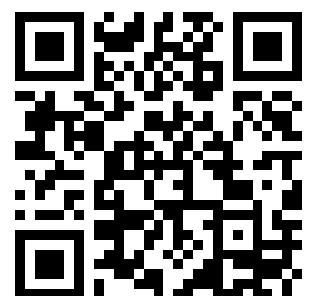


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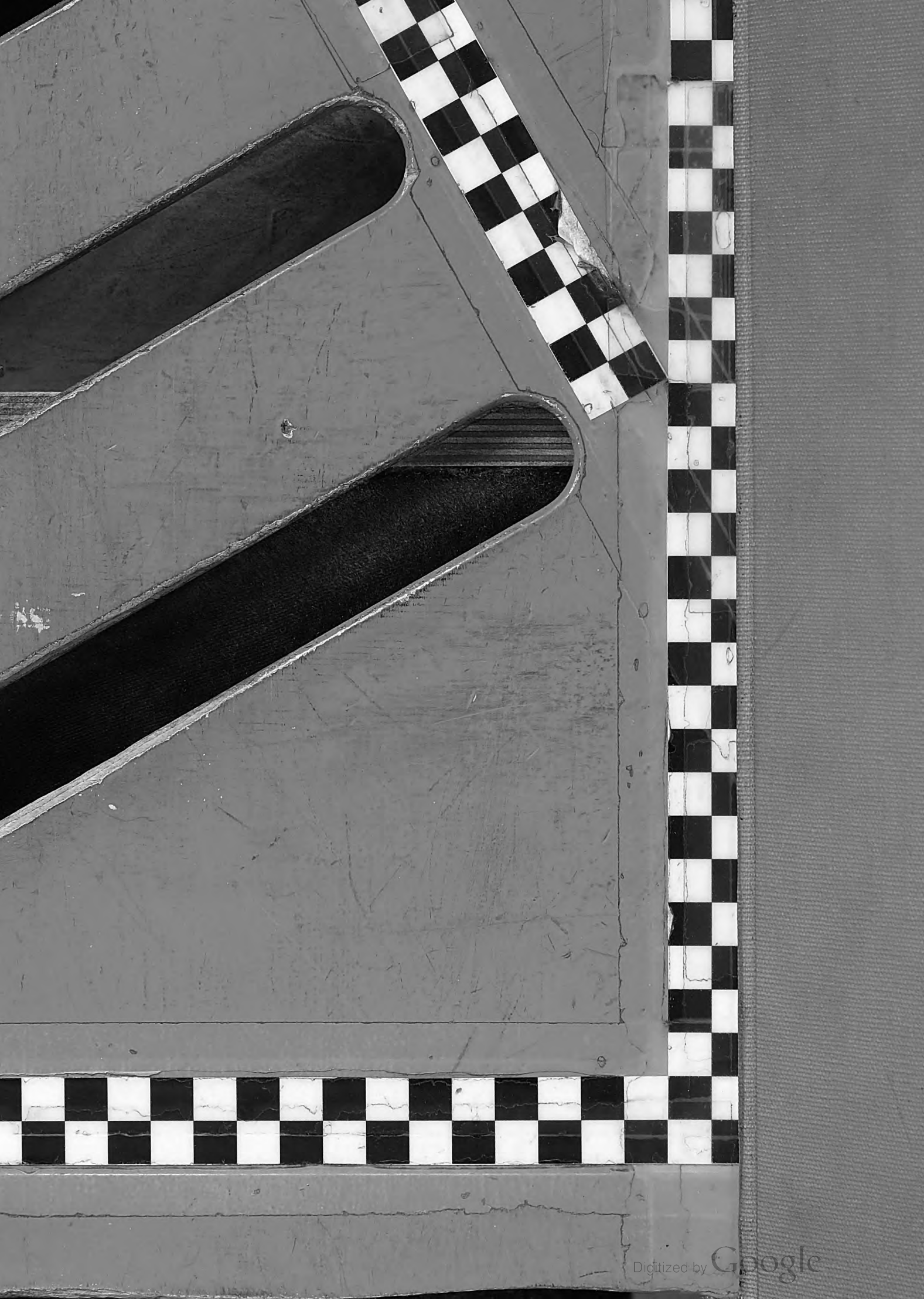


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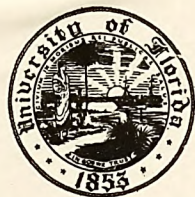
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THE  
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The Fifty-Fifth Annual Convention  
LOUIS LA BEAUME

Convention Notes

The Producers' Section of the Structural Service  
Committee

The Autobiography of an Idea  
LOUIS H. SULLIVAN

Nine Lithographs  
BOLTON BROWN

The Housing Project of the Metropolitan Life  
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JULY

to  
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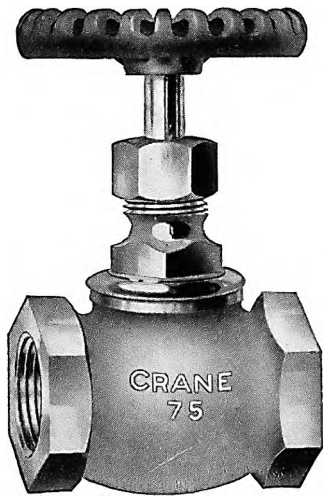
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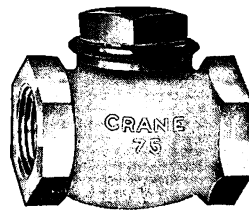
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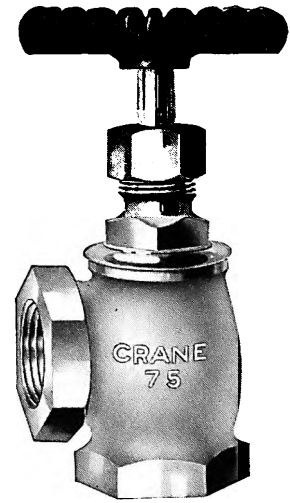
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Volume X

JULY, 1922

Number 7

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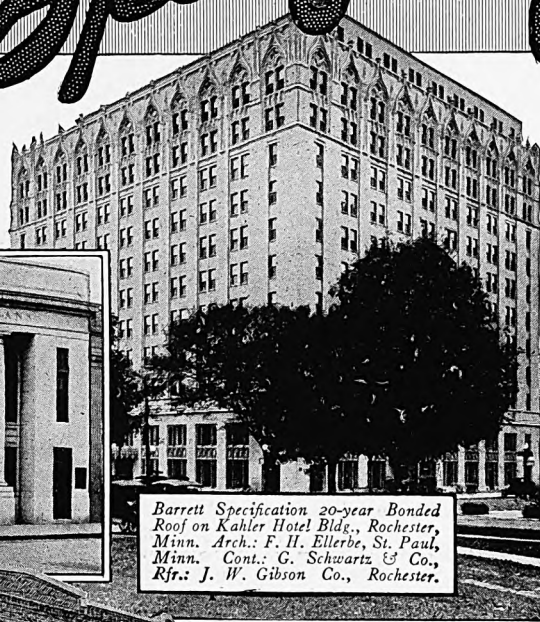
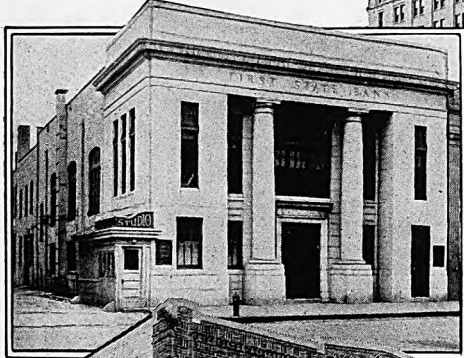
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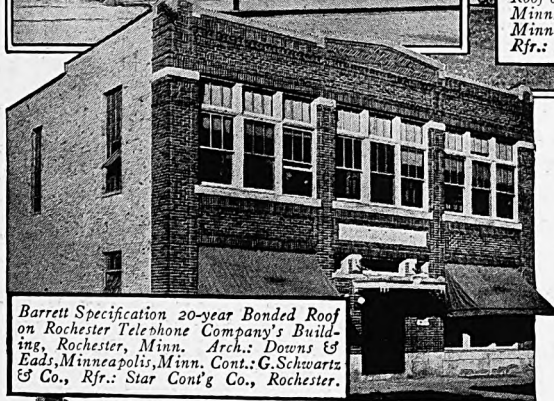
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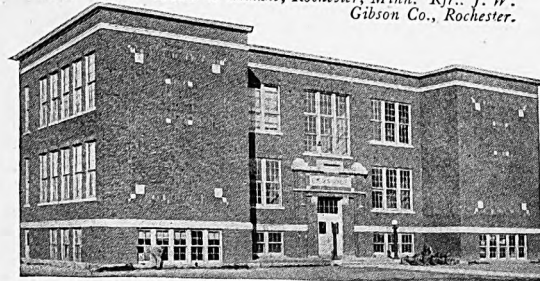
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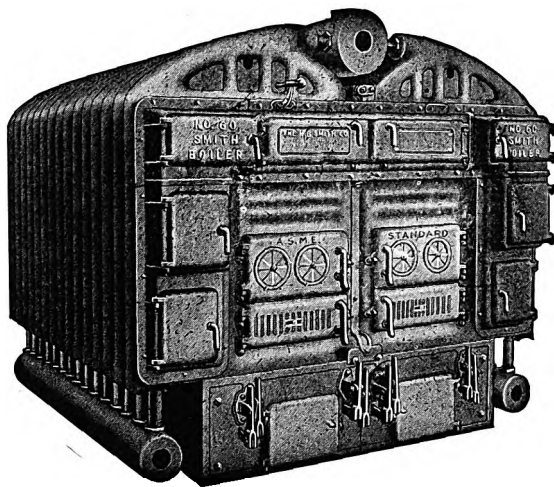
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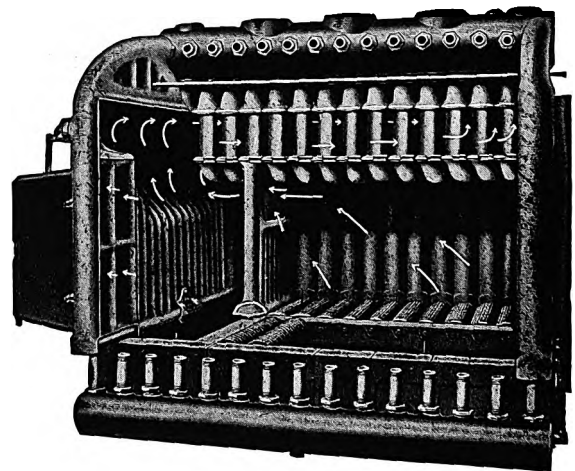
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Vol. X

JULY, 1922

No. 7

## Shadows and Straws

**D**OES the calm and orderly despatch of business at the Fifty-Fifth Convention presage a new type of Convention? We believe that a change is more imminent than is suspected, and not because of the passionate cry for it, but simply because the Institute has perfected its machinery by a process of elimination until the question of government, so called, is less a source of either interest or anxiety to the membership than formerly. Certainly the complaint of Convention tedium and monotony does not abate, while the respect for the Board and its arduous and conscientious labors increases. But it is precisely in the recognition of this coincidence that there lies so much hope for a Convention that will arouse not only a wider member interest but a larger public concern. The Board of Directors have won a great and deserved confidence. The delegates show this more and more. That is what makes the opportunity.

TO THE FIFTY-FIFTH Annual Convention we shall revert in succeeding issues of the JOURNAL. There is much to be said about it, for in certain ways it seemed to mark a very definite turning-point in Institute history. For the present Mr. La Beaume has been kind enough to give his impressions of it as a delegate and within a very short space of time the full Proceedings will, of course, be available to every member of the Institute as usual.

For ourselves, we would crave only the privilege of adding to Mr. La Beaume's narrative by recording our impression of the ceremonies which brought the Convention to a close. There is but little to be added, it is true, to what Mr. La Beaume has said. The whole evening, from the moment of alighting in Jackson Park, was an achievement on the part of the Institute's hosts such as lifts that particular Convention into a niche of its own. The thing was *architectural*. The whole effect was related directly to *architecture*. And in that respect, it was one of the few times when a Convention of Architects ever differed very much from a Convention of any other kind of people.

It was a Roman Festival, a Greek play, a *fete champetre*—it was Claude Lorraine, or it was Hubert Robert. It was Watteau or it was Fragonard. If one

chanced to sit on the outer circumference of the rotunda, one looked inside upon the faintly lighted hall and watched the luminous wavering shadows disappear in the depths of the vault above, or one looked out through the doorways upon the shining water of the lagoon, the trembling reflections of lights, the silvery stream of moonlight that now and then broke through the nebulous fastnesses of cloud. Seemingly from a far distance came the ripple of soft music. Of decoration there was hardly more than the merest suggestion. Never, in the opinion of the writer, did an Institute Convention breathe forth so perfectly the message of that beauty which it is the office of architecture to create and perpetuate. We are encouraged to go on with a task which we set ourselves some time ago, and perhaps ere the year is out, we may offer our readers the story of the One Hundred and Fifty-Fifth Convention!

ANNOUNCEMENT, by President Kendall, of the Treasurer as the donor of the fund of \$25,000 given to the Institute for educational purposes two years ago removes the anonymity that had hitherto surrounded this munificent gift, henceforth to be known as the Waid Educational Fund. Only one other Institute fund takes precedence, we believe, for much to the surprise of all, the bequest of Henry Adams now amounts to several thousand dollars, although it represents nothing more than the accrual of royalties on "Mt. St. Michel and Chartres," which, it will be remembered, was first published under the auspices of the Institute and at the suggestion of Mr. Ralph Adams Cram.

The Institute is rich in gifts of time and in money spent lavishly by its members. Many thousands of dollars have thus been contributed in little known and never mentioned ways. It is perhaps a matter of regret that it has never enjoyed any of the bequests which commonly fall to such an organization, but let us hope that the Waid Educational Fund will increase and multiply until it will permit an annual disbursement sufficient to afford all deserving students whatever help they may need toward making their utmost contribution in architectural development.

C. H. W.

# The Autobiography of An Idea

By LOUIS H. SULLIVAN

## CHAPTER II

"There was a child went forth every day."—Whitman.

THUS after traversing a long orbit inversely to the prehistoric of the family genealogy, and tracing, on the backward swing, the curve of a little one's experience in contact with the outer world and his individual impulsive responses thereto, we again take the train for South Reading. For, while we originally started with a sort of trumpet-blast announcing the entry, upon the scene, of a wonder-child, that song quickly died among its echoes leaving behind it the silent unknown of five years duration, to be evoked from the depths, by way of justification.

Arriving at the station a man descends, asks directions, and follows the first dirt road to the left, leading over an almost treeless flat, and heading for a somewhat distant hill. Part way up the hill he notices a house on the right. Here lived a man named Whittemore, who having lost a leg, proceeded in due consideration of the remaining one, to invent, perfect and manufacture a new type of crutch, which has remained the standard to this day. The workshop stood some distance back of the house, just at the beginning of the pine woods that covered part of the hill. The road here takes a curve to the right, traverses the back of the hillside with a heavy growth of pines on the right ascension, and a neat valley to the left with scattering woods and meadow. The road then straightens, becomes of easy grade, and begins to emerge from the wilderness, so to speak. An orchard comes into view on the left, a field of young "herd-grass," or possibly it was "red-top," on the now smoothly rounded hilltop at the right. Straight ahead, running at right angles and terminating the road thus far traversed, was the main road from South Reading to Stoneham. The land here was temporarily level for a moment or two. At the left-hand corner of the intersection stood a rather modern house, clap-boarded, painted white with green shutters, and in front of it on the Stoneham Road were two stately and graceful elms. Here lived the Tompsons. The person who made this trip had no sooner reached the intersection and made a mental note or two of the surroundings than he saw a middle-aged or elderly couple, quite near, slowly approaching from the left on the road running straight toward South Reading. They were leading between them a chubby child who was screaming at the top of his angry voice, crying savagely, declaring vindictively he would not go, he *would not* go to school. The traveler must have worn the tarnhelm of legend, for they saw him not. To our thinking

he was a phantasm of years to come. The child was absurdly dressed. Under an immense straw hat, curving broadly upward at the brim and tied on with a ribbon, appeared his upturned face, red, bloated, distorted; angry eyes, terribly bright, running with tears in a stream; a mouth hideously twisted out of shape. Below this raging hell was a sort of white jacket and a big bow tie. Below this, if you please, *white pantalettes*, gathered in at the ankle and more or less flounced or frizzled. These pantalettes were the source of his fear, of his rage and his protest. He had already on account of them, he said, been regularly insulted by the neighbors' children who had formed a circle around him and danced, sneered, pointed the index of scorn, and made merry. Was that not enough? Must he now face a schoolfull of tormentors? He would not go, he would *not* go! He bawled and screamed that he would not *go!* The child was on the verge of hysterics; it seemed less agonizing to face death than to face ridicule. The elders consulted quietly, turned back, the child still between them, and disappeared at the entrance-way of a house a hundred yards or so beyond the Tompsons on the Stoneham Road. Next day, he appeared in conventional garb. His name was Louis, or, as his Grandmother pronounced it, Louie. It was a joyous day for him, a sad day for her. For in her heart she knew that with the laying away of the pantalettes there was laid away a child—a child gone forever—a child soon to be but a sweet memory,—a child soon to metamorphose into a tousle-headed, freckled, more or less toothless, unclean selfish urchin in jeans; and that he would continue to grow bigger, stronger, rougher, and gradually grow away from her—ever more masculine, ever more selfish. But this apprehension, this heart's foreboding was not to come wholly true, for she held his love—she held it to the end. The child was not an *enfant terrible*; he was rather an independent, isolated compound of fury, curiosity and tenderness. Subtle indeed were the currents flowing and mingling within him, embryonic passions arising and shaping, ambitions vaguely stirring; while his sharp eyes saw everything. Spring was on the wane. The birds were full-throated in glorification of the number of bugs and worms eaten, or the intensive discussion of domestic affairs. High up in one of the Tompson elms—the one to the east—hung the purse-like nest of the self-same golden orioles that came there year by year, while from a nearby meadow floated the tinkle of a solitary bob-o-link winging its way rejoicing. The day was beauteous; full sunshine flooded and enfolded all. The boy, after much thought, of its kind, suddenly announced he was

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ready. His curiosity had been insidiously at work. He would see the school; he would meet new children; he had become eager; he would be a bigger boy in the world's opinion. So, on this same cheerful morning, hand in hand with Grandma, who alone habitually assumed responsibilities, he began the pilgrimage of learning that hath no end. They took the dusty road that led eastward, directly toward the north end of the village. They leisurely mounted a gentle grade until the crest was reached. At this exact point, just behind the stone wall to the right of the road—marvel of marvels—stood a gigantic, solitary ash tree. On account of a certain chipmunk, various flowers, pebbles, and other things, the child had not noticed it during the approach. But of a sudden, there it stood, grand, overwhelming, with its immense trunk, its broad branches nearly sweeping the grass, its towering dome of dense dark green; opposite it, across the road was a farm house, back of it an open pasture. From the vantage of the road spread out a view of things below. The grandmother was for going on. The child stood transfixed, appalled. A strange far-away storm, as of distant thundering, was arising within his wonderself. He had seen many trees, yes; but this tree—*this tree!* He trembled strangely, he wished to cry; with gentle scolding he was dragged away: the grandmother did not understand. From this point on the road was bare and shaggy. Half way down, to the left, and set well back, was found not the little red school house of romance, but a rather large white one, clap-boarded, green blinds, gabled, a bell, a well with force-pump, trampled playground, and so on. He was duly presented to the teacher. Her face and form, alas, like many another face and form, have passed into memory's oblivion. All details settled, he was to come the following morning, which he did, after successfully passing the magnet tree, while saluting it affectionately in a calmer mood. Day after day he passed the tree. It became his tree—his Great Friend.

He was to spend many days at this ugly hillside school. Gradually he became acquainted with the boys and girls there, for it was coeducational. What these children did during the recess hour would scandalize the wholly good. But to the casual sinner, scrutinizing the depths of his own past, reason might be found and a certain tolerance engendered whereby these vagaries of small animals, if not exactly condoned, might at least be minimized as the native output or by-product of inquisitiveness and emulation. Our boy was as yet too young to fight. But according to the rules and regulations of the gang his time was but deferred, for each new boy must establish his fistic status.

The school room was rather large with two wooden posts supporting the roof. The teacher sat at her desk

on a raised platform at the wall opposite the entrance. The children sat at rows of desks (a row per grade) at right angles to the rear wall; in front of them an open space for recitation by class; blackboard on the wall and so forth. There were five grades in the single room. Teacher sat at her desk, ruler in hand to rap with or punish with. All the children studied their lessons aloud, or mumbled them. The room vibrated with a ceaseless hum, within which individual voices could be heard here and there. Everything was free and easy; discipline rare. There was however a certain order of procedure. Came time, for a class to recite. They flocked to the wall and stood in a row; neither foot nor head first. Questions and answers concerning the lesson of the day. Teacher's questions specific; pupils' answers must be definite, categorical. Teacher was mild, patient; the answers were sometimes intelligent, more often hesitant, bashful, dull, or hopelessly stupid. Each answer was followed by a monotonous "go to the foot," "go to the head;" and all the time the hum went on, the unceasing murmur, a thin piping voice here, a deeper one there, a rasping out yonder, as they pored over their primers, first readers, geographies, arithmetics, while now and again Teacher's voice rose high, questioning, the class on the rack answering as best they could. This babel merged or deliquesced into a monotone; there seemed to be a diapason, resonant, thick, the conjoined utterance of many small souls trying to learn, entering the path of knowledge that would prove short for most of them. The children were all barefooted and rather carelessly clad; notably so in the matter of omissions. One thing is certain and the rest is lies: This school was of, for, and by the people.

Our child was given his proper place in the lowest grade, or class, or whatever it was called. He took hold rather blithely. He seemed to feel the importance of his entry into this new world, so different from home. Little by little he seemed to feel that he belonged there; but he never succeeded in feeling that the school belonged to him except as to its externals. Somehow he did not fit into the curriculum or the procedure. He was of a most pronounced, independent nature. He quickly became listless as to his own lessons. He seemed to be nothing but a pair of eyes and ears not intended for books, but for the world little and big about him. In this immediate sense he was almost devoid of self-consciousness. His normal place was at the foot of his class. But one day he awakened to the fact that unawares he had become interested, not in books, but in procedure; said procedure consisting in the oral examinations and recitations of the grades above his own, as they, in accordance with the arrangement of the school room, stood directly in front of him, drawn up in line, undergoing the routine torture. He began to notice their irregu-



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lar mass-effect and their separate persons. He followed their fortunes in going to the foot and going to the head. He transferred himself to them. He noticed, too, which girls were the prettiest and which boys were the gawkiest. He learned the names of all. He became solicitous of their personal fortunes, in their struggle for knowledge or their attempts to escape it. For him, it became a sort of drama, a sort of stage performance, and he began to note with growing interest what they said and what teacher said, which answers were correct, which were failures. Over and over again he saw and heard this until he came to know the groundwork of what all the grades above him were struggling with. But as to his own lessons, Alas! Yet he followed the upper grades so intently that he became critical: What was this about the four men who built so many perches of stone wall in three days, and two other men who were to build some wall in six days? What did it amount to anyway? The real question was *where* was the wall to be built? For *whom* was it to be built? What was his name? What were the names of the men who were building the wall, (for it was becoming a real wall)? Were they Irish or Scotch? Where did they get the stone to build the wall of? Did they get it from the rough quarry across the road from the school-house? Did they gather up boulders from the fields? Was not this matter of four men and two men irrelevant? The information was too sparse, too unconvincing. He could not *place* the wall, and what good was any wall he could not see? And thus he went on, unaffected by the abstract, concerned only with the concrete, the actual, the human.

One evening when all were at home, a letter arrived addressed to Grandpa. He opened the envelope and read the letter aloud. It was from Teacher, and set forth with deep regret and concern that his grandson was a dull boy, that he was inattentive, would not study his lessons, was always at the foot of his class, but he was a nice boy. Could not Mr. List bring influence to bear to induce Louis to reform his ways? Would not a kindly word from him, concerning the need of education, have a moral effect? She had used all her powers of persuasion, and so forth and so on. At the end of the reading Grandpa dropped the letter on the floor burst into volcanic laughter, roaring until the lid of the heater rattled, rocking forward and backward on his chair, clapping himself on the knee, in a series of subsiding outbursts, ending in a long drawn spasmodic chuckle, expressive of his cynical sense of humor, his infinite contempt for those who had eyes and yet saw not. To call his sharp-eyed grandson a dullard! Why, he said, one might as well call Sirius a flap-jack, and other joking words to that effect, for he was fond of teasing his grandson, whom he had so long watched out of the corner of his eye. But

Grandma, more conservative, took the matter seriously. With her grandson standing at her knees, a bit abashed, a bit afraid, after giving her six propitiatory kisses, his arms about her neck and cheek to cheek, she found it, oh, so hard, to scold him. Instead she told him gently how necessary it was to acquire an education; how necessary to that end that little boys, particularly her own grandson, for the family's pride, should attend industriously to lessons. Could he not do better, would he not do better? He said he could and would; and all was peace. She had not Grandpa's perspicacity.

Next day, at school, he pitched in, and the next day and the next; shutting out all else. Oh, it was so easy to head this class; so easy for one who knew what the upper grades knew, or thought they knew for a moment or perhaps a day. They knew not that it was all, save a bare remnant, fated to fade away forever. Tired of heading the class, which was so easy, he occasionally, and indeed with increasing frequency fell to zero, because of a lapse, because, perhaps, of a twitching squirrel in a tree nearby the window, or a beautiful white cloud, curiously changing shape as it slowly drifted through a beautiful blue sky. And what did it all amount to? What signified it to be at the head of a row of dull-wits? He was becoming arrogant. For Grandma's sake, he kept on, after a fashion. He was becoming bored.

Summer was waning. The third of September was at hand. Six candles in the cake announced an anniversary. He was overjoyed. He was actually six, healthy and strong, robust. He became, at once, more arrogant. He loathed the school.

The winter of 1862-3 passed along with its usual train of winter sports and hardships. Our Louis joined heartily according to his height and weight in all the sports. Of hardships he knew nothing. What fun it was to be drawn on a sled over the snow by his Uncle Julius. To be drawn on the same sled over the dark sheer ice of the pond by Uncle on newly sharpened skates. What thrill of courage it required not to cry out as he shuddered at the darkness below, and wondered whether the pace were not too swift. But Uncle, some fifteen years older than he, was to him a big man; and what could not a big man do? So he had faith in the uncle, if not entire confidence, as they flew here and there among the gay crowd of skaters. How they went way to the end of the pond and then swung back past the ice houses where men were beginning to work. And later on how thrilled and stilled he was by the thunderous boom and tear of an ice crack ripping its way from shore to shore. And many such booms he heard on similar trips in zero weather. And then the men at work cutting ice. How exciting it was to watch men at work. They used large hand saws to cut ice into square

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blocks and there was one strange saw drawn by a horse. Then men with poles who shoved and dragged the ice-blocks through the clear water to the bottom of the runway, and now it was hauled up the runway by a horse that walked away with a rope that ran through a pulley, and then back to the ice cake. The ice seemed very thick and clear.

And then came splendid snow-storms, decorating the trees, forming great drifts through which he struggled in exultation, every now and then stumbling and falling, with his face in the snow. How he rolled over and over in glee in the snow of a white world, a beautiful world even when the gray skies lowered. And why not? Had he not warm woolen mittens knitted by Grandmama and hood and stockings, by the same faithful hands, and "arctics"? Was he not all bundled up?

And the sleigh rides. Oh, the sleigh rides in the cutter with the horse looming so high, and the row of bells around the horse's collar, jangling and tinkling in jerky time. And he so warm under the buffalo robe. And they met so many other sleighs in the village when they went to the post-office or the grocery store, and he noticed so many men walking about clad in buffalo coats. And he made snowballs and did all the minor incidentals. It was his first experience within the pulchritude of a winter in the open. Of course his mother came frequently to see him and caress him. He could hardly understand why she loved him so; he had so many other personal interests and distractions. But he hailed her comings and deplored her departures.

We have said his name was Louis, but he had other names; interesting ones too. He had not been christened or baptised. The question had called for a family council. The father, a nominal Free-mason, not sure whether he was a Catholic or an Orangeman or anything in particular, expressed no serious interest; he would leave it to the rest. Grandpa, as usual, vented his view in scornful laughter. Grandmama, a Menno-nite, was opposed to baptism. But Mother in her excited way was rampant. What! Would she permit any man to say aloud over the body of her pure and precious infant that he was born in sin; and ask for sponsors?

Never! That settled it and they named him Louis Henri Sullivan. It has been declared and denied that the name was given in order to heap honors upon Napoleon III. Be that as it may. The name, Henri, obviously was to deify Grandpa. The Sullivan could not be helped. It was scorned by all but its owner. They detested the Irish, whose peaceful penetration of Boston had made certain sections thereof turn green. Even his wife could not stand for it, much less for Patrick. So sometimes she gallicized the name; which wasn't so bad, when she used it in the third person, nominative, singular. Then she had an inspiration, an illumination one might say, and invented the word *Tulive*, whatever that may have meant, as a general cover-name, and thus secured a happy, life-long escape. But later on, say about the age of twelve, the scion asked his father about this name Sullivan, which seemed to coincide with shanty-Irish. So his father told him this tale: Long ago in Ireland, in the good fighting days, there were four tribes or clans of the O'Sullivans: The O'Sullivan-Moors, the O'Sullivan Macs, and two others whose names, forgotten by the writer, are not especially pertinent here. That *We* were descended from the O'Sullivan Moors, and that all four tribes were descended from a Spanish marauder, who ravished the west Irish coast and settled there. His name it appears was O'Soulyevoyne or something like that, which, translated, meant, The Prince with One Eye. Now, however great was the glory of this pirate chief, his descendant, Louis Henri Sullivan O'Sullivan-Moore-O'Soulyevoyne, had this specific advantage over him of the high-seas. The prince had but one eye that must have seen much; the youngster of six had two eyes that saw everything, without desire to plunder.

*These became part of that child who went forth every day, and who now goes, and will always go forth every day.*

*And these become part of him or her that peruses them here.*

*Whitman.*

*(To be continued).*

## The Fifty-Fifth Annual Convention

By LOUIS LA BEAUME

In the course of discussion relative to the improvement or extension of the Octagon property, Mr. Donn Barber expressed the hope that a day might come when the Institute's rules and regulations would be so perfected and its anguish over labor difficulties and sociological problems sufficiently soothed to permit our indulgence in some degree of self-education, and a consideration of the real practice of architecture as a learned

and æsthetic profession. This hope has been voiced before, and may in the fulness of time be realized. To be impatient of the debris and scaffolding which so often, and for so long a time, obscures the real object of our interest and serious effort is but natural, and constant vigilance on the part of somebody is probably necessary to keep the site reasonably clear. That "somebody" happens (for the moment) to be the architect himself, and

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this service is undeniably the most galling and least inspiring of his functions.

Except at Conventions, he attempts with more or less success to delegate this duty to a competent clerk of the works. But with a knot of orange ribbon in his button-hole proclaiming him an authorized representative of his Chapter constituency, he becomes a sort of imitation Congressman content to spend his fleeting moments in the dotting of i's, the crossing of t's, of striking out the word "that" before "this," or rising to a point of order. At times, in an effort to recover his self-respect, he offers a resolution couched in endearing terms and pledging his profession to some lofty and innocuous ideal. There is something inimitably pathetic in the spectacle of one hundred and seventy-six winged geniuses, each with his shovel full of rubbish. So the wise provision to limit the size of the spectacle is a step in the right direction, and the motion so frequently made to "refer the subject to the Board with power to act" (after night falls) is always heard with a sigh of relief.

On the whole the Convention transacted its business with a minimum of controversial effort. The Board of Directors had performed its preliminary work very thoroughly and whatever opposition had been expected to its proposals melted away in the genial but rather intense heat of the assembly room. There were certain moments of interest during the proceedings and many in retrospect; these latter having to do with the greeting of friends, the general feeling of fellowship, and the hospitality of our hosts.

To review the proceedings seriatim would be to retrace our steps and would result in the same mild criticisms above recorded. The recognition of Mr. Waid's generous contribution to the cause of education is pleasant to recall; and the presentation of a gold medal to Dr. C. Howard Walker in recognition of his literary skill in the cause of Art, called forth a response from the recipient in his usual happy vein. Mr. W. Stanley Parker was deputized to convey a silver medal to Mr. R. Clipston Sturgis for his essay in the same cause.

Those who feel that the JOURNAL ought to pay in dollars and cents as well as in usefulness were pleased with Mr. Kimball's announcement that the JOURNAL had earned a net profit during 1921, over and above all expenses. As a matter of fact it did this and also bore a loss of some five thousand dollars incurred in giving the JOURNAL to members at half the regular price, and in distributing the minutes of Board and Executive Committee meetings to members of the Institute without any charge on the Institute's treasury.

The recommendations of the Committee on Survey of Institute Methods in regard to Junior Membership met with cordial response, and the Board of Directors will undoubtedly perfect these suggestions so that young men fresh from the universities may be recruited to the ranks of the Institute. It is a little disconcerting to realize that this might have been done long ago both to the advantage of the juniors and their seniors.

President Kendall called the Convention to order on Wednesday morning, 7 June, at the Chicago Beach Hotel, and presided at most of the sessions from that time until final adjournment on Friday afternoon, with suave and

mellow competence. His presidential address was a model of pertinent recital and his forbearance in refraining to address the delegates on the state of the Union might have been taken as an indication that though the architect as a citizen may hold valuable opinions on politics, social economy, or finance, his chief contribution to civilization is presumed to be architectural.

The report of the Board of Directors again impressed the delegates as significant of the enormous amount of work ably and unselfishly performed by the Institute's officers and committees. The various resolutions comprised in the Board's report were either passed as presented, or referred, after discussion and approval of their essence, to the Board for action. Among these were the several amendments to the constitution which seemed necessary in order to harmonize the revised constitution with the original charter, following which all acts of previous conventions were validated by resolution.

The treasurer's report showed a healthy financial condition, receipts for the year 1921 being \$9,468.95 in excess of expenditures. The principal factor accounting for this prosperity is an increase of 40 per cent in dues. The Institute membership has grown from a total of 1,580 in 1920 to 2,256 at the end of 1921. However, as this rate of increase cannot be expected to continue, care must be exercised in stretching our resources to cover the necessary extension of activities. The treasurer was revealed as last year's anonymous donor of the sum of \$25,000 to the Educational Fund; and at the suggestion of President Kendall this fund, now increased to \$28,000, will henceforth be known as the Waid Educational Fund.

The report of the Committee on Education indicated once more the serious and valuable efforts on the part of the Institute to raise the educational standards of the profession and thereby increase the quality of the architect's contribution to society. The committee endorsed the resolutions of the Collegiate Schools of Architecture "to provide insofar as they may be able, in addition to existing four year courses, a course leading to the baccalaureate degree in architecture that will require normally not less than five years' collegiate work; that the additional time be occupied in increased cultural, scientific and structural studies; that the completion of the major part of the scientific and structural subjects included in the five years' course be required as a prerequisite to the study of design, and that the cultural, scientific and structural studies included in the five years' course be required for the graduate degree." The committee also proposed "that the Convention approve the use of the income of the Educational Fund for the stimulation of a general appreciation of the arts, and for the support of graduate scholarships in architecture in such manner and degree as the Board may approve, and that this resolution shall not prevent the Board from providing in any annual budget for the expenditure of current funds of the Institute in addition for either or both of these purposes." Pursuant to the resolution, the committee recommended the establishment of ten graduate scholarships in architecture and expressed a belief that the graduate students benefited by these scholarships should be concentrated in one premier school. Some difference of opinion in regard to this concentration developed and

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was voiced by representatives of the Association of Collegiate Schools of Architecture. The general idea was, however, enthusiastically approved and doubtless the details will be worked out satisfactorily to all concerned. The committee further requested that the Institute assist the Beaux Arts Institute of Design by taking up a certain number of subscribing memberships. It was also suggested that the lectures on the appreciation of art so successfully delivered by Dr. C. Howard Walker and Mr. Charles Z. Klauder be continued. The general tenor of the committee's report may be expressed by the following resolution which received the unanimous endorsement of the Convention:

*Whereas*, The art of a people is the enduring flower of their civilization; and

*Whereas*, The American Institute of Architects is convinced that as a Nation our lack of appreciation of art is due to a manifest lack of early training, and that the study of art has been neglected to make room for so-called more practical subjects; and

*Whereas*, The American Institute of Architects believes that as a medium for training the mind in observation and broad vision, quite aside from its great cultural value, the study of art in its various manifestations has been improperly neglected; and

*Whereas*, The American Institute of Architects believes that American youth is today more prepared to feel an interest in this great subject, by reason of our closer international contacts; and

*Whereas*, The American Institute of Architects recognizes the far-reaching influence of the College Entrance Board on the standards of College entrance teaching; and heartily acknowledges the admirable results already accomplished by that Board in its difficult task; and

*Whereas*, The American Institute of Architects has earnestly hoped that the study of Art would be given a place comparable to that accorded to Poetry and Literature; therefore

*Be It Resolved*, That the American Institute of Architects does now urge the College Entrance Board to include in college entrance examinations generally, and more particularly in relation with History, Literature and the Classics, questions dealing with the arts as the most lasting expression of civilized man; to the end that American youth may be led to appreciate past achievements in those arts, and that they may require of our artists of tomorrow, their fellow-members of the rising generation, that they worthily express their day and our Country.

Discussion of the report of the Building Committee regarding the improvement of the Octagon property revealed an affectionate interest in this landmark, but a decided lack of unanimity as to the particular nature and form of the improvement. The layman might have thrilled with pride as the ball was continually knocked out of bounds by supposed experts, quite in the manner of the ordinary, human, untutored Building Committee. The discussion of this particular architectural problem while interesting as an innovation seemed to confirm our familiarity with Congressional methods of procedure.

The evening session on Wednesday with the first vice-president presiding was devoted to discussion of Industrial Relations, Registration Laws, Jurisdictional Awards and the organization of the American Construction Council. Mr. T. J. Donnelly, chairman of the Citizens' Committee to enforce the Landis Award, explained the activities, accomplishments and aims of this committee, but there was no further discussion of the delicate and dif-

icult subject of Industrial Relations, unless the discussion following the report of the chairman of the National Board of Jurisdictional Awards might be interpreted as such. The delegates passed on to something easier or at least more academic when Mr. Lorch reviewed the work of the National Council of Registration Boards. Its bureau, under the direction of Mr. Emery Stanford Hall, does a useful work in collecting data relative to the qualification of applicants for registration, and is also attempting to standardize requirements for registration so far as may be possible.

While the principle of registration seems to have gained headway in certain parts of the country, there still remains a considerable apathy on the part of the profession at large respecting its importance. Registration Laws, however well conceived, do not seem as yet to have materially improved the standards of practice or the quality of design in the States where such laws exist.

Of all the subjects introduced to the Convention that involving the present system of Jurisdictional Awards seems to have aroused the greatest amount of contention. A considerable body of the membership appears to question Institute policy in attempting to rid the Building Industry of one of its most annoying features. Notwithstanding the fact that the Board of Jurisdictional Awards has repeatedly stated that its decision cannot apply in those localities where union labor does not prevail, the adherents to the principle of the open shop seemed to imagine some malign menace in the activities of the Board. The discussion recalled at times the debates over the danger of entangling alliances which have followed our national aspirations for peace. Treaties of any kind, no matter by which political party they may be presented, seem, at the present moment, to be objectionable to the American temperament. The thing which the American temperament likes best, however, was done in the case of the Report of the Institute Member on the Board of Jurisdictional Awards when the whole subject was referred back to the Board for further study.

Once more the Committee on Small Houses rendered a report of its activities and testified to a growing interest in the work of the Small House Service Bureau idea. The partisans of the service are gratified by the endorsement of the Department of Commerce, but deplore the indifference of the profession at large. Surely, they must be commended for rendering an unselfish service, and their work may be but a prelude to the organization of Architectural Clinics, even in the great cities where the Apartment House Promoter, the Moving Picture Producer, the Real Estate Operator and the Jerry-Builder may receive scientific treatment at little or no cost. If the idea is successful in the field of housing it should be extended indefinitely. The advertising value of the Small House Service Bureau idea to the profession and its educational value to the public at large should not pass unnoticed, however, in these times when the word architect has still so uncertain a meaning.

The work of the Structural Service Committee was endorsed and will be continued under the patronage of the Institute. Reference was made to the organization of the American Construction Council, and it is to be hoped that the idea of calling together in counsel repre-

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

sentatives from all branches of the Building Industry will result in mutual benefit to all concerned in building.

Mr. O. C. Harn, of the National Lead Company, spoke briefly on behalf of the conference on Better Advertising to Architects, and the Convention approved a resolution "to continue the work of the conference by creating a Producers' Section of the Structural Service Committee to advise and counsel with manufacturers, who may so desire, on the character of their advertising as to size, form and content. To assist in furthering the use by Architects and Producers of the Standard Construction Classification adopted by the American Institute of Architects, and to promote sincerity and reliability of statement in advertising."

The recommendations of the Board regarding the question of Fellowships involve changes in the By-laws by which Fellowship hereafter shall be conferred by a Jury of six Fellows appointed by the president. The name of each candidate selected by this Jury, after having been submitted to the Chapter of which he is a member, and to all Members and Fellows of the Institute shall be submitted to the Convention for final action. It is hoped by the establishment of this Jury of Fellows, whose duty it shall be to investigate the qualifications of candidates, that the distinction of Fellowship may from this time on be brought into closer harmony with the purposes for which the Award of Fellowship has been devised.

This capitulation by no means covers all of the business of the Convention, and mention should be made of Mr. Levi's report for the Committee on Foreign Building Co-operation, which assembled the Exhibition of American Architecture, exhibited in Paris in 1921, and since shown at the Royal Institute of British Architects, and elsewhere throughout Great Britain. The attempt to carry forward newspaper publicity work of an Educational character seems quite in harmony with the Institute's general educational policy, and its desire to increase public appreciation and understanding of the Art which we practice.

The Report of the Institute Members on the Department of Commerce Building Code Committee indicated progress in the difficult but important task of standardizing Building Codes and Construction Methods.

The Institute Medals for distinction in the Allied Arts were awarded to Mr. Arthur Matthews, Mural Painter of California, and to Mr. Frederick W. Goudy for his accomplishments in the art of typography.

Charters were granted to new Chapters as follows: Central Illinois, Erie, St. Paul, Central Georgia and Scranton—Wilkes-Barre. There seemed less discussion than usual of the Canon of Ethics, the Competition Code, and the Schedule of Minimum Charges. The burning questions involved in these important documents seemed either to have burned themselves out, or resolved themselves into the kind of hard gem-like flame that needs no further trimming.

The Election of Officers was unexciting, although an undercurrent of sectional self consciousness was felt, and is probably inevitable in a country so large as ours. Situated at a central point like Chicago, however, one should be able to sweep the entire horizon with impar-

tiality, and hear cries from any wilderness either North or South, or East or West with about the same ease.

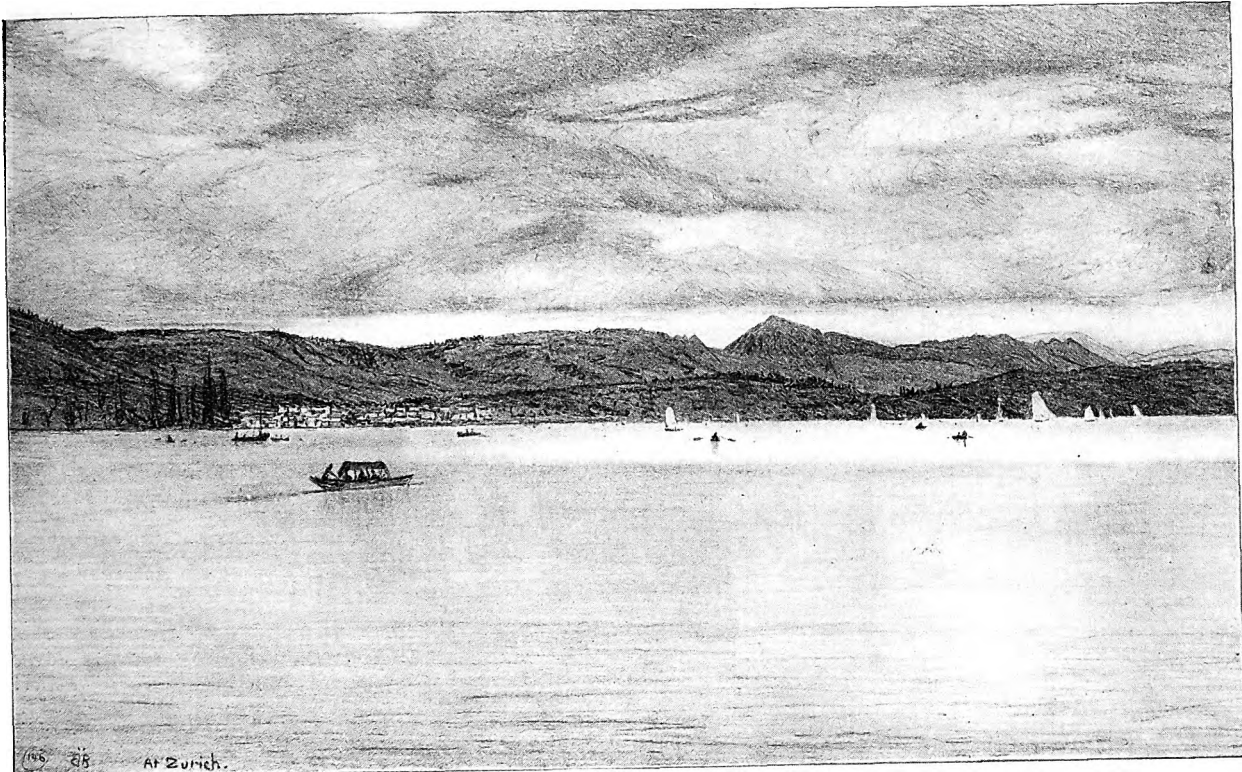
The Theory of Regional representation on the Board of Directors approached one or two steps nearer realization. The Officers elected were:

President, William B. Faville, San Francisco.  
First Vice-President, E. J. Russell, St. Louis.  
Second Vice-President, Robert D. Kohn, New York.  
Secretary, William Stanley Parker, Boston, Mass.  
Treasurer, D. Everett Waid, New York City.

First District, Director, William Emerson, Boston, Mass. Second District, Director, Benjamin Wistar Morris, New York City. Sixth District, Director, William L. Steele, Cedar Rapids, Iowa.

The luncheons arranged in the intervals between sessions enabled the delegates to fraternize, and the business of the Convention was no doubt greatly expedited by the remote location of the Chicago Beach Hotel. Opportunity was given the visiting delegates to inspect the grounds and buildings of the Chicago University; and the delightful motor trip through the North Shore Suburbs and Lake Forest will not soon be forgotten. The itinerary included stops at Mr. Howard Shaw's charming Ryerson house with its lovely gardens; the McCormick house, notable among the works of Mr. Charles Platt; the residence of Mr. Charles Burrall Pike designed by Mr. David Adler, and the Stonehill residence of formal 18th Century dignity, the latter revealing the combined talents of Mr. Shaw and Mr. Adler. The drive culminated at the Indian Hill Country Club where the guests were most hospitably entertained by the Chicago Chapter and the Architectural Club.

The scene of the Institute dinner Friday evening was the rotunda of the old Fine Arts Building in Jackson Park. Here President Kendall felicitously awarded the Institute Medal to M. Victor Laloux, response being made by Monsieur Barthelemy, Consul of the Republic of France in Chicago, on behalf of the recipient. Mr. Charles L. Hutchinson then assumed direction of the meeting and, presiding as toastmaster, introduced Mr. Lorado Taft and Mr. Oliver Dennett Grover. Eloquent as these gentlemen proved to be, the silent eloquence of their surroundings will long remain an impressive memory in the minds of those present. The building had been especially prepared for this unusual event. To say that it had been decorated would be misleading, for there was scarcely any decoration at all in the accepted sense, but only the barest simplicity. The rotunda itself, vast, and domed with its sombre stony walls and stately columns, was shadowy and dim in the soft flare of shielded lights, and the guests dined in a kind of classic gloaming. Outside, the moon in a cloudy sky shed fitful gleams on the decaying portico and colonnades, and spread a silver greenish sheen on the still waters of the lagoon. The scene was altogether lovely, and however well the building may be restored, it will never look as well as it looked that evening in the eyrie light. The cracks and fissures in the stucco, the splotches and stains and patches of rusty brickwork here and there gave it a softness, a mellowness and a dignity that cannot be recovered in a thousand years. So, with this memory almost wholly architectural, the delegates dispersed.

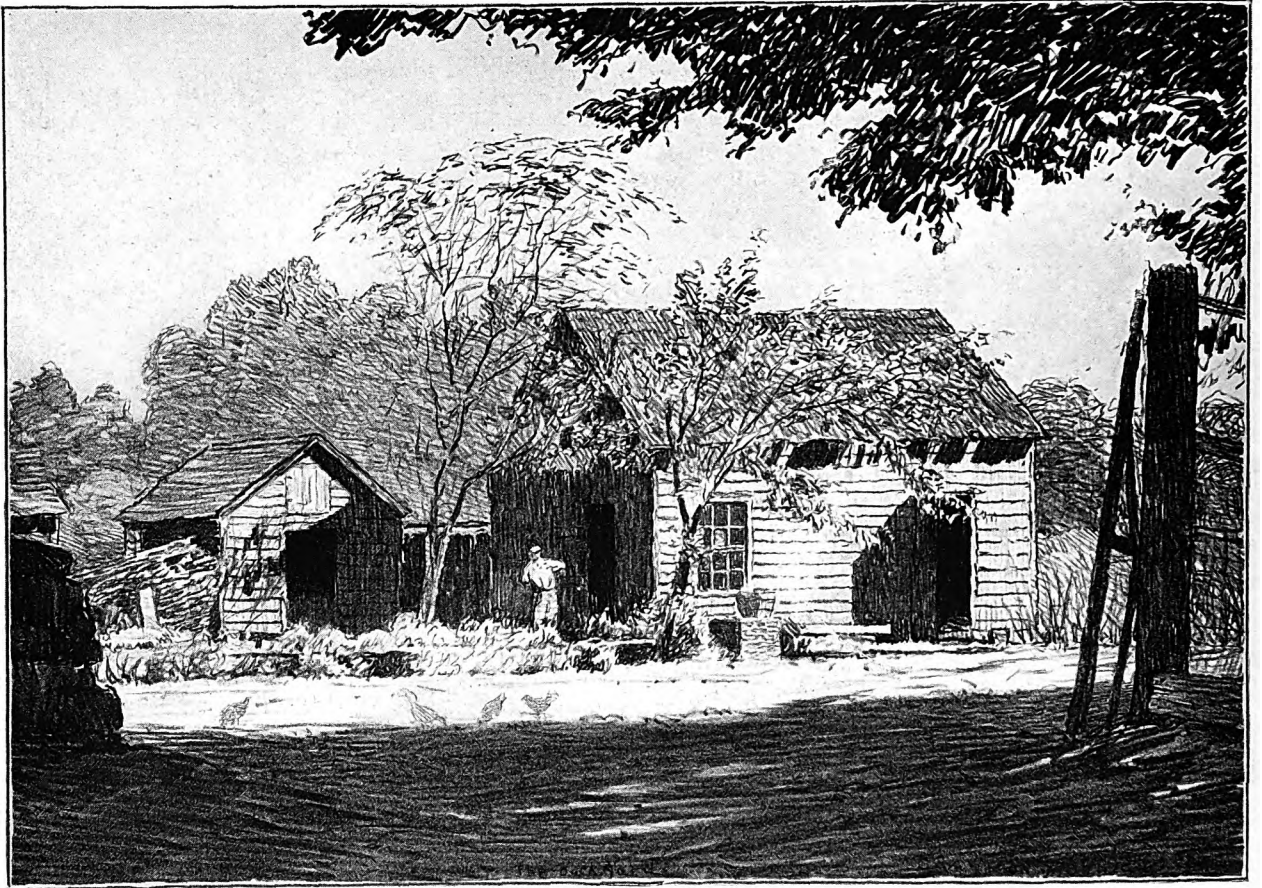


## Nine Lithographs

By BOLTON BROWN

From time to time the JOURNAL has published reproductions of lithographs and has commented upon the growing interest that is being taken in this simple and yet marvelous reproductive process. The lithographs by Mr. Brown are now published because apart from their value as lithographs, they offer excellent examples of the varying values of line and tone, which lithography permits. Toward this aspect of the art Mr. Brown has given special study and those architects who have experimented with the lithographic stone will be interested to see what he has done. Also, they will be further interested to know that each of these lithographs was drawn on stone on the spot, since Mr. Brown contends that there is really no other way to make a true lithograph, an opinion on which there are many who agree. It is our hope that more and more architects may come to see the value of lithography as an auxiliary method of presenting their work to the public.

AT ZURICH



THE BACK YARD  
Bolton Brown

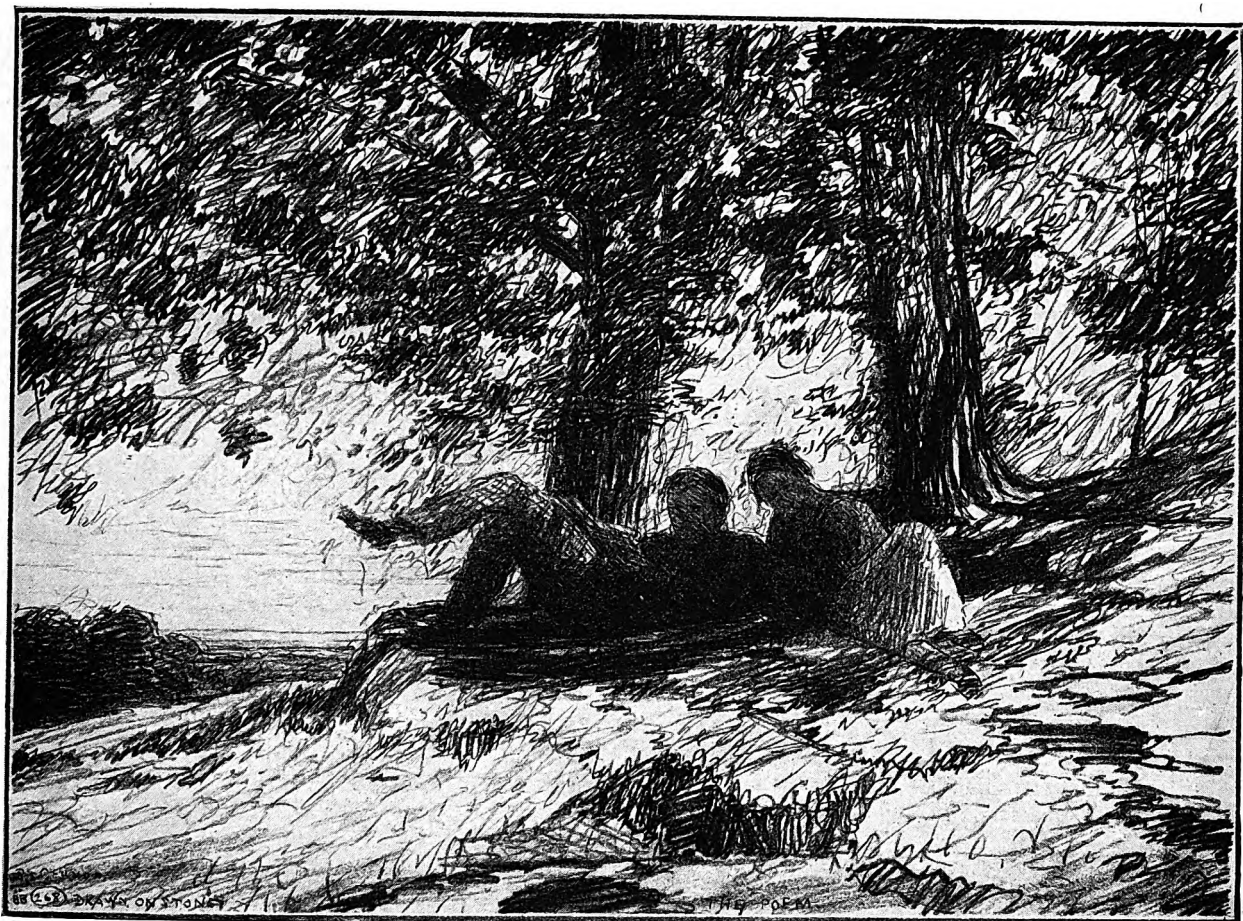


THE MOUNTAIN  
Bolton Brown





TWO MAPLES  
Bolton Brown



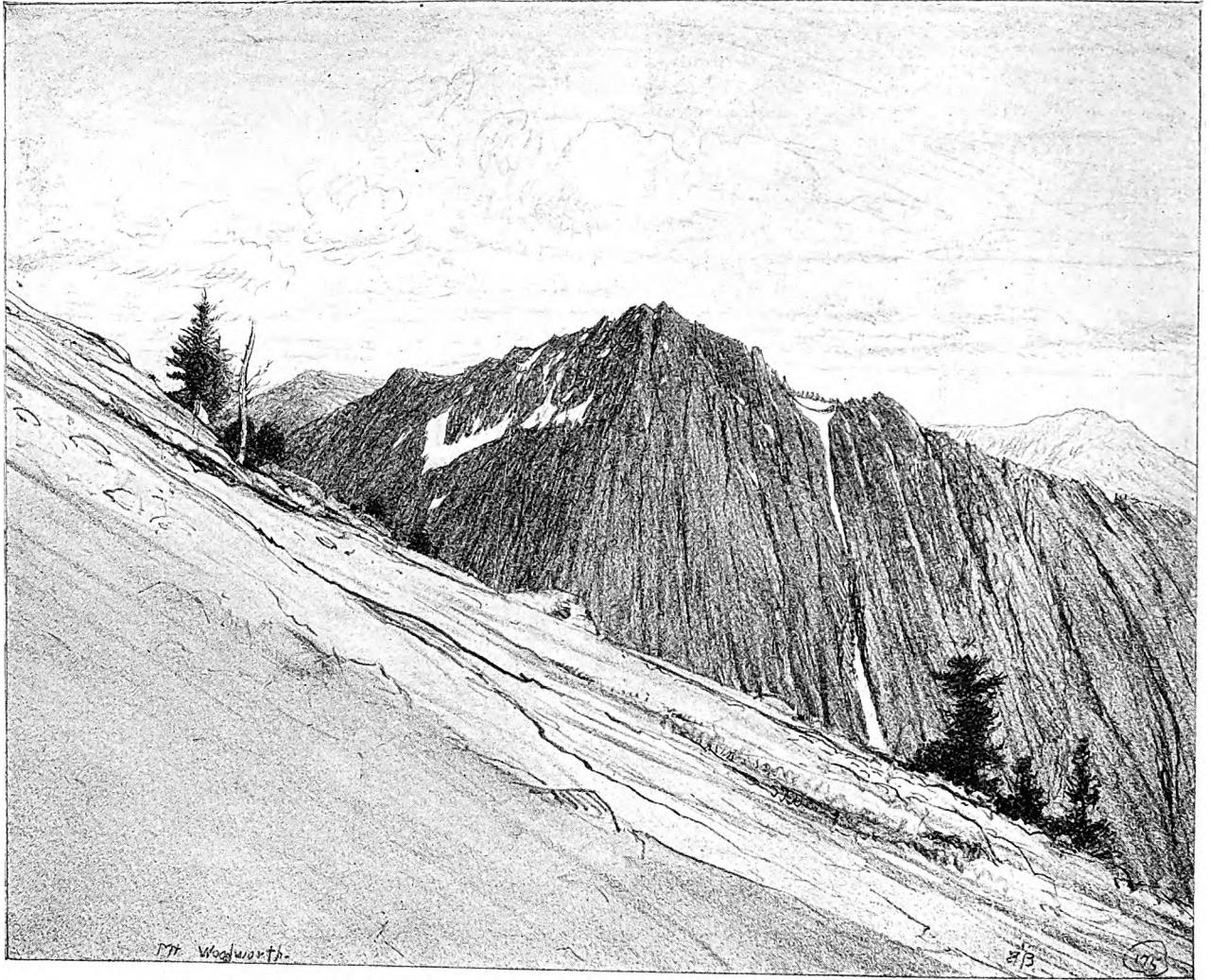
THE POEM  
Bolton Brown



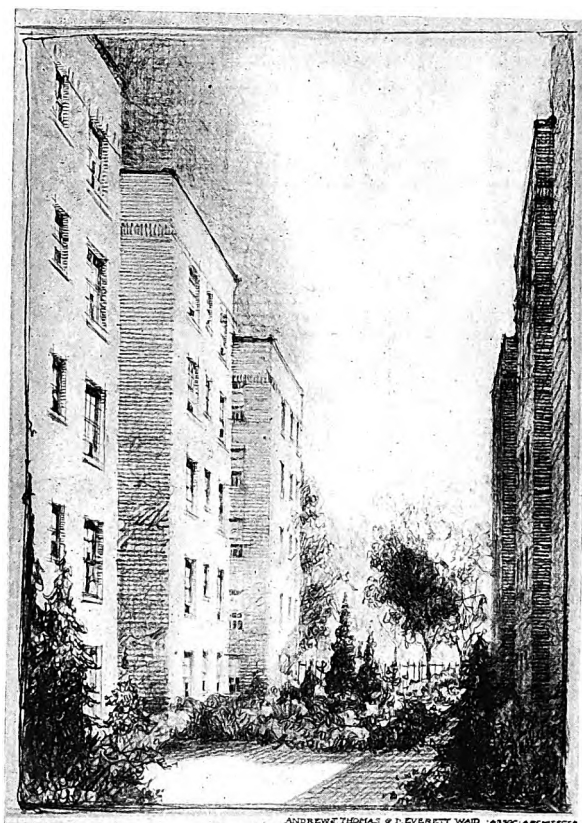
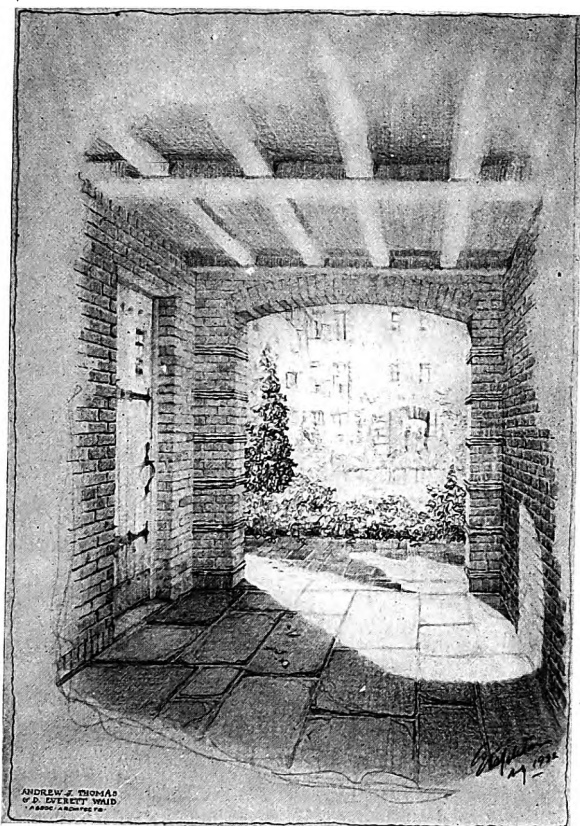
MORNING SUNSHINE  
Bolton Brown



EDGE OF THE WOODS  
Bolton Brown



MT. WOODWORTH  
Bolton Brown



## The Housing Project of the Metropolitan Life Insurance Company

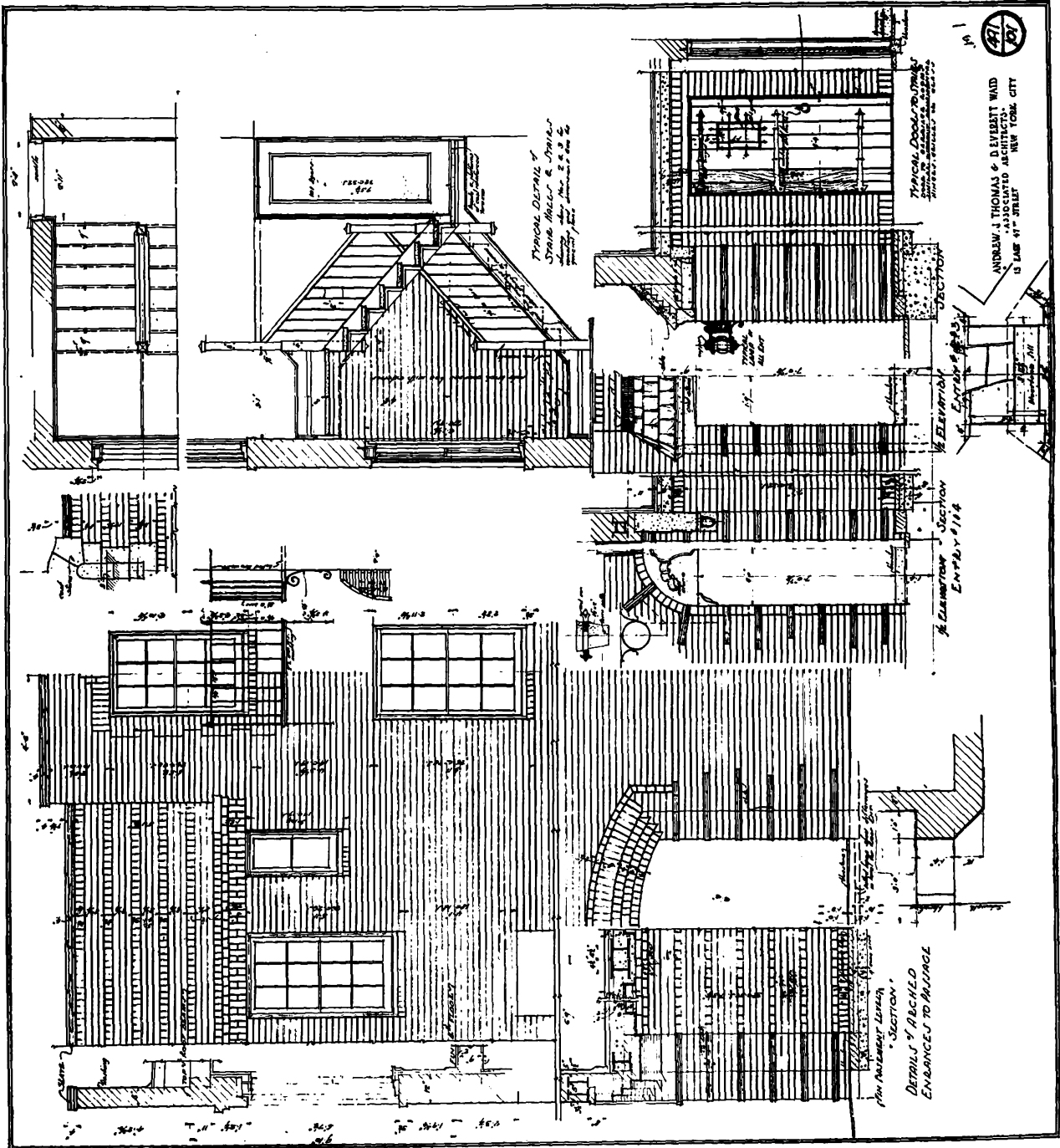
The accompanying illustrations will convey an idea of the extensive housing development to be sponsored by the Metropolitan Life Insurance Company, an intimation of which was contained in our May issue. A complete city block is to be developed, as will be seen, in the metropolitan area of New York City, and the plans are based upon the intensive study which Mr. Andrew J. Thomas has given to the subject of apartment house planning. There are to be fifty buildings or units, each containing thirty-nine apartments, housing in all 1950 families.

Certainly this is one of the most significant operations in housing that has come to the attention of the citizens of the United States. It does not by any means solve the housing problem, as many may quite freely claim, yet on the other hand it does more than any other undertaking has done in pointing the way by which skill in architecture can be made to serve, as well as showing the way by which people may look to their own effort as a way out. Is there any reason, for example, why groups of working men cannot combine their earning power, their savings, and their credit to do what is here being done for them? And if they can educate themselves to the point of utilizing that sort of co-operative effort, why may they not see that the principle of co-operation can be applied in infinite detail? In no other way shall we be able to provide decent and comfortable homes for those earning a low wage, or even for those earning a little better than a low wage. Every country on earth has

had to confess utter inability to answer that problem.

In his long and devoted studies, made often at great sacrifice, Mr. Thomas has demonstrated that the mad scramble to cover the largest possible area of land, in a tenement house scheme, is a mistake. We have long known that it was a sad mistake from a humanitarian point of view, but he has shown that it is a mistake even from the sordid point of view which concerns the investor. We say sordid in no spirit of personal disparagement. The housing business proceeds on the theory of investment and interest. It can proceed in no other manner as it at present functions. The point is that in so proceeding it must of sheer necessity sacrifice both quality and quantity of housing in order to get in under the wire. If we are willing to admit this we shall begin to understand the question of providing good houses at a low rental. It is noticeably true that the project under discussion profits from the scale on which it is undertaken. All the financial savings are here possible, but, in addition, there are incomparable gains in the possibilities of developing a whole city block at a time. The long garden, for instance, some 36' by 100', the ample courts, the simple circulation, and the savings in space, due in large measure also to the very skillful planning. The economic unit from which the scheme derives is that of a rental of nine dollars per room per month, and the financial outcome of the project will be watched with interest.

Mr. D. Everett Waid is associated with Mr. Thomas.



TYPICAL DETAIL OF  
STRAUB HALL & STAIRS  
ARCHITECTS  
NEW YORK CITY

TYPICAL DOOR TO STAIRS  
ARCHITECTS  
NEW YORK CITY

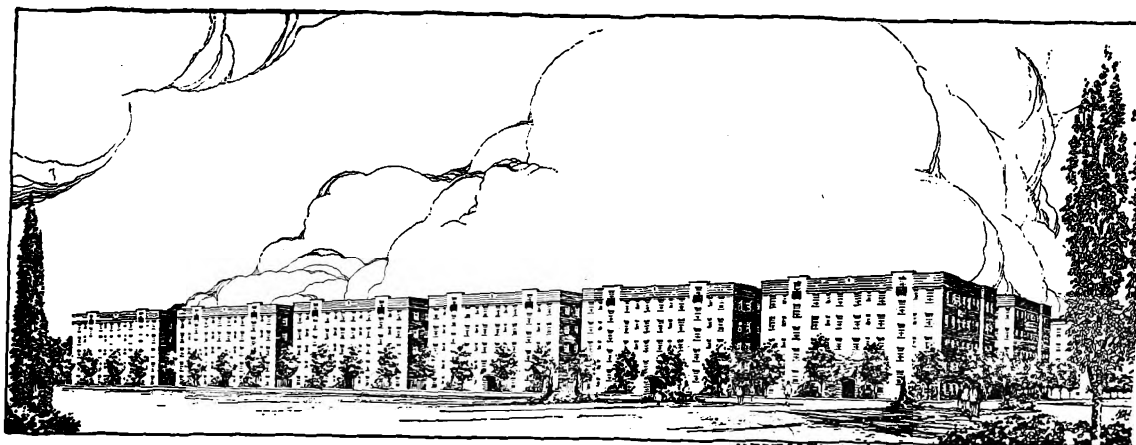
DETAILS OF ARCHED  
ENTRANCES TO BALCONY

SECTION  
ELEVATION  
ENTRANCE

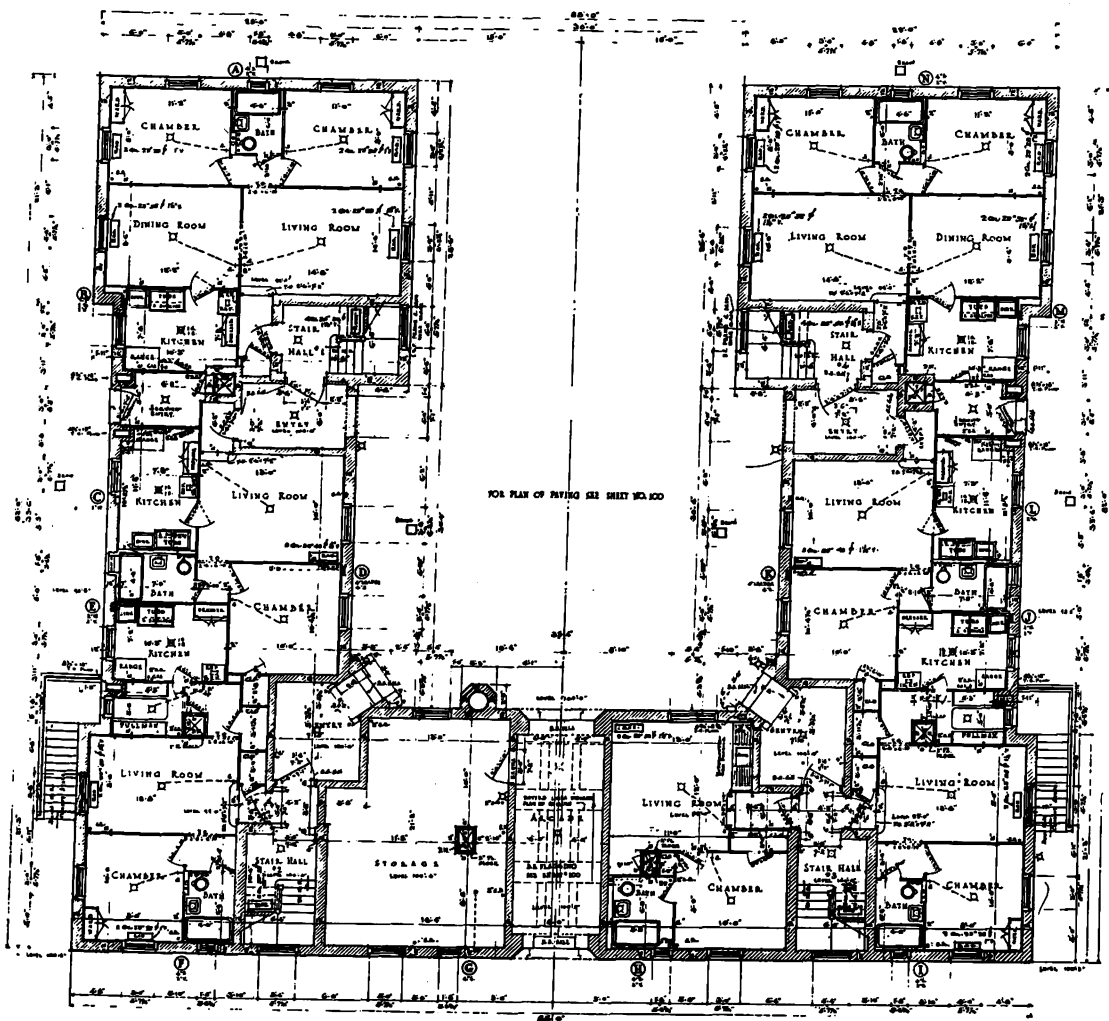
ANDREW J. THOMAS & D. EVERETT WARD  
ARCHITECTS  
13 LAKE 47th STREET  
NEW YORK CITY



THE HOUSING PROJECT OF THE METROPOLITAN LIFE INSURANCE COMPANY



ANDREW J. THOMAS & D. EVERETT WAID ASSOC. ARCHITECTS

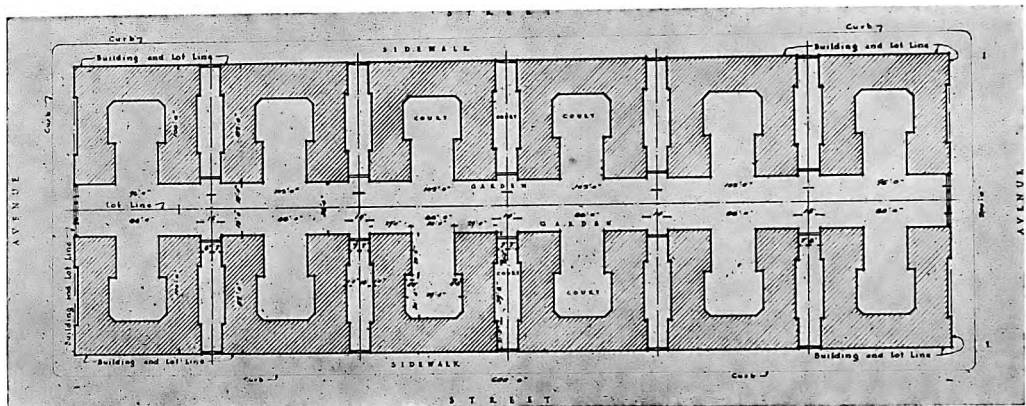


PLAN OF BASEMENT  
SCALE 1/4" = 1'-0"

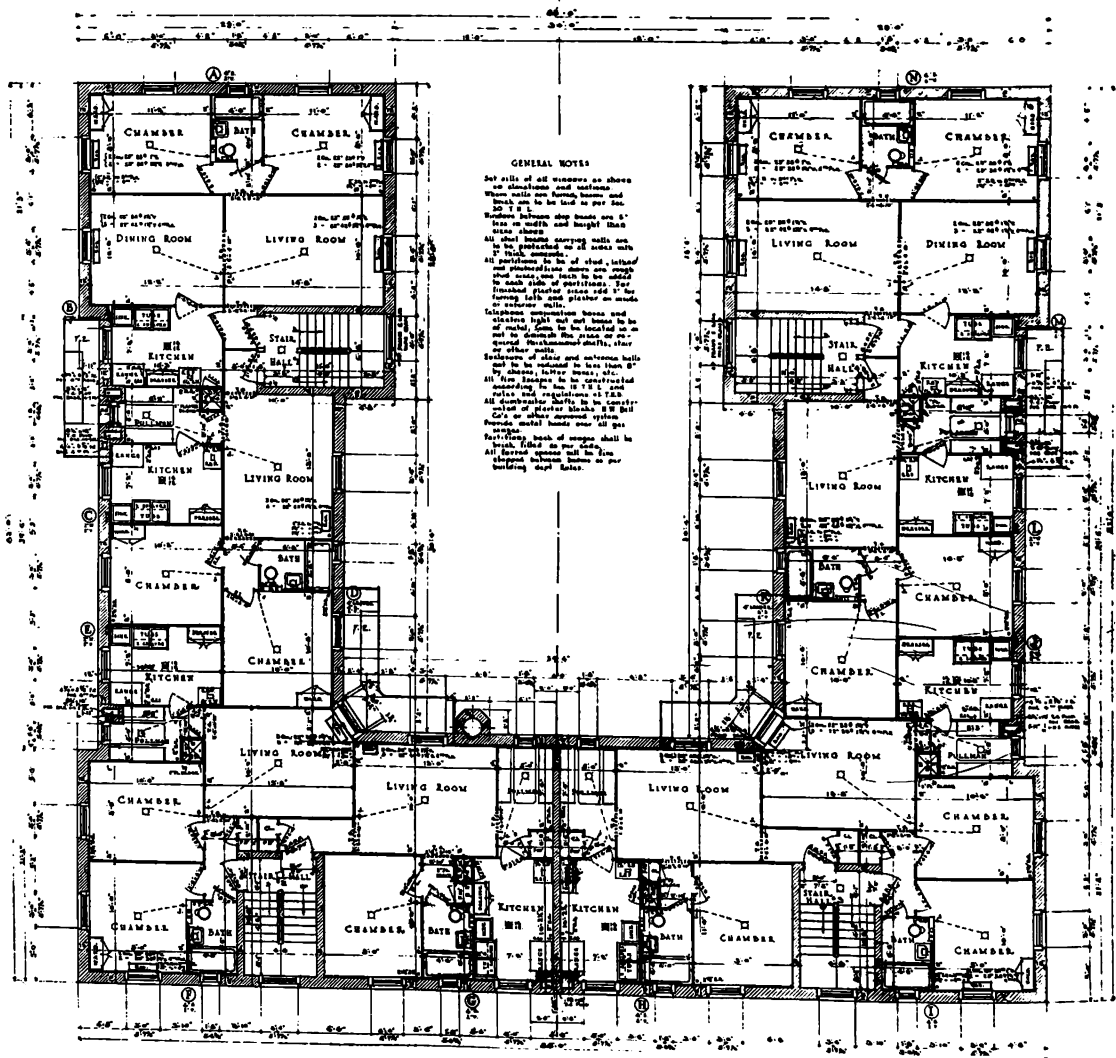
COPYRIGHT MAY 1914 ANDREW J. THOMAS & D. EVERETT WAID

ANDREW J. THOMAS & D. EVERETT WAID  
ASSOCIATED ARCHITECTS  
15 EAST 67<sup>TH</sup> STREET, NEW YORK CITY





BLOCK PLAN



GENERAL NOTES

Set sills of all windows as shown on elevations and sections. Where walls are formed, beams and joists are to be laid as per the S.T.R. 117.

Staircases between the floors are to be less in width and height than those shown.

All steel beams carrying walls are to be protected on all sides with 1/2" thick concrete. All partitions are to be of solid masonry and shall be built on masonry walls. Fireproof floor joists are to be formed with steel plates on ends of wooden joists.

Telephone connections on beams and electric light and gas lines to be of metal. Cables to be located so as not to disturb the floor or ceiling. Mechanical shafts, pipes and other ducts.

Stairways of stone and entrance halls to be shown. Interior walls are to be shown. Interior walls are to be shown. Interior walls are to be shown.

All fire escapes are to be constructed of steel. All fire escapes are to be constructed of steel. All fire escapes are to be constructed of steel.

All elevators shall be in compliance of elevator blocks of S.T.R. 117. All elevators shall be in compliance of elevator blocks of S.T.R. 117.

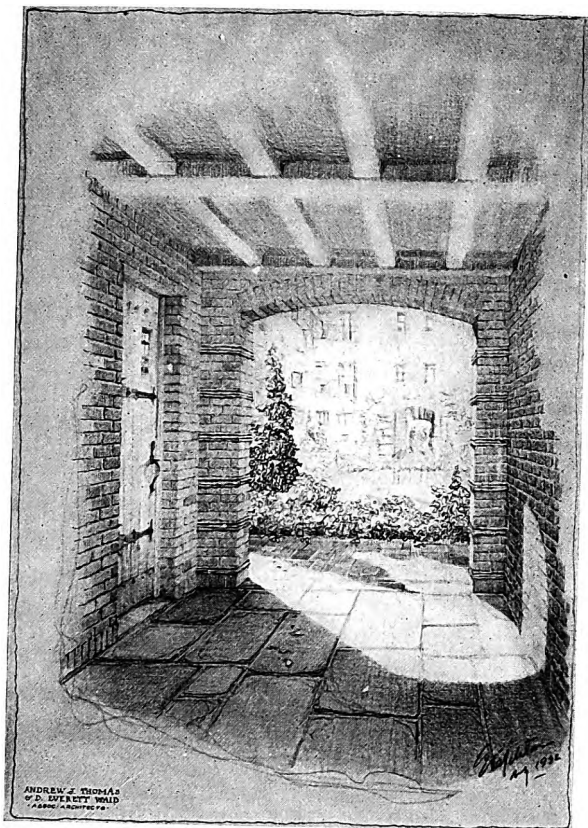
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PLAN OF 1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup> & 4<sup>TH</sup> FLOORS  
SCALE 1/4" = 1'-0"

ANDREW J. THOMAS & D. EVERETT, ARCHT.  
ASSOCIATED ARCHITECTS  
15 EAST 47<sup>TH</sup> STREET - NEW YORK CITY

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## The Housing Project of the Metropolitan Life Insurance Company

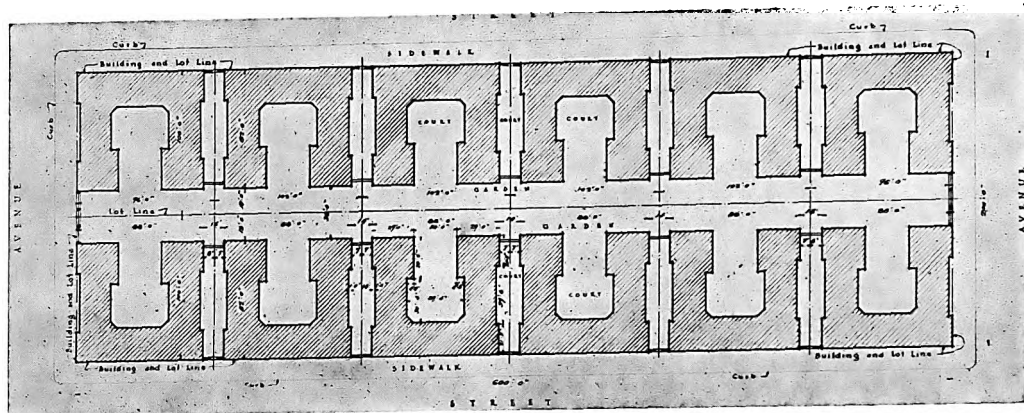
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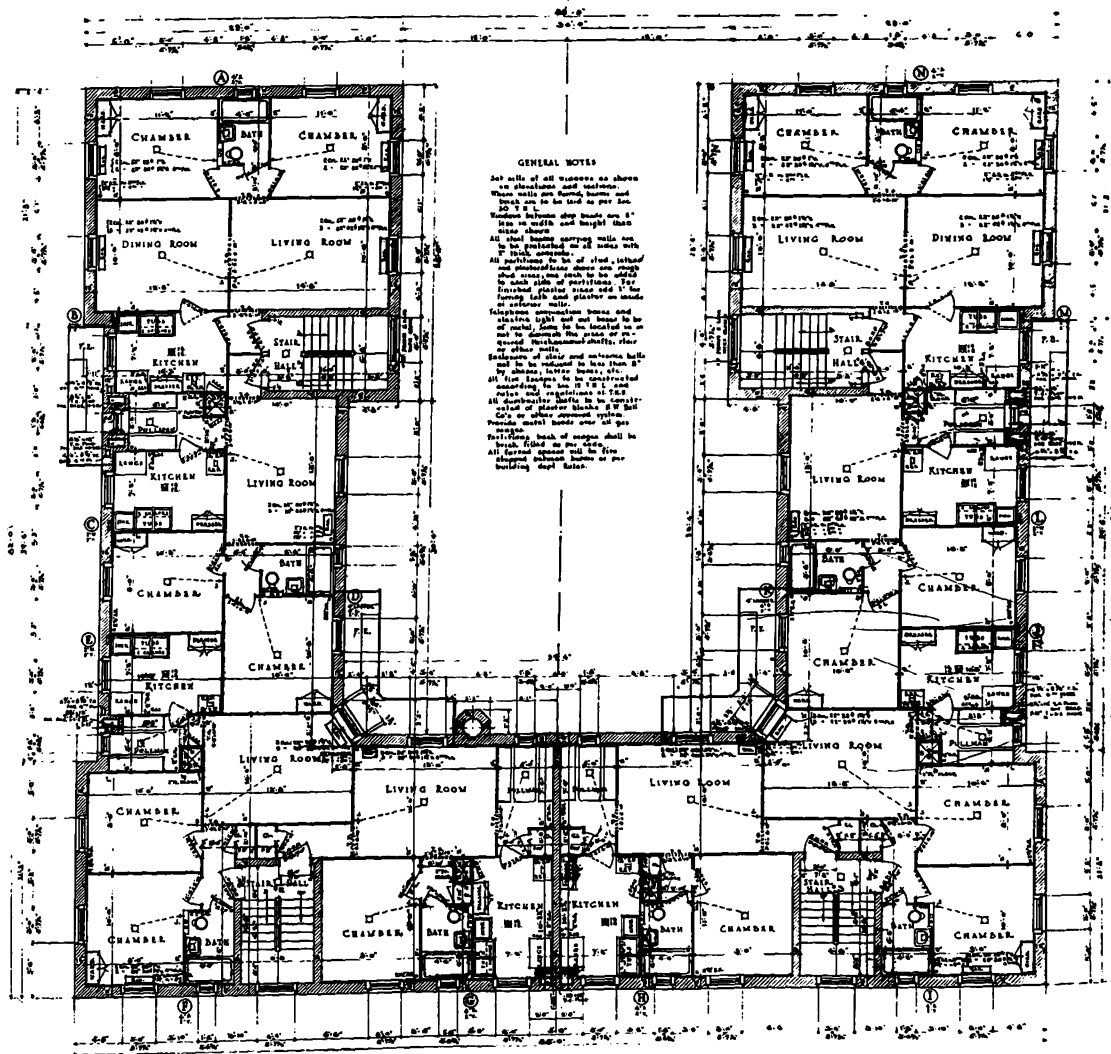
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BLOCK PLAN



GENERAL NOTES

Set outs of all windows as shown on elevations and sections. These walls are double, header and bench are to be laid as per loc. and 2" l. c. in wall and height 1/2" thick concrete. All steel beams carrying walls are to be protected on all sides with 2" thick concrete. All steel beams above one story shall carry one inch of lead, galvanized and galvanized sheet one inch thick, spaced one inch to be added to each side of partitions. For finished glass doors and 1/2" for frame, lead and glass on inside of window walls. Telephone connections to be made to each floor, the place of an electric meter, and entrance hall and to be indicated to be less than 8" by above, in the lobby, etc. All fire escapes to be constructed according to law of N. Y. and all other details to be in accordance with the Code of Laws of the City of New York. All other details to be in accordance with the Code of Laws of the City of New York. All other details to be in accordance with the Code of Laws of the City of New York.

PLAN OF 1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup> & 4<sup>TH</sup> FLOORS  
SCALE 1/8" = 1'-0"

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## Convention Notes

PRESIDENT Faville is the nineteenth to be elected by the Institute and is the first president to be chosen from west of Chicago.

THE Association of Collegiate Schools of Architecture held its annual conference on the two days preceding the Convention and a report of its proceedings is promised for our next issue.

THE Honorable Herbert Hoover was made an Honorary Member of the Institute in recognition of his services to the building industry.

PRESIDENT Kendall announced, at the dinner on Friday evening, the competition to be held by the *Chicago Tribune*, a complete account of which appears in our advertising pages.

THE CONVENTION supported the Committee on Education in urging upon the College Entrance Board the advisability of including the history and development of art in its examinations for admission to college.

A TRAVELING Scholarship for the purpose of study in the use of marble was also announced by the Committee on Education. The funds for this in the amount of \$1,800 a year are to be contributed by the Alabama Marble Company, and the particulars will later be announced.

A NEW Jury of Fellows was ordered to be established. It is to be appointed by the president and we believe that it is the intention to confine it, as far as possible, to Past Presidents of the Institute. Its task will be the restoration of Fellowship to the dignity which ought to surround it.

THE amount to be set aside in the Reserve Fund is reduced from fifteen to ten per cent of the Institute's income from dues. We believe the majority will welcome a financial change which promises to provide more money for the advancement of architecture in the very present present, rather than in the very future future.

TO AID in planning for the Institute's growth in income and expenditure the Convention authorized the creation of the Finance Committee recommended by the Board in its report. The Committee is to be so arranged that one new member will be added annually and it will be its duty to develop a continuous financial program and draft budgets.

IT WAS an impressive moment when, after President Kendall's eloquent tribute to the Ecole des Beaux Arts, those graduates present at the dinner were requested to rise and assemble at the foot of the speaker's table so they might be presented to Monsieur Barthelemy, who received the Institute Gold Medal on behalf of Monsieur Victor Laloux. Mr. Van Pelt addressed Consul Barthelemy, who responded most cordially.

THE National Council of Registration Boards held its annual meeting on the evening preceding the Convention and struggled with some of the problems which have arisen in the methods of granting reciprocal registration. The Council should be ready to make some public announcement in the near future as a means of satisfying

those members of the profession who are being denied registration upon what seem to them to be the merest technicalities.

THE JUNIOR class of members is now established, by act of the Convention. They will be known as "Juniors" and any graduate from a recognized school of architecture is eligible for admission, providing application be made within one year of the date of graduation. The membership will expire automatically at the age of thirty and in the meantime a Junior will be bound under the disciplinary rules of the Institute. The annual dues will be \$5.

ARTHUR Matthews of San Francisco, and Frederick W. Goudy, of New York City, were awarded Institute Medals, the former for his work in decorative painting and the latter for his contributions to the art of typography. Illustrated articles in connection with these awards will later appear in the *JOURNAL*. A gold medal was also awarded to Dr. C. Howard Walker in recognition of his literary contributions to the furtherance of art, and a silver medal was bestowed upon Mr. R. Clipston Sturgis for his work in the same field.

CANON 11 was stricken out and in its place there was ordered inserted in the Circular of Advice the following:

"To compete knowingly with a fellow architect for employment on a basis of professional charges is inconsistent with the spirit of this code and belittles the profession in the eyes of the public. An architect should take reasonable steps to ascertain if other architects are also under consideration and in no event should he depart from his own or any general standard of charges for the purpose of underbidding his competitor." In other words, Canon 11 has gone the way of the old Canon on advertising, and architects are merely reminded, albeit with some devious language, that they are engaged in practising a profession rather than in a hunt for business. But, as Mr. Morris pointed out in a recent issue of the *JOURNAL*, there can be no actual competition in the price of anything until the measure of the price has been established.

THE proposal to deprive the Standing Committee on Competitions of the discretionary power vested in it or to limit or abridge that power, was not approved by the Board of Directors and the Convention concurred in its disapproval. The Board's report summed up the matter very properly when it stated that neither the Standing Committee nor architects should be brought to trial because in the opinion of someone the Standing Committee had acted unwisely in exercising its discretion. This statement of course grew out of the charges preferred by certain members of the Kansas City Chapter in the case of the competition for the Kansas City War Memorial, the competition having been approved by the Standing Committee and having been participated in by some of those who later preferred charges. We are glad to say that the Kansas City Chapter has, since the resignation of those of its members who could not agree with the report of the Committee on Practice (which dismissed the complaint), affirmed its support of the Stand-

ing Committee and of the Competition itself. The Convention acted wisely in leaving the discretion where it is, for, as in the case of the Indianapolis competition now being formulated, it is clear that the discretionary power is the best evidence of the Institute's good faith in trying to guide competitions in the public interest.

## The Producers' Section of the Structural Service Committee

The Conference at Indianapolis in November last between members of the Institute and the Producers of Building Materials has been reported in these pages. There was a second Conference at Chicago immediately preceding the Convention in June, at which there was adopted the resolution referred to by Mr. La Beume in his article in this issue. This means another considerable step in the direction of making the distribution of advertising literature to architects more effective and less costly.

It is the object of the JOURNAL and its Structural Service Department to increase the efficacy of advertising by reducing its volume and consequently its cost, and this point is coming more and more to be recognized. *Good advertising is cheap. Poor advertising is dear. Good advertising means reducing the cost of building. Poor advertising means increasing the cost of building.* That is the story in a nut-shell.

On behalf of the Continuing Committee which grew out of the Indianapolis Conference, Mr. O. C. Harn, of the National Lead Company, presented the resolution concerning the Producers' Section of the Structural Service Committee to the Convention, and he summed up the situation in an admirable manner by saying:

"Out of the clear sky last fall I received a letter from your esteemed president inviting me to attend a conference on the subject of advertising, to be held in Indianapolis in connection with the meeting of the Board of Directors of the Institute. I had no acquaintance with this movement. I didn't know what it meant, but being a manufacturer who sometimes tries to get literature into your private offices, I got on the train and went out there.

"I found there a number of manufacturers and a number of architects, mostly members of the Board, and I was asked to address this joint conference after one of your members had made a rather bold arraignment of the advertising which we manufacturers sent to you; he made a good case. One of the other architects at the conference added some horrible examples of the kind of things we manufacturers perpetrate upon you architects, and we seemed about ready to go to court.

"But it occurred to me that there was another side to the question, and as the architects had talked pretty plainly, I ventured to do likewise and to submit that when it came to the question of advertising you architects didn't know it all. Thus, before we got through we were about in the position of the negro who preached a very good sermon to his congregation one Sunday morning upon the subject of the ark of the covenant. He had a great

deal to say on the subject of seraphim and cherubim. After he had preached a good deal longer than I am going to talk, one of his hearers came to him and said: 'Deacon, that was sure a fine sermon that you gave this morning; that was a very uplifting sermon. But Deacon, is there any difference between a seraphim and a terrapin?' The Deacon was puzzled; he scratched his head and finally said: 'I believe there was some difference but they have made it up.'

"We went into conference after those two speeches of very plain words on both sides, to which I have alluded, and we found out, as a philosopher once said, that most arguments would cease if we could only agree upon the meaning of words. All differences pretty nearly come out of a difference in our understanding of words and what we are trying to get at, and after architects and manufacturers had sat in a two-day conference, we found we were pretty nearly together.

"We have to grant that you need materials out of which to visualize your dreams. We manufacturers are in the business of making materials. We don't all make good materials, neither do you make good designs all the time. I know that because you have admitted it this morning.

"It is with the idea to better building, to couple the best designs with the best materials, and to eliminate the poor designs and the poor materials that we are here. Now let's get together. For example, we found in the Indianapolis conference that this was not a touch-and-go proposition. It was nothing that we could solve there because the problem was going to be a continuing one as long as buildings were built and as long as architects were architects. And so we saw the thing to do was to provide for a continuing body. We did appoint what you might call a continuing committee for a short time and we had an executive committee of architects and manufacturers which met quite frequently and we had a conference here on the first two days of this week (5-6 June). The result of the conference was a very small document, but like the minister who said he preached such a long sermon because he didn't have time to write a short one, this little document is the result of all those months of conference and, finally, of the conference from seven o'clock Monday night to two-thirty Tuesday morning, and I can say that practically every word was debated during that session. The resulting document is a brief for your consideration because of the fact that somebody has given a lot of work to it. I will read this as a resolution and then leave it for your consideration.<sup>1</sup>

"I have one or two words in explanation of the resolution. If the manufacturers of the country were asked to form a new organization which might come into contact with you, to solve these problems that you wish solved, they probably would say we are organized to death already. If, on the other hand, a suggestion should be made that this idea be taken up by some present manufacturers' organization, then you might become involved in things you do not want to be involved in. So we have proposed that you simply expand your own going Committee on Structural Service just as far as you want to go, and no farther.

<sup>1</sup>This resolution appears in the Structural Service Department, under Committee Activities.

## AN ENGLISH VIEW OF ARCHITECTURAL EDUCATION IN THE U. S.

"Getting the support of manufacturers in the work you have in mind and in the work you have already started, will simply be a matter of expansion at your own invitation."

THE PRESIDENT: I wish to thank Mr. Harn for this clear presentation of the subject and the manner in which the resolution was presented. (The resolution was unanimously adopted.)

### An English View of Architectural Education in the United States

When our genial and sanguine friend, Robert Atkinson, Director of Education, Architectural Association School of Architecture, London, dropped in on us (meaning not me but all of us) a year or more ago, we hardly realized that his enthusiastic exterior hid a critical eye and an analytical soul which would record its impressions and deductions in due form in a "Report on the Education of the Architect in the United States of America." This report in attractive dress and of considerable length has just come to hand.

To the architect and critic who has been bemoaning the fact that Architecture in the United States has been for the last thirty years tossing about in the doldrums of eclecticism, without the north star of a purpose or the guidance of a directing genius, the first paragraph of Mr. Atkinson's report comes as a tremendous shock. Here it is: "After visiting the States the broad impression left on the mind is that the Mistress Art *lives* in America as it lives in France, and in no other country in the world. That is to say, that in America, as in France, Architecture is a national plant with a national flower, cultivated by a profession, but drawing its life from the people." Changing Mr. Atkinson's metaphor, truly any ship looks beautiful but the one the decks of which we tread, and, turning from our own heterogeneous, if costly, cargo and clearing the coal smoke from our eyes, we have seen England and France as fairy galleons with harmony, taste, and beauty manning the silken shrouds and with a national artistic purpose at the wheel. But here comes this new Christopher Columbus, who says we are all wrong, that our smoky, noisy leviathan is the pearl-hued galleon, and that the arts and graces fare forth with us; and all this he ascribes to education.

In its development he discerns four distinct phases. First, in the latter quarter of the nineteenth century certain master minds dominated architectural education, whether by precept or by example Mr. Atkinson does not state. Next is the period of Beaux Arts domination, when imported French professors and the atelier system came in violent conflict with the old technical school system, in which Architecture was the handmaiden to Engineering. Third, a union of the technical school system and the Beaux Arts system, or what Mr. Atkinson calls a compromise. "It consisted roughly in the enlargement of the department of architecture in the great technical schools, in the employment of Beaux-Arts masters to teach design and the maintenance of an engineer as head of the department." In the fourth place, now beginning, he finds Architecture "awake and aware,"

and, while the Technical-Beaux Arts compromise continues to function with great success, great attention, he says, is being given to problems of architectural education and to the gradual elimination of its obvious evils.

Your reviewer can see, instead of the "four distinct phases" of Mr. Atkinson, only a gradual and healthful evolution. The first great architectural course (at the Massachusetts Institute of Technology) was organized with a Frenchman, M. Letang, at its head, and operated very much as it does now. The great period of Beaux Arts influence from 1900, lasting for about a decade, was noticeable in the draughting-rooms of the practitioners and not in the schools, which, after all, could not have been affected much, as they had always followed the Beaux Arts or standard methods of architectural study and presentation.

It is only in the organization of the Beaux Arts Society and its programs, which Mr. Atkinson does not mention, that the Beaux Arts has been injected in any greater degree than formerly into the schools. No, we have had, I am quite sure, a gradual evolution, in which the method of teaching has changed not at all, but in which engineering subjects such as higher mathematics and physics are being gradually eliminated, and the student is being more and more prepared for instant service and immediate pecuniary return on his graduation. In this we see the scrapping of two moss-grown theories; first, that such subjects as the calculus furnished invaluable and elsewhere unprocurable mental training, and, secondly, that it was useless to give practical instruction in the school; all this must be acquired in years of ill-paid work in an architect's draughting-room.

Continuing, the report finds that "the triumph of American schools has been in the region of culture," that "the architect's relation to building remains a cultural liaison," that "a close training in Greek culture and its derivatives has *not* led to æsthetic freedom, but has tended to stereotype," "education should be concerned with the development and liberation of imaginative effort." Mr. Atkinson continues his report with a description of the "General Constitution of Schools in the U. S. A.," and ends with the publication of the curricula in full in Architecture of the following institutions. Especially interesting are the brief remarks which he appends to his description of each institution. Columbia University,—*"the design side is very strongly stressed and the art side is not very strong."* Massachusetts Institute of Technology,—*"Although not possessing any notable teachers (written before the appointment of Professor Emerson) the spirit of co-operation between the professors and the sympathetic way in which they handle the students probably explain its superiority over other schools."* University of Pennsylvania,—*"is usually recognized as the leading architectural school in the United States, owing, I think, to the organizing genius of Professor Laird and the teaching ability of Professor Cret."* University of California,—*"The school suffers through not being near any museums or places where old work may be studied, although there is very good modern work in San Francisco."* Carnegie Institute of Technology,—*"The teaching of construction subjects is*

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weak. The younger professors are very good but have no authority and feel rather restricted." Armour Institute of Technology, Chicago,—“stresses design very strongly at the expense of other subjects.” Cornell University,—“Poor position for an architectural school”; “the school has a very good atmosphere.” University of Michigan, Ann Arbor,—“Professor Lorch is very keen on modern design, and starts his students very early upon pure abstract design as an exercise in ingenuity and observation.” University of Oregon,—“This is one of the newer progressive schools of the West.” Among his general conclusions he opines that the English schools have much to learn from America, that there is considerable friction between the anti-atelier and pro-atelier professors, that the usual school of 200-300 pupils is inelastic and likely to suffer “through the personality of a single principal; that a school suffers when the atelier system is grafted on the old technical school system; that schools in America fail to retain their students after their school training is completed.” But perhaps more significant than any conclusion in his report is the remark that he made to the writer last spring in London,—“The greatest influence in English architecture today is the United States.” THOMAS E. TALLMADGE.

## Tenth International Congress of Architects

Brussels, 4-11 September, 1922

The Tenth International Congress of Architects will be held under the auspices of the Société Centrale d'Architecture de Belgique in Brussels, 4-11 September, 1922, coincidentally with an International and a National Retrospective Architectural Exhibition.

There was never a more auspicious moment than the present for holding an International Congress. The War, it will be remembered, brusquely interrupted the preparations of the Tenth Congress which was to have been held in Petrograd in May, 1915, under the august protection of H.I.M. Emperor Nicolas. During and even since the War the architects of various countries have been isolated from each other. The Société Centrale will be celebrating the fiftieth anniversary of its foundation at the time of the Congress and the Belgians believe that as their country was the center of the theatre of War, where so many peoples mingled their blood, their former *confrères* will be glad to see their reconstructive progress and will also rejoice in the vitality of the Belgian people.

The Congress, which will include delegates from all friendly countries, will be held under the distinguished presidency of M. Girault, Member of the Institute of France. The Belgian Committee under the Chairmanship of M. J. Caluwaers, with R. Moenaert as Secretary, is assured of the co-operation of Spain, Holland, Canada, Portugal, England, Italy, the United States and Switzerland.

## Program

- 4 Sept. Morning: Meeting of the Permanent Committee of the International Congress of Architects. 2 P. M. Formal opening in the Palais des Academies. Evening Reception.
- 5 Sept. 10 A. M.: Opening of the Architectural Exhibition, in the Palais d'Egmont. 2-6 P. M. Conferences. Evening, Receptions.
- 6 Sept. 9 A. M. to Noon: Visits to buildings of interest in Brussels. 2-6 P. M. Conferences. Evening, Receptions.
- 7 Sept.: Visits to the devastated zone, stopping at Ypres and spending the night at Bruges.
- 8 Sept.: Visits about Bruges, returning to Brussels in the evening.
- 9 Sept.: Excursion to Antwerp, visits about the city and up l'Escaut. 2-5 P. M. Conferences, returning to Brussels in the evening.
- 10 Sept. 9 A. M. to Noon: Visits to the Exposition. 2-6 P. M. Conferences. Evening, Receptions.
- 11 Sept.: 10 A. M. Closing Exercises.

## Subjects for Discussion

1. The responsibilities of the architect.
2. Schedule of Charges.
3. The appointing of State and Municipal Architects.
4. The rights of Authorship of the Architect.
5. The Profession of Architecture; its aims and its rights.
6. Women Architects.
7. Public, National, and International Competitions. The position of the winning architect in an International Competition or of one working in a foreign country.
8. Town Planning.
9. Small houses.
10. The influence of locality on Architecture.
11. The preservation of Historic Monuments; with consideration of their economic, hygienic and social aspects.

## Expositions

An Architectural Exhibition will open 5 September in the Palais d'Egmont, lasting two weeks.

It will be divided in two general classes—(a) Belgian: 1, Retrospective; 2, Contemporaneous. Jury, Messrs. Maukels, Mercenier and Van Montfort. (b) Foreign: There will be as many Sections as there are countries represented.

*Dues*—The dues for members will be fifty francs. Ladies accompanying members (wives and daughters only) will be thirty francs, which will give them the privilege of visits, excursions and receptions.

*Language*—Official Delegates may address the meetings in their own language. The official language of the Congress will be French, though any other language may be used provided a “resumé” in French is submitted at the same time.

## American Architects Invited

All American architects are cordially invited to attend and take part in what will be one of the most unique and original gatherings of architects ever held. The subjects to be discussed are of international interest, the excursions will be instructive and the receptions of unusual interest. This will be the second International Congress of Architects to be held in Brussels, the first being held in 1897. That was the fourth congress to be held in

## FROM OUR BOOK SHELF

Europe; the fifth was held in Paris, 1902; the sixth in Madrid in 1904; the seventh in London in 1906; the eighth in Vienna in 1908; and the ninth in Rome in 1910.

### Permanent Committee

The Permanent Committee of the Congress attends to all the business of the organization between sessions. It also selects the country in which the next Congress is to be held and chooses the subjects for discussion. There are about one hundred members from various countries. The American Section consists of Francis R. Allen, Glenn Brown, W. R. Mead, Cass Gilbert and George Oakley Totten, Jr., Secretary.

All desiring to attend or wishing further information should communicate with the Secretary, 808 17th Street, Washington, D. C.

### News Notes

THE annual meeting of the National Council of Architectural Registration Boards was held in Chicago at the time of the Institute Convention. The report of the Secretary-Treasurer showed that a large number of architects engaged in interstate practice had availed themselves of the services of the organization and that considerable effective work had been accomplished. Steps were taken to lighten the burden of the Secretary.

It is important that architects understand that the Council does not undertake to secure registration or transfer of registration. It is able to save the candidate time and expense in producing a statement of his record which can be submitted to all the states in which he desires to practice.

The Council Senior Examination is a plan worked out by the organization by which an architect registered without examination in his own state may by going before his own State Board ask for an examination for a change of status to one *by examination*, thus greatly facilitating his transfer of registration to those states where examinations are required of all.

The officers for next year are as follows:

President: Arthur Peabody, Madison, Wis.

First Vice-President: Sylvain Schnaittacher, San Francisco.

Second Vice-President: William H. Lord, Asheville, N. C.

Third Vice-President: M. I. Kast, Harrisburg, Pa.

Secretary-Treasurer: E. S. Hall, 1107-64 E. Van Buren St., Chicago, Ill.

The above with E. Lorch constitute the Executive Committee.

"L'ARCHITECTURE," 33 Rue St. Andre des Arts, Paris, 6e., the organ of the Société Centrale des Architectes, extends a welcome to members of the Institute traveling in France this summer, and expresses a wish that they will apply to its offices for any information they may desire.

ARNO KOLBE announces that he is now associated in practice with Jordan Green, Essex Bldg., Newark, N. J.

AN EXAMINATION is about to be held by the Municipal Civil Service Commission, City of New York, for the position of Deputy Superintendent of School Buildings, for which there are six vacancies, at a salary of \$6,500 annually. Two members of the Institute have been appointed by the Commission as examiners for this test. The duties of a Deputy Superintendent of School Buildings are the supervision of the erection of new school buildings and of their equipment; and repairs, maintenance, etc., of all existing buildings. The announcement of the subjects and weights, the duties and requirements of the examination, will be made as soon as it has been approved by the Commission.

THE International Housing Congress will be held at Rome on 21-26 September for the discussion of housing problems and means for their solution. It is hoped that the Institute may be represented by those of its members in Italy at the time. Further information may be obtained from the Executive Secretary of the Institute, The Octagon, Washington, D. C.

### New Honors for Massachusetts

We clip the following item from the *Manchester Guardian*:

"The Dean of Worcester, Dr. Moore Ede, got locked in the Cathedral after Evensong on Sunday and narrowly escaped having to remain all night in the building. After the congregation had dispersed the Dean remained to talk about the Cathedral fabric with an architect from Massachusetts. He believed he had in his pocket his master key to all the exits, and directed the verger to lock up and depart. Later the Dean found he had no key and could not ring the bell or display a signal through the window. The architect, however, was able to unbolt the great converging oak doors at the North Porch, and forcing them both together induced the lock catch to yield. He then climbed over the outer iron gates, 15 ft. high, and got a key from the precentor's house to liberate the Dean."

## From Our Book Shelf

### Heresies<sup>1</sup>

Having just finished reading that serenely beautiful prose poem "Maria Chapdelaine," I am disturbed by the eager voice of Mr. Roger Fry. He has done a "heap of thinking," and has "weighed and found wanting" the accepted theory and orthodox practice of Architectural Design. The "heresies" themselves do not disturb me particularly. Some of them seem quite obvious. Some of them impress me as rather forced or factitious. They do not march abreast. Some are corollary to others and some are the result of looking at both sides with perhaps a hint of compensation for a possible over-statement. I do not get Mr. Fry's distinction between natural and

<sup>1</sup> The Architectural Heresies of a Painter. By Roger Fry. Brentano's, New York City.



æsthetic beauty. At least I do not get it in the way that he does. My old fashioned philosophy does not permit me to acknowledge mere accident in beauty. That which evokes in me the emotional response and intellectual delight (which what I call "beautiful" always does) speaks to me in no uncertain terms of the designer. Beauty often attends unthought of and uninvited by the poor human instrument, but only, I believe, when the processes are natural, sane, logical, poetic. The problem for the architect is to think in harmony with what we call natural law. We are lost in a fog if we trust ourselves to any idea of finding beauty in mental processes that have somehow been cut adrift from the roots that go down deep in our common humanity.

The sensation of disturbance previously referred to is perhaps caused by the realization that we are not going to get very far in architecture or in anything else by bandying arguments. The novel "Maria Chapdelaine" gives one a wonderful mental atmosphere of beauty. It is very simple. Primitive nature, unsophisticated people, an episode of hope, disappointment, self sacrifice are its elements. And yet to have merely read it is a beautiful experience to be remembered always.

We find it hard to philosophize in times of stress. At the bed side where unseen forces are dealing with the life of one beloved, at the cradle where new born humanity in its most gracious and appealing form bids us weave a gauzy texture of dreams for the future, at the grave where our dearest one lies hidden, and grief, stark and desolating, has conquered us utterly: whenever the realities of life are borne in upon us so that we can but thrill or agonize, all criticism and word mongering seems worse than futile.

It is perhaps the severest indictment of Modern Art that we seem to have so much to say about it. But critics we have and may as well make the best of them. So let us give thanks when we find an honest and an unflattering one. Mr. Fry puts it mildly when he says "you will probably agree with me that all is not well with modern architecture." He names ten "heresies," as he calls them, in which he points out some architectural failures and inconsistencies. He is a heretic only to those who accept with smug self-satisfaction all things as they are. The Canadians in "Maria Chapdelaine" accept life as it is but not in self-satisfaction. Their point of view is humility, self-sacrifice and an abiding faith and love. Mr. Fry does not go far enough in some of his analyses but he goes farther than most critics of architecture who are concerned apparently only with appearances and the application of curiously superficial rules.

To those of us for whom Beauty was captured by Vignola with his calipers and measuring rod and stripped of all her mysterious provocation for all time Mr. Fry will seem very disrespectful. To those others of us, however, who still believe in Beauty as emotional, elusive and not to be realized through rules and formulæ, Mr. Fry will give the same enjoyment we feel when our children announce the discovery of some phenomenon which to us has lost all novelty and become an accepted fact. He has not told us anything that we did not

already know but he has phrased it all well in his own way and we are without stint in rejoicing that another kindred spirit has made his little profession of faith in the great scheme of Things as They Ought to Be.

WILLIAM L. STEELE.

## Obituary

John Theodore Comes

Elected to the Institute in 1908  
Died at Pittsburgh, April 13, 1922

The death of John Theodore Comes leaves a void in the architectural life of Pittsburgh and of the nation that will take long to fill. His works, which are many, will not fail to remind his friends, co-workers, and associates of his energetic and tireless personality so long as they shall live.

He came to Pittsburgh about 26 years ago, at the age of 23, bringing with him an enthusiasm for his chosen profession that was to carry him far on the road to success. As a draftsman in St. Paul, Minnesota, he had early developed a facility at pen and ink drawing such as would have won recognition for him had he chosen to pursue this medium of expression. His talent, however, was early directed along the lines of ecclesiastical architecture and it is in this field that he became known from coast to coast.

To his ability and facility for expressing himself by his excellent drawings, he later added a remarkable gift for literary expression, both in writing and in lecture. In this way he gained for his advocacy of the good, the true, and the beautiful in his chosen branch of architecture a national audience that has been equalled by few other architects. Believing that men are influenced for good or evil by the nature of their surroundings, he applied all his energy and enthusiasm to the improvement of the character of architecture wherever he could make his influence felt. That he succeeded in large measure is attested by the many commissions that came to him from all parts of the country. His interest was not confined to architecture alone, but embraced the allied arts of painting, sculpture, metal working, stained glass and ceramics.

His burning faith and love for his Church was a religious instinct almost Mediæval in its ardor. It carried him steadily onward to better and greater achievements, and his tireless devotion will remain alive in all his buildings. At the time of his death his work of creating beautiful Church Architecture was growing faster than ever. Much had been accomplished but much more lay at his hand. "How inconsistent," he said, "to teach from the pulpit that the Church is the ground and pillar of truth, when perhaps the architectural pillar located back of the speaker, instead of being a pillar of honest masonry, is nothing but a sham of metal lath and plaster, painted to simulate marble, thereby violating the vital principle of truth in architecture."

Although the range of his work necessitated his frequent absence from home, he was ever ready to contribute his available time and efforts for the betterment

## LETTERS TO THE EDITOR

### Letters to the Editor

Mumbo Jumbo (*Continued*)

of art in the city of his adoption. He was the creator and chief organizer of the Pittsburgh Architectural Club,—an opportunity that he embraced almost as soon as he joined the architectural community of Pittsburgh. Often he has told us of the pride and satisfaction he felt that he was privileged to accomplish this work, and he ever took an active part in all the life of the community and gave unsparingly of his time and energy to help forward all public movements for the advancement and improvement of the city and its affairs. Often it was his call to lead and initiate. In the Architectural Club for many years he was its mainstay as well as its Father. In the Pittsburgh Chapter of the Institute he took leading parts in the upbuilding of organized professional effort to its present high standing. He was its Vice President at the time of his death. He was also a member of the Municipal Art Commission.

His was a very lovable character. He had many friends both in and out of the profession. Always earnest and serious in his affairs, he was at the same time ready for humor and the enjoyment of lighter things. But when he was stricken it seemed that nothing in his life was finer than the courage, simplicity, and faith with which he was filled. We shall never forget the last visit made with Henry Kroppf, after he had taken to his bed for the last time. No complaint passed his lips; no lack of interest in life was present; he knew he was doomed but dealt not with his fate. He accepted it, with almost no comment that he, at least, expressed. When we were ready to go he expressed a wish that we would hunt up a Bird House so that he might have it hung outside his window where he could see it from his bed. "Maybe a robin would come and nest in it," he said.

E. B. L. and C. T. I.

#### George Spencer Morris

Elected to the Institute in 1910

Died in Philadelphia, April 12, 1922

George Spencer Morris received his early training in the office of Addison Hutton, Architect, Philadelphia, and after experience in several Architectural offices in Philadelphia, he entered professional practice with William S. Vaux in 1900.

This partnership existed for a number of years when it was dissolved and after a practice alone for three or four years, Mr. Morris formed a partnership with Richard Erskine, and under the name of Morris and Erskine, continued, as the senior member of that firm until his death.

Mr. Morris had many interests outside the profession of Architecture. He was associated with the Academy of Natural Sciences, where he served as one of the Board of Curators, taking the greatest interest in the ornithological section. He had a large private collection of bird skins, which he had personally collected, not only locally but in Florida and the far west.

He had a local reputation as an artist and his work in lead pencil was of particular merit.

Mr. Morris was one of the earliest members of the T-Square Club of Philadelphia, and had been for many years an active member of the Philadelphia Sketch Club.

It is indeed a strange circumstance that, on reading Mr. Magonigle's interesting transcription of certain Assyrian records, I should recognize, after all these years, the missing portion of a series of records which I unearthed during my first excursion in Assyria many years ago. I have always wondered about the missing text and its possible bearing upon the fragments I had so painfully deciphered. Now that it is before me, I am struck with the nice balance of the two records, how they supplement each other in thought, and make of the whole a complete parable of our profession. How trite but true it is to say that conditions have so little changed after all these years.

I am sure that Mr. Magonigle will be relieved to find that the continuation of his chronicle was not irrevocably lost, and I rejoice with him in our ability to present this complete record, at last, to those eager searchers after truth, with whom our profession is so notably filled in this day of grace.

The record, done into English as faithfully as I have been able, runs as follows, evidently picking up the narrative at the exact point where the previous record stopped.

WILLIAM STANLEY PARKER.

... and the true God of our art sank back, heavy hearted, into his marvellous throne of Syrian cedar and ivory, wrought by the greatest artist of the day and already famed throughout Assyria and even among the Chaldeans. The embracing curve of its ample back and the echoing curves of its slender spreading legs lent a rhythmic charm to the throne of this true God of Art, high up on its alabaster-faced altar. Alas, what calamity was now to be witnessed! With a warning creak, quickly followed by an ominous crash, the throne gave way beneath the burden of its God and both were precipitated as one onto the heads of the silent throng standing spell bound around the altar.

"After the first awful moment of dismay and terror, the guards quickly cleared the populace from the temple. The minor Gods of Technique and Structural Security raised the True God of Art from his undignified position, prone amidst the debris of his throne. For a moment the spirit of the true artist flamed in his eye, but, God-like, he kept himself in hand and besought an explanation of the disaster. The God of Structural Security made a rapid survey of the fragments and quickly found the cause. The great artist, overzealous in his search for beauty of line and grace of proportion, had neglected the natural limitations of his medium. The cedar wood, familiar as roof beams, was little used in furniture and its nature was but poorly understood. The graceful curves and slender proportions left but little strength, the grain across the curve, already weak, was made still weaker by cutting for the inlays. So, ignorantly piling one weakness on another, did the artist work his own doom and the indignity of the True God he sought to serve.

"The True God listened and for a long time walked apart. His faith in the skill of his great artist was somewhat shaken. It had to be admitted that the graceful lines of his throne were no less graceful now that the remnants were temporarily reassembled, but as a throne it was of little use. Was it then so fine a work of art if it failed in serving its chief purpose? In failing to support its God, did it not also fail to support his plea for the preeminence of the artist? Was it possible that there was another God, more nearly equal to his own stature and dignity than he had supposed, who was challenging his right to preeminence, who was claiming with some show of justice the right to a throne beside his own?

"It were well to investigate. Every part of his temple and the adjoining palace had been constructed under the direction of the chief artists of the land. Were there hidden defects elsewhere in their work? Calling the God of Structural Security and the God of Technique, who somehow as they approached had acquired a certain dignity he

had not noticed in them before, he made a circuit of the precincts of the temple.

"A certain stain high up on the walls attracted his eye and he enquired of his companions about it. They informed him that the heavy rains each year so saturated the sun-dried brick of the walls as to penetrate even to the inner frescoed walls. Yes, an alternative capping to the wall had been suggested but the chief artist insisted upon the stepped cresting of the parapet which, while artistically effective, was cleverly designed to catch and hold the rain, until it became absorbed in the massive but sponge-like walls. And how about the walls themselves? Undoubtedly there was a constant deterioration in progress.

"The True God of Art uttered a troubled sigh and passed through the deep portal. Gaining the center of the broad terrace he turned to gaze upon the noble entrance he had so frequently admired. The pure alabaster that faced the pylons glittered in the sun, and the shadows of the carving caught, with gay tints, reflected lights from the terrace tiles. It was beautiful as ever; but now his restless, searching eye, detected in the corner a slab of alabaster stained and partly displaced. Further investigation disclosed a crack extending through the wall. Where did it lead, and what had caused it?

"And so as they circled the splendid structure, one after another were observed the failures in technique of those who had but followed the artist's whim. The faulty glazing of enamelled tiles, the settled keystone of an arch, cracked lintels, rotting roof beams, everywhere the True God looked were found defects that marred the beauty of the artist's work.

"Sadly he entered again the temple door and seeking rest, sat for safety on the substantial throne wrought for the God of Structural Security, and let his mind speak freely to his attendant Gods. "Why do you seem so different to my eyes than you have seemed so short a space of time ago? I confess you have seemed to be attempting to usurp the central place wherein my throne has for long years been set and held in reverence. Yet, as I now detect, your arrogance is much less marked than I had come to think. You speak considerably of the faults we have observed, nor claim a certain knowledge for yourselves of all the various problems that 'twould seem surround the building of such a temple as this of mine. Tell me what your ambitions really are. Are you usurpers, or faithful supporters of that great guiding spirit of our profession, beauty, the inspired imaginings of the artist, without which we labor in vain? Speak."

"The God of Structural Security answered thus: "We are matter of fact people, not always understood by those of more emotional tendencies. We are far from seeking to usurp your throne, indeed we do but seek to make it more secure and permanent. The simple days and methods now are passed, and problems of security have arisen that call for careful research, test, and thought. Without such service the artist could not work his beauty into terms of usefulness. And without usefulness, ability to stand the service tests of time, Art would totter on her throne, and soon be cast wholly down, a wanton, seeking sensation only, using the needs of men as playthings for her imagination.

"Art has so often tripped upon the snags it is our province to remove, that it would seem she should be grateful rather than jealous of our new importance. You envy us perchance; you fear the growing signs of our increasing power and worth. Pray calm your fears. We do not grudge your high preeminence; rather, which you cannot seem to grasp, we take it for granted. It need not be shouted from the house tops, for we accept it freely without argument. But in the natural course of things our function has gained increasing notice in proportion as the results of our failure have become more critical.

"We seek but recognition of the natural dignity of the functions that we serve. Keep your high place on a throne that is truly worthy of your art. We are content to sit on either hand, duly subordinated, yet given that

recognition by the True God which alone will inspire respect for our efforts in the minds of those too frequently blind worshippers of your high estate."

"The True God rose and took a hand of each, and understanding glistened in his eye. Thereafter on the altar stood three thrones, nor any doubted the supremacy of Art nor the solid virtues of the lesser Gods."

## New Members Elected

(As of May 5, 1922.)

BOSTON: James S. McIntyre, *New Bedford*. DAYTON: Frank J. Weis. ILLINOIS: Howard L. Cheney, Arthur S. Coffin, Gardner C. Coughlen, Stanley Moyer Peterson, *Chicago*. NEW YORK: Pleasants Pennington. PHILADELPHIA: J. Frank Clark. TENNESSEE: A. B. Baumann, Jr., Herbert R. Graf, John Richard Graf, R. F. Graf, Clem Henry Meyer, M. E. Parmelec, Clarence A. Ttarwater, *Knoxville*; Charles Deas, James L. Gatling, Estes W. Mann, *Memphis*. TEXAS: Allan Burton, *Dallas*. VIRGINIA: Alfred Garey Lambert, *Richmond*. WISCONSIN: George A. Kemnitz, *Milwaukee*.

(As of June 3, 1922.)

BOSTON: Louis Elbridge Jackson, Frederic M. Kendall, Lyman Sise, Albert E. West. BROOKLYN: Isaac Kallich. CENTRAL ILLINOIS: Rexford Newcomb, *Urbana*. COLUMBUS: Clarence Earl Richards. DAYTON: Edward P. Musselman. ILLINOIS: Scott C. Dyer, Herbert H. Green, Philip G. Odgers, *Chicago*. MICHIGAN: Harvey W. Jackson, *Grand Rapids*. NEW YORK: John J. Klaber. PITTSBURGH: Joseph Browne Dick German, Randolph L. Patterson, L. G. Tucker, *Charleston, W. Va.* Albert Ford Dickey, *Huntingdon, W. Va.* Thomas P. Jones, A. F. Wysong, *Princeton, W. Va.* ST. LOUIS: Henry W. Hall, E. L. Pleitsch, Paul Valenti, Wm. F. Wischmeyer.

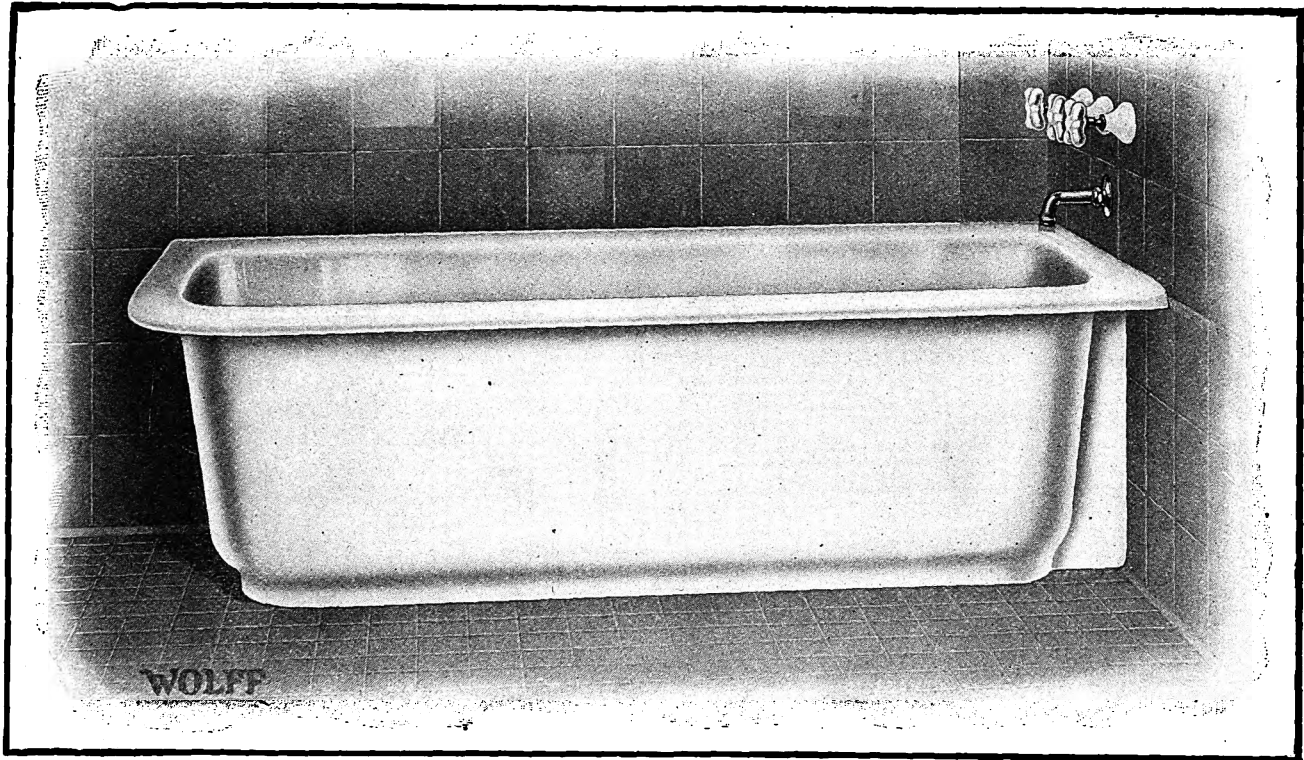
(As of June 5, 1922.)

ILLINOIS: Hugh M. G. Garden. KENTUCKY: J. A. Baylor, *Louisville*. NORTH CAROLINA: Harry Barton, *Greensboro*. PHILADELPHIA: Gabriel B. Roth. TEXAS: David S. Castle, *Abilene*.

(As of June 7, 1922.)

BOSTON: George F. Shepard. BROOKLYN: Charles C. Wagner. Frederick H. Briggs, *Plandome, L. I.* COLORADO: Arthur E. Saunders, *Boulder*. Eugene G. Groves, Burnham Hoyt, Merrill H. Hoyt, *Denver*. DAYTON: Ralph G. Rossell. NEW JERSEY: Fred-eric Bigelow, Chas. A. Horton, Neil J. Covery, *Newark*. Seymour Williams, *Rahway*. PITTSBURGH: James Llewallyn Montgomery, Edward J. Wood, *Charleston, W. Va.* J. C. Burchinal, *Fairmont, W. Va.* SAN FRANCISCO: James W. Plachek, *Berkeley*. SOUTHERN CALIFORNIA: Stiles Oliver Clements, Walter Swindell Davis, Wm. Field Staunton, Jr., Edw. Lloyd Taylor, Walter Webber, Donald R. Wilkinson, David J. Witmer, *Los Angeles*. Roland E. Coate, *Pasadena*. Wm. H. Wheeler, *San Diego*. SOUTHERN PENNSYLVANIA: Chas. Howard Lloyd, *Harrisburg*. Robert A. Stair, *York*.

Structural Service Department appears on the second right-hand page following



# This **WOLFF** Built-in Bath

*Costs Little More than an Ordinary Free-standing Bath*

WOLFF "PLANET" Built-in Bath with concealed fixtures supplies at low cost the sanitary closed front and classic lines, space economy and convenience of the finest built-in tub. Owners find both the effect and the economy gratifying.

Wolff Quality Plumbing insures durability far beyond the ordinary. The presence of Wolff fixtures in a structure implies quality construction throughout.

A three-color folder has been issued showing the Planet Bath in various styles, with perspective drawings and floor plans. We will gladly send this together with folders indicating the completeness of the Wolff line — on request.

## WOLFF Quality Plumbing

*Branch or Distributor at Every Central Point*

SANITARY  
ENAMELWARE  
RANGE BOILERS  
POTTERYWARE  
BRASS GOODS  
MARBLE



CHICAGO  
DALLAS    HAMMOND  
OMAHA    CINCINNATI  
ST. LOUIS    DENVER

Makers of Quality Plumbing Since 1855



# Structural Service Department

SULLIVAN W. JONES, *Associate Editor*  
LEROY E. KERN, *Assistant*

*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.*

## Committee Activities

**The Joint Conference on Advertising.**—The second Joint Conference on Better Advertising to Architects met in Chicago on June 5th and 6th. At the Monday afternoon, June 5th, session a Committee of twelve, consisting of architects and manufacturers was appointed to prepare a Resolution expressing the purpose of the Conference and providing for the action which the Conference wished the Institute to take.

The Committee drafted the following Resolution and presented it to the Conference on the morning of June 6th:

Whereas the Joint Conference on Better Advertising to Architects between the Board of Directors of the American Institute of Architects and the Building Materials Producers of the United States and reported in the Journal of the A.I.A., of April, 1922, and the Conference in Chicago held June 5th and 6th, 1922, has demonstrated the great desirability of a better understanding among architects and producers as to their common interest in the characteristics, presentation and appropriate utilization of products entering into construction, be it

Resolved by the American Institute of Architects, in 55th Annual Convention assembled, that the Structural Service Committee of the American Institute of Architects be authorized to create a Producers' Section of the Structural Service Committee as a sustaining body to collaborate in the following duties:

- (a) To advise and counsel with manufacturers, who may so desire, on the character of their advertising as to size, form, and content.
- (b) To assist in furthering the use, by Architects and Producers, of the Standard Construction Classification adopted by the American Institute of Architects.
- (c) To promote sincerity and reliability of statement in advertising.

The Conference adopted it and arranged for its transmission to the Board of Directors of the A.I.A. The Board adopted the Resolution and referred it to the Convention with a favorable recommendation. The Resolution was adopted by the Convention without a negative vote at the session on the morning of Friday, June 9th.

The creation of a Producers Section of the Structural Service Committee signalizes the beginning of an era of closer co-operation between manufacturers and architects than has been known since the architect was the master builder, used local materials, wrought by local craftsmen who were also his friends.

The induction of a number of manufacturers into a sort of associate membership in the Structural Service Committee will make possible the broadening of the Committee's work on advertising and its development into a real service to both the manufacturing and the architectural fraternities. It provides for a free exchange of ideas, the joint consideration of the architects and manufacturers common needs and problems, and last but not most important of all it furnishes

the means of substituting mutual confidence for the mutual suspicion which has characterized the relationship of these two important groups in the building industry for a great many years.

**The Lumber Conference.**—The result of the series of conferences held in Washington during the week of May 22, under the auspices of the Department of Commerce, between the producers, distributors and consumers of lumber was, from the architect's standpoint, disappointing.

The National Lumber Manufacturers Association was asked to appoint a Committee representative of all interests with a view to the adoption of a standard nomenclature, standard grades, marking and practices. It is expected that another Conference will be held in the early fall to create the necessary organization for the formulation and working into practice of the proposed standards.

The misuse of specie names, the confusion resulting from the inconsistencies of grading rules as applied even to the same wood by different Associations, the lack of standard sizes and the absence of all guarantees of quality, seem to call for immediate action; and it does appear unfortunate that the initial move toward the removal of the architect's difficulties in specifying what he needs will not be met for some months to come.

The Conference was productive of one good result—a better understanding between producers and consumers.

**The Small House Service Bureau and the Structural Service Committee.**—Arrangements are in the making providing for the Structural Service Committee to function with the Small House Service Bureau in connection with the preparation of the Small House Specifications and the Question and Answer Column of the Small House Clinic.

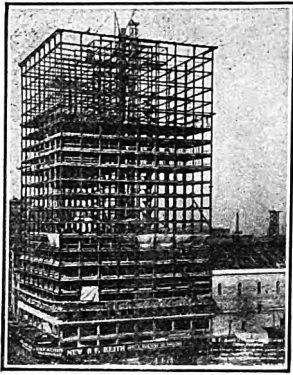
It is proposed that these specifications shall be written in co-operation with the manufacturers interested who are to become members of the Producers Section of the Structural Service Committee. By adopting this procedure it is expected that the Institute will be able to exert a very powerful influence toward raising the standard of architectural practice in connection with the Small House.

## Abstracts

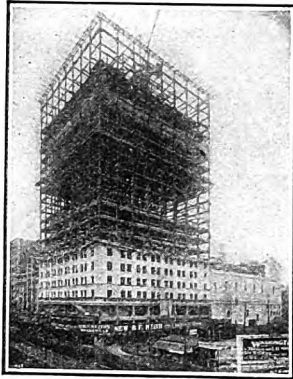
*Is it the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

**Whitewash and Cold Water Paint.** (25b24)—(*Bulletin No. 304 of the National Lime Association. Size 6" x 9". Pages 8.*) *Ordinary Whitewash.*—Place about ten pounds of quicklime into a vessel with two gallons of water. Cover

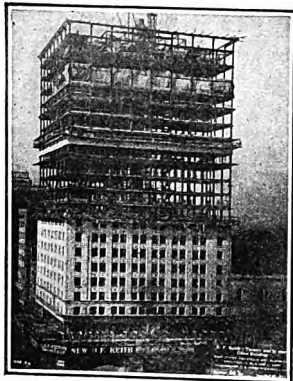
# Rapid Construction



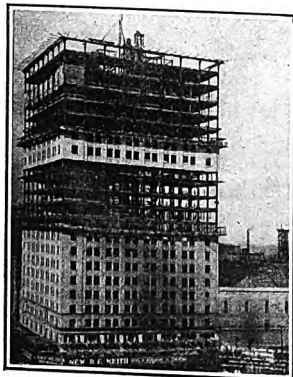
October 1.



October 8.



October 15.



October 22.

INDUSTRIAL SECTION



## Progress Photographs

taken at intervals of one week

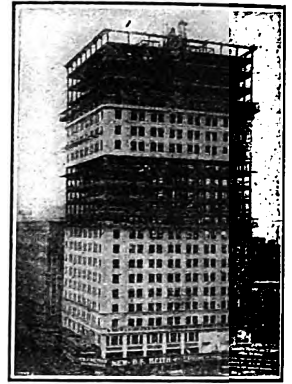
OUR innate modesty forbids our making any mention of the speed which we made in completing the Terra Cotta on the above building. However, we feel we can say that this job was enclosed more rapidly than any other building of a similar type which has been erected in Cleveland. It goes without saying that no progress of this kind could have been made had we not had your co-operation and your rapid delivery of materials. The manner in which you handled the work was highly satisfactory and we are all very much pleased with the results.

Very truly yours,  
The Lundoff-Bicknell Co."

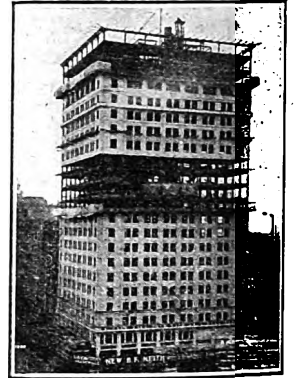
*B. F. Keith's Theatre and Office Building, Cleveland, Ohio. C. W. & Geo. L. Rapp, Architects; The Lundoff-Bicknell Company, Builders. Atlantic Terra Cotta in glazed conglomerate with slight touches of color, from base course to roof.*

Atlantic Terra Cotta Company  
350 Madison Avenue, New York

Southern Factory  
Atlanta Terra Cotta Company  
Atlanta, Georgia



October 29.



November 5.



November 12.



November 19.

## STRUCTURAL SERVICE DEPARTMENT

the vessel with an old piece of carpet or burlap and let it stand for about an hour, stirring, *if necessary*, to prevent burning. At the end of that time the material will be ready to use.

If too little water is used, the lime will not be completely slaked or hydrated, and besides it will be burned. Burned or scorched lime is generally lumpy and transparent after enough water is added to bring it to brush consistency. Too much water, on the other hand, retards the slaking by lowering the heat.

A simpler way in which to prepare this whitewash is to mix ordinary commercial hydrated lime with water until the proper brush consistency is obtained. This whitewash will not stand the weather and will rub off rather easily.

*Interior Whitewash.*—The following formula is recommended by insurance companies: (1) Slake 62 pounds (1 bushel) of quicklime in 15 gallons water. Keep the vessel covered until steam stops coming off. Stir occasionally to prevent scorching. Or, mix 80 pounds of commercial hydrated lime with water to a creamy consistency. (2) Mix 2½ pounds of rye flour thoroughly with ½ gallon of cold water and then thin with 2 gallons of boiling water. (3) Dissolve 2½ pounds of common salt in 2½ gallons of hot water. Mix (2) and (3), then add (1), and stir until well mixed.

*Exterior Weatherproof Whitewash.*—(1) Slake 62 pounds of quicklime (1 bushel) in 12 gallons of water; or mix 80 pounds of commercial hydrated lime with water to a cream-like consistency. (2) Dissolve 2 pounds of common salt and 1 pound of sulphate of zinc in 2 gallons of boiling water. (3) Provide 2 gallons of skimmed milk. Pour (2) into (1), then add (3), and stir well.

*B.*—(1) Slake 8 pounds of quicklime in 2 gallons of hot water, or mix 10 pounds of commercial hydrated lime to a cream-like consistency with water. (2) Dissolve 1 pound of carbonate of soda in ¼ gallon of boiling water. (3) Soak in cold water for at least 8 hours ¼ pound of common glue and 1 pound of rice flour, and then thoroughly dissolve the glue mixture in ¾ gallon more water in a double boiler. Mix (1) with (2); then add (3).

*C.*—(1) Slake 6 pounds of quicklime in 1½ gallons of hot water or mix 8 pounds of commercial hydrated lime to a cream-like consistency with water. (2) Dissolve 4 ounces of white resin in 12 fluid ounces of boiled linseed oil. (3) Beat 6 pounds of whiting in 1 gallon of skimmed milk. Mix (2) with (1) while hot; then add (3).

*Simple Cold Water Paints.* *A.*—Mix 10 pounds hydrated lime, 1 pound casein, 1½ ounces soda ash.

*B.*—Mix 10 pounds hydrated lime, 1 pound casein, 1 ounce powdered soap, 2 ounces pulverized borax, 3 ounces dry carbonate of soda.

The ingredients in either of the foregoing formulas may be mixed dry and thinned to brush consistency with water when used.

*C.*—(1) Soak ½ pound of white glue at least four hours in 1 pint of water and then fully dissolve in 1 quart more water in a double boiler. (2) Mix 16 lbs. of hydrated lime thoroughly in 1 gallon of hot water. Pour (1) into (2) and mix well.

*D.*—(1) Mix 12 lbs. of quicklime slaked in 3 gallons of hot water or 16 lbs. of commercial hydrated lime to a cream-like consistency. (2) Thin 3 lbs. of silicate of soda (water glass) with 1 gallon of hot water; then stir in 1½ pounds of casein and continue to stir until all is dissolved. (3) Soak 2 lbs. of strong white glue at least 8 hours in ½ gallon of cold water; then dissolve in ½ gallon more water in a double boiler. (4) Dissolve 2 lbs. pulverized alum in ½ gallon of

hot water, to which is added 24 lbs. of whiting. Mix (1) and (2) well, then stir in (3), add (4), and again stir well.

*Waterproof Cold Water Paint.*—Beat up 1 lb. of casein with 1 pint of cold water; dilute with ¾ gallon of cold water and add 8 fluid ounces of ammonia. Stir this until a smooth jelly is formed and then add ¼ fluid ounce of formaldehyde as a preservative.

Stir in hydrated lime until a moderately thick paste is formed and then dilute with water, alcohol, turpentine, or linseed oil as may be desired until proper brush consistency is obtained.

*Washable Cold Water Paint.*—(1) Soak ½ pound of white glue at least four hours in ½ gallon of cold water; then completely dissolve by boiling in a double boiler. (2) Dissolve ¼ pound of phosphate of soda in ⅛ gallon of hot water. (3) Mix 16 lbs. of hydrated lime thoroughly in 1 gallon of hot water. Pour (1) into (3). Stir well, then add (2), and stir again.

*Lighthouse Whitewash.*—The following is the formula used by the United States Lighthouse Board: Make a thin paste of 50 lbs. of hydrated lime in boiling water (or slake ½ bushel of quicklime in about 7½ gallons of water, keeping the vessel well covered and stirring occasionally). Add 1 peck of common salt dissolved in hot water, 3 pounds of rice flour boiled to a thin paste and stirred in while hot, ½ pound of Spanish whiting and 1 pound of clear glue thoroughly dissolved in boiling water.

Mix well in the order given and let the mixture stand for several days before using. Apply as hot as possible with a brush or spray.

*General Notes.*—Whitewashes and cold water paints should always be laid on, and no attempt should be made to brush out as is done with oil paints. Alum added to whitewash prevents its rubbing off. Flour paste will also prevent rubbing off, but, when it is used zinc sulphate must be added as a preservative.

Molasses causes lime to penetrate wood and plaster better. One pint of molasses to 5 gallons of whitewash is sufficient to use.

A solution of silicate of soda, or water glass (35 degrees Baume), makes a fireproof cement of whitewash when used in the proportion of one part of the solution to ten parts of whitewash.

By adding 1 pound of cheap bar soap dissolved in 1 gallon of boiling water to every 5 gallons of whitewash, a gloss similar to oil paint can be obtained.

*Tinting.*—Most of the earth colors are fast in the presence of lime and practically any desired tint may be obtained by using these pigments in dry powdered form, either singly or in combination. When lamp black is used, however, it should first be mixed to a thick paste in a hot soft soap solution, so as to remove the grease.

In addition to the above formulas, this bulletin describes equipment required, preparing the surface, and gives the covering capacity.

Since the publication of Bulletin 304, the Research Laboratory of the National Lime Association has been conducting an extensive investigation of whitewashes and cold water paints involving exposure tests of more than a hundred formulas. As a result of this work the following formulas also have been shown to have special merit.

*A.*—A simple lime paint is prepared by dissolving a mixture of three pounds of borax and five pounds of casein in three gallons of water and adding this to a paste made of fifty pounds of hydrated lime with six gallons of water. Thin with more water if necessary.





## STRUCTURAL SERVICE DEPARTMENT

B.—Dissolve a mixture of three pounds of trisodium phosphate and five pounds of casein in three gallons of water and add this solution to a paste made of fifty pounds of hydrated lime with six gallons of water. Mix well and then add slowly, with stirring, a mixture of five pints of formalin in three gallons of water.

For the hydrated lime in either of these formulas thirty-eight pounds of quicklime may be substituted. This should be carefully slaked to a thick paste and cooled before adding the other constituents.

**Concrete Building Block and Brick.** (3k)—(*Booklet Published by the Portland Cement Association. Pages 23. Size 6" x 9". Illustrated.*)—This booklet discusses such fundamental principles underlying the manufacture of concrete building block and brick as workmanship, materials, consistency of concrete, surface finish, strength, types of blocks and types of machines. It also contains the following standard specification of the American Concrete Institute:

### *Specifications and Building Regulations for Concrete Stone, Building Block and Brick.*

1. Concrete architectural stone and building block for solid or hollow walls and concrete brick made in accordance with the following specifications and meeting the requirements thereof may be used in building construction.

2. *Tests.*—Concrete architectural stone, building block for hollow and solid walls and concrete brick must be subjected to (a) Compression and (b) Absorption tests. All tests must be made in a testing laboratory of recognized standing.

3. *Ultimate Compressive Strength.*—(a) Solid concrete stone, building block and brick. In the case of solid stone, block and brick, the ultimate compressive strength at 28 days must average not less than fifteen hundred (1,500) lb. per sq. in. of gross cross-sectional area of the stone as used in the wall and must not fall below one thousand (1,000) lb. per sq. in. in any test.

(b) *Hollow and Two Piece Building Block.* The ultimate compressive strength of hollow and two piece building block at 28 days must average one thousand (1,000) lb. per sq. in. of gross cross-sectional area of the block as used in the wall, and must not fall below seven hundred (700) lb. per sq. in. in any test.

4. *Gross Cross-Sectional Areas.*—(a) Solid concrete stone, block and brick. The cross-sectional area shall be considered as the minimum area in compression.

(b) *Hollow Building Block.*—In the case of hollow building block, the gross cross-sectional area shall be considered as the product of the length by the width of the block. No allowance shall be made for the air space of the block.

(c) *Two Piece Building Block.*—In the case of two piece building block, if only one block is tested at a time, the gross cross-sectional area shall be regarded as the product of the length of the block by one-half of the width of the wall for which the block is intended. If two blocks are tested together, then the gross cross-sectional area shall be regarded as the product of the length of the block by the full width of the wall for which the block is intended.

5. *Absorption.*—The absorption at 28 days (being the weight of the water absorbed divided by the weight of the dry sample) must not exceed ten (10) per cent when tested as hereinafter specified.

6. *Samples.*—At least six samples must be provided for the purpose of testing. Such samples must represent the ordinary commercial product. In cases where the material is made and used in special shapes and forms too large for testing in the ordinary machine, smaller specimens shall

be used as may be directed. Whenever possible the tests shall be made on full sized samples.

7. *Compression Tests.*—Compression tests shall be made as follows: The samples to be tested must be carefully measured and then bedded in plaster of paris or other cementitious material in order to secure uniform bearings in the testing machine. It shall then be loaded to failure. The compressive strength in pounds per square inch of gross cross-sectional area shall be regarded as the quotient obtained by dividing the total applied load in pounds by the gross cross-sectional area, which area shall be expressed in square inches computed according to Article 4.

When such tests must be made on cut sections of block, the pieces of the block must first be carefully measured. The samples shall then be bedded to secure uniform bearing, and loaded to failure. In this case, however, the compressive strength in pounds per square inch of net area must be obtained and the net area shall be regarded as the minimum bearing area in compression. The average of the compressive strength of the two portions of block shall be regarded as the compressive strength of the samples submitted. This net compressive strength shall then be reduced to compressive strength in pounds per square inch of gross cross-sectional area as follows:

The net area of a full sized block shall be carefully calculated and the total compressive strength of the block will be obtained by multiplying this area by the net compressive strength obtained above. This total gross compressive strength shall be divided by the gross cross-sectional area as figured by Article 4 to obtain the compressive strength in pounds per square inch of gross cross-sectional area.

When testing other than rectangular block, great care must be taken to apply the load at the center of gravity of the specimen.

8. *Absorption Tests.*—The sample shall be first thoroughly dried to a constant weight at a temperature not to exceed two hundred and twelve (212) degrees Fahrenheit, and the weight recorded. After drying the sample shall be immersed in clean water for a period of forty-eight hours. The sample shall then be removed, the surface water wiped off, and the sample re-weighed. The percentage of absorption shall be regarded as the weight of the water absorbed divided by the weight of the dry sample multiplied by one hundred.

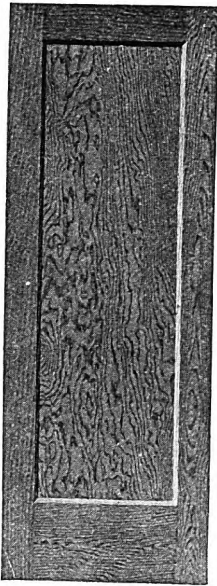
9. *Limit of Loading.*—(a) Hollow walls of concrete building block. The load on any hollow walls of concrete block, including the superimposed weight of the wall, shall not exceed one hundred and sixty-seven (167) lb. per sq. in. of gross area. If the floor loads are carried on girders or joists resting on cement pilasters filled in place with slush concrete mixed in proportion of one part cement, not to exceed two (2) parts of sand and four (4) parts of gravel or crushed stone, said pilasters may be loaded not to exceed three hundred (300) lb. per sq. in. of gross cross-sectional area.

(b) *Solid Walls of Concrete Block.*—Solid walls built of architectural stone, block or brick and laid in portland cement mortar or hollow block walls filled with concrete shall not be loaded to exceed three hundred (300) lb. per sq. in. of gross cross-sectional area.

10. *Girders and Joists.*—Wherever girders or joists rest upon walls in such a manner as to cause concentrated loads of over four thousand (4,000) lb. the block supporting the girders or joists must be made solid for at least eight inches from the inside face of the wall, except where a suitable bearing plate is provided to distribute the load

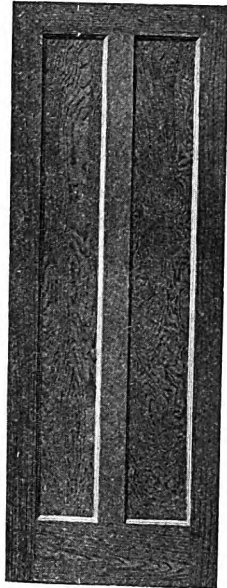
# Long-Bell Quality White Pine Doors

Made of California White Pine Only in Our  
Factory at Weed, California.



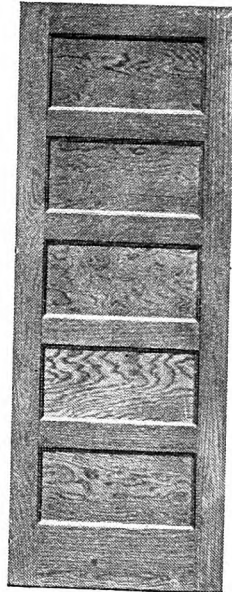
**California**

A charming effect in a large panel design. Solid No. 1 quality White Pine stiles and rails and 3-ply rotary cut California White Pine panels. Bead and cove sticking.



**Mongolia**

A new and beautiful effect in a colonial design. Solid No. 1 quality White Pine stiles and rails and 3-ply rotary cut California White Pine panels. Bead and cove sticking-flat panels.



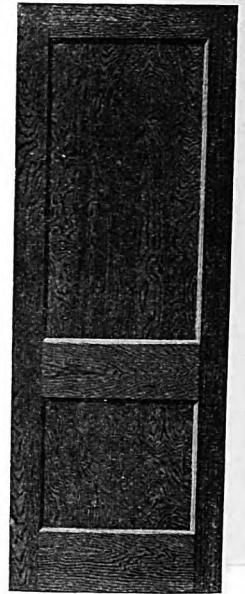
**Five Cross Panel**

A beautiful 5 cross panel door. Solid No. 1 quality California White Pine stiles and rails and 3-ply rotary cut California White Pine panels.



**Oakland**

A beautiful craftsman design. Solid No. 1 quality White Pine stiles and rails and 3-ply rotary cut California White Pine panels. Bead and cove sticking.



**Shasta**

One of the most popular designs in use. Solid No. 1 quality White Pine stiles and rails and 3-ply rotary cut California White Pine panels. Bead and cove sticking.

**L**ONG-BELL doors are made in our factory at Weed, California, in the heart of the California White Pine district. No other wood enters into the manufacture of Long-Bell doors except the oak dowels. By means of thoroughly modern machinery, the skill of the best door makers, and, because of the natural qualities of California White Pine, we are able to produce doors that have won national recognition for their uniform high quality.

California White Pine is a soft wood with a beautiful grain. It resists weather to a remarkable degree. As made into Long-Bell doors, it does not check or split and it takes enamels, paints and stains perfectly. Fewer coats are necessary to obtain the desired effect. Long-Bell doors are manufactured with oak dowels and waterproof glue and come in numerous attractive designs in standard sizes.

**The Long-Bell Lumber Company**  
R.A. LONG BUILDING Lumbermen since 1875 KANSAS CITY, MO.

Southern Pine Lumber and Timbers; Creosoted Lumber, Timbers, Posts, Poles, Ties, Piling, Wood Blocks; California White Pine Lumber, Sash and Doors, standardized Woodwork; Gum and Oak Lumber, Oak Flooring

## STRUCTURAL SERVICE DEPARTMENT

over a sufficient area to reduce the stress so it will conform to the requirements of Article 9.

When the combined live and dead floor loads exceed sixty (60) lb. per sq. ft. the floor joists shall rest on a steel plate not less than three-eighths ( $\frac{3}{8}$ ) of an inch thick and of a width one-half to one inch less than the wall thickness. In lieu of said steel plate the joists may rest on a solid block which may be three (3) or four (4) inches less in wall thickness than the building wall, except in instances where the wall is eight (8) inches thick, in which cases the solid block shall be the same thickness as the building wall.

11. *Thickness of Walls.*—(a) Thickness of bearing walls shall be such as will conform to the limit of loading given in Article 9. In no instance shall bearing walls be less than eight (8) inches thick. Hollow walls eight (8) inches thick shall not be over sixteen (16) feet high for one story or more than a total of twenty-four (24) feet for two stories.

(b) Walls of residences and buildings commonly known as apartment buildings not exceeding four stories in height, in which the dead floor load does not exceed sixty (60) lb. or the live load sixty (60) lb. per sq. ft. shall have a minimum thickness in inches as shown in Table 1.

TABLE 1

No. of Stories	Basement in.	First Story in.	Second Story in.	Third Story in.	Fourth Story in.
1	8	8	..	..	..
2	10	8	8	..	..
3	12	12	10	8	..
4	16	12	12	10	8

12. *Variation in Thickness of Walls.*—(a) Wherever walls are decreased in thickness the top course of the thicker wall shall afford a solid bearing for the webs or walls of the course of the concrete block above.

13. *Bond and Bearing Walls.*—Where the face wall is constructed of both hollow concrete block and brick, the facing shall be bonded into the backing, either with headers projecting four (4) inches into the brick work, every fourth course being a header course, or with approved ties, no brick backing to be less than eight (8) inches thick. Where the walls are made entirely of concrete block, but where said blocks have not the same width as the wall, every fifth course shall overlap the course below by not less than four (4) inches unless the wall system alternates the cross bond through the wall in each course.

14. *Curtain Walls.*—For curtain walls the limit of loading shall be the same as given in Article 9. In no instance shall curtain walls be less than eight (8) inches in thickness.

15. *Party Walls.*—Walls of hollow concrete block used in the construction of party walls shall be filled in place with concrete in the proportion and manner described in Article 9.

16. *Partition Walls.*—Hollow partition walls of concrete block may be of the same thickness as required in hollow tile, terra cotta or plaster block for like purposes.

**Grading Rules for Lumber.** (19a2)—(*Lumber Inspection Rules. Pages 541. Size 4½" x 5½."*)—This publication contains the rules governing the manufacture and inspection (grading) of different kinds of lumber, weights of lumber, comparative strength of building timbers, drawings and dimensions of standard patterns and other data useful to the consumer of lumber.

**Modern Lighting; Examples of Its Successful Application in the Industries.** (31a1)—(*Engineering Department, National Lamp Works. Size 7½" x 10". Pages 44.*)—Contains 20 full page halftone illustrations of well lighted interiors, giving complete data on the location of units, type of equipment, size of lamp and amount of illumination resulting. Other pertinent facts on illumination are included. Of particular value as a "copy book."

