

# THE AMERICAN ARCHITECT AND THE ARCHITECTURAL REVIEW

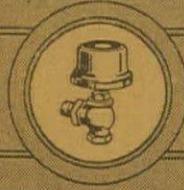


IN THE BASQUE COUNTRY, BY SAMUEL CHAMBERLAIN & SPANISH GOTHIC,  
BY RALPH ADAMS CRAM, F. A. I. A. & WORKING PHOTOGRAPHS, ILLUSTRATED  
BY PHOTOGRAPHS BY JOHN RUSSELL POPE, F. A. I. A. & CURRENT ARCHITEC-  
TURAL PRESS, BY EGERTON SWARTWOUT, F. A. I. A. & HENRY BACON, AN  
OBITUARY AND AN APPRECIATION & INTERIOR ARCHITECTURE

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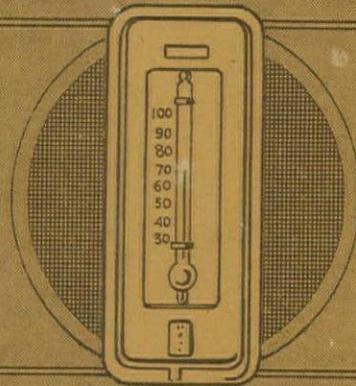


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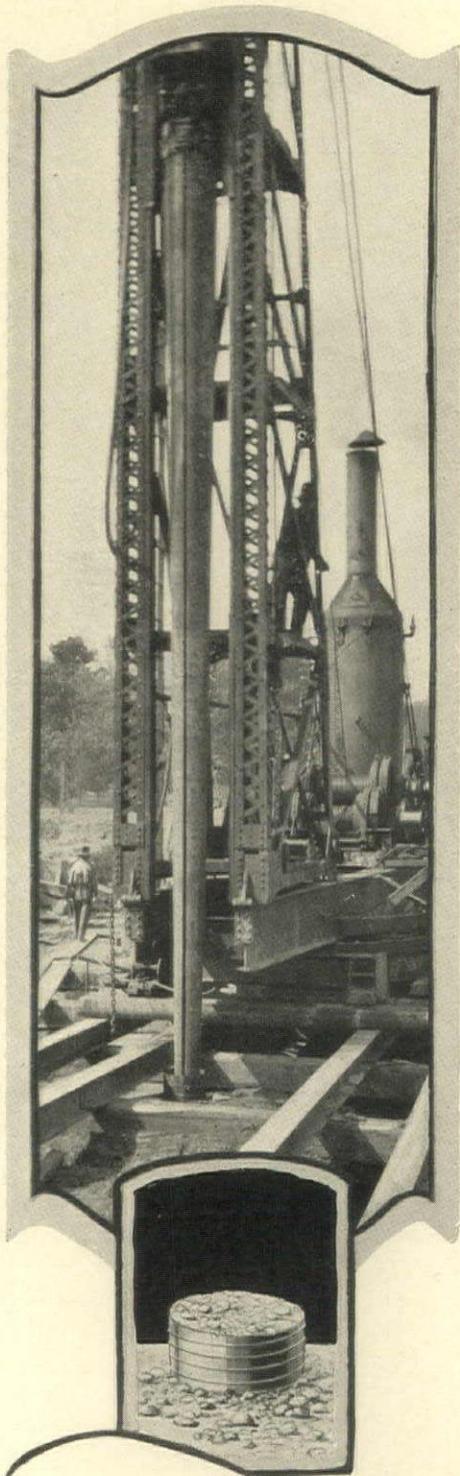
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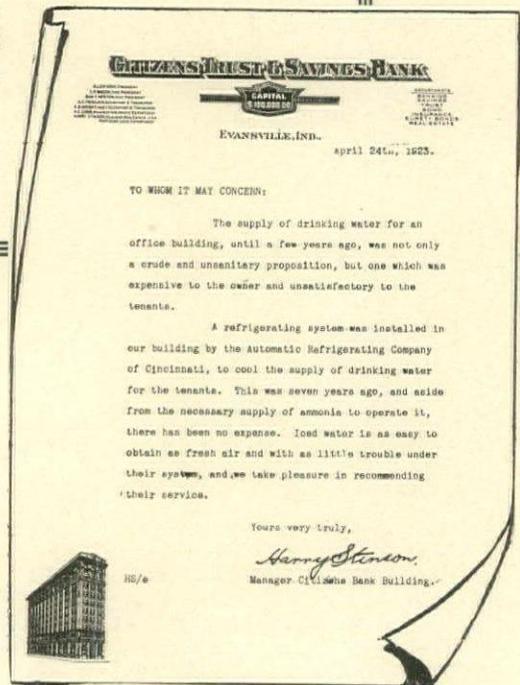
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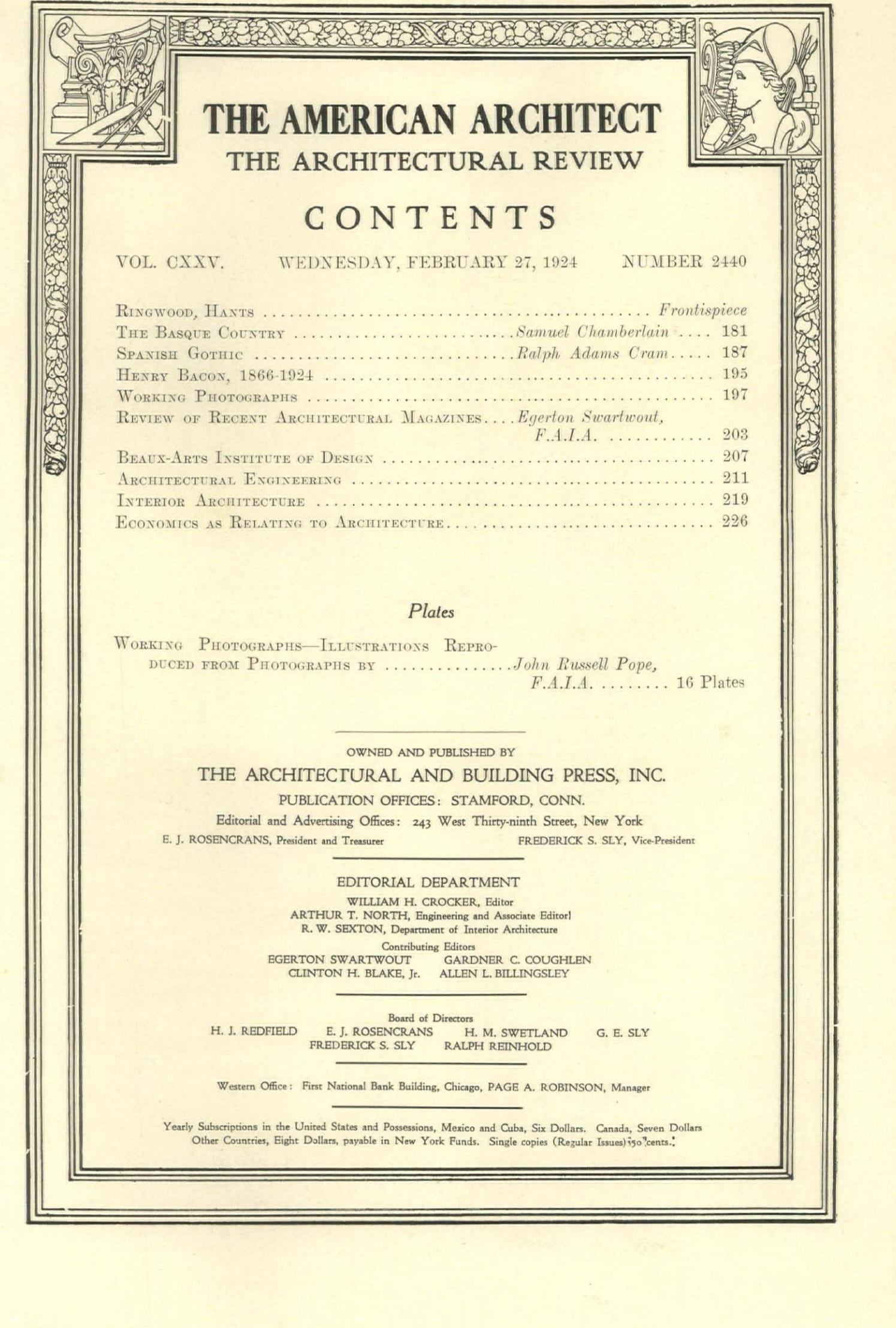
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**THE AMERICAN ARCHITECT**  
**THE ARCHITECTURAL REVIEW**