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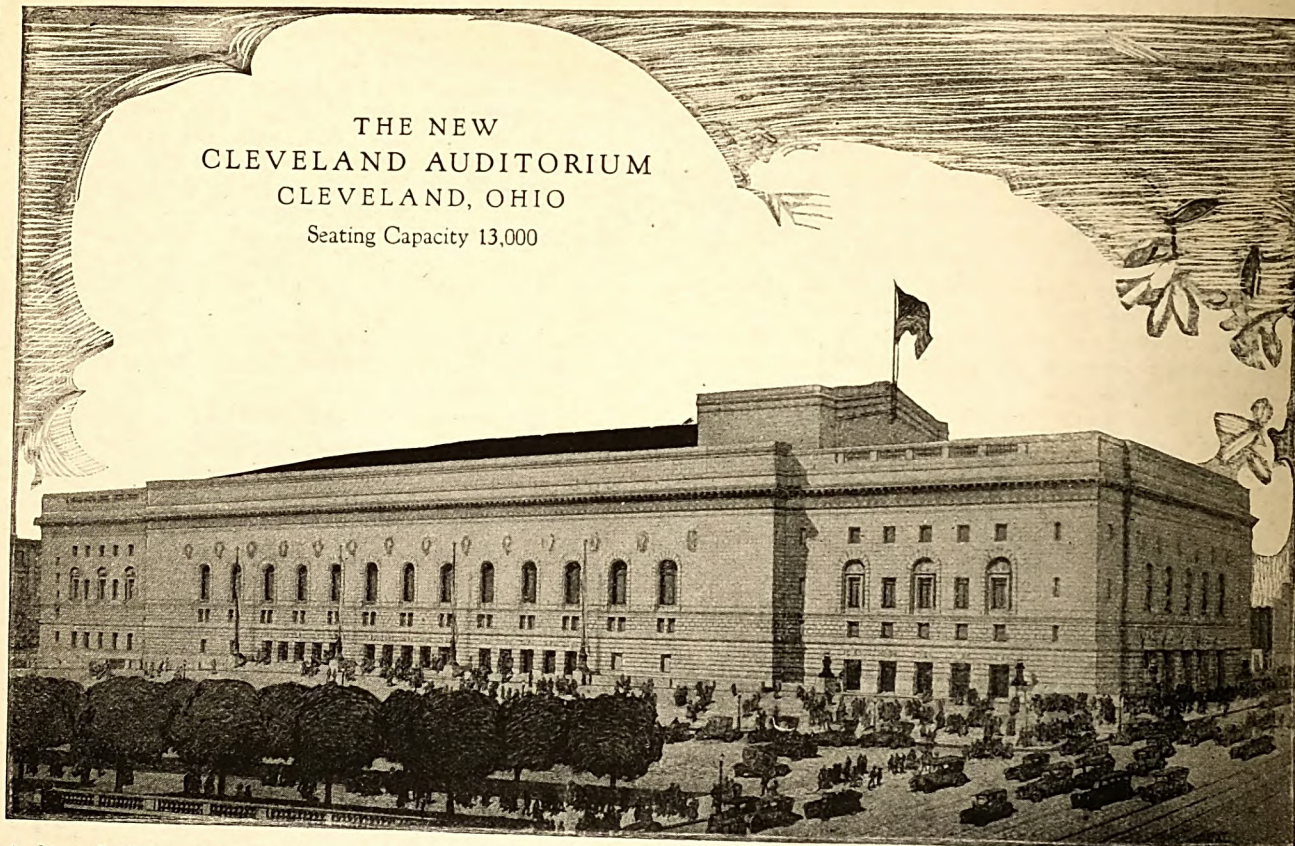
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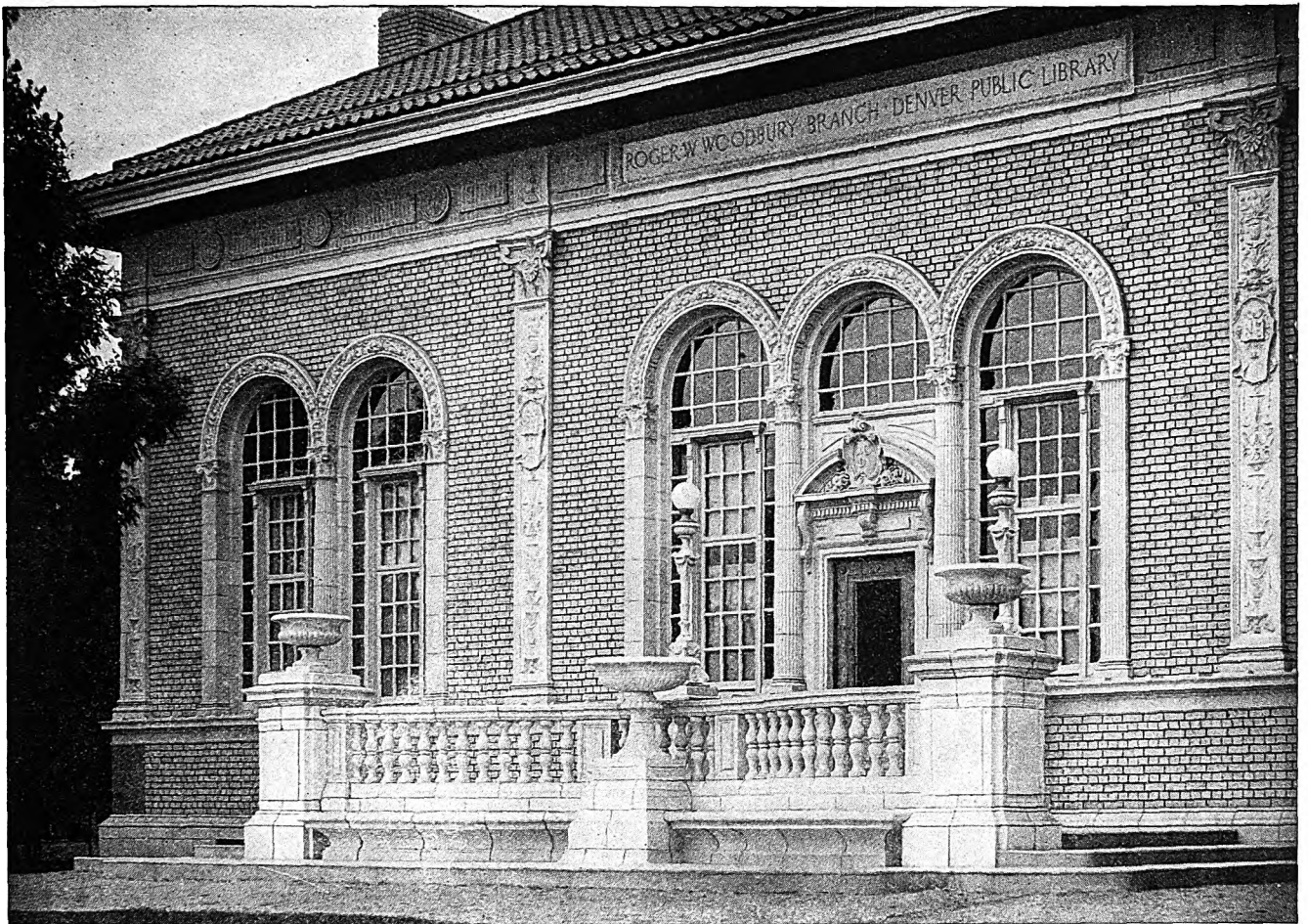
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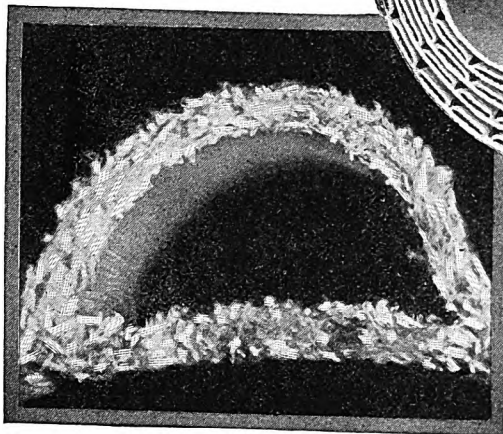
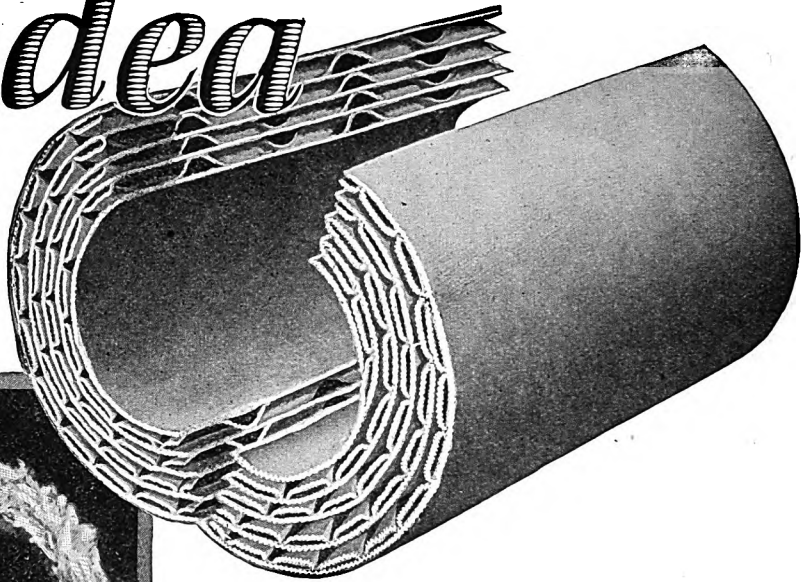
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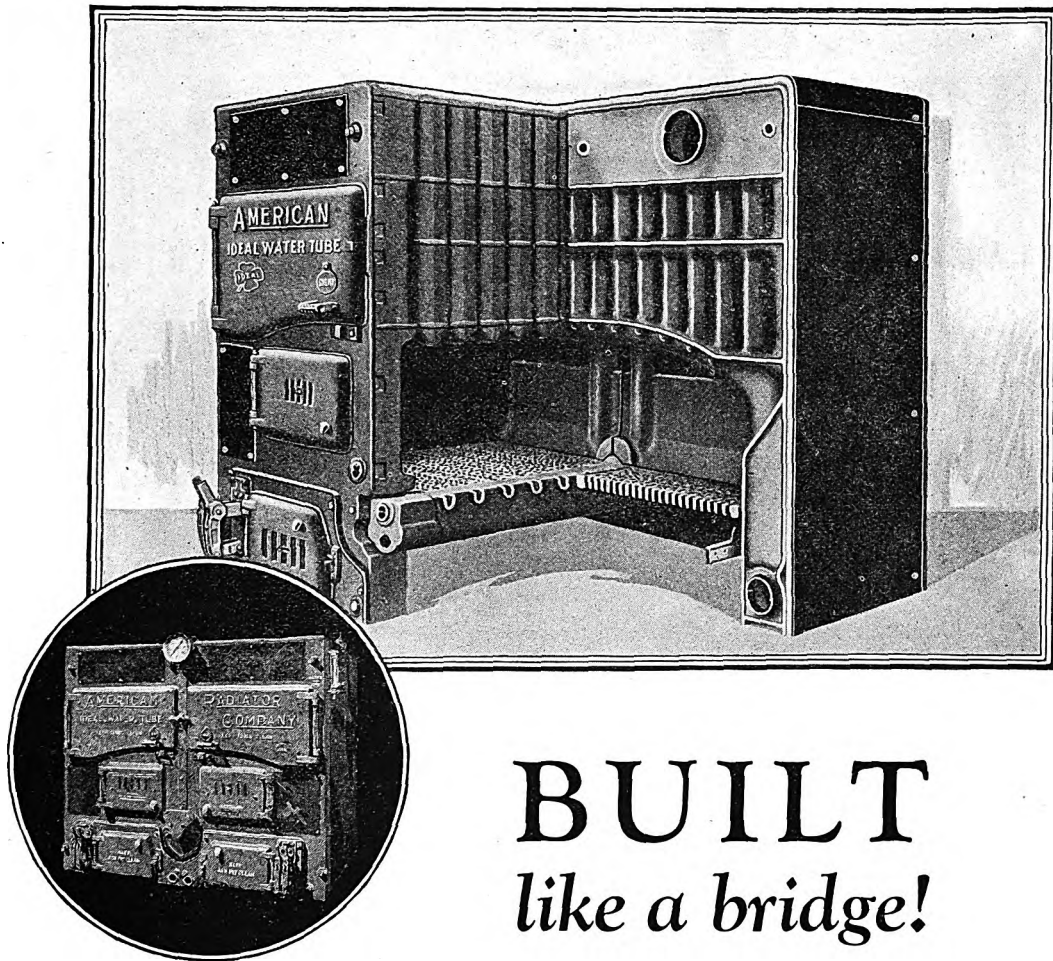
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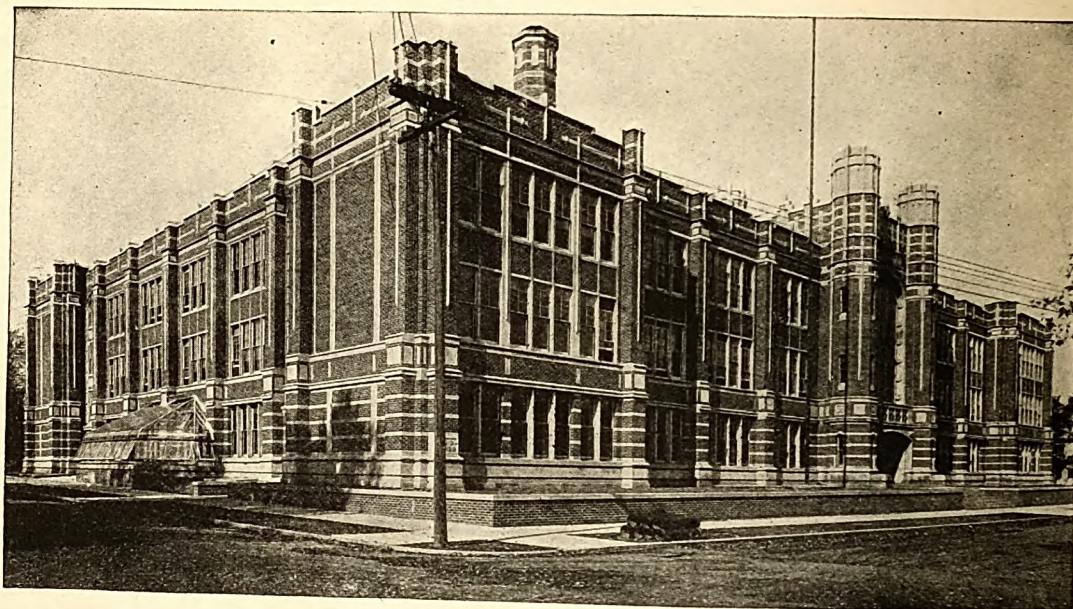
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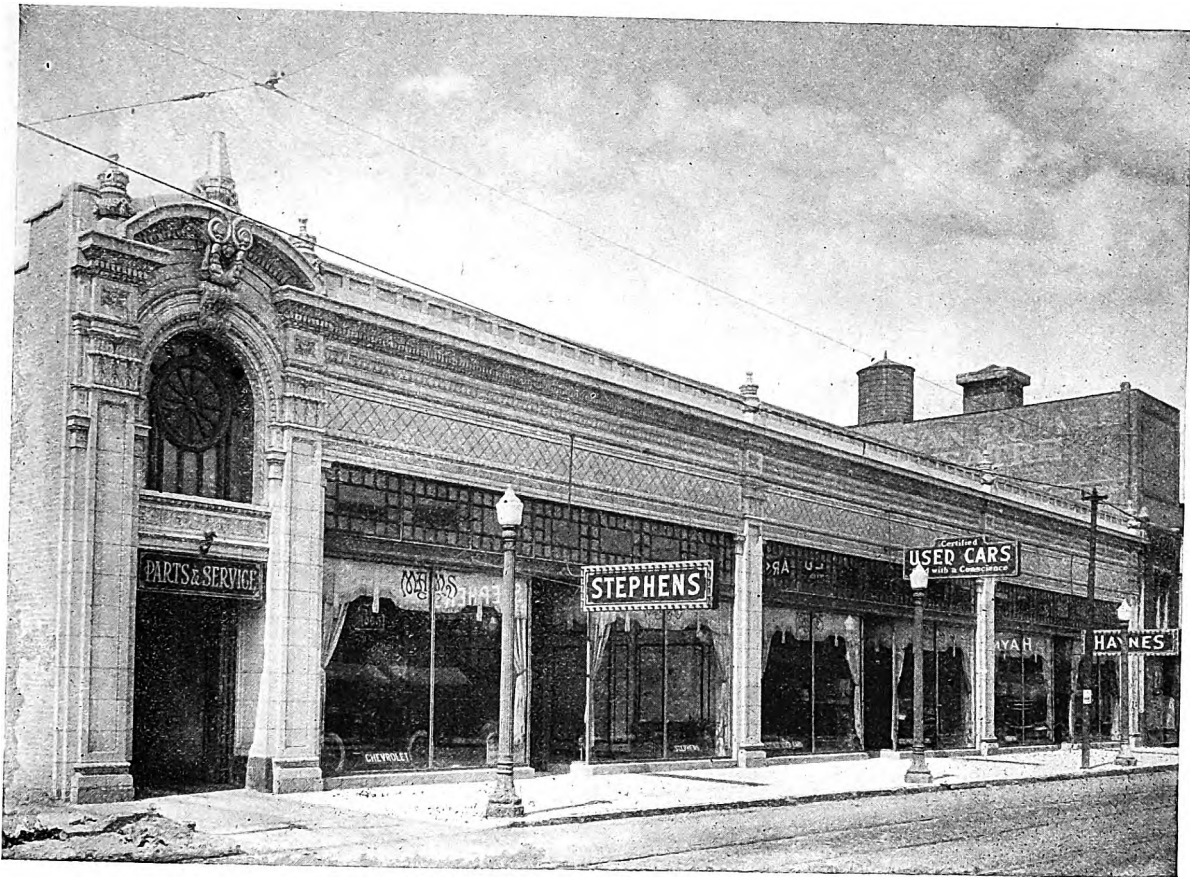
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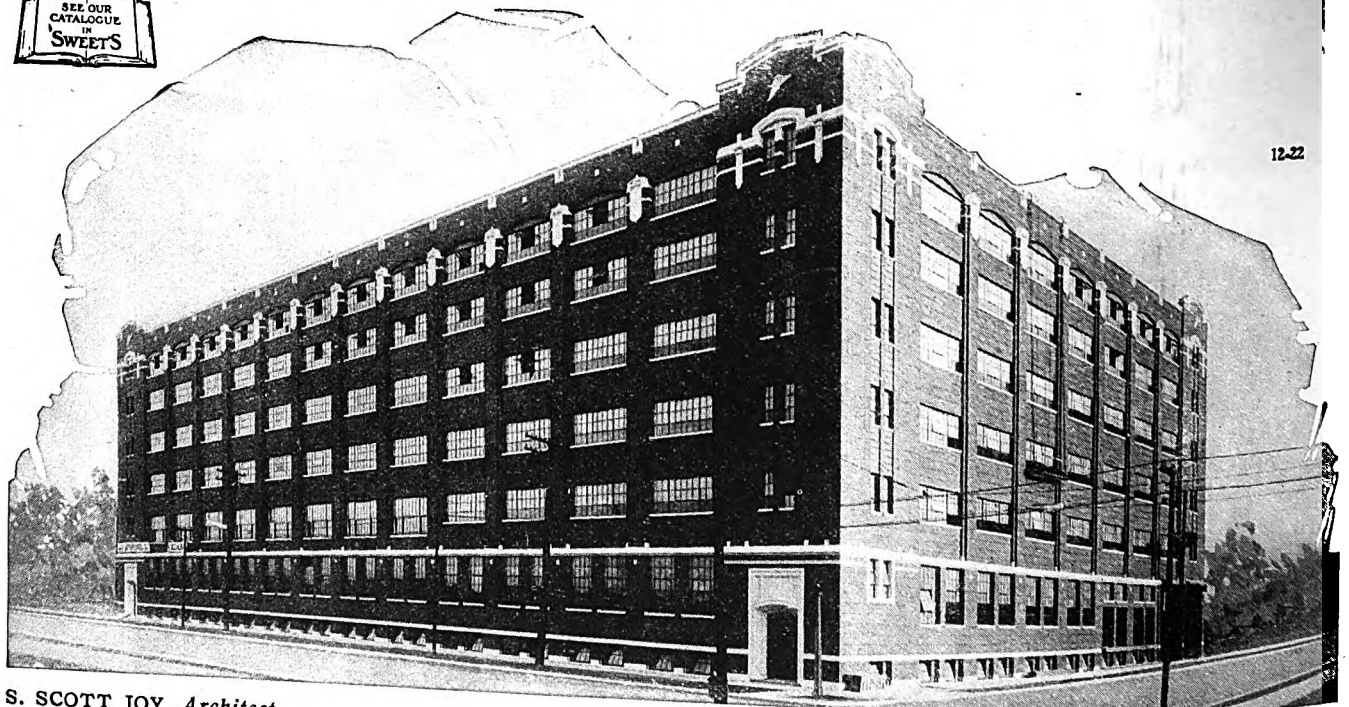
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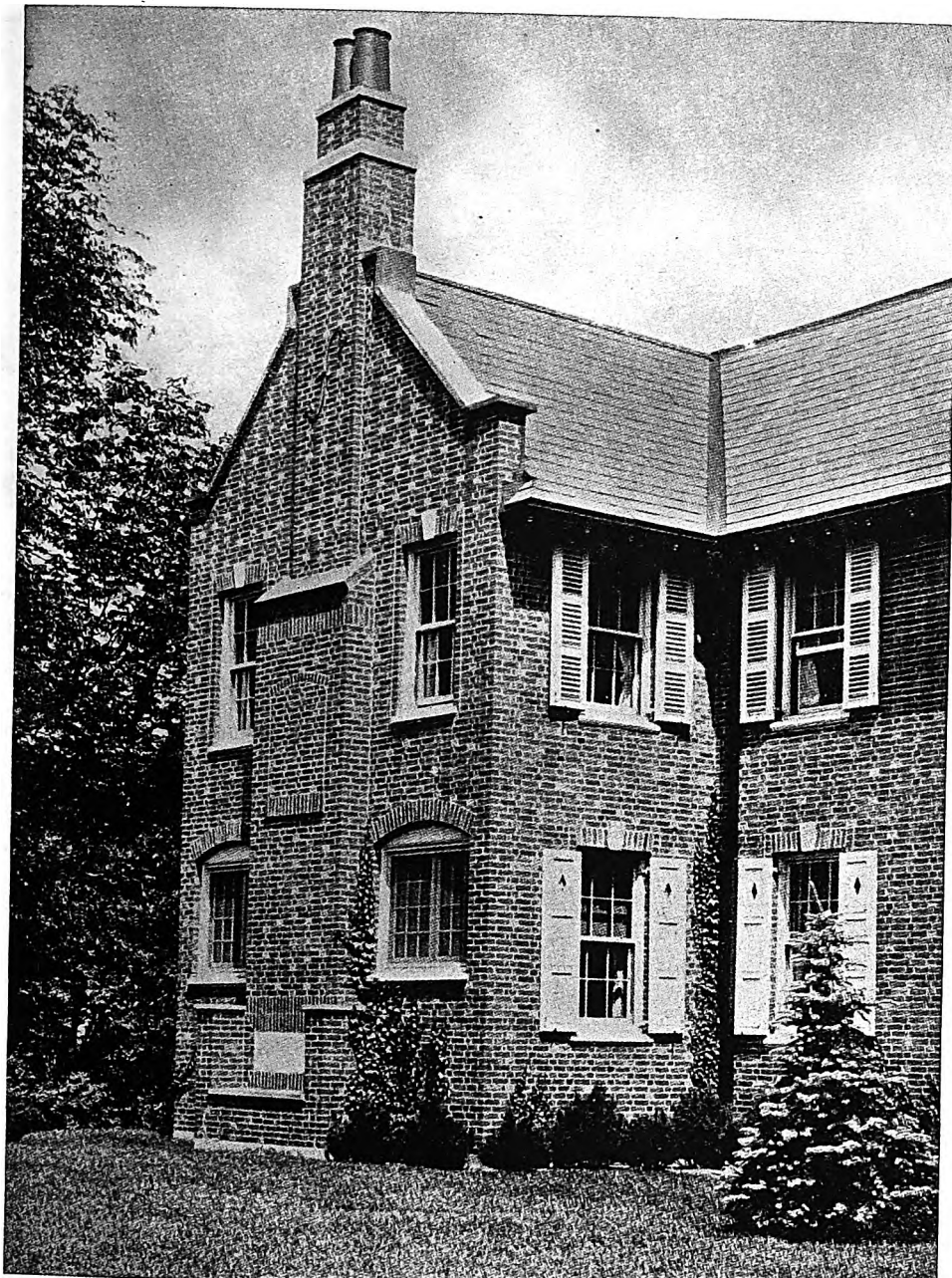
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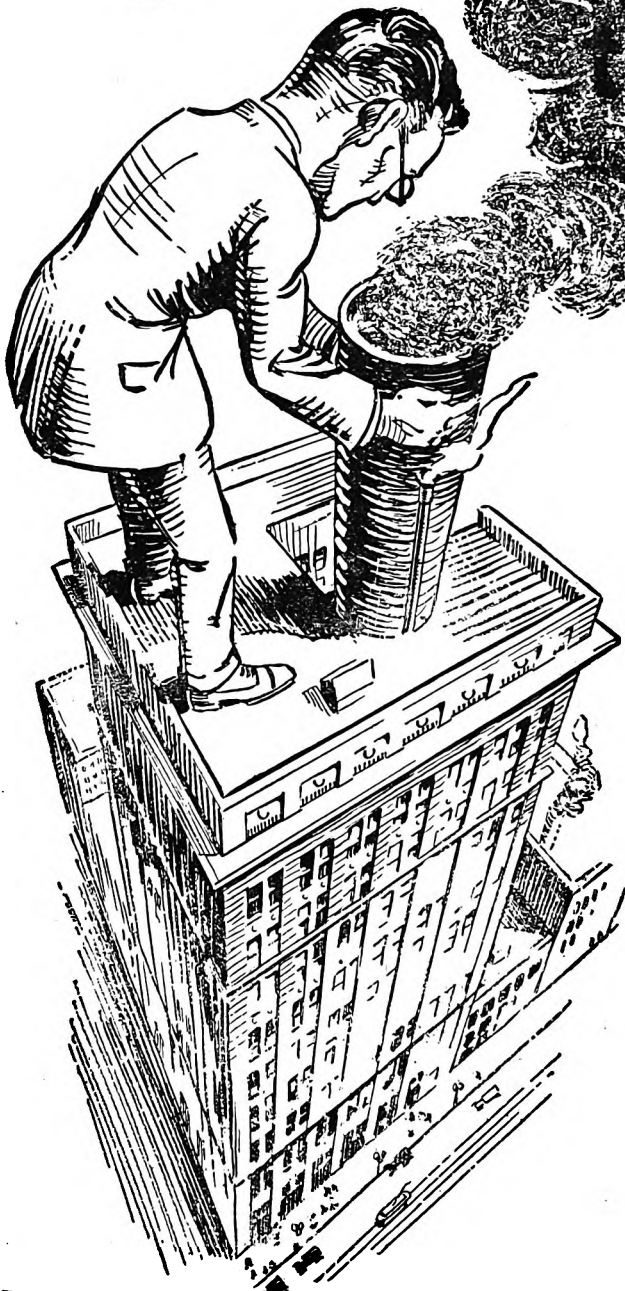
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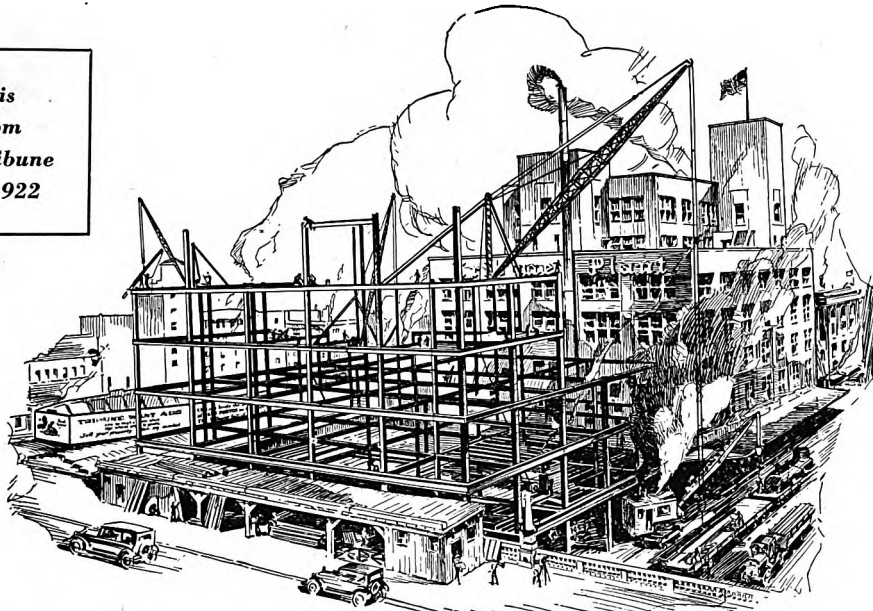
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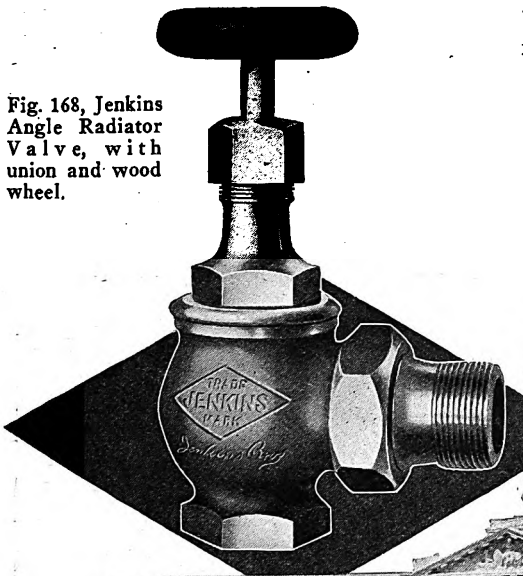


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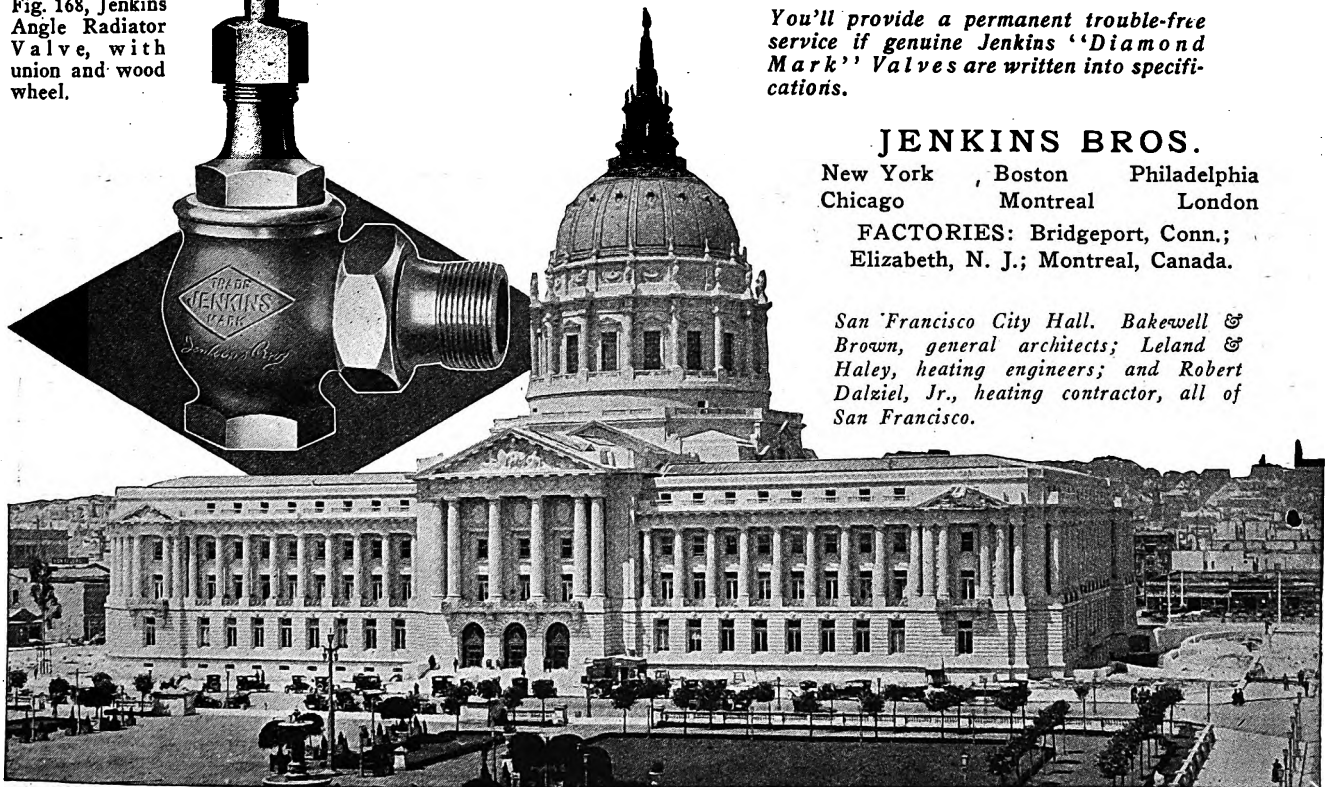
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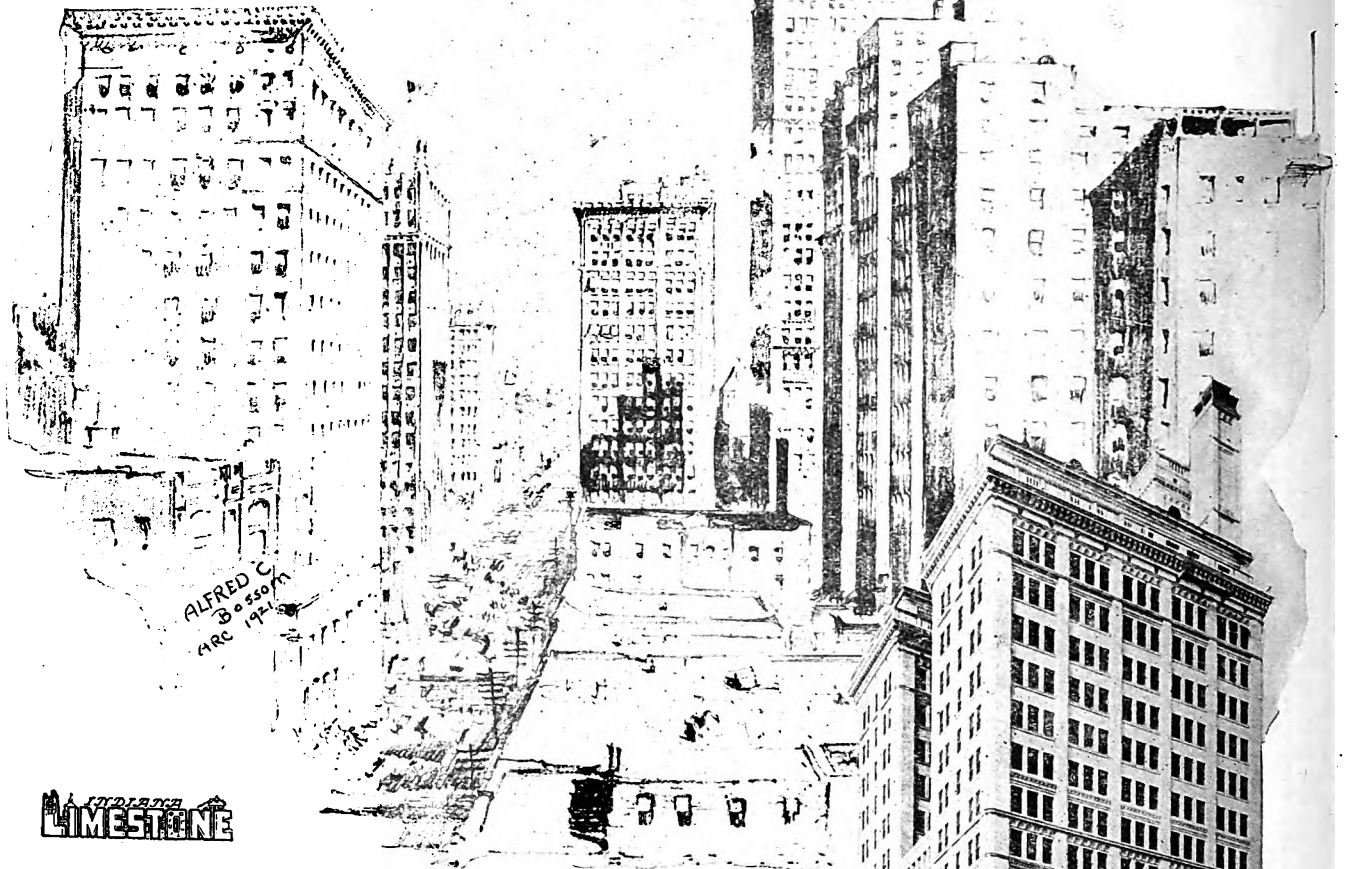


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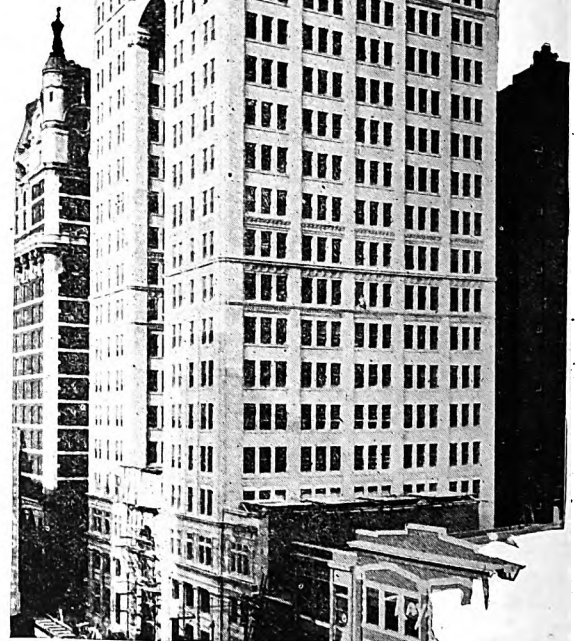
Mr. Alfred C. Bossom's drawing of the Dallas skyline shows that city's two largest structures — the American Exchange National Bank building, seventeen stories, and the magnificent twenty-eight story Magnolia Petroleum Company building, constructed of Indiana Limestone. Mr. Bossom was the architect for both projects.

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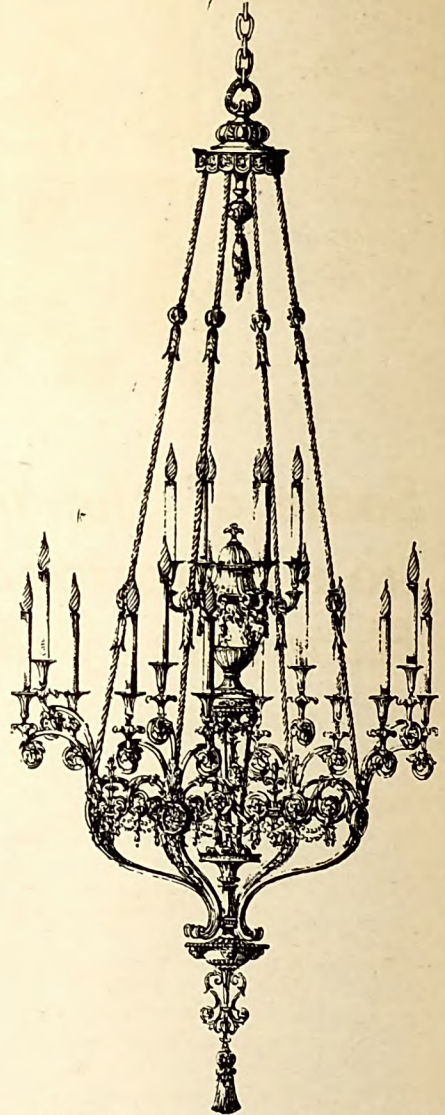
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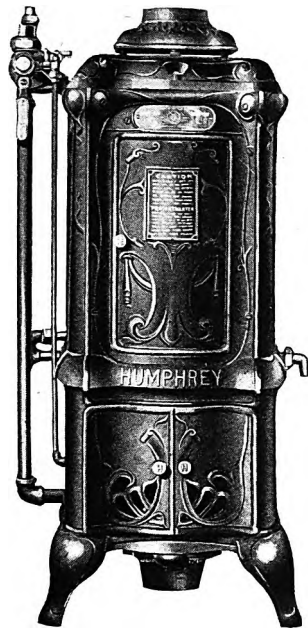


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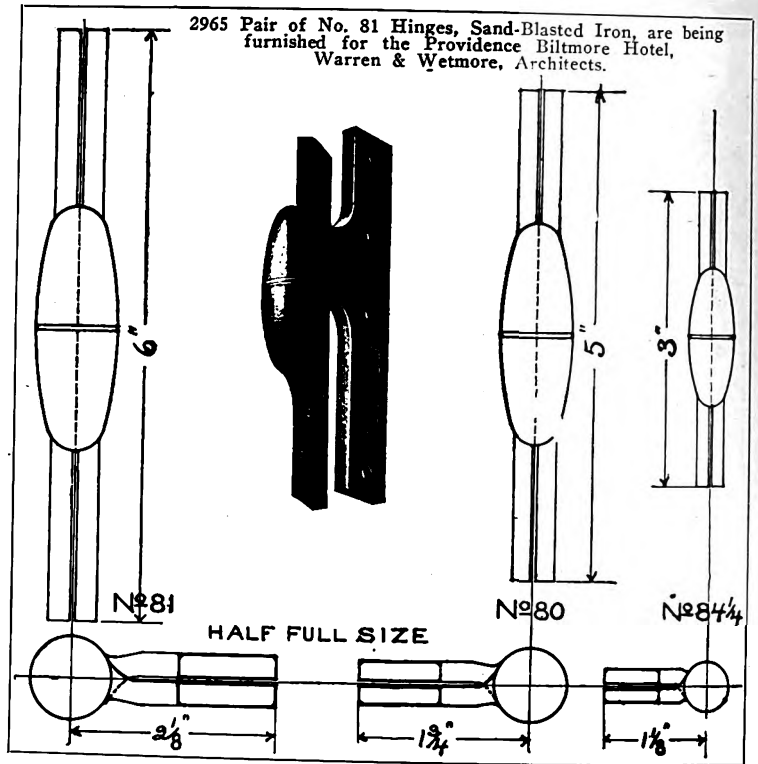
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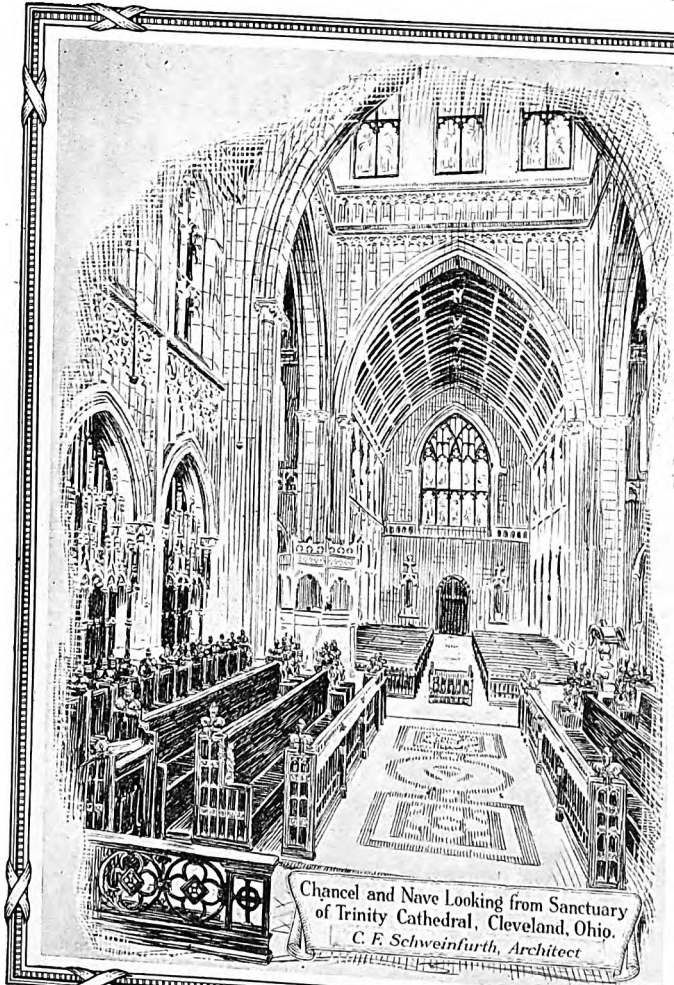


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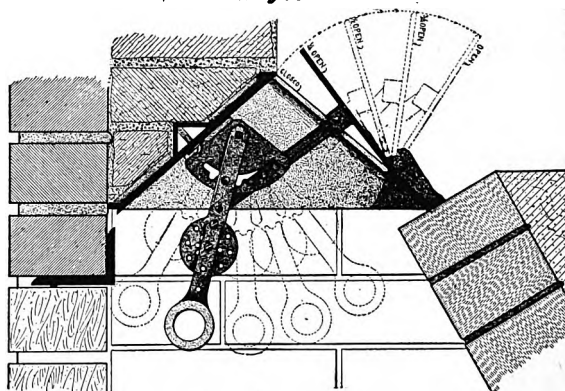
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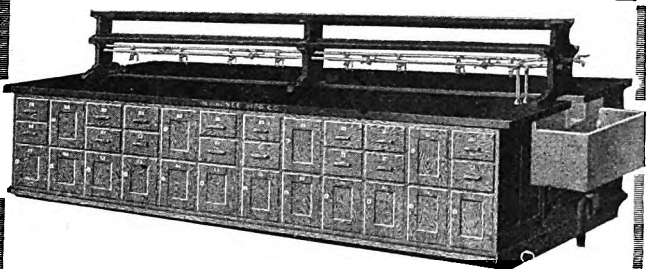
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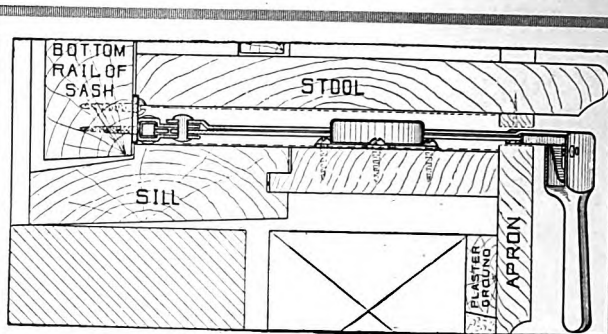
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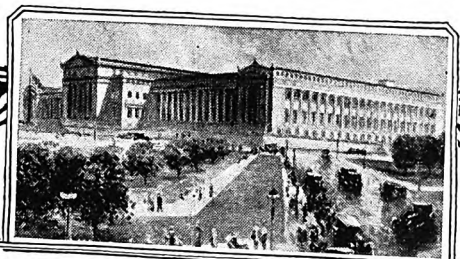
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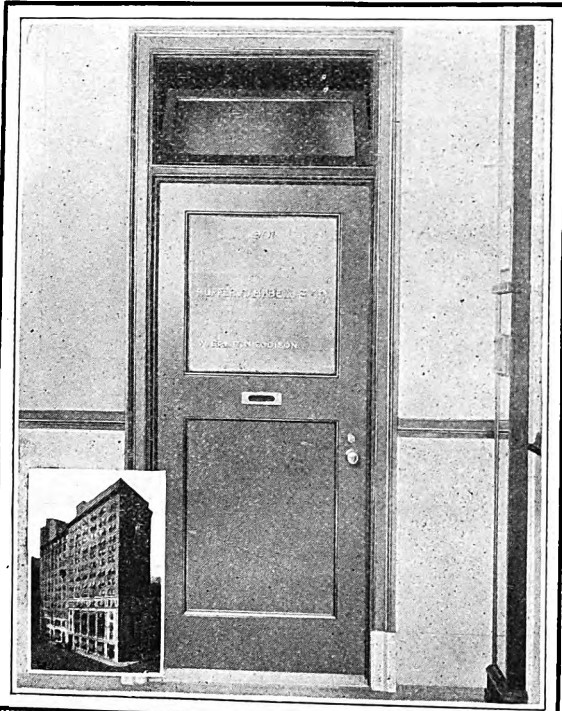
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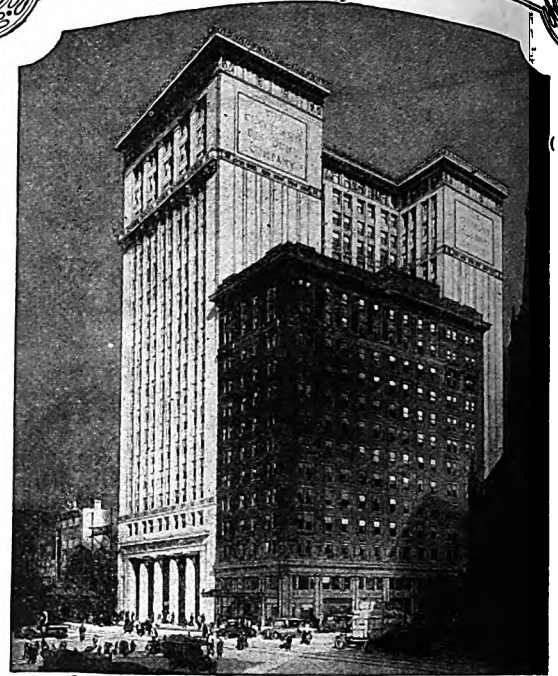
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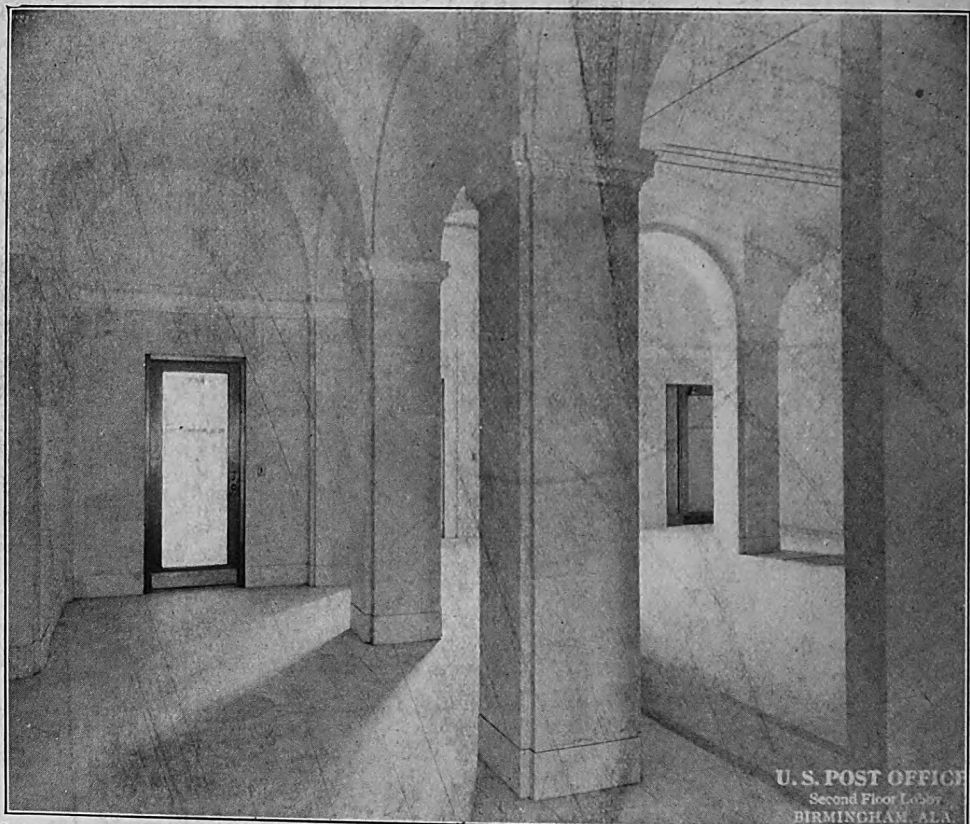
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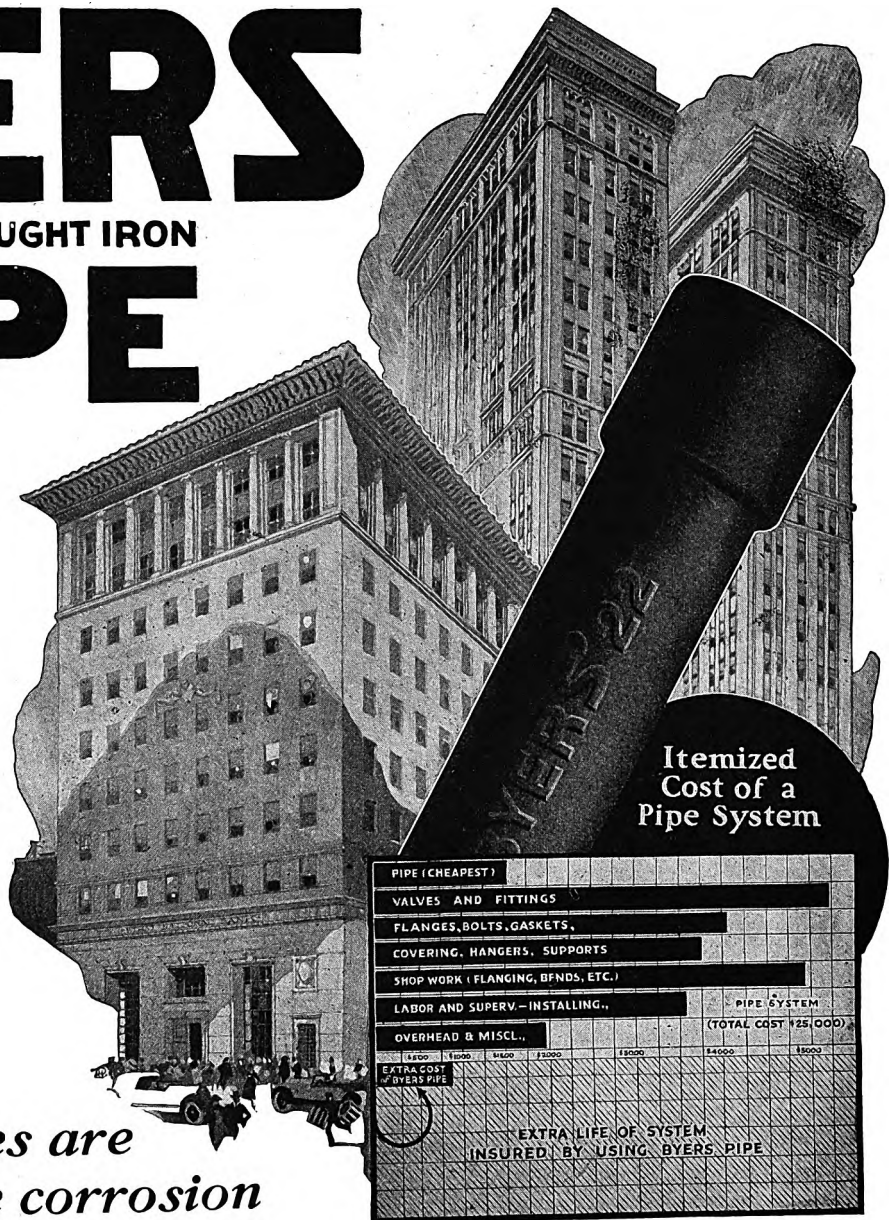


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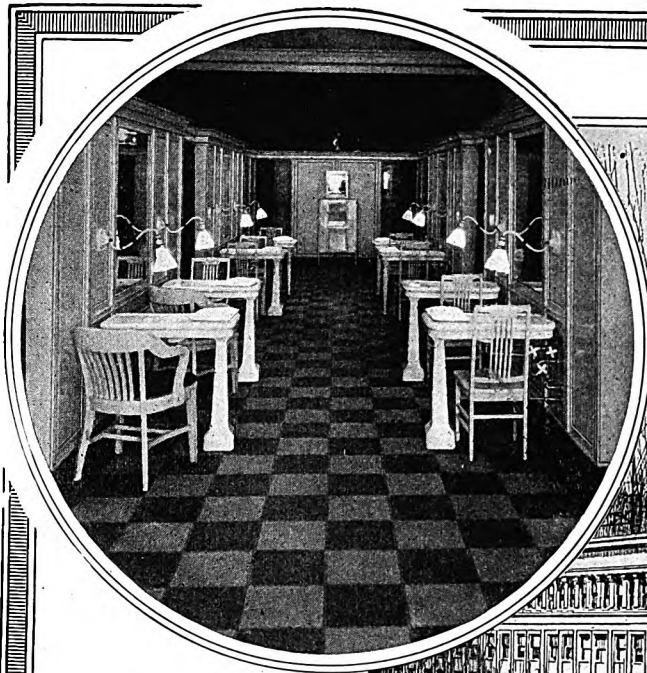
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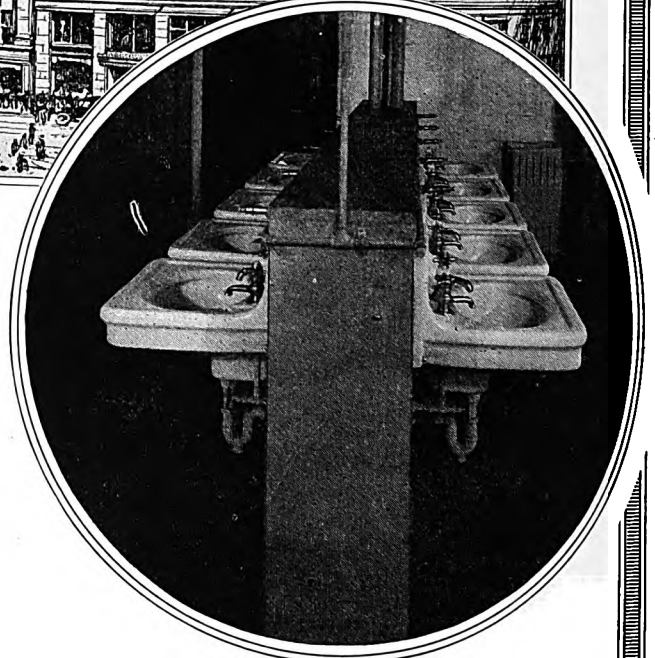




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Volume X

AUGUST, 1922

Number 8

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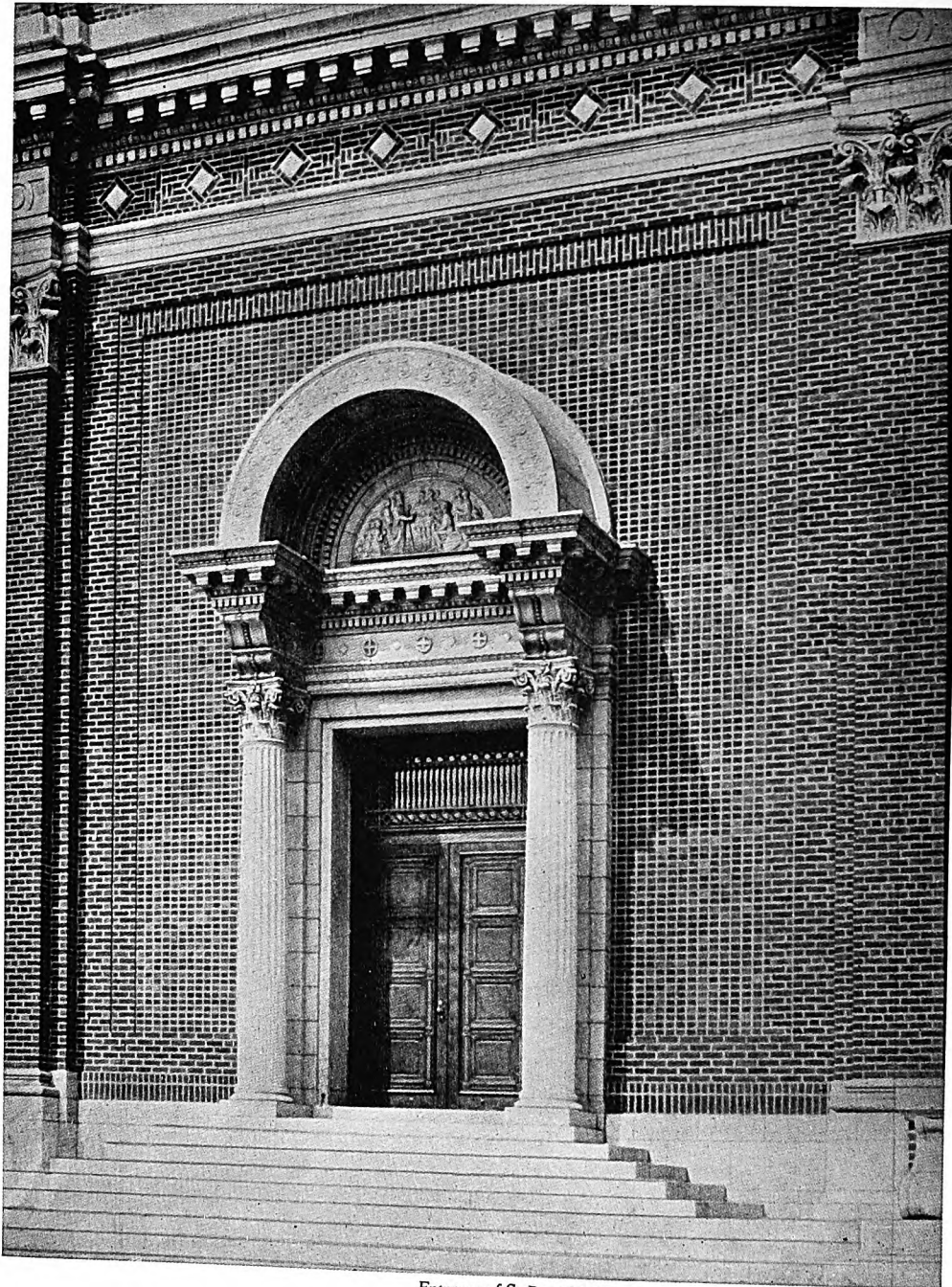
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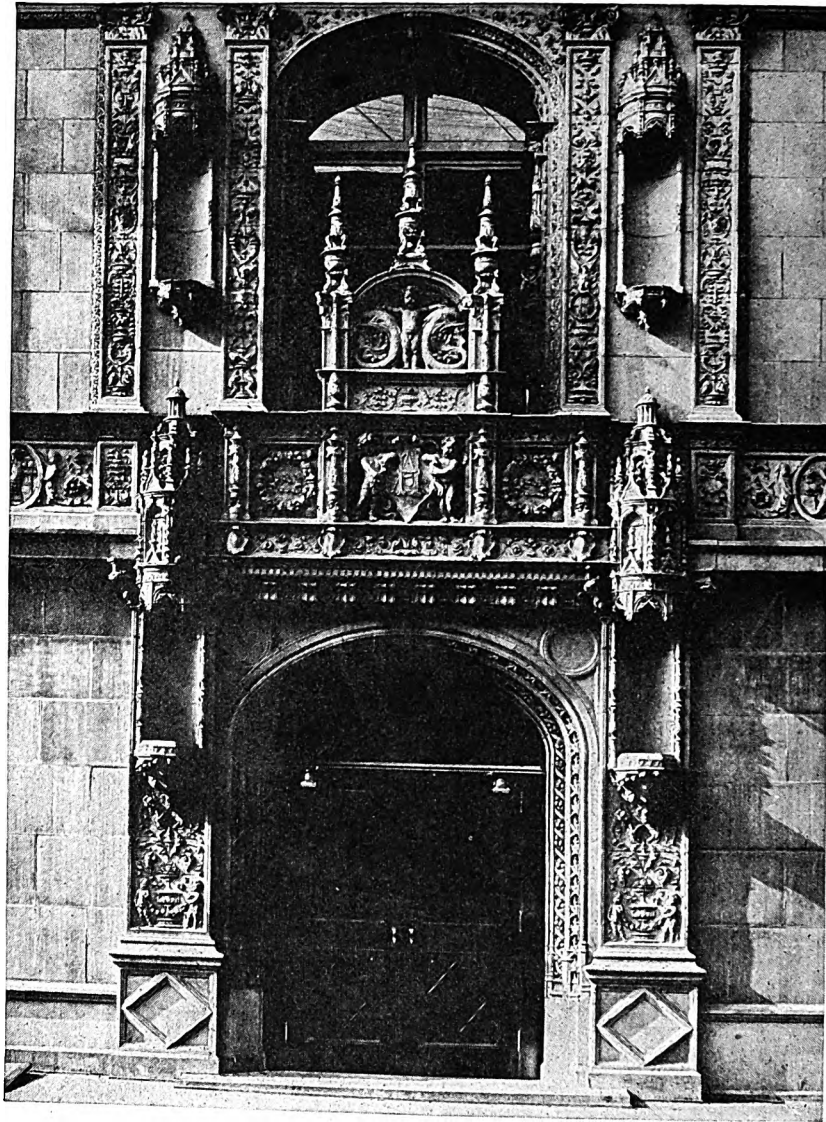
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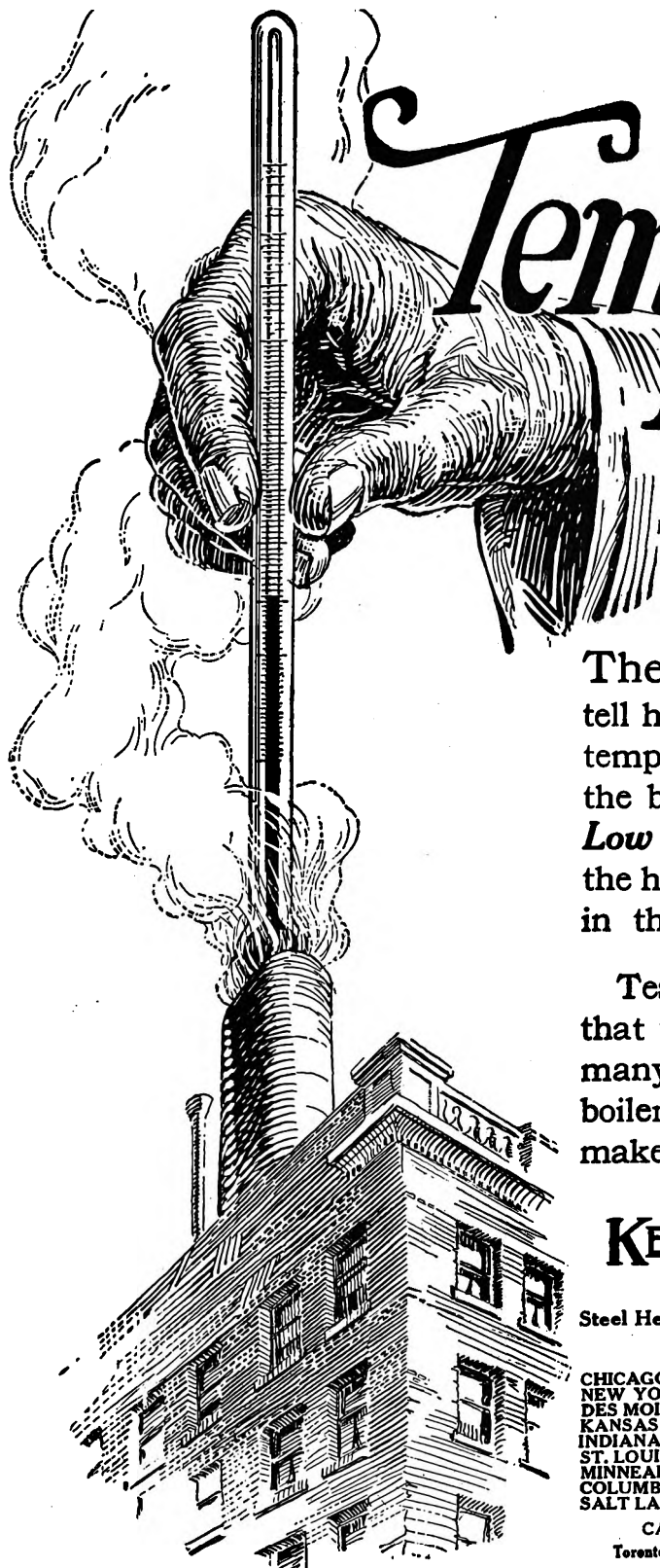
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August, 1922

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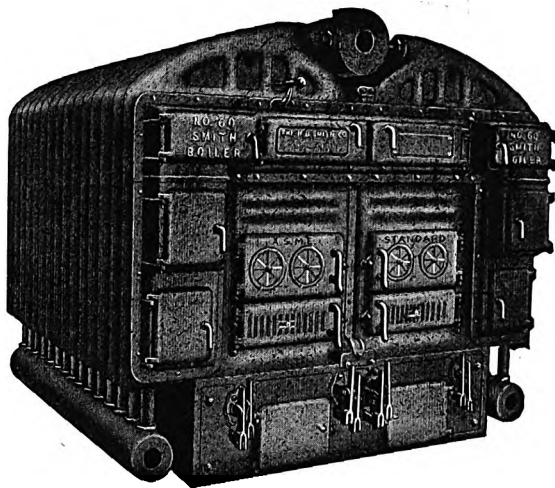
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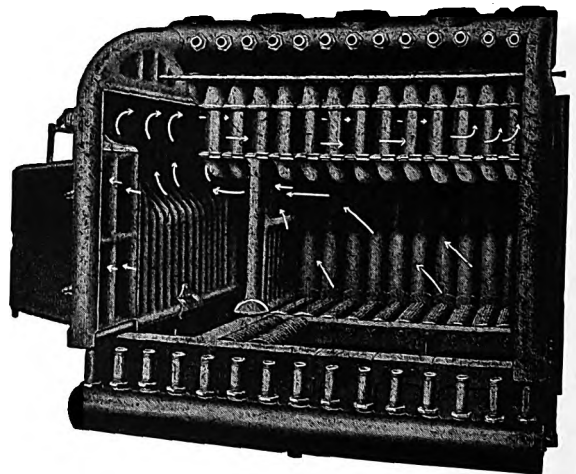


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THE THRONED GODDESS

# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Vol. X

AUGUST, 1922

No. 8

## Shadows and Straws

WHEN ANATOLE FRANCE recently visited Berlin he was greatly impressed with the throned goddess of which we present an illustration as the frontispiece of this issue, and since that time the statue has been much discussed and seems to have evoked universal admiration. It was acquired by the Berlin Museum in 1915, and photographs of it were shown in London in 1916. Leading authorities in England consider the work to be the most important known example of the late Archaic period, probably belonging to a date somewhat earlier than 480 B.C. Monsieur France considered that the statue was of the time of Phidias, or even by a member of his school, but others prefer to place it in the late Archaic period. While the statue seems to have been colored,—the natural colors having probably been used for the eyes and eyebrows, the lips and the hair,—the dress and chair are believed to have been inlaid with patterns in bronze. The statue is supposed to have been found not in Locri, Greece, as originally asserted, but on the site of the Greek Colony of Locri in South Italy. Is she Hera or Aphrodite, or Persephone, or merely a patron goddess of some town? Probably her secret will never be known, which matters little. Serenely she sits, her smile evoked by what memory we know not, perhaps, may one not surmise, by the sheer happiness of her secure place in Greek art.

THE INSTITUTE Committee on Education announces the forthcoming publication of "The Significance of the Fine Arts," the work upon which it has now been engaged for some two years. The book of 500 pages, well illustrated, is in two parts, the first devoted entirely to architecture, the four periods being covered as follows: *Classic*, C. Howard Walker; *Medieval*, Ralph Adams Cram; *Renaissance*, H. Van Buren Magonigle; *Modern*, Paul P. Cret. In part two there are the following contributions: *Painting*, Bryson Burroughs; *Sculpture*, Lorado Taft; *Industrial*

*Arts*, Huger Elliott; *Landscape Design*, Frederick Law Olmsted; *City Planning*, Edward H. Bennett; *Music*, Thomas Whitney Surette.

We think it quite safe to say that no more distinguished group of artists and writers have heretofore collaborated in so important a piece of work, and it is but faint praise to say that they have done so not because of the meagre remuneration but through a realization of the great value which it is hoped will accrue to this most earnest effort of the Institute's Committee. A portion of Mr. Elliott's chapter on the Industrial Arts appears in this issue of the JOURNAL and we hope that it will serve to stimulate the advance orders for the book now being solicited by the Committee. Its members have labored long and well. They have given prodigally of their time and have privately contributed the rather large fund which made the book possible. Certainly we are safe in saying that every member of the Institute will not only rejoice in the consummation of their enterprise but will accord the publication of the book every possible support. The advance subscription price is \$3.50, and orders may be sent to C. C. Zantzinger, Chairman, 112 South Sixteenth Street, Philadelphia.

HENRY BACON is the third member of the American Institute of Architects to be awarded the Institute Gold Medal. In 1909 it was given to McKim, and in 1911 to Post. The first award was to Sir Aston Webb in 1906. Then, in 1913, to Jean Louis Pascal, and in 1921 to Victor Laloux, both of Paris. Following the usual course of events, the medal will be presented to Mr. Bacon at the next Convention of the Institute to be held in Washington in 1923. The event will be unique in the annals of the Institute, for one of its own members will be signally honored, perhaps at a function to be held in the Lincoln Memorial itself, but at any rate within sight and sound of the national monument designed by the architect who will receive the medal. An added significance will

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derive from the occasion, for the city of Washington has long been the scene of many memorable efforts on the part of the Institute and its members,—efforts put forth toward the accomplishment of that vast civic design of which the Lincoln Memorial forms a part.

As Mr. Litchfield so well said in seconding the recommendation of the Board of Directors, when Mr. Bacon's name was put in nomination: "The American Institute of Architects cannot add to the glory which is Bacon's, but it will honor itself in honoring him. We may not add to his glory, but much to his happiness. Sweet, indeed, is the heart-felt praise of one's fellow architects; they know, as no one else can, the struggles, the disappointments, the infinite pains which alone produce success, but for this reason they can appreciate, as others cannot, the greatness of a great success. Let us, therefore, with love and with gratitude, make to Henry Bacon our highest award in token of our appreciation of his wonderful achievement."

SOMETHING MORE than a fortnight after the Convention, another great honor fell to another member of the Institute, when Mr. Thomas Hastings received from the King of England the Royal Gold Medal of the Royal Institute of British Architects. Only once before, we believe, has the medal been conferred upon an American, when it was given to McKim. By a coincidence quite unanticipated, Mr. Hastings receives the medal at the moment when England is praising, almost without stint, the exhibit of the work of American architects, to which frequent reference has been made in these columns. To say that American architecture has for the moment eclipsed all else would hardly be an exaggeration. Professor C. H. Reilly, of the School of Architecture, Liverpool University, in opening the American exhibit in Manchester recently, paid a most eloquent tribute not only to American architects but to the vision of those who paid for our buildings and to the people of the United States who demanded good building. In expressing the opinion that we were as yet hardly to be called a race and that our progress in no other art would scarcely warrant the assertion that we were a nation of artists, he assigned our remarkable architectural development to the coincident development of our architectural schools, the methods of our architects and the attitude of the public to whom that work appealed. He placed architecture as the first of all our achievements, so that altogether, Mr. Hastings could not have asked for a happier setting for an occasion so memorable.

WHILE WE ARE on the subject of medals, let it not be forgotten that the more modest awards of the Institute Medal for excellence of scholarship in the architectural schools often carries an exceeding joy

to the recipient. Recently, in writing to the Institute in acknowledgement of the receipt of the medal, one of the students said:

"It may seem commonplace to say it, but the award of the Institute medal came to me as a great surprise. I had heard, during my course, of its existence, but never quite understood for what it was given, but least of all did I expect that I should be the fortunate recipient. It is an honor which I prize very highly indeed and I know that I may confess that to you without fear of any seeming lack of modesty. The Henry Adams book is one I have long wanted to read and I am deeply indebted to the Institute for this additional generosity. This encouragement is a great stimulus and I can only hope that the future may in some measure justify the award."

QUITE TRUTHFULLY it might be said, without doubt, that those who have to deal with the administrative side of the Institute's affairs find nothing more unpleasant than the cases which have to do with what is called unprofessional practice. It is really rather astonishing, when one stops to think about it, that men should be willing to serve, wholly without reward and often where their action is apt to leave a trace of bitterness behind, in attempting to adjudicate these differences of opinion as to what is fair in architectural practice.

Therefore, it is not hard to imagine with what pleasure the Executive Committee, at a recent meeting, had read to them a letter in which the writer, a member of the Institute, now retired from practice, took occasion to point out the following incident as indicating that perhaps we heard far too little of the other side of the story. Some years ago he had prepared plans for a certain type of building which then involved some wholly new problems. To these he had given great study and had found what was thought to be a solution. But the building was not built and the plans were laid aside.

Some years later, in fact quite recently, another architect was given the commission to design the building. He, too, had been puzzled by the problems presented, but a draughtsman, formerly in the employ of the architect who first studied the question, had offered a solution which had been accepted. Then it was that the present architect discovered about the previous plans and the first architect. He immediately wrote a letter explaining the incident and enclosed \$500 for the ideas which he had innocently accepted, together with an apology. Doubtless the incident is not unique and attention is only called to it because it is pleasant to remind ourselves that there are architects still possessed of that high sense of personal honor which once distinguished not only the professions, but trade and commerce as well. C. H. W.

# The Autobiography of An Idea

By LOUIS H. SULLIVAN

## CHAPTER III.

### *And Then Came Spring!*

THE beauty of winter was fading as the thaws began their work, patches of bare ground appearing here and there, patches of deep snow remaining in the gullies, and remnants of drifts lying here and there. Each day the scene became more desolate; mud and slush were everywhere. But our youngster was not downhearted. Any kind of weather suited him, or rather he suited himself to any kind of weather, for he was adaptable by nature,—which meant in this case abundant glowing health.

The hounds of spring *may* have been on winter's traces; he knew nothing about that. His immediate interests lay in the rivulets which emerged at the lower end of the gully drifts. He wished to know just where these rivulets started. So he shoveled off the snow and broke off the underlying decaying ice until the desired point of information was reached. Then he would go immediately to another drift, and operate on that to see if the result tallied with the first. This work completely absorbed him. It gave him new and exciting sensations, physical and mental. Then, too, he would tramp over the sodden stubble of the fields, and plow along the muddy roads. He would hunt about eagerly to find by actual test which places were the soggiest, and just where the mud was deepest and stickiest. Then came rains upon rains. The snow vanished. The earth and all upon it was bare. The child took all this for granted.

He did not know, he did not even suspect, because of the city life he had led, that out of this commonplace bare earth—indeed now actually hidden within it as a mystery—was to arise a spectacle of entrancing beauty. The rains became showers, occasionally sparkling in the sunshine. The winds became mild breezes. There settled over all a calm, a peace, an atmospheric sense that caressed and encouraged. And thus came spring. The grass appeared as a delicate deepening influence of green. Did not our boy soon find the earliest pussy-willows, the first crocuses in the garden? Did he not note the delicate filigree appearing as a mist on tree and shrub, and the tiny wild plants peeping through the damp leaves of autumn in his favorite woods? Did he not really see things moving? Was not the filigree becoming denser and more colorful? Was not the grass actually growing, and the tiny plants rising higher? Was not the garden becoming a stirring thing like the rest? The outburst of bloom upon peach tree, cherry and plum, evoked an equal outburst of ecstasy and acclaim, an

equal joy of living. Was not something moving, were not all things moving as in a parade, a pageant? Was not the sunshine warm and glowing? Had not the splendor come upon him as upon one unprepared? He heard the murmur of honey-bees, saw them burrowing into flowers, fussily seeking something and then away; and the deep droning of the bumble-bee, the chirping of many insects, the croaking of crows, as in a flock so black, they flew heavily by now and then; and the varied songs of many birds; riotously shaping, all, on one great tune with bees, insects, flowers and trees. Were not things moving? Was not something moving with great power? Was there to be no end to the sweet, clamorous joy of all living things, himself the center of all? Could he stand it any longer? An interlude! Then of a sudden the apple orchards sang aloud! What made them thus burst forth? Was it that same power, silent amidst the clamor? Was it a something serene, sweet, loving, caressing that seemed to awaken, to persuade, to urge; yea, to lure on to frenzy, to utmost exaltation, himself and the world about him, the new, the marvelous world of springtime in the open—a world that became a part of this child that went forth every day, a world befitting him and destined to abide with him through all his days? Oh, how glorious were the orchards in full bloom! What mountains of blossoms! What wide-flung spread of enravishing splendor! The child became overstrung. Yet his heart found relief from suffocation in his running about, his loud shouts of glorification and of awe, his innumerable running-returns to the house to say breathlessly, "Come Grandma! Come See! Come See!" He wished to share his joy with all. These wonder-orchards were his, the fields, the woods, the birds were his; the sky, the sun, the clouds were his; they were all his friends, and to this beauteous world he gave himself without a thought—without reserve. For how could he know that "All mankind being born in sin, are by nature under the wrath of God"? And how could he know that far, far from this scene of love, of pride and joy, men were slaughtering each other every day in tens, in hundreds and in thousands? True, at the appointed hour, he had run about the house shouting "Fort Donelson's taken! Fort Donelson's taken!", and equally true he had made monitors out of a bit of lath and the bung of a flour barrel, and with greater difficulties a *Merri-mac*. He had sailed them in a wash-tub filled with water. Further, he had listened to some talk about the war between the North and the South. He heard some talk about "Rebels" and "Yanks." Yet it was all vague, and distant beyond his hills. It was all

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indistinct. He knew nothing about war—he does now. Spring passed slowly on, things were surely moving. The petals had fallen, and tiny round things appeared in their places. Trees were coming to full foliage, their branches swaying and leaves fluttering gracefully in the quickening breezes. Plowing, harrowing and seeding were over. He had been given a tiny patch in the main garden to be all his own, and with toy tools he worked the soil and planted flower seeds. He became impatient when certain nasturtium seeds failed to show above the surface, so he dug them up with his fingers, only to be astonished that they had really put forth roots. He pressed them back into the earth. To his sorrow that was the end of them. He had not yet heard of the French proverb which runs to the effect that Time will not consecrate that in which it has been ignored. For a first attempt however he did pretty well. He learned little by little. He was now abundantly freckled, and in a measure toothless. His heavy thatch of black hair seemed to have known no brush. His hands were soiled, his clothes were soiled. Hatless, barefooted, his short pants rolled above his knees, and unkempt with activity, he was still a wonder-child, though effectively masked as a son of the soil. To the ordinary passerby, he was a stout, stocky miniature ruffian, let loose upon a helpless world. The more discerning noted within the disorder two fine eyes, clear and bright, with mobile lids; eyes that varied strangely in accord with his varying moods; deep liquid hazel eyes, expressive of his every thought. He saw all things just as they were. The time had not arrived for him to penetrate the surface, even though he saw more than most, even though he saw at times what seemed a pellucid ghostly presence, a diaphanous mystery hovering in and about things living in the open; living in that very open where he liked to live. Exceedingly emotional—though unaware of it—the responses of his heart, the momentary fleeting trances, the sudden dreaming within a dream, perturbed him. He wished to know about these; he wished to know what it was that enthralled him time after time. And in this he failed also; he could not interpret—few can. For that which perturbed him lay far deeper, far higher than his thoughts—a living mystic presence within the self-same open that was his. *Per contra*, he was generally regarded as a practical little fellow who liked to work.

Generally speaking the family was without the pale. Father had some nondescript notions, without form, and void. He was attracted by the artistic, especially by the painter's art. He was well posted as to the names and works of contemporaries, and was a fairly good judge of landscape and still-life; also he admired a fine orchestra. Paradoxical though it may seem, but really consistent, he had tried church after church seeking what he wanted. What he wanted was not priest

or preacher, but a thinker and orator. At last he found, in Theodore Parker, the satisfaction of his quest. Going alone, he attended regularly. From this it may be inferred that he leaned toward Unitarianism. Nothing of the sort—he leaned toward oratory. If Unitarianism went with it, well and good. It was of no moment. He praised Parker highly. Mother had a fixed idea that existence was continuous in a series of expanding becomings, life after life, in a spiral ascending and ever ascending until perfection should be reached in a bodiless state of bliss. This ethereal belief, obviously enough of Buddhist ancestry, opened to view the beauty and purity of her heart and mind. Moreover, be it said, she read with avidity Renan's *Vie de Jesu*, in which that whilom radical strips from the Son of God the raiment of divinity. Grandpa, it scarcely need be said, scoffed and grinned. He looked upon religion as a curious and amusing human weakness—as conclusive evidence of universal stupidity. Grandma alone was devout. Unostentatiously she believed in her God, in the sublime compassion of his Son, in the wondrous love he bore—a love freely given to the outcast—a love so great, so tender, so merciful, that for its sake he yielded up in agony his earthly being, the supreme sacrifice, to the end that all men might be blessed thereby; that, as his mortality passed, his supernal love might be revealed to men throughout all time; and that his divine being ascended through the firmament to join the Father in Glory on the throne of Heaven. These things she firmly believed. They were the atmosphere of her inner life, the incentive of her daily deeds. She furthermore believed quietly in doctrine—and it may be in dogma. She held the scriptures of the Hebrews to be sacrosanct—as verily inspired of God. She did not seek to proselyte. She was satisfied to abide in her faith, undisturbed and undisturbing. Perhaps this is why her grandson loved her so. Innocent of creed, of doctrine and dogma, he loved her because she was good, he loved her because she was true, he loved her because to his adoring eyes she was beautiful. Such was Grandmama.

Otherwise Grandmama was the responsible head of a family consisting of herself, her husband, her son and her grandson. She was methodical, orderly, knew the true meaning of thrift, entered every item promptly in the account books, struck the monthly balance, had a fine mind for figures, and withal she was prudently generous. Her main business was to give private lessons in French to certain brahmins and their offspring in that curious city called Boston. In her leisure moments, she knitted, knitted, knitted; gloves, mittens, scarves, socks, stockings, shawls; she knitted in silk, in wool, in cotton; she knitted with wooden needles and with steel needles; sometimes she used two needles, sometimes three. Frequently in night's still hours, she read in her Bible. Her precise hour of

## THE AUTOBIOGRAPHY OF AN IDEA

retiring was always 1 A. M. She had her coffee served in bed, and arose precisely at 10 A. M. Grandpa's hours were the reverse. At or about 8 o'clock in the evening he would lay down his long-stemmed clay pipe, yawn, chirrup a bit, drag himself from his comfortable chair, kiss everyone goodnight and make his exit. His grandson, following soon after, passed the open door at the head of the stairs. He always looked in, and always saw grandpa stretched full length in bed, reading by the light of a student lamp some book on astronomy. The child did not intrude. He knew full well that however much Grandpa ridiculed so many things, he never poked fun at the solar system. In this domain, and the star-laden firmament, he lived his real life. This was his grand passion. All else was trivial. The vastness awed him; the brilliance inspired him; he kept close track of the movements of the planets. He read endlessly about the moon and the vast, fiery sun, and the earth's spiral path.

But it was in Autumn, when the full train of the Pleiades, the Hyades, Orion and Canis Major had cleared the horizon and stood forth in all their conjoined majestically-moving glory, that Grandpa went forth in the early hours of night to make vigils with the stars, to venerate, to adore this panoply of constellations, to be wholly lost within the splendor of the sky. Here was the man—all else was husk. What communion he held within the stillness of night, within his own stillest hour, no man shall know. It was his secret. Now and then he would, bit by bit, endeavor to impart a little of his knowledge. But he knew well enough his grandson was not of age. Still, the boy learned to recognize and name several of the constellations as well as some of the larger stars and planets. One evening they were walking together along the garden path. The crescent moon was smiling just above the tree-tops to the westward. They had been silent, thus far, when, Grandpa of a sudden asked, "Louis, have you ever seen the *penumbra* of the moon?" When the meaning of *penumbra* had been asked and answered, when the child had grasped the idea that it was the rest of the moon next to the crescent, he said, "Yes, Grandpa, I see it." "What is it like?" "It is curved at the edge and flat the rest of the way. It is pale blue, like a fog. It is beautiful." "Ah!" exclaimed Grandpa, "how I envy your young eyes! I have never seen it. I have tried with opera glasses, but still could not see it. It must be wonderful—and I shall never see it. Ah, my dear boy, little do you know what treasures your sharp eyes bring to you. You see things that I cannot see and shall never see. When you are older you will know what I mean." The child was startled. He did not know his grandpa was near-sighted. True, he had noticed that when Grandpa read in bed, he held the book very close to his eyes. He had noticed that some people wore spec-

tacles, that his grandma wore spectacles in the evening. But Grandpa didn't wear spectacles at all. Why then could he not see the *penumbra* of the moon? It was all strange, very strange to him; it was anything but strange to Grandpa—it was a sorrow. To that eager mind, burdened with reluctant eyes, it was a calamity that he could not see and would never see the *penumbra* of the moon.

Grandmama on the other hand was not imaginative. In place of this divine power she had well-defined, solidly settled ideas concerning decorum, breeding, formal and informal social intercourse, and a certain consciousness that Mrs. Grundy resided as definitely in South Reading as elsewhere. Upon her arrival there, one of her first activities was to seek out a church, attendance upon which would at one and the same time insure to her unquestioned respectability, and, as nearly as possible, coincide with her individual views of doctrine. Indeed Grandmama was conservative of the social order of her day. She seemed oblivious to hypocrisy and cant. She was devoid of them. In this instance, she differed diametrically with her daughter Andrienne, who railed bitterly at that cloak of respectability which to her view camouflaged the sins of the world. Candor and sincerity were her ideals of character and conduct. There was but limited choice in the village and Grandmama soon fixed upon the Baptist Church as her election. She began regular attendance. The child had now reached the age at which she deemed it proper that he, also, should attend divine service. Thus another new world was to arise above the limited horizon of his experience.

It should be mentioned that among the treasures of barn and pasture, there was a certain and only horse named Billy. He was an object at the time technically known as a "family horse—safe for any lady to drive." As a matter of fact Billy was a sallow plug, who, as a finality, had resigned himself to a life of servitude, but not of service. Within the barn was housed what was mentioned familiarly, though not correctly, as the "carryall." It was really a family carriage, having an enclosed body somewhat like a modern automobile limousine. It was a neat solid affair, well built, well finished and upholstered, and with good lines. It was of the essence of respectability, even as Billy was of the lower classes. Billy's harness was all that could be desired, and on Sundays Billy was groomed to the extent of his limited adaptability to the exactions of high life. Billy, harness, and carryall, made a rather interesting combination, even though Billy, as fate would have it, was as a fly in an ointment. The combination, however, is explainable. Grandmama was timid, or at least apprehensive, and very cautious. She wished to be sole guardian of her physical safety, to the extent, even, that she permitted no one but herself to drive. Her husband was too nearsighted and absent-minded,

her son too reckless, her grandson, too young. Hence her determination to take matters into her own hands. The idea of a glossy, dignified, high-stepper to match the aristocratic carryall could therefore not be entertained by her. It involved risk, possible disaster. So Billy was selected as a compromise between the desired tone and the much more desired security. That is, as a deletion of a certain, or uncertain percentage of village respectability, for South Reading was of ancient settlement. Grandma would not countenance a check-rein for Billy; she maintained that it was cruel. The normal center of Billy's head, in consequence, was nearer the earth he feebly loved than the heaven Grandma hoped to reach with Billy's material aid. There was a whip, in its socket, to be sure, but Grandma would not strike a dumb beast. When Grandma wished to start, or, on frequent occasions, to accelerate Billy's pace—if such it might be called—she waved the lines with both hands and chirped encouragement—never becoming aggressive—and satisfied that she had a horse "safe for any lady to drive." But just here appearances became deceptive; for Billy, soon after his transfer in exchange for legal tender, revealed a defect in character. He was given to unlooked-for fits of insanity. From a turbid dodder, he would suddenly break into a runaway. This was alarming; yet there seemed a method in the madness. Like a clock, with mainspring breaking, and the works rattling fiercely toward a silence soon reached, even so were Billy's runaways. Their distance-limit seldom exceeded one hundred yards. So, after prudent observation of his antics, and with due allowance for the fact that he did not run away every time, Billy was reinstated as a family horse, safe for any lady to drive, provided she were familiar with his mannerisms. Such was now the case.

Of a Sunday morning, fair to look upon, in early summer, all prepared and ready, Billy and carryall connected into a material totality, the family set forth, following the dusty road to the village, without mishap. Upon arrival at the church, a white-painted wooden structure in imitation of stone, pretentious, and ugly,—as if indoctrinated with sin,—so much talked about within—Billy was hitched to the general railing and the family entered, after Louis had sufficiently patted Billy's nose. Climbing a wide flight of stairs to the second floor, all entered a large, dim, barren room, and reached the family pew. Louis immediately felt a pang of disappointment. There was nothing here to recall an echo of the spring song he had shared in the open. He thought there should be. Looking about at the congregation, he was astonished at the array of solemn faces: Why solemn? And the whispering silence? Why whispering? What was to follow? What was to happen? He enquired, and was hushed. He waited. The service

began; he followed it eagerly to the end, noting every detail. He greatly admired the way the minister shouted, waved his arms terrifically, pounded the big Bible magnificently, and then, with voice scarcely exceeding a whisper, pointed at the congregation in dire warning of what would surely befall them if they did not do so and so or believe such and such. He roared of Hell so horribly that the boy shivered and quaked. Of Heaven he spoke with hysterical sweetness—a mush of syrupy words. He had painted the same word-pictures year after year; worked himself to the same high pitches and depths. His listeners, now thrilled, relaxed, expanded, held these sermons, these prayers, these hymns as precious; for the man looming in the pulpit was of their world. He gave pith, point and skilled direction to those collective aspirations and fears, which otherwise would have lacked symmetry and power. The sermons invariably ended with a tirade against the Papists. This epilogue appealed to all as a most satisfying finale. After the closing words of benediction the congregation remained for a while outside the church, gathered in groups, the men swapping lies and horses, the women folks exchanging idiosyncrasies. All declared their satisfaction with the sermon. This was the routine. Then they went home. To the child, however, as a first violent experience, the total effect was one of confusion, perturbation, and perplexity. One particular point puzzled him most: Why did the minister, when he prayed, clasp his hands closely together and so continue to hold them? Why did he close his eyes? Why did he bow his head and at times turn his sightless face upward toward the ceiling? Why did he speak in whining tones? Why was he now so familiar with God, and then so groveling? Why did he not shout his prayers as he had shouted and roared through his sermon? Why did he not stand erect with flashing eyes, wave his arms, clinch his fists and pound the big Bible, and walk first this way and then that way, and otherwise conduct himself like a man? He seemed afraid of something. What could it be? What was there to be afraid of? And then this matter of the Papists. Why so bitter, why so violent, why so cruel as to wish these people, whoever they were, to be burned throughout all eternity in the flames of awful hell? And the minister had said he was sure they would be. The boy asked at home what Papists were. Grandma said they were Catholics. Grandpa said they were imbeciles. Then he asked what were Catholics, and Grandma said, simply, they were not Protestants. And what were Protestants? And Grandma said, as simply, but with a touch of detail, that they were not Catholics, to which Grandpa added that they, also, were imbeciles. But at the end of the next sermon the minister explained it all. He declared in his wrath that they, the Papists, were pagans,

## THE INDUSTRIAL ARTS

heathen, infidels, idolators, worshippers of saints, low beasts, vile savages, ignorant, depraved, the very scum and slime of earth whom God in his mercy had segregated from the elect, in this world, in order that he might damn them totally to Hell in the next. The minister made it quite clear that no Papist could by any chance enter the Kingdom of Heaven, and equally clear that a good, strict Baptist could and surely would. As to other denominations, he felt dubious, indeed plainly doubtful, almost certain. Still, he said, grace was infinite, and the wisdom of the Father beyond the grasp of mortal man. On the other hand, he acknowledged himself a sinner, and frequently proclaimed, as with a sort of pride, that his entire congregation, individually and collectively, were miserable sinners; and they agreed. He told them, moreover, the wages of sin was death. He told them also, with unction, of the bloody source whence came the wages of purity in redemption. The child appealed to Grandpa, who said the minister was an idiot full of wind and nonsense. The child suffered. Nothing in this new world agreed with his own world. It was all upside down, all distorted, cruel and sugary. It was not like his beautiful springtime, it was not even like his beautiful winter. There was no laughter, no joy as he knew these things. He appealed to Grandma, but his questions were too persistently direct, too

embarrassing to her placidity. She explained perfunctorily; he got no satisfaction there. He began to think perhaps Grandpa was right. After more sermons, and prayers, and denunciations, he began to feel distinctly that his world, his life, which he had frankly felt to be one, was being torn in two. Instinctively he revolted. He would *not* have the beauty of life torn from him and destroyed. These things he did not say; he felt them powerfully. A tragedy was approaching. He was about to lose what he loved, what he held precious in life; he was about to lose his own life as he knew or felt life. He rebelled. He lost confidence in the minister. He no longer believed what was said. More than that he soon disbelieved everything that was said. He was regaining his freedom. The services increasingly irritated him; he asked to be transferred to the Sunday School. He would at least see children there. The Old Testament amused and pleased him with its interesting stories. He could almost live them over. But when it came to the crucifixion he rebelled again in spirit, this time so ardently that it was thought prudent at home to release him from Sunday School and Church alike. His rumination now was to the effect that fortune might perhaps also separate him from the schoolhouse, standing white and bare on the hillside.

*(To be continued)*

## The Industrial Arts \*

By HUGER ELLIOTT

WHEN walking along—let us say—New York's Fifth Avenue, we see in the shop windows, gathered from every quarter of the globe, a multitude of objects which will, sooner or later, take their places in the homes of the people. Here are porcelains from China; brocades from Persia, Italy and France; carved and gilded candlesticks from Spanish churches; pottery from Delft or Copenhagen; an Elizabethan chest and a chair designed by Sheraton; Roman glass unearthed in Asia Minor; Egyptian jewelry; silver cunningly wrought by Spanish-American craftsmen; Japanese cloisonné; coral from the Mediterranean, brass bowls from Russia and rugs from the Near East. We see a profusion of articles beautiful in line and form and color and eloquent of the romance of trade and war and of the love of beauty in maker and purchaser. These things tell us not only of the satisfaction of physical needs—a bench upon which to sit or a bowl from which to eat—but also of the

satisfying of the spiritual needs of man in the production of things of beauty. For men have always desired to make beautiful those things which they use; the degree of cultivation which the people of any time or locality have reached is reflected in such products.

The fact that we now see in our larger cities articles gathered from the most distant lands indicates the astonishing development, in the last few decades, of the facilities for transportation and opens a vast field of conjecture concerning the development of trade. We picture the many-oared boats of the Phoenicians coasting along the shores of the Mediterranean; caravans toiling across the Arabian desert; Portuguese galleons, bound for India, doubling the Cape of Good Hope; and the steam-driven vessels of modern commerce calling at every port on the seven seas. Ancient trade-routes have been traced by the archæologist; prehistoric trade relations between vanished races proved by the discovery in graves or buried shrines of fragments of pottery and vessels of beaten gold. It is interesting to trace the routes by which the silks of China reached the palaces of the later Roman em-

\* We here offer the readers of the JOURNAL a selection from "The Significance of the Fine Arts," shortly to be published by Marshall Jones Company of Boston, and to which a more extended reference appears on page 237 of this issue.—Editor.



perors; by which the glass of Venice made its way into English homes in the time of Elizabeth or a carpet of the Nearer East appeared in Madrid to play a part in a painting by Velasquez.

The influence of conquered peoples upon their conquerors and of the victors upon those who were subdued, can be followed almost as clearly in an examination of these works of minor fine arts as in the study of the resulting political changes.

The journeyings of the famous "Horses of St. Mark's" present a well-known instance of the vicissitudes to which works of art are subjected. Erected in Constantinople, probably after the sack of some Græco-Roman city, they were, as spoils of the conquerors, carried to Venice in the thirteenth century to adorn the exterior of the Venetian Cathedral, there to influence the works of Donatello and Verrocchio. Again the fortunes of war swept them off, this time to Paris with the armies of Napoleon, only to be restored after his fall. Finally, to save them from possible damage by bombs dropped from aeroplanes, they were, in 1917, removed to Rome. They have but recently been replaced upon their ancient pedestals.

The conquest of Greece by the Romans furnished their architects and craftsmen with a wealth of ornamental motifs. These were later given a new development when the barbarians overthrew the power of Rome. To trace the changes wrought in the decorative application of the acanthus leaf is to study the history of Europe from the fifth century, B.C., to the invasion of Italy by Charles VIII and beyond. Many wares which fostered the development of European craftsmanship were imported from the East during the Crusades. The decorations in the "Egyptian taste" appeared in France after Napoleon's campaign in Egypt; did space permit, many other instances might be cited.

The spread of religions played its part in the development of the arts. Many ornamental motifs are found to have new meaning when one follows Buddhism into China, Christianity into the wide domains of the Roman Empire, Mohammedanism into India and Spain. Even the Reformation wrought clearly seen changes in the art of Northern Europe and affected that of the new world.

The development of Christian symbolism is a study in itself. Particularly interesting is the naïve adoption of pagan forms to serve the needs of the new faith. The symbol of Bacchus becomes the vine of life; Orpheus reappears as Christ; even the tonsure was borrowed from Egypt, through Rome; Mahommet's strict interpretation of the Mosaic law concerning graven images, although not always observed, turned the creative impulse of his followers toward the development of geometric ornament, producing the rich and distinctive Moslem style. This, in its turn, had

an influence upon the Renaissance ornament of Spain after the reconquest of that country by the Christians. The deeper one delves into the human side of the story the more enthralling the study becomes.

Although men have produced, to serve their daily needs, unnumbered articles, these may be grouped under a comparatively few heads. The general form of these objects is fixed by the need which they serve; the spoon, the bowl, the table have the same fundamental characteristics the world over. That which differentiates them is the artistic quality with which they are endowed. One great group of articles—clothing—varies not only in this artistic quality but has been conditioned by climate as well.

The interchange of ideas—and of decorative motifs—has been so fostered by trade, by wars and by religious movements that before long it may be a matter of surprise to learn that there are any places the products of which show local characteristics. Dress is, alas, becoming deplorably uniform (and unbeautiful for men at least) whereas in earlier times national costume was worn as a matter of course. Says Portia of one of her suitors: "I think he bought his doublet in Italy, his round hose in France, his bonnet in Germany, and his behavior everywhere." Racial differentiation was once observable in every article made by man. An expert, without hesitation, declares this fifteenth century brocade to be Spanish, this other Italian. A Chinese bowl and one from Persia are easily distinguishable; a bit of Gothic carving from England is quite different from one executed in Italy at the same period. Local decorative characteristics furnish us with an inexhaustible source of delightful study; a mass of material illustrative of the progress of humanity. One wonders whether through the unifying power of the printed page and the photograph all national individuality is to disappear.

It is important that those who deal pictorially with past ages be familiar with local characteristics. No longer may Julius Cæsar be played in a wig and dressing gown as was the custom in the eighteenth century. Yet recently a celebrated singer appeared in Aida swathed in velvet—a material first produced some four hundred year after the period of the opera. Another actress, playing the part of Cleopatra, reclined upon a rug which could not have been woven until a thousand years after the death of the enthralling queen. Illustrators are often to be found indulging in such anachronisms; and a famous writer, in a tale of the period of Henry VIII, mentions a full length mirror, whereas the largest mirror in England at that time was not more than twenty inches square.

While the needs of men have been more or less the same, the world over, the articles which serve these needs differed as the artistic impulse differed and as they were affected by natural resources. The presence

## ARCHITECTS AND CITY PLANNING

of kaolin in China made possible the production of porcelain. Silk was the exclusive product of that country until silk worms had been smuggled out of China. According to tradition this occurred in the sixth century A.D., when two Persian monks, sent for that purpose, escaped with the eggs hidden in sticks of bamboo. Rugs were, and are, made in the Orient, particularly in Asia Minor, because wool was there plentiful, earth and vegetable dyes easily procured and time of little value. That Venice, situated amidst sandy islets, should become a centre for the making of glass was as inevitable as that Pittsburgh should become the steel centre of the United States or Grand Rapids, near the great forests of the Northwest, the chief producer of furniture. For although our transportation facilities make it possible for us to manufacture what we wish, where we wish, the cost of moving raw material will more and more tend to develop industries in those places where the necessary supplies are plentiful.

The artistic impulse which differentiates the product of one country from those of another or of the same country at different epochs,—France, for instance, in

the fourteenth and the eighteenth centuries, the “genius of the race” which causes these differences, is difficult to analyze. What is it that led the ancient Greeks to produce objects in every way unlike (save in being pleasing in form and color) those made by the contemporary Chinese and which caused the work of the Egyptian craftsmen to differ from that of their fellows in India?

Social and religious ideals—climate and natural resources; these played their part. But there is something else, something deeper and more subtle, which defies analysis; a special feeling for line or form or color; a racial way of visualizing beauty; a psychological bias the secret of which we may some day be able to solve. At least all were striving to achieve beauty. And as we broaden and refine our perceptions—freeing them from prejudice and from the control of passing fads and fashions—we may, through the study of these objects which men have made to serve their daily needs, deduce some of the laws of beauty and increase, for posterity, the number of those works of art which have power to delight and uplift the human spirit.

## Architects and City Planning<sup>1</sup>

By THOMAS ADAMS

### CHAPTER II.

#### Instruction to Architectural Students

As a rule the man who wishes to specialize in any direction should begin to do so when he is a student, if the opportunity is made available to him. Students of architecture who desire to take up city planning work or to become authorities on the architectural features of a city plan should have some teaching by city planning experts as part of their education.

This is being recognized in some architectural schools of high standing. The schools of Architecture and Landscape Architecture at Harvard are closely identified in respect of those phases of teaching which relate to civic design. The Massachusetts Institute of Technology has appointed lecturers on Town Planning and Landscape Architecture to give special courses to architectural students. Other universities are giving special courses in different forms to different groups.

#### Two Kinds of Students

It is found that the teaching has to comply with the requirements of two categories of students. There is the small group that is ambitious and hopeful to make city and town planning their especial field. There is the larger group, the members of which intend to be architects pure and simple, and to whom as prospective

artists in the design, composition and arrangement of buildings, some knowledge of city and town planning will be useful.

What then is the kind and form of teaching that should be given? Should it take the form of a regular curriculum comprising a consecutive series of lectures and studio hours, leading up to an examination that would give the student credit in obtaining his degree; or should it merely comprise a limited lecture course for the purpose of stimulating thought and research in a special field treated admittedly as a side issue? To these questions some answer has to be given and it is not easy to give it.

#### Science of City Planning in Infancy

As an art, City and Town Planning is old and has been much practised, but as a science it has never received much attention. The available knowledge of definite facts, and of the relation of these facts to one another, in connection with the methods and functions of city growth, is small; because there has been no continuous body of knowledge built up and accumulated in printed form by trained specialists in the subject. The formulation of principles and of rules affecting their application, has only received sporadic and superficial study by men engaged in the practice of city planning, who have had little opportunity for scientific investigation and elucidation. We are only at the beginning of the study of the facts and principles relating to the plan-

<sup>1</sup> The first chapter of this article appeared in the June issue.

ning of cities and towns, and it will take a generation of continuous study, if we begin now, to accumulate the knowledge necessary to form the basis for authoritative guidance on the subject.

There is of course a vast amount of material in letter-press and illustration containing evidence of methods of town planning and description of concrete schemes. There are a number of informative and reliable books dealing with principles and methods of planning modern cities by experienced writers. There are sociological studies by observant students, like Patrick Geddes, dealing with fundamental factors and important functional elements in city development. There are historical works containing evidence of great value regarding the origins and systems of building great cities in the past. There is indeed the material for a large library in all these directions; but it is hardly an exaggeration to say that no really scientific and logical treatise exists which deals comprehensively with the subject in a manner suitable for students.

Meanwhile the teacher collects, compiles and analyzes such material as is available and gives his students such guidance as he can as a result of his own observation and experience. In considering what he can teach, he decides what is desirable with a full course and what is practicable with a limited course of lectures. At the Massachusetts Institute of Technology a partial course was given in the first year, limited to ten lectures followed by a test paper. The success of the course has justified the decision to have a more extended course with laboratory work next year. It may be of interest to give a brief outline of the subjects dealt with in the limited course.

## Limited Lecture Course

The teaching begins with a general review of the subject and a description of the known factors that have to be taken into consideration in preparing plans. The character, size and geographical or administrative boundaries of areas are dealt with. Then follows a description of ancient and mediæval plans, showing the early methods of the laying out of streets and open spaces, grouping public buildings and the underlying social conditions that influenced the making and execution of plans.

City and town planning since the Renaissance, including the planning of Washington, Edinburgh and Paris during the latter part of the eighteenth and in the early part of the nineteenth centuries are next dealt with. Three lectures cover this ground in a general and somewhat superficial way, but it needs at least five lectures to give satisfactory treatment of historical phases alone. The student needs to supplement this first group of lectures with a considerable amount of reading.

The scope, objects and examples of modern city and town planning are next dealt with in two lectures. Here we come in contact with matters that lie within our experience and observation. We begin to convey to the student some idea of the problems that confront us from day to day in modern cities, and of the methods of solving these problems. The greater interest that is attached to the study of the concrete example that comes within common observation makes these lectures more

popular, and it is open to question whether it is not better to open the series with the consideration of modern problems and lead up to historical phases later.

As stated in the previous article instruction has to be given in the law of city planning. The architect does not want to be an authority on municipal and city planning law and administration, and yet he should have sufficient knowledge of the scope and limitations of the law to enable him to co-operate with the lawyer and to plan with proper regard to the legal restrictions imposed upon him.

The relation between the architectural and engineering features of the plan, and between the contributions that have to be made to its preparation by the architect, the landscape architect and the engineer need explanation.

The importance of the land question in relation to the city plan is a point that must have special emphasis. Systems of sub-divisions; planning of general street systems, and relation of streets to traffic and buildings; planning of public utilities; grouping and reciprocal relations of important buildings; preservation of natural and structural beauty; park and housing developments including site planning, are considered from the architect's viewpoint.

Two lectures instead of the required four deal with industrial development and distribution; the relation between industries and homes; and the planning of the public services of transportation, power, water supply, sewerage; the consideration of community centers, growth of suburbs and satellite cities; connection between rural and urban problems; garden cities and suburbs and the financial advantages of encouraging decentralization.

Zoning has to be limited to one lecture although reference to the delimitation of areas for purposes of use, height and density is made in most of the lectures.

Finally, in two crowded lectures instead of four or five, matters of technique are dealt with on general lines, with a few concrete illustrations. There has to be described the methods of preparing and executing surveys and plans for regions, cities, towns, and separate subdivisions or estates. The field is covered in a general way and the answers given by the students to the test paper at the end of the course will show that the knowledge gained is more than superficial and is of distinct advantage to the students in other architectural studies.

The desirability of giving such teaching cannot be questioned. What will be questioned by many teachers is whether there is room in the ordinary three to five year course for adding special lectures on city planning, or whether it is desirable to substitute city planning lectures for those on some subject regarded as of equal importance. That must be a matter to be decided by the Professor and College Faculty in each case.

Those who are not convinced that any extended course is desirable, because it would add too much to the work of the year; or alternatively that it would mean that something else, perhaps not more important but made so by usage and convention, had to be omitted, may find that a limited lecture course on city planning in the final year would be practicable and valuable. The scope and working of a more extended course will be dealt with in the next article.



Four Wood Cuts  
J. J. LANKES

THE PORTICO





ROUEN—PALACE HENRI QUATRE  
Drawn by Louis C. Rosenberg  
Engraved by J. J. Lankes



THE KNOLL  
J. J. Lankes



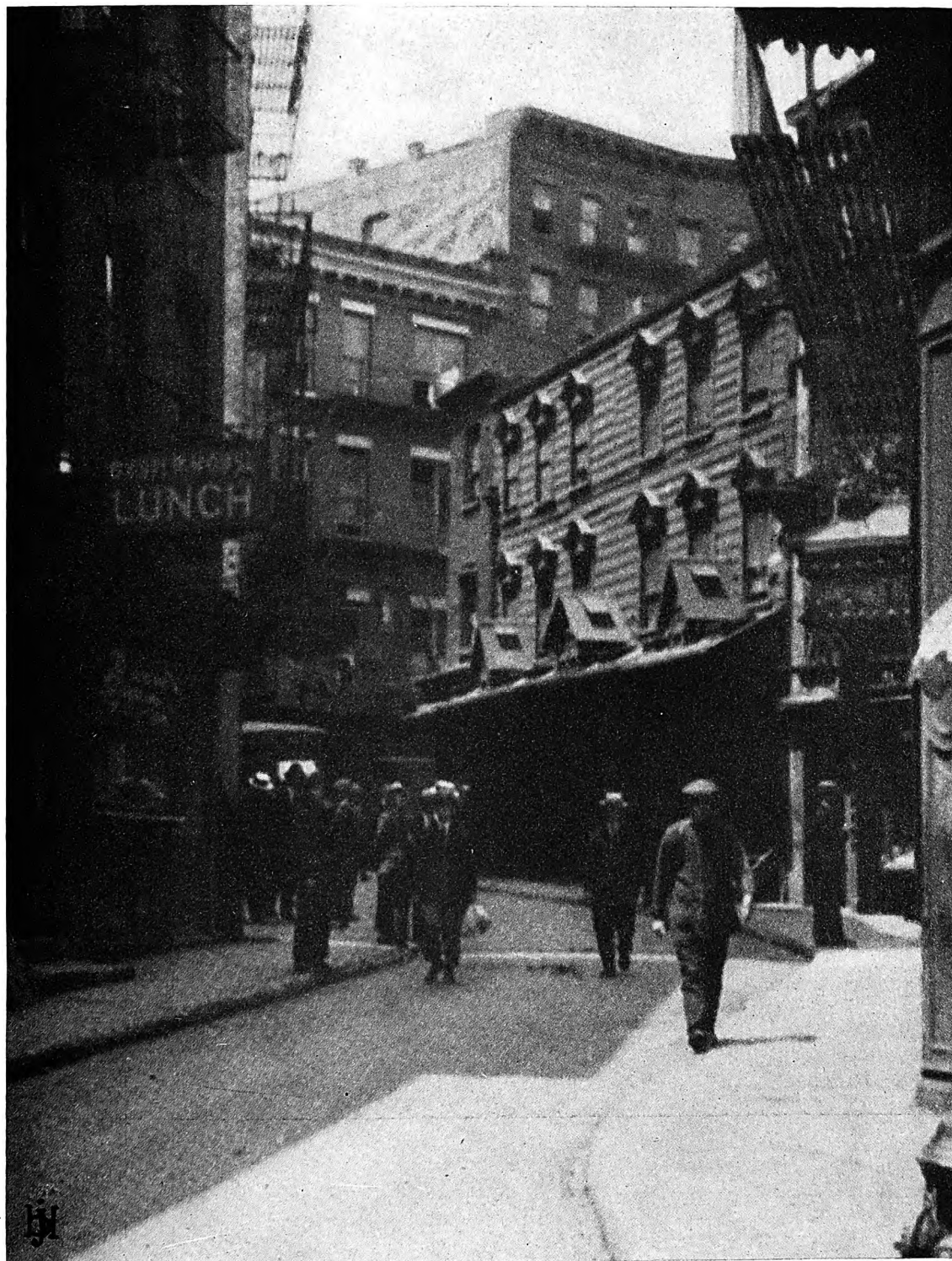
Five Photographs  
BEN J. LUBSCHEZ

THE "L" STATION



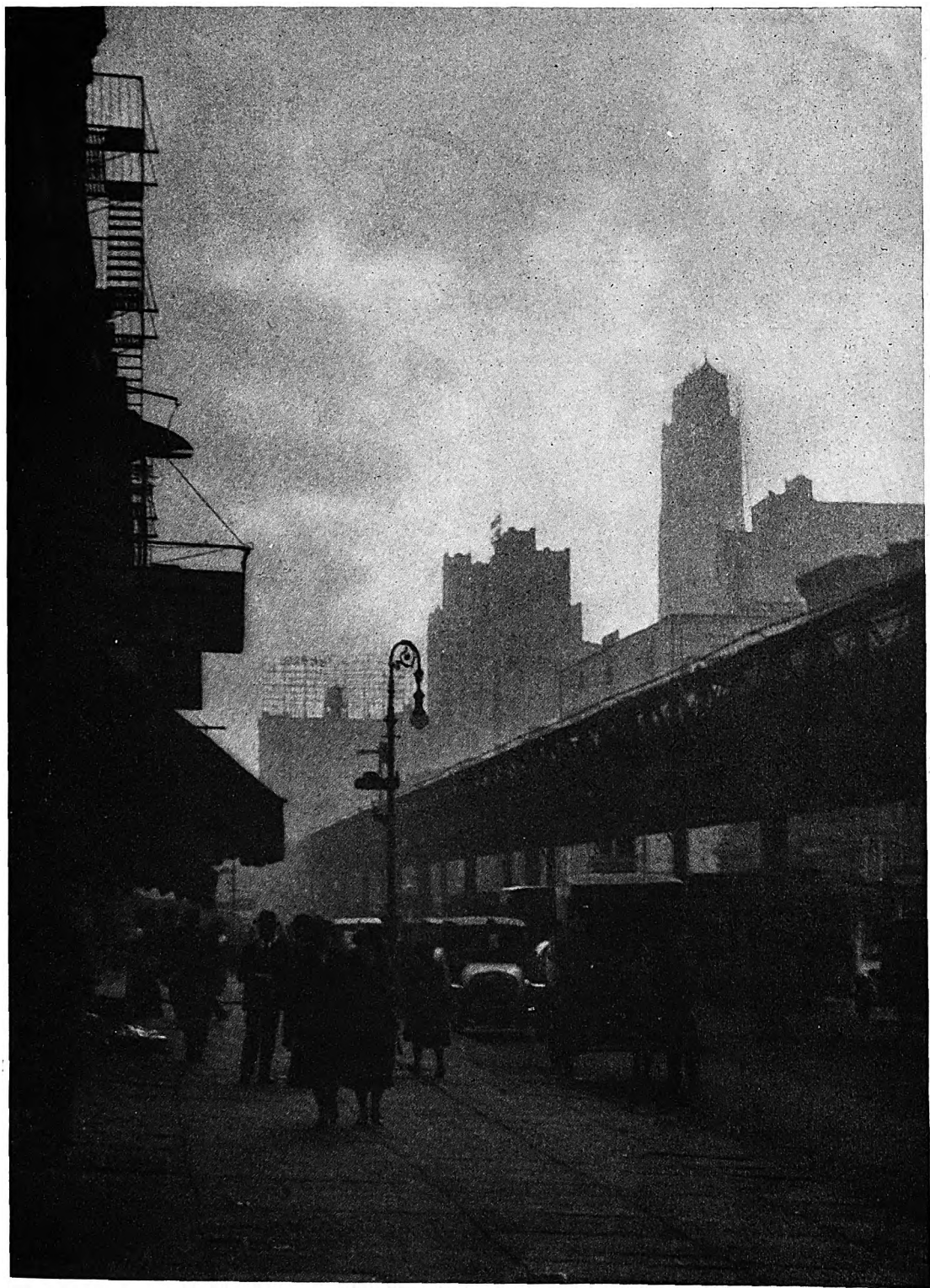


FROM BRYANT PARK, NEW YORK  
Ben J. Lubschez



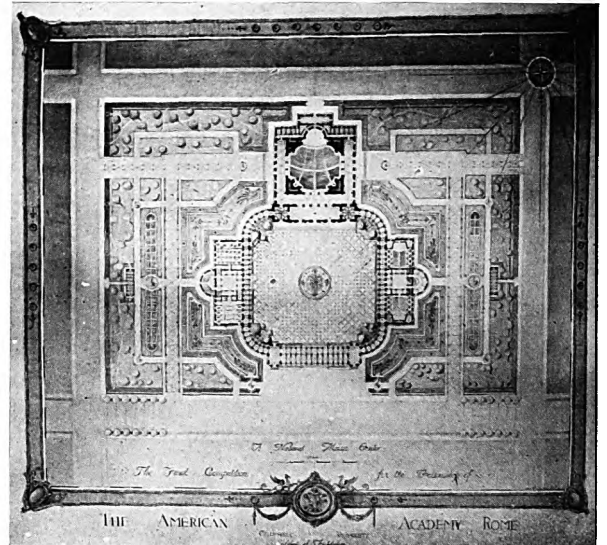
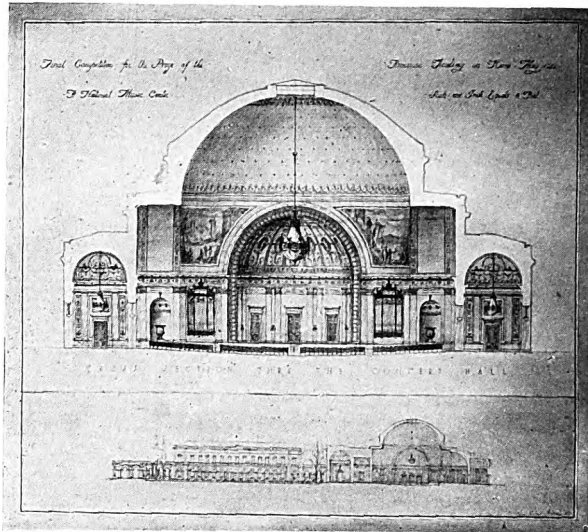
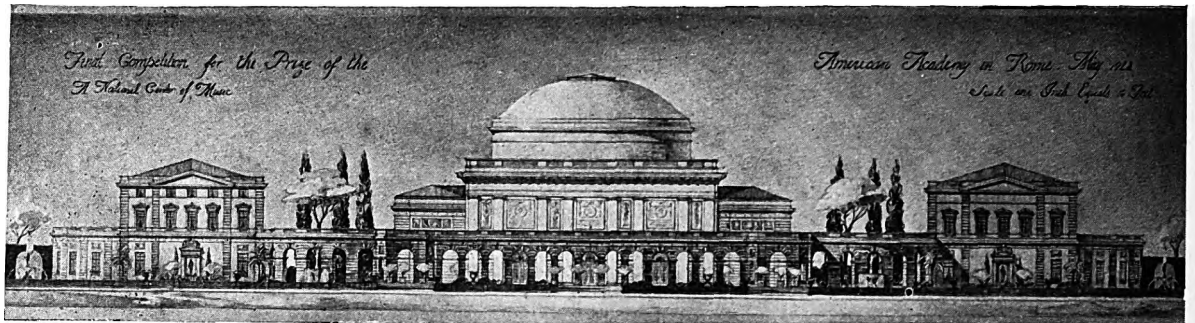
DOYERS STREET, CHINATOWN, NEW YORK  
Ben J. Lubschez





SIXTH AVENUE, NEW YORK

Ben J. Lubschez



## American Academy in Rome

### Final Competition for the Fellowship in Architecture—1922

It is supposed that a National Association, formed for fostering American music, proposes to erect in the country's capital, a national headquarters of such a character as to focus the public mind on the society's aims. Lovers of music have subscribed a sufficient sum to allow the architect a free hand in plan and character. As a site, the city has provided a small park, approximately level, 1,000 by 700 feet, and bounded by three streets and a wide avenue, the latter running the long way of the park and at the south. The building should face this avenue.

The building shall be in three distinct parts: (1) Part for Administration; (2) Part for the Association's Social and Reception Rooms; (3) A Concert Hall.

#### I. Part for Administration:

This part shall be in several stories and contain:

- (a) A general working office for information, control, stenography, accounts, etc.
- (b) A National Committee Room.
- (c) An assembly room for delegates of local chapters at reunions.
- (d) Living apartment for the National Chairman, large enough to permit of receptions.
- (e) Servants' quarters for the whole building, janitor's quarters, postal sub-station, telegraph office.

#### II. Part for the Association's Social and Reception Rooms.

This part shall contain:

- (a) A restaurant with necessary service and kitchen.
- (b) A café.
- (c) Reading rooms, lounge rooms.
- (d) A great hall of magnificent proportions for reunions and receptions. There shall be several smaller reception rooms in connection with it. The great hall shall be easily reached from the club rooms and by the public.
- (e) A large musical library and in connection with it a small museum for musical instruments and precious mementos.
- (f) A hall for chamber music. This hall and the library will on certain days be open to the public.

#### III. The Concert Hall.

In direct communication with the Association's social rooms and also easily accessible to the public will be the concert hall. It shall seat about 2,000 people (allow 6½ sq. ft. per person) mostly on the floor, though there may be galleries, but no boxes. There will be a large stage capable of seating a symphony orchestra and chorus and in connection with it a musician's foyer, dressing rooms, etc. The whole property will be embellished to set off the building in the most imposing and dignified manner.

The winner of the competition in architecture was Henry G. Marceau, of New York City. The winners in painting and sculpture were respectively Alfred Floegel, New York City, and Lawrence F. Stevens, of Brighton, Mass.

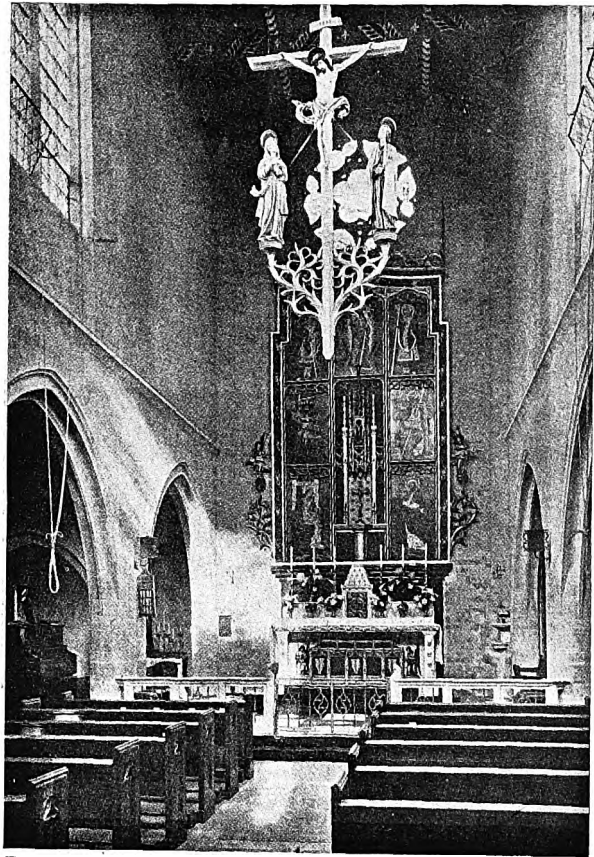
# To Other Continents, and Again Home

By IRVING K. POND

## A Running Start

In this present venture into the far and fairly fascinating regions which lie between the covers of certain foreign Architectural periodicals (dropped upon my drafting table by the postman a short while since, in staggering bulk), I am not only carried to the far Far East, but I am swept into other vortices of language and expression equally far beyond my depths; and I am cast upon the alien shores of at least five other continents. Some of the shores do not seem altogether alien, however, for the breezes blowing off. Old England, for instance, and off South Africa and New Zealand and Canada are laden with odors (not always perfumes) and vapors which might well have been extracted from our own professional and social ebullitions. And I am inclined to suspect that were I sufficiently at home in them the linguistic tides which flow from Scandinavia, from the Argentine, from other remote shores would not seem so vortitectual, so to speak; and that if only I could put out my feet and touch something solid I would find myself standing firmly on the same bottom which underlies "the sea of thoughts and things at home." For we are all alike in essence, as even a cursory peep between the covers of these foreign technical journals serves well to show.

It does not take a deeply penetrative glance into what is trying to express itself in these printed pages to confirm the impression that the professions are taking themselves very, very seriously; and especially does this seem true of the architectural profession. I am rather of the opinion that when one is sure of his status, entirely certain of the firmness of the ground underneath him, he can afford to "let himself go" a bit and not be forever feeling for the next firm foothold. I am led to this

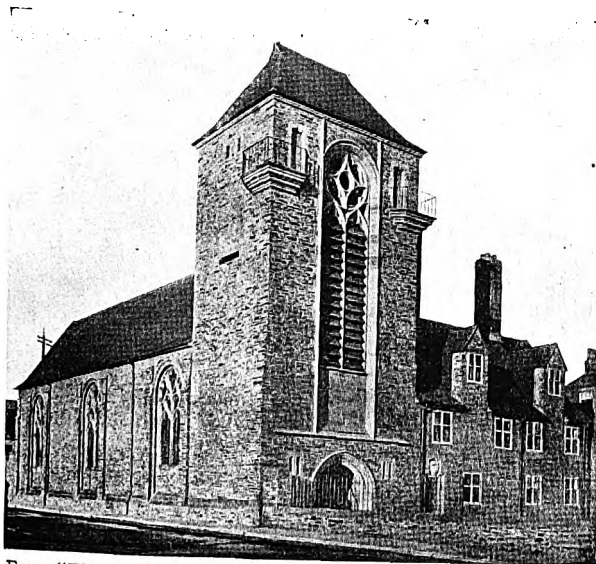


From "The Architects' Journal"

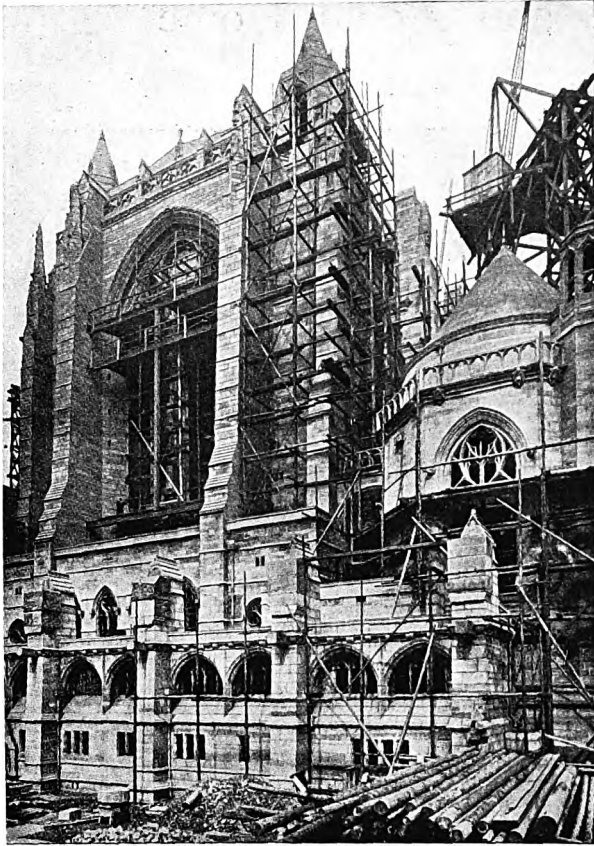
rather platitudinous deliverance by noting in the pages before me constant questionings by architects as to the status of the Architect: "What is an Architect?" "Has an Architect any place in the modern scheme of civilization?" "Is the Architect giving *quid pro quo*?"—"Why is the engineer supplanting the Architect?" (the plain answer is that he is not, nor, in the nature of things, ever can. I shall revert to this later.) "Why is the Architect and his work misunderstood or, at least, underrated by society and the state?" (Perhaps society and the state are as much in the dark as to what they are misunderstanding, and so underrating, as is the Architect himself.) "How shall the Architect be trained?" "Will Registration and Unification restore the status of the Architect?" (Can the banding together of a great body of business men who have architecture for a trade establish the real status of a great art? and can the registration of these same practitioners contribute to that great end?) Please consider the bearing of these parenthetical remarks when perusing what comes a little later on.

## In Foreign Languages

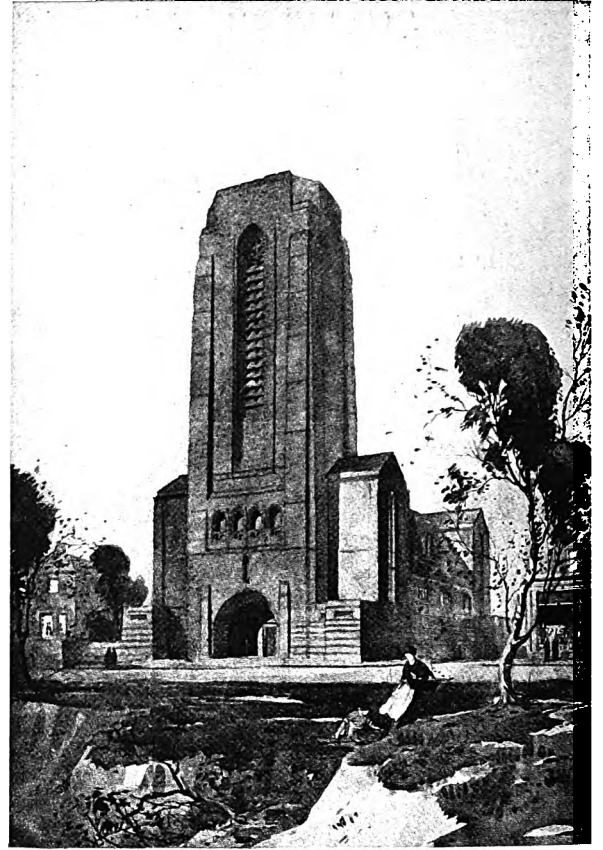
The *Journal of the Institute of Japanese Architects* for 25 March comes laden with formulæ for continuous



From "The Architects' Journal"



Photographs from "The Architects' Journal"



beams, etc., etc., indicating that even in the Farthest East architecture is based on construction and construction is science. One hardly can imagine the free, rhythmic Japanese binding his art with the bonds of structural formulæ, but when he took up with the ways of the Western world he swallowed the whole thing with all its limitations. A beautiful old Indo-Chinese tower, illustrated and described in the same issue, came up out of a seething volcano of feeling for both beautiful mass and structural function,—a piece of real architecture.

Two studies in town planning come from some unknown French source. "Besançon—a study of the evolution of the town," and "Tours—its urban functions," are the subjects of these elaborate and interesting studies. The pages of *L'Architecture* (of 10 April) which are before me are devoted in greater part to a presentation, in text and illustrations from old prints, of the Fêtes of Versailles and their architectural settings in the years 1664 to 1674, interesting mainly to students of morals and manners, in which I suppose architects are included.

#### Back to English

The journals from the provinces will not detain us long, for generally they reflect what is going on architecturally in the Mother Country and in the United States to which they are bound by economic and spiritual ties. And they are watching us over there. An essay on "The Relation of Plan to Elevation" read by H. S. Goodhart-Rendel at the Liverpool School of Architecture and

quoted in full in *Construction*, Toronto, Canada, April, 1922, reveals that. To quote the quote: "The architect who falsifies his plan to make it fit a preconceived elevation not only deprives his building of its rightful individuality, but is also on the road to becoming incapable of anything except repeating himself, or perhaps of repeating other people. This is the danger which threatens American architecture at the present time. The gay parterre of American architecture, which we all admire, is composed too much of cut flowers from Europe. Even the native majesty of her skyscrapers is marred, more often than not by the misunderstood architecture with which they are trimmed. A recent writer in a popular American magazine has attempted to justify the Gothic attire in which some of these skyscrapers masquerade by citing the coincidence of the lines of Mediæval masonry design with those natural to a steel framed structure. 'Old forms serve our purpose,' he says, 'so why not use them?' Would he, I wonder, use the Portland vase as a salad bowl?" "Yet," proceeds our author, "these American reproductions are often beautiful: their insincerity does not spoil their appearance." I quote this last, by the way, that I may suggest that an attractively dressed lie has always appealed, for the moment at least, to the mind of the general public more potently and sympathetically than has a plain naked truth. In time, however, even an attractively dressed lie palls on the public morals, and so for that matter does a plain naked truth on public taste. I wonder if this has any bearing on

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the present assumed Architecture vs. Engineering situation. I started to read in this same number of *Construction* an article entitled "The Eternal Triangle," but when I discovered, as I soon did, that the only *dramatis personæ* involved were an artist's ideal, a client's whim, and a restricted building fund, I desisted—had had sufficient experience in that field myself.

The number of *Architecture*, the Journal of proceedings of the Institute of Architects of New South Wales, which now comes under my eye, contains little of more than local interest and nothing very vital to architectural practice or design.

### In England

*The Journal of the R. I. B. A.* for 6 May contains a fully illustrated article on the Public Buildings of Cardiff. A view of Cathays Park, the Civic Center, from the air presents the topographical relationship between the buildings very clearly. But neither this nor any other view, nor does the descriptive matter, nor for that matter do the buildings themselves, explain the varied foreign influences which have made themselves felt on this Welsh soil. France, Spain, Germany, Italy, all in their less serious aspects, have offered accepted and seemingly acceptable contributions to the civic architecture of this provincial town. The two old churches shown and the old Castle are the only buildings which smack of the soil; the only buildings which could really warm the hearts of the natives. I wonder if here lies any suggestion of an answer to the questioned service of the architect to the community! In this number of the *Journal* is issued a statement from the R. I. B. A. Committee on Unification and Registration. I wonder again if registration and unification would help conditions such as obtain in new old Cardiff! I doubt it. And in the matter of unification and registration, the war goes merrily on with crinations and recriminations; the *Architect* publishing letters and statements from the *Antis*, the *Architects' Journal* espousing the cause of the Pros, though in its issue for 10 May deprecating the heated form which the debate seems to have taken. And if the Pros win? where will be the standard for further professional advancement; can the mob (pardon my use of the word) be counted on to raise standards, *i.e.* to lead? The power of the R. I. B. A. in the past, it seems to me, lay in the very fact that it was a select body. If a professional body exists to standardize business methods and to influence legislation in its own behalf, then the more the merrier—quantity counts. If ideals are at stake—look out for the quality. However, they don't need my advice! But something much more of personal interest to me is presented in the 5 April number of *The Architects' Journal* which announces the bestowal of R. A. upon Mr. G. Gilbert Scott and accompanies an appreciative comment upon him with a half dozen views of his work. I have treasured up a letter from Gilbert Scott, now R. A., introducing me to Clerk of Works Green of the Liverpool Cathedral which I visited in November of 1911 while it was, as it still is, in course of construction. I was duly impressed with Mr. Scott's personality as with the character of his work. Bold, direct, austere (I rather like the word) free from unnecessary ornament, the work touched a

responsive chord in me and imbued me with a fellow feeling. It is the same quality in the work of Leonard Stokes—touched more deeply with a spirit of modernity—which attracted me to him. Congratulations to Mr. G. Gilbert Scott on his new honors and success to him in his work. I dislike the term "work" in connection with the activities of the architect. That phase of the business is what they are trying to unify. The play of the architect, his joy in the enterprise from the first period of conception to the finished creation is not a thing for legislation and cannot be conserved, though it may well be stifled by legislative enactments which regard architecture merely as a business.

Sandwiched in among the bulkier publications I find two numbers of the *Journal of the Society of Architects*. It is to the leading article in the May number that I direct your earnest attention. The article in question is by H. Bartle Cox, A. R. I. B. A., Membre corr. S. A. D. G., is entitled "A Plea for the Modern Outlook" and evidently was written in France. I wish I could quote it all, but it covers over twelve pages of the *Journal*. The author is a devout believer in the efficacy of training and advocates "centralization," *i.e.*, education by the government as in France. He believes in Federation rather than Unification; and, too, he believes in standardization. "Is not man," he asks, "a social animal, and do not architects copy and develop along traditional lines?" "Originality in design," he continues, "is too great a miracle to be believed in by professional men with any learning." But, let me say, not so great a miracle or so stupendous a fact as to be unwelcome when it does appear as it has in ages past. "The present age," says our author, "is a transitional period of great complexity in which the engineer alone is sure of his standard, provided he does not attempt ornamentation, popularly termed architectural treatment. . . . The æsthetics of pure construction are more important than its dressing, but long before the whole can be brought to perfection the modern standard must be found." And then: "The petty-minded infatuation for ornament, the hysterical appreciation for local peculiarities (more novel to the visitor than to the resident), the pretentious ancestral worship of the half-learned archæologist, the sophism of most popular writers, the wide-spread insincerity of many so-called artists (poseurs), the bluff of modern art dealers (made easy by dilettantism), the belief that art is a gift outside and beyond all useful and practical considerations, are some of the reasons why the meaning of the word Architecture has been so distorted, why the average person takes the trappings of a building to indicate its style, and why he dare not admit the beauty of engineering, while, at the bottom of his heart, he enjoys his motor car far more than his Queen Anne billiard room, and admires the nation's marine more than its museums. It behooves architects to take this into consideration if they want to improve the narrowness of their modern position."

"Parliament," says our author, "if asked to grant Registration might demur on the following questions:

1. What is an architect, what are his functions, and from what does he claim to be able to protect the public?



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2. Do architects know more about building than engineers?
3. Is art, as understood by modern practising architects, an undisputed boon to society?"

And Mr. Cox sums up his thesis by urging on the profession the necessity for completing the organization "by founding:

1. A single Centralised National School, with ramifications in the provinces;
2. A System of Co-operation with Industry, for the realisation of national problems; and
3. A Federation of All Architectural Societies, to present petitions to Authorities."

All this by our author. And now let me dogmatize a little and in my own feeble way analyze the functions of both engineer and architect and determine, if may be, whether the one deserves all the encomiums which he himself among others is now showering upon him and whether the other is serving society as his art demands.

And, too, let us make it perfectly clear at the outset that the only branch of engineering which pretends to usurp architectural functions is the structural branch in which may be included the business engineer or contracting builder. The automobile engineer, the mechanical engineer, the naval engineer, affect architecture only as they educate (if they do) the public taste to an appreciation of functional line; and a shallow public is sometimes deceived into believing that because a functional line may be made beautiful by an artist that all functional lines must necessarily be beautiful; the latter is not true and never was. An object may function perfectly and yet not be æsthetically beautiful—if you don't believe it just contemplate some other man's perfectly good wife (or some other woman's model husband). The function of engineering is to make practicable and economical in action the machinery for sustaining life; the function of architecture is to help life to be worth living when once the sustenance has been provided. The craving for food and for shelter, the physical craving, has always been in man—it has led to wars, mass-movement and slavery. The craving of the spirit for beauty has been co-existent with this other and has made for peace, individual initiative and freedom. Force has gone with the one—gentleness with the other. You can pass fair judgment on the spirit of an age by determining which element has dominated the arts. I think I have answered the first question which might have led Parliament to demur. The answer to the second is implied: the real architect does know more about building to satisfy the craving of the spirit for the higher things in life than the engineer or any other building agency. The moment the engineer builds with that in view he ceases in the very nature of things to be an engineer and becomes an architect. And if he has that possibility within him I do not want to see him robbed of his rightful heritage by any narrow class legislation. And as to the third question, from my limited capacity for judgment, I should have to answer in the negative. Mr. Cox has indicated one phase of a negative answer in the paragraph quoted above, beginning: "The petty-minded infat-

uation for ornament," etc., a perfectly valid statement which is expanded among other equally valid statements in his valuable paper. That the engineer and the architect each may know what underlies his own profession and that of the other I shall epitomize.

Engineering gives expression to the material side or basis of society. Architecture emphasizes the spiritual aspect. When a structure compels the sense of something beyond mere utility, of some spiritual content, it transcends engineering and in just that measure it is architecture, regardless of the cast, class or profession of its creator. When a structure fails in this high mission, whether designed by a self-styled or by a legally established architect, it fails of architecture though by some happy accident it may fall into the category of good engineering. The engineer gives expression to the material aspects of society. He is like a reporter dealing in detached facts though sometimes binding them into a readable story. The architect, like the dramatist, deals with facts in their spiritual significance and weaves them into an expression of the spirit of the age. The architect causes facts to function ethically in a medium of æsthetics. If the architect does not accomplish this in so far as he fails, he fails of his mission; also he fails to perform a self-appointed task; and worse, where registration laws are in force, he fails to fulfil an immense social obligation in the performance of which the law at his own behest creates a monopoly in his behalf.

## Unification

The *Journal* of the Society of Architects, presenting the point of view of a large number of British Architects, has published a statement on Unification in the architectural profession as issued by the Committee on Unification and Registration. This statement seems to have the approval of Mr. Paul Waterhouse, President of the Royal Institute of British Architects, Mr. Edwin J. Sadgrove, President of the Society of Architects and Mr. Arthur Keen, Hon. Secretary, R. I. B. A., the above named serving in the order mentioned as Chairman, Vice-Chairman and Hon. Secretary of the Committee.

The question of registration being deeply involved with that of Unification, the British point of view must be of interest to every American architect. The British idea seems to be Unification first and registration as a consequence. The American idea, registration first and as much Unification afterward as may be deemed advisable for the welfare of the public and advancement of the profession. The Committee report says that "Unification means a grouping with an organic whole within the Royal Institute of British Architects"; The Society of Architects is to be eliminated as far as concerns its name if the reported is adopted; some other societies are allowed to retain their name and entity. The unattached architects, it is presumed will gladly accept an offer of membership in the R. I. B. A. The grade of membership for each society and the individuals is to be determined at a later date.

The advocates of Unification "regard Unification as a preliminary step without which Registration is a mere

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vision and as a stage in the evolution of Registration which will add incalculable value and force to Registration when finally the latter is obtained." The report then sets forth the advantages to be obtained by a large single association acting under the Code of the Royal Institute of British Architects, the advantages to the individual, to the profession and to the R. I. B. A.—the concentration of all authority in the Royal Institute of British Architects and the saving of all Charter rights of that organization without disturbance from Parliament.

Summed up, the proposition seems to be compulsory membership in a great guild of architects with grades established by the guild itself and every member registered as an architect. A minority report by Mr. Alfred W. S. Cross, Vice-President, R. I. B. A.; Mr. Sydney Perks, Mr. W. E. Riley, Mr. Digby Solomon, takes issue against the scheme on the ground that it would lead to a weakening of the standing of the R. I. B. A. and then demands that the Institute proceed forthwith to promote a Bill for the Statutory Registration of Architects.

The discussion of the question of Unification of British architects is not our concern beyond the light that it may furnish to the American architect. We consider that any test leading to the entrance to our profession in our Country must necessarily demonstrate the applicant's ability to meet certain minimum educational qualifications; a good preliminary education, varying in definition in the many states, but actually amounting in values to the same proof of ability to understand the major subjects, *i.e.*, History, Language, and Mathematics involved in the study of architecture. The applicant being thus prepared is subject to tests in the History of Architecture, Architectural Design, Plan, Architectural Engineering and Architectural Practice. Passing these minimum tests entitles the applicant to serve as an architect. The idea of a maximum test is set aside as being impossible since no one is deemed competent to apply it.

The American Institute of Architects accepts to its membership those who have advanced to a satisfactory point beyond the minimum established by law. An Institute membership covering the entire profession might be an important political agency for the profession if harmony of action could be assured, but it would at best be one new "bloc" to inject discord in the body politic. We believe that it may be assumed that the power for good is greater in a body composed of persons representative in their professions of the highest degree of attainment than in a diluted organization. Therefore we do not open the door of our national organization to those unable to qualify beyond the minimum standards established by statute.

The ideal of a guild, however, persists and cannot be carelessly set aside, but the guild means allocation to class in a profession. Business disadvantage prohibits such classification in the mind of the American, but as a rule he seeks to qualify for membership in a society in which membership is presumptive evidence of competency to a degree beyond the provisions of the law. For geographical convenience the Institute has Chapters. Entrance to the Institute by way of the Chapter which represents the local opinion of the candidate's competency

held by his competitors is an approach which generally speaking assures Institute standing. Statutory regulation of minimum qualifications is the life of our system. Progression to Institute membership by advancement because of conscientious work is the source of whatever power the Institute may possess. Failure to apply for Institute membership is not deemed to be a reflection on the ability of an architect.

Registration first and Institute recognition for advanced knowledge second is a workable program. It does follow the path of the guild to a degree, being a compromise between the guild and the more or less concentrated control of an entire profession. No architect here wishes Unification at the cost of free will. No one seems to object seriously to reasonable proof of qualification, but to submit to organization rule, as a matter of law, does not appeal to the American. He has his local societies and state organizations; he may choose to be a member of one or all organizations of architects; but to enter any one he must be lawfully in practice as an architect and have given proof of attainment in excess of that required by statute.

Most American architects believe that it is an honor, outside of the law, to be a member of the American Institute of Architects, the Royal Institute of British Architects or the Society of Architects. It is probably an opinion formed by observation of the works of the distinguished personnel of these great societies. Many of us would feel sorry to see these organizations pass from their present status and become merely a group under statute law. The whole question involves the rights of a minority; we have had this principle continually before us since the foundation of our government. To box up all architects in a single crate and compel them to agree to a majority rule when ethics are not involved is an abandonment of liberty. Whenever a majority rules without protection to the minority, government shows signs of failure. Whenever democracy is mentioned it is always accompanied with restrictive laws making the principle a farce.

It seems that the American ideal, as far as the architect is concerned, is good, inasmuch as it preserves the right of the minority to join or stay out of a regulatory body. As long as the members of this minority behave themselves in their independence no one can justly criticize. If they do not so behave it is a matter of the application of punishment provided for under the general criminal code.

WM. P. BANNISTER.

### From Our Book Shelf Architecture and the Public

The profession of architecture seldom is the stepping stone to a literary career. When it is we may well look for admirable results in the presentation of the Architect's point of view and his professional background. We certainly do not look in vain for these results while reading Mr. Cornford's brief history of the Royal Institute of British Architects.<sup>1</sup>

<sup>1</sup>The Designers of Our Buildings. By L. Pope Cornford. The Royal Institute of British Architects, London, 1922.

It describes the development of this great professional body from the days of its first charter through its re-organization in the reign of Victoria, to the present day; and the growth of its power and the increased scope of its activities symbolize the developments of the profession and its modern complexities. 'If for no other reason, this admirably written book could claim its right to a place on the shelves of the American as well as the British Architect.

In addition to its purely historical interest, however, it will claim the attention of architects on account of the forceful way in which it pleads for a greater publicity of the essential facts of the building industry and of the personalities that contribute to its progress. This could hardly be stated more simply, directly, and convincingly than in the brief foreword by William J. Locke. He, like the author, served his apprenticeship in the profession, a fact of which probably few of his many readers are aware. For years he was indeed the Secretary of the Royal Institute, and is therefore fully cognizant of his facts.

The reticence of the Architect in matters of publicity is fostered by his code of professional ethics, a code which, by its ban on advertising, encourages the average practitioner to humble obscurity while permitting the gifted exception to gain legitimately the full fruits of his instinct for a place in the public eye. Mr. Locke's plea for a more general knowledge by the public of the great architects of their time, and his assertion that the daily press is largely responsible for the present ignorance of matters relating to architects and their work, are admirably stated, and are equally irrefutable.

This book, indeed if only on account of this foreword, should be read by every newspaper editor in this country. It should be read by every architect; and in the interest of his profession any architect who is a personal friend of an editor should see that it is read also by him. The Committees on Public Information of the Institute and its Chapters could hardly find a better weapon for use in their campaign, which is already showing results.

W. S. P.

NOTE: Copies of the above may be obtained from the office of the Journal.

### Sound and Its Control

It has long been known that certain effects of sound are due not so much to the way in which the sound is produced as to the influence of surrounding conditions. Echo has been associated with cliffs and hollows ever since the days of prehistoric legend. Reverberation was familiar to Homer, who tells us how the noise of carousing "rings through the courtyard of Aeolus." The Greeks of the Hellenistic period apparently had methods of providing for proper conditions of hearing in their open-air theatres, and the Roman architect Vitruvius wrote three remarkable chapters on the subject.

But it is not so generally realized that architectural acoustics, as a modern science, was born as well as bred in these United States. Early in the last century a committee of the Senate called upon a commission (of which the celebrated architect McCombs was the leading member) to investigate the acoustic conditions in the national

capitol. The inquiry lasted through several administrations, and resulted in a series of reports in which the theory of sound reflection was discussed ably and at length. In 1856 the well-known scientist Professor Joseph Henry reported further experiments through which he had been enabled to determine the conditions of echo and the relative intensity of sound in different directions from a speaker. And some fifty years later Professor Robert W. Wood conceived the idea of photographing the actual sound-waves reflected from miniature architectural silhouettes, such as vaults and flights of steps.

As a result, by the beginning of the present century the theory of sound-reflection and of its effect upon an audience were fairly well understood, although they were seldom applied in actual construction. What was not in the least understood was the theory of sound-absorption. In the case of the ancient open-air auditoriums this lack of information was of slight importance, because all the sound which did not reach the audience within the first fraction of a second after it was produced was lost in the heavens above. But in the modern enclosed auditorium this extra sound cannot escape, and so is obliged to rebound back and forth between walls, floor and ceiling until it is finally absorbed by repeated impact. The result is the prolongation of the initial sound which we call reverberation and which produces such disastrous confusion in so many of our finest buildings.

Up to the year of grace 1900 there was not one iota of technical data on this important subject. One guess was as good as another with regard to what the conditions might be in any proposed auditorium. But by great good fortune in 1895 the Corporation of Harvard University had called upon Professor Wallace C. Sabine "to propose changes for remedying the acoustical difficulties in the lecture-room of the Fogg Art Museum." About two years were spent in experimenting on this room, and the questions arising in the consideration of its plans forced a continuance of the general investigation.

The task was enormous. Professor Sabine was obliged not only to formulate *de novo* the entire mathematical theory of reverberation and its calculation, but also to determine the sound-absorbing capacity (or *coefficient*) of every important architectural and decorative material. Moreover the experiments required extreme delicacy and accuracy. "In fact, early in the investigation, two months' work—over three thousand observations—had to be discarded because of failure to record the kind of clothing worn by the observer." Nevertheless he persevered, and in 1900 was able to announce that he had solved the problem to a first approximation for the pitch of treble C and that he had been able to apply the results of his investigations to the design of the new Boston Music Hall.

And he was not content to stop here. It was one thing to be able to calculate in advance the conditions in a proposed auditorium—it was quite another to be able to control the conditions. In certain cases, such as theatres, court-rooms and the music hall above-mentioned, the length of the reverberation could be conditioned upon the amount of heavy carpeting, wall hang-

## WHAT DO WE PAY FOR IN ART?

ings, curtains and upholstery. But there was one entire class of auditoriums, of which the masonry church was the type, in which such textile decorations were hopelessly out of place. For such interiors it was necessary to invent some new and appropriate material combining a hard surface and a high sound-absorbing capacity. In this undertaking also Professor Sabine was successful, and succeeded in producing akoustolith, an imitation stone adapted to wall facings, and Rumford tile, a block adapted to domes and vaulting. These materials closely resemble ordinary stone and tile but have a finely porous surface which gives them an absorbing capacity about half as great as heavy felting—amply sufficient for the purpose in hand.

These successes made Professor Sabine the foremost specialist in the world in applied acoustics and opened the door to much wider fields of investigation. He was called in repeatedly both to correct the defects of existing buildings and to anticipate the conditions in new ones. Already he was planning a monumental treatise on the entire subject of architectural acoustics when his work was cut short by his untimely death.

The story of his accomplishment is told in the "Collected Papers on Acoustics by Wallace Clement Sabine" (Harvard University Press, 1922). In spite of their somewhat formidable title, the essays are quite readable, and, in spots, even humorous. In fact, aside from the mathematical portions, they are written in almost too popular a style, and lose something in practical value from the lack of precise and technical detail. We are told *how* to calculate reverberation, but only incidentally *how much* we ought to provide for. So after spending half a day in laboriously figuring out the conditions in a given case, we suddenly find that we are no farther advanced than when we started. We are told that panelled ceilings are sometimes effective, but not *how big* the panels should be. We are shown a beautiful photograph of a chapel in which the acoustic treatment "is not merely inconspicuous, but is entirely indistinguishable" but we are not given the slightest inkling as to *what the treatment actually was*. Nevertheless, to one who is able to supply the missing links, the papers are full of valuable suggestions. And they constitute the record of a notable scientific achievement.

H. T.

### What Do We Pay For In Art?

I suppose that one could scarcely read the novels of Charles Marriott without suspecting that he had predilections toward other forms of expression than that which finds its outlet with the pen. Readers of the JOURNAL will remember an editorial in our columns, some years back, written after the writer had finished "*The Catfish*," one of Mr. Marriott's novels which has a good deal to do with the question of making good wares and selling them—and that question is vexing us no less today than then. "*The Grave Impertinence*," the last of Mr. Marriott's novels, carries on along the same line, although with a divergence into the field of an employer who had a half vision of a ready-made sort of community to be evolved

entirely out of his own consciousness and who was able to learn better ere he had committed so gross a folly. But running through these two books, and in a somewhat different manner through others of Mr. Marriott's novels, there weaves the gentle philosophy of the personality of the craftsman, his right to his birthright, his subjection, too often, to forces which have nothing to do with the making and selling of sound wares and things of beauty but which have very much to do with the business of carrying on production at a profit.

Mr. Marriott does not propose to change things. He offers no political or economic programme. Like Mr. Jacks, whose "*Philosophers in Trouble*" and whose "*Mad Shepherds*" are filled with the clearest insight, Mr. Marriott gently persists in pointing out, in labeling the shoddy not with curses and imprecations but as the output of the human passion for acquiring things, the one passion, of course, which humans are most unwilling to recognize, at least in themselves. But, all of this is perhaps beside the point and is merely by way of setting a background, so to speak, or perhaps of paying a tribute to a writer whom I so highly esteem. The point is, after all, that Mr. Marriott has lately written the following in the *London Nation*, from which I borrow it, in toto, so replete is it with wisdom and with that other kind of quality which we call spiritual, for we still speak of art and of spirit as though they were quite different things, which, to my mind, they are not. This is what Mr. Marriott has to say:

"Lately there has been a great deal of discussion about the teaching of art, on the one hand, and the economics of art, on the other. Without going so far as to say that art can neither be taught nor bought and sold, isn't it likely that we complicate the matter by failing to distinguish truly between art and its application? At any rate, as regards the teaching of art, there is a great deal to be said for the method of Mr. Wackford Squeers: 'W-i-n-d-e-r, winder—go and clean it!', and as regards the payment of the artist, for the provision of an adequate tuppence for the job.

"But the confusion indicated above, though it affects injuriously both the teaching of art and its payment, goes far deeper in its evil consequences. It proceeds, really, from putting the distinction between art and applied art on the wrong grounds. Most people are agreed that the applied arts are best learnt in the workshop, under workshop conditions; but many are inclined to draw the line at what are called the 'fine arts.' What the term 'fine arts' meant originally it is difficult to say; but, from the history of art, it is reasonable to suppose that it was not intended to convey more than a convenient distinction, a difference of degree rather than of kind. A dictionary quotation from Ruskin, which I am unable to trace to its context, says: 'Then *Fine Art* is that in which the hand, the head, and the heart of man go together.' For practical purposes, that, with its full implications, is good enough. We may readily agree that the hand, head and heart of man are more exquisitely concerned, or in different proportions, in painting a picture than in painting a door; but we prejudice art, and, what is worse, limit humanity, in excluding any of the three factors from the latter exercise. Not only that,

but, for thinking purposes—with practical reflections upon both the teaching and the payment of art—we create, as between the door and the picture, a nightmare problem as to where in the scale of purpose fine art really begins.

“Would it not be simpler to say that, in practice, all art is applied art, and to organize our teaching and our payment accordingly? Putting aside all questions of ultimate application, as to whether the picture is to have a distant and temporary or close and permanent relation to architecture; to go in a frame or be painted on the wall; the very fact of a picture is an application of painting. This is very far from being a verbal nicety; it has, by defect, serious practical consequences—as one may see in any exhibition. Between the representation of Nature, or the expression of the artist, as general aims, and picture-making, lies a great though commonly neglected part of artistic education. Without considerable practical experience not only of painting, but of the teaching of painting, he would be a rash man who said how long, if at all, this part of artistic education should be deferred; but from the practice of great artists in the past, as well as from occasional instances of the present day, the evidence agrees with the assumption that it may with advantage be pursued from the very beginning. In short, it seems overwhelmingly probable that the ideal training for the painter of pictures, as for the maker of chairs or cabinets, is under workshop conditions; having regard not only to the general practice of drawing and painting, but to their particular application to definite purposes, and even to the requirements of the market, from the first handling of the brush or pencil.

“If this be the ideal training, as it seems to be, what we have to consider is how far it is practicable in present conditions. Once agree that a school of art, any school of art, is only second-best, and we are much nearer to seeing the sort of school we ought to have. At any rate, as regards what are already known as applied arts, there seems to be no question that the best results are got when the school approaches workshop conditions by being associated with some local industry; and the pamphlet issued by the Royal Academy in connection with its next winter exhibition, not to speak of such actual results as the International Theatre Exhibition at South Kensington, and the fact which can hardly be questioned that some of the best pictorial art of the moment is to be seen in posters, indicates a growing opinion that what, on wrong grounds, have been distinguished as the fine arts will respond to the same kind of treatment.

“The true distinction between art and applied art remains; the point is that it is valid all down the scale. It is not as between one kind of painting and another, but as between æsthetic theory and any kind of painting; or, in common language, between ‘art’ and ‘craft.’ The former is, so to speak, a University subject, the latter an affair of workshop conditions and market requirements. This distinction at once meets the objection that to take what are called the fine arts into the workshop and the market is to materialize or commercialize art. On the contrary, it is to spiritualize labor. Once agree that the same æsthetic considerations which apply to painting a picture apply, though in a different degree, to painting

a door, and you have emancipated labor without any prejudice to the highest meaning of art. Putting on one side the question of taste in color, a good surface of paint on a door is as truly an emotional, an æsthetic, consideration as ‘significant form’; indeed, it *is* significant form. The true commercialization of art is to make æsthetics the basis of payment—to buy and sell doves. Artistic values are as inestimable in terms of cash as love or moral goodness; but the laborer is worthy of his hire. The illustration has been used before, but it may serve again, that the case of the artist is analogous to that of the wife; she may and should be paid in her capacities of housekeeper and child-bearer, but she cannot without dishonor be paid in her capacity of mistress. Stevenson’s famous comparison was nothing more than a comment upon the unfortunate position of the artist in our civilization; paid for what he should give instead of for his labor; and in the Middle Ages it would have had no meaning.

“How far it is possible to pay the different kinds and degrees of artists on a craft basis is, of course, a difficult question; but, surely the first step is to absorb, or reabsorb, the artist into the craftsman category by organizing his education to that end. What stands in the way is, at bottom, the ‘fine art’ superstition as meaning a difference in kind as well as in degree. How it works out in practice may be seen when the good average painter of pictures tries to decorate a room. As a rule, his ‘æsthetics,’ having been, so to speak, secluded, go to pieces; and he fails not only in the mechanical task of handling large surfaces of paint but in the elements of design, form, and color as applied to that purpose. His knowledge of them has been bolstered up with reference to some theory of Nature; the props removed, he finds himself without principles. On the other hand, when the good house-painter paints pictures as a hobby, he gets into them, as a rule, none of the qualities apparent in his daily work. His instinct and training as a craftsman are defeated by the superstition of ‘fine art.’ He has not grasped the emancipating truth that ‘art’ is not the form but the spirit in which a thing is done. The form can be taught and paid for, but the spirit is common heritage, capable of guidance, maybe, but irrespective of the form and beyond price.”

C. H. W.

## The Producers Section of the Structural Service Committee

The 55th Annual Convention of the American Institute of Architects, on recommendations by the Second Joint Conference on Better Advertising to Architects, adopted unanimously a resolution authorizing the Committee on Structural Service to create a Producers Section of the Committee as a sustaining body to collaborate with the Committee in advising and counseling with manufacturers, who may so desire, on the character of their advertising as to size, form and content in furthering the use, by Architects and Producers, of the Standard Construction Classification adopted by the American Institute of Architects; and in promoting sincerity and reliability of statement in advertising.

## INSTITUTE AND CHAPTER ACTIVITIES

Since the Convention the work of organizing the Producers Section has been pushed energetically forward. On 29 June there was a joint organization meeting followed by two meetings of an Executive Committee. The results of the three meetings are recorded in the following resolutions:

WHEREAS, the creation of the Producers Section of the Structural Service Committee authorized by the 55th Annual Convention of the A. I. A., should be regarded as the beginning only of a program, as yet but partly defined, for cooperation between the producers and architects to promote growing mutual respect and confidence, better joint service to the public and better building; and

WHEREAS, in initiating this program it would be unwise, in the opinion of the Committee, to hamper the work or so restrict activities as to prevent the undertaking of such enterprises as may be considered desirable and as may be sanctioned by the A. I. A. by the adoption of any rigid scheme of organization under a Constitution and By-laws; be it

RESOLVED, that the Producers Section be merely an informal body of individuals, representatives of corporations and representatives of associations working with the Structural Service Committee by means of such liaison committees and agencies as may be needed; and be it

RESOLVED, that to accomplish this purpose the Producers Section of the Structural Service Committee be created and related to the Committee in accordance with the following provisions:

a. That the manufacturers of building materials and appliances and associations of manufacturers be eligible to membership in the Producers Section.

b. That Producer Section membership dues be \$200 a year, \$100 to be paid upon acceptance of membership and \$100 on call if and when needed.

c. That the Chairman of the Structural Service Committee, with the consent of his Committee, appoint an Executive Committee of the Producers Section which shall meet with the Executive Committee of the Structural Service Committee.

d. That the Chairman of the Structural Service Committee be Chairman ex-officio of the Producers Section Executive Committee.

e. That in consultation with the Executive Committee of the Producers Section the Structural Service Committee shall prepare budgets, make special appropriations for special work, select paid employees, fix their salaries and take such other action as may be necessary to the performance of the proposed service.

f. That the Structural Service Committee appoint a Treasurer, satisfactory to the Board of Directors of the A. I. A., to be custodian of the Producers Section fund and to make disbursements therefrom on vouchers signed by the Chairman of the Structural Service Committee and in accordance with budgets adopted or special appropriations made.

g. That the service of counsel and advice on advertising by the Structural Service Committee be rendered to members of the Producers Section at cost less indirect charges, estimated at 25 per cent of the gross cost and covered by Producers Section membership dues, and that the service to non-members be rendered at cost.

h. That the dues for membership in the Producers Section be credited to the member on account of any charges against him for service rendered by the Committee in any fiscal year.

i. That in rendering service the Committee on Structural Service shall give precedence to members of the Producers Section.

j. That no member of an Association of manufacturers which Association is represented by a membership in the Producers Section shall have the right to secure service from the Structural Service Committee through the Association and that service to Associations of manufacturers shall relate only to Association advertising activities.

k. That the Structural Service Committee shall render no service to a publication in connection with manufacturers advertising to be carried in the publication; but that this shall not be construed as preventing the Committee from advising and counseling with a publication on the general character of the publication, nor shall it restrict or limit the activities of the Committee in the performance of its Institute functions.

l. That as a condition precedent to the rendering of service by the Structural Service Committee, the producer, firm, corporation or association or the agent of any of them requesting the service shall agree that no statement will be made in connection with the advertising in question to the effect that it has been submitted to the Committee for criticism and suggestion or that it accords with the Committee's views or recommendations.

m. That the Structural Service Committee issue invitations to manufacturers, and associations of manufacturers to become members of the Producers Section and that the Committee on Structural Service take the necessary steps to place itself in readiness to render the proposed service on and after August first.

n. That as many, but no more than four meetings of the whole Structural Service Committee and the members of the Producers Section be held each year as available funds will permit.

### Institute and Chapter Activities

THE IOWA CHAPTER has issued in printed form the Proceedings of its nineteenth annual meeting. Papers delivered at the meeting are included and copies may be obtained from the Secretary of the Chapter, Mr. Eugene H. Taylor, 222 South Third street, Cedar Rapids, Iowa.

THE PROCEEDINGS: These should reach Institute members not later than August 15. Efforts are being made to mail the book within sixty days of the Convention. The Institute issues a complete record of its Convention transactions, at considerable expense, and members will do well to spend an evening in reading the discussions, and the decisions.

SCHOOL MEDALS: Each year the Institute awards a silver and gold medal to students in the recognized Architectural Schools who excel in Architecture during the four year course. The medals are appropriately engraved and are presented at commencement. Each is accompanied with a copy of *Mont St. Michel and Chartres*. The winner invariably writes of his appreciation, and usually concludes the letter with a paragraph expressing the hope that some day he may be worthy of Institute membership.

ABOUT to incorporate, the Small House Service Bureau, Atlantic Division, with headquarters in New York City, announces the following list of shareholders, the first five of which are Directors: Charles Butler, John Van Pelt,

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Sullivan W. Jones, S. F. Voorhees, Francis Y. Yoannes, Francis A. Nelson, Julian C. Levi, Edward J. Smith, Robert D. Kohn, Otto Boertner, Arthur C. Holden, Walter B. Kirby, H. O. Milliken, R. L. Walker, Bevan Jones, Henry C. Hahn, A. B. Trowbridge, A. J. Thomas, L. W. Eisinger, A. D. Sneden, Gerald L. Kaufman, Roderick B. Barnes, Edward I. Shire, Albert S. Gottlieb, Eli J. Kahn.

MR. GEORGE OAKLEY TOTTEN has been appointed representative of the Institute to the International Congress of Architects to be held at Brussels in September. Mr. Totten will carry with him an invitation from the American Institute of Architects for the eleventh International Congress of Architects to be held at Washington in 1926 to which representatives of all nations are invited.

PUBLIC INFORMATION: In May, a complete plan for newspaper publicity about architecture was submitted to the Chapter by the Committee on Public Information. The material consists of halftones and reading matter concerning architectural subjects. All of it can be used in any community, either as submitted or as a basis for local revision. The Committee plunged on this document and spent its entire appropriation for the year 1922. Each Chapter now has data for an entire year of publicity work.

SOME TIME AGO there appeared in our columns a suggestion that the revenue of the Institute might be increased very considerably by the contributions of the membership to an educational fund, for example, the principle involved being a voluntary donation of a certain very small percentage of the gross amount of work passing through each office. We are glad to announce that the Washington State Chapter has put the idea into actual practice. The contribution is purely voluntary and amounts to one dollar for each ten thousand dollars gross of work secured by each contributing member during the year. A unique reminder and remittance form and treasurer's stub have been worked out for taking care of the contributions.

BASIC BUILDING CODE: The Chapters responded nobly to the call of the Basic Building Committee of the Department of Commerce for comments on a first draft of a Basic Building Code. The document contained some 135 pages of mimeographed material and the time for comments was limited. There was a wide distribution of the Code and we are informed that the most complete and helpful responses came from architects. In view of the consideration which Secretary Hoover has shown to the Institute this is very gratifying. The Institute representatives on the Basic Building Code Committee are Messrs. E. J. Russell and Edwin H. Brown. The last meeting of the Committee was a three day session in Washington—1-3 June. References to future development of this work will appear from time to time.

REGISTRATION IN THE DISTRICT OF COLUMBIA: Following the Knickerbocker Theatre tragedy the Washington, D. C. Chapter prepared a draft of bill for the registration of Architects in the District of Columbia. It was introduced in the Senate by Mr. Calder and referred to the District Commissioners for report. The Com-

missioners were under the impression that a joint law for Architects and Engineers would be more economical in administration and a hearing was held at which the architects and engineers were present. There was extended discussion and the point of view of the architects was ably presented by Mr. Leisenring, Chairman of the local registration committee. A day or two after the hearing the Commissioners recommended to the Senate that the separate law, proposed by the architects, be adopted. It is based on the model form of the Institute. In view of the severe scrutiny which the bill withstood it might be valuable to other Chapters. Copies of it, and the accompanying report, are available upon request.

*The Annuary* for 1922-23 is now in type. It cannot be printed until the personnels of the new Standing and Special Committees have been appointed and acceptances received. It is hoped to distribute the book with the Proceedings—if not sooner.

## News Notes

JOHN HUTCHINS CADY has removed his office to 621 Grosvenor Building, Providence, R. I.

BERNHARDT E. MULLER has removed his office to 527 Fifth Avenue, New York City.

STALYBRIDGE, ENGLAND, is at odds with the Ministry of Health. The town has an ordinance requiring ceiling heights of eight feet six inches. The Ministry of Health says that no housing ceiling shall be more than eight feet high. The standardists are much perplexed. They are even divided, which is awful. Some of them have the temerity to hope the town will win, which is not unlikely. But what will the standard then be?

MANCHESTER, ENGLAND, in October next, will hold a town planning exhibit devoted to the efficient development of an area surrounding Manchester and covering some seven hundred square miles. More than a hundred local authorities will be represented as well as several county councils. The history of the growth of the area will be presented showing what one hundred years of unplanned, undirected, and unrelated activities have produced in congestion, absence of through lines of communication, and general disorder. The event is likely to prove memorable in more ways than one for a multitude of people will, for the first time in their lives, gain some sort of a comprehensive idea of the interrelationship of the corporate bodies of which they are a part and to which they too often yield a blind devotion rather than an intelligent criticism based upon the larger interest. For, in the last analysis, it is the larger interest which finally dominates all the smaller ones, just as is the case in a municipality itself, where lack of planning works an injury on every inhabitant. Our American cities might well begin to sow the seeds of the regional idea in planning by assembling such exhibits as that proposed for Manchester.

SIR CHRISTOPHER WREN died on 23 February, 1823, and in connection with the bi-centenary which will occur next year, the R. I. B. A. is inviting the appointment of

## LETTERS TO THE EDITOR

representatives from English universities, social and ecclesiastical bodies to consider in what way the occasion may best be celebrated. The R. I. B. A. has already prepared a tentative program, but recognizing that Wren was not only a great architect but a great distinguished scientist, mathematician, and scholar, as a great Londoner, it has sought the collaboration of those representative in those fields. It is surely to be hoped that the approaching event will exercise a beneficent influence in the subscription of the fund of £100,000 which is being asked from the public in order that the most necessary repairs may be made to the piers on the north side of St. Paul's Cathedral. During the last few years some £70,000 have been spent in making safe the piers on the south side and the special commission of architects and engineers now reports that there must be no delay in dealing with the weakness of the north side. The two southern piers were found to be filled with rubble, and not with masonry. They were thus quite unable to bear the weight of the dome, and although it is sometimes said that St. Paul's was "jerry-built," it is a well-known fact that Wren labored under the greatest difficulties both as to materials and money.

CHIMNEYS and their place in the landscape was the theme of a discourse by Lord Leverhulme during his inspection of a park of some hundred acres which he recently presented to the town of Bolton in Lancashire. "Some people," he is quoted as saying, "are of the opinion that there are too many chimneys and works to be seen and that spoils the view. As a Lancastrian and a Bolton lad I think that is the charm of the park. It is an entirely perverted idea that factory chimneys are essentially ugly. They are an inspiration for work; they indicate enjoyment and happiness wherever they exist. Why we should think a tree beautiful and a factory chimney ugly it is impossible for me to say. They are both, in my opinion, beautiful in their proper place, and when you combine, as in this park, the beauty of the trees, shrubs, lawns and terraces with the distant view of factory chimneys and homes, I think you have a much more inspiring landscape than Scottish glens or the valleys and mountains of Cumberland and Westmoreland." Those who prefer steeples, towers, windmills and the picturesque landscape adornments that antedated the era of steam may find scant consolation in Lord Leverhulme's remarks. Perhaps, also, one's impressions, in the circumstances, might be colored more or less by the particular kind of blessing conferred by any particular chimney. Seen through the rays of profits, chimneys might mean one thing, while seen through the source of a precarious wage, they might mean another. On the whole, we still imagine that the opinion from which Lord Leverhulme dissented was based upon something sound in the principles which govern the creation of beauty.

THE Association of Collegiate Schools of Architecture held its annual meeting in Chicago on 5 and 6 June, just before the Institute Convention. Most of the member schools were represented, notwithstanding that the time of the meeting conflicted with the Commencement or examination periods of many of the universities. The discussion this year centered about the larger educational

questions and policies. Most of the Association schools are considering five-year courses while a few have already developed them. The schools of the Association are agreed that the longer course is necessary to give the architectural student a broader foundation, and favor the longer course because of the possibility of adding cultural rather than technical studies. The Committee on the Five-Year Course, Professor Ferrand, Chairman, will make a further report on this subject at the next convention.

The Association went on record as heartily endorsing the proposed Institute graduate scholarships, favoring however on the part of the scholars freedom of choice of school as against making all attend a single school.

The requirements for admission to the Association will also be revised during the coming year by a committee, of which Professor Laird is chairman.

The Department of Architecture of the Armour Institute of Technology, Chicago, was admitted to membership, the members of the Association making a visit to the exhibition of the school at the Art Institute.

Professors Boring and Laird were elected directors, the remaining officers being as follows:

President: Emil Lorch; Vice-President: William Emerson; Secretary-Treasurer: Clarence A. Martin.

Most of the Association delegates remained to attend the Institute Convention and shared the fine hospitality and splendid arrangements made by the Chicago architects.

IN recognition of his work in the field of architecture, Professor Harry Sternfeld, Acting Head of the Department of Architecture, at Carnegie Institute of Technology, Pittsburgh, recently received a medal and diploma awarded by the Pan-American Congress of Architects, which met in Montevideo, Uruguay. As holder of the Paris Prize in Architecture given by the Society of Beaux-Arts Architects, he studied in Europe for two years, at the Ecole des Beaux-Arts in Paris and at the American Academy at Rome.

### Letters to the Editor

July 19, 1922.

TO THE EDITOR:

SIR: Do many of the architects of the United States, even some who are members of the A. I. A., look upon manufacturers' advertising departments as "Hand-Out" organizations, or as eleemosynary departments?

One would think so, judging from the frequency with which advertising manufacturers are pestered by cries of "Backsheesh!" either directly by architects, or through their recommendation.

Perhaps the fact that many architects so readily accede to requests by contractors to write to manufacturers urging them to advertise in this or that book or booklet or catalog is evidence of their good nature. But may I suggest that whenever such requests are made they should think of themselves as professional men allowing themselves to be used as tools by concerns that have so little regard for ethics and honesty as to try to use them (the architects) practically for *black-mailing*.



# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

There is another form of solicitation of advertising by architects that is also akin to blackmailing: Before me are soliciting letters written by the Chicago Architectural Exhibition, The Architectural League of New York, the Philadelphia Chapter of the American Institute of Architects and the T Square Club for their twenty-fifth Architectural Exhibition, and so on.

(Incidentally, I may say that these professional men and their organizations have their letters included in a collection which contains similar solicitations from the Plumbers' Social Club of New York, the Police and Fire Journal [of the Police and Firemen of Pittsburgh, Allegheny County and Western Pennsylvania], and the Indiana Ice Dealers' Association, etc., etc.)

How do these *professional* men like being thus regarded as "birds of a feather . . ."?

The vast majority of these catalogs, Chapter Bulletins, Year Books, Annual Ball Programs, Convention Programs, are of absolutely no advertising value, no sales value. They represent pure waste of money, waste for which the entire population suffers in unnecessary costs of distribution. They represent, also, that form of graft known as "You-scratch-my-back-and-I'll-scratch-yours." Indeed, it is too frequently extremely difficult to distinguish the line that separates these "enterprises" from blackmail.

Perhaps the Chapters of Architects who solicit advertising in their Bulletins think they have as much reason as the JOURNAL of the A. I. A. has for obtaining advertising. Cannot they see that since the JOURNAL obtains and carries advertising, and if they believe in the JOURNAL as the voice of the A. I. A., those are the very reasons why they themselves should cease soliciting advertisers who do, or may use, the JOURNAL.

Manufacturers who spend money for advertising do so for the purpose of securing the stabilizing of markets, to secure standardized quantity production in their plants for the purpose of securing a minimum unit cost of production, a low selling cost, and so be able to maintain minimum selling prices. They use, in selling their goods, not only the individual salesman, but the mass salesman—advertising.

Architects would shrink in horror, no doubt, from a suggestion that they should ask a manufacturer to turn over to them or someone else some of the money appropriated for the salaries and expenses of the individual salesman.

But some of them do exactly the same thing when they make requests that the manufacturer let them, or someone else, have money appropriated for the use of the *mass salesman* in ways in which he has found resultful in securing marketing economy and effectiveness.

Whenever I see one of these spurious, vanity advertising, help-me solicitations, I think of a hobo slinking around a house in the hope of a "hand-out." These propositions, in the main, are among the many parasitical elements that afflict advertising practice, commercial enterprise and the public interest. Strange that architects and their organizations should be willing to have themselves classified as parasites.

Yours very truly,

ASSOCIATION OF NATIONAL ADVERTISERS, INC.,  
JOHN SULLIVAN, *Secretary-Treasurer.*

P.S.—There is one matter that I have overlooked: There are architects belonging to the American Institute of Architects who appear to think it is an obligation of that membership that they recommend manufacturers to use the JOURNAL of the A. I. A. Cannot these gentlemen realize that such a

course is likely to injure the JOURNAL? Their recommendations are more likely than not to be regarded as pressure. They should understand that when publication space is *bought*, it is bought on merit—because it will reach the manufacturer's market. Kissing may go by favor; but not advertising orders that are the result of a "hard-boiled," cold, passionless study and appraisal of the capacity of a publication to "deliver the goods." J. S.

## Mumbo Jumbo Again

TO THE EDITOR:

I regret that the Secretary of the Institute should rejoice with me prematurely—for I am not in the least relieved, but rather the more concerned; I cannot rejoice at the misfortune of another. Alas for human credulity! Mr. Parker is not the first explorer to be deceived by the rascally dragomen who infest the ruins of Europe, Africa and Asia, and kindly assist the innocent stranger to unearth treasures thoughtfully planted the night before. In no department of archaeological work are so many forgeries perpetrated as in the domain of epigraphy. The forger may be physically perfect; but your trained epigraphist submits an inscription to a drastic and infallible test—the test of intrinsic, internal, evidence. When Mr. Parker's fragment is subjected to even a cursory analysis of spirit, style and content, the discrepancies between the portion quoted by me, and that given by him in the JOURNAL for July, are so glaring that one is amazed that they should have escaped the Secretary's attention. All the evidence points to the fact that the chronicle passed off on Mr. Parker as genuine is a crude forgery, and that it *was not written by the same person*. It reads like the report of a survey of an unsafe building. It exhibits the familiar and apparently ineradicable obsession—that an architect who regards architecture primarily as an art neglects the natural limitations of materials and the grammar of his art, structure, as a matter of course. Further, it is equally evident that some worshipper of the false gods referred to in the authentic record must have had a hand in the substitution—for even the casual reader will observe that two of the instruments used in the service of the Art of Architecture are very adroitly installed beside the god to share in the worship due to him. Rejoice! Nay. I only laugh that I may not weep.

H. VAN BUREN MAGONIGLE.

## Errata

DUE TO A MISPRINT so palpable that we hope it was obvious, we were made to say in our last issue that President Faville was the first president of the Institute to be elected from west of Chicago. Naturally it was intended to have the statement refer to Omaha, since that city is the home of the seventeenth president of the Institute, Mr. Kimball, and is a little farther west than St. Louis where lives the fourteenth president, Mr. Mauran, and whence came the tenth president, Mr. Eames. Also, by way of emphasizing the great injustice of the misstatement, let us record the fact that the seventh president, Mr. Van Brunt, came from Kansas City. We offer our regrets and our apologies.

**Structural Service Department appears on the second right-hand page following**

# WOLFF "Kitchenette" Sink



Made with single drainboard either right or left, in single back—also in right or left-hand corner—with or without apron.

Made in double drainboard, 61" with single back (as illustrated) with or without apron, also 42 and 45½" single drain-board with roll rim.

## Solves the Space Problem

*In Apartment and Other Small Kitchens*

During two-thirds of a century architects have learned that they may specify Wolff Plumbing with absolute assurance. The "Satisfaction" record which tens of thousands of Wolff installations have earned by uninterrupted service for many years proves that Wolff Enamelware possesses extraordinary durability.

Wolff "Kitchenette" Sinks have rapidly reached a pinnacle of national popularity with housewives because of their fine appearance, their quality, and a variety of styles which insures a convenient installation in practically any kitchen.

The presence of Wolff Quality Plumbing in a structure implies quality construction throughout.

A folder has been issued showing a typical installation of Wolff fixtures from bathroom to laundry. It features only those items for which the public has indicated an overwhelming preference. Handsomely printed in colors, with perspective drawings and floor plans. Sent free on request.

# WOLFF Quality Plumbing

Sanitary Enamelware  
Range Boilers  
Potteryware  
Brass Goods  
Marble



CHICAGO

DALLAS      HAMMOND  
OMAHA      CINCINNATI  
ST. LOUIS      DENVER

*Branch or Distributor at Every Central Point*

*Makers of Quality Plumbing Since 1855*



# Structural Service Department

SULLIVAN W. JONES, *Associate Editor*  
LEROY E. KERN, *Assistant*

*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.*

## Committee Activities

**Paint-on-Wood Research.** (25c1)—(*Suggested Draft of Program*).—The object of this undertaking is to learn and promote the best uses of protective coatings on wood, first to increase the durability of the wood and of the article made from it; second, to develop better methods for reducing the swelling and shrinking of wood with changes of moisture; and third, to secure economy and intelligent use of coating materials.

The increasing cost of wood, which inevitably goes on as the natural supply becomes less, makes it a matter of importance to every one to have these things done. It is plain that if by proper care the life of the average wooden building can be doubled, which competent experts think possible, no greater public benefit is in sight.

To accomplish any good results the natures of the different kinds of wood must be considered; these are known to the Forest Products Laboratory; the effects of exposures of different sorts must be observed, the composition and durability of the coatings, and the best method of application. This research involves an organization which will eventually include experts and specialists in the different lines. At the outset, the work of the superintendent of this particular undertaking may be somewhat along the following lines:

A. Collect books, pamphlets and other literature relating to paint and painting, and varnish. If not already available, these may be bought; lists of such books should be secured through experts, if possible, and from technical and public libraries. Obtain wherever possible the co-operation of the editors of the paint journals. Card catalog all persons interested.

B. Collect advertising matter, color cards, samples.

C. List the species of wood chiefly used in the wood-using industries and their individual uses; find out the difficulties encountered in their use, especially as regards durability, and the difficulties encountered in painting and varnishing. It may be expedient to prepare a printed circular letter to be sent out for this purpose.

D. Get information regarding the immediate services desired by consumers.

(a) *Architects*.—They may wish to be informed to what extent manufacturers (e.g. makers of doors and windows and casings for same) are prepared to supply their products kiln-dried (1) definitely to a certain percentage of moisture; (2) indefinitely or (3) air-dried; also (4) painted to any architect's specifications on surfaces not accessible after erection. This information may be had through inquiry, from the manufacturers. Such information is to be accumulated in files. Kinds of wood used.

(b) *Furniture Manufacturers*.—Collect information about present practice of drying wood-stock; also time which elapses after assembling until varnishing is begun. Also, get information as to kinds of wood used; differences as to cheap and expensive furniture; extent to which paint is used; details as to priming, number of coats, rubbing, decorating, etc. Get samples of varnishes, with names of makers,

and prices; ask makers for information. Make tests. (See Bureau of Standards, etc.)

(c) Pursue similar inquiries as to *automobile wheel and body makers* and other wood-using industries.

E. Inquiry is to be made of painters and decorators, especially such as are recommended by well-known architects, in regard to the use of definite paints and varnishes, especially on interiors. Future investigation is expected to determine the ultimate value of such materials, but much may be learned by inquiry of experienced men; and when any particular material is commended, in many cases its approximate composition may be learned from the makers, and confirmed (or otherwise) by analytical tests, if possible (see Bureau of Standards). Especial attention should be given to methods of use recommended by experts. All such information should be digested by study and consultation.

F. Particular problems proposed by the architects and others should receive attention.

G. Digest the information collected, condense those parts of real value, and put them into forms convenient for quick use.

H. Collect information about available places and facilities for field tests and tests in factories and shops.

**National Electrical Safety Code.** (40b1)—The American Engineering Standards Committee, by letter ballot, has approved the National Electrical Safety Code of the Bureau of Standards which covers the generation, distribution and utilization of electricity for power, light and communication.

## Architects and Industry

By LYMAN CLARK of the General Electric Co.

In adopting the resolution creating a Producers' Section of the Structural Service Committee, the Chicago Convention of the American Institute of Architects laid the foundation for a greater appreciation of industry by architects and assuredly a greater appreciation of architects by industry.

Practically every professional organization has adopted some means for knowing the manufacturers of products with which its members are professionally concerned. To many it has been a source of wonder that the American Institute of Architects has not long ago officially recognized the producer of the materials with which the architect must create his structures. Certainly this new and broader policy of the Institute will be hailed by both architects and manufacturers as a step, a long step, toward a working realization of the community of interest between them.

There is so much that can be accomplished through the close association of producer and architect, that it is impossible to prophesy all this relation can mean. Architectural conceptions can be of little value without full and appreciative knowledge of the products that must be utilized in their execution. Many a splendid architectural conception has been mutilated by improper selection of materials or their improper use.



## STRUCTURAL SERVICE DEPARTMENT

If the individual architect is too occupied, and generally he is, to obtain direct from manufacturers the information he should have, then surely the establishment of a committee of his professional associates who may obtain for him that information in accurate and useful form, must result in benefit to the entire profession; and if such a service is beneficial to the profession, it must also benefit the manufacturer.

Other professional bodies through their association with producers, have rendered material service in setting up many very useful standards. Much of the work done by other professional bodies in their relations with manufacturers might very properly have been done by the American Institute of Architects had there previously existed a Producers' Section as now established. However, there are innumerable problems yet to be solved and considerable knowledge to be gathered that will greatly aid architects in the design and erection of their buildings. The manufacturer possessing any acumen whatever will be much interested in the opportunities afforded through the Producers' Section to learn the needs of the architectural profession and to produce to meet those needs.

It is a recognized fact that the architect cannot by any means within his individual reach, expand his knowledge to embrace the vast quantity of materials and devices he may use. It is only through the professional body of which he is a member that he may cover the broad field and obtain authoritative information of value to him in his work. In the establishing of the Producers' Section of the Structural Service Committee he has created this medium.

In the discussions by the producers at the second Joint Conference on June 5th and 6th, immediately preceding the Institute Convention, it was quite evident that the manufacturers there represented were anxious to find some effective means of putting before the architects sincere and reliable statements in regard to their products. To them the Producers' Section of the Structural Service Committee seems to offer that means. There is now provided the medium for a better understanding among architects and producers as to their common interest in the adequate presentation and appropriate utilization of products entering into construction.

### Abstracts

*It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

**Lime-Definitions.** (3c)—(*Circular of the Bureau of Standards No. 106, "Lime-Definitions and Specifications." Fifteen pages, 7" x 10".*)—For an abstract of Bureau of Standards Circular No. 30 "Lime; Its Properties and Uses," see the December, 1920, Journal.

*Lime* is the product resulting from calcination of limestone. The material remaining (oxide of calcium or of calcium and magnesium) is lime. The adjectives used to describe the composition of the stone are equally applicable to the lime. Thus a lime may be high-calcium or dolomitic, siliceous or argillaceous, etc.

**"Quicklime."**—The material as it comes from the kiln. It is commonly sold in large pieces, as "lump" lime.

**"Ground lime."**—Lump lime put through a crusher.

**"Stone lime."**—Lime made from limestone.

**"Shell lime."**—Lime made from oyster shells.

The quality of lime depends to some extent upon the kind of kiln in which it was burnt; "rotary-kiln" lime is noted for its ability to slake very quickly; "pot-kiln" lime usually contains some coal-ashes mixed with it. Lime is also referred to according to the kind of fuel used in burning. "Wood-burnt" lime is usually accepted as the best. The product of any kiln will contain more or less overburnt lime and underburnt lime or core. If these materials are sorted out and discarded, the resultant product is termed "selected lime;" otherwise it is called "run-of-kiln" lime.

Lime is divided into three classes, according to its use: agricultural, chemical and structural. In both the agricultural and chemical fields the word lime is given a broader meaning than in the structural field. It means apparently any material which will produce the same effect as lime and may include ground limestone or air-slaked lime. In the structural field, lime includes quicklime, hydrated lime or slaked lime.

**"Lime putty" or "slaked" lime.**—The plastic mass resulting from the addition of water to quicklime. If too little water is used the lime may "burn." Too much water will "drown" the lime.

**"Running-off."**—Pieces of core; coal ashes, and similar impurities that have not disintegrated are removed by washing the putty through a coarse screen ( $\frac{1}{8}$ "), letting it settle, and draining off the excess water. This is known as "running-off."

**Hydrated lime.**—Quicklime slaked with just enough water to combine with the calcium oxide and produce a dry powder instead of a putty. Chemically it is identical with slaked lime, but it contains no excess water. The adjectives used to describe limestone and quicklime are used with the same meaning to describe hydrated lime wherever they are applicable. In addition, there are two classes of structural hydrate—"masons" and "finishing." Masons' hydrate is used for all structural purposes except the final coat of plaster. This "finish" coat requires such a high degree of plasticity that lime for this purpose must be either finishing hydrate or else putty made from quicklime.

**Air-slaked lime.**—When either quicklime or hydrated lime is stored without reasonable protection from the weather it will absorb water and carbonic acid from the air. The mass heats slightly, and any lumps of quicklime will disintegrate. The product, termed "air-slaked" lime, is a carbonate of calcium and magnesium chemically identical with limestone. It is worthless as a structural material.

Air-slaked lime should not be confused with hydrated lime. The two materials are similar in appearance, but radically different in composition. Since hydrated lime is a hydroxide, a putty made from it will absorb carbonic acid when exposed to the air, and will "set." A putty made from air-slaked lime, which is already a carbonate, can not absorb carbonic acid, and can not set.

**Note.**—Circular No. 106 also gives data on shipments and packages, storage, proportions for use, and publishes a tentative specification for masons' hydrated lime.

**Reflectors for Incandescent Lamps.** (31f22)—(*Bulletin L. D. 123, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 34.*)—In this bulletin will be found many data sheets pertaining to typical standard reflectors. An attempt has been made to cover the field in a fairly complete manner but due to the large number of varieties being sold it is not claimed that all meritorious designs have been included.



## STRUCTURAL SERVICE DEPARTMENT

*Classification of Reflectors.*—Diffusing and light directing reflectors on the market at the present time may be classified under two general headings, viz., as to material and use. The first mentioned may be subdivided into two general classes—steel and glass.

The term steel reflectors is commonly applied to those which have sheet steel as a base to which is added, to form a reflecting surface, such materials as:

(a) *Porcelain enamel*, which is practically a coating of opal glass fired on. This forms a reflecting surface which is very permanent, durable, efficient, and easily cleaned. This is undoubtedly the most generally used type of steel reflector. The distribution of light is not changed materially by change of contour of reflector.

(b) *Paint enamel*, as the name implies, is a coating of enamel paint applied to the reflecting surface. This coating is cheaper than porcelain and when new is quite efficient. However, it is subject to rapid deterioration when exposed to acid fumes, etc., and will not retain its original efficiency after cleaning. The distribution of light is not materially changed by changing the contour of reflector when this type of reflecting surface is used.

(c) The third type of steel reflector is that having an aluminum reflecting surface. An aluminum paint is sprayed on the steel base forming a reflector of fairly high efficiency. As this surface produces specular reflection, it is possible to vary the distribution of light by changing the contour of the reflector. Aluminum paint as to permanency is slightly better than paint enamel but inferior to porcelain enamel.

*Glass.*—Reflectors made of glass may be divided into three general groups, viz.: (a) opalescent glass, (b) prismatic glass, and (c) mirrored glass.

(a) Opalescent glass reflectors are found in many different designs, the essential differences being contour, ornamentation and density of glass. The construction consists of glass having an infinite number of small white particles in a solid colloidal solution. Reflectors of this type are either blown or pressed. They are translucent, of varying efficiencies, and the transmitted light is, in general, well diffused, the degree of diffusion depending on the quality of glass.

(b) Prismatic glass reflectors are made of clear glass, moulded into scientifically designed prisms. Each prism is designed with reference to the position of the light source, and, as a result, almost any desired type of distribution curve may be obtained. Prismatic reflectors also furnish a certain degree of diffusion to the transmitted light.

(c) The third type of glass reflectors are those whose reflective properties depend on a silvered coating on the exterior glass surface. The clear glass blank is usually corrugated or ribbed in order to prevent streaky illumination which might otherwise result. As a mirrored reflecting surface acts by regular reflection, varying light distributions may be obtained from reflectors of different contours.

*Use.*—In analyzing the reflector equipment from the standpoint of use, they may be broadly divided into two classes, namely, industrial and decorative.

The first class is composed largely of direct lighting steel reflectors. In addition to these, dense opal, prismatic, and mirrored glass, as well as semi-indirect and semi-enclosing units find application in industrial plants, but they are used to a smaller extent.

In industry, protection of the eye, efficiency of light output, effectiveness of light distribution, ease of cleaning and durability are prime requisites. Artistic appearance of in-

dustrial reflectors is not of material importance and as long as the above requisites are fulfilled, any type might be used.

The second classification, namely, decorative reflectors, covers a much broader field. The requirements of lighting installations, where artistic appearance is of importance, must be carefully weighed and an accessory selected which will give the proper balance between appearance and efficiency of output. Efficiency of output must be sacrificed to obtain quality and effect and it is obvious that there would be a wide range of requirements between those of a commercial office, where plainly designed efficient units find application, and those of a handsomely furnished residence where lighting fixtures used and effects produced should harmonize with the general scheme of decorations.

*Relative Efficiencies of Reflecting Devices.*—As stated above, the degree of diffusion realized and the decorations on the unit itself are factors which largely control the efficiency of light output of reflectors. From a purely reflective standpoint, mirrored glass, prismatic glass and the various steel reflectors are most efficient in redirecting light.

Opalescent glass reflectors vary widely in their reflective properties, the heavy density being quite efficient, while the light density is less efficient, due to its greater transmissive and diffusive properties. These glass reflectors lend themselves to decorative lighting and, from such a standpoint, the redirective effect is of lesser importance.

*Position of Lamp in Reflector.*—All well designed reflectors are made for use with a certain size of lamp whose physical dimensions, such as size of bulb and light center length, are standard. To obtain the most satisfactory results, the specified combination of lamp and reflector should be adhered to. This is particularly important in reflectors which control the distribution by regular or specular reflection, as any variation from standard filament positions materially changes the distribution.

In reflectors which control the distribution by diffuse reflection, the change of filament position within certain limits does not materially change the shape of distribution. However, such a variation will result in either a greater amount of glare or a smaller quantity of effective light.

*Bibliography.*—“*The Principles of Shades and Reflectors*,” Louis Bell, Trans. I.E.S., Vol. 4, page 723; “*Scientific Principles of Globes and Reflectors*,” V. R. Lansingh, Trans. I.E.S., Vol. 5, page 49; “*The Manufacture of Globes for Illuminating Purposes*,” E. H. Bostock, Trans. I.E.S., Vol. 6, page 838; “*Symposium on Illuminating Glassware*,” Trans. I.E.S., Vol. 6, page 854; “*Modern Requirements of Reflector Design*,” F. L. Godinez, Trans. I.E.S., Vol. 6, page 921; “*Metal Reflectors for Industrial Lighting*,” T. W. Rolph, Trans. I. E. S., Vol. 8, page 268; “*A Photometric Analysis of Diffusing Glassware with Varying Indirect Component*,” E. B. Rowe and H. H. Magdsick, Trans. I.E.S., Vol. 9, page 220; “*Reflectors for Glass Bowls*,” J. L. Stair and J. A. Hoveler, Trans. I.E.S., Vol. 11, page 794; “*Recent Developments in Prismatic Glassware*,” H. L. Jenkins and G. W. Roosa, Trans. I.E.S., Vol. 11, page 808; “*Design and Manufacture of Diffusing Glass Shades*,” S. G. Hibben, Trans. I.E.S., Vol. 11, page 895; “*The Laws of Reflection and Transmission of Light*,” T. W. Rolph, Trans. I.E.S., Vol. 11, page 1144; “*Some Problems in the Design of Lighting Fixtures*,” S. DeKosenko, Trans. I.E.S., Vol. 12, page 78; “*Artificial Light and Their Fixtures in Japan*,” Motoo Uchisaka, Trans. I.E.S., Vol. 15, page 257; “*Shades, Reflectors and Diffusing Media*,” V. R. Lansingh, Lectures on Ill'g Eng., Johns Hopkins University, 1910; “*Modern Lighting Accessories*,” W. F. Little, Ill'g Eng., Practice, University of Pennsylvania, 1916; “*Projectors and Reflectors for Domestic and Street Lighting*,” Hayden Harrison,





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Electrical Eng. (London), March 2, 1916; "Selection of Lighting Units," D. H. Tuck, Electrical World, May 6, 1918; "An Investigation on Reflectors for Tungsten Filament Lamps," A. L. Powell, G. E. Review, November, 1912; "An Investigation of Diffusing Glassware," M. Luckiesh, Electrical World, April 26, 1913; "Reflectors for Tungsten Lamps in Industrial and Office Lighting," A. L. Powell, Electrical Eng., Oct. 1913; "Data Concerning Incandescent Lamp Reflectors," G. H. Stickney and A. L. Powell, Electrical World, Sept. 6, 1913.

**Railway System Lighting Buildings and Yards.** (31a13) —(Bulletin L. D. 128, *Lighting Data Edison Lamp Works. Size 6" x 9"*. Pages 32.)—In this bulletin the following subjects are discussed: Modern Lighting Practice, Recommendations for Shops, Outdoor Lighting, Stations and Special Considerations (repair pits, oil torches vs. portable lamps, electric hand lanterns), and Maintenance.

**Bibliography:** "Lighting of Railroad Stations, Yards, Shops, and Offices," Electrical World, December 2, 1911. "Roundhouse Wiring and Lighting," Railway Electrical Engineer, December, 1912. "Railway Yard Lighting," D. Brittain, Lighting Journal, October, 1914. "Railway Illuminating Engineering; Track, Scale and Yard Lighting," H. Kirschberg and A. C. Cotton, Transactions Illuminating Engineering Society, Vol. 9, p. 242. "Yard Lighting," Railway Electrical Engineer, November, 1914. "Lighting Railroad Yards with Large Incandescent Lamps," Railway Electrical Engineer, December, 1914. "Importance of Good Lighting in Railroad Service," Railway Electrical Engineer, February, 1915. "Lighting of Engine Terminals," Railway Electrical Engineer, January, 1916. "Lighting of Yards, Docks and other Outdoor Places," J. L. Minick, Illuminating Engineering Society, U. of P. Lectures. "Lighting a Modern Railway Shop," Railway Electrical Engineer, March, 1917. "Illuminating Railway Piers," H. C. Yost, Railway Electrical Engineer, May, 1917. "Railroad Office and Shop Lighting," C. W. Bender and C. K. Stover, Railway Electrical Engineer, December, 1917. "Importance of Correct Lighting in the Shop," A. L. Powell, Railway Electrical Engineer, April, 1918. "Shop Lighting for Production and Safety," Wm. A. D. Evans, Railway Electrical Engineer, May, 1918. "Lighting Layout for Engine Terminals and Yards," Railway Electrical Engineer, October, 1918, and November, 1918. "Lighting Coal and Ore Docks," Railway Electrical Engineer, October, 1918; "Light as an Aid to Transportation of Materials," A. L. Powell and R. E. Harrington, Transactions Illuminating Engineering Society, Vol. 14, page 1.

**Determining Penetration of Wood Preservatives.** (19a31)—(*Technical Note No. 163, Forest Products Laboratory*).—The effectiveness of any wood preservation treatment is measured very largely by the depth to which the preservative penetrates. The presence of creosote oil is indicated by the dark discoloration, and the degree of penetration may readily be determined by taking a sample at a point free from checks and other imperfections and at a considerable distance from the end. This may be done either with an ordinary one-half inch bit, or with an increment borer, which brings out a core of wood that shows in cross section the depth of penetration and is easily examined. The observation should be made at once, because the oil spreads rapidly over the cut surface. In order to prevent infection, the hole in the treated piece should be tightly closed with a creosoted plug.

As zinc chloride is colorless, the depth of penetration of this preservative must be ascertained by chemical means. After cutting the stick in two or getting a sample with the increment borer, the freshly-cut surface is dipped for not to exceed 10 seconds, in a 1 per cent solution of potas-

sium ferrocyanide, and the excess solution is removed by blotting paper. The sample is then dipped into a 1 per cent solution of uranium acetate, and dried. The treated portions will be whiter than the natural wood, and those untreated will have a dark red or a maroon color. This method does not give very sharp contrasts on wood which is reddish in color, like red oak, but otherwise is very satisfactory and affords a permanent record.

**Effect of Alkali Soils on Concrete.** (4a)—(*Abstract of Technologic Paper of the Bureau of Standards No. 214, by G. M. Williams. "Durability of Cement Drain Tile and Concrete in Alkali Soils"; Third Progress Report, 1919-1920.*)—This progress report gives an account of the condition in 1919-1920 of experimental drains laid in western alkali districts in 1913, and of large concrete blocks similarly exposed in 1915. Both drain tile and concrete blocks were made up in sufficient quantity and variety to be representative of all qualities. The paper contains two appendices, one containing a summary of the absorption tests on samples of all types of drain tile used in the investigation, and the other a discussion of the occurrence of soluble salts in the soil and their action on cement and concrete.

**Conclusions.**—The following tentative conclusions have been drawn:

1. The use of cement drain tile in soils where sulphates occur in considerable quantities is hazardous. In certain localities the best quality of tile disintegrated within six years.

2. Porous or permeable tile, made from lean or dry mixtures, are subject to disintegration in sulphate waters of relatively low concentrations.

3. Disintegration of mortar or concrete in sulphate waters may be due in part to physical forces arising from crystallization of salts in the pores, but it is primarily due to chemical attack upon the cement.

4. In the best quality of tile the outer skin may sometimes remain apparently unaffected at the same time allowing the alkali water to pass through and attack the mass underneath.

5. In tile of given quality exposed to sulphate waters, the disintegrating effect seems to vary with the concentration.

6. Tile made by hand or with the packer-head type of machine, and of sufficiently dry consistency to permit immediate removal of the moulds, are less resistant to alkali action than tile of a wetter consistency which requires their retention in the molds for a period of hours.

7. Tile cured with steam seem to be no more resistant to alkali attack than those cured by systematic sprinkling. Tar and cement grout coatings were not effective in protecting the tile.

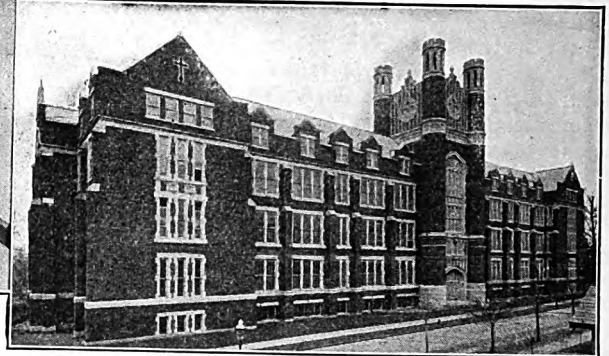
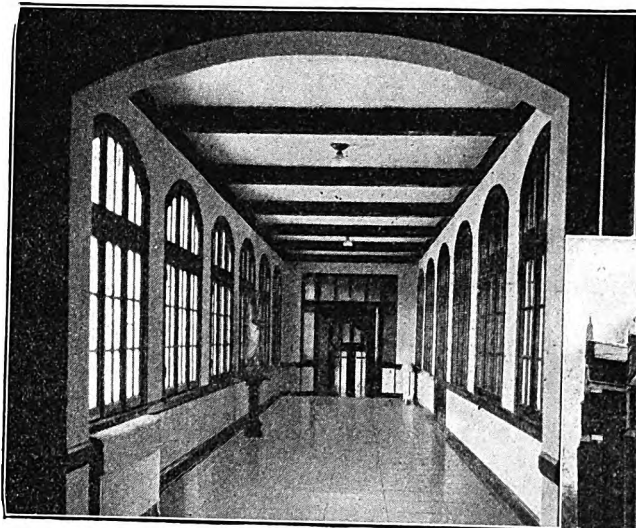
8. If cement drain tile are to be used in soils or waters containing more than 0.1 per cent of sulphates, careful consideration should be given to sub-surface conditions, the quality of tile to be used, etc.

9. Quality of cement drain tile can best be measured by permeability tests. There appears to be little definite relation between permeability and the related factors of porosity, absorption, and density.

*With regard to concrete the following tentative conclusions have been drawn:*

1. Materials of good quality and proper workmanship are of great importance in the fabrication of concrete exposed to alkali soils and waters.

2. Surface action on concrete blocks of good quality after 1 year's exposure has in most cases been progressive.



*Notre Dame Academy,  
Cleveland, O.*

*W. C. Jansen, Architect, Cleveland.  
John Gill and Son, Contractor,  
Cleveland.*

## Footsteps Down the Corridors of Notre Dame—

have not abraded nor worn these tile-like floors. The restless, scuffling feet of children, too; and yet no appreciable wear in almost eight years of constant use. And the colors—Red and Grey—as steadfast as the day the floors were laid. That's Masterbuilt Floors performance here and everywhere. In public buildings, schools and institutions, as well as in other structures where dustproof, wearproof and waterproof floors are of *real* consideration Masterbuilt is supreme. Master Builders Red Hardner—other colors, too—gives concrete the effect and "class" of tile, with a durability and saving that is satisfaction at its utmost. We have a book for architects that it is a pleasure to send.

*For Specifications see Pages 202, 203, 7th Edition, Sweet's Engineering Catalog, and Pages 102 and 103, 16th Architectural Edition*

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An integral metallic hardner for hardening and dust-proofing cement floors. Grey for utility and Red for decorative effects. Time-tested for twelve years.



*Practical Building Arts, Paris, 1919*

**MASTER MIX.** An integral cement accelerator-hardner, waterproofer and anti-freeze compound.

**SANISEAL.** A liquid preparation for hardening and dust-proofing cement floors after they are laid. Also furnished in crystal form.

### Notre Dame Convent

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The Master Builders Co., March 1, 1922.  
1836 Euclid Avenue,  
Cleveland, Ohio.

Gentlemen: Subject: *Masterbuilt Floors.*

Seven and a half years ago, when our new building was erected, your Masterbuilt Red Floors were installed in corridors on the first floor of our building and Grey Masterbuilt Floors in our basement corridors, showers, locker-rooms, boiler-room and outside court.

These floors have been subjected, during the above period, to very severe wear, particularly the Red Floors, over which 700 children pass several times daily. The floors today, after seven and a half years of wear, are in perfect condition. The color has been retained in the Red Floors, which have answered every purpose that tile would have answered in the first place.

We shall be pleased to have you inspect these floors at any time.

Very truly yours,

THE SISTERS OF NOTRE DAME.

*Lillian Mary Erwin,  
Superior*

## STRUCTURAL SERVICE DEPARTMENT

3. The extent and rapidity of disintegration depends upon concentration of soluble sulphates.

4. Disintegration of concrete blocks, containing reinforcing rods has in some cases been aided by corrosion of the rods and consequent splitting of the concrete.

5. Concrete structures exposed to alkali waters should be given all possible protection by drainage.

6. Concrete of the best quality will disintegrate if exposed to sufficiently high concentrations of alkali, such as were encountered in some of the locations where the test blocks were installed.

So far as the tests indicate, the resistance to alkali action of mass concrete, made of the same aggregates and exposed to the same concentrations, varies with the cement content or richness of mix. This again seems to indicate that strength and permeability rather than absorption, are the governing factors in determining the quality and durability of concrete under alkali exposure.

**Quantities of Materials for Concrete.** (4b1)—(*Bulletin No. 9—Structural Materials Research Laboratory—By Duff A. Abrams and Stanton Walker. Pages 21. Size 6" x 9".*)—This bulletin gives tables of proportions and quantities of materials required to produce concrete of a given compressive strength. By varying the proportion of water, cement and aggregates concrete of the same compressive strength may be produced by using fine and coarse aggregates of a wide range of different sizes.

**Purpose of Tables.**—To furnish a guide in the selection of mixtures to be used in preliminary investigations of the strength of concrete.

To indicate proportions which may be expected to produce concrete of a given strength under average conditions where control tests are not made.

To furnish a basis for comparing the relative economies of concretes made by combining aggregates of different sizes, when the workability and strength of the resulting concrete are taken into account. (In other words, it is not necessary to restrict aggregate sizes to those usually mentioned in specifications.)

To furnish a basis for making changes in proportions to compensate for variations in size and grading of aggregates or workability of the concrete during the progress of the work.

**Fundamental Considerations.**—The strength of a concrete mixture depends on the quantity of mixing water in the batch, expressed as a ratio to the volume of cement so long as the concrete is workable and the aggregates are clean and structurally sound. The strength of the concrete decreases as the water-ratio increases.

The effect of differences in the quantity of cement is reflected by differences in the water-ratio. In richer mixtures, a given condition of workability can be produced with a lower water-ratio, and consequently give higher strengths.

There is an intimate relation between the size and grading of the aggregate and the quantity of water required to produce concrete of a given workability. The strength of concrete is affected by the size and grading of aggregate only in so far as the quantity of mixing water is influenced

by these variables, so long as the aggregate is not graded too coarse for proper workability. Finer aggregates require more water for a given plasticity and quantity of cement, and therefore give lower strengths than the coarser aggregates.

It is not necessary, or desirable, that the aggregate be proportioned according to any fixed grading; wide variations in gradings of aggregate may occur without affecting the quantity of mixing water or the quality of the concrete. The classification of all aggregate finer than  $\frac{1}{4}$  in. as fine aggregate, and that above this size as coarse aggregate, is purely an arbitrary division. Aggregates separated into any sizes may be proportioned to give desired results, so long as the grading will give workable concrete. The separation of aggregates into two sizes is desirable to facilitate uniform proportioning of successive batches.

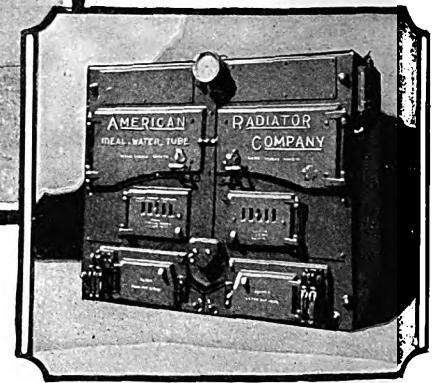
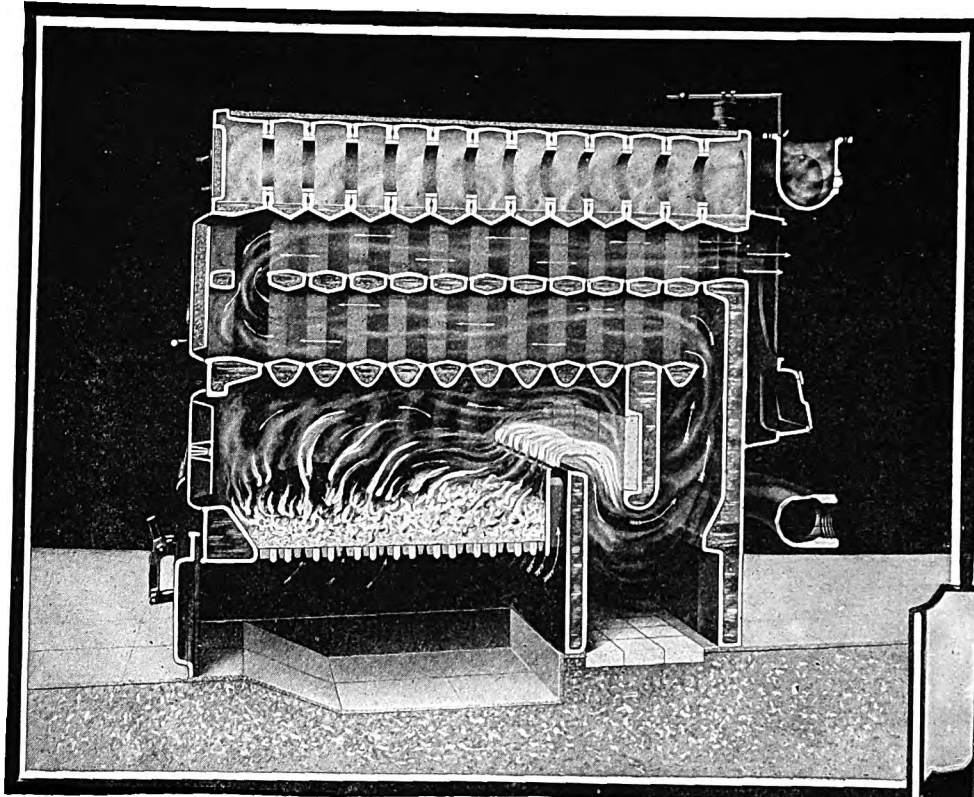
Plasticity or workability is an essential requirement of concrete for structural purposes. If a high degree of workability is necessary, this factor must be taken into account in designing the mixture. It is essential that the workability be kept under proper control.

**Properties of Ordinary Wood Compared With Plywood.** (19e6)—(*Technical Note No. 131. Forest Products Laboratory.*)—Wood is a nonhomogeneous material, with widely different properties in the various directions relative to the grain. The Forest Products Laboratory has found that the tensile strength of wood may be 20 times as high parallel to the grain as perpendicular to the grain, and its modulus of elasticity from 15 to 20 times as high. In the case of shear the strength is reversed, the shearing strength perpendicular to the grain being much greater than parallel to the grain. The low parallel-to-the-grain shearing strength makes the utilization of the tensile strength of wood along the grain difficult, since failure will usually occur through shear at the fastening before the maximum tensile strength of the member is reached.

The large shrinkage of wood across the grain with changing moisture content may introduce distortions in a board that decreases its uses where a broad, flat surface is desired. The shrinkage from the green to the oven-dry condition across the grain for a flat-sawed board is about 8 per cent and for quarter-sawed board about  $4\frac{1}{2}$  per cent while the shrinkage parallel to the grain is practically negligible for most species.

It is not always possible to proportion a solid plank so as to develop the necessary strength in every direction and at the same time utilize the full strength of the wood in all directions of the grain. In such cases it is the purpose of plywood to meet this deficiency by cross banding, which results in a redistribution of the material.

In building up plywood a step is made in obtaining equality of properties in two directions, parallel and perpendicular to the edge of a board. The greater the number of plies used for a given panel thickness, the more homogeneous in properties is the finished panel. Broadly speaking, what is gained in one direction is lost in the other. For a very large number of plies it may be assumed that the tensile strength in two directions is the same and that it is equal to the average of the parallel-to-the-grain and perpendicular-to-the-grain values of an ordinary board.



## Making Coal Work!

**M**AN is often a victim of his environment. So also is coal. It refuses to do good work except under ideal circumstances.

In the fire-pot and flue chambers of the IDEAL 79' WATER TUBE BOILER coal works as it never worked before. Study the cross section of this boiler above.

Notice how the walls of the large fire-box and ash-pit are *waterfilled*. The radiant heat, given off by the intensely hot flame, is completely absorbed. Passing to the rear the gases move over a water-backed bridge wall into a large combustion chamber, then travel upward and forward into the lower gallery of tubes.

Reaching the front, these gases, having given up most of their heat, rise into the upper gallery of tubes where they sift to the rear, passing out through the smoke-hood with practically all heat extracted.

Smokeless combustion is obtained by admitting highly heated air at the bridge wall which mingles with the unburned gases and causes them to be completely consumed in the combustion chamber.

Making coal work is but one of many advantages of the IDEAL 79' WATER TUBE BOILER. It has so many new and interesting points of construction that a booklet is necessary to present them adequately.

Your name on your letterhead will bring a copy to you. Address the nearest office below.

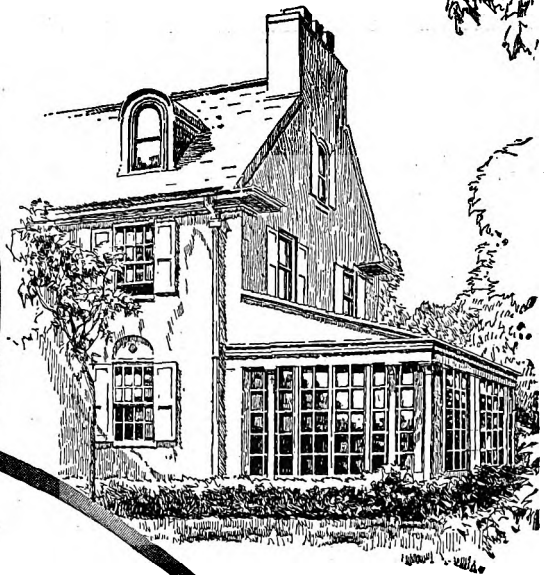
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**H**OUSES of the better kind use plate glass in the windows as a matter of course. From inside or outside, plate glass windows impress the observer with a fine sense of perfect architectural finish.

Plate glass makes all the difference in the world. Ordinary glass cannot compare with it in artistic effect. The true surface of plate glass, with its perfect reflections, is inviting and restful-looking, and a promise of an elegant interior. There are no humps and hollows, no wavy lines or accidental swirls, no distorted shadows that wave

and wiggle and annoy the eye.

Plate glass is the proper glass for a well-planned home, office building or hotel. It lifts a house out of the ordinary.

Inside of the house, too, there are dozens of uses for plate glass to make the home more livable, rentable or salable—plate glass shelves in the bathroom and kitchen, full-length plate glass mirrors in closet doors, plate glass doors for vestibules, plate glass push-plates for swinging doors. All these details can be installed at little cost, and in some cases the cost is less than other materials.

PLATE GLASS MANUFACTURERS of AMERICA



*Use Plate Glass for:*

- Table Tops
- Mirrors
- Windshields
- Closed Car Windows
- Desk Tops
- Ventilators





# Industrial Uses of Tiles

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Definite answers to definite questions pertaining to the effective tiling of food factories, paper mills, bottling and refrigerating plants, packing houses and other buildings, are the objects of this service.

It covers such installations as laboratories, chemical hoods, oil tanks, brine vats, agitators, stuff chests, hoppers, reservoirs and similar containers, or wherever a tile lining may be required for reasons of cleanliness, permanence or economy.

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# What Is Cement?

What is this finer-than-flour building material called cement, that you can mix with water, sand, and stone or pebbles, and cast into all sorts of shapes that become as hard and enduring as solid rock?



Portland cement consists principally of silica, lime, and alumina. In cement manufacture these are obtained from (1) Cement rock and limestone; (2) Limestone or marl and shale or clay; (3) Blast-furnace slag and limestone.

First the rock is quarried and transported to the mill. Then it is ground to a powder, analyzed, and the several ingredients mixed in accurate proportions.

Next it is subjected to long and gradually increasing heat until, at about 3000 degrees Fahrenheit, the mixed materials decompose and fuse into hard balls, known as clinker.

Then this hard clinker is cooled, mixed with a definite proportion of gypsum, and again ground to a powder so fine that at least 78 per cent of it will pass through a sieve having 40,000 holes to the square inch.

Finally this finished product must be analyzed to determine that it conforms to the exacting specification requirements of cement manufacture. packed in bags and placed in cars for shipment.



The manufacture of cement is a complex process involving great care, skill and expense, and requiring an enormous capital investment.

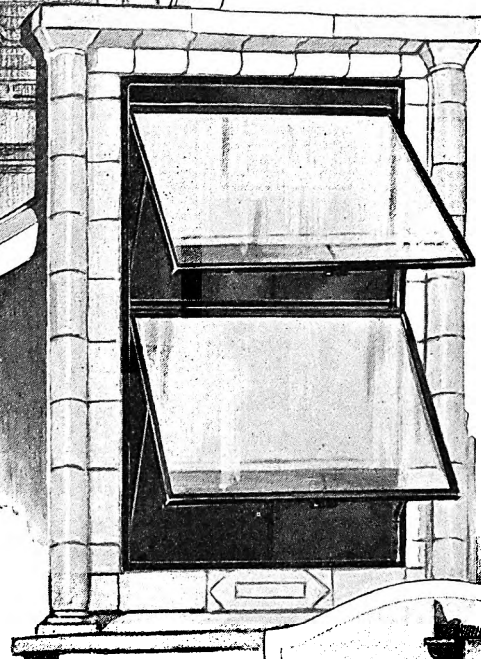
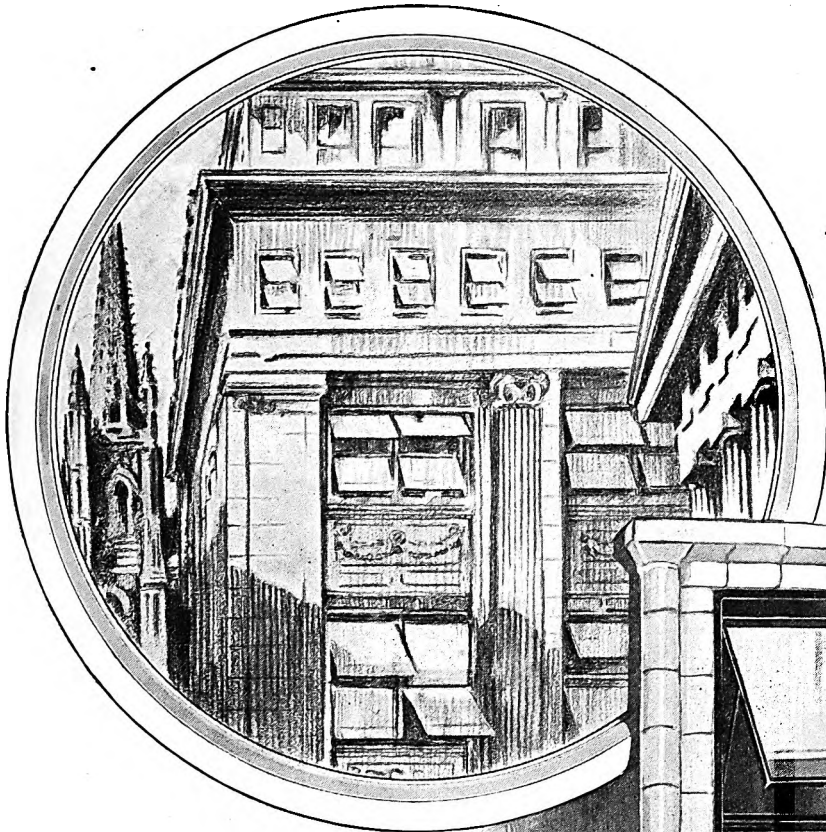
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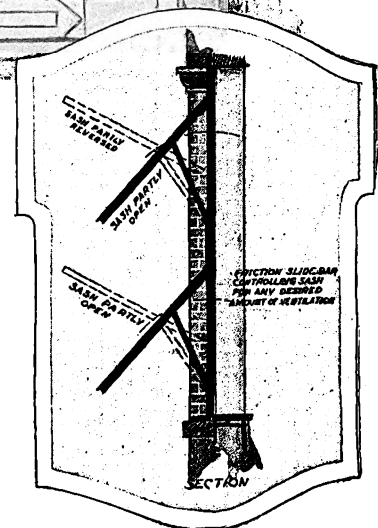
It is made of the finest materials by the same craftsmen who build the Crittall Steel Casements, yet is priced for use in office buildings, hospitals, schools and similar structures.

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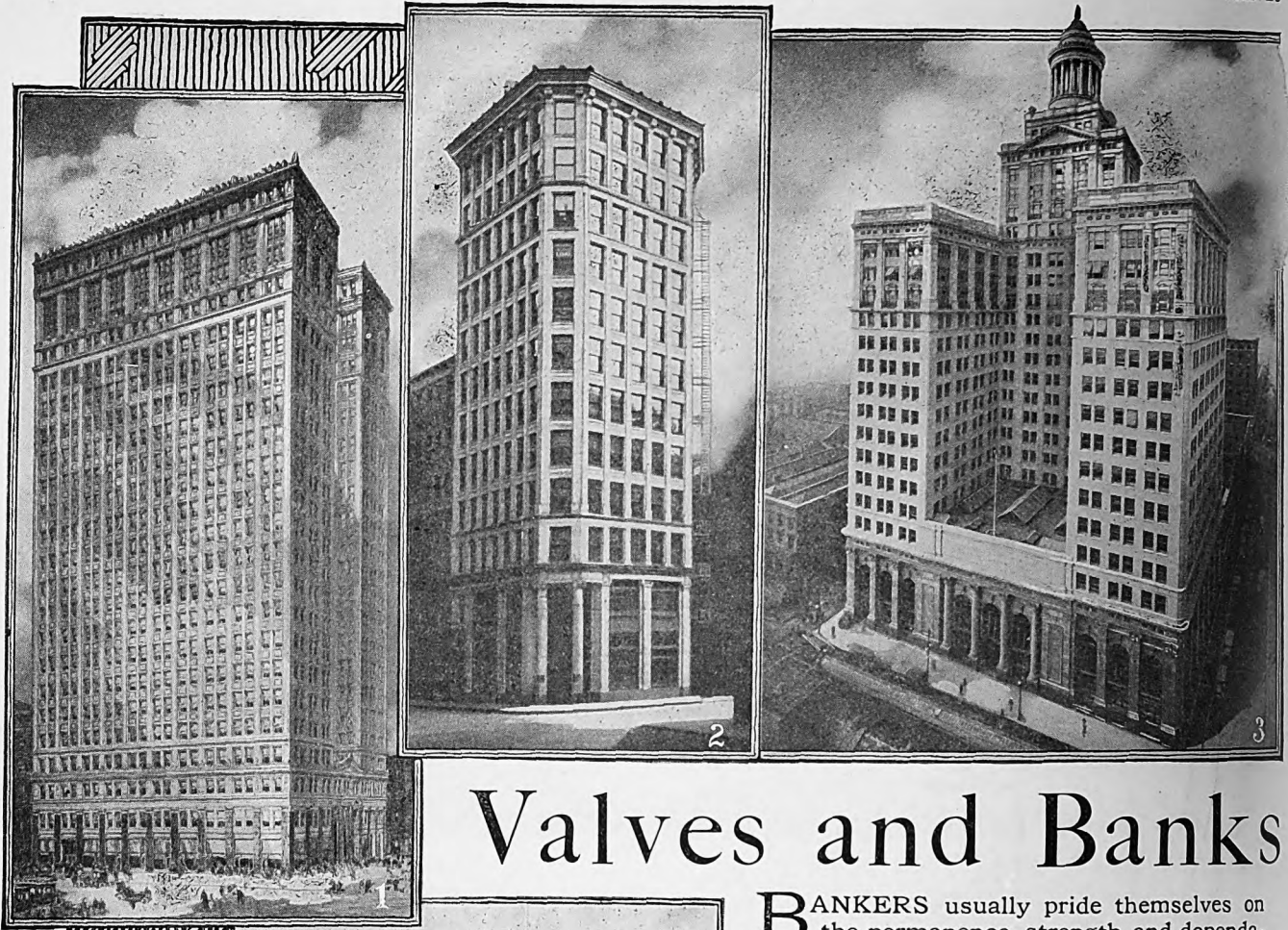
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INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS



August, 1922



# Valves and Banks

**B**ANKERS usually pride themselves on the permanence, strength, and dependability of their institutions. Perhaps this same pride is carried into their bank buildings, for it is general for banks to be equipped, in every detail, with the finest and best.

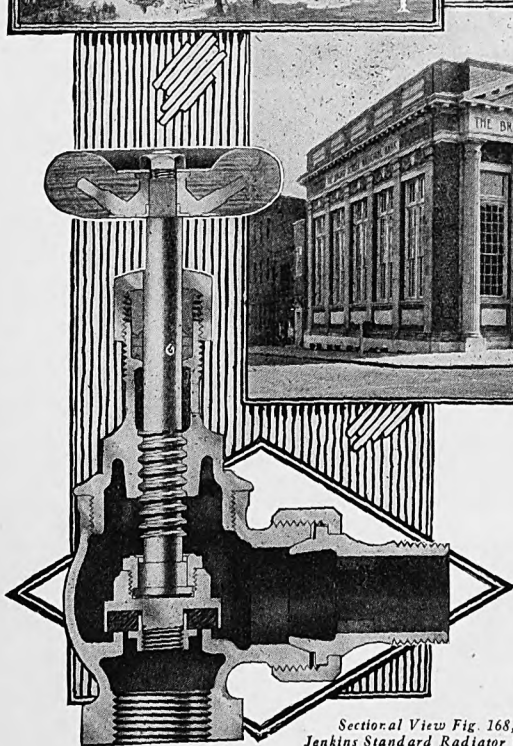
The fact that Jenkins Valves are so universally selected for bank equipment is pertinently significant of Jenkins reputation and prestige. In every locality, in large and small bank buildings, you will find Jenkins Valves installed. The buildings shown here are typical of the many "Jenkins equipped" banks throughout the country.

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- (2) Bankers' Building, Boston, Mass.—Clinton J. Warren, Architect.
- (3) Hibernia Bank Bldg., New Orleans, La.—Favrot and Livaudais, Architects.
- (4) Broad Street National Bank, Philadelphia, Pa.—Paul A. Davis, 3rd, Architect.

Avoid imitations and substitutions by writing genuine Jenkins "Diamond Marked" Valves into your specifications.

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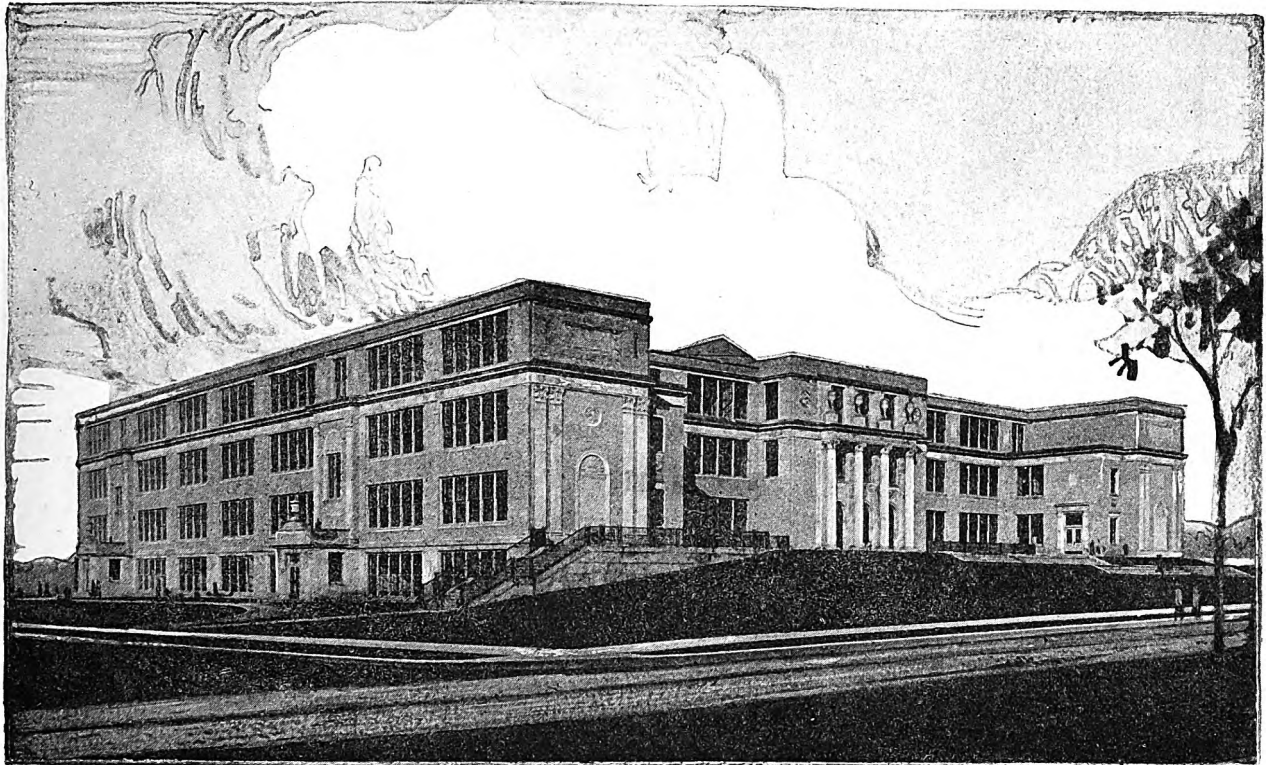


Sectional View Fig. 168,  
Jenkins Standard Radiator Valve



# Jenkins Valves

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Architect, VERUS T. RITTER, Philadelphia

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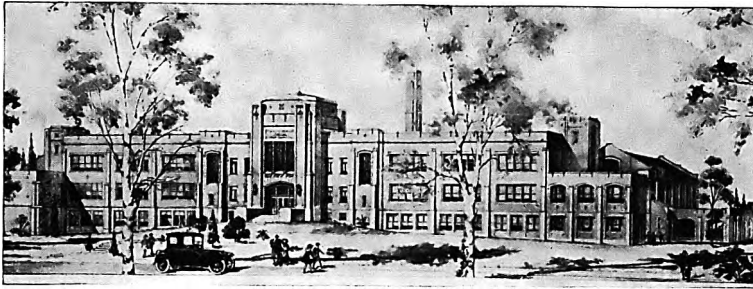
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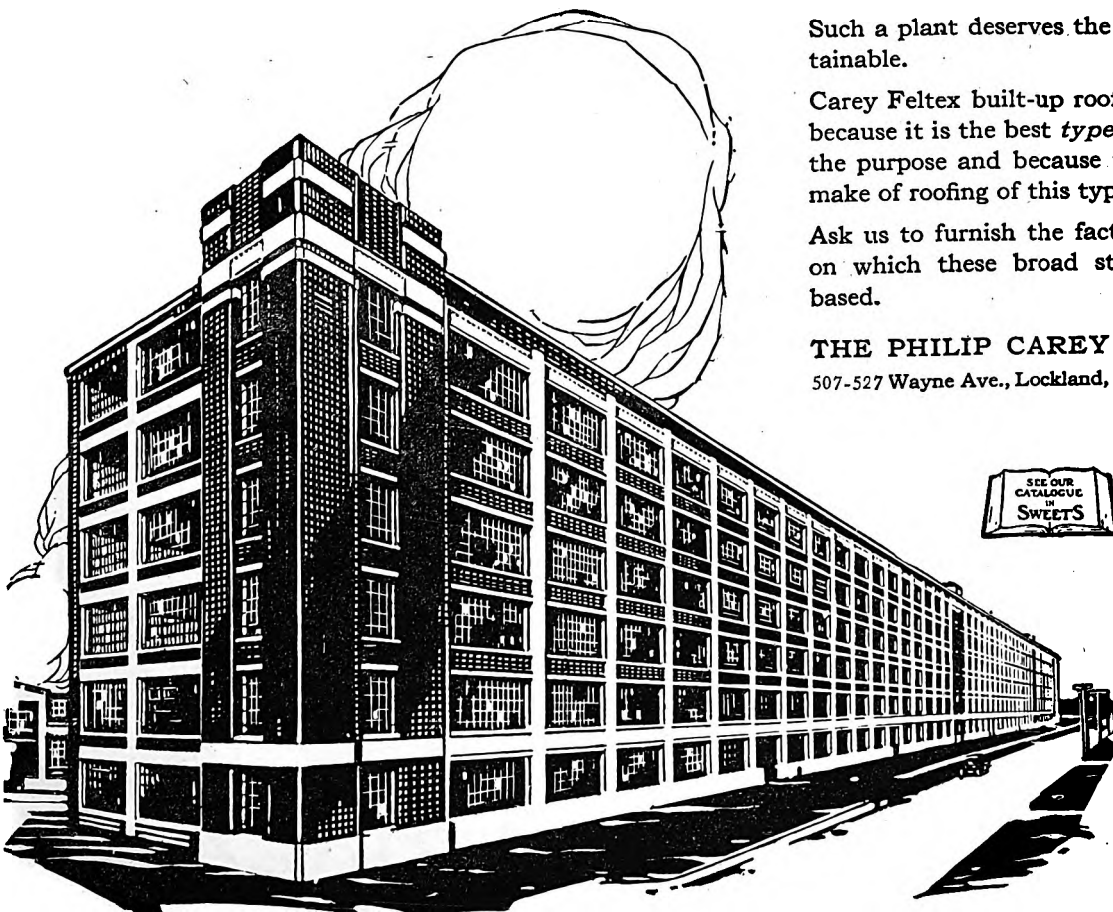
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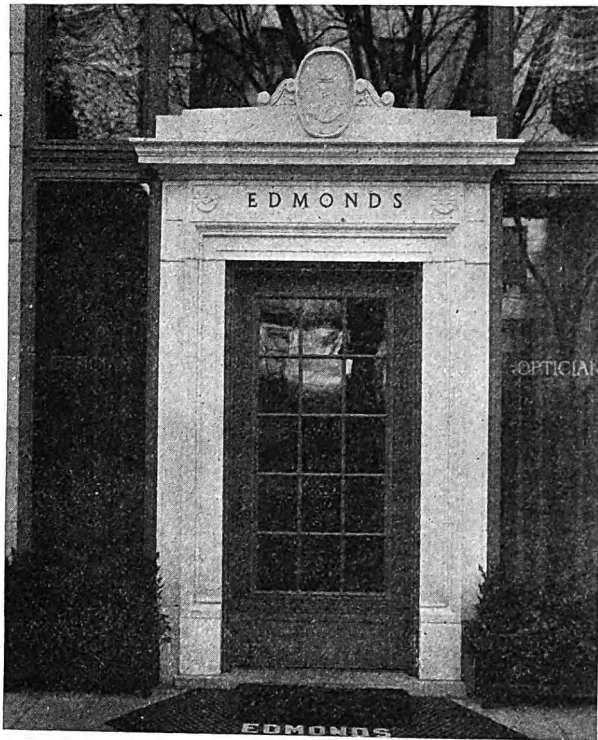
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Albert Kahn, Detroit; Architect. Thompson-Starrett Co., Cleveland; Contractors





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## Perspective

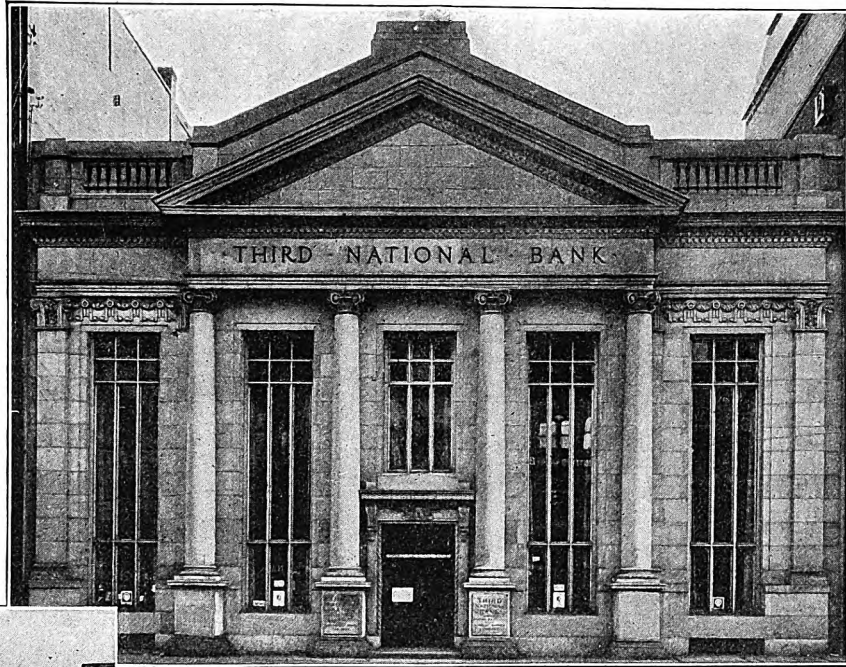
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*Third National Bank Building, Scranton, Pa. After being remodeled  
Edward Langley, Architect for the Alteration*



*Third National Bank Building, Scranton, Pa.  
Before being remodeled  
Dockworth Brothers, Architects*

*Note: When this building was previously illustrated  
in the advertising of this Association, the name of  
Architect for original building was, in error, given  
as Architect for the Alteration also*



*Booklets on Indiana Limestone  
will be mailed on request*

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INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

August, 1922

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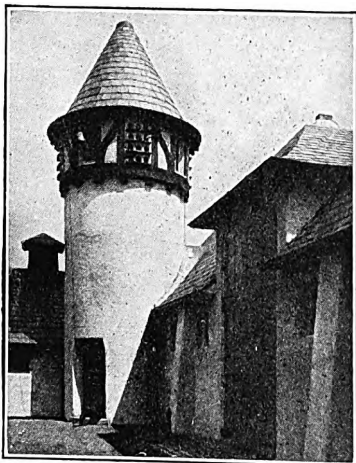
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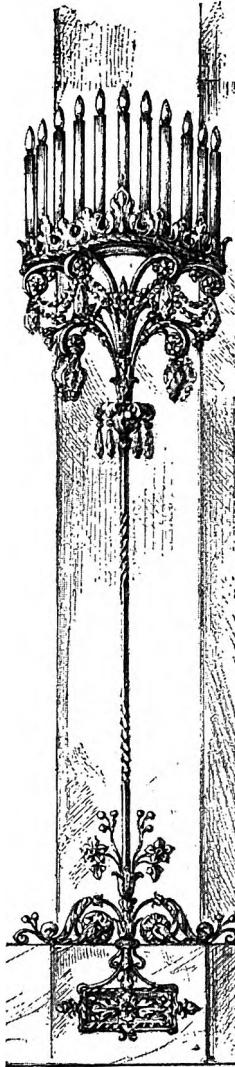
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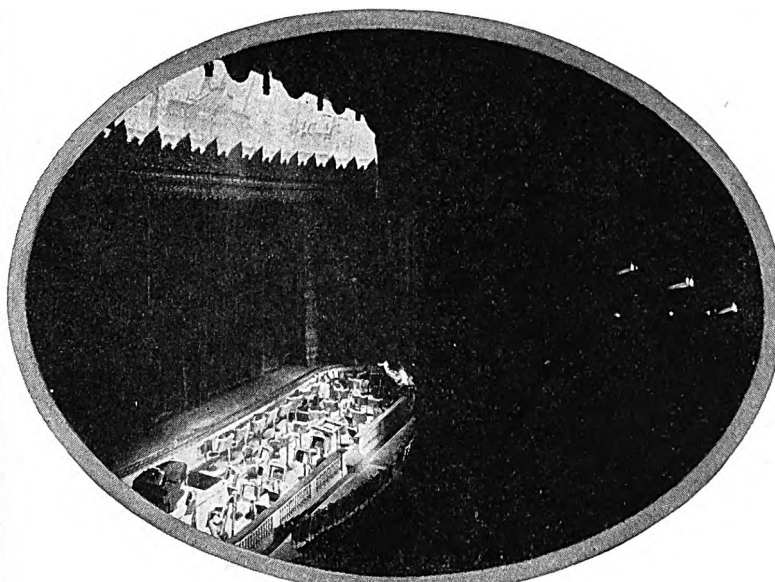
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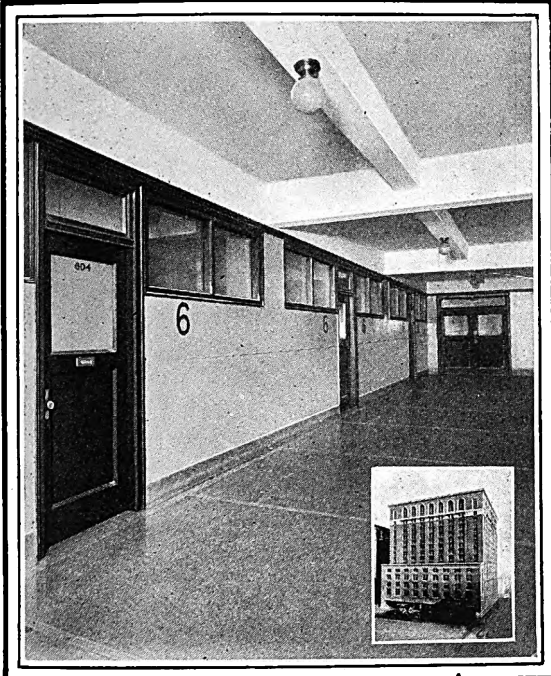
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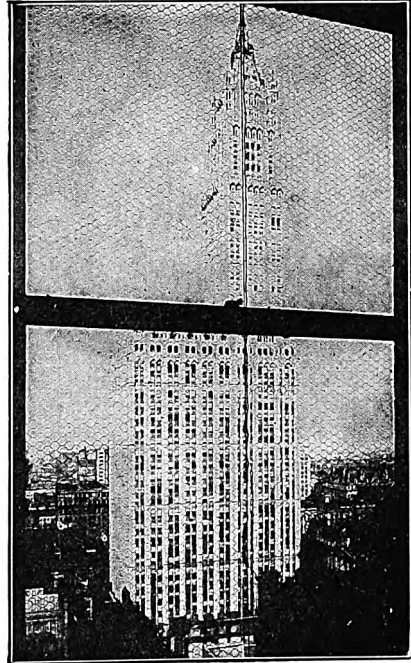
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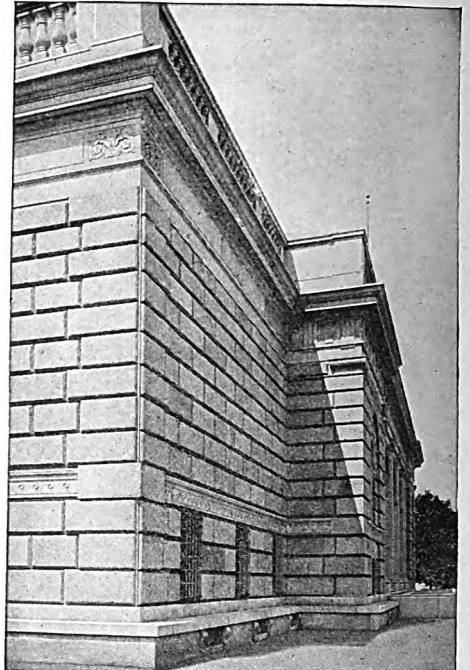
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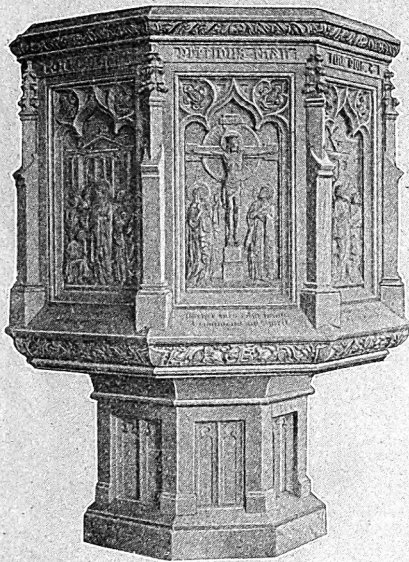
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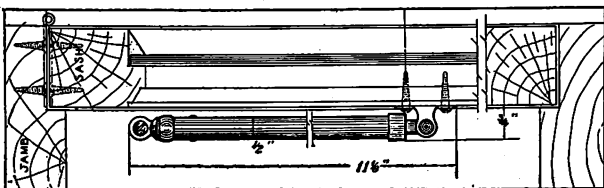
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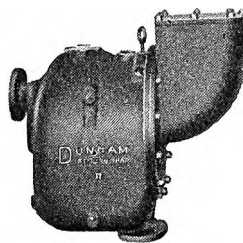
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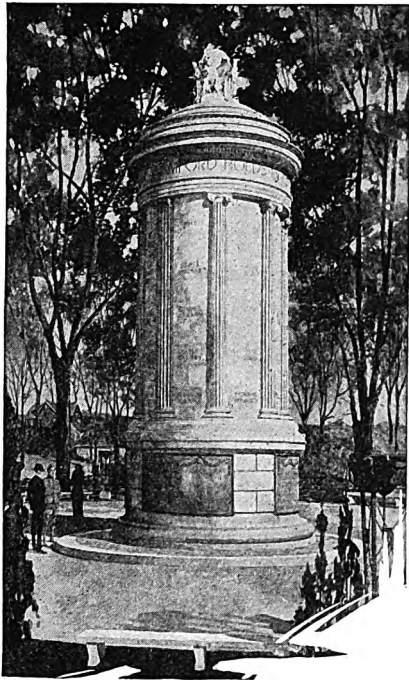
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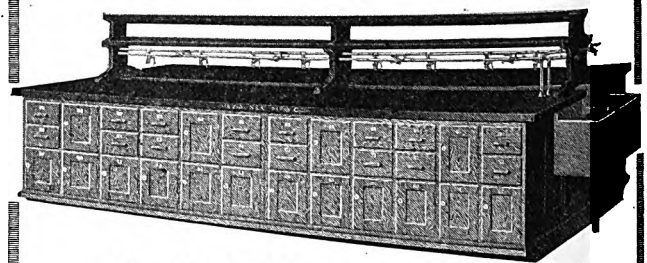
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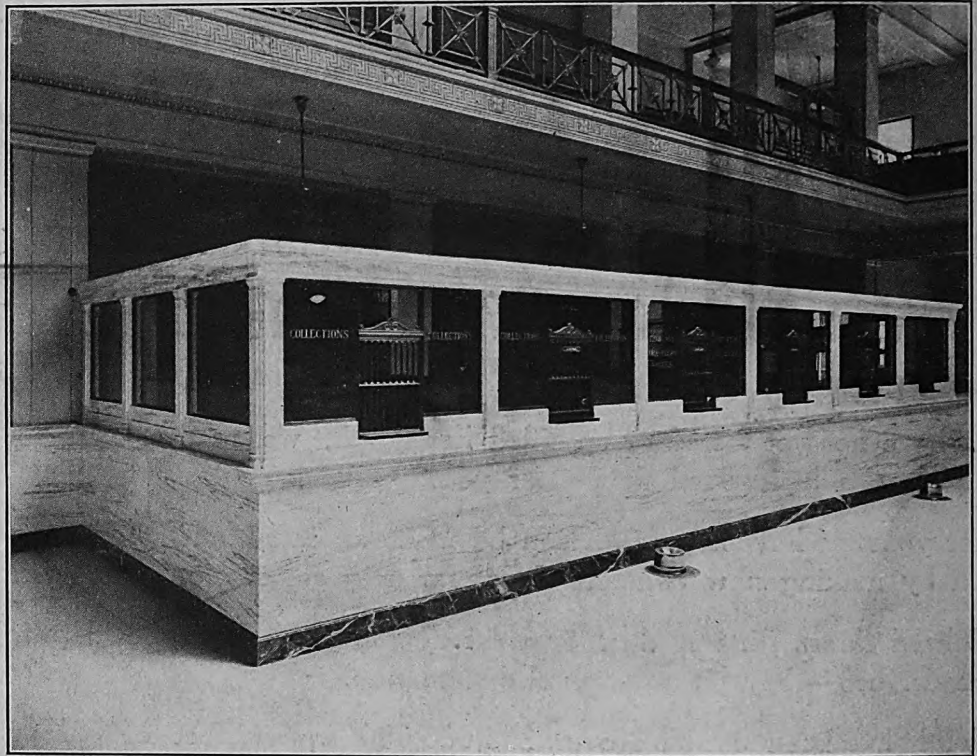
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Number 9

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Utah—State Board of Architecture, Salt Lake City. Virginia—State Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors, Richmond. Washington—State Board for Registration of Architects, Olympia. West Virginia—State Board of Examiners and Registration of Architects, Odd Fellows Bldg., Charleston. Wisconsin—Board of Examiners of Architects, Madison. Such laws are pending in Indiana and Iowa.

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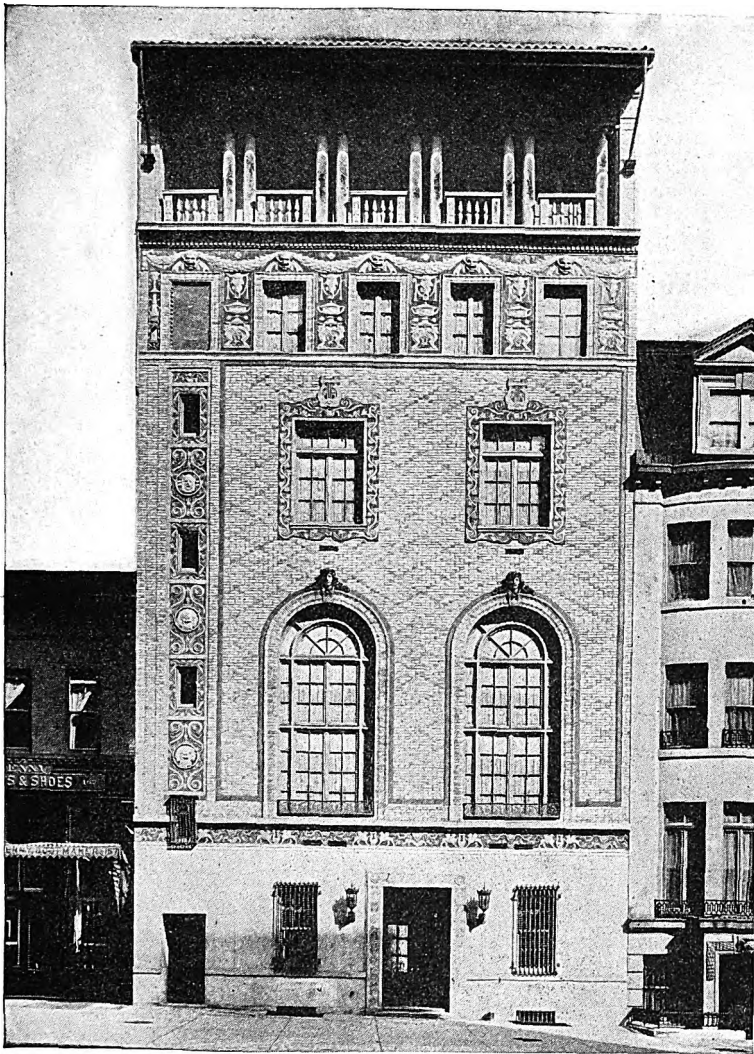
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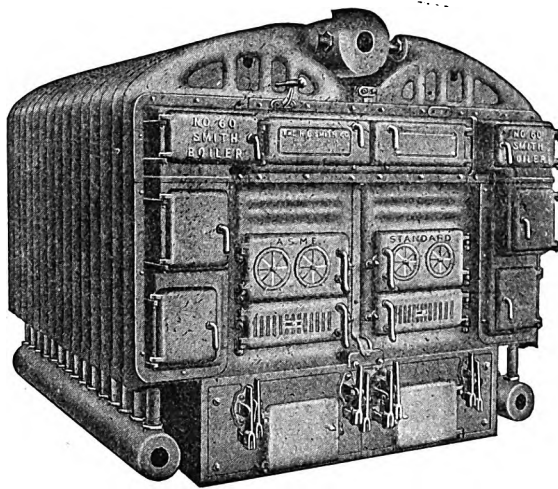
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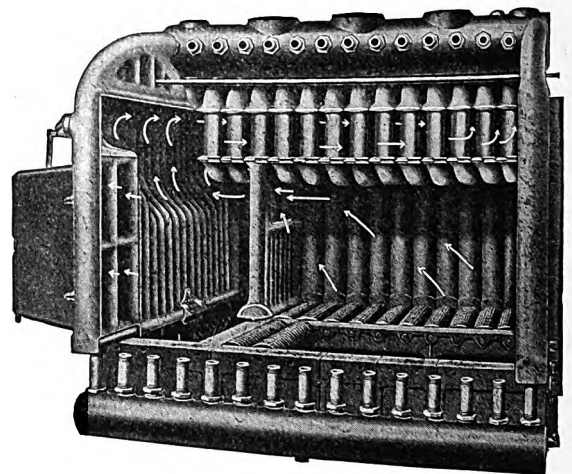
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

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## Shadows and Straws

**I**N NEW YORK CITY, recently, a group of plasterers presented a demand which is not unusual in these times. Although the union rate of pay is ten dollars a day, and they are now receiving twelve, they asked for Sunday work at twenty-four dollars a day. For reasons which had to do with an owner's wish, they were conceded this demand. On the following Monday morning they again gave notice that they must have Sunday work, at the same rate, as the price of their continuance. This time, they were refused. The architect calculated that their previous Sunday's work had netted about one good half day per man. On being refused their demand, they downed tools and left the job.

The occurrence is no doubt paralleled all over the land. Plasterers are scarce. The market is in the hands of the sellers of that particular kind of labor. But the opinions expressed as a rule are severely condemnatory of this sort of action. Certainly it is not to be upheld, but while any intelligent commentator must be aware of the extent of this practice in all modern business, since evidences of it are to be had in reading a newspaper, there is one particular aspect of the matter to which more attention might profitably be directed.

In this issue of the *JOURNAL*, Mr. Ackerman writes on the "Division of Labor," and the incident of the plasterers has a great deal to do with that question. For example, it is because of the division of labor that the plasterers were able to execute their frontal attack. No other trade will today do plastering. In former times this was not so. Bricklayers and masons and plasterers often did each other's work. Now they have apportioned among themselves their various activities. So it is all through the gamut of modern industry. A vested interest, or its equivalent, has been established. The practice obtains in all professions and is thoroughly entrenched in business.

Running along with this evolutionary process there may be discovered the shortage of skilled workers in all lines of industry. The census statistics are illumi-

nating, but the experience of architects generally bears out the considered opinion of students. The number of skilled workers is decreasing and the measure of skill is likewise deteriorating. The Apprenticeship Committee of the Congress of the Building Industry in New York City is making the first concerted effort of which we have heard to discover the facts in the case and apply a remedy. They are being actively supported financially by builders and by bankers, which may fairly be taken as added evidence of the conditions to which allusion is made.

Yet it is very plain, if one stops to think of it, that the whole tendency of machine industry is to dispense with skill and judgment. In other words a major force is opposing a minor one. It has not passed unnoticed, by any means. Dr. Ralph Adams Cram, in his writings, has touched the question, though not primarily, particularly in "Walled Towns." Mr. Arthur J. Penty, also an architect though practising in England, has probed the question deeply in his last work, "Post Industrialism," which Dr. Cram is soon to review in these columns. Mr. Ackerman, a third architect, examines the question very closely, in the article to which we refer, and it is significant that the effect of the machine is being regarded with misgivings throughout the western world. The east has long suspected it. The friends of Japan have noted the results of its adoption. The friends of China view its incursions there with keen regret, and the Chinese themselves are opposed to it. Rathenau, the assassinated German Foreign Minister, intimately connected with one of the greatest industrial establishments in the world, expressed the opinion in his remarkable writings, that machinery was one of the greatest dangers to civilization.

Of what use to become acquainted with these facts? Perhaps no more than it is to learn that the result of the Cretan excavations completely changes the archeological inferences of the last hundred years. On the other hand, in the event that one proposes to act, it is



sometimes useful to know the nature of the forces against which one is to contend. Such knowledge conserves fervor and often prevents a foolish investment of energy. Life is a flow and gets rid of things by decay. The machine, speaking generally, will decay along with the rest of things, unless the motive that now directs it toward the destruction of man is changed.

LUNCHING with a member of the Royal Institute, in London, in May, our conversation fell upon the Royal Gold Medal, the award of which to Mr. Hastings had then been announced. Our host mentioned Mr. McKim as having been the first American architect to receive the medal, and, neglecting to look up the fact, this error was so recorded in our August issue, much to the editor's regret. The list of Royal Gold Medalists is appended below, from which it will be seen that Mr. Richard Morris Hunt was the first American architect upon whom the medal was bestowed. The presentation address, and Mr. Hastings' reply, appear in full elsewhere in this issue.

- 1848—*Charles Robert Cockerell.*
- 1849—*Luigi Canina, Italy.*
- 1850—*Sir Charles Barry.*
- 1851—*Thomas L. Donaldson.*
- 1852—*Leo Von Klenze, Austria.*
- 1853—*Sir Robert Smirke.*
- 1854—*Philip Hardwick.*
- 1855—*J. I. Hittorff, France.*
- 1856—*Sir William Tite.*
- 1857—*Owen Jones.*
- 1858—*August Stuler, Germany.*
- 1859—*Sir G. Gilbert Scott.*
- 1860—*Sydney Smirke.*
- 1861—*J. B. Lesueur, France.*
- 1862—*Rev. Robert Willis.*
- 1863—*Anthony Salvin.*
- 1864—*E. Viollet-Le-Duc, France.*
- 1865—*Sir James Pennethorne.*
- 1866—*Sir M. Digby Wyatt.*
- 1867—*Charles Texier, France.*
- 1868—*Sir Henry Layard.*
- 1869—*C. R. Lepsius, Germany.*
- 1870—*Benjamin Ferrey.*
- 1871—*James Fergusson.*
- 1872—*Baron Von Schmidt, Austria.*

- 1873—*Thomas Henry Wyatt.*
- 1874—*Geo. Edmund Street.*
- 1875—*Edmund Sharpe.*
- 1876—*Joseph Louis Duc, France.*
- 1877—*Charles Barry.*
- 1878—*Alfred Waterhouse.*
- 1879—*Marquis de Vogüé, France.*
- 1880—*John L. Pearson.*
- 1881—*George Godwin.*
- 1882—*Baron Von Ferstel, Austria.*
- 1883—*Fras. Cranmer Penrose.*
- 1884—*William Butterfield.*
- 1885—*H. Schliemann, Germany.*
- 1886—*Charles Garnier, France.*
- 1887—*Ewan Christian.*
- 1888—*Baron Von Hansen, Austria.*
- 1889—*Sir Charles T. Newton.*
- 1890—*John Gibson.*
- 1891—*Sir Arthur Blomfield.*
- 1892—*César Daly, France.*
- 1893—*Rich. Morris Hunt, U.S.A.*
- 1894—*Lord Leighton.*
- 1895—*James Brooks.*
- 1896—*Sir Ernest George, R. A.*
- 1897—*Dr. P. J. H. Cuyppers, Holland.*
- 1898—*George Aitchison.*
- 1899—*George Fredk. Bodley.*
- 1900—*Professor Rodolfo Amadeo Lanciani, D. C. L. Oxon, Italy.*
- 1901—*Not awarded owing to the death of Queen Victoria.*
- 1902—*Thomas Edward Colcutt.*
- 1903—*Chas. F. McKim, U.S.A.*
- 1904—*Auguste Choisy, France.*
- 1905—*Sir Aston Webb, K.C.V.O., C.B., R.A.*
- 1906—*Sir Alma-Tadema.*
- 1907—*John Belcher.*
- 1908—*Honoré Daumet, France.*
- 1909—*Sir Arthur John Evans, D.Litt., F.R.S.*
- 1910—*Sir Thomas Graham Jackson, Bart., R.A., LL.D.*
- 1911—*Wilhelm Dörpfeld, Germany.*
- 1912—*Basil Champneys.*
- 1913—*Sir Reginald Blomfield, R.A.*
- 1914—*Jean Louis Pascal.*
- 1915—*Frank Darling, Canada.*
- 1916—*Sir Robert Rowand Anderson.*
- 1917—*Henri-Paul Nénou, Membre de l'Institut.*
- 1918—*Ernest Newton, C.B.E., R.A.*
- 1919—*Leonard Stokes.*
- 1920—*Charles Louis Girault, Membre de l'Institut.*
- 1921—*Sir Edwin Landseer Lutyens, R.A.*
- 1922—*Thomas Hastings, U.S.A.*

The names of those deceased are printed in italics.

C. H. W.

## The Autobiography of An Idea

By LOUIS H. SULLIVAN

### CHAPTER IV.

#### *A Vacation.*

OUR child became moody. Day by day the hill-side school and all its doings irked him ruthlessly. In wood, field and meadow, his friends the birds were free. Why should he remain within these walls imprisoned and sad? He was a child of sudden resolves. On a morning early he went to the pantry. As he glanced over the shelves, his thoughts wandered to the pink and white smiling baker who

delivered "Parker House Rolls" every so often, and, with a cheery word left thirteen for a dozen. "A baker's dozen" he would say every time he drove up to the kitchen door; and then in a busy way inquire: "How's all the folks?" "Guess I don't need ask if this boy's a sample." Then he would make a quick step into his light wagon and away with a rattling start. The boy in the quiet pantry unbuttoned his blouse, as his thoughts went on:—Not so at the school:—Teacher was not always kind. Twice with a rattan she had whipped the palm of his right hand while he

## THE AUTOBIOGRAPHY OF AN IDEA

placed his free arm across his eyes and bent his head and cried. It did not hurt much, but Teacher said it hurt her more than it did him. She told all the class so. She said she must make an example by having him stand on the platform and she said she did it to "learn him to mind and pay attention"; that it was her moral duty to do so; that she could not fail in her moral duty even though it pained her; that she punished not in anger but in grief; and then she cried, her forehead bowed between her hands, as she sat at her desk on the raised platform; he recalled that she had cried this way every time she had whipped a child, and she didn't whip very often either; so he bore her no ill will; yet he wondered why he should be whipped at school when he was never whipped or punished at all, at home; and again came floating the thought of the dainty baker-man; nimble, pink faced, blue twinkling eyes and jolly chuckle. Thus musing but intent he filled his blouse with rolls and doughnuts and cookies—and buttoned up. Also, he had, hidden in his bosom, a small tin cup; for he knew where he was going. He was preparing to answer the call of a wooded ravine through which wandered a noisy rivulet. He had seen it but once, while on a walk with Grandpa, but he marked it then as the favored spot in his imaginary world. Once found and marked for friendship, it often had called to him in his school—a distant call—he could not come. This morning it called to him irrevocably and nearby. Without a word to any one he set forth, following the Stoneham Road westward until he reached the gate of a right of way leading northward. He climbed the padlocked gate, and, following the road, soon passed a long hillock to the left crowned with tall hardwood trees, then down grade, then upgrade to a crest where the road ended. He climbed the gate and in new freedom, lightly traversing the down slope, reached the depths of the promised land. One bright particular spot was his goal. It lay in the narrow bottom of the ravine just where the gurgling water passed hurriedly among field stones under tall arching oaks. Here was the exact spot for a dam. He got immediately to work. He gathered the largest field stones he could handle, and small ones too. He had seen Scotchmen and Irish build farm walls and knew what to do. He was not strong enough to use a stone hammer if he had had one. So he got along without. He found a rusty remnant of a hoe, without a handle; with this he dug up some stiff earth. So with field stones, mud, twigs and grass he built his dam. It was a mighty work.

He was lost to all else. The impounded waters were rising fast behind the wall, and leaking through here and there. He must work faster. Besides, the wall must lengthen as it grew higher, and it leaked more at the bottom. He had to plug up holes. At last

child power and water power became unequal. Now was at hand the grand climax—the meaning of all this toil. A miniature lake had formed, the moment had arrived. With all his strength he tore out the upper center of the wall, stepped back quickly and screamed with delight, as the torrent started, and, with one great roar, tore through in huge flood, leaving his dam a wreck. What joy! He laughed and screamed. Was he proud? Had he not built the dam? Was he in high spirits? Had he not built this dam *all by himself*? Had he not planned in advance just what happened? Had he not worked as hard as he had seen big men work? Wasn't he a strong boy for his age? Could anything at school or at home compare with this? Exhausted with work and delight he lay stretched on his back, in the short grass, looking far up at the spreading branches, glimpsing bits of blue between the leaves, noting how these self-same leaves rustled softly, and twinkled in the sunshine. This rested him. Then hunger sharply called. He had cached his Parker House rolls and doughnuts and cookies, and his tin cup, on a big boulder in the shade. The "hired girl," Julia, had taught him to milk. Dipper in hand he went afield to hunt up a cow. All cows were his friends. Soon he had the dipper filled with warm fragrant milk—his delight. Then came the repast near the site of his triumph. Then he loafed and invited his soul as was written by a big man about the time this proud hydraulic engineer was born. But he did not observe "a spear of summer grass": he dreamed. Vague day dreams they were;—an arising sense, an emotion, a conviction; that united him in spirit with his idols—with his big strong men who did wonderful things such as digging ditches, building walls, cutting down great trees, cutting with axes, and splitting with maul and wedge for cord wood, driving a span of great work-horses. He adored these men. He felt deeply drawn to them, and close to them. He had seen all these things done. When would he be big and strong too? Could he wait? Must he wait? And thus he dreamed for hours. The shadows began to deepen and lengthen; so, satisfied, with a splendid day of work and pondering, he reached home in time for supper. Grandma said the usual grace, all heads were bowed as she appealed to her Lord of love to give strength and encouragement and to bestow his blessing upon this small family in their daily lives and tasks and trials and to give abundantly of His divine strength unto all that loved and obeyed Him. But the child's thoughts were concrete and practical; parallel to the prayer but more locally concentrated. His grandmama, in her appeal, spoke the beautiful old French with its liquid double-ell. Her voice soft and heartfelt meant peace on earth. He understood a little of it; he knew that the words *Que Dieu nous bénit* which sounded to him like one word: Kudgernoo-

baynee, meant: May God Bless us. He had no objection to God as a higher member of the family; it was only the minister's God, the God of Hell that he disliked and avoided. Nevertheless he wished the ceremony might be shorter—it would do just as well—for while Grandmama prayed, his mouth watered. He would have accepted prayer as a necessary evil were it not for the reconciling thought that God seemed to be Grandmama's big strong friend; and what Grandmama loved he knew he ought to love too; even as he loved his own idols—his mighty men. The prayer done, a silver bell tinkled by Grandmama and Julia appeared, a glowing Irish vision, bearing high stacks of her wonderful griddle-cakes, a pitcher of real syrup, and a—Surely, why parade or parody a dreamer's gluttony rising thus thrice daily like a Jinni of old within his nascent dream of power? After supper he visited his small garden in the large garden. It was more sizable now than last year. Satisfying himself that the four o'clocks, nasturtiums, geraniums, mignonettes, and the rest of the family were doing well, he trotted down the granite steps to the dirt road in front where he might practice at throwing stones—a sport strictly taboo in the fields, but permissible in the sterile pastures. Between his house and the Tyler farm house opposite, was quite an open space, containing, at a level considerably lower than the road, a small spring-fed pond. In this pond were colonized bull-frogs, mud turtles, minnows and leeches: bulrushes grew at each end. Stray cattle browsed about at times. This pond was one of the child's possessions. It didn't make any difference if it were called *Tyler's Pond*, it was his own just the same. Stone-throwing finished, he went there to look things over and satisfy himself that everything was all right as it should be. As he approached, the host of frogs were beginning their evening chant to the invisible King of all frogs; he waded in a bit; the clamor increased; then the bass volume became overtoned by the awakening sounds of tree toad, Katydid and cricket, while fire flies softly shone here and there. These were his familiars. Then he found a glow worm in the damp grass. As he held it in his hand he noticed with surprise that the surface of the pond was crimson: This was new to him. He waded a little ahead and was pleased to see the ripples turn silver and crimson as they moved away from him. He was pleased and somewhat perplexed. Somehow he looked straight ahead from where he stood in the water, and there right in the woods on Tompson's knoll, he saw the setting sun, the trees silhouetting against it, and the lower sky aglow. He had seen many sunsets, but there was something peculiar about this sunset—He would speak to Grandpa. The sun sank from sight; the western sky softened into gray, twilight deepened into gloaming as the child stood knee deep in the warm shallow water, lost in reverie so faint,

so far, so near, so absorbing, so vibrant that the once noisy chorus seemed a tranquil accompaniment to a melody that was of earth and sun in duo with his dream. He awoke! He must speak to Grandpa about the sun.

Grandpa was willing, but careful. He well knew that a child's mind was a tender thing. He was keenly observing, but said little. He quietly, even eagerly observed his grandson, as one might watch a precious plant growing of its own volition in a sheltered garden, but far from him was it to let the child suspect such a thing. He had often laughed at the child's outrageous frankness. It infinitely amused him; but when it came to *knowledge*, he was cautious—dropping information by crumbs. But this time, when his grandson in eager child-words dramatized the sunset and climaxed all by a sudden antithesis saying he had never seen the sunrise! How did the sun rise? Where did it rise? How did it rise? Would Grandpa tell him? Would Grandpa please tell him? Then Grandpa wide-eyed knew a mystic golden bell had struck the hour. He told the boy at once that the rising sun could not be seen from the house because Cowdrey's hill shut off the view; that the sun truly arose far beyond this hill. That to see the sun rise one must go to the crest of the hill, whence one could see to the horizon. He used the word horizon boldly, as one throws down a card, and then with strategy of simple words, and easy similes he produced a sort of image for the child: difficult to do in a hilly country, and for the mind of one who had never viewed the open sea. Then he explained that the lay of the land westward of the house was not so hilly as that to the east, therefore one could view the sunset to fairly good advantage.

In his discourse, he was careful not to mention the revolution of the earth. He knew well enough the child was living in a world of the senses. "But Grandpa, is the sunrise as beautiful as the sunset?" "Far more so, my child; it is of an epic grandeur; sunset is lyric, it is an elegy." These words escaped Grandpa in a momentary enthusiasm. He felt foolish, as he saw a small bright face turn blank. However, he patched up the "lyric" and the "elegy" fairly well, but "Epic" was difficult. Had he but known of his grandson's big strong men:—how simple. Then Grandpa went on: "But you must know that in summer the sun rises very early, earlier than I; and I scarcely believe my young astronomer will get out of his comfortable bed long before daylight, just to see the sun rise out of *his* bed," and Grandpa chuckled. "Yes, I will, Grandpa, yes, I will"—and he slipped from his Grandfather's knee to arouse the somnolent cat, and shape his plans for tomorrow.

Restless through the night, he arose at twilight, made ready quickly, and passed up the road leading to the great ash tree whose companionship he ever sought on

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high occasions. Here, under the wondrous tree—and with Cowdrey's farmhouse resting silently across the way—here in stillness of oncoming dawn punctured here and there by a bird's early chirp, and chanticleer's high herald call heard near and far, raucous, faint, and ever fainter far away; the few remaining stars serene within the dome of pale passing night, he stood, gazing wistfully over the valley toward a far away range of dark blue drowsy hills, as the pallid eastern sky, soon tremulous with a pink suffusion, gave way before a glow deepening into radiant crimson, like a vanguard of fire—as the top of the sun emerging from behind the hills, its slow-revealing disc reaching full form, ascended, fiery, imperious and passionate, to confront the child. Chilled and spellbound, he in turn became impassioned with splendor and awe, with wonder and he knew not what, as the great red orb, floating clear of the hilltops overwhelmed him, flooded the land; and in white dazzling splendor awakened the world to its work, to its hopes, to its sorrows, and to its dreams. Surely the child, sole witness beneath his great ash tree, his wonder-guardian and firm friend sharing with him in its stately way as indeed did all the land and sky and living things of the open—the militant splendor of sunrise—the breaking of night's dam—the torrent and foam of far-spreading day—surely this child that went forth every day became part of sunrise even as this sunrise became forevermore part of him. The resounding power of the voice of the Lord of the sky and earth found in him a jubilant answer—an awakening world within, now aroused from its twilight dream, its lyric setting sun, its elegy of the gloaming. The great world was alive to action. Men resumed the toil of countless ages: the child, illumined, lost in an epic vision, came slowly to a consciousness of his own small self, and the normal doings of his own small day. He made a long detour through the solemn pine woods near Whittemore's, crossed the road there, descended into the small valley, followed it to and through a lumpy bog where skunk-cabbages grew and their synonyms wandered, scaled a low wall, followed a rivulet that traced from the considerable spring in the hollow of his own pasture, sat there watching a small frog, fell asleep, woke up, followed the hollow to the pasture's high ground, turned into the walled road leading to the barn, stopped at the pump in the kitchen yard—and was late to breakfast. Grandpa looked at him quizzically, but said nothing—he knew what the imp had been up to—he had heard him leave the house and had hastily donned gown and slippers, to watch his grandson disappear up the road to sunrise land. Julia was furious in rich brogue concerning punctuality, and the child, usually so naïvely communicative, said not a word to anyone about his adventure—it seemed to have happened for himself alone. Grandpa amused, amazed and disturbed by

this freak of his grandson, feared precocity—in much the manner that academically trained men are apt to fear manifestations of instinct. The only thing that reassured him was the fact that his grandson, between spells, was as ridiculously practical. As a matter of fact the child was living almost wholly in the world of instinct. Whatever there was of intellect consisted in keen accuracy of observation, and lively interest in all constructive affairs. Without reflection he admired work. To see men at work, and himself to work, especially if he could participate, was his childish joy. With never a serious illness, most carefully reared as to dietary and early hours, he was sound. Though he was his grandparents' pet, disparity in age, occupation and thought left him much to himself; and he did mostly as he pleased. What marked him apart and comforted his elders was an entire absence in him of destructive tendency. Therefore they allowed him the utmost freedom to go and come and do. This morning, breakfast out of the way, and Julia also, he went at once to his garden. His quick eye detected a fallen nasturtium; with his finger he dug up the offending cut-worm. How could a cut-worm do so shocking a thing? Had he not reared all these cherished beauties from the very seed? Had he not watched them growing, day by day, from infancy to blossom-time—putting forth tender leaf after leaf, and unfolding their tiny buds into lovely flowers? Had he not watered them and weeded? How often had he wondered at what made them grow. How often, on hands and knees—close up—had he peered and gazed long, hungrily, minutely at them one by one, absorbed in their translucent intimacy; indeed worshipped them in friendship until he seemed to *feel* them grow: that they were of his world and yet not of his world; that they seemed to live their own lives apart from his life. But he never said a word of this to Grandpa or to Grandma—*They might not understand*—and Grandpa might laugh.

After further careful inspection, he left his garden friends for the day; and equipped as before, made his way to the ravine with its sturdy rivulet and the wreckage of a dam. But this he judged was not dam-building day. He had not seen the full spread of his domain. He must explore. So saying, he followed the rivulet eastward out of the heavily wooded ravine, into a broad field of meadow grass where the small clear stream now flowed—in tranquillity winding its way. As he lifted his eyes from its course, there, solitary in the meadow, stood the most beautiful tree of all. He knew it at once for an elm; but such tall slender grace he had never seen. Its broad slim fronds spreading so high and descending in lovely curves entranced him. He compared it with the two Tompson elms. They were tall and spreading but stiff and sturdy. Now he knew why he had never adopted them:

—they were *pruned* from the ground way up to the big strong branches, while this lovely sister of the meadow, beneath her branching plume, put forth from her slender trunk delicate frothy branchlets reaching almost to the meadow grass. Her beauty was incomparable. Then he thought of his great ash tree. How different it was—so grand, so brooding, so watchful, on the crest of the hill; and at times, he firmly believed, so paternal—so big-brotherly. But the lovely elm was his infatuation—he had adopted her at first sight, and still gazed at her with a sweetness of soul he had never known. He became infiltrated, suffused, inspired with the fateful sense of beauty. He melted for an instant into a nameless dream, wherein he saw she was sufficient unto herself, that like his garden plants she lived a life of her own, apart from his life. Yet they, both, lived in the same big world—they, both, for the moment stood in the same green field. Was there nothing in common? Did she not know he was there? Then he awoke!—he came to his senses, and turned to the practical business of hunting wild strawberries in the meadow grass. His dream had flitted by like a bird of passage. He looked upon her sanely now. She was still uniquely beautiful, he thought, in free admiration. So he had two trees now—all his own, and powerfully prized. It was all agreed. Then he moved further north to a dense mass of rather tall pines. He pushed in some distance, saw a crow's nest overhead, climbed painfully up to it, had barely looked in when came a horrible crawling; angry crows came suddenly from everywhere, bent on his destruction. Amid a fierce clamor, he descended to safety and then and there fixed these gloomy pines as the eastern boundary of his domain. He explored until he found in another field, on slightly higher ground, the deep clear wellspring from which the rivulet flowed. Thence, he followed its windings, wading as he went. Grasshoppers in alarm hopped foolishly into the stream and floated along; now and then a small frog jumped the other way for safety. There were a few strawberries peeping from the grass along the banks; the channel was cutting deeper into the meadow and held more water; as he rounded a long curve he became aware of a great presence near him; it was his elm; he craned his neck to look at the branches way up in the sky, but his interest was centered in his new friend the rivulet, he had not room for both just now. The little stream began to ripple and sing sweetly, to the child all alone in the meadow in the full sunshine—all alone: with plenty of company. Then the rivulet began to hurry and gurgle. The child scaled the fence quickly, to see the water descend all at once, in a beautiful cascade of about his own height. After this, noisily foaming, it poured among the boulders to the lower level where he had built the dam, and, as he knew, moved on to the marsh.

He had reached his sanctuary in the shady grove, and sat a while on the lower or northern bank, to watch the squirrels. It seemed so funny to see a gray squirrel run head first down a tall tree, sit up straight, in the grass, frisk his tail, wag his head, scamper to the next tree, run up, and out to the end of a branch and jump from that to a branch of the next tree. He laughed gleefully at these antics. Meanwhile came from the undergrowth the note of the brown thrush, and from above various twitterings, chirpings, and distant floating meadow songs. It was now time to establish the northern boundary. The north bank of the ravine sloped rather gently upward, and as it emerged from the grove it rounded and flattened into a lumpy pasture, with many boulders large and small, and plants of mullein scattered over its surface. He must include this pasture because here was the milk supply, and besides, the pasture was green. All along the north border of it stood a dense growth of young pines which he found impenetrable and repellent, so he fixed his northern boundary resolutely there. As to the southern boundary he was in some doubt. It should, properly, be located a little way south of the crest of the ravine where the grove ended. He mounted the height and stood at the edges of a sterile stony sunburned pasture—no trees, no cows; nothing but mulleins. This would not do. Yet he yearningly gazed beyond it to the long Tompson hillock crowned with beautiful lofty hard wood trees running parallel to the ravine. He wished this grove to be his, but could not accept the miserable pasture. He thought hard,—and solved his problem this way: He would fix the south boundary at the crest of the ravine, and would annex the Tompson Grove as an outpost. The boundary of the meadow he had already fixed, much farther south than the ravine, at a cross fence near the spring, where the meadow ended and a cultivated field began. He contemplated for a while, and saw that all thus far was good. Now for the marsh: at which he had cast covetous eyes as he, yesterday, peered under the lower branches of his grove as through a portal. His expectations were far exceeded by the revelation. It was a lovely marsh, shaped like an oval, enshrined by the diminishing trees of his grove and a margin of heavy shrubbery all around. In the near background beyond the far end of the marsh were scattering swamp pines and cedars standing very straight and tapering to a point; they were welcome to him as they stood on guard behind the dense thicket. But the marsh itself—how beautiful—covered with water half-knee deep, filled with groups of tall bulrushes, of reeds, of blue flag, and slender grasses; and bright flowers here and there along the wavering edge. What joy to wade and wade, lengthwise and crosswise, pulling up a flag now and again and stripping it to reach the edible core; following the margin to seek out hidden flowers. It was too

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much; too much at one time for one small boy. And then, in mingled affection and gratitude he established as western boundary a vague semicircle of deep green holding in its heart a marsh—his marsh without price. Slowly he returned to the dam-site to think it all over. Now was the work done. The boundaries of his domain established. The domain his very own. His breast swelled with pride. It was all his. No other boy should ever enter these lovely precincts. No other boy could understand. Besides, he loved solitude as he loved activity, and the open.

Thus an entire month sped by as he reigned supreme. Not a soul came to disturb him: Rabbits, squirrels, birds and snakes were company enough. When he wished to play with other boys he went to them and joined in their games. While his heart was fixed in one spot, he made many tours of exploration; he called on many farmers and shoemakers. He even went so far one day as to enter the stove foundry beside the tracks, near the depot. He went frankly to a workman, watched him a while and told the man he liked to see him work. The moulder much amused said he would show him how it was all done. The child frankly spent the entire afternoon there; the moulder carefully explained to him every large and minute procedure. The child was amazed; a new world had opened to him—the world of handicraft, the vestibule of the great world of art that he one day was to enter and explore. He went away holding this moulder-man in special honor, although he was not very big nor very strong. He even visited the rattan works but did not like the dust and noise. He saw nothing but a long slender cane coming out of a machine. One day he saw a man in a wagon. The wagon was going without a horse. Also he visited a shoemaker named Boardman who lived near his home and whom he knew well; a swarthy little man, with black beard, black beady eyes, who both worked and chewed tobacco furiously. There he learned every detail of making pegged and sewed shoes; he saw them *built* from beginning to end. He would spend hours with this shoemaker who made shoes every day, while the farmers made shoes only in winter. The man liked to have him around; and once in a while he would suspend work, and, to amuse the child, would extinguish the life of a fly on the opposite wall with an unerring squirt of tobacco juice. The child danced with joy. What a wonderful man to spit like that. He tried to spit that way himself—failing ignominiously. The man told him he must spit hard between his teeth; and the child spit hard between his teeth; without avail. Then the Boardman man would catch flies with his hand and eat them, or pretend to eat them. The child believed he really ate them. Then the shoemaker would return to his furious work, and the child in admiration would wander on. The neighbors said this man Boardman was a lowdown sport who

staid sober and worked hard only to get money to bet on the races—whatever that meant. But thus far the child had made no social distinctions. It did delight him, though, at a certain season, to see Boardman, all dressed up and flashy, jump into his surrey behind a nervous high-stepping steed, start away with a prancing rush and disappear down the Stoneham Road lost in a trailing cloud of dust. For a long time after this event Boardman would not be seen thereabout. Also he would visit Farmer Hopkins to watch him break a fallow field with his monstrous team of oxen swaying and heaving heavily against the yoke, with low-bending heads and foaming mouths, as the man, with one booted foot in the furrow, guided the plowshare as it turned up the beautiful black soil of the bottom land, while the man said, "gee-haw"; "haw"; "haw-gee." Many such trips he made, always starting from his secret domain. Evenings he would tease Julia to tell him Irish fairy tales. How lovely, how beautiful they were, with fairies, elves, gnomes and a great company, weaving spells of enchantment in the moonlight. He lived them all. Julia was a robust Irish peasant who remained with the family for nine long years. Fiery was her hair; brilliant her white perfect teeth of which same she was very proud. And had she a temper? Sure! she had a temper that came and went like a storm. She was not long since come to America. Many evenings her Irish women friends called and they talked Irish together. He had never heard anything so sweet, so fluid except the rivulet. He could listen by the hour; and Julia taught him a few words.

All was running smoothly. It had not in the least occurred to him that all this time he had been a truant. No one had said anything for a whole month; or asked any questions.

Then came the crash! Teacher had written. Little was said at home. He was simply sent back to school. Here he languished in misery. But help soon came as suddenly as the crash. His father had opened a summer school in Newburyport. Grandma had written to Mama; Mama had told it to Father; Father decided that the grandparents were too soft; they had let the child grow up like a weed; they had pampered him outrageously; it was high time his son was brought to him, that he might establish in him a sense of respect, order, discipline, obedience. So Mama took the train to South Reading. She spent a few days there visiting her parents. She looked at her son with a sadness he could not understand, but she found it not in her heart to chide. The day of their departure arrived. With many a sob he had said good-bye to all. They were driven to the depot. Mother and son boarded the train for Newburyport. The engine puffed—the train sped on its way. Came to an end the day-dreaming of a child.

*(To be continued)*

# Vingt Ans 'Après

By H. VAN BUREN MAGONIGLE

Photographs by the Author

## Crossing.

Only Carlsen has painted such a sea as that we sail upon, or such a sky as that which overarches us; the ocean is of that marvellous blue of his, overlaced with a violet mesh, broken to the horizon by the white-caps of a lovely day of mid-summer; and where they break, nearby, the emerald of the thinning waves. Light clouds float far off and are reflected in the sea in pale lavender. As the night falls the sea grows darker until it seems a deep blue carpet laid down for the coming of the moon. At the horizon the sky is turquoise and deepens toward the zenith into purest cobalt.

## Paris.

My chief impression of Paris, *vingt ans après*, is not of the majesty of that superb composition which sweeps from the Louvre of Louis XIV to the *Arc de Triomphe*, nor of the mystery and beauty of the quais at night, nor of the so-called gaiety of the *Grands Boulevards*, nor of the quaintness of the Latin Quarter, nor of the elegance of the shops in the Rue de la Paix. It is of the noise—hideous and unparalleled except in the heavy trucking districts of New York under the elevated railroad. The Parisians should erect, as a pendant to the Arch of Triumph of the Star, an Arch of Triumph of the Noise.

There are myriads of taxi-cabs, each more decrepit, ramshackle, and rattling than the others, with noisy motors and gears that shriek and clash; there being no traffic regulation whatever and no restriction upon speed, they all tear about at the utmost they can get out of their engines, twenty-five to forty miles an hour. This means that approaching a corner they must blow their horns and, to be effective at the speed they move, they must begin to toot at least a hundred feet away. They are all hand horns with a toot of a peculiarly rasping, exasperating, exacerbating quality. And when from four to a dozen come up to a corner together, with a couple of thundering motor-busses thrown in, the effect is not to be described except in terms too emphatic for these pages. The tired traveller, unwilling to close his windows and suffocate, must wait perforce until midnight, when the din diminishes a little, to catch a fitful slumber before the milk wagons and garbage *camions* and wine trucks begin—and they begin business early.

We hunted in vain for a quiet spot. "This is a quaint, quiet old street," we would say—and the punctual and ungodly machine would come careering around the corner on two wheels, shattering the silence with crazy blasts of the horn, and go drunkenly away down the street, blowing the horn to scare a cat from the road, blowing the horn to warn an old woman two hundred feet distant, blowing the horn to warn pedestrians peaceably moving along the sidewalks not to step out into the road and be run over and be arrested for being run over, blowing the horn for any other reason or for none

at all, or to cover up the rattle of the crazy old thing itself.

We took refuge in the Luxembourg Gardens. But although the nights were warm enough, there is a prejudice against the use of the parks for sleeping out, and we had to brave the row again. The heat had been extraordinary just before we reached Paris, rising to ninety-eight and nine; and the mind refuses to picture the horror of that heat in combination with that noise. The percentage of murders must have perceptibly risen. We fled before we, too, should have to face the knife and the basket.

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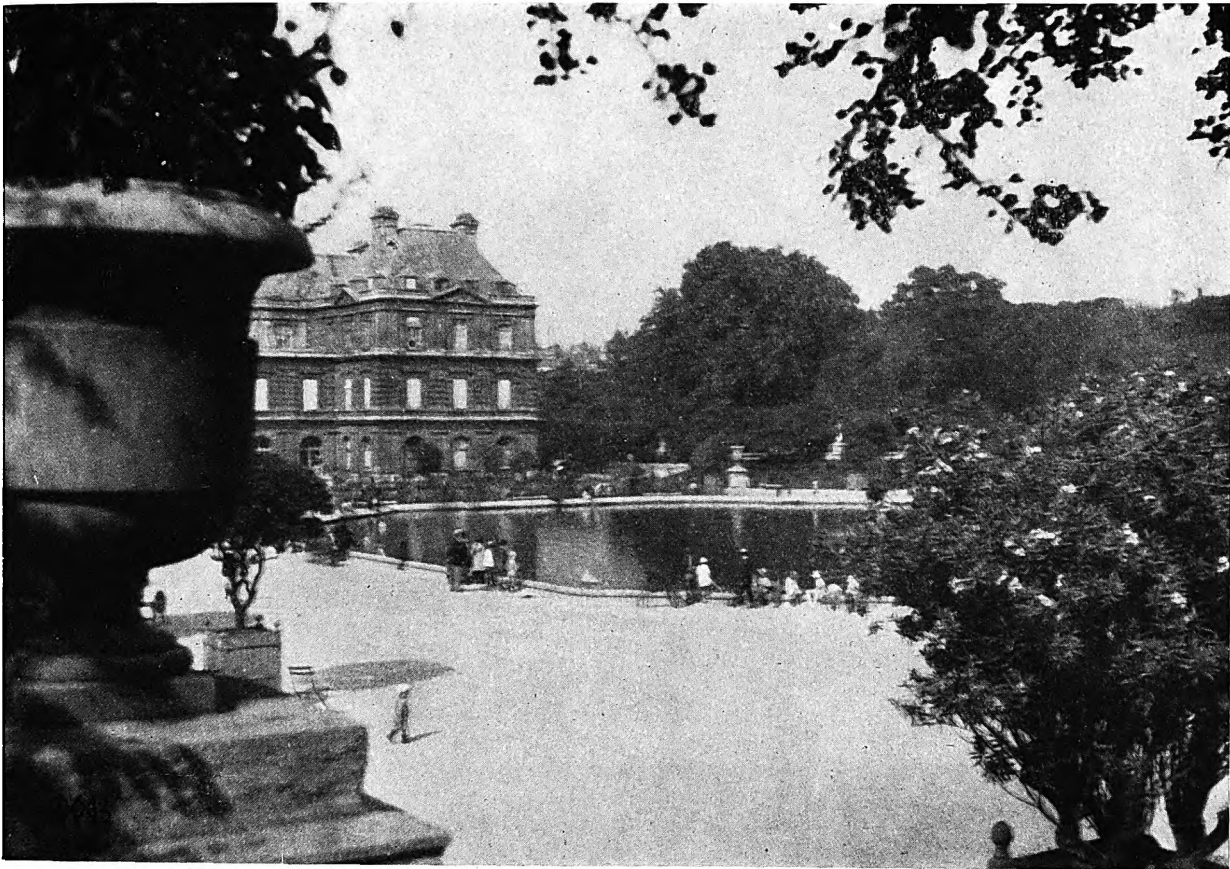
My prophetic soul must have been off duty one mild spring day at dusk, in the *Bois de Vincennes* twenty-odd years ago, when our group of young people out for a tramp, heard a noise like a fire-engine behind us and presently, around a turn, came a kind of victoria, perched high on its wheels like a spider, moving fast—at least fifteen miles an hour—without horses, but with an unconscionable trail of smoke and steam and smell and sparks of fire. With the light *insouciance* of youth we marked it for a "horseless carriage," without recognizing the portent—that in the bowels of that machine lurked Revolution, and change of much we held most dear in charm and character.

\* \* \*

In those days, every morning at a certain hour—shall we say, nine o'clock—I was awakened by the musical call of the sardine woman, "*Sardines de Nantes, sardines nouvelles!*" which ended on a rising and sustained inflection; then I'd get up, and go down to the *crêmerie* on the Boulevard St. Germain for breakfast. Now her sweet old cry would be drowned out by the blast of the motor horns, celebrating the advance of progress. And progress has improved the *crêmerie* away.

There seem to be many more people about, in the Latin Quarter, even now, at midsummer, than there used to be. The old leisurely spirit seems to have passed, and the few strolling folk of other days have given place to quite a throng, especially along the Boulevard St. Germain, where the character of the shops has changed, and where many women trot briskly from stall to stall with their marketing nets. And in the old *Marché St. Germain* they have changed the courtyard, and moved the fountain over to one side, and in other ways broken the heart of the musketeer who comes back to renew old impressions.

The questing musketeer misses the old *cochers* with their hats of white patent leather—hats one had supposed were so firmly fixed on the heads of their wearers, so completely a part of the social fabric, that nothing could remove them, not even an *acte législatif*. Here and there is a *sapin*—with a taximeter attached—driven by a melancholy old bird in a black topper. But it is not the same thing; one longs for the shiny white leather,



THE GARDENS OF THE LUXEMBOURG

and the dirty fawn colored coat with the enormous buttons.

\* \* \*

Along the Seine at night all the old charm, all the old mystery, comes back. The lights are reflected in the river as of yore; dim shapes are to be seen moving down on the ports, which one may permit to figure in the imagination as the simple bourgeois about to be *assommé* by the stalking Apache. The bookstalls are all shut and padlocked for the night. Here and there a couple of workmen sit on the parapet and chat quietly. A pair of *sergents de ville* pass with their hands clasped idly behind them. And here and there, in the darker places, furtive forms slip quickly from shadow to shadow.

\* \* \*

Strolling back across the Pont Royal after an exquisite luncheon at the old *Foyot*, in the full light of mid-afternoon, we see a man in a boat maneuvering something toward him with an oar. Presently he bends and seems to tie it to the stern; he washes his hands overside—significant gesture—and pulls for the quai. Another joins him and together they get the poor flotsam to the bank and lug it up the steps. Its arms and shoulders have stiffened into one last, supreme shrug. Even from where we stand I can see that God's image is quite effaced and only an amorphous horror remains.

Many people have paused along the parapets and others come running. We go away. *Requiescat!*

#### *Fontainebleau.*

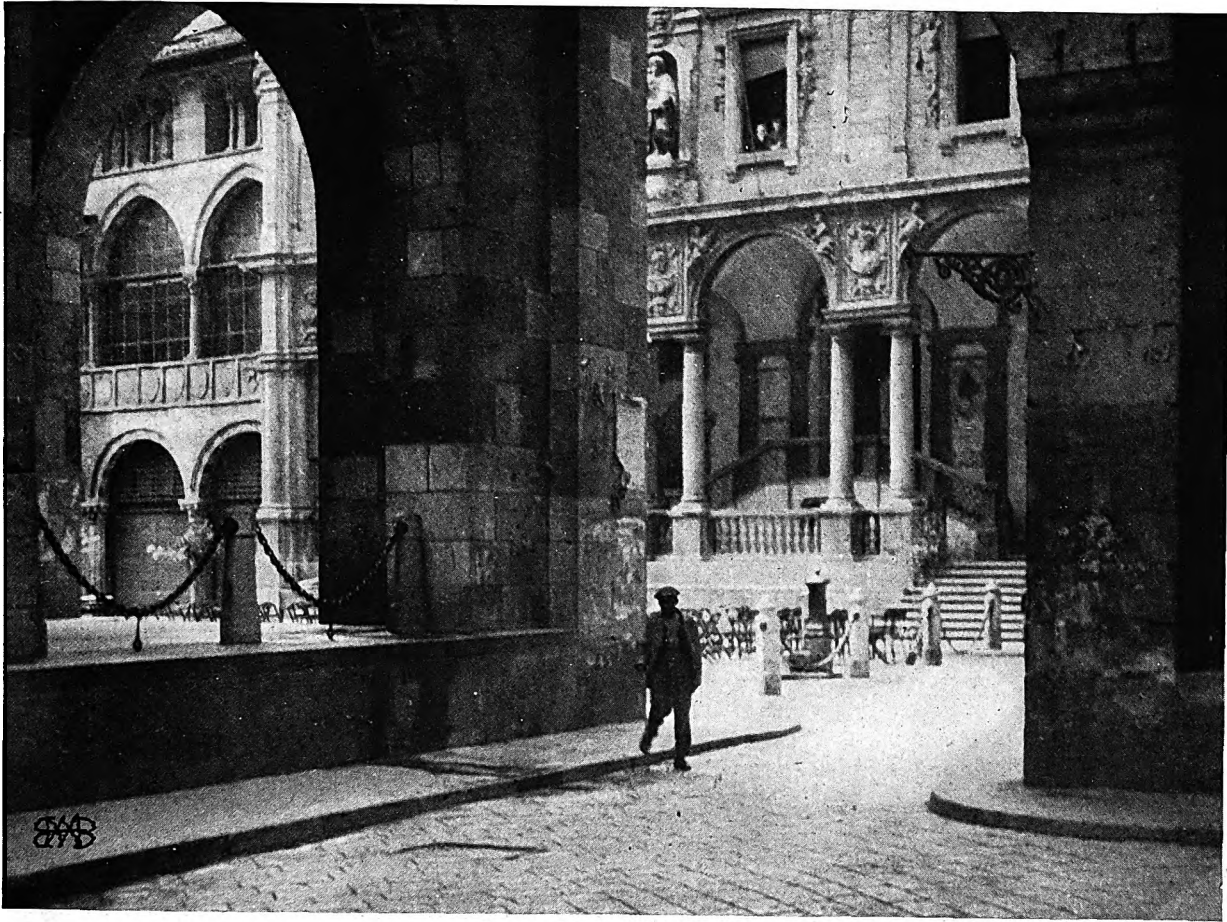
The first time we visited Fontainebleau was on a soft grey day in winter. There were no visitors or foreigners about except our little party of three, and we were turned loose in the Château to browse as we would. This time it is the noon of a summer day, hot in a searching sun that is rather pitiless to the old building and the park. Not a shred of mystery nor of romance, no softening veil anywhere. And is it the passage of time, the critical, appraising eyes of *vingt ans après*, that makes most of the interiors seem rather cheap and tawdry, or is it this same searching light of midsummer? August is notoriously unkind; it is so to New York; it is so to Paris; and the wonderful forest down here, parched in the great heats of this year, shows sadly where its hot hand has passed.

#### *Barbizon.*

The inevitable has happened to Barbizon. It is no longer the quiet place of pilgrimage, the simple and friendly village where the School of 1830 took refuge from the cost and complications of living in Paris, but a tourist-ridden place where Millet and Rousseau and the rest are exploited for present profit. To be sure,







PIAZZA MERCANTE—MILAN

we were there on a Sunday, and a good many people were making holiday. But the evidences were everywhere, in picture-post-card shops, and the indifference of the inn servants; a large sign on the *Bas Bréau* that has sheltered so many artists of note, calls attention to the circumstance that Stevenson wrote *Forest Notes* in that hotel; and the tablets, too, affixed to the houses, which probably had a reverent purpose in the beginning, seem, in the general atmosphere of exploitation, to be a part of the unbeautiful spirit which seeks to make a profit out of the memory of these great departed, of the men who were denied the daily crust when they lived and worked here.

But there is something gallant and splendid in the struggle they made, and the thought of their ultimate victory, even when they had already passed into the Great Indifference, comforts the sensitive pilgrim to the scene of their labors.

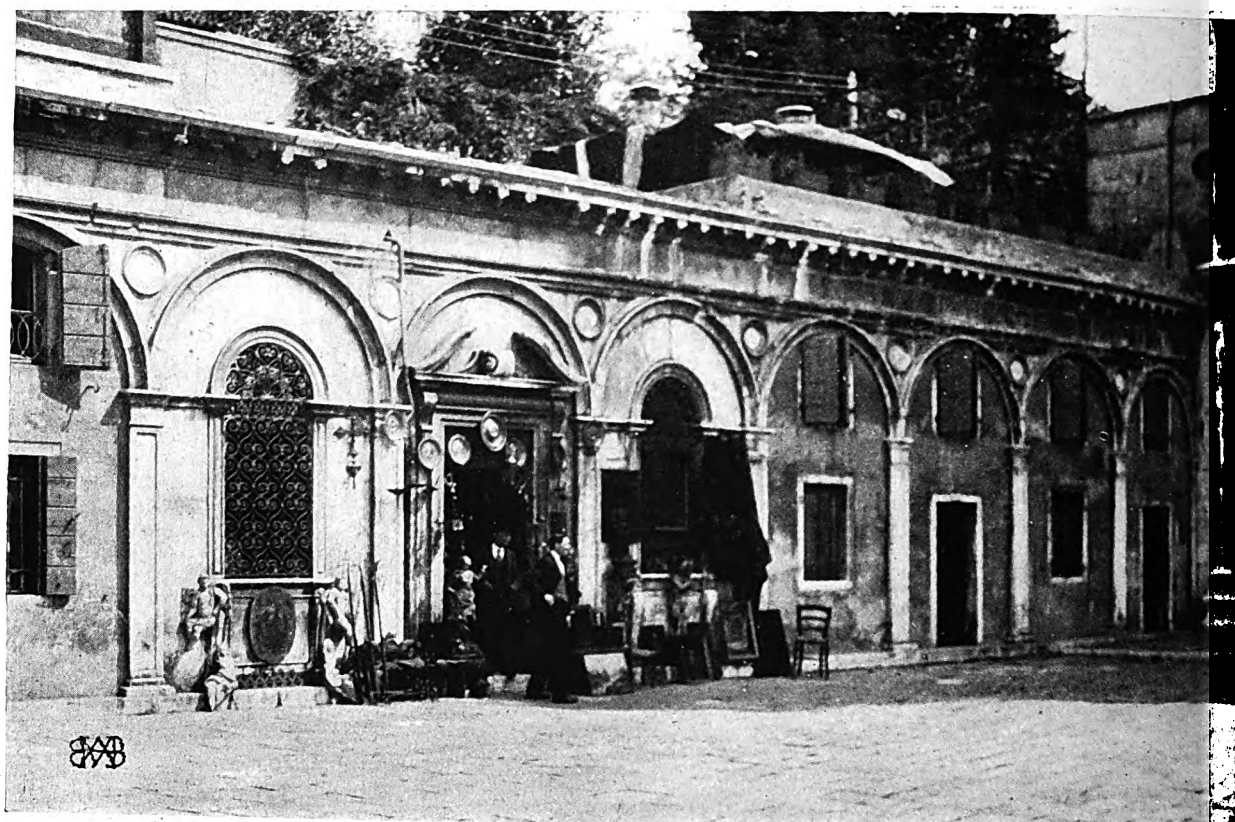
And if one leaves the village street with the tram tracks in it, and, following a lane between some old and unbedizened houses, comes out into the fields and the great plain of Barbizon, all the vulgar and ugly exploitation drops away; and in these vast spaces of plain and sky one may penetrate a little way into the secret of the essential bigness of Millet.

*Paris to Lucerne.*

Moving across France on a day when rain impended, it seemed to me that the clouds were shepherded by a different hand from that which models the cloud shapes of our eastern states in America. Strange forms and combinations of forms and a predominance of a queer dull violet, all new to my eyes, with reflections of yellow in the lighter parts, and glimpses between of a veiled blue of a peculiar opacity and remoteness, made some of the elements of a new heaven; and the wide fields of Champagne, where they were gathering a golden and abundant harvest, a new earth.

*Bellagio.*

The bedroom I have in this old Villa, now a hotel, was evidently the chapel. They have built a partition across the shallow segmental apse and made a bathroom of it, in response to the incomprehensible but profitable demand of the *forestière* for the means of lustration. From the vault above, God the Father, in fresco, represented as an elderly gentleman with long whiskers blowing violently about his head and surrounded by mature and sophisticated-looking cherubs, presides over my matutinal ablutions. They have very obligingly cut a semi-circular opening through the partition at the spring of



OLD CURIOSITY SHOP—VENICE

the arch, and, my bed being exactly opposite, I have an uneasy sense of surveillance of a very direct and personal sort while I slumber.

*Milan to Venice.*

The difference between travel by train and travel by motor car is far more pronounced in Italy than in America. The one may be roughly described as that between Purgatory and Heaven; the other, between Heaven and the lowest circle of Hell, what with the dirt and the delays, the heat and the crowding; for in this year of grace an apparent desire to travel for the sake of movement seems to have seized all classes of the populations of Italy and France; and even the first class carriages, once sacred to English, Americans, and royalty, are uncomfortably well patronized. Impoverished France and poverty-stricken Italy are travelling—first class whenever possible. The carriages are about the same as they were twenty-five years ago; just about as dirty, the so-called sanitary arrangements just as unspeakably impossible for anything above the grade of pig. The war, upon which one is charitably inclined to lay the burden of all shortcomings, is not to blame; the Latins simply do not know what cleanliness is. And they have not the faintest idea how to run railroads.

There is a fast express train between Milan and Venice to which is attached an "observation car." For the magnificent sum of thirty *lire* each—one dollar and a half at the then current rate of exchange—we secured places in this *car de luxe*, a vehicle that had arched the eyebrows and

cast up the eyes of the young man at Cook's. Elijah's chariot itself could not have elicited more admiring awe. We found a kind of chair-car, moderately well appointed, except that there was not a drop of water aboard to drink, nor a water glass to drink it from if it had been there; and the spirit of democracy, of which one notes a distinct increase in Italy, was manifested by the installation of one roller towel of more than doubtful lineage. As for the other items of convenience—just as usual, just as impossible, on one of the important trains of the national system and on a car evidently regarded as a miracle of luxury and convenience. Besides ourselves, and a man of the usual begrimed and slovenly type of Italian trainman who acted in a vague way as a sort of porter, not a soul in the car; we had it all to ourselves, this splendor. At the stations, groups would form on the platforms to stare at us and the marvels of the *osservazione*; girls in their eternal pairs would make errands to our end of the train and furtively scan our magnificence; gilded youths would stroll by displaying an elaborate indifference which did not deceive us. And all for a mere decent-like Pullman. Verily the simplicity of this people is beyond words. If they could have but seen a typical George in his spotless uniform and gold buttons, standing at the car steps, they would have swooned away.

Twenty-odd years ago, in the last week of November, an icy fog made Venetia and Lombardy almost invisible, and one could claim to have seen only the ground floor of Northern Italy; all the upperworks disappeared in

## VINGT ANS APRES

the chilly envelope; I caught a fearful cold in Verona, had an immense circular cloak as thick as a board made for me overnight, and hurried north to Paris where I hoped to find it warmer—and did—or at least die among friends. But the day of this our regal progress in the *osservazione* was a wonderful day in late August, with a sky like that in a Francia, the Alps stepping delicately down to the plain with lovely lakes at their feet. It was all too beautiful to be possible, and I could not believe that anyone could be so utterly miserable as I was when I passed here before.

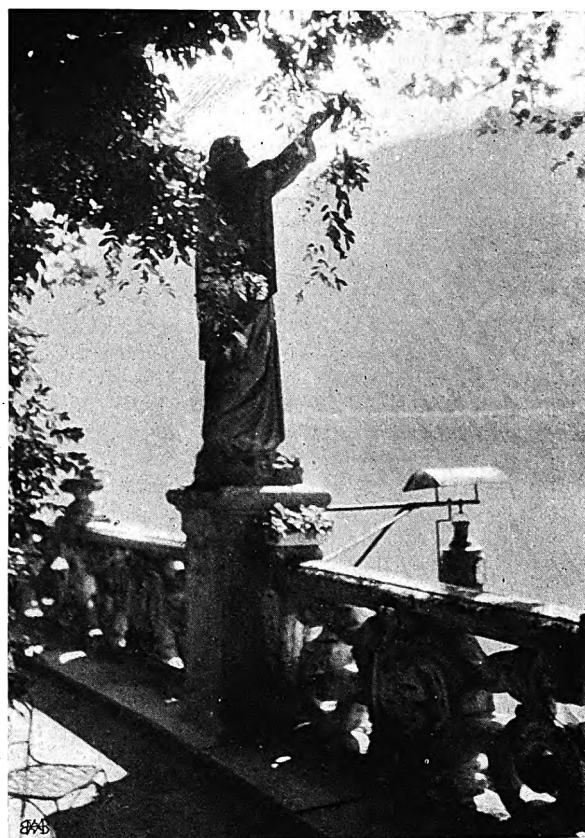
One change is observable in all the old towns of the Veneto, Lombardy, and the Emilia; they are all ringed about with factory chimneys. There is the old familiar nucleus of *Duomo* and *campanile*, and *Santa This* and *Santo That*; but all around are new industrial suburbs whose many chimneys compete with the old towers of the town and quite ruin the old compositions. Italy is paying a dreadful price for her industrial progress. I suppose a people may do what they like with their own; but there should be a law against it. Verona, Vicenza, Padova, Parma, Piacenza,—how one loves to say them over—all these towns give the impression of being in a state of siege, the enemy Progress encamped about them, the muzzles of his artillery pointing to heaven belching smoke and flame, and the feeble old cities armed only with charm and beauty. I wonder how long they will hold out! The cry is forced from us: Why must progress be so young and sharp and ugly? Why must beauty be so old and dirty? We do not find an answer in the eternally beautiful light of this late afternoon, flooding the foothills in a warm violet glory dusted over with motes of gold. Nor in the old, old waters which reflect the eternally renewed miracle of the sunset as we draw near to Venice.

### *Siena.*

Out of our window, up to the left, the vast fabric of the Cathedral stretches along the chine of the hill; lower down and to the right, across the valley of the Fonte Branda rises the bare brick mass of S. Domenico. Just



THE WHITE OXEN OF SIENA



LAGO DI COMO

in front of us, across a picturesque huddle of roofs and chimney tops, there is a little belfry, two arches below, one above, with a bell in each. The top bell is shaped like a huge cow-bell and sounds as though the grandmother of all cows were coming home; the other two are small and sweet and mellow, and always ring first followed by the harsh clangor of the cow-bell. Pulled by some hand unseen, they seem magically to ring themselves.

### *Siena to Genoa.*

Three hundred kilometers before us. The Cathedral and all the familiar rooftops blotted out by a dense envelope of fog. Fog drifting through the streets as we sound a warning horn on our way out of the city; dim forms of white oxen, high carts with half-seen groups of men in them; fog blurring the wind-shield, blurring one's glasses, beading on face and clothing, cool and clean and fresh. All this instead of the sight of Siena we were to have had as we slipped swiftly down her hills; but of her, not even a rosy glow through the white curtain. Down through oak groves, the mist thinning, the hills more gentle, into the plain of the Arno, flat and ugly hereabout. White, clayey roads, full of ruts. Pisa. The once-seen curve of the embanked Arno and the tone of the town, a tawny yellow, as familiar as though seen yesterday. The Cathedral, the Baptistery, the Leaning Tower in its perpetual genuflexion, in their lonely, unkempt, grassy corner.

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

On the road again, down toward Viareggio and the sea, through a *pineta* of great extent. The fog had given way to sunlight long before, then to the diffused light of a white sky, and at last to low clouds, and rain far and wide over the pine woods, shrouding their aisles in silver veils and filling the air and the spirit with the balm of their perfume.

Spezia; and a poor luncheon. A strong wind ruffling the gulf—for one of us the first sight of Mediterranean waters. Out of the town and up violently climbing roads, zigzagging up the mountains behind the city, the clouds heavier than ever now, but no rain. Up and up, the road flung in great loops along the flanks of the hills, the valleys filled with boiling clouds, and above and beyond them, apparently suspended in mid-air, like a silver shield, the sea. Up and still up into cloudland itself. Now and again a breeze tears a hole in the mist and we see valley bottoms with streams and little homesteads, miles away and below. Blacker and blacker at two in the afternoon, the road, invisible twenty feet beyond the car, winding and twisting around the shoulders of hills, a bottomless gulf to the left. A huge bulk looms up ahead—two *diligenzie* filled with country folk making holiday; "*Buon' viaggio! Buon' viaggio!*" "*Addio, ragazze!*" Giggles follow us. Down, down through the murk. Around a sharp turn. "*Heugh! Heugh!*" A string of carts with immense poles trailing behind and projecting far over the horses' heads. The carters beat the horses over against the cliff-side. We duck under the poles. Down and down, the clouds thinning, the road faintly visible now for a hundred yards. Whew! We find ourselves braced like stakes against the foot-rail; we relax; and one of us uncurls his feet.

The rushing air, the reaction from the strain of careering around mountain tops through the clouds, conspire to reduce us to a delicious drowsiness. "*Ferma!*" Throw in the brake! Lost in these hills, a little local

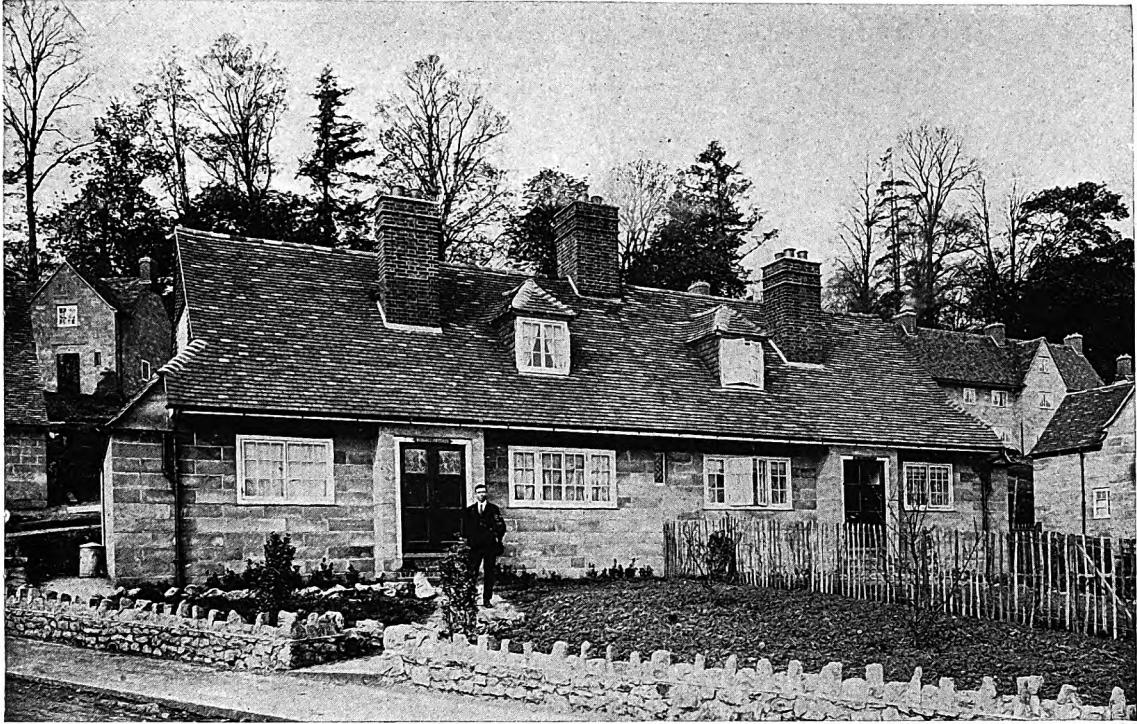
customs house. No town, no village visible. "Have the *Signori* anything to declare?" "Nothing." "Behold a bottle of wine!" "The officer will observe that it is half consumed; one must quench the thirst when travelling." "The baggages of the *Signori*! They are closed!" "Yes, we always keep them closed; like that the dust enters not." "It will be two *lire*." "Two *lire* for what?" "Because the baggages are closed!" We seem to have discovered a novel excuse for the universal graft. "Be tranquil, *Signore*, they will be returned to the *Signori, laggiu*." The functionary retires to his little hut, where he is visible for what seems like hours, painfully filling out papers; at last the sand is dusted over them and he emerges, waving the papers gently. "*Ecco, Signori! Due lire. Grazie, Signori*, they will be returned to the *Signor, laggiu. Addio, Signori!*" "*Avanti!* Now what on earth—" Two miles farther on—" *Ferma!*" This must be *laggiu*. It is. The paper is produced. "Behold the *due lire* of the *Signore!*" "*Grazie!*" "*Niente, niente!*" "*Avanti! Meccanista*, can you tell us what all that means? Why do they separate us from ten cents American for five minutes if we motor with our baggage closed?" "*Signore, non so. E molto misterioso. I understand nothing!*" "Nor do we others. *Avanti!*" Many minutes, precious in these darkling hours, wasted in that passion for making out papers which consumes the Latin races.

Gathering dusk followed by misty moonlight and, suddenly, the sea! We wind around headlands, the gentle waves lapping below us on the rocks which are now black, now silver, as the road turns. A succession of stage settings—half ruined hut, boat drawn up, moonlight drenching the scene.

Unmistakable suburban indications. Presently, cobbles, ruts, tramcar lines, street lights,—Genoa! We drive through interminable streets to the extreme west of the city, where, twinkling high above us, beckon the lights that mean bath, dinner, and at last, sleep.



THE PLAIN OF BARBIZON



GOVERNMENT HOUSING SCHEME AT CHEPSTOW, ENGLAND  
Dunn, Watson and Curtis Green, *Architects* Concrete Block Continuous Cavity System

## London Letter

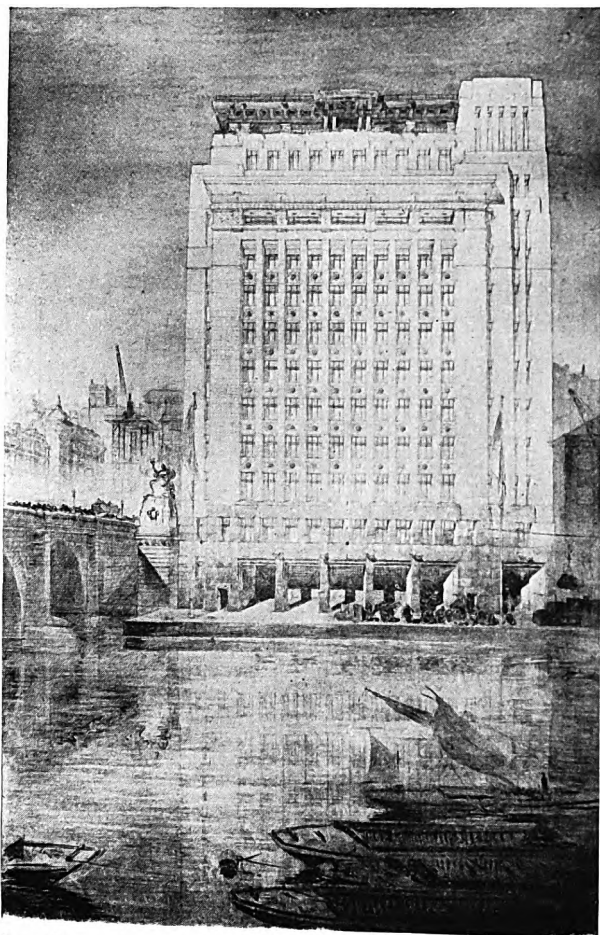
Mr. Hilaire Belloc has shown that he has a peculiar knowledge of architecture, unusual even amongst men of such high intellectual capacity as himself. In his recent address to the Architectural Association on "The probable effect on Architecture of the decline in our Civilization" he gave evidence of powers of analysis and acquaintance with the technique of construction which made his hearers feel that they would gladly listen to his impressions and criticisms of individual buildings. As it was, he was obliged to confine himself to the strict letter of his subject; it was noticeable, however, in the discussion which ensued on the completion of his paper, that his architect auditors were not equally successful in this respect.

Mr. Belloc did not make a definite assertion that our civilization was declining, but he certainly inferred it. He believes that one of the unfailing symptoms of decline is the presence of the wrong people in high places, with resulting misrule and chaos which reacts on the nation and its architecture. That such a state of affairs exists in Europe today was evidently his premise, but nobody asked him whether America was in like condition.

Decadence in our architecture is to follow the decline in our social condition. There will be reactions and periods of architectural achievement, but the general tendency will be downwards. The first step, already beginning to manifest itself, is failure to attain beauty of proportion and scale. Lacking power to attain these,

architects will fall back on mere bigness of size—the cult of the Kolossal. During this period construction will show ingenuity and resourcefulness, but shoddy workmanship and the gradual disappearance of the pride and knowledge of craftsmanship will counteract this advantage. The tendency will be to build large buildings such as apartment houses, on simple lines, to bring in good commercial return. Rooms will be small, and short spans permitting the cheapest kind of construction will be common. Gradually, as the level of good workmanship declines, buildings will become smaller and more utilitarian. In the same way as the Romans in their decline gradually lost their power to construct in the manner and scale found in such buildings as the Baths of Constantine, so will History repeat itself along parallel lines in the future. Mr. Belloc was asked whether good architecture and the cult of beauty could not arrest the decline of civilization. He replied that beauty in itself was always an influence for good, but that in itself it was insufficient. What would be required would be a widespread cultivation of that same spirit and endeavor which amongst architects makes for good building.

Needless to say there are many who disagree with Mr. Belloc. Probably there never was a time when the younger generation of architects felt more confidence than they do today that their efforts lie along the lines of improvement rather than decline. And though Mr. Belloc has French blood in his veins, he is probably



NEW BUSINESS PREMISES, ADELAIDE HOUSE, LONDON BRIDGE  
Sir John Burnet and Partners, *Architects*  
*Drawing by Thos. S. Tait*

sufficiently an Englishman to have acquired the characteristic vein of pessimism.

It is interesting to note that the Society of Architects has made an important innovation in the matter of architectural examinations for admission. Instead of obliging candidates to sit for examinations in the usual way, the papers of questions are sent to their homes, and candidates are allowed to consult any books or works of reference which they may desire. Both in design and in technical questions, it is felt that this method is the one which an architect actually follows in practice, and that the system of cramming and memorizing which the average examination entails is very defective.

An oral examination satisfies the examiners as to whether the candidates have really acquired the knowledge which their papers evidence, and the system has worked remarkably well.

The standard required for the Associateship of the R. I. B. A. and Membership of the Society of Architects is about equal, but there is no doubt that under the scheme of the Special War Examinations, which are very easy, many men have slipped into the Associateship who are barely qualified for it by their training. The privilege of these "War Specials" ceases however in December

of this year, and it is probable that the ordinary Final Examinations will be increased in severity.

A good deal of interest has been evoked by a Competition held by the R. I. B. A. for a Design for a Street Facade in Color. Prizes amounting to \$1,000 were offered by an anonymous donor, and there was to be a strong jury consisting of such men as Mr. T. E. Collcutt, Sir Edwin Lutyens, Mr. Walcot, Professor Moira, and Mr. Halsey Ricardo. Actually we understand that only Mr. Collcutt and Professor Moira were able to attend.

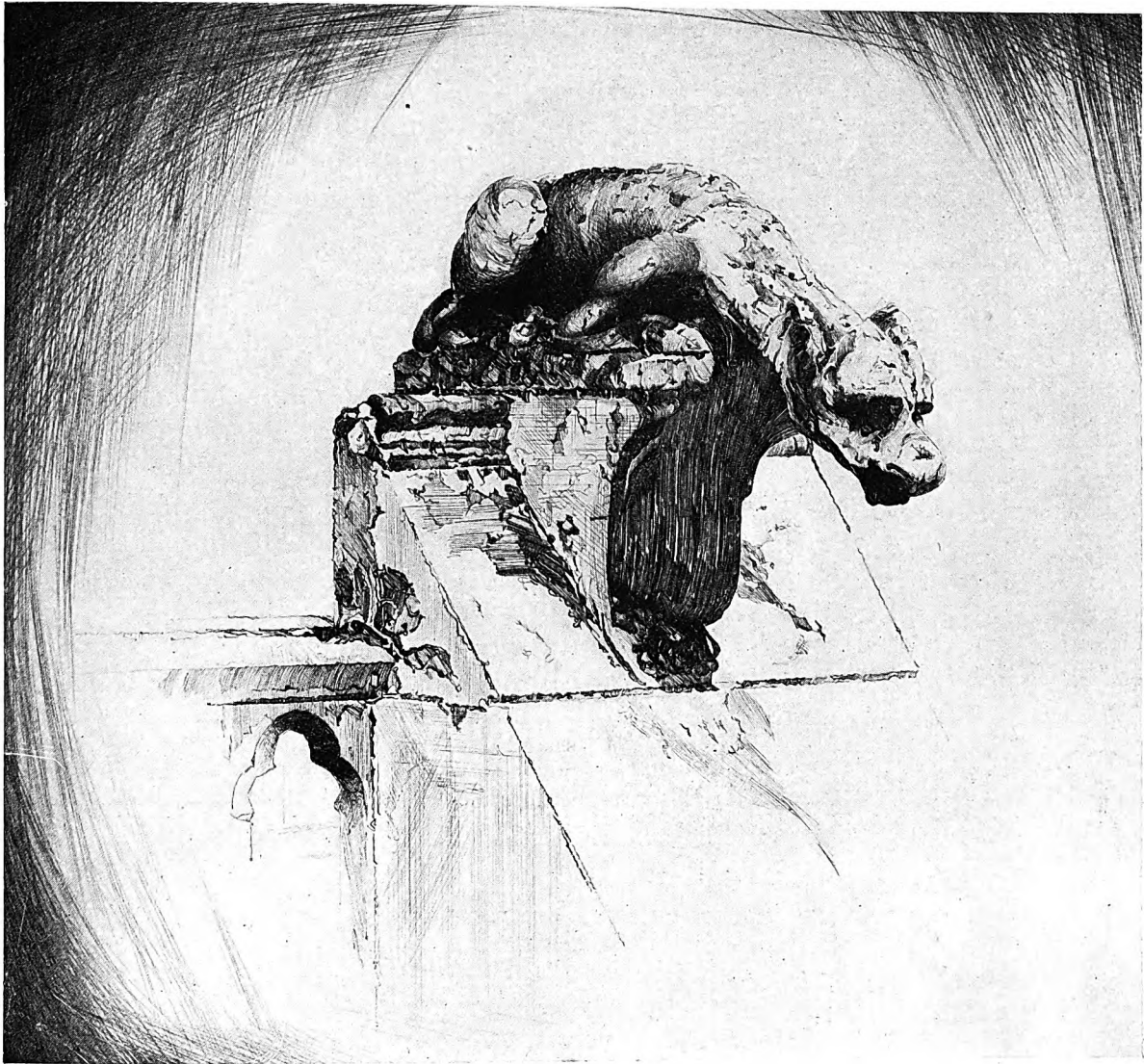
The design was for an office building with five stories and a frontage of 50 feet. Terra-cotta, tiles, marble, granite, and copper plates were amongst the materials suggested to candidates, but brick was banned.

The results were in the main disappointing, and went to show that the most successful use of color lay in its function of providing accents and contrast to broad masses of low tones. The winning design was commonplace in the manner of terra-cotta buildings popular about 25 years ago, and the color treatment of green stripes with blue accents in the shape of panels under the windows was not in advance of Mr. Collcutt's own experiments in that direction as exemplified in such buildings as the Savoy Hotel and the block of flats at Hamilton Place adjacent to Hyde Park Corner.

There is plenty of color in London already, although it is pitched in low tones. What seem to be required are small concentrations of more brilliant color which will provide the element of contrast and sharpen the general key. The touch of Della Robbia blue on the Loggia of the Spedale Degli Innocenti in Florence gives an inkling of pleasant possibilities in this direction. X.



ADELAIDE HOUSE, LONDON BRIDGE—2ND PRELIMINARY SKETCH  
Sir John Burnet and Partners, *Architects*  
*Drawing by Thos. S. Tait*



## Four Gargoyles

*After the Etchings by JOHN TAYLOR ARMS*

AMIENS.





AMIENS  
John Taylor Arms



AMIENS

John Taylor Arms

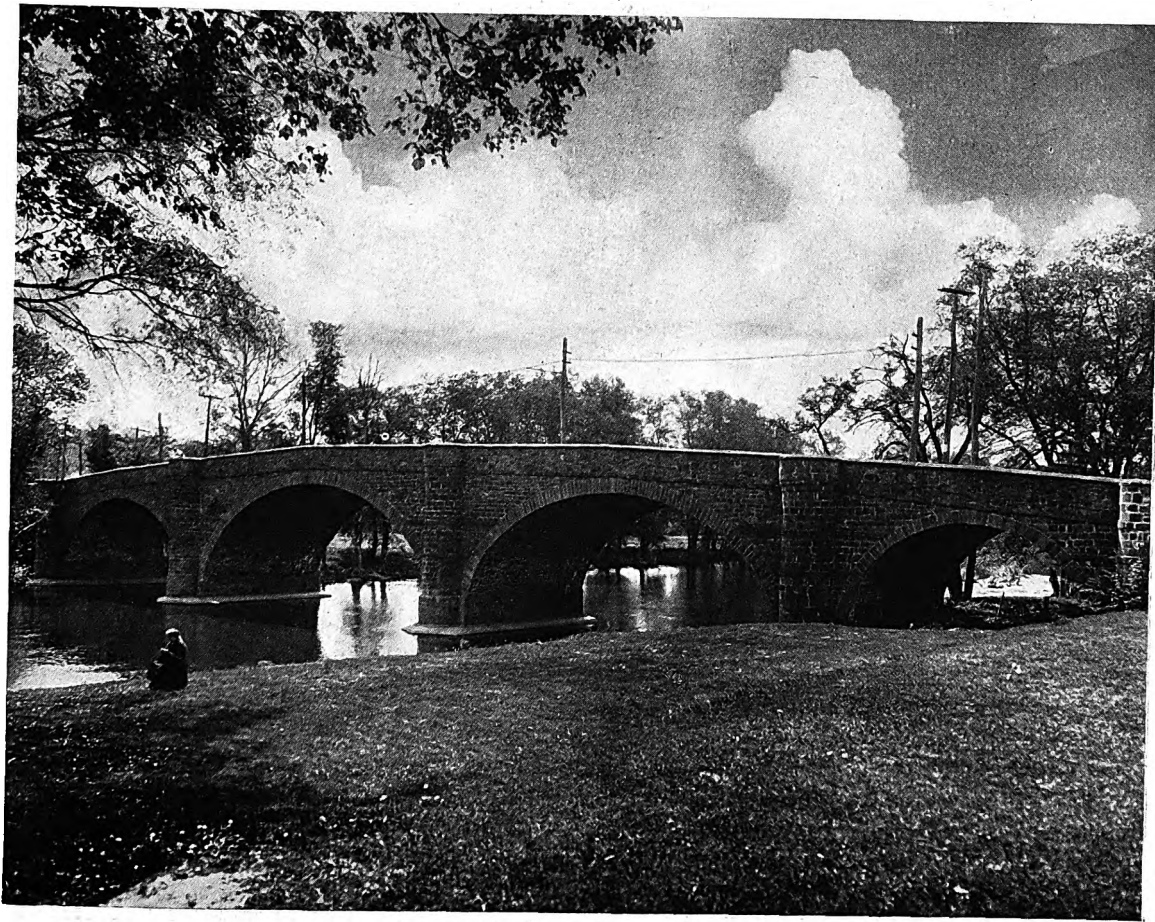


## Ponts and Pontists

A *pontist*, as one gathers from Mr. Sparrow, is one who loves bridges and not one who builds them, as the etymologist might at first opine. The dictionary being silent on the word, one might of course raise a philological issue, but the intent is too clear and the ancestral lineage of the word too pure to encourage any save the most querulous. Not so, perhaps, with some of those who have looked long upon bridges and have loved them well, when Mr. Sparrow traces their growth. What he has to say may all be true. Perhaps it is to the acquisitive instincts of men that we owe bridges, their arched and vaulted waterways, the swirling current about their buttressed piers, the mirrored curves that come with placid waters. Were it not for war, the love of conquest, the passion for acquiring things, we might have yet had no bridges to this very day, and should still be fording at shallow places, or ferrying at the deeper ones. At least we feel that Mr. Sparrow would think so. For warriors first built bridges for an army, even as warriors have destroyed them by hundreds within the memory of Mr. Sparrow's readers. These splendid structures that Mr. Brangwyn has drawn for *The Book of Bridges* are not of poetic

mould. The gentle dwellers in pastoral lands or the more rugged husbandman who battled with nature for his crops and his herds did not produce these majestic piers and arches. Nor were they born of commerce and industry except as they followed hard upon the heels of war. Nor were architects and engineers contending for the glory of adding a mite to some city's portion of what we call civic art. Out of the stern rigors of war and conquest, of bitter defense, of long cherished dreams of kings and emperors, out of the very despair of the slaves that were to be dragged to market and sold, arose the early bridges that we now regard with envy, so picturesquely do they or their ruins seem to speak a glory that is no more.

Yet in many a way and with a difference that marks the dramatic from the poetic, the bridge over the Perkiomen, of which, since the two sides are different, two illustrations are here presented, seems to tell its more peaceful tale. At least, there are those who will wish to think so, even though they might admit that if history were searched, some scheme of conquest would have been found lurking well in the rear of the bridging of the Perkiomen. We might be certain that fat land



THE BRIDGE OVER THE PERKIOMEN RIVER, COLLEGEVILLE, PENNSYLVANIA



## THE DIVISION OF LABOR

increments fell into the pockets of some lucky proprietors, for example, and little prowling about would be necessary to discover such a blot on the escutcheon. But if one stands upon the bridge and examines the oval tablet, of which an illustration is also given, these things surely would not intrude their unpleasant significance. Instead we should take a real delight in the quaint phrase which informs us that Henry Priest was the Undertaker of Masonry and that George Boyer was the Carpenter. We should feel that they had been on something better than commercial terms with John Lewis, Architect and Superintendent, and that all of them had known a craftsman's joy. No thought of a ravaging army here intrudes upon our reflections. No royal conqueror dreamed of marching his invading army over the Perkiomen in 1798. We feel aware, instead, of that peaceful expansion of town and country which is perhaps only an idealization of what we wish to believe and which never was. We sense the then apparent need for a bridge as a means of easing the distance between families and friends, perhaps

between town and city, or the farmer and his market. This very bridge, indeed, may have replaced an earlier one; I do not know. But quite aside from the fact that there still existed, at least we must so believe, a curiosity to know what architect could design so pleasant a structure, and that masons and carpenters were still practising a calling not beneath social dignity, we may also feel, if we care to pick a little deeply, that the manner of doing things is, in the end, more important than the thing done. A statement which of course has not the slightest chance to pass current, and which it were idle to utter, except that Mr. Sparrow and his book provoke a mild defense of the Undertakers of Masonry, the Carpenters, and the Architects and Superintendents, who, I am quite certain, would have built beautiful bridges, and, most important of all, would still be building them if they had been left free to work out their part in an unacquisitive scheme of things.

C. H. W.

## The Division of Labor

By FREDERICK LEE ACKERMAN

"The division of labor is the immediate cause of opulence." The importance which Adam Smith attached to this observation is suggested by its use in the opening argument in "The Wealth of Nations." Upon the organization of production around a well ordered and balanced scheme with respect to the division of labor hangs, according to his view, the economic well-being and the progress of society. But the organization of such a scheme of production, is not, as he conceives it, the result of planned, premeditated action—not altogether. For he argues that such a division of labor as had developed up to the time when he formulated his economic theory arose out of the "propensity (of human nature) to truck, barter and exchange one thing for another." His point of departure, in accounting for the economic scheme in which he found himself, was this "propensity," he was not concerned with how men had come by it. It had been given to men as a natural endowment with a view to the welfare of human society. Such a view was in harmony with the animistic outlook which underlay the speculations of economic writers of that time. <sup>(1)</sup>

But we are not here primarily concerned with the question of how it came to pass that men resorted to the division of labor in producing goods. Adam Smith and his opinion is recalled simply to indicate that the present point of view with respect to specialization is not unlike that with respect to the division of labor which took definite shape some one hundred and fifty years ago. Wherein the present point of view differs from that so well defined by Adam Smith will be pointed out later.

This note is confined to a simpler question—the shifting lines or boundaries which set off one division of labor

from another as the same have been drawn under an ever changing process of production.

### The Simplicity of Primitive Industry

Looking back over the centuries during which Western (European) civilization has come by its present characteristics, we note that the framework of its industrial organization has all the while been subject to a process of change. In early times, prior to the Middle Ages, production was a matter which hung upon the ability of the individual, or at most upon a very small group of individuals, to engage successfully in approximately the entire range of industrial activities required to maintain such a standard of living as then obtained. During this period the industrial framework was simple in the extreme; it was a case of one's being able to do whatever there was to be done. The Middle Ages reveals a more complex industrial structure in which, for the most part, the individual and the small self-supporting group of the earlier period have lost in independence in that they became dependent upon the operation of a larger economic unit, the town. Production proceeds in response to a division of labor, so that the individual is no longer called upon to function in so great a diversity of ways. Still later periods reveal a still more complex industrial and economic structure with larger grouping. The town loses in independence and becomes dependent upon still larger units—the State and the Nation. This changing process is referred to ordinarily as a record of progress. It is here beside the point to attempt to rate it; for our purpose it may be regarded simply as a process of change. It is a record of growth, but it is equally a record of subsequent decay.

So we may return to the matter of considering this

<sup>1</sup> See "The Preconceptions of Economic Science II" in "The Place of Science in Modern Civilization" by Thorstein Veblen.

process of growth and decay from the angle of what has taken place with respect to the nature of the division of labor which has stood to characterize certain periods.

Recalling the industrial situation of, say, the eleventh century we find that the subject had received some attention. "A picture of the conditions which obtained in England during this period is found in the Colloquium of Archbishop Aelfrico, written for the purpose of instructing English boys in the Latin tongue. It is a dialogue between the teacher and a number of men engaged in work of different kinds. It gives a vivid picture of the day's work of the plowman and his boy, with all they had to do, as well as the duties of the oxherd, who tended the cattle at night in the pasture. We read also of the King's hunter, who took game with his nets and also hunted with his dogs, and who was provided with food and clothing and a horse by his royal master. There was the fisherman, too, who fished in the rivers and found a good market in the towns, but who rarely went on the sea and was too timorous to try to catch a whale. There was the hawk, as well as the merchant who boasted that he was of service to the king and the alderman and the wealthy and all the people, for he went in ship, with his goods and bought precious things which were not native to England, and brought them across the sea despite the perils of the deep and the risks of shipwreck. And when he brought them he tried to sell them for more at home than he paid abroad, so that he might have some gain and support his wife and sons. The salt maker, the baker, and the cook follow; a group of artisans is next introduced, and the question is propounded, which is the best of crafts? The reply is tillage, since the plowman feeds us all. But the smith objects since he supplies the plowshare, and the coulter, and goad, and indeed the implements of every craft. The wright puts in his claims too, and the discussion is closed by the wise man, who repeats his view, as to the primary importance of tillage, while he exhorts them all to be diligent in their respective callings." (2) The eleventh century discloses what earliest centuries fail to disclose, that there were such facilities for exchange, that the division of labor now could be carried to a certain point. It is also to be noted that the lines of division or boundaries are drawn around what we commonly refer to as "industries"—is of a handicraft character. The machine has not entered to modify the course of events nor radically modify the industrial process. Evidently those who engaged in production performed a fairly wide range of operations in the course of the day's work. Yet as a system of production it belongs in the category with that which is based upon the division of labor.