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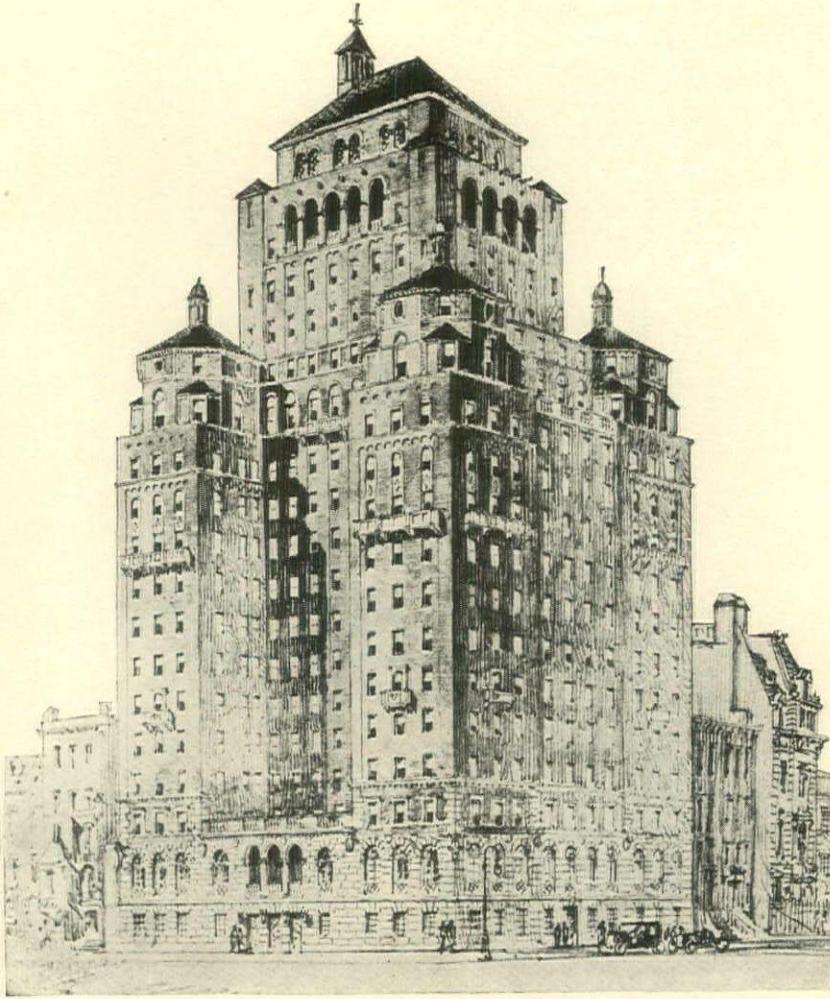
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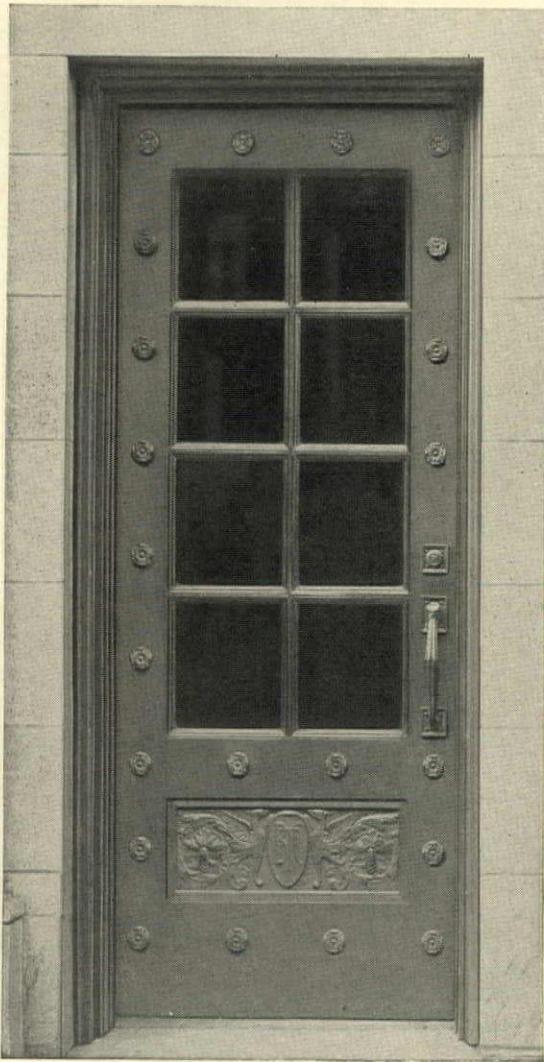
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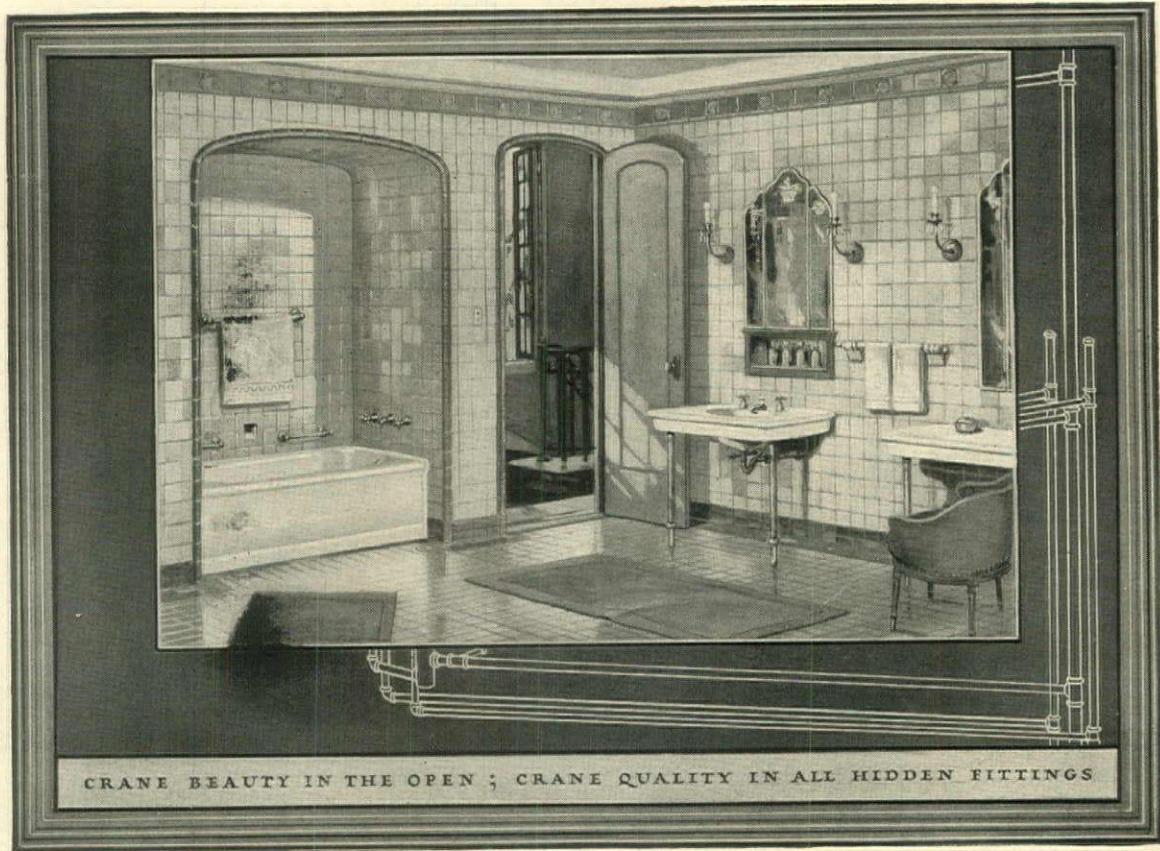
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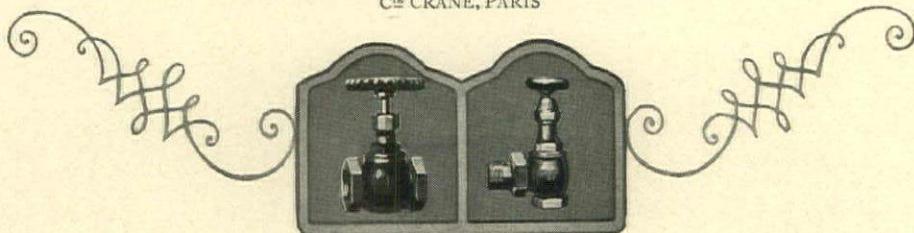
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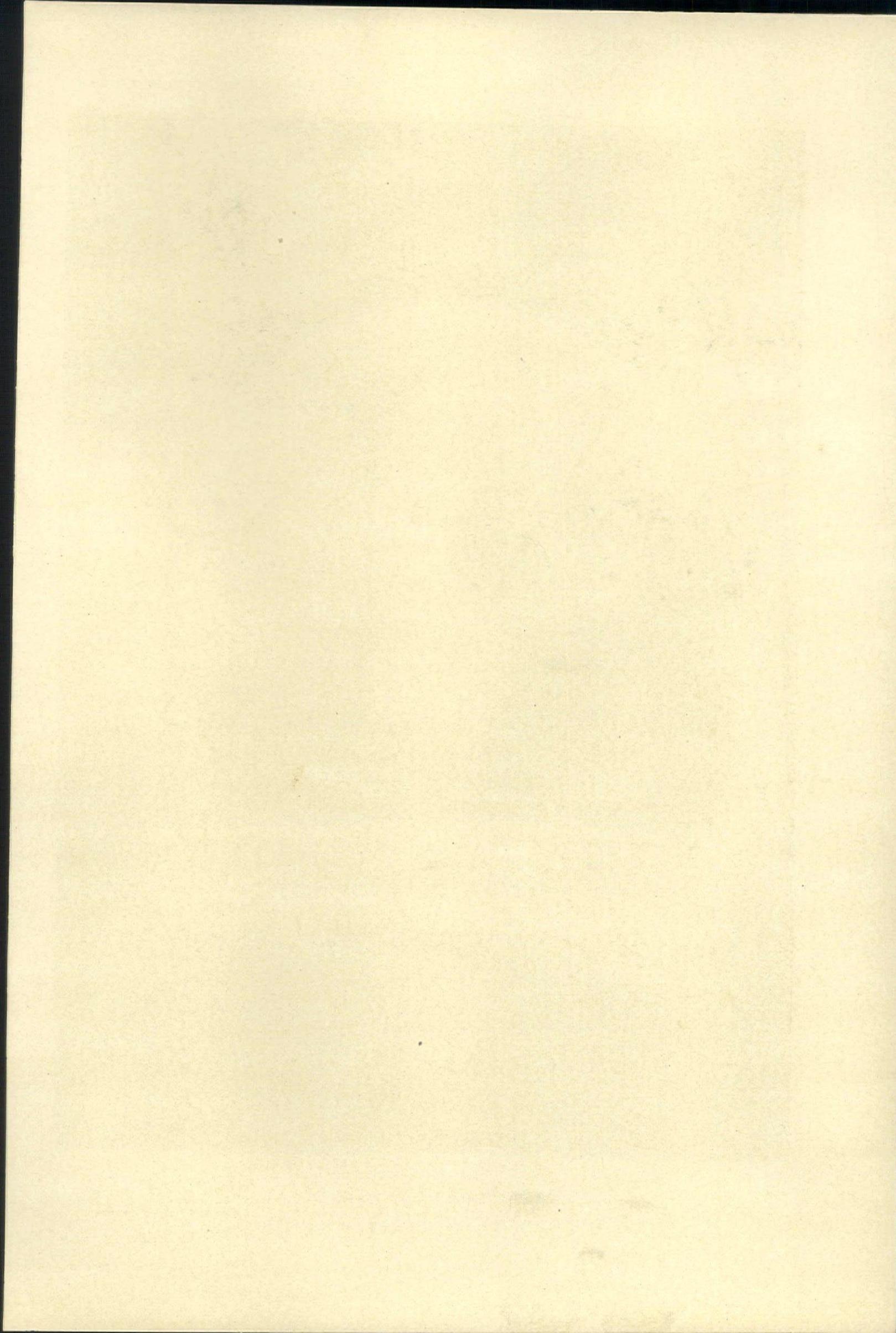
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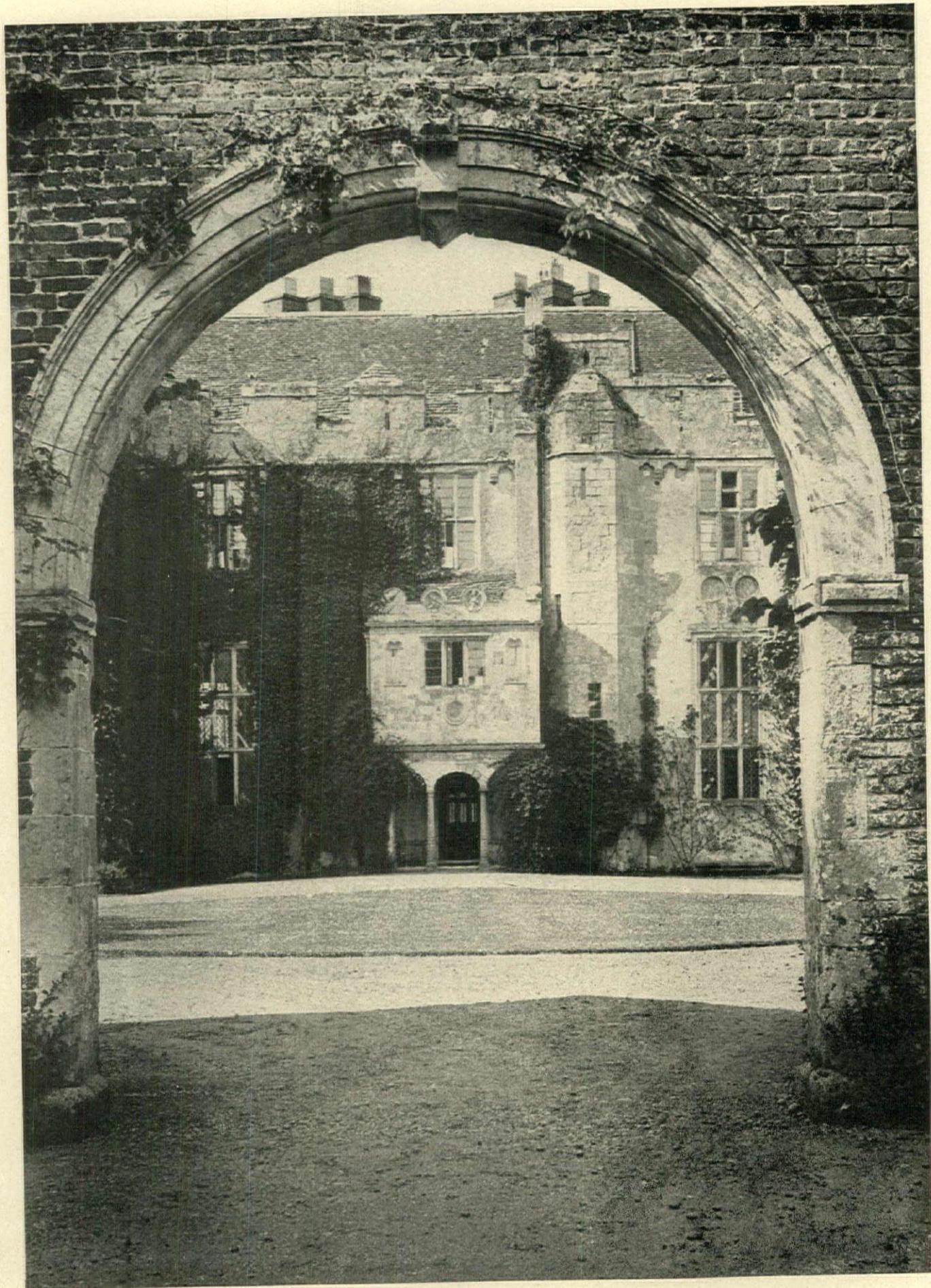
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RINGWOOD, HANTS

"WORKING PHOTOGRAPHS"

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

# THE AMERICAN ARCHITECT

## *The* ARCHITECTURAL REVIEW

VOL. CXXV

WEDNESDAY, FEBRUARY 27, 1924

NUMBER 2440



## The BASQUE COUNTRY

*Notes and sketches by* SAMUEL CHAMBERLAIN

UNDENIABLY, the idea of sending back to America a manuscript of bubbling observations upon the Basque country is not a new one. The foreign correspondents of our more haughty journals of "le monde ou l'on s'amuse" have dealt with it often and well. But in vain does one scan their paragraphs for even the faintest mention of the architectural charm of the place. To gap this dismal void these few lines are written, with a solemn promise to make no mention of who composed Lord Whattaberry's foursome or what Mrs. Sheckle wore at the opening of the Casino.

A most individual corner of the world these black-eyed Basque people have made for themselves. They retain their own language, costumes, games, dances. The fact that they are scattered

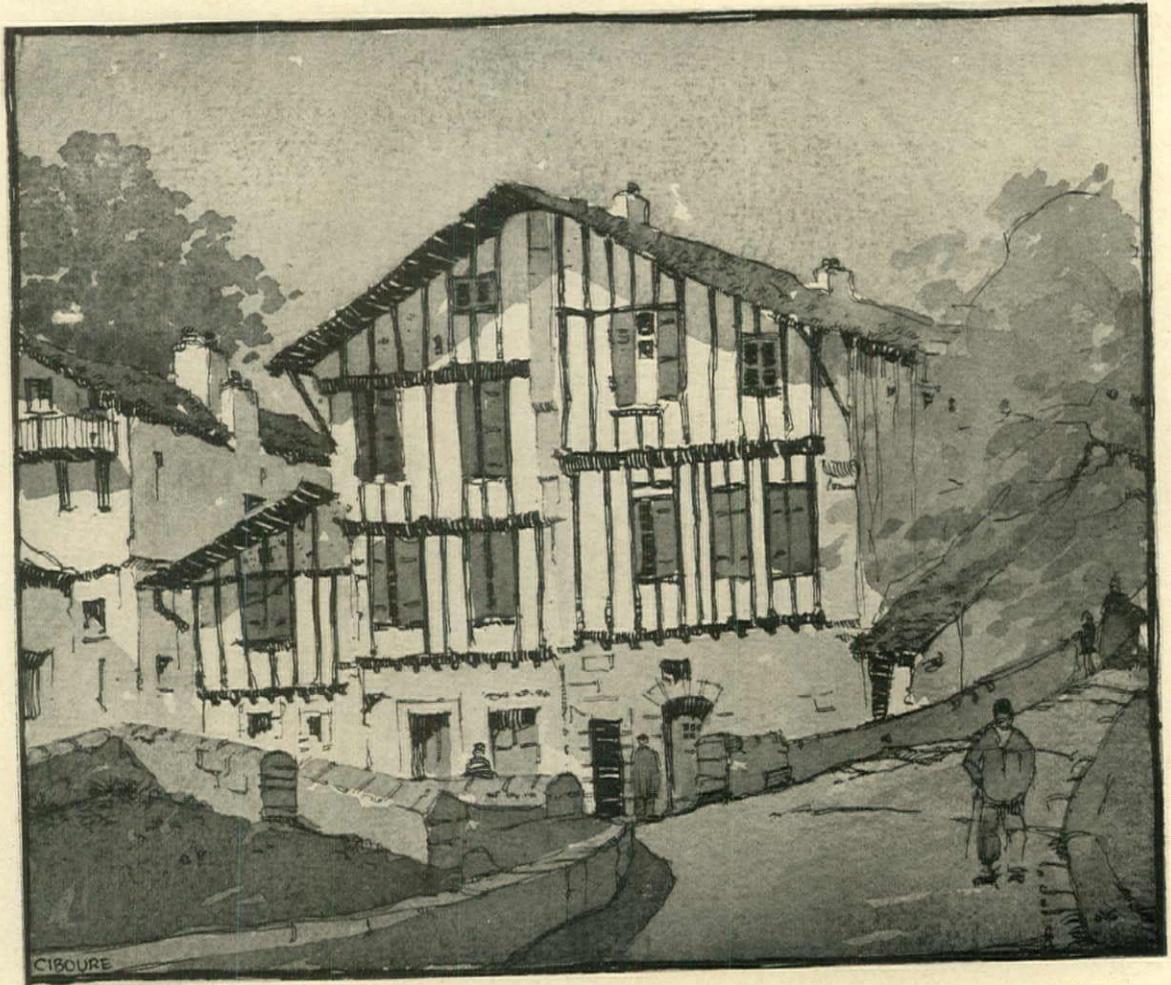
over the frontier of two countries does not divide them. The Basque tongue, unique in Western Europe, defies one who searches to disclose in it a bit of Latin ancestry. There is a bewildering juxtaposition of letters, featuring k's, x's, z's and every other awkward letter in the alphabet. Heard by the garden variety of auditor, the words are as unfathomable as Sanscrit. To the eye, a spoonful of alphabet noodles is equally intelligible. Spoken, it has a crackle like a bonfire of pine needles.