### The Eighteenth Century

But this eleventh century state of affairs is quite a different matter from that which shows up when we move on to the end of the eighteenth century when Adam Smith set out to take account of things in "The Wealth of Nations." The intervening centuries witnessed the rise of the guilds and also their decay; a system of pro-

<sup>2</sup> See "Growth of English Industry and Commerce" by Cunningham. Early and Middle Ages, Page 94.

duction, and exchange, which we now refer to as "handicraft and petty trade" gave ground to the Mercantilists. The machine had been invented; the framework of the old industrial order beginning to give way. So that when Adam Smith refers to the "division of labor" the term no longer signifies the activities of the farmer, the smith, the fisherman nor the builder. Precisely what meaning it then carried he makes clear by recourse to an illustration drawn from his own time.

"A workman not educated in this business (which the division of labor has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the inventions of which the same division of labor has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin a day, and certainly not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straightens it, a third cuts it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on is a peculiar business, to whiten the pin is another; it is even a trade in itself to put them into a paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves make among them about twelve pounds of pins a day." (3) That is to say each person therefore produced four thousand eight hundred pins per day.

### The Twentieth Century

On the face of it, the industrial conditions which he describes would seem to approximate the conditions of the present. As between the conditions of then and now there are certain points of difference to be noted. Adam Smith made reference to the use of tools and machines, as he certainly should, since they had grown to be essential factors in production. But it must be recalled that the machines to which he refers were crude; they counted for little in comparison with those of our day. So this point of emphasis with respect to the important factor making for a large volume of production falls upon the workman in the case. He is all for the rapidly developing system based upon an even more minute sub-division of labor; for out of a sub-division of labor come greater skill and dexterity. Skill, dexterity and judgment plus sub-division of labor constitute the essential factors which make for a large volume of production.

To express such a view of the industrial process was but to express a commonplace of the time. In the im-

<sup>3</sup> "The Nature and Causes of the Wealth of Nations"—Adam Smith, Book I, Chapter I "of the Division of Labor."

## THE DIVISION OF LABOR

mediate background was the era of handicraft still shaping men's views. A greater volume of production was to be expected from greater skill, dexterity and judgment. This period differed, with respect to the division of labor, from what had preceded in that skill and judgment were now applied to a process the scope of which was so confined as to make possible the development of something approximating perfection in the technique of the process. The machine was conceived as a tool the value of which turned upon the skill and dexterity of the workman who used it. The sweep of industry had broadened; but the frontiers of experience had narrowed, confining the activities and interests of the individual to still narrower fields.

Some one hundred and fifty years have passed since Adam Smith took account of the situation and explained the working of the industrial system in hedonistic terms. Since that time, the Mercantile system of economy has given ground to Capitalism and Credit Economy. And the machine has taken effect. Out of the change in the system of economy and the astonishing development of the machine, there are now flowing streams of consequences of an altogether revolutionary character, with respect to the state of the industrial arts and the system of institutions which make up the cultural scheme. Of these consequences here we may touch upon but one only—the resulting machine process and the resulting effect upon the division of labor.

### A Modern Actuality

For this purpose we may pass by the theoretical formulation of the economists and the engineers. The realistic purposes which now serve to guide development of the machine process have been clearly set forth by Henry Ford and Samuel Crothers. (5) They refer to the division of labor with the same emphasis, as to its importance, as did Adam Smith. The illustration used is the production of the Ford car. The Ford car is a more complicated affair than a pin. A pin would now be made by a machine. It is unfortunate that sentences only may be quoted; but the few which follow will serve to indicate the present point of view with respect to the ideas associated with the "division of labor." In this issue, under the sub-caption, "Explaining my principles on which production is built up, and the relations of machines and men," we find: "In the beginning we tried to get machinists. As the necessity for production increased it not only became apparent that not enough machinists were to be had, but also that skilled men were not necessary in production . . . Our foundry used to be much like other foundries. When we cast the first "Model T" cylinders in 1910, everything in the place was done by hand; shovels and wheelbarrows abounded. The work was then either skilled or unskilled; we had molders and we had laborers. Now we have about five per cent of thoroughly skilled molders and core setters, but the remaining ninety-five per cent are unskilled; or, to put it more accurately, must be skilled in exactly one operation, which the most stupid

man can learn within two days. The molding is all done by machinery. . . Some men do only one or two small operations, others do more. The man who places a part does not fasten it—the part may not be fully in place until several operations later. The man who puts in a bolt does not put on the nut; the man who puts on the nut does not tighten it. . . . The net result of the application of these principles is the reduction of the necessity for thought on the part of the worker and the reduction of his movements to a minimum. He does as nearly as possible only one thing with only one movement."

These observations, it is true, express the point of the owner of the plant; but they express more. These and other similar observations in the articles now pass as common sense among producers, production engineers and those who deal with the matter of large scale production. The point of view is approximately that of the run of business men and those who give thought to the matter.

Here and there in the articles the outlook with respect to how production should be organized, in the ideal case, proceeds somewhat beyond the frontiers of popular opinion on this head. But no thought is advanced in the articles which is likely to appear as an innovation or disturb the peace of mind of the readers of McClure's magazine.

### The Decreasing Demand on Skill and Judgment

Evidently we have passed that point in the ever changing processes of production where the skill and judgment of the workman serve as the axis upon which the industrial system turns. It is not that skill and judgment have ceased to count—they still count for much in certain lines of production, as, for example, in the erection of buildings, farming and the like—it is rather that dexterity now stands as the only qualification of importance, while skill and judgment are qualities which have now come to be viewed as good and serviceable to the operation of the industrial system only in so far as these are necessary. That is to say, skill and judgment have come to be no more than qualities to be made use of pending the further development of the machine to such a point of mechanical perfection as to admit dispensing with them altogether.

Naturally the question intrudes; what is due to happen to those who work under this newly conceived ideal condition wherein the scope of endeavor and the sweep of industrial experiences is confined as closely as may be to "the doing of only one thing with a single movement" and where "skilled men are not necessary in production"? A multitude of other related questions follow. But the point of interest here is not what effect this new regime of machine production is likely to have upon the workman; it is rather what is likely to happen to the machine process itself as we gradually approach this "ideal" condition.

That is to say, what effect will the decay of skill, which may be assumed to follow consequent upon the general application of this point of view—what effect will this

<sup>5</sup> See "My Life and Work" by Henry Ford and Samuel Crothers in the current issues of *McClure's Magazine*.



have upon the development of the machine process itself? Will the decay of skill on the part of the workman result, in due time, in the decay of the machine process?

This question intrudes for a variety of reasons, but primarily by virtue of the condition that it would seem that it was out of the era of handicraft, and consequent upon it, that the machine was developed and the machine process took shape. That the machine and the machine process swept away the system of handicraft has long been plain—but it has not been equally plain that the machine process was making for the decay of skill and judgment of those engaged in it.

Objection may be raised with respect to this observation; and it will no doubt be pointed out that one of the chief characteristics of the machine made product is its perfection as compared with hand made articles. But this perfection may be viewed as the outcome of machine process; it is not necessarily related to the skill, dexterity and judgment of the workmen who tend the machines. But what is likely to happen is a matter of speculation. So that we will pass over this phase of the matter after pointing to the magnitude of the change that has taken place since the days when primitive man ceased his fumbling and developed a simple system of handicraft which supplied his needs by reason of his resourcefulness and skill in a fairly wide range of activities, and the present when the industrial worker's experiences may be limited to such a simple operation as the tightening of a nut.

In a factory such as referred to "the length of time required to develop proficiency in the various occupations (sic) is about as follows: forty-three per cent of the jobs require from one day to one week; six per cent require from one to two weeks; fourteen per cent require one month to a year; one per cent require from one to six years. The last jobs require great skill—as in tool making and die sinking." From this we see how it is that some of the most complex products of industry may be produced by a force of workmen ninety-nine per cent of which may acquire the necessary qualities of skill, dexterity and judgment in less time than it takes to make a good farm hand. In fact proficiency in eighty-five per cent of the employees may be developed so rapidly as to warrant the statement, when taken in relation to the amount of training required of those who engage in oc-

cupations where handicraft processes prevail, that no training is required. Which brings us to a point of immediate interest to architects, engineers and builders. In relation to the automatic performances of something like ninety-five per cent of those engaged in production carried on along lines as in the Ford plant, the farmhand or the workman in the building trades shows up as a highly skilled artisan who reaches his position as the result of years of training. The ease and the slight loss of time required to develop proficiency in an automatic activity stand in contrast with the years which must be passed in training to produce the plumber, the carpenter, the mason, or the plasterer. So that as it works out the modern process of production as a whole now falls into two types of industrial process which stand in a peculiar competitive relation to each other. These two processes, machine and handicraft, run at different rates of speed so to speak, and the case of entry into the one stands as a barrier to entry into the other. Obviously to enter the building trades one must devote some years of training. This requirement would seem to demand, as an essential condition, that those occupations which so require a long period of training would insure better pay or more steady employment. On the face of it, the bare invitation to the young man, and the provision of educational facilities would hardly seem sufficient to insure his entry. Something more substantial should be offered than an opportunity to sacrifice some years in training when the same might be avoided by taking a job in a plant where all that is required is dexterity—a qualification belonging to youth.

What has been said above is not to be taken as a remark derogatory to the machine process nor as an expression of a hope that we might well do away with it. The aim has been solely to point out that the various meanings attached to the "division of labor" have been variable in the course of the changing process of production; that in its latest phase it implies the avoidance of the use of skill and judgment; that the present situation is this latter condition is unavoidably one of stress as between highly developed machine industries and those that still remain of a handicraft nature; that the outcome of the aim to eliminate skill and judgment from the day's work in the case of the average man might conceivably lead to the decay of the process itself.

## Mr. Thomas Hastings Receives the Royal Gold Medal of the Royal Institute of British Architects

As noted in our columns last month, Mr. Thomas Hastings was present at the General Meeting of the Royal Institute of British Architects in London, on 26 June last, and there received the Royal Gold Medal of that body. Mr. Paul Waterhouse, President of the R. I. B. A., in his address, after felicitating Mr. Hastings upon certain of his architectural accomplishments, said:

I am perfectly sure that the opening words of any reply which Mr. Hastings is good enough to give us

tonight will be a modest disclaimer. He will say that we are asking our King to honor his epoch and his country, and that the allocation of this honor to his individual personality is a mere accident. Let him say so. He will not thereby shield himself from the direct attacks of our respectful homage, nor will he dilute or divert in any degree the enthusiasm with which we acclaim him as the man of the hour.

It is undeniably true that we are consciously applaud-

## MR. THOMAS HASTINGS RECEIVES THE ROYAL GOLD MEDAL

ing America of the twentieth century. But what of that? It is the architects of America who make American architecture, and in searching for a true and significant example of that group of creators we have—with very great, very careful deliberation—thrown our choice on Mr. Hastings. I think we will stand firm in support of our own judgment. Mr. Hastings can diffuse, as much as he pleases, our compliments among his able countrymen, so long as it is on his neck that the King's Gold Medal crosses the Atlantic, and so long as he is our most respectfully chosen ambassador.

The very fact that Mr. Hastings is surrounded in the States by confrères whose aims are his own, the very fact that there are others in his favored country who may rightly be classed as of Gold Medal rank, only enhances, I hope, the honor which we try to pay to him and through him to his colleagues, many of whom are men to whom his example, his instruction, and his rivalry have meant much.

I make no apology for being, by the accident of the Presidency, the man through whose hands the medal passes from its gracious giver to its distinguished recipient. Rather do I with complete immodesty rejoice that so great a piece of good luck falls in my way, for I have wanted, above many other wants, to stand face to face with an American and tell him exactly what I think of the present-day school of American design in architecture.

I believe, with a very profound belief, that it represents a most significant fact in the history of our art. I do not say, "of our age," but of that ageless company of centuries which, viewed from Art's point of view, stand not behind one another in series, but abreast. There is a reality called Eternity. Some define it as time with the beginning and the end removed. They define it falsely. It is the great Now. It lies with architects more than with other artists, it lies with artists more than with other men, to realize (and this is realization shared with religion) that the brotherhood of man has its extension forth and back in time no less than East and West in space.

This is not wandering on my part. I could make it plainer by detaining you with a history of civilization (if I were capable of it). I would sooner try to make it plain by talking about the United States.

There is much heretic talk of progress in architectural design. There is progress, of course; but there is much more evidence of the sham progress which is no friend of art at all. The horrible experiment to which a certain old-world country is submitting herself, the experiment of attempting an architecture "free from historic style," would be a nightmare to Europe and a grim menace to all lovers of the beautiful were there not a bright hope that

so foul a conflagration will quite soon burn itself out.

Let us turn happy eyes to America and take to our hearts the remarkable testimony she gives to the divine sovereignty of tradition.

America is, of all countries, the land whose civilization was unprejudiced—a vigorous population on virgin soil found itself free to look forward without any obligation to look back. There was the country of all countries in which could flourish unhindered and undismayed that traditionless architecture which is the dream of some of our philosophers.

But what has come to America in her freedom? What, after the early flutterings of untried wings, has been the direction of her flight? What star guided her? What voice prompted her? None other than the star of that civilization which leads and has led old Europe, no voice but the voice of the ancients.

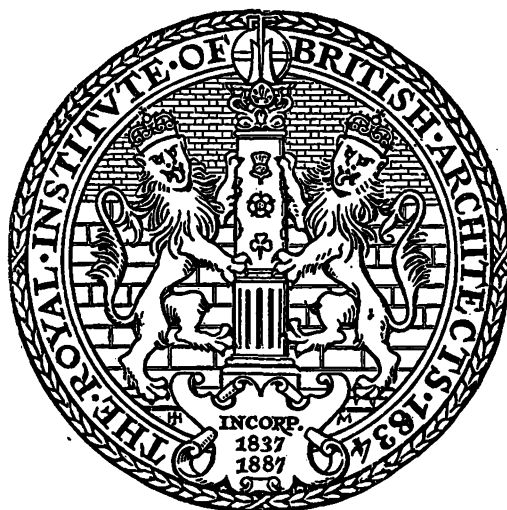
Gentlemen and ladies, were there ever wanting some proof that our happy bondage to the ways of our forefathers is not a bigot's delusion, but a free man's song of liberty, that proof is given to us by the

choice of America—or shall I say rather by America's joyous submission to the golden chains in which we also labor?

In the name, Mr. Hastings, of our Gracious Patron, and as the spokesman of my brother architects of England, I transfer to you the greatest testimony we have to offer; and, in doing so, I thank you and your colleagues in America for the encouragement you give to our ancient art, and congratulate you with the warmest cordiality on the fact that your line of thought, your line of work, and your spirit of achievement are the very spirit, work and thought that have for centuries bound into a timeless brotherhood the architects of Europe.

### Mr. Thomas Hastings' Reply

While we Americans have inherited your language, and consequently have no right to complain, I must confess that on this occasion I find the English vocabulary quite inadequate—there are no words to express my grateful appreciation of the honor which His Gracious Majesty the King has conferred upon me. Realizing that it was prompted by the action of this time-honored Institute, I would like to feel that it is in recognition of such services as the profession in our country has rendered in the interest of contemporaneous architectural education. In all sincerity, I would rather believe that by example, I had in some way influenced others in the right direction than be conscious of individual success or feel that what I have done were worthy of your commendation. As you know, I believe we should return to follow and respect the tradition which obtained before the present modern



confusion, that we should be careful of the direction in which we work, and thoughtful of our influence upon future generations.

While the question of modernity is most important, it is after all the true inborn sense of beauty which assures the architect his success. Goethe said: "The Beautiful is a manifestation of secret laws of nature, which, but for this appearance, had been for ever concealed from us." The layman too frequently only superficially understands beauty in defining its attributes, as though it were a mere appeal to the emotions, a pleasure-giving luxury, or a refining influence. It is rather an organic vital provision of nature, manifestly a part of the order of the universe—divinely ordained for the specific purpose of promoting *permanency* in all things, and giving life and enthusiasm wherever it may find its resting place. It is, indeed, a force in life capable of stimulating the noblest endeavor, and capable of making virtue appeal to the senses and making truth endure. Nowhere is this so vividly illustrated as when we consider architectural design. The practising architect, if he continues, as he should, to be a draughtsman all his life, must realize that beauty of design and line build well in construction, and with greater economy and endurance than construction, which is mere engineering. All form and all design are the natural and legitimate outcome of the nature or purpose of the object to be made. The practical and the artistic are inseparable. There is beauty in nature because all nature is a practical problem well solved. The truly educated architect will never sacrifice the practical side of his problem. Some of the greatest economic as well as architectural calamities have been executed by so-called practical men with an experience mostly bad, and with no education.

The science of modern engineering has too frequently divorced the architect from many of the larger and more interesting so-called utilitarian problems of construction. Some of them are entirely and legitimately architectural problems, while in other cases the architect should collaborate with the engineer. There may be no question of decoration or ornament involved, but architecture and practically all construction should be inseparable. An earnest appeal should be made for this collaboration, not merely in the interest of beauty, but rather in the interest of economy—beauty will follow in its natural sequence. In the larger municipal and suburban problems requiring economy in cost and saving of energy, even when commercial and investment interests are involved, in problems of traffic, rapid transit, and public comfort, under all conditions in the solution of these greater problems the qualitative and quantitative viewpoints should be inseparable. Following the natural laws of the survival of the fittest, if undertaken with art, beauty will predominate in the end, and so deliver us from the defacement of nature, and make the city and suburbs more fit to live in, especially where the working and poorer classes are concerned. Such problems may only involve a thorough knowledge of good planning.

In the first years of my architectural career I was accused by my fellow countrymen of attaching too much importance to the artistic study of the floor plan; it was constantly asserted that I was trying to inculcate the Paris Beaux Arts methods of education into our American ar-

chitectural practice, my critics not realizing that those methods of study in plan have been adhered to at all times since the beginning of architecture. They little realize that if the floor plan, determining two of the three dimensions in space, is well studied, beautiful in proportions, with a proper distribution of piers, thickness of walls, logically disposed and with good circulation, there will be no structural difficulties, and that this principle has obtained ever since the dawn of architectural history. The plan lends itself to thinking in three dimensions. When the plan looks well it builds well, constructs well, so that we find we need very little of the analytical mathematics to assist us excepting as a mere matter of verification.

Until modern times, architects knew but little about analytical mathematics as compared with what we are now given to learn—but they knew their stereotomy better than most of us today. They knew but little about the strength of materials, but they understood constructive principles, for, after all, analytical mathematics is a comparatively modern science. While there existed graphical rules for the approximate determination of the thrusts from arches as early as the thirteenth century, yet it is practically only within the last century that the correct principles of constructive analysis have been fully developed. If an arch or a bridge looks well, it will build well, when it is the outcome of a well-studied plan.

There must have occurred many serious calamities in the past because of bad art and no analytical means of verification; but just as nature is beautiful when fit to survive, so the great buildings and monuments of the past that have survived are beautiful in plan, form and proportion. It is really architecture and well-proportioned masonry *versus* engineering and iron, a comparatively new profession and a new material; each has its use, but they are not interchangeable. I believe that buildings have stood for centuries solely because their plans, as seen on paper, were so thoroughly artistic and beautiful.

We are told that the cell of the bee is built at that angle which gives the most strength with the least wax, so that the line of beauty is the result of perfect economy. Emerson realized the truth when he said it is a rule of largest application, true in a plant, true in a loaf of bread, that in the construction of any fabric or organism any real increase of fitness to its end is an increase of beauty.

We Americans too little realize that we really come to Europe in a large measure because of what man has done with art to beautify nature. As music is more beautiful than any merely natural sound, so nature is generally either greatly enhanced by the human interest when man has made his impress upon it, or it is cruelly and unnecessarily sacrificed.

Art and a proper artistic sense of the fitness of things completes the picture. When far away from civilization, surrounded by primeval nature, a man, if in his normal state of mind, soon longs for the warmth and color of fertile fields, the thrift of farms; he thinks of forests interwoven by winding roads or vistas intelligently conceived.

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The pageantry of sea and sky, the starlit night, the rising or setting sun, the rugged mountains or deep crevices, the bewildering beauty of the flowers, can never awaken the same human emotions and sympathy as when with art they are made more beautiful—wedded to weather-beaten walls, the castle or the shrine, or the distant romantic village nestled in the crevice or perched on the mountain-side. I have said that I believe it to be a law of the universe that the forms of life that are fittest to survive—indeed, the very universe itself—are beautiful in form and color, and that nature's selections are beautifully expressed. Ugliness, deformity, and self-indulgence are synonymous. And so it is in every economy of life—what would survive must be beautifully expressed.

It is equally true that one trained in the understanding of beauty can more profoundly fathom the laws of nature than one who has neglected to develop this side of his education. Indeed, if the way of the artists is undertaken with philosophy and humility, the things that are divine, God in the universe, will I believe, be more clearly revealed to him, more impressively, more convincingly, than when approached by way of theological discussion or scientific research. And so in literature as in art, the subject matter must be expressed or presented with beauty in order to survive and firmly impress itself upon successive generations. It is the art in storytelling which gives real life and human interest to the characters, and which makes the fancy and imagination of the author outlive his own generation. Words may have color as full and luminous as may be found in any school of painting, and form as subtle and radiant as may be revealed in the art of the sculptor or the architect, and music as beautiful and melodious as a song. Truth or precept as well as fiction will only penetrate the human heart and demand respect and obedience when clothed in beauty.

The proverbs, the bywords of the ages, are only familiar truths beautifully expressed with forceful simplicity and precise epigram; even mathematics have a beauty of their own, and, while in some ways allied with beauty in art, both are different phases of what we might call generalized beauty. Every mathematical equation has a certain quality of beauty because it is orderly and complete in its visible expression of a truth. All the natural lines of stresses and strains in a solid are things of beauty, and every structure built to these true lines, *ipso facto*, is beautiful. Newton's laws of motion, so simple, so fundamental, so inclusive in their scope, could only be enunciated with such elegance of expression to make them endure forever. The divine word of God as it has been revealed in any enduring philosophy or religion has always been enshrined in language immortal.

There is beauty everywhere, and there is no such thing as poverty if only we realize the universal ownership of beauty in nature and art. You may own the land, but not the landscape. You may have physical possession of a great picture or a building, but if they are really great the man who truly owns them is the man who most appreciates their beauty. In the light of this truth in written word, in painted canvas or chiselled stone, or in the harmonies and melodies of sound and in the beauty of nature

all round, the happiest and richest man in the world is he who sees most and best understands nature's laws as expressed in beauty.

### Biography

Mr. Hastings was born in New York City, of American parents, in the year 1860. His grandfather, Thomas Hastings, was distinguished as a composer of sacred music. His father, the Reverend Thomas S. Hastings, an eminent Presbyterian divine, was for many years President of the Union Theological Seminary of New York City; his mother was a Miss de Groot, an American of Dutch and French parentage.

Mr. Hastings obtained his professional education at the Ecole des Beaux Arts, where he studied under the professorship of Jules André. He began his architectural career in the office of McKim, Mead and White.

Mr. Hastings is an Academician of the National Academy of Design, a member of the Academy of Arts and Letters, the Royal Vienna Association of Architects, and the Committee of Visitors to Columbia University (Architectural Department). He is Chevalier of the Legion of Honor; a Fellow of the American Institute of Architects; Chairman, Sardis Exploration Society Commission; President Beaux Arts Institute of Design. He was one of the founders of the Commission of Fine Arts, and is a Director in the Museum of French Art. He was one of the founders of the Architectural League of New York of which he has been President and several times Director.

### List of Mr. Hastings' Principal Works

New York Public Library, New York City; Carnegie Libraries, New York City; Layout of Baltimore, Maryland (Mt. Vernon Square and Civic Centre); Senate Office Building, Washington, D. C.; House of Representatives Office Building, Washington, D. C.; The Plaza at 59th Street and 5th Avenue, New York City; Century Theatre, New York City; Globe Theatre, New York City; Interior of the Metropolitan Opera House, New York City; Academic Halls for Cornell University, Ithaca, N. Y.; Portland (Maine) City Hall; Richmond County Borough Hall, Staten Island, N. Y.; Richmond County Court House, Staten Island, N. Y.; Staten Island Terminal, New York; Manhattan Bridge over East River, New York; Administration Building, Carnegie Institute, Washington, D. C.; City Plan of Hartford, Conn.; Union Pacific Railroad Stations, North Platte, Nebraska, and Grand Island; United States Rubber Building, New York City; Cunard Steamship Company (Consulting Architect for New York Offices); office building Standard Oil Company of New York, New York City; Bank of Mexico, City of Mexico; one of six architects in collaboration on Panama-Pacific International Exposition, San Francisco, California; Industrial Town plan for United States Steel Corporation, Duluth, Minn.; Ponce de Leon Hotel, St. Augustine, Fla.; Knoedler Building, Fifth Avenue, New York City; National Amphitheatre, Arlington Cemetery, Washington, D. C.; Bryant Memorial, New York City; Yale Memorial Buildings, New Haven, Conn.; Princeton Battle Monument, Princeton, N. J.; City Hall Fountain Memorial, New York City; McKinley Monument, Buffalo, N. Y.; John Paul Jones Monument, Washington, D. C.; Lafayette Monument, Paris, France; Altar of Liberty and Victory Arch for the Mayor's Committee for Homecoming Troops, New York City; War Memorial for Atlantic City, New Jersey; Cenotaph for Unknown Dead, Washington, D. C. (in course of construction); numerous important residences, various churches in different parts of the country, and a number of office buildings for private corporations.

# Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

## What Happened to London?

The Committee on the Plan of New York and its Environs in its study of conditions in the Metropolitan district, we hope, will not lose sight of the fact that much light may be thrown on one's own problems by the experiences of other great cities. Some of the evidence submitted by the Garden Cities and Town-Planning Association to the Royal Commission on London Government applies as much to New York as to London. The Committee said in regard to Social and Economic Evils of Large Cities:<sup>1</sup>

"Nothing is more difficult to resist than a proposal which offers immediate and visible advantages. 'Give us,' we say, 'what is sweet, and let the next generation deal with the bitter.' Londoners of today, as they gaze upon the illuminated map of the Underground Railway, are fain to admire an achievement, at which, as Frenchmen would say, they have 'assisted.' Cool in summer, and warm in winter, we travel from the central nucleus in half-a-dozen directions, rapidly, safely and cheaply. The Tubes, not so long since a novelty, have become a necessity, as a breakdown or strike makes painfully obvious. What more natural than that they should be extended still further in all directions, carrying passengers beyond Highgate, beyond Golder's Green, and beyond Clapham? Moreover, who will dare to oppose a scheme which promises to employ thousands of men now out of work and to feed their children, to allay industrial unrest and provide idle machines and shops with much-desired engineering orders? It would seem as if this were a game in which there are many prizes and no blanks. Such games are in general designed for the simple by those who are not so simple.

"As Londoners are suffering today from what their fathers did for them, they should think of the difficulties they in their turn are piling up for the next generation. London is already too large, its streets too narrow, its houses too close, its traffic too heavy, its population too much congested. These words were true of London 30, 40 or 50 years ago, before the Tubes were heard of. It was because London was already too large that part of its passenger traffic had to be carried underground. Instead of restricting the growth of the monster we constructed a labyrinthine world beneath her, which has in effect added to the built-up area above ground.

"It is clear that Tube extensions are not going to be made for nothing; the lifts are not going to pour forth nightly thousands of strap-hangers into uninhabited corners of Middlesex, Surrey and Essex. *Tube extension means London extension.* Wherever the Tubes go, and as far as they go, the speculative builder will follow. Around every new terminus will grow up a new dormitory. The planning of London's future will be taken

out of her own hands, and whether she likes it or not, she will be forced to grow larger.

"There are, too, technical objections to the extension of Tubes under present conditions. By adding half-a-dozen stations contributory to the system the trains must carry more passengers. The crowding which has already reached its maximum of bearable discomfort will become a positive danger. Instead of being, as was intended, a passable alternative to travelling in the open air, Tube travel will become a twice-daily infliction, which none but the most hardy will undertake. The Underground Railway of late has been encouraging its passengers to think by putting before them in advertisements concise statements of its position. We make no apology for repeating one of their most effective posters:

## Greater London's Development

Before the Underground drove its Railways out to Golders Green there was nothing but green fields. Now there is a considerable Town and a busy population.

New values have been created which stand to the credit of the Underground, though others keep the cash.

"To carry the process of thought a little further, it may be added that new problems are being created which are left for solution to posterity."

The National Municipal League has published a short and concise statement by Thomas Adams on "Modern City Planning, its Meaning and Methods"<sup>2</sup> in which he offers a practical program of planning that should be of great help to those who direct the policy of the many cities and towns now going in for "Zoning" instead of fundamental planning. Zoning, Mr. Adams points out, cannot be carried out successfully excepting as part of a well studied plan. He says: "But no plan should be limited to 'zoning' and no 'zoning' should be done with the main object of stabilizing real estate values. A plan should increase real values and not stabilize unreal values based on speculation." Of the Zoning experts he says: "The most intricate problems in city planning are probably those which are least popular and least spectacular. The 'zoning' plans which are now being prepared for many cities require less specialized knowledge than the other matters which need to be dealt with and may involve the suppression rather than the exercise of imagination. To a large extent they depend for their successful application on intimate local knowledge. The zoning expert may have acquired the knowledge to present his data in an intelligent form. He may know the arguments

<sup>1</sup> Garden Cities and Town-Planning—Editors—William L. Hare and W. McG. Eagar, July and August, 1922.

<sup>2</sup> Modern City Planning, as published in June, 1922, number of National Municipal Review.

## COMMUNITY PLANNING AND HOUSING

to use to 'put it over' with the citizens and he may have collected information in other cities which enables him to give valuable advice regarding the many cases that require special treatment. On the whole, however, a plan that is limited to 'zoning' can be prepared by an intelligent city engineer with comparatively little expert assistance." But the planning of a city cannot be cut up into watertight compartments. If worthwhile results are desired a comprehensive plan must be worked out, so Mr. Adams outlines as order of study and work:

1. Reconnaissance survey of the city and surrounding region;
2. Tentative skeleton plan of the region based on the survey;
3. City survey;
4. Complete working plan of the city adapted to the law of the state or province.

### A Zoning Primer

"A Zoning Primer"<sup>3</sup> which has been brought out by Secretary Hoover's Advisory Committee for the purpose of boosting zoning, though it mentions the fact that zoning is a part of the general planning problem, lays stress mainly on its value as protector of individual property rights. The Primer says of "Technical Advice": "The practice of zoning is relatively new in America. We are feeling our way and must learn by experience. Those who have had experience tend to become expert, with broader knowledge of practices that are proving effective. These men are becoming gradually more skilled in the methods of getting at the essential facts of any local situation, and in the interpretation of those facts. If they possess insight and sane judgment, their advice becomes increasingly valuable."

### Service—for What—and by Whom?

The outstanding fact in regard to the great housing activity of most of the European countries during the last few years is the admission of the failure of private initiative and the acceptance of housing as a public or social function. There is hardly a country at the other side of the Atlantic that is not giving financial assistance in the building of homes, not only in the form of loans, but outright bonuses. This money is not being spent for the profit of builders but for the welfare of the Community, for these governments are controlling to a much greater extent than in the past the type of home in which the people are to live. It looks as though the period when housing for working people was a business and nothing else had passed, as far as Europe is concerned.

Those who have to do with Government functions are beginning to acknowledge that this point of view must apply not only to housing but to every activity that

<sup>3</sup> A Zoning Primer by The Advisory Committee on Zoning—Appointed by Secretary Hoover. Sold only by the Superintendent of Documents, Government Printing Office, Washington, D. C. has to do with the making of our cities. Daniel L. Turner, the Consulting Engineer of the New York Transit Commission, in writing of the fundamentals for transit

planning, for cities<sup>4</sup> concludes: "In short, city transit is a social problem, not a business one. From a profit-getting standpoint, the interests of the public and the railroads are conflicting. They can never be reconciled. If past efforts may be taken as a criterion, under the old order of things the transit problem never can be solved." Mr. Turner says of the old order—the town authorities, the community representatives, did not cause the street car system, the moving street, to ramify over the old and the new town—over the entire town—in the same manner that the street system does. Instead, the matter was left to private interests. City transit was left to be exploited by private capital as a business proposition—the natural course for a business man to follow is to develop his property so as to produce as quick a return as possible. He cannot be blamed for doing this. Now what did those old owners of the street car line do, nearly a hundred years ago? They looked over the city, selected a route which seemed to offer the best prospect. Accidental conditions might have been entirely responsible for its location, but the chief requirement was the possibility of early profit on the investment. It was a case of profits, not service. The essential thing, the question of circulating and distributing the city's population, never entered anybody's head.

Mr. Turner indicates that transit is in the same boat as all of the other related functions that go to make up the physical shell in which we develop—they must be planned—planned to serve as a part of a related structure. He says in regard to his specialty: "If the city is to prosper and is to grow, its municipal transportation facilities must constantly develop and expand. To utilize these carriers in its best interest, the city should own and control them. To be able to develop, expand and utilize its facilities properly, the city first must know the fundamental requirements of transit planning. When should the facilities be provided? Are they conveniently accessible? Are they sufficiently extensive? How should the facilities be owned? How should they be operated? These are important matters which every city should know. Every city should compel the development, the extension and operation of its transportation lines in such a manner as will best serve its needs."

Transit like zoning cannot play the City Planning game alone without regrettable cost to the City. New York's growth since the coming of rapid transit has been dictated by subway financiers followed by land and building speculators. London's story here again parallels that of New York.

The International Housing Conference at Rome, Italy, in September, has an elaborate program, including a general discussion of the problem of low-cost houses in all countries. It will also deal with the problem of financial intervention by State and municipal authorities, and will endeavor to bring about a uniformity of terminology, so that statistics may be more accurately compared. The question of standardization of materials will likewise be considered. The full report of the Congress will appear in the JOURNAL.

<sup>4</sup> The Fundamentals of Transit Planning for Cities by Daniel L. Turner, Consulting Engineer New York Transit Commission, National Conference on City Planning, 1922, August.

Letters to the Editor

More About Fugitive Advertising

TO THE EDITOR OF THE JOURNAL:

The distinctions between Bravery, Recklessness and Knavery are sometimes fine ones. Bravery makes sure of its facts and then advances fearlessly. Recklessness plows ahead heedless of facts, and Knavery willingly ignores facts, if by so doing it may perchance profit by the ignorance of the bystander.

Mr. John Sullivan, signing himself Secretary-Treasurer of the Association of National Advertisers, Inc., and who of course speaks with authority for all the advertisers of the country, in a recent letter to the JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS includes the following paragraph:

"There is another form of solicitation of advertising by architects that is also akin to blackmailing: Before me are soliciting letters written by the Chicago Architectural Exhibition, the Architectural League of New York, the Philadelphia Chapter of the American Institute of Architects and the T Square Club for their Twenty-fifth Architectural Exhibition, and so on."

The use of the word "blackmail" by Mr. Sullivan savors slightly of the last of the three qualities mentioned above. It is a fine reptilian word suggestive of secrecy, filth, slime and venom, and as such, he seems perfectly willing to let it carry whatever false implication it may. Stripped of innuendo, his grievance against the organizations named by him is that the prestige and influence of the architectural profession is employed to divert a certain amount of advertising from professional advertising channels into publications directly supervised and controlled by the artistic professions themselves.

I quote a further paragraph of his letter:

"Incidentally, I may say that these professional men and their organizations have their letters included in a collection which contains similar solicitations from the Plumbers' Social Club of New York, the Police and Fire Journal (of the Police and Firemen of Pittsburgh, Allegheny County and Western Pennsylvania), and the Indiana Ice Dealers' Association, etc., etc."

Could anything illustrate more beautifully than this paragraph the utter stupidity of the person who is entrusted with the duty of classifying the mail of the Association of National Advertisers?

I quote one more paragraph:

"Manufacturers who spend money for advertising do so for the purpose of securing the stabilizing of markets, to secure standardized quantity production in their plants for the purpose of securing a minimum unit cost of production, a low selling cost, and so be able to maintain minimum selling prices. They use, in selling their goods, not only the individual salesman, but the mass salesman—advertising."

Let us take this statement on its face value and assume that it is fairly representative. What then? It says nothing whatever about quality and it is with quality in the industrial output of the country that professional organizations, such as those mentioned are primarily concerned. Two curses of architectural practice today are the uninformed salesman and the deluge of unreliable reading matter issued under the auspices of commercial agencies. Among the organizations mentioned by Mr. Sullivan, the one with which I have been intimately familiar during many years is the Architectural League of New York. For more than a third of a century the exhibitions, year books and other educational activities of this organization have in my judgment

constituted the most valuable single element in the steady progress of quality and good taste in the industries allied with the art of architecture. These activities have been made possible by a group of farseeing builders and manufacturers of all the materials which enter into a building, who have had the wit and the imagination to see the value of an appeal to a smaller but more select audience, and many of them have been outspoken in their appreciation of the privilege of cooperating in this undertaking, from the standpoint of their own advantage as well as of the general good.

J. MONROE HEWLITT.

TO THE EDITOR OF THE JOURNAL:

As President of the Architectural League of New York, I feel it incumbent on me to comment on the letter published in the last issue of the JOURNAL by the Secretary-Treasurer of the Association of National Advertisers, Inc.

This letter appears to me to express an irritation on the part of Mr. Sullivan at the temerity of the members of the Architectural League and other architectural organizations in soliciting advertising matter, on the ground that the catalogues or year books do not constitute legitimate publicity vehicles. That his expression of opinion is founded on a very gross ignorance of the publications and the methods by which the League, to confine myself to this Society, secures advertising, and the attitude of the manufacturer or of other firms toward the League, seems at least apparent. A knowledge of the necessity which dictates a means of raising money for exhibition and other educational necessities of the Architectural League as a supplement to the time, money and energy contributed by the various administrative committees and the members as a whole, must be first acquired before adopting a critical attitude toward this and other societies with similar objectives. To confuse us with various nondescript associations soliciting advertising for possible private and less public benefit also predicates an apparent lack of investigation on the part of the Secretary-Treasurer of the Association.

Letters and observations of this type, with arguments pro and con covering the principles involved, turn up periodically and the subject has been discussed from every angle with much controversial heat. The remedy seems to be in the hands of the advertisers, if one may suggest it, and that is not to advertise. On the other hand, the attitude of the manufacturer or other advertiser toward us has been uniformly encouraging and in no way significant of acquiescence in the suggestion made of polite "blackmail." I hesitate to comment on Mr. Sullivan's use of this word as being, I am sure, a figure of speech in its intent, and not used by him as an insinuation.

We should be delighted to eliminate advertising and make our contribution toward the general artistic education of the country by means of our exhibitions, lectures, and other propaganda, all at our own expense, if it were possible to translate the attitude of a very large group of architects, painters, sculptors, and craftsmen into practical actuality. Their devotion to this idea is too well known to make additional comment thereon necessary.

Fortunately, there exists among the people who advertise a similar attitude toward things pertaining to art and their encouragement through the medium of architecture and the allied arts, and therefore, I feel safe in assuming that one sacrifice is offset by the other, and until we can have a Ministry or Department of Fine Arts in Washington as part of the United States government, and an attitude on the part of national or municipal governments to encourage

## INSTITUTE AND CHAPTER ACTIVITIES

August 3, 1922.

art in this country by government interest and subsidy, we shall have to continue our exhibitions, wherein this spirit of sacrifice is evident to everyone, except to the gentleman who wrote the letter which prompted this reply, for the general good of the public and its instruction.

Unless some such means is discovered to defray costs, and when I say costs I do not mean actual money alone, but the contribution of time and energy, the exhibitions of the Architectural League, the Chicago Architectural Club, the Philadelphia Chapter of the Institute, and the T Square Club would have to be discontinued, and, as an equivalent, each member of the Institute or member of these societies would voluntarily undertake privately and at his own expense an exhibition of his work. That this would reduce the number, scope and dimension of exhibitions is altogether probable, in which case let us sacrifice exhibitions and records of exhibitions altogether if by so doing we can avoid the appearance and implication contained in Mr. Sullivan's letter.

In conclusion I may say that the issue of the Exhibition Catalogue of the Architectural League is each year increasing and tending toward over-subscription.

HOWARD GREENLEY, *President.*

### Institute and Chapter Activities

A CIRCULAR of all decisions of the National Board of Jurisdictional Awards up to 1 August has just been issued by the Institute.

THE EXECUTIVE Committee of the Institute will meet at Greenwich, Conn., on 8 and 9 September.

THERE HAS been received at the Octagon House the following letter from Monsieur Laloux on whom was conferred the Institute Gold Medal at the Convention in Chicago:

La Marjolaine,  
Montigny sur Loing (S. et M.)  
June 27, 1922.

To the President  
of the American Institute of Architects:

SIR, AND ESTEEMED CONFRERE:

I have received from the French Consul in Chicago a letter in which he informs me that he has received, in my name, the gold medal which was awarded to me by my confreres of the American Institute of Architects, at the closing session of the Congress.

The intervention, in the circumstances, of a representative of France at Chicago, shows that the American Architects—a great many of whom, I believe, are students of the Ecole des Beaux Arts of Paris—wish, in honoring me of their second country, to render discreet homage to French instruction and art. I am rejoiced and proud, but I am not surprised, in view of the sentiments of profound esteem and of high comradeship which unite us.

Be that as it may, my dear and honored confrere, I wish again to impress upon the President and the Institute my sincere gratitude for this precious mark of their esteem.

With renewed assurance of my sense of indebtedness and of high consideration,

LALOUX.

THE FOLLOWING letter has been received from Secretary Hoover who was elected to Honorary Membership at the Chicago Convention:

Mr. Henry H. Kendall,  
American Institute of Architects,  
The Octagon House,  
Washington, D. C.

MY DEAR MR. KENDALL:

I hope you will express my appreciation to the Institute of Architects for the great honor I have received at their hands. There is nothing that one can treasure so much as the kindly feeling of men akin to one's own profession.

Yours faithfully,

HERBERT HOOVER.

FOR THE ensuing year the Committee on the Le Brun Traveling Scholarship of the New York Chapter is Julian Clarence Levi, Chairman, and Messrs. Ayres, Howells, Koyle and Peck.

THE ARCHITECTURAL exhibit arranged by the Washington State Chapter is considered to have been most successful and the Committee in charge has been highly commended for their work.

IT SEEMS idle to add to the evidence of the favor with which the exhibit of American Architecture has been received in England, but we cannot resist printing the comment which appeared in the publication of the Incorporation of Architects in Scotland, on the occasion of the opening of the exhibit in Glasgow on 21 June last:

"The first surprise on entering the Galleries was the general effect of the show, which was much finer than any exhibition of pictures and sculpture ever seen there. The bare cost of the work shown must have been about £50,000,000, and its artistic value probably ten times that of all the picture galleries of the world. And this is only a small part of one country during one generation. Many a poor fly buys a picture or a nick-nack. It takes a big man to build something worth while. A shallow nation spends its money on paper lanterns and hollow-walled slums. A nation of big men build for all time. America is not a nation of big men, but her men do bigger things than ours. She is passing through a Renaissance, we are passing through a Decadence, and whether passing upwards or downwards is doubtful.

"From the utilitarian point of view originality may be claimed for American buildings. The American wants comfort, and tries to get it in heat and upholstery, in a thousand 'labor-saving' devices, many of them for doing things which are better not done. From the point of view of the creative architect, America, great as she is, is less inspiring than almost any other country. Her architects are products of the hot-house schools of Paris, trained in rigid styles by the French architect dominie. Architecture has never been understood by the French. They look on it as cabinetmaking in stone. The Americans suffer from having gone to school there instead of—playing truant. Their earliest work is the best, and it is London, Dickens period. No American architect has yet realized what a skyscraper really is. The most original thing in the show is the National Farmers' Bank, Owatonna, Minn.; Louis H. Sullivan, Architect, Chicago, Ill. One gets tired of guessing which old building Messrs. McKim, Mead & White will copy next.



# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Their office must have a photograph of every 'box-office success' in Europe.

"Bertram Grosvenor Goodhue is good at using Spanish motifs.

"The Plans of the City of Washington are neatly drawn. Who did them?

"Charles I. Berg has made Allen House, Morristown, N. J., much more Old English than anything in old England.

"John T. Windrim, Philadelphia, Pa., makes interesting buildings and interesting drawings of them.

"Carrere & Hastings, N. Y., are somewhat amateurish in the carrying out of a big idea—The Ponce de Leon (Hotel), St. Augustine, Fla.

"Why should Scottish architects remain in Scotland when America so evidently wants architecture and Scotland doesn't?

"The same old mistake—Patriotism! Patriotism makes us think that our fellow-countrymen are better than they are—Patriotism does the same for the fellow-countrymen. It would do the same for us if possible."

## News Notes

G. ALBERT LANSBURGH, architect, announces the removal of his offices to 140 Montgomery Street, San Francisco, Calif.

ANNOUNCEMENT is made by the Chicago Building Material Exhibit of a new and expanded service for architects in connection with their sample rooms at 15 East Van Buren Street.

VISITORS to Chartres this summer may have enjoyed the very rare privilege of seeing a stained glass window put together. During the war all of the glass in Chartres was taken down and stored for safe keeping. It is now being replaced, much to the delight and instruction of one of our correspondents.

W. R. B. WILCOX has accepted the professorship of architecture, which carries with it the task of organizing and administering the Department of Architecture, at the University of Oregon, to which he will carry a host of good wishes and the rare qualifications which are his through long study, reflection and experience.

THE PATRONS of the American Section of the Tenth International Congress of Architects at Brussels in September are The Honorable Secretary of State, The Honorable Secretary of the Treasury, The Honorable Secretary of Commerce, His Excellency the American Ambassador to Belgium, Doctor Nicholas Murray Butler, Mr. Robert de Forest, Honorable Thomas Nelson Page, Honorable John Barton Payne, Honorable Elihu Root and Mr. Daniel Chester French.

THE JOURNAL is asked to bring to the attention of architects the facts concerning the reorganization of the Officers' Reserve Corps of the United States Army,

which consists of men commissioned ready for service in a national emergency. Previous experience for enlistment is not necessary but it is the expressed desire of the War Department to give each applicant the grade and position commensurate with his probable value in helping "to plan the mobilization of the industrial, transportation, economic and even artistic resources of the country." A letter to the Adjutant General, Washington, will bring application blanks, and a reserve officer may be commissioned direct from civil life, provided, in the case of an architect, he has the necessary training and experience.

PRESIDENT FISKE of the Metropolitan Life Insurance Company of New York turned the first sod, on 16 August, in the work of the building the new Nine-dollar-a-room apartments, designed by Andrew J. Thomas, illustrations of which have already appeared in these columns. The event was marked with much ceremony. The gratitude of the children was symbolized, "labor" promised its unqualified support, and there were remarks and addresses by prominent people. The publicity resulting might well be pondered by architects generally, for it seems an easy thing to achieve when undertaken in the proper way. In the meantime, it is safe to say that no housing venture was ever the object of more interest than this one, for it is the last word in the United States in careful planning and financing.

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC., announce the preparation of a standard form of Equipment Rental Agreement for distribution to its membership. It is designed to remove misunderstandings and facilitate the shipping of equipment on short notice or in emergency. Its interest to architects will be found, we believe, in cases where they are working under a cost basis of agreement. Architects using the Circular of Information on the Cost Plus Fee Form of Contract for Building Construction will have noticed that the question of plant is touched upon in Article 7, and the present standard form of equipment lease will no doubt assist in meeting the problems disclosed in this Article. Copies of the Agreement may be obtained from the A. G. C., Inc., Munsey Building, Washington, D. C., at ten cents each or five dollars a hundred.

## Obituary

Howard Crosby Butler, H.A.I.A.

Elected to Honorary Membership in the Institute in 1915

Died at Paris, France, 15 August, 1922

(Further notice later.)

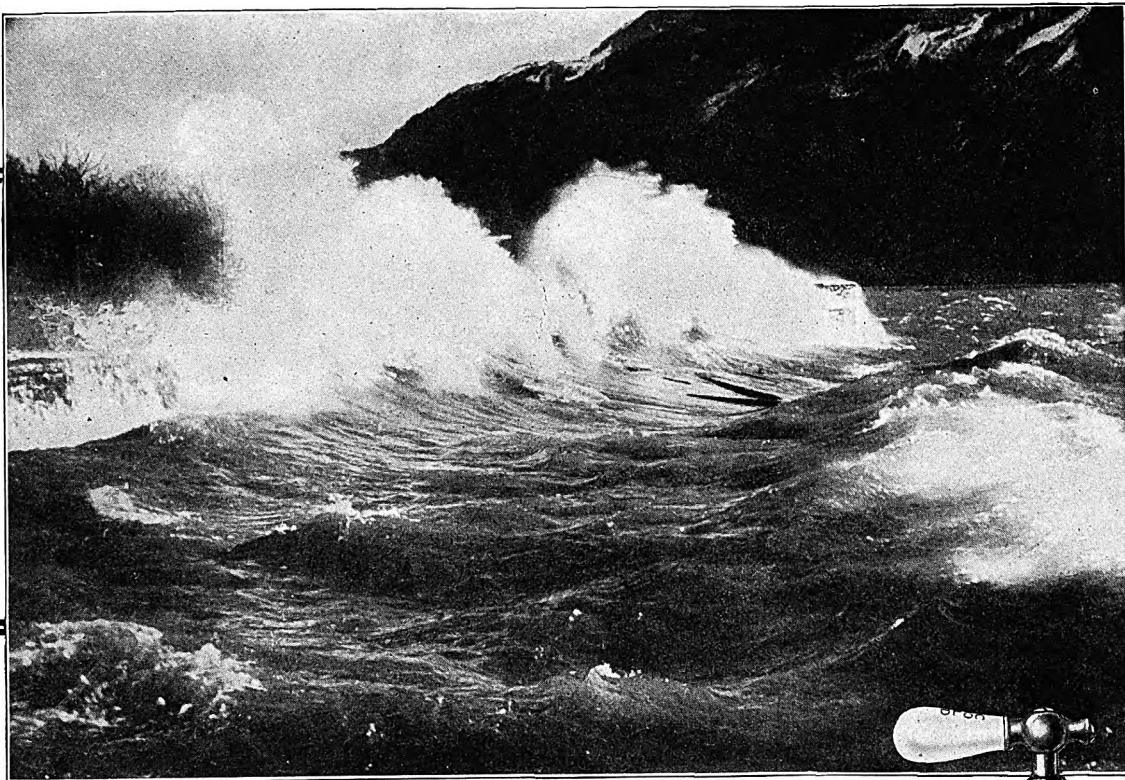
George Beaumont, F.A.I.A.

Elected to Fellowship in the Institute in 1889

Died at Chicago, 11 July, 1922

(Further notice later.)

**Structural Service Department appears on the second right-hand page following**



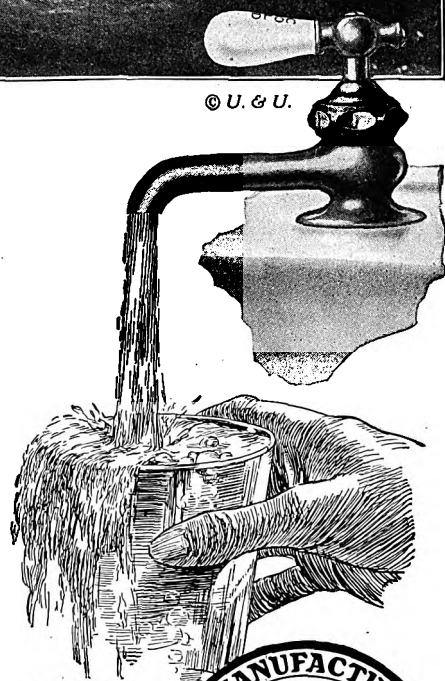
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67 years experience has indicated to the Wolff organization the ideal material and design for every variety of plumbing—valve seats, nickel plating, galvanizing, enamelware, potteryware, etc.; and our policy is to use one grade only—the highest.

Wolff installations are constantly being found in old buildings where they have been giving complete satisfaction without attention for many years.



"Midget" Basin Cock—a wonderfully efficient and popular number in the complete line of Wolff Quick Compression Brass Goods.



Makers of Quality Plumbing Since 1855

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Sanitary Enamelware  
Range Boilers :: Brass Goods  
Potteryware :: Marble

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St. Louis Hammond Buffalo  
Denver Cincinnati New York

The presence of Wolff Fixtures in a structure implies quality construction throughout



# Structural Service Department

SULLIVAN W. JONES, *Associate Editor*  
LEROY E. KERN, *Assistant*

*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.*

## Committee Activities

**The Producers Section.** There was published in the August issue of the JOURNAL a report on progress made in organizing the Producers Section of the Structural Service Committee. The resolutions adopted by the Joint Organizing Committee, called the Executive Committee, required that the Chairman of the Structural Service Committee, with the consent of his Committee, appoint an Executive Committee of the Producers Section. This unusual procedure of organizing from the top down was resorted to because the Producers Section existed only in name. There were no qualified members to elect officers and no membership from which to select them. Consequently an arbitrary selection had to be made from among those representatives of manufacturers who had previously declared their intention of becoming members and who were in New York or near enough to New York to insure a quorum at meetings called on short notice.

The members of the Producers Section Executive Committee appointed with the approval of the Structural Service Committee are as follows:

- \*O. C. Harn, National Lead Co., N. Y. C.
  - \*T. D'A. Brophy, Anaconda Copper Co., N. Y. C.
  - \*F. P. Byington, Johns-Manville, Inc., N. Y. C.  
Lyman Clark, General Electric Co., Schenectady, N. Y.
  - F. W. Walker, Associated Tile Mfrs., Beaver Falls, Pa.
  - Geo. E. Swenson, The Barrett Co., N. Y. C.
  - \*A. J. McComb, Otis Elevator Co., N. Y. C.  
Junius Brown, Pacific Lumber Co., N. Y. C.
  - \*Ray Young, Stanley Works, New Britain, Conn.
- \*Have accepted appointment.

In the interest of expediting the transaction of Committee business it became necessary to have an Executive Committee of the Structural Service Committee vested with the authority usually given to such a Committee. By letter ballot the Structural Service Committee created the following Executive Committee:

- Sullivan W. Jones, Chairman.
- S. F. Voorhees, Vice-Chairman.
- F. Y. Joannes.
- F. S. Benedict.
- LeRoy E. Kern, Secretary.

All of these Executive Committee members are in New York and were nominated because of that fact. They will meet with the Executive Committee of the Producers Section.

Mr. F. Y. Joannes has been made Treasurer of the Structural Service Committee and custodian of its funds. The Committee's first selection for treasurer was Mr. Kern, but the appointment was made subject to approval of the A. I. A. Board of Directors, and the Board suggested the wisdom of selecting for the treasurership a member of the Committee whose services were wholly gratuitous. The action of the Executive Committee in substituting Mr. Joannes for

Mr. Kern will be submitted for ratification to the whole Committee.

Invitations to membership in the Producers Section are being sent to a list of some 350 manufacturers. At the time of this report (August 16th) the following have accepted:

The National Lead Company,  
General Chemical Company,  
Associated Tile Manufacturers,  
Spencer-Turbine Company,  
American Face Brick Association,  
Johns-Manville, Inc.,  
Southern Pine Association,  
Stanley Works,  
Monarch Metal Products Company,  
National Terra Cotta Society,  
Otis Elevator Company,  
Frank Adam Electric Company,  
National Lime Association,  
Atlantic Terra Cotta Company.

In connection with the service of counseling and advice on advertising being rendered by the Structural Service Committee with the aid and collaboration of the Producers Section, it is important that certain possible misconceptions should be prevented from establishing themselves.

The Committee on Structural Service will not prepare advertising copy. It will merely criticize copy submitted from the standpoint of the usefulness of the proposed advertising to architects.

The Committee will make no attempt to verify the truth of claims made in advertising. The Committee, will, however, urge upon manufacturers the importance to them of substantiating their claims by the submission of evidence of unquestionable authenticity.

Membership in the Producers Section signifies no approval by the Structural Service Committee of either the manufacturer or his product, or of his advertising. The fact that through accepting membership in the Producers Section, a manufacturer has declared his interest and desire to aid in the work of making advertising to architects a more useful and trustworthy medium of communication, should be recognized and add perhaps somewhat to his prestige in the eyes of the architectural profession.

## Abstracts

*It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

## Scientific Ceramics

Rutgers College has always taken a scientific interest in ceramics, and its course in Ceramic Chemistry is one of the best in the world.

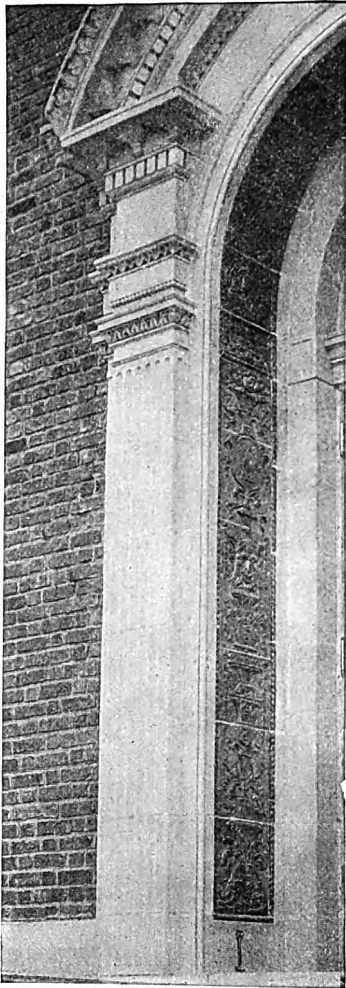
We were glad to help when a new Ceramic Building was erected. In acknowledgment of our appreciation of their service to the industry we contributed the Main Entrance of Atlantic Terra Cotta.

We made the entrance in accordance with the design of the Architect, Mr. Alan B. Mills—a design which in modeled detail and the use of bright colors is a typical ceramic design.

The base color, vitreous gray, is enlivened with touches of green, yellow and brown in the modeled detail. The vestibule panel is modeled in warm yellow-brown against a background of green.

As the dominant feature, the Main Entrance of Atlantic Terra Cotta immediately gives the building an appropriate ceramic character.

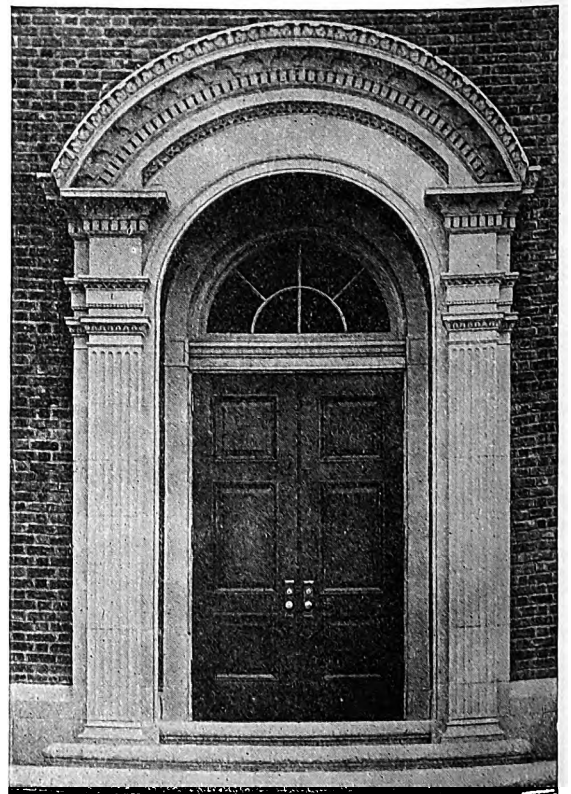
*Ceramics Building, Rutgers College, New Brunswick, N. J. Architect, Alan B. Mills, Director Division of Architecture and Construction, State of New Jersey.*



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*Southern Factory*  
**Atlanta Terra Cotta Company**  
Atlanta, Georgia



## STRUCTURAL SERVICE DEPARTMENT

**"Gunite" Walls.** (*Report of tests by the Underwriters' Laboratories. Pages 90. Size 6" x 9". Illustrated.*)—This report is confined to various types of single and double exterior and interior walls and partitions. The fire protection is furnished by expanded metal ( $1\frac{3}{4}$ " mesh) embedded in Portland cement mortar applied with a "Cement-Gun."

**Construction of Double (Hollow) Exterior Wall Panels.** These panels are constructed of cement mortar slabs from 2" to 2½" thick. The mortar is applied over expanded metal against a backing of roofing felt tacked to a wooden framework over horizontal wires, reinforced concrete studs 6" wide, spaced not over 7'-0" on centers, are constructed between the main structural members. The wooden framework consists of vertical 8" x ⅝" boards with edges toward the outer surfaces of the wall. These boards are placed as far apart between the studs and structural supports as is possible and still give the requisite strength for supporting the wet mortar. Horizontal boards are cut in between the vertical boards at intervals of approximately 3'-0". This framing serves to support the felt backing and expanded metal while the cement is being applied and until it has set. Its function ends when the cement has set, but as it is encased in the wall it cannot be removed.

At openings in the wall panels, reinforced sills and lintels are formed.

In connection with skeleton steel construction all structural steel members are protected by at least 2" of concrete. Reentrant portions are filled in solid.

In connection with reinforced concrete skeleton construction the wall panels are built in place independently and anchored to the concrete structure. The reinforcing rods for the cement studs are set in place when the concrete frame is poured or set in holes drilled in the concrete if the concrete is put in place before the wall panels are formed.

**Construction of Single (Solid) Wall Partitions.**—These walls are identical in construction with the double walls for the same class of buildings except that there is no slab on the inside face of the wall. The roofing felt and wire backing are omitted, the concrete being applied against a wooden centering which is removed after the cement is set. Structural steel columns are protected with approximately 2" of concrete on the flanges and webs instead of having the reentrant portions filled solid.

**Construction of Test Panels.**—The test panels were approximately 10'-0" wide by 11'-0" high. Two were of the double wall and two of the single wall pattern.

No difficulty was experienced by the workmen in setting up the wooden frame, and it appeared that this is simply rough carpenter work which any house carpenter is capable of doing satisfactorily. The application of the saturated felt, the wire backing and the expanded metal are simple operations and workmen accustomed to work of this character should experience no difficulty in performing the work quickly and accurately.

The operation of the "Cement-Gun" requires the services of at least two men trained for this class of work, together with several helpers or laborers for screening sand, shifting staging, etc.

The actual operation of shooting the cement in place consumed only a part of the time and the actual running time of the "Gun" varied considerably. In general, stoppages were of frequent occurrence owing to stones in the nozzle of the gun, shifting staging, the regulating of a slipping belt on the engine, trueing up the finished work, repairing places where the concrete had fallen or had shown a tendency to fall off. In all, the gun was in operation

practically less than 33 per cent of the time required to apply the concrete.

About twenty per cent of the material placed in the hopper of the "Cement-Gun" was not actually incorporated in the construction of the panel. This includes sand and cement not adhering and mortar struck off in trueing up. Also a small quantity of sand and cement was left in the machine. The panels when finished were practically identical in appearance except that two panels were double faced and two single faced.

The concrete was all applied under pressure and the method of application seems to assure a uniform composition of the mortar applied. The concrete as applied to these samples varied considerably in thickness even on the same sample and there appeared to be considerable waste of material.

**Conclusions—Practicability.**—Gunite walls of the types described can be installed without material difficulty, can be applied quickly and uniformly, are not easily damaged, and, if damaged, can readily be repaired.

**Durability.**—Field examinations indicate that these walls will resist the weather for long periods without deterioration and the "Gunite" will retard corrosion of steel as do other cement coverings.

**Strength.**—These gunite walls, when non-bearing, have sufficient strength for the intended use. They are sufficiently strong to support their own weight and to provide the requisite stiffness for the wall when made in any commercial heights. In the impact tests many blows were required to open a large hole in the expanded metal, one blow from the beam making a small hole, which was increased by the following blows. It took many blows to tear through the expanded metal sufficiently to reach the unexposed face of the double wall construction.

**Uniformity.**—The various parts of the completed structure are all as uniform as is practical in constructions of this class. All gunite is probably more uniform in composition than ordinary cement mortar, since the sand and cement are mixed in the dry state before being put into the machine where they are subject to another mixing before reaching the discharge nozzle. It is also probable that an excessive amount of sand in the mixture, when discharged through the nozzle, would simply result in an excessive sand waste. The thickness of the panels showed considerable variation. This was due to sagging of the felt backing caused by the force with which the mixture was discharged against the structure. The tests all indicate that completed gunite structures will be fairly uniform.

**Fire Retardant Properties.**—The outstanding feature of all the fire tests was the spalling of the gunite with a resultant reduction of the fire retardant properties. Test performances, however, shows that this spalling can be largely controlled. No spalling occurred in the tests except where the span of the gunite slab was very short.

Hollow 12" gunite exterior or interior non-bearing walls with 6" x 8" gunite studs placed not less than 4 feet nor more than 7 feet center to center, anchored at all edges of the wall to protecting steel or reinforced concrete load bearing units of the building frame, and without openings in walls, when exposed on either side to standard fire conditions will prevent the passage of flame through the wall for upwards of three hours and will function as a barrier to the passage of fire through heat transmission for at least three hours.

Solid 2" gunite exterior walls and interior partitions, non-bearing, reinforced with studs and anchored as above



## STRUCTURAL SERVICE DEPARTMENT

described, will prevent the passage of flame through the wall for upwards of one hour and will function as a barrier to the passage of fire through heat transmission for at least one hour.

**Moments and Stresses in Slabs.** (4e5)—(By H. M. Westergaard, Assistant Professor of Theoretical and Applied Mechanics, University of Illinois, and W. A. Slater, Engineer Physicist, U. S. Bureau of Standards. Reprinted from *Proceedings of the American Concrete Institute*, Volume 17, 1921 by the National Research Council, 1701 Massachusetts Avenue, Washington, D. C. Pages 124.)—The authors of this report have correlated the large amount of experimental work previously done on slabs with results of their own special analysis. The report consists of five parts:

Part I is a brief introductory statement of purposes and scope of analysis.

Part II, pp. 2-56, presents (1) the fundamental equations which form the basis of the theoretical analysis of slabs (2) intensity and distribution of moments in a large number of cases of slabs supported rigidly on four sides and of girderless slabs, all loaded with uniform load, and (3) as an entirely new feature, the effect of the non-uniform distribution of load in modifying the stress in different parts of the slab. Information not previously available is presented to indicate the moments due to a uniform load in a large number of special cases.

Part III, "Relation between observed and computed tensile stresses in reinforced concrete beams," contains an analysis of tests of beams which shows more clearly than has been done elsewhere the systematic relations between the observed and computed stresses and between the maximum load and the yield point stresses of the reinforcement.

Part IV, "Tests of slabs supported on four sides," and Part V, "Tests of flat slabs" offer an analysis of test data on slabs, and correlates the slab analysis of Part II and the analysis of beam tests of Part III with the test data of a considerable number of full size and of laboratory slabs.

In appendices are given method of solution employed in slab analysis and detailed test data obtained with two of the slabs employed in the study reported in Part V. There is also a bibliography of published and unpublished results of tests on slabs.

Although the moment coefficients arrived at in this analysis are larger generally than those likely to be used in design, and larger than those indicated as necessary the effect on one part of the structure by any modification in another part is well shown by diagrams.

**Wear Tests of Concrete.** (4a)—(*Structural Materials Research Laboratory Bulletin 10* by Duff A. Abrams. Pages 25. Size 6" x 9".)—The investigation includes tests of about 10,000 wear blocks made to determine how the wear of concrete is affected by such considerations as quality of cement and aggregates, quantity of water, addition of hydrated lime, etc.

It is stated in the conclusions that:

In general the factors which gave concrete of high strength also gave concrete of low wear (a high resistance to wear.) Increasing the quantity of cement reduced the wear. Increasing the quantity of mixing water, beyond the minimum required to produce a plastic concrete, caused a material increase in the wear. The coarser the grading of the aggregates, up to certain limits, the lower the wear. Curing concrete under favorable conditions exerted a marked influence in reducing wear. Wear was materially reduced by longer mixing of the concrete. Wear was reduced (resistance to wear increased) with the age of the concrete. The quality

of the fine or coarse aggregate produced less effect on wear than is commonly supposed. The wearing resistance of concrete is determined largely by the quality of concrete rather than by the type of aggregate. Good concrete can be produced from aggregates which are generally considered inferior, if other factors are properly taken into account. The wear of concrete was not sensibly increased by the presence of hydrated lime or other powdered admixtures up to 20 per cent of the volume of cement.

**Treatment and Disposal of Sewage.** (29c2)—(*U. S. Public Health Service. Reprint No. 580 from the Public Health Reports. Size 6" x 9". Pages 33.*) This publication gives a brief description of the methods, processes, and structures used in the treatment and disposal of sewage in the United States. The information is sufficient, however, to give a general idea of the various methods of disposal, and references have been made to literature where complete data may be obtained on the design and operation of any combination of treatment devices discussed in the text.

**Farm Dairy Houses.** (351)—(*U. S. Department of Agriculture. Bureau of Animal Industry. Bulletin No. 1214. By Ernest Kelly and K. E. Parks. Pages 14. Size 6" x 9". Illustrated.*) This bulletin contains plans of nine dairy houses of various sizes and brief notes on choice of location and construction.

**Slash Pine.** (19a)—(*U. S. Dept. of Agriculture, Forest Service. Farmers' Bulletin 1256 by Wilbur R. Mattoon. Pages 41. Size 6" x 9". Illustrated.*) The purpose of this bulletin is apparently to point out the commercial value of this variety of pine. The following are among the subjects discussed: How to recognize slash pine; Range and distribution; Rate of growth; Timber, turpentine and rosin production.

**Relative Durability of Native Woods.** (19a)—(*Forest Products Laboratory. Technical Note 173.*) In response to numerous requests for information on the relative durability, or resistance to decay, of untreated woods, the U. S. Forest Products Laboratory has prepared the following table from the service records and information it has collected. There are not enough records in existence on some of the woods to be conclusive, and the durability figures given should be accepted only because they are based on the most complete service data anywhere obtainable, supplemented by observation and expert opinion from many sources. They are subject to correction whenever authentic service data show the necessity.

No attempt has been made to translate the relative durability given here in per cent into years of life, since the variety of climate, soil and moisture conditions to which timbers might be exposed would make such data worthless. Individual timbers of the same species may differ considerably in durability, too, according to the amount of heartwood and sapwood they contain and to their state of preservation when they are placed in service. Under any given set of conditions, however, the average service life of timbers of the different species will probably vary in proportion to the percentages given.

Black locust and osage orange are the most durable of the native woods. When exposed to conditions which favor decay they will probably last almost twice as long as white oak, and from three to four times as long as red oak. Bald cypress, redwood, catalpa, and most of the cedars are also highly durable species. Douglas fir, longleaf pine, the white pines, and western larch average only a little less durable than white oak. Hemlock, the true firs, and lob-





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lolly, lodgepole, and western yellow pines fall considerably lower. The sapwood of practically all species has very low durability.

### Relative Durability (Resistance to Decay) of Untreated Woods

#### Durability of Commercial White Oak Taken as 100 Per Cent Conifers

Cedar, eastern red (juniper) .....150-200 Cedar, southern white 80-100 Cedar, other species..125-175 Cypress, bald .....125-175 Douglas fir (dense) ..75-100 Douglas fir (average mill run) .....75-85 Fir (the true firs) ....25-35 Hemlock .....35-55 Larch, western .....75-85 Pine, jack .....35-45 Pine, long leaf, slash (Cuban) .....75-100 Pine, Norway .....45-60	Pine, pitch, sugar .....45-55 Pine, shortleaf .....60-80 Pine, So. yellow (dense) .....80-100 Pine, western white ..65-80 Pine, white .....70-90 Pine, western yellow, pond, loblolly, lodgepole .....35-50 Redwood .....125-175 Spruce, Engelmann, red, Sitka, white .....35-50 Tamarack .....75-80 Yew, Pacific (Western) .....170+
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#### Hardwoods

Ash .....40-55 Aspen .....25-35 Basswood .....30-40 Beech .....40-50 Birch .....35-50 Butternut .....50-70 Catalpa .....125-175 Chestnut .....100-120 Cottonwood .....30-40 Elder, pale .....25-35 Elm, cork (rock) slippery .....65-75 Elm, white .....50-70 Gum, black, cotton (tupelo) .....30-50	Gum, red .....65-75 Hickory .....40-55 Locust, black .....150-250 Locust, honey .....80-100 Magnolia, evergreen ..40-50 Maple .....40-50 Mulberry, red .....150-200 Oaks, red oak group ..40-55 Oaks, white oak group..100 Oak, chestnut .....70-90 Osage orange .....200-300 Poplar, yellow .....40-55 Sycamore .....35-45 Walnut, black .....100-120 Willow .....30-40
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**Properties of a Good Wood Preservative.** (19a31)—(*Forest Products Laboratory. Technical Note 177.*) A list of the various substances that have been used or suggested for preserving timber from decay would include a surprisingly large proportion of those known to industrial chemistry. By-products for which no use could be found have often taken their last stand as possible preservatives of wood. There have been sent to the U. S. Forest Products Laboratory for testing of their preservative qualities the condensed fumes of smelters, the waste liquors of pulp plants, the refuse of tanneries, the skimmed milk of creameries, and a wide assortment of compounds under trade names.

Very few materials have been found to have value as wood preservatives. Most of them lack one or more of the following requirements.

To preserve wood against decay a substance must first of all be poisonous to wood-destroying fungi. Decay in wood is not due to direct chemical action or action of the elements but is always the result of the activity of those plants which feed on the wood and thus destroy it. To prevent fungous infection, the preservative must be able to penetrate the wood thoroughly enough to form a continuous exterior shell of poisonous treated wood deeper than any surface checks which are likely to develop, and to retain its toxicity, or poisoning power, under service conditions.

Safety in handling and use is another important considera-

tion. A wood preservative must not be a dangerous poison to men and animals, a highly inflammable substance, nor a material injurious to wood. If it seriously corrodes iron, steel, or brass, its use is limited because of its action on the treating equipment and on bolts and metal fastenings in contact with the wood in service. Color, odor, and effect on paint are sometimes of considerable importance.

Provided a preservative meets these requirements its cost, availability, and uniformity, will largely determine its usefulness.

There are materials of established protective value now on the market which are both cheap and plentiful. The standard wood preservatives in the United States are zinc chloride and coal-tar creosote. Their value has been established by many years' use of millions of railroad ties, poles, posts, paving blocks, mine timbers, and other wood treated with them. Search for new and better preservatives is constantly being made, but in the meantime the wood preserving industry has at its command these reliable materials.

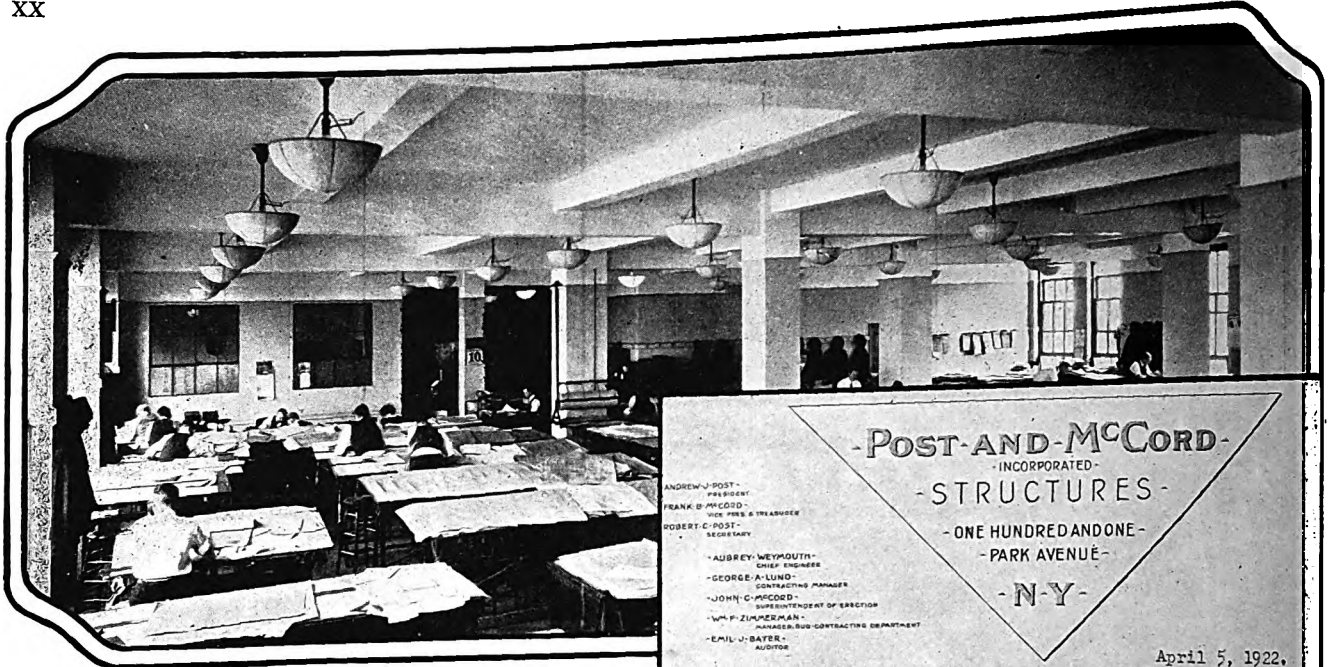
**Blight-Infected Chestnut as Durable as Sound Chestnut.** (19a31)—(*Forest Products Laboratory. Technical Note 174.*) Service records collected by the U. S. Forest Service indicate that chestnut posts, poles and ties cut from blight-infected trees are as durable in service as similar timbers cut from healthy trees. Inspections on posts in one locality during eight years of service showed that decay progresses about as rapidly in undiseased posts as in blight-infected posts.

The blight fungus attacks living trees and grows in the bark, particularly in the cambium layer, but it does not penetrate deeply into the wood itself. The blight finally kills the tree, effectively girdling it by separating the bark from the wood.

**Comparative Strength of Air-Dried and Kiln-Dried Wood.** (19a32)—(*Forest Products Laboratory. Technical Note 180.*) Some wood users claim that kiln-dried wood is brash and not equal in strength to wood that is air dried. Others advance figures purporting to show that kiln-dried wood is much stronger than air-dried. But some 150,000 comparative strength tests, made by the Forest Products Laboratory, of the U. S. Forest Service, on kiln-dried and air-dried specimens of 28 common species of wood show that good kiln drying and good air drying have the same effect upon the strength of wood.

The belief that kiln drying produces stronger wood than air drying is usually the result of failure to consider differences in moisture content. The moisture content of wood on leaving the kiln is generally from 2 to 6 per cent lower than that of thoroughly air-dried stock. Since wood rapidly increases in strength with loss of moisture, higher strength values may be obtained from kiln-dried than from air-dried wood. Such a difference in strength has no significance, since in use a piece of wood will come to practically the same moisture condition whether it is kiln-dried or air-dried.

It must be emphasized that the appearance of the dried wood is not a reliable criterion of the effect the drying process has had upon its strength. The strength properties may be seriously injured without visible damage to the wood. Also, it has been found that the same kiln-drying process can not be applied with equal success to all species. To insure uninjured kiln-dried material, a knowledge of the correct kiln conditions to use with stock of a given species, grade, and thickness, and a record showing that no more severe treatment has been employed, are necessary.



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**Laminated Wood Construction.** (19e6)—(*Technical Note*, 140. *Forest Products Laboratory*.)—The use of heavy and light material of the same species in laminated or glued-up wood construction has less injurious effect than has been generally supposed. Most warping and checking in laminated construction is due to the use of plain-sawed and quarter-sawed lumber in the same construction, or to the combination of material of different moisture content.

Plain-sawed lumber of any species shrinks and swells more than quarter-sawed lumber; and when the two kinds are glued together, they pull against each other with every change in moisture content. If the block containing such a combination is kept for a long time in the same atmospheric condition, the stresses die out, because the block checks or changes shape more or less to relieve the stretched condition of its fibers. As soon as the atmospheric conditions change, new stresses will be set up.

If boards of different moisture contents are glued together, internal stresses will result from the unequal shrinkage of the boards as their moisture contents equalize through seasoning. In some blocks made at the laboratory these stresses were large enough to rupture the wood. If the wood is not ruptured, the stresses will disappear permanently in time, but the block will have changed its shape somewhat in getting rid of them.

From these facts it becomes apparent that for laminated-wood articles where strength and accurate shape are required, it is desirable to use all plain-sawed or all quarter-sawed material, to have all pieces at a uniform moisture content when glued, and to prevent as far as possible subsequent moisture changes by means of moisture-resistant coatings. For the manufacture of rougher articles where slight changes in form are of no consequence, these precautions are of much less importance.

**Sitka Spruce.** (19a)—(*Sitka Spruce: Its Uses, Growth, and Management*, by N. Leroy Cary, *Forest Examiner*. U. S. Dept. of Agriculture. *Forest Service*. *Bulletin No.* 1060. *Size 6" x 9"*. *Pages 38*. *Illustrated*.) This bulletin devotes more space to the growth, distribution, varieties and management of sitka spruce than to the uses. The following are among the subjects discussed: Geographic distribution and altitudinal range; Present supply and annual cut; Characteristics of the wood; Uses; Logging and milling; Size, age, and distinguishing characteristics.

**Heating and Ventilating.** (30)—(*The American Society of Heating and Ventilating Engineers Guide for 1922*. *Size 6" x 9"*. *Pages 360*. *Illustrated*.) Part I, 213 pages, is devoted to technical data. Part II, 147 pages, is advertising. The following quotation from the preface indicates the purposes back of the yearly publication of the guide. "The purpose of this new addition to the Society's publications is to provide the engineer, the architect and the contractor alike, with a useful and reliable reference data book relating to the art of heating and ventilating. A wide range of data within the scope of the field is presented and every effort has been made to present the material in a practical and usable manner.

"The American Society of Heating and Ventilating Engineers, being an institution for the advancement of the arts and sciences connected with its field, publishes this volume to render a service to the industry and to form a co-operative basis for closer contact between the maker and user of equipment. Any funds which may accrue from the activity will be devoted to research, which will react to the mutual advantage of the entire profession, as well as the trade.

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in an effort to eliminate exaggerated claims or statements. However, it must be borne in mind that publication of manufacturers' data does not imply the Society's endorsement or approval, and that the Society cannot assume responsibility for statements made in catalog data or in papers presented.

"The data appearing in the General Data Section are based upon the most reliable information obtainable and represent the actual practice of the most prominent and successful engineers in the field. As rapidly as possible the Research Bureau will investigate these data and standardize them for the general use of the profession and the trade. The findings of the Research Bureau will be published in future editions of *The Guide* and thus made, annually and continuously, available to the profession and the trade."

**Conductivity of Roofing Materials.** (12)—(*Technical News Bulletin No. 64*. *Bureau of Standards*.) The Bureau of Standards has already called attention to the question which has arisen concerning the most efficient covering for keeping the inside of a balloon hangar at a minimum temperature when exposed to the sun. The same question also applies to tents and similar structures.

From consideration of the emissive and absorptive properties of substances, it appeared that instead of using the roofing material now obtainable, which has (1) both sides covered with asbestos, or (2) both sides covered with a bright metal (aluminum paint) the proper covering is one in which the outside is a good reflector (white paint or asbestos) for short wave lengths and the inside is covered with aluminum paint which reduces the radiation into the building.

These conclusions were verified during the past month when it was found that the radiation from the rear side of an all-asbestos roofing material was reduced by 50 per cent by having the outside of asbestos and the inside painted with aluminum. The temperature rise above the shade temperature was only 15 degrees C as compared with 25 degrees C for the sample in which both sides were covered with aluminum.

It seems obvious that tents and other enclosures exposed to the sun can be made more comfortable by painting the inside of the roof with aluminum paint.

**School Grounds.** (35b)—(*U. S. Dept. of Interior. Bureau of Education. Bulletin No. 45 "School Grounds and Play"* by Henry S. Curtis. *Pages 31*. *Size 6" x 9"*.) This bulletin discusses new state laws, the municipal playground, area of the school ground, trees, menagerie, garden, equipment, supplies, time for play, the Gary system and its modifications, the gymnasium, athletics, curriculum of play, special playgrounds for typical children, the school excursion, the community center, the summer vacation.

It also contains the following bibliography.

*Bibliography*.—Angell, Emmett Dunn. *Play*. Boston, Little, Brown & Co.

Bancroft, Jessie H. *Games for the playground, home, school, and gymnasium*. New York, Macmillan Co.

Cary, C. P. *Plays and games for schools*. State of Wisconsin.

Crawford, Caroline. *Folk dances and games*. New York, A. S. Barnes & Co.

Curtis, Henry S. *Play and recreation in the open country*. Boston, Ginn & Co.

*Education through play*. New York, Macmillan Co.

*The practical conduct of play*. New York, Macmillan Co.

*The play movement and its significance*. New York, Macmillan Co.



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Recreation for teachers. New York, Macmillan Co.  
Dudley, Gertrude, and Kellor, Francis A. Athletic games in the education of women. New York, Henry Holt & Co.  
Elsom, J. C., and Trilling, Blanche M. Social games and group dances. Philadelphia, J. B. Lippincott Co.  
Hofer, Mari R. Children's singing games—old and new. Flanagan.  
Johnson, George E. Education by plays and games. Boston, Ginn & Co.  
What to do at recess. Boston, Ginn & Co.  
Lee, Joseph. Play in education. New York, Macmillan Co.  
Miller, Louise Klein. Children's Gardens for school and home. New York, D. Appleton & Co.  
New Jersey (State). Education department. Course in physical training. State of New Jersey.  
New York (State). Education department. General syllabus for physical training in the elementary and secondary schools of the State of New York.  
Parsons, Henry Griscom. Children's gardens for pleasure, health, and education. New York, Sturgis & Walton Co.  
Stecher, William A. Games and dances. McVey.

**Carbon Monoxide Poisoning in Closed Garages.** (35m)—(*U. S. Treasury Dept. Public Health Service. Reprint No. 694. Public Health Reports. Pages 6. Size 6" x 9".*) This publication describes experiments made on the poisonous effects of carbon monoxide gas in varying concentrations and thus indicates the necessity for thorough ventilation of garages. It was found, for example, that a 23 H. P. automobile engine while "warming up" would give off approximately 1.5 cubic feet of carbon monoxide per minute. In a closed room 10' x 10' x 20' the dangerous concentration of 15 parts of carbon monoxide in 10,000 parts of air will be reached in 3 minutes by a car giving off 1 cubic foot of carbon monoxide gas per minute.

**The Eye as Affected by Illumination.** (31f)—(*Bulletin L. D. 130. Lighting Data. Edison Lamp Works. Size 6" x 9". Pages 16.*) Seeing with continued ease and comfort requires good lighting. In order to be able to understand just what qualities of artificial illumination are desirable, we must know something of the characteristics of vision in the human being. The eye with all the marvelous organization behind it for the production of visual perception was evolved under natural conditions of illumination.

In imposing new artificial lighting conditions on the human eye, we must expect to find harmful reactions. The unfortunate part, however, is that reaction to abuse of the eye is not always immediate and the harmful effects do not always confine themselves to the eye alone, but extend to the nervous system in general.

The present stage of accumulated knowledge on the phenomena of visual perception is incomplete. Material in this bulletin represents an attempt to outline the steps involved in visual perception and those qualities of lighting required for seeing with ease and comfort.

**Electric Lamps.** (31f2)—(*Standard Specifications for Large Incandescent Electric Lamps, Tungsten and Carbon. 9th Edition. Circular of the Bureau of Standards No. 13. Pages 20. Size 7" x 10".*) Lamps are classified under two styles—large and miniature. "Large lamps" designate, broadly, lamps regularly fitted with other than miniature bases.

These specifications have been prepared primarily for the use of the departments of the Government in purchasing incandescent lamps, and in circulating them the Bureau de-

sires to call attention to the fact that only those thoroughly instructed in the art of lamp manufacture and science of photometry should undertake to determine upon the acceptability of lamps under the terms of these specifications. The specifications do not apply to frosted, bowl enameled, etched, or colored lamps, or to lamps other than those with the usual clear glass bulbs.

In this edition noteworthy changes have been made in the test procedure specified for tungsten lamps. The most notable of these changes is the abandonment of the long-established provision that the life of test lamps shall be considered as ended when the candlepower has fallen to 80 per cent of the initial value. The specification of such an end-point is convenient and reasonable in the testing of carbon lamps, because those lamps will often burn for a long period after they have become so blackened that they should not be continued in use. In tungsten lamps, however, means have been found to prevent excessive blackening of the bulbs, so that the lamps normally burn out before their efficiency has fallen enough to justify replacing them. The new tests will therefore be based on the total life to the time of burn-out, thus conforming more nearly to actual practice in the use of lamps.

The performance of the lamp throughout its life will also be taken into account through two new provisions. One of these is the evaluation of life-test results on the basis of average efficiency throughout life, instead of the initial efficiency; the other is a requirement that the average light flux during the life of the lamp must not fall below a specified percentage of the initial flux.

**Lighting Designs for Stores.** (31f14)—(*Engineering Department, National Lamp Works. Bulletin No. 45. Pages 40. Size 6" x 9".*)—This booklet contains concise, practical suggestions for the proper lighting of the more common classes and types of stores. Floor plans are given of small stores from 10'-0" to 24'-0" wide and of large stores with bays from 15'-0" x 15'-0" to 25'-0" x 25'-0". These indicate the recommended locations of the lighting units and the average foot-candles obtained with different types of fixtures, in connection with light, medium and dark ceilings and walls.

In addition to the above the booklet contains brief discussions of the types of fixtures, location of units, amount of light desirable, decorative lighting, color matching units and display window lighting.

**Better Electric Lighting in the Home.** (31f12)—(*Engineering Department, National Lamp Works. Bulletin 47. Page 32. Size 6" x 9".*) By comparison with earlier forms of illumination we are usually satisfied with the convenience, reliability and safety of electric light. However, when the electric lighting of one home is compared with that of another the two installations may be equally convenient, reliable and safe and the fixtures equally pleasing in appearance by day and yet there may be a wide difference in the lighting effects produced. This difference is due to the way in which the raw light from the lamp is modified and controlled. There is no limit to how far a skillful designer may go in producing pleasing and usual effects by the control of high-lights.

This bulletin deals with the lighting of the various rooms of typical modern homes. Part I treats of the location and choice of types of fixtures whereby present-day standards of illumination may be obtained. Part II contains a chart of lighting fixtures with recommended size of lamps to use, proper mounting height of the unit and a page reference to the detailed description of each particular fixture.

# Stack-Hung Closets

**D**ESPITE their obvious advantage in certain kinds of buildings, we have not hitherto advocated wall-hung water closets.

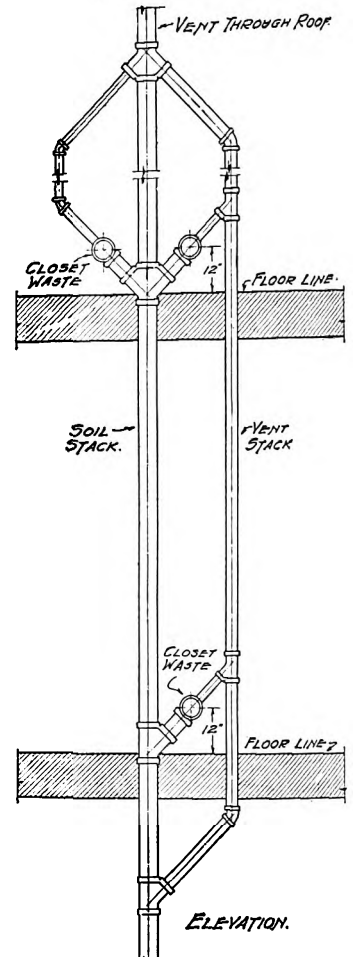
Now, however, after most careful study of the problem, we are prepared to supply a wall-hung closet, with hanger and fittings, that will satisfy the most critical standards.

The "CLOWALL" line of water closets, with the CLOW-GRAHAM hanger and fittings, is complete enough to answer every requirement.

Special Bulletin, descriptive of this line, will be sent on request.

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General Offices: 534-546 S. Franklin Street, Chicago  
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This is one method of using "CLOWALL" stack-hung closets, installed with toilet rooms directly above each other and solid partitions.

There is no constructional condition which cannot be met by "CLOWALL" installations.

Our Engineering Department is always at your service.

# CLOW



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About the Use of

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“BASIC INFORMATION”—a book published by the Associated Tile Manufacturers—is part of a comprehensive service plan which is designed to effect a better and more economical utilization of the regular and standardized products of the Tile industry.

The book is an informative and educational document. Irrespective of producer, it defines the characteristics of the kinds of Tiles; explains the basis and development of sizes and shapes; gives standardized definitions for trade names and kinds of Tiles; reviews methods of production in so far as they tend to promote a better understanding of the product and its uses; describes methods of grading and standard form of grade certificate; gives basic tabulations or schedules of dimensions, grades, colors and finishes, and generally interprets the technical language of the Tile industry.

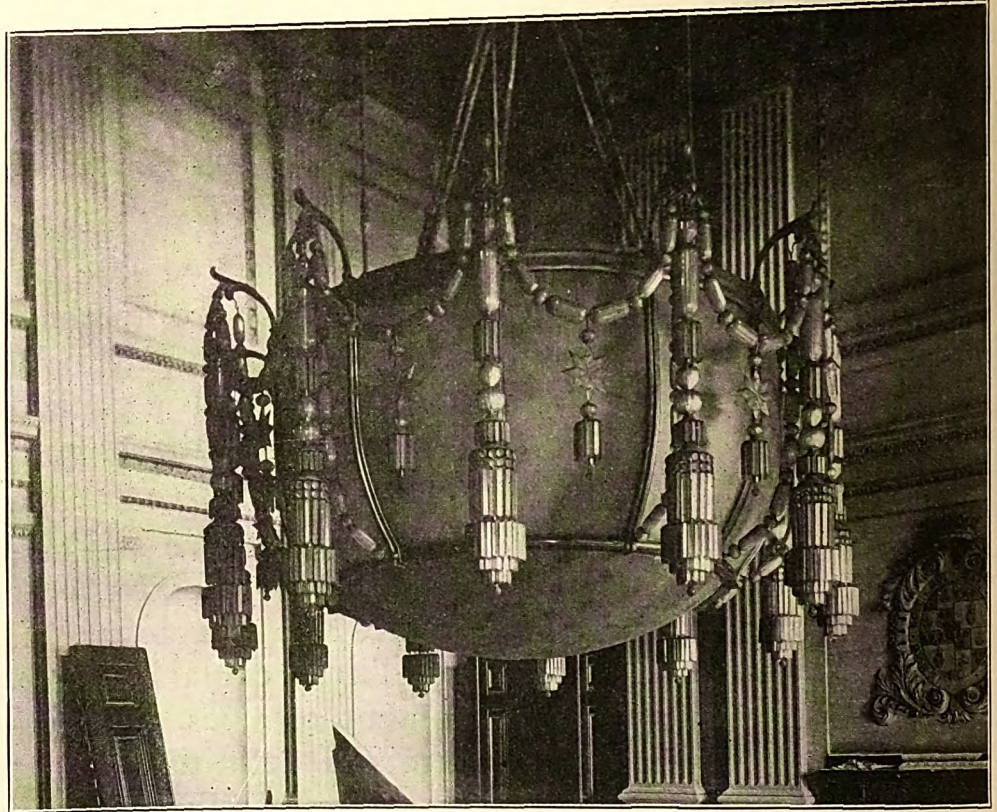
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THE ASSOCIATED TILE MANUFACTURERS  
BEAVER FALLS, PA.



# HAMILTON

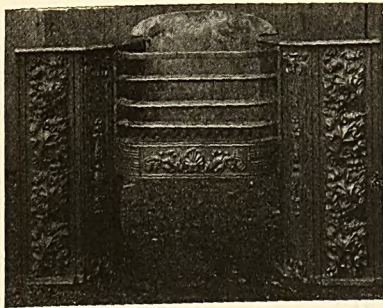
*The Ancient Royal Residence*



Ceiling Light—10 feet in diameter, 5 feet deep, with 12 massive, cut crystal Pendants, 12 eight-point suspended crystal Stars, mounted in Cut Glass Panels, with winch and gear for lowering and raising.

## Interior Fitments Now Available to

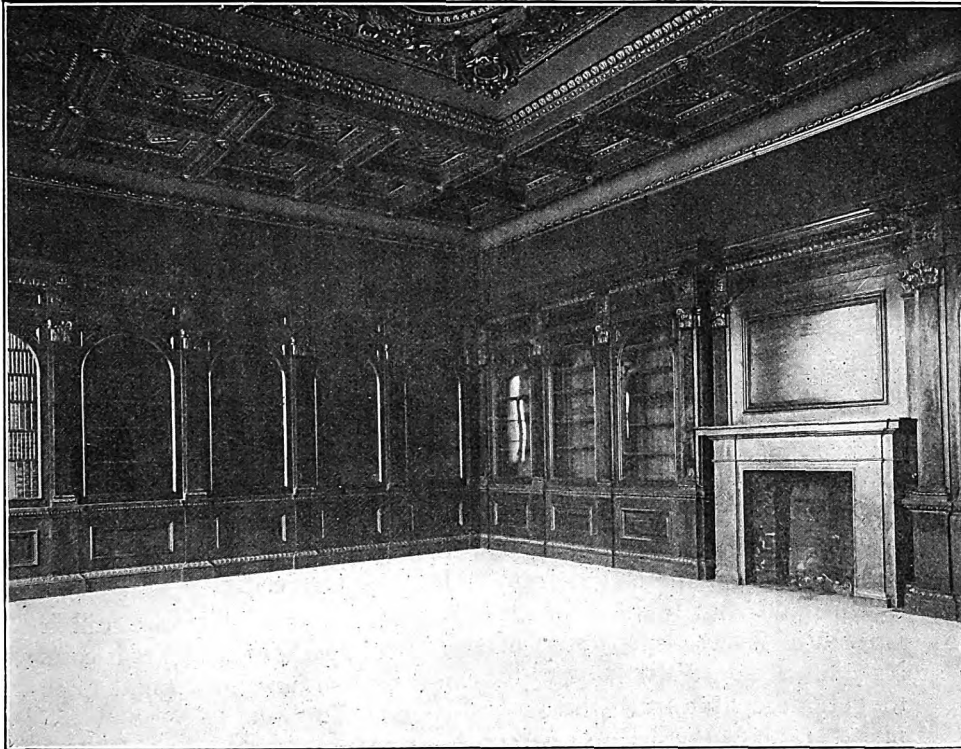
**S**OIL subsidences have necessitated the dismantling of Hamilton Palace. Its interior fitments are being removed and are now offered for sale. They include items too numerous to mention. The ac-



companying illustrations will give an idea of the exquisite craftsmanship employed in the working of marble, carving of wood, modeling in bronze and the art of cabinet-making. There are columns and pilasters, staircases and balustrades, bronze Caryatides, tables, mantles, fireplaces, candelabra and lamps, doors and

# PALACE

*(Scotland) Now Being Dismantled*

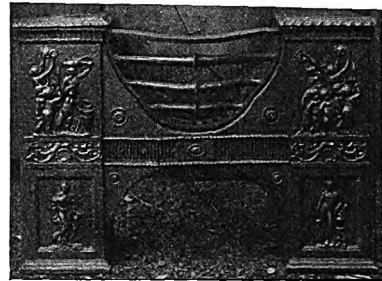


Royal Palace Library. 36' 4" x 25' 6" from face to face of bookcasing, all in Oak with Teakwood Doors and Plate Glass Panels. Pilasters and panels of lower doors (in Kingwood or Rosewood); in all, 14 divisions, fitted with circular top glass doors, shelving and framed oak linings. 10 of the lower cupboards with framed and hinged doors enclosing open space, the other 4 cupboards fitted with drawers for folios and window finishings complete with Marble Fireplace and adjoining casing; also window and wall finishings, and entrance door as sham bookcase.

## the Architects in the United States

trim, all marvelously wrought by master workmen of past centuries. There are also certain quantities of pitch pine flooring in perfect condition and several thousand square feet of marble flooring,

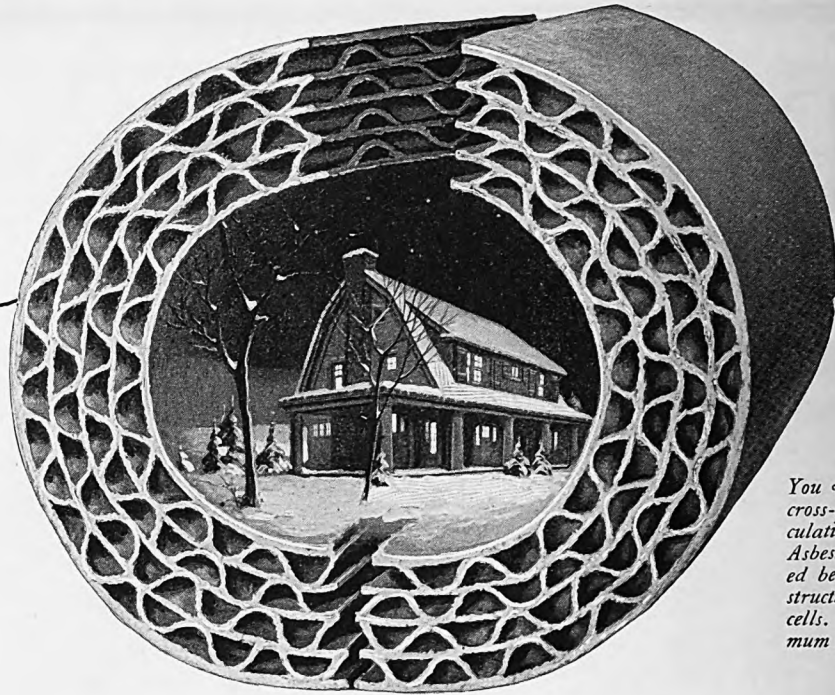
beautifully selected, in quite as good a state as when laid. For full particulars as to measurements and quantities please address inquiries to



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Bridgeport, Conn.



*You will note from this cross-section that air circulation through Improved Asbestocel is greatly retarded because of the integral structure of each of its air-cells. This means a maximum of heat-saving.*

## More warmth from the home-fires

AS you know, any pipe covering will get more heat from the coal pile. But Johns-Manville Improved Asbestocel, because of its unusual construction, is able to get more heat from the coal pile than any other cellular covering.

The difference is structural.

In most cellular pipe coverings there is ever present the danger of circulating air—which reduces the efficiency of the covering. But in Johns-Manville Improved Asbestocel these cooling draughts of air are prevented. Each one of the cells is closed. This is accomplished by a series of cross corrugations interrupting the lengthwise corrugations at regular intervals. (See the cross-section above.) Air cir-

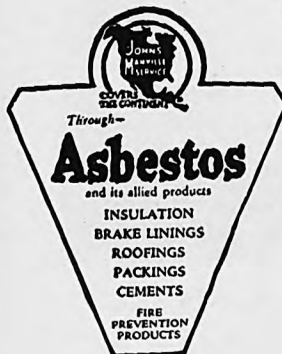
ulation is greatly retarded and so heat is conserved.

You see now why we call it *Improved Asbestocel*. Yet it costs no more than “any good pipe covering”.

Added to this is a service to the profession that is frequently alone responsible for the appearance of the name Johns-Manville in architects’ specifications.

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*Details of Residence, South Orange, N. J. Mann & McNeille, Architects*

Here is a charming piece of brickwork, surmounted consistently by a heavy slate roof. The brick trim around the door, the soldier and rowlock belt courses, and the simple pattern under the second story window show the possibilities of standard size brick for chaste and distinctive embellishment.

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PANELS and pattern work in Face Brick do not necessarily require molded shapes and special forms. Standard size Face Brick are susceptible to a great variety of combinations and treatments. Shades and color tones extend this to an almost infinite field of artistic possibilities. Beautiful walls are thus more a matter of the designer's skill than extravagant cost.

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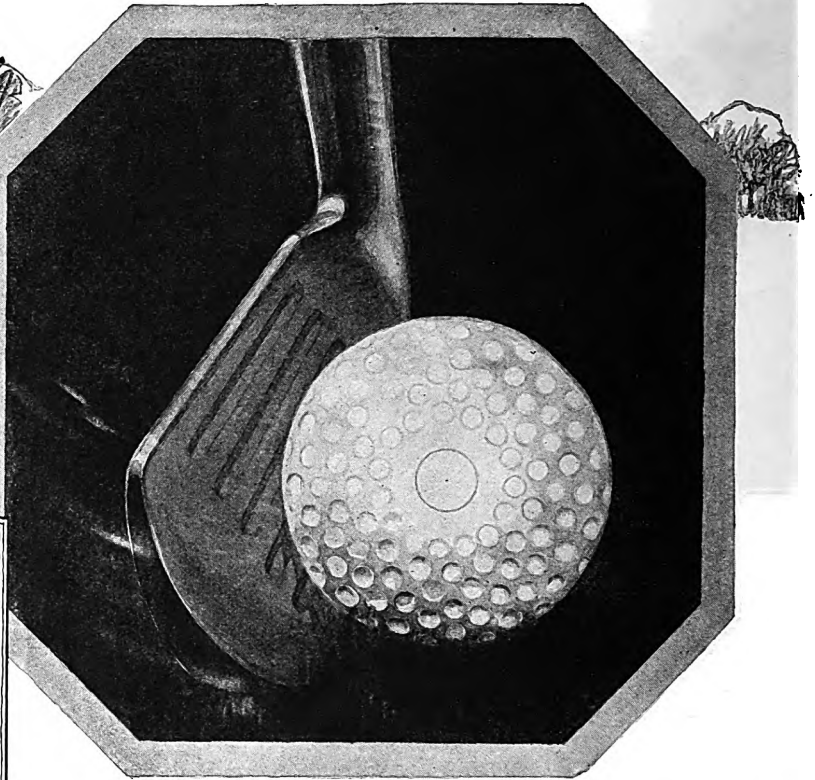
shows more than a hundred examples of beautiful brickwork—all in standard size brick.

These de luxe half-tone plates are assembled in three series, each in an enclosed folder, with printed tab, ready for filing.

A set of these folders will be sent to any architect requesting them on his office stationery, and his name will be placed on the list for future mailings.

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"For three years I have been repainting golf balls with your Old Dutch Enamel. It stands up better than the enamel on new balls. This superiority is so pronounced that several 'pros' of my acquaintance have adopted it for repainting balls to sell.

"I believe that the impact of the club against the resilient and yielding surface, and the grinding fall on sandy or gritty ground, give a more severe test to an enamel than any use in a building."

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You may be thinking of building a bird bath or an office building, a home or a silo, and you may be wondering whether Concrete is the material to use. No need to wonder long. By return mail from our nearest office, you can get the facts about that special use of Concrete in a free every-day-language booklet on the subject.

Booklets of this sort have been prepared by the Portland Cement Association on all the common uses of Concrete. They give not only counsel on the conditions under which each use is advisable, but specific instructions for carrying out the work.

And if any question is left unanswered in your mind after reading the booklet on the subject that interests you, one of our specialists in that particular class of Concrete work will gladly answer it.

The information in the booklets is based partly on the findings of our research laboratory and partly on the field experiences and investigations of our engineers. It is accepted as a basis of practice by well-informed engineers, architects and builders throughout the world.

The publication of these booklets, and their circulation without charge, is one of the numerous activities carried on by the Portland Cement Association for the service of users of Concrete.

The Association is the joint research and educational foundation of 85 independent manufacturers of cement in the United States, Canada, Mexico and Cuba.

Suggestions as to how our work may be made more useful to you are invited.

## PORTLAND CEMENT ASSOCIATION

*A National Organization  
to Improve and Extend the Uses of Concrete*

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Chicago	Helena	Milwaukee	Pittsburgh	St. Louis
Dallas	Indianapolis	Minneapolis	Portland, Oreg.	Vancouver, B. C.
Denver	Kansas City	New York	Salt Lake City	Washington, D. C.

# Journal Publications

## A Handbook of Architectural Practice

*For Architects and Their Clients*

**T**HIS is the most important work ever published in relation to the whole problem of conducting an architectural practice. The idea of the Handbook first took form in the mind of the late Frank Miles Day, one time President of the American Institute of Architects, whose office routine was a model of painstaking care and thoroughness, and to whose memory this work is dedicated. His untimely death prevented him from actually completing it, but the work has been finished under the guidance of those members of the original Committee of the Institute who collaborated with him.

The Handbook of Professional Practice represents a continued effort extending over five years and embracing an examination and study of the systems in use in the best offices in the United States. Also, it contains the complete text of all the documents published by the American Institute of Architects as enumerated under Part VII.

The First Edition is limited and is nearly exhausted; the right is reserved to advance the price for subsequent editions. **\$5.00.**

## The Structural Service Book

A very complete directory of information about building materials and methods, including bibliographies which provide a comprehensive history of scientific data, institutions and organizations connected with the building industry in all its branches. An invaluable reference book to every architect. **\$3.50** (formerly **\$5.00**).

## Over the Drawing Board

*By Ben J. Lubschez*

A complete guide to the use of ink and paper, angle and square, pencil and wash, eraser and paste, containing innumerable suggestions of the greatest value in the draughting room. **\$2.00.**

## Platting of City Areas

*By Henry Wright*

A pamphlet dealing with the laying out of land in order to get the most intensive use for housing purposes while still providing for the decencies and amenities of the people who live in the houses. The best and most modern study of this subject available at the present time. **50 cents.**

## The Housing Problem in War and in Peace

*By Charles Harris Whitaker, Frederick L. Ackerman, Richard S. Childs and Edith Elmer Wood*

An exhaustive treatise on the economic aspects of the housing problem with fifty illustrations of the war housing work done in England, including numerous town plans. **\$2.00.**

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The Jenkins "Diamond Mark" is the means of identifying genuine Jenkins Valves. Because Jenkins Valves are the original and true stock, they have a distinct superiority, for an originator excels in producing that which he has created.

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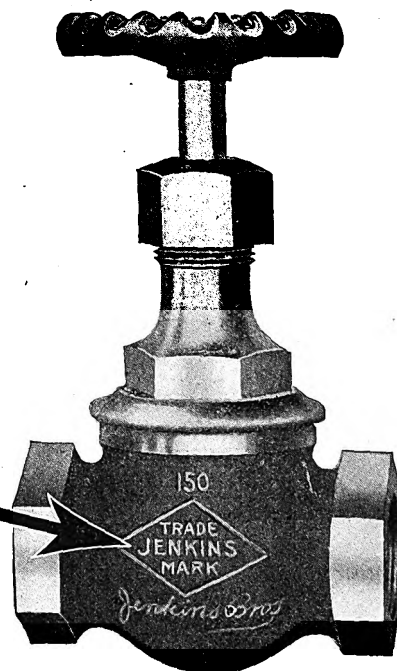
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Fig. 106, Jenkins Standard  
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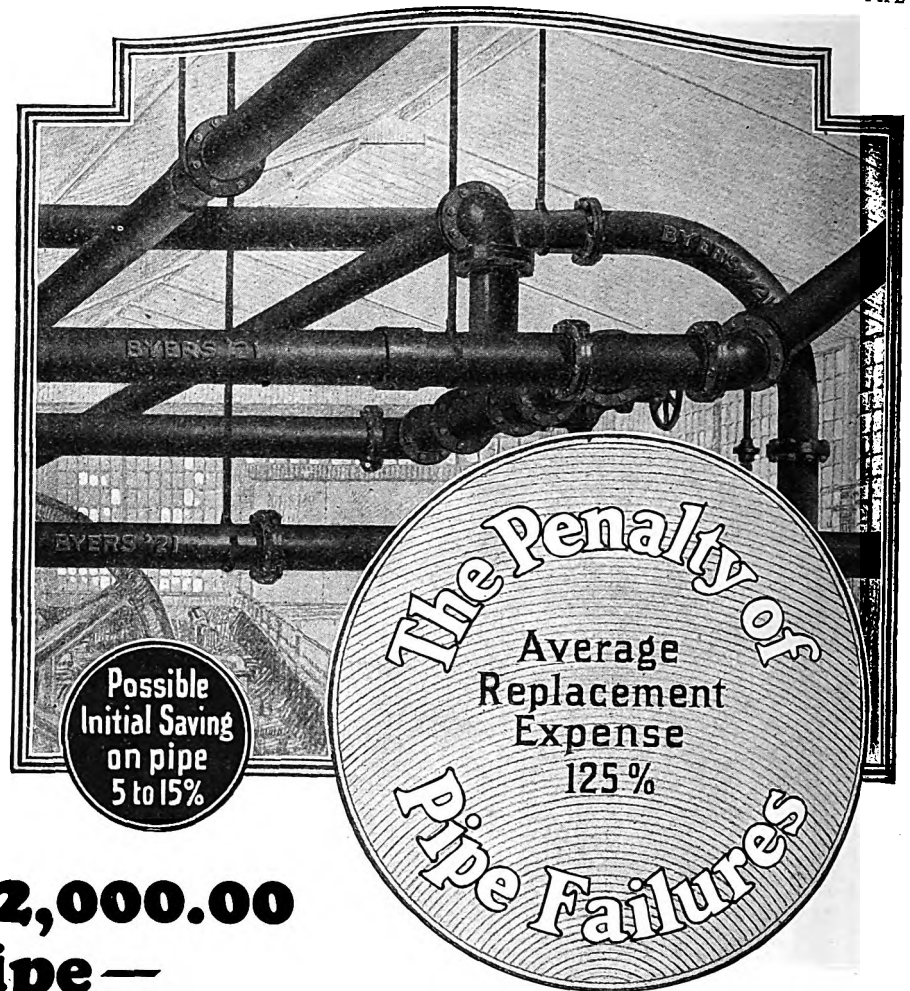
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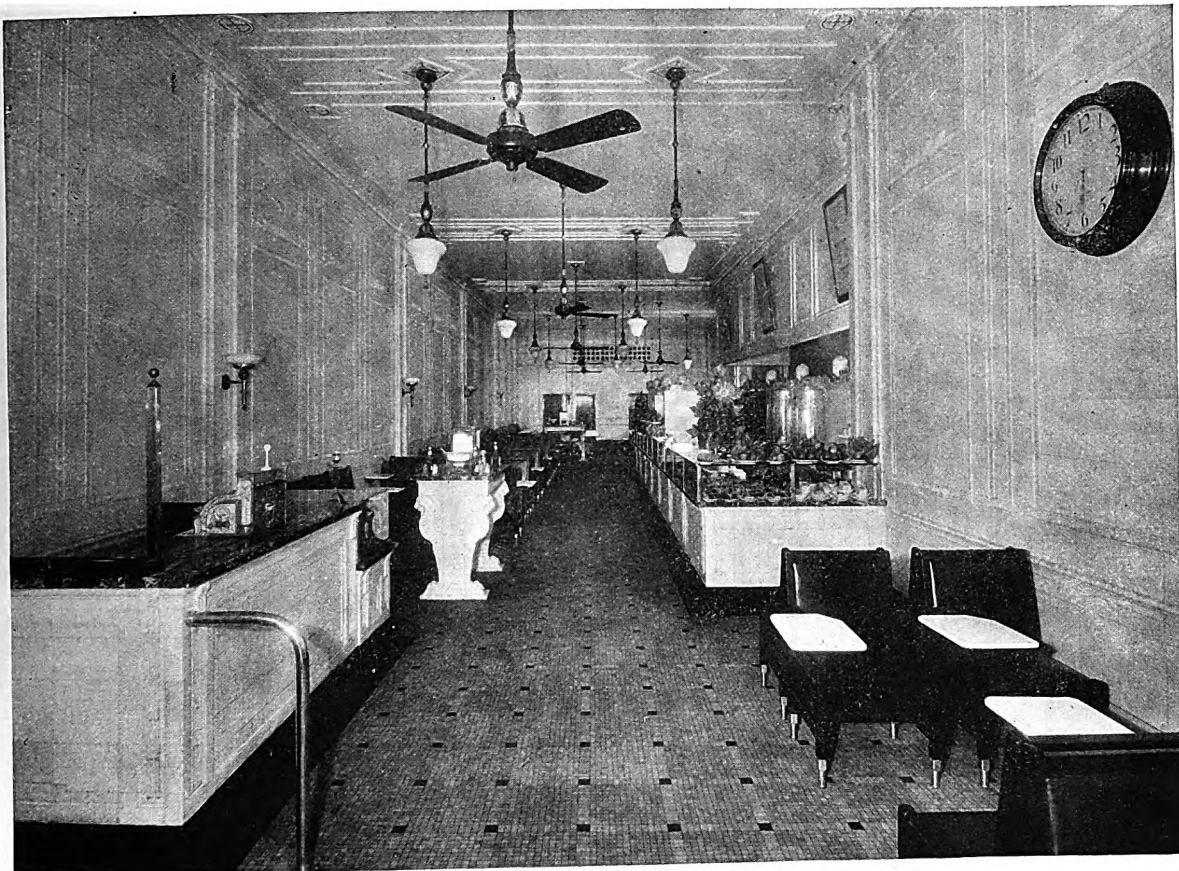
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A FINE and exceptional sample of the use of architectural terra cotta and faience for a restaurant interior is shown in the above illustration. This building was erected at 16-18 So. Clark St., Chicago, for the Charles Weeghman Corporation, John Archibald Armstrong, Architect.

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## THE NATION'S BUILDING STONE

INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

September, 1922

WHEN YOU SPECIFY A

# HUMPHREY

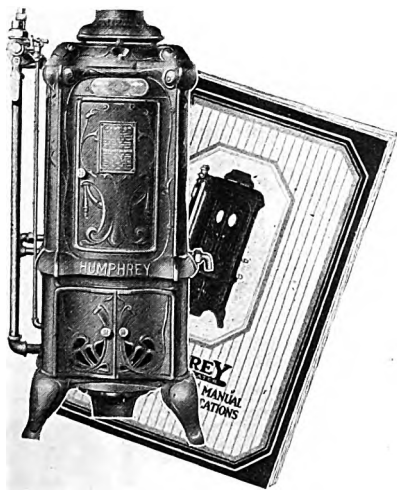
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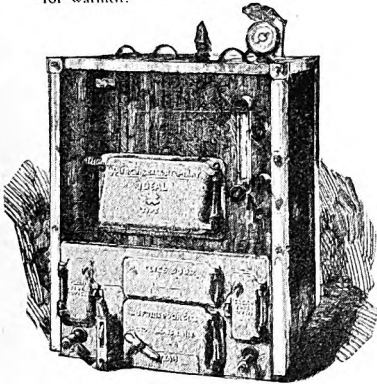


From an etching by M. PAUL ROCHE, © ARCO 1922

Home of H E Faddon, a prominent New York architect, in Ridgewood, New Jersey.  
The house is warmed with American Radiators and an IDEAL TYPE A HEAT MACHINE.

## When an architect plans his own home what heating equipment does he specify?

If you plan to build or remodel, send for our book about the IDEAL TYPE A HEAT MACHINE. Mail your request to either address below. This Company is headquarters for warmth.



HOW many regrets would be avoided if Americans would consult their architects more!

Your architect knows the difference between the kind of heating equipment which is merely a purchase; and the kind which is a life-long investment.

If you demand the cheapest boiler and radiators, he can get them for you.

But a better question to ask him is this: "When you planned *your own home*, what heating equipment did you specify?"

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Makers of the famous IDEAL Boilers and AMERICAN Radiators

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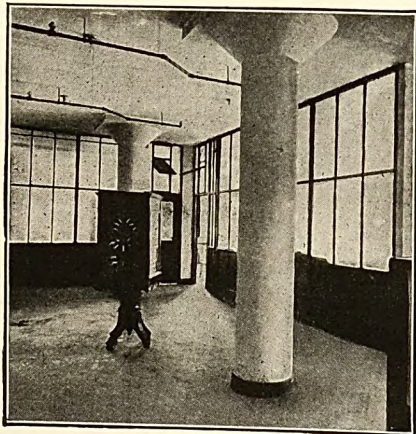
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vice to the home builders of America.

Have you complete specifications and ratings of the IDEAL TYPE A HEAT MACHINE in your files? Your name on your letterhead sent to either address above, care of Dept. 115, will bring it.

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*Reduced costs and in-  
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our high standard of qual-  
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*Specify Model F. stand-  
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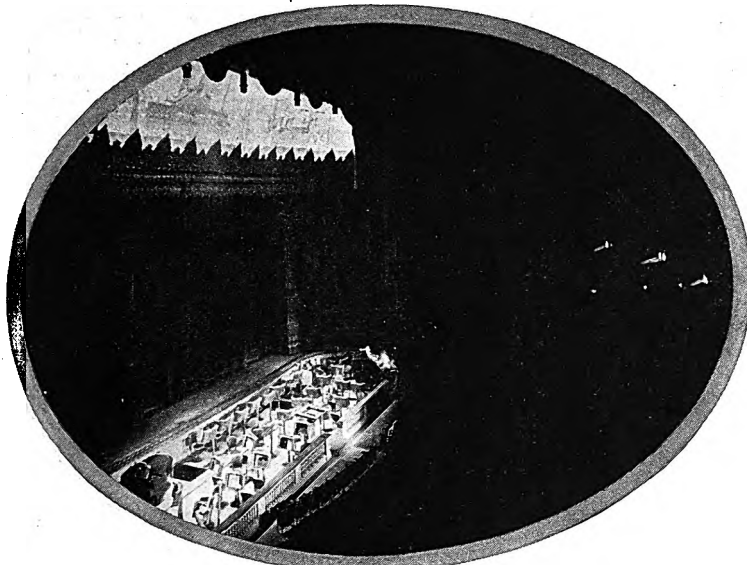
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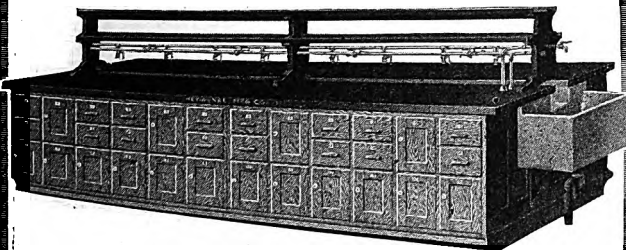
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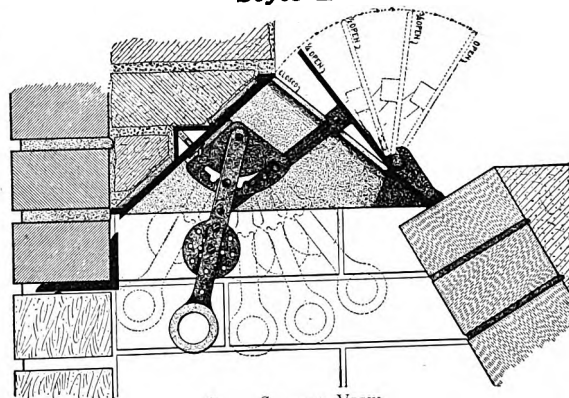
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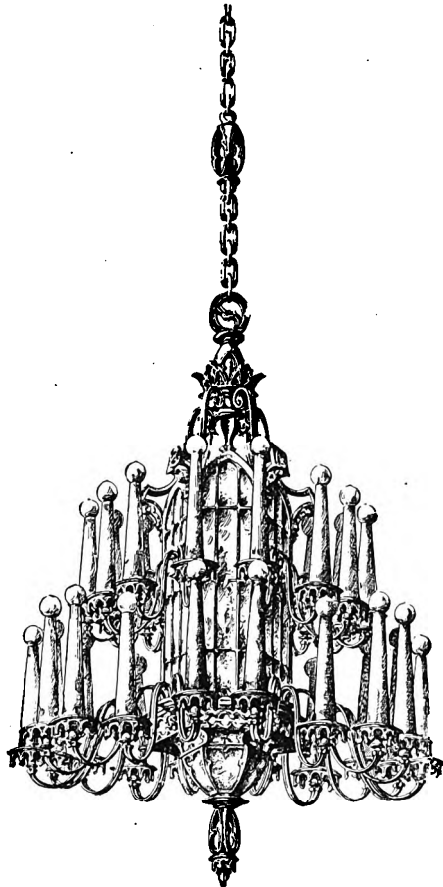
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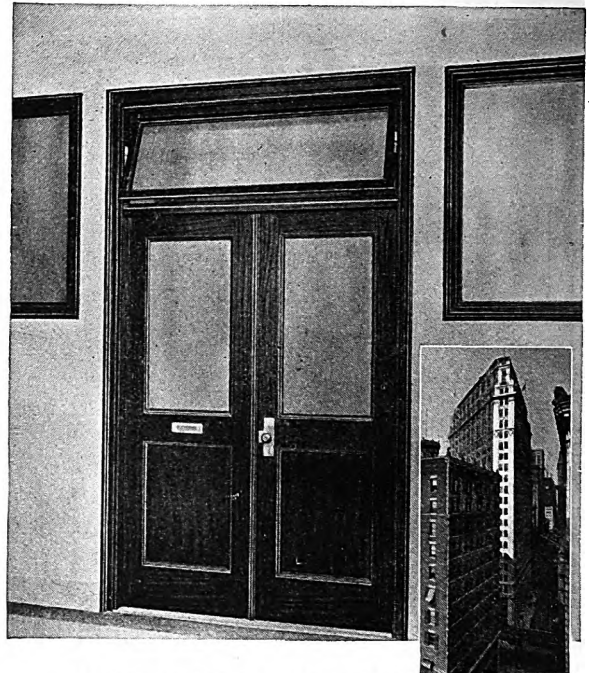
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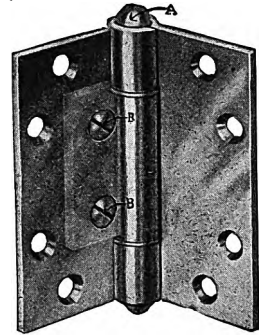
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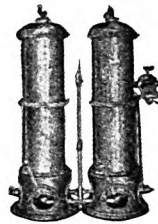
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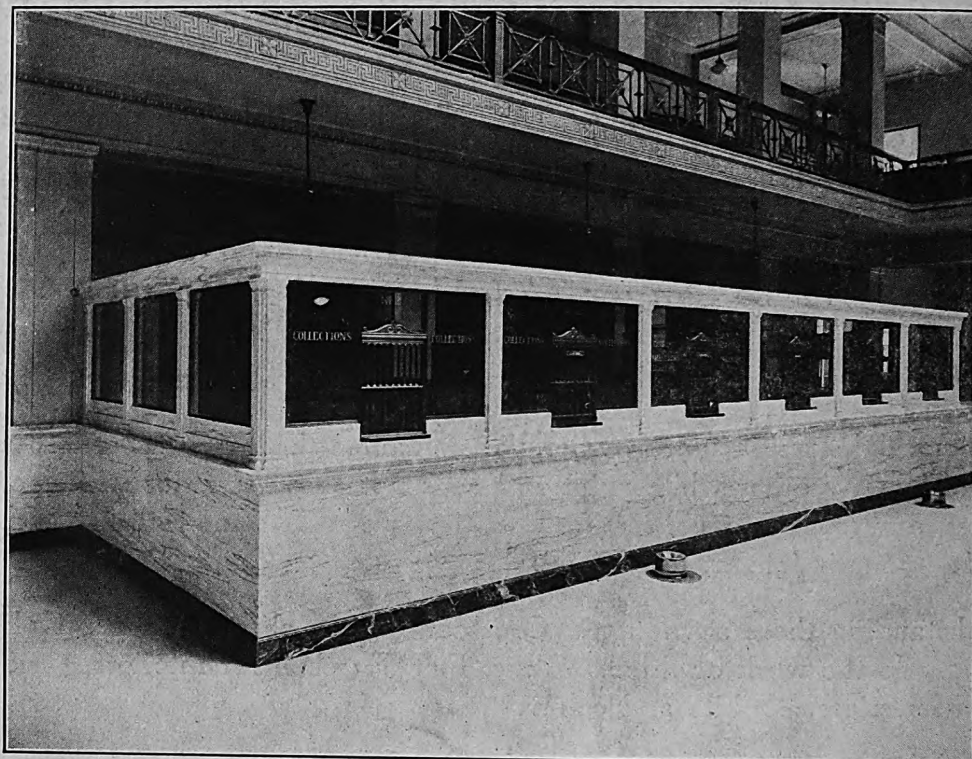
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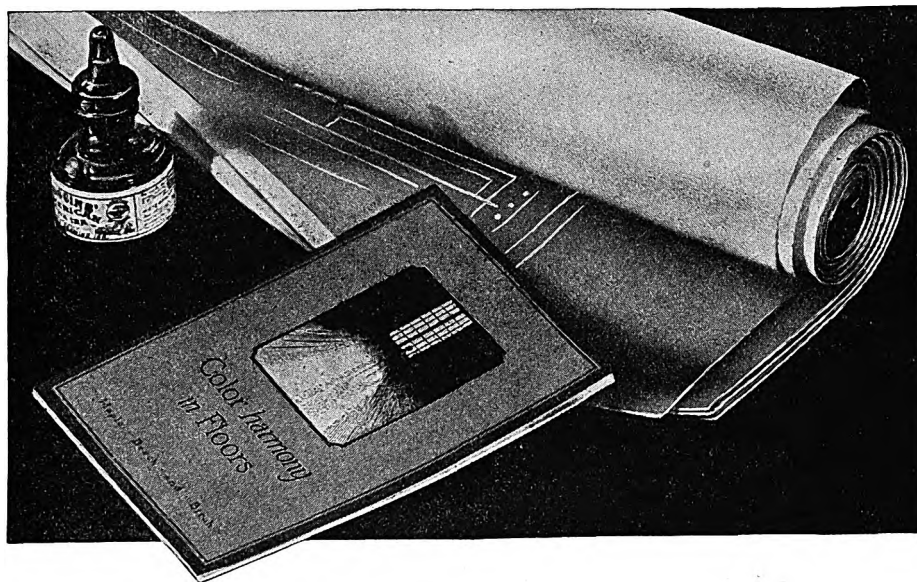


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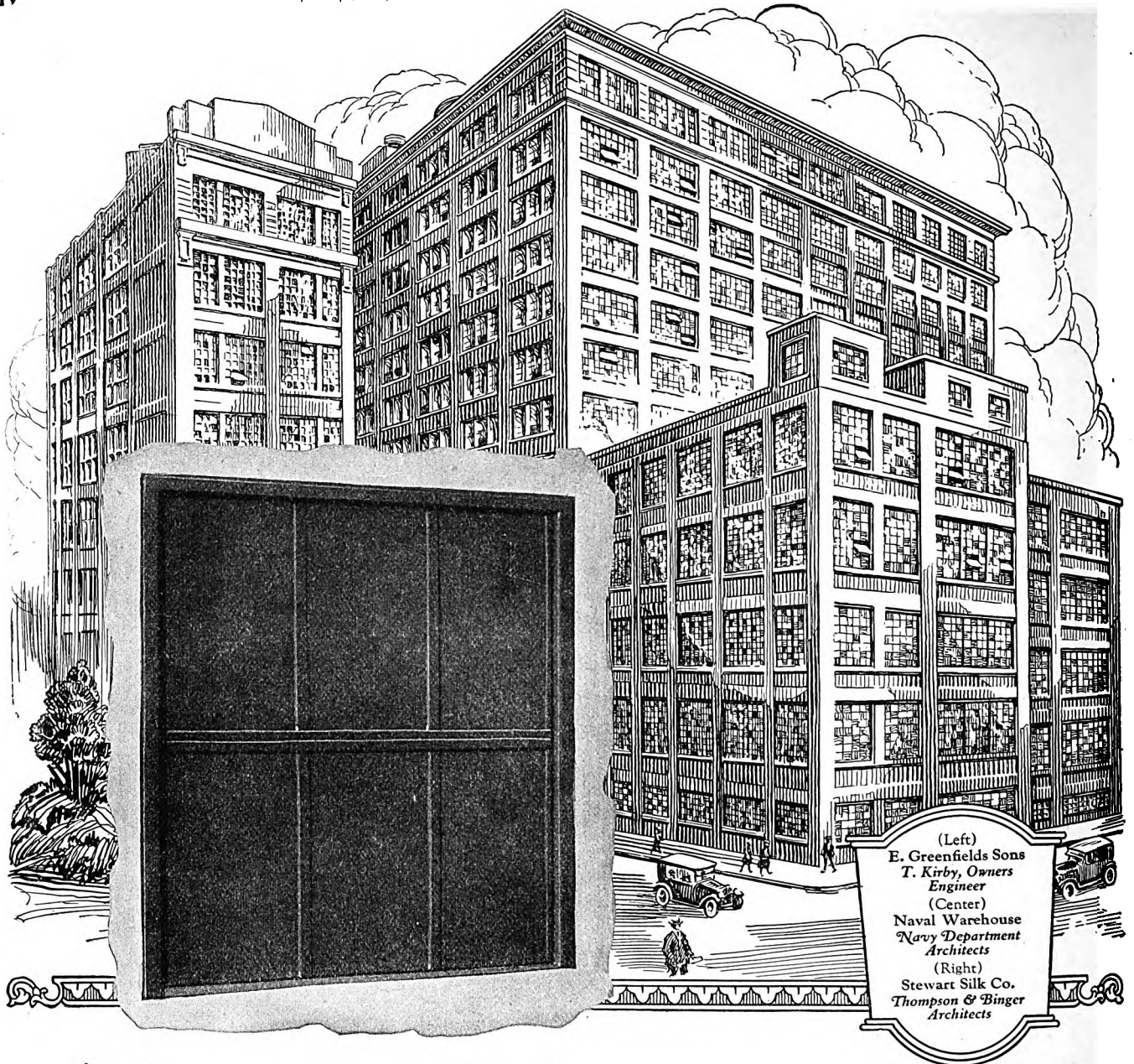
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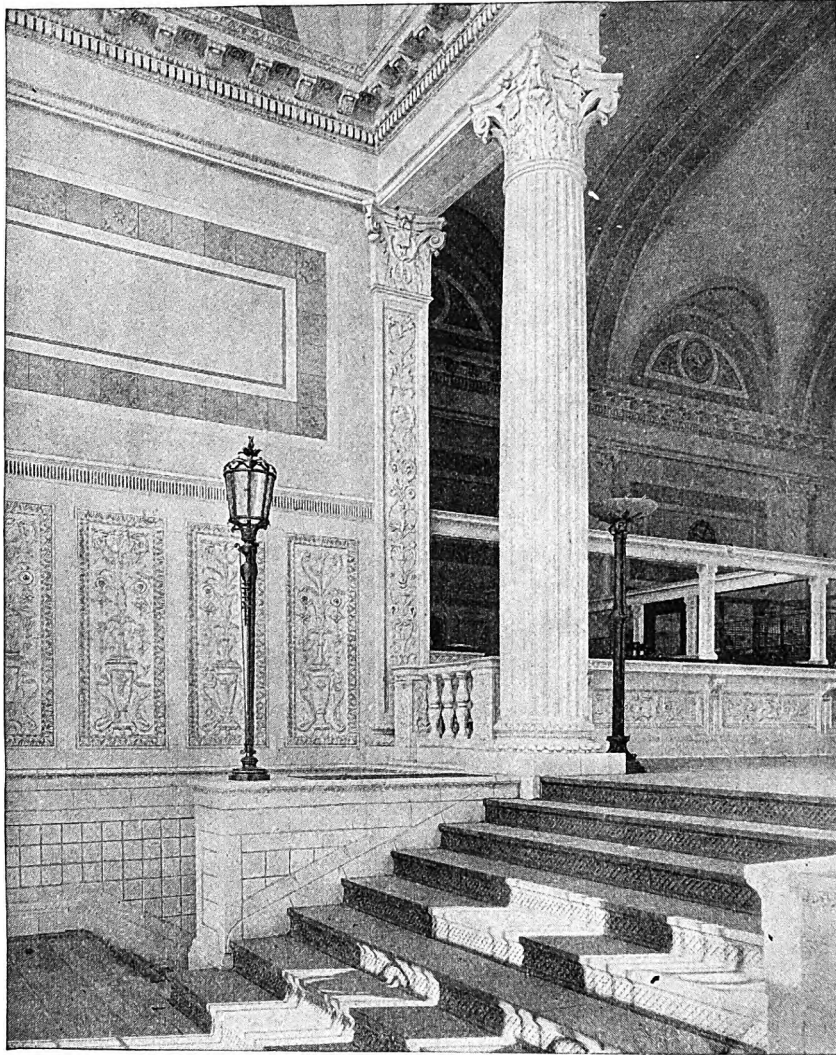
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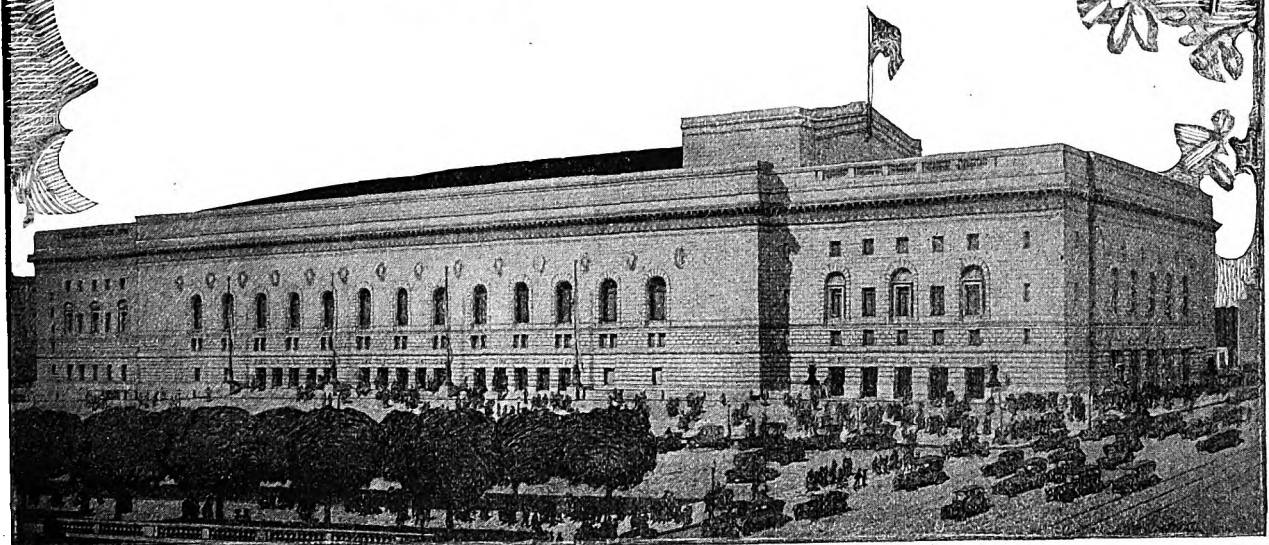
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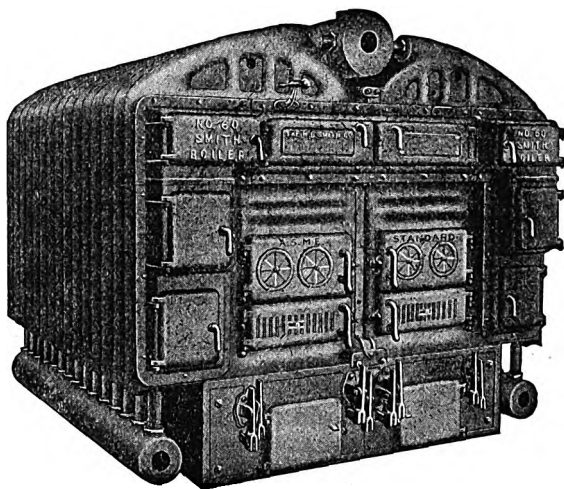
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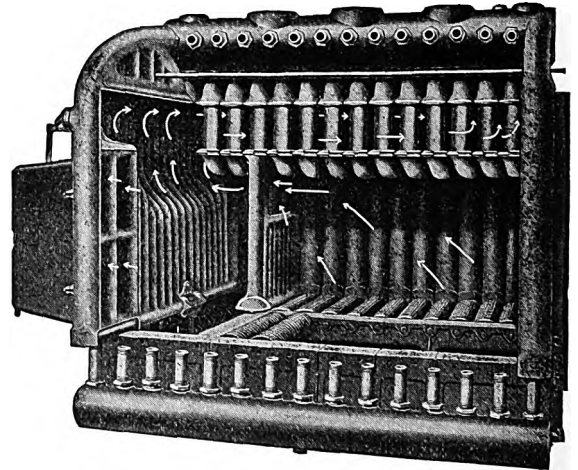
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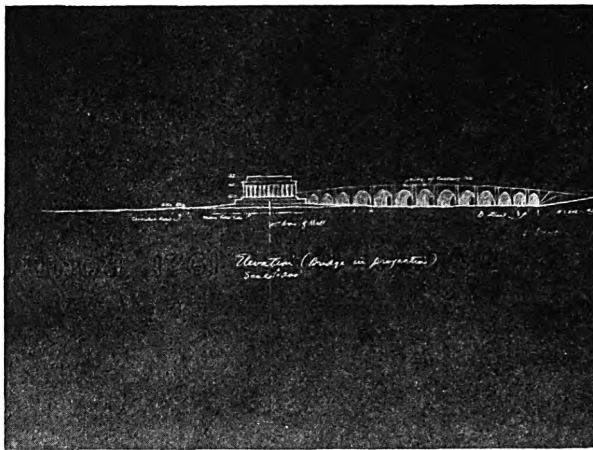
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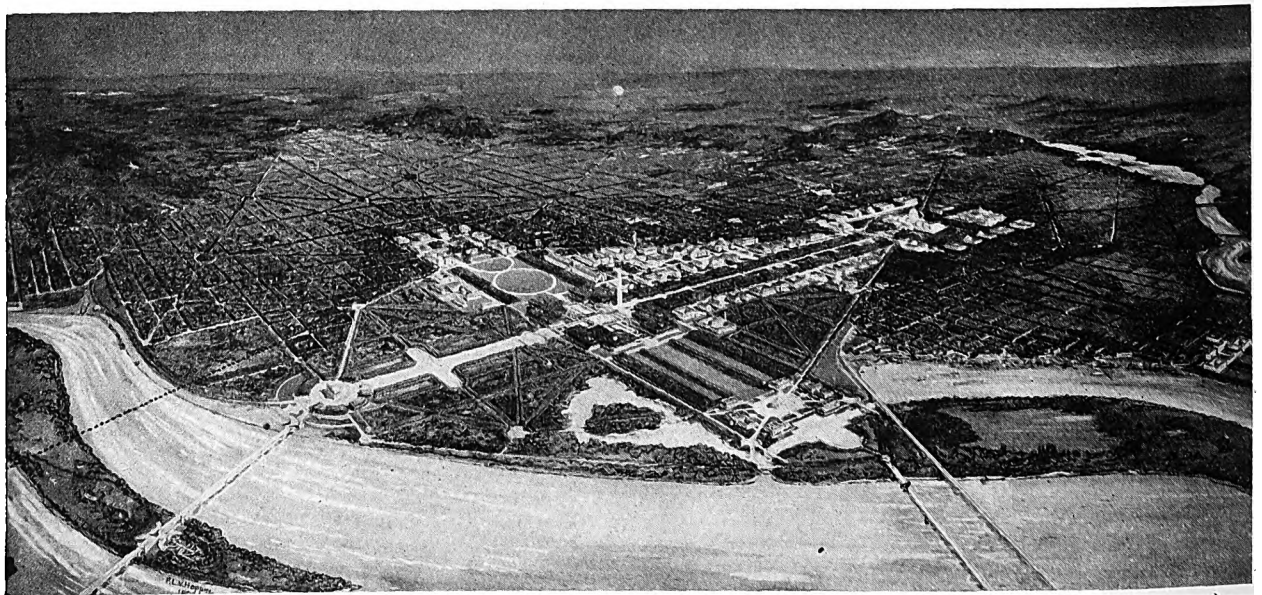




## The Arlington Memorial Bridge Proposal at Washington

Plan showing the development of Washington as laid out by the Commission of 1901, and indicating the site selected for the Arlington Memorial Bridge. The Arlington Memorial Bridge Commission has presented an alternative plan by which the bridge would cross the river higher up and at the terminus of New York Avenue, as shown by dotted lines in the illustration, which would then be carried through the present Naval Hospital and grounds. The Commission of Fine

Arts has had this proposal under consideration and has submitted a report adversely thereto and has expressed the hope that no deviation be made from the plan of 1901, which was of course the basis for determining the location of the Lincoln Memorial. The small sketch above, by Mr. Henry Bacon, Architect of the Lincoln Memorial, shows how the New York Avenue location of the bridge would make it compete with the Memorial.



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## Shadows and Straws

**F**EW MEN THERE ARE, caught in an avalanche, who would exhibit that rare philosophic poise which would cause them to reflect upon the futility of clutching at the nearest object. Yet it is certain that when everything is coasting down the mountainside with precision, velocity, and unanimity, the human caught in the track is destined to go along. Therefore, in the midst of the present day avalanche of censorships and restrictive laws, it seems hardly worth while to clutch at the decision handed down by Magistrate George W. Simpson—Hail to his name!—in the Municipal Court of New York City on 12 September last. The Society for the Suppression of Vice had sought to restrain the further issuance, on the grounds of obscenity, of three books by three writers who believe that a function of literature is to portray life as they see it and to provide a basis for passing judgment by seeking to discover why it is that people act as they do, no matter into what field the study may lead. It seems unbelievable that in this day and age there can be opposition to any such beliefs, and it is at least some satisfaction to know that the S. for the S. of V. was sent home to think over a very intelligent opinion as expressed by Magistrate Simpson. It may be a straw to clutch at but we doubt it.

On the very same day, for example, it was announced that the theaters of New York City will in future submit their productions to a voluntary censorship by 500 "intelligent citizens." The quotation marks were used in the press, which may indicate that some editors were sufficiently sensible to realize that no really intelligent person would presume to set up standards of right and wrong for others, either in esthetics or in morals. That kind of person is too busy in trying to set up standards for himself. It is only the snobs—the dull and the stupid—who are so eager to lay down the law. It might be noted, in this case, that there are certain extenuating circumstances, for the voluntary censorship is an effort to head off the legal (political?) censorship that has so

long threatened. However, the experience in the moving picture field does not inspire one to believe that the result will be any different in the case of the legitimate theater. We are far too dull, as a nation, to perceive that the only remedy for what may be considered as degeneracy in art or in morals is more liberty—not less.

The true libertarian will here rise to remark that character is not formed on an intellectual diet of carefully disinfected platitudes. That human beings are not made strong by being spared the "bright face of danger" but by being taught to look upon it light-heartedly. That men are not made good by laws which restrict their liberty but only by learning to use that very liberty by which all men and all nations must in the end be tested. That art is not propagated in the hothouse of expurgated, sterilized and standardized respectability, where the shades are always down, but in the clear air of liberty where all beauty is seen to be pure. Every step toward the censorious and legal manacling of the mind of man means a more and more dangerous sapping of the one fibre that can carry us on—the power of clear thinking.

We agree, of course, but one might also inquire what it is all about anyway? Is it because economic pressure has risen until it is straining the bonds that confine it? We think so. We think that wise men see that some things will have to be changed, just as all wise men have ever seen. But the dull and the stupid, who fear the very word change, believe that it can be prevented by taking away, one after the other, every liberty of the individual. If thinking could only be made a capital offense how happy the dull people would be!

But the approaching condition is one in which "morals," so-called, will be made safe by law. Art will be made secure by emasculated premeditation. The spectacle is either too tragic for words, or too comic for laughter. On the whole, perhaps, 'twere best to let ourselves be comstocked and bowdlerized without further ado. Then we can return to the ad-

venturesome joy of hiding our dime novels under the bed, as we used to, and that was some fun. On with the laws, censors, commissions, amendments! Away with the Bible and the work of every great artist since time was! Let purity reign. Some art will still be bootlegged, we opine, and that may prove to be the most certain way of making it universally precious. Recent experience might be taken to indicate that the real hope for art lay in its merciless suppression.

As for architecture, one hardly dares predict. It is involved with property rights as is not the happy situation of drama and the dance and the other arts generally. Likewise, architecture is very difficult to hide. "But that," as a great Mythlodatian ruler is said once to have remarked, as he signed an order for the immediate demolition of a building that had singularly offended his eye, and affixed his royal seal to a warrant calling for the instant decapitation of the designer thereof, "is one of the things that architects ought never to forget."

EXPOSING OURSELVES to what we believe to be a wholly unwarranted charge of pessimism we think it fitting to point out in connection with Mr. Stein's article in this issue that the housing dilemma is not by any means over. Certain New York newspapers have trumpeted their great services abroad—one for having paved the way for Mr. Untermeyer and the scandals he exposed, the other for its irresistible panacea of tax-exemption as a means of getting more houses. Likewise the single taxers generally have heralded this latest experiment of New York City—this involuntary and unwitting confession that the American low paid worker cannot support himself decently out of his

wages—as a marvelous demonstration of the single tax as a universal panacea. We hope that no one will accuse us of having ignored land monopoly as the primal curse of man, but it is certain, if one will but examine the housing that has been provided under the tax exemption law of New York City, that something more is needed if New York is not to quit the frying pan for a hotter fire than it will be able to bear. The facts are that no newspaper in New York City, so far, has been willing to face the real difficulty in dealing with the housing situation, and that the single taxers have no basis for pretending that here the occupants of the houses have in any way been benefited. True, it is not a bona fide application of the single tax theory, which is all the more reason why its partisans should withhold their judgment and bestow a more critical examination upon the kind of housing and the environmental conditions that have been the result of New York's experiment.

MANY things have been left over from the war and one of these is the renewed rivalry between Trieste and Venice. It now bids fair to take form in the development of the Port of Venice, although reports indicate that this is to be done without in any way affecting the "historic and artistic associations of the city." The project seems to be under way, as accounts refer to the new canal as having been opened by the king, the construction of three large docks, and the contemplated provision for three miles of wharves, the area of the port when completed to be larger than that of Venice itself. The work is being carried out by the State, the City of Venice and a private company, eighty million lire having already been spent. C. H. W.

## The Autobiography of An Idea

By LOUIS H. SULLIVAN

### CHAPTER V.

#### *Newburyport*

THE train now well under way for Newburyport, our poet, he of the dream-life, crawled forth from his cave of gloom and began to take notice. Soon he was all notice and no gloom. His prior and only trip in a railway train was now over two years back in ancient history, which signified oblivion. Hence all was now new and novel. He began at once, at the very beginning of the beginning, that intolerable, interminable series of questions which all children ask and no mother can for long stand the strain of answering. He did his mother the wholly unsolicited and unwelcome honor of assuming as a finality that she knew the names of every farmer along the route, that

she knew why the trees went by so fast, why the telegraph wires rose and fell and rose again; that she was personally acquainted with the conductor and the brakeman. At the forty-seventh question, Mother, who was only twenty-eight and not very strong, became drowsy with fatigue just as her son was becoming rigidly interested. Mother was not the only one asleep: everybody was asleep; and he noticed that they were all greasy with sweat and dust and grotesquely relaxed. He was intent on knowing the brakeman's name. For that purpose he moved up the aisle, managed to open the door, was on the platform and would have been pitched to Kingdom Come as the ramshackle train rounded a sharp curve, had not a white-faced brakeman grabbed him, thrust him back into the car and, with a string of New England profanities, wanted to know why in thun-

## THE AUTOBIOGRAPHY OF AN IDEA

der he was out on the platform. The child replied that he had come to ask him his name: to which the brakeman replied: "Wall, I swow, you be a cute un; you'll be President some day." So the child immediately transferred his questionnaire from oblivious Mamma to his wide awake new friend whom he found good natured, and much amused, and whose name as far as this recorder knows, may have been Matthew, Luke, David or Moses—all favorites, in that day; but there were also many Johns, James, Marks, Samuels, Ezechias—but no Solomons. He put the brakeman through an exhaustive examination and cross-examination concerning this, that and the other, after he had induced him to detail his family connections and home life, and to give assurance that he was not a Papist, and had not hated his teacher.

Then began the technical inquisition: Why did the wires move up and down all the time? What were the wires for? Why did the poles whizz by? What did "telegraph" mean? What made that funny noise all the time, click-a-lick-click-click, click-a-lick click-click-click? And so on and so on. He was amazed at what the brakeman knew. It was *wonderful* how much he knew. Then came a toot for the next station; the brakeman swung open the door, let out a yell that startled the child, reminding him of the Baptist minister in South Reading, and began to twist the hand-brake with all his strength. The child saw all this through the open door. How wonderful that one man could be so strong as to stop a car that had been going so fast. Wasn't it splendid to see a man in action? He adopted "Luke" immediately. At the station Luke helped him down the steps, and he began verifying certain statements. For Luke had only *told* him: he wanted to *see*. So he examined the link and coupling pins, the flange on the wheels, the iron rails which he found badly frayed from wear, the open joints, the fish plates, the spikes, the ties, and was crawling under the car to examine the trucks when a strange man yanked him out and asked him if he was crazy. The bell rang; the brakeman hoisted him aboard before he had had time to go forward and ask the engineer his name, and the fireman his name, and how much wood it took, and what made the choo-choo. True the brakeman had told him all about it, but that wasn't seeing; and besides he wished to know the engineer and the fireman personally, for they must be great men—it must be a wonderful man who could keep the engine on the track and steer it around all those curves as the brakeman said he did. And the brakeman said the fireman expected to be an engineer some day, but that he himself didn't expect to brake no cars all his life—it was just hell in winter; and he went on to tell of his ambition, said he'd be damned if he'd work for anybody much longer; he'd saved up some money and was going to have other men work for *him*, and he'd make more money out of *them*.

He'd drive 'em, he said; he'd learn 'em what a day's work meant when they worked for him, he would; and so on, excitedly. The child took no interest in this and wandered back to his mother, who, having observed him in safe hands, had not troubled. He started in to tell her all about his new friend, what a great man he was, that he wore three woolen undershirts in winter, and knew the name of every station, and all about links and pins, and engines and telegraph and everything, until Mamma wearily turned toward him and gasped: Louis! Louis!! *Mon dieu*, you are a pest! Louis thought it strange that his mamma was not interested in what interested him, yet failed to reflect that the brakeman's get-rich romance had bored him. So on went the train swaying, rattling, banging, clanking, sinking suddenly, rising suddenly, screeching infernally around the curves, amidst smoke and dust and an overpowering roar. Soon there were two bedraggled ones sweatily sleeping side by side, and from the roar unfolded for one of them a dream of much mixed up brakemen, wheels, engineers, telegraphs, wood, links, pins, firemen, trucks—but no conductor: the conductor had not interested him, for he had a big belly, a heavy gold watch chain across it, gray chin whiskers, wore spectacles and did nothing but walk up and down, punch tickets and stick bits of card in people's hats. Faintly the brake-wheel creaked; and a distant voice seemed to call the name of a station—NEWBURYPORT!

\* \* \*

The town, in, by and of itself, made no first impression on him, other than one of quiet commonplace. It was not very different from the village of South Reading, only it was larger and had more streets and houses.

The family had taken quarters in an old-looking building called a hotel—a word new to the child. The hotel fronted on a square in which were trees, and on the other side of the square but not opposite the hotel was the town hall, and in front of the town hall was the town pump—of which, more later. Thus the family "boarded" at the hotel. The dining room was a large dreary cave containing one long table at which the boarders sat facing each other. From the middle one could not see the ends of the rows of vacant sallow faces. The family had places in the middle—Louis sitting next to Mamma. He was hungry—always hungry. It was their first joint struggle against dyspepsia. Not much was said for a while; then Louis, in confidential tones, suitable to a pasture, uttered this sage judgment: "Mamma; this gravy isn't like Grandmamma's gravy; this is only just a little flour and water!" Mamma made big eyes and grasped his arm, a titter went along the opposite row, napkins to faces, whispers exchanged, some rude persons laughed, and some one said "Hurrah!" Lucky Grandpa wasn't there—the ceiling would have fallen. Everybody was

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stunned at the child's bravado, but assent was beaming. Perhaps, even, they yearned for some of Grandmamma's gravy; why not: if they but knew. The child looked at the opposite row of faces in astonishment. What was it all about? If the gravy was only a little flour and water, why not say so? Besides, he was only talking to Mamma anyway. And moreover he did not see anything to laugh at, at all. It was a serious matter, this flour and water.

Mamma said she would tell him something after a while when they were alone. And she did. According to her view, children, in public, should be seen but not heard; they should speak only when spoken to; they should be well mannered, circumspect; they should especially be respectful toward their elders; they must never put themselves forward, or try to be smart or show off, or otherwise attract attention to themselves; must remain in the background; speak in subdued tones and say: "yes, sir," "no, sir," "yes, ma'am," "no, ma'am," and she thus went on setting forth a complete code of ethics and etiquette for children in general and for her child in especial particularity, for she trusted he would not become, so she said, a young ruffian like other people's children that were devoid of table manners in particular, and used the language of the streets. This was Mamma's theory. In practice she vacillated, oscillated, vibrated, ricocheted, made figures of eight and spirals in her temperamental emotionalism and mother love, meanwhile clutching at the straw of her theory. And this was not all. Secretly she kept a note book. In this she entered carefully and minutely all the wonderful sayings of her son as observed by herself, or as transmitted in long letters from Grandmamma. True to form, she immediately entered the gravy item, wrote a long letter to Grandmamma about it, confessed she nearly strangled in suppressing her delight; and how the other people present were convulsed, as a loud voice, within the dining room's wilderness, proclaimed the unholy truth that this was not like Grandmamma's gravy—it was only just a little flour and water. Officially the child was squelched; and officially Mamma kept an eye to weatherward. But in her secret book she gave way to self flattery.

Not so with Father. There was no sentiment, no nonsense about him. He would not rave for thirty minutes over a single blossom; a brief moment of appreciation sufficed; during which he would express regret at the absence in him of the sense of smell. This was the regular formula—unless it came to "Scenery." What he had fixed firmly in mind was a practical program fitted to a child that had grown up like a weed—a program of physical training, combined with presumptive education and sure discipline. This program he set in motion by pulling his son out of bed at five in the morning, standing him upright, hurrying him into his clothes and leading him by the hand straight to the town pump. Here Sullivan Senior

pumped vigorously until certain the water was of lowest temperature; then he gave unto the child to drink. The child, as commanded, drank the full cup, shuddered, and complained of the chill. Well, if he was chilly, he must run,—to establish circulation—again a new word. There was no help for it. After a sharp quarter mile, the son of Patrick Sullivan was convinced that "circulation" was now established, and said so. They settled to a brisk walk. At the end of two miles they came upon a narrow arm of the sea, which spread into a beautiful sequestered pool, at the point reached, with water deep, and clear green, and banks quite high. Strip! was the order. Strip it was. No sooner done than the high priest dexterously seized the neophyte, and, bracing himself, with a back-forward swing cast the youngster far out, saw him splash and disappear; then he dived, came up beside a wildly splashing sputtering unit, trod water, put the child in order, and with hand spread under his son's breast began to teach him the simple beginnings of scientific swimming. "Must not stay too long in the water," he said. "Would Sonny like a ride astride Papa's shoulders to a landing?" Sonny would and did. He gloried as he felt beneath him the powerful heave and sink and heave of a fine swimmer, as he grasped his father's hair, and saw the bank approach.

On land he took note of his father's hairy chest, his satiny white skin and quick flexible muscles over which the sunshine danced with each movement. He had never seen a man completely stripped, and was pleased and vastly proud to have such a father, especially when the father, an object lesson in view, made exhibition dives and swam this way and that way in lithe mastery. And he asked his father to promise him he would teach him how to do these things, that he too might become a great swimmer. For he had a new ideal now, an ideal upspring in a morning's hour—a vision of a company of naked mighty men, with power to do splendid things with their bodies.

The return journey passed quickly and excitedly. Would Papa take him again to the pool? Yes, Papa would take him every morning to the pool. And would he have to swallow any more salt water? Not unless he opened his mouth at the wrong time. And why was the water salt, and why did it tingle the skin so queerly? Because it was sea water. And would Papa show him the sea? Yes, Papa would show him the sea, and ships under sail; and Papa would some day take him to the shipyards where ships were built. Ah, what prospects of delight! How big the world was growing, how fast the world was spreading. Had not Papa promised him?

The dingy hotel loomed ahead; a mighty craving arose. To the child, the bowl of cold oatmeal was super-manna. Father's dietary law was strict:—simple foods, no coffee, no tea, no pastry, a little meat; and strictly taboo was white flour bread, for the millers

## THE AUTOBIOGRAPHY OF AN IDEA

had even then begun their work; lots of milk, some brown sugar, plenty of greens and fruit, potatoes only when baked, or boiled in their jackets and so eaten, no greasy things; and at times a tiny sip of claret as a bonus. His time-law for young people was: taps at eight o'clock, reveille five o'clock. He put his son through a fine and highly varied course of calisthenics to make him supple and resilient. He took him daily to the pump and the pool, made of him for his age a competent diver and swimmer, made him vault fences, throw stones at a mark; taught him to walk properly—head up, chin in, chest out; to stride easily from the hip, loose in the shoulders. And the child worked with gusto; it became play; for the father did all these things with him jointly—they even ran races together, and threw stones at marks, in competition. Surely it was intensive training; but Father was wise in these respects: he knew that where there was hard work, there must also be leisure and relaxation, and time for carefree play. Father was forty-five then, and wondrous wise for his day and generation. To be sure his profession gave him the time to spare.

So, the family frequently went a-picnicking to the lovely banks of the Merrimac River, and elsewhere to shady groves and beauty spots.

This Sunday, it was the first trip to the Merrimac—a clear, calm summer day, not too warm.

They found, at a bend of the river, a bit of greenward, sufficiently shaded, yet leaving an open view of the woods across the water.

The great stream flowed by tranquilly: its dark brown mirror solemnly picturing woods and sky.

The child had never seen a river. Was it not wonderful, this river so wide, so dark, so silent, so swift in its flow? How could such things be? Why had he not known?

Here and there a small fish jumped, leaving a pretty circle of ripples where it fell; and then arose into the air an enormous sturgeon, to fall heavily back, making a great hole whence came a rush of circles expanding magically to the shores, causing sky and trees to totter and twist; then all would be calm again and silent, as the great stream flowed on and on careless of trifles; on and on, so Papa said, until its waters should mingle with the sea's; on and on, day and night, winter and summer, year after year, before we were born, when we are gone, so Papa said, its waters had flowed and would evermore flow to the sea.

Papa and Mamma had begun to draw pictures of the opposite shore, and were absorbed in the doing.

The child watched sturgeon after sturgeon leap and fall; they seemed to shoot out of the water's surface. He had never seen such big strong fishes; he had seen nothing larger than minnows and sunfish in South Reading. But here on this river everything was large.

So thinking he wandered downstream along the

water's edge, musing about South Reading, recalling his rivulet, his dam, his marsh. How small they seemed. And then there arose his tall, slender elm, his great ash tree to comfort him. Mechanically he ascended a hill, entered a heavy grove, musing, as he went, upon the great river Merrimac; lost in the thought that the world about him was growing so large that it seemed out of proportion to him—too great for his little size, too bewildering for his untutored mind. Meanwhile something large, something dark was approaching unperceived; something ominous, something sinister that silently aroused him to a sense of its presence. He became aware; he peered through the foliage. What was it? He could not quite see; he could not make out; except that it was huge, long and dark. He thought of turning back, for he was but a little boy, alone in the woods bordering a dark-running river whose power had stilled him, and the lonely grove that stilled him; he was high strung with awe; he could glimpse the river; he was moving forward, unthinkingly, even while he thought of turning back. The dark thing came ever nearer, nearer in the stillness, became broader, looming, and then it changed itself into full view—an enormous terrifying mass that overhung the broad river from bank to bank. The child's anxious heart hurt him. What could this monster mean? He tried to call for Papa, but found no voice. He wished to cry out but could not. He saw great iron chains hanging in the air. How could iron chains hang in the air? He thought of Julia's fairy tales and what the giants did. Might there be a fairy in the woods nearby? And then he saw a long flat thing under the chains; and this thing too seemed to float in the air; and then he saw two great stone towers taller than the trees. Could these be the giants? And then of a sudden, mystery of mysteries, he saw a troll, not much bigger than a man, come out of the fairy forest, driving a fairy team. The troll went right across on the flat thing that floated in the air, and vanished. This must be the land of enchantment that Julia told about. A wicked wizard has done this thing. A giant will come soon to eat up a little boy. And the trees murmured: "Yes; a wicked wizard has done this thing—a giant will come to eat up a little boy—goodbye, little boy"—and the river said: "goodbye little boy"—and the great iron chains said: "goodbye little boy." The child shrieked: "Papa! Papa! Papa!" Instantly Papa appeared—ah, the good fairy had waved her wand in the enchanted wood! Papa had become concerned at the child's long absence, and was angry that his son should have gone away without asking permission. He had intended to spank the child; but one look at that upturned face, at those eyes glazed with approaching madness halted him in alarm. "What's the matter, Sonny? Did something frighten you?" "Oh, Papa, Papa, see the big iron chains hanging in the air, see the two giants turned to stone,



see the flat thing floating in the air. A troll just came over it with horses and wagon. I am to be eaten up by a giant. The troll with the magic wagon is coming to get me now. I am to be eaten by a giant, Papa; the trees have just said goodbye, little boy; the river has said goodbye, little boy; Oh, Papa, did the good fairy send you to save me?" Papa, thoroughly alarmed, impulsively said: "Yes, dear"; then, soothingly: "Sonny, you must not listen any more in memory to Julia's Irish tales. They are not true, now. There are not any giants or goblins, or trolls or elves or even fairies any more anywhere. They lived only in people's fancy long ago, when Ireland was young. It is only the *tales* that are told today—for the Irish have ever loved romance. Their heads are filled with queer notions. They imagine things that are not so. Papa lived in Ireland once; he knows what is true. Now we will go to the bridge and see it all." "And what is a bridge, Papa?" "That is what you are to see. Don't be afraid. It won't hurt you." So they went to the nearby bridge. As they crossed to the Amesbury side the Father felt the nervous clutch of his child's hand about his forefinger. His own mind began to clear; now the child's mind must be cleared. So he explained that the roadway of the bridge was just like any other road, only it was held up over the river by the big iron chains; that the big iron chains did not float in the air but were held up by the stone towers over the top of which they passed and were anchored firmly into the ground at each end beyond the towers; that the road-bed was hung to the chains so it would not fall into the river. That the bridge was so strong that many people and loaded teams could pass over it at one and the same time; and as he said this, happily some teams and people came and went. Father was clever in making simple explanations of things he knew something about. This expertness came of his long training in teaching little tots to dance. His skill and patience in this respect were fine art. So, gradually, he brought his son out of nightmare-land into the daylight of reality. For shameful fear, he substituted in his son's heart confidence and courage. Thus was the child-mind freed again to wonder what men could do; to adjust itself to the greater world into which it had been suddenly catapulted from South Reading's tiny world. Within that little spot of earth he had never seen a river, never a bridge, for neither river nor bridge were there to be seen. On their way to rejoin Mamma, the child turned backward to gaze in awe and love upon the great suspension bridge. There, again, it hung in air—beautiful in power. The sweep of the chains so lovely, the roadway barely touching the banks. And to think it was made by men! How great must men be, how wonderful; how powerful, that they could make such a bridge: and again he worshipped the worker.

Mamma had become alarmed; but Father, on the approach, gave her a hush-sign. Evening was on the wing; dew was in the air; dark Merrimac still flowed, sturgeons still leaped high, a cricket chirped its first, cheerful note. They returned to the dismal house of flour and water.

The child was soon abed; the father sank into deep thought: this would never do; the boy must be protected against himself; he was overexcitable; he must not be let go into the woods alone, nor near any mystic thing. His blood must be cooled—more water; no meat; his mind must be directed to everyday things; he would take him into the active world, to the shipyards, to see ships a-building; he would take him to Plum Island, to get the salt sea air, to see the real ocean, with its ships coming and going under full sail; he would explain all these practical things to him and keep his mind wholesome; he must be educated to realities, disciplined, shown life as it is. And Father, thus ruminating, turned in.