A fez in Turkey is no more universal than the tight fitting, dark blue beret which is worn by every male inhabitant of the Basque country from two to eighty. The lace caps worn by the women have a greater variety. Some resemble glorified cornucopias, some are simple lace hand-

kerchiefs, but the prize exhibits look like nothing more than the paper decorations on the unupholstered end of a mutton chop.

And they have their own games, particularly the fascinating "pelote," a distant country cousin to both handball and lacrosse. And the bullfights at San Sebastian—but this is no sporting column. A genuine fandango is danced by the natives on those frequent occasions when the

buildings in the pure Basque style are invariably marked by a broad passageway in the middle of the structure, in which the wagons and often the horses and oxen are housed. The urban buildings with their vast overhanging eaves and heavily shuttered windows, usually look as though they had received their last coat of whitewash but a month before. Their timbers, slender and strong, are not closely spaced as one finds them



A TYPICAL BASQUE HOUSE IN CIBOURE

band plays in the public square. The abandon and utter lack of self-consciousness which characterize these people when, as the music suddenly bursts forth, the whole population swings into the gay gestures and agile steps of the fandango, are what startle the conventional Anglo-Saxon mind.

But most gratifying of all, the Basques have developed an architecture typically and incontestably their own. The Basque buildings, particularly the farmhouses, are deserving of study, for they combine a perfect utility with what is much rarer, an architectural treatment at once picturesque, well proportioned and devoid of detail. It is half timber construction at first glance, but basically it is stone and brick, effectively camouflaged with whitewash and painted timbers. Farm

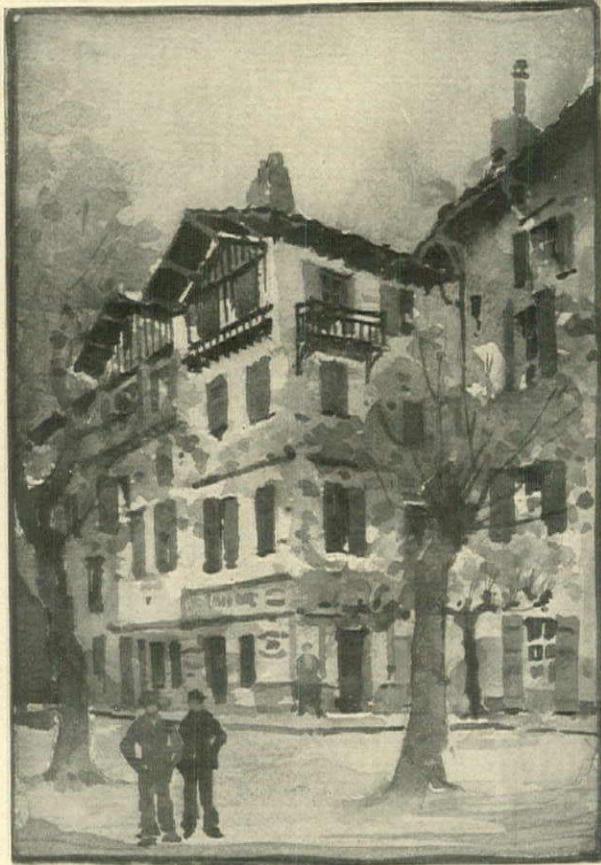
in Northern France, and the lintels are strung with only a simple bead-like ornament. It seems unprecedented to paint the timbers in any colors but a box car red, a sage green or a strange salt water blue.

Biarritz is, of course, the much touted city of the region. But Biarritz has sprouted from a forlorn fishing village to the most ornate of fashionable watering places in less than a century, and looks it! What picturesque spots there are in the town, although protected by rustic wooden fences which prove to be cement, appear weary and worn from the endless inspection of lolling tourists. Architects in search of aesthetic tonic here are advised to concentrate their attention on the shop windows of the English haberdashers



A BACK ALLEY IN ST. JEAN-DE-LUZ

and gloat over the tweeds and homespuns, the exotic golf hose and sweaters there exposed. See these, the tiny fishing port with its much exploited handful of fishermen, the flashing white cylinder of the simple old lighthouse and the selfsame



ST. JEAN-DE-LUZ

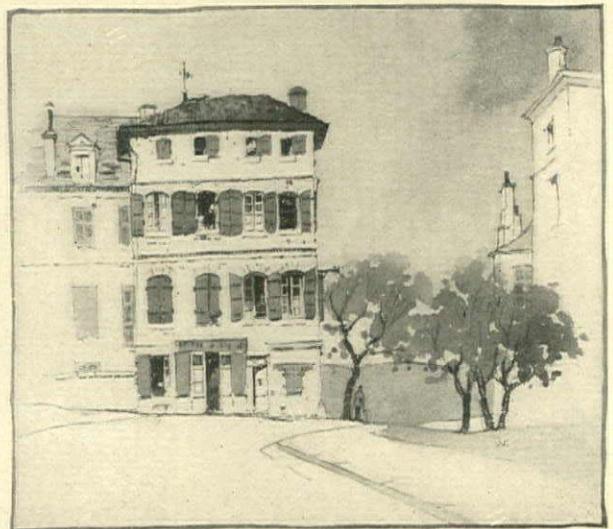
Atlantic Ocean against the jagged blue backdrop of the Pyrenees—and your artistic obligations are at an end. Assuming, of course, that no invigoration is to be found in the spectacle of marvellously made up demoiselles and señoritas, smoothly bedecked in Paris robes a day old and studded with several ounces of glistening stones, gazing languidly from their Hispano-Suizas and feeding chocolates to their Russian wolfhounds—but this is not a society sheet.

St. Jean-de-Luz, populated chiefly by English tourists and native fishermen, has more to recommend it. As a fishing village it is ideal, the combination of a naturally protected harbor, an elaborate series of breakwaters and jutting stone wharves giving it an extraordinary security. The most picturesque touch in the town is found in the fishermen, who for some unknown reason, wear overalls and jumpers not in the conventional, locomotive engineer blue, but in a gorgeous brownish red, the tone of which changes with each frequent washing. A cluster of fishermen loafing on the pier resembles nothing more than

a huge, brilliant blotch of Autumn foliage. Some of the finest of the Basque houses are here; the streets are spotlessly clean; the hotels seemed palatial after not having been in a town with edible soup, a bathtub or civilized plumbing for two months. Louis XIV was married in the quaint, balconied Basque church here, and had the door, through which he emerged a much married king, sealed up and properly labelled. It is therefore evident that recent generations of pleasure seekers have not been the first to discover the charms of this untroubled village. The wonder is that it has not suffered the fate of a "ville de luxe" and become overrun with villas, ultra-modern shops, and utterly useless guides.

Many curious and anticipatory thrills take possession at the frontier at Hendaye, despite the discomfort of being herded bewildered through a shuttle of corridors and corrals, past money changers, ticket punchers, passport inspectors, baggage snoopers and trunk gougers. One has an ineradicable idea that, as soon as the border is crossed, a complete change will take place everywhere. Rather a childish idea, no doubt, but the transformation in this extreme corner of Spain was even more decided than expected. Dumped unceremoniously into the streets of the uninspiring border town of Irun, one feels a thousand miles from France. Architecturally the buildings were but little different from those across the border, more frosted perhaps, and more bestrewn with flah flah. But multi-colored clothing hung over every iron balcony, strings of red peppers and onions garnished most of the doorways, and bright plaid blankets ambled by, concealing and smothering some chilly Spaniards beneath their heavy folds. Decidedly a new touch of color.

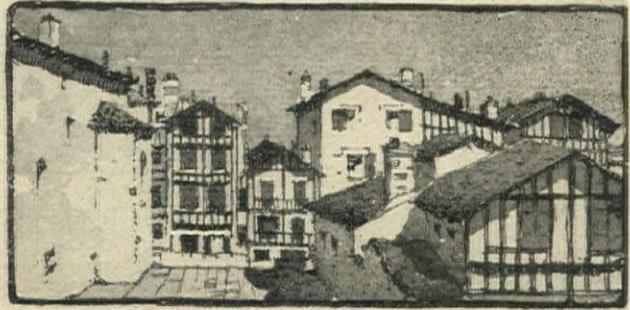
Fuenterrabia, a bouncing trolley ride away, is perhaps the quaintest walled town in the Basque



AN ADAPTATION OF THE BASQUE HOUSE



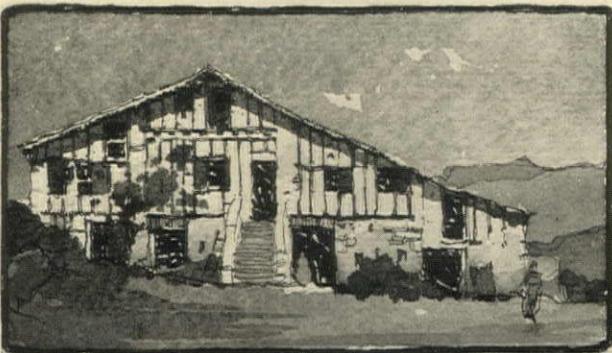
THE OLD BRIDGE AT SOCOA



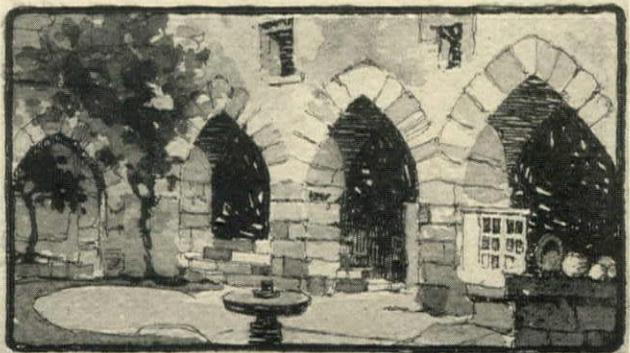
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THE FORTRESS - SOCOA



A BASQUE FARMHOUSE

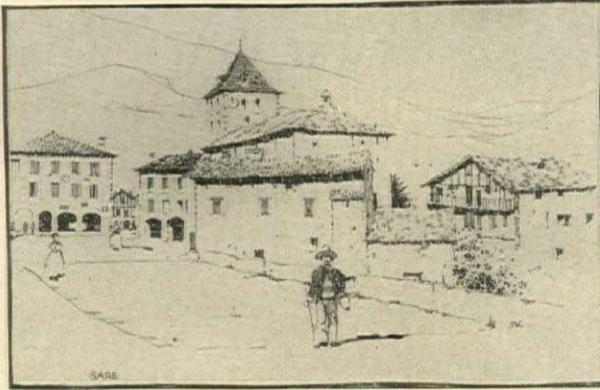


A CLOISTER IN FUENTERRABIA

A GROUP OF SKETCHES IN THE BASQUE COUNTRY

(From the original water colors by Samuel Chamberlain)

country. Its narrow streets, overhung with elaborate jutting cornices and bulging balconies, were so sheltered that a shower of rain could scarcely



SARE

moisten a narrow strip in the middle of the stony pavement. The beautiful old wooden consoles, used to support the balconies, are a joy to behold. One house in every five seemed to be adorned with a bit of ironwork of incontestable antiquity.

And that touch as unmistakably Spanish as the click of a castanet, the carved stone escutcheon, is to be found in a dozen spots. The old Spanish Renaissance church, distinguished from a distance by its vast buttressed walls and its finely detailed tower, was a fascination inside. Dark and ominous, the smoky heights of its vaults were filled with the blue haze of incense. Its air of solemnity was marred by the scamperings and exaggerated whisperings of a dozen ragged children who were fishing under chairs for candle remnants, hiding behind confession coops and grimacing behind the backs of passing ecclesiastics. High up on the stony roof of the huge dismal dungeon in which Charles V kept his lunatic mother, one has a superb view of the seacoast, far up into France—but this is not a guide book.

Climatically, the Basque seacoast is as near all year round perfection as you can hope to find anywhere. Tennis and golf flourish at all times. No more restful place could be chosen for a vacation—but this distinctly is NOT a real estate sales letter.



SUMMER

OVERDOOR PANEL IN ORIENTAL GALLERY OF CHAUNCEY McCORMICK, CHICAGO, ILL.

ANTHONY DE FRANCISCI, SCULPTOR—PHILIP L. GOODWIN, ARCHITECT

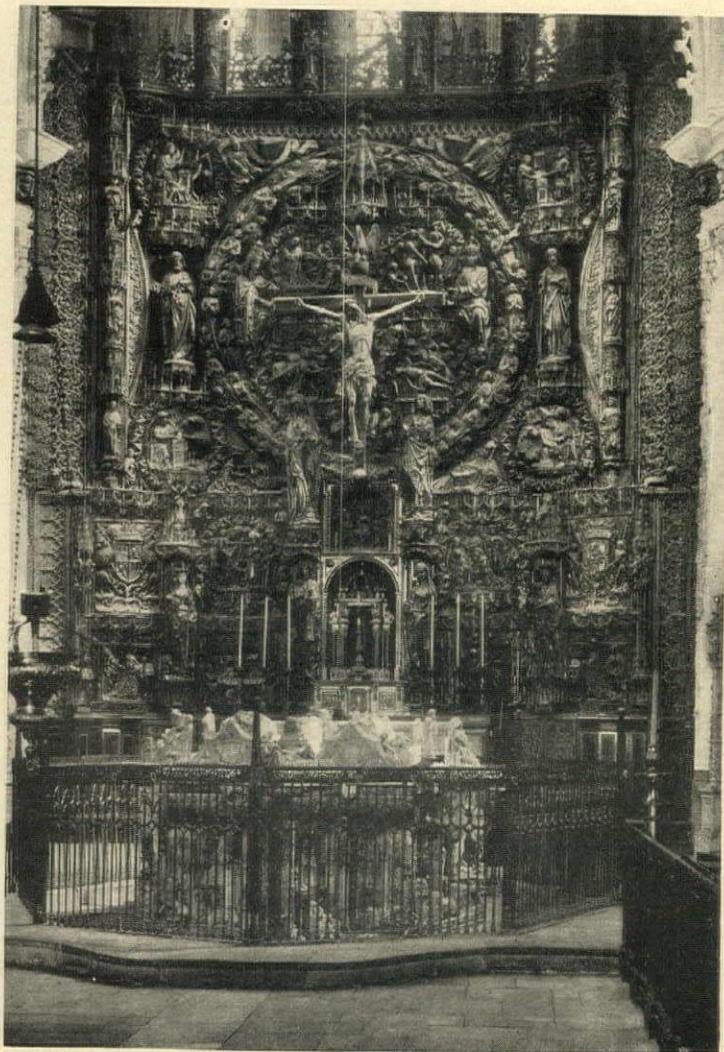
# SPANISH GOTHIC

BY RALPH ADAMS CRAM, F. A. I. A., Litt. D., LL. D.

ONE of the great marks of Gothic is its almost infinite mobility and the facile way in which it adapts itself to varying nationalities, so achieving myriad forms which are yet at one in principle, however diverse they may be. No one would ever confuse English Gothic with French or this with that of the Teutonic countries, while in Spain the intense, indomitable racial character, so wholly different from that of France or Italy, has wrought a variant that has almost the isolation of a new style. And yet it is not this, but rather a national form of Gothic so infused with vitality, so daringly original yet so consistent, so blended of austerity and voluptuousness, that it takes rank with the other two great Gothics of the world, those of France and England.

For some reason or other it was long disregarded in spite of occasional efforts at forcing its recognition, our old friend Ferguson being, I think, one of the first to treat it with respect. Generally, however, it was accepted as a modified and rather debased form of French Gothic and even Street, who dealt with it honestly, always seemed to be trying to prove the French origin of all its motives. In a way, of course, this was true; the style did indeed come over the Pyrenees with the pilgrims, administrators, friars and bishops, as the decadent Moors were pushed back from the paradise they had made, but except at Leon, which certainly is French in spirit and in form, and in monasteries like Poblet which tried to be both and failed because of defective master builders, whatever there was that was French in the beginning was transmuted by racial energy into "something rich and strange." Perhaps if Street had taken the trouble to go from Toledo to Seville (apparently he visited every other church of importance in Spain) he would have seen there something that would have opened his eyes to the national quality of other work than this.

The strictly Spanish Gothic churches fall into three groups, those that consciously try to be French and succeed in varying degrees, such as Leon, Toledo, Burgos (in its original estate); those that in plan, organism and spirit are purely



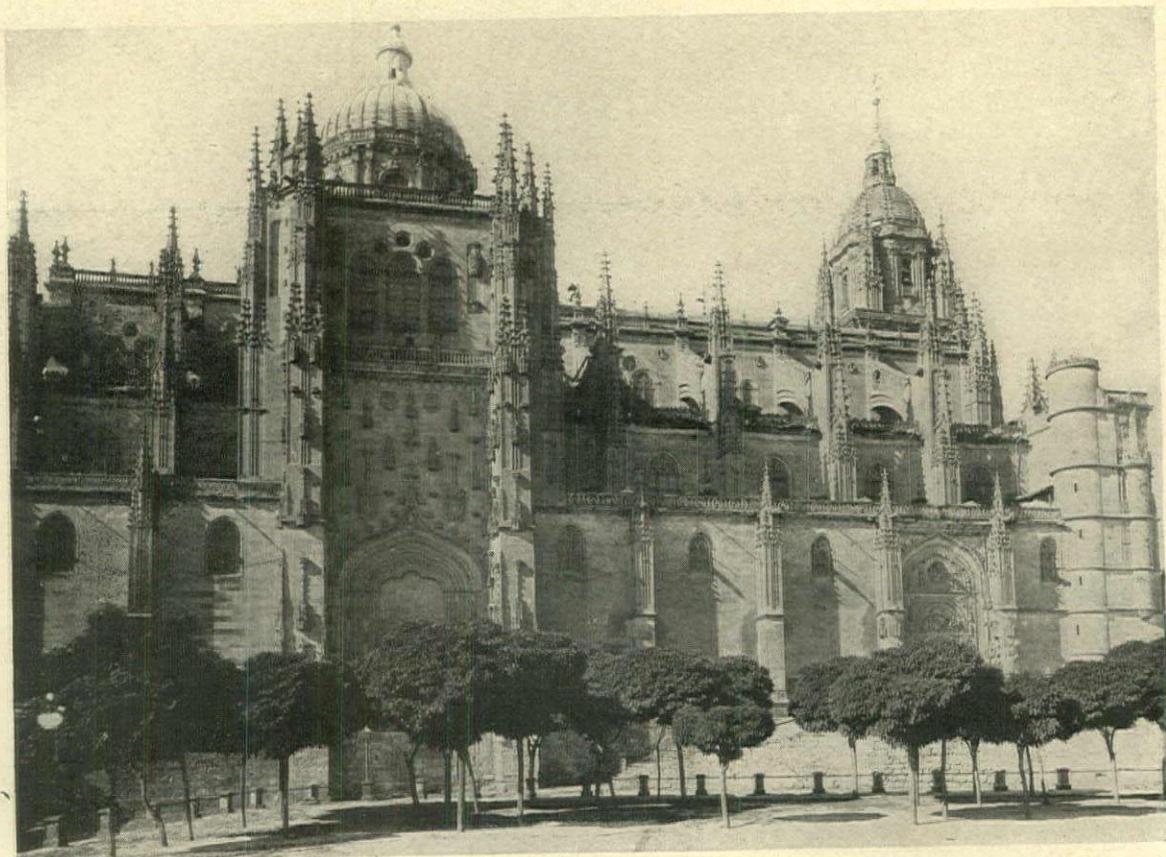
MAIN ALTAR, BURGOS CATHEDRAL

Spanish, such as Seville, Salamanca, Segovia, Barcelona; and finally the Cataluñan group of the type of Gerona, Santa Maria del Piño, Santa Maria del Mar and the Cathedral of Palma. The lines of demarcation are none too clear and influences are always interacting, but certain churches stand out as supreme and definite examples, amongst which I should certainly place, as representative of the three groups, Seville, Segovia and Santa Maria del Piño.