Now they are at the shipyards, father and son. Four or five ships are in progress on the ways; others are being rigged in the slips. One is a skeleton, another almost ready to launch. There is much hubbub; men going here and there. The strident song of the caulking iron saws the air; odor of tar everywhere; fine view of the harbor, craft of all kinds moving this way and that—some at anchor. Here in the shipyard were crowds of men working, doing many things, all moving at the same time—all urging toward a great end. The child was in a seventh heaven; here were his beloved strong men, the workers—his idols. What a great world it was into which he had been thrust—the great river, the wonderful bridge, the harbor, the full rigged ships so gallantly moving. And what new words too—circulation, calisthenics, catenary, dietary, suspension bridge and others, that seemed very long, very strange indeed. Was he also entering a world of words? Were there many more such words? Eagerly he watched a man working with an adze. The man was lying on his back and chipping overhead. Then the man turned on his side and chipped sidewise; then he chipped between his feet and in front of his feet. Was it not wonderful? He had never seen an adze, nor a man at work with an adze. Here, the man took off heavy chips and there only thin shavings; was it not wonderful? He wished to talk to the man, but the man was too busy; perhaps the man wished to keep his feet to walk home with. And all the other men were too busy to talk to him; they did not seem to know he was there, except one man near a kettle of hot tar who told him to get out of the way. And there were men boring holes in great planks; other men steaming planks, other men carrying planks, other men bending the planks against the ribs of the ship, other men driving in with sledge hammers great iron bolts to keep the planks in place, and these men,

## THE AUTOBIOGRAPHY OF AN IDEA

he guessed, had no time to talk to him. He wondered why the ships were all set stern-end toward the water. He wondered how "they" were going to get them into the water. And there were men who drove oakum—a new word—into the joints between the planks. They did it with a thin wedge and a funny looking mallet, and made a sound that beat upon his ear drums. He could get near enough to some of these men to talk to them, but they were too busy to hear him; and he saw men painting another ship which was all ready to be pushed into the water. And there was such a rush and crowd of things that were new to him that he was joyfully dazed—very happy, very serious.

He had his first view of the power of concerted action; but he did not look at it that way. To him it seemed the work of individual men working separately, or of small groups of men helping each other—a great crowd of men each doing his own work in his own way. To be sure, he saw men walking about who spoke to the workmen, and the workmen always had time to listen to these men. In the great confusion he had not sensed order, and therefore did not ask Papa about it. Yet he saw the ships grow, and saw the workmen make them grow.

He walked all over the place with Papa, ever inquisitive, peering here and there. The hum of work was everywhere. He keenly sensed its greatness. What could men not do if they could do this, and if they could make a great bridge—suspended in the air over the Merrimac. He poured forth his questions and Papa answered them pretty well, but a bit pedantically where he was not posted. He used too many big words. He concealed with them what he did not know.

A few days later father and son saw the launching of a ship, and the child had another spasm of wonder, for the ship seemed to him to launch itself; he did not see any men pushing it, and Father recited something about "she seems to feel the thrill of life along her keel," which he said was poetry because it all rhymed, so the child learned at once what poetry was—it was a *new word*. And again came the regular questionnaire, and again Father did his best, using however, so many strange long words that the child became drugged and drowsy with them and said he wanted to go home, so they both, father and son, went home.

And soon the child began to tease to be taken to Plum Island, to see the ocean his father had talked about. Strangely enough there wasn't any ocean at South Reading, any more than there was a great river and a wonderful bridge there; any more than there was a great shipyard and a great harbor. At South Reading there was only a railroad and two ponds—a big pond and a little pond and some hills. So the son, accompanied by the father, went to Plum Island,

for he had said, "This is to be mine, isn't it, Papa?" And the father had relaxed at the idea.

There they stood, in a stiff salt breeze, on the sharply sloping rounded beach; some drifting clouds in a pale sky, some ships in the offing. True, he had seen the ocean at Cape Ann, seen it in furious, terrifying, storming moods, seen it as huge glossy ground swells, as glancing, dancing wavelets in the sunshine; but that was long, long ago when he was three; he had wholly forgotten what happened when he was three—and four—and five. He had forgotten even that he had fallen into a well there. He had, like the workmen in the shipyard, been too busy—all these years, these months, these days.

Even South Reading was fading before the glory of the new-risen day: this engulfing splendor of Newburyport, as they stood there, on the hard wet sand, two figures solitary, a mere speck, a minute accent on the monotonous miles of beach and pounding surf. The child looked far seaward, without emotion, save a sense of dull platitude, of endless nothingness, of meaningless extension. The sea was merely rough, without mood, dull in color, spotted here and there by a cloud's shadow. It left him indifferent, all except the green and white combing surf which was in merry mood. He wished to wade in but Father said positively no, the beach was too steep, the undertow too strong. Undertow? Undertow?—another word—more explanations. He built sand forts which the rising tide made short work of; he ran up and down the beach, waded in the dry sand, found some wild cranberry bushes. He ran back to Papa who was wrapped in thought, standing with folded arms, facing the sea. Far to the east, far over the waters lay Ireland, he said to his son. The son looked for Ireland; it was not to be seen; but he cried out of a sudden: "Papa, some of those ships are sinking! One is all gone but the top of the masts; one is just beginning to sink!" Father, who wished to educate his son, now found his work cut out for him. How explain the curvature of the sea? How explain the horizon? How prove that the ships were not sinking? He went at it bravely, patiently, doggedly, step by step; he even made diagrams on his drawing pad. Little by little the child grasped the idea; he brightened with intelligence. His Father had opened for him then and there a new, an utterly unsuspected world—the world of pure knowledge—vaster than the sea, vaster than the sky. And for the child, the portal to that limitless world was an illusion—a sinking ship.

Now it was time to return to Boston. The school must open soon. In the bustle of preparation the day he was *seven* passed unnoticed even by himself. Newburyport departed—Boston came.

(To be continued)

# Amsterdam--Old and New

By CLARENCE S. STEIN

A Dutchman was showing the sights of Amsterdam to a New Yorker. It was not the churches and museums or the bourse and office buildings that he pointed at with pride—New York, he knew, had more architecture that was monumental. It was Amsterdam, the living, growing, modern city that he was showing; blocks and blocks of orderly arranged homes, planned and started at the time that New York could devise no means of building for the homeless and yet could create gigantic garages and office buildings. The Dutchman tried to explain: "You see Holland is a poor country—we cannot afford monumental buildings—so we erect homes for the people."

Following the great war the long existing shortage of dwellings reached a climax in practically every city of the western world. Neutrals and participants alike suffered. Very few homes had been built during the war. Materials and wages rose in Switzerland and Holland just as they did in England, France, Germany and here in America. Each country tried to find a solution of the resulting abnormal scarcity of houses.

This is the tale of two cities, two great cities tested by the same emergency—two port towns that once bore names so similar—Amsterdam and Nieuw Amsterdam—and the way in which they handled the housing dilemma. Both are growing industrial cities; both owe their success to their splendid harbors. Nature has been more bountiful to the city of the new world. The extent and safety of its navigable water front are unsurpassed. It has solid land and rock on which to build. Amsterdam has been forced to make a sub-structure of piles on which to erect its city and to dig out much of its water basin. Transportation within New York is mainly by streets; in Amsterdam by canals. The Dutch city grew from a single island outward like a spider's web. Its dimensions gradually increased by a series of arcs of which its bay is the chord. Each arc is marked by a canal bordered by narrow tree lined streets. All are connected with the center by radiating roads and canals. No city has a more definite pattern—no city but New York. But what a different pattern! New York is the monotonous checker board without purpose or beauty. Manhattan (which was Nieuw Amsterdam, glories in its Broadway towers and Fifth Avenue show-windows that speak of the wealth and success of its merchants. Old Amsterdam was no less proud—but less ostentatious. The wealth of its merchants was satisfied with the simple, austere houses—each with its shining windows and polished brasses—that line the *Single*, the *Herregracht* and other canals. Both cities were alike in one thing,—they crowded their poor into the dilapidated left-over houses in the heart of the business section.

In spite of the war the two cities continued to prosper and grow. Their populations increased. More houses were imperative—yet in old Amsterdam as in New Amsterdam, the speculative builders who had supplied most of the houses in the past would not build. Costs were high, said the Dutch speculator—they would wait

until they came down. And so they said in New York—for after all, neither here nor there were the speculative builders in business to see that there was an adequate supply of houses—but to make an adequate profit. Speculative builders are the same the world over.

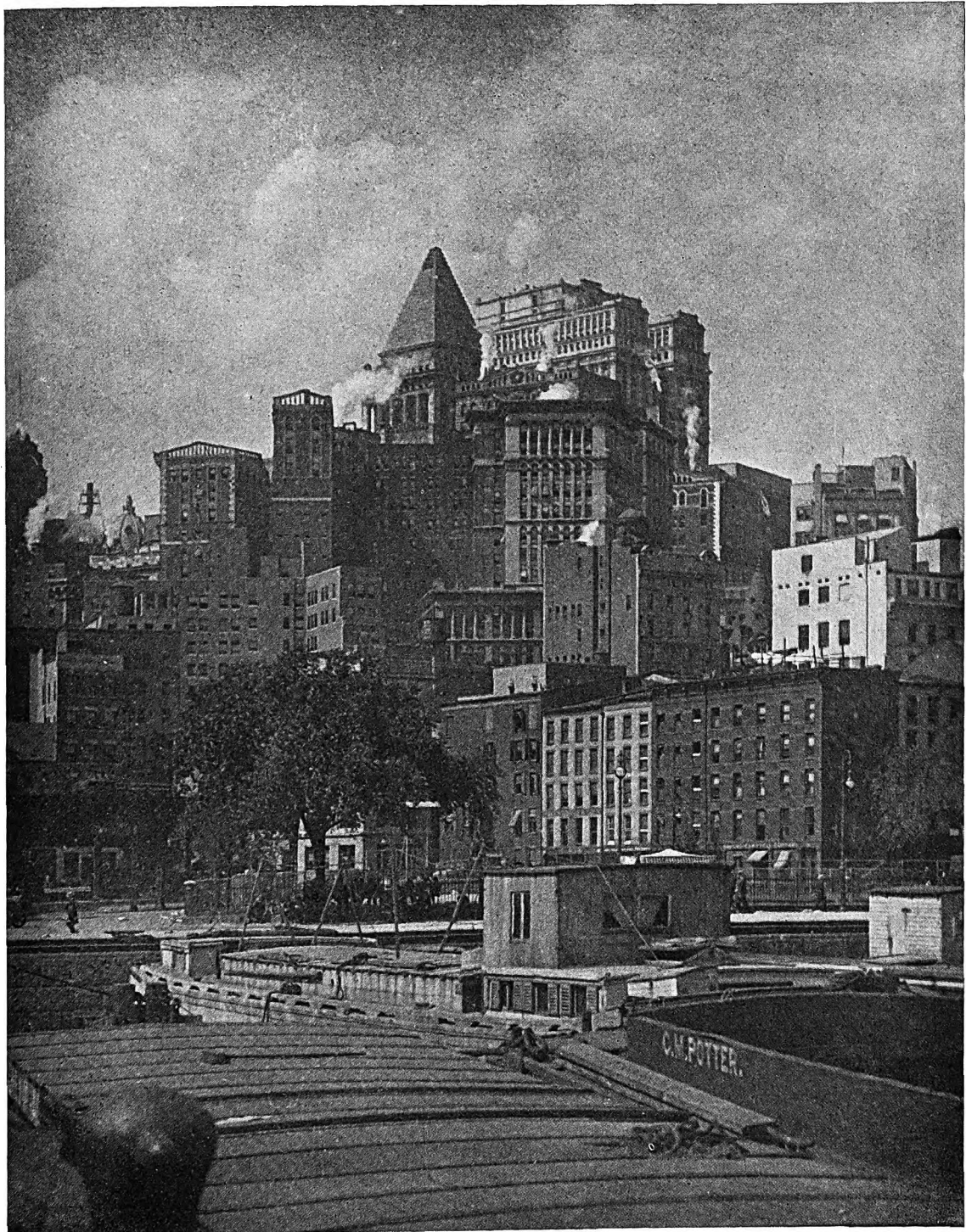
As to the emergency—Amsterdam was alert. New York had to be awakened to it by the cries of a class of people who had never felt the pinch before. If before the war, these New Yorkers had thought of the housing problem, they thought of it as something to be cured by law—the great American panacea. So they passed restrictive legislation and gave not the slightest thought to any constructive action. Something that was called the "law of supply and demand" was supposed to produce the needed homes, and so it did—for the well-to-do—in a quite unsystematic, tasteless and wasteful manner.

But the poorer half of the population could afford nothing but the worn-out houses that fell below the legal requirements for new dwellings.

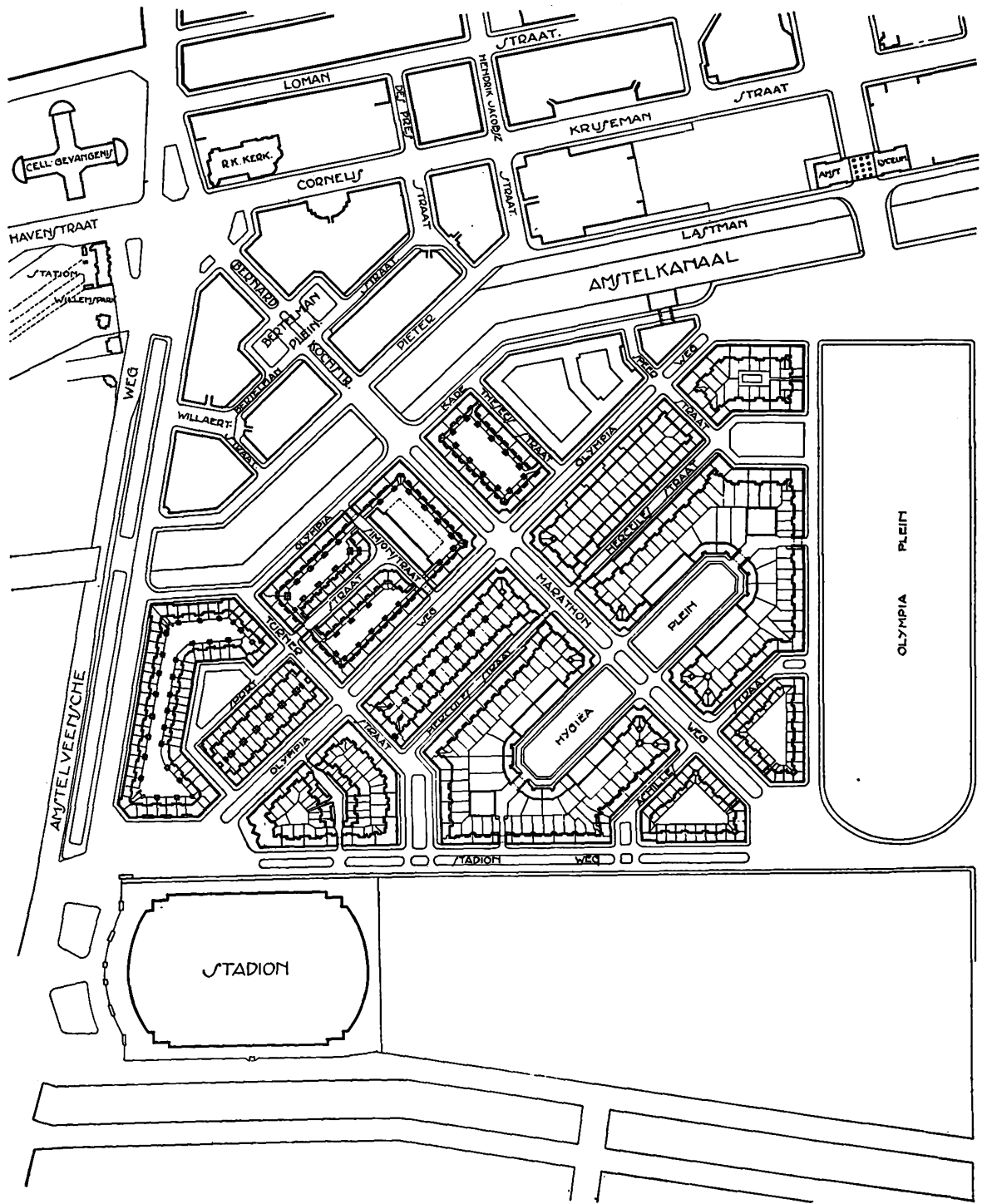
Amsterdam was better prepared for the housing climax. When speculative builders ceased building for fear of lack of profits, the people of Amsterdam didn't resign. They didn't throw up their hands and say "no profits, no houses." They had already tried out their emergency machinery—its elements had been long in existence. Dutch municipalities long have had the powers needed to secure homes for the people—in fact they had never been deprived of them, for they are considered by the Dutch as natural and inherent in any social fabric based upon the needs of men. Any city in Holland could acquire land for housing, build houses or lend money for that purpose. The national housing legislation of 1901 compelled cities to pass housing and building laws, to appoint housing committees and to make city plans. It also offered state aid in housing in the form of loans to local governing bodies or to the housing societies, which are similar to the British Public Utility Societies or our Limited Dividend Associations. These were able to borrow from the government as much as 100 per cent of the cost of the houses they erected. The rate of interest was fixed by the market rate of the state debentures on the Amsterdam Exchange. The loans, which were for a period of fifty years, were made by the national government, through the municipality, which was held responsible for the repayment. The societies are semi-public institutions. Their capital and their profit above that used in paying their limited dividend (4% until 1921—now 6%) can be used only for housing improvement. The societies cannot make a profit on homes; neither can those that dwell in the houses, whether the society be cooperative or not, and many of them are; the government will not permit occupants of the houses to resell their dwellings. If they no longer wish to occupy them they must return them to the societies,—for the house is not a commodity to be bartered. Housing in Holland—anyhow, for the manual worker—has for many years been looked upon not as a speculative busi-



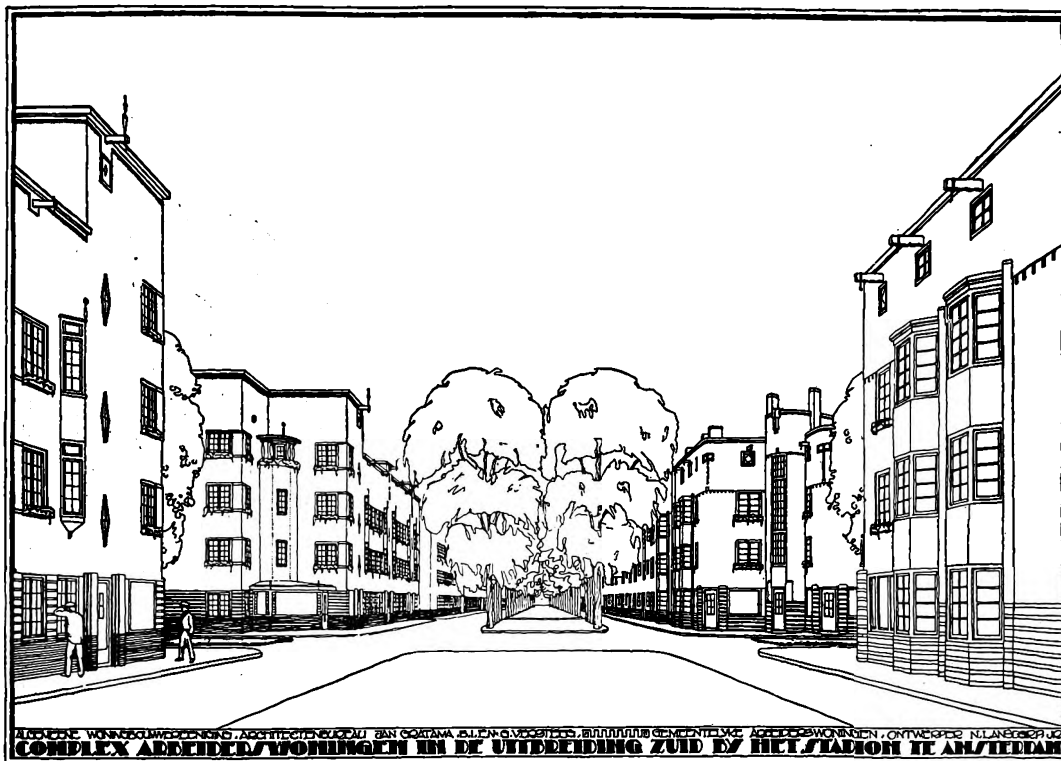




LOWER NEW YORK FROM THE WATERFRONT  
Henry Boak



GENERAL PLAN OF STADIUM HOUSING DEVELOPMENT, AMSTERDAM



DETAIL OF THE STADIUM HOUSING DEVELOPMENT, AMSTERDAM

It soon became apparent to every one of intelligence in Holland—as it might have in America—that houses were not being built because most workers could not possibly pay what is called an economic rent based on the inflated cost of building and the increased interest rates. Amsterdam and Holland faced the problem in a very practical way. Houses they must have. An economic rent could not be secured. So in 1919 the government decided to pay as a subsidy to municipalities or societies on all houses they erected the difference between the economic rent and the rent that a worker could afford. Three-quarters of this subsidy is paid by the nation, the rest by the city; it is given, however, only on condition that a reasonable rent is charged. The rents are fixed on the basis of one-sixth or one-seventh of the income of the tenant. Perhaps such drastic action seems to an American to be contrary to that spirit of independence which we would engender in every citizen, by pretending that he can without any cooperation take care of himself and his family under the rules of an economic system where the odds are all against him. Anyhow, it seemed to the Dutch—who are by no means lacking in self reliance and independence—the common sense way of meeting an existing problem.

As a result of emergency legislation passed in 1918 not only did the societies actively enter the field again but the municipal government also commenced to build directly. From 1918 to 1921 the city erected 2,169 houses while the societies constructed 3,705. There are today 1,058 municipal houses and 3,019 housing societies' houses in course of erection and both the city and the

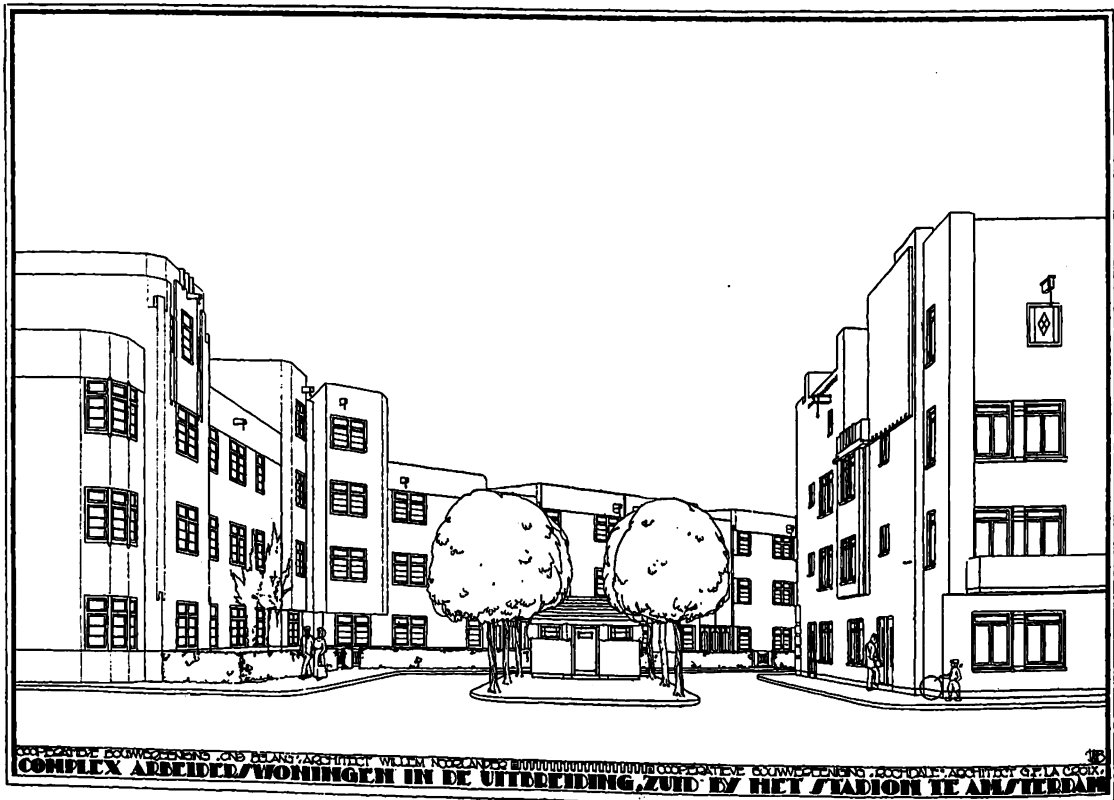
societies have more than doubled the numbers of dwellings planned. Supervision of the construction of all these houses, those of the societies as well as of the city, is under the control of the municipal housing department, which must approve all designs. In case a society fails the municipality must accept financial responsibility; in short, the responsibility of this whole colossal housing operation is centered in the housing department of Amsterdam, directed by a big calibre architect—Keppler by name.

In spite of the opinion of many of those who have had most experience and who have given most thought to the matter—that housing should be a service and not a business—the government ultimately decided to offer assistance to private builders. The speculators who had built 3,504 houses in 1912 and 1,756 in 1914 erected only 17 in 1919. At first the subsidy offered was based on the difference between the real cost at the time of erection of the building and the cost on which an economic rent could be charged—and there were certain restrictions as to the rental. These restrictions met with strong objection from speculators and they succeeded in having the law revised in 1920. The new subsidy is a fixed amount for each square meter with a maximum which was at first F2,000 (\$800) and is now F600 (\$240). The private builder may also borrow capital on mortgage from the government for fifteen years at 6 per cent. This capital is paid by the government to the city, which may accept or refuse the responsibility of lending it. In spite of all these inducements the private builders are erecting fewer houses than the societies or the municipality.





222 WONINGBOUWER, HET COBLEN, ACHT O.V.L. MOLENEPLOT IN GEMEENTELIJKE WONINGEN, ONTWERP N. LANGHOOP, DE RIJCK, SCHEWING, ACHT BELANG ACHT WILLEM, NOORLANDER 1928  
**COMPLEX ARBEIDER/WONINGEN IN DE UITERBIDING ZUID BV HET STADION TE AMSTERDAM**



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DETAILS OF THE STADIUM HOUSING DEVELOPMENT, AMSTERDAM

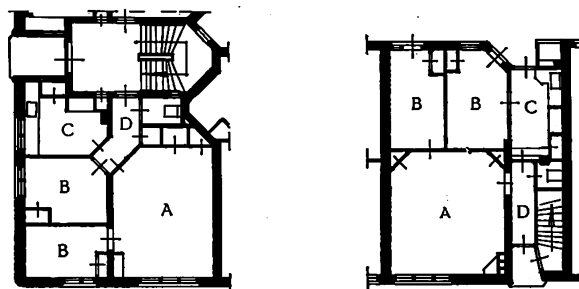
## AMSTERDAM—OLD AND NEW

Land was not wanting on which to carry out the great housing program of Amsterdam. This wise city for many years has been acquiring land. The State did not have to confer this right on the cities of Holland, for housing and all that is needed to carry it out is considered necessary on behalf of public order, morality and health. But the housing act of 1901 extended and amplified the compulsory land acquisition act of 1851 so as to facilitate the taking of land for slum clearances or carrying out of large scale housing schemes. The basis of valuation is that at which the land might have been sold within a period of six to eighteen months before the preparation of plans. Amsterdam is beginning to see that the only way to control the growth and the future appearance of the city is for the municipality to own all the necessary land and the city is acquiring a ring of municipal land around the old city, and already owns 1,200 acres. Of this 600 acres have been leased to Public Utility Societies for periods of 50 to 75 years. The policy of Amsterdam is to lease and not to sell its land!

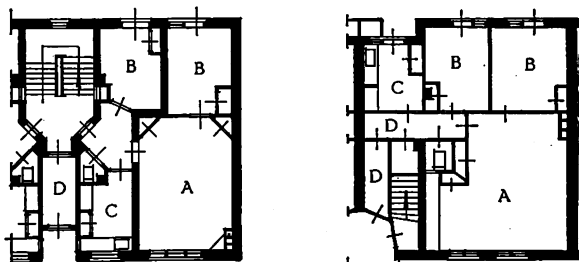
In New York the building of homes had ceased in 1916. Gradually the badly planned, the poorly lighted, the dilapidated houses that had stood empty for years were filled. Landlords did not at once discover that it was their inning—that the "law of supply and demand" was working in their favor. But when they did they were not slow in acting. Rents soared. The newspapers howled against the unjust raising of rents—rent strikes were called—the legislature appointed a commission to investigate rents—the Mayor appointed a powerless rent committee. No one, not even the cleverest newspaper reporter, seemed to connect rents with housing scarcity. And what was the use? There was no profit in building houses when the prices were at the top and no one knew when they would drop. Any builder would be a fool to build at such a time unless he was in business to lose money. And who would lend him money if he did not want to build? Not the insurance companies or the loaning institutions. Their representatives appeared before the Governor's Reconstruction Commission and explained that they did not have the money—it was invested in Liberty Bonds—anyhow they could not risk it under present conditions—it was the people's money, not theirs. So the people went homeless or borrowed half of a worn-out home.

And the Mayor's Rent Committee bullied or persuaded landlords and tenants to compromise. And the Legislative Committee on rents after perspiring through endless hearings discovered that it was dealing with a housing scarcity, not a landlords' conspiracy. The stenographers had filled many neat volumes with lengthy questions and answers—the newspapers had many front page leaders and laws were passed at Albany restricting rents and permitting the lending of money that would not be lent.

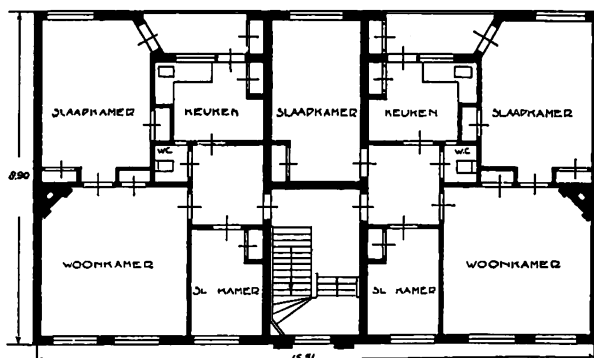
Governor Smith's Reconstruction Commission alone treated the dilemma as a housing emergency. After pointing out that "the present crisis was the result of past tendencies" and that its fundamental causes were "no different than the causes of the evil housing conditions



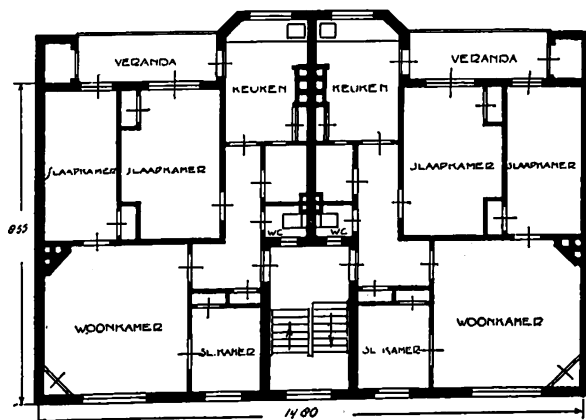
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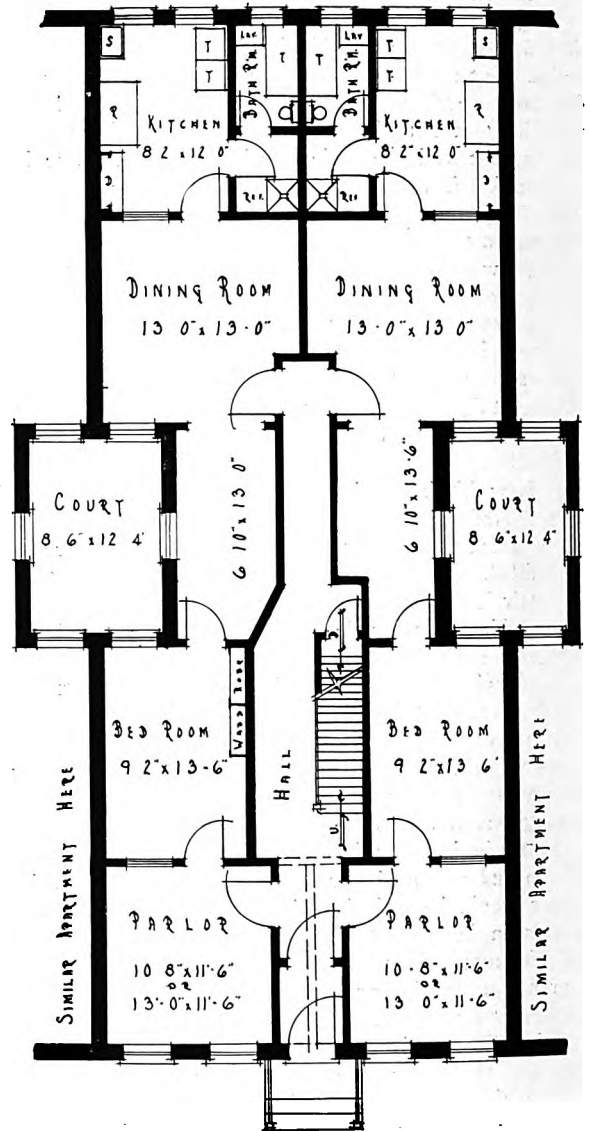
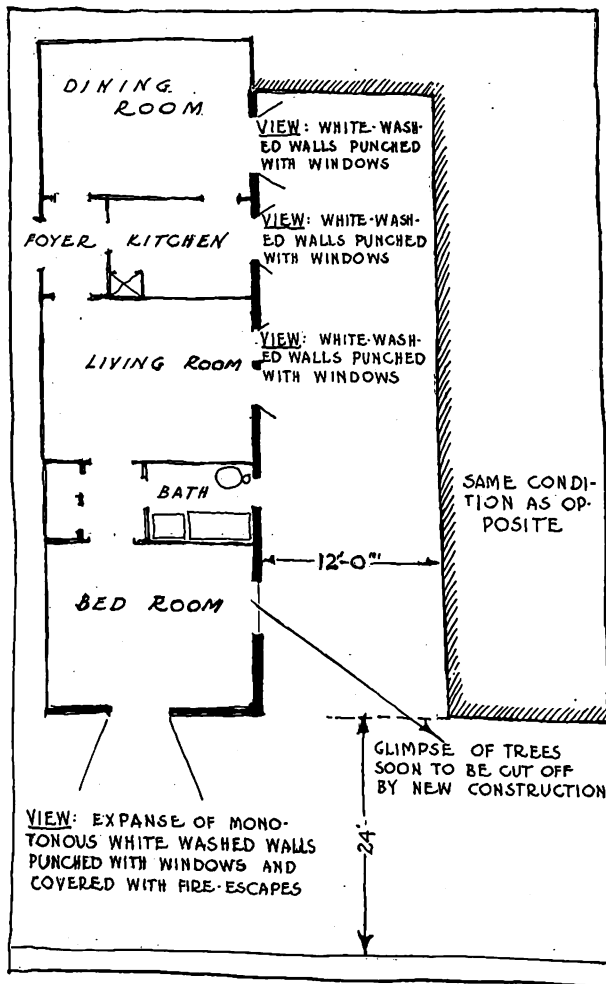
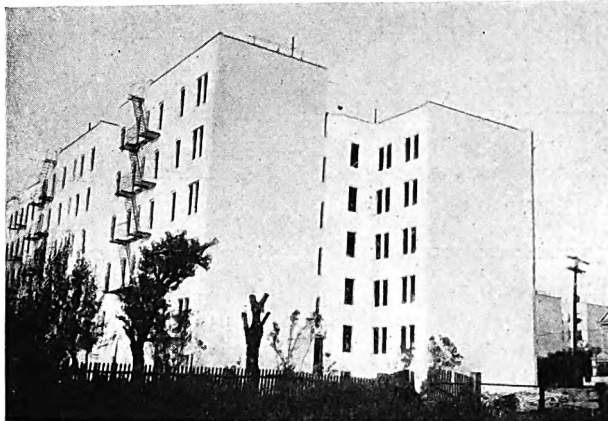
PLANS OF APARTMENTS, HOUSING BLOCK, AMSTERDAM  
M. de Klerk, *Architect*  
a—living room, b—bedroom, c—kitchen, d—foyer



PLANS OF APARTMENTS IN STADIUM DEVELOPMENT,  
AMSTERDAM



PLANS OF APARTMENTS IN STADIUM DEVELOPMENT,  
AMSTERDAM



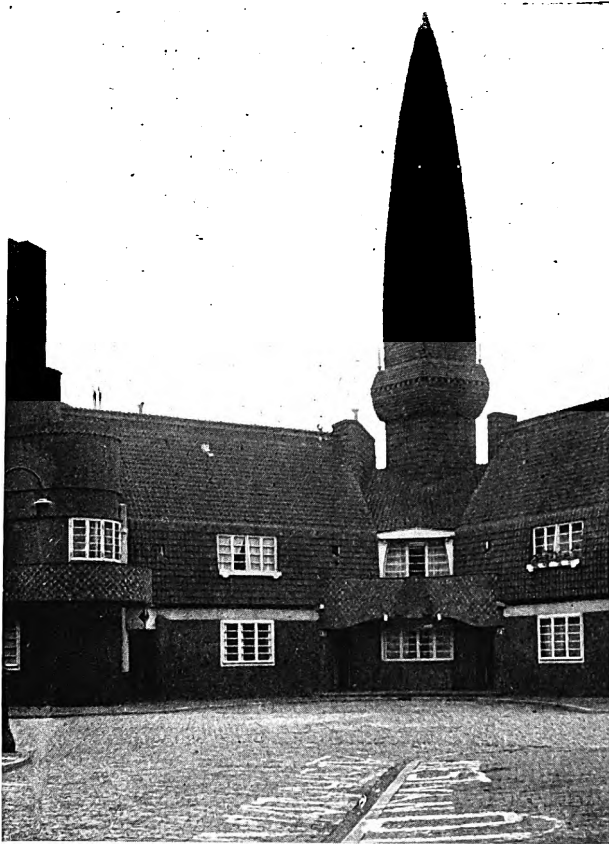
The type of Tax-Exempt Apartments being erected by the hundred in the Borough of Queens, New York City. These five rooms rent for \$45 to \$50 a month. They are practically the only living places which come within the income of working men—and only skilled workers can afford them. These three-story buildings afford approximately as much light and ventilation as did the dumb-bell apartments which were made illegal 20 years ago.

At the left.—Characteristic six-story apartment now being built in the Borough of the Bronx, New York City, to rent for approximately \$1,000 a year.



DOWN TOWN NEW YORK

Henry Boak



Photograph by F. R. Yerbury

DETAIL OF HOUSING BLOCK, AMSTERDAM  
M. de Klerk, Architect

that have long existed in the state"; the Commission suggested a constructive program:

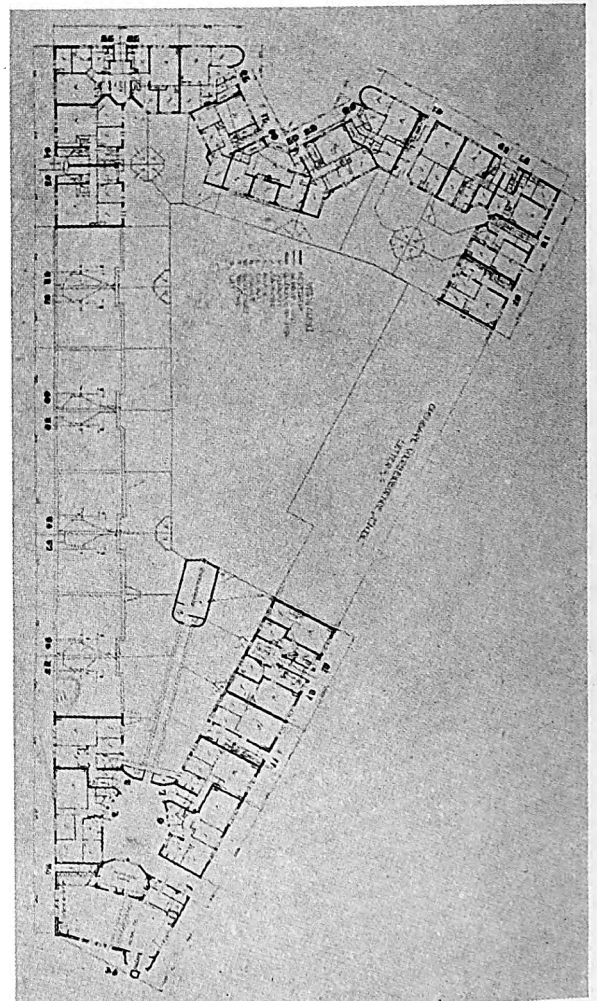
1. Housing and city planning Commissions and Committees for the State and Cities.
2. The lending of state money for long terms at low rates of interest.
3. Municipal ownership of land on which the municipality or others might erect houses.

This program that would have seemed so feeble in Holland was altogether too revolutionary for New York. Rather no houses than take the business from the speculator. He must be revived and brought back into the building game. So it was finally decided that a bonus should be offered, one that didn't look like a direct gift, for it would not do to admit that the State or City was taking a part in housing—it would not do to admit the fact that an American citizen could not pay for his own home—that the government had to help him out. So the bonus was camouflaged—it was called "tax exemption." This subsidy was not to be given to the poor worker, white collar or otherwise. It was for the builder or landlord. He could charge what rent he wanted—and apparently he wanted everything he could get. Why not? Is he not in the housing business to get as much profit as he can. At any rate when the tax exemption buildings were completed they were let for twenty, twenty-five or thirty dollars a room per

month and the poor and the poor middle class continued to live two families in a house—in any old, dilapidated house.

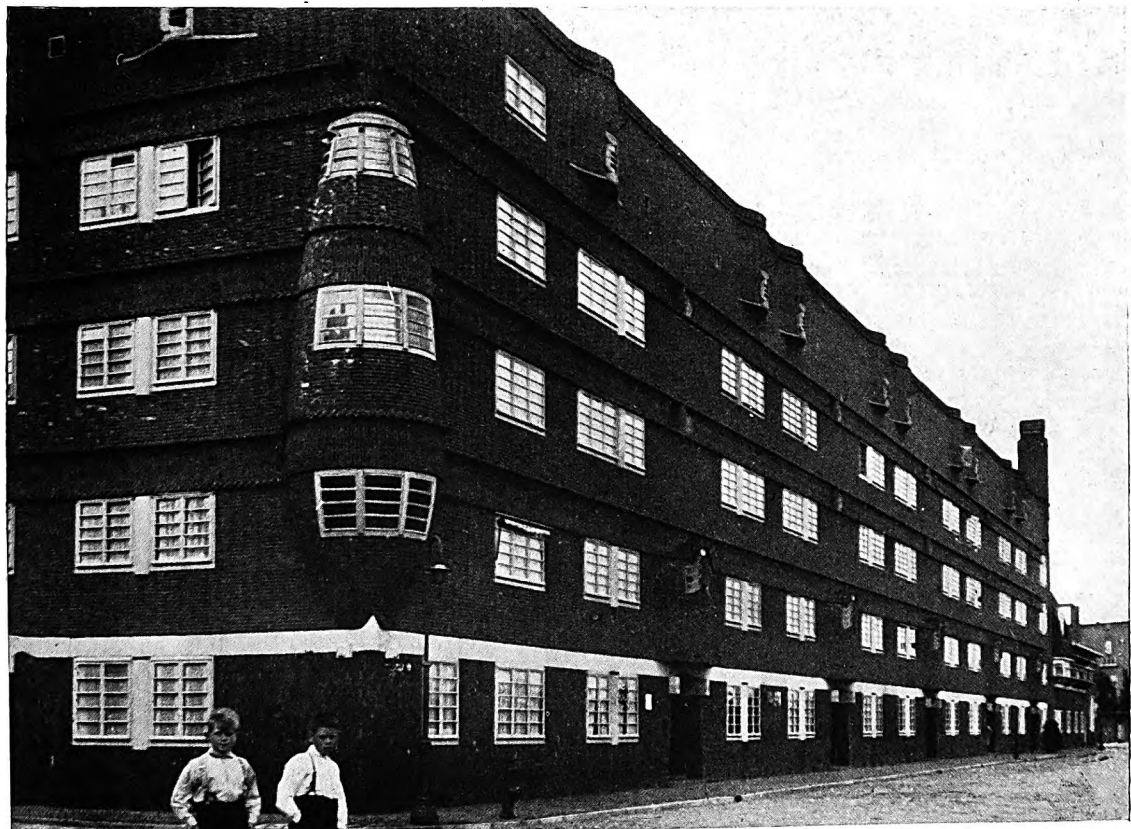
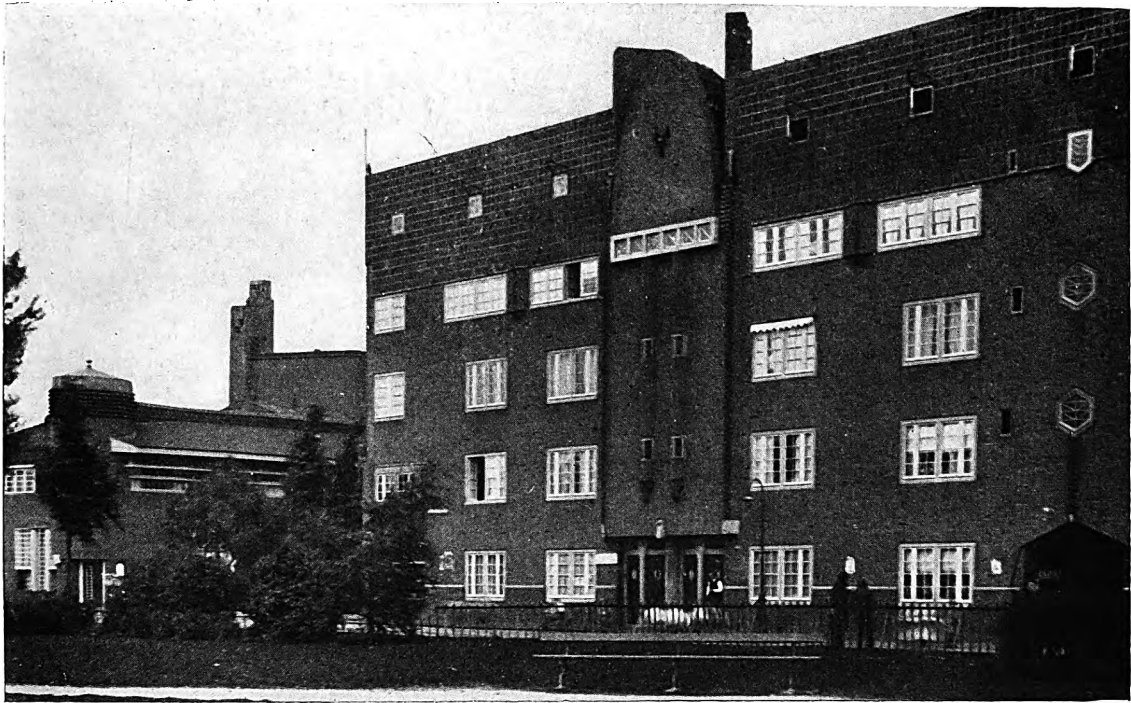
Then for a year or so one Untermeyer held the middle of the stage. He induced everyone, builder, manufacturer, laborer and capitalist, to admit that he had been a criminal and would never do it again. The price of materials dropped in New York—but curiously enough with no Untermeyer in Amsterdam prices also fell. Yet, in New York the poor and the poor middle class are still huddled two families in an apartment and no one is building homes for them.

What has been the result of the mad building of the past year which must at least be paid for in part by the citizen of New York? For tax exemption is a subsidy. That which the owners of the new houses do not pay must be paid by the other property owners. The tax exempt house will require, ultimately, more sewers, transit, roads, police, firemen, street cleaners,—and for these the community must pay. What is it getting in return? Houses, yes—but such houses. They



GENERAL PLAN OF HOUSING BLOCK, AMSTERDAM  
M. de Klerk, Architect

Built 1920; number of apartments, 102; cost, \$372,000; rent per week, \$1.92

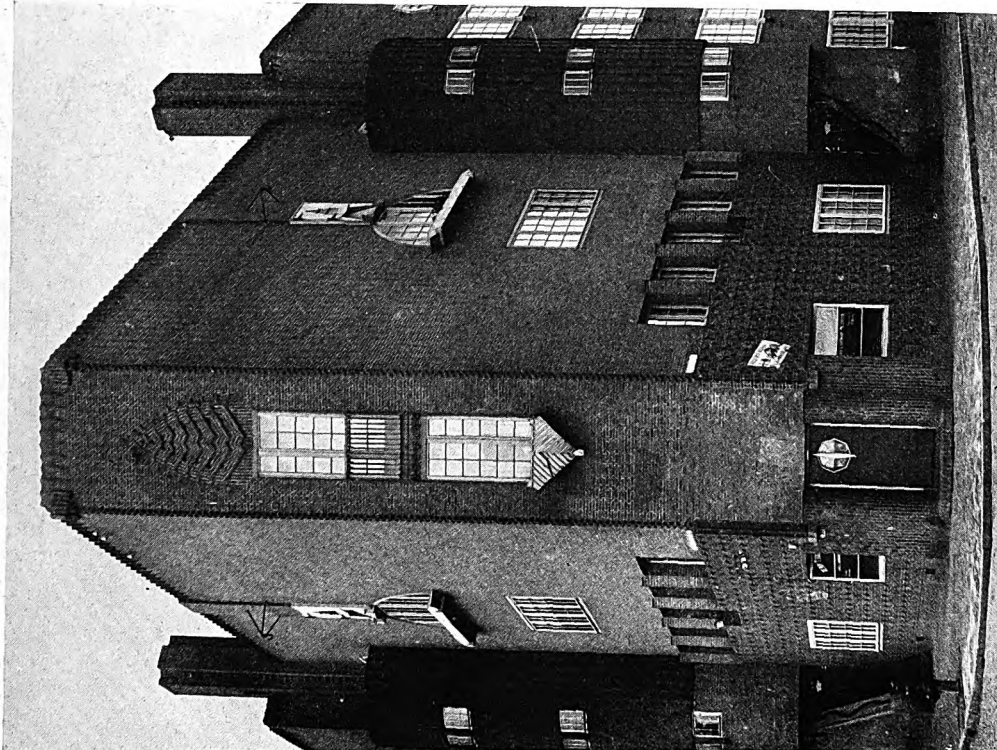
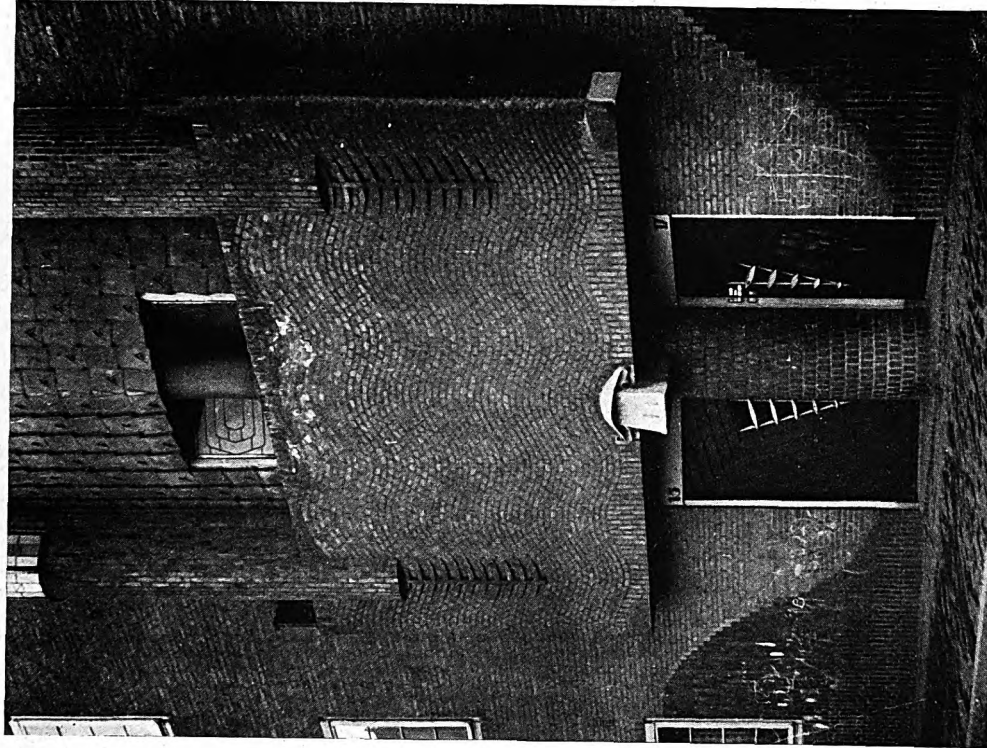


*Photographs by F. R. Yerbury*

**DETAILS OF HOUSING BLOCK, AMSTERDAM**

*M. de Klerk, Architect*



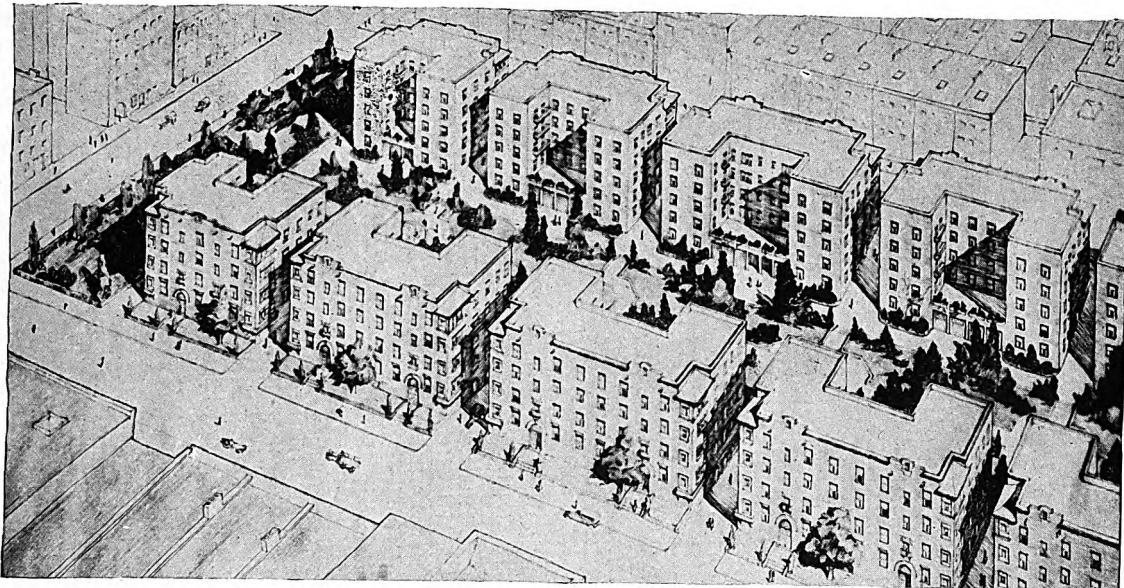


Photographs by F. R. Yerbury

DETAILS OF HOUSING BLOCK, AMSTERDAM  
M. de Klerk, *Architect*



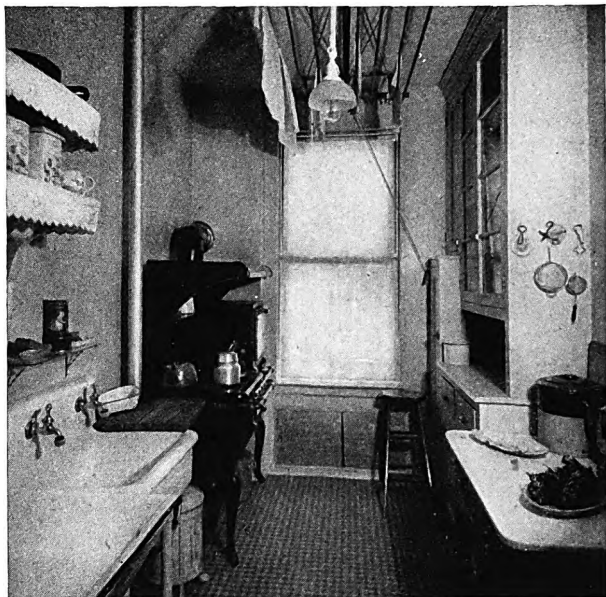




BIRD'S-EYE VIEW OF APARTMENT HOUSES FOR THE QUEENSBORO CORPORATION, JACKSON HEIGHTS, NEW YORK CITY  
Andrew J. Thomas, *Architect*



VIEW OF STREET ELEVATION. FIRST GROUP OF APARTMENT HOUSES FOR THE QUEENSBORO CORPORATION, JACKSON HEIGHTS, NEW YORK CITY  
Andrew J. Thomas, *Architect*



TYPICAL KITCHEN IN APARTMENTS OF QUEENSBORO CORPORATION, JACKSON HEIGHTS, NEW YORK CITY

Andrew J. Thomas, *Architect*

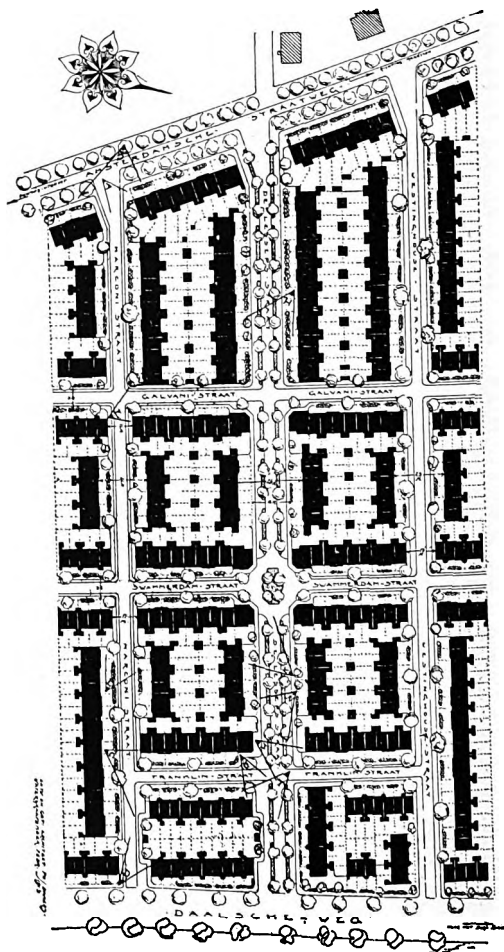
are no better than the law requires—apartments with dingy courts and rooms that look out on nothing but monotonous walls and windows; or worse still, apartments in which most of the rooms look out upon a tiny shaft which gives but a glint of light and no air. Ugly affairs with no technical skill wasted on them. "An Architect" so called was employed at a cut rate, for which no adequate services could be given. Apartment houses all alike set on sloping streets, flat streets, on the top of rocks, cheap in design and shoddy in construction. The one and two family houses are no better. Over in Long Island City are rows of cheap boxes defacing the farm and wood land. To think that the people of New York had a chance to really design the part of the city that has been constructed during the past year! They were helping to pay the bill. They could have organized and directed the effort so that it would have added to the beauty of New York and to the happiness of those that will live in the new houses.

A few exceptional developments stand out in contrast to all this haphazard building. The Queensboro Corporation and the City and Suburban Homes Company have had vision enough to build on a large scale and in a less congested manner than the typical narrow lot apartment. But neither of these companies has been able to build at a cost that would permit them to sell or rent except at high prices or big rentals. The Metropolitan Life Insurance Company, which has secured the permission of the State Legislature to invest a portion of its capital in constructing large groups of apartment houses, intends to build homes that will have light, air and the sight of green and yet will be rented at a reasonable rent, as compared with the rentals that the speculative receivers of municipal bounties are charging. But houses renting at nine dollars a room per month

would hardly be called workers' homes in Amsterdam! But even if these experiments do not succeed in relating rents to working men's incomes, they are particularly interesting because trained technical skill has been used to meet the problems of housing on a large scale in New York. It is to the credit of a group in the architectural profession, and to the JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS that the designer of these apartments, in his many years of unselfish effort to develop a type of New York apartments that would have air, light and sunshine at a minimum cost, has had the loyal backing to see him through.

This is all that New York has secured after three years of investigation and legislation! It had no understanding of the housing problem in 1919—it has none now. The city seems destined to continue to grow by the addition of one ugly mass after another at the whim of the speculator. And the horror of it is that his work will stand to haunt us years after we have discovered the need of united effort and technical direction in the building of our homes and our cities.

To one who hails from the city of haphazard building on narrow lots along monotonous streets it is a matter



GROUP OF APARTMENTS, AMSTERDAM

Built 1915-18. Number apartments, 375; rent per week, \$1.20 to \$1.70; cost, \$380,000.

Ph. Hamers, *Architect*

## AMSTERDAM—OLD AND NEW

of astonishment to find Amsterdam building not houses to sell or to rent, but a city to live in. Not only unified blocks but whole sections of the city—groups of five or ten blocks are being created at one time. The street layout of these new sections that surround the old city are quite different than that of Old Amsterdam. Instead of the ever repeating circular canals the new portions are laid out on streets. There are few broad avenues—the through traffic will apparently still be carried in and out of the city by water on the Amstel or the comparatively few canals that divide the newer regions. The roads are in the main straight and in many places parallel, but there is constant relief from the monotony of the checker board pattern. Small and large parks and playgrounds here and there add a foreground of green to the buildings. And all the blocks whether of single family, two family or apartment houses are built around great open courts. There is generally plenty of opening between the groups of buildings to let the air pass freely in and out of this garden block center. All these houses—whether erected by the municipality, the societies or builders borrowing from the government—must meet the approval of the city housing department. Apparently there is nothing bureaucratic about the department of which the energetic, broadminded Keppler is the head. There is great variety in the external treatment of the new apartments that make up the larger part of the building now under way. These are examples of the old Dutch gabled architecture and many examples of a new type of design that cannot be classified. The younger architects have put aside all they knew about the past—columns, cornices, old forms of roofs and gables. They are modelling broadly with flat and curved surfaces of walls or windows, with voids and solids, with different

materials. They are working with large masses, whole blocks of buildings, never single narrow facades. One smiles at first—youthful exuberance! But it is more than that. They are striving to find new forms—simple forms. They do not always succeed: some of their results seem ridiculous—others show charm and simplicity. But at least there is an effort to escape from the bonds of the past—to design—to find design in wall surfaces and materials instead of with applied borrowed ornament.

Even the private builders have apparently learnt that it is more satisfactory and economical to build on a large scale. They are building under trained technical guidance in units of a block or more.

So this is the tale of two cities and the housing emergency. It has no moral. Two cities met a dilemma in manner dictated by their past customs and point of view. Ultimately, they both succeeded in producing houses—in more or less sufficient quantities. In one city these houses were soundly built in an orderly manner with the aid of trained technical skill; in the other they were mostly shoddily built and spotted in a haphazard manner as dictated by the whim and the greed of the speculators. In the one case rents are based on the means of those who are to occupy the houses, in the other on the cost of the houses or the scarcity of homes—the rents have no relation to the income of any but the wealthy. Yet neither Amsterdam or New York has solved the housing problem. The odds against them are too great. It is not design or construction or loans or bonuses that will solve it as long as the income of workers and their standard of living remains so far apart. But Amsterdam has at least sensed the problem and is searching for a practical solution—New York does not even grasp the meaning of the housing problem.

Number of Apartments in Tenements Constructed in New York City 1910-1922<sup>1</sup>

Year	No. of Apartments Constructed	No. of Apartments Demolished or Conveyed to Other Uses	Net Increase or Decrease in Number of Apartments	
1910	32,113	4,960	+27,153	
1911	32,673	4,371	+28,302	
1912	26,763	3,473	+23,290	
1913	28,038	3,389	+24,649	
1914	20,576	4,081	+16,495	July-August, 1914—Beginning of Great War.
1915	23,617	2,597	+21,020	
1916	21,359	2,093	+19,266	
1917	14,241	2,419	+11,822	April, 1917—U. S. A. enters the War.
1918	2,706	1,672	+ 1,034	Nov., 1918—The Armistice.
1919	1,624	3,012	- 1,388	Great year for investigations and for building of garages and loft buildings.
1920	4,882	4,379	+ 503	Rent Restriction Laws passed April and Sept., 1920.
1921	6,835	2,168	+ 4,667	Tax Exemption law effective.
<b>Total:</b>	<b>215,427</b>	<b>15,743</b>	<b>119,684</b>	
1922	27,060 <sup>2</sup>			Tax Exemption law renewed until April, 1923.

<sup>1</sup> These figures do not include apartments in one and two-family houses for which no reliable statistics exist. The net increase of apartments in small houses over a period of ten years has been calculated as about 1/3 that of apartments in tenements.

<sup>2</sup> Apartments in tenements in course of construction on June 30, 1922, as shown by the records of the Tenement House Department.

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Number of Apartments Erected in Amsterdam in Tenements or Small Houses, 1909-1921  
According to the Statistics of the Housing Department (Gemeentelijken Woningdienst te Amsterdam).

Year	By Private Builders	By Employers <sup>1</sup>	By Limited Dividend Societies			Municipal Dwellings	Total
			Built with the help of governmental loans according to the housing law	Built with the help of loans from Governmental Postal Savings Bank <sup>2</sup>	Built with the help of loans from the Municipality		
1909	675	—	28	—	—	—	.703
1910	1,205	—	48	72	—	—	1,325
1911	1,988	—	88	148	—	—	2,224
1912	3,504	—	148	120	—	—	3,772
1913	2,342	—	753	238	—	—	3,333
1914	1,756	21	463	119	—	—	2,359
1915	634	—	1,227	173	238	—	2,272
1916	929	—	415	—	—	—	1,344
1917	412	—	295	—	—	306 <sup>3</sup>	1,013
1918	130 <sup>5</sup>	—	821	—	—	450 <sup>4</sup>	1,401
1919	17	115	989	—	—	851 <sup>6</sup>	1,972
1920	255	62	297	—	—	123	737
1921	733	102	1,590	—	—	745	3,178
Totals	14,580	300	7,162	870	238	2,475	25,633

<sup>1</sup> Dwellings built by employers and rented to their employees at low rentals.

<sup>2</sup> Amsterdam Company for the erecting of dwellings for laborers. (Decree of the town council, 16 September, 1874.)

<sup>3</sup> Blocks of temporary dwellings on the north side of The Y (the bay).

<sup>4</sup> Of these 348 semi-permanent dwellings (lifetime about 30 years) and 102 emergency dwellings built by the town.

<sup>5</sup> Of these 20 emergency dwellings built by the Committee for Belgium Fugitives. (Were pulled down in 1919.)

<sup>6</sup> Of these 184 semi-permanent dwellings.

## Architects and City Planning<sup>1</sup>

By THOMAS ADAMS

### CHAPTER III

The previous article described the character of the instruction in city planning that might be given to architectural students in a limited lecture course of ten or twelve lectures during the final year of study for their Bachelor's degree. Obviously a course so limited could not lead up to any certificate of proficiency or be regarded even as a basis for specialization in town planning as a profession. The reason for restricting the course would be because of the lack of time available from other subjects. The object of the instruction would be to enlighten the architectural student more fully and more directly than formerly regarding the principles and technique of city planning.

There is a good deal of misunderstanding as to what city planning is, and the average student has only a hazy idea of its meaning. The want of knowledge, particularly of the sociological phases of city planning, has to be made good, and misunderstanding removed during the undergraduate period. The student should obtain some definite idea as to what part he has to play in co-operating with city planners or with engineers. Such

a course then is useful in giving the undergraduate in architecture a wider outlook on the important social aspect of his profession and in indicating his limitations as well as his scope as an architect for dealing with the technique of city planning.

A limited amount of teaching supplemented by reading and, if practicable, a sufficient number of laboratory hours to enable one simple problem of city planning to be worked out should be given to all architectural students during the final year of their course leading to graduation. The comparatively small part of the academic year required to be given for this purpose should raise no serious difficulties.

### Comprehensive Course

More extended teaching is, however, desirable where it is practicable to give it, but in this connection arise problems that require much consideration and are not easy to solve. Some part of the instruction hitherto regarded as almost essential has to be curtailed to make room for a full course on city planning, if the period given to undergraduate study is not to be extended.

For the present we are considering the needs of the undergraduate and not the post-graduate student, but

<sup>1</sup> The second chapter of this article appeared in the August issue.

## ARCHITECTS AND CITY PLANNING

obviously we cannot decide what is best for the former without regard to what courses the student may be likely to follow after getting his Bachelor's degree. If, for instance, a student takes only a limited course in city planning before he graduates in architecture from one of the lesser Universities or scientific schools, and goes to Harvard or elsewhere to take a post-graduate course, he will find his preliminary studies of some value, whether he decides to specialize in city planning or not. The proper value of city planning studies will, however, only be realized if they have given the student some definite knowledge, a good grasp of main principles and important details, and not merely some historical information and vague impressions derived from occasional lectures and cursory reading. To obtain this proper value of the extended course is needed.

Later on there will probably be created a post-graduate degree in city and town planning at one or more Universities. When this degree is established, it will be desirable to make the under-graduate course that leads up to it much the same as that which leads up to a post-graduate course in Architecture and Landscape Architecture, such as those provided at Harvard.

On the whole, it appears desirable that all students for Bachelor's degrees who intend to take a post-graduate degree in Architecture or Landscape Architecture should have given to them a liberal course of instruction in the elements of landscape design and city planning, and such a course will probably be adequate for students taking a city planning degree if and when it is available. Therefore, the introduction of a more or less extended course of teaching in City Planning to undergraduates should prove of value to all students who intend to go in for a post-graduate degree. Those who do not intend to proceed beyond the Bachelor's degree have, nevertheless, to go in for post-graduate training in offices to equip themselves for professional work. They would equally benefit from some training in the broader social phases of architecture and city planning.

The question of what can give place to city planning is one to be decided on its merits within each University. If it is decided, as it has been at the Massachusetts Institute of Technology, that an extended course be given to undergraduates, then the question that remains is: what should be the form and contents of the course?

It may be decided either to give a full year's work in the final year or to spread the teaching over two years. If the latter is considered desirable, the lecture courses would have to be arranged at different periods for each group of students, but the laboratory work could be carried on simultaneously. If we assume that the work is entirely done during one year extending from October to March, we have next to consider what would be a reasonable arrangement of lectures and laboratory work.

It is suggested as a beginning, until further experience is gained, that thirty lectures and forty hours work in the laboratory be given as follows:

*October to December*—Ten lectures at the rate of one in each week on landscape design and elementary phases of site and town planning, supplemented by twenty hours in the laboratory working out a simple problem.

*January to March*—Twenty lectures on the history, principles, and technique of city and town planning, supplemented by twenty laboratory hours and a civic survey of an area with which the student is acquainted.

At the conclusion of the course an examination would be held, and full credit given to the student.

The aim would be to give the student who graduated some definite knowledge of the subject, and its relationships as they have been described in these articles. The sociological aspects of the problem of city development would be kept before the mind of the student throughout the courses. The teaching would necessarily be elementary in its scope but need not be superficial. The student should be encouraged to use his own observation, to think independently, to express himself in brief reports and discussions, and to form definite ideas. The knowledge gained, however limited, would be invaluable if it were used as a basis for observing and studying, in the right perspective, the many examples there are of good and bad conditions, lost opportunities and of misdirected efforts, in connection with the physical and social growth of the modern city.

Coming to the matter of the contents and arrangement of the course of lectures, there is room for considerable variety of opinion according as one might be influenced by adherence to what is most logical or most expedient.

### An Interesting Programme

An interesting programme of twenty-four lectures has been proposed by Professor Adrian Berrington for the students of architecture and engineering of Toronto University. Professor Berrington divides the suggested lectures into two groups, one of twelve dealing with "The Regional and Civic Survey" and "Methods and Application" and a second twelve with "The Technique of Town Planning." The first group deals with:

(a) The Region (Regionalisme)—its character, the geological, geographical and other aspects of survey, and maps and models;

(b) The Existing Plan—the nature of the plotting or sub-divisions, values of land, heights and densities of buildings, supply (including collection), and centres of accretion and distribution;

(c) Communication (the matrix of the whole)—roads, railways and waterways;

(d) Civic Self-Control—local government, assessment, ordinances, town planning laws, private property and public interest.

(e) Vital statistics—as revealed by census and in connection with homes and recreation.

The second group deals with the technique relating to:

(a) Housing and Homing—natural and assisted developments and garden suburbs and garden cities;

(b) The Satellite City;

(c) Zoning or planning widely—natural zoning, causes of present troubles, remedies, and extensions and limitations of idea;

(d) Road, railroad and waterways—through-ways, methods of plotting, types, comparisons of square, radial and natural plans, technique of crossings, sidewalks, etc.

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The proposed course was to be supplemented by diagram, plan and picture, and accompanied by laboratory work.

The syllabus was suggested as an option in town planning for fourth year students in both architecture and engineering. Under the arrangement, if carried out, architectural students were to receive a short course on the General Principles of Surveying, while civil engineering students were to receive a short course on the History and Principles of Architecture in the first term. Both classes of students were to have the regular lectures on Highway Engineering, Sanitary Science, and other subjects as at present taught. It was proposed that the student make a civic survey of an approved

social or geographical unit together with reasoned suggestions for improvement of one or more features and prepare an account of his work as a thesis. Under this arrangement which entailed 35 hours work in each week during two terms devoted to town planning, and to modifications of regular courses on architectural and engineering subjects to fit in with the instruction in town planning, it was apparently intended to prepare men for professional positions as town or city planners. It would undoubtedly be better to limit the instruction during the undergraduate period to laying the foundation for a post-graduate course leading to a Master's degree.

(To be continued)

## Architecture and the Public Press

### I. A Recent Episode

The General Convention of the Protestant Episcopal Church, in 1919, created a Joint Commission on Church Architecture and the Allied Arts. The reasons for this action are very clearly set forth, as are the objects desired, in the following Resolutions:

#### Report of the Joint Commission on Church Architecture

At the General Convention of 1919, the following was adopted:

"WHEREAS, On the part of the clergy and of the laity, there is, in this Church, sore need of fuller information as to what constitutes the fundamental principles which should govern the plan, the design and the decoration of churches, ignorance of which sometimes leads to such deplorable results in church architecture:

"Art. 1. *Therefore, be it Resolved*, the House of Bishops concurring, That a Joint Commission, consisting of three bishops, three presbyters, and three laymen with power to add not more than three experts to their number, be appointed, whose duty it shall be to disseminate information on this subject throughout the Church, with a view to raising the standard of knowledge and taste, as to what is pure and beautiful, in style and design, and correct in plan and preparation.

"Art. 2. In pursuance of this end it shall be the duty of this Commission to effect in each diocese and missionary district, with the consent of the bishop thereof, the organization of a diocesan commission on church architecture.

"Art. 3. The central commission shall be authorized to prepare a hand-book under the direction of one or more experts which shall contain a brief statement of the essential principles of some of the leading styles of church architecture, with illustrations of the best examples of those types which proved to be the most suitable to the various conditions found in city, town, village and country parishes. This hand-book shall be furnished at as low a price as possible to the diocesan commissions, which in turn shall furnish it to the clergy and interested laymen of the parishes and missions throughout the Church.

"Art. 4. It shall be the further duty of this commission to take the matter up with the officials of the theological schools of this Church, with a view to the inauguration of

a short course on church architecture to be given annually in each school by some competent expert."

Pursuant to these Resolutions, the Commission was formed, consisting of the following members: the Rt. Rev. Rogers Israel, D.D. (Deceased); the Rt. Rev. Thos. F. Davies, D.D.; the Rt. Rev. Herman Page, D.D.; the Rev. D. D. Addison, D.D.; the Rev. William J. Dixon; the Rev. Milo H. Gates, D.D.; Ralph Adams Cram, LL.D.; Bertram Grosvenor Goodhue, D.Sc.; Chas. Steele, Esq.

The Commission first met in February, 1920. In August, 1921, it had adopted the following program:

1. There shall be a Commission of the Diocese (or Missionary District), to be known as the Commission on Church Architecture and the Allied Arts, which shall consist of the Bishop (and the Bishop Coadjutor, or Suffragan Bishop), together with three clergymen and four laymen, of whom three at least shall be skilled in Church Architecture, and ecclesiastical art, to be appointed annually by the Bishop. The experts may or may not be chosen from within the Diocese.

2. To this Commission shall be submitted, for counsel and advice by the proper authorities of the Diocese and of all parishes and missions thereof, first, all preliminary sketches, and, later, all completed plans for the erection of new Churches, chapels, parish houses, rectories, institutional buildings, and for any proposed changes of importance in existing buildings; with respect to sites, architecture, decoration, color schemes, furnishings, sculpture, stained glass windows, and memorials of all kinds whatsoever.

3. While it is mandatory on the Diocese and the parishes and missions of the same, to submit, through their official representatives, such sketches and plans to the Commission for counsel and advice, before any contract shall be let; in the case of missions and parishes receiving aid from the Diocese, only after the sketches, plans and specifications shall have received the approval of the Commission, shall the authorities of such missions and parishes be at liberty to proceed to their execution.

4. It shall be the duty of the Commission to consider all questions submitted to it with the least possible delay, and, except for extraordinary reasons, to give an answer in writing, at least within one calendar month after the receipt of sketches or plans.

## ARCHITECTURE AND THE PUBLIC PRESS

5. It shall also be the duty of this Commission, to bring about, in each parish and organized Mission of this Diocese or Missionary District, the appointment of a Committee on Church Architecture and the Allied Arts, consisting of not more than three persons, to be appointed annually by the Rector, or Minister-in-Charge, whose work it shall be to direct the study of these subjects within the parish, and to offer criticism and advice on all matters within the parish, pertaining to Ecclesiastical Architecture and Art.

6. This Commission shall be under obligation to furnish parish committees with a bibliography of the best works on these subjects, and, generally to stimulate an interest in them, through the Diocese, by the distribution of literature, by lectures, and where possible, by exhibitions and conferences.

In announcing that Dr. Milo H. Gates of the Chapel of the Intercession, New York City, and Dr. Cram and Mr. Goodhue had been appointed as a special committee to prepare the Handbook mentioned in the resolutions above, the Joint Commission said:

"It is hardly needful to dwell upon the absolute necessity of good art of every kind when it is called into the service of the Church, but 'good' art is not enough; it must be the best, and the word art includes not only architecture, painting and sculpture, but as well, and equally, stained glass, music, wood-carving, metal-work of all kinds, vestments, needlework.

"The Church brought Christian art into existence, fostered it, developed it to its highest perfection, and not only inspired all the art of Europe from the Edict of Constantine until the Reformation, but, both directly and indirectly, determined the form and method of European art for 1,200 years. What the Church made is the glory of European civilization, and it not only expressed Christianity in absolute perfection, but was as well a potent influence in the spread of Christianity, and its dominion over men for centuries.

"The degradation began in the 16th Century, and it progressed steadily until it reached its lowest estate in the years between 1800 and 1875, three-quarters of a century of humiliation and dishonor, broken only by the beginning of the 'Gothic revival' in England and its repercussions in the United States.

"Since then the recovery has been almost miraculous. The Anglican Communion took the leadership, and still holds it in the United States through the Episcopal Church, though in England the recent remarkable advance in Roman Catholic architecture threatens the old-time Anglican supremacy. Here in America, the Protestant denominations, particularly the Presbyterians, Congregationalists and Unitarians, are now generally content with nothing but the best procurable in architecture, while the last ten years have seen a notable, though sporadic recovery amongst the Roman Catholics.

"By no means all the ground has been regained, particularly in the arts other than architecture, and even here bad work crops up, particularly in certain sections of the country. There must be no slipping back; there cannot even be a pause and a resting on the laurels already won. There must be a jealous guarding of recovered standards and a steady and consistent advance. Good art is organic; the best art is both revealing and creative. Bad art is a betrayal.

### "Basic Principles"

"Religious art must be the best obtainable.

"Church architecture must be expressive of the historic continuity, the doctrinal succession, and the racial antecedents of 'Ecclesia Anglicana.'

"Imitations, substitutes and dishonesty of every kind;

together with second-rate work or poor craftsmanship, are intolerable.

"Æsthetic infallibility does not inhere in a bishop, a parish priest, the wardens and vestrymen, a clerical or lay benefactor, or in any architect or other artist because of his vocation.

"An architect, just because he is a member of the A. I. A. need not necessarily know anything about church building or religious art.

"A firm that advertises widely and employs many and plausible 'drummers' may very likely produce 'art goods' that are a scandal.

"Paying for a new church, an altar, a window or a rood-screen, does not give the donor the right to impose his own taste on posterity, or justify the rector, wardens and vestrymen in accepting something that is bad.

"Nepotism in Church art is as bad as nepotism in Church preferment.

"A competition is the worst possible way of selecting an architect, a memorial window, a statue or any other thing that is linked with the church.

"There are many architects in America who have proved they can build a church right. There are several makers of stained glass as able as those in England. There are absolutely competent wood-carvers, cabinet-makers, metal workers, needle-women and embroiderers. Go to them direct. Never 'send for a catalogue.' If you do not know who to go to for anything, find out. Until each diocese has its own Committee competent to give information, advice and criticism, this Commission will undertake the task, sending lists of those who already have proved their capacity.

"It would be of great service to this Commission if clergy and building Committees would send in photographs or other records of churches or decorative elements recently completed or proposed. If criticism is asked it will be freely and honestly given.

"The Commission would also welcome suggestions as to constructive lines it could well follow, and statements of the difficulties that are experienced in getting good art into the service of the church.

"Your Commission wishes to urge upon our Theological Schools the advisability of having a course of lectures upon Church Architecture and the Allied Arts. In this connection, the Secretary wishes to make an observation: during the past two years, he has been able to collect about twenty-five hundred pictures of Episcopal Churches in all parts of the country. Anyone going over this collection will be impressed with the need of improvement in our Church architecture and Church furnishings.

"This is something more than a matter of art. Here we face serious financial loss. It is evident that millions of money have been unwisely spent.

"The movement for improvement in Church architecture, we have observed, is not confined to our own Church. Quite recently, the Methodist, Presbyterians and Baptists have taken up this matter and if we may judge from the reports of their action, have organized more authoritative commissions than we have.

"In order to clear what has seemed to be a misunderstanding on the part of some, our Commission desires to state that it has not thought it to be the desire of the Convention that it should attempt to act as an architect or should attempt, in any way, to take the place of architects. Manifestly, it is impossible for so small a Commission, the individual members being residents in widely separated parts of the country, to act as architects. Numerous requests for assistance have come in, evidently upon this supposition. To meet these requests, the Commission would need to meet at least twenty-five times a year. If that were done, some



of the members would have to spend most of their time travelling to and from meetings.

"Besides this, the Commission believes that one of the best things it can do will be to encourage good architects to give more attention to church architecture. In this way, we hope not only to develop but to bring forward such architects. Already, there are many in the Church and we are glad to report that the number of them is increasing. No Commission and no Committee ever can take the place of a good architect.

"Your Commission wishes, also, to call attention to the fact that improvement in Church Architecture and the Allied Arts of the Church, if it shall come, must come slowly. We cannot expect to revolutionize things, but we look forward with hope to a very considerable improvement in this field.

"If our candidates for the ministry can receive proper and much needed instruction, if each of the Dioceses will organize its own Commission, or Committee, and if this important subject can be taken up in the different parishes, we may confidently expect sure progress in the future."

The above statement was released to the principal newspapers of New York City late in August, and elicited the following comment:

## Our Inartistic Churches

Churches and temples ought to be beautiful, and during several periods of history have been so. That they are not always so now is the gist of a joint commission on architecture which has drawn up a report to be presented at the general convention of the Episcopal Church at Portland, Ore., next month. The committee includes Ralph Adams Cram and Bertram Grosvenor Goodhue, both architects of distinction, who are especially interested in ecclesiastical structures. Their report lays down the sound doctrine that no one has a right to impose bad art on a church, in the form of a window, rood-screen, or altar, simply because he is willing to pay for it. Dr. Milo Gates, the secretary of the commission, has collected 2,500 photographs of Episcopal church edifices which he says impress him with "the need of improvement in our church architecture and furnishings."

Other denominations are at least as badly off as is that to which Dr. Gates belongs. If one were to go more deeply into the subject it might appear that trouble is not a falling off in the artistic impulse, but a dying down of the religious impulse. The ages of great religious architecture have been ages of faith. Ours is not an age of faith, and our architects put much more enthusiasm into banks and office buildings than they do into churches. It is not by any means an accident that the tallest and possibly the most beautiful office building in the world resembles a cathedral. When art itself has ceased to be religious, or when it has made a religion of commerce, its churches are likely at best to be spiritless imitations. Of course such buildings, which seem to have been slammed together by a rough carpenter by rule of thumb, are often much less than that. Yet, as many a dignified old New England church testifies, rule of thumb in a devout community may produce admirable architecture.

Dr. Gates and his committee must find some way of bringing the church more completely into harmony with the spirit of the present day. When that has been accomplished beautiful architecture may be added unto it.—*Evening Globe*.

## Abuses In Architecture

The Commission on Church Architecture attacks in its report to the general convention of the Episcopal Church

abuses in modern church architecture. It seems to have become the custom for the church authorities to accept gifts from rich men without sitting in judgment on the taste and appropriateness of the gifts.

As the report says, "Paying for an altar, a window or a rood screen does not give the donor the right to impose his own taste on posterity or justify the rector, wardens and vestry in accepting something which is bad. Nepotism in art is as bad as nepotism in church preferment. In going over the 2,500 pictures of Episcopal Church edifices in all parts of the country, it is evident that millions of money have been unwisely spent."

A church should be beautiful and fitting, fitting both for the purpose to which it is put and for the setting in which it is placed. Some church architects are prone to imitate medieval cathedrals, to make a more or less accurate copy of their exteriors and to seek to adapt their interiors to the purpose of a modern congregation. The result is sometimes painful and often incongruous. Attempts to incorporate in one structure different architectural types often cause incongruities like that of the young girl at whose request a fairy gave her hair like one beautiful sister, a complexion like another and features like a third. The whole did not harmonize.

The purpose of a church is neither to advertise its architect nor to glorify its donor. The great cathedrals of the middle ages were growths. In some cases their construction extended over several generations. Their architecture represented the aspirations of the people.

The modern church, like the modern office building, the modern hotel and the modern apartment house, should not be an imitation, but a creation.—*Evening Mail*.

## The Churches of Tomorrow

We wonder just what the late Henry Adams would have said to the plan of Dr. Ralph Adams Cram and others to regulate and improve art in the Episcopal churches of America. Nothing very encouraging, we fear. That dry old New Englander spent the last years of his life worshipping on his knees before Our Lady of Chartres, and his heart was sold—in the language of the great American faith, business—to the medieval idea. That idea is a long way separated from the present plan to improve ecclesiastical art by sifting out horrors and regulating beauty upward by control from above.

That much debated thirteenth century, long scorned as a period of crass ignorance, now much rehabilitated and by some regarded as the "greatest of centuries," had anything but an art controlled from above. The taste and enthusiasm that built Chartres Cathedral and all the other great churches of the period welled up from below; they were in the eye and hand of stonemason and window builder quite as much as in the brain of the great designers. Rivalry between cities was one great stimulus; Chartres vied with Bourges and Rheims with Amiens—their people working with might and main—exactly as if all the citizens of New York should fall to upon their greatest church in an effort to outbuild Boston. Religion was the center of life. It sent knights and children alike careering off on crusades. It sent towering aloft the most wonderful buildings since the Parthenon, pulsing with life and fresh beauty.

Well, things are not that way nowadays. We have our wonders. Especially we have the towers of down-town New York, and anybody who thinks they are not wonderful would have been a killjoy in 1222 and scoffed at Chartres Cathedral, when building, as a strange, monstrously tall horror. But the great thrust of American architecture, the best in the world today, does not reach its great successes

## ARCHITECTURE AND THE PUBLIC PRESS

in church building. So one wonders about the new plan to save our churches from horrors. Is taste to be bettered in this negative fashion? Can anything more be achieved than a rather prim, conventional adherence to old styles? Perhaps it is the best that can be hoped for in a period of waiting between tides. It will certainly save sensitive retinas many awful wounds. But what of great churches? Is their day past or will some revival of exuberant faith send them soaring skyward again, as utterly original as the great Gothic cathedrals, to reach with their steel ribs a height and majesty that no cathedral builders before ever dared attempt?—*Tribune*.

### Reform in Church Building

Plain truths about modern church architecture are plainly spoken in a report which is to be presented at Portland, Ore., before the General Convention of the Episcopal Church. "Paying for an altar, a window or a rood screen," it says, "does not give the donor the right to impose his own taste upon posterity." Nor are the authorities as at present constituted a sufficient tribunal. "Æsthetic infallibility," the report proceeds imperturbably, "does not inhere in a Bishop." Among the members of the committee that signed these irreverent words one finds the vicar of the Chapel of the Intercession, also Mr. Charles Steele and the architects Bertram Goodhue and Ralph Adams Cram. Episcopal churches are presumably no worse than others, but a study of 2,500 of them has convinced the committee that "in all parts of the country millions of money have been unwisely spent."

Clearly the time has come to apply the new principles of self-government to the building of churches. What is needed is not so much a personal dictator—a pictorial Judge Landis, an architectural Will Hays or a sculpturesque Augustus Thomas—as a commission of churchmen and architects that shall improve the taste of the donor, curb the artistic hospitality of wardens and vestry, even direct the feet of the Bishop in the way they should go. Hitherto, folk who have been properly brought up have thought it incumbent upon them not to say out loud what they think, by and large, of church architecture. But, backed by the authority of this report, they may now express a hope that in the future a pair of too-aspiring spires shall not give the rude populace occasion to dub the edifice behind them the Church of the Holy Toothpicks; that a sculptured Gabriel, overflamboyant with his trump, shall not suggest to the ungodly a Church of the Holy Bean Blower.

Ecclesiastical building presents real difficulties. Many of our most modern churches, if they faithfully expressed their character in stone, would lean on several sides toward the amusement centre, the lecture hall, the settlement house. A sly attempt was made in this direction by Messrs. Goodhue and Cram when they adorned the portal of St. Thomas's, frequented by fashionable weddings, with monocled Fifth Avenue fops and love-knots entwining dollar signs. As members of a commission for enlightening the Bishop, how far would they carry this conception?

For the present their mood is sobriety itself. They propose that the curriculum of theological schools shall include a course in church architecture and that a handbook shall be prepared for the use of such commissions as may be established. Of late years church building has distinctly improved and competent supervision should accelerate the progress.—*Times*.

### For Better Church Architecture

In the matter of church architecture the rector and vestry of every Episcopal church are a law unto themselves. The

only power to which they bow is that of the rich man or woman who wishes to give a memorial to the church and wishes to impose his or her own taste, or that which some architect or stained glass man may have suggested.

The result of this is not always pleasing, either to those versed in church history or in the laws of architecture. A committee composed chiefly of architects will submit a report to the coming General Convention of that church, recommending some sort of official supervision in that matter. The report will recommend a course in church architecture in theological seminaries, which would be an excellent thing for other denominations as well as the Episcopalians. Bad church architecture is to be found outside that denomination quite as plentifully as inside. Many denominations have departed from the traditional churchly idea in favor of building commodious and comfortable auditoriums. But there is no reason why an auditorium should be an eyesore, save the bad taste of the men in charge of it. In order to raise the standard of taste Ralph Adams Cram, the architect, is preparing a handbook for the use of clergy and parochial committees on church building. It may be an excellent handbook, but the next thing will be to induce vestrymen to use it. Education in architecture, as elsewhere, is a slow process.—*Eagle* (Brooklyn).

Whether the following being part of an article from the pen of Cuthbert Wright in the *Nation* (New York) for 16 August, was provoked by the above report we do not know but as it deals with that aspect of the problem of church architecture which was treated with such unanimity by the newspapers quoted, we append it as a part of the exhibit:

### For the Heathen

No one would deny, I suppose, that Western art, from the days of the Catacombs to those of the Renaissance, flourished essentially under the ægis of the Christian tradition and the Christian church. To understand what that tradition has achieved in the way of art one has only to enter a modern church, or worse still, to observe what they have done to the ancient ones. Let no perfervid admirer of Brother Ralph Adams Cram and all his works now rush in with the assertion that we too have produced great religious architects, for the answer is that fanciful imitation of a form as dead as Charlemagne is not creation at all but dilettantism. When Dr. Cram, instead of serving out wedding-cake facsimiles of Peterborough and Amiens, builds us a church which expresses the spirit of the century, as certain skyscrapers and railroad termini express it, then one may be free to call him, in some sense, a creative artist. The whole case against the Gothic which, according to Dr. Cram, is to save the world, is too long to be treated here, and besides can be found, much better done, in Mr. Clive Bell's amusing book. . . . .

To be sure, the Mohammedan artists did not go in for painting at all in the sense of representation; their religion forbade it, and what the world was saved in the way of bad art by this salutary restriction only a confirmed visitor of churches and galleries may know. Those divine artists did not waste time on the trees like a child drawing pictures, or an academic painter, but kept their eyes on a vision of the great wood; they concentrated, not on accidents of detail, "a scholarly rendering of John the Baptist's big toe" and such flummery, but on essential and significant form. Hence their masterpieces—the mosques of Egypt and Syria—give us a feeling which exists even in the amber spaces and male color of St. Sophia, originally, as every parson is eager to tell you, not a mosque at all but a

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Christian church. The Moslems do not "restore"; they employ one of the first of æsthetic principles—they throw out the upholstery. They would have been, it is feared, insensible to the sufferings of Archbishop Tikhon and two of his priests recently exiled by the Soviets, because the holy fathers kept back some of the church-plate and knick-knacks destined to be sold for starving babies. I suppose half the charm of a Christian, particularly a Gothic, church exists, so to speak, in its excrescences, pilasters, capitals, rood-screens, choir-stalls, paintings, sculpture, and the like. Take away all this from any but the best, and you have a vast shell, austere and noble, if you like, but not a little chilling in effect. Only Amiens or Beauvais and a very few others could endure such nudity unharmed. The primary motive of the Arab builders, on the other hand, was essential form, partly achieved by unimpeded space and light. More than often, the actual sanctuary is open to the air, with a green palm-tree aspiring in the center, a few splendid rugs, an exquisitely devised pulpit, a fountain—and really that is all. I remember such a mosque in Cairo, and I shall never forget the clean, golden nakedness, the sweet austerity of that Eastern house of prayer at nightfall. They talk about the "aspiration" of a French cathedral, achieved in considerable part by some elementary conjuring with arches and colored glass. In that mosque at Cairo, that portal of eternity, everything aspired in an ecstasy achieved—the trees, the bubbling water, the quivering colors, the amber light. Two figures in snowy turbans were outlined against

the dark blaze of the far wall in a dream of prayer; a youth of white rose from the pulpit and, folding up the tasseled book from which he read, descended gravely the stair, glancing at us with his black eyes as he passed. To talk about the atmosphere of such a place as if it were inferior in what is called religion to, say, Saint John's Cathedral with its 150,000 represented congregations, and Bishop Manning in the pulpit, is the merest nonsense.

Into the field of argument and discussion opened by the statement of the Joint Commission on Church Architecture and the Allied Arts, the newspaper comment thereon, and Mr. Wright's article, we do not now propose to enter. Our object is to discover, by research, the attitude of the public press toward architecture, to inform ourselves of the cause and nature of that attitude, whatever it may be, and to express no opinions as yet as to the degree of intelligence with which the press deals with architecture as a subject. It is for the reader to form his own conclusions. Then, if there be anything resembling a unanimity of opinion, the American Institute of Architects might very well offer such co-operation as would be generally welcomed by the press at large.

(To be continued)

## Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

### Legal Obstacles to City Planning

The road of the city planner is beset with many difficulties. The young architect whose ambition it is to follow this broader field of planning prepared himself by many years of study of design and of engineering—he tries to understand the economic, social and political problems of the day so that he may plan cities that will serve the customs, habits and needs of the time and of the future. Then he thinks he is ready to practice. But no—he must study the law—the law, that greatest of obstacles that society has set up—so it sometimes appears—that it may be more difficult to serve or to save it. City planning is a social function. The law in its long fight to preserve the property rights of the individual has set those rights above the needs of the community as a whole. Take the question of the use of land for public purposes—for streets or parks. We lay out a lovely plan years in advance of a city's growth showing where streets and parks should be to best serve the city's need; but these are on property now held by private individuals and the municipality is not yet ready to take them over. The owners of the property may set their rights above the need of the community and build on the bed of the future streets.

Mr. Frank B. Williams of the New York Bar in his pamphlet "The Law of the City Plan"<sup>1</sup> discusses this

<sup>1</sup> Revised, 1922, by National Municipal League, 261 Broadway, New York City. This will form part of Mr. Williams' forthcoming book, "The Law of City Planning and Zoning."

matter at length. He says "The need of protecting planned streets from the encroachment of land owners has always been appreciated in this country, and, at various times many of our states have passed laws for that purpose. Everywhere in the United States, however, except in Pennsylvania, these laws have been held to be a taking from the land owner of a right of use in his land and, therefore, to be contrary to the provision of our constitutions that no man shall be deprived of property for a public use without just compensation."

Mr. Williams considers the various possible "methods of establishing the street plan on a secure basis, as is done abroad": the purchase or condemnation by the city of an easement or option to the land when the plan is adopted; the approval of land owner's layout by the city before land is recorded and thus before it can be sold—this leaves the initiative of planning to the owners of part of the cities; the requirement of six months' notice by owners intending to build on the bed of mapped streets so that the city may purchase—"this instead of protecting the city would furnish the land owner altogether too easy a method of forcing the city to buy his land at his pleasure." All these methods put the city at a disadvantage. But Mr. Williams offers but little hope—the law and the constitution seem to be set up as obstacles to the city planner. He says, "In order that the plan may be adequately guarded, its main features must be protected by the police power of the state. It has, therefore, been suggested that an amendment to our state constitutions

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be urged giving cities the right to adopt plans binding land owners, as in Pennsylvania. At best, such amendments could be passed only after a long struggle; and it is to be feared that they would be held by the Supreme Court of the United States (which has not as yet passed on the question) to be contrary to the federal constitution. It is true that with proper city planning a good plan will be made for undeveloped territory and will be carried out seasonably; but in this country the probability of good administration is not regarded as a sufficient safeguard against injustice in exceptional cases, as it is abroad."

Mr. Williams suggests a method of hurdling this legal obstacle (or perhaps of climbing underneath the bars). "The municipalities shall be authorized by state law to adopt plans binding upon them until amended in due form. If a land owner desires to locate an improvement in the bed of a mapped street or within mapped building lines (or perhaps on land destined by the plan, for a small park or playground, or the site of a public building) he shall apply, in the building permit, for permission to locate an improvement contrary to the provisions of the city plan; and when, ultimately, the land is condemned he shall recover no damages for the improvement if it is so located without permission." Such permission shall be given by the building department only when its refusal will unavoidably do the land owner substantial economic injury and the land owner may appeal from the decision of the building department to a board of appeals.

These legal difficulties that stand in the way of communities that wish to plan for the welfare of the many instead of the enrichment of the few land owners are apparently nowhere as severe as in this country. Mr. Williams says, "In foreign countries where city planning has been most successful, adherence by the land owners to a plan containing a few of the main features of the future city is secured by providing that the land owner shall not improve his land in any way which will interfere with the carrying out of that plan; or that, when the public subsequently takes the land, he shall receive no pay for any improvement infringing upon the plan made subsequent to its adoption. This system has been in operation for many years, not only in Roman Law countries, but in England and Canada, whose laws and traditions are so like our own; and has not been found to be unjust to the land owner. The street is essential to the land owner in the profitable use of his land. The only right of which the plan deprives him is the right to build in the bed of the mapped streets between the time when the plan is adopted and the time when it is carried out."

Mr. Williams does not mention the means that have been taken by some European countries—notably Holland and Germany—of cutting this knot that the law has tied so tightly. That is the taking of land by purchase or condemnation in those directions in which the city intends to grow and the holding of that land by the municipality for all times. The large cities of Holland are purchasing extensive tracts of lands. They have the power to compel the owner to give up his property even before its selling price has been fixed. The Hague has acquired

2,550 acres, Amsterdam 1,200 acres and Rotterdam 800 acres. The policy of the two former cities<sup>1</sup> is to hold the land for all times and to lease for terms of fifty or seventy-five years. Mr. H. Hudig, Secretary of The Dutch Housing Institute, has said, "In large or rapidly growing towns where there is a pressing want of building sites, the only way by which an effective carrying into effect of the plan can be secured is by the ownership of all the land included (in a plan) by the local authorities."

### 600 Millions More for Transit in New York

"A month in this hell hole of a subway each year—that's me"—said the man who hung on to the strap at my right. The guard at Forty-second had shoved us by brute force into a car so crowded that we could not lift the newspapers we carried. We were wedged immovably tight. Our common misery served as an introduction. "Almost an hour's trip each way" he said; "three hundred times a year—twenty-five days of twenty-four hours—almost a month—I think of it every day as I stand here trying to get breath—I think of it every evening when I get home too dead to do anything but eat and sleep. The curse of the great city is the subway. Eight hours work a day—what's the use of it? You're in no condition to use your time off after a trip in the subways; all the shows and lectures are no use to me. T'aint the work that kills folks in New York—it's the trip in this hell hole . . . . ."

I was thinking of the head lines in the morning papers "*Hylan Announces His \$600,000,000 Plan for Transit. Proposes to Construct 35 More Subways, Extensions, Tunnels and Bridges—126 Miles of New Lines—System to Total 237 Miles With Transfers and a Single Five Cent Fare—To Be Finished in Fifteen Years.*" If my companion could only hold out until it was all built, perhaps he would have a seat. But no! I remember the days before the first subway was opened and how we hoped to escape the congestion of the elevated railroad. The first underground was hardly opened before it was crowded. Then came extensions and new lines. The number of people to be carried back and forth from the center of activity in lower Manhattan always grew quicker than the service of the transit lines, and I saw that the tale was bound to repeat itself again and again. The net result would simply be that the average length of trip would be increased. That means not only more waste of time for each of us but a greater cost for each passenger. If the fare is to be only five cents, the additional cost will have to be paid indirectly by the tax payers. It is a hopeless muddle. The fact that the Mayor's plan will probably not be carried out because of political differences with the Public Service Commission does not help the situation. The Commissioners' cure for congestion differs not from that of the Mayor. It is more subways, more and more subways.

Will we never learn that as long as we pile most of the goods on this wee little island of Manhattan, there to be sorted, remade and distributed for the port district

<sup>1</sup> The land policy of Amsterdam, which is similar to that of other large cities in Holland, is described on pages 310 to 328 of this issue of the JOURNAL.

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and much of the entire land as well as foreign lands, we will have this everlasting transit problem? As industry and business grow on Manhattan the number of workers grows, and their homes must be further and further away. There is only one possible cure. Industry and business must be spread—decentralized. And the homes of workers must be within walking distance of their work. Six hundred millions for new homes in garden cities near industrial plants—if you will—but not for subways.

## The Institute's Activities

FOLLOWING the discussion at the meeting of the Executive Committee on 9 September, the following cablegram was sent to Major George Oakley Totten, representative of the Institute at the Tenth International Congress of Architects in Brussels:

"American Institute of Architects expresses hope that the International Congress of Architects will find it possible to arrange to meet in the United States in Philadelphia in nineteen twenty-six in connection with the exposition celebrating the one hundred and fiftieth anniversary of the Declaration of Independence.

"WILLIAM B. FAVILLE,  
*President.*"

AT THE LAST Convention the question was informally asked as to why architects were not granted the same income tax exemption on automobiles used in practice as is granted to physicians.

The Internal Revenue Department has advised the Institute that a professional man may claim as deductions expenses paid in the operation and repair of an automobile used in making professional calls. Further information is contained in Section 214 (a) (1) and Section 214 (a) (8) of the Revenue Act of 1921, and Articles 101, 104, 161, and 162 of Regulations 62, copies of which may be procured upon application to the Internal Revenue Office, 1422 Pennsylvania Avenue, Washington, D. C.

AMENDMENTS TO THE SCHEDULE OF CHARGES: No important amendments were made to the Schedule of Charges. Those directed by the Convention were of a minor nature, in the interest of clarity, and will be found on page 63 of the Proceedings. The amended Schedule has been printed as A. I. A. Document No. 177, and it will also appear in the Ethical Documents.

PUBLIC INFORMATION: Prior to the Convention, a brochure on publicity work with the newspapers was sent by the Public Information Committee to the President and Secretary of each Chapter. This document contains ample material for a good beginning in the territory of any Chapter, and it is hoped that every Chapter will take steps to use it. The plan was first tried in the Washington, D. C., Chapter, and results were most gratifying. Your officers consider the development of a Public Information Program one of the most important matters before them, and further reports will go to the membership from time to time.

NEW MEMBERS: The Convention approved a program for increasing the membership of the Institute to 4,000 by the end of 1926. It is almost obvious that among the unaffiliated architects there are 1,500 worthy of Institute membership, or at least worthy of a trial. To get these 1,500 within the fold in the next four years is the duty and ambition of the Secretary's Office. The task can only be accomplished through the Chapters and the individual members of the Institute. Their help is sought. When you realize that some non-Institute architect in your community has the makings of Institute membership why not mention his name to the Chapter Committee on Institute membership; or give him some encouragement to the end that he will seek affiliation with his professional society? There are some good men waiting for such an invitation. They hesitate to seek uninvited the honor of Institute affiliation.

EXECUTIVE AND BOARD MEETINGS: The summer meeting of the Executive Committee was held in New York. The minutes are included in this issue of the JOURNAL.

The Board of Directors will meet in December, probably in Denver, Colorado, when the Budget for 1923 will be prepared and tentative plans made for the Fifty-sixth Convention. Progress reports from the Standing and Special Committees will also be considered. The Board will welcome any suggestions from Institute members intended to make the Society more useful to the Public or more effective in the advancement of the Architectural Profession.

On any of these matters the Secretary shall be glad to furnish any other information available, and to render generally to the membership the service and co-operation which it has the right to expect of the Secretary's Office.

DISTRIBUTION OF DOCUMENTS: Members have received the Proceedings of the Chicago Convention and the Annuary for 1922-1923. The Monograph of Ethical Documents containing the Schedule of Charges, the Circular of Advice, Constitution and By-laws, and the Disciplinary Rules, some of which were amended by the Convention, will be delayed for some weeks.

In the Proceedings certain matters are of particular interest: (1) Changes in the Circular of Advice: There was extended discussion of the Board's proposal to eliminate Canon XI of the Canon of Ethics which reads: "To compete knowingly with a fellow architect for employment on the basis of professional charges is unprofessional"; and to add to the Circular of Advice, paragraph 4, a second paragraph condemning competition with a fellow architect for employment on a basis of professional charges, and stating the duty of the architect to take reasonable steps to ascertain that other architects are not under consideration. The Convention approved the Board's recommendation and directed that the phraseology of the amendment be left with the Board for determination and issuance.

WILLIAM STANLEY PARKER,  
*Secretary.*

# INSTITUTE AND CHAPTER ACTIVITIES

## Chapter Activities

ANNOUNCEMENT is made of the formation of the North Pacific Division of the Small House Service Bureau of the United States. It is thought that the State Bonus Act of Oregon will furnish an excellent opportunity for sales of Small House Bureau plans in the North Pacific territory.

THE PENNSYLVANIA State Association is now composed of five Chapters as follows: Philadelphia, Pittsburgh, Southern Pennsylvania, Erie, and Scranton-Wilkes-Barre; of which Association the President and Secretary as are follows: Mr. W. L. Plack, President, 1200 Locust Street, Philadelphia; Mr. Percy Ash, Secretary, 1827 Arch Street, Philadelphia.

## From Our Book Shelf

### Fifteenth Century Flemish Art

To anyone who has ever had the good fortune to be able to loaf through Belgium and Holland, particularly to anyone who has walked through the archway of the Town Hall in Bruges, followed along by the "Dyver" canal, crossed the bridge with the ducks swimming below, and pulled the bell at the door of the Hospital of St. John to gain admission to that Chapter House filled with its wealth of Memling's art,—to all such people Sir Martin Conway's book<sup>1</sup> will be fascinating reading.

It tells about the origin, the training and the work of the early French miniaturists, and notably those who worked on the "*Heures de Chantilly*" for the Duc du Berry in 1485; the innovations in methods introduced by Hubert Van Eyck; the Guild System; Peter Christus; Robert Campin; John Van Eyck; Roger Van der Weyden; Hugo Van der Goes; Hans Memling; Quentin Matsys and onward through a fascinating list to Lucas Van Leyden and Peter Bruegel. All these are told about in a most interesting and entertaining way in a large and well made book, almost an Encyclopedia of the art of the period. Sir Martin Conway explains why of necessity he confined himself only to such illustrations as would explain his points. He does make his story clear, sufficiently complete and most satisfying even if somewhat rambling in manner.

If we dare be critical of so learned a discourse, we must say that the author seems so familiar with his subject that he occasionally becomes patronizing. Of Memling he says towards the close of his chapter devoted to that painter, ". . . his pictures prove him to have possessed an artist's eye for a picture as a whole. If his sympathies did not embrace the wide gamut of human capacity and emotion, they were broad enough to include all that was in harmony with his own ideal. His paintings are complete, each within its intended area. They are integral. They suffer neither from the too-much or the too-little. Execution matches conception. Idea and form are at one. They may not greatly stir the

<sup>1</sup>"*The Van Eycks and Their Followers*," by Sir Martin Conway, formerly Slade Professor of Art at Cambridge. E. P. Dutton & Co., New York City. 1921.

imagination, but they please the eye. Their merit may perhaps best be measured by the fact that of all Netherlandish painters Memling has most attracted the affection of posterity, though he has failed to excite its wonder. In the Elysian fields he walks with Fra Angelico; but if we are to select an Italian parallel to him as an artist, Perugino must be our choice. The two men would have understood one another."

We wonder whether the comparison is a fair one. If we may trust the stories that are yet told in Flanders about the great painters of that period and particularly about Memling, there was not a bit of the Italian spirit in him. There was in him rather more of the boisterous, hearty, energetic man of the world whose periods of repentance were just as violent as his periods of sinning, and his religious moods the reflex of the others. Whether Sir Martin Conway be right or wrong in this particular, his book about the Van Eycks and their followers reconstructs for us the world of fifteenth century Flemish Art.

ROBERT D. KOHN.

## News Notes

SMITH, HINCHMAN AND GRYLLS announce the removal of their offices from the Washington Arcade Building to the Marquette Building, 243 Congress Street, Detroit, Mich.

R. CLIPSTON STURGIS, F. A. I. A., announces that William Stanley Parker, F. A. I. A., William B. Coffin, A. I. A., William Adams, A. I. A., S. Winthrop St. Clair, A. I. A., and Alanson H. Sturgis, A. I. A., are now associated with him in the practice of architecture, the organization being known as the office of R. Clipston Sturgis, architect, 120 Boylston Street, Boston 11, Mass.

EVERY Architect who wishes to practice in New York State must secure a certificate of registration from the Regents of the State University. Application for renewal of registration should have been made by September 1; otherwise it is subject to a heavy penalty for each month's delay. Application blanks should be secured immediately from the State Board of Examiners and Registration of Architects, Education Building, Albany, N. Y.

THE SOCIETY of Beaux-Arts Architects announces the result of the 15th Paris Prize Competition, the subject being a City Hall. The awards were as follows: Prize and First Medal—Roger Bailey, Patrons, Prof. E. V. Meeks and Mr. O. Faeltou, Bronxville, N. Y.; Placed Second and First Medal—E. W. Burkhardt, Columbia University, N. Y. C., Patrons, Messrs. M. Prevot and H. W. Corbett; Placed Third and Second Medal—L. Fentnor, Patron, Mr. F. C. Hiron, N. Y. C.; Placed Fourth and Second Medal—J. G. Schuhmann, Jr., Columbia University, N. Y. C., Patrons, Messrs. M. Prevot, H. W. Corbett and J. V. Van Pelt; Placed Fifth and Second Medal—E. L. Babitsky, John Huntington Polytechnic Institute, Cleveland, Ohio, Patron, Mr. J. Wynkoop, N. Y. C. The members of the jury of awards

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

were F. L. Ackerman, L. Ayres, R. P. Bellows, P. P. Cret, J. M. Howells, J. H. Hunt, J. G. Rogers, H. R. Sedgwick and H. O. Milliken, chairman.

TALES of the passing of ancestral estates in England seem to increase in their appeal to our affection for the things that were. Now it is Cassiobury, to be sold by the Countess of Essex, in whose family the property has been for six generations. It is said that Grinling Gibbons is there to be seen at his best, and of course the press records the fact that he was appointed carver to Charles I. at the salary of 1s. 6d. a day. Tantallon Castle, a part of a North Berwick estate, is likewise to go under the hammer, while Sutton Courtenay, on the Thames near Abingdon, is also down for sale. The earliest part of this historic structure dates from 1450, and the medieval banquetting hall is referred to as a gem of architecture. There seems to be no doubt about the coming change in the character of English domestic architecture, since the ability to maintain an establishment of the old order is now greatly circumscribed in many ways.

## New Members Elected

(As of 5 August, 1922.)

BOSTON: William Adams, Harold Field Kellogg, Stanley Brampton Parker, Alanson Hall Sturgis. George H. Edgell, *Cambridge*. Millard B. Gulick, *Waltham*. John Tempest Walker, *Worcester*. Raphael Boilard, *Manchester, N. H.* BROOKLYN: Lester Bristol Pope. Erling Owre, *New Brighton*. CENTRAL ILLINOIS: Lemuel Cross Dillenback, *Urbana*. CLEVELAND: Allen Sogg. CONNECTICUT: O. C. S. Zioli, *Bridgeport*. ILLINOIS: Gustaf P. Lagergren, Edgar Martin, Joseph J. Nadherny, A. N. Rebori, Herbert Hugh Riddle, Frederic B. Schmidt, Charles E. White, Jr., Laurence E. Wilkinson, *Chicago*. KANSAS: Charles W. Shaver, *Salina*. KANSAS CITY: Edward Buehler Delk, H. H. Dunham, Samuel M. Hitt. Henry C. Smith, *Independence, Mo.* LOUISIANA: John Herndon Thompson, *New Orleans*. N. W. Overstreet, *Jackson, Miss.* MINNESOTA: William P. Allred, Jr., W. Emil Ellingsen, Peter Olsen Martin, *Duluth*. Leon Arnal, *Minneapolis*. Albin Reinhold Melander, *Agricultural College, N. D.* O. A. Braseth, Walter B. Hancock, *Fargo, N. D.* NEBRASKA: Edward George Schaumberg, *Lincoln*. NEW JERSEY: Frank Haviland Vreeland, *Upper Montclair*. PHILADELPHIA: James F. Talbutt. PITTSBURGH: Arthur N. Steinmark, *Bellevue*. Raymond L. Ewald, *Charleston, W. Va.* SAN FRANCISCO: Albert John Evers. Charles E. Perry, Jr., *Vallejo*. SCRANTON-WILKES-BARRE: Gilbert N. Edson, William S. Lowndes, *Scranton*. SOUTHERN CALIFORNIA: Clyde A. Paige, Edward B. Rust, A. C. Zimmerman, *Los Angeles*. ST. PAUL: Roy H. Haslund, Edwin H. Lundie. TENNESSEE: Hubert T. McGee, *Memphis*. VIR-

GINIA: Thomas Perrin Thompson, *Norfolk*. WASHINGTON, D. C.: Robert C. Walker. WISCONSIN: Frank Riley, *Madison*. Henry G. Lotter, *Milwaukee*.

## Obituary

George Beaumont, F.A.I.A.

Elected to Fellowship in the Institute in 1889

Died at Chicago, 11 July, 1922

In the death of George Beaumont, the Illinois Society of Architects loses a valued member. Mr. Beaumont was born in Leeds, England, in 1854, and commenced the study of Architecture when only fifteen years of age. After traveling in Europe extensively in the pursuit of his architectural studies he was awarded the annual medal in 1880 of the Leeds and Yorkshire Architectural Society. In 1881 he was elected to membership in the Royal Institute of British Architecture.

He came to Chicago, in that same year and found employment with architect J. A. McLennan and shortly afterwards with Wheelock & Clay, remaining with this firm as its superintendent of construction until its dissolution in 1886, at which time he went into general practice for himself. Mr. Beaumont twice served as President of the Chicago Architectural Sketch Club, which he organized in 1885.

He was an early member of the American Institute of Architects and was always an active member of the Illinois Chapter, serving for seven years as secretary, one year as treasurer and as president for two terms. Mr. Beaumont joined the Illinois Society of Architects during its first year of existence and at once became a most valued member, serving as president through two terms. At the time of his death he was serving on the Board of Directors.

Mr. Beaumont in his practice of architecture always sought to give full value in his services and thus won the confidence and loyalty of many prominent clients. On account of his knowledge and reliability his services were also sought after by the City Administration to conduct its civil service examinations; he gave freely of his time in this special work for a period of seven years. Mr. Beaumont was one of those rare, true and tried men who could be relied upon always to act promptly, doing his best, and carrying out his part of the work successfully. He leaves a place that will not be easily filled and his memory will be cherished by many. Mr. Beaumont, as Historian, ended his report at our 25th Anniversary in the following words, "In looking back over the last quarter of a century we, in loving memory, deeply regret that so many of our older talented members, who fought the fight and kept the faith, have passed into the great Homeland and, resting from their labors, peacefully await the glorious day of Resurrection."

These words mean much more to us now than when spoken by our departed friend. H. B. WHEBLOCK.

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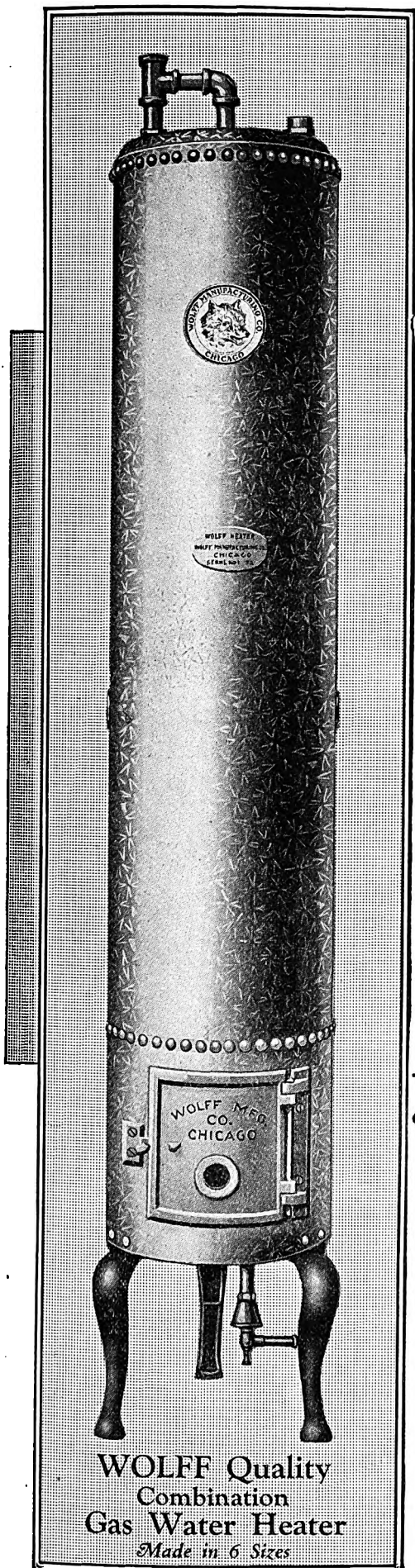
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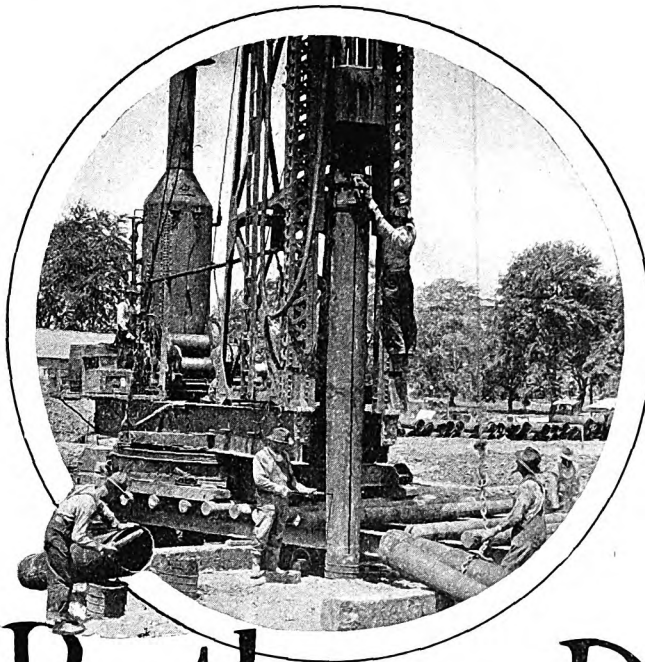
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# Structural Service Department

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*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vacations and avocations.*

## Abstracts

*It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

**Comparative Tests of Automatic Ventilators. (12k)—**  
(By J. P. Calderwood, A. J. Mack and C. J. Bradley. From the July, 1922 number of the *Journal of the American Society of Heating and Ventilating Engineers*.) Because of the lack of authentic data upon the effectiveness of different types of automatic ventilators, when subjected to varying conditions, the tests, described in this paper, were conducted in the Engineering Experiment Station of the Kansas State Agricultural College, to determine the efficiency of many of the various styles.

A preliminary series of tests upon three different types of automatic ventilators was carried on at the Kansas State Agricultural College during 1919 and 1920. The results of this investigation proved so interesting that a decision was made to continue the work upon a much broader scale and to include as many of the commercial ventilators as possible. Consequently the laboratory equipment was enlarged and twenty-two representative ventilators were secured through the courtesy of the various manufacturers.

**Types of Ventilators.**—In general, an automatic ventilator is simply a protecting device, which is placed over a hole in the roof of the building or inclosure to be ventilated, to prevent the entrance of rain or snow. Their use for the removal of foul gases from inclosures is quite common so that further description is unnecessary. Their chief advantage over the mechanical means of ventilation consists in their providing ventilation without the use of mechanical power.

Such a ventilator, in order to be effective in the production of ventilation, should not only be effective in preventing the entrance of snow or rain, but should also provide for the free exit of foul gases when no wind is blowing and should not be affected by down drafts when winds prevail. This fact gives rise to various types, the main feature in their several designs being to utilize the wind to better advantage in the production of draught. Commercial ventilators may, consequently, be divided into four general classes dependent upon the means utilized in producing the additional draft. They are the plain stationary, the siphoning stationary, the plain rotary, and the rotary siphoning types.

The plain stationary type of automatic ventilator makes no special provision for utilizing the wind velocity in producing additional draft. This type consists simply of a cap over the ventilator pipe which prevents the direct entrance of rain or snow and is made storm proof by a circular cowl or hood.

The principle of operation of the stationary siphoning type is based upon the breaking up of the wind currents and directing them in such a manner as to create a decreased pressure in the upper portion of the ventilator. Ventilation is thus secured by an ejector action. When no wind is blowing, the ventilation resulting is that due to natural circulation of the air. When winds prevail the siphoning action is established and additional ventilation results. The higher the velocity of the wind, the greater the exhausting power of the ventilator.

The plain rotary type consists of simply an elbow or its equivalent which is supported upon a vertical shaft. The position of the elbow is regulated upon the principle of the weathervane so that the opening from the ventilator always points away from the direction of the wind. This ventilator makes use of the slight vacuum produced by the wind in the production of additional draft.

The turbine ventilator was classed in this investigation as of the rotary siphoning type in that its operation was difficult to classify and that its effectiveness brought it within the rotary siphoning type. It is illustrative of the many different ideas which have been incorporated in ventilator construction.

The rotary siphoning type has, in addition to the principle embodied in the plain rotary type, a feature similar to that used in the stationary siphoning ventilators. The air is directed by flutes or vanes so that an ejector action is established, thereby increasing the velocity through the ventilator. In some cases, the ejector is placed within the ventilator, while in others it surrounds the ventilator.

**Method of Test.**—In establishing a method of procedure in conducting the tests, it was conceded that there were many factors which would influence the practical performance of a ventilator and which should be included if an exhaustive test were to be conducted, but difficulties would arise if any attempts were made to include these in the laboratory tests.

In dealing in a practical way with the effectiveness of a ventilator, it is necessary to take into account the openness of the structure to be ventilated, as well as the action of the wind. When wind is arrested by an obstruction, such as a building, a pressure is developed which forces air through possible openings with the result that the air inside the building is forced outward through no action of the ventilator other than the opening it provides.

Furthermore, temperature differences exist between the inside and outside of buildings ventilated and this likewise will increase or decrease the effectiveness of a ventilator in practical use, depending upon the degree of temperature difference.

In conducting the tests in this investigation, it was finally decided that the performance of the wind in inducing a current of air through the ventilator was the important factor. Also, it was thought desirable to secure data upon the advantages of the various types of ventilators and to ascertain, if possible, what principles of design should be incorporated to secure the most efficient ventilator. The investigation, consequently, was limited to these phases of the subject.

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**Test Equipment.**—In order to conduct the tests and to approximate actual wind conditions, a wind tunnel 3 ft. square and 16 ft. long was first constructed. In one end of the tunnel a variable speed fan was placed which was capable of producing wind velocities up to 15 miles per hour. About 3½ ft. from the other end of the tunnel a 10 in. pipe, which protruded about 2 in. above the tunnel floor, was inserted to receive the ventilator.

The wind tunnel with its fan was placed in the mechanical engineering laboratory, the volume of which was large enough to eliminate all perceptible drafts caused by the fan. The temperatures of the air in the tunnel and that in the room were also equal so that all effects from natural ventilation were removed. Honeycombed screens were placed within the tunnel to produce parallel currents of air and to create a more uniform velocity over the tunnel section.

All the ventilators tested were of the same commercial size. The diameter at the base of the ventilator was 10 in. This dimension was selected as being fairly representative of the ventilators used in practice and this size made possible the investigation without necessitating a large tunnel. It was assumed that the manufacturers of ventilators proportioned their ventilators according to their size and that a 10 in. ventilator would be proportional to other sizes.

In performing the tests, a ventilator was placed over the pipe in the tunnel and the speed of the fan regulated to produce the desired wind velocity. The air from the fan was forced through the tunnel toward the ventilator, thus creating a region of high pressure near the ventilator which tended to force air down through the ventilator rather than induce a current up through it. Readings of the wind velocities in the tunnel and of the air induced through the ventilator were taken by means of an anemometer. The readings of the velocity of the air in the tunnel were taken at various sections of the tunnel and the results averaged. The velocity of the air induced through the ventilator was measured by inserting the anemometer in the short vertical pipe underneath the tunnel floor. Data was also secured of the air induced through the ventilator pipe when no ventilator was inserted in the tunnel. The results secured in this latter case are referred to and recorded as No Ventilator.

**Conclusion.**—Before attempting to draw any conclusion from these results, it may be well to call attention to one or two important facts.

1. The test apparatus while designed to reproduce actual wind conditions approaches this only approximately. As was mentioned before, in an actual installation, the wind has its progress arrested by the building. A portion of this air enters the building through any crevices. This theoretically increases the pressure within the enclosure and materially increases the velocity of the air passing through the ventilator. Thus, it would seem that the results secured in this investigation were only approximations of actual installations or would be applicable only to exceedingly tight or well built buildings.

To compare the results with actual installations, a 10 in. ventilator pipe was inserted in a small outbuilding. No heat was supplied to the building during the tests and readings of the wind velocity and the induced velocity through the ventilator were read when various types of ventilators were used. The variable velocity of the wind made the readings rather erratic, but when the tests extended over several days, the average results checked fairly closely with those secured in the laboratory. It was thus concluded that the laboratory results were fairly representative. They were at least conservative values of what should be expected in actual installations.

2. The results were secured on rather small ventilators. Commercial ventilators as a rule are much larger than those used in this investigation and their proportion may be different from that of the 10 in. ventilator tested. This may alter the aspect of the problem, although it is assumed to no serious extent.

3. The results as found in the investigation differed somewhat from those secured in tests of similar ventilators conducted in different laboratories. This discrepancy is partly explained by the fact that different laboratory equipment will produce different results. Any turns or extension to the pipe which is used for receiving the ventilator under test produces friction that lowers the test results. The size of the tunnel likewise plays an important part, a small tunnel producing different results from those of a large one. With a tunnel 3 ft. square as used in this investigation, some of the larger ventilators produced so much obstruction that only a comparatively small area remained for the flow of air between the ventilator and the sides of the tunnel.

One of the first important conclusions that may be readily drawn from these results is that a wide range of effectiveness is found in the ventilators of each type. There were ventilators in each type that gave an extremely high ventilating effect, while others were comparatively poor. The range was more pronounced in the plain stationary type. Some of the plain stationary types did not give as good results as no ventilator. Much of this could be overcome through more judicious design. The free area through the ventilator openings should be ample capacity and be as free from obstructions as possible. The storm band, if used, should be of ample width to prevent the wind from entering the ventilator.

As judged from the results of the different types of ventilators tested, a slight gain is made by utilizing the wind to better advantage. In the order of their effectiveness come the plain stationary, the stationary siphoning, the plain rotary and the rotary siphoning. The average effectiveness of the various types is plotted on the accompanying chart:

### *Results of Tests Showing the Velocity in Feet Per Minute Induced Through Seven Different Plain Stationary Ventilators.*

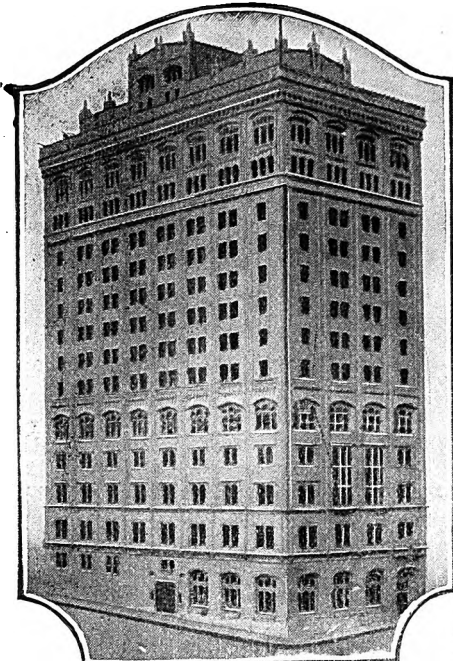
Velocity of wind in miles per hour	No. Ventilator	Velocity induced through ventilator, feet per min.						
		Ventilator Designation						
		1	2	3	4	5	6	7
4	145	185	266	148	185	142	133	160
8	241	287	355	257	287	238	242	267
12	337	390	446	366	390	334	350	375

### *Results of Tests Show the Velocity in Feet Per Minute Induced Through Six Stationary Siphoning Ventilators.*

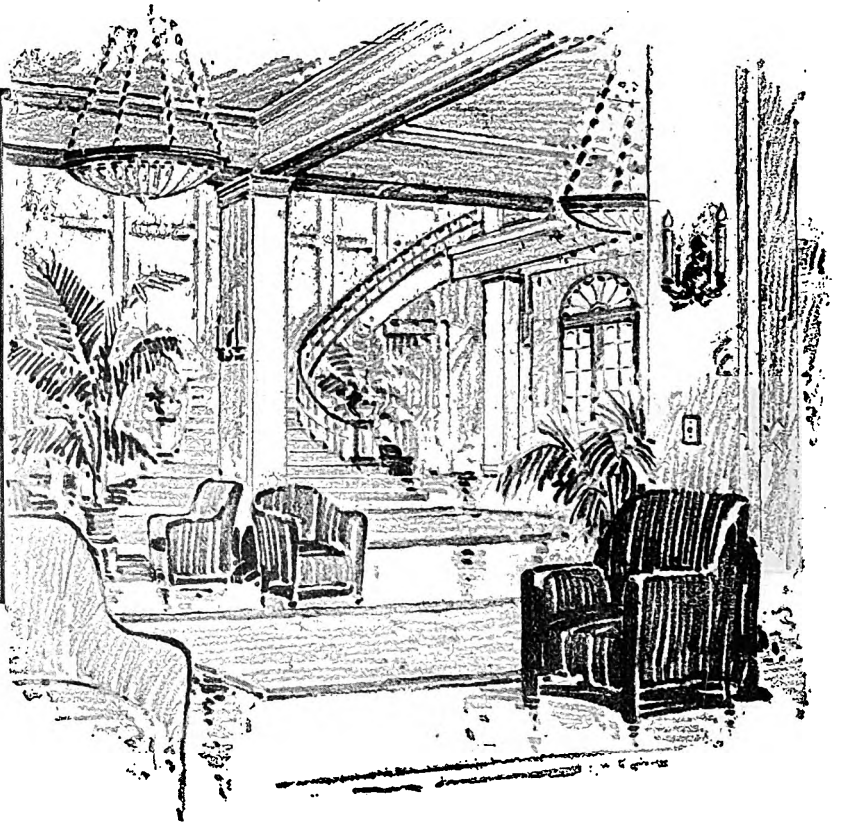
Velocity of wind in miles per hour	No. Ventilator	Velocity induced through ventilator, feet per min.					
		Ventilator Designation					
		1	2	3	4	5	6
4	145	162	157	226	189	205	206
8	241	304	292	404	315	332	369
12	337	446	426	583	440	458	532

### *Results of Tests Showing the Velocity in Feet Per Minute Induced Through Four Plain Rotary Ventilators.*

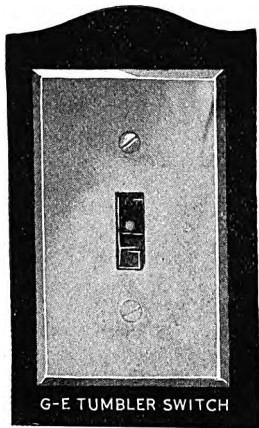
Velocity of wind in miles per hour	No. Ventilator	Velocity induced through ventilator, feet per min.			
		Ventilator Designation			
		1	2	3	4
4	145	208	192	191	202
8	241	346	348	354	341
12	337	484	505	518	480



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## Results of Tests Showing the Velocity in Feet Per Minute Induced Through Five Rotary Siphoning Ventilators.

Velocity of wind in miles per hour	No. Ventilator	Velocity induced through ventilator, feet per min.				
		Ventilator Designation				
		1	2	3	4	5
4	145	257	192	222	217	204
8	241	479	370	387	410	393
12	337	702	548	553	606	582

## Results of Tests Showing the Average Velocity in Feet Per Minute Induced Through the Various Types of Ventilators.

Velocity of wind in miles per hour	No. Ventilator	Velocity induced through ventilator, feet per min.			
		Type of Ventilator			
		Plain Stationary	Siphoning Stationary	Plain Rotary	Rotary Siphoning
4	145	168	191	198	218
8	241	273	326	348	408
12	337	379	461	497	598

A comparison of the siphoning types of ventilators with those of the non-siphoning types show that some of the non-siphoning types are as effective as some of those employing the siphoning principle. This fact led to a special investigation which had for its object the determination of the effectiveness of the siphons. In this part of the work the siphons on the windward side of the ventilator were closed by wads of paper and invariably the effectiveness was not decreased.

A further study of the effectiveness of the stationary siphoning types was made to determine what factors in the design made those of one manufacturer better than another. This study was decided upon because most of the ventilators in this classification were practically the same in general measurements. It was found that the width of the storm band played an important part; the wider the band, the greater the effectiveness.

The results also seemed to show that the addition of the flutes for producing the siphoning acted as a secondary storm band and that those ventilators in which the angle of the flutes were small proved the most effective. This later conclusion was explained by the fact that with ventilators whose flutes were steep, more difficulty was encountered by the air in entering the ventilator. Consequently, less air entered that had to be exhausted and the exhausting power of the ventilator could be utilized in inducing air through the ventilator rather than removing air that had been introduced for siphoning.

The results of this investigation seem to indicate that the most effective action of the wind in inducing air through a ventilator is the vacuum produced in the wake of the wind. The ventilators which showed marked effectiveness in these tests took advantage of this principle. Those ventilators, which presented a large obstruction to the wind, other factors being the same, gave best results.

The factors which seem to be important in the design of a ventilator are as follows: The area for the outgoing gases should be made ample; in the case of siphoning ventilators the free area should be designed to care for the additional air used in siphoning; the storm band, if used, should be made at least wide enough to prevent entrance of outside air. Any provision, whereby the vacuum created by the wind is increased or made more effective will produce better results.

**Effect of Storm Band.**—In order to test the effect of the width of the storm band, an experimental ventilator of the plain stationary type was constructed. The storm band was formed by two sheets of tin and made so that the width of the band above and below the ventilator opening could be varied. The size of the tunnel did not permit of a larger storm band than 22 in. and the minimum width of band was 17½ in. The lower edge of the storm band was placed 4 in. below the ventilator opening as this location gave best results. A comparison of these results indicates that a wide storm band materially increases the effectiveness of the ventilator and that a plain stationary ventilator so equipped is equal in effectiveness to some of the rotary siphoning type. While these results may be in error because a ventilator with so great a band width produced so large an obstruction in the experimental tunnel, they do indicate the advisability of considering the storm band as an important part of the ventilator.

## Results of Tests Upon An Experimental Ventilator to Determine Effective Width of Storm Band.

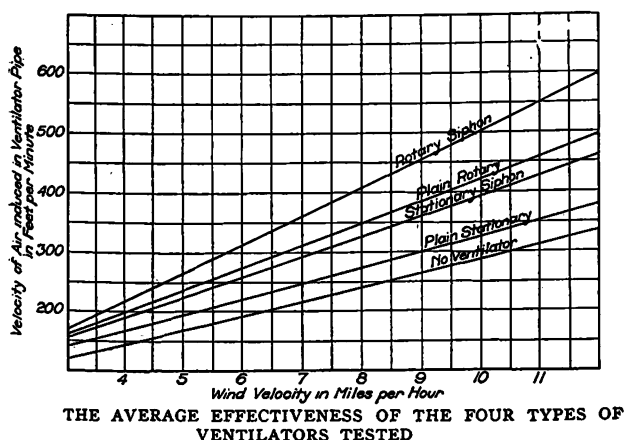
Wind Velocity in miles per hour	Velocity induced through ventilator, feet per min.			
	Width of Storm Band in inches			
	17½	19	20	21
4	130	164	183	202
8	402	432	456	477
12	620	651	680	696

**Tar Preparation and Uses.** (12a11)—(*U. S. Dept. of the Interior. Bureau of Mines. Technical Paper 268, "Preparation and Uses of Tar and Its Simple Crude Derivatives" by W. W. Odell. Pages 84. Size 6" x 9". Illustrated.*) According to Webster's dictionary tar is a thick, brown to black viscous liquid obtained by the destructive distillation of wood, coal, peat, and other organic materials, and having a varied composition according to the temperature and material employed in obtaining it.

**Chief Sources of Tar.**—Although it is possible to produce an endless variety of tars, the varieties commonly found on the market in appreciable quantities are few in number and may be listed under the general heading of tars produced as a by-product in the manufacture of combustible gas or coke as follows: Horizontal-retort tar, inclined and vertical retort tar, by-product coke-oven tar, water-gas tar, producer-gas tar, and oil-gas tar.

In fact, a more general classification can be made, and the chief varieties of tar on the market may be classed as: Coal tar (including retort tar and oven tar), water-gas tar, and mixtures of coal tar and water-gas tar.

**Coal Tar.**—Coal tar is obtained by the destructive distillation of bituminous coal, as in the manufacture of coal gas. New methods of manufacturing coal gas have been intro-



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**A**LMOST everything that can go into building construction bears the trade-mark of some manufacturer who has said to himself:

"If I am to realize my ambition in building a permanent business, I must put into what I make the best of my skill and knowledge, must label it with my trade-marked name, must win for that name an honorable place and must keep it so."

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Trade-marks are guides to good merchandise. You have proved it with building materials—you have proved it in buying the food you eat and the clothing you wear.

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For it, too, is trade-marked. You can specify it by brand with the same assurance you designate other trade-marked goods.

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Long-Bell Lumber has back of it 47 years of honorable enterprise.

Long-Bell Lumber comes from exceptional stands of virgin timber; manufactured in modern mills.

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## STRUCTURAL SERVICE DEPARTMENT

duced in recent years, which in turn have resulted in corresponding changes in the properties of coal tar.

**Properties of Coal Tar.**—Retort-gas tar, which is obtained as a condensation product in the manufacture of illuminating gas by the carbonization of bituminous coal in retorts, is a black viscous liquid that contains less of the lighter hydrocarbons and more of the heavy hydrocarbons and free carbon than the tars from some other sources. The specific gravity (water-free retort-gas tar) ranges from 1.10 to 1.25. The so-called "free carbon" varies from 18 to 30 per cent for horizontal retort tar and from 0.4 to 5 per cent for vertical retort tar. Tars having a high specific gravity and high free-carbon content yield a high percentage of high boiling point pitch. Differences between the various tars are in a great measure due to the rate, duration, and completeness of heating of the coal, the amount of exposure of the tarry vapors to hot brick or coke surfaces, the temperature of these walls, and the exposure of the vapor to the final temperatures reached in the coking chamber.

**By-Product Coke-Oven Tar.**—This is a particular kind of coal tar. In by-product ovens coal is carbonized in greater mass and the carbonization period is longer. The coal is not heated so rapidly, but it is finally exposed to a higher temperature, resulting in the production of a greater volume of gas and a different quality of coke and tar.

**Properties of By-Product Coke-Oven Tar.**—This tar is less viscous, is lighter in weight, contains more oils, less pitch, and less free carbon than tar from horizontal retorts; and in some respects is much like tar from vertical retorts.

**Water-Gas Tar.**—This tar has an entirely different origin from coal tar and, in addition, differs from coal tar both physically and chemically. In appearance, however, it is much the same, except that it is much more fluid. It has the consistency of water or oil. When a small quantity is rubbed between the finger and thumb in a thin layer, it appears to be brown to black. Its specific gravity is very nearly the same as that of water, but when free from water may be as high as 1.15. Its composition and physical properties vary, this variation being greater in small plants when gas is produced intermittently than in larger plants where operations are continuous. It frequently is found to contain more than 50 per cent water. Water-gas tar contains compounds known as paraffins which are not present in coal tar. It is further distinguished from the latter by its not containing any appreciable amount of tar acids. Free carbon is seldom present in amounts greater than 1 to 4 per cent.

For many uses to which coal tar and its products are put, water-gas tar and its products are apparently unsuitable, but they should not be condemned for all purposes requiring a tar or tar products. The wide variations in important properties existing between water-gas tars made with the various oils no doubt occasions much of the discrimination against water-gas tar. However, it may be said of water-gas tars in general that they are separated from water with difficulty; their pitch is small, easily fusible, and readily affected by temperature changes; they contain paraffins, and their free carbon content is very low.

**Raw and Refined Tars.**—Raw tar is tar as collected at the works; it contains water in various proportions and frequently small amounts of ammoniacal liquor. It is not usually sold to consumers in the raw state.

Refined tar has had these ingredients removed by the application of heat. In some plants the tar is heated in vertical tanks by a coil immersed near the bottom; then it is drawn off from the bottom and sold as refined tar. The tar thus treated is not free from water or ammonia but is,

perhaps, more suitable for most purposes than the untreated tar. When tar is heated in a closed tank until the water, ammonia, and crude naphtha or "first runnings" are removed, the remaining tar might properly be termed "refined tar." For certain uses it is desirable to continue the heating a little longer, volatilizing and removing more of the lighter oil constituents of the tar; the resulting heavy tar is also refined tar. When it is purchased in quantities and when the particular use to which it is going to be put is known, the tar is usually refined to suit a given specification. Tars that have been refined are heavier and more viscous than raw tar, their viscosity depending on the degree of refining.

**Tar Distillation.**—When heat is applied to tar contained in a still, the first change that takes place is the volatilization of the very light oils and the water contained in the tar. These vapors pass out through the off-take and are cooled. On condensing to a liquid, the light oil and water can easily be separated. As more heat is applied heavier vapors distill off and if carried to completion or until all volatile oils have been evaporated, only carbon or coke is left in the still. If the distillation is stopped before all the heavier fractions are vaporized and driven off, the residue is pitch. The more oil left in the residue, the softer the pitch, and vice versa.

The first distillate, very light oil and water, is usually called crude naphtha, but in some works is termed crude benzol. This mixture of oil and water is referred to as "first runnings." When water no longer appears in the distillate, a "change" is made and the oil coming over is run into another container reserved for "light oil." The distillate coming over as the second or light oil fraction has a specific gravity lower than 1.00 at 60° F.

When the oil coming over has a specific gravity equal to 1.00 at 60° F. a second change is made and the distillate is called carbollic oil, as it contains most of the carbollic acid that distills over.

The next or fourth fraction to come over is called "creosote," "dead oil," or "heavy oil," and is usually the last fraction separated. Its properties depend largely upon the completeness of the distillation. When soft pitch is desired as a residue from distillation the volume of creosote and amount of solid matter crystallizing from it at ordinary room temperature will be less than if the distillation is carried to a hard pitch.

The residue in the still, pitch, is drawn off and cooled to proper temperature and run into tight, dry, open-headed barrels, in which it solidifies on further cooling and in which it is usually shipped.

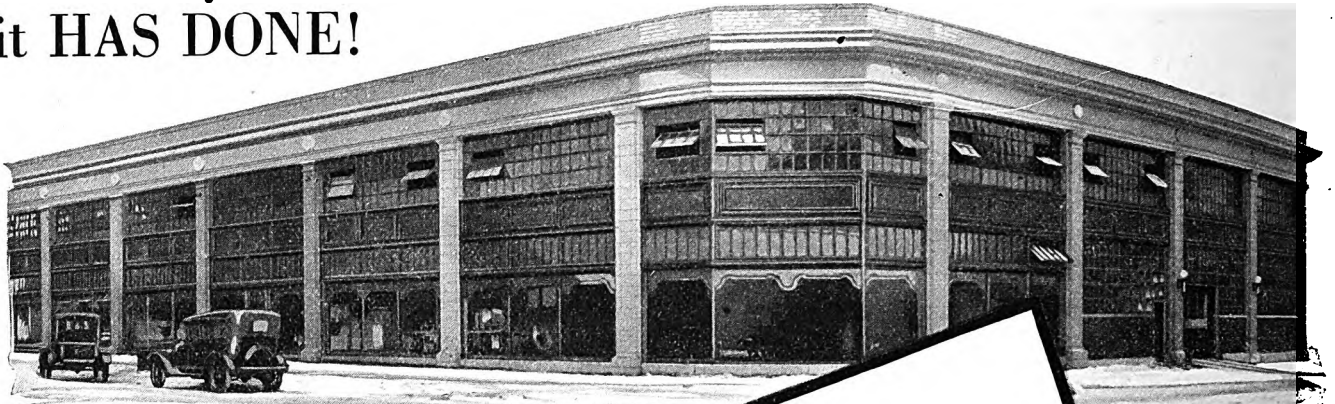
The final point where the distillation should be stopped cannot be foretold in a way that will apply exactly to all tars, the point being determined by the quality of hard or soft pitch that is desired. For a medium grade of pitch, such as is used by roofers, the firing is stopped when the odor, which is noticeably different toward the end of the "run," is more pungent and like ammonia.

When a distillation is made to a soft or a medium pitch and the fractions separated as described, the following yield may be anticipated:

Coal tar:	
1. First runnings—	<i>Per cent by volume</i>
Water .....	1 to 5
Crude naphtha .....	1 to 2
2. Light oil .....	1 to 4
3. Carbollic oil (middle oil) .....	5 to 10
4. Creosote oil (heavy oil) .....	10 to 22
5. Pitch .....	60 to 80
6. Uncondensed gases and other losses...	1 to 2
Total .....	100



Judge what Master Mix  
will do by what  
it HAS DONE!



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BUILDERS  
Plymouth Building  
MINNEAPOLIS

March 28, 1921

The Master Builders Co.,  
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Gentlemen:

On the Cadillac Garage, 10th and Mary Place, we used Master Mix in the laying of 60,000 square feet of floors. The floors are hard and smooth and the owners are well pleased with them.

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Yours very truly,  
FARNAM CONSTRUCTION COMPANY  
(Signed) L. C. Farnam



*For specifications see pages 202, 203, 7th Edition, Sweet's Engineering Catalog, and pages 102, 103, 16th Architectural Edition.*

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## STRUCTURAL SERVICE DEPARTMENT

When hard pitch is made by mistake, it is frequently "cut back" by adding to it, in the pitch tank, enough of the last fraction removed by distillation to give a soft or medium pitch, as desired. When the distillation has not been carried too far, "cutting back" can be done without seriously affecting the quality of the resulting pitch, but the practice is objectionable and should be avoided when possible. If the distillation has been carried too far "cutting back" will not remedy the error and a good quality of pitch cannot be made.

Roofing pitch, such as is used in connection with flat roofs, is medium to soft according to the climate. It is decidedly common practice for roofers to cut back the pitch a little by putting a small quantity of tar in the kettle with it. In fact, some roofers take advantage of the fact that tar is cheaper than pitch by buying as hard a grade of pitch as they think they can use and cutting it back with coal tar to the consistency desired.

*Carbonization of Coal Tar-Distillation to Coke.* As there is a greater demand for the oil than for the pitch, it is desirable to increase the percentage of oil, simultaneously reducing the quality of the pitch. In some plants this is being accomplished by making a very hard pitch which is subsequently powdered and used as fuel; the yield of oil is thus increased from 32 per cent of the tar to 50 per cent of it. By distilling at a red heat to a solid residue the yield of oil is still higher. When tar is distilled to a medium pitch, only about 10 to 20 per cent of the original tar is suitable for timber preserving. When coke is made, however, over 60 per cent of the original tar may be so used.

*Uses.* Among the many and varied uses of tar and its derivatives the following abstract is selected as being of interest in connection with building construction.

**Creosote.** (19a31)—(*Technical Paper 268. Bureau of Mines.*) There is some confusion regarding the meaning of the word creosote. The definition given in Webster's dictionary is: (a) An oily antiseptic liquid, of a burning smoky taste, colorless when pure, but usually colored yellow or brown by impurity or exposure, obtained by the distillation of wood tar, especially that of beechwood. It is a complex mixture of various phenols and their ethers, the principal constituents being guaiacol, creosol, phlorol and methyl creosol. (b) A similar substance obtained from coal tar.

The definitions given for creosote oil are: (a) That part of the wood-tar distillate from which creosote is obtained by purification. (b) The third main fraction in the distillation of coal tar, boiling from 230 degrees or 240 degrees to 270 degrees C. It is greenish yellow oil, heavier than water, containing phenols and other bodies.

From the last definition, creosote oil is the fraction distilling just after the carbolic oil and before the anthracene oil. As frequently used, however, the term has a broader application, including all the heavy oils distilling up to the temperature at which soft pitch remains in the still. Sometimes "creosote oil" means carbolic oil; then the true creosote oil is called heavy oil. Of late years tar has been added to creosote oil and carbolic oil, and the mixture is sold as creosote, creosote:oil, wood preservers' creosote, and paving-block oil, for treating timbers and wood blocks. It is accordingly not surprising that so-called creosote oil can be purchased having almost any specific gravity from 1.02 to 1.14.

Specifications for creosote oil differ so widely that the term frequently means a tar oil with a specific gravity greater than water and with a high boiling point. The word creosote is often used as synonymous with creosote oil.

True creosote oil, which comes over after the carbolic fraction, usually contains naphthalene that may crystallize on cooling. Usually the naphthalene is not separated from the liquid, as the oil is mainly used in wood preserving, for which purpose a small content of naphthalene is not objectionable.

The two primary objects of treating timbers and wood blocks with creosote oil are to preserve the wood from decay caused by the action of molds and fungi, and to waterproof the wood to prevent warping and swelling.

Numerous experiments with the various tar oils as wood preservers have demonstrated clearly that the heavy fractions from the distillation of coal tar are superior to the light fractions or to mixtures of the light with the heavy. It has been shown that the light oils boiling below 205 degrees C. (401 degrees F.) do not remain long in treated timber, whereas the heavy oils with a high content of anthracene oil remain almost indefinitely and preserve the wood from decay and from boring animals.

The method of applying creosote, the quantity used per cubic foot, and the grade most suitable depend on the kind and condition of wood to be treated and the use to which it is put. When the wood is merely dipped, as in the open-tank process, the loss of oil by evaporation is proportional to the temperature of the bath, to the percentage of low-boiling oils present, and to the area of the exposed surface of the bath. With this method, an oil that has the minimum content of low-boiling constituents is particularly desirable; it should not contain an appreciable amount of free carbon. The wood will absorb only a small amount of oil when treated by this process, even under the best conditions; therefore an excessive proportion of high-boiling solids that may on chilling choke the pores of the wood during treatment is undesirable. Very often, however, tar of low free-carbon content is mixed with tar oils for use in this process, cost being the controlling factor.

In the closed-tank or pressure processes, considerably more creosote oil is used per cubic foot of wood treated, the amount ranging from 5 to 20 pounds in different specifications. A common requirement for paving blocks for exposed pavement is that the penetration be equivalent to 16 pounds of water-free oil per cubic foot of wood.

The oil used for this and similar purposes may be classed, first, as a pure distillate of coal tar, and, second, as mixtures of such distillates with pure water-free coal tar.

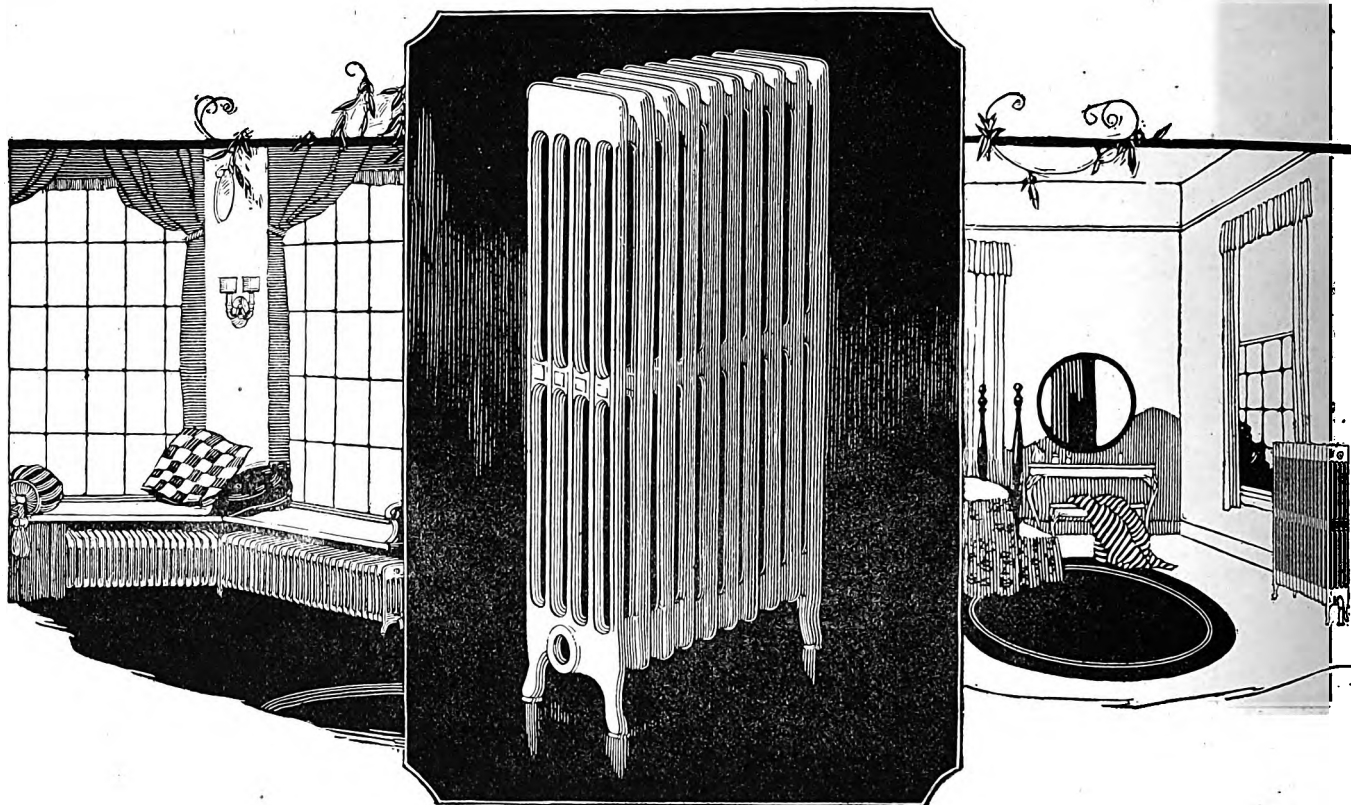
The following is the American Railway Engineering Association specification for creosote oil:

### *Commercial Creosote-oil Specifications*

Distillation: (a)	Grade 1	Grade 2	Grade 3
Below 210° C., not over.....per cent	5	8	10
Below 235° C., not over.....per cent	25	35	40
Residue above 355° C., must be soft and greater than .....	5	5	5
Water, not over.....per cent	3	3	3
Specific gravity at 38° C., not less than..	1.03	1.03	1.025

(a) Distillation results are calculated on the basis of dry oil when distilled by the method adopted by the American Railway Engineers Association in an 8-ounce asbestos-covered retort, with a standard thermometer and bulb one-half inch above the surface of the oil. Per cent here means per cent by weight.

Grade 1 is a pure product obtained from coal-gas tar or coke-oven tar, and shall be free from any tar, or from any oil or residue obtained from petroleum or any other source; it shall be completely liquid at 38 degrees C. (100 degrees F.) and shall be free from suspended matter. Grades 2 and 3 shall be the best obtainable grades of coal-tar creosote.



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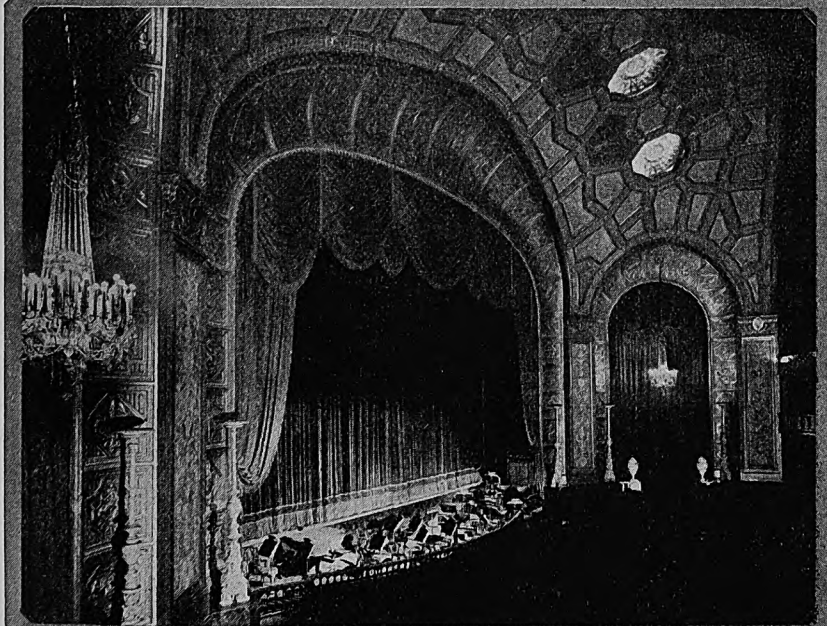
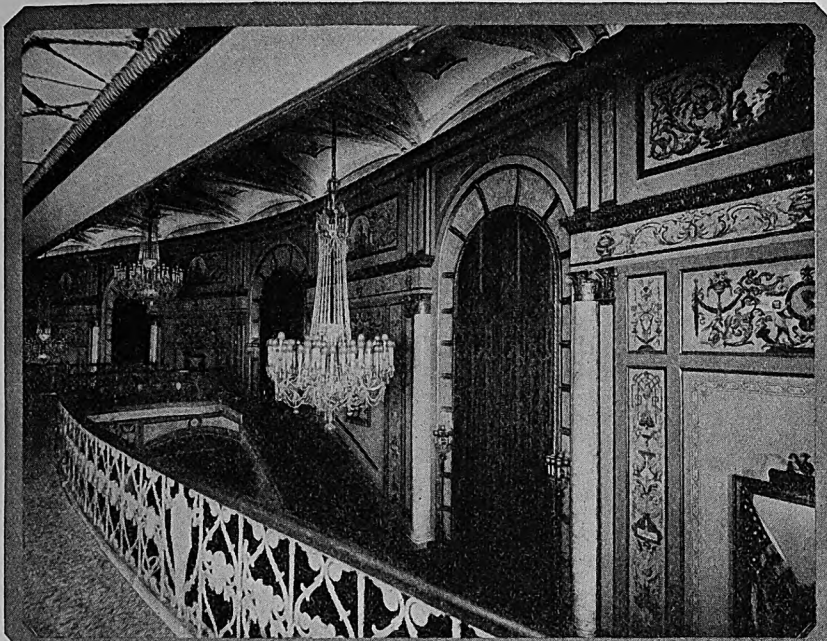
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**T**HE builders of the Capitol theatre were not penny wise — they did not scrimp the ounce of prevention, they did not use Carey Asphalt built-up roof because it was cheapest.

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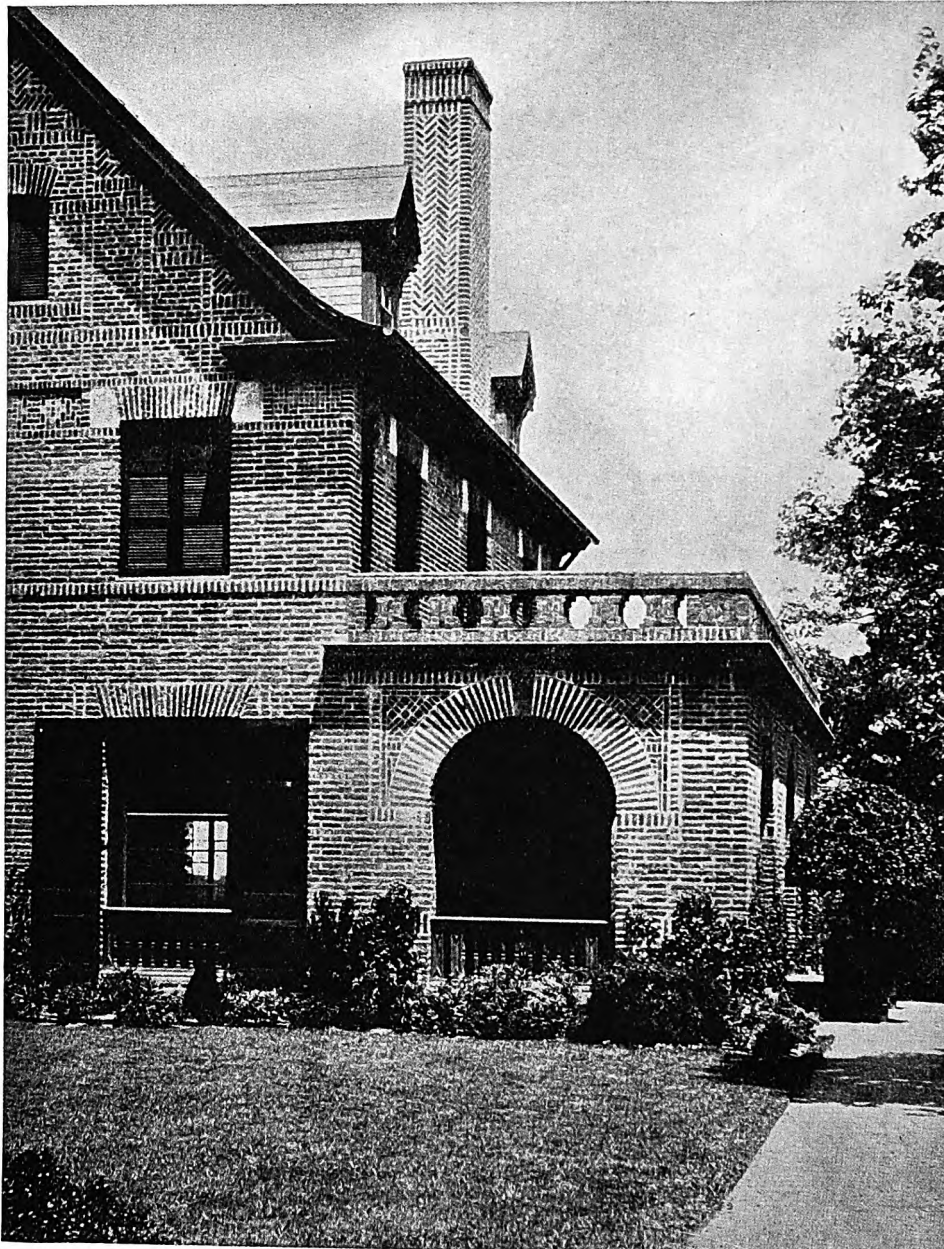
# Carey

## ROOFINGS

11-22

The Philip Carey Company  
507-527 Wayne Ave., Lockland, Cincinnati, O.

October, 1922



Detail of House, Oyster Bay, N. Y., Carrere & Hastings, Architects

The architects have not been hampered for money in working out their designs for this noble structure, in which the very genius of brick, as the fired clay of the all-supporting earth, has been embodied. Unfortunately the half-tone does not reproduce the exquisite color blending of the brickwork.

## *Variety of Effects in the Face Brick Wall*

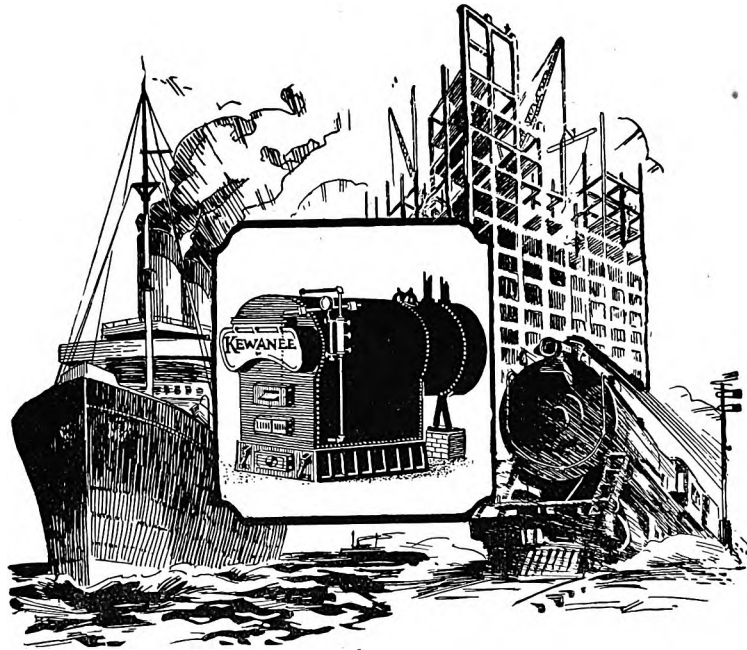
THE many beautiful Face Brick walls—in residences, in commercial, industrial and public buildings—that are built every year indicate the infinite variety of effects obtainable by the architect in the use of this plastic material. The great variety of color tones and textures in the material itself, the arrangement of the units in various bonds, the innumerable patterns obtainable by shifting the headers or stretches in successive courses back and forth, and the color, texture, and

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Plate glass registers an immediate impression of architectural refinement. The effect is the same in any building or house. Cheaper quality may be substituted in some materials without any great change in the appearance of the building. But substitution of common glass for plate glass is immediately apparent.