Burgos certainly began as a French sort of church, but its vicissitudes during the ages have made it almost the most Spanish of all in its general effect. Not only have chapels been broken out all around, some twelve in all and of the most varied sizes and styles, but the whole crossing with its amazing piers and lantern is of the most

purely Spanish blend of Gothic and Renaissance; the western towers are capped with openwork spires, German in impulse but very Iberian in quality; the triforium throughout is the most Spanish thing imaginable, and the famous stairway in the north transept is Spanish Renaissance at its best. Rejas of gilded iron, sumptuous altarpieces, tombs and shrines crowd the church with glory until it becomes an epitome of Spanish artistic genius. Of course it has no stylistic consistency, but this in itself is Spanish, for this people, driven by a burning spirit mingled of

asteries of Miraflores, Las Huelgas and Silos, the first with tombs of incredibly rich late Gothic and one of the most splendid altarpieces in the world, the second invisible except to a few specially privileged women since it is a convent the members of which are all of noble blood and strictly enclosed, while the third has unique cloisters with sculpture of the XIth century that stand alone in their curious perfection. It is necessary, however, to content one's self with hitting a few high spots, for Spain is too rich in great art to permit here any detailed consideration, so we pass on to



SALAMANCA CATHEDRAL

adventure, piety, sacrifice and emulation, was always tearing down, building up, inventing new modes of art, lavishing the gold of the Indies, and never resting satisfied with what had been accomplished. For six hundred years Spain seemed to be in a paroxysm of passionate creation and its art has a fire that is paralleled nowhere else except for brief and brilliant periods. When this fire died the sort of things that followed may be seen in the hideous triple doors of the Burgos west front, cheap and barren classical formulas that were stuck in during the XVIIIth century, fine Gothic portals of the Cathedral's first period being hacked away to this ignominious end.

Of course the Cathedral is not all in Burgos; the whole city reeks with great architecture, both Gothic and Renaissance, and nearby are the mon-

Seville as the great exponent of the true Spanish Gothic in its highest estate.

I believe I have seen every great cathedral in the world except four, and I can give it now as a considered opinion that Seville, in respect to its interior (its exterior is nothing, or less) is the noblest of them all, and this can be said while clearly remembering Bourges and Chartres, Westminster and Exeter, St. Mark's and Monreale. When in 1401 the Canons determined on a new cathedral to replace the converted mosque they said: "Let us build such a church that those that come after us will say that we were mad!" No one has brought this charge against them, but instead they, or their architect, is credited generally with the most magnificent idea since Hagia Sophia. Who this great genius was, no one knows,



THE CATHEDRAL, SEVILLE

though the names of practically all the other great master builders have been preserved. Baedeker, with his usual ineptitude, says he "came perhaps from Germany" which is silly. It is far more likely that the scheme was the result of divine inspiration. There never was another cathedral like it either in its general idea or the sublime grandeur of its scale. To all intents it is a seven-aisled church, for its outer aisles, though divided into chapels, are so lofty and open that they count for full value. Antwerp is the only other seven-aisled church in the world, but here the wide outer aisles were an afterthought, while in Seville they are part of the original plan. The vast church is 450 feet long and about 230 feet wide inside. The nave is 50 feet clear width, the four main aisles 35 feet each, the chapels 20 feet deep. Fifty-four vast columns, each 11 feet in diameter and about 70 feet high, carry the vaults which are 85 feet to the crown in the aisles and 120 feet for the high vault. There is no triforium and only a narrow gallery at the spring of the nave vault. The piers are set diagonally and are approximately square in plan, and the manner in which these enormous columns, delicately

striated, develop into arches, vault ribs and colonettes at different stages, is the most perfect piece of articulation I know. In place of capitals there are narrow bands of foliation, the arches and ribs do not overhang and are immensely stilted, those of the high vaults at least six feet, the result being a soaring lightness without rival. The double side aisles are of the same height (the chapel aisle about 30 feet lower) and the spring and outward curve of the vault ribs take away one's breath. The windows are comparatively small but the stone is silvery gray so there is sufficient light, and the colored rays from the high windows stream across on the pale shafts, staining them and the rosy marble floor with every hue

of opals and the iridescent plumage of birds.

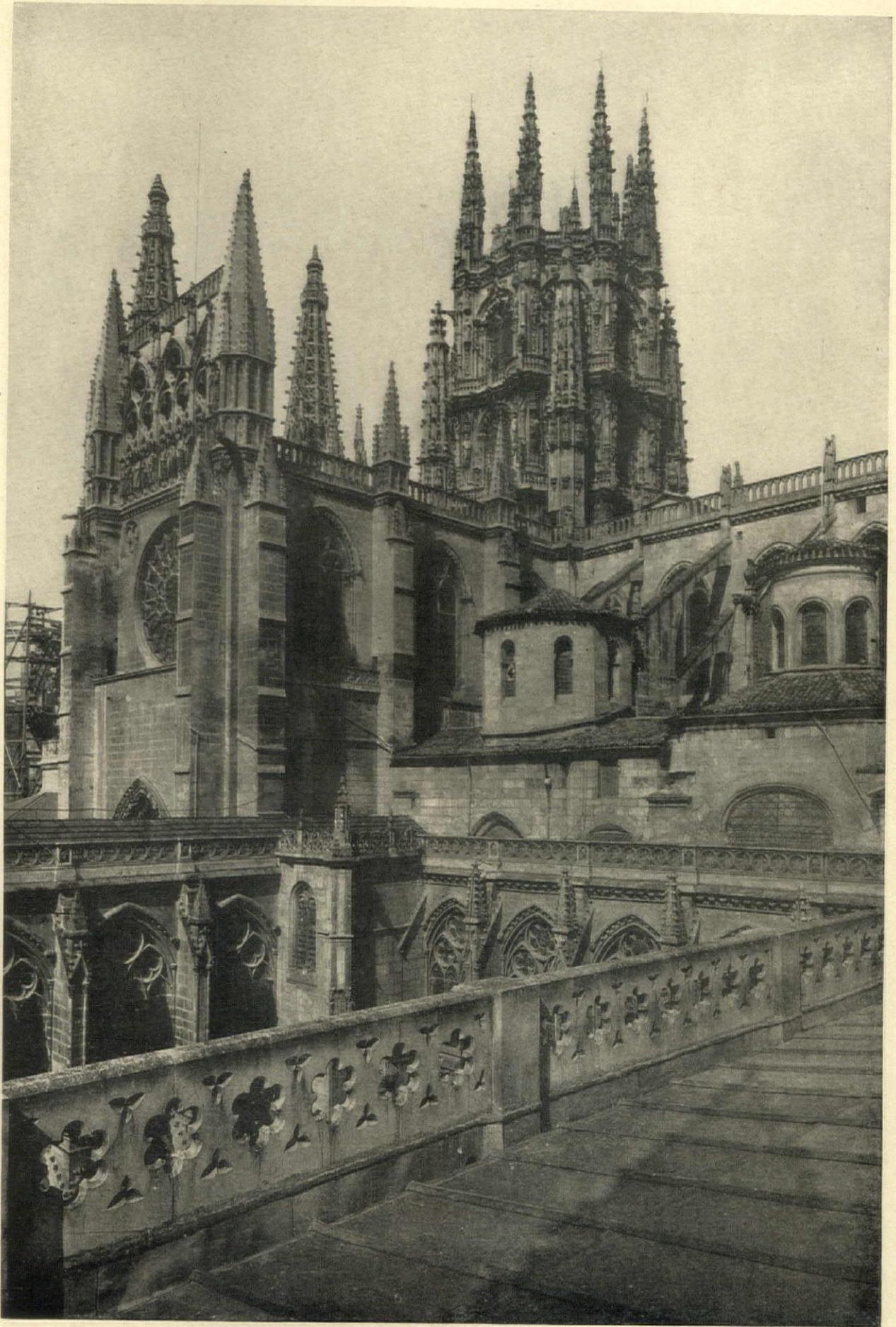
Of course the major part of the nave is blocked below by the choir with its walls of gorgeous marbles in Renaissance design, but it does not matter for the church is so lofty the eye ranges clear above the choir screens. The effect in looking diagonally across the building is just what one gets in a vast forest; walls disappear and there is only a soaring myriad of enormous silvery columns, lifting incredibly into the air and curving into dim vaults that seem as far as the sky.