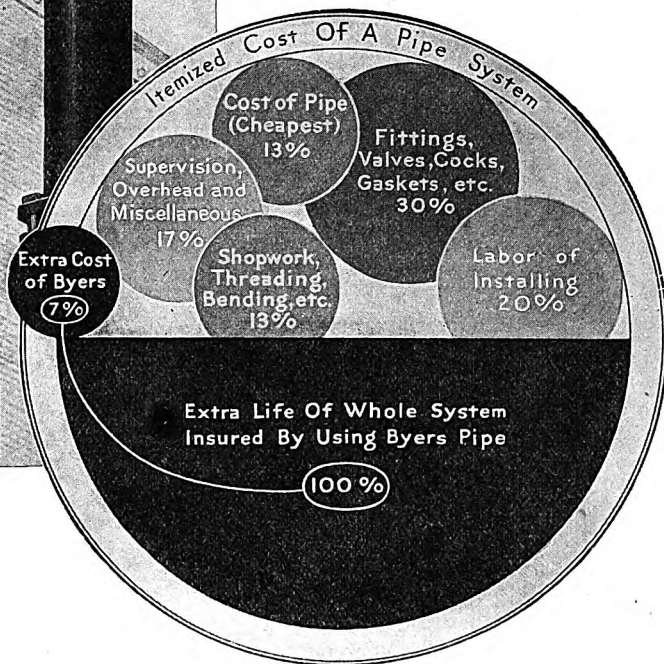
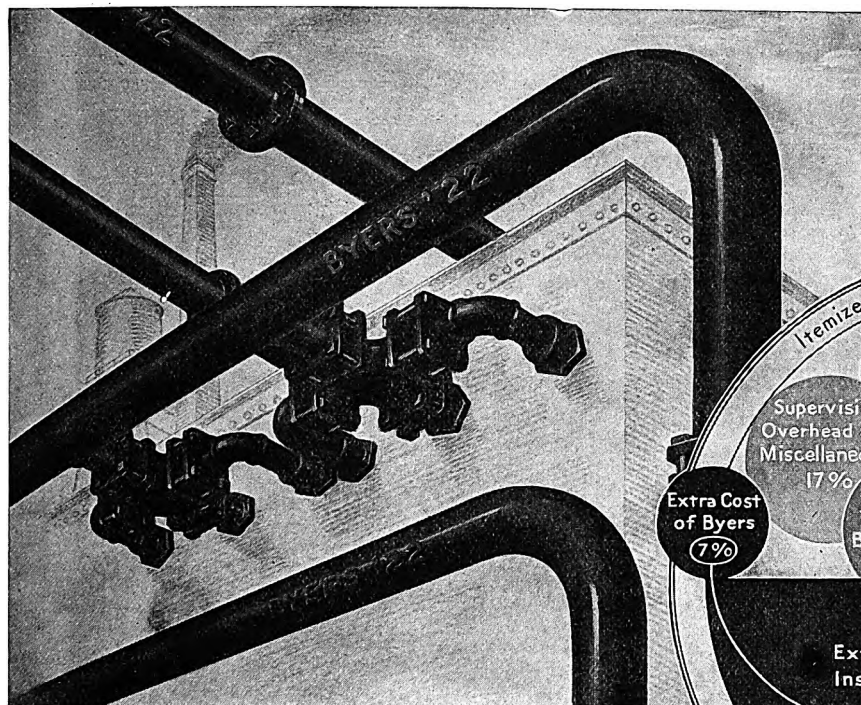
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# BYERS PIPE

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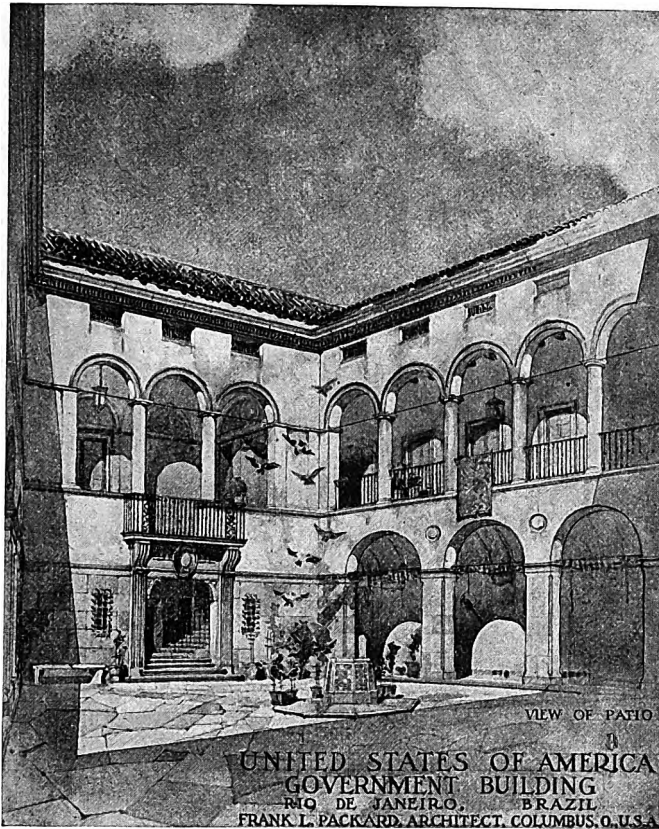
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The plain and moulded surfaces of the terra cotta are tan and white in a mottled finish with dark mottled terra cotta base course. The ornamental features are emphasized by the use of the tan on backgrounds and in the depths of the ornament, with pure white on the high relief. This arrangement produces a notable and highly satisfactory effect in the frieze.

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It is interesting that in this building, designed to represent fittingly not only our Government but our ideals in construction, Clow plumbing throughout is specified.

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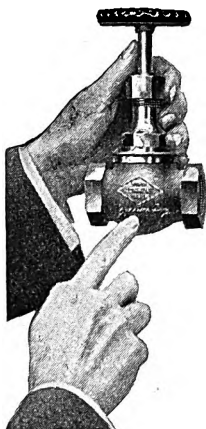
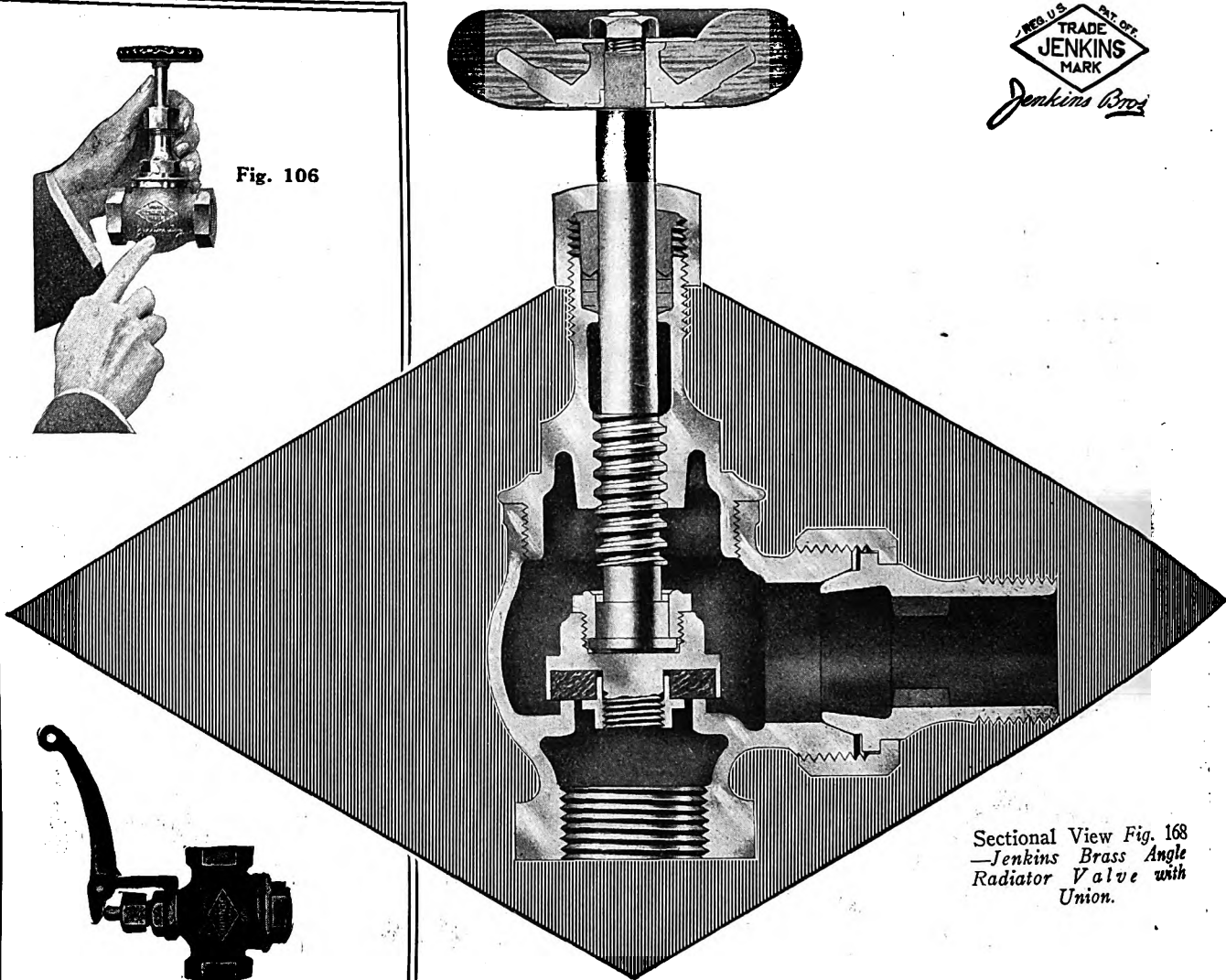


Fig. 106



Sectional View Fig. 168  
—Jenkins Brass Angle  
Radiator Valve with  
Union.

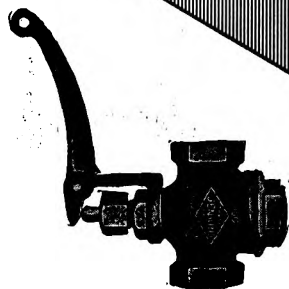


Fig. 121

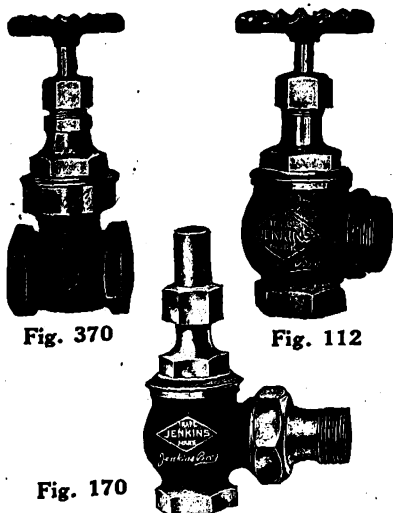


Fig. 370

Fig. 112

Fig. 170

## Valves for Schools

JENKINS standardization for school heating, plumbing, and boiler room valves means: (1) an assured valve service; (2) reduced inventories of replacement parts, as it is not necessary to carry in stock a scattered assortment of parts; (3) money saved, for Jenkins Valves go into service and stay—a quality which makes them far more economical than the light-weight, cheaply constructed valve.

The following Jenkins Valves are commonly used for school work:

- Fig. 168.** Jenkins Angle Radiator Valve. Note heavy, uniform construction.
- Fig. 121.** Jenkins Brass Quick-opening, Self-closing Valve, for shower baths.
- Fig. 170.** Jenkins Lock Shield Radiator Valve, precludes tampering.
- Fig. 106.** Jenkins standard Brass Globe Valve, for water and steam lines.
- Fig. 370.** Jenkins Standard Brass Gate Valve, for plumbing.
- Fig. 112.** Jenkins Brass Angle Hose Valve, cannot stick nor corrode.

You'll provide permanent, care-free service if you specify genuine Jenkins Diamond Mark Valves.

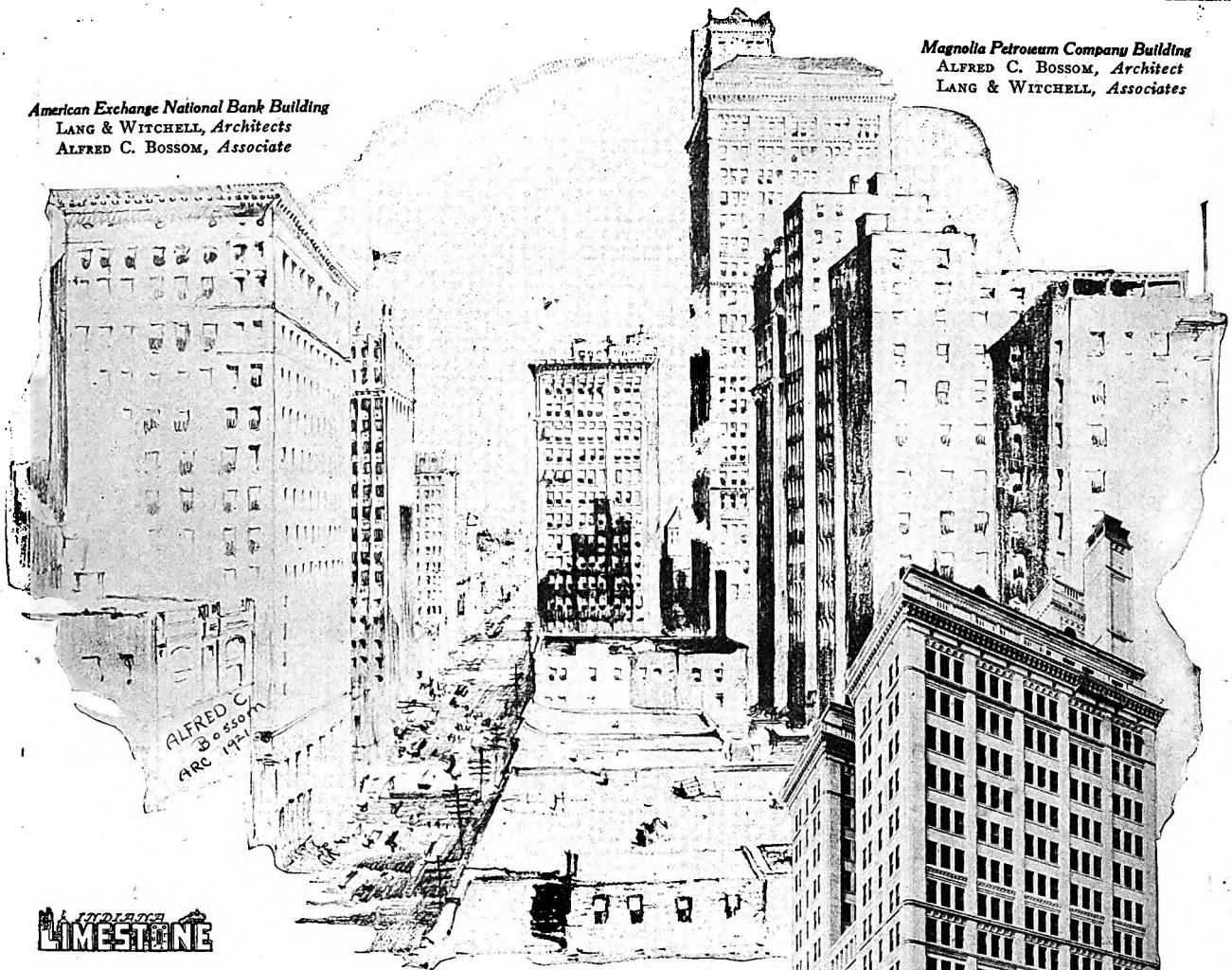
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Magnolia Petroleum Company Building  
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INDIANA Limestone

## The New Skyline of Dallas

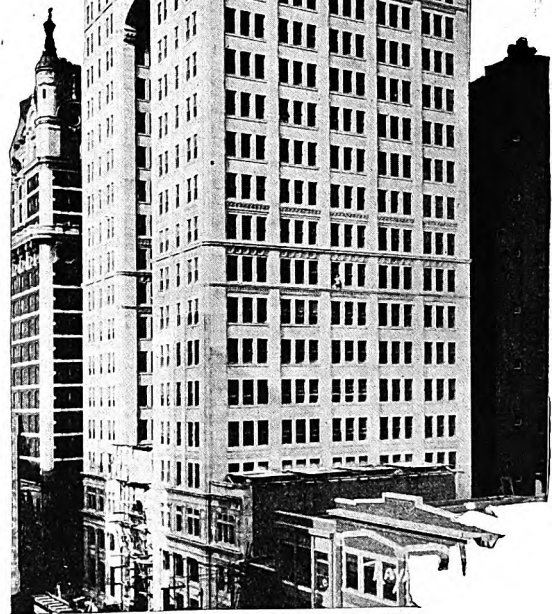
Mr. Alfred C. Bossom's drawing of the Dallas skyline shows that city's two largest structures—the American Exchange National Bank building, seventeen stories, and the magnificent twenty-eight story Magnolia Petroleum Company building, constructed of Indiana Limestone.

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Magnolia Petroleum Company Building

# INDIANA LIMESTONE

## THE NATION'S BUILDING STONE

# Cement Industry Fourth Largest Consumer of Coal

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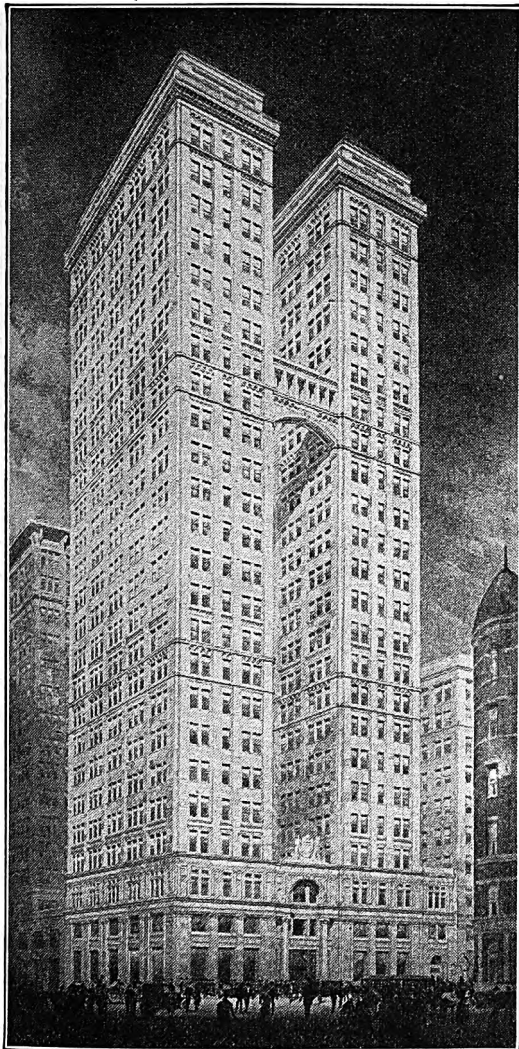
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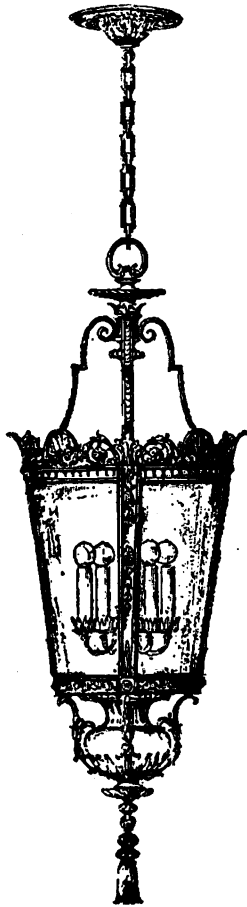
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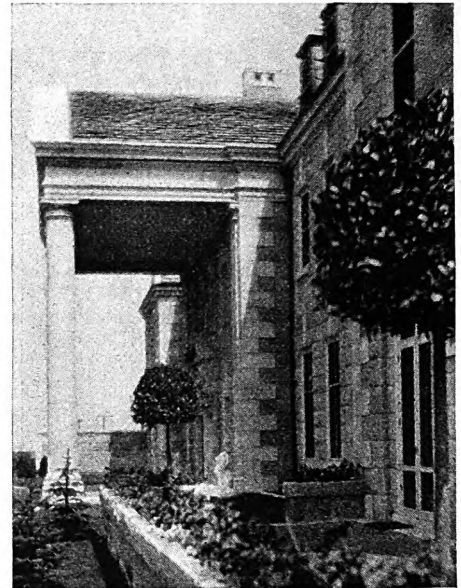
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A. C. Bossom, Architect

## Granite and a Seaside House

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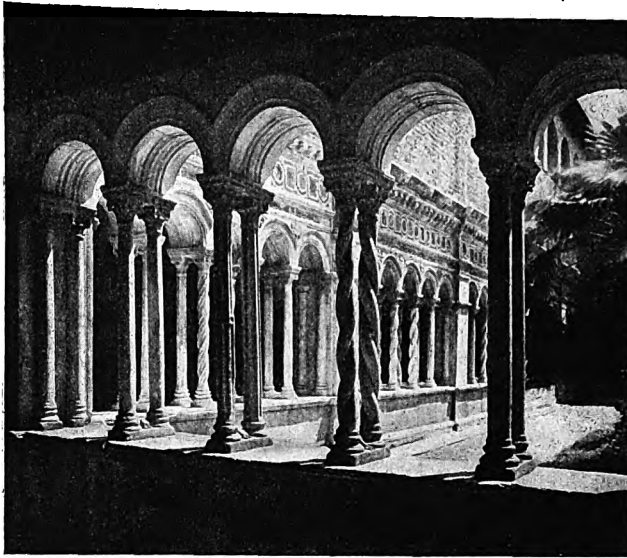
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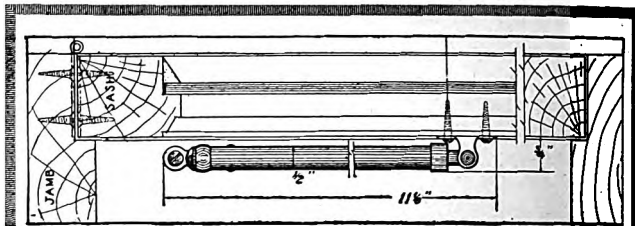
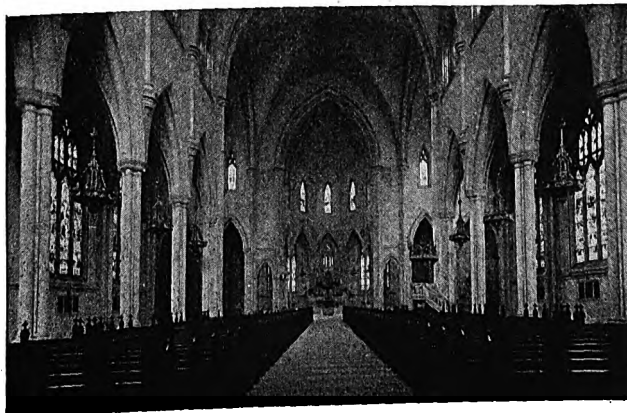
MICHIGAN



THE cloisters of the Church of San Giovanni, in Laterano, Rome, were built nearly seven hundred years ago. At the top of the page is a rather unusual picture of the spiral inlaid marble columns.

Below is a sectional view of the interior of St. Joseph's Cathedral, Buffalo, N. Y. Aristides Leonors, Architect. While the two structures are not at all alike, they are altogether typical of the use of marble for church work—one of Old World marble and the other of White Vermont.

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(Section from drawing in Manual)

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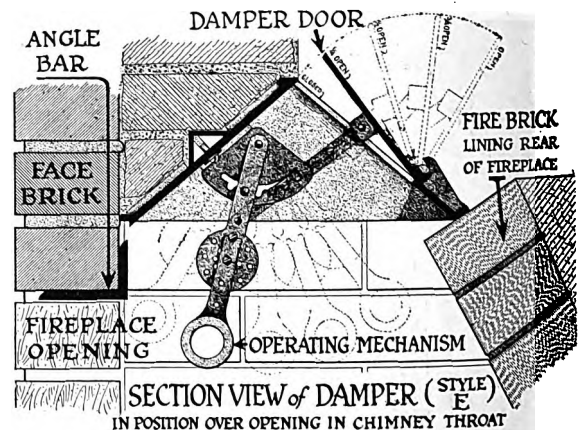
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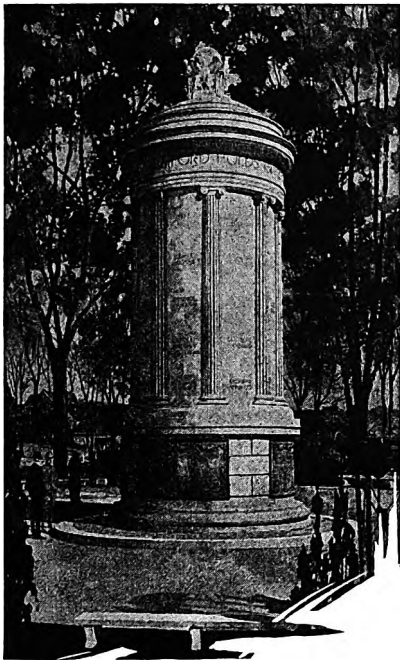
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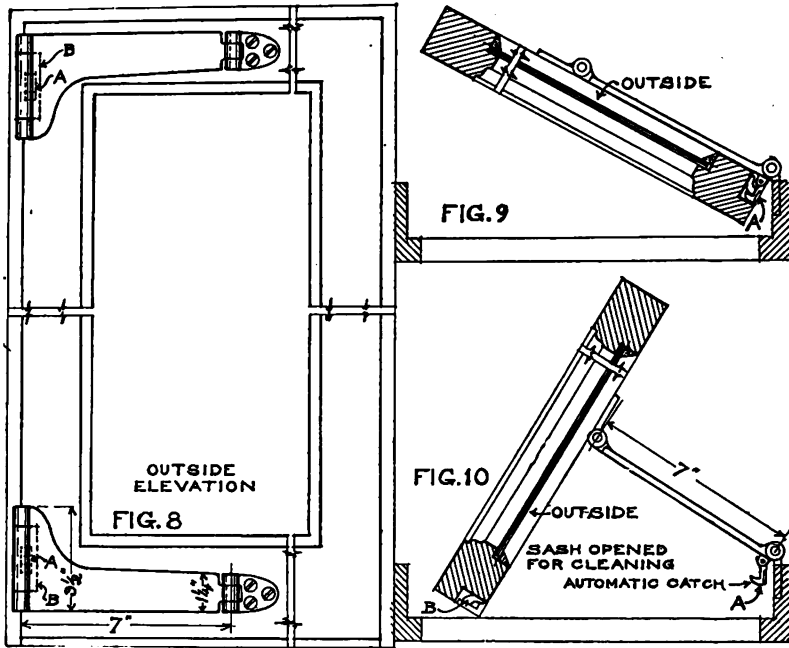
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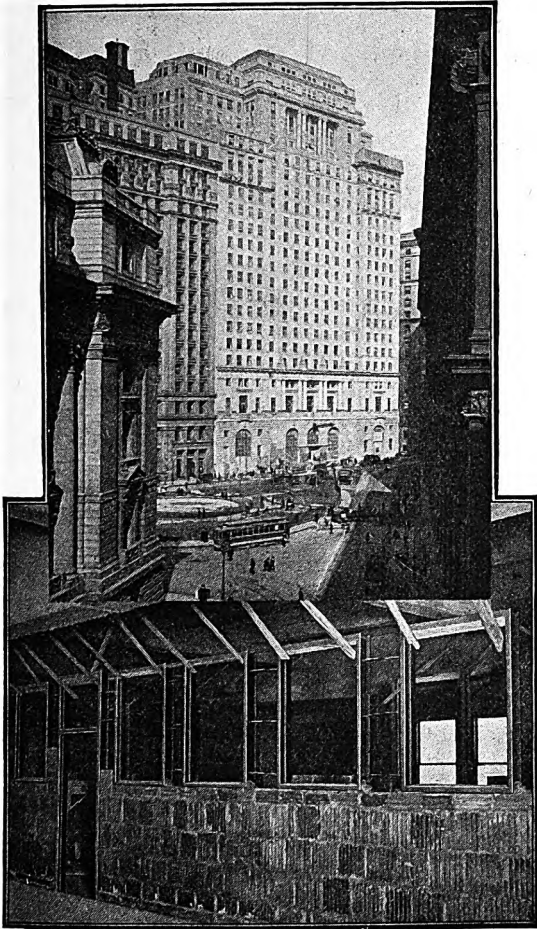
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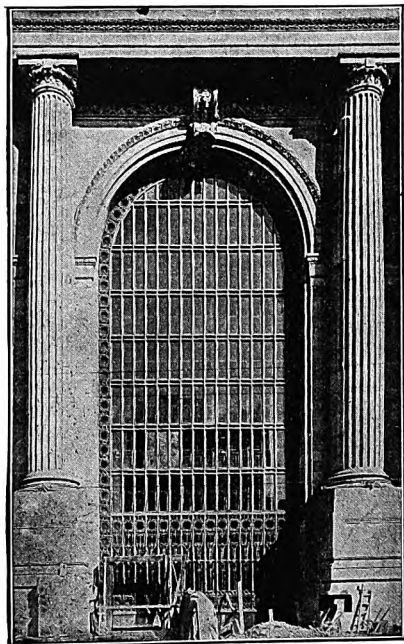
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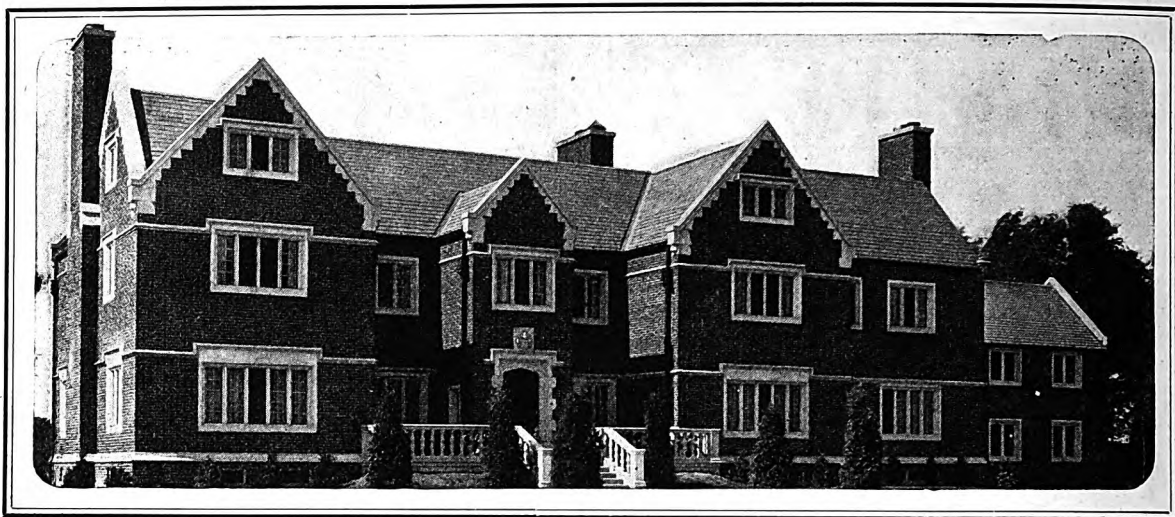
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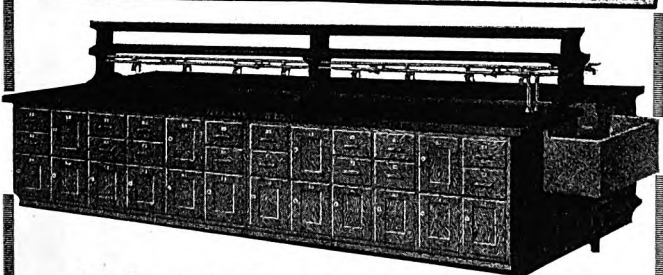
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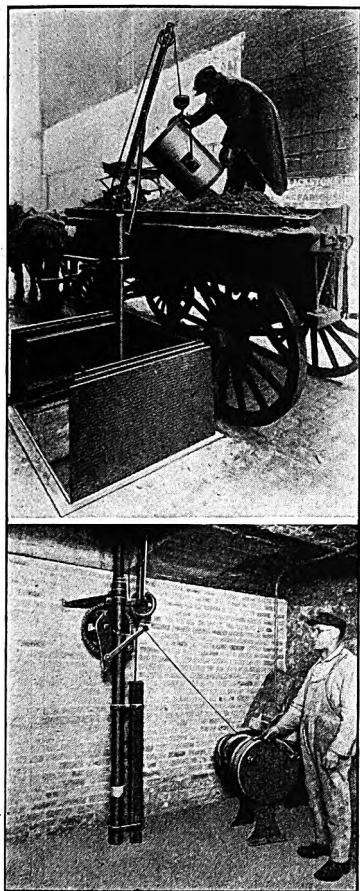
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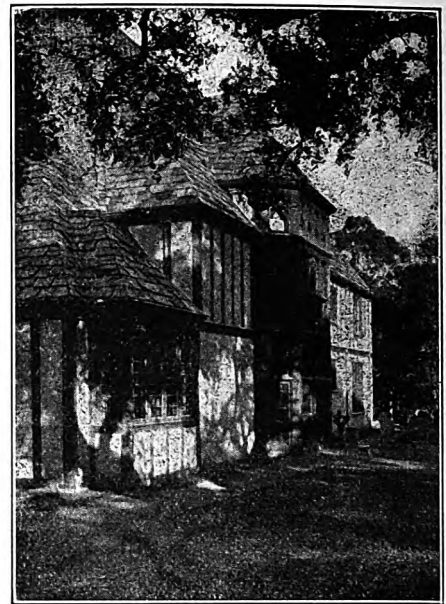


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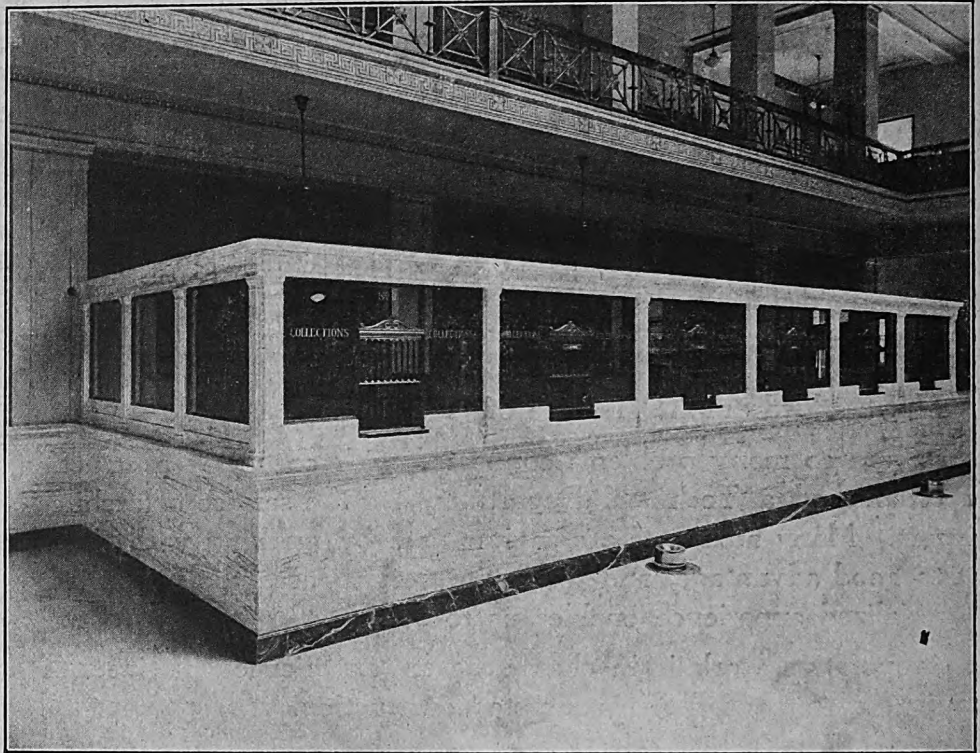
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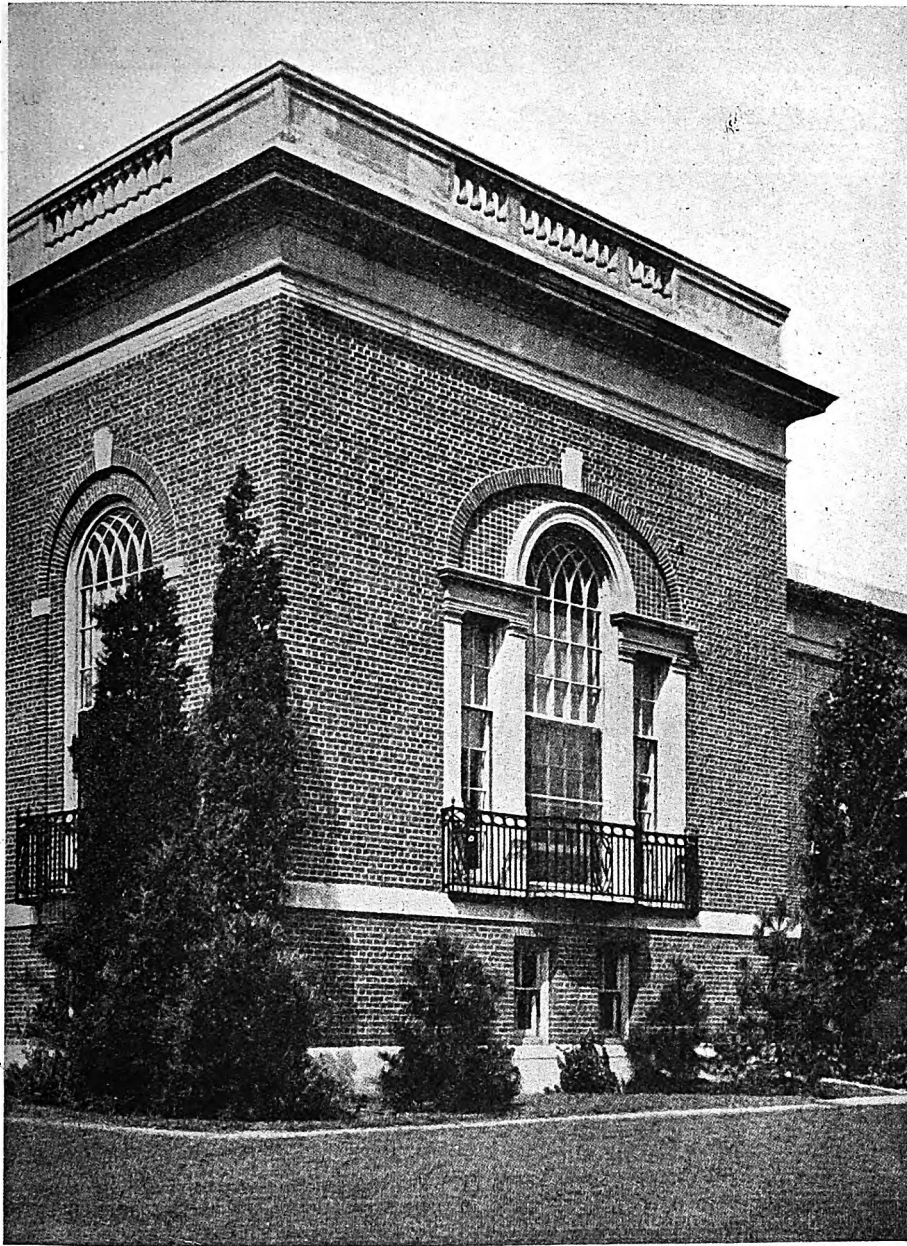
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

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NOVEMBER, 1922

Number 11

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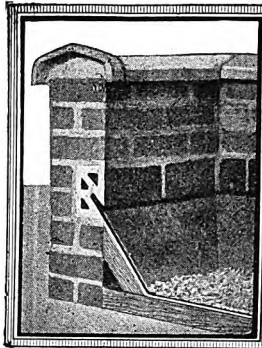
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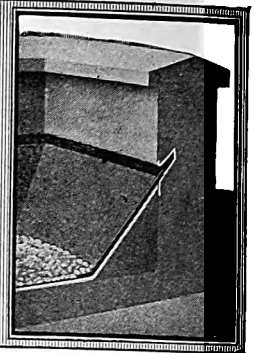




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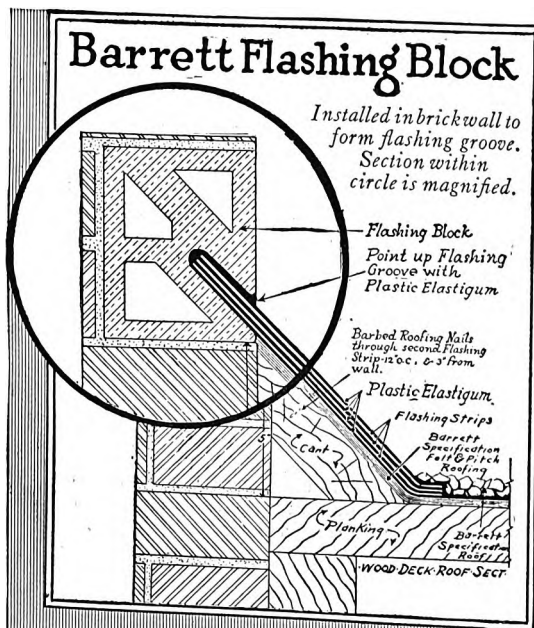
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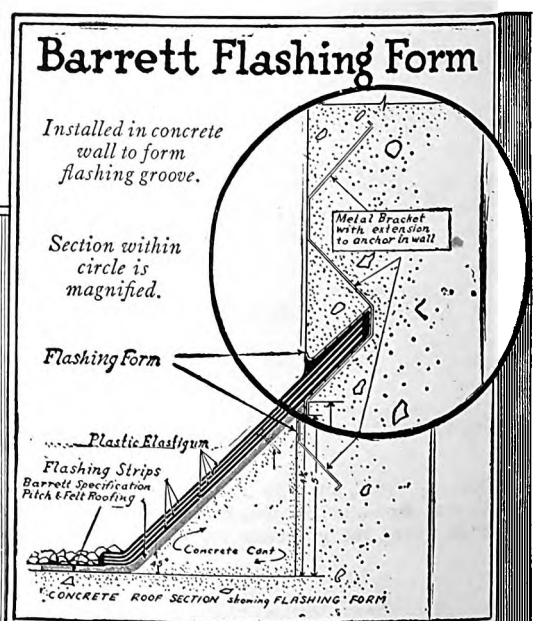
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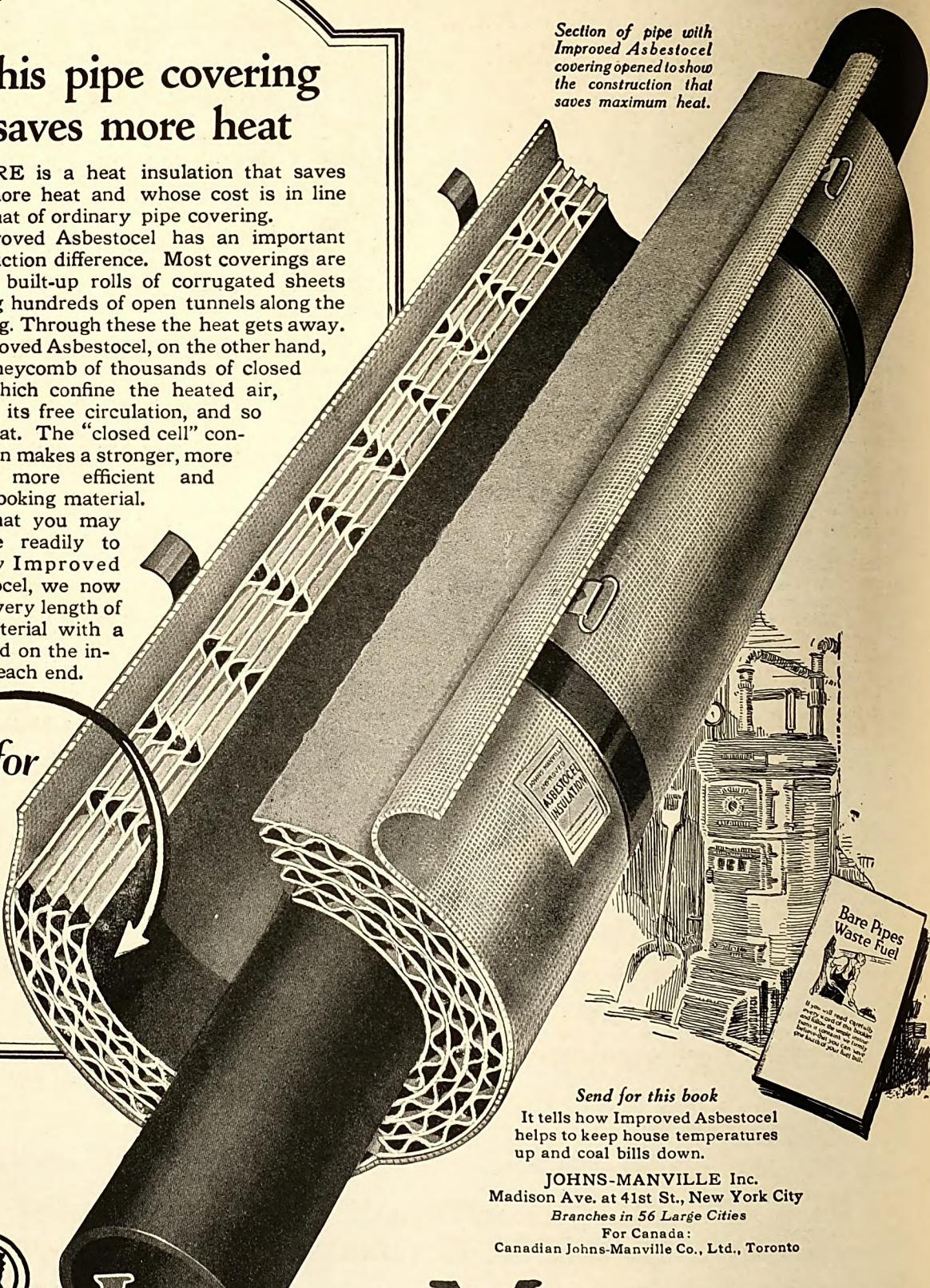
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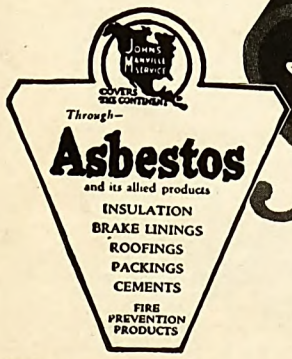
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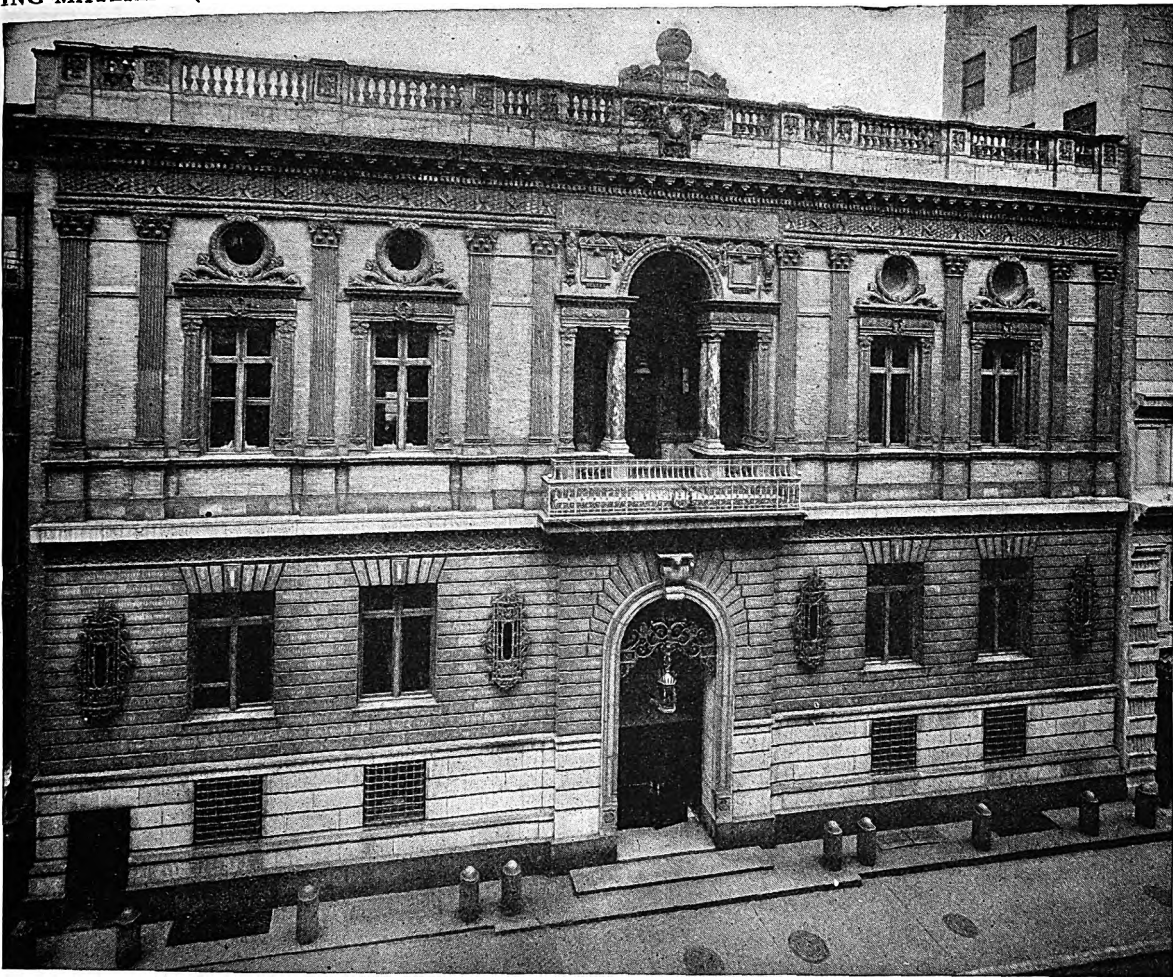
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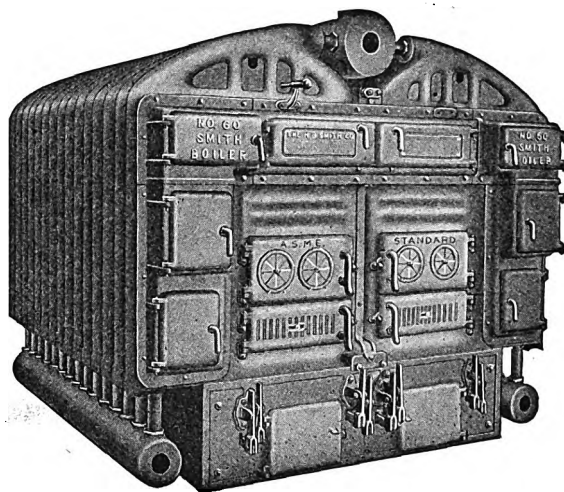
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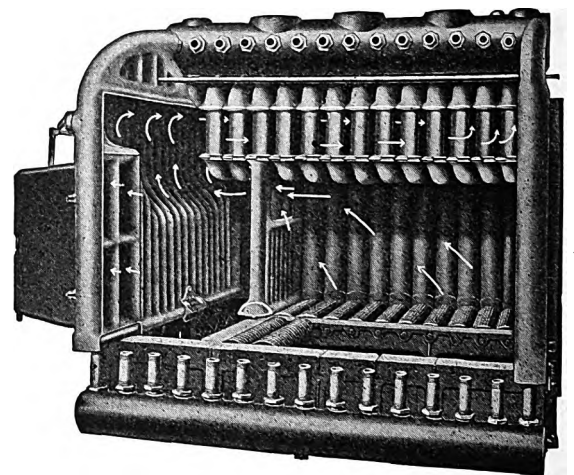
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A RECENTLY DISCOVERED GRECIAN STATUE

# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Volume X

NOVEMBER, 1922

No. 11

## Shadows and Straws

RECENTLY, in Dorset, England, Mr. Arnold Mitchell, an architect of London, discovered the statue of which we present an illustration on the opposite page. It is now in the Ashmolean Museum at Oxford. Dr. Gardner, Professor of Classical Archaeology at Oxford University, puts the date of the statue at about 300 B.C., according to the *Times* (London) and, from the character of the stone, considers its place of origin to have been in the neighborhood of Smyrna.

ONCE OR TWICE before we have ventured to draw attention to the writings of Mr. Charles Marriott and again the inclination to do so seems stronger than we can resist. Writing recently in the *Nation* (London) of "Use and Beauty," Mr. Marriott said:

"In a recent newspaper article a distinguished architect spoke of 'the familiar fallacy that beauty is efficiency.' It all depends upon what you mean by efficiency. If you mean only mechanical efficiency, of course it is a fallacy; but does anybody—can anybody, at this time of day—mean that? Surely, what is meant is efficiency for all the purposes involved. Nobody, for example, would call a business man efficient who disregarded the feelings of his clients, or a machine efficient which injured the people who used it. Our objection to a great deal of existing machinery is precisely that it does this; and practical efforts are constantly being made to remove the deficiency—not only as regards crude bodily injury, as in the case of the rock-drill, but the moral injuries which are summed up under 'industrial fatigue.' The writer went on to say: 'Architecture, if it is to be good, must be efficient for its purpose, but efficiency for its purpose in architecture has a wider range than it has in engineering or in simple building.' So far so good; 'wider range' is just, though one would like to know exactly when 'simple building' becomes 'architecture.' But then the writer added: 'because in architecture the appeal to the æsthetic sense has to be taken into account, and if that appeal fails the archi-

ture fails with it.' So, in some degree, does everything else fail; because the æsthetic sense is present and potent in everything. . . .

"What it amounts to is that the architect was right about architecture, but wrong about everything else. The 'æsthetic sense' is not something which we put on, like spectacles, when we look at architecture, and take off when we sit down to dinner. Like the poor it is always with us, and often most active when least convenient. So is the 'appeal' to the æsthetic sense; and the only question is whether or not the appeal shall be properly organized. In architecture, as in the other arts, it is; and that, no doubt, is why architects, like other artists, are apt to speak and write as if the appeal itself were peculiar to their work. They mistake the organization for the thing organized. In reality we can no more escape from appeals, agreeable or disagreeable, to our æsthetic sense from everything about us than we can run away from our noses.

"In theory it might be possible to distinguish architecture from building, but in practice they are inseparable. The reason is not so much a virtue as a fatality of the human mind. Try as we will, we cannot separate our material from our spiritual needs; and the Divine saying, 'Man shall not live by bread alone,' is equally true of the cupboard in which the bread is kept. What the author of 'The Young Visitors' would call 'mere' building might be a very desirable thing if it were possible, but it is not. For better or worse, the æsthetic appeal is always present, and the meanest building has an architectural character, though it may be a very bad one. . . .

"If we say that architecture is building in view of all the circumstances, moral and material, we shall be near enough to the truth for practical purposes; because it implies the organization of the æsthetic appeal and leaves unquestioned the 'wider range' of architecture as compared with simple building. The difference between them is neither here nor there. The simplest



building is capable of architectural treatment, that is to say, organization of its æsthetic appeal; but, in view of its purpose, that side of the matter may be relatively unimportant. Efficiency has a narrower range in a cowshed than in a cathedral, because the needs involved are narrower. Though, even here, the needs are something more than material. Grant—it is a mere assumption—that cows are insensible to proportion; the people who milk them are certainly not, though they may be quite unaware of their sensibility; and, in the long run, a well-proportioned cowshed—to the eye, I mean—is more efficient. . . .

“In all such discussions as that about ‘use and beauty,’ or ‘beauty and efficiency,’ we are apt to reckon without our host. The simple truth is that neither practical nor æsthetic questions can be decided without reference to human nature—which refuses to separate them in its reactions. We are only just beginning to discover how ‘practical’ the æsthetic problem really is. Not to mention such special observations as the effect of color on health, the investigations of psychologists in the factory and the workshop have demonstrated the close dependence of efficiency, in the most utilitarian sense of the word, upon conditions and surroundings. We are, in fact, only just beginning to recognize the profound truth of Francis Thompson’s ‘Thou canst not stir a flower Without troubling of a star.’ . . . In a dozen directions we are learning, often by painful experience, that efficiency cannot be separated from its æsthetic overtones without a loss in efficiency to that extent. Nor, on the other hand, can the æsthetic overtones be considered apart from efficiency without serious danger to themselves; as we see from what has happened in the arts of painting and sculpture. The reason why architecture has, on the whole, escaped the same fate is that it is more obviously—rather than more closely—bound up with utility. If anything were needed to clinch the connection, it would be that, when the utility is partial, or prejudicial, the architecture looks bad in proportion as it is well adapted to the purpose; and we can only make our big shops look tolerable by pretending that they are temples.”

THE FACTS ABOUT the vast housing program offered to the people of England at the close of the war are now out. A very recent report of the Medical Officer of Glasgow states that “over 60 per cent of the population of Glasgow are housed in not more than two rooms, and this quite irrespective of the size of the families.” Glasgow is the second city of the British Isles, and has produced immense wealth. This same tale is approximated in other towns. Since the war, when there was a carefully estimated shortage of 850,000 houses, not enough new houses have been built in England to take care of the normal increase of population. The housing program was stopped be-

cause of expense, since when England has spent the incredible sum of £133,000,000 in unemployment “doles” and now faces the winter with a million and a half idle workers! The condemned and insanitary slums are still in use. Graham Wallas calls it a failure in man’s master task. Can such a statement be disputed? Can any government survive, as President Harding has inquired, if it cannot solve such a problem as the fair distribution of the necessities of life? The answer is that none has.

Little by little town planning has made some headway. The narrowness of view so long held by its chief sponsors—they who advanced it as a means to the “city beautiful” or as a method of stabilizing realty values or of increasing them without in any way disturbing the time honored way of building cities for profit rather than for use—has long failed to win for it any popular enthusiasm or understanding. And no government of which we have heard has ever had the courage fairly to face the problem of so controlling the use and development of land that a halt shall be called in the atrocious process of piling human beings closer and closer and thicker and thicker. The problem is an economic one and nothing else. All the skill of all the architects in the world is helpless in the face of conditions over which they have no control. Every technical advance in planning or construction is immediately capitalized and sapped of the economic benefit it should confer. Nation after nation has come up against this fact, and has retreated as best it could. The will to change these things has perhaps generated in the public consciousness, but the deadly hypnosis of the profit idea still obscures the way. Until men are ready to abandon that idea all governments will be helpless. If patience is a noble test, it is sometimes a dangerous one.

THE BUILDING Guilds of England, believing that the English Government has failed to keep its housing promises and seeing no possibility of getting the necessary houses through private initiative, has formed a building society based upon small subscriptions in large numbers from wage earners all over the country. As sufficient money comes in houses will be built and the house will go to the subscriber selected by lot. The method of providing houses will be slow at first, but the Guild believes that it can in the end make headway even against the present lack of capital and that it can also provide easy methods for financing the furnishing of the house as well. We hope to publish further particulars of this plan later.

AT THE RECENT Library Association Conference in Cardiff, Dr. Davies proposed a novel (so far as we are aware), addition to library facilities. Quite truthfully remarking that music had in the end to be heard if one were really to come to an intelligent sense of

## THE AUTOBIOGRAPHY OF AN IDEA

it (although certain accomplished people do read scores with keen interest and understanding) he suggested the provision of sound-proof rooms in libraries. To these musical students might repair and there, with the aids of records and gramophones, might run the entire gamut of music as easily as they now explore the vast heritage of literature.

THE INVENTOR of the gramonophonic film has this to say of the future of his mechanism: "Its educational possibilities are immense. The board of education,

for instance, draws up the synopsis of a lecture; that lecture may be given by thousands of teachers, and each would be different. But with this machine a lecture could be standardized and given all over the country in exactly the way the board would wish it." Standardization, it seems, is headed even for this end too horrible to contemplate. No wonder that Mr. Penty cries out that not another machine shall be invented without the sanction of some superextraordinary and intelligent guardian of mankind.

C. H. W.

## The Autobiography of An Idea

By LOUIS H. SULLIVAN

### CHAPTER VI.

*Boston*

AS ONE in tranquillity gazes into the crystal depths called Memory, in search of sights and sounds and colors long since physically passed out from what is otherwise called memory; when one is intent, not upon recalling but upon re-entering, he finds a double motion setting in. While out of the gray surface-obscurity of supposed oblivion, there emerges to his view, as through a thinning haze, a broad vision assuming the color and movement of a life once lived, of a world once seen and felt to be real, so likewise, the intensive soul moves eagerly forward descending through intervening atmospheric depths toward this oncoming solid reality of time and place, a reality growing clearer, more colorful, more vibrant, more alluring, more convincing—filling the eye, the ear with sound and color and movement, with broad expanses, with minute details, with villages, and cities, farms and work shops, men and women densely gathered or widely scattered, and children, little children always and everywhere. So moving, the two great illusions, the two dreams of the single dreamer, accelerating, rush onward, and vanish both into a single life which is but a dream:—the dream of the past enfolding and possessing the dreamer of today: the dreamer of today enveloping, entering and possessing the dream-reality of the past; all within the inscrutable stillness of a power unknown, within which we float, with our all, and believe ourselves real. We believe in our reality in our strenuous hours, in our practical doings, in our declamatory moments, and even in our hours of silence. In sleep there come images before us, floating by, irretrievable, or steadfastly convincing; and these we speak of casually as dreams. We are willing even to extend the idea of dream to man's ambition. We say such or such a man had or

has dreams of empire, of dominion, of achievement, of fulfillment of this or that sort. And occasionally we acknowledge, upon information, that such dream had taken full possession not of a man we read about, or see in the plenitude of his power, but that the dream arose within a child, in broad daylight—as night-dreams do in their way—and aroused in him a passionate desire.

We do not associate the idea of dream with our strenuous hours of thought and deed in the selfsame broad daylight. Nor do we see the stars at noon—but they are there. So is a dream there, within every human, ever—day and night unceasingly.

We impeach the dream idea, calling certain men "Dreamers." We do this in derision—much as the pot might call the kettle black. We do not suspect that we could not put one foot forth before the other were we not dreaming: so artificial and sophisticated are we in our practical moments. And it is even so as we forget that each of us was once a child; even as we banish the thought, as crude, that out of that very child we have grown inevitably to be what we are; that the thoughts, the feelings, the emotions, the reactions, the waking dreams of that child have governed and determined us, willy-nilly, through the course of our lives and careers with compelling power—that what the child accepted we accept; that what the child rejected we reject.

Thus from the abysm of Memory's stillness, that child comes into being within Life's dream, within the dream of eternal time and space: and in him we behold what we were and still are. Environment may influence but it cannot alter. For it is the child in multiple and in multiple series that creates the flowing environment of thought and deed that shall continuously mature in its due time. It is the moving child-in-multiple of long ago that created for us the basic environment within which we now live. Thus in a

memory-mirror may we re-discover ourselves. Expecting to find therein a true reflection of ourselves as we believe we are, the image dissolves as the features of a long forgotten child confront us. Deny him, we dare not.

Turning about from self-contemplation we find children everywhere. We see the tidal wave of children moving on and on, we partly under their dominion, they partly under ours. But theirs is the new, ours the old; and, as ancients, we move on, unchanged from the children that we were—leaving our thoughts and deeds as a beaten trail behind us.

With this image in view the narrator has laid extended stress upon an authentic study of child life. Maturing years have made it but too clear that only on such foundation, resting deep within the vast-moving and timeless heritage of Instinct and Intellect, might a valid superstructure be reared into the light of our day. Men in their fatuity believe that they cause replicas of themselves to be born of woman: that they create children like themselves for themselves. They are picturesquely unaware, in mass, that they are but instrumental, normally, in bringing forth full grown men and women whom they may never see, but who, it must be so, are in essence of being with them at birth, specifically differing from them. Hence the unceasing flood of child personalities, accepting or rejecting influences in an environment they had no share in making. Historically, and in mass, victims of Fate rather than Masters of Destiny. For Destiny and Fate alike have birth in what is accepted or rejected by the child.

\* \* \*

With this digression as a commentary we may now resume in its natural course the story of a growing child well known to us, and proceed to extend that series of rejections and acceptances—beginning in his infancy—into an ever enlarging world of fact and fiction until we may perchance obtain a glimpse of what they really were, and of their significance in determining his onward drift—a drift that as yet has developed no self-defined momentum.

Shortly after their return to Boston from Newburyport, the father, for reasons of his own, whatever they were, decided to move his family to Halifax, Nova Scotia. They were away six months.

\* \* \*

A small boy stood on the dock at Eastport, Maine, holding in his hand a huge greengage plum. The same small boy suffered and saw the agonies of those who cross the Bay of Fundy. He saw and lived in a hotel in Halifax, where an Academy was opened. Later he endured in patience the terrible discipline of his father, who in below zero weather walked him for miles along the bleak "Northwest Arm," to return with white cheeks and nose, only to be told to

wash his face in snow—the father doing the like. He saw his Gods blasting a deep trench for water pipe through the solid slate ledge, and again he marvelled at what men could do. He saw the great citadel crowning the heights, and from it, he viewed the harbor. Then came calamity. Mamma was taken down with diphtheria; and he saw the great and grand Newfoundland dog, that had welcomed them effusively on their arrival and had adopted them at once, lying day after day, night after night, faithfully guarding her chamber door. Mamma recovered; but her illness was prophetic of change.

In the spring they returned to Boston, and Louis was sent to live with his grandparents in South Reading, as before, with the proviso that he was to return to his parents in the fall. He became at once deeply immersed in the miniature activities of the farm, taking the initiative wherever he could, doing small things with large enthusiasm. He did not consider such things work, but joy. He was physically active and mentally active too. He was always excited in his work and always constructive. As Grandpa also worked, they became great pals, and planned and worked together. His natural surroundings became less mystical to him. He held them in affection, but no longer in dreamy wonder. The delicate bloom of early childhood was passing, while the vigor and aggressiveness of budding boyhood were rising as branches from the same deep root. His love of the open remained constant and intense. He was developing pride, ambition, and a sense of growing power over material things. The desire some day to exercise such power to the full became in him a definitive dream, within which, unnoticed, was resident the glow of a deeper power—a power that had suffused a swiftly-moving, vocal spring-time, which he had seen and heard and lived in this same spot.

Grandpa did not bother about the child's education, for, being wise, he knew the child was daily self-acquiring an education exactly suited to his temperament and years. But Grandmamma believed otherwise. She thought her grandson needed polish, and that he should now begin a systematic study of the French language. Louis was willing enough and started in gaily. He liked the sound, and the words in italics looked pretty; all went well for a while. As he got in deeper he began to be oppressed by the inanities of the grammar-book, and the imbecilities of a sort of first reader in which a wax-work father takes his wax children on daily promenades, explaining to them as they go, in terms of unctuous morality, the works of the Creator, and drawing therefrom, as from a spool, an endless thread of pious banalities. Louis rebelled. He declared he was an AMERICAN BOY!—that none of his playmates spoke French—why should *he*? Grandmamma, in habitual indulgence, discontinued polishing. She could not enter the child-mind. To

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her, her grandson was an object of boundless love—and little more: and yet this little more was an impassable gulf, lying as a chasm between old age gently petrifying in the thoughts of her own childhood, and a vigorous young animal with thoughts and an impetuous will of his own. And he in turn held his grandmamma to be the sweetest of mortals—and little more.

Thus summer passed on broad pinions sweeping, and Louis saw it moving thus. He *saw* such things. Beneath all the overlay the child was a mystic: inarticulate, wondering, believing. These fleeting revelations of Life came and went as interludes within the chosen practicalities of his realistic and material activity. He had rather help build a stone wall than listen to a poem—all except the fairy tales that Julia told: for here was Romance—and romance he could not withstand.

One morning; it happened to be September 3rd of that year. Louis Henri Sullivan arose early and sallied forth in pomp and pride. On the Stoneham road he met a farmer friend:

Hello! Do you know I am eight years old today?  
No; wall, wall, that's fine. Heow old did yeh say yeh be?

I am Eight! Don't you think I'm a big boy now?  
Do you want to feel my muscle?

My sakes—but yeh aire strong!

Yes I am. I can lift a stone almost as big as my grandfather can; but of course he's older.

How old did yeh say yeh be?

I say I am eight years old today and I want you to know it. Do you want to pound my chest?  
Can't say's I do.

You may pound my chest as hard as you like and I won't say a word. Have you noticed my new boots? It's my first pair. My grandma gave them to me for my birthday.

No I hadn't saw them.

Well, look at them now. See; they're copper-toed and have red tops. Don't you think they're fine?

Yaas; how old did yeh say yeh be? I think yeh got a mighty fine granny t'give yeh them boots.

And the Ancient doddered down the road dustily regurgitating the thoughts of his childhood now become decayed and senile; while bounding boyhood clattered on, from house to house, from field to field, wherever might be found man, woman, or child to whom he might sing his own saga in vainglory. For was he not right? Was he not Eight? Was he not heroically aware that that day he was crossing the invisible line between childhood and boyhood? Were not the gaudy boots his plain certificate of valor and of deeds done and to be done? Were they not for him symbols of that manhood toward which he so ardently yearned that his pride might come to the

full? He said it was so. In this joyous mood was his saga sung, as of one with a growing faith.

Then came, as it were, a bugle call from the south. He answered the call in person. Boston City swallowed him up.

The effect was immediately disastrous. As one might move a flourishing plant from the open to a dark cellar, and imprison it there, so the miasma of the big city poisoned a small boy acutely sensitive to his surroundings. He mildewed; and the leaves and buds of ambition fell from him. In those about him, already city-poisoned, even in his own kin, he found no solace, and ceased openly to lament. Against the big city his heart swelled in impatient impotent rebellion. Its many streets, its crooked streets, its filthy streets, lined with stupid houses crowded together shoulder to shoulder like selfish hogs upon these trough-like lanes, irritated him, suffocated him; the crowds of people, and wagons, hurrying here and there so aimlessly—as it appeared to him,—confused and overwhelmed him, arousing amazement, nausea and dismay. As he thought of the color, the open beauty of his beloved South Reading, and the great grand doings of Newburyport, where men did things; where there was obvious, purposeful action; an exhibit of sublime power; the city of Boston seemed a thing already in decay. He was so saddened, so bewildered, so grieved, that his sorrow, his bitter disappointment, could find no adequate utterance and relief. Hence he kept it all within himself, and became drugged to the point of lassitude and despair. The prospect of a whole winter to be spent within these confines, shut out from the open world that had been growing so large and splendid for him, filled him at times with a sudden frantic desire to escape. Had not his father at once taken up again the rigorous training of cold baths and outdoor exercise, had he not taken him on long walks to Roxbury, to Dorchester, even to Brookline, where the boy might see a bit of green and an opening-up of things, the boy would surely have carried out his resolution to run away. To run where? Anywhere to liberty and freedom!

He had partly revived from the first shock, when his ruthless father placed him in the Brimmer School on Common Street. Louis found it vile; unspeakably gloomy; a filthy prison for children. He learned nothing. There was no one to teach him, and what he saw there shall not be recorded here. So passed the winter; Louis looking, ever aimlessly, yearning, for a teacher. As a rose springs upward from the muck and puts forth gracious blooming, even so out of the muck of this school a re-action sprang up, a fervent hungered yearning within, for a kindred spirit to arise that might illumine him and in whom he might rejoice; a spirit utterly human that would break down the dam made within him by sanctioned suppressions and routine, that there might pour out of him the gathered

cesspool, and the waters of his life again flow on. Of such nature was the hunger of a well-fed child.

As the Boston winter of '64 was groaning on its way to the tomb of all winters, Mamma was again stricken with diphtheria; and again she recovered. The city winter passed, a city springtime passed. With vacation at hand, Louis returned to his grandparents, resumed his activities now enlarged in scope, and in the fall returned to the City, his wounds somewhat healed. He was immediately placed in the newly organized Rice School,—temporarily housed in another gloomy structure, but not so foul—at that time situated on the west side of Washington Street and a short distance south of Dover Street. Here he learned nothing at first except in-so-far as there was a sort of mechanical infiltration going on. But, at a nearby book store, "Beadle's Dime Novels" appeared in a whirlwind of popularity. Louis Sullivan pounced upon them. He devoured the raw melodramas and cried for more. Here at last was Romance! Here again were great men doing great deeds. Here was action in the open. He could live these scenes. He could visualize these acts even within the deadly philistine air of Washington Street and its Rice School where he was supposed to know that 2:4:: 4:8. He did not especially care for the standardized lady in the case who was always ravishingly beautiful and always eighteen; and to the villain he was sometimes lenient, but the hero, that magnificent man-god whose ear had just been grazed by the arrow of a huge red savage—him he took to his bosom. He got a thrill out of every page, which was more than he ever got out of the school. He was to remain at this school for several years, during which time he slowly became citified. His activities naturally spread over an ever widening field; and these years were filled with multifarious details large and small. His geographical ventures extended from South Reading as a center to Stoneham, Woburn, North Reading, Sangus and Ipswich; and from Boston as a center to Rockport, Gloucester, Marblehead, Salem, Lynn and Nahant; and southward into Jamaica Plains. Between Boston and South Reading were dotted, as villages or hamlets, Somerville, Malden, Melrose, Greenville and South Reading Junction. West of the Junction was a small affair called Crystal Lake, with bare and sterile surroundings, including an ice-house on its northern shore. The big pond to the north of South Reading—then a village of possibly two thousand souls—was officially known as Lake Quannapowitt. From the western shore of this lake projected a promontory, and within this promontory was a cemetery.

During these years, Louis Sullivan, always inquisitive and fool-hardily curious, had ferreted out every street, alley and blind court, and dock and wharf from end to end and crosswise within the limits of Boston, and had made partial explorations of Charleston, Chelsea

and South Boston. Thus there gradually arose within his consciousness a clearing sense of what a city meant objectively as a solid conglomerate of diverse and more or less intricate activities. He began indeed to sense the city as a power—unknown to him before—a power new-risen above his horizon; a power that extended the range and amplified the content of his own child-dream of power as he had seen it manifested in the open within the splendid rhythm of the march of the seasons. Nevertheless, he saw, in his boy-way, and felt it strongly, a great mysterious contrast between the two. In the open all was free, expansive and luminous. In the city all was contraction, density, limitation, and a cruel concentration. He felt that between himself and the city, as such, lay a harsh antagonism that seemed forever insoluble; as though men had made the city when they were mad; and that as it grew under their hands it had mastered and confined them. Yet men, women and children seemed to move about freely enough at certain hours. These waves of doubt and apprehension came and passed at intervals, but each wave left its precipitate, in solution as it were, in the boy's quizzical mind. He became less and less unfriendly toward the school, as sporadic knowledge crept out of his books and took on a certain segregated appearance of validity, having slight connection, however, with his own world. He ceased to be wholly rebellious, and took his small doses of formal routine education much as he might take a medicine supposedly for his good. Thus far his father had been his only successful teacher.

The boy had acquired and was continuing to acquire the education he possessed partly through a series of shocks—frequently humiliating—which inverted his illusions into realities; partly through his own keen powers of observation, and perhaps something in the way of intuition; but mainly and fundamentally through his high sensitiveness to externals which, always with him, took on character, definition and, as it were, a personality. He was now ripe for another shock.

One day his father took him on a walk to South Boston, and made him run up a high hill on the top of which was a reservoir. This altitude reached, a great view spread before them. The boy at once became exalted with awe at the living presence and expanding power of Mother Earth. Never—since the long forgotten days of Halifax—had he reached such a peak of observation. His father's love for "scenery" had taken them there. As the boy gazed in thrilling wonder, his father called attention, one after another, to special points of beauty in the land and waterscape, finally coming around to the Blue Hills, which indeed were blue and enchanting against the far horizon and its haze. After explaining the nature of the haze, father called attention to two outstanding peaks, near together but differing in size, and asked his son a point-blank question:—Which of the two hills is the

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larger? His son walked straight into the trap, saying that of course the larger one was the larger—why did Papa ask? Then the trap fell—knocking Louis senseless—for Papa said, (beyond a doubt maliciously he said it) that *the smaller was the larger*. When Louis came to, he protested vehemently; but Papa said he had been there and knew. Then, relenting, believing he had carried his practical joke far enough, he told his son, seriously, that the effect, the appearance, the illusion was, in fact, due to what he called PERSPECTIVE; and the nature of this particular perspective, and perspective in general, he explained with notable skill, simplicity, and with many objective instances. But Louis instead of receiving this information with acclaim and joy, as a new world opening before him, was deeply saddened and perturbed. His father, sincerely believing he was educating his own, came near to destroying him. He was no psychologist, he had indeed but little human sympathy or insight—hence he had no suspicion of what was going on beneath the surface of his own son. For had not that son built up a cherished world all his own, a world made up of dreams, of practicalities, of deep faith, of unalloyed acceptance of externals, only now to find that world trembling and tottering on its foundations, threatening to collapse upon him, or to vanish before this new and awful revelation from the unseen. This ghostly apparition which his father called “perspective” terrorized him. What his father said about it did not help. For behind the perspective that the father saw was a perspective that the child saw—invisible to the father. It was MYSTERY—a mystery that lay behind appearances, and within appearances, and in front of appearances, a mystery which if penetrated might explain and clarify all, as his father had explained and clarified a little. Did this mystery reside also in his lovely slender elm tree? Was his great friend the ash tree involved in mystery? Was the sunrise that had glorified him and the earth around him part of this mysterious perspective that lay behind appearances, that lay behind even the clear apparition his father called perspective? Must he lose his faith in what seemed real? Was Boston itself and all within it but a mask and a lie? Was there within it and behind it a perspective, a mystery which if understood might reveal and clarify it, making it intelligible? Could this mystery be penetrated? He was determined it should be, soon or late—and that he would do it. Thus had a father’s playful joke set up in a child a raging fermentation. Such high-pitched emotion could not last. Such vision was bound to fade. Such fear must pass. And so it happened. The turmoil, the chaos lasted but as the span of a day-dream. But within that dream, within that turmoil, there awakened a deeper dream that has not passed. Thus Louis Sullivan accepted and rejected; rejected and accepted.

He returned to the school and the streets which

were much the same thing to him. At recess he promptly announced that he could lick any boy of his size. Whereupon “his size” knocked him in the eye, and the two “sizes” went at it, according to regulations which consisted in beginning fairly and ending foully—two boys rolling over and over in the middle of the street, in the center of an eager, urging, admiring circle of excited ruffians of varied sizes, who cried at the proper time: “He’s had enough; let him up.” Sometimes Louis’ prophecies were verified. Sometimes they proved unfortunate. But it was all the same, all in the game; and there was established in the school a “Who’s Who” that never reached print. Moreover there was established a Hierarchy in which each “who” was definitely ranked according to the who’s he could lick, and the who’s and sizes who could lick him. And while all this was going on, Louis picked up, in addition to a bit of geography and arithmetic, every form of profanity, every bit of slang, and every particle of verbal garbage he could assimilate. In other words he was one of the gang and a tough. But his honor required that he refrain from licking the good boys just because they were good—which could not be said of some.

He was progressing so well at school, his mother thought — for his teacher so certified for reasons unknown—perhaps to conceal the truth—that she believed it time he learn to play the piano. Louis thought otherwise. Mamma was stern, Louis yielded. Mamma promised it should be half an hour only, every day. She placed her watch in good faith on the piano shelf—fatal error—and the series began. It was not that Louis disliked music; quite the contrary. Had not his parents but recently taken him to Boston Music Hall, there to hear a great Oratorio rendered by the Haendel and Hayden Society? Had he not been overwhelmed by the rich volume and splendor of choral harmonies—again a new and revealing world? Had he not thrilled to the call: “Lift up your heads, O ye gates; and be ye lift up, ye everlasting doors; and the King of Glory shall come in.”

Was he not always teasing his mother to play for him any one of a group of brilliant five-fingered exercises arranged as stately compositions? No; Louis loved his Mamma but hated the piano when annexed to himself. So the series moved on to disaster. The five-finger work bored him, the dinky tunes enraged him; he watched the watch, he kicked the piano, he struck false notes, he became utterly unruly; and at the agonizing end of one especially bad half-hour, Mamma burst into hysterical tears; and Louis, seeing the damage he had done, threw his arms about her neck and cried his heart out with her. Thus the series ended, by mutual understanding and Mamma’s forgiveness—as Mamma’s tears still flowed from bitterly swollen eyes, as she gazed blindly in unspeakable sorrow at her repentant but incorrigible son. But—let it

be said in a whisper—Mamma should have known that Louis' hands were not made for the piano. Louis did not know it; yet there lay all the trouble.

Then the father thought he would teach his son drawing. His son thought otherwise. His son detested drawing. The prospect of copying a lithographic plate setting forth a mangle, a step-ladder, a table, a mop and a pail, was not alluring. Louis demurred. Father thought a thrashing would help along some. He started in. A she-wolf glared. He quailed—End of still-born drawing lesson. No series.

Meanwhile the name of the village of South Reading was, by popular vote, changed to Wakefield. Cyrus Wakefield, rattan magnate, thought it good business to offer a new town hall in exchange for his name. The townspeople thought so too. The deed was done; both deeds were done; and, as if on a magic carpet the farm that Louis had lived on floated from South Reading into Wakefield—meanwhile remaining station-

ary as of yore. This occurred in the summer of 1868 when Louis was in his twelfth year.

Meanwhile, also, in 1868, a new school building was in course of construction on new made land in the Back Bay district. It was to be up to date in all respects, and was to be called The Rice Grammar School Building.

In the winter of this year, Mamma, for the fifth time, was stricken with diphtheria and her life despaired of. She pulled through on a perilous margin. Father, now thoroughly frightened, finally got it through his head that the east winds meant death. So in the summer of 1869 he moved his family to Chicago—leaving Louis behind, to live with his grandparents, and continue his education. Louis sobbed on his Mother's shoulder, but was much relieved to say to his father: Good-by! Now he was free!

(To be continued)

## Towered Cities--II

By GEORGIANNA GODDARD KING

Photographs by E. H. LOWBER\*

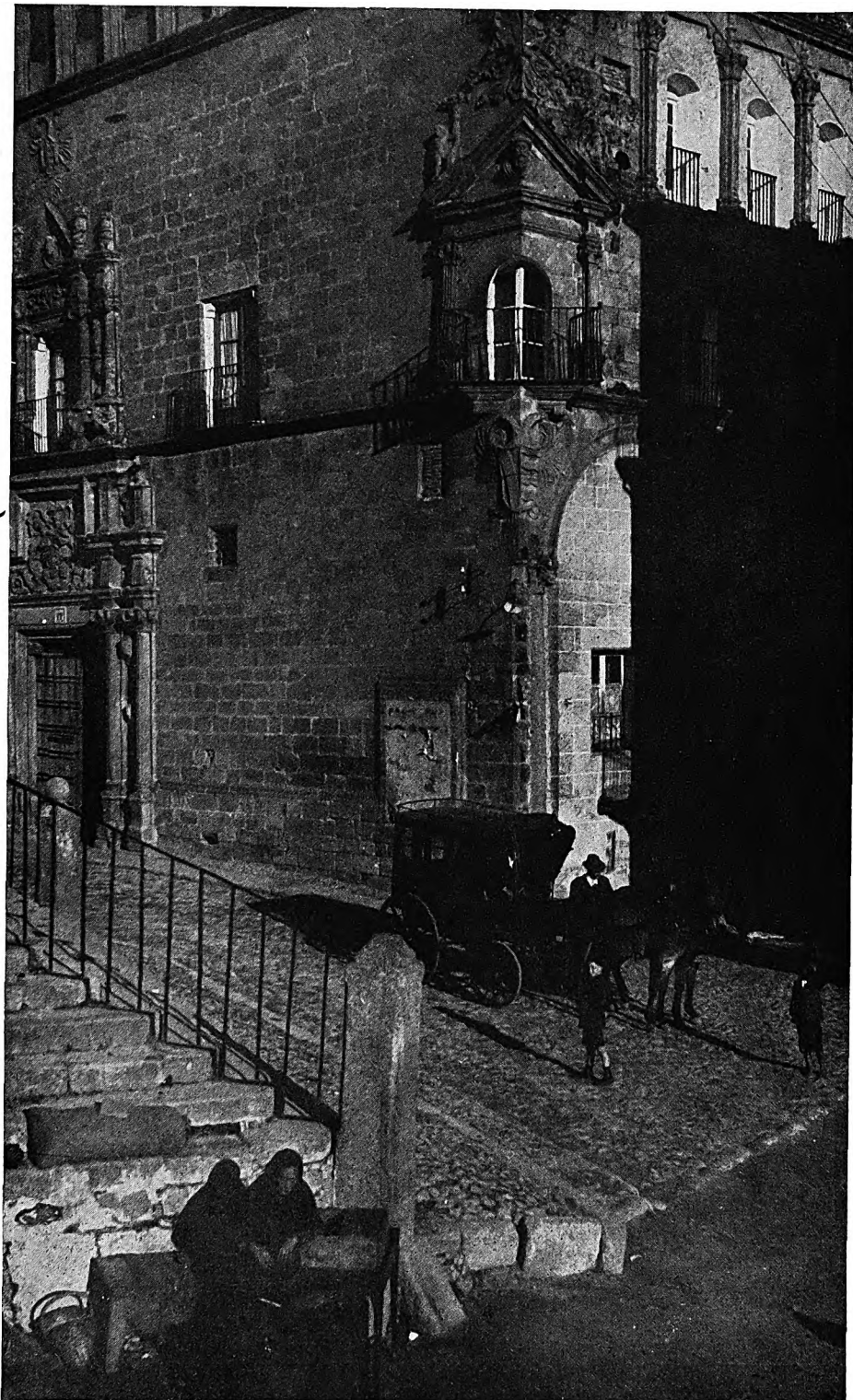
THE cities of Spain are more precious than anything they contain; and that is the ultimate miracle. You cannot enumerate and itemize Toledo or Cuenca like a museum, or like Venice, or like the Lake Country of England. You cannot offer a picture of Alarcón or Trujillo, though you may photograph in Bruges or sketch in Toulouse. It is as the traveller from southern Tuscany feels the heart in his bosom stirred by the thought of Radicofani hanging far off in the pale air, or indeed by the very name of Acquapendente, though he cannot explain what he means in a London hotel to his brother-in-law.

Take these just named, Toledo and Cuenca and Alarcón. They are set high, and look abroad through a blue immeasurable distance, and rivers lie coiled about their feet; as on the coins of eastern capitals, Antioch or Lystra, Iconium or Barata, the city sits enthroned upon her mountain and the river-god is under her sandal; she is consecrated with a mural crown or she wears the horned moon for a jewel on her brow.

No two of them are alike in memory, notwithstanding. At Toledo the brown Tagus has cut down through the purple shale and there is not a blade of green to be seen: the *cigarrales*, where you walk on the heights over against the city, are set out with silvery agave tipping the red earth banks or planted

with olive orchards blue as smoke where you look across their tops to the ancient city. At the weirs the river shows its teeth, and sends up irregularly a faint rustling noise, lost when a mule shakes his bells on the Puente de S. Martin, and from high among the rocks still you may hear his driver, "*Arré, burro!*" At the sanctuary of Our Lady of the Valley, terraced out where two gorges are cloven down toward the streamside, a little bell clatters and whimpers below your feet; it is sunset there above the darkening waters, though across on its citadel height the Alcazar shines bright as marble and the cathedral spire is filmy and fair, and the grave male towers of brickwork, S. Thomás, and S. Roman, and S. Andrés, and the twin towers of the Baptist are ruddy till long after the bell has ceased. Then the Toledo of Greco is seen in lilac-blue; like an enchanted city it hangs its towers against a sky as pale as glass, and darkness comes up cold out of the river-gorges, and the sound of the waters is constant. Flocks go by on the road with a hurried tinkle and a muffled patter. Walking is easy on that lonely road, in the clear dark, where Angel Guerra passed so many times; but the descent is long to the bridge where about the piers the foam-flecks swirl white and lisp; and the climb is even longer by narrow winding streets where the third turn to the right and then two to the left may signify the way home, but anything else means getting lost completely.

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**TRUJILLO:**  
A palace in the square



## THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Cuenca is unlike Toledo, as Rachel is unlike Leah. Among all the memories of wayfaring in Alps and Pyrenees, of the Velay, of the seaside peaks of Greece, there is none to overpass or outweigh that of the far-flung approach by the western road to where Cuenca couches like a lioness in the gateway of the hills. About Cuenca\* the streams are swift and clear; below Cuenca the poplars are tall and never still. The houses cling to the rocks like nests of swallows that have returned with recurrent seasons longer than recollection can count. Up the gorge of the Jalón the rocks are tossing with creepers, planted with vines and gourds and heavy-leaved fig-trees; and the noble arches of the

ing through the upper gate the traveller goes on up, where peasants come down driving their two or three donkeys or where long strings of mules shake their ears and stamp before the little *venta* that thrives just out of reach of the octroi. The shade and the wine are cool there; but indeed tavernors and landladies are uncommonly well-provided and friendly along all this outlying edge of New Castile.

The gates hereabouts are built like castles, with two good strong square towers and an arch between, defensible from either side, whether invaders were to be kept out or rebels, belike, besieged. The tradition of these fortifications is perhaps Arabic, for Cuenca was



TRUJILLO: BIRTHPLACE OF PIZZARO

Moors' aqueduct close the view at the last turn. Up the valley of the Jucar the hillsides are austerer, stubble-marked and gravelly by turns; as we leaned on the bridge in autumn a boy stopped to lean beside us and look, and cried out, "The wood is coming down!" Yes, all the tall sweet-scented pines which were cut back in the hills through the long summer months, now that the autumnal rains had swollen the stream, were floating down, lazily, dangerously; by next morning the men were out with steel-shod poles at the turns and bridges, and at the pool below the town they never rested.

The town itself reaches back into the hills, and pass-

ing through the upper gate the traveller goes on up, where peasants come down driving their two or three donkeys or where long strings of mules shake their ears and stamp before the little *venta* that thrives just out of reach of the octroi. The shade and the wine are cool there; but indeed tavernors and landladies are uncommonly well-provided and friendly along all this outlying edge of New Castile.

The gates hereabouts are built like castles, with two good strong square towers and an arch between, defensible from either side, whether invaders were to be kept out or rebels, belike, besieged. The tradition of these fortifications is perhaps Arabic, for Cuenca was founded by the Moors and a long time held by them; it fell finally to Alfonso VIII and belongs, though not to the domain of the Order of Santiago already established at Uclés, yet to that region and to the style of the Order.

To the eastern marches of Santiago, and the protection and influence of Uclés, belongs the forgotten city of Alarcón. It is situated on the Jucar, a good bit further down its course, and close to the old road that comes up from Valencia to Madrid, passing near Uclés and through Tarancon and Aranjuez. Cuenca is not on this road, but the way from Cuenca to the sea comes into it at Minglanilla, soon enough to take its passage through the superb gorge of the river Cabriel.

\* See March, 1919.

## TOWERED CITIES—II

Thence we drove through glittering wheat-stubble and purpled vineyards to Alarcón by way of Motilla del Palancer. I take the name of that tiny and ancient burgh to indicate some perishing memory of a mound and a palisade. The walled village lies hardly bigger than a grange but with castle-keep and church yet standing, yet habitable, and the white argosies slowly sailing overhead. It is not only picturesque but entirely typical of these wide upland plains reconquered only as the twelfth century closed; and the village was all pink, stone, plaster and roof-tiles alike.

Thence we dropped steeply to the river valley, which is said to be lovely when wheat is green. Northward a mound showed the site of Valhermosa; it was just the situation where Cistercians loved to alight. The earth hereabout is almost Indian red, and already on Holy Cross Day (14 September) it was turned up by the autumn ploughing. Milky green, the river lay in the burning metal of the hillsides. Breath of the thyme that stood pallid amid the dark patches of juniper and rosemary, mingled with the scent of the fresh-turned clods. A lonely tower on the edge of the world marked the city; only as the trotting mare came close the square towers of the gate-house rose up, and beyond that the keep with overhanging battlements; then the whole grey mass of the Alcázar loomed like a ship in the offing; lastly a grey churchtower or twain could be made out beyond. Where the bridge entered the town, with but a short steep climb to breast the hill-crest, we looked far down, at the left, past crumbling banks to the Alpine-green water flecked with white, and a terraced road that toiled over the bastions of the opposite hill. So from the Alcázar, on the other hand, we peered into another gorge where the arched gateways of the walls spanned only sheep-tracks now, and the juniper and wall-flowers rooted in the scars of machicolations. The city that once had covered the level plaintop and looked abroad with level gaze over the immense and rose-colored Castilian plain, had once pitched down grey streets steeper than Toledo's to the river's side, and the grey walls had climbed steeper than the red walls of Daroca and had guarded a haughtier citadel.

Like Cuenca, Alarcón was an Arab city, as indeed its name declares, and it has an Arab history. Situated on a road and a river, it was impregnable. The tall soft-footed brown nobility of Abderrahman and Hixem had swung their white cloaks up and down these narrow streets, the steepest terraces had showered rose-petals on climbing jasmine vines below when caged nightingales awoke the full moon of May; and Christian dames, wedded in lawful and noble alliance, had dreamed away long years of sheltered life, to sleep under the cypress trees of a Moslem cemetery at the last. When the eldest son of the Emir Yusuf, Mohammed Abul Asul, feigning blindness, had fled hither

from a prison in Cordova and raised a rebel flag, the north had risen to follow him; but against the turbaned hosts, Arab and Berber both, that were too strong for Castilians and Leonese, his frontiersmen and colonists had no chance; back here he came to die in 785, unknown to all. The silent months and years of secret, objectless existence were spent, perhaps, in watching the constellations, and solaced with such poetry as that of the Almerian, Ibrahim ibn Chafadshe:—

I live in sorrow, dreaming of a city far away;  
Thither I would travel, longing all the long slow  
day;  
But when the nightfall rings me round, and dark-  
ness closes over,  
And winds awake, I give to them the message of  
a lover:  
"Bear my love, O north wind, on your winnowing  
wings,  
And, south wind, to my well-belov'd carry my  
questions!"

A hundred years later the famous adventurer Hafsua garrisoned and held the place; in 1038 the Emir of Toledo here drafted an army to fight against the barbarous conquerors of Cordova; though Alfonso VI, who took Toledo, took Alarcón as well, it lapsed again into the free dominion of the Moslem for another century. The Toledo Annals record that in 1184 Alfonso VIII captured the city and ten years later gave it to the Knights of S. James. But they did not keep it. Often the Annals repeat the name, for the inhabitants were men of war, and they fought as a free commune in the great battle of Las Navas, that turned back the Moslem rush from Europe. In the Chronicles thereafter the name is frequent, for the position was important and the Procurators of the city figure largely in the reign of John II. The wealth of the city lasted so late that all the surviving churches belong to the age of Charles V and show the plateresque style. A lord of Alarcón was famous in the battle of Pavia, and the gesture of Velázquez's general perhaps belongs to him and to the proud hour when the captive François I was consigned to his charge: "his *Commentaries*," says Ford, "are truly chivalrous and interesting." Few traces of the Gothic age remain; an arched doorway is serving still for daily passage; here and there, built into a house wall or rolled up against a sunny door-jamb, may be seen the English dog-tooth moulding that the English Queen Leonor brought to Cuenca. The churches seem abandoned and not only locked but nailed up, impossible to visit, though there is said to be a good retablo with two more flanking it, in S. Juan. Of Santiago nothing is left: S. Domingo de Silos surprisingly flowers around the portal in to the scalloped cusping familiar in the



## TOWERED CITIES—II

west country, at Zamora and Toro. In the plateresque church of the Trinity the nave has fallen, but the tower yet stands and under a ribbed vault a street runs through, as quaintly as at Daroca.

In the church of S. Maria, which is almost square, three bays by three with side chapels, the form certainly preserves the foundations of the chief mosque. We entered the church as the village band was ending the Creed, and dropped on our knees at the back: procedure of which the outcome was not so devotional as the intention, for the entire congregation wheeled about to stare and I think the only eyes which saw the Elevation of the Host were the *paroco's* and our own. It should be said that the village band was made up of excellent musicians, and there was a great glory in the Sanctus given out by horns and bassoons, and the Benedictus culminating with drums and cymbals. It was a Feast of the Cross and the Faith, and eleven processions, separate and successive, escorted about the town to pipe and tabor the huge Crucifix, and the Cura vested in cope and beretta under a grey linen umbrella. We noted that the individual offerings in the sacristy, which paid for these, while some were in money, were, some of them, in wheat.

The houses have no more than two stories, not even a noble *casa solar* that regards gravely the trodden earth of the *plaza*, and everything was very white with lime-wash. The schoolmaster was a gentle creature of infinite courtesy, with that distinction which comes only from gifts of the spirit and is worn only by the meek. With all its fragrance of Moorish legend and its brave tales of the Italian wars, after all its romance and pride, Alarcón is now no more than a "rock that angels haunt—on the mountains visitant."

From Alarcón to Trujillo is not so far as it looks on the map, for though each was free and independent, the history of both cities is interwoven with that of the Military Orders and the same knights recovered them both for the Cross within a year's space; and, again, the architecture of both belongs to the age of foreign conquest in the Renaissance. If the Warder of François I is claimed by the one, the conqueror of Peru is claimed by the other.

Trujillo, that belongs to the world of granite, is picturesque in a more romantic and obvious way, one more European than the other hilltowns of this account. From afar it is seen and lost and described again hanging against the sky, as the road runs over granite hill-pasture and dips into oak woods and comes up into sheep-pasturage. The upper town can show the birthplace of the Pizarro brothers; the lower, the palace that they built, where Hernando, having lived out his hundred years, died alone at last. Not the situation alone but the very air of the place will recall to the traveller certain hill-towns in Italy.

Yet the settlement is ancient; and moon-marked stones declare that there once Astarte or Anahita was worshipped, and the city shield still bears the Queen of Heaven, and Cervantes has a pretty phrase about the old worship of Diana transferred but unaltered. The Arabs prized the place and their baths may be seen there yet, and their cistern; and another cistern has been lately built, identical in plan.\* Indeed the water was always good here, and plentiful. The church of S. James, in the upper town, from which the Conquistadores took their license, has been stripped for sale of what the French and the revolutionaries had spared; but S. Maria is still magnificent, in a fifteenth-century style but loftier, purer and more elegant; high and not too wide, with a good nave, arcade and chapels that perform the office of transepts, and a magnificent Primitive retable of five-and-twenty panels.

The Renaissance building in Trujillo was late and sudden and short: it is very pure, rich and lovely. To concentrate ornament on a single window in a granite wall was learned in Salamanca for a great excellence and practised here as a badge of subtle pride; the window is often set in the corner of the house and in time one learns not to dislike it there. Along a steep street above the square is set a palace that turns on itself at an angle and carries a small and exquisite loggia opening up there in the wing, topped by another story, which has more of delicate and reticent beauty than can be expressed.

The finest of all the houses flanking the vast square below had such another loggia, though now built up and such another window; the town hall is open on the ground floor, set upon arches like those of Bergamo and Como; Hernando Pizarro's palace is the biggest and splendidest of all. But indeed it were a week's work to learn the houses here, and a month's lesson to savour all the history. In the upper town the castle still crumbles, and the houses are built into and over against the living rock, and the walls reach down and out, and by the towers you may know the site thirty miles off. Granite is the temper of the race: courage and freedom have nested in that eyrie like eagles that come back to their rock.

There is a tale of the Constable D. Alvaro de Luna; how he discussed the surrender of it with a Bachellor that was the Princess Catharine's representative, under the postern gate, and suddenly the two clinched and rolled down the steep sward; and when the Constable's men picked them up they kept the Bachellor and so got the city; there is another of the Master D. Juan Pacheco, how he died when besieging the place and the Alcayde surrendered to a dead man, and was torn to pieces afterward by the populace in a Gallegan town. Always strange haps and disastrous chances fell thick,

\* See photograph, August, 1921.

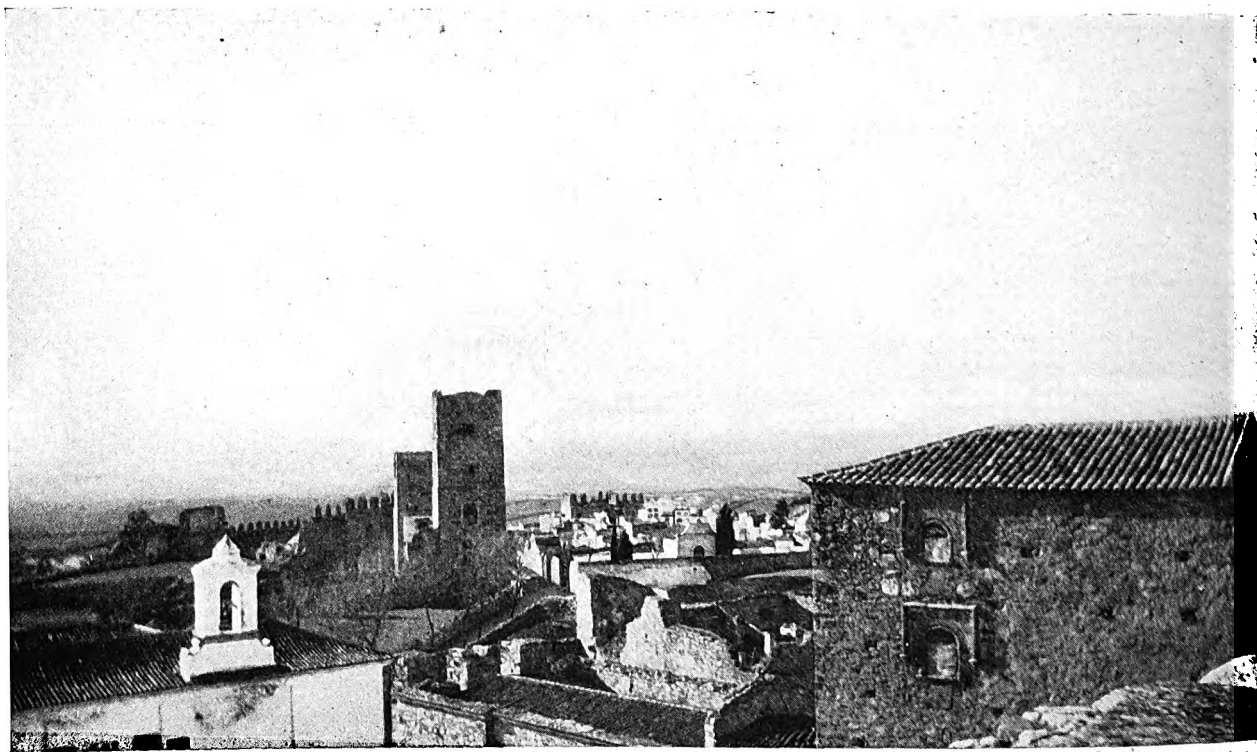
## THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

and the French sacked and burnt, Wellington being more occupied with sparing his troops than with saving his allies. Yet spotless and untarnished is still the shield, and the great memory of the adventurers who went out to the Conquest of the Southern Sea.

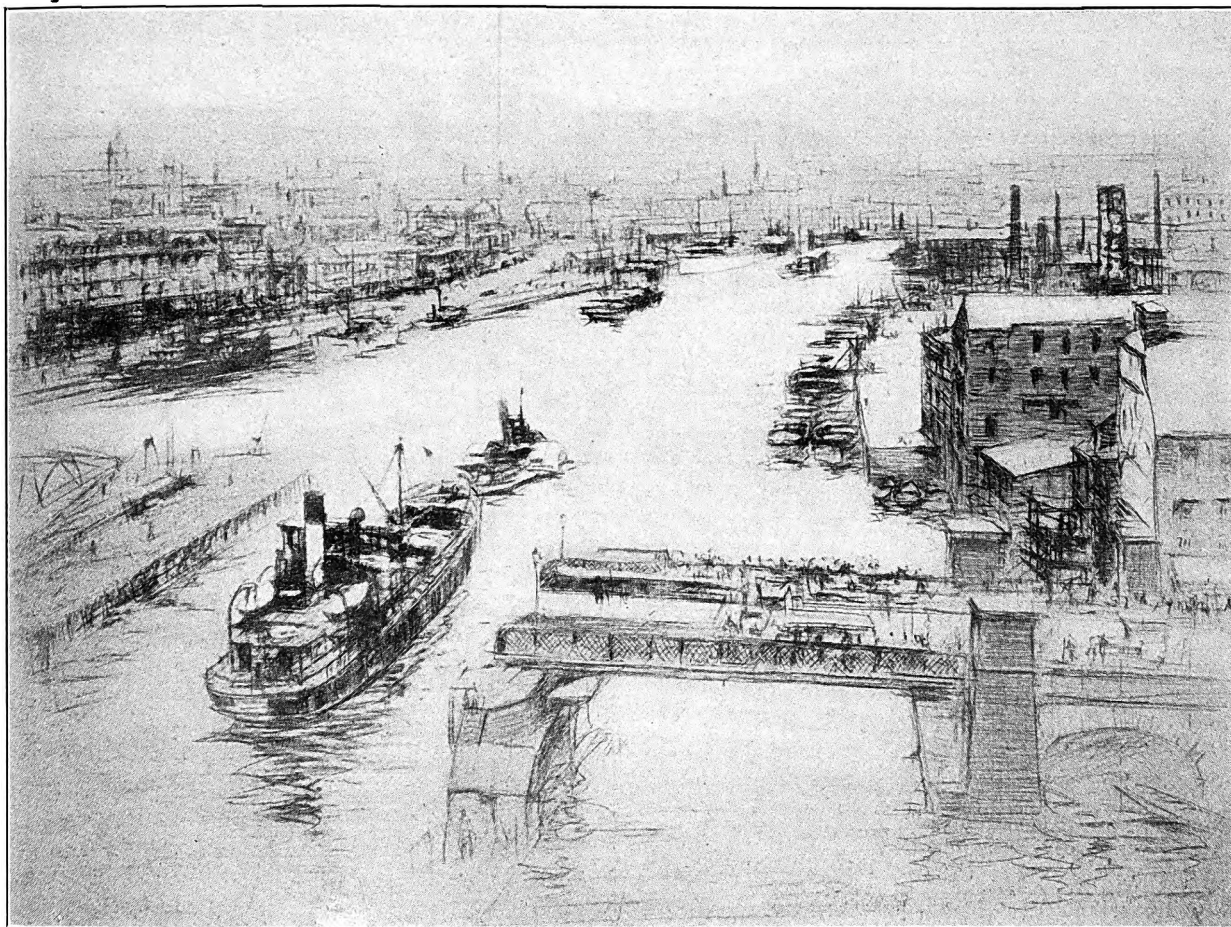
Pizzaro may have been born out of wedlock, as legend says, but he was born in a *casa solar*; it is doubtful whether he herded swine under the live-oaks of the adjacent hills, but certain that he learned to manage men from his father who was a captain in the Italian wars. He went early to the quest of honour and fortune in the New World just announced, and he went first to the search for Peru and the Pacific and the man-eating hordes of the south, that wore feather-woven raiment and drank human blood from cups of soft and virgin gold. A kinsman of Hernando Cortes, he had already crossed the Isthmus with Balboa, and again alone, when at last the great adventure of the South beset his imagination, "and," says the historian, "he drew a line with his sword's point as the term of the immense labors necessary for the conquest, and invited whoso would cross with his." Of the thirteen men who took that step that day, one other was a fellow from Trujillo; it was but a single step, but it was the first of a long way to go. Francisco Pizzaro was to see his home twice again, to collect money and bring back his brethren with him, and to leave his bones in Peru. D. Gonzalo Pizzaro died also in the Americas, and D. Hernando was falsely accused, and wore out twenty years in prison before his enemies

were confuted and his honor vindicated. Then he came home to dream, in the granite streets and under the oak-woods, of strange cities planted among the clouds and of the gorgeous swamps of the Amazon, of long-dead companions in arms whose faces were plainer to consciousness than those of their children's children who passed and saluted him in the square and pointed him out to one another, noting what medal he wore in his cap and what fashions he trimmed his beard.

Along the road, in coming from Caceres to Trujillo, we had seen the broad strip of turf left on either side of the roadway for pasture of the sheep in the long travelling of the *mesta*, the annual migration; and as we came back in the diligence after nightfall we were to see the shepherds. It was winter time, but hereabouts the oaks are evergreen and, herdsmen still shake down acorns, as on cathedral portals, to fatten their swine; we had seen the clean sweet city, so ruddy and fresh-smelling, so like lusty age; we had halted in the darkness at a *venta* black against the stars. There lights were flaring and thence as the door opened the whining bagpipe could be heard, and *coplas* in a long crying, and rude mirth. At the side a fire smelling of juniper flung up hissing sparks that danced above the red and yellow flames. Out came a sunburnt shepherd in his sheepskins, in his soft, peaked hat like a Sicilian or Vergilian figure, to peer into the diligence, with pipe in hand and shaggy wallet on shoulder to whom we gave a piece of silver for pity of his long travelling.



TRUJILLO—UPPER TOWN AND TOWERS DESCENDING



*Courtesy of A. C. and H. W. Dickens*

**THE TYNE**

An etching by William Walcot

# To Foreign Lands in a Paper Boat

By IRVING K. POND

Toward the end of July I opened a package containing foreign architectural periodicals which I began immediately to peruse with the idea of reviewing for the JOURNAL. Fate interposed and sent me post-haste to the hospital to be diagnosed, doctored and set surgically to rights; and here am I after mid-September taking up the task which was so rudely interrupted; for fate can be rude, though in the end it was very kind to me. I preface this article thus that the reader may know why at this late date his attention is called to events so long past, such as the election of the new council of the R. I. B. A., the bestowal of the R. I. B. A. gold medal upon Thomas Hastings, Esq., and other matters which by this time are more or less ancient history.

one in opposition, as one of the "burning" questions of the day. It is more than that. It is, like all controversial matters in architectural policy and practice, a perpetually "burning" question—a burning question for all time. It is like an asbestos gas log. One can instantly produce a flame and incandescence merely by turning on a cock simultaneously with knocking the ashes out of one's pipe. Unification and Registration are as perpetually burning with our British brethren as competition procedure, prying a fellow architect loose from his job, and the schedule with its absolutely impossible interpretations and possible and altogether probable misinterpretations are with us. By the bye, some of our British confrères are considering a sliding scale, not at all dissimilar to that



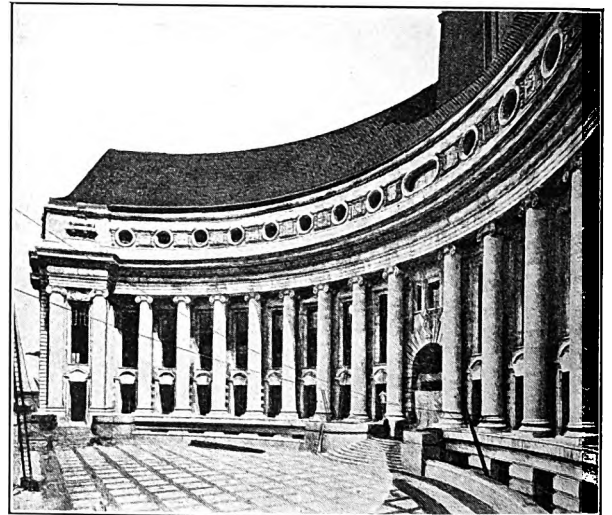
From "The Architect"

## LONDON COUNTY HALL

Front from the southeast

Ralph Knott, F.R.I.B.A., *Selected Architect*

W. E. Riley, F.R.I.B.A., *Council's Official Architect*



From "The Architect"

## LONDON COUNTY HALL

River Crescent and Members' Terrace

Ralph Knott, F.R.I.B.A., *Selected Architect*

W. E. Riley, F.R.I.B.A., *Council's Official Architect*

The Hastings incident involves nothing of a controversial nature—everybody is satisfied, everybody is happy. Everybody by this time has read the presentation address and the learned and lengthy response of the recipient. Everybody knows that it was the intention of the Royal Institute in bestowing the medal at this time not only to honor a great American architect, but also to indicate a kindly appreciation on the part of the British architects of the high place which American architecture generally holds in the domain of architectural art today. So we all are made happy in Thomas Hastings' supreme happiness.

## British Architects and Unification

One of the periodicals before me refers good-humoredly to that which caused the retirement of the old Council of the Royal Institute to private life, and the election of

which our own Institute refused to hear discussed some dozen years ago. I was interested in the attitude of the British architectural press toward the election of the new Council of the Institute which carries a repudiation of the majority report of the Institute Committee on Unification and Registration and an, at least partial, endorsement of the minority report. The tone of *The Architect*, which is anti U. and R., is, in a measure, exultant; that of the pro U. and R., *The Architects' Journal*, is a bit depressed; as though one should say: God's will be done, (though not too fully nor over too extended a period!). The paper hopes for better things in the end. And so does *The Architect*, which is opposed to both Unification and statutory Registration; its feelings, as expressed in the issue before me, and my own are very much in accord. I stated mine in this space in August last and need not repeat them now, but I was gratified that, counter to my prophecy, the British Institute was not swept off its feet

## TO FOREIGN LANDS IN A PAPER BOAT

by the present craze. By the way, while I appreciated being quoted in the *Journal of the Society of Architects* for June, I am sorry that in so far as the remarks on "Who is an Architect" are concerned, proper credit should not have been given to "W. P. B.," who alone was responsible.

### Architecture of the Aliens

In *The Architect* one modest little review of "The American House" challenges my attention: "The best American houses are those which are built on simple, classical lines. . . . In these two types, the ordered classical house and those founded on Colonial precedent, the greatest success has been achieved. To these we might add the fine house based on Spanish traditional lines, many of which are to be found in the West." Is it because the classical and Colonial houses are sticking so closely to English precedent that *The Architect* finds them pleasing? Are these houses "successful" because they are in a style already over-developed and run to seed; a style in which there is no chance for imagination or play of fancy? "But where American architects attempt to base the designs on Tudor or earlier precedents of earlier character they almost uniformly come to grief. It is to be hoped that American architects will either abandon the attempt to do what is evidently alien to them or give more time and study to the English precedents which they do not yet seem to understand." My opinion is that when any architect, British or American, draws academically on these former styles his work is lacking in fancy, in vigor, and in charm. The Tudor and the earlier forms are no more alien to the American than are the "ordered classical" or the Colonial or, for that matter, the Spanish. We, some of us over here, came to America by the way of Normandy and Britain, long ago, perhaps, but with a heritage in common with the best of the Britons of today. In fact there is *nothing* "alien" to us Americans if you take us as a whole. What we have to do is to take what is fundamental and basic in all the architectural manifestation to which we are heir and upon those fundamentals base what in time will be a rich, complete and unified expression of ourselves. That is why some of us think that America is not helped in the solution of her problems by those who are content to copy, slavishly or otherwise, Tudor, Colonial—which is Georgian—French, Italian, German, Scandinavian or South European architectural motifs or social customs. We, some of us, admire in some of the British their power to get at fundamentals and on those fundamentals to build sincerely. There is nothing slavish or dilettante in the work of Norman Shaw, H. Wilson, the always charming Ernest George, the vigorous and virile Leonard Stokes, the less vigorous but still virile Aston Webb, G. Gilbert Scott, and many others who, like these, inspire in a real American a spirit of emulation. I can well imagine that some of the American return to or insistence upon fundamentals might seem an expression of crudity in some British eyes. Indeed I was so impressed when I read the closing lines of the principal address at the recent convention or gathering of the R. I. B. A. at Cardiff. Now in quoting the "poem," with which the speaker urged cautionary

measures, the American would not have tried to soften the fundamentals in the cause of refinement. He would have used the original word "swim" rather than "bathe" and, rather than "gooseberry bush," the staunch old "hickory limb," which you will note rhymes with "swim," would have been suggested as the proper object upon which darling daughter should hang her clothes. Men (and daughters) swam thousands upon thousands of years, probably, before they bathed. At this late day no daughter would think of asking her mother's permission to bathe. (But, after all, therein perhaps is where the pleasantries lie—and all these years since babyhood I have missed it).

This same number of *The Architect* gives several illustrations of the grossly misapplied architectural embellishments of the saloons of a mammoth ocean liner, only the editor does not so catalogue them,—and also we are given plans and illustrations of the new London County Council building—the London County Hall—and here I feel myself up against something whereof by nature and training I am unqualified to speak. However, in spite of that feeling I speak. I remember the design which won the competition. There was a "crescent" bitten out of the plan as at present, but its center was filled with an important circular structure which served to unify that elevation. That structure does not now appear and evidently there is no provision for it in the future. It looks almost as if some monstrous, unfeeling giant had bitten out a hunk and left the building mutilated in plan and elevation. Originally the curving roof of the crescent finished against important architectural features. Now the unfinished ends of the roof call mutely and sorrowfully to be extended—the arc calls for completion in a great circle—but the call will never be heeded. The huge rusticated corner masses of the pavilions, themselves out of all scale, exist seemingly only to buttress grotesquely gigantic arches above, and interfering with the function of which, the wall has been boldly pierced for light.

How much more charming and gracious would have been John Belcher's carefully studied design, which was placed second, than this—but I realize that I am unfitted by temperament and training to deal with some aspects of the architectural art.

### Matters of Varied Interest

*The Architects' Journal* is giving considerable space to the modern theatre. Many of the playhouses are weird and fantastic in design as in execution. Probably one should not treat the architecture of the theatre as real any more than one should consider what goes on upon the stage as having any relation to real life. What goes on within is all illusion, all hectic, all hollow, all mimicry, so why should the shell present other than these characteristics?

I am not speaking of the literary drama but of play acting and the husk in which it rattles about. I am speaking now from the standpoint of the man of action who goes to the playhouse to escape life. I may present another point of view at some more opportune time.



## Architecture in Letters

Architecture is holding its own in literature in Great Britain. F. R. Jelley, A.R.I.B.A., has an interesting paper in *The Architects' Journal* on Architects in Popular Literature, in which he conceives that architects have been none too pleasingly presented from Pecksniff on: from Dickens down to Wells. Mr. Galsworthy, who is included in the indictment, answers in a later number in genial vein, indicating that the characters are treated rather as characters than as architects and that architects should not be more sensitive than lawyers or doctors or others are, or should be, who have had their like held up to the mirror of literary art. That architecture is a subject of general interest in Great Britain—as perhaps in no other country—is evident from the fact that the columns of the great metropolitan and provincial dailies and weeklies are open to real discussions of architectural principles and theory and practice rather than mere news and real estate items. In these discussions architecture is treated as art, as a possible living art, and given a dignified position and treated in its ideal relationships to society.

*The Architects' Journal*, for example, while lamenting that the topic is ignored by the bulk of the press, says: "To this scandalous and unwarrantable neglect there have been always honorable exceptions. The more dignified

and distinguished of the newspapers, both in London and in the country, maintained the tradition that, no matter how apathetic the 'masses,' the 'classes' liked to see in their chosen periodicals an occasional reference to so refined a subject as architecture. Occasionally it was accorded hospitality in the Reviews, where Sir E. Beckett Denison's diatribes, or Mr. Emmett's sardonically humorous censures, or, finally, Mr. March-Phillips' graceful perversities, were each and all welcomed as leavening the mass. More than any other contemporary writer, Mr. March-Phillips was successful in showing how fascinating a subject architecture can be made in the hands of a skillful writer, and eventually the *Morning Post* offered him a large audience to which to preach, at regular and frequent intervals, the gospel of good building. He was thus able to convince many readers and a few editors that architecture is a subject that can be invested with singular charm by a capable writer, as Ruskin had proved long before." My own opinion of March-Phillips is an exalted one.

The *London Observer* and the *Manchester Guardian* are mentioned as rendering especial service in this direction; and other papers, a goodly list, come in for thanks for their continued work in the good cause. When will our great dailies open up their columns to sincere and deep discussion of art as affecting social progress and include architecture in the category of beneficent institutions?

## The Passing of the Skyscraper

By GEORGE C. NIMMONS

The most conspicuous contribution of our time to the architecture of the world is the high office building commonly called the skyscraper, the outstanding feature of which is that it seemed at first, to the astonished observers, to scrape the sky. But in their construction it has transpired that those which at first were called skyscrapers lost their claim to this title as soon as other buildings in their vicinity were carried up higher. The first skyscraper was only 11 stories high and the second 12, and now they are 40 stories and more.

Their history reveals a continuous effort to gain distinction by exceeding the height of former buildings. It has been a veritable building race into the sky, but the race is now practically over, and there will hardly be any more entrants, as the privilege to scrape the sky with a building has been recalled. Laws for the restriction of building heights are either already in force or are in the process of being passed in practically all of the large American cities.

The result at the conclusion of this remarkable race gives the Woolworth Building, 790 feet high, first place, and the Metropolitan Life Building of New York, second, at 700 feet.

While some of the laws restricting building heights still permit a portion of the area of a site to be carried up to certain heights, the main mass of the building is limited, on the building lines, to a maximum height of about  $2\frac{1}{2}$  times the street width. There appears to be

no large city which does not materially cut down the height formerly allowed for such buildings. As a natural result, office buildings will tend toward a uniformity of height in each community, and then no more buildings will astonish the natives by their tremendous height.

No doubt it will be most interesting for future generations to review the rise and fall of the skyscraper in the estimation of our time. It came and was condemned by the people in the period of about one generation. Therefore it seems appropriate and advantageous for us to speculate on the lessons this experience will teach posterity, which probably will not view with much sympathy the motives which led to the erection of these buildings, or some of the effects that followed, although it should not fail to be thankful for the invention of skeleton construction and what we call the modern elevator, which together made these buildings possible. It may be that its attitude will take a humorous turn, as they reflect upon the youthful enthusiasm with which we overindulged in something not for our good.

One of the first things they probably will note will be that we didn't invent the elevator but only applied mechanical power to operate it. Archimedes had a freight elevator in 236 B.C. operated by perfectly good hand power, according to Vitruvius who recorded a description of it in 46 B.C., when he was working for Julius Caesar as a military engineer. This must have led to the invention of the animal elevator which was installed

## THE PASSING OF THE SKYSCRAPER

at the Roman Coliseum for raising the wild animals up to the level of the arena floor.

The passenger elevator would probably be traced 'way back to the sixth century at the Convent of St. Catherine on Mt. Sinai, and then at the Monastery of St. Barlaam in Greece, where one had a travel of two hundred feet. Queen Anne had a passenger elevator at Windsor Castle, and the Empress of Austria, Maria Theresa, in 1780, at the Capuchin Church in Vienna, had one which she used for descending to the family tomb in the crypt. It is reported that this was of the plunger type. At any rate, it stuck in the hatchway, one day,—a not uncommon occurrence even now,—but the Empress, who was very strong for omens, took this as a bad one and assumed it to be the forerunner of her death, which really did occur a short time afterwards.

Beginning at the beginning, posterity will note that as soon as scraping the sky with buildings became an assured thing, real estate men and owners of downtown property conceived a great idea, *viz.*, that the price of the land could go up with the height of the buildings. In the various large cities these soon began to tower above their surrounding neighbors to 12, 14 and 16 stories; people did not hesitate to ride in the elevators to these dizzy heights and tenants proceeded to sign up leases for the available space. It was also observed that there seemed to be a preference, even at first, for the top stories. This tendency had its effect in helping to create a conviction that the higher a building went the better people liked it. Upon consultation with the architect and builder, assurance was also given, particularly after the adoption of the caisson foundation, that there was practically no limit of height to which these buildings might not go.

With these essentials established, owners of downtown corners and the realtors began to visualize and dream. Story piled upon story up into the great heights of the atmosphere was not only a pleasant gratification of the popular ambition for bigness and the vast outlay of money, but it seemed to open up an opportunity to enhance the value of city property to a degree never before equalled. And that was exactly what it did. It became possible to demonstrate that the income from the great rent rolls of these buildings would pay good interest on tremendous valuations of the land. The prices for suitable office building sites began to soar and there was scarcely a time when these land values were not raised to the limit of what the buildings erected upon them could stand. And there are many instances where pieces of property are held at prices far beyond what buildings erected upon them could possibly justify, by reason of their unfavorable locations and unsuitable size and shape. This is the case largely with property upon which large areas would have to be left vacant for light courts for inside offices, in case high buildings were erected.

Prices for land, however, continued to rise, and as the cost of maintenance and construction increased rentals were advanced. This might very properly follow as a result of the natural law of supply and demand, if it were not for the surprising fact that office buildings have never paid very well; that is,—the percentage of profit earned on the total value of land and buildings

was always small. As proof of this there is probably no better evidence than the statements of the president of The Building Owners and Managers Association at its national convention a few years ago, when reliable statistics on about two hundred office buildings showed that for the previous ten years the average net earning was only about 4% on the value of land and building in each case.

It was argued that the nature of an office building investment had sufficient business risk connected with it to merit a net earning of 8 to 10%, instead of only 4; the causes of low earnings were discussed and the conclusion reached that the only feasible remedy was to raise the rents. It was recognized that the cost of new office buildings could not be reduced; that was fixed by the market cost of labor and material at the time the buildings were built and a campaign of education, therefore, was recommended to bring about the raising of rentals. There was no discussion or inquiry as to whether or not the value of the land was too high, or upon what basis its value was arrived at. The fact that the value of the land can only be computed properly from what a building erected upon it can earn, did not receive consideration, nor was any attention given to the fact that land values had been systematically raised as fast, and in some cases faster, than the rise in the height of buildings. It is probable that in every community the experience has been the same, *viz.*, that as soon as the building height was raised over what had been customary in that city, the price of the land was advanced, and as soon as it was found that this was not satisfactory the rental of the buildings was increased.

This kind of boosting process has been going on ever since the skyscraper was invented, but it has now met a very formidable obstacle in the new zoning laws and in the discovery of the fact that office buildings reach the maximum rate of earning at a much lower height than was formerly supposed.

On account of the limitation of the height of buildings, all increase in income in the future will have to come from the increase in rentals, and not as it did in the past by increasing the height of the buildings. Fortunately, it is only a relatively small proportion of city property, as a rule, that has advanced in price beyond what it can readily justify from the earnings of future buildings. The restrictions now placed upon buildings should have, and no doubt will exercise, a wholesome influence in restraining the inflation of the value of property beyond a stable and permanent value.

(While we, no doubt, will be criticized in the future for expanding the prices of real estate holdings beyond a legitimate amount, there is at least one example in this country which stands out conspicuously, and may give evidence of a spark of the poetic and sentimental in our property transactions. This instance, according to the *Economist*, is the rental of the ground on which stands a little church at Manheim, Pennsylvania. On the first day of June each year the congregation assembles, and each member pays to the owner of the land one red rose. In addition to this the treasury of the congregation gives over five shillings. The church is known as the Red Rose Church.)

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Posterity, no doubt, will note with interest another important feature of the skyscraper's development. When steel skeleton construction was adopted, the then existing theories and precedents of architectural design were all upset. With the old masonry construction there had been no need for anxiety as to whether the pier, lintel, or arch was of sufficient size to give an appearance of adequate strength and stability. The designer of such a building could frankly express the construction in the façade and feel assured that there would be sufficient masonry in its different parts to make the building look stable and secure. But when steel came into use, with a strength so much greater than masonry, the required size of columns was so small that it was not only a very difficult problem to secure good proportions, but it was also difficult to prevent the building from looking dangerous and liable to collapse, by reason of the seeming inadequate size of its different members. Yet it was not long, however, before people adjusted their standards of strength and stability to this new material, and no longer hesitated to walk on the side of the street where one of these buildings stood.

In fact it did not take merchants long to discover wonderful selling possibilities in buildings with skeleton construction. Enter the modern show window,—the intensive display method of modern advertising. The idea of showing the greatest variety in the largest quantity grew in popularity, and architects were asked for the largest show windows it was possible to build.

The common inquiry then became,—how small can the columns supporting the building be made in the lower stories to give all possible room for the show windows? Building owners no longer had any concern about having the supporting columns or piers of a building look strong enough to hold it up; they wanted the space for show windows to put a car load of something in, so that people would see that they had plenty of goods on hand. Show windows increased in size until some bright genius discovered that columns didn't need to appear on the outside at all. The lower story could be all show window by setting the columns back from the building line, and running the glass right along in front of them. In this way the glass could be continuous except for the entrance doors, and even at the street corner the column could be set back and glass made to come right up to the corner. Then the remaining space above and below the show windows could be covered by sign boards, or signs could be painted in red or orange on any remaining surface above or below the glass, thereby getting the full selling power out of the entire store front of the building.

When at first the supporting columns were reduced in size, someone remarked that such buildings looked as if they were supported on tooth picks, but when the columns disappeared altogether from the outside surface it seemed as if some magician or conjuror had surely been at work. The laws of gravity seemed certainly to be suspended! Here we had a great skyscraper with no visible means of support whatever! The floating of the planets in space seemed no greater mystery than this enormous building suspended in the air over a great display of ladies' lingerie, men's clothing, children's toys, patent medicines, surgical appliances, men's underwear,

or some other motley. Of architecture, no vestige was left. By craning one's neck skyward one might gain a distorted glimpse of rich cornices and noble orders of architecture too far off to be appreciated. If any of the fine arts have suffered by the inroads of business, surely architecture has had to bear the limit of that imposition in some of the downtown shopping districts.

An architect, therefore, in attempting to design one of these buildings had to assume that his architectural base would be underwear, clothing, or other merchandise suspended in the air, or if fortunate, there might be some wax lady models to resemble caryatides, thereby giving some semblance of support to the theory that architecture, in these buildings, did not commence until the second story was reached.

From an observation of all these queer developments one might suppose that people didn't care anything about architecture. But, quite the contrary, there was quite a lively interest aroused about the difficulties of designing these tall buildings. This soon led to a demand for a new style of architecture, which should frankly express the new kind of construction. In fact there was quite a stir in the architectural profession over it. Two warring factions sprang up. One claimed that "all architecture was rotten that followed precedent in trying to clothe this new kind of structure," while the other so characterized all efforts to follow along conventional lines. The slogan of one was "Progress before precedent"; of the other, "Precedent before progress." There seemed to be a strong sentiment among the radicals for a new style of architecture, one that would be distinctly American, and some thought that it should be expressive of the democracy of the government and the freedom of the people.

About this time there arose into prominence an architect whose originality and skill in design surpassed any other of modern times, and that was Mr. Louis H. Sullivan. He did originate a new system of architectural design and ornamentation which had a far greater following than any of the other architects who attempted to break away from the conventional methods. His method of designing the ornamental features of buildings is one which seems specially well adapted for producing the originality of expression in design so much desired. And it was the example of his work during the World's Fair and afterward which called forth such enthusiastic praise, especially from the people of France.

Mr. Sullivan's method of designing ornament is based upon his great knowledge of the habits of the growth of flowers and plants, and of the principles of geometry. Having availed himself of the principles of nature in plant growth and of the rules of science in geometry he was not restricted as is the ordinary designer to copying the methods of conventional architecture, but on the contrary was more or less free, in his creative work, to express himself, his emotions, and his own taste just as the talented craftsmen must have done in the old days when they created the masterpieces of art. Fortunately, in connection with the story of his life now appearing in the JOURNAL, he is completing a series of twenty plates which will reveal his methods of design for posterity. Anyone, therefore, who will avail himself of these prin-

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ciples can select whatever flower or geometric pattern he may choose as his motif, and create his own original ornament by the Sullivan method.

Whatever posterity may say of the contribution of our time to architectural design, there is not likely to be much question about the value of the service performed in the planning, arrangement, and equipment of the important and complicated buildings of our day. If one contemplates a typical modern office building, a prominent hotel, or a great railway terminal, the question of the exterior architectural design sinks into insignificance when compared with the problem of solving, by planning arrangement and interior design, the great number of unprecedented and difficult requirements which had in each case to be overcome. There were no precedents to follow in providing for the inventions and products of modern science and art in these new buildings.

Mr. Paul P. Cret, in summing up his estimate of the value of our contribution to architecture, in the forthcoming book of the Committee on Education,<sup>1</sup> takes this view, that our greatest achievement has been the successful planning, arrangement and equipment of these buildings.

In regard to the arrangement of the space in an office building, there appear to be two distinct opinions as to how the outer and inner offices should be arranged. One holds that it is best to make the building or pavilions narrow, and have only a single row of offices on each side of the public corridor, so that all space devoted to offices will have outside windows, while the outer office, or waiting room in this arrangement will be alongside the main office, and have an outside window. Others claim that the building or pavillion should be wide enough to have a double row of offices each side of the public corridor; that borrowed light, through opaque windows in the main office partition, together with artificial light, is sufficient for lighting the outer office, and that this arrangement of a double row of offices gives a large, wide room as required for clerical forces, or for any other of the many uses for which wide spaces are an advantage.

The final stage in the history of the skyscraper was brought about by the creation of city zoning laws. While these laws primarily were made for the restriction of the use of the different parts of a city for very definite kinds of buildings, there was also included a limitation of height. This applied to the skyscraper and in every case resulted in cutting down the height formerly allowed for these buildings.

The passage of these laws involved a great deal of consideration and investigation in each case. It had come to be quite generally recognized that the skyscrapers, when they became too numerous in any one locality, were a bad thing, and that it was necessary for the common welfare to limit them materially in height and confine them strictly to certain localities. It is also interesting to note that for the first time in the history of American cities very much needed laws are being passed in connection with these zoning laws for the protection and perpetuation of the home.

The principal charges made and proven against the skyscraper were, that it was largely responsible for the congestion of traffic in the streets, for the marked increase of the respiratory diseases, such as colds, influenza, and pneumonia, occasioned by the cutting off of sunshine and the interference of ventilation in securing pure air, the increase in the danger of injury and loss of life in times of fire and panic, and the undue raising of the prices of land beyond what was considered stable and reasonable. There are a number of other minor charges made, but most of them result from those given above.

The obvious cure for most of these evils would be, of course, to cut the height of buildings right down to a relatively low limit, such as that of Paris or London, but this would bring about very serious results. If the prices and values put upon centrally located property had not mounted up to heights corresponding to the buildings, the matter would not be so serious. But the fact is that the whole economic fabric of society is built up to an important degree upon the current values of city property. Industry, commerce, and business are deeply involved. Investments of a large part of our wealth are tied up in city property. Credit extended by the banks is largely secured by the important pieces of property, and many people are holders of securities which have an interest in city property. If, then, building heights were generally cut down over the country to a point which would materially lower the present earning power of city property, it is almost certain that there would be a panic and that thousands of people would fail.

In deciding, therefore, how much building heights shall be restricted in the zoning laws now being prepared in many of our large cities, the outstanding question in the whole discussion turns upon the problem as to the height at which a building reaches its maximum rate of earning. Is this height fifteen, twenty, or thirty, or more, stories? It is the answer to this question which will aid a city most in determining how much the height of buildings may be restricted without seriously affecting the values of city property.

In serving upon a committee of the Chicago Real Estate Board to study the question of building heights for the new zoning laws of Chicago, the writer made a series of calculations of the earning power of a typical office building from five to thirty stories in height, and the results were published in *The Chicago Realtor*, the Board's official publication, and are also repeated in the tabulated statement to follow. As a large percentage of Chicago's important office buildings are built in the form of a hollow square, that type of plan was adopted. It was assumed that the site was a corner lot 160' x 172', with streets on two sides, an alley on the third and adjoining property on the fourth. The land value was placed at \$1,500,000, the cost of the building sixty cents per cubic foot plus variations for its different heights, and the income at an average of \$3.00 per square foot for office space and \$5.00 for shop or store space. Taxes, insurance and operating costs were included at the average local rates. Depreciation of the value of the building was not included.

In order to determine the earning power of buildings of different heights erected upon this same lot, calcula-

<sup>1</sup>"*The Significance of the Fine Arts.*" To be published by the Marshall Jones Company, Boston.

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tions began with a five-story building and were carried through to show what the annual income, expenses, and net profit would be. The same calculations were made for a 10, 15, 20, 25 and 30-story building.

In making these calculations, the cost of the mechanical equipment and the structure of the lower part of the building was increased as the building was carried up higher. Deductions from rentable area of typical floors were also made for the increase in the size of the light court in the upper floors, and for the increase in the number of elevators required. The effect of the different heights was thus applied to the same lot, giving an equitable comparison, which is not the case in a comparison of the earning power of existing buildings of varying heights on different sites. The earning power revealed in these calculations was very surprising in some respects, for the rate of earning on the capital invested reached its maximum at a much lower height than was expected.

The calculations show that the 5-story building earns annually 4.36% on the capital invested, the 10-story 6%, the 15-story 6.82%, the 20-story 7.05%, the 25-story 6.72%, and the 30-story 5.65%. The outstanding feature of these calculations is that the building is shown to reach its maximum rate of earning at about the twentieth story, and that the rate of earning of the 15-story building is only 0.23% lower than the 20-story building. In

this connection it should be recalled that the common idea about the earnings of office buildings is that the higher you build the more is earned on the particular piece of property in question. This is quite true in respect to the lump sum, but in the calculations under consideration, the rate of earning on the total money invested begins to decline as soon as the twentieth story of height has been passed. For example, the investment represented by the 20-story building and the land is \$5,435,000, and for the 30-story building \$7,781,000, but the rate of earning for the 20-story building is 7.05%, and for the 30-story building only 5.65%. This is the vital point in the whole question, *viz.*, that an excessively high building does not, under ordinary conditions, earn as high a percentage on the money invested as one of medium height, and that there is no justification from an economic standpoint to oppose the restriction of building heights to a reasonable limit in the new zoning laws. In fact, the best argument in favor of this policy is that it will be a positive gain for an owner to build two lower buildings in different locations rather than to build one extremely high one. For example, if an owner were to build two 15-story buildings under the same conditions as herein described he would earn 6.82% on the total investment, while if he built one 30-story building he would only make an earning of 5.65%.

Tabulated statement showing the comparative earnings of buildings from five to thirty stories on an assumed typical plot.

	5 Stories	10 Stories	15 Stories	20 Stories	25 Stories	30 Stories
<b>LAND AND CONSTRUCTION COSTS:</b>						
Value of Land.....	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Cost of Building.....	1,108,000	2,054,000	3,000,000	3,935,000	5,013,000	6,281,000
Total Land and Construction Costs.....	<u>\$2,608,000</u>	<u>\$3,554,000</u>	<u>\$4,500,000</u>	<u>\$5,435,000</u>	<u>\$6,513,000</u>	<u>\$7,781,000</u>
<b>OVERHEAD AND ANNUAL EXPENSE:</b>						
*Interest on Loan @ 5½%.....	\$60,940	\$112,970	\$148,500	\$179,355	\$214,929	\$256,773
**Interest on 2nd Mortgage @ 7%.....	.....	.....	21,000	47,180	77,364	112,868
Ground Lease, Average Annual Rate.....	54,000	54,000	54,000	54,000	54,000	54,000
Taxes @ 3½% (on 65% Land, Con. Cost).....	59,332	80,854	102,375	123,646	148,171	177,018
Insurance @ 2c Sq. Ft. Rental Area.....	2,019	3,704	5,381	6,930	8,308	9,368
Operating Exp. @ 62c S. F. Rental Area.....	62,584	114,824	166,808	214,836	257,545	290,396
Total Overhead and Annual Expense.....	<u>\$238,875</u>	<u>\$366,352</u>	<u>\$498,064</u>	<u>\$625,947</u>	<u>\$760,317</u>	<u>\$900,423</u>
<b>INCOME:</b>						
†Rentable Offices Area @ \$3 Sq. Ft.....	\$152,644	\$381,132	\$608,810	\$819,261	\$1,006,547	\$1,150,902
†Rentable Store Area @ \$5 Sq. Ft.....	199,836	198,180	196,020	193,860	191,700	189,540
Total Income.....	\$352,480	\$579,312	\$804,830	\$1,013,121	\$1,198,247	\$1,340,442
Deduct: Overhead and Annual Expense.....	238,875	366,352	498,064	625,947	760,317	900,423
Annual Net Earnings.....	<u>\$113,605</u>	<u>\$212,960</u>	<u>\$306,766</u>	<u>\$387,174</u>	<u>\$437,930</u>	<u>\$440,019</u>
Earnings on Total Investment.....	<u>4.36 %</u>	<u>6.00 %</u>	<u>6.82 %</u>	<u>7.05 %</u>	<u>6.72 %</u>	<u>5.65 %</u>
Rentable Area, Square Feet Office.....	56,535	141,160	225,485	303,430	372,795	426,260
Stores.....	44,408	44,040	43,560	43,080	42,600	42,120
Total Rentable Area Square Feet.....	<u>100,943</u>	<u>185,200</u>	<u>269,045</u>	<u>346,510</u>	<u>415,395</u>	<u>468,380</u>
Number of Elevators.....	<u>3</u>	<u>6</u>	<u>10</u>	<u>14</u>	<u>18</u>	<u>22</u>

\*Based on 60% of Land and Construction Cost, except for 5 and 10 story buildings in which case loan principal is actual "Cost of Building."

\*\*Based on difference between loan principal and "Cost of Building."

†Includes Deduction of 10% to cover vacancies.

## THE SUB-DIVISION OF LABOR—II

Therefore it seems evident that the cities of the country are fully justified in restricting the heights of buildings in their zoning laws without incurring any undue depreciation of property values, as these values must, in the last analysis, be governed solely by the earnings of buildings erected upon such property.

In conclusion it seems appropriate at least, on account of the disparaging statements made, in another part of this article, in regard to the appearance of some shop fronts

and office building façades, to express appreciation of the admirable way in which the design of the best office buildings has been handled and the artistic and beautiful appearance of some of the store fronts. Some of the show windows, particularly at holiday season, are spectacles of delight, composed as they often are with all the skill of the finest stage setting, and worked out in color and design in a way that greatly enhances the beauty of the articles displayed.

## The Sub-Division of Labor--II

By FREDERICK L. ACKERMAN

### Union Rules

A recent editorial in the New York *World* calls attention to a statement of F. H. Alfred, President of the Pere Marquette, concerning union rules which obtain in every roundhouse in the United States. "I know," he says, "that there is not a railroad in the country that could not afford to pay its shop craftsmen ten per cent more were it not for the obnoxious national rules of employment. There are one hundred and eighty-six of these rules, which were drawn up by the representatives of labor during war times, and the end and aim seems to have been the creation of the most jobs that could be made." Mr. Alfred lists, for example, the classes of labor which must be used to replace a broken stay bolt in a locomotive:

1. The cab carpenter and his helper remove the running board.
2. The sheet metal worker and his helper take off the jacket.
3. The pipemen remove the pipe.
4. The machinist and helper remove the running board bracket.
5. The ox-welder and helper burn out the stay bolt.
6. The boiler maker and helper take out the stay bolt.
7. The boiler maker and helper put in the stay bolt.
8. The running board bracket is replaced by the machinist and helper.
9. The running board is fastened on by a cab carpenter and helper.
10. The jacket is replaced by a sheet metal worker and helper.
11. The pipe work is replaced by a pipe fitter and helper.

It is necessary, in addition, that a separate foreman order done the work that is to be performed by each group.

Now the curious thing about this scheme for dividing manual operations is this: If the writer of that editorial in the *World* had been viewing this division of labor in the Ford factory, for example, he would have characterized it as a marvellous piece of efficiency engineering, so called, which proceeds by precisely such methods; he might then have asked himself: the difference as between making motor cars under a modern engineer's efficiency

program and repairing a locomotive under union rules, is one of what? But no such thoughts intruded upon the writing of the editorial in question, and, in conclusion, the *World* remarks that "if the unions insist on inefficient methods because they make more work to do, they must obviously sacrifice something in the rate of pay received."

Now an almost identical example of the division of labor under union rules might easily be found in the building industry, but in so referring to such rules as sabotage—a slowing up of production in order to "make work," which is equivalent to obtaining a higher price per unit of productive effort—the *World* views this matter as it is ordinarily viewed. But in so characterizing such action there follows the obligation to place in the same category action, either by individuals or groups, which, in one way or another, contributes to the production of a smaller volume of goods than is easily possible under the material circumstances attending production.

No more than a casual examination of characteristic action and outlook in the case of those who dispense credit, produce and market the crops, use or sell land, or produce and market materials for clothing and shelter, discloses, as has been repeatedly pointed out, that *business* cannot be carried on without a most painstaking regard for so limiting production as to insure the maintenance or the advance of prices. It is this undeniable fact with respect to the situation in general which lifts the action of the round-house shopmen, workmen in the building trades and others out of the field of union policy and places it in the field of action characteristic and unavoidable under the working of our price system. The demand that the working rules of the union be voluntarily abandoned in the interest of lower prices to the consumer and lower pay to the workmen should be coupled with the further demand that the producers and the marketers of materials of all sorts go to their work in the interest of lower prices to the consumer and smaller profits to themselves. That is to say, if workmen should abandon the practice of attempting to regulate the volume of goods which they produced, others should also proceed to the production of the maximum volume possible regardless of what would consequently happen to prices and profits.

It is the demands that the workers shall do certain things in the first case, and the complete lack of any

equivalent demands that the producers and marketers shall do the same things in the second case, which give rise to the present industrial conflict and furnish ground for the idea that here focuses the class struggle. It is out of our two completely divergent attitudes towards one and the same thing which gives to the present industrial situation its character of unavoidable and ceaseless conflict of interests.

Another phase of the matter is deserving of attention. Under guidance of habits of thought which follow upon the development of the machine process an ever more extended and minute division of labor has come to be viewed as the road to efficiency—a larger production of goods for the same expenditure of effort. In fields of production where the machine performs most of the functions it has come about that the ideal state of affairs is that in which the workman performs one operation with one movement only. An appraisal of this condition in industry is not in question here. Reference to it has been made merely for the purpose of pointing out that these obnoxious rules of unions look, on their face, exactly like the formulated principles which have been developed by financial business to guide the managers of our industrial plants. It is probably true, for the time being, that, in the case of machine production, a minute subdivision of labor similar to that indicated by the rules referred to above works out in an increased volume of goods produced. It is also probable that these rules, when applied to production which falls largely within the sphere of handicraft operations, operate to retard or restrain the industrial process and increase prices. Thus they are quite properly referred to as sabotage.

But it is hardly to be denied that these rules of the unions are in accord with the aims of producers who seek to carry on production without drawing heavily upon the skill of the workmen. For the aim in industry in general is: how, in the typical case, to reduce the field in which the individual workman functions, so that his interests are confined to the doing of one thing with only

one movement. This is not to condone these rules of the unions. It is to point out, however, that in the business of selling time and such skill as the workman may have acquired under the system which seeks to get on without the skillful, these workmen are acting strictly in accord with what have developed to be the principles of business traffic. Not only are the workmen and their unions quite up-to-date in this respect, but as already suggested they are keeping quite abreast of the engineers and the employers with respect to the working out of a more minute sub-division of labor.

Of course, the outcome of these union rules foots up to a very considerable item which may be properly accounted a dead loss. But then, precisely the same may be said of the outcome in the case of those who engaged in production with a view of selling goods for something above cost, for in the latter case the aim is to always so control output as to keep prices up, so that in fairness to all we should not treat these trade union rules and regulations as something arising out of an alien point of view or moving in conformity with an alien economic system.

All these rules are in strict conformity with the rules for controlling output which govern the world of business traffic and without which the world of business traffic could not stand as a going concern over night. When these same rules are viewed from the standpoint of technology it is plainly to be seen that they run in strict conformity with those rules which guide the modern production engineer when he goes to his work. It is, therefore, not at all likely that these rules and practices of the unions will give ground or give way in advance of the decay of business traffic and the falling into disrepute of the ways of the modern production engineer. That is to say, they are likely to stand for some time to come, for they are in conformity rather than alien to the situation as a whole.

*(To be continued)*

## The Question of Public Information About Architecture

By JOHN V. VAN PELT<sup>1</sup>

*Chairman of the Committee on Publications and  
Public Information*

The Committee on Public Information of the Institute has written to all of the Chapters to urge that they take up with their local press, the publication of matter pertaining to architecture.

It is not credible that the American public is so far from an approximation of civilization that it has no interest in this subject. France cares. Italy cares. Are we who look down on these nations from the heights of our serene self-satisfaction, really less cultured

than we think? Our periodicals publish whole columns or pages, on the Drama, Music and the Motion Pictures. How has this come about? Unquestionably because these arts are fostered by business organizations and the theatrical, musical and movie publicity man has pushed them to the front.

Architecture has an organization, too, with 51 children localized throughout the country, on whom the mother depends. But while some of these children have been making an effort to support her, unquestionably some of them have been guiltily lethargic and apathetic.

<sup>1</sup> Communications should be addressed to the Chairman at 126 East 59th Street, New York City.

## THE QUESTION OF PUBLIC INFORMATION ABOUT ARCHITECTURE

A young member of one of the Eastern Chapters complained to me the other day that no effort had been made by his Chapter to right the wrongs brought to light by the Lockwood investigation in New York City. "Well, why don't you urge this at the Chapter Meetings," I said, "instead of knocking? And then do something yourself." His attitude is the easy one we all like to follow. The omissions and crimes of the architectural profession as a whole are vested in each architect. Each one is responsible for the fact that improper methods obtain, because if each of us put his shoulder to the wheel, the wheel would turn and grind the villainous practise to powder. To go a step farther; if there is lack of publicity for architecture in the United States, it is because architects as a whole pay no attention, give no time to the presentation to the public of the interesting points of this vital art, an art which is an integral part of the life of the people.

By and large, the real estate man, as a by-product of lining his pockets, does one hundred times as much for architecture as does the architect who claims to have inherited the sacred fire.

The Committee on Public Information of the Institute proposes to take space in the *JOURNAL* discussing these matters with the members, and it wishes as a first step to ask each member to communicate with it and to send in suggestions to the Chairman concerning new ways in which it may operate.

It has considered whether it may be possible and advisable to institute a general news distribution service. Obviously the almost insurmountable difficulty is that of financing such a service, and it is a serious question whether this can be undertaken at the present time. Furthermore, while news and articles of a certain class are of countrywide interest, the great mass of architectural news is of a decidedly local cast. This is where the Committees on Public Information of the Chapters must shoulder the burden and at the present writing it would appear that some chapters have not even appointed a Committee on Public Information. If that is the case in any Chapter, each member of that Chapter is guilty, for all that he has to do is to attend its next meeting and make the proper motion.

It will be suggestive here to outline means adopted by some of the Chapters to obtain publicity for architectural subjects and to come in contact with the readers of the press. This committee has asked all of the Chapters to report to it, but has only received replies from a limited number. It may well be that activities of the greatest interest are being carried on in certain localities from which we have not heard. Such localities must not take it amiss that no mention is made of their work. Unquestionably reports of this kind will be valuable to the efforts of all the Chapters and your general committee here makes an urgent appeal to each Chapter to send a report to the Chairman in New York by the fifth of each month. We believe that if it accomplishes nothing other than to act as a clearing house for the Chapter Information Committees, the Institute Committee will have performed a real service.

THE BALTIMORE CHAPTER, through the instrumentality

of Mr. John H. Scarff, obtained the publication of some very valuable articles on Architecture in the *Morning and Evening Sun* of Baltimore. One of these was by the late Professor Howard Crosby Butler, another by Stephan Ivor Richebourg, partially reprinted from the *JOURNAL*, and four or five by Mr. Scarff himself.

THE CENTRAL ILLINOIS CHAPTER has taken up with the editor of the *National Geographic Magazine* some rather flagrant omissions of the Architects' names when it has shown illustrations of buildings.

THE CENTRAL NEW YORK CHAPTER issues a very interesting bulletin that gives news of Chapter matters and also attacks problems of architectural import.

THE CLEVELAND CHAPTER sponsored in the Sunday papers two series of sketches of twelve house designs each. The first conducted by Mr. Schneider consisted of houses costing from \$2,000 to \$2,500 with accompanying articles, and was eminently successful. The second for houses not to exceed 700 square feet was conducted by Mr. Sabin, secretary of the Chapter, whose modesty doubtless conceals a similar success. The newspapers published exactly what was supplied to them. Twenty to fifty inquiries from persons hoping to purchase stock plans followed the publication of each design. This does not in any way gauge the benefit to the profession and to the public derived from such an educational campaign. Mr. Sabin tried sending advance reports of the Chapter meetings to the Cleveland newspapers last year, but the resulting notices were not very full, and in many instances no notice appeared. Evidently the editors did not consider this news of general interest. The Cleveland Chapter has tried both speakers and stunts to give interest to the Chapter meetings and finds the latter more effective.

THE CHICAGO CHAPTER is working with the *Chicago Tribune* which it finds interested in the idea of developing the presentation of architectural news to the public. The Chicago Chapter has the practice of inviting able out-of-town architects to speak at its meetings, and finds this successful in arousing the interest of the members.

THE COLORADO CHAPTER has been devoted to the issuance of a very full and interesting monthly bulletin which is distributed to all the architects of Colorado and to the leading publications of the State. The mailing list comprises 110 names at the present time. The efforts of the Chapter, through the press, are being devoted toward the development of the Mountain Division of the Small House Service Bureau, and large page illustrations are being run by the press showing plans, elevations and site beautification, together with interesting articles on each design. The Chapter is represented on the Denver Municipal Planning Commission, the Colorado Engineering Council and like organizations.

THE KANSAS CHAPTER is taking up the publication of architectural news with two of the local papers, and is meeting with success. The Chapter is a new one and is showing some of the older Chapters the path they should tread. All the members of the Chapter are members of the Kansas Society of Architects, so the annual meetings are held in conjunction, to the profit of each.



# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

THE MICHIGAN CHAPTER is arranging with one of the Detroit papers to make a more interesting real estate and building page, and to train its members to furnish architectural matter that will appeal to the papers as news. They had talks at meetings last year from Harvey W. Corbett and Leon V. Solon, and are planning some special evenings with experts to perfect themselves so that they may cope with the problems offered by imminent revisions of the Building and State Housing Codes.

THE NEBRASKA CHAPTER is working to develop the architectural news output of the Omaha papers and has found the Lincoln papers very responsive.

THE NEW YORK CITY CHAPTER was approached when it began the year's work, by the Eastern Films Corporation, who desired to enlist its help in the production of architectural, educational films. After a thorough study of the matter, its Committee agreed to edit such films and the Eastern Films Corporation agreed to turn over the films to the Committee after the preliminary use had been made of them. This activity was subsequently vested in a corporation which further engaged in an activity in which the Committee is interested, namely the production of a series of moving pictures of different kinds of building construction to be used in the course of the Architectural schools of America. The Committee brought to the attention of the Chapter the difficulties that exist in the settlement of disputes and vexed questions between architects and members of the building trades. As a result the Building Trades Employers' Association was approached, and eventually a joint committee appointed, to which questions of policy affecting architects and builders or matters of dissension between an individual architect and a builder may be referred. The Committee formed two groups, or sub-committees, the first to study plans looking toward the betterment of certain squares and parks in New York and the creation of a series of fountains, and the second to make an effort to bring about greater recognition of the architectural profession by the periodicals and newspapers of the architectural profession and of the city. A number of meetings were held, at which well-known architects, city planners and landscape architects gave valuable criticism.

A perspective of City Hall Park has been begun, and although the work has not yet been completed, it is expected that it will be finished this fall, and that an exhibition will be held. Meanwhile a considerable amount of publicity has been given to the activity, and sketches of some of the fountains and parks have been featured in the Sunday papers, notably the *New York Times* and the *New York World*. The Committee has also brought different matters to the attention of the newspapers and has contributed in this way to the movement for the preservation of the William K. Vanderbilt house, of which Richard M. Hunt was the architect, and to the inauguration of the Atlantic Division of the Architects' Small House Bureau. The Committee has also been in touch with the movement with which the Russell Sage Foundation is associated for a plan for Greater New York and its environs. It has met with a special Committee appointed to consider the matter of City Hall Park and is proceeding with their approval

and in touch with Mr. Frederick P. Keppel, who is in charge of these activities for the Russell Sage Foundation. The Committee has interested itself in a number of matters of broad import to the architectural profession and to the City of New York, such as the proposed bridge connecting Manhattan Island with New Jersey as proposed by Gustav Lindenthal, the activities of the New York Building Trades' Congress on the education of apprentices and seasonal employment. It has distributed some of the circulars of the Committee on Education of Apprentices. The Committee has also interested itself in the proposal of the establishment of a City Architect, and, finally, has issued a bulletin to the Chapter members. Five of these were sent out during the year.

THE PHILADELPHIA CHAPTER has always been an efficient one. Mr. H. Bartol Register, Secretary of its Committee on Public Information writes as follows: "We have found through experience that we can gain more impression by selecting one or two important subjects and trying to push them through articles in the press and individual effort. Last year we were especially interested in zoning for Philadelphia and carried on a newspaper campaign. Personally, I do not feel that this type of propaganda touches the public very much \*\*\*. The whole problem of trying to communicate our ideas of broad import, must be done through personal contact. It is possible that a great deal can be accomplished through association with the many business and lunch clubs, Chambers of Commerce, etc., where the architect could make himself known and speak on matters where we feel we are the leaders. However, as you know, it is very difficult to get architects to do this sort of thing. We expect this winter's campaign to be conducted along these lines—through press publications and furthering more personal contact between Architect and public."

THE PITTSBURGH CHAPTER, through its President, Mr. Edward B. Lee, sends us the following: "The Pittsburgh Architectural Club publish a monthly small paper called 'The Charette.' This is circulated to all the architects and also to all recognized leaders and friends of architecture art and public betterment in Pittsburgh and the territory of the Pittsburgh Chapter. A great deal of our publicity effort is consumed in this sheet, all of whose staff are also Institute men. We are planning on taking up with the *Pittsburgh Gazette-Times*, beginning at first with the Sunday issue, a column on current architecture. We have approached the publishers and are awaiting advice. Our men were favorably received, but frankly the publishers are skeptical that we could produce the readable copy. The publishers are putting their finger on our weak spot. I can frankly and confidentially say I do not know for sure on whom I could depend to produce regularly the required copy, but I am endeavoring to get my plans perfected. We have organized a group of an architect (myself), a landscape architect, a sculptor, a builder and a painter, which, regularly during the winter season, will give short talks on the KDKA Westinghouse Radio. Each is preparing ten to fifteen minutes' talk of popular character on his profession. They will be grouped under the Chapter direction."

## THE SECRETARY'S PAGE

The Pittsburgh Chapter is also interesting itself in a local Zoning Law. In view of the shortage of draftsmen, it has written to the Editor of the *Journal of the R. I. B. A.*, stating that there is a shortage of well-trained architectural draftsmen, and it has received over 150 replies from England, Canada, India, Australia and France. Its own wants have been supplied and information in regard to these applications will be sent to anyone interested.

THE SAN FRANCISCO CHAPTER, through the Chairman of its Committee on Public Information, Mr. Harris C. Allen, has interested a representative of one of the large daily papers in the idea of publishing material furnished there from Washington and edited and illustrated locally with the addition of local articles written by local architects.

Mr. Allen adds: "The application of these articles for local benefit appealed to this paper. If this series is published and is successful, I think we might then be able to induce the paper to accept the series of architectural reviews printed by the *Christian Science Monitor*."

THE SCRANTON-WILKES-BARRE CHAPTER asks the Institute to furnish the reading matter and let the Chapter dole it out to the local papers. As we have already indicated, the Institute Committee is investigating the possibility of doing this for matters of nation-wide appeal. But such matters usually contain less news value than those which touch the immediate environment of the reader. The smaller the place the more circumscribed the circle of the reader's interest. And at that the newspapers of our largest cities are 90 per cent full of local doings. Furthermore, to secure articles written by men of sufficient ability to command general attention merely on account of the quality of the writing is practically an impossibility without a large fund with which to back the venture. This would be true even though the copy were eventually sufficiently saleable to recoup the original outlay.

THE TEXAS CHAPTER stands ready to take the initiative

itself. Following is a part of the letter of the Chairman of its Publicity Committee, Mr. Ralph Bryan: "We have been successful as a start in obtaining the co-operation of the *Dallas News*, which is the largest local paper and one of the largest in the entire southwest, for the publishing of articles of architectural interest. Our scheme is to carry on a campaign of publicity similar to that outlined in the pamphlet issued by your Committee dealing wherever possible with local subjects rather than with general ones. Our idea is, furthermore, to have each member of the Chapter in Dallas contribute one of these articles, illustrated with his own work and signed by himself. This plan has the endorsement of the *News*. Our trouble so far, however, has been more in getting the interest and co-operation of the architects themselves, rather than of the press, as practically every office in Dallas is very busy at present and the architects need a bit of following up to get them to furnish the articles necessary, although they seem to approve the general idea."

Evidently the individual is again at fault, and foolishly, for this attitude of indifference is the last one any experienced manufacturer or other shrewd business man would assume toward publicity.

THE WISCONSIN CHAPTER has initiated action with the local newspapers. We shall probably hear from it later.

THE ST. LOUIS ARCHITECTURAL CLUB has written to the Committee that it is ready to do its share in arousing public interest in architecture. Wherever these clubs of young architects exist, the local Chapters should communicate with them, interest the clubs in the subject of publicity work and give and seek from them co-operation.

A very important activity for the energies of each local publicity committee is the refutation of unfair attacks on the profession or any individual architect and systematic effort to the end that the architect's name be not ignored when mention is made of his buildings. A further statement on this subject will appear in the next issue.

## The Secretary's Page

**AWARDS TO OWNERS:** With regard to awards to owners for good buildings the attention of the Chapters is called to the following resolution adopted by the Fifty-fifth Convention:

"Whereas, the objects of the American Institute of Architects are to promote the æsthetic and practical efficiency of the profession, and

"Whereas, these objects are greatly furthered by arousing public interest in artistic design and economical planning, and

"Whereas, it has been found that by the award of recognitions or merit to owners and builders such an interest has been stimulated, therefore be it

"Resolved, that the American Institute of Architects in Fifty-fifth Convention assembled does approve of the

issuance of such awards by or under the direction of the various Chapters within their respective territories."

**NON-RESIDENT DUES:** At a recent meeting of the Executive Committee it was directed that the Institute dues of a member travelling abroad be remitted. In the discussion it developed that some of the Chapters have no provision in their By-laws for such a contingency; and that in other Chapters members in parts of the state distant from the city in which chapter meetings are customarily held are required to pay full dues.

The Executive Committee recommends to these Chapters that at the next favorable opportunity amendments be made to Chapter By-laws which will relieve the absent member, or the non-resident member, in whole or in part, of the payment of Chapter dues.

# THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

THE FOLLOWING cablegram has been sent to the International Engineering Congress now being held in Rio de Janeiro: AMERICAN INSTITUTE ARCHITECTS EXTENDS INTERNATIONAL CONGRESS ENGINEERS MOST CORDIAL GREETINGS, BEST WISHES SUCCESSFUL MEETING.

S. F. VOORHEES has accepted the Chairmanship of the Committee on Structural Service, vice Sullivan W. Jones who has now become Technical Director, with Mr. LeRoy E. Kern as assistant.

JURISDICTIONAL AWARDS: President Faville has addressed the following letter and questionnaire to the President of every Chapter:

DEAR SIR:

The Convention in June discussed the question of Jurisdictional disputes and the relation of the Institute to the National Board for Jurisdictional Awards. The Convention resolved that the question of the relationship of the Institute to the National Board be referred to the Board of Directors to restudy with a view to revising it in the light of the present labor conditions. The Board desires to give this matter fullest possible consideration at its meeting in December. In order to do so a fuller expression of Chapter sentiment in regard to the matter is desirable so that in the discussion, the opinions of all the Chapters will be known to the Board.

To this end, therefore, I request that the Executive Committee of your Chapter send to me at the Octagon at its early convenience, and in any event not later than November 1, answers to the specific questions attached hereto, and any other comments in regard to Chapter opinion that may be of value to the Board.

I will very much appreciate a prompt reply so that the data may be distributed to the members of the Board for consideration in advance of the meeting.

## Questionnaire

(1) To what extent did Jurisdictional strikes interfere with and increase the cost of construction work in your locality prior to the inauguration of the National Board, in 1919?

(2) Has there been any marked improvement in the situation regarding Jurisdictional strikes in your territory since the inauguration of the Board?

(3) Is work in your territory, generally speaking, done under an agreement with union labor, or is it done under

conditions of so-called open shop, American plan, or other similar conditions which do not officially recognize union labor as such?

(4) Is it clearly understood by the members of your Executive Committee that the rulings of the National Board apply only where building work is carried on under agreements with union labor as such, and that it does not apply in localities where work is done under the so-called open shop, American plan, or other method which does not officially recognize union labor as such, and that Institute members may properly disregard such rulings in these localities?

(5) Is it clearly understood that the organization and existence of the Board depend wholly upon the inclusion of a mandatory clause, as the labor representatives stated that unless the plan involved powers of discipline by all bodies connected with it, they would have no control whatever over their own membership, and the efforts would be a waste of time, and without any chance of accomplishing the desired results?

(6) Having in mind the fact that the forces of labor admit themselves, and have been proved to be incapable of eliminating Jurisdictional disputes by themselves, is it, in the opinion of the Executive Committee of your Chapter, desirable that other elements of the Industry should co-operate to remove the delays and expense to the industry caused by Jurisdictional disputes?

(7) If your answer to the previous question is in the affirmative, do you approve of the Institute co-operating as heretofore for this purpose in the work of the National Board for Jurisdictional Awards?

(8) If your answer to the previous question is in the negative, please append a full statement of such procedure as you believe the Institute should advocate.

(9) What is the sentiment in your Chapter regarding:

(a) The method created for that purpose in the shape of the Board of Awards?

(b) The efforts of the Board in attempting to solve the problem?

GOVERNMENTAL CONTRACT FORMS: The Budget Bureau of the Government has called upon the Institute for help in developing a satisfactory governmental contract procedure. The aim is to standardize and modernize the various forms of government contracts now in use and to eliminate therefrom all inequitable provisions. All Chapters have been asked to send the comments of their members direct to the Budget Bureau.

## Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

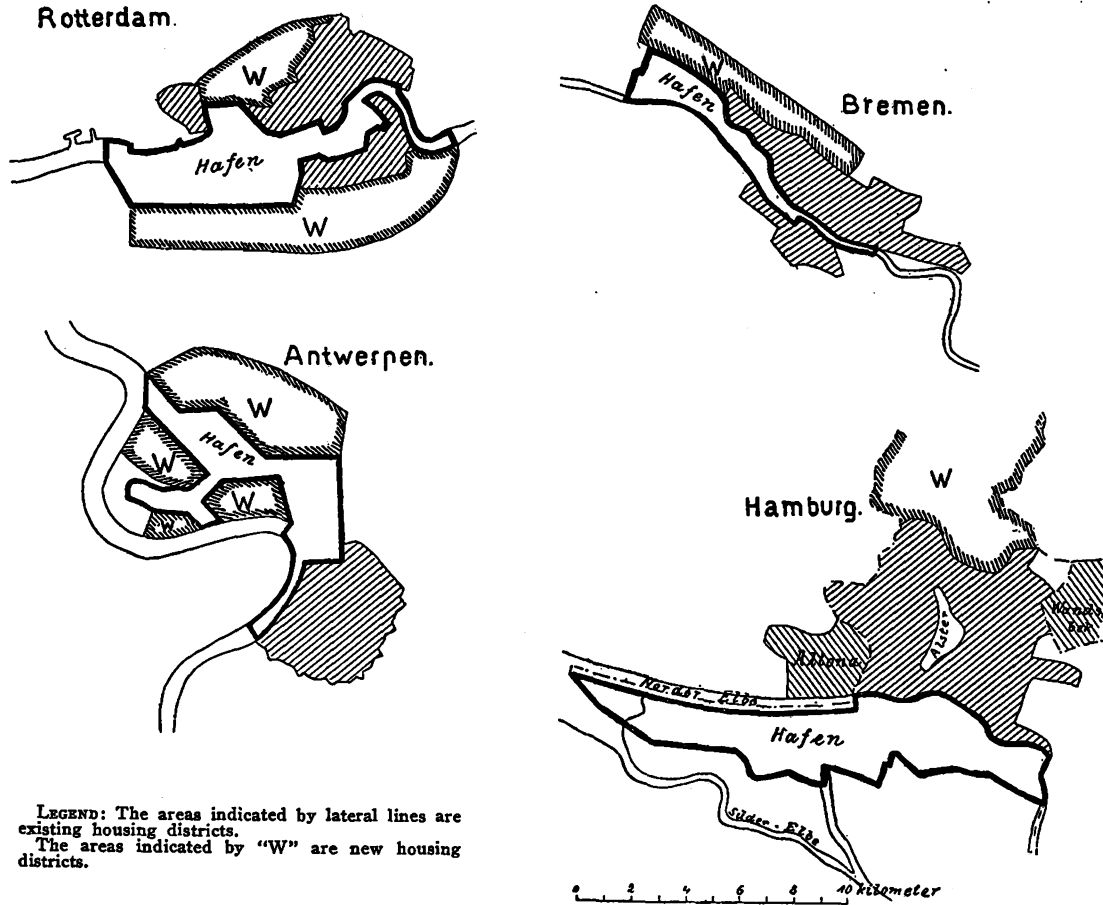
### A Plan for Greater Hamburg

That the future planning of the Greater New York district has a parallel in the planning problems of Greater Hamburg is indicated by a series of articles in a recent issue of *Die Volkswohnung*. The organized growth of Hamburg, a free state within the German Federation, is hampered by its political boundaries. Just as a logical and practical plan of New York will have to extend over territory of the States of New York and New Jersey, so the planning for Greater Hamburg must extend far beyond the present city limits into the Prussian provinces

of Hanover and of Holstein. Prussia seems, however, little inclined to meet Hamburg's claims for territorial extension, and Hamburg will probably be compelled to co-operate with Prussia in establishing and in carrying out its plans.