If you enter from the west and go down one of the south aisles, the shock that comes as you reach the transept is staggering. The sanctuary occupies only a bay and a half east of the crossing; it is surrounded on three sides by rejas of gilded iron in the richest possible designs, some forty feet high, and within, eleven steps, the full width of the chancel, sweep up to the altar platform and above rises the reredos, 50 feet wide with 15 foot returns on the sides, a hundred feet high, canopied at the top, and all of marshalled niches with groups of figures in full relief, the whole structure being covered with gold leaf now toned to a luminous bronze, and dull,

faded color. There never was anything quite like it on earth, and I suppose never can be again. As for the chapels, some thirty in all, they are crowded with towering Renaissance or late Gothic altarpieces, also plated with gold and set with paintings; tombs of all periods, pictures innumerable, shrines, banners and I know not what of splendor and solemn magnificence. Truly this church is the wonder of the Christian world, and its essential greatness lies not in its wealth of allied arts but in itself as a consummate work of architecture. It is simple to the point of classicism, perfectly articulated, faultless in balance and composition. Except in the late and ugly vaulting of the crossing, there is nowhere a thing too



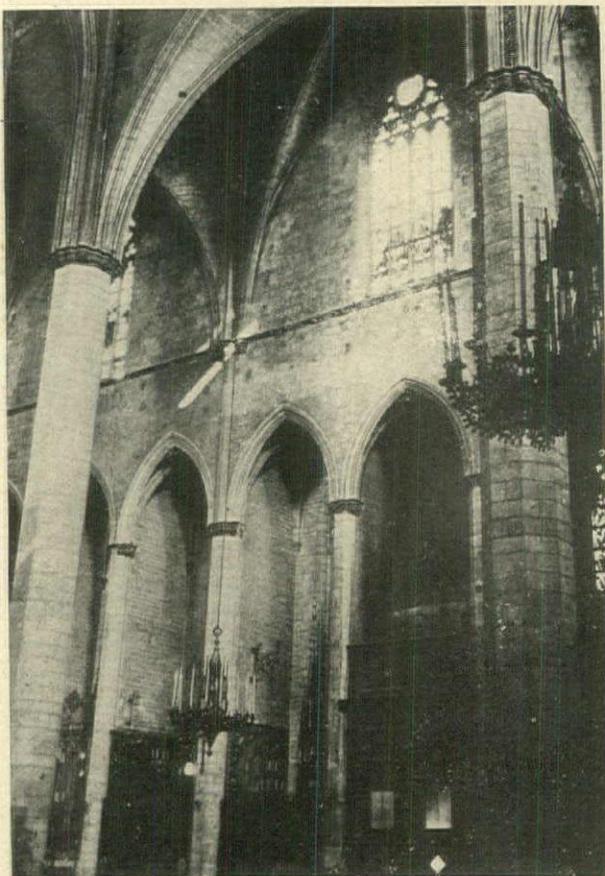
PALMA DE MALLORCA CATHEDRAL, SHOWING WIDE CATALAN NAVE



BURGOS CATHEDRAL

much or a detail that detracts from the majesty of its great, informing idea. Other churches grew; this, it almost seems, came down from heaven, the Holy City, "The Bride" of the Vision of St. John.

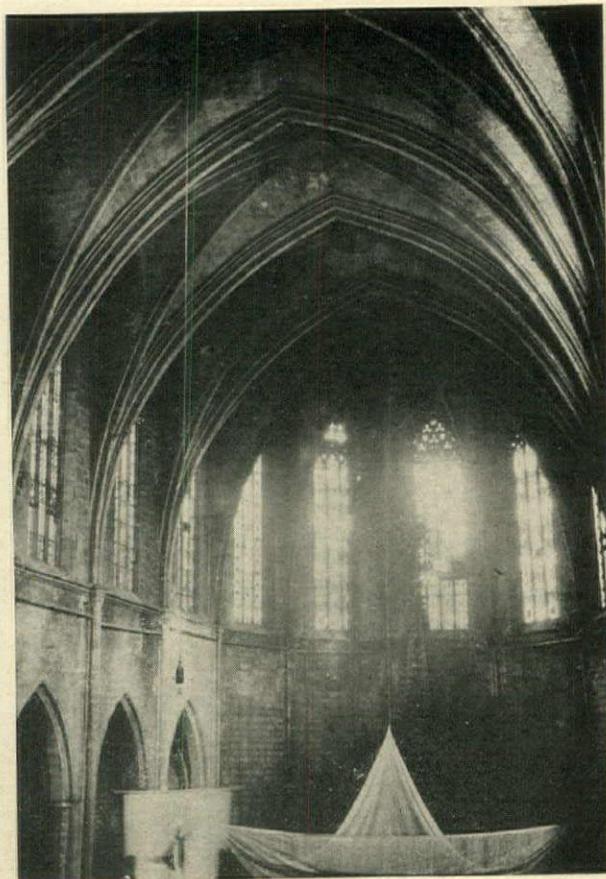
To a great extent it influenced the second group of churches I have referred to as particularly Spanish, those that were the work of Juan Gil de Hontañon and his son Roderigo. Their great works were Salamanca and Segovia, with smaller churches here and there, but they represent a large school that during the XVIIth century effected a most marvelous blending of Gothic and (Spanish)



THE NAVE, CHURCH OF SANTA MARIA DEL MAR, BARCELONA

(By permission of The Hispanic Society of America)

Renaissance motives. The new work at Burgos is of this sort, the colleges of Salamanca are full of it. Guadalajara offers its palaces, Toledo its San Juan de los Reyes, while every major town has its examples. It is not a fantastic assembling of two opposed ideas but a true blending in real vitality. Great "Masters of Masonry" like the Gils de Hontañon could combine domes and crocketed pinnacles in perfect unity and give to Gothic carving the suavity and finesse of early Renaissance. In such churches as Segovia, Palma and Salamanca the vast masonry masses of Seville are reduced to slender shafts, the spans

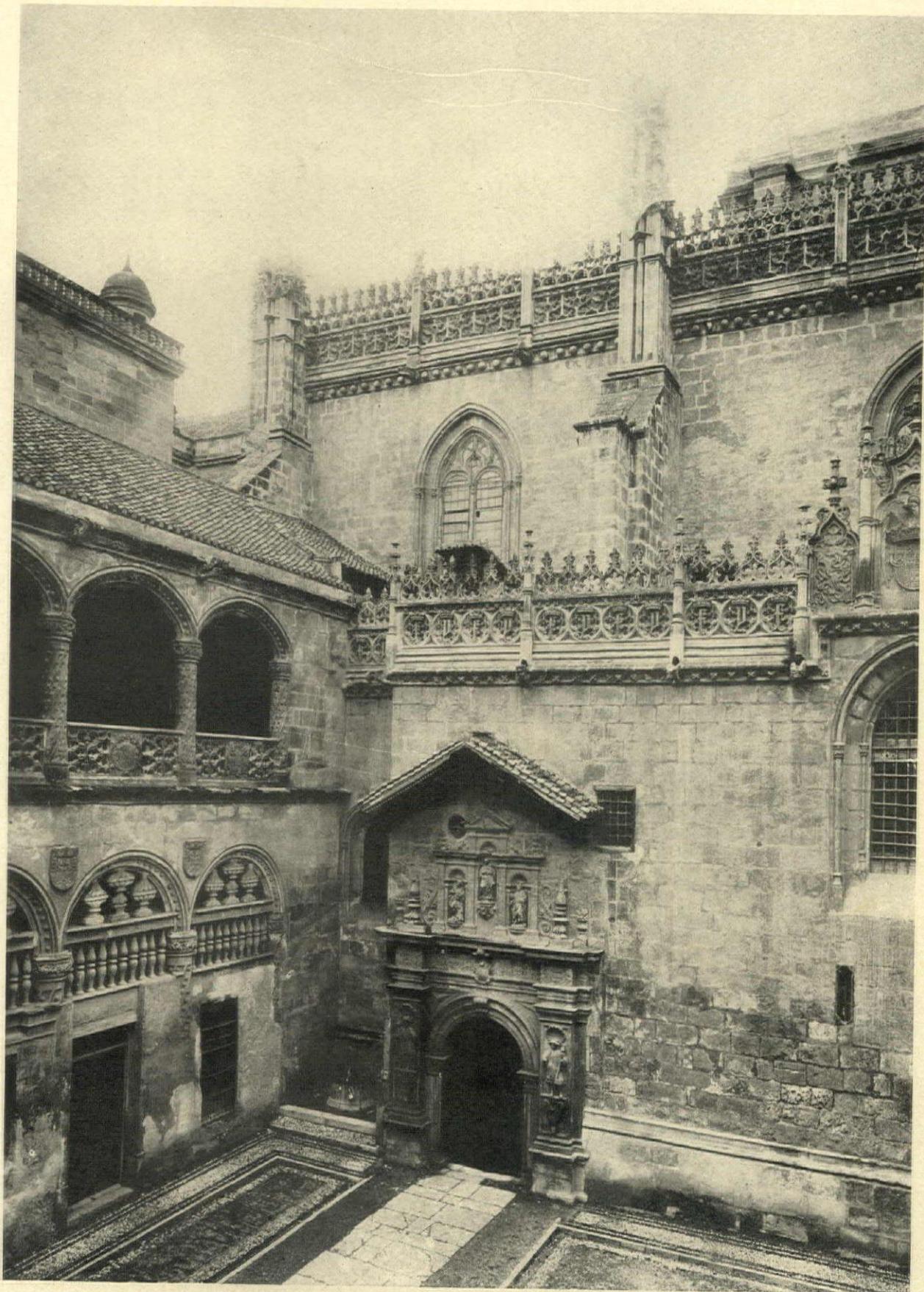


SANTA MARIA DEL PIÑO, BARCELONA

(By permission of The Hispanic Society of America)

are widened, the whole thing made more open and luminous, but the soaring height obtained by the elimination of the triforium is retained and the result is a lightness that has some of the elements of ecstasy. Incidentally the Cathedral of Segovia is all of gold colored stone, glowing like a tawny sunset; in fact the whole magical town is yellow, russet, amber and pale sienna, with ivory, rose-pink and faint lavender for accents, and as it mounts and rides its great rock, with the golden Cathedral at the crest, the Lohengrin Castle of yellow ochre at the far end, and little rivers down below under slim, tall, silver-green trees, it is more like an impossible ship out of faery than anything else I can think of. An artist should go to Segovia and find all his dreams fulfilled.