From still another viewpoint the problems of Hamburg and of New York may well be compared in spite of Hamburg's smaller population and size. In both instances great harbor extensions will be planned, probably assuming in Hamburg a magnitude comparable with that of the New York plan. Hamburg, before the war,

## FROM OUR BOOK SHELF



### Relation of New Housing to the Docks of Hamburg and Other Ports

This shows the tendency, apparent in most growing European cities, to give primary emphasis in planning to the location of homes. While in Rotterdam, Bremen and Antwerp the harbor workers live near the docks, in Hamburg they live as far away as an hour's travel.

had become one of the greatest harbors of the world in volume of tonnage.

Professor F. Schumacher, the well-known architect, has this special aspect of Hamburg's future in mind when he points out the fact that city planning of the past has failed largely because it has been more concerned with skillful handling of technical problems than with the solution of social ones, such as land and housing policies. He says, "It is incumbent upon the city planner to emphasize these connections, formerly either not noticed or ignored, because troublesome. The harbor problem cannot be separated from the housing problem."

Evidently Hamburg, like almost all great cities, needs decentralization, needs to pass from the state of compact agglomeration to that of the extensive "urban district," primarily so planned as to insure improved housing conditions to the great mass of the population. This idea underlies the reasoning of the contributors of *Die Volkswohnung*, who insist upon the paramount importance of providing better housing as the keystone of urban development.

NILS HAMMARSTRAND.

## From Our Book Shelf

### On the Visual Arts

Somewhere beyond the daily pathway of logic lie the pursuits of the imagination. Here is syllogism and consistency, and there, beyond the pattern, a world of living joys. And throughout the ages of art men have been seeking for intellectual rules of beauty.

We come to "The Things Which Are Seen,"<sup>1</sup> by A. Trystan Edwards, M.A., Oxford. Here is an abstract treatise conceived in propriety and reason and being; as the author puts it, "A Revaluation of the Visual Arts." He has adopted "a manner which is simple and grave," as when thinking outweighs graceful attempts at phrasing. He admits a dogmatic intention. He invokes morality. "Beauty is Nature's touchstone by which the attainment of virtue can be recognized." "Ugliness is always ignoble unless it walks in sackcloth and ashes."

<sup>1</sup> Philip Allan & Co., London, 1921.

We find man spoken of in terms of men; the salutation is not to the scholar but frankly to the "average man." With such preliminaries we come promptly to the theme. If the reviewer may assume here the rôle of tourist guide he will halt the æsthetic traveller and warn the weak-hearted, for the party is now to climb to great altitudes.

In a word, the mountain has been turned upside-down. If you found the discussion arresting when you read that it is the "purpose of art . . . to enable spirit to declare itself in terms of matter" and if you found yourself in sympathy with the author's broad idea of society, you shall now come to a hard climb of thought as the author, by intellectual means, arranges the arts into a "social hierarchy" in harmony with their human significance. The old school of æsthetics, he thinks, has come to its zero hour. Henceforth, the foremost of the arts shall be the cultivation of human beauty, and then in turn, manners, dress, architecture, and painting and sculpture. To these are sub-added literature and music considered for visual appeal. There it is, react as you will. You may be an architect who loves paintings or a painter who reveres music or a plain human being who prefers automobiles, but you may not escape the persistent vigor with which this is presented. Agree or not; remember that nothing less than a new era is recommended here, "a new tradition, a new attitude of mind, a new conscience."

Each point is driven home with logic and consistency and a decided combativeness, but he must needs be emphatic who would wage a cause like this. At first the theme resembles "*mens sana in corpore sano*" and perhaps in truth the concept goes no deeper than this. The argument is keenly alive to all human values with the social value of the arts established in accordance with the opinions of the average man. Consider this, for example, "an abhorrence of ugliness in men and women is a surer sign of an artistic nature than is the ability to criticise a picture or a building." Should we be annoyed by such an opinion, or inspired, or only amused? In such a world at least the strong back with the weak mind, once said to be necessary qualities in midshipmen, could not exist.

Consider the second of the new arts, that of manners. There are street manners and table manners; each is considered in its details. There is an excellent appeal for better conditions of employment for manual laborers, "good breeding . . . reduces every physical operation to its proper status." The argument concerning the Discobolus as an athlete of good-breeding would be spoiled by repetition and should be read. The discussion of man as a biped uses the terms intellectual and spiritual interchangeably. Statements are directed to visual appearances and folks and things are taken generally full-face or front elevation. "Some of the victims," we read, "of the industrial system, to those who have eyes to see, present a sorry spectacle." If Ruskin, the young critic of art, were superimposed upon the mature Ruskin sociologist, the resultant quality would resemble this.

Now comes the theory of dress as an accompaniment

of beautiful human form. We read of "propriety" where before we read of the "wrong" kind of visual appeal. Grecian draperies are discussed, and the "smart" shades of dresses, and skirts, trousers, ties and bright hat ribbons. From all this pedagogy of propriety this reader played hookey to where a window opened to the rising fields of Maryland with mountains afar, good corn waving in the breeze, with tree masses and late summer flowers, and a barn full of ripe wheat. But inevitably, for the good pages of our author lay open, the truant eye with sorry excuses found its way back to the next man's mediums of æsthetic expression, namely, architecture. Here "man's object . . . is to satisfy the elementary needs of men and women." It is not difficult to subscribe to this nor to most of the subsequent findings concerning the fine art of building. There comes a long outline of sightliness and then the good old principle of "truthfulness" is attacked, rather unwarrantably. If buildings shall not be explanatory of use we are at sea. If kitchens are to be veneered outside with classic pilasters it were better at once to dismiss this logic as fallacious and yet it is but a minor point. There is much of interest to the architect who reads here with humility. This sentence reveals the social faith, "A noble street that is created at the bidding of a democracy is of profounder significance than a whole city laid out by a tyrant, for the former indicates the attainment of a high level of general culture." We may approve and yet feel inclined to reject the use that is made of the words "good" and "bad" for "sightly" and "ugly."

At the beginning of a chapter devoted to painting and sculpture we shall find these two, as slaves to the foregoing arts, bound together like the Siamese twins and classed as "only" reflections of the reality that is expressed by the four major arts. This is annoying. Throwing, with an adverb, the challenge to Plato, the essayist now adopts an "obvious" course and, in a manner reminiscent of Godiva, rides boldly through the market-place of imitative art clad only in his intellect. He is to free his average man of the unjust toll of creative instinct. At this point a blindness falls upon the "peeping Tom" who was raised in the old school and he retires to obscurity to dream of an earlier world where painting could be glad or sorry, inspired or desperate, practical or perchance raised into the free world of imagination.

And again the argument grasps up literature and music and throws them with their fellows into this rose jar of logic whence we shall inhale the dry sweet scent of things that once were alive but now, under the press of intellect, are saved only for their perfume.

The mountain climbed, the theme developed, the second and third sections of the book are devoted to application. The Canon of Form includes a Grammar of Design similar to other formalisms but true to its own theory. The Canon of Subject resumes the argument and is reasonably brief; if the reader will pause and read carefully the argument about the bread-knife he will find in epitome the rational method of the entire work. The conclusion in Part Three points the way to

## LETTERS TO THE EDITOR

final social unity of average man and artist. The precepts stated are applied to the relations between the artist and the statesman, engineer, mathematician, psychologist, biologist, historian, moralist, and metaphysician. It is vastly interesting to see the abstract and scholarly presentation and the consistent application of logical thinking to actual problems. Read, for instance, of the relations of architect and engineer and you will admire although you may differ to the death in the matter of Gothic arches.

And finally, with the journey done, the worthy traveler may take his rest. Go over it again tomorrow if you like in detail by yourself. You know the way and may pursue it in any direction; at one end lies the country of the Anglo-Saxon reformers, at the other the Socratic "Know Thyself."

DELOS H. SMITH.

### Letters to the Editor Fugitive Advertising Again

TO THE EDITOR OF THE JOURNAL:

Sir: Mr. J. Monroe Hewlett's letter in your issue of September, in reply to my letter in your August issue, after the elimination of the personal abuse in which he indulges, can be described as evidencing a misunderstanding, a lack of sense of humor, and a failure to read my letter calmly.

I say that Mr. Hewlett's letter shows a misunderstanding on his part. He writes: "Stripped of innuendo, his grievance against the organizations named by him is that the prestige and influence of the architectural profession is employed to divert a certain amount of advertising from professional advertising channels into publications directly supervised and controlled by the artistic professions themselves."

Let me inform Mr. Hewlett that the Association of National Advertisers, Inc., is an organization of manufacturers—of firms that *spend* the money for the advertising space from the sale of which the existence of publications, including those of the architectural societies, is to a large degree made possible.

Neither the member companies nor the officers of the Association operate in what Mr. Hewlett calls "professional advertising channels." They are the *buyers*, not the sellers of advertising space, material and service. Mr. Hewlett should have made some inquiries before he confused members of the A. N. A. with advertising agents and other professional or semi-professional men.

It is a pleasure to find myself in a position heartily to agree with Mr. Hewlett that "two curses of architectural practice today are the uninformed salesman and the deluge of unreliable reading matter issued under the auspices of commercial agencies." Mr. Hewlett will readily appreciate that I would be reticent as to such agreement with him were I on the side of the fence he wrongly supposes me to be.

Mr. Hewlett—also Mr. Greenley—shows a lack of a sense of humor in supposing that I confused the Architectural League with such bodies as the Plumbers' Social Club of New York, the Indiana Ice Dealers' Association, etc., etc. Both gentlemen were probably led into this error by their own anxiety to defend the good name of the Architectural League, which was not attacked, and which will certainly

never be attacked by myself. The League is all that Messrs. Hewlett and Greenley say it is, and its educational work is admirable.

Let me try to re-state the point that I evidently failed to get across to both these gentlemen: There come into the general offices of our manufacturer-members letters soliciting advertising orders for, say, the Plumbers' Social Club of New York Circular, the Indiana Ice Dealers' Association Annual Picnic Program, or the publications of the Architectural League. Our manufacturers know from experience that the value of all these publications as mediums for advertising is either nil or extremely dubious.

One of these manufacturers may, however, consent to spending money in the Indiana Ice Dealers' Association Annual Picnic Program. Why? Simply because the distributor who has urged the manufacturer to spend his money in this way may, if rebuffed, use his influence against sales of the manufacturer's product.

Now consider the architectural societies' catalogues, yearbooks, bulletins, etc. As advertising media, their value is either nil or exceedingly dubious. Why, then, does the manufacturer spend his money in them at all? (Mr. Greenley, in effect, asks that very question.) Because a refusal may disgruntle the architect who has urged the use of these catalogues, yearbooks, bulletins, etc., upon the manufacturer.

Perhaps, now, Messrs. Hewlett and Greenley will appreciate why the manufacturer puts architectural catalogues, yearbooks, and bulletins, etc., and the circulars and programs of plumbers' social clubs and ice dealers' associations into the same category, and why the manufacturer so frequently exclaims, at the same time that he authorizes the advertising order, "This is just a damned hold-up! But what can we do about it?"

To all intents and purposes, President Greenley supports my contention that the architectural publications under discussion have little or no advertising value for the manufacturer? He says that "We should be delighted to eliminate advertising and make our contribution toward the general artistic education of the country by means of our exhibitions, lectures and other propaganda," and "if it were possible, to translate the attitude of a very large group of architects, painters, sculptors, and craftsmen into practical actuality, . . . all at our own expense."

Mr. Greenley goes on to say that until there is government interest and subsidy in promotion of the arts, getting the manufacturer to pay this expense must go on, in the assumption that "one sacrifice is offset by the other," the other "sacrifice" being that of the art enthusiast who has to touch the dirty money at all, and pay his way arm in arm with business. Yet again, Mr. Greenley says that, unless the manufacturer, in advertising in publications he would prefer to stay out of, defrays the costs, the various architectural exhibitions would have to be discontinued. Is the architectural profession, then, so reluctant to contribute its own money? And are manufacturers so uninformed of the important work of these architectural societies that money to pay for the exhibitions, etc., has to be obtained on a basis of fictitious or doubtful value rather than as a straight contribution?

The carrying of advertising matter by architectural yearbooks, catalogues, bulletins, etc., goes on, not on a basis of value to the manufacturer, but "because we need the money." I refer you to President Howard Greenley's letter for confirmation.

Yours very truly,

JOHN SULLIVAN,  
Secretary-Treasurer.

News Notes

WILLIAM D. FOSTER and Harold W. Vassar have opened an office at 132 Madison Avenue, New York City.

CHARLES A. DIEMAN is now associated with the new firm of Gardner-Parry-Dieman, 313 Engineers Bldg., Denver, Colo.

PROF. A. F. D. HAMLIN, F.A.I.A., School of Architecture, Columbia University, will deliver next year in Paris a course of sixteen lectures on American Art in the Ecole du Louvre, and a shorter but similar course in the School of Higher Social Studies. These lectures are a gift from Prof. Hamlin, and Columbia is granting him six months' leave for the purpose of delivering them.

THE PHILADELPHIA CHAPTER is figuring very prominently in the construction program for the proposed Sesqui-Centennial Exposition. Through the influence of the Chapter, Mr. Paul Cret has been named architect-in-chief, with the assistance of Mr. M. B. Medary, Jr., and Mr. George Howe; a separate committee, composed of Messrs. Klauder, Lovatt, Sinkler and Rankin, was also named by the Exposition Directors as the Advisory Committee on architecture.

RESTORATION of the Fine Arts Building in Jackson Park, Chicago, where was held the memorable dinner of the last convention, has proceeded to a point where some \$7,000 is now available for undertaking such work on the east wing as will serve to show the feasibility of the whole project and convince the public of the wisdom of carrying through the whole restoration. Some accounts of the proposal have appeared in various issues of the JOURNAL. It is interesting to know that the initial sum has been made available by the activity of the Illinois Federation of Women's Clubs, which has placed the money at the disposal of the Municipal Art Committee of the Illinois Chapter.

THE MONEY required for the memorial to Joan of Arc, to be erected at Winchester Cathedral, has now been subscribed, and the work has accordingly been put in hand. The memorial is to take the form of a canopied statue, clad in armor, and the total cost will not exceed £500.

Many of the contributions have come from well-wishers in New York, where, it may be recalled, an equestrian statue of the "Maid of France" has already been erected. One of the side chapels in Westminster Cathedral has been consecrated to her memory. It is hoped that the unveiling ceremony may take place in the early weeks of next year.

TO OBTAIN for the small community a hospital building both "efficient in arrangement and creditable in architecture," *The Modern Hospital* has announced a prize competition, open to all architects. The Illinois Chapter of the Institute, to which the program of the competition was submitted, has approved it. Richard E. Schmidt of the firm of Richard E. Schmidt, Garden & Martin of Chi-

cago, is the architectural adviser. Prizes amounting to \$1,000 are to be given to successful contestants. Registration for the contest must be made by November 15, 1922. The program may be had from the Chicago office of *The Modern Hospital*.

WRITING from France, Mr. W. Marbury Somervell, a member of the Institute who has long been associated with post-war work in France, has the following to say, in the Monthly Bulletin of the Washington State Society:

"No matter how good the French School may be, it is certain that the architecture of France has reached the lowest stage in its history. I never in my life imagined anything so atrocious as the work now being done, both in public and in private. The useless ornament, the meaningless mouldings accomplished at great cost, the texture of walls, the brickwork and all the rest of the bag of tricks are disheartening. Why, Seattle has in the last ten years produced more good design than all of France in a like period. They do excel in workmanship, and when you have said that, you have said all that there is to be said of modern French architecture. The devastated district is the most disheartening of all the areas of France, in the design of new work, and if Rheims is a fright, Verdun is no better."

"PLENTY of liberty, but bad architecture," seems to sum up the impressions of London's latest critic from the United States, says the *Westminster Gazette*. "Mr. Mencken, the critic in question, hates Prohibition, and that is no doubt the reason why he praises our freedom. He doubtless despises our many chimneys and 'Gothic garages,' as he calls them, because he has been accustomed to skyscrapers with more stories than chimneys in New York. He would hang all London architects as an artistic international amenity—and the architects have now to retort what they would do with all the hit-and-miss critics who come from America. Whatever may be the fault of London's buildings, past or present, they make an architectural assemblage more romantic than is to be found even in Paris—where Richard Jefferies objected to the straight lines on the boulevards—and more varied than is to be found in big-block New York. Mr. Mencken may not know that the new London is being built upon the solid front principle of New York, especially in the region of the Kingsway. This may be the very reason why he finds fault with our architects. He thinks the new L. C. C. H. all 'big and American,' and does not like the color of the roof. It will be soon enough to get a settled view of the new County Hall when it is seen in its finished aspect, and when the weather has mellowed its rawness. Rawness is just as exasperating in a building as in a critic."

Obituary

Dudley McGrath

Elected to the Institute in 1908

Died at New York City, 1 October, 1922

(Further notice later.)

Structural Service Department appears on the second right-hand page following



# Rushing Waters!

HERE the rushing waters of the Genesee River have worn a gorge 20 miles long through the solid rock, with walls in places 520 feet high.

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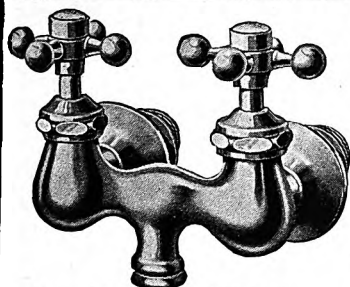
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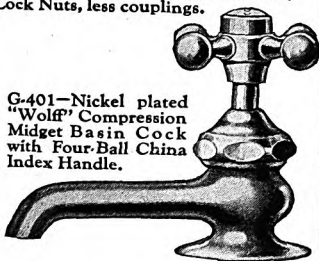
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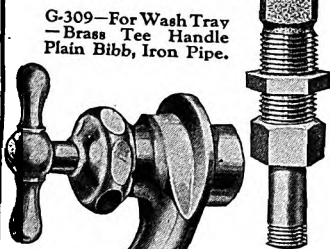
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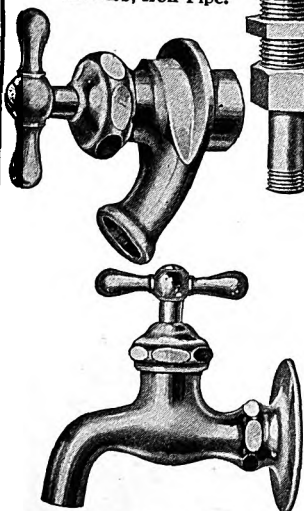
G-415—Nickel plated “Wolff” Compression Double Bath Cock with Four-Ball China Index Handles, Lock Nuts, less couplings.



G-401—Nickel plated “Wolff” Compression Midget Basin Cock with Four-Ball China Index Handle.



G-309—For Wash Tray—Brass Tee Handle Plain Bibb, Iron Pipe.



G-305—Female Flange. Brass Tee Handle Plain Bibb, Iron Pipe.





# Structural Service Department

SULLIVAN W. JONES, *Associate Editor*  
 LEROY E. KERN, *Assistant*

*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.*

## Abstracts

*It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give, in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

**Shingle Stain. (25b12)—(Technical Paper 268. Bureau of Mines.)** A stain suitable for use on new structures where it is desirable to retain the new look of the shingles is commonly composed of either "straight" creosote oil or mixtures of creosote oil and varying amounts of linseed oil. Occasionally resins also are added. On account of the difference in price, the tendency is to use considerably more creosote than linseed oil. A large percentage of light volatile oil, or an oil containing appreciable amounts of naphthalene, should not be used. Stains are often ruined by the painter's desire to make them flow more easily from the brush, for which purpose he adds kerosene. The writer has tested a number of stains now on the market that are composed chiefly of light mineral oil and creosote with drier and linseed oil. While the mineral oil may help to prevent solidifying of the pigment at the bottom of the container, it has not the germicidal or wood-preserving properties of creosote. One large oil company interested in selling petroleum products suggests the following formula for a shingle stain.

	Gallons
Light neutral oil, sp. gr. O. 857.....	2
Turpentine substitute, mineral naphtha.....	2
Boiled linseed oil .....	1
Coal-tar creosote, extra heavy.....	4
Good liquid drier .....	½
Total .....	9½

Color pigment, ground in oil, 1 to 2 pounds per gallon of stain.

In the writer's opinion this stain would be improved by substituting for the mineral naphtha, crude coal-tar naphtha or some of the first portion of the light oil distilling from tar. The preserving effect on the shingles is usually not given as much consideration as permanency of color; hence the selection of the best stain for a particular purpose will depend on the preference of the user.

**Tarred Felt. (12a2)—(Technical Paper 268. Bureau of Mines.)** In the manufacture of tarred felt special felt paper is treated with hot tar, and the excess of tar removed by passing the felt between heated steel rollers. From the rollers the felt is run on a spindle and made up into rolls containing 250 or 500 square feet. The rolls are then wrapped in paper and are ready for the market. It is often necessary to "age" and "turn" the finished product before marketing; that is, the paper rolls are stood on end and are turned, end for end, every few days for two or three weeks, in order to

keep the paper at one end of a roll from becoming "soggy." Aging and turning are necessary because the paper sometimes has more tar on it than it can absorb at once. The use of heavy, cold tar also aggravates the tendency of the paper to become soggy. Tar paper should always be stood on end when stored.

The temperature, water content, and consistency of the tar used are of considerable importance in the manufacture of a good roofing felt. While the paper is being treated with tar it is under considerable tension, because the force required to unroll it, draw it through the tar, and roll it, is exerted at one end. If the tar contains water this is absorbed by the paper, which can not now withstand the stress and breaks or tears at the surface of the tar; consequently the tar must be free from water. Even if the paper did not break under these conditions, it is desirable that the tar should be freed of water before the felt is saturated, as the presence of water causes uneven saturation and impairs the waterproofness of the product. In order to insure a high saturation, the tar should be hot enough to reduce its viscosity and give it the consistence of a thin sirup. The limiting temperatures for the best results are 200 degrees and 260 degrees F.

The tar used for this purpose is sometimes prepared by distillation to a pitch and "cutting back" the pitch so obtained with creosote, or with creosote and light oil, and is called "prepared tar." It is preferable, as a rule, to use "straight" dehydrated tar, thinned, when necessary, with light oil or creosote that has been cooled and freed from naphthalene. When the natural tar is so high in naphthalene that the desired saturation cannot be obtained without the naphthalene causing the layers of tarred felt in a roll to stick together, the "prepared tar" is preferable. Usually naphthalene is not present in such proportions, particularly not in "straight" coal tar.

Felt absorbs from 100 to 200 per cent of its weight of tar. When it is over-saturated, or when the excess of tar has not been removed by the rollers, the sticking of the convolutions of the tarred felt in a roll may make unrolling difficult or even impossible. If the felt is undersaturated, the finished product will be porous, capable of absorbing moisture, and therefore less waterproof. The degree of saturation is controlled by the time the felt is allowed to remain in contact with the tar, which may be governed by the depth of immersion, and the speed of travel through the tar.

The steam-heated rolls between which the felt passes prevent the paper from cooling too quickly, aid the absorption of the surface tar, and remove the excess tar. Saturated felt so prepared is employed chiefly for pitch and gravel roofs or as a basis for slate and tile roofs. It is sometimes used as building paper and as deadening felt and for waterproofing walls, tanks and tunnels, where it is applied as on a roof.

A number of kinds of tarred roofing papers, differing mainly in degree of saturation and weight per square foot, are on the market. Soft thick felts absorb more tar per square foot than thin hard felts, and a roll of tarred soft felt is therefore heavier than a similar sized roll of tarred hard felt. Some of the more common saturated felts in general



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use are slaters' felt, made in two grades, weighing 30 and 40 pounds, respectively, per 500 square feet; and tarred felt, made in three grades, weighing, respectively, 60, 70 and 75 pounds per 500 square feet.

Heavier felts than these are made but are not in as wide demand.

**Bituminous Paint.** (25b27)—(*Technical Paper 268. Bureau of Mines.*) *Stonework, Brickwork, Iron.* As an inexpensive coating for brick or stonework exposed to the action of acid vapors, alkalis, or the atmosphere, tar is a ready and satisfactory material. Although tar dries more slowly than some specially prepared pitch paints, it is used extensively as a paint. It should be dehydrated, and is usually applied hot.

Hot, water-free tar is also used for painting underground iron pipes and for coating castings, pipe fittings, and metal roofs that are exposed to the atmosphere. It is not so resistive to the weather as specially prepared pitch paints but it is a good preservative and answers the purpose well where an inexpensive coating must be used.

**Metal.** A highly satisfactory metal paint can be prepared by dissolving pitch in the light oils obtained in the distillation of tar. Many specifications require that such a paint should dry quickly; then the lightest oil, crude naphtha, is employed as a solvent. A very hard pitch will not dissolve readily in that oil. For this and other reasons it is more satisfactory to use a medium grade of pitch. The consistency must be such that the paint will flow well under the conditions prevailing at the time it is used. However, as the light oils evaporate readily and mostly do not remain in the paint film, the more oil used per unit of pitch the thinner will be the coat or film of paint. A formula for a metal paint that will flow well and can be applied with a brush at ordinary temperature is: Medium soft pitch, 40 gallons; crude naphtha (from tar), 60 gallons.

Paint prepared according to the formula above given is very elastic, but this elasticity is not permanent. On surfaces exposed to atmospheric conditions and to the sun, the paint film gradually becomes brittle. The time required for brittleness to develop depends, in part, on the free-carbon content of the paint. A paint having a moderately low free-carbon content is superior to one of a high content. Finely ground opaque pigments are sometimes used in bituminous coatings with the intention of excluding the actinic rays of light which play an important part in the decomposition of such coatings. The paint withstands high temperatures fairly well and is accordingly well adapted for use on stacks and boiler fronts; it is also particularly adapted to use underground, in tunnels and on pipe.

When the paint can be conveniently applied warm or to a warm surface, light oil may be substituted for crude naphtha to good advantage. Similarly, when castings and fittings are "dipped," it is desirable to use light oil as a solvent and to employ a warm bath. Closed steam is preferable to a direct fire for heating the paint bath.

By the addition of certain resins and linseed oil, the latter in proportion varying from 15 to 25 per cent, a paint may be prepared with somewhat better weathering properties, but its cost is higher.

**Preservation of Timbers.** (19a31)—(*Technical Paper 268. Bureau of Mines.*) Tar prevents decay of timber not only by its antiseptic properties but also by its waterproofing qualities, whereby the pores of the wood are filled. It is used to preserve fence posts, telephone poles, and heavy building timbers, and for such purposes is applied with a brush or the timbers are dipped in hot, waterfree tar. By far the largest proportion of the tar used for preserving timber, however, is mixed with creosote oil. Large quanti-

ties of mixtures of this nature are used annually to treat paving blocks, railroad ties, cross arms, and telephone poles. The brush method is not as common for this purpose as the closed-tank pressure method, wherein the actual absorption of the preservative is many times greater. Although it is generally understood that some of the tar distillates are superior to tar for preserving timber (especially when the proportion of free carbon in the tar is high), the difference in first cost favors tar.

When used for treating timber the tar should be hot and free from water, and to obtain the best results the timber treated should be as dry as possible, as the absorption and penetration is considerably greater under these conditions than when the wood is wet or moist. The penetration into the wood is not so great with tars with a high content of free carbon as with those of a low free-carbon content.

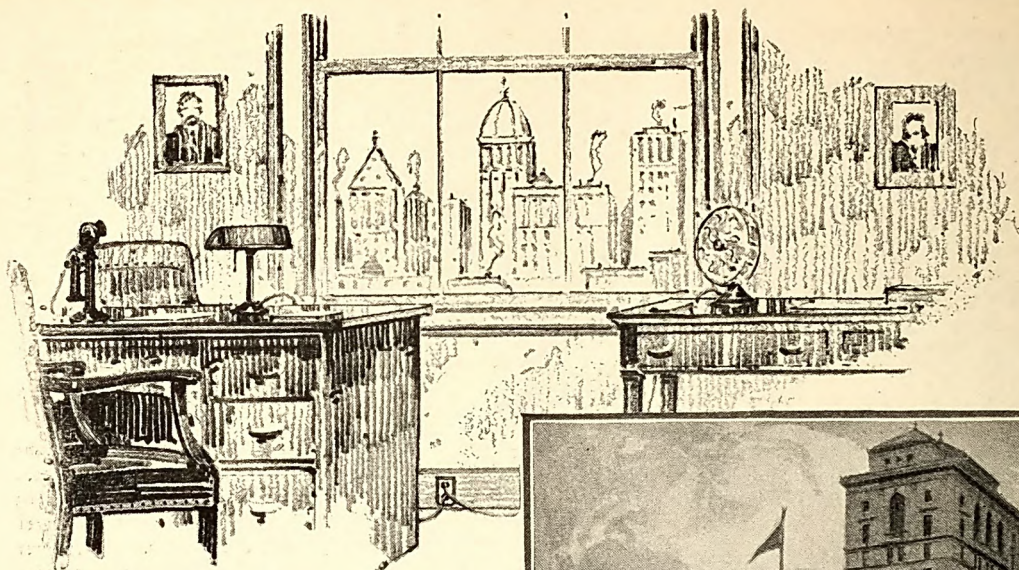
The amount of preservative required per unit of area with the brush method is greater for tar than for tar distillates. The exact amount can not be stated by a figure universally applicable, because the condition and kind of wood, as well as the quality and kind of tar, affect the results. However, it can be said that a gallon of hot tar will cover approximately 200 square feet of the surface of smooth, dry poles. More tar is absorbed by dry, rough-sawn timber, and a gallon of hot tar will cover 150 to 200 square feet of such surface.

**Carbon Black.** (25a27)—(*U. S. Dept. of the Interior, Bureau of Mines. Bulletin 192. "Carbon Black—Its Manufacture, Properties, and Uses." By R. O. Neal and G. St. J. Perrott. Pages 95. Size 6" x 9". Illustrated.*) Part I covers the engineering and economic side of the carbon black industry. Part II deals with the chemistry of the present methods of making carbon black, considers the possibility of producing it by other methods, and describes in some detail the properties and uses of the products.

Carbon black is coming into extensive use in paints. It has a higher tinting strength than any other black; a given weight will obscure a greater area of surface. It is acknowledged to be superior for making varnishes and enamels and is much used in making black and gray paints for general purposes. The U. S. War Department requires the use of carbon black in black enamels and in various black and gray paints. Some authorities consider lamp-black superior to carbon black and it is probably true that in certain gray tints lamp-black is superior on account of its bluish-gray tones.

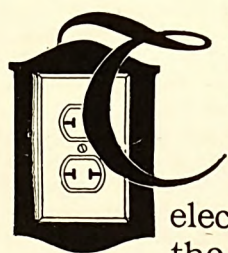
Carbon black, as known to the American trade, is a fluffy, velvety-black pigment produced by burning natural gas with a smoky flame against a metal surface. In its physical characteristics it is entirely different from lamp-black, which is made by burning oil or other carbonaceous material with insufficient air and collecting the smoke in settling chambers. Lamp-black is gray in contrast to the deep black of carbon black.

**Sampling and Testing Highway Materials.** (11)—(*U. S. Department of Agriculture. Bureau of Public Roads. Bulletin No. 949. "Standard and Tentative Methods of Sampling and Testing Highway Materials." Pages 98. Size 6" x 9". Illustrated.*) This bulletin embodies the recommendation of the Second Conference of State Highway Testing Engineers and Chemists. It includes abrasion tests for broken stone and gravel, tests for hardness and toughness of stone, for apparent specific gravity of stone and other coarse materials, of sand, slag screenings and other fine non-bituminous highway materials, tests of weight and voids of coarse and fine aggregates, sieve analysis of broken stone, gravel, pebbles, broken slag, sand, fine aggregate and mixtures of fine and coarse aggregates, tests for determining the



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amount of clay and silt in sand or fine aggregate, in gravel and in sand-clay, top soil, or semi-gravel; tests for quality of water to be used in concrete, for organic impurities in concrete aggregates and for mortar making quality of fine aggregates; tests for portland cement, for paving brick, for bituminous road materials, a number of tentative tests and recommended methods of sampling.

**Rugs and Carpets.** (281)—(*U. S. Department of Agriculture. Farmers' Bulletin 1219. "Floors and Floor Coverings." Pages 36. Size 6" x 9."*) The majority of modern textile rugs and carpets are woven on power looms perfected by American manufacturers. Ingrain, Brussels, Wilton, Velvet, and Axminster are the most common kinds. In addition to these, there are oriental rugs and various adaptations of the old-fashioned rag rug now manufactured on a large scale in factories, as well as fiber and grass rugs and mattings.

All carpets and rugs, whether they have a pile, as in Brussels, Wilton, or Axminster, or a plain weave like ingrain, are made up of warp and weft threads. The warp threads, or chains, as they are often called, are those that run lengthwise and are set in the loom; the woof, weft, or filling threads run crosswise through the warp.

Worsted, woolen, cotton, linen, hemp, and jute are all used for carpet yarns. In general, the best pile carpets have a worsted surface and a clean, smooth linen or hemp backing. When woven the difference between worsted and woolen for carpets is hard to detect, but worsted wears better and is made of coarse, hairlike wools doubled and twisted after spinning, while woolen is softer and less lustrous and durable.

**Ingrain.**—Ingrain carpet is woven like plain cloth from 2-ply or 3-ply yarn dyed before weaving. The warp, often made up of threads of various colors, forms the design and is so handled that the ground color of the design on the face becomes the color of the figure on the reverse, and an ingrain carpet can therefore be used on either side. The mixing and weaving of these threads of different colors is called ingrain, and the more closely it is done, or, in other words, the greater the number of warp and filling threads to the inch, the more durable is the carpet, provided good materials are used.

Many grades of ingrain are on the market, and material, weave and weight should all be carefully considered before a choice is made, because they affect the wearing quality. The all-wool kinds with worsted warp and woolen or worsted filling are best and at the same time most expensive, while those with cotton warp, or chain, and woolen filling are cheaper but less desirable, because they will not hold their color so well and are likely to shrink. A light-colored wool or wool-filled carpet is likely to contain more pure wool than a dark one, for the dark colored wools can be more easily adulterated with animal hair.

There are also modifications of the ingrain carpet sold under a variety of names. The Kidderminster is woven on an ingrain loom and gets its name from the city in which it was originally manufactured. Venetian is also an ingrain with a colored worsted or cotton warp, which forms the figure, and with a jute filling. Pro-Brussels is still another grade with a jute warp and a wool weft.

Art squares are seamless ingrain rugs, often oblong in shape and with fringe on the ends and are sometimes called druggets, referring probably to their use as a protective covering for more expensive carpets. Scotch wool rugs are also ingrain, but the wool yarn used is very heavy and the finished rug is more firmly bound than an art square.

**Brussels.**—Brussels carpet, so called because it was first extensively manufactured on Flemish looms in and around

the city of Brussels, is a loop-pile carpet with two or more warps and one or two fillings. One warp is always colored worsted yarn raised in rows of loops to form the surface pile by being thrown over wire inserted with each filling thread. These loops are held in place by the other warp and the filling, which form the back and may be of linen, hemp, cotton, or jute. The wires are set from 7 to 10 to the inch, and are drawn from the fabric after several inches have been woven. The closer these wires are, the heavier and more durable the carpet woven.

In genuine Brussels each color of the worsted warp is dyed separately in the yarn, and in weaving is carried on a separate frame. As many as six frames may be used in the best grades. The number of colors is limited therefore to six in any straight line running lengthwise of the carpet, and whenever one of them is not needed in the design on the surface, it is buried in the body of the carpet and may be seen on the wrong side among the backing threads. From this has come the name body Brussels. In judging the quality of a Brussels carpet, one should note how close together the rows of loops are on the surface, whether the colored warp shows on the wrong side, and whether the thread used for the backing is clean and smooth. Dirty, lumpy backing thread generally indicates poor quality.

Tapstry Brussels is an imitation of body Brussels and is inferior to it in both appearance and durability. The design is not woven in with several warps each of a different color as in body Brussels, but is either printed on one warp before it is woven or is printed on a plain-colored carpet after weaving. Less worsted yarn is therefore used, the design is not so distinct, more colors are used, and no color appears on the back unless stamped there after weaving. The worsted yarn is generally of poor grade, and jute or some inexpensive fiber is used for the backing. Also, the rows of loops are farther apart than in real Brussels, and often only one thread is used in a loop. Tapstry Brussels generally, however, costs only about half as much as body Brussels.

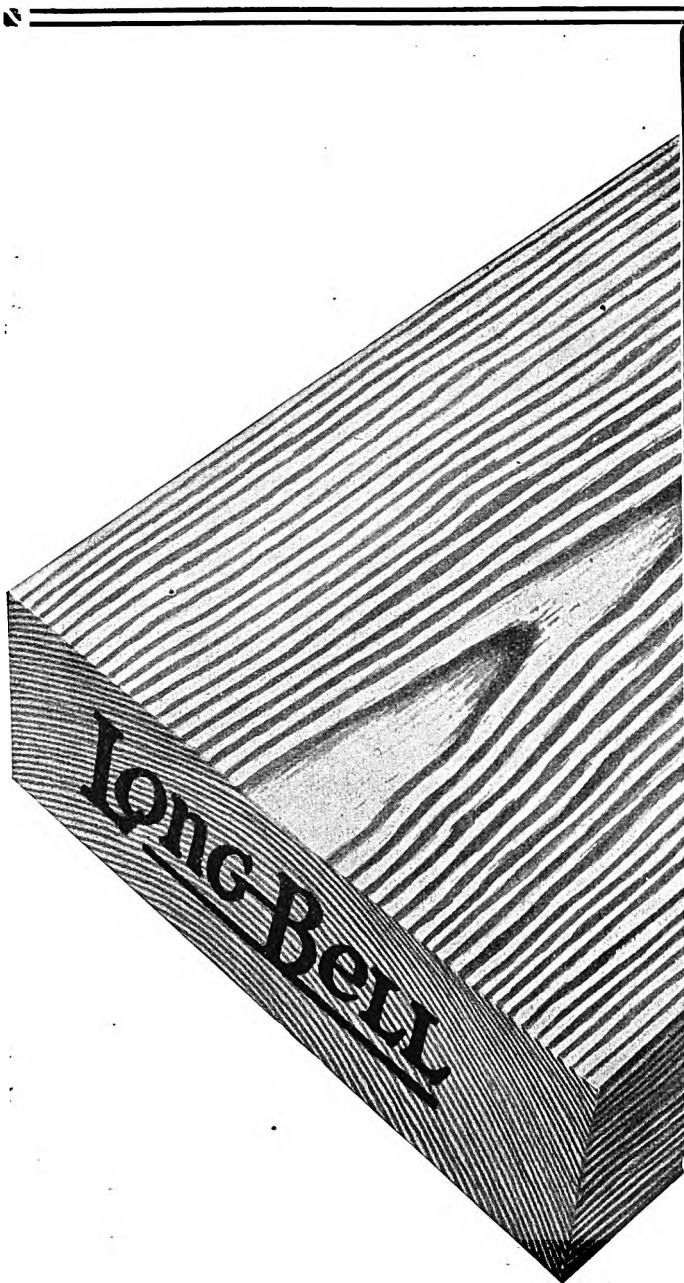
Brussels carpet is about 27 inches wide as sold to the general trade, but is often sewed into rugs with borders to correspond. The surface is free from lint and rather easy to clean. Just at present, (1921), comparatively little Brussels carpet is on the market, for the cut-pile types can be more easily and cheaply manufactured, but there is every indication that its popularity will return.

**Wilton.**—Wilton carpet is woven in the same way as Brussels, except that the loops are cut by a knife attachment on the wires that raise the pile in weaving, thus giving a plushlike surface. The pile is higher than the loops of a Brussels, the yarn for both surface and back is generally of better grade, and the Wilton is more firmly woven and contains about 50 per cent more yarn than a Brussels. The more wires there are to the inch in weaving Wilton carpet, the better the quality. Wilton carpet is woven in several widths, varying from  $\frac{3}{4}$  to 1 yard. The large Wilton rugs are woven in strips, which are accurately matched in design and so firmly sewed together that unless closely examined the rug looks as though it were woven in one piece. The designs are in many cases skillfully worked out in soft harmonious colors from oriental rugs and carpets as patterns.

There are two general types of Wilton, worsted and woolen, so called because of the kind of material used in the warp that forms the pile. The worsted Wiltons are more expensive than the woolen, but will withstand harder wear and are generally made in more attractive colorings and designs

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*You should know the lumber you buy — and the Long-Bell trade-mark provides the way.*

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R.A. LONG BUILDING Lumbermen since 1873 KANSAS CITY, MO.

Southern Pine Lumber and Timbers; Creosoted Lumber, Timbers, Posts, Poles, Ties, Piling and Wood Blocks; California White Pine Lumber, Sash and Doors, Standardized Woodwork; Southern Hardwoods, Oak Flooring.

## STRUCTURAL SERVICE DEPARTMENT

**Velvets.**—Many persons in this country call all machine-made cut-pile carpets and rugs velvets, but this encroaches on a commercial name given to an imitation Wilton, and in buying a so-called velvet rug this distinction should be remembered. Velvet carpet and rugs are made in the same way as tapestry Brussels, except that the loops are cut, but on account of the longer pile they contain more wool. Velvets should be cheaper than Wiltons for the same reasons that tapestry Brussels should be cheaper than body Brussels; that is, they contain less worsted yarn. The heaviest qualities of velvets are said to wear almost as well as good-quality Wiltons.

**Axminster.**—Axminster carpets and rugs have a thick, cut pile and somewhat resemble Wiltons, though the method of weaving is quite different and a greater range of colors is possible. They have two warps and two fillings and hence are not so heavy and are less closely woven than Brussels and Wilton. For these reasons, they require less material and less time to manufacture. The pile is made by fastening tufts of woolen yarn into the warp, and in this respect an Axminster is woven like a handmade oriental rug, except that on the power loom ingenious nippers take the place of the deft fingers of the oriental weaver. This woolen tufting is sometimes adulterated with jute and coarse animal hair, and before buying an Axminster it should be carefully examined at close range on both front and back. These inferior materials generally feel harsh or fibrous to the touch. The more closely the back is woven the better the carpet will wear.

The best Axminsters are very durable; and a wide range of design, coloring and depth of pile may be obtained at a fairly moderate cost. The cheaper grades of Axminsters are not considered so durable as Wiltons and Brussels, and will show effects of hard service rather soon.

The chenille rugs and carpetings having a wool backing and a welt of tufted cord, which is woven separately, are a modification of the Axminster. They can be woven any length and as wide as 30 feet without seams and in any shape desired. Many of them have two-toned borders and centers, either plain or broken by inconspicuous conventional designs. Though expensive, these chenille rugs are said to be exceptionally durable.

**Oriental Rugs.**—Oriental rugs are those woven in one piece on hand looms in eastern countries, and as a whole are the most beautiful and sought after of all floor coverings. They have a linen, hemp, or wool warp and filling and a pile of tufts of woolen or occasionally silk yarn knotted into the warp by hand and evened with scissors. Weaving rugs in this way is, of course, a laborious process, requiring great dexterity and skill, and only after the rugs have lain on the floor for a long time and been polished by the wear of oriental sandals do they attain their greatest beauty and value. The value of a genuine oriental rug depends on the design, the fastness of color, the compactness and evenness of the weave, the number of knots to the square inch, and the care that has been taken of it.

Formerly beautiful old rugs could be bought at fairly reasonable prices, but during recent years the demand has increased to such an extent that good genuine ones are out of reach of all except those who can pay high prices. To meet this demand quantities of rugs are being woven in oriental countries, in some cases under factory conditions, in imitation of the antiques. These do not have the quality that comes with age and wear, but if well made they are worth buying and will give good service. Modern Chinese rugs, copying the designs and colors of the old ones, are especially popular at present.

In some cases, however, oriental rugs are bleached and treated with chemicals in order to soften the garish colors resulting from aniline dyes and to give them sheen, and such rugs are likely to wear out quickly. Sometimes this bleaching is so skillfully done that even expert judges of rugs are deceived, but there are a few signs that even an amateur can recognize. If cheap, crude dyes have been used, the darker colors generally run into the lighter, making the design blurred. If the rug has been very much bleached, the colors on the surface of the pile will be soft and dull, while by separating the threads and looking closely the colors at the base will be found to be clear and bright. Rubbing the surface briskly with a damp cloth will bring out the odor of chloride of lime with which the rug has been bleached, and very often the cloth will be stained with the colors. As a general rule, it is safe to buy oriental rugs only from reliable dealers.

This bulletin also contains a general discussion of rag carpets and rugs, fiber and grass rugs and mattings, utilizing old carpets and rugs, care of rugs, carpets and mattings, linoleum, oilcloth, and finish of wood, stone, concrete, composition and tile floors.

**Lime—Packages, Storage, and Proportions.** (3c)—(*Circular of the Bureau of Standards No. 106, "Lime—Definitions and Specifications." Fifteen pages. 7" x 10."*)

**Packages.**—Ground limestone comes in burlap bags of various sizes. Possibly the most common size weighs 167 pounds net, or 12 bags to the ton. Paper bags, 24 to the ton, are also used.

When quicklime goes direct from manufacturer to consumer, or when the retailer has facilities for storage, the lime is shipped in bulk in box cars. The usual retail package is the wooden barrel. Federal law prescribes that a barrel of lime shall weigh either 180 or 280 pounds net, and shall be marked to show its weight, the name of the manufacturer, and the place where it was made. The larger barrel is used in New York City; practically all other markets use the 180 pound barrel. The cost of wood is now so high that steel barrels are coming into use in many localities. A steel drum which can be sealed air-tight has found extensive use as a container for chemical lime, where the lime must not be air-slaked in transit. A new package which is in use in one locality is a waterproofed pasteboard carton, holding 90 pounds.

The standard package for hydrated lime is a paper bag holding 50 pounds. A smaller package, about 10 pounds, has recently come on the market to be retailed by grocers for use on kitchen gardens and lawns.

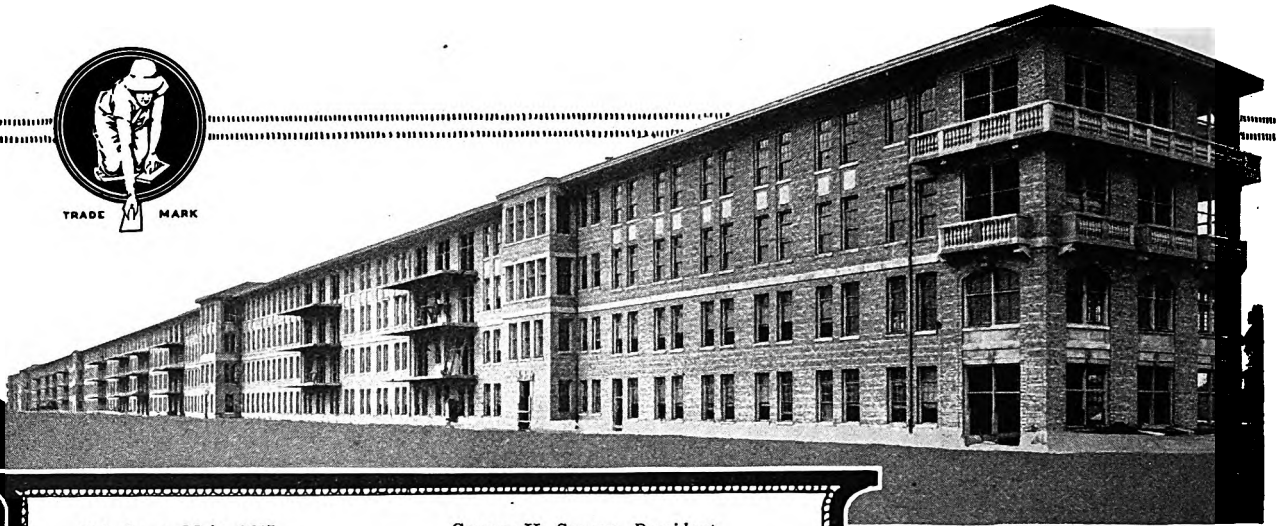
Air-slaked lime is not packed or shipped. It can be obtained by the load from local manufacturers or dealers.

**Storage.**—The storage of quicklime requires especially constructed bins or buildings, designed to be as nearly air-tight as possible, and, above all, to keep the lime dry. The amount of heat generated by air-slaking is frequently sufficient to set fire to wood. The storage of quicklime in a wooden bin or building constitutes a serious fire hazard.

The air-slaking of hydrated lime is indicated by the formation of a crust of hard material at the exposed surface of the package. This crust and the fineness of the powder make it difficult for the air to penetrate very far into the package, so that usually only a negligible proportion of it is spoiled. The air-slaking of hydrated lime is not accompanied by the evolution of enough heat to be dangerous. Hydrated lime should therefore be stored in the same way as Portland cement: It should be reasonably protected from the weather, and should be kept dry.

**Proportions for Use.**—Whitewash may be made according to the following formula: Add enough water to 12





Telephone, Main 1647

GEORGE H. SHANK, *President*  
F. H. FOSTER, *Secretary-Treasurer*

## SHANK COMPANY

Rooms 535-538

30 NORTH LA SALLE STREET

**GROUND PURCHASED AND FACTORIES,  
WAREHOUSES AND OFFICE BUILDINGS  
BUILT TO SUIT TENANTS**

Chicago, February 28, 1922.

The Master Builders Co.,  
Cleveland, Ohio.

RE: EDWARD HINES, JR., MEMORIAL HOSPITAL,  
MAYWOOD, ILL.

Gentlemen:

Your letter regarding our experience in the use of your product, MASTER-MIX, for the above job, we take pleasure in answering.

MASTER-MIX was adopted for all the floors in this building which are cement finish, after a thorough investigation of all the various products offered in competition.

We are not sorry for our selection and your claims were all verified and even more so.

The topping was applied on a set slab, and we not only used MASTER-MIX in the top finish but followed your directions and used it as a bonding coat and it proved its value in this respect. We had but a few hundred square feet that was not bonded, over an area of 600,000 square feet where we found that failure was caused by the slab not being cleaned of plaster that had fallen before topping was applied.

The floor finish with the MASTER-MIX is very dense, hard, and dustless. From the contractor's standpoint, it is a big advantage for time and labor saving, a claim you make that we doubted at the start.

We are glad to lend a good word for the advancement of your product. If you could carry these floors around as a sample, you would sell every prospect.

Very truly yours,  
SHANK COMPANY,  
By GEO H. SHANK,  
*President.*

This large institution, the Edward Hines, Jr., Memorial Hospital at Maywood, Ill., has 600,000 square feet of Master Mix Floors. Contractor, Shank Company, Chicago. Acting Supervising Architect, James A. Wetmore.

Master Mix is a liquid integral cement accelerator — hardener, waterproofer and anti-freeze compound. Master Mix, by securing maximum hydration of each particle of the cement, creates as dense concrete as it is possible to obtain. Because of this density, capillary attraction (due to porosity of ordinary concrete) is eliminated, thus rendering the concrete permanently waterproof. Master Mix is no surface treatment—it hardens and densifies the entire topping. This means permanently wearproof floors.

*For specifications see pages 202, 203, 7th Edition, Sweet's Engineering Catalog, and pages 104, 105, 17th Architectural Edition.*

## The Master Builders Co.

MAIN OFFICES:

**CLEVELAND, OHIO**

Sales Offices in 70 Cities

Factories at Cleveland and Irvington, N. J.

# Master Mix for Mortar

## STRUCTURAL SERVICE DEPARTMENT

pounds of hydrated lime to make a thick cream. Dissolve 1 pound of washing soda in 1 gallon of boiling water, and add this to the lime. Dissolve one-fourth pound glue and 1 pound rice flour in three quarts of water. Add this to the above mixture and apply. The above quantities will make enough whitewash to cover about 600 square feet.

Enough lime mortar to lay 1,000 bricks can be made from 1½ barrels of quicklime, or 5 bags of hydrated lime, and one-half cubic yard of sand. If a stronger mortar is desired, use 1½ bags of hydrated lime, one-half barrel of Portland cement, and one-half cubic yard of sand.

The first, or scratch, coat of plaster should consist of 100 pounds of hydrated lime, 350 pounds of sand, and three-fourths pound of hair. For the second, or brown, coat, use 100 pounds of hydrated lime, 400 pounds of sand, and three-eighths pound of hair. The third, or finish, coat is made of one volume of calcined gypsum to two volumes of lime putty, using either quicklime or finishing hydrate.

**Hog Houses.** (351)—(*U. S. Dept. of Agriculture. Bureau of Farm Management and Farm Economics. Farmers' Bulletin 438, by J. A. Warren. Pages 24. Size 6" x 9". Illustrated.*) This bulletin discusses the following subjects: need of shelter for hogs; prevailing conditions; cost of housing; varieties of hog houses; hog cots or individual houses; construction; location of windows. Illustrations, drawings and diagrams are used to indicate both the faulty and proper design.

**Poultry Housing.** (351)—(*College of Agriculture, Univ. of Maine. Bulletin No. 133 by O. M. Wilbur. Pages 12. Size 6" x 9". Illustrated.*) This bulletin contains a short discussion of the essentials in poultry housing and detailed drawings and description of the type of colony house recommended for the latitude of Orono, Me. (45°).

**Bird Houses and How to Build Them.** (*U. S. Bureau of Biological Survey. Farmers' Bulletin 609. Pages 21. Sizes 6" x 9". Illustrated.*) This bulletin contains instructions for making houses suitable for the different kinds of birds known to use them or likely to do so. It contains a large number of house plans.

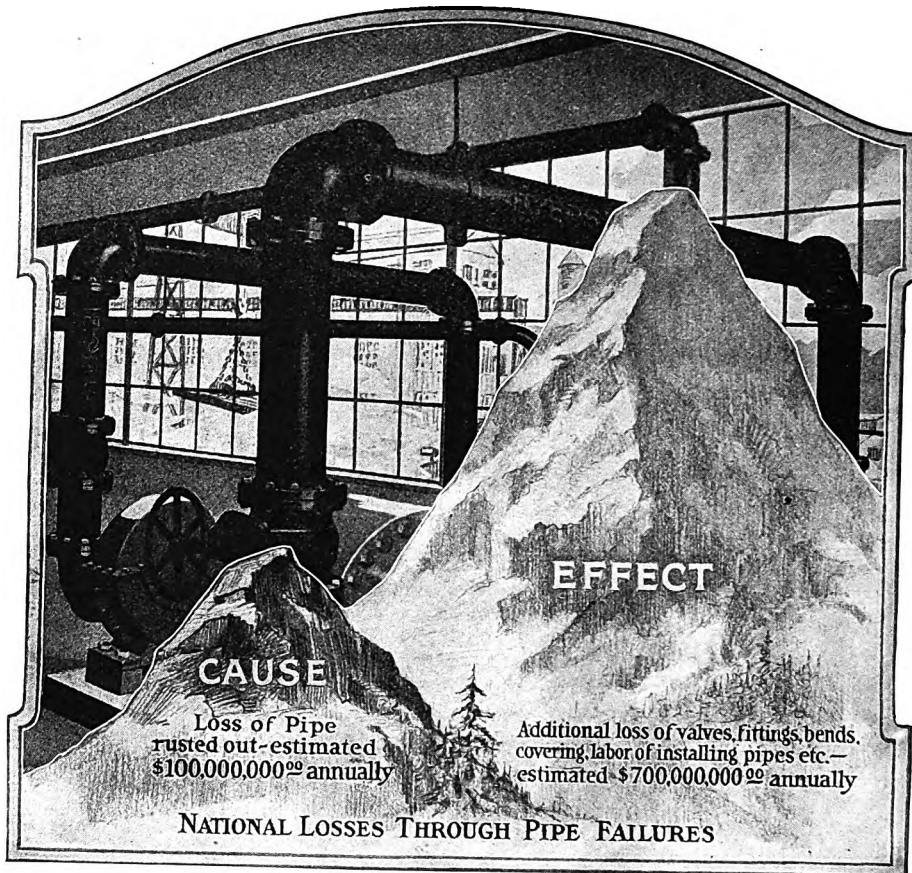
**The Lighting of Large Dry Goods and Department Stores.** (31f14)—(*Bulletin L. D. 132. Lighting Data. Edison Lamp Works. Size 6" x 9". Pages 24.*) This bulletin discusses the general considerations applying to store lighting, desirable intensity of illumination, color of light and diffusion, arrangement and systems of lighting, choice of reflecting or diffusing equipment, selection of fixtures, spacing of outlets and hanging height, present practice and special considerations.

**Bibliography.**—"The Lighting of a Large Retail Store," (Marshall-Field Co., Chicago) F. J. Pearson, *Trans. I. E. S.*, Vol. 2, page 693; "Electricity in the Department Store," E. F. Tweedy, *Electrical World*, July 6, 1912; "The Lighting of a Large Store" (Gimbel Bros., New York), C. L. Law and A. J. Marshall, *Trans. I. E. S.*, Vol. 6, page 186; "Lighting of a Department Store," (L. Bamberger Co., Newark, N. J.), *Electrical World*, May 24, 1913; "Electrical Equipment in Lytton Bldg.," *Electrical World*, July 5, 1913; "Electrical Equipment of a Department Store" (Filene's,

Boston), *Electrical World*, Sept. 20, 1913 and April 4, 1914; "Electricity in Department Stores," *Electrical Review*, Aug. 2, 1913; "Large Dry Goods and Department Store Lighting," A. L. Powell, *Lighting Journal*, July, 1913; "Illumination Features in New York Department Store" (Lord and Taylor, New York), *Electrical World*, May 23 and June 13, 1914; "Semi-Indirect Lighting Applied in Large Areas," (Saks, New York), W. S. Kilmer, *Lighting Journal*, February and June, 1913; "The Illumination of the New Hub Store," Chicago, H. B. Wheeler, *Lighting Journal*, May, 1913; "Department Store Lighting," (McCreery, Pittsburgh, Pa.), H. W. Shalling, *Trans. I. E. S.*, Vol. 8, page 17; "Store Lighting," A. L. Powell, *G. E. Review*, March, 1914; "Lighting of Lord & Taylor's Store," Bassett Jones, *Lighting Journal*, July, 1914; "The Wiring of a Department Store," *Electrical Review*, July 25, 1914; "Store Lighting with High Efficiency Mazda Lamps," A. L. Powell, *Lighting Journal*, Aug., 1914; "Clothing Store Lighting with Type C Mazda Lamps," E. J. Dailey, *Lighting Journal*, Jan., 1915; "Store and Shoe Case Lighting Fixtures," *Electrical Record*, Dec., 1915; "The Lighting of a Large Department Store," (Rosenbaum Co., Pittsburgh), *Lighting Journal*, November, 1915; "Lighting of Stores and Public Buildings," W. R. Moulton, *Electrical Review*, May 20, 1916; "Latest Practice in Store Lighting," H. T. Spaulding, *Electrical Review*, Aug. 25, 1917; "Illumination of the Emporium, San Francisco," L. C. Mullgardt, *Journal of Electricity*, March 1, 1918; "The General Level of Illumination Intensities in Large Stores of New York City," W. F. Little and A. F. Dick, *Trans. I. E. S.*, Vol. 13, page 201; "Notes on Department Store Illumination," J. Daniels, *Trans. I. E. S.*, Vol. 15, page 709; "Good Store Lighting Costs," Norman Macbeth, *Electrical Merchandising*, Dec., 1920; and "Office, Store and Window Lighting," Norman Macbeth, *Illuminating Engineering Practice*, University of Pennsylvania Lectures.

**The Lighting of Metal Working Plants.** (31f13)—(*Bulletin L. D. 134. Lighting Data. Edison Lamp Works. Size 6" x 9". Pages 20.*) This bulletin discusses methods of lighting and general considerations as well as detailed recommendations for bench work, machine tool work, sheet metal work, assembling and painting.

**Bibliography.**—"An Example of Efficient Machine Shop Lighting," *Electrical World*, March 22, 1913; "The Lighting of a Machine Shop Building," R. E. Harrington, *Lighting Journal*, March, 1914; "Lighting Considerations and Results in a Modern Plant," A. B. Oday, *Electrical Engineer*, June, 1914; "Present Practice in the Use of Tungsten Filament Lamps for Metal Working Plants," A. L. Powell and R. E. Harrington, *Trans. I. E. S.*, Vol. 9, Page 814; "General or Localized General Illumination Versus Local Illumination in Industrial Plants," A. L. Powell, *Lighting Journal*, Dec., 1916, Jan., 1917, and Feb., 1917; "Foundry and Machine Shop Lighting," C. E. Clewell, *Electrical World*, July, 7, 1917; "Local Lamp and Inspection Work Lighting," C. E. Clewell, *Electrical World*, August 4, 1917; "Better Lighting of Machine Shops," F. H. Bernhard, *Electrical Review*, June 1, 1918; and "A Handbook for Machine Shop Electricity," C. E. Clewell, McGraw-Hill Publishing Co.



Look for the  
Name and Year  
Rolled in Every  
Length

## Cause and Effect

The Nation's annual loss through corrosion of welded pipe is probably close to \$100,000,000.00. Multiply this amount by seven, and you arrive at the concurrent loss of fittings, valves, cocks, gaskets, bends, labor and other items in a pipe installation. This does not include allowance for idle time or damage to property attendant upon many pipe failures.

Corrosion, while not preventable, may be greatly retarded by the use of Byers genuine wrought iron pipe. Its life is recognized to exceed that of ordinary black or galvanized pipe by 100 per cent up to 500 per cent, while in cost it adds but five to ten per cent to the average pipe system.

If you would avoid the big losses and annoyances caused by the use of cheap pipe, investigate past performance records of iron and steel pipe. (Ask for Byers Bulletin No. 27, 30 and 32.) Then look into the Analyses of Pipe Installation Costs, presented in Byers Bulletin No. 38.

Byers Bulletin No. 38 contains cost analyses of a variety of plumbing, heating, power, and industrial pipe systems, with notes of corrosive conditions. Sent free on request.

A. M. BYERS COMPANY, PITTSBURGH, PA.

Established 1864

New York Philadelphia Boston Cleveland Chicago Houston Tulsa Los Angeles

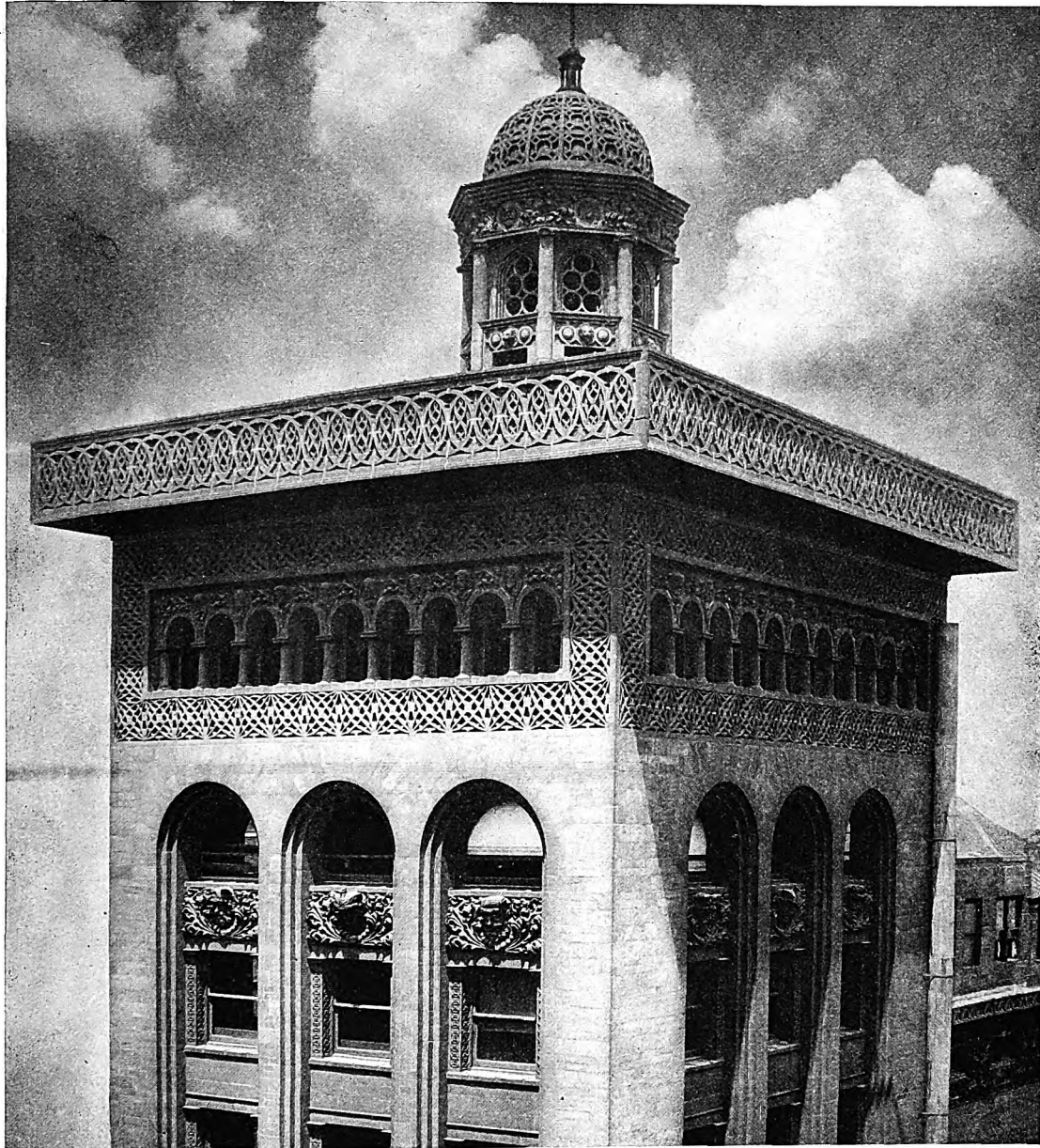
# BYERS PIPE

## GENUINE WROUGHT IRON

INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

November, 1922



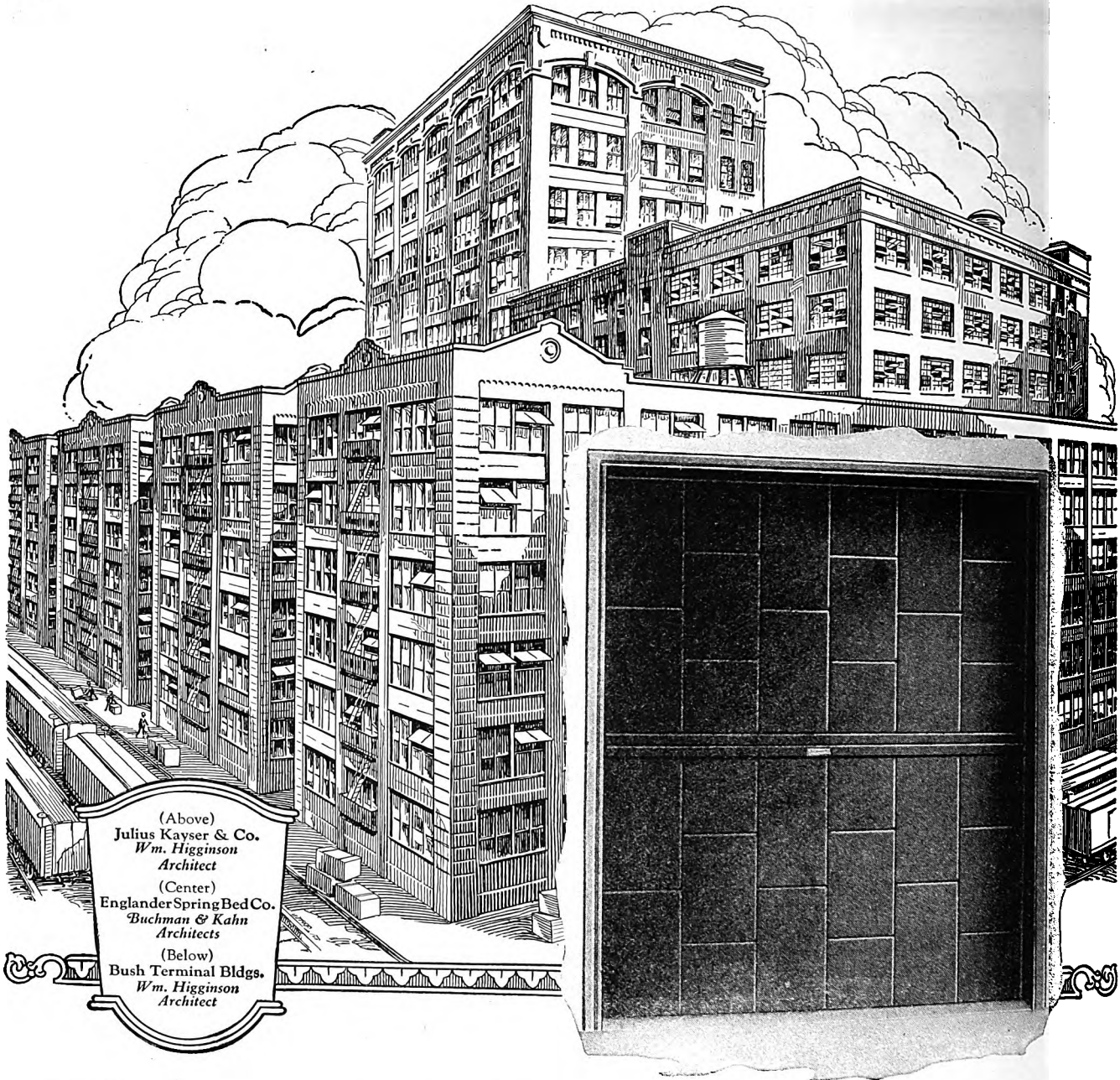
The tower of the Schiller Building, Chicago, originally named the German Opera House. The auditorium is now used as the Garrick Theatre. Built 1891,—thirty-one years ago; Adler and Sullivan (Louis H.), Architects.

The entire facing and trim is unglazed Northwestern terra cotta of light gray color. The fine enrichment of the tower is surpassed in the exquisite detail of the lower stories, to be illustrated at a later date.

**NORTHWESTERN**  
is a short form of  
specification for archi-  
tectural Terra Cotta  
of superior quality.

## THE NORTHWESTERN TERRA COTTA CO.

### CHICAGO



(Above)  
 Julius Kayser & Co.  
 Wm. Higginson  
 Architect

(Center)  
 Englander Spring Bed Co.  
 Buchman & Kahn  
 Architects

(Below)  
 Bush Terminal Bldgs.  
 Wm. Higginson  
 Architect

*Efficiency  
 is one of the  
 reasons why  
 they are specified*

**PEELLE** Counterbalanced Truckable Freight Elevator Doors are efficient, not because we say so, but because we make them so. Their ability to stay "on the job" year after year, is built into them. Exacting construction insures that brand of uninterrupted, untroubled service that may be rightfully called efficient.

Exclusive with Peelle Doors is the truckable feature which permits smooth passage between elevator and floor. Vertical operation gives full clearance, speeds up loading and unloading. The steel framed panels on Peelle Doors free elevator shafts of drafts and prevents fires from spreading.

*Let us help you on your next door problem. A copy of "Elevator Door Efficiency" will be sent gratis upon request. It describes Peelle Doors for every purpose.*

**Partial List of Peelle Door Users**

- Bloomington's Dept. Store
- Studebaker Corp.
- Huylers Candy Co.
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**THE PEELLE COMPANY • Brooklyn • New York**  
 BOSTON • CLEVELAND • CHICAGO • PHILADELPHIA • AND 12 OTHER CITIES

**PEELLE Freight Elevator DOORS**  
 Counterbalanced-Truckable

# The "Big Scene" in Cement Making

The climax in the huge impersonal drama of cement making is the burning of the raw materials in great rotary kilns.

One of the largest kilns, set on end, would be as tall as a 20-story building. A touring car could run through it.

The kilns are steel cylinders lined with fire brick. They rest at a slight angle from the horizontal on heavy rollers, and are driven by steel gears at half a revolution a minute. A medium-sized kiln weighs 275,000 pounds, empty, and has foundations as heavy as for a 10-story building.

Into the upper end of the revolving kilns flow the finely ground materials for cement. There they meet a blast of burning pulverized coal, blown in at high pressure from an 8-inch jet at the opposite end.

Where the materials enter the kiln, the temperature is 1,000 degrees Fahrenheit or more. As they tumble over and over on their 3-hour journey through the kiln in the face of the flame, they rise gradually to a temperature of 2,500 to 3,000 degrees—more heat than is required for almost any other industrial process.

The workman, watching through his peephole in the end of the kiln, must wear smoked glasses. It is like looking at the sun. And if you speak to him, you must shout close to his ear to be heard above the roar of the flames.

In a big cement plant, there will be a dozen or more of these kilns, roaring and revolving side by side in one great room.

A medium-sized kiln's output is 25 barrels an hour, and in that time 3,500 pounds of coal must be blown into it.

You may have seen the great smoke stacks in rows over a cement plant. There is a stack for every kiln, and four kilns make a medium-sized plant, with 3,000 barrels capacity a day or thereabouts. When you see four of these stacks together, you can know that enough coal or equivalent fuel is being burned in the kilns beneath to supply the electricity for the homes, streets, shops and industries of three ordinary cities of 20,000 inhabitants each.

In a certain town of 12,000 inhabitants there is a 4-kiln plant where the heat lost through the stacks, because of the great temperature and draft required below, would, if it could be captured, supply three times the electric light and power used by all the rest of the town. Burning cement, costly as it is, is only one of the heavy fuel consuming operations in cement making.

Every ton of cement you buy takes the equivalent of more than half a ton of coal in heat and power to make it—more than 200 pounds, that is, to the barrel of 376 pounds.

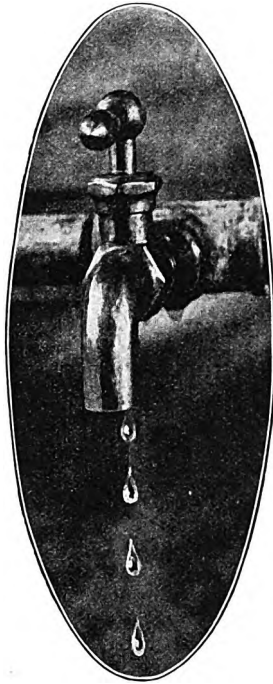
## PORTLAND CEMENT ASSOCIATION

*A National Organization*

*to Improve and Extend the Uses of Concrete*

Atlanta	Des Moines	Los Angeles	Parkersburg	San Francisco
Boston	Detroit	Milwaukee	Philadelphia	Seattle
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Dallas	Indianapolis	New York	Portland, Oreg.	Vancouver, B. C.
Denver	Kansas City		Salt Lake City	Washington, D. C.

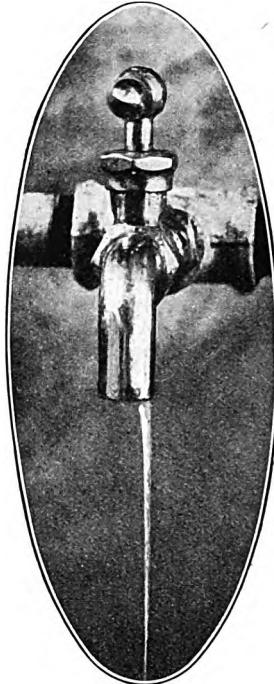
# Plumbing Facts



### Water Just Leaking Drop by Drop

15 gallons per day  
105 gallons per week  
5,475 gallons per year

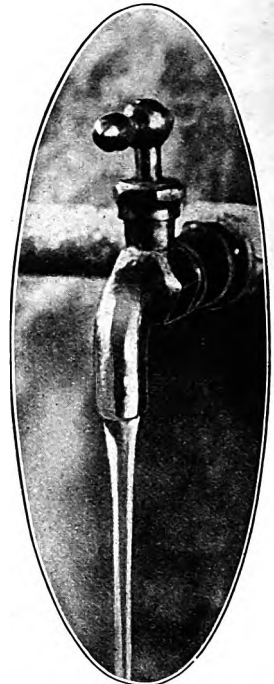
Cost per day .....\$ .00375  
Cost per week ..... .02625  
Cost per year ..... 1.36875



### Water Leaking Through One-Fourth Inch Aperture

17,425 gallons per day  
121,975 gallons per week  
6,360,125 gallons per year

Cost per day .....\$ 4.356  
Cost per week ..... 30.493  
Cost per year ..... 1590.031



### Water Leaking Through One-Half Inch Aperture

70,488 gallons per day  
493,416 gallons per week  
25,728,120 gallons per year

Cost per day .....\$ 17.622  
Cost per week ..... 102.354  
Cost per year ..... 6432.03

**N**O other single item causes more trouble and repair bills for your client than does faulty plumbing. Think of your own personal experience.

The greatest cause of plumbing trouble and repairs is due to the use of cheap brass trimmings. Don't permit the use of anything but the

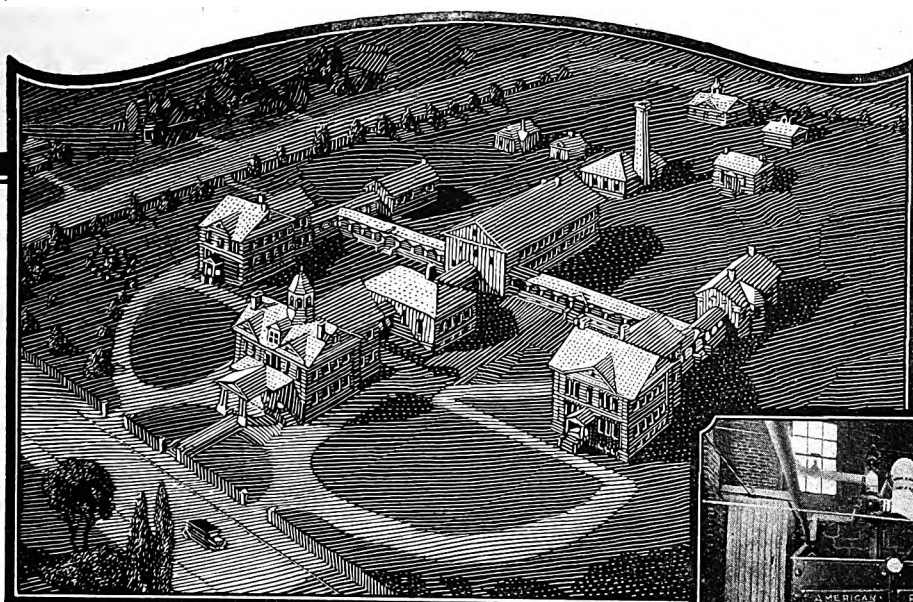
best in plumbing brass goods.

Crow Trimmings are of red metal, designed in every detail to stand hard usage and long wear. When you specify "Crow plumbing throughout" you insure your client against future troubles.

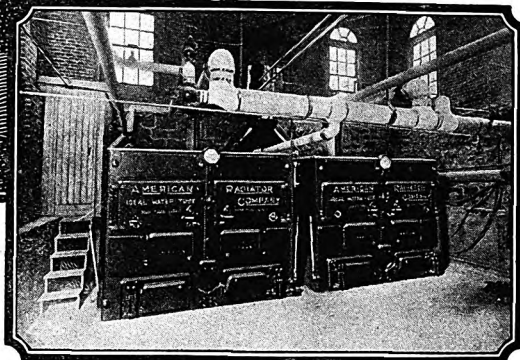
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General Offices: 534-546 South Franklin Street, Chicago  
Sales Offices in the Principal Cities

# CROW



The Schenectady County Poor Farm, Schenectady, N.Y., is warmed by a central heating plant. A battery of two Ideal 79-inch Water Tube low pressure boilers are connected with 8150 feet of radiation. The installation was made by the Carl Frank Co., Schenectady, N.Y.



## Poor in pocket—Rich in warmth

**T**HOUGH poor in pocket the tenants of the Schenectady County Poor Farm, Schenectady, N.Y., now enjoy better warmth than the owners of too many first-class homes.

And the County, last Winter, saved 50 tons of coal!

The Poor Farm consists of several buildings, distributed over a city block, and warmed from a central heating plant.

Though the old heating plant carried a constant load of from eight to ten pounds of steam, it failed to deliver adequate warmth. So the old boilers were replaced by two IDEAL 79" Low Pressure Boilers.

This is what the superintendent, Mr. Chisholm wrote at the end of the winter:

We are gratified with the change to the IDEAL 79" Boilers. Instead of carrying eight to ten pounds of steam, the entire system of 8150 feet of radiation now warms quickly on three to four pounds. And from November to April we have saved easily fifty tons of coal.

IDEAL 79" Water Tube Boilers have many new and interesting points of construction; every Architect or Heating Engineer interested in adequate heating equipment, for apartments, schools, hospitals, hotels, theatres, banks or office buildings, should have the booklet describing them.

Your name on your letterhead will bring it at once.

# AMERICAN RADIATOR COMPANY

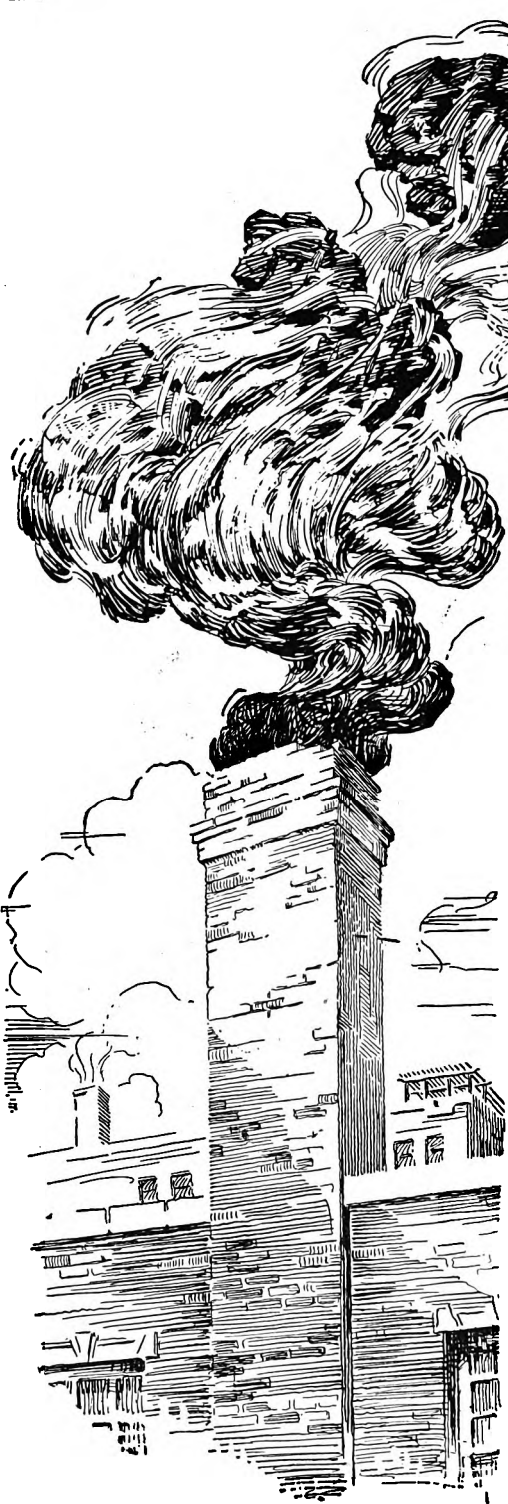
*IDEAL Boilers and AMERICAN Radiators for every heating need*

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NEW YORK

AMERICAN IDEAL  
RADIATORS BOILERS

816 So. Michigan Ave., Dept. 115  
CHICAGO





# SMOKE is unconsumed FUEL

A Kewanee Smokeless Boiler burns *all* its coal—hence none of it is wasted up the stack as smoke. The man who pays the coal bill appreciates the saving—usually it is a big one.

Furthermore, Kewanee Smokeless Boilers have “burned” their way into the hearts of owners by their ability to burn *any* coal. Your reputation is safe when you specify and install a Kewanee.

## KEWANEE BOILER COMPANY KEWANEE, ILLINOIS

Steel Heating Boilers, Radiators, Tanks, Water Heating Garbage Burners

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DES MOINES	315 Hubbell Bldg.	DENVER	514 Boston Bldg.
KANSAS CITY	2014 Wyandotte St.	DALLAS	809 Southwestern Life Bldg.
INDIANAPOLIS	509-10 Occidental Bldg.	DETROIT	1772 Lafayette Blvd.
ST. LOUIS	1212 Chemical Bldg.	TOLEDO	1121-22 Nicholas Bldg.
MINNEAPOLIS	708 Builders Exchange	CLEVELAND	706 Rose Bldg.
COLUMBUS	808 First Nat'l Bank Bldg.	ATLANTA	1524-25 Candler Bldg.
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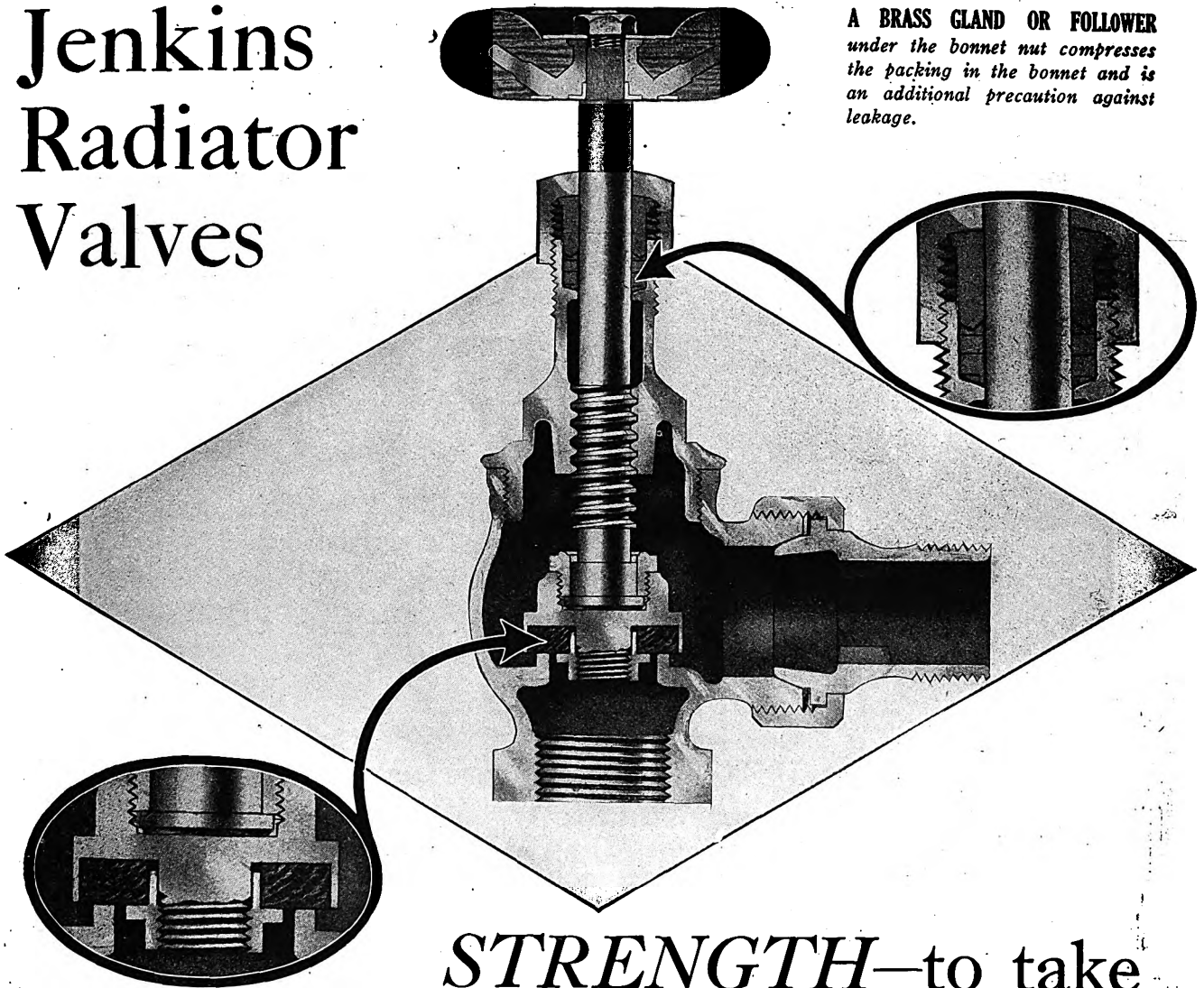
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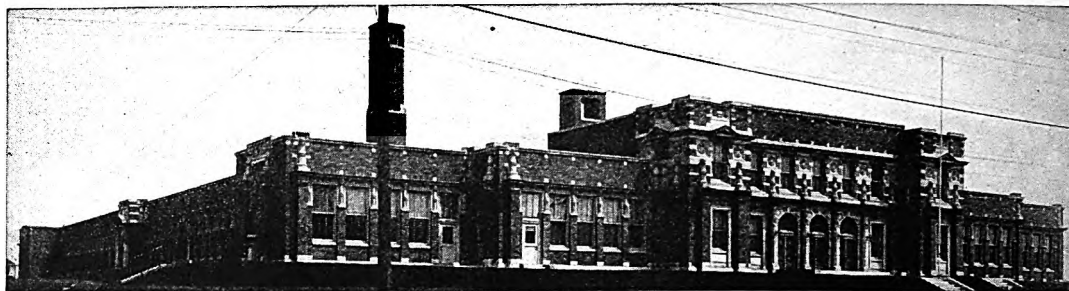
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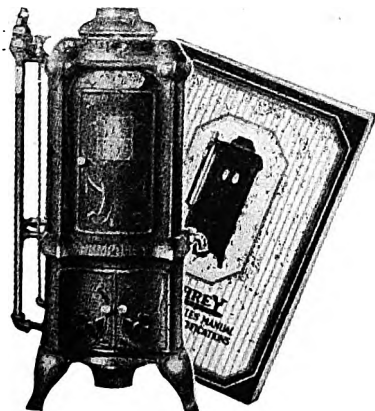
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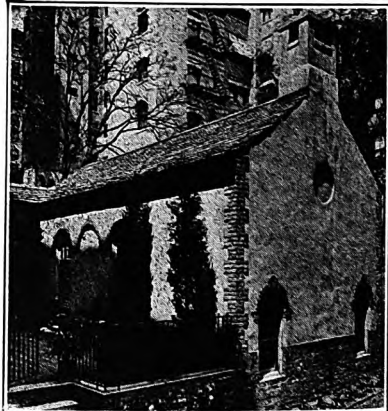
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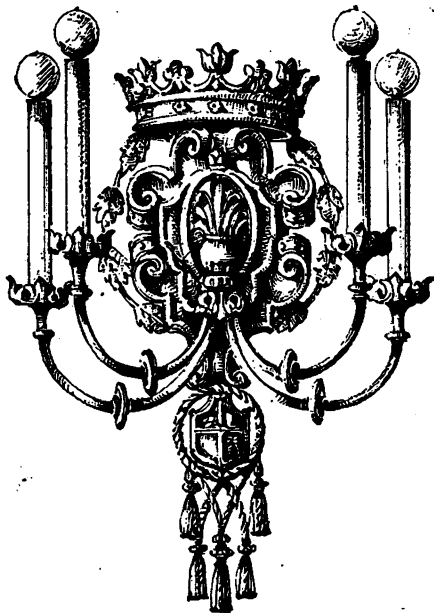


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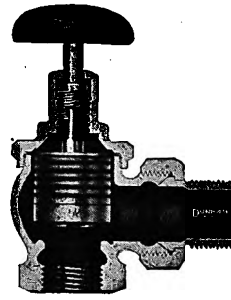


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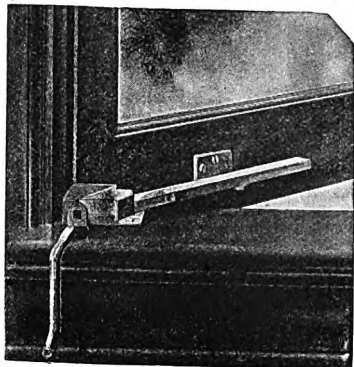
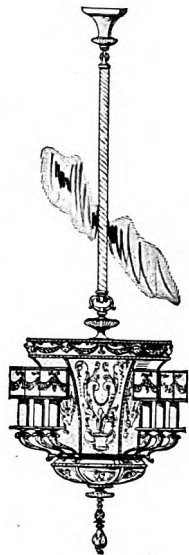


Fig. 1



## Casement Operator No. 95

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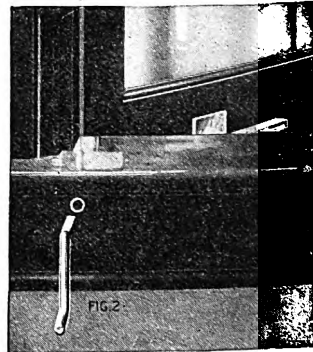


Fig. 2

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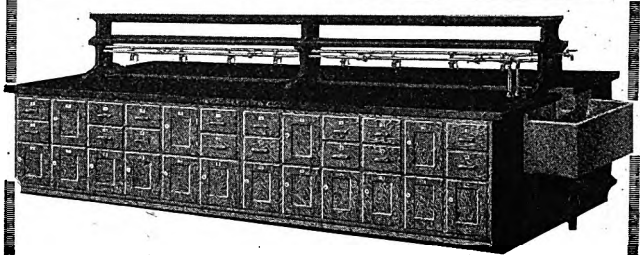
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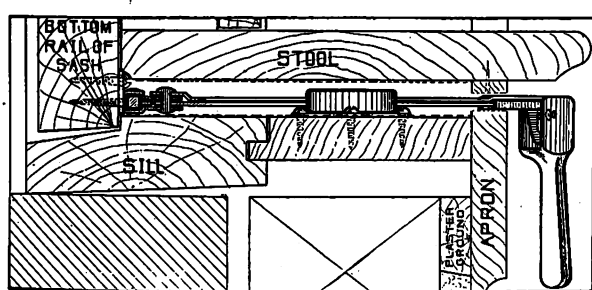
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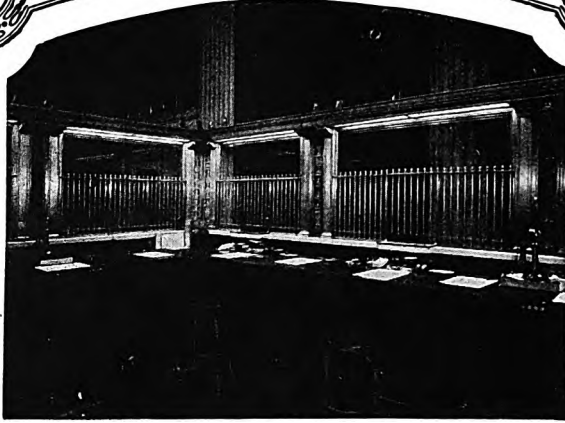
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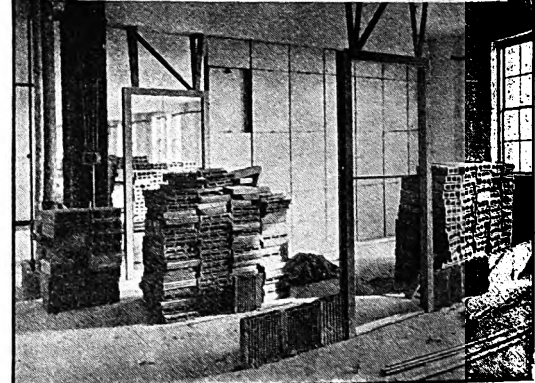
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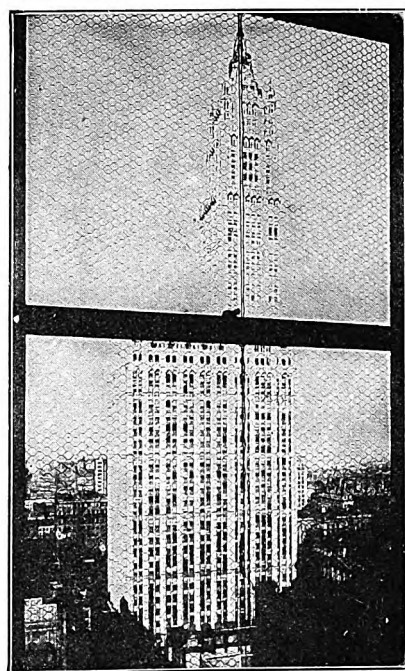
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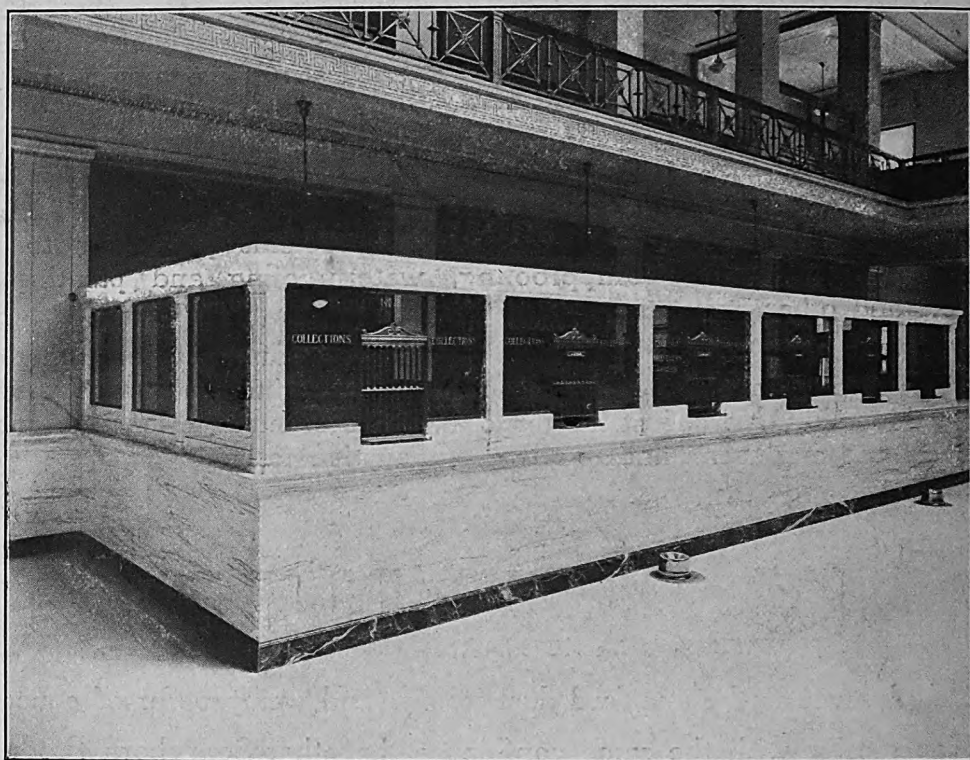
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*Due to the long indisposition of the editor and his recent serious illness, the reading of many manuscripts and attention to much editorial correspondence has been greatly delayed. The patient indulgence of contributors and correspondents is asked. It is hoped that the editor will fully resume his labors by mid-December.*

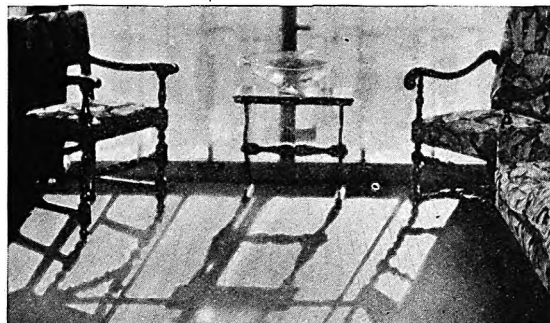
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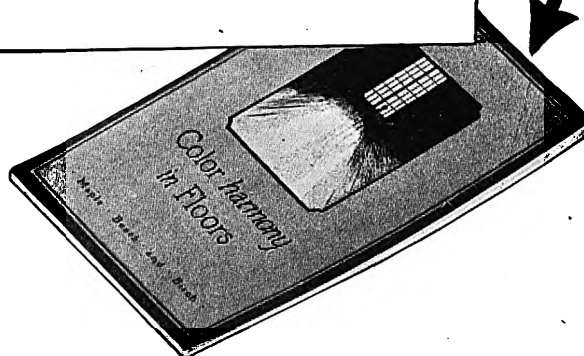
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Volume X

DECEMBER, 1922

Number 12

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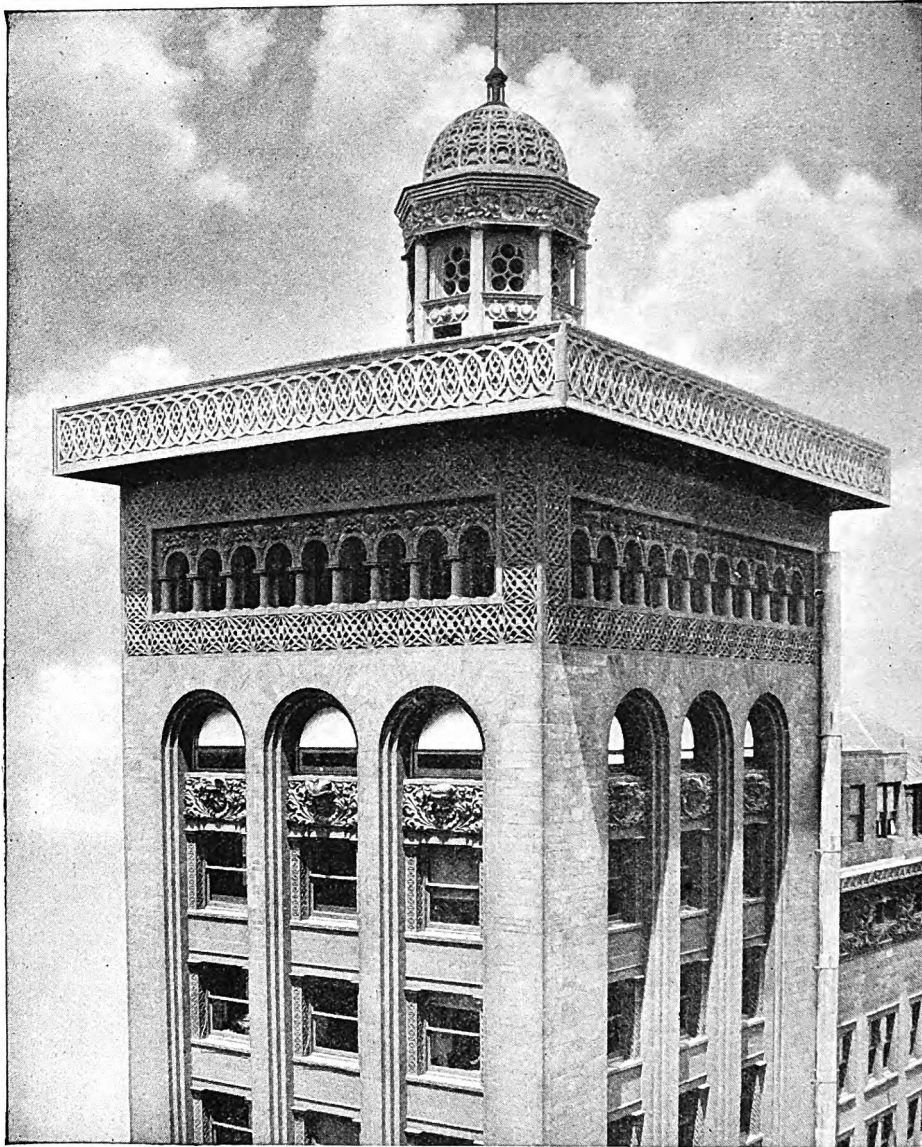
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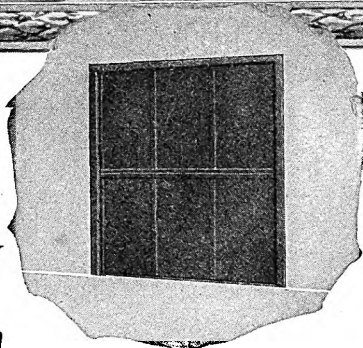
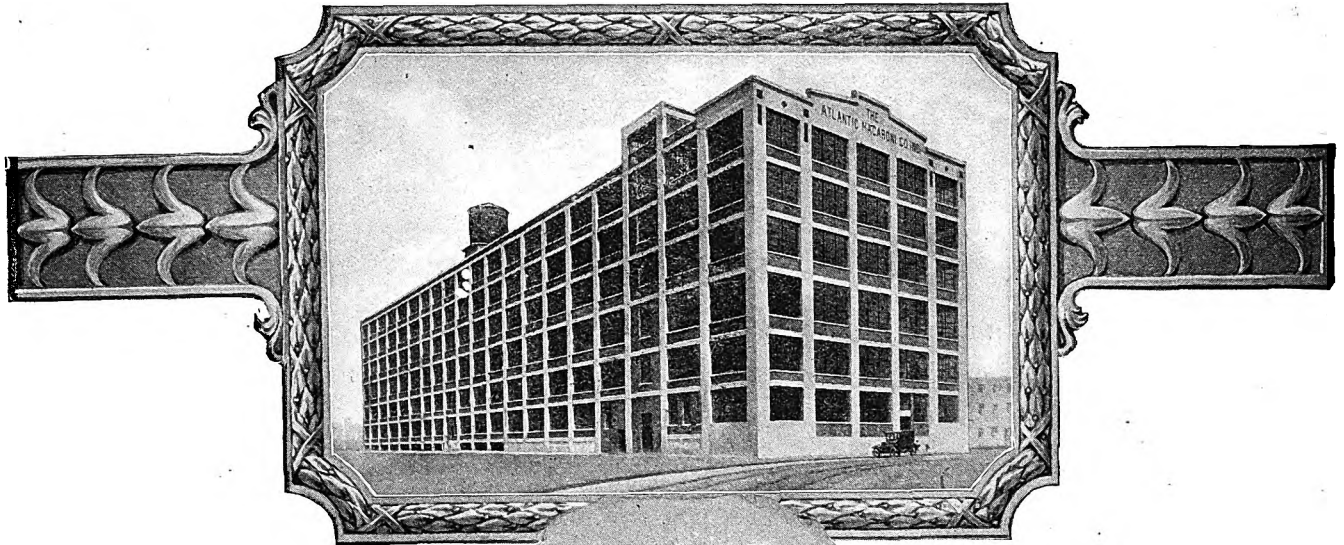
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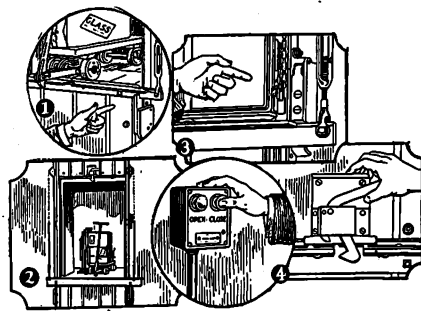
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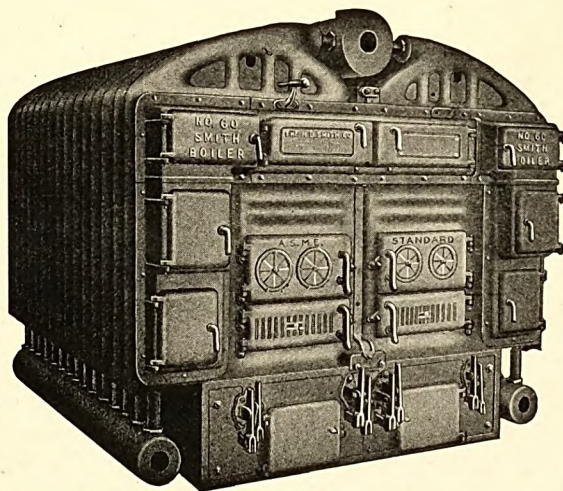
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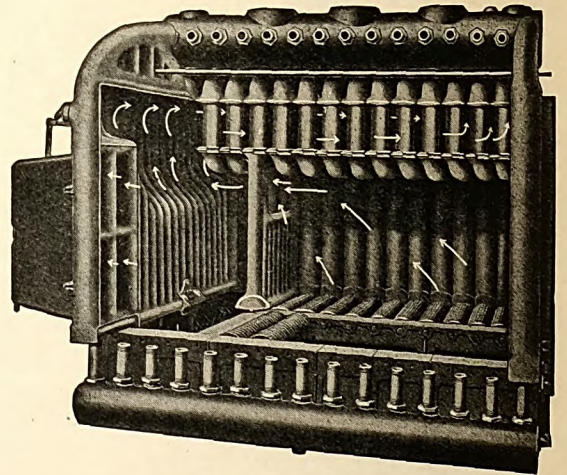
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# JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

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Number 12

## The Autobiography of An Idea

By LOUIS H. SULLIVAN

### CHAPTER VII.

*Boston*

#### *The New Rice Grammar School*

ONE day, in Boston, a boy of nine was walking northward on the east side of Washington Street. Just then "Yankee Doodle" came along whistling his tune to a brisk step, a pair of boots slung over one shoulder of his faded blue jeans; and, under a stovepipe hat, much battered in the strife of years, this agile elderly man wore a grey chin beard after the manner of Uncle Sam. And thus went Yankee Doodle tirelessly up and down Washington Street, always on the east side of it, day after day, year after year. In a legendary sense he was a cobbler. The boy watched his kindly face approaching, and for the hundredth time admired in despair the clear sharp whistle which he had tried in vain to emulate; and, as Yankee passed on southward the boy turned east into South Bennett Street following the south sidewalk. About midway to Harrison Avenue a paper bag struck the sidewalk in front of him, burst, and hard candies scattered over the pavement. The boy, startled, looked around, and then up. In a second story window, straight across the way, appeared two fat bare arms, an immense bosom, a heavy, broad, red face, topped with straight black hair. A fat finger beckoned to him; a fat mouth said something to him; and at the doorway of the house was the number 22—the house he had been born in; but the silver nameplate marked P. Sullivan in black script was no longer there.

He had been led to the spot, which he had not seen for years, by a revived memory of a sweet child named Alice Look, who lived next door when the two of them were three together. He had wished to see once more the sacred dwelling wherein she had lived and the walled yard in which she had mothered him and called him Papa in their play.

Much troubled, he walked on to Harrison Avenue, where Bennett Street ends its one block of length. There he noticed that the stately trees were bare of leaves and sickly to the sight, while on the twigs and among the branches and even on the trunks were hundreds of caterpillar nests which made the trees look old, poor and forsaken. While he was counting the nests on a single tree, caterpillars now and then would come slowly downward from the heights. Some of them would remain for a time in mid-air, suspended invisibly, before completing their descent, perchance upon a passerby. The boy was examining one of these caterpillars undulating upon his coat sleeve, when his quick ear detected the sound of snare-drums. Crowds began to gather on the sidewalks. Slowly the drums beat out their increasing sadness, pulsing to a labored measure of weariness, and finality, as a faint bluish mass appeared vaguely in the north. The sidewalk crowds became dense—men, women and children stood very still. Onward, into distinctness and solidity, came the mass of faded blue undulating to the pathos of the drums. The drum corps passed—and in the growing silence came on and passed ranks of wearied men in faded blue, arms at right shoulder, faces weather-beaten, a tired slow tread, measured as a time-beat on the pavement, the one-two of many souls. And to these men, as they marched, clung women shabbily clothed, with shawls drawn over their heads, moving on in a way tragically sad and glad, while to the skirts of many of these women clung dirty children. Thus moved in regular mass and in silence a regiment of veterans, their women, their children, passing onward between two tense rows of onlooking men, women and children, triple deep, many of them in tears. So vivid was this spectacle, so heartrending, so new this aching drama of return, that the boy, leaning against a caterpillar tree, overflowed with compassion. When he had ceased weeping upon his coat sleeve, Harrison Avenue

was vacant; but not so the boy—he in fullness of sympathy was ill with the thought of what all this might mean. What was the mystery that lay behind these men in faded blue? He found no sufficing answer. The men had been mustered out, he had been told; that was all.

He chafed until he got permission to go to South Reading for a week end; ostensibly to visit the grandparents, surreptitiously to visit Julia, to whom alone he could bare his heart. He knew in advance what Grandpa would say; he knew in advance what Grandma would say; he wished eagerly to learn what Julia might say. So after earnest greetings with Grandpa and Grandma he slipped quietly to the kitchen. Julia was not there. He moved to the barn; Julia was not there. Then, in dime-novel fashion he made a detour through the "old" orchard, dodging from tree to tree in Indian fashion, examining the grass, crawling slowly on all fours, bent on surprise, signalling to an imagined companion in the rear, cautiously advancing until he caught a glimpse of a broad back, topped with massy hair on fire. He approached at a flat crawl and, from behind the next tree, saw Julia sitting on a milk stool peeling potatoes. Now came the villain's mad rush. Julia was seized savagely—with an arm around her neck, her head pulled back, her face kissed all over, her hair roughly tousled, her shoulder pushed hard, her stool kicked from under her as Louis, in a warwhoop of joy, hailed her as Ireland's hope, Queen of the orchard, and was greatly pleased.

Not so Erin's daughter. Sitting broadly on the grass, shaking a clenched fist, she screamed: "Ye rat, ye vile spalpeen. To think o' the likes o' ye takin' me un-awares; and ye've upset the spuds and me pan of fresh water. May the divil fly away with ye. Get y'self out o' here before I smash ye with the stool," and Julia's language became violent in a torrent of brogue, as, madly erect, she swung the stool and let fly while Louis danced about her singing an impudent Irish song he had learned from her. Then Julia sat largely down again in the grass, gasping for breath, while Louis went for the distant stool. Grandpa passed that way, remarking simply: ah, I *hear* you and Julia are visiting today. Louis walked up to Julia and said, in a manner: "Julia Head, I now present you with this stool. It is far less beautiful than yourself, but in its humble way, it is as useful as your own valued activities, inasmuch as it, on many an occasion, has served as your main stay while you were drawing from our gentle kine the day's accumulations. Will you accept this emblem of industry in the same simplicity of spirit with which it is offered you?" Julia, tired of ranting, laughed. "Sure, she said, 'tis well ye know that had ye come at me dacently, it's a hearty welcome I'd a given ye." And she resumed operations, still sitting, the pan of spuds resting upon her enormous thighs. And Louis sat down meekly beside her, his small hand barely touching

the expanse of freckled arm. He said he was sorry, and went on to pacify her. He used Gaelic words she had taught him, words romantically tender and sweet. Julia softened. With both hands she turned his face toward her; looked at him roguishly: "Now what the divil is it ye want?" "Julia, tell me a fairy story, won't you? Just a little one, won't you, Julia?" "Divil a fairy tale there'll be told this day! Tell me about Boston. I've a brother working there. I want ye to find how he's getting on. His name's Eugene Head. He's younger than meself, he's only here wan year. He's tendin' bar in a saloon on Tremont Street near King's Chapel. I've heard he's steady and don't drink; and I've heard, too, that he knocks down quite a bit. Naw! I don't mean that he knocks down people. I shouldn't be talking such things t'ye anyway. It's sorry I am I said a word. But Boston is a hell ye know."

Then Louis opened the subject nearest his heart. He told her all about the soldiers in faded blue, and the wives and children hanging to them. What did it all mean? Why was it so sad; why did he have to cry? "Well, Louis dear, ye know war's a sad business; those men ye saw had just been mustered out of the army, they were good fighting men, but all tired out. From the shawls the women wore and the dirty childer, I know the whole crowd was Irish and poor; and as everyone knows, the Irish won the war. Think of it! Holy Virgin!—the Irish fighting for the naygers! What will it be next time?" "But, Julia, what was it all for? What was back of it all?" "I'll not be telling ye what was back of it all, tho' well I know. I'll waste no breath on one who has no moind. Besides you're too young and ye have no education. Ye wouldn't understand. Why the divil don't ye stick hard to yer books, and learn? What in the name of all the saints d'ye think your father is spending his good money on ye furr? Filling yer belly with food, giving ye a good, clane bed to sleep in, putting nice clothes on ye, buying ye books, except that he wants ye to have an education? The Irish are proud of education, and yer father's a proud man, and he wants to be proud of his son. In God's name why don't ye do yure share? Ye remember the tale, I told ye of the man who looked too long at the moon? It's a tender heart indade, ye had likewise to be lookin' at thim dirty childer hangin' to the mithers' skirts! It's a big heart ye had and a fine education ye have that ye didn't think at wanst whin ye saw thim that ye haven't a care in the world, that ye've niver known rale hunger, niver a rale sorrow, niver a heart-break, niver despair; niver heard the wolf bark at the doore as yer blood went cold! And yerself, Louis, wid yere big heart and small head couldn't see with yer own eyes and without any books at all, that thim very childer was part of what as ye say lies behind it all? God! me heart aches in the tellin: for the min ye saw come back wuz not all the min that wint out; but I'm through. I'll tell ye no more of

## THE AUTOBIOGRAPHY OF AN IDEA

what lies behind it all; but I'll tell ye some more about education, for I want to knock a bit of since into yere empty skull. Yere all sintiment, Louis, and no mercy. You've kissed the Blarney Stone right well, and ye kicked the milking stool from under me.

"Now the story I'm to tell ye I got from one of me girl friends whose brother said he knew the man by reputayshun, and that he came from County Kerry where the Lakes of Killarney a're I've told ye so mooch about, and I suppose ye've forgotten it all; and faith, I have me doubts, with yere scatter brains if ye can say fer a truth wither Ireland's this side o' the water or the other. Now its not meself as'll make a short story long nor a long story short, so I'll tell it in the words I heard it.

"This man from Kerry was in some way connected with the army, as most of the Irish were, for they're natural fighting min from the oldest times. And wan day as he was out a-walking fer his health, and faring to and fro, he came upon a blanket lying on the ground; and at once he picked it up and with great loud laughter he sed, sed he: Sure I've found me blanket with me name upon it: U fer Patrick and S for McCarty; sure edication's a foine thing, as me faather before me wud say." "Oh, Julia, I don't believe that's true. That's just another Irish yarn." "Will, maybe it isn't true and maybe it's just a yarn; but I belave it's true and I want to till ye this: the man from Kerry had a rale edication. Ye may think I'm a-jokin' now, but when ye get older and have more sinse ye'll be noticin' that that's the way everywan rades; and the higher educated they are, the more they rade just as Pat McCarthy did, and add some fancy flourishes of their own. Now run along and carry in the wood, and do the chures. Me two feets is sore wid me weight. And take along the pans and the stool as ye go. I suppose it's the whole batch of yees I'll have to be feedin; and I've a blister on me small toe, and me back is broke with handlin' the wash tubs; an' it's little patience I have with ye, furr ye don't seem to learn in school or out, and yit, be the powers, ye ask some mighty quare questions for a lad, so I suppose there's something in the back of yer head that makes yer father support ye when ye ought to be wurkin'."

And thus Julia grumbled on to the kitchen door and Louis did the chores. But his heart was not in them. Julia had told the story mockingly. She seemed to leave in it somewhere a sting he could feel but could not understand; and he mused as to what might perhaps be behind Julia, Irish to the core. She had set him vibrating at the suggestion of an unseen power and he became rigid in his resolve to penetrate the mystery that seemed to lie back of the tale she told.

\* \* \*

Later on, say about the age of twelve, this same boy, to his own surprise, became aware that he had become

interested in buildings; and over one building in particular he began to rave, as he detached it from the rest and placed it in his wonder-world. It stood at the northeast corner of Tremont and Boylston Streets. It was a Masonic Temple built of hewn granite, light gray in tone and joyous of aspect.

Boston, as a conglomerate of buildings, had depressed Louis Sullivan continuously since he became engulfed in it. These structures uttered to him as in chorus a stifling negation, a vast No!—to his yea-cry for the light-hearted. In their varied utterance, they were to him unanimous in that they denied the flowers of the field. Some were austere, some gave forth an offensive effluvium of respectability, some fronted the crowded street as though they had always been there and the streets had come later; some seemed to thank God that they were not as other buildings, while others sighed: I am weary, weary. Most of them were old and some were very new; and individually they impressed Louis, in their special ways, as of an uncanny particularity. He seemed to feel them as physiognomies, as presences, sometimes even as personalities; thus the state house with its golden dome seemed to him a thin, mean, stingy old woman; while Park Street Church seemed to tower as a loyal guardian above its ancient graveyard, and as friendly monitor of the crowds below. And one day as they looked at Faneuil Hall, Grandpa said of it: "The Wild Ass of the City stamps above its head but cannot break its sleep." This sounded thrilling and imaginary to Louis, like a wild thing out of Julia's land of enchantment; but Grandpa said he got it out of a book and that its meaning was too deep for the boy—that he was talking to himself.

Thus buildings had come to speak to Louis Sullivan in their many jargons. Some said vile things, some said prudent things, some said pompous things, but none said noble things. His history book told him that certain buildings were to be revered, but the buildings themselves did not tell him so, for he saw them with a fresh eye, an ignorant eye, an eye unprepared for sophistries, and a mind empty of dishonesty. Nevertheless, a vague sense of doleful community among buildings slowly suffused him. They began to appear within his consciousness as a separate world in their way; a world of separated things seemed, in unison, to pass on to him a message from an unseen power. Thus immersed, he returned again and again to his wonder-building, the single one that welcomed him, the solitary one that gave out a perfume of romance, that radiated joy, that seemed fresh and full of laughter. How it gleamed and glistened in the afternoon sunlight. How beautiful were its arches, how dainty its pinnacles; how graceful the tourelle on the corner, rising as if by itself, higher and higher, like a lily stem, to burst at last into a wondrous cluster of flowering pinnacles and a lovely, pointed finial. Thus Louis raved. It has been often said that love is blind! If Louis chose to liken



this new idol of his heart unto a certain graceful elm tree, the pulchritudinous virgin of an earlier day, surely that was his affair, not ours; for he who says that love is blind may be himself the blind—and love clairvoyant.

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One day, on Commonwealth Avenue, as Louis was strolling, he saw a large man of dignified bearing, with beard, top hat, frock coat, come out of a nearby building, enter his carriage and signal the coachman to drive on. The dignity was unmistakable, all men of station in Boston were dignified; sometimes insistently so, but Louis wished to know who and what was behind the dignity. So he asked one of the workmen who said: "Why he's the archeetec of this building." "Yes? and what is an archeetec, the owner?" "Naw; he's the man what drew the plans for this building." "What! What's that you say: drew the plans for this building?" "Sure. He lays out the rooms on paper, then makes a picture of the front, and we do the work under our own boss, but the archeetec's the boss of everybody." Louis was amazed. So this was the way: The workmen stood behind their boss, their boss stood behind the archeetec—but the building stood in front of them all. He asked the man if there had been an "archeetec" for the Masonic Temple, and the man said: "Sure, there's an archeetec for every building." Louis was incredulous, but if it were true it was glorious news. How great, how wonderful a man must have been the "archeetec" of his beloved temple! So he asked the man how the architect made the outside of the temple and the man said: "Why, he made it out of his head; and he had books besides." The "books besides" repelled Louis: anybody could do that; but the "made it out of his head" fascinated him.

How could a man make so beautiful a building out of his head? What a great man he must be; what a wonderful man. Then and there Louis made up his mind to become an architect and make beautiful buildings "out of his head." He confided this resolve to the man. But the man said: "I don't know about that. You got to know a lot first. You got to have an education. Of course us mechanics has our books too. That's the way we lay out stairs, rails and things like that. But you got to have more brains, more experience, more education and more books, especially more books, to be an archeetec. Can yer father keep yer at school long enough?" "Yes; he says he'll keep me at school until I'm twenty-one if I wish." "Well, that being so, yer may stand a chance of coming out ahead, but I honestly don't think yer have the right kind of brains. That far-away look in yer eyes makes me think yer won't be practical, and y' got to be practical. I'm a foreman and that's as far as I'll get, and I've done work under a good many archeetecs; and some of them that's practical ain't much else. And some of them that's fairly practical has so much education from

books that they gets awful fussy, and are hard to get on with." The latter part of this monologue interested Louis rather faintly, for he'd made up his mind. He thanked the foreman who said in parting: "Well, I dunno—mebbe."

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Shortly before his father left Boston for Chicago, Louis confided to him his heart's desire. The father seemed pleased, greatly pleased, that his son's ambition was centering on something definite. He "allowed," as they used to say in New England, that Architecture was a great art, the mother of all the arts, and its practice a noble profession, adding a word or two about Michael Angelo. Then he offered a counter proposal that made Louis gasp. It was none other than this: That Louis was fond of the farm and the open, that he had shown himself a natural farmer with ready mastery of detail of common farming. Why not go further. After proper preparation he would send Louis to an agricultural college, he said, and thus Louis would be equipped as a *scientific farmer*. Louis was dazzled. The word *scientific* was electrical. Before him arose the woods, the fields, the cattle, the crops, the great grand open world as a narcotic phantom of delight. The father was eloquent concerning blooded stock, plant cross-fertilization, the chemistry of soils and fertilizers, underdrainage, and so forth; Louis wavered. He sat long in silence, on his father's knee, lost to the world. Then he said: "NO: *I have made up my mind.*"

And thus it was agreed that Louis should remain in Boston to complete his General Education; after that to a Technical School; and, some day—Abroad.

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During the years preceding his decision, Louis, in practice, was essentially scatter-brained. His many and varied activities and preoccupations, physical, mental, emotional, his keen power of observation, his insatiable hunger for knowledge at first hand, his temperamental responses to externals, his fleeting mystic trances, his utterly childlike flashes of intuition, his welcoming of new worlds, opening upon him one after another, his perception that they must grow larger and larger, his imagination, unknown to him as such; all these things, impenetrable to him in their vast significance within the gigantic and diverse world of men and things and thoughts and acts, a world as yet sealed tight to him; all these things seemed to exist within him formless, aimless, a disconnected miscellany rich in impulse but devoid of order, of form, of intention.

Yet this was not precisely the fact. It was an ostensible fact objectively, a non-fact, subjectively; for a presiding order, a primal impulse, was governing and shaping him through his own marvel at manifestations of power, his constant wonder at what men could do; at men's power to do what they willed to do; and

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deeper than this moved a power he had heard in the Song of Spring, and which awakened within the glory of the sunrise.

All this was vague enough, to be sure, but his memory was becoming tenacious and retroactive. Little given to introspection, as such, he was in daily conduct and appearance much like any boy, though perhaps he had a more stubborn will than is usual. His aversion to schools and books had been normal enough, because they failed in appeal. Nevertheless, he began to swing around to an idea that there might be something useful to him in books, regardless of teachers; and this idea was vivified when he was transferred to the new Rice Grammar School building, the lightness and brightness and cleanliness of which put him at once in exceeding good humor.

True to form he reacted to these cheerful externals, and at once became filled with a new eagerness. A cloud seemed to pass away from his brain, a certain inhibition seemed to relax its hold upon him. As by the waving of a magic wand, he made a sudden swerve in his course, and became an earnest, almost fanatical student of books, in the light and joy of the new school house. Teachers were secondary: and in habit he became almost a recluse. For the idea had clarified that in books might be found a concentration, an increase in power: that books might be—and he later said they were—storehouses of what men had done, an explanation of their power to do, and that the specific knowledge stored within them might be used as tools of the mind, as men used tools of the hand. Louis saw consequences with extreme rapidity and daring once the first light of an initial idea broke upon him. His enthusiasms were pragmatic. He lost no time, once he saw an objective. His grammar-book in particular fascinated him. Here for the first time in all his schooling a light began to shine within a book and illumine his brain. Here opened up to him, ever more startling, ever more inspiriting, the structure of the language he spoke; its whys and its wherefors. Here opened, ever enlarging, a world of things said and to be said. The rigid rules became plastic as he progressed, then they became fluent; grammar passed into romance; a dead book became a living thing. He could not go fast enough. When would he reach the end?

And as the end approached nearer and nearer, there came forth from the book as a living presence, as a giant from the world of enchantment, with shining visage, man's power of speech. Louis saw it all, but it left him feeble. He had taken grammar at one dose. As usual his imagination had far outsped any possibility of reasonable accomplishment. For Louis, as usual, *saw too much at one time*. He saw, at a glance, ends that would require a lifetime of disciplined endeavor to reach. And so, in a measure, it was with his other studies, though not so ardently. There was lit-

tle romance to be found in his arithmetic. It was in the main material and philistine. Yet he saw use in it. He accepted it as a daily task and plodded. It was not his fault but his misfortune that it was handed to him dry. Geography he took to kindly. He could visualize it as a diagram and it extended, on paper, his boundaries far and wide. Topographically and racially he could not see into it, even though he was informed, for instance, that the Japanese and Chinese were half-civilized. He asked what civilized meant and was told that *we* were civilized. There were various other things in the geography that were not clear; he found difficulty in making images of what he saw in the book. In his history book he was lied to shamefully, but he did not know it. Anyway, he had to take some things on faith. The history book did not interest him greatly because the people described did not seem human like the people he knew, and the story was mostly about wars. He got the idea that patriotism always meant fighting, and that the other side was always in the wrong.

As to compositions, the pupils had to write one every so often, on a given topic. The first subject for Louis was "The Battle of Hastings." He went at this dolefully, sought refuge in the encyclopedia, and in wabbly English produced a two-page essay weakly-hesitant and valueless; a mere task. He was marked low. The next subject was "A Winter Holiday in Boston." Louis filled the air with snowflakes, merry bells, laughter, movement and cross movement, amusing episodes and accidents, all joyous, all lively. In simple boyish English, he made a hearty story of it, a word-picture; yes, the suggestion even of a prose poem, for it had structure. Within it was a dominant idea of winter that conveyed a sensation of color, of form. Louis was happy. He had hard work to confine himself to four pages. He was marked high. He was commended before the class. But the topics seldom fired him; as a rule they were academic, arid, artificial, having no relation to his life experiences, concerning which he might have said something worth while had he been given the chance. Another feature of the curriculum that went against the grain with Louis was the course in declamation, or "speaking pieces." For Louis had a streak of bashfulness in his make-up, which, though invisible in his former street fights, came painfully into view when he must face the class and "speak out loud." The ensuing torture of self-consciousness made him angry and rebellious. Besides, he had his opinions concerning various "pieces" and was not in the least backward in venting them. He ridiculed the "Village Blacksmith" unmercifully.

His pet aversion was old "Iron-sides," and it befell one day that he was to speak this very piece. As he approached the platform, he saw red; the class was invisible, no bashfulness now; teacher even, scarcely invisible. His mind was made up; he mounted the plat-

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form, faced about; and in instant desperate acrimony, he shrieked: *Ay, tear her tattered ensign down!!!!* The class roared; teacher stopped him at once; sent him to his seat. She left the room. Louis boiled in his seat. In the hubbub he heard: "Now yer going to get it." "Serves yer right." "Yer made a fool of teacher." "Serves yer right." "Fatty'll fix yer." The teacher, Miss Blank, returning, stilled the storm, and said calmly: Louis Sullivan, you are wanted in Mr. Wheelock's office. Mr. Wheelock, head master—called "Fatty" for short—was round, of middle height, kindly, with something of the cherub in his face. He wore a blond beard, had rather high color, merry blue eyes, a full forehead, sparsely covered with hair. He appeared not over thirty-five, had served in the army, and was judicial, considerate and human in his dealings.

As Louis entered he saw, not this Mr. Wheelock, but a Mr. Wheelock, gray of face, sinister of eye, holding in his left hand a long rattan. "Miss Blank tells me you have grossly insulted her before the class. What have you to say for yourself?"

Louis was fearless and aggressive by nature. He had crossed his Rubicon. He made a manly apology, wholly sincere as regarded Miss Blank. This cleared the ground but not the issue. He saw the rattan, and with steady eye and nerve he quickly wove about it his plan of action. The rod should never touch him; it was to be a battle of wits. He boldly made his opening with the statement that he regarded the poem as bunkum. Mr. Wheelock sneered. He then went on to take the poem to pieces, line by line, stanza by stanza. Mr. Wheelock looked puzzled; he eyed Louis quizzically. He edged about in his chair. Louis went on, more and more drastically. Mr. Wheelock's eyes began to twinkle, calm returned to his face, he dropped the rod. He laughed heartily: Where in the world did you dig that up? Then Louis let go, he waxed eloquent, he spread out his views—so long suppressed, he pleaded for the open, for honesty of thought, for the lifting of a veil that hid things, for freedom of thought, for the right of interpretation, for freedom of utterance. He passionately unbosomed his longings. The head master, now sitting chin in hand, looked steadily at Louis, with grave, sad face. As Louis ceased, the master remained silent for a moment, then pulled himself together, relaxed, chuckled and patting Louis on the shoulder said: "That was a pretty fine stump-speech, young man. When you got through with Holmes, you left his poem as tattered as his ensign. As for the rest: Irish accounts for that. I'm glad we had it out though. I might have thrashed you in anger. Go back to your class now, and hereafter be considerate of a woman's feelings." Louis returned to his room, before all the class he made full amends. Then, in his seat, he set to with a book. His plunge into grammar had not been in vain.

Thus Louis worked on and on, all by himself, as it were, digging into the solid vein of knowledge as a solitary miner digs; washing the alluvial sands of knowledge as a miner sifts—a young prospector grub-staked by an absentee provider now settled on the shores of a vast Lake far in the West.

Living again with his grandparents Louis felt at home once more. He had respites from the city bareness and baldness. He studied in the evenings, in the sitting room, unmindful of the family doings. He lost interest in playmates; waved aside all little girls as nuisances and inferior creatures—they became nonexistent. He rose early, at all seasons and in all weathers, before the family were awake, walked the mile to the depot, took the train to Boston, walked a mile to breakfast and another mile to school. Many a night he was awakened by the rattling sash, and listened to the sharp wind moaning, groaning, shrieking, whistling through the crevices with many a siren rise and fall, from the depths of sorrow to the heights of madness, from double forte to pianissimo as this weird orchestra of the countryside lulled him again to sleep. And many a morning, in pitch darkness, he lit his little lamp, broke the skin of ice at the pitcher's top, washed in arctic waters, donned his clothing, neatly folded over a chair as grandmamma had taught him—his stockings even, carefully turned in for orderliness, then left the house still in darkness and silence, to break his way, it may be, through fresh-fallen snow, knee-deep on the level, and as yet without a trail, his woolen cap drawn down, his woolen mittens well on, his books bound with a leather strap, held snug under the arm of his peajacket as the dim light at the depot shone nearer, and a distant double-toot announced the oncoming train, and the blinding headlight that shortly roared into view as he stood, waiting, on the platform.

Yet this was not heroism, but routine. It was an accepted part of the day's doings, accepted without a murmur of other thought in days long since gone by.

Thus Louis worked, in gluttonous introspection, as one with a fixed idea, an unalterable purpose, whose goal lay beyond the rim of his horizon, and beyond the narrow confines of the casual and sterile thought of the day. Hence Louis was bound to graduate with honors, as he did, the following June of 1870. There and then he received in pride, as a scholar, his first and last diploma. Never thereafter did he regard life with the gravity, the seriousness and the futility of a cloistered monk. That summer, he spent part of vacation time on the farm, and part of it within the primeval forest of Brown's Track in the northern part of the State of New York. On his return to Boston in September, he passed the examinations, and at the age of fourteen entered the English High School, in Bedford Street—there to expand.

(To be continued)

## Castles in Spain--II

By GEORGIANNA GODDARD KING

*Photographs by E. H. LOWBER<sup>1</sup>*

WHEN S. Louis invited his cousin Ferdinand to join him in a Crusade, and the King of Castile replied that he had a complete crusade at home functioning actively, it was no more than truth. Spaniards of the thirteenth century enjoyed all the advantages, in culture as well as morale, in worldly as well as spiritual benefits, that Frenchmen were to acquire in Syria by the intercourse with an alien race in no way inferior, highly civilized, disciplined, intellectual and exquisite, equally apt for poetry and medicine, for philosophy and military architecture. The Frankish castles in Syria supplied the models not only at home for Templars and Teutonic Knights when these were surrendered and the Europeans expelled, but for the feudal lords of northern and of southern France, and possibly in Navarre and Aragon.

It is probable, however, that in Castile and Andalusia the building tradition was earlier formed on Oriental models and persisted unaltered down to the Renaissance; and this may be true also on the east coast and the Cantabrian shore, in Galicia and the Asturias. In the wars of the Peninsula, Spanish castles were ruined so often and rebuilt up to so late an epoch that trustworthy dates are very hard to come by; yet a little evidence exists, partly historical but partly direct also. In those parts where the Spanish race is purest, and the tradition, Visigothic and Mohammedan, least contaminated by alien occupations and by foreign alliances of the reconquering kings, the earliest mediæval castles are quite unlike those of the northern peoples.

In France and England the first castles consisted of a ditch, a mound, and a keep, concentric and superimposed; only after the Crusaders' return were they changed into such gallant conceptions of lovely contours, and learned massing of strength and tension, as appeared when Coeur-de-Lion built Château Gaillard in 1196; and never, even in the Renaissance, did they quite unlearn the grim custom of the donjon. On anyone looking over plates of English and French castles the conviction is impressed that the main element of them is the great tower. With Syrian castles this is hardly true: at that called Karak of the Knights, or at Castle Pilgrim, or at Karak the Stone of the Desert, it is hard to make out the keep among the mighty towers that rise within the double circuit of defense. The plan of these Crusaders' castles clings to the hill-top that they crown, as the Byzantine and Arab architects since Justinian's day had preferred to set their own.

It is with the building of Justinian that any serious study of Spanish castles will have to begin. The Em-

peror was an untiring builder, in Constantinople as in the provinces, and to the farthest outlying frontiers he sent his architects, from Ctesiphon to Cadiz. Drawn from Hellenistic Asia, his military and hydraulic engineers were the finest the world had ever known. All along the north of Africa we may see his castles, built four-square with square corner-towers, or round towers sometimes instead; and sometimes round and square towers midway the curtain wall. They are dated by inscriptions. Justinian and the emperors who followed him held the entire south of Spain from A. D. 554 onward to 624, at the height of the building age, when S. Sophia was rising; and the Visigoths as they slowly won the south took over the architecture, like the decoration, which they found there. When, nearly a century later, the Moslem invasion broke over Spain, and the Visigoths were driven back, past the Tagus, past the Duero, past the mountains of Leon, to a refuge beyond the Asturian highlands, upon the northern shore, they carried thither neither more nor less than what was in their heads: a Byzantine-imperial tradition of building churches, a Byzantine-imperial tradition of building strongholds.

The wide region known as Campos de los Godos was, as the name tells, won back early in the Reconquest. It lies, roughly speaking, between the mountains of Leon and the Duero valley, and between the old Road which runs from Medina to Burgos and that, just as old, which runs from Zamora to Astorga. The wide plain may be measured, more exactly, from Rio Pisuerga to the Sil. For many centuries these fields have been fought over—by the warring children of Ferdinand the Great, by the successors of Alfonso VI, the enemies of Alfonso IX, and, lastly, by the Communes when they rose against an alien in the time of Charles V. Burned and rebuilt more often than any historian can say, the castles of that region still keep as Byzantine traits, recognizable through all alteration, the square plan and the absence of a central keep. Aguilar de Campó lies now ruinous on the steep hill-top, with four huge, round towers challenging the four winds. A long spur reaches down where the incline is least; round towers flank the curtain that culminates in a larger one, somewhat as at Peñafiel. But of a keep there is no trace; no more than at Gatal or Timgad in the African highlands. So the castle of Montealegre shows four square towers tangential to the corners and round towers midway the curtain. It was besieged in 1216 and built in 1469, says the historian; who shall say when first built, by what Ordoño or Veremund or Froila, with what clear or dreamy recollection of his ancestors'

<sup>1</sup> Permission of the Hispanic Society of America.

fortress set among chestnut woods and embowered in oleanders in what once was Betica? A third example must suffice: that of Ampudia with a mighty keep at one angle and the other three square corner-towers various in size and epoch, with an outer enclosure of towered walls rising beyond the moat and about the drawbridge, and a town wall that rings in all with its manifold round towers, much as Procopius describes the ideal fortified city under the Empire. And indeed in this very region a Basilian convent, owing obedience to the Greek church, long survived.

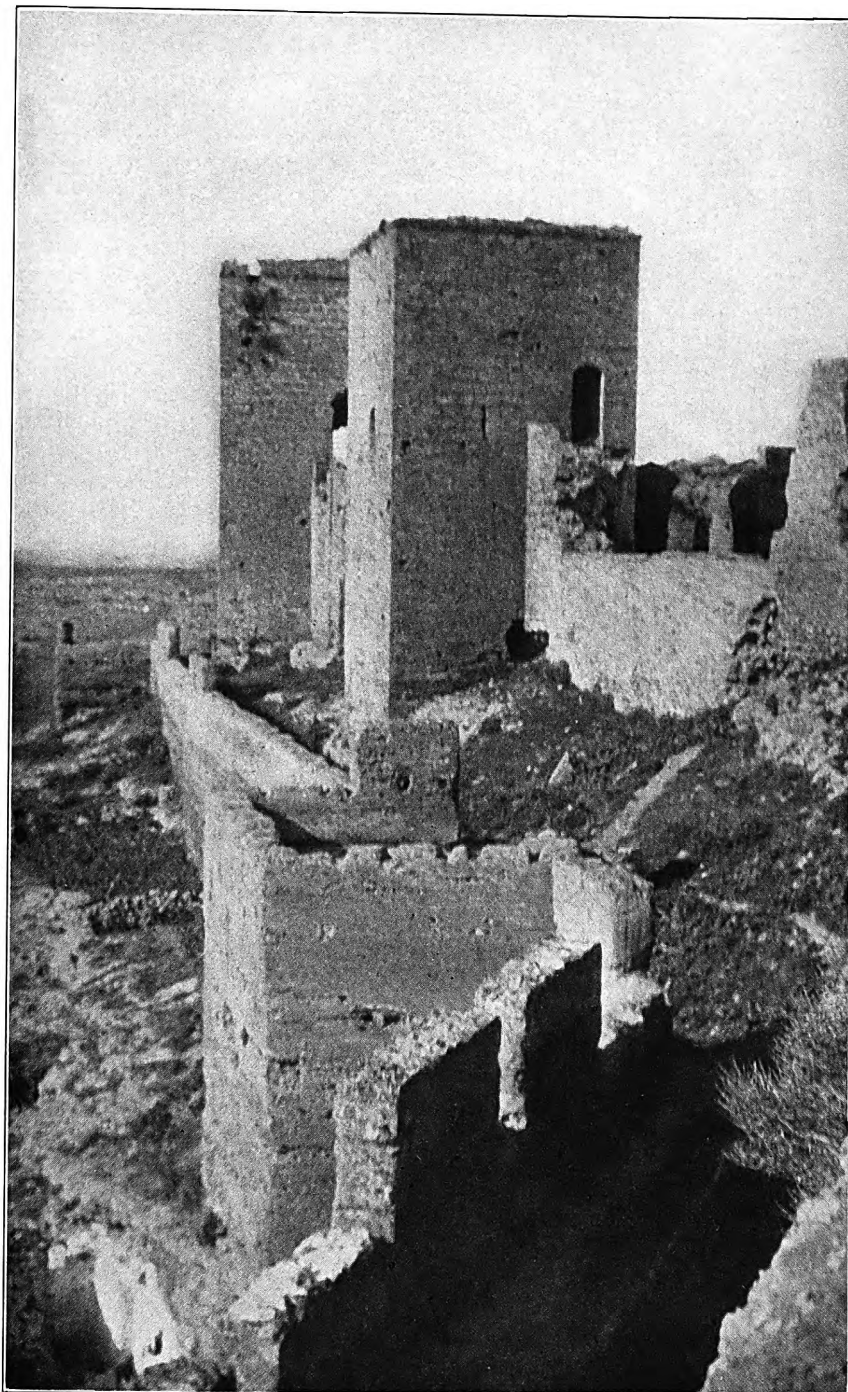
The Moslems who entered Spain before the first century of the Hegira had ended may have brought their own builders; or they may have sent back, as time went on, to Damascus or Bagdad, or Babylon or Egypt. Their style in military architecture is marked, in such late castles as have survived for study, by the multitude of towers that rise along the hill-crests they selected, and guard the curtain walls by their command of flanking fire; by their irregular outline; by their complicated approaches, and their underground cisterns and storehouses. How much of their own skill must be set down as debt to Byzance, is not here the question, but it would be doubtless the lion's share. At any rate, they built quickly and well. In 761, just half a century after the death of Roderick, Toledo was well fortified, with new-made walls and towers; anon Abderrahman II had the walls and strongholds of Merida repaired by Giafar ben Muhasin, the chief of the architects, and in 981 Fatho ben Ybrahim the Omeiad, famous for his wisdom and his numerous journeys to the East, fortified, or enlarged, the fortifications of the castle of Maqueda on the Tagus. There a great battle was fought in 1013, and the Vali of Toledo, Obeyd Ala, was defeated by his rightful lord the king of Cordova; there in 1083 to Alfonso VI was surrendered all the domain from Talavera to Madrid. A century later the castle was given to the Order of Calatrava.

The Military Orders have always played a part in castle-building: the Templars in their turn had fetched their plan and their square towers from the East and built superbly, for instance at Ponferrada in the Vierzo; the Knights of Calatrava carried with them the pure Cistercian early Gothic: for instance, to the mother-house that bears their name, below Ciudad Real. But all the time, on just the other side of an imaginary shifting line of frontier that waxed and waned with the seasons and the campaigns, abode the Moslem builders. They reared fair and rosy their delicate brick towers in squares or octagons, they corbelled out the *chemin de ronde* on arches along the inner face of the wall—as was indeed recommended by Philo of Byzance—they set no machicolis to overhang but they capped the battlements with a dainty pyramidal cresting.

Above Cordova on the river, where Roman pottery and Visigothic metal yet turn up under the spade to attest earlier occupation, they built a castle which was

to serve the King D. Pedro in the eleventh century for his treasury, and a Spanish noble in the twentieth for his toy; it is called Almodovar del Rio. The ascent thereto is steep and difficult; the towers therein are solid up to the level of the inner ward, the *chemin de ronde* runs through them, higher up; the keep is set apart and connected only by a light bridge at the same level. The vaults were of brick and domical or cut-stone, eight-sided cloistered vaults on squinches, or, in the upper chamber of the keep, a true ribbed dome carried on angle-arches after the manner invented by Sassanians and employed by provincials throughout the nearer East. It has been restored now, and the tourist who stops at Cordova may see it for his pains.

Rather like in effect, when the turban nodded in both, will have been the stronghold of Alcalá de Guadeira, built by Abu Yacub in 1172, surrendered to S. Ferdinand in 1246, and rebuilt and altered by the Christian conquerors, who added a mighty keep where the hill-top breaks down to the stream and encloses it in a descending series of wards and barbicans. They dedicated a church, too, where the mosque had stood, as may be known by the broadish square plan of the chapel of S. Michael, and its minaret-belfrey, close behind the castle on the utmost hill-top crest. To the siege of the little city in the fifteenth century, Mosen Diego de Valera devotes a chapter, nor was it the least of the Divers Feats he celebrates in his *Memorial*. Fernan Darias de Sayavedra held the castle for the Marquis of Cadiz, and thence harried Seville, where the Duke of Medina Sidonia lay. "So the Duke bestirred him to gather a great company of men, saying that he wanted to go to Xerez, and as Alcalá be only two leagues from Seville he bid fetch out his lombards (which are great guns) and ponies (which I take to be like mortars) and catapults and various rams and all the other things needful to fight, and went to beleaguer Alcalá de Guadeyra with about 3000 horse and 8000 foot. The Marquis hearing this wrote to his friends and came up, so that in truth on one side or the other were arrayed the greater part of the noble gentry of Andalusia." And this complicates the situation. There is a moment in the story when treason was smoking like flax where a spark lies: a Commander of S. James called Mosqueira was the retainer of the Master of that Order, D. Juan Pacheco, who would have been glad had the city not been taken. "Mosqueira, feigning a wound from the hand of the Duke's gunner Master Alonso, stabbed him, as he was about to fire a great lombard, which when the Duke heard, though not naturally inclined to cruelty, he was so wroth that he laid hand on his sword and ran him through." His death upset all the plans. The outcome was that the two principals, with three retainers each and without arms, were locked into the little castle of Marchenilla near by, there to stay till they agreed: which is one way of conducting arbitration. Alcalá is



ALCALA DE GUADEIRA  
Chemin de ronde



PENAFIEL—THE PROW OF THE CASTLE

too old for sieges now: the outer walls are gone, where stubble gilds the plain, and where, within, the wavy grass is tall, the broken vaulting above *aljibe* and granary wants wary walking. The river brink is terraced for vine-garth and oliveyard, where through the red earth the outcrop of brick and stamped clay is like a redder rock, timeless and forgotten. To the upper town the steep street goes up too steep for carriage or motor-car, as clean as if men walked there only on Sabbath days; the murmuring mosque is a hushed and twilight chapel, where, on the retable, perishing colors are crimson and azure still, and the tarnished gilding glimmers in the afternoon light from the rarely-opened door. The lower town is filled with the soft throbbing purr of mill-stones and the creaking wheels of the patient mules, for the finest bread in the world is baked at Alcalá, of flour they have grown, ground, bolted and sifted, and the Psalmist's blessing is fulfilled upon the place, where the low, winter sun lies long and the towers hang filmy above the brimming pools.

Those towers that the Moslem builded yet crown the Alhambra<sup>1</sup> hill; and he worked on through the centuries, in Andalusia, till the Alhambra fell. One Master Mohammed a Moor planned and directed the castle of Carpio on the Guadalquivir, and his head-workman who saw it finished in 1325 was called Ruy

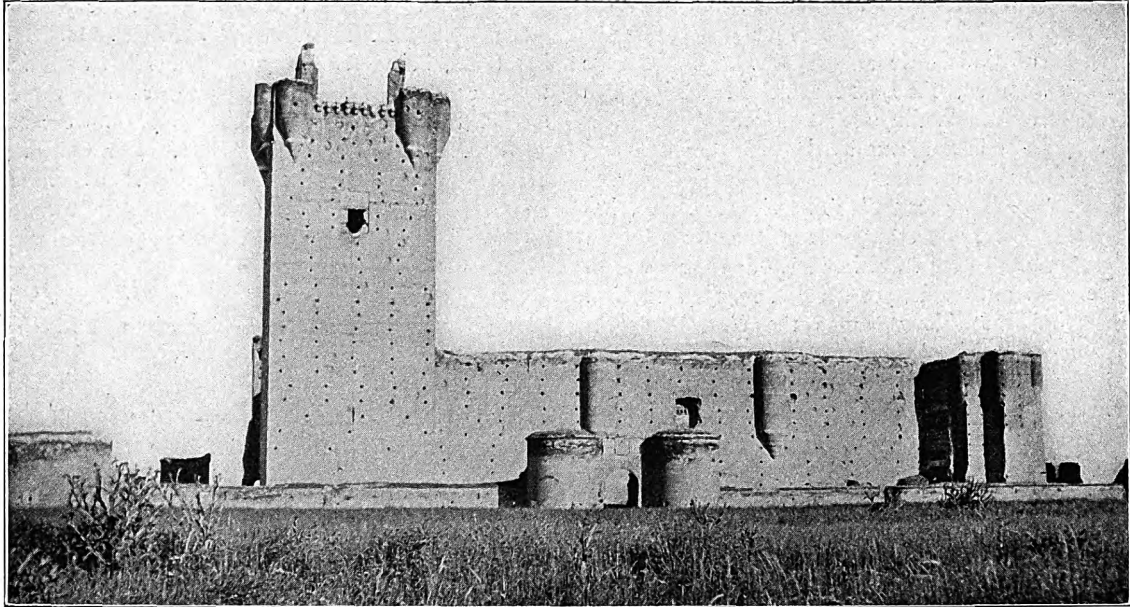
<sup>1</sup> For Granada see February, 1919.

Cil, who by his name would seem to have been a baptized Moor. In 1477 Mohammed Agudo was master mason of the Alcazars of Seville:—but the old story at Seville, how King Peter built a pleasure palace for Maria de Padilla whom he loved, is another story. Spain was still in touch with the East; in that same year of 1477 an Alexandrian called Staius built the mole at Barcelona, and when storms prevented its completion the city officers and the Chamber of Commerce took council together with the best architects that were to be found in Syracuse and Rhodes and Crete. Between Justinian's veterans in the seventh century and the divided caliphates in the eleventh, between the Latin despots of the East in the thirteenth and the merchant princes of Barcelona in the fifteenth, there is no break.

At moments the trail is crossed by Italian or French builders; indeed yet they do not divert the course of things so much as might have been expected. When the castle of La Calahorra was erected in the sixteenth century and decorated in the best Genoese style, the four-square plan, the round angle-towers, are traditional, and only the incorporation of the great stair in the ensemble of the central court, is foreign and unparalleled. It is barely conceivable that a French château inspired the plan of the beautiful castle of Belmonte, not very far from Cuenca, begun in 1455 and finished in 1470, by the Master of Santiago, D. Juan Panheco. While the site may have fortified long before, certainly the pentagonal plan was conceived by the Renaissance spirit, and bespeaks the caprice of a wanton noble or the experiment of a curious engineer. Here, by the riverside under its shadow, was born, of gentle blood, though not, as often alleged, of the great lineage of Ponce de Leon, the gracious youth who was to be a glory in the Augustinian Order and at the University of Salamanca as Fray Luis de Leon. The hill with its ruins belonged latterly, I believe, by right of inheritance, to the late Empress Eugénie; I do not know to whom she has left it, but perhaps it is the Institute of Valencia de Don Juan. That delightful body, a sort of intellectual hospice for poor scholars and the home of recondite and adorable learning, already possesses by an inheritance legitimate and direct the superb ruins, in the west, of the castle of Valencia de Don Juan.

While, as in Syria, some castles followed the form of the hill-top in Castile, of which the finest instance is Peñafiel,<sup>1</sup> yet alongside the quadrilateral form persisted. The double and triple enclosure, learned from the East, was rarely omitted. Those walls which the traveller from the train may see, pausing at the junction of Medina del Campó, belong to the outer line of defense on the plan published here; beyond them lies the moat, in which a pier supported the drawbridge when lowered, and a lower enceinte defended this in turn, while the castle proper not only overlooked the

<sup>1</sup> For Peñafiel see November, 1921.



MEDINA DEL CAMPÓ—BROADSIDE VIEW

rest but rose within a short bowshot, close enough to help in the first defence: all this still in accordance with the Byzantine rule. Eastern also is the depth of the moat and the marked battering of the wall that rises from it. The keep differs from that at Peñafiel, for instance, and most others, not only by its own position but in the placing of the turrets,—not, here, set on the angles and mid-way intermediate but flanking the corners in pairs that show the angle between.

Standing on a main road, commanding a great city, and a huge annual fair, this castle is probably older than our history of it. Built in the twelfth century, it keeps of that age no architectural remnant. It keeps, however, a good story how a peasant proprietor was accused to the king of coining money and showed that it was only diligence and good management which brought in the wealth, then, being justified, asked leave to spend the wealth in building up the great



IN THE EAST—DENIA HILL ABOVE THE SEA



## THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

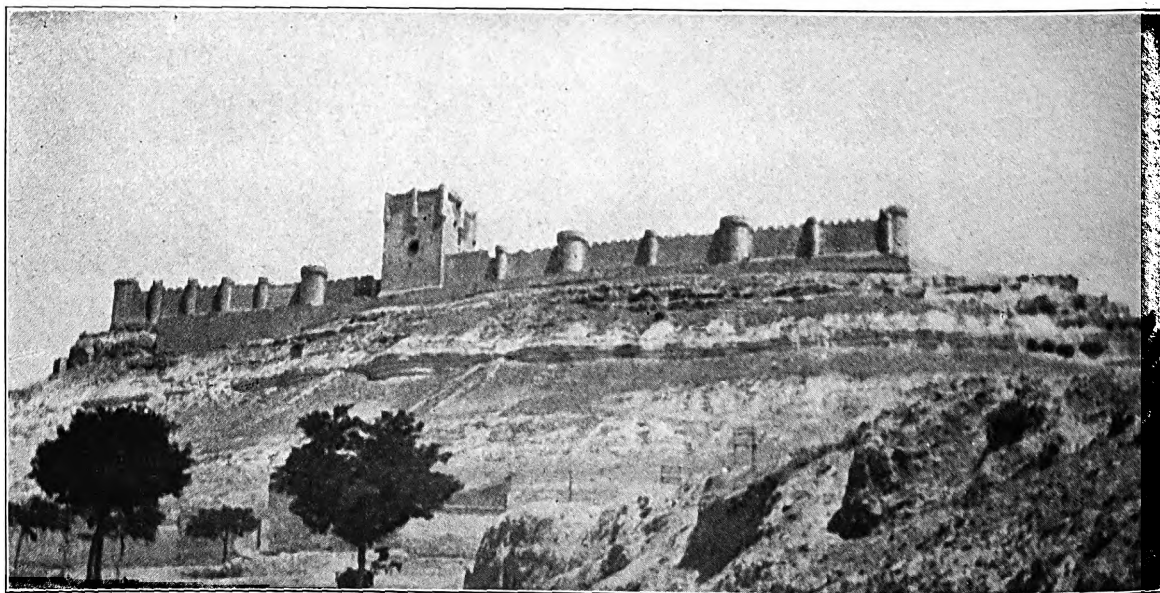
castle. Fernando Carreño in 1440 was erecting the present one, and in 1479 Alonso Nieto was Master of the Works of the Castle and Town. Le Mota de Medina, it is called, like La Mota del Marqués which lies westward from Valladolid: the word (which signifies a mound) is the same as the French *motte* and the English *mote* and *moat*, and possibly lies back of Mariana's "moated grange." The site, however, has but little eminence and that probably natural, being on the river's bank. Few travellers have done better than stop over between trains, yet Medina repays attention.

The wind that blows across the Castilian plain turned up the poplars' leaves all silver in the quiet light and shook a few stubble stalks: it came out of the infinite far, as though it had never stopped blowing since the creation of the world. Bounded by slopes like the flanks of great creatures, purple in the shadow, tawny on the sunward side, the castle rose up, pale against the pallid sky.

A national monument now, locked up and inaccessible at the irrational hours of the sentimental wanderer, it is still a sort of museum or pantheon of memories. Good Queen Isabel loved it well, and set the arms of the Catholic Kings on the portal. Here in November of 1503 the poor princess Doña Juana was in residence; and, being bent to follow her, worthless Philip the Handsome came down as far as the gate-house, but the sentry would not let her by. The Bishop of Burgos and the lords who had her safety in charge raised the draw-bridge and dropped portcullis, but if she could not go out she would not go back, and for three days and nights the poor distracted lady stood out in the wind

and weather, leaning at times against the wall in the embrasure, not eating and not listening. Isabel found her there, being fetched post-haste from Segovia, and took her upstairs and put her to bed like the loving mother that she was; but Isabel's years were already counted. Here she died in 1504. For Queen Joan, Tordesillas was worse than Medina. Rebellious nobles had often held the castle, then with the turn of the wheel the Archbishop D. Pedro Tenorio had it for his prison: so had Caesar Borgia, who contrived a romantic escape in 1506 but broke a leg forby, whereof he shortly died. Another prisoner was a Marquis of Coria, D. Enrique de Toledo, held for *burlador de damas* (as a deceiver of ladies), like D. Juan Tenorio. Here were lodged the gentlemen who arranged the ransom of François I, and they doubtless felt as much like prisoners as the rest. Here too for twenty years was kept Hernando Pizzaro, the brother of the great Conquistador, a close prisoner, accused of cruelty in the new dominion: his character was cleared at last, but by then his day was come to the closing. Yet it was a proud hold, independent of Church and State: *Ni el Rey officio ni el Papa beneficio*, says the shield; and in the Comuneros' rising it was held for the town while arms and men as many as might be spared were despatched to help in Segovia the gallant Juan Bravo and the cause of liberty.

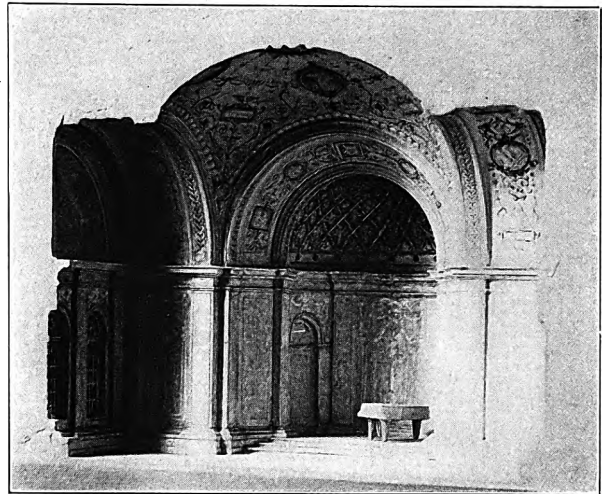
These ghosts walked the pale ramparts one August eve: the sky was amber of grape and silvery purple like the bloom of a plum. No green showed anywhere, only an ashen-colored earth and amber-colored slopes, waiting till a moon should rise.



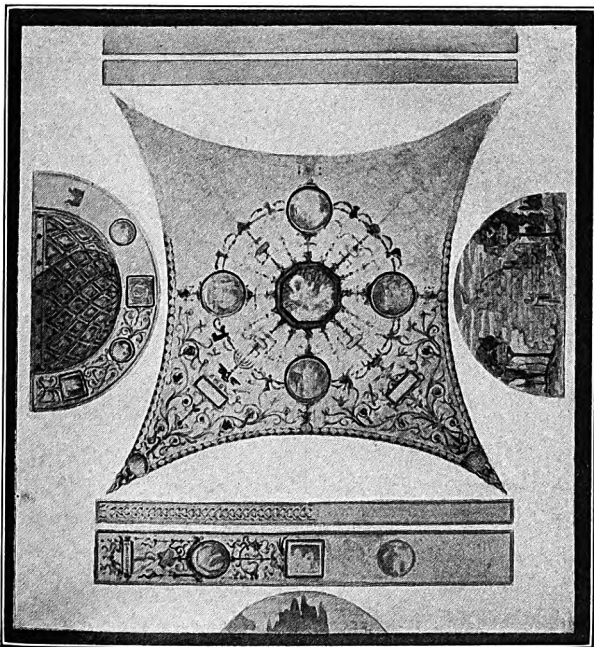
PENAFIEL—CASTLE FOLLOWING THE HILL TOP CONTOUR



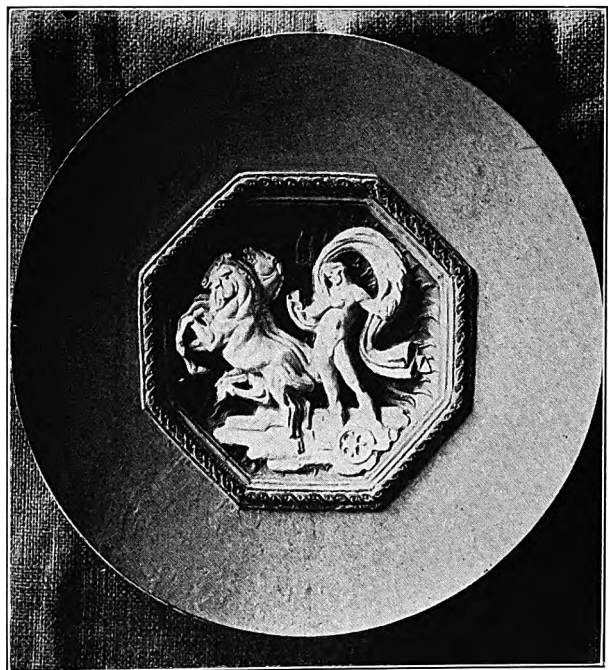
ELEVATION  
J. K. Smith, Architect



MODEL  
J. K. Smith, Architect



PAINTER'S DETAIL  
S. Lascari



SCULPTOR'S DETAIL  
E. R. Amateis

### AMERICAN ACADEMY IN ROME

The Winning Designs in the Competition for the 1922 Collaborative Prize Offered by the American Institute of Architects (See Page 399)



THE DOME OF ST. PETER'S, AS EXECUTED



# Comparative Notes on the Dome of St. Peter's and the Original Model by Michelangiolo

By VICTOR L. S. HAFNER

*Fellow of the American Academy in Rome in Architecture*

The scholar or tourist who has seen, in Rome, the original model of the dome of St. Peter's by Michelangiolo and who has compared it with the dome as it exists today cannot but feel that steps should be taken to complete the dome as originally intended by the master architect.

About the year 1547 Michelangiolo Buonarroti was appointed architect-in-chief of the Cathedral of St. Peter's. On taking this office he found the state of affairs at the building quite serious, and his first duties were to free the church and himself from the clique of unscrupulous contractors and inferior workmen, who were parasites in the very vitals of the work. His predecessors as early as Bramante's time encountered these individuals and money had been misappropriated by many fraudulent devices. San Gallo had not the force of character or strength of mind to arrest these conditions. Michelangiolo made his position sure by refusing all payments for his services. This enabled him to use a strong hand in checking dishonesty and eliminating many lazy workmen. Naturally, these measures made many enemies. The workmen immediately appointed a committee of deputies to protest to the Pope and to check Michelangiolo. He termed them "Setta San Gallecca," and showed his shrewdness by keeping the injured officials in darkness as to his plan, giving information from day to day only as the work progressed. This continued until the year 1557. The committee of deputies appointed Nanni di Baccio Bigio, an incompetent architect, an enemy of Michelangiolo, as spokesman. The Pope received the committee and appointed a relative to investigate their grievances. There was nothing to report against Michelangiolo's actions, who, however, tendered his resignation, which the Pope wisely refused. In 1559 Pius IV strictly forbade any changes from Michelangiolo's designs. This was the condition the new architect had to meet on entering the office of architect-in-chief of St. Peter's and is the reason for the model which proved such a help to the subsequent architects who carried out the original designs.

When Michelangiolo had reached the sublime age of 82, his friends, Cardinal of Capri Donato Giannotti Lottino, Tommaseo Cavalieri, and Francesco Bandini, advised him to have a model prepared so that, in case of his death, his work would be continued as he intended. (If only his friends could have persuaded him to have had a model made of the Façade as he dreamed it!) This we know to be the case from the following letter written to his nephew:

From Rome, 13 February, 1557.

To LEONARDINO DI BUONARROTO SIMONI in Florence:

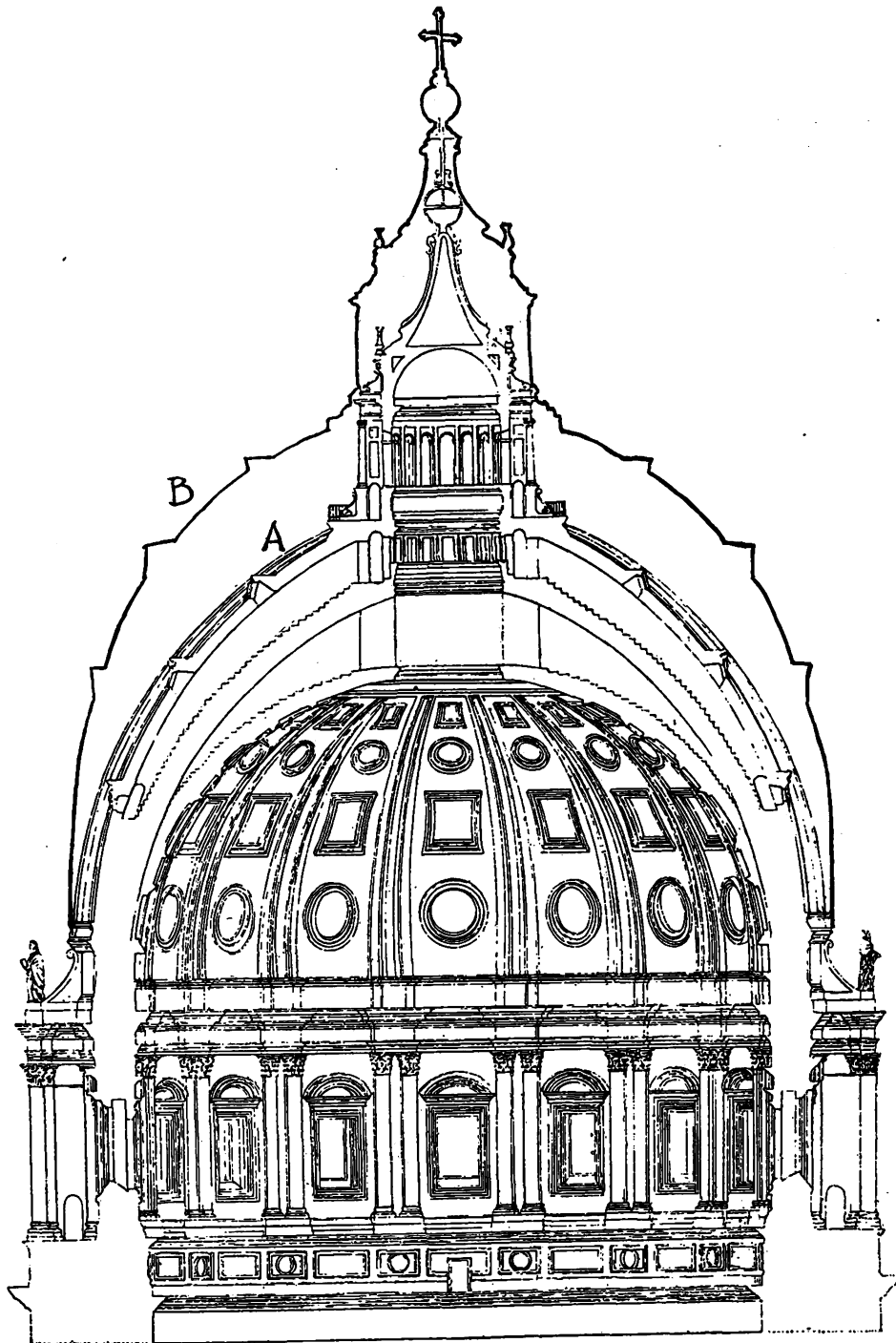
"When, about two years ago, Messer Leonardo, a servitor of the Duke of Florence, came to visit me here in Rome, he told me His Lordship would have been greatly pleased if I had then returned to Florence, and held out many inducements in the name of the Duke. I replied that I

begged His Lordship to grant me sufficient time to enable me to leave the fabric of St. Peter's in such a condition that it could not be altered by the substitution of any other design for my own. As I heard nothing more about the matter I proceeded with the said work, but it has not yet reached the desired condition; and not only that, *but I am obliged now to construct a large wooden model of the dome and lantern so as to show the exact manner in which it is to be finished.* All Rome has asked me to do this, the Reverend Cardinal di Capri especially, and I estimate that it will keep me in Rome for another year; at least I entreat the Duke for the love of God and St. Peter to grant me this delay so that I may come back to Florence freed from this haunting thought, and feeling that I shall never be obliged to return to Rome again. *With reference to the work having been stopped,* this is not true, for between masons, bricklayers and laborers, there are still sixty men at work, as may readily be seen, with good hope of continuing. I wish thee to read this letter to the Duke and to beg His Lordship on my behalf to allow me to remain here for the period already mentioned, which will be necessary before I can return to Florence; for, if my dispositions now *incorporated in the structure* were to be changed, which *certain envious persons* here seek to compass, it would be as though in all this time I had accomplished nothing.

MICHELANGELO BUONARROTI."

The model was a year in construction and we are told that a certain Giovanni Franzese is responsible for this work. (Vasari speaks of him as Jean: Vasari XII 252, 253). It measures 12 feet 6 inches in diameter by 20 feet in height. This model has fortunately come down to us practically intact and now rests in a room over the left aisle of St. Peter's Cathedral. It is soon to be moved, however, to a new museum under construction and adjacent to the Cathedral. I have carefully measured the model and shall reproduce it exactly, and I hope that my reproduction will be permanently exhibited in a museum in the United States. Thus, thanks to Cardinal of Capri and his friends, the world has now among its collections of many domes the finest example ever created by the human mind. Still, it is not yet complete as Michelangiolo intended it.

By looking at the two photographs accompanying this article, it will be noted that several changes took place even in the time of the great architect, for it is known that the dome had reached the height of the cornice of the buttresses at the time of his death (1564). One will notice that he varied the window heads between the buttresses. In the model they are all pedimental, whereas in the actual dome they are alternately pedimental and segmental. Other changes took place in the detail of the festoons and in the insertion of the lion heads above the swags. In addition the detail of the leaves of the corinthian capitals is much more ornamental on the dome than in the model.



THE DOME OF ST. PETER'S IN ROME  
A—Contour of the Model  
B—Contour of the Existing Dome

But the omission of the curved buttresses, or consoles, and the statues above the buttresses is the most important difference between the two. These features seem to me absolutely necessary to complete the silhouette of the dome. How graceful the lines of the dome would be if carried down to the buttresses! This would give the dome strength and grace, and do away with the sharp, angular effect now so apparent at the juncture of the dome and the buttresses. The omission of these details not only weakens the support given to the dome, but also lends a stilted effect to the dome by abruptly separating the perpendicular lines of the drum and attic from the domical portion. The addition of the figures of the apostles and the added superimposed weight would give more stability, both apparent and real, to the buttresses, and would terminate appropriately the steel-like quality of the line of the dome. How essential it is to complete the whole! Surely he who succeeds in correcting this error, which can even now be done, will receive great renown for his work.

A great change took place in the curvature of the dome as seen in the accompanying sketch. "A" shows the contour of the model and "B" that of the existing dome.

This change, no doubt, was made by Michelangiolo after experimenting with the model; he probably left instructions to be followed. Only a master's eye could have foretold that, seen from the ground in the immediate vicinity of the cathedral, the lantern would have been partly eclipsed by the curvature of the dome if the curvature of the model had been followed. The additional

heightening of the dome is more stately, more noble, more dignified. Certainly the curve as constructed is more stable as was proved by Du Bois Reymond, a French mathematician of the eighteenth century, who showed that the curve of the dome is the curve of maximum stability. The great master must have known this: at least I for one do not believe that the coincidence is a mere chance.

The other differences are in the interior. The model contains three shells, whereas in the present dome there are only two. Whether or not the omission of the lowermost dome took place in the time of Michelangiolo has been a subject of much discussion. Fontana and other early writers strongly insist on the fact that the architect's own plans and ideas were strictly followed. They never allude to a third or innermost vault. I feel that the elimination of the inner dome was a change made by Michelangiolo himself before his death. He probably found, in experimenting with the model, that the inner dome took away the soaring, sweeping quality he desired for the interior. Furthermore, an inner dome would have caused a long, dark, funnel-like shaft from the top of the lower dome to the lantern. The two existing shells of vaults are of brick, and the space between them gives access to the lantern. In order to resist the earthquakes, to which Rome is subject, chains were placed around certain portions of the dome. The chains were strengthened in 1747 when the second of the two shells displayed signs of cracking.

The architects subsequent to Fontana were Giacomo Della Porta and Vignola. The dome was finished according to the master's design in 1590.

## Cooperative Housing

By FREDERICK L. ACKERMAN

Cooperative housing has become a commonplace. That is to say, readers of the daily press (New York) have come to be familiar with the term. News items and the advertising columns carry information; salesmen will call upon request to furnish further details and initiate. So to understand "cooperation" one need no longer consult the volumes written about it by its friends. In fact, one need no longer cooperate to be a cooperator in a cooperative undertaking. So much down and so much a month takes care of the preliminaries; an operating company will manage—for a price. And if all goes as promised, one may sell out to some future cooperator for a profit.

Some will hold that these well-advertised undertakings which carry the name of cooperation are neither new nor cooperative. Others will hold that they serve to indicate a phase in a process of change—the decay of competitive enterprise carried on for gain and the rise of a system of cooperation as the same has been formulated by its friends. Debate concerning these points could at best only lead to academic classification. For these enterprises have all been classified in popular opinion, thanks to the news items and the advertising matter in the press. So that the point of interest here is not what these advertised

undertakings should be called, but what has "cooperative housing" come to mean to those who read and so become cooperators.

During the decade before the war a few cooperative housing enterprises were launched under the handicap of hostile opinion. The legal profession, for the most part, viewed such undertakings as extremely precarious ventures. Real estate interests and speculative builders could forecast nothing but disaster to those who so invested their savings. And what, above all, stood to render the launching of such undertakings extremely difficult was the reluctance of lenders and the current opinion that such investments were not to be rated as liquid assets.

But even so, under this reign of doubt and suspicion a number of so-called cooperative apartment houses were launched. For the most part these cooperating groups were recruited from the ranks of the more prosperous artists of one sort and another. In a few instances the enterprises were initiated by and for the cooperators themselves. Ordinarily they were "promoted" by some enterprising artist who had an eye out for gains easily secured. Characteristically and typically they were the outcome of a purpose to secure those pecuniary gains

## COOPERATIVE HOUSING

which had ordinarily accrued to the landlord. That is to say, buildings were designed to be occupied only in part by the cooperators. One-half or two-thirds of a building was designed for the use of tenants who would, it was hoped, pay enough rent to cover the operating expenses and the fixed charges. Typically a "successful" undertaking was one in which the cooperator's rent was no more than the calculated interest upon the equity which he had originally put in. So that in a successful undertaking, heat, light, and sundry services came free or nearly free to the cooperators in the case.

Hence one may fairly conclude that what served to make the launching of these early cooperative undertakings possible under the reign of doubt and suspicion—sustained by the viewpoint of the legal advisors who drew up the articles of incorporation, the lenders of money and the cooperators themselves—was the prospect of profit. Failure to charge such rents to the tenant as would cover fixed charges and operation was sufficient to characterize an undertaking as a failure. It is not, therefore, to be concluded that these pre-war cooperative enterprises differed in any essential, with respect to aim, from enterprises launched by speculative builders whose purpose was profit.

Out of the years of war there developed a still greater shortage of houses touching other than the "workers." Rents soared; signs of distress appeared in plain view. The cost of building reached a point where it was obvious that sufficient income from rents could not be secured to justify production. Nothing but loss was in sight for the builders of habitations. And the rent laws (New York) served to throw the ownership of habitations to rent into a dubious category of investment. So that for a time the production of habitations of every class ceased altogether; real estate men and builders had nothing to do. Which served to broaden the base of the housing problem; it now touched more than those who needed places in which to live.

The key to the situation, so it appeared, was the investor. But the professional investor had nothing to offer. For him there was no prospect of profit in building; building promised a loss. Which served to shift the point of view with respect to what had best be done. For if those who needed houses would assume the newly developed risks of ownership, houses could be produced; and of course real estate would turn over, production would pick up and builders and building-trades workmen would have something to do. All that stood in the way was the lack of a method of transferring the risks of ownership to the would-be occupants of habitations.

So, in response to the exigencies of the moment, the "own your own home" idea was stretched to cover the multi-family habitation. It was an extremely simple matter under the circumstances to brush aside the ancient legal objections to joint ownership of houses. Those whose business stood to be ruined by cooperative undertakings before the war now saw in collective ownership the most certain means of continuing their activities as producers of habitations for a profit. Thus, something of a shift in point of view has taken place. Cooperative enterprise, instead of being a competitor and alien, could be brought into the field. It could be sold at a profit.

Hence it is taken as a matter of course that pages of advertising are used to set forth the advantages of "cooperative housing"—that is, buying into a cooperative building. But buying into such a building discloses, in the typical case, some interesting things. Ordinarily, the relation between first mortgage and sale price to the cooperators indicates that the promoter advanced a 70 per cent equity—which is not likely. From the relations between first mortgage, a fair estimate of the cost of land and building and the price for which the building is sold, one gains the impression that the promotion of cooperative housing affords something more by way of reward than obtains in the typical case when the speculative builder sells to the investor in tenement or apartment houses. Which may be sufficient to account for the change in point of view with respect to the merits of cooperative housing.

In popular opinion, these pre-war and post-war enterprises are "cooperative." The latter differs from the former in that, typically, they offer no prospect of profit consequent upon ownership; all occupants are owners who assume the obligation to pay the operating costs, the fixed charges, and the cost of management during the period of payment or amortization.

It is said, and it is no doubt true, that for the time being, the tenant owner secures more for what he pays than does the tenant who does not own. And so the gains are credited to "cooperation." But neither the gains nor the enterprise itself may be referred to as the outcome of "cooperative" effort.

For it is not to be overlooked that these enterprises grew out of the prospect of profit to be secured by the promoters by resort to the time-worn methods of business traffic. Initiative in the case arose out of the need to "do business." To do business in this case was largely a matter of engaging in building without assuming the risks of ownership which had fallen into a precarious state. And all this took place by reason of the condition under which the time-worn methods of business traffic had hopelessly failed to provide houses.

What, then, emerges as of interest in what has taken place is this failure and the hatching out of new methods of business traffic under the wing of cooperation. The enterprises are known as cooperative; and certain gains are apparent. This may suggest that, by extending the field of cooperation, further gains may be secured. But in this connection it should be pointed out that the cooperator has gained no experience in cooperating. His function in the case has been that of the investor who buys that which the professional investor had refused to take. The cooperator merely acted in response to the exigencies of the situation—that is all. So that it does not follow that a system of cooperation is likely to grow out of these experiences.

It may be pointed out that we are here dealing with but an insignificant sector of the field of action; that initiative in cooperation is not likely to spring from such as become tenant owners in enterprises of the type referred to above; that cooperative action will develop out of the activities and experiences of labor—trade unionists. In connection with the latter assumption it is taken more or



less for granted that cooperation will consist of something more than the name implies; it will also be in the nature of a businesslike manœuvre—a flanking movement with respect to the financial interests as now constituted.

All of these assumptions on the part of those who set store by cooperation rest upon a further assumption that labor—the trade unionist in particular—is guided in action by a point of view completely at variance with that which underlies the business situation. That is to say, it is assumed that a lifelong experience, under conditions enforced by the machine process and given over largely to businesslike dealings with business men over conditions of work, wages and hours, has had no effect upon the workmen. He is conceived, both by his friends and others, to occupy a somewhat exposed position well outside the frontiers of the happy land of business promise.

But to assume that such a lifelong experience in businesslike bickering with business men has left no trace upon the outlook and the aims of the workman is to ignore the most obvious characteristics of the present situation. More and more the time-worn methods of business traffic are being adopted by workmen; and businesslike methods make for a single objective, the main chance. Pursuit of the main chance may require what we refer to as collective

action; but it does not follow that the outcome will be cooperation. Indeed, there is now little to indicate that the outlook of the workman as expressed by himself or by his representatives in trade unions differs in any essential from the outlook of the businessman who goes to his work with this end in view. To this broad statement there follow certain qualifications, of course. There are individuals and groups who have not taken over the outlook of businessmen and who, as a consequence, have other ends in view. But what has been said is substantially true of the larger labor groups whose outlook is said to account for most of our woes.

So it appears that the friends of cooperation have, for the time being, no more than an extremely weak foundation upon which to build a system of cooperation. For activity—initiative—without promise of pecuniary profit would seem to require a compelling, workmanlike interest surrounding the thing to be done. And the signs about us indicate that a compelling workmanlike interest in the thing to be done has fallen into decay. Which is to say that a system of cooperation, or cooperative housing, as formulated by its friends is not likely to take effect in advance of the decay of business traffic. So the friends of cooperation need not lose hope—not altogether.

## Community Planning and Housing

By CLARENCE S. STEIN

### Land Studies in New York City.

Although hundreds of books and pamphlets have been published dealing with the problem of land values very little statistical data is available giving the facts with any substantial degree of accuracy or in sufficient detail.

The published figures setting forth the value of farm and city lands are inaccurate and unreliable. But even if this were not the case the available data would be of very little use because of its failure to supply certain detailed information without which the bare statement of market values would mean very little. Let us take, for example, statistics of farm land. The figures purport to separate the value of the land from the value of improvements, yet the only improvements which are classified as such are buildings. But the work done upon the soil to fit it for agricultural purposes, the construction of fences, roads, wells, irrigation ditches, etc., all these things are improvements just as much as the erection of a building. We know that the cost of these items is very great but there is no data available to show what the actual cost has been. Nor is there any way of telling what is the relationship between the market value of farm land and the cost of making it available for use.

In city land, also, many factors are included which have never been properly separated or studied. The subject is one of such great importance that it seems strange that there should be so little available data, and yet it is a fact that practically no reliable statistics are available by which a complete picture of the costs and values of urban

land can be obtained. The material at hand consists principally of the assessment rolls of city tax departments. Until recently it was the practice to assess land together with improvements (buildings) without separating the one from the other; now, many of our cities have adopted the more helpful plan of assessing land and buildings separately. But the assessment rolls of themselves are not very enlightening because the assessed value has seldom been the actual value. To make matters worse, the practice of assessors has varied from year to year; that is to say, the assessment rolls in different years have represented varying percentages of the actual value and these percentages have varied in a given year for different localities and for different kinds of property. It is, therefore, a task of some difficulty to correct the assessment rolls in order to make them represent more clearly the actual market value of the property. But after we have accomplished this task a very much harder one awaits us. Just as in case of farm lands, a bare statement of market value failed to indicate improvements, so in the case of city land it is necessary to separate market value into the elements which have produced it. Thus the opening of streets and the installation of public utilities are usually paid for by the owner of the land. To build a sewer is as much an "improvement" to the land as to build a house. But the sewer is underground; it serves not only one parcel of land but many. Once installed it is never regarded as an "improvement." The value which it adds to the land becomes land value and as such it is assessed by the city. Another one of the hitherto un-

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studied elements of land value has been described by Professor Ely as the "ripening" value of land. In a city like New York it is quite obvious that certain sections should be restricted for particular uses and that a substantial amount of vacant land should be at all times available for improvement. If this were not the case owners of land that is immediately usable would be in a position to extort monopoly prices from prospective home builders. It is quite impossible to gauge, with any degree of accuracy, the amount of land which will be needed from year to year. When a considerable tract is developed, with street improvements, etc., there is an unavoidable lapse of time between the placing of the land upon the market and its complete development. During this time carrying charges accrue and must be paid for by somebody. A certain expense for this so-called "ripening" is as unavoidable as the cost of street improvements. On the other hand, nothing could be more wasteful than the practice in which all American cities have indulged of cutting up into building lots large areas of farm land long before there was any possibility of their use for building purposes and the sale of this land to investors, builders or real estate speculators, who were forced to hold the land for a long period of years because of the excessive number of building lots which had been developed.

What are the facts in any large community? Is the promiscuous sale of housing lots at auction socially desirable? These lots are usually sold to workers of small means who are seldom in a position actually to improve their land with a home but who hope to do so at a future time and who believe that the purchase of a home site will prove a desirable and profitable investment. What has been the experience of such purchasers? What is the relationship between market value of land and the cost of developing it? What happens when land is held vacant and gradually increases in value as a city grows up around it? What is the cost to the owner in assessments, taxes and interest? This is the type of question which the available data does not permit us to answer. Realizing the importance of knowing the facts, a committee<sup>1</sup> of men interested in social questions and especially in housing undertook about a year and a half ago to investigate certain aspects of land values in the city of New York. A statistician and an assistant were employed for more than a year studying the records of the register's office and the tax department. A full account of this investigation appeared in the August number of the *Quarterly Journal of Economics*. The purpose of this article is to give a brief account of the results of the investigation together with some of the statistical tables.

The writer realizes that this study must be taken only for what it is worth. It applies to only one city; most of the study covers only a limited number of pieces of real estate. That part which covers the entire city does so for a period of less than twenty years. No final conclusions can be drawn from so limited an investigation.

<sup>1</sup>The membership of the committee was as follows: Frederick L. Ackerman, Alexander M. Bing, Richard S. Childs, Prof. Robert M. Haig, Robert D. Kohn, Lawson Purdy, Robert E. Simon, Clarence Stein, Herbert S. Swann, Graham R. Taylor, Charles H. Whitaker.

It is hoped, however, that similar studies will be made in the City of New York as well as elsewhere; and in the meantime, the results of the investigation are submitted for whatever light they may throw upon the problem and in the hope that they will stimulate others to undertake similar research.

The investigation consisted of a study of the costs and market value—over a period of years—of various plots of land in New York City and—for a shorter period—of all the land in the different boroughs of the city, as well as an investigation into the value of land sold at auction approximately fifteen years ago and the relation between its present cost, including accumulated interest and taxes, and its present market value. The land studied was chosen more or less at random from pieces suggested by different members of the committee. The parcels of land were selected as samples of what was taking place all over the city. The amount of labor involved in each study was so great as to make the sampling method the only one practicable.

The market value of the land at the time from which the investigation started was fixed by the expressed consideration in deeds of executors or trustees or by public auction sales, etc. In order to determine the market value of the property in any subsequent year, tests were made of the relationship between the assessed value of approximately two hundred different parcels of real estate in that year and their actual market value as determined by executor's or trustee's deeds (in which consideration was expressed). Forced sales in partition or foreclosure were eliminated. In this manner the average ratio between assessed value and actual value was determined. It was assumed that this average applied to the parcels under consideration and the market value was determined accordingly.

The elements of costs which were computed were taxes, assessments, interest on investment and interest on taxes and assessments. It was assumed that if any part of the land was improved the income from the improvement would take care of the carrying charges. From the time that such improvement was made no further interest or taxes were charged. In all cases, however, assessments—whether the property was improved or not—were added to cost, as these are capital charges which are not covered by ordinary income. In calculating interest, the rate used was 4 per cent compounded, in order to put the owner of the land in the position in which he would have been, if, instead of buying land, he had put his money in a savings bank. It is realized that both the rate of interest and compounding it are open to question. On the one hand the rate is too low; most parcels of vacant land carry mortgages which bear an interest rate of 6 per cent and the owner of equity will certainly expect a return at least equal to that of the holder of the first mortgage. On the other hand, it may be questioned whether in a study of this kind it is proper to compound interest. The course which was adopted seemed conservative because it merely placed the purchaser of vacant land in the position in which he would have been if he had made so safe a use of his money as to place it in a savings bank.

In the tables which are given below the different items

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are separated. This enables the reader not only to see at a glance the relative importance of each but to eliminate an item if he sees fit to do so. Irrespective of the social usefulness or disusefulness of holding vacant land, and consequently of the right of the holder to be compensated by receiving interest on his investment, it is both interesting and important to know what the total cost is. Taxes and assessments are both paid to the city and are in a different category. The taxes which any individual pays depend, for their amount, upon the taxes which are paid by every other individual. If no taxes were paid upon vacant land the tax rate would be correspondingly higher on property that was improved. So with assessments. If a sewer, or street opening or a park is not paid for

by assessment against the property benefited, then the city must raise the cost of such improvement by general taxation, thus increasing the tax rate on the rest of the property in the city. A distinction must, therefore, be made between the expense items of interest on investment and those of taxes and assessments. In the one case, the owner of the land may or may not be performing a social service by merely holding the land. In the other case, the paying of taxes and assessments are by that much a direct reduction of the taxes of the rest of the city.

In the cost of these assessments, as well as in all the services for which taxes are levied, the element of land value enters. No effort has been made to estimate the importance of this factor, nor can it be estimated.

Table I—Vacant Land, Manhattan

	Base Year	Value in Base Year	Taxes on Vacant Land	Special Assessments	4% Compound Interest on Base Value	4% Compound Interest on Taxes	4% Compound Interest on Special Assessments	Total Cost	Value 1921
1. 14th Street, near Fifth Avenue ....	1840 Est.	\$60,000	\$385,881	\$5,072	\$1,102,209	\$749,234	\$33,614	2,336,010	\$726,000
2. Fifth Avenue and 39th Street .....	1845 Sale	3,000	311,781	1,031	56,109	290,552	8,487	670,960	932,000
3. Fifth Avenue and 73rd Street .....	1866 Sale	82,500	320,741	3,337	631,189	335,523	18,568	1,391,858	726,000
4. Fifth Avenue and 75th Street .....	1860 Sale	20,000	203,683	1,664	198,720	214,630	10,784	649,481	458,000
5. Fifth Avenue and 95th Street .....	1856 Sale	11,400	301,147	10,355	134,617	320,994	47,161	825,674	737,000
6. Fifth Avenue and 97th Street .....	1865 Sale	65,000	184,546	11,781	519,185	219,466	52,089	1,052,067	474,000
7. 64th Street and Broadway .....	1854 Sale	3,000	100,771	7,541	38,565	91,499	48,374	289,750	388,000
8. Central Park West and 97th Street...	1859 Sale	15,000	78,329	7,187	130,892	91,437	24,202	347,047	195,000
9. Riverside Drive and 109th Street..	1880 Est.	60,000	156,509	21,689	241,231	106,757	46,884	633,070	421,000
		\$319,900	\$2,043,388	\$69,657	\$3,052,717	\$2,420,092	\$290,163	\$8,195,917	\$5,057,000

Table I consists of the study of nine different parcels of real estate located between 14th and 110th Streets, Fifth Avenue and the Hudson River. The starting point varies, depending upon the dates from which reliable information was continuously obtainable. The total value of these nine parcels at the starting dates is \$319,900, which had increased by 1921 to the startling figure of \$5,057,000. During the time that these properties were held vacant, however, a total amount of \$2,043,388 was paid for taxes. In other words, the owners of this property paid to the city in taxes approximately 40 per cent of the present valuation of the property. During the period in question there was an accumulation of \$2,420,000 of interest upon taxes. If the taxes and interest thereon be added together the cost of these two items is in round numbers \$4,500,000 as against a present value of \$5,057,-

000. Special assessments amounted to approximately \$70,000, which with interest represent a present cost of \$360,000. Interest on the base value totaled approximately \$3,000,000. If this be included the present cost of these nine parcels is approximately \$9,000,000, as against the present value of \$5,057,000. Only two parcels in the list show a present value greater than the total cost; the one being at Fifth Avenue and 39th Street, the other at 64th Street and Broadway. In all the other cases, the present value is substantially less than the total cost. The most startling discrepancy is shown by the 14th Street parcel, the present value of which is approximately \$700,000, as against a total cost of approximately \$2,300,000. In this case, taxes and interest thereon total almost 50 per cent more than the present value.

Table II—Tract on Washington Heights, 178th to 182nd Streets

	Base Year	Value in Base Year	Taxes on Vacant Land	Special Assessments	4% Compound Interest on Sale Value	4% Compound Interest on Taxes	4% Compound Interest on Special Assessments	Total Cost	Value 1921
Entire Tract .....	1891	\$1,490,420	\$653,475	\$481,025	\$1,642,380	\$234,651	\$264,740	\$4,766,691	8,996,100
First Improved Tenth	1891	124,422	4,352	40,672	22,203	508	534	192,691	729,500
Unimproved Tenth...	1891	131,450	165,248	46,495	294,892	76,412	59,370	773,867	474,500

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Table II shows the result of a similar study of a large tract of land extending from 178th to 182nd Streets and from Amsterdam Avenue to Broadway. This tract was sold at auction in 1891 and shows a present value of almost double the present cost. A study was also made of the first 10 per cent of the land to be improved. In this case, the carrying charges are small and there is a present value of almost four times the total cost. On the other hand, that tenth of the property which remained

unimproved in 1921 shows a cost of about double the present value.

Practically all the land studied in Table I has remained vacant up to the present time. Most of that included in Table II was rapidly built upon. The land of Table II has enhanced in value at a rate much faster than the average rate of increase of New York real estate, and yet that portion of this property which was held vacant for a considerable length of time shows a very high present cost.

Table III—Auction Sales

	Base Year	Sale Price	Taxes on Vacant Land	Special Assessments	4% Compound Interest on Sale Price	4% Compound Interest on Taxes	4% Compound Interest on Special Assessments	Total Cost	Value 1921
1. Morris Park . . . . .	1913	\$3,674,590	\$489,448	\$728,793	\$1,335,158	\$67,782	\$79,359	\$6,375,130	\$2,741,800
2. Van Cortlandt . . . . .	1912	1,584,175	205,053	246,504	549,986	33,461	41,680	2,460,839	1,091,650
3. Riverdale . . . . .	1909	260,075	49,551	57,508	151,798	11,249	13,094	543,275	200,975
4. Throggs Neck . . . . .	1908	366,549	88,862	61,439	221,256	20,910	3,419	762,435	401,900
5. Ogdon Estate . . . . .	1907	1,520,825	357,945	223,263	952,558	97,962	83,902	3,236,453	1,706,300
6. Beck Estate . . . . .	1905	1,229,400	195,170	122,832	604,929	47,082	31,242	2,230,655	1,474,100
7. Martense Farm . . . . .	1909	146,200	35,551	51,804	79,228	7,615	14,299	334,697	191,250
8. Canarsie . . . . .	1906	131,600	36,094	.....	95,404	11,197	.....	274,295	117,685
9. Bay Ridge . . . . .	1905	181,195	54,907	34,612	118,380	13,549	22,351	424,994	263,175
10. Livingston . . . . .	1906	105,700	23,441	16,567	82,355	6,494	3,439	237,996	92,250
		\$9,000,309	\$1,536,000	\$1,543,322	\$4,191,052	\$317,301	\$292,765	\$16,880,769	\$8,281,085

In Table III there is an analysis of the present position of the purchasers at auction sales of ten different parcels of land in all parts of the greater city of New York. These sales were advertised far and wide and attracted a great deal of attention at the time the property was sold. In not a single case does the present value come

anywhere near equaling the total cost. The aggregate value of all the land in the ten pieces is only 50 per cent of the total cost. Most purchasers at auction sales are people of small means induced to invest their money by tempting advertisements; yet unless they promptly improve their lands they are almost certain to suffer losses.

Table IV—Land Values in Five Boroughs of New York City, 1906-1921

Borough	Value in 1906 Land Only	Taxes Paid on Vacant Land	Special Assessments	4% Comp. Interest on Value in 1906 on Vacant Land	Interest on Taxes	Interest on Special Assessments	Total Carrying Charges, Inc. 1906 Value	Value of Land in 1921
Manhattan . . . . .	3,421,000,000	46,396,000	19,719,000	134,000,000	12,798,000	404,000	3,634,317,000	3,295,000,000
Bronx . . . . .	278,600,000	41,064,000	60,281,000	91,472,000	11,457,000	9,620,000	492,494,000	364,615,000
Brooklyn . . . . .	651,876,000	44,613,000	51,798,000	102,533,000	12,085,000	3,773,000	866,678,000	892,559,000
Queens . . . . .	116,100,000	40,230,000	34,316,000	46,022,000	11,442,000	4,354,000	252,464,000	309,175,000
Richmond . . . . .	29,340,000	4,494,000	3,198,000	7,835,000	1,186,000	402,000	46,455,000	58,499,000
TOTAL . . . . .	4,496,916,000	176,797,000	169,312,000	381,862,000	48,968,000	18,553,000	5,292,408,000	4,919,848,000

Table IV attempts a survey of all the land in the city of Greater New York for a period of fifteen years from 1906 to 1921. The point of greatest difficulty in this part of the study was to determine the actual value of the land at the starting and terminal points. The method described above was the one that was used and every effort was made to reduce the margin of error. The difficulties of arriving at a correct value of all the land in the City of New York are, however, very great and the estimate may not be absolutely accurate. It is unlikely, however, that a greater error than 10 per cent has been made and even if this be allowed the figures are very surprising. They show, in the first place, that the aggregate value of the land in the Borough of Manhattan has not increased in the last fifteen years. It is quite probable that the occurrence of the war, checking as it did a substantial number of the building operations, exercised a retarding effect upon land values. Another

explanation lies in the fact that whereas certain parts of the city have increased enormously in value, other parts have declined. Even assuming a 20 per cent error in the estimated value of land in 1921, the enhancement since 1906 averaged over the entire borough would still be very small indeed.

In the Borough of The Bronx there was a large proportion of vacant land in 1906 which has since been developed and the value of the land shows an increase from \$278,000,000 to \$364,000,000. But during this period the owners of the vacant land paid taxes of \$41,000,000 and special assessments of \$60,000,000, making a total of \$101,000,000, a charge which would be increased by an additional \$21,000,000 by the inclusion of interest on these two items for land that has remained vacant. In other words, the land included in the Borough of The Bronx increased \$90,000,000 in value but there was expended \$122,000,000 for assessments and taxes on vacant land

and interest thereon. In other words, the total increase in the borough including the increase on improved property was less for the period in question than assessments and taxes on vacant land. In addition to these items, interest on the base value of the land of \$91,000,000 swells the total present cost to \$492,000,000, as against a present value of \$364,000,000. In Brooklyn, Queens and Richmond the story is much more favorable to the holder of vacant land. In each of these cases the increase for the whole borough is sufficient to show a profit as against the present cost, although not a very large one. For the entire city the cost is somewhat greater than the present value.<sup>1</sup>

From the entire study, the conclusion which seems irresistible is that, popular opinion to the contrary notwithstanding, the holding of vacant land is exceedingly unprofitable and that it is much better to deposit one's money in a savings bank than to buy a piece of vacant land and continue to hold it vacant. Whether or not the holding of vacant land is socially desirable, there can be little doubt that from the standpoint of sound investment it is inadvisable.

The above figures would also indicate the necessity

<sup>1</sup> It will be noted that in the above tables changes in the purchasing power of money have not been taken into consideration. If the present values were corrected on the basis of the 1913 price level, there would be a substantial reduction in the 1921 values.

for better city planning and better supervision over the opening of streets, sewers, etc. It is wasteful in the highest degree to develop many times as much vacant land as the city can possibly absorb. Somebody must pay the bill. Whether it be the homeseeker who finds that land, which ten or twenty years before was within his means, has now so much increased in value as to be beyond his reach; whether it be the speculator in vacant land who, reading about the vast profits of the Astors, has been tempted to buy a few vacant lots and finds that they have cost him more than double what they are worth; whether it be the land developer whose first sales were very profitable, but who sees these profits shrinking and disappearing as he carries the property from year to year, to all of these the holding of vacant land is disastrous and the process is one of great social loss.

The figures quoted above indicate the necessity for more intelligent study of this most important question. In order to devise a remedy we must know what are the facts. Limited as it is, the present study points to a widespread misconception as to the profitableness of holding vacant land. It points also to great social waste in connection with the marketing of building plots. The entire question of land tenure and taxation cannot be properly considered without more definite information and more thorough statistical studies.

ALEXANDER M. BING.

## Town Planning in England

By THOMAS ADAMS

### An Important Conference

The most important and largely attended Town Planning Conference that has been held in England since the R. I. B. A. Conference of 1910 was opened in Manchester on Monday, 9 October, 1922, and extended over a week. The Conference was held in the Manchester Town Hall, and was particularly remarkable because of the interest shown by the local authorities in what is known as the Manchester region. An Exhibition of plans, models, and drawings took place in connection with the Conference and illustrated the progress being made in town planning in all parts of England.

The auspices under which this Conference and Exhibition were held indicate a significant trend towards the development of regional planning, and shows that the progress of town planning in the future will be largely assisted or retarded by the success which meets the present efforts being made to promote regional schemes.

The Conference was convened by the Manchester and District Joint Town Planning Advisory Committee. This Committee is representative of the local authorities lying within an area of 700 square miles, with Manchester as the centre. It includes, besides Manchester, large cities and towns like Salford, Stockport, Oldham, Bolton, Bury and Rochdale.

The organization which has been set up in the Manchester district for the purpose of making a regional survey

and preparing a regional plan is one of a number that have been formed in different parts of England. Similar organizations or joint committees have been formed to deal with the planning of such areas as the Tyneside Region, where Newcastle is the main urban centre, South Wales, the Doncaster coal region, West Middlesex, South Essex and elsewhere. The Manchester region is the largest and perhaps the most important that is being dealt with by a joint committee. The 700 square miles in the region lie within a radius of 15 miles from St. Anne's Square, Manchester. Within this radius there are local authorities, comprising what are known as county boroughs, urban districts and rural districts. There has been a certain amount of town planning in the region since the passing of the Town Planning Act of 1909. Some 17 or 18 schemes are in course of preparation in different parts of the area. Another score or more will have to be prepared under the compulsory clauses of the Town Planning Act by 1926, and several of these schemes are now under consideration. The measure of agreement between the different districts is remarkable notwithstanding that there are a few authorities not prepared to cooperate. For instance, there are 14 or 15 small districts that do not want to prepare town planning schemes. Undoubtedly the educational work that is being done by the Joint Committee will gradually have the effect of bringing all the Councils in the region into line.

As is well known, Manchester derives its importance

## TOWN PLANNING IN ENGLAND

and its wealth largely from the cotton industry, but it is also an important centre for engineering and glass manufactures. The Lancashire people are strongly individualistic and, in spite of much progress they have made in achieving wealth and promoting education, the towns in which they live are among the worst planned and most depressing in the country. The town and regional planning movement which is developed in this district affords the hope that a real effort will be made to secure better amenities of life for a vast industrial population that has suffered from some of the worst evils of congestion and disorder in town development.

*The Conference.* A dominant figure throughout the whole proceedings, lasting a week, was the lord mayor of Manchester. The "managing director" was Alderman T. Turnbull, D.L., Chairman of the Joint Committee, who has been an ardent supporter of town planning for the last twelve years. Ten mayors, including the lord mayor, occupied the chair at the different sessions. Among those who read papers were Sir Henry Maybury, Director-General of Roads; Professor P. Abercrombie, A.R.I.B.A., Professor of Town Planning, Liverpool University; Professor Alshead, F.R.I.B.A.; Mr. F. L. Elgood, O.B.E., F.R.I.B.A.; Mr. G. L. Pepler, Chief Town Planning Inspector Ministry of Health; Mr. I. G. Gibbon, C.B.E.; and the author. Professor Abercrombie dealt with "Regional Planning," Mr. Elgood with "Town Planning Schemes," and Professor Alshead with "Imagination in Town Planning." Professor Abercrombie referred to Boston metropolitan area as having accomplished the most important pioneer work in connection with regional planning. Although, as indicated, several architects took part in the proceedings, there was not much attention given to the architectural phases of town planning. This is perhaps natural, because of the regional character of the Conference and discussions.

*The Exhibition.* The Exhibition was chiefly remarkable because of the extent to which it showed that civic surveys were being promoted in different parts of the country. A great deal of town planning that has been carried out or started in England was based on inadequate studies of existing conditions. After the work of preparing the plans had proceeded to a certain stage, the need of fuller knowledge became evident and caused plans to be suspended. That has gradually created, therefore, an appreciation of the necessity of making thorough investigations of civic conditions as a preliminary to preparing plans. Indeed, this is one of the causes which has brought about the popularity of regional studies. If a thorough study is made of a whole industrial region it saves the necessity of making detailed civic surveys for each separate district within it. Perhaps the most significant exhibit was the one relating to the district in which the Exhibition was held. This included historical maps showing the growth of Manchester and other cities, survey maps showing open spaces, contour traffic densities, etc., diagrams illustrating the existing conditions as a basis for zoning, and interesting studies showing the ideas of certain authors as to the probable state of development in Manchester, Rochdale, Hythe, and other places in the year 2000.

Attendance at these conferences in England reveals the fact that town planners generally and local authorities are looking to the United States as the place where zoning is being successfully carried out. Zoning in England is limited under the law for all practical purposes to areas that are not yet built upon. There is a growing disposition, however, to demand powers from Parliament to permit zoning of built-upon areas similar to that which has been carried out in New York and St. Louis. Curiously enough the objection to it in England is based on the idea that zoning will depress the values of land, whereas the stimulus to it in the United States has come from those interested in stabilizing and increasing the values of land. Zoning in neither country will make much real progress in improving social conditions until it is promoted directly for the purpose of making conditions healthier and not for any selfish purpose connected with the land interests. On the whole, apart from somewhat loose ideas on the subject of zoning, town planning in England is taking hold of the public mind that is being promoted along the right lines. The Manchester Conference and Exhibition is a local illustration of the growing tendency to deal with the question in a comprehensive manner for a wide regional area.

The Town Planning Institute held a Provincial Meeting at Manchester during the last three days of the Conference. The Institution enjoyed liberal hospitality from the Manchester people and its members contributed largely to the discussions. The new president of the Institute is Mr. H. V. Lanchester, F.R.I.B.A., of Lanchester, Rickards & Lucas. Mr. Lanchester is one of the prominent English architects who devotes a large portion of his time to town planning in Great Britain and India. Among his predecessors in the chair of the Institute are Mr. Raymond Unwin, F.R.I.B.A., and Professor S. D. Adshead, F.R.I.B.A.

### Announcement

The Executive Committee of the New York Chapter, as Trustees of the Travelling Scholarship, founded by Pierre L. Le Brun, announces the 1923 Competition for the selection of a beneficiary. The programme will be issued about 30 December, 1922, calling for drawings to be delivered about 1 March, 1923.

All those wishing to enter the competition should arrange at once for nomination by a member of the American Institute of Architects. Nomination blanks can be had of the Secretary of any Chapter, or of the Le Brun Scholarship Committee, Julian Clarence Levi, Chairman, 215 West 57th Street, New York City. Nominations should be sent so as to be received before 1 January, 1923.

*Subscribers, Advertisers and Correspondents are requested to note that the Editorial Office of the JOURNAL has been removed from 313 East 23rd Street to the Fiske Building, 250 West 57th Street, New York City.*

# LLOYD ELIOT WARREN

A.B., M.A., Ph.B., A.D.G.

*Atelier Daumet-Girault-Esquié, 1892*

*Past President of the Society of Beaux-Arts Architects*

*Chevalier of the Legion of Honor*

*Born 10 November, 1868*

*Died 25 October, 1922*

“And unto one he gave five talents, to another two, and to another one; to every man according to his several ability; and straightway took his journey. After a long time the lord of those servants cometh and reckoneth with them. And so he that had received five talents came and brought other five talents, saying, Lord, thou deliveredst unto me five talents; behold, I have gained beside them five talents more.”

It is not a little thing that a man, as to whom all the outer circumstances of life might conspire to cloud his sense of the responsibilities, the privileges, of an unusual position, should deliberately choose, not the easy way but the rough path of service to his fellow men. Birth, breeding, fortune, education, Lloyd Warren used as instruments in his daily service of the spirit of beauty, in the effort to give others also the opportunity to serve at beauty's shrine; and renounced the practice of his art that he might dedicate himself to this—to what he felt to be of greater worth to the world. No one can fill the place he held, no one can wield the influence that was so peculiarly his—this beloved and respected leader, victim of a tragic and untimely fate; but over his bier as it lay violet strewn below the wonderful reredos in St. Thomas's must have risen more than one reverent and affectionate vow: that the work he had so well begun and so generously supported should not fail of full accomplishment.

“His lord said unto him, ‘Well done, thou good and faithful servant: . . . enter thou into the joy of thy lord.’”

# Public Information About Architecture<sup>1</sup>

By JOHN V. VAN PELT

*Chairman of the Committee on Publications and Public Information*

This month a large proportion of the Public Information Committees of the different Chapters have responded to the request for a report. Many of them have not had Chapter meetings and have only been able to forecast activities. Nevertheless the Institute Committee is grateful for a word of any kind and would like to receive 51 letters from the 51 Chapters between the 4th and 6th of each month.

THE BALTIMORE CHAPTER, through the efforts of John H. Scarff, is continuing the publication of articles in *Baltimore Evening Sun*. The last we have on file in the issue of 7 October, was on The Development of Art. Each one of the Chapters should undertake work of this kind.

THE BOSTON CHAPTER issues a monthly bulletin and interests itself in civic improvements. Except for the very useful work of Mr. Bourne in having induced the *Christian Science Monitor* to publish articles of architectural interest, we have as yet no information concerning further activities with the press on the part of this Chapter.

THE BROOKLYN CHAPTER is inquiring into the difficulties that the Building Department finds in the changing of plans after approval of the Department so that buildings are at times constructed in violation of the law.

THE CHICAGO CHAPTER has done notable work in bringing before the public, the desirability of restoring the old Fine Arts Building of the World's Fair, as has already been recorded in the JOURNAL.

THE CONNECTICUT Public Information Committee proposes to furnish to the press, descriptions of the winning drawings in public competitions within the State and the copy of a satisfactory description of all of the important public or semi-public buildings as they are completed.

THE MINNESOTA CHAPTER has been preparing articles for publication in the *Minneapolis Journal*. Furthermore, different architects in Minneapolis belonging to the Minnesota Chapter financed certain paid publicity in the *Minneapolis Journal*. The tax to architectural firms was \$18.00 and to individuals \$12.00 for the winter's publicity. The headings of the articles follow:

- Why the Architects are Advertising.
- Functions of an Architect.
- Training of an Architect.
- Methods of an Architect.
- Value of Architecture to the Owner.
- Value of an Architect to a Community.
- The Businesslike and Economical Way to Build.
- The Right Use of Materials.
- The Architect's Practice One of Personal Service.
- Selecting and Dealing with an Architect.
- The Architect's Charge for Service.

The space contracted for was two columns wide and seven inches long, but the newspaper gave, in addition, considerable space for a general news item of which the Chapter took advantage and which was felt to be most valuable.

During the coming winter the Chapter plans the same form of publicity and to supplement it with a series of personal letters mailed to the majority of businessmen in Minneapolis every two weeks. It is also outlining a talk to be given before the Rotary Club and other similar organizations. In addition it has taken up the matter of credit for the architect whenever a building is mentioned or a photograph published in the newspapers. It finds by advertising in the newspapers that they have more or less of a lever over them and the latter are much more generous with their space and in giving the architects credit where credit is due. It also intends to approach the realtors of Minneapolis requesting that when they offer a house for sale they mention that it was designed by an architect, if that be the case, and if possible, give the architect's name.

THE NEBRASKA CHAPTER is furnishing a series of lectures once a month before the Omaha Business Woman's League and purposes having the same lectures given before some club in Lincoln. The first of these, delivered in October, was quite successful. The Chapter has taken up with the Lincoln daily papers the subject of having credit given the architect when illustrations of buildings are published.

THE NEW YORK CHAPTER has begun an inquiry into improper or undesirable conditions in the building trades. The Chapter is also preparing one or more traveling exhibitions to be sent on circuit throughout the country by the American Federation of Arts. This might also be done by other Chapters having available material. Communicate with Miss Leila Mechlin, Secretary of the American Federation of Arts, Washington, D. C.

THE NORTH CAROLINA CHAPTER is working on some small house plans which they hope to furnish.

THE TENNESSEE CHAPTER has undertaken to hold a yearly exhibition within the State. The first of these at Memphis, held during the summer, was a success.

ABOUT THE middle of October the members of the Wisconsin Chapter subscribed individually for a full-page advertisement in the *Milwaukee Sentinel* setting forth the advantages of complete architectural service. The advertisement is dignified in appearance and begins with the caption "Build Better Homes." There are some small decorative illustrations and at the bottom of the page in medium-sized, bold-face type is the signature "Wisconsin Chapter, the American Institute of Architects." From 2 until 15 November, the Chapter held an exhibition in the Milwaukee Art Institute furnished by the Associated Tile Manufacturers with about 150 enlarged photographs of examples of work executed in that city.

<sup>1</sup> Address communications to 126 East 59th Street, New York City.



Mr. Kelsey and Mr. Boyd were scheduled to deliver addresses. One evening was given over to a joint discussion by representatives of the tile-setters' union, tile contractors and architects. Leigh Hunt, chairman of the Public Information Committee of the Chapter, has exerted considerable personal effort with the Milwaukee editors to induce them to give space to architectural matters and the Milwaukee *Journal* has agreed to publish satisfactory material.

It is possible that although the Institute formally gave its approval to advertising, some of the members may be unsympathetic to a paid newspaper advertisement. It must be said that the Chapter advertisements put forth in Minneapolis and Milwaukee are dignified. But this question is not the point. What is important is that these Chapters not only have the courage of their convictions but are transmuted those abstract convictions into concrete facts. They are doing. Even that would not be enough. What they are doing is done well. They are succeeding.

## The Secretary's Page

BOARD MEETING: Among the subjects for discussion by this body, assembling December, 1922, at Denver, are the following:

- Proposed Uniform Contract Advocated by Bureau of the Budget of the Government.
- Bill Providing for Systematic Extension of the Park System of the National Capital.
- National Capital.
- Regional Representation.
- Purchase of Sites by the Public Buildings Commission for Housing.
- Establishment of Scholarship at American School of Classical Studies in Athens.
- Structural Service Matters.
- 1923 Convention.
- Small House Service Bureau, Miscellaneous Matters Connected Therewith.
- Arlington Memorial Bridge, Proposed Site Rejected by Fine Arts Commission.
- National Board for Jurisdictional Awards.
- Pan-American Congress of Architects.
- Engineering Division of National Research Council, Consolidation with Engineering Foundation.
- Institute Representation on Consulting Committee of the Central Committee on Lumber Standards; also Request of \$1,000 Contribution by A. I. A. to Committee on Lumber Standards.
- Jury of Fellows.
- Government Architecture, Institute's Position with Regard to Same.
- Alabama Marble Company, Scholarship Offer of.

ON 9 NOVEMBER a meeting of the Finance Committee, composed of Wm. B. Ittner, Chairman; Horace Wells Sellers, Lansing C. Holden, James O. Betelle and John B. Slee, was held at New York City for a discussion of the budget of 1923 and a general survey of the Institute's financial situation.

## New Members Elected

(As of 25 October, 1922.)

BUFFALO: Eli W. Goldstein. NEW YORK: Wesley S. Bessell, Theodore Irving Coe, Cameron Clark, Paul Gmelin, Harold Eric Kebbon, William M. Rouse, William F. Thompson, Arthur Ware, Lawrence Grant White.

(As of 20 October, 1922.)

BROOKLYN: Robert F. Schirmer. CLEVELAND: Donald O. Dum, Benj. S. Hubbell, Jr. COLORADO: Arthur M. Garbutt, James P. Sweeney, Charles T. Weidner. GEORGIA: Francis Palmer Smith. ILLINOIS: Norman Wolcott Cook, Wm. Spencer Crosby, Earl Howel Reed, Jr. INDIANA: Elmer E. Dunlap. KANSAS CITY: Heber David Pampel. KANSAS STATE: Harrison G. Overend. MICHIGAN: C. K. Bell, Charles Crombie, Harold D. Davenport, Wm. E. Higginbotham, Alfred H. Mitschke, Cyril Edw. Schley, Henry F. Stanton. MINNESOTA: Rollin C. Chapin, Lewis James F. Gomme. NEBRASKA: M. L. Evans, C. W. Way. SAN FRANCISCO: George Henry Howard. SCRANTON-WILKES-BARRE: Frederick Lord Brown. ST. LOUIS: John W. Kennedy. SO. CALIFORNIA: Clifford A. Truedell, Jr., Frederick Wm. Walker. TEXAS: John L. Putnam. VIRGINIA: Samuel Daley Craig. WASHINGTON STATE: George H. Keith.

## Errata

We regret exceedingly that in this same space last month appeared two errors in regard to the competitions conducted by the Cleveland Chapter. Its Secretary informs us that the first was for "houses costing \$20,000 to \$25,000," instead of "\$2,000 to \$2,500," as was stated. The second was for "houses not to exceed 800 square feet" instead of "700 square feet."—EDITOR.

## The Architecture Club

By J. C. SQUIRE

As President, during the current year, of the Architecture Club, I have been asked by the Editor to give a few particulars as to its origin and aims.

The Club originated in discussions which took place last year between certain architects and men of letters interested in architecture. It was generally agreed that there was insufficient contact between architects and workers in other arts; that the press devoted far too little attention to architecture and especially to informed criticism of it; that the general public, though in a considerable degree interested in buildings, was given too little guidance and did not even know the names of the most eminent architects; and that steps should be taken to remedy these evils.

A series of dinners followed, at which some twenty or thirty persons attended. It was decided that a Club should be founded, composed in part of architects, in part or authors and journalists, and in part of interested laymen, which should do its best to promote the interests of the best modern architecture.

## PUBLIC INFORMATION ABOUT ARCHITECTURE

A committee was elected consisting of Messrs. Oswald Barron, James Bone, A. Clutton-Brock, Sir Lawrence Weaver and J. C. Squire (non-architects) and Messrs. Vincent Harris, Oswald P. Milne, G. Gilbert Scott, R.A., Ralph Knott, H. Austin Hall and Professor Reilly, representing the profession. Mr. J. H. Elder-Duncan was appointed Secretary, he having been an architect; and the committee drew up a constitution.

This was announced as the first Quarterly Dinner of the Club, which was held at the Hotel Cecil, in July. There was a large attendance and speeches were made by Messrs. H. J. Goodhart-Rendel, G. K. Chesterton, J. St. Loe Strachey and others. The rules announced provided for a total ultimate membership of 300, of which roughly one-third were to be architects. A hundred and fifty, including fifty architects, were to be elected this year and the rest at the rate of ten a month.

Note—The story of the Architecture Club of London is reprinted from the *Journal of the Society of Architects*, London. It seems fairly safe to say that architecture is almost never the concern of men of letters in this country. As to how greatly architects are concerned with the art of literature, taking the profession as a whole, we, of course, have no opinion. But the apostles of one art cannot come into intimate contact with those of another except with profit to both, and assuredly architecture greatly needs the support of literature.—EDITOR.

### The Labouisse Prize

Samuel Stanhope Labouisse, whose untimely death was mourned not only in the city of New Orleans where he lived, but throughout the American Institute of Architects, was one of those rare souls to whom architecture was a veritable development for transcending the cleverness of the trained designer or the pedagogy of the successful practitioner. In the city of New Orleans—where was once to be found, perhaps, the gayest flowering of the art of building on the American continent—Samuel Labouisse came into his own as naturally as a free soul responds to beauty always. He labored patiently, untiringly, and always uncomplainingly, to show Orleanians the treasures that lay all about them, either sinking to melancholy and contemptuous decay or falling before the wrecking crews of the new spirit that was loudly acclaimed as progress.

Thus it was, with great joy, that we learn of the prize with which the name of this great soul and gentle architect is to be commemorated. Thanks to an anonymous gift, the Department of Architecture (founded by Mr. Labouisse) of Tulane University, will give an annual prize to that student whose work exhibits the best appreciation of the architectural traditions of New Orleans. It is an example that other institutions might well follow, before all the charm of many an early American development is sacrificed to the incongruous intrusion of meaningless academic *motifs*. But these young graduates of Tulane University will need help and encouragement. So, let the citizens of New Orleans, through one of their great civic organizations, offer a worthy prize to that owner of a building, who, during each twelvemonth, shall have encouraged his architect to produce a work most in

keeping with that unique and precious tradition which is the joy of all artists the world over. By whatever name it may be called would not matter, for Samuel Labouisse loved his city and his art with no thought of vainglorious preferment.

### American Academy in Rome

The jury of the American Academy in Rome, composed of Breck Trowbridge, *Chairman*; Herbert Adams, E. H. Blashfield, F. C. Jones, W. M. Kendall and Ferruccio Vitale, announces the result of the Competition for the 1922 Collaborative Prize offered by the American Institute of Architects. The award was made to the joint design of Messrs. J. K. Smith, architect; S. Lascari, painter, and E. R. Amateis, sculptor. The problem was the design and decoration of a group of buildings—ten studios, a dining and lounge building, and a pavilion of music. Details of the winning drawings appear on page 383.

### From Our Book Shelf

#### Concrete and Stucco Houses Again

The continued demand for popular handbooks on domestic architecture is evidenced by the re-issue of that of Mr. Hering<sup>1</sup>. Few changes have been made from the first edition of 1912. The colored frontispiece, to be sure, has disappeared. To compensate, we have an added chapter "House Stucco Helps to Solve the Housing Problem in New York City." This is a plea for the new movement of society East River-wards, where stucco is to conceal the ancient brownstone. Much of the "brownstone," one might urge, is itself stucco, but obviously there is something magical in the replacing of brown stucco by white! One would like to have seen the illustrations enriched with some of the best work in stucco during the last ten years, both along the lines of expression of material emphasized by Mr. Hering, and of abstract beauty of form, in the hands of the classicists and Palladians.

F. K.

#### Machines and Men

In his preface to this more than remarkable book<sup>2</sup> Mr. Chesterton says that the author is "one of the two or three original minds of the modern world" and the book goes far towards justifying this estimate, as well as many other complimentary things that may equally well be said. It has been very interesting to watch Mr. Penty's development from his earliest essays, such as "The Restoration of the Guild System" and "Old Worlds for New," through "A Guildsman's Interpretation of History," to this last book of his and "Guilds, Trade and Agriculture." Steadily and consistently he has probed deeper and deeper into the causes of the catastrophic downfall of industrial civilization, of civilization itself, and in this last book he pretty nearly reaches rock-bottom; there remains but one

<sup>1</sup> *Concrete and Stucco Houses*, by Oswald C. Hering. Robert M. McBride & Company, New York, 1922.

<sup>2</sup> *Post-Industrialism*, by Arthur J. Penty. The Macmillan Company, New York, 1922.

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more to write, one deeper probe to be achieved, and this, unless we are much mistaken, he will accomplish before long; there are passages in "Post-Industrialism" that already foreshadow this event.

Mr. Penty is an English architect, and it should be a matter of pride to our profession that it is one of us who, better than political economists or historians or philosophers, has estimated existing conditions, discovered several of the radical factors that have brought them about, and indicated the way out of the intolerable imbroglia in which we now wander, distracted and dismayed. There is no reason why it should cause surprise, however, for architects by their temper, training and practice are both analytical and constructive, while their relationship to beauty in all its forms should certainly give them clearer vision than usually comes to other men. In any case it is true that the architects of England and America are not only responsible for the most vital manifestation of this great art that has shown itself for several centuries, but have also revealed through many of their number a grasp of the great social, economic and political problems of the present day that is hardly to be matched in other categories of human activity.

Mr. Penty was by no means the first to mark the grave dangers inherent in the whole system of industrialism, or to estimate at their true value the results of a century of unimpeded and portentous development. Ruskin, Samuel Butler, William Morris and Walter Crane were vociferous in the last quarter of the nineteenth century, and were well laughed at for their pains, while the years of the Great War and the Little Peace have been loud with the thunders of condemnation hurled on a system that until 1914 had been almost universally hailed as final and almost above criticism. Nor is he the first to suggest palliatives. We have had enough of them, Heaven knows, from Owen and Fourier and the Shakers and Brook Farm and Henry George, to Communism and Syndicalism and Bolshevism and "One Big Union." Everything that has been tried has failed, and the things that haven't been tried would meet the same fate, because none of them has got to the roots of the matter but has simply scratched the surface. The eternal war between capital and labor, the failure of representative democratic government, the loss of right standards of comparative value, have brought out a thousand apologists with a hundred panaceas, but none of them is convincing because none of them dares to admit that it is not the method that fails, but the thing itself, and that is—machinery, the things it has brought about, and the ideals and new code of living it has encompassed.

This is Mr. Penty's thesis; that machinery and the blind worship it has instigated in its dupes and slaves are one of the prime sources of the poison that has vitiated modern civilization and brought it down in disreputable ruin, and that no solution of our manifold ills can be looked for until this fact is recognized and machinery is put under rigid restriction and control, the subdivision of labor abolished, "scientific management," "efficiency," and the quantitative standard put under the ban, and the ideals of men turfed from legal enactments, systems and all other mechanical devices, to character, eternal principles revealed through history, and spiritual values expressed

through individuals and communal groups of individuals. In a word, "the war has given the lie to Marx as it has done to Herbert Spencer, for it has revealed industrialism as a destructive rather than a constructive force," and it must be curbed and largely destroyed if it is not to bring the world down into another period of Dark Ages. I quote almost at random a few sentences that show Mr. Penty's convictions better than I could paraphrase them.

"It is not the evolution of capitalism that determines the evolution of machinery, but the evolution of machinery that determines the evolution of capitalism."

Architecture "is attacked on all sides by a combination of influences against which the architect is apt to struggle in vain, most of which are directly or indirectly the consequence of unregulated machine production."

"If any art is to revive, it must be an art that is the common possession of the whole people and such an art cannot be grafted on a machine society. On the contrary, the arts (if we may so call them) that a machine population can share, are the arts of the cinema and the gramophone, and the only culture is the culture of mechanism, whether it be motor cars or aeroplanes."

"The really practical challenge to Christian morals does not come from the materialist philosophy but from the machine."

"The subdivision of labor and its recent development into scientific management are the curses of industrial civilization, for by reducing men to the level of automata they reduce them to the position of mere fragments of men; they undermine their spiritual, moral and physical life and disintegrate their personality, while by giving rise to gluts in the market they lead inevitably to sweating and economic insecurity."

"Of course this system cannot last, \* \* \* for while on the one hand it is giving rise to wholesale incompetence, on the other by destroying all charm in work and turning it into hatred toil, it has generated a spirit of class hatred that expresses itself in revolt."

"If society is to be reconstructed on a basis that allows for a margin of safety, scientific management and the subdivision of labor must be abolished, and a return be made to handicraft as the basis of production, using machinery only in an accessory way."

"The principle for which we contend then is that if machinery is not to be a curse we must, in our use of it, never lose sight of the fact that human values come first."

"There is no solution of our problem, apart from a return to simpler conditions of life such as would reduce the complexity of our relationships to terms commensurate with the human understanding."

All these quotations are from the earlier chapters of the book and the remainder is quite as full of meat. Not the least valuable is the chapter that deals with machinery in government, where the author shows the definite impossibility of any free government, monarchical, republican or democratic, existing under the terms imposed by an industrial civilization the nature of which is determined by machinery.

It may seem from this review, it may even seem from a cursory reading of the book itself, that Mr. Penty offers

## OBITUARY

machinery and the subdivision of labor as the sole cause of all the fatal weaknesses that are showing themselves in modern civilization. Such an inference would be far from the truth. The unhappy vicissitudes that have overtaken religion and philosophy, and the low-grade substitutes that have been offered—and accepted—have an equal part in the calamity. This fact is recognized, and later on Mr. Penty says:

“Political and economic activity pursued apart from a new ideal of life as expressed in spiritual values, is for the most part a vain delusion; \* \* \* the economic evils of our society are finally nothing more than the obtrusive symptoms of an inward spiritual disease that has followed the separation of man from religion, art and nature, and which has changed the substance of our lives and activities.”

Yes, this comes close to the root of the thing. It was the coincidence of the mechanical inventions and scientific discoveries with a condition of society and human character brought about by the loss of religion and the prevalence of a false philosophy that turned the “labor saving” machines into engines of destruction and panders of slavery. In the late twelfth or early thirteenth century these very inventions and discoveries might possibly have been curbed and used to beneficent ends, for society was dominated then by powerful spiritual forces that could bring good even out of evil. It is in this fact that we can find both the assurance of the uselessness of the materialistic and “practical” panaceas now offered us, and the pointing to the way that leads towards valid remedies.

You cannot cure a drunkard by taking away his whiskey, but only by taking away his *desire* for whiskey, and similarly you cannot cure the ills of an industrial civilization by mechanistic laws or the purblind conclusions of committees, commissions or conferences, but only by creating a new vision and new ideals in individual men. Today the world is one ridiculous welter of honest and sincere citizens getting together in hired halls and passing resolutions and publishing reports. Nothing comes of it except a worse confounding of the confusion. If they would forget it all, go back to their homes and sensibly pray “Renew a right spirit within me, O God!” the results might be different.

The only weak spot in this book is Mr. Penty's apparent yielding now and then to the very mechanical methods he so justly condemns, when he tries to indicate some method whereby the limitation and control of machinery and the abolition of subdivision of labor may be accomplished. For example, in dealing with the necessary return to the Mediaeval guild system in industry he says, “the first thing to do it to create a popular belief in the ideals of craftsmanship by means of propaganda”: *Absit omen!*—“Following that, there must be organization of the market and the provision of credits for craftsmen. If this were undertaken on a large scale as part of a national movement that sought to establish Guilds, fix prices, regulate machinery and abolish the subdivision of labor, then it would be a practical proposition.”

You see how hard it is, even for Mr. Penty with his clear vision, to escape from the mechanical incubus, “propaganda,” “organization of the market,” “large scale,” “national movement,” “practical proposition.” What are

these but the very ear-marks of mechanized civilization expressed in the very jargon of the social enemy? Well, we cannot be too hard on Mr. Penty; we all do it by a kind of instinct bred of long familiarity; it is hard to emancipate ourselves, even in thought, from our own age. No, the salvation must come from the things condemned in the book, and a return made to the things here praised, but it will hardly be by mechanical means or “mass-action,” rather by the renewal of a right spirit in the individual, the achievement of a new vision, and the concurrent action of small and inconspicuous groups of men of like mind and good will. St. Benedict made over and saved Europe for a thousand years, but the revolution was effected by one man in a hidden cave in the Calabrian hills.

It seems to me that this book is the most revealing, stimulating and sane product in its own category that has as yet appeared. Those who read it might well do so in connection with “A Guildsman's Interpretation of History,” Tawney's “Acquisitive Society,” Belloc's “Servile State,” Chesterton's “What's Wrong with the World,” and Dr. Figgis' “Civilization at the Cross-Roads,”—and if they haven't already read Samuel Butler's “Erewhon” and William Morris' “News from Nowhere” and “The Dream of John Ball” they should do so at once.

RALPH ADAMS CRAM.

### Obituary

Howard Crosby Butler, H.A.I.A.

Elected to Honorary Membership in the Institute  
in 1915

Died at Paris, 13 August, 1922

Howard Crosby Butler was born 7 March 1872, at Croton Falls, N. Y., the son of Edward Marchant and Helen Belden (Crosby) Butler. He prepared at Lynn's Collegiate Institute and the Berkley School, New York City; entered the sophomore class at Princeton in March, 1890, and was graduated with the degree of A.B., in 1892, winning an appointment as fellow in Archæology. He received the degree of Master of Arts the following year and spent the year 1894-95 at the School of Architecture, Columbia University. He was appointed Lecturer on Architecture at Princeton in 1895, held a fellowship at the American School of Classical Studies in Rome 1896-1897, and spent the next year at the American School of Classical Studies in Athens. On his return he was appointed Lecturer on Architecture at Princeton, in 1905 became Professor of Art and Archæology, and later Professor of the History of Architecture. In 1920 he was made Director of the newly organized School of Architecture at Princeton.

Early attracted to Syrian archæology by the writings of DeVogue, an interest which was fostered by personal acquaintance, Professor Butler organized an American Expedition to Syria in 1899 and 1900, traversing much of the ground covered by DeVogue, but adding extensively to the material brought back by the earlier explorer. He returned to Syria as Director of the Princeton Expedition in 1904, 1905 and 1909. The results of these expeditions appear in the “Publications of the American Archæologi-

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cal Expedition to Syria." In 1910 he was the organizer and director of the American Expedition to Sardis. The work was producing remarkable results when the outbreak of the European War in 1914 put an end to the excavations.

In the spring of 1922 work at the site was resumed, and it was on his return from Sardis in midsummer that he died of heart failure induced by the after-effects of fever.

In 1921 he was made chairman of the committee to reorganize the *Journal of Archaeology*, and also of the Research Commission established by the Archaeological Institute of America to prepare a general survey of the three fields of Oriental, Classical and American Archaeology and to present a report on projects in these fields to lay before the great financial foundations in the United States.

Howard Crosby Butler will be remembered for his personality, not to mention his remarkable ability as a lecturer and teacher, which was perhaps his greatest influence. He had the gift of inspiring his students with his enthusiasm and love of architecture not only as a technical science but as an art. From this influence sprang the Princeton School of Architecture in which not only is the technical side of architecture provided for but the allied arts of sculpture and painting are also taught in their relation to architecture.

V. LANSING COLLINS.

## Dudley McGrath

Elected to the Institute in 1908

Died at New York City, 1 October, 1922

Dudley McGrath, a member of the New York Chapter since 1914, died recently after a brief illness. He was the son of the late Thomas H. and Maria A. Bergen McGrath, and received his early education in the public schools of Brooklyn, the Polytechnic Institute, and later at Columbia University. He entered the office of J. B. Snook & Son immediately after leaving college in 1893, serving with them as assistant engineer, and later as chief engineer of their construction department, until 1902. He then began the practice of architecture as a member of the firm of Davis, McGrath & Shepard, which later became the present firm of Davis, McGrath & Kiessling. For a number of years he delivered a course of lectures on the subject of "Building Contracts" to the architectural students of Pratt Institute.

For many years Mr. McGrath was an active member of the Brooklyn Chapter of the Institute, serving on the Board of Directors and as Secretary of the Chapter from 1911-1913, after which he transferred to the New York Chapter. For a long period he represented the Brooklyn and later the New York Chapter as a member of the Joint Committee on City Departments and rendered valuable service in the effort to secure a better Building Code for the City.

His natural optimism endeared him to his co-workers and his considerate attitude towards others in the practice of his profession made his loss keenly felt by his associates and his many friends within and outside the profession of architect.

## Ernest Woodyatt

Elected to the Institute in 1916.

Died at Chicago, 29 June, 1922.

*Whereas*, it has pleased Almighty God to remove from our midst, our friend and business associate, the late Ernest Woodyatt, and

*Whereas*, in his unexpected demise we have lost a highly trained architect and a friend, one whose character and sterling qualities endeared him to all who came in contact with him, and

*Whereas*, knowing and appreciating the high esteem in which he was held, we believe and feel that all his many friends mourn with us in the loss of one of the noblest of men, one whose life was devoted to his ideals. His life could be best summed up by a quotation from a recently published letter of Chas. McKim who said "A man can always give up everything in an argument but the essence. The 'essence' here is a question of principle with me, to which I feel that I must adhere."

*Therefore*, be it resolved that the Illinois Chapter of the American Institute of Architects, in meeting assembled this day deeply and sincerely deplore the death of Ernest Woodyatt and express to the family of the deceased their heartfelt sympathy in their hour of great grief.

## Enrique-Maria Repulles y Vargas, H.C.M.A.I.A.

Elected to Honorary Corresponding Membership in the Institute in 1905

Died at Madrid, Spain, in September, 1922

## News Notes

H. GEORGE FINK has removed his office to Suite 301-4 Merrick Bldg., Miami, Fla., to which address he wishes sent samples and catalogues of architectural materials.

AS THE ARCHITECT of the United States Mortgage & Trust Company Building, New York City, adjudged by a committee of New York architects and laymen as the finest structure erected in the Fifth Avenue district during the past year, Henry C. Chapman was recently awarded a medal by the Fifth Avenue Association.

IN CONNECTION with the Sesqui-Centennial Exposition in Philadelphia, announced last month, the Philadelphia Chapter further states that it will not approve any plan not involving "the use and improvement of both banks of the Schuylkill River as far as Vine Street."

REGISTRATION of architects in Kansas may be in the offing, as committees of the Kansas City and Kansas Chapters are at present active in the matter of a bill for the legislature, entitled "Proposed Act for the Examination and Licensing of Architects and for the Regulation of the Practice of Architecture in the State of Kansas."

**Structural Service Department appears on the second right hand page following**

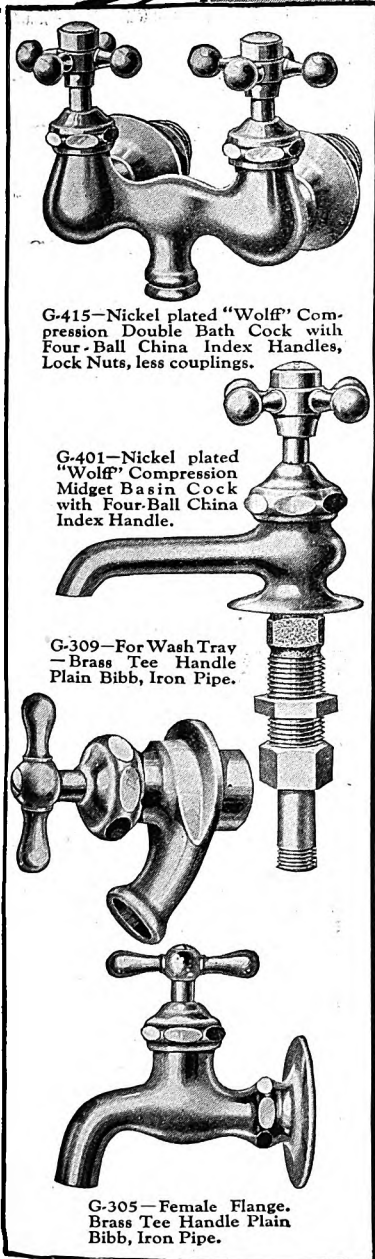


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G-309—For Wash Tray—Brass Tee Handle Plain Bibb, Iron Pipe.

G-305—Female Flange. Brass Tee Handle Plain Bibb, Iron Pipe.

# WOLFF

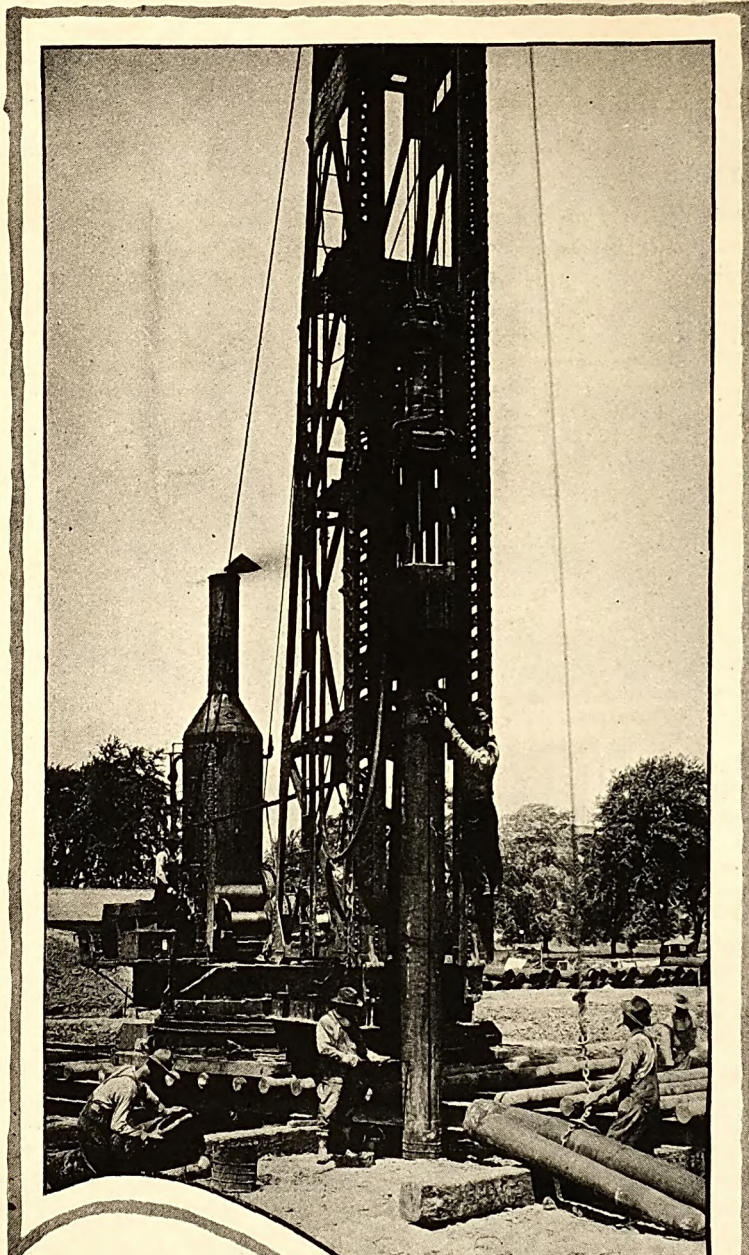
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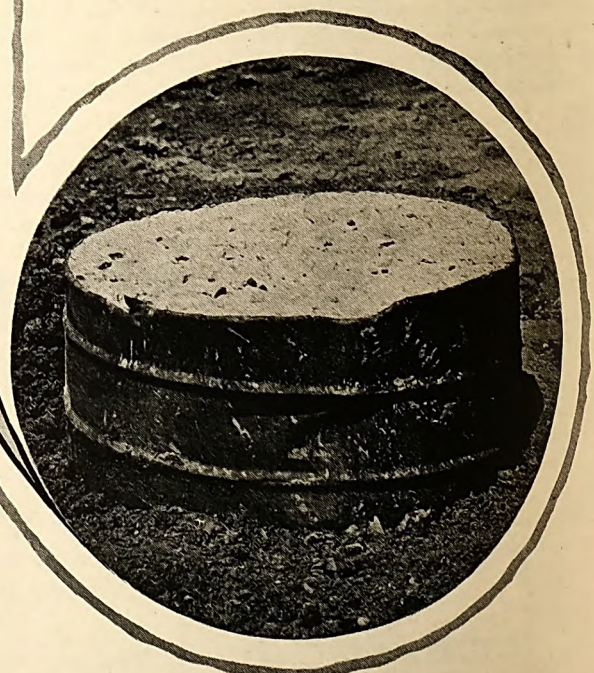
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# Structural Service Department

SULLIVAN W. JONES, *Associate Editor*  
LEROY E. KERN, *Assistant*

*In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.*

## Abstracts

*It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

**Purity of Copper.** (15b)—(*Mining and Metallurgy*, Nov., 1922. "One Phase of the Problem of Increasing the Consumption of Copper," by H. H. Stout). The high copper price during the war stimulated the capacity to produce far beyond a possible normal consumption and the copper industry consequently faces: (1) Potential over-production capacity; (2) Diminished consumption. Obviously the remedy for this condition is to increase, if possible, the consumption of copper by reducing the price and by improving the product.

It would appear that the copper producer has made very creditable progress in reducing the price of refined copper product as sold by the refiners. This article, therefore, discusses the problem of improving the product. The particular step that is discussed is the final one; namely, copper in the form of cathodes, of pure native copper, is melted in a reverberatory furnace and cast into the final marketable shapes and bars. This operation consists of:

A. Charging copper into the furnace (charging period).

B. Melting the copper by allowing a flame from coal or oil to play over the surface (melting period).

C. Blowing air through an iron pipe inserted beneath the surface of the molten metal for the purpose of saturating it with oxygen. The object of the oxygen saturation is to oxidize and remove impurities which have been absorbed from the furnace gases, primarily sulfur (oxidizing period).

This is also called flapping period, because the oxidation is sometimes done by flapping the surface with a rabble.

D. Reducing the molten metal by inserting poles. This removes the oxygen previously put into it (poling period).

E. Running the molten copper out into molds. During this time (about 4 hours) the surface is kept covered by charcoal and short pieces of wood (casting period).

To begin with, it may be stated that the methods used in these five steps are identical with those followed as far back as there is any history of the art. In other words, there has been no progress in this particular operation in many centuries.

At the completion of the oxidizing period, the molten metal should contain at least 0.38 per cent oxygen, which is 3.46 per cent copper oxide. In this small amount of copper oxide, all the remaining copper crystals are soluble, so the metal is 100 per cent copper-copper-oxide eutectic, and does not contain any undissolved copper crystals.

Stated in another way, its purity is zero for the reason that the eutectic is a substance that is practically worthless, as far as physical qualities are concerned. More particu-

larly, it is readily attacked by many of the gases found in normal atmosphere, and to the presence of this substance in sheet copper can be traced nearly all of the few failures of the metal which have caused engineers and architects to be averse to its more extended use.

After the molten metal reaches 100 per cent eutectic, all impurities have been removed by the oxygen. Since 0.4 per cent oxygen means 100 per cent impure eutectic, it follows that 0.1 per cent oxygen remaining in the finished product means 25 per cent impurity. Stated in a more concrete way: The impurity present is 250 times the oxygen content.

Standard specifications for refined copper are: Copper, not less than 99.88 per cent. Oxygen, not more than 0.1 per cent.

Another source of physical defects are certain gases which are soluble in the molten metal. As the metal is cooling in the molds, hundreds of minute specks of copper being projected upward from the molten surface can be seen. This is the gas which (not being so soluble in the cold metal) is being expelled during cooling.

The sheet copper used in the trades and arts is made from the bars produced by the refinery by rolling, annealing, rolling again, then annealing, etc., until the desired thickness and size is secured. The annealing consists in heating the copper to about 1,500 degrees F. and maintaining it at that temperature for various lengths of time (depending on its character). The heat is applied, allowing the flame from commercial fuel, coal, oil or wood to pass around the metal as it is piled in the furnace. The combustion gases from commercial fuel playing around this metal contain in various amounts: oxygen, nitrogen, hydrogen, hydrocarbons, sulfur, CO, CO<sub>2</sub>, SO<sub>2</sub>, etc. The relative amounts of each gas change from time to time and it is absolutely impossible to so regulate the combustion that a definite desired composition is always maintained.

A perfectly fair and logical conclusion may be drawn to the effect that notwithstanding all the care and regulation with which the annealing furnaces are operated, it is possible to change the chemical and physical properties of the sheet copper product. Also, the lower the per cent of eutectic (or per cent of oxygen) the less is this likely to happen.

Why can't all oxygen be removed in poling? During the casting period, the flame from commercial fuel containing hydrogen and SO<sub>2</sub> plays over the surface of the molten bath, and for about 4 hours it absorbs these gases in a greater or lesser degree. In order to offset the evil effects of these two gases on the final bar, the furnaceman is forced to allow some oxygen to remain, as that is the only way he can produce a casting that will "get by."

From a study of micrographs of copper bars the following tentative conclusions, which may or may not be altered by future research, might be drawn:

**Hydrogen.**—It is absorbed by molten copper and when the hydrogen has reduced all the oxygen it is highly soluble, producing a hollow core in final casting. It is absorbed by the solid metal hot and cold and penetrates the entire mass.





*The Plaza Hotel during cleaning; Terra Cotta, glazed brick and marble*

## Cleaning the Exterior

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**Hydrocarbons.**—No conclusion can be drawn as to their solubility in molten copper (from the hollow casting) as the commercial illuminating gas used contained hydrogen also. Some hydrocarbon compounds are absorbed by the solid hot metal, penetrating the entire mass, reducing the oxygen and leaving carbon distributed throughout the interior of the metal.

**Sulfur Dioxide.**—It has no appreciable effect on solid copper, hot or cold. If the oxygen content of molten copper falls below a certain mass reaction balance,  $\text{SO}_2$  is dissociated, absorbed and both O and S combine. The S forms a copper-copper-sulfide eutectic. The copper oxide separates out as individual crystals.

**Air.**—It oxidizes from the surface all copper in whatever state.

**Carbon Dioxide.**—It is neutral to all solid copper, hot or cold. It is neutral to pure molten copper.

**Carbon Monoxide.**—It reduces copper-copper-oxide eutectic in solid copper progressively from the surface. If at all, it is only slightly soluble in molten copper. The small holes in the CO melt micro are similar to the hydrogen melt micro, and hydrogen was present in the cathode used in the CO melt.

From a practical standpoint, these mean that after copper is melted it must be removed from contact with the combustion gases resulting from commercial fuel and which contain hydrogen and  $\text{SO}_2$ . It can then be oxidized by air and reduced by charcoal, and practically a perfect product will result. This points to an electric furnace. Since all cathodes contain some sulfur from the copper sulfate occluded between its crystals, the copper after melting must be flapped to remove this sulfur. It follows that nothing would be gained by melting cathodes in an electric furnace. They can be melted in a tall cupola requiring no waste heat boiler and operating 24 hours; inexpensive to build and cheap to operate. The melted copper can be oxidized in the cupola bath, or after it is transferred to the electric furnace. It can be reduced after transfer to the electric furnace by addition of charcoal (no hydrogen) and then cast in stationary molds.

The gasses in contact with the molten metal will be CO until all oxygen is removed and then  $\text{CO}_2$ . If all the sulfur found in commercial charcoal were absorbed by the copper, it would amount to 0.000001 per cent in the finished casting, which would not affect the product.

Some of the brass industry have recently adapted the electric furnace to their work. They melt the brass by electricity, which is expensive; and notwithstanding this we are given to understand that not only are their operating costs lower (when losses are considered) and that the highly skilled and mysterious melter is a thing of the past, but best of all, they can control the character of their product. They, too, had previously made no progress for centuries. From them we find that maintaining copper in a molten condition by electricity (after it is melted) is a relatively small cost.

Recently there has been developed a bauxite lining fused under an electric arc which, when used in these same brass induction furnaces, proved satisfactory in resisting the erosion of copper melted in them. The successful work by this new lining seems to pave the way for the adaptation of the electric furnace to the copper industry.

It has long been known that there are certain alloys of copper which possess very excellent physical characteristics, but to produce them in a furnace fired by commercial fuel was not feasible. The electric furnace removes all obstacles to this development. The steel industry pro-

duces in this way many alloys, each suited to its particular function. Judging from the prices we are all very willing to pay for the superior qualities of these steel alloys, this branch of the industry has not decreased its earnings.

**Gypsum Plaster Board.** (21c)—(*U. S. Dept. of Commerce. Bureau of Standards. Circular No. 108, "Gypsum-Properties, Definitions and Uses,"* (3g) Pages 21. Size 7" x 10"). Gypsum plaster board is a board made of calcined gypsum which is used as a lath-and-plaster construction. It consists, essentially, of a thin layer of gypsum contained between two layers of paper. Plaster boards are 32 by 36 inches and vary in thickness from one-fourth to one-half of an inch. The gypsum contains wood fiber as an aggregate, which reduces its brittleness, so that the boards can be nailed directly to the studs. The surfaces of the boards are roughened, and the paper is not sized. This construction forms a good bond for the application of plaster.

**Specification.**—The following specification has been adopted as tentative by the American Society for Testing Materials and is recommended by the Bureau of Standards.

**Definition.**—Gypsum plaster boards are used as a sheet lath or base for gypsum plaster on walls, ceilings, and partitions on the interior of buildings.

**Composition.**—Gypsum plaster board shall consist of sheets or slabs composed of one or more layers of hydrated gypsum plaster, with or without fiber, reinforced on the surface with chip board or felt.

**Thickness.**—The thickness of plaster boards shall average not less than the following:

(a) Three-eighths inch thick, with permissible local variations of one-sixteenth inch, plus or minus, and the thickness at any point in the board shall not be less than one-fourth inch.

(b) Five-sixteenths inch thick, with permissible local variations of one-sixteenth inch plus or minus, and the thickness at any point in the board shall not be less than three-sixteenths inch.

(c) One-fourth inch thick, with permissible local variations of one-sixteenth inch, plus or minus, and the thickness at any point in the board shall not be less than three-sixteenths inch.

**Dimensions.**—(a) The width shall be 32 inches with a permissible variation of one-fourth inch less than the dimension specified, and the length shall be 24, 36, or 48 inches, with a permissible variation of one-half inch, plus or minus.

(b) Unless otherwise specifically stated in the order, plaster boards of the widths specified and in lengths of 18 and 30 inches may be included in amount not exceeding 5 per cent of any single carload.

**Weight.**—The weight per thousand square feet of plaster board shall conform to the following:

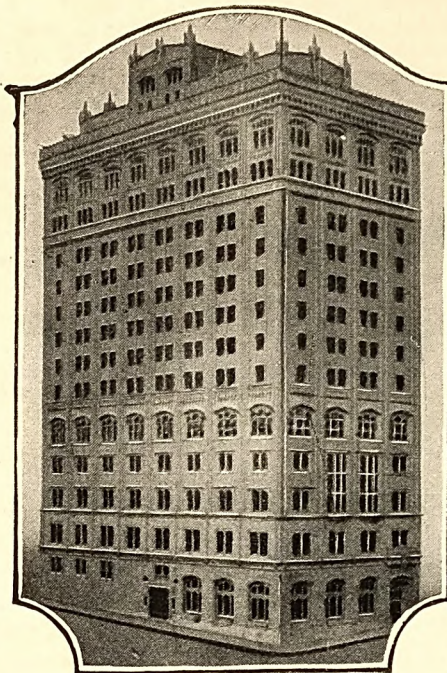
(a) For three-eighths inch thick, not less than 1,500 nor more than 2,000 pounds.

(b) For five-sixteenths inch thick, not less than 1,250 nor more than 1,600 pounds.

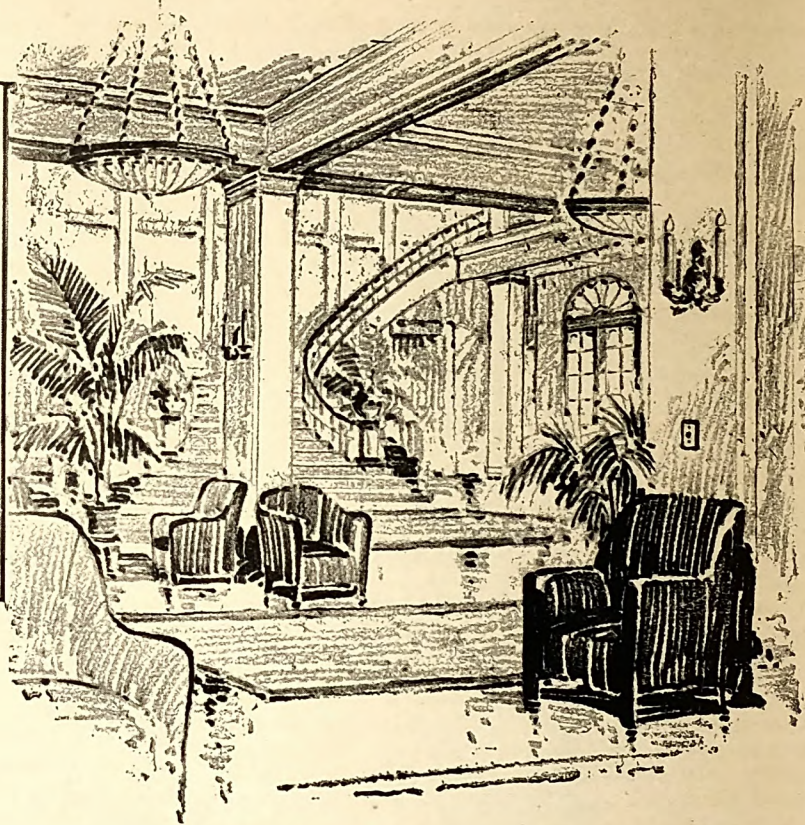
(c) For one-fourth inch thick, not less than 1,200 nor more than 1,500 pounds.

**Strength.**—(a) Strength-test samples shall be 12 inches wide and approximately 18 inches long, and when tested shall be supported on parallel knife-edge bearings spaced 16 inches and loaded through a similar bearing midway between the supports.

(b) When tested as described, samples taken from the



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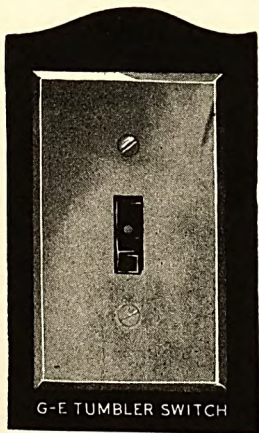
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plaster boards shall carry not less than the following loads:

Thickness in inches	Ultimate load	
	Load applied across fiber of surfacing Pounds	Load applied parallel to fiber of surfacing Pounds
3/8 .....	40	20
5/8 .....	35	17
1/4 .....	30	14

The minimum acceptable strength shall be not less than 5 pounds below the averages given.

NOTE.—The figures given above for five-sixteenths and one-fourth inch board have not yet been adopted by the A. S. T. M.

(c) Samples tested shall fail by rupture of surfacing and core, and not by the breaking of the bond between the surfacing and the core.

**Cores.**—The cores shall consist of the hydrated calcined gypsum plaster, to which may be added not to exceed 15 per cent by weight of sawdust or other vegetable fiber intimately mixed. Cores shall be of sufficient thickness throughout to make the finished plaster boards conform to the specifications as to thickness of the finished product.

**Surfacing Material.**—The surfacing material shall be composed of plain chip board, felt, or other stock of the same character, which shall be securely bonded to the core and shall completely cover the larger surfaces, with a permissible variation of one-fourth inch at the edges along the shorter dimension.

**Finished Product.**—The surfaces shall be such that they will readily receive and retain gypsum plaster. The edges and ends shall be reasonably straight and solid. The corners shall be square, with a permissible variation of one-fourth inch in the full width of the boards. The boards shall be free from cracks and imperfections that will render such boards unfit for use.

NOTE.—Plaster boards will be considered acceptable that have their corners blurred or broken, provided that the broken portion is not more than one and one-half inches in length.

**Packing and Marking.**—Gypsum plaster boards shall be shipped so as to be kept dry and free from injury. Each board shall be plainly labeled with the name of the brand and of the manufacturer.

**Inspection and Rejection.**—Gypsum plaster boards shall conform to the foregoing requirements and shall be tested as provided for when determining their strength. Plaster boards may be rejected upon failure to conform to any of the foregoing requirements.

**Gypsum Wall Board.** (19f)—(*U. S. Dept. of Commerce. Bureau of Standards. Circular 108, "Gypsum-Properties, Definitions and Uses."* (3g) Pages 21, Size 7" x 10"). Gypsum wall board is quite similar in construction to plaster board. Wall board, however, is not intended to be plastered, but the surface of the board forms the finished wall. Therefore, the surface of a wall board is smooth, and the paper is sized. Wall board comes in strips 32 or 48 inches wide, varying in length from 4 to 10 feet. Its thickness may be from three-eighths to five-eighths of an inch. It is erected on walls in such a way that all joints are vertical, the length of the board being cut to correspond with the height of the ceiling, thereby avoiding horizontal joints. The boards are nailed directly to the studs or ceiling supports. The joints may be covered with

wooden strips, which give the wall a paneled effect. Some types of wall board have the edges so finished as to permit of the joints being filled with a putty of calcined gypsum. Another method is to cover the joints with strips of paper the same color as that forming the surface of the board. Either of these methods produces a joint which is barely visible.

**Specification.**—The following specification has been adopted as tentative by the American Society for Testing Materials and is recommended by the Bureau of Standards:

**Definition.**—Gypsum wall boards are used without plaster coatings as a finish on walls, ceilings, and partitions on the interior of buildings.

**Composition.**—Gypsum wall board shall consist of sheets or slabs composed of a layer of hydrated gypsum plaster with or without fiber and a surfacing of chip or manila board on both sides.

**Thickness.**—The thickness shall average not less than three-eighths inch, with permissible local variations of one-thirty-second of an inch, plus or minus, and the thickness at any point in the board shall not be less than five-sixteenths inch.

**Dimensions.**—Where the wall boards are to be laid with joints butted, the width shall be 32, 36 or 48 inches, with a permissible variation of three-thirty-seconds inch, plus or minus. Where the joints are to be filled with joint filler, the width shall be 31 3/4, 35 3/4 or 47 3/4 inches, with a permissible variation of three thirty-seconds inch, plus or minus. The length shall be 4, 5, 6, 7, 8, 9, or 10 feet, with a permissible variation of three-eighths inch, plus or minus.

**Weight.** The weight shall be not less than 1500 nor more than 2000 pounds per 1000 square feet of wall board.

**Strength.** (a) Strength-test samples shall be 12 inches wide and approximately 18 inches long, and when tested shall be supported on parallel knife-edge bearings spaced 16 inches and loaded through a similar bearing midway between the supports.

(b) Such samples taken from the wall boards shall carry a load of not less than 80 pounds when the line of supports is at right angles to the direction of the fiber of the surfacing, and not less than 32 pounds when the line of the supports is parallel to the fiber of the surfacing.

(c) Samples tested shall fail by rupture of the surfacing and core and not by the breaking of the bond between the surfacing and the core.

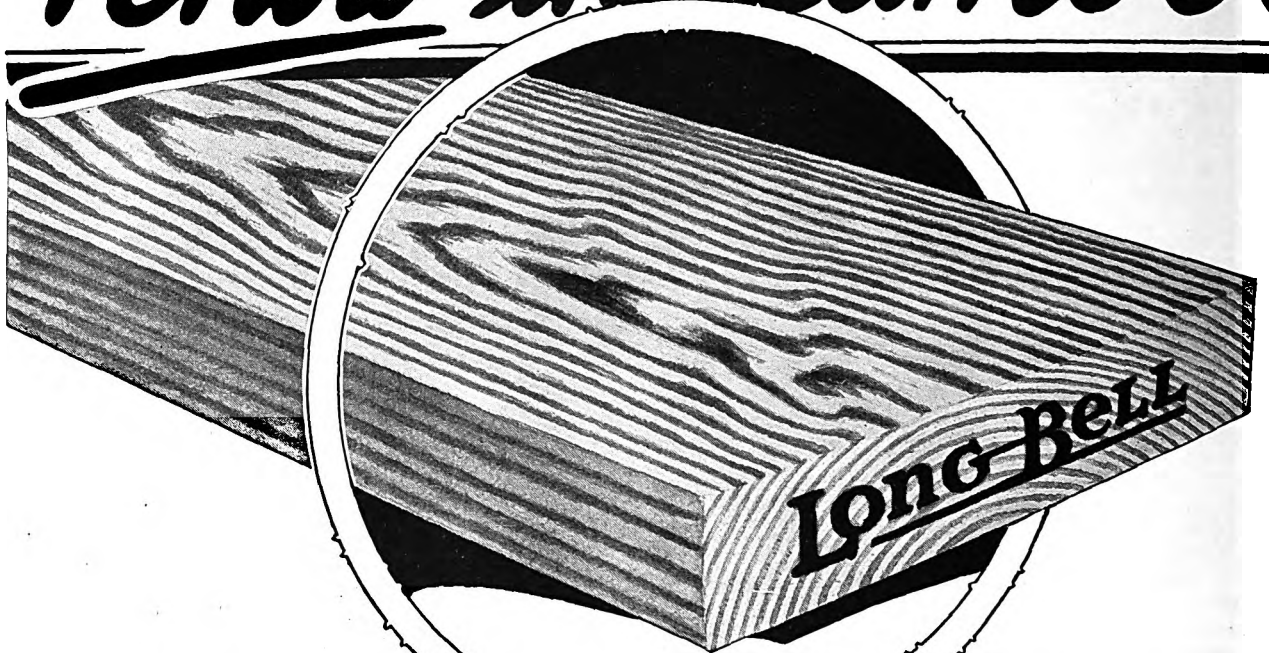
**Cores.** The cores shall consist of hydrated calcined gypsum plaster, to which may be added not to exceed 15 per cent by weight of sawdust or other vegetable fiber intimately mixed. Cores shall be of sufficient thickness throughout to make the finished wall boards conform to the specifications as to thickness of the finished product.

**Surfacing Material.** The surfacing material shall be composed of plain chip, manila, filled news, or other stock of the same general character containing sufficient sizing to meet the following conditions:

(a) Samples of the finished wall board shall sustain a static head of 1 inch of water (confined within a 2-inch ring on either of the surfaces of the board) for a period of not less than two hours without penetrating the surface sufficiently to stain the core.

(b) The surfacing material shall completely cover the two larger faces of the core and shall be securely bonded to it.

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**Finished Product.** The surface designed to be exposed on erection shall be true and free from imperfections with or without decoration. The edges and ends shall be straight and solid. Where wall boards are to be butted the corners shall be square with both side edges. In cases where the joints are to be filled, the joints shall be square with both side edges with a permissible variation of one-eighth inch in the full width of the boards. The finished product shall be dry and free from cracks and imperfections that would render such boards unfit for use.

**Packing and Marking.** Gypsum wall boards shall be shipped so as to be kept dry and free from injury. Each board shall be plainly labeled with the name of the brand of the manufacturer.

**Inspection and Rejection.** Gypsum wall boards shall conform to the foregoing requirements and shall be tested as provided for when determining their strength and water permeation. Wall boards may be rejected upon failure to conform to any of the foregoing requirements.

**Calculation of the Lighting Installation.** (31f1)—(Bulletin L. D. 117, *Lighting Data, Edison Lamp Works. Size 6" x 9."* Pages 29.) There are two basic methods of pre-determining the illumination produced by a given lighting installation. The first is based on certain mathematical calculations depending upon the distribution and candle-power values of a lamp with its reflector equipment, and the distance of the source from the point where the illumination is to be determined. While this method is especially useful for determining the amount of light upon specified points, it necessitates many tedious calculations and does not take into consideration the light reflected from the walls and ceiling.

The second method is more convenient and is an absolutely reliable means of calculating an illumination problem, as it is based on the law of conservation. According to this law all of the light flux (lumens) produced by a source or sources of illumination in an enclosure such as a room, is absorbed by the illuminated surfaces in the enclosure. Calculations based upon this law, which is fundamental, must be accurate when the assumptions as to absorption, etc., are correct.

A certain portion of the light is reflected back from the objects upon which it falls, such as the walls and ceiling, the remainder being absorbed by these surfaces. The percentage of the light which is reflected to the amount falling upon the surface is known as the reflection coefficient of the surface. This reflected light may again be reflected, and so on.

The useful light may be considered as that reaching an arbitrary working plane (say 30 inches above the floor), and knowing the light flux produced and the reflections of the walls and ceilings, etc., it is possible to determine the total lumens usable.

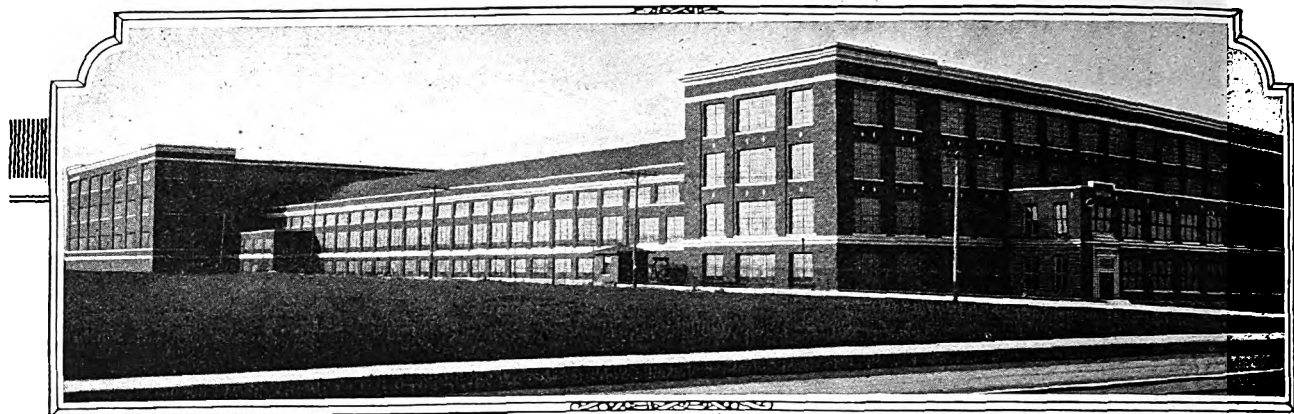
This would necessitate many measurements and mathematical computations to obtain the various reflection coefficients. Therefore, typical cases have been tested and tables derived from them, which are found to be very convenient for designing an illumination layout.

In order to facilitate the work of laying out the proposed installation, which is rather cumbersome by some of the methods, a system of curves and tables has been developed, known in this bulletin as Method No. 3. The principles involved in the first two methods have all been taken into consideration in the new method, leaving only a substitution of values from the curves necessary for the one who is planning the lighting layout.

In this bulletin the following subjects are discussed: Candlepower Relations Point by Point Method, Flux of Light Method, Modified Flux of Light Method.

**Bibliography.**—"Calculation of Illumination by the Flux of Light Method"—J. R. Cravath and B. R. Lansingh, Trans. I. E. S., Vol. 3, page 518. "Calculating and Computing Light from Various Sources"—Carl Hering, Trans. I. E. S., Vol. 3, page 645. "Engineering Problems in Illumination"—A. A. Wohlauer, Trans. I. E. S., Vol. 3, p. 693. "The Mathematical Theory of Finite Surface Light Sources"—Bassett Jones, Jr., Trans. I. E. S., Vol. 4, page 216. "Calculation and Design of Illumination"—A. A. Wohlauer, Trans. I. E. S., Vol. 4, p. 259. "The Simplification of Illumination Problems through the Principles of Light Flux"—J. S. Codman, Trans. I. E. S., Vol. 4, page 310. "Standard Relations of Light Distribution"—A. J. Swett, Trans. I. E. S., Vol. 4, p. 745. "On Finite Surface Light Sources"—Bassett J. Jones, Jr., Trans. I. E. S., Vol. 5, p. 281. "Illumination Tests"—C. H. Sharpe and P. S. Millar, Trans. I. E. S., Vol. 5, p. 391. "Polar Curves on Finite Line and Surface Light Sources"—Bassett Jones, Jr., Trans. I. E. S., Vol. 6, p. 365. "The Law of Conservation as Applied to Illumination Calculations"—A. S. McAllister, Trans. I. E. S., Vol. 6, p. 703. "Effectiveness of Light as Influenced by Systems and Surroundings"—J. R. Cravath, I. E. S., Vol. 6, p. 782. "Essential Principles of Illumination"—A. J. Rowland, I. E. S., Vol. 7, page 315. "Theory and Calculation of Illumination Curves"—F. A. Benford, Jr., Trans. I. E. S., Vol. 7, p. 695. "Simplification of Illumination Calculations"—A. S. McAllister, Trans. I. E. S., Vol. 10, p. 587. "A Flux Method of Obtaining Average Illumination"—F. A. Benford and H. E. Mahan, Trans. I. E. S., Vol. 10, p. 593. "Simple Methods of Computing Light Flux and Horizontal Illumination"—W. E. Hodge and A. W. Chadbourne, Trans. I. E. S., Vol. 11, p. 22. "Illuminating Efficiencies as Determined in an Experimental Room"—W. Harrison and E. A. Anderson, Trans. I. E. S., Vol. 11, p. 67. "Fundamentals of Illumination Design"—Ward Harrison, G. E. Review, May, June, July, and August, 1918. "Graphical Solution of Illumination Problems"—N. S. Dickerson, Electrical World, Aug. 17 and Sept. 20, 1918. "Illuminating Calculations for the Electrical Contractor"—L. W. Moxey, Jr., Electrical World, Dec. 25, 1915. "Calculation of Illumination from Indirect Sources"—R. C. Powell, Electrical World, June 5, 1915. "The Lumen"—F. W. Wilcox, Illuminating Engineer (British), Jan. and Feb., 1918. "The Principles and Design of Interior Illumination"—W. E. Barrows, Jr., Practice on Illuminating Engineering, Johns Hopkins University, 1910. "Illumination Units and Calculations"—A. S. McAllister, Illuminating Engineering Practice, University of Pennsylvania, 1916. "The Principles of Interior Illumination"—Illuminating Engineering Practice, University of Pennsylvania, 1916.

**Commercial Photometry.** (31f1)—(Bulletin L. D. 122. *Lighting Data, Edison Lamp Works. Size 6" x 9."* Pages 32.) In this bulletin the following subjects are discussed: Elements of a Photometer, Means of Varying the Light, Means of Comparing the Light, The Standard Lamp and Calibration of the Comparison Lamp, Measuring Horizontal Candle-power of Light Sources, Measuring Spherical Candle-power or Total Light of Illuminants, Determination of the Vertical Distribution of Light, Selection of Equipment for Test, Calculating Results from the Test Readings, Portable Photometers, Calibration, Illumination Tests, Brightness Measurement, Measurement of Reflection Factor, Illumination Test on a Single Unit, Rough Distribution Determination with Portable Photometer and Street Illumination Tests, and Projector Tests.



*The A. O. Smith Corporation's Building at Milwaukee. Jacobus & Winding, Contractors. Approximately 126,000 square feet of floor finish laid the Master Mix Way.*

A Product Must Be Good When the President of a Busy Construction Company Will Stop His Work to Dictate an Unsolicited Acknowledgment of its Merits as President Winding Did of Master Mix.

## Jacobus & Winding Concrete Construction Co. CONTRACTORS

The Master Builders Company,  
456 Broadway, Milwaukee, Wis.

Wauwatosa, Wis, March 22, 1921,

Dear Sir:

Attention—Mr. F. Theilacker.

We feel it our duty, to write you, concerning our experience in using Master Mix for floor hardener, etc.

Before we started using Master Mix for the entire area of floor we conducted a series of tests. We would lay an area of floor, without the hardener and then we would lay an area of floor with the hardener in the same day's pouring. We used this method three consecutive days, watching closely, day by day, the hardening of the floor, using a sharp tool and applying the same pressure to determine which was the harder. We found that the floor, which we used the Master Mix hardener in was by far, the hardest. Also that it set up a great deal faster, allowing us to get on to it for troweling, a good deal sooner. Therefore, decreasing the cost of finishing, overtime, etc., considerable. We also found that using Master Mix in freezing weather, by hastening the setting and preventing the freezing of concrete, was a great help to us, saving us considerable, as we did not have to heat material.

We would like to say a word in regard to the services rendered us thru your Mr. F. Theilacker. Mr. Theilacker gave our work his personal supervision. In other words, he acted as one of the crew, following the application of the hardener from the start to the finish, working in harmony with the Contractor in reducing the cost, by using the hardener as economically and yet as efficiently as possible.

The floor area, we have reference to, was a six inch monolithic floor, and by using Mr. Theilacker's recommendation of striking off the floor to a true level with the rough concrete and then sprinkling with Master Mix, using a 1 to 1½ dryer, applied at two different times, floated and troweled hard, gave us a very hard and satisfactory floor.

If any other information is desired, we would be pleased to give same upon application.

Yours very truly,

JACOBUS & WINDING CONCRETE CONSTRUCTION CO.

Per: W. G. WINDING, Pres.

**The Master Builders Company**

Union Building, Cleveland, Ohio

Sales Offices in 70 Cities

# Master Mix for Mortar

## STRUCTURAL SERVICE DEPARTMENT

**The Maintenance of Lighting Systems.** (31f25)—(*Bulletin 40, Engineering Department, National Lamp Works. Size 6" x 9." Pages 16.*) The effectiveness of a lighting system depends largely upon its maintenance after installation. The design of fixtures and the character of the installation is influenced to a great extent by the question of maintenance. This bulletin emphasizes the importance of maintenance and shows that dirty reflectors, walls and ceilings darkened by smoke and dust, blackened lamps, empty sockets, unobserved burnouts and replacements with lamps of wrong size or improper voltage rating are prime causes of inadequate illumination.

**Store Lighting.** (31f14)—(*Bulletin 29, Engineering Department, National Lamp Works. Size 6" x 9." Pages 32.*) A discussion of various types of lighting systems with suggestions and tables of particular application in store lighting problems. Actual problems are used to illustrate the method of application.

**Incandescent Lamp Temperatures as Related to Modern Lighting Practice.** (31f21)—(*Bulletin 44, Engineering Department, National Lamp Works. Size 6" x 9." Pages 34.*) This bulletin presents data obtained from tests on Mazda B (vacuum) lamps. The material presented is divided into four main parts: First—Temperatures of incandescent lamps operated without reflecting or diffusing equipments; Second—Temperatures of incandescent lamps operated with reflecting and diffusing equipments; Third—Ventilation vs. non-ventilation; Fourth—Suggestions on the use of incandescent lamps in interiors which present special temperature problems.

The data are aimed to clear up or show in proper relation much discussed questions regarding operating temperatures, interpretations of the National Electrical Code pertaining to lighting unit temperatures, use of lamps in dusty places, explosions due to lamp breakage, etc.

**Factory Lighting Designs.** (31f13)—(*Bulletin No. 42, Engineering Department, National Lamp Works. Pages 48. Size 6" x 9."*) Illumination design involves somewhat tedious calculation when all the factors which exert an important influence on the final result are given proper consideration. In this bulletin is shown the application of general information and data to the design of overhead lighting systems for factories. Ready-made illumination designs are presented and these designs can be applied directly or with only slight alterations, to a wide variety of industrial interiors.

**Lighting of the Clothing Industry.** (31f13)—(*Bulletin L. D. 133. Lighting Data. Edison Lamp Works. Size 6" x 9." Pages 20.*) In this bulletin is given the result of an inspection of approximately 100 factories to determine the present practice in the industry. This is followed by a discussion of the general requirements for illumination and a description of the specific requirements for the various individual operations.

**Bibliography.**—"Electrical Lighting of Laundries," By A. L. Powell, *Lighting Journal*, August, 1913; "Laundry Lighting," by W. D. Stitchberry, *Electrical Merchandising*, March, 1917; "Lighting in the Textile and Clothing Industries," by C. E. Clewell, *Electrical World*, July 28, 1917; "High Intensity Improves Sewing Machine Lighting," *Electrical World*, May 7, 1921.

**Erection of Steel Structures by Arc Welding.** (13e)—(*Proceedings of the Engineers' Society of Western Pennsyl-*

*vania, Dec., 1921.*) Electric arc welding of the structural steel framework in building construction presents no serious difficulties that have not already been encountered in the application of this process. The material to be welded has the same characteristics as that used in steel ship construction. Commercial welders in the principal harbors of the country have welded this material without difficulty for a number of years in making repairs to portions of the structure of steel ships.

**Poultry Houses.** (351)—(*University of Montana—Agricultural Experiment Station. Circular No. 100, by W. F. Shoppe. Pages 23, size 6"x9". Illustrated.*) Contents: Importance of hygiene; Systems of poultry housing; Location of poultry houses; Drainage; Soil for poultry yards; Principles of house construction; Ventilation; Moisture; Sunlight in the house; Height and width of house; Foundation; Floor; Roof; Straw lofts; Curtain front house.

**Planting and Care of Street Trees.** (38e2)—(*U. S. Dept. of Agriculture, Bureau of Plant Industry. Farmers Bulletin No. 1209 by F. L. Mulford. Pages 33. Size 6"x9". Illustrated.*) Contents: Importance of shade trees. Public control of shade trees. Planning for trees on city streets. Spacing trees. Conditions for tree growth. Trees suitable for city streets. Culture of street trees—selection of individual trees; preparation of holes; planting; pruning; stakes and guards; later care. Care of mature trees—pruning; feeding; spraying.

# Indiana World War Memorial

## Notice to Architects

Not later than March 15, 1923, the Board of Trustees of the Indiana World War Memorial will receive at its offices in The Chalfant, N. W. Corner of Pennsylvania and Michigan Streets, in the city of Indianapolis, Indiana, competitive "designs, plans and specifications" for a World War Memorial to be erected in the city of Indianapolis at an approximate cost of \$2,000,000.00. Full information in regard to the competition may be had by addressing

PAUL COMSTOCK, *Secretary.*

The Chalfant,  
Indianapolis, Indiana.



# To Architects:

A LOT of us manufacturers have received a great deal of correspondence of late advising us that architects are not at all interested in general claims as to the quality of wares advertised for their approval.

For instance, if we say that Humphrey Automatic Gas Water Heaters are the best in the world—as we do honestly believe they are—the mere unsupported assertion leaves you cold. You are swayed by neither eloquence nor reiteration. You want to know *why*.

That's the best news we've had since the Armistice. For years these advertising chaps have been pleading with us to keep crude technicalities out of our copy. We've kept mum about lots of interesting things we were just dying to tell. They wouldn't let us. They were very unkind about it.

So now that the muzzle is off and we've actually been urged to talk Humphrey Heaters in our own homely, scientific way,

we're going to be just as cold-bloodedly technical as we please.

We announce herewith a course of Humphrey lectures, brief, snappy and wholly to the point, to be published month by month in this and other architectural papers.

We'll take Humphrey Heaters apart and explain them to you in detail. We'll tell you why a certain valve we've got is so simple and effective that competitors are waiting at the door of the Patent Office to get a chance at it. We'll tell you about our thermostatic control and leave you to judge as to its superiority.

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We'll tell you what you want to know in your own language, and all we ask you is to pay the attention due to age and a deep knowledge of our subject.

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It's worth studying. Get your copy right away from —*

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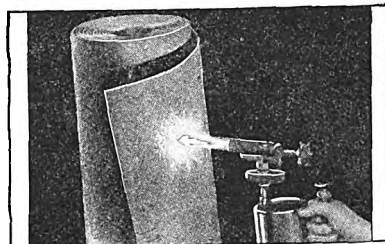
*First National Bank Building, Omaha, Neb.*

*Architects—Graham, Burnham & Co.*

# JOHNS- MANVILLE Asbestos Roofings

THE difference in duty between a length of pipe covering and a strip of roofing is a broad one.

But when these materials are united by an unusual service to architects under the same manufacturer's name—Johns-Manville—it is not strange that this name appears many times in one set of specifications. In specifications for a building such as that above,



*Any Johns-Manville Asbestos Roofing will withstand the white hot flame of a plumber's blow-torch.*

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If you wish particulars on any or all of the above products, write to:—

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# Through a Sieve Woven Finer Than Silk

Portland cement, to meet the exacting specifications of leading engineering societies and the United States Government, must be ground so fine that at least 78 per cent will pass a sieve having 200 wires per linear inch. A silk handkerchief has but 110 threads per inch—an excellent quality of silk dress goods 187 threads.

The watch in your pocket hardly calls for a more complicated and carefully adjusted process of manufacture than the making of cement.

Grinding is only one of the many operations required to make it. Yet in grinding alone, see what is required:

The rocks from the quarry, often as big as a piano and heavier, go first into a gigantic "coffee mill." It bites at these huge chunks, chips them, and finally crushes them—to pieces six inches or so in diameter.

Two finer mills follow, one after the other, reducing the stones to the size of coarse sand. After this, they must be ground in a great revolving cylinder half filled with steel balls, until every cubic foot of the rock has been reduced to 14 billion pieces—until 85 per cent of them will shake through a sieve that will actually hold water, a sieve with 40,000 holes to the square inch.

And all of this is less than half the necessary grinding. The coal must be ground. For the object of all this fine grinding of the raw materials is only that it may be fused into crystalline clinkers. And to fuse it requires pulverized coal—or its equivalent. Most plants use pulverized coal.

The coal must be ground as fine as the raw stone. Eighty-five per cent of it or thereabouts must go through the sieve that holds water. And that often means two grinding operations.

There is still the clinker to be ground. It is glass-hard to begin with. It must be ground first to the fineness of sand, and then ground and reground in another cylinder of steel balls—until at least 78 per cent of it will go through the sieve woven finer than silk.

Huge boulders to an impalpable dust. Common coal to an impalpable dust, and finally, after the burning, glass-hard clinker to an impalpable dust. That is the making of cement. And eight heavy grinding operations are required in the process.

Grinding is only one of the lesser heat and power consuming operations in cement manufacture.

## PORTLAND CEMENT ASSOCIATION

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to Improve and Extend the Uses of Concrete*

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# “Taking Pen in Hand—”

I might as well admit it! I don't know how to write ads—but I do know the plumbing business. The fellow who used to write our ads didn't know the plumbing business, so he just strung words like “quality” and “service” together and tacked our name on the end.

That isn't my idea of advertising. To me, advertising is just *writing* to the people I can't meet personally.

I want our ads to tell our story the way I tell it myself.

Therefore—I'm going to write some myself.

When I can get a plumber in our shop I don't have much trouble selling him on the advantages of Clow plumbing—what he *sees* does that for me.

But there are a lot of plumbers I can't bring to the shop. Therefore, I'm going to bring the shop to them.

I'm going to try my hand at writing an illustrated serial story! A personally conducted trip through our shop—from receiving room to the shipping platform.

Instead of saying that “Clow plumbing saves money on installation costs,” I'll show you a picture of a man with an air chipping hammer, squaring up a tub to architect's detail, so that it will fit the opening like a foot in an old shoe.

Instead of talking about the “superior quality” of our brass goods, I'll take you through our brass shop, and leave it to you to judge.

I think this series will be worth reading. But, as I said, I'm no hand with the pen, and I'll be eternally grateful for suggestions.

*W. B. Clow, Jr.*

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## Engineering Tests Again Demonstrate Superiority of Southern Pine

In the series of tests just completed by the Testing Laboratories of the Department of Civil Engineering at Columbia University, Long Leaf Southern Pine again emerged the victor. The result of the tests is summed up in the following concise table:



We are manufacturers of the famous ESSCO Heart Flooring for homes, office buildings, factories, etc. Each bundle is identified with the Heart Label.

	Long leaf Pine	Short leaf Pine	Loblolly Pine	Coast type Douglas Fir
Strength as beam or post.....	100.0	84.0	83.5	85.0
Compressing 1 grain (flatwise)	100.0	80.0	92.0	88.5
Shearing grain .....	100.0	83.0	84.0	85.0
Shock-resisting ability .....	100.0	90.0	91.0	77.0
Stiffness .....	100.0	82.0	85.5	100.0
Hardness .....	100.0	85.5	80.0	78.0
Weight (green) .....	100.0	100.0	108.0	80.0
Weight (air dry) .....	100.0	90.5	90.5	80.0

The holdings of Exchange Sawmills Sales Company are all in that belt in Louisiana where Long Leaf Southern Pine grows to its best. Southern Pine—the wood of a thousand uses—is available in any shape or size, is known for its workability, and can be secured at a reasonable cost. We give particular attention to items used in home building.

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## A mirror for balance

**I**S there a true lover of artistic achievement in home design who doesn't love the enchanting illusion of the mirrored door? First, the subterfuge of a puzzled architect, but now the artifice of artistic effect in planning interiors.

Seemingly something that it isn't, the mirrored door may add a witching air of mystery. It may hold the secret of balance essential to a restful room. It may compensate a window or a door, or break the tiresome space of blank walls.

A mirror is something more than merely an article of furniture to be hung up. Considered in the building of house or apartment, and in the hands of a skillful artist, it may play an important part in the architectural scheme.

Plate glass mirrors made in America are unsurpassed in brilliance, clearness

and flawless perfection. They are made of selected plate glass silvered with the greatest care by skillful workmen.

Specify plate glass mirrors in bedroom doors, closet doors, bathroom doors, medicine-cabinet doors, over the mantel and paneled French doors. If properly installed, built-in plate glass mirrors will last the life of a house without discoloration. They are made for permanency.

A well-designed house, the pride of its owner and builder, deserves nothing less than plate glass in its windows. Its beautifully polished surfaces and crystal clearness make all the difference in the world in the external appearance of the house. Yet the difference in cost between plate glass and common sheet glass is surprisingly small. Get comparative figures from any glazing contractor or builder.

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*Hibernia Bank & Trust Co., New Orleans, La., 26 stories in height. Favrot & Livaudais, Architects. The George A. Fuller Company, General Contractors.*



*Booklets on Indiana Limestone will be mailed on request*

## *Consider These Facts When Confronted With Time Contracts*

A time contract, with heavy penalty for delay, is the test of true service and strength. Contract for the Hibernia Bank & Trust Company building called for the following schedule:

*"A crew of 25 stone setters to be employed at the building. Stone to be set at the rate of 2½ to 3 stories a week. The erection of 3 derricks for unloading of stone. Each derrick to be equipped with a searchlight so that unloading can continue uninterruptedly both night and day."*

Again the Indiana Limestone industry was selected as the one best equipped to meet this exigency. From the limestone district 65,000 cubic feet of stone were shipped in 65 working days, and the stone set in the building at the rate of three stories a week. *The entire contract was completed nineteen days ahead of schedule time.*

The resources and facilities of this great industry enable architects and owners to obtain this service at all times.

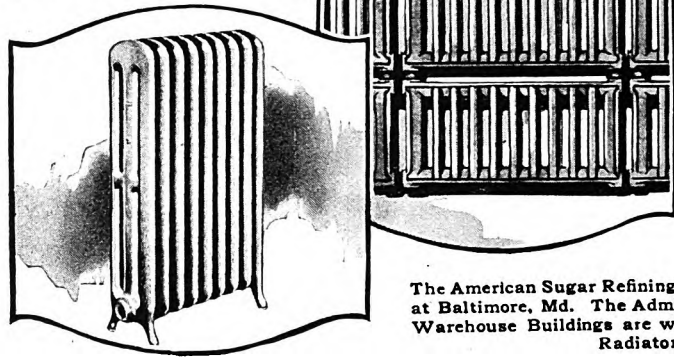
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# INDIANA LIMESTONE

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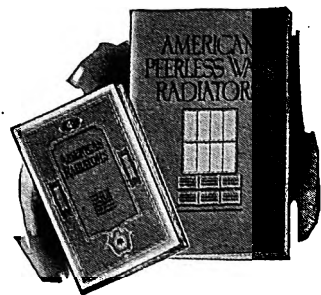
In the warehouses, 8,000 additional feet

of Peerless Wall Radiation are on duty. The remainder of the plant requires no heating system, as the machinery used in the processes of refining gives off sufficient warmth.

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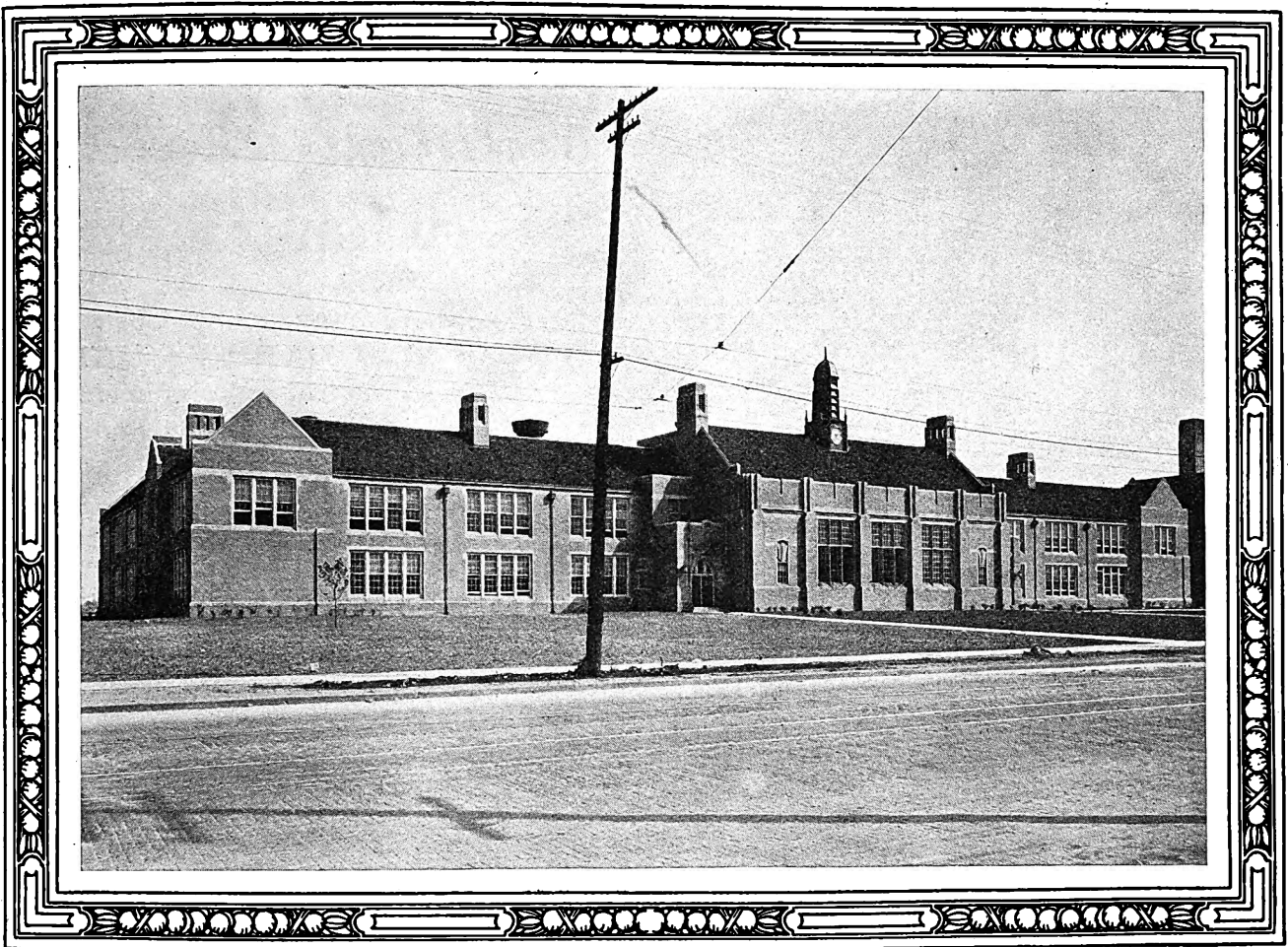
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There are many and obvious reasons why STANDARDIZATION OF JENKINS is true valve efficiency and economy—the six most distinct are:

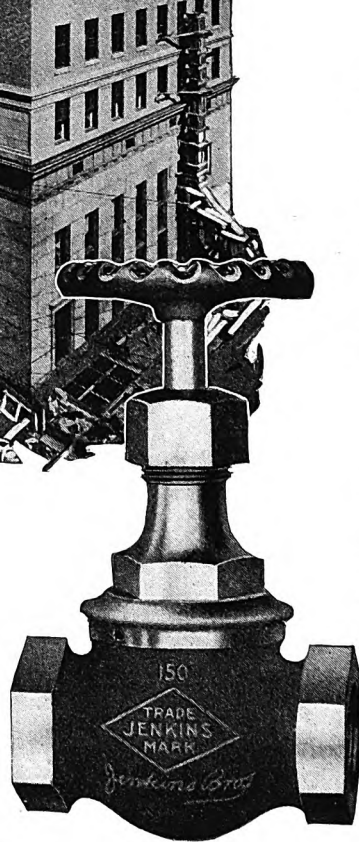
- (1) An assured valve service—for Jenkins Valves have strength and proportion to meet the most severe conditions.
- (2) Operatives can easily acquaint themselves with the simple construction of Jenkins Valves. They do not have to worry about the actions and peculiarities of valves of widely varied manufacture.
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- (5) Nation-wide distribution, through supply houses everywhere, carries Jenkins Valves and their parts to every locality.
- (6) Money is saved, for Jenkins Valves go into service and stay—a quality which, alone, would make them the most economical.

*Jenkins service can only be expected from genuine Jenkins Valves—specify Jenkins "Diamond" Valve and avoid imitations.*

*Jenkins Valves, and Jenkins Only, are installed throughout the new First National Bank Building, Jersey City.*

*Architect: Alfred C. Bossom, New York City; Plumbing and Heating Contractors: W. W. Farrier & Co. Jersey City.*

*Fig. 106, Standard Brass Globe Valve, one of the many types of Jenkins Valves used.*



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INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

December, 19

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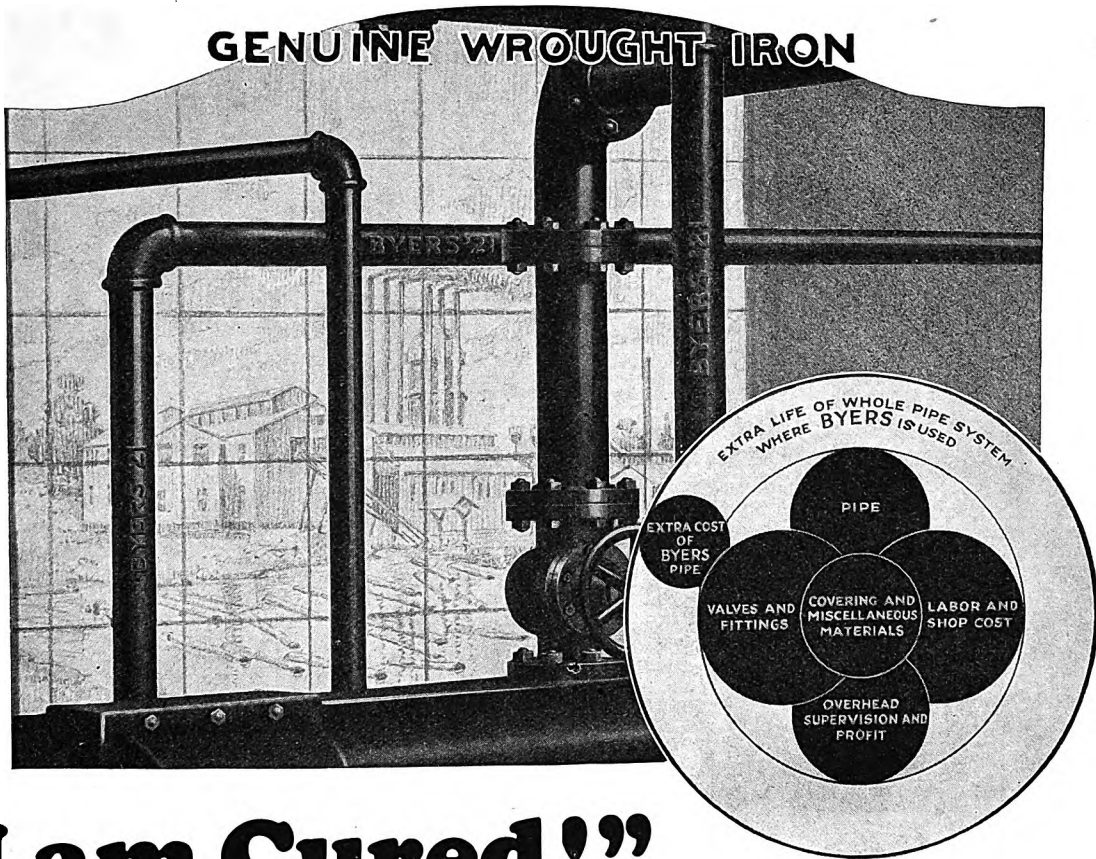
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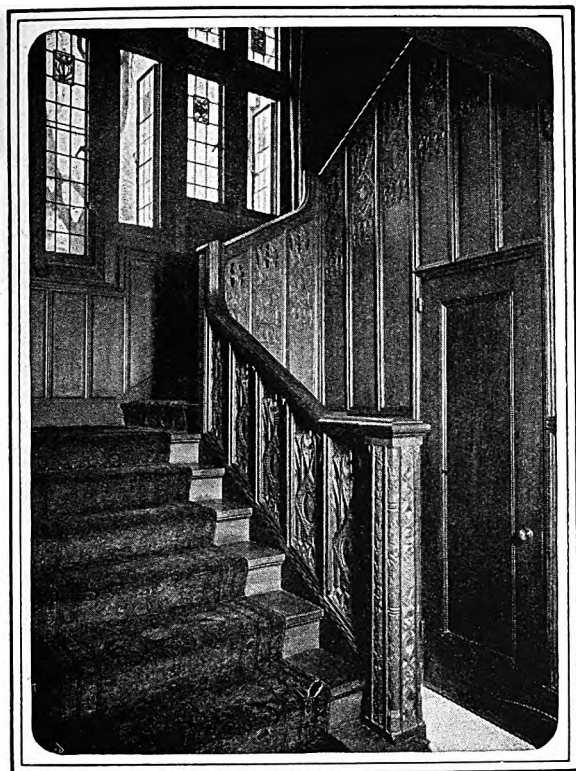
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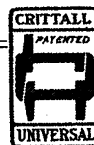
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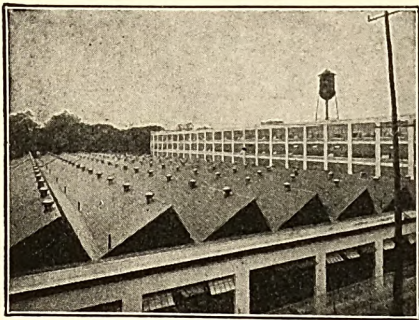
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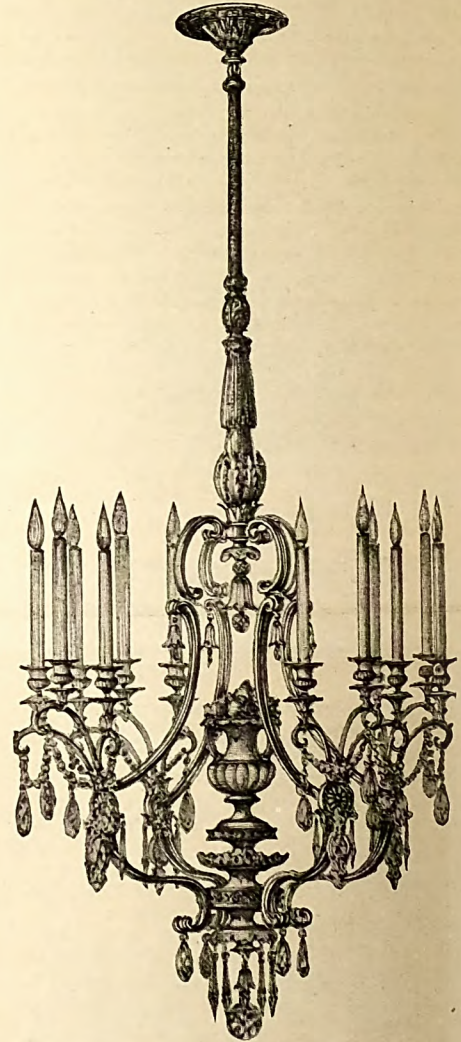
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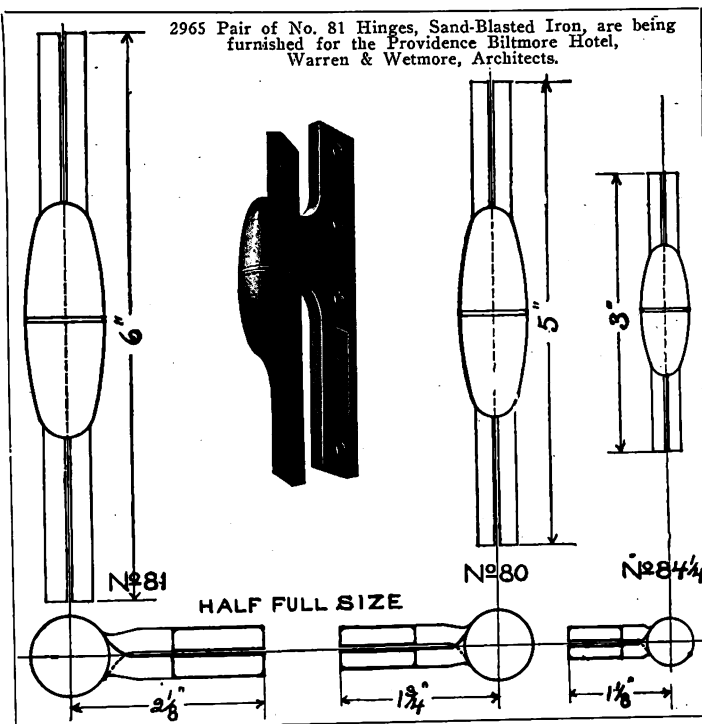
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WE RECOMMEND that the sand-blasted hinge be used and painted or stained at the job to match the woodwork. This can be done where natural finished hardwood is used as well as painted wood work.

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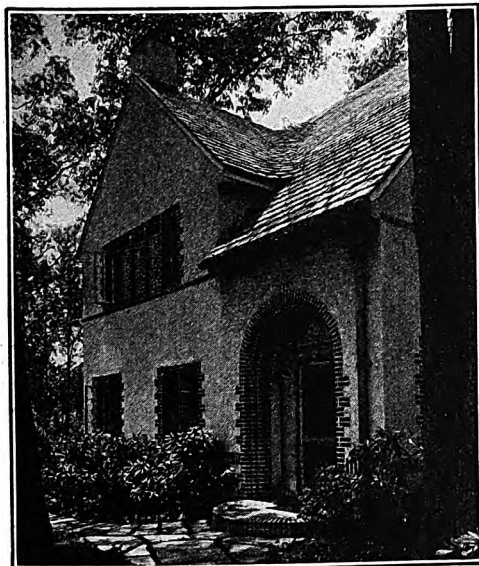


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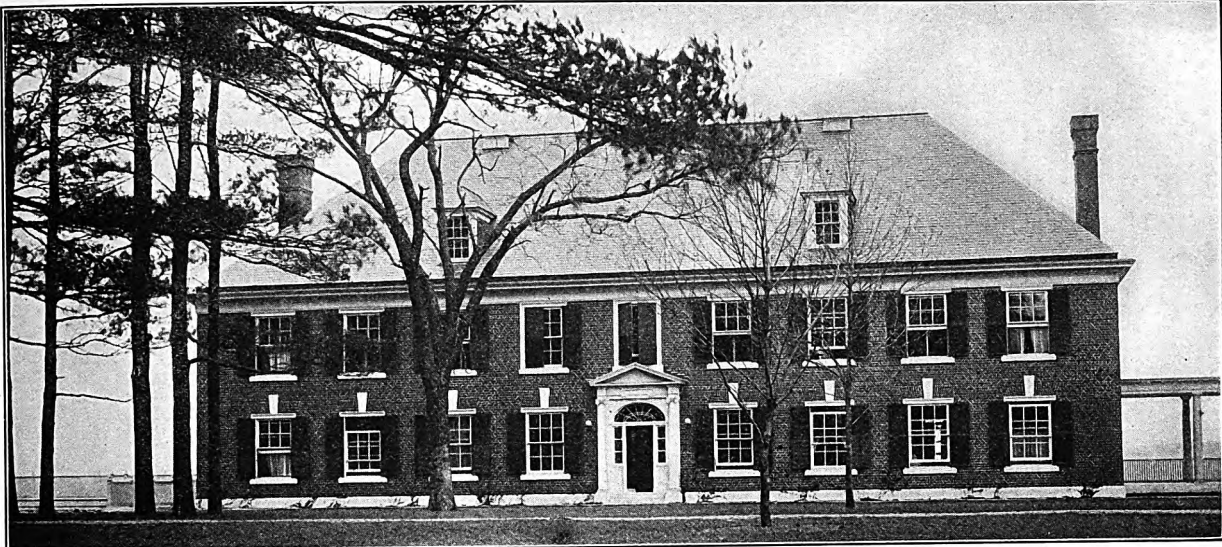
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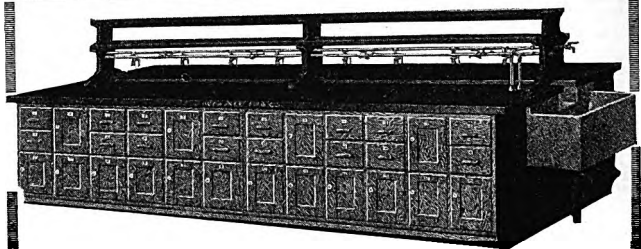
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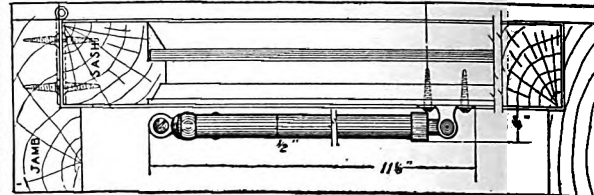
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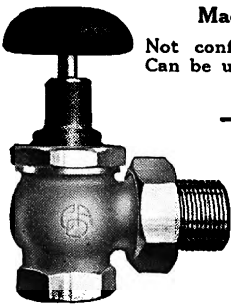
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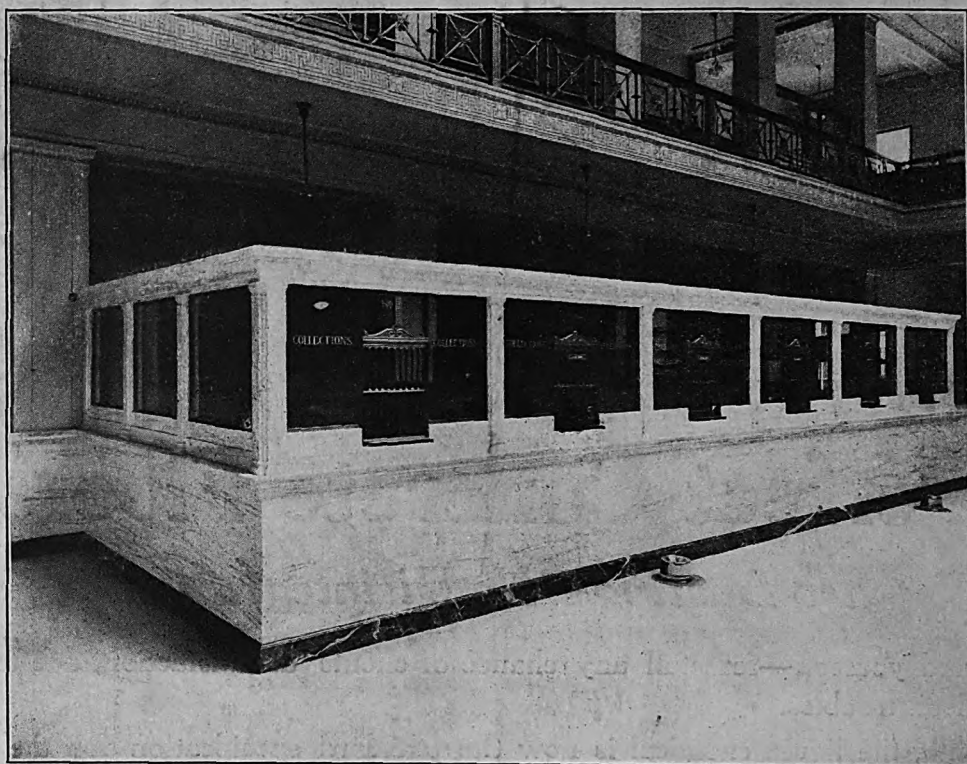
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## THE AMERICAN INSTITUTE OF ARCHITECTS

THE OCTAGON HOUSE, WASHINGTON, D. C.

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## Minutes

MEETINGS OF EXECUTIVE COMMITTEE, SEPTEMBER 8, 9, 1922

**MEMBERS PRESENT.** The meeting was called to order by President Wm. B. Faville, at the Greenwich Country Club, Greenwich, Connecticut, at 1:30 P. M., on September 8, 1922. Others present were the Second Vice-President, Robert D. Kohn; the Secretary, Wm. Stanley Parker; the Treasurer, D. Everett Waid; and N. Max Dunning; also the Editor of THE JOURNAL, Charles Harris Whitaker, and the Executive Secretary, Edward C. Kemper.

**MINUTES CORRECTED AND APPROVED.** The Minutes of the meetings of the Executive Committee and Board of Directors held on June 4, 5, 6, 9, and 10, 1922, were presented. A reading was dispensed with, and the Minutes were approved as printed.

**DISTRIBUTION OF THE PROCEEDINGS AND ANNUARY.** The Secretary reported that the Proceedings of the Fifty-fifth Convention, and the Annuary, were mailed to the entire membership, under a single wrapper, between August 1 and August 4, less than sixty days after the Convention. By careful editing of the Proceedings in the interest of brevity, and by mailing the two books in single packages the weight

was reduced to one pound, effecting a saving in postage of \$133.00 over the distribution of 1921.

The Proceedings and Annuary were also sent to all Honorary and Honorary Corresponding members. The Proceedings alone were sent to 66 national or regional associations having to do with the building industry; also to all members of State Societies who desired them. Surplus copies of the Proceedings will be used for library distribution, and as a reserve at the Octagon.

**REPORT OF THE TREASURER.** The Treasurer reported the financial condition of the Institute, and receipts from all sources, to be generally satisfactory for the period ending July 31, 1922. The securities have been transferred from Washington to New York, and tentative arrangement has been made for placing them in a safe deposit box subject to inspection in the presence of the Treasurer, and one other Officer or Director.

**CONVENTION REFUND BALANCE.** The balance remaining after paying all Chapter refunds is \$1,570.70. The adjustment recommended for the

*There have been omitted from this record various items of a privileged nature.*



San Francisco Chapter will reduce this balance to \$1,155.62. The Treasurer recommended that this be turned back to the Chapters.

*Resolved*, that the balance of \$1,155.62 be distributed to the Chapters in proportion to the taxes paid by them.

**TRUSTEES OF OCTAGON PROPERTY.** In view of the amended Constitution of the Institute, the following resolution was adopted:

*Whereas*, the Fifty-fifth Convention amended the Constitution of the Institute to conform with the original certificate of incorporation, and with the amended articles of incorporation, as granted by the State of New York; and authorized the filing of an amended certificate of incorporation to cover the matter of the change to fourteen directors and

*Whereas*, this certificate has now been filed and the Institute is therefore in a position with safety now to take title and actual possession of its own property until now held by trustees, be it

*Resolved*, that Counsel be requested to draft a resolution for action of the Fifty-sixth Convention making such transfer effective, and

*Be it further Resolved*, that the Secretary be requested further to submit to the Membership notice of an amendment to the By-laws, providing that thereafter no Real Estate possessed by the Institute may be sold or transferred without two-thirds majority vote of all legally appointed delegates at a legally called meeting of the Institute, due notice of proposed action on the subject having been given at the last preceding regularly constituted annual meeting of the Institute and in no case shall there be less than six months such notice.

**CONVENTION REFUND OF SAN FRANCISCO CHAPTER.** A letter was presented from the San Francisco Chapter requesting that the Chapter receive the full refund of \$619.71 instead of \$204.63. This request was based on the attendance of Mr. Faville, who was registered as a delegate ex-officio instead of as a delegate of the San Francisco Chapter.

*Resolved*, that the Treasurer be authorized to consider Mr. Faville a delegate of the San Francisco Chapter, with reference to the matter of Chapter Refund, and to remit to the Chapter on a basis of a total refund of \$619.71.

**CONVENTION TAX OF THE ILLINOIS CHAPTER.** A letter of July 31 was read from the Secretary of the Illinois Chapter, from which it appeared that the Chapter was entitled to 8 delegates to within 24 hours of the opening of the Convention. Election of new members at the last minute gave the Chapter an additional delegate, and on the strength of this, Mr. C. Herrick Hammond was registered. This made an additional Convention tax of \$41.59

against the Chapter, which the Treasurer recommended be cancelled.

*Resolved*, that this additional tax be cancelled.

**INSTITUTE MEMBERSHIPS IN THE BEAUX ARTS INSTITUTE OF DESIGN.** Consideration was given to the resolution of the Convention referring to the Board the recommendation of the Committee on Education that the Institute subscribe annually to ten supporting memberships of \$25.00 each in the Beaux Arts Institute of Design. In the discussion of this matter, it was brought out that there are many similar educational institutions in which the Institute maintains no memberships. It was

*Resolved*, that each year there be placed at the disposal of the Beaux Arts Institute of Design a School Medal and a copy of Mont St. Michel and Chartres, to be awarded for general excellence in the architectural course; and copies of Mont St. Michel and Chartres for award in courses other than those architectural.

**LEAGUE OF AMERICAN ARTISTS.** Letter and circular were presented from the League of American Artists, appealing for the membership of the Institute, the cost of which is \$10.00 per year.

*Resolved*, that the request be referred to the Committee on Allied Arts for report.

**CLEARING HOUSE OF CIVIC INFORMATION.** The Secretary reported concerning the appeal of a special committee of the American Society of Landscape Architects for Institute cooperation with the International Union of Cities, and its Center of Civic Documentation. The activity proposed is an investigation or compilation of relevant bibliography in the Library of Congress at Washington. The Institute was requested to make a contribution of \$50.00 which, with the approval of the Treasurer, was made.

The Treasurer desired the formal approval of the Executive Committee, which was given.

**OVERDRAWAL OF APPROPRIATIONS.** The Treasurer requested authority to pay an overdrawal of \$150.17 on account of the Public Information Committee. The larger part of this overdrawal was incurred in connection with the publication of the brochure entitled "Publicity Work with Newspapers." Other appropriations overdrawn are: Competitions, \$31.90; Allied Societies' Dues, \$3.00; Small House Committee, \$31.47.

*Resolved*, that the Treasurer be authorized to pay these overdrawals.

**SALES OF THE STANDARD DOCUMENTS.** The Executive Secretary reported a constantly increasing demand for the Standard Documents. The documents are being advertised in the leading architectural publications of the country, and by circularization. There are now 135 agents in the large cities. Users in the small towns are supplied direct

from the Octagon House. The net profits on the Documents after deducting all manufacturing and distribution costs, for the eight months ending August 31, amounted to \$5,023.62.

The report was accepted.

**ELEVENTH INTERNATIONAL CONGRESS OF ARCHITECTS.** The Convention referred to the Board of Directors, with power to act, the invitation of the American Section of the Permanent Committee of the International Congress of Architects to appoint delegates to the Tenth Congress, and to hold the Eleventh Congress in America under Institute auspices. Acting under this resolution, President Faville appointed the following Institute members to act as delegates at the Tenth Congress, now being held in Brussels: Major George Oakley Totten, Chairman, and Messrs. Francis R. Allen, Glenn Brown, W. R. Mead, Robert D. Kohn, members. Major Totten is now at the Congress, which will conclude its sessions on September 11th.

The Executive Committee then considered the question of inviting the Eleventh Congress to meet in the United States. A report from Major Totten was presented, showing the cost of previous Congresses and attendance.

*Resolved*, that the President be authorized to cable the Institute Delegates, expressing the hope that the International Congress will find it possible to arrange to meet in the United States in Philadelphia, in 1926, in connection with the Exposition celebrating the 150th Anniversary of the Declaration of Independence.

**PARTICIPATION IN INTERNATIONAL ENGINEERING CONGRESS.** An invitation was presented from officials of the Engineering Congress to send representatives to the Congress; also letter of August 16, from a joint committee of Engineers, stating that Mr. Calvin W. Rice would attend the Congress as an official delegate of the Engineering Societies and that he would gladly represent the Architects also, if the Institute desired.

*Resolved*, that a cablegram be sent to Mr. Rice, extending the greetings of the American Institute of Architects to the Congress.

**REPORT OF THE BUILDING COMMITTEE.** The Chairman of the Building Committee, Mr. Waid, submitted a report of progress concerning the development of the Octagon property; also tentative plans for the proposed auditorium and exhibition rooms. These plans were studied and criticized by members of the Committee and left with the Chairman for further report at the December meeting.

The Chairman requested authority to amend and reprint the circular descriptive of the Octagon property. The edition is exhausted and there are many requests for the document.

*Resolved*, that the circular be reissued as outlined by Mr. Waid.

**REPORT OF THE SMALL HOUSE COMMITTEE.** A report of progress was submitted from the Chairman of the Small House Committee, Mr. E. H. Brown.

The Secretary was requested to transmit to the Chairman of the Committee the sense of the meeting with regard to the various proposals contained in the report, and to ask for a further report at the December meeting of the Board.

**APPOINTMENT OF DIRECTORS OF THE SMALL HOUSE SERVICE BUREAU.** The President reported that with the concurrence of the Executive Committee, he had appointed the following to represent the Institute as Directors on the Board of Directors of the Small House Service Bureau, Incorporated: Edwin H. Brown, F. M. Mann, Sullivan W. Jones, Charles A. Favrot, Robert D. Kohn.

**PUBLIC INFORMATION.** On invitation, the Chairman of the Public Information Committee, Mr. John V. Van Pelt, appeared before the Executive Committee, and reported concerning the development of the program of Public Information work proposed by his committee.

*Circular on Architectural Service.* The Committee was authorized to proceed in drafting such a document. The Chairman was requested to write to the Chapters stating that this is being done by the Institute, and suggesting that they await the appearance of the Institute form before issuing local documents.

*Institute Handbook of Information.* The Committee was authorized to proceed with this document, submitting draft to the Board for approval.

*Public Information to Chapters.* This service should be conducted largely through the columns of THE JOURNAL.

*Newspaper Work.* The Chairman referred to the achievement of Mr. Parker in Boston with the Christian Science *Monitor*, and its possible development in the Chapters. He believed this to be the fundamental point of attack, and the most important item of all. To make it effective he proposed to establish a mat service, for distribution through the Office of the Secretary, and to develop its use in all of the Chapters.

*Resolved*, that the report of the Committee be approved in principle, with the direction that a meeting be held each month for coordinating certain phases of the work. This meeting is to be attended by the Chairman of the Committee, by the Editor of THE JOURNAL, and by the Executive Secretary.

**THE AMERICAN CONSTRUCTION COUNCIL.** The Chairman of the Committee on Industrial Relations, Mr. Kohn, reported the organization of the American Construction Council in Washington in June.

The Institute was represented by delegates and, under authority given by the Convention, has accepted membership in the Council. The Council is endeavoring to secure a representative membership, and the work in general is progressing.

**STRUCTURAL SERVICE.** The Chairman of the Structural Service Committee, Mr. Jones, conferred with the Executive Committee concerning the development of the structural service work of the Institute. He reviewed the activities of his Committee, and the organization of the Producers' Section.

There was comprehensive discussion of the desirability of creating a Consumers' Section, to have a membership composed of architects, engineers, contractors, owners, and other individuals using building materials.

It was the sense of the meeting that the organization of a Consumers' Section was desirable, and the Committee was requested to present a plan therefor to the Board in December.

After further consultation with Mr. Jones, the President accepted his resignation as Chairman of the Structural Service Committee, and appointed him Technical Director of the Structural Service Committee.

The President then appointed Mr. Stephen F. Voorhees, Chairman of the Structural Service Committee, subject to acceptance.

*Resolved*, that the Structural Service Committee, in consultation with the Technical Director and the Editor of THE JOURNAL, be requested to make an investigation and report to the December Board on the technical organization of the Structural Service Committee and its related activities and a plan for the financial support of this work.

**INVESTIGATION OF WOOD PRESERVATIVES.** A communication was read, from the Chairman of the Structural Service Committee, in which he recommended that the Institute make an appropriation of \$200 for the remainder of the year to cover its share of the cost of the investigation of wood preservatives, to be conducted under the auspices of the Forest Products Laboratory. The Committee also recommended that the Budget of 1923 carry \$500 for the work.

The Executive Committee was in sympathy with the purposes of this investigation, but decided that the Institute Budget could not well support the added appropriation. The item was left for further consideration at the December meeting.

**SIZES OF ADVERTISING MATTER.** In view of studies made by the Structural Service Committee, with regard to sizes of advertising matter intended for the files of architects, it was

*Resolved*, that the size 8½" x 11" seems to be the most desirable, and shall remain the size recom-

mended officially by the Institute. In view of the growing favor with which the size 7½" x 10½" is regarded, the Institute is willing to sanction variations toward that smaller size as a minimum.

The present Circular on the subject is to be re-issued in accordance with the above.

**INSTITUTE REPRESENTATIVE ON CENTRAL COMMITTEE ON LUMBER STANDARDS.** A letter was presented from the Secretary of the National Lumber Manufacturers' Association, requesting that the Institute appoint a member on the Central Committee on Lumber Standards. The Institute was represented by Mr. E. S. Hall, member of the Structural Service Committee, at the preliminary meetings which led to the organization of this Committee. There was presented the verbatim report of the July conferences.

*Resolved*, that with the approval of the Chairman of the Structural Service Committee, Mr. Hall be appointed as the representative of the Institute.

**UNIFORM GOVERNMENTAL CONTRACTS.** The Secretary reported a request from the Budget Bureau for Institute aid in developing uniform contracts to cover structural work, and also the furnishing of materials. The object of the Budget Bureau is to reduce red tape, and to secure for the government the same consideration as is secured by private firms. The proposed documents and other data from the Budget Bureau have been considered by the Committee on Contracts, of which Mr. Morris is Chairman, and a draft of letter to Institute Chapters was submitted for approval.

*Resolved*, that the letter be approved.

**UNIVERSAL CONTRACT FORMS.** Mr. Parker reported concerning Institute cooperation with the engineers, contractors and other representatives of the building industry, in developing universal contract forms. Another conference will soon be held in Washington.

The Secretary desired instructions as to the attitude of the Institute. He outlined the proposed forms, and explained their development and scope.

*Resolved*, that the Executive Committee heartily favors cooperation with the various elements of the Building Industry in the preparation of universal contract forms. For the time being the Institute reserves decision as to whether or not it will change its own forms, in the meantime observing the acceptance and value of such universal documents as may be developed. It was further

*Resolved*, that the Institute cooperate with the other interests of the industry by contributing the subject matter of the Standard Documents, on the understanding that the name of the Institute will be joined in the copyrighting of any new forms; that it will have a proper share in the control of such forms;

and that no use of the Institute's Standard Documents shall be made, which in the opinion of Counsel will or might impair its copyright privileges.

**WORK OF THE JURY OF FELLOWS.** The President reported the organization of the Jury of Fellows under the By-Law amendment adopted by the Convention. Past-President, John Lawrence Mauran, has accepted the Chairmanship, and the Office of the Secretary has been placed at his command in connection with the work involved.

Mr. Kohn urged early action by the Jury, in view of the past delays and the expectation of the membership of definite nominations at the next Convention.

The Executive Committee expressed the hope that the Jury is so forwarding its work that there will be nominations for presentation at the next Convention. The Committee understands that progress of the Jury's work to that end is being made, and that an early notice to the Chapters is to be issued.

**CONVENTION INVITATION OF COLORADO CHAPTER.** President Faville presented a letter of June 15, from Mr. William E. Fisher, of the Colorado Chapter, strongly urging that the next Convention be held at Colorado Springs.

It was the sense of the meeting that the next Convention ought to be held in Washington, and that a Board Meeting should be held in Colorado at an early date.

**THE FIFTY-SIXTH CONVENTION.** There was discussion of the time and place of the Fifty-sixth Convention, and the general program.

*Resolved,* that the Convention be held in Washington, in May, on the 16th, 17th and 18th. The Executive Secretary was directed to make inquiry concerning hotel headquarters, the use of the Corcoran Art Gallery, and a suitable place for the dinner.

The question of an architectural exhibition, or an exhibition of the Fine Arts, was considered. Mr. Kohn was requested to report to the December Board on this item.

With regard to the general program, it was the sense of the meeting that one day should be devoted to a discussion of the relationship of sculpture and painting to architecture. There might also be a discussion of the relative importance of the artistic and the practical sides of the profession.

It was suggested that the Gold Medal be presented to Mr. Bacon on the steps of the Lincoln Memorial on the last day; and that each Chapter carry a banner at this ceremony, with an appropriate device thereon. To develop this idea, a committee was appointed with Mr. Howard Greenley, Chairman, and Messrs. Monroe Hewlett, and D. Everett Waid, members. The Committee is requested to study and report, and to order banners with blank fields,

in which the Chapters may insert their own devices. The Treasurer was authorized to pay for the same, subject to reimbursement by the Chapters. These banners should be sent to the Chapters well in advance so that all may be represented.

There should be provided banners for the Institute at large, for the sculptors and mural painters, and for the departments of architecture in the accredited schools.

It was decided that there should be a dinner at the conclusion of the Convention, with some form of entertainment to make the affair original and interesting. Mr. Kohn was requested to report on the entertainment feature.

The President asked each member of the Committee to send to him within thirty days their suggestions for making the Convention truly architectural in character. It was suggested that the morning sessions of each day should be devoted to business, and the afternoon and evening sessions to the art of architecture.

**GOLD MEDAL ORDERED.** The Chairman of the Committee on Allied Arts was requested to have made the Gold Medal of the Institute, for presentation to Mr. Henry Bacon at the Fifty-sixth Convention.

**CRAFTSMANSHIP AND FINE ARTS MEDALS.** With regard to the two gold medals awarded by the Institute for excellence in craftsmanship, and in the Fine Arts related to architecture, a review of the creation of these medals and the awards was presented. Some confusion has arisen as to nomenclature, and it was

*Resolved,* that the memorandum submitted be approved as the authentic record of these two medals of the Institute, which are to be known as the Craftsmanship Medal and the Fine Arts Medal.

**SYMBOL FOR ARCHITECTURE.** The Secretary read a letter from the Librarian of the University of Washington Library at Seattle, requesting that the Institute send a copy of any seal, emblem or device employed by the A. I. A. which might be used in the University's new Library building as a symbol of the profession of architecture.

*Resolved,* that the Institute seal be sent, with a suggestion that the Institute would appreciate the opportunity of seeing a sketch showing how the seal is to be used.

**REQUEST OF MANCHESTER SOCIETY OF ARCHITECTS FOR LECTURER.** A letter of August 21st was read from the President of the Manchester Society of Architects, asking if some arrangement could not be made whereby the Society and the Manchester University might have some American architect give a lecture during the winter season at the University.

The Secretary was requested to endeavor to find through the larger Chapters, some member willing to accept this commission.

**STATE AND MUNICIPAL ARCHITECTS.** At the Pre-Convention Board meeting it was directed that the question of determining a policy with respect to the appointment of State and Municipal architects be referred to the incoming Board, with the suggestion that a Committee be appointed to study the whole situation and submit recommendations.

*Resolved*, that a special committee be appointed with Mr. D. Everett Waid, Chairman, and Mr. Robert D. Kohn, member. The Committee was requested to formulate a statement of Institute policy in this matter for discussion at the December meeting. The Chairman was authorized to add members to the Committee if he desires.

**ISSUANCE OF SCHEDULE OF CHARGES.** The Secretary reported that the amended Schedule of Charges was reissued immediately after the Convention as A. I. A. Document No. 177. The revisions were those proposed by the Committee on Contracts; and approved by the Convention.

The document was approved, and it was directed that it be distributed to the membership as a part of the Ethical Documents Monograph.

**AMENDMENT TO CIRCULAR OF ADVICE.** The Convention approved in principle the addition, to paragraph 4 of this document, of a second paragraph concerning competition in price, and an amendment to the first paragraph, and referred the phraseology to the Board for editing.

*Resolved*, that the phraseology of the amended paragraph be referred to Messrs. Kohn, Parker, Waid and Morris, with power.

**AMENDMENTS TO CONSTITUTION.** The Chairman of the Committee on Legal Matters, Mr. Kohn, reported that he had information to the effect that the amended certificate providing for the change in the number of Directors to 14, from 9 as provided in the original Charter, had been filed with the Secretary of State at Albany, New York, and copy filed in the County Clerk's office, New York County, by Messrs. Brownlee and Shafer, Attorneys acting for the Institute. He reported further that the Attorneys held that it was not necessary to secure action of the Supreme Court of the State of New York on this amendment, but that the Secretary of State had decided that the amendment could be filed without action of the Court and would thereby be legal. The Chairman of the Committee further reported that he would secure certified copies of the Certificate as recorded. He wished also to have put on the record that the Attorneys decided that the other changes to the Constitution, namely, change in the declared object of the A. I. A. did not need

legal action; that it was within the power of the Institute to make this change without making record of it in the office of the Secretary of State.

*Resolved*, that the report be accepted.

**AMENDED CONSTITUTION AND BY-LAWS.** The Secretary presented, in proof form, Constitution and By-Laws as amended at the Fifty-fifth Convention including a new Article III providing a Junior class. This Article has been approved in principle by referendum vote of the Board of Directors.

*Resolved*, that the document be approved and issued to the membership as A. I. A. Document No. 179, after approval as to details by the Secretary.

**HANDBOOK OF ARCHITECTURAL PRACTICE.** The Editor of THE JOURNAL stated the intention of the Press to republish the Handbook of Architectural Practice and he desired authority from the Executive Committee for certain minor changes.

*Resolved*, that the matter be referred to the Secretary and the Editor of THE JOURNAL to discuss, and to draft specific proposals which can go to the Executive Committee for approval by referendum.

**JUNIORSHIP CIRCULAR AND APPLICATION FORM.** Draft of circular, and application form, concerning Juniorship was presented for approval. This document was in accordance with the amendments made to the By-Laws at the Fifty-fifth Convention and has been approved in principle by the Chairman of the Committee on Survey of Institute Methods.

*Resolved*, that the document be left with the Secretary for approval and issuance.

**GRADUATE SCHOLARSHIPS IN ARCHITECTURE.** Consideration was given to the resolution passed at the Convention approving the use of the income of the Waid Education Fund for the stimulation of the general appreciation of the Arts, and for the support of graduate scholarships in architecture, in such manner and degree as the Board may approve.

*Resolved*, that the Committee on Education be requested to submit its further advices on this proposal.

**THE ARCHITECT AS A CITY PLANNER.** The Convention resolution referring to the Board of Directors the desirability of formulating a definition of city planning for submission to the next Convention was considered.

*Resolved*, that this be referred to the Committee on Community Planning for report.

**MEMBERS ELECTED.** The Secretary reported the election of new members effective June 3, June 10, and August 5, 1922. These lists have been published in THE JOURNAL, and are not included herein.

*The meeting adjourned at 3 p. m., Saturday, September 9th.*













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