The third group (I must leap lightly from one to another) is that amazing Catalan development represented by Gerona, Manresa, Santa Maria del Piño, Santa Maria del Mar, and the Cathedral of Palma. This is all pure Catalan work, evolved by that singular race of the northeastern corner of the Peninsular that seems to be more French, or perhaps Provençal, than it is Iberian. I attribute these churches to a race but there is a coincidence in dates that suggests that one surprising genius may have been responsible for all,



THE COURTYARD, GRANADA CATHEDRAL

at least for the novel idea. The chief characteristic is an enormously wide nave, sometimes with, sometimes without columns. All but Gerona were begun about 1328, and all have the great, clear naves necessitated by the crowds that always flocked to Mediaeval preaching. Santa Maria del Mar has four great square nave bays of 45 feet with twenty-foot aisles, niched chapels in the fortress walls, and an apse with ambulatory. Manresa has a fifty-foot nave and is on the same general plan as is Palma, with a span of 60 feet. Santa Maria del Pi is aisleless, a splendid basilica of seven bays and polygonal apse, 55 feet wide in the clear, with wall chapels. It must be remembered that Chartres and York are only 50 feet wide. All these churches are very lofty and vaulted throughout in stone, the most daring adventures along this line up to the time they were built. Gerona leaves them in the shade. Here the choir was built between 1300 and 1346 in the standard and modest fashion, with three aisles, but when in 1416 it was decided to build a new nave an architect of parts, one Guillermo Boffy—or as we should say, William Boffy—advanced the novel project of going Santa Maria del Pi several better and, omitting columns altogether, build a vast hall equal in width to the existing three aisles of the choir, 73 feet in clear span, and vault the whole thing in solid masonry! This was too much for the judicious canons and they promptly called on all the Spanish architects they could get hold of, some twelve in number, to pass on the audacious project. The records of this Commission have been carefully preserved and make most interesting reading. The verdict was favorable and Master Boffy proceeded with his work, having to his credit, to this day, the hugest Gothic vault in Christendom.

This Catalan group, including the Cathedral

of Barcelona of course, which is really contemporary though with no unusual width of nave, is one of the most original in the whole history of Gothic art. The enormous clear areas, the widely spaced, soaring columns, the lighting effects, curious and dramatic as at Barcelona, high up and mysterious as in the basilican churches, the close-set little chapels in the lower walls, the austere simplicity of design—all these things work together to set these churches in a group apart and as the great Catalan contribution to architecture.

I am sorry that no photograph of any of them, except Palma alone, seems to be available either in Spain or here, and so bare description must suffice. That they may be useful as inspiration for architects who confront the contemporary objection to interior columns in a church, is a reasonable assumption, for here certainly are Gothic churches of great beauty that offer the largest possible uninterrupted areas for a congregation of sermon addicts. One could wish also that the grandeur of their scale and the majesty of their dimensions might be taken to heart by modern cathedral builders, rather than the parochial or monastic setting-out of the crowded and constricted English type. New York Cathedral was wisely determined on these lines long ago, with its fifty-foot-square areas, but even these are small compared with the lordly width of sixty-foot Palma and of Gerona with its span of seventy-three.

Altogether a great and varied era of supreme Gothic building in Spain, quite commensurate with any other in the world. What happened when the gold of the Indies poured into the Peninsula like a flood and the movings of the Renaissance began to manifest themselves at the same time, I shall try to indicate, or rather sketch, in the next article.

# HENRY BACON

1866-1924

**H**ENRY BACON died on February 16. Born in Watseka, Ill., in 1866, he came to New York at the age of twenty-three to find employment with McKim, Mead & White. In 1889 he won the Rotch Travelling Scholarship. Returning to New York after his scholarship tour abroad, he again entered the office of McKim, Mead & White where he remained for six years. The architectural firm of Brite & Bacon followed until 1903, since which time Mr. Bacon practiced independently.

At the time of his death, Mr. Bacon was a Fellow of The American Institute of Architects, Fellow of The American Academy of Arts and Letters, and a member of many civic organizations and clubs in the field of art. He was awarded the Gold Medal of Honor in 1918 by The Architectural League of New York, and in 1923 received the highest distinction an architect may attain in this country, the Gold Medal of The American Institute of Architects. This award was in recognition of his work in designing the Lincoln Memorial at Washington.

Perhaps no man in the profession of architecture was ever more generally respected or held in greater affectionate regard. His passing creates a feeling of great loss. No words can more fittingly set forth the true character of Henry Bacon than those contained in an editorial printed in the *New York Tribune*. They are so truthful and so calmly appreciative that they could only have been written by a man sufficiently intimate with Bacon thoroughly to know his worth. This editorial stated:

"When a great artist dies he takes from us the embodiment of an idea. He is the representative of a principle, a style, an individualized vision of beauty. Such a type was Henry Bacon. As a man he was modesty itself, gentle, generous, all

sunny kindness to his friends. As an artist he stood for the severity of the Greeks and figured in his profession as the most consummate exemplar of the grand style we have ever had. This fact, which is confirmed by a large number of buildings designed by him, is made most triumphantly manifest in the Lincoln Memorial at Washington. Bacon's genius reached its culminating point in that famous temple. There he exposed in its noblest estate his idea, his style, his vision of beauty.

"It is a fine thing when we can thus conceive

of an artist's character, for it means recognition of something constructive, something durably fertilizing that he has brought into the world. Beauty is a living force. It does more than please the eye. It stimulates the brain, it warms the heart and brings the better self of mankind into action. The tribute that we pay to certain of the architects of America is a tribute of gratitude to men who left American art better than they found it. Richard M. Hunt did that when he brought here from Paris the motives of French classical design and used them with distinction in his own work. Henry H. Richardson was another significant contributor to our



HENRY BACON

artistic experience through his exploitation of Romanesque. Charles F. McKim was in his turn a profoundly fruitful disseminator of the ideas of the Italian Renaissance and of the Roman principles underlying them. Henry Bacon, who, as a creative artist, was the peer of them all, dedicated himself to the majestic inspiration of the antique. With unique power he truly revived 'the large utterance of the early gods.'

"He used it with much more than the authoritative skill of a craftsman mastering a technical instrument. It was for him the means whereby he instinctively expressed an inner spiritual

purpose. Greek simplicity, Greek order, Greek beauty and grandeur were to him as the air he breathed. He dealt in these things with a fervor and a rectitude giving to his art a kind of moral weight. Art was with him, in fact, character in action. There was something enkindling about his devotion to the Lincoln Memorial. To those who knew him and observed him during the years of its erection nothing was more beautifully apparent than his absorption in what might be called the idealistic elements of his task. It was his privilege to commemorate Abraham Lincoln,

and it was that, not merely the fulfillment of an architectural obligation, that engaged his very soul. Bacon was every inch a man, ardent upon political honesty, steadfast and invincibly square in all the relations of life, impeccable in the performance of duty, clean and sweet and strong, a friend whose death brings inexpressible sorrow to those who loved him. All these rich traits were poured as in a golden flood into the work that he did as an architect. The only comfort that we have in bidding him farewell is that he leaves behind him a shining and a deathless mark."

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A TRIBUTE TO THE MEMORY of HENRY BACON by the NEW YORK CHAPTER of THE AMERICAN INSTITUTE of ARCHITECTS

THE New York Chapter of The American Institute of Architects records the death of our fellow member, Henry Bacon, on February 16, 1924.

As we realize that the friendly voice of Henry Bacon is forever stilled, there come to us reflections of profound significance.

We recall first how that voice was never raised except in the ways of kindness, never expressed any other humor than that which has no sting. We think of the deep essential sweetness that radiated from the good man. And as affection moves us it is mingled with reverence at the thought of his pervasive modesty, the absence in him of any exploitation of himself, of his utter singleness of purpose and his sincerity.

True, devoted student of that great art of Greece that he so deeply loved, he came to know it as only the lover can know. Unflinching in his fidelity, his long striving was not for what so many seek: bigness and loud acclaim and the driving bustle of the market place, but ever to capture and make to live again the exquisiteness of the most perfect moment of man's past. Let us all now be glad that the fine crown of his career was bestowed upon him by his own brethren, as they charged him with the task of serving his country by commemorating its great hero.

We may hold what views we like about the forms of our art; we can have but one as to the nobility of him who is gone away from us

and of whom we shall with pride tell our sons. Grief is with us, and sympathy for the afflicted, but above the grief is thankfulness for what he was.

RESOLVED, that this minute be filed in the Chapter and Institute records and that a copy be sent to the family of our revered and beloved friend.

D. EVERETT WAID,  
*President.*

HOBART B. UPJOHN,  
*Secretary.*

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COPY OF TELEGRAM FROM THE PRESIDENT OF THE AMERICAN INSTITUTE OF ARCHITECTS

D. E. WAID, *President*,  
New York Chapter,  
American Institute of Architects.

Through the death of Henry Bacon the Nation sustains a deep aesthetic loss and our profession is bereft of one of its luminaries. The Lincoln Memorial in Washington, of which he was the architect, reveals in its beauty his architectural mastery and his integrity of spirit and it now becomes a lasting and glorious memorial to the worthiness of his character. The National Organization joins the New York Chapter in its bereavement over this irreparable loss.

WILLIAM BAKER FAVILLE,  
*President.*



NEAR CHICHESTER, SUSSEX, ENGLAND

The charm of the English countryside is no greater than in this locality whose history dates back to the VI century. The buildings show the mellowing effect of time and blend harmoniously with the landscape. Some of the oldest topiary work in England is in this neighborhood

## WORKING PHOTOGRAPHS\*

Notes on a series of hand camera photographs by John Russell Pope, F.A.I.A.,  
for use as adjuncts to Specifications and Working Drawings

**A**RCHITECTS in this country are largely influenced in designing, and particularly in the handling of material, by the ability of craftsmen to execute. Specifications and working drawings are statements of cold facts. Even to trained architects, they fail to convey the subtleties of execution contemplated in the finished structure.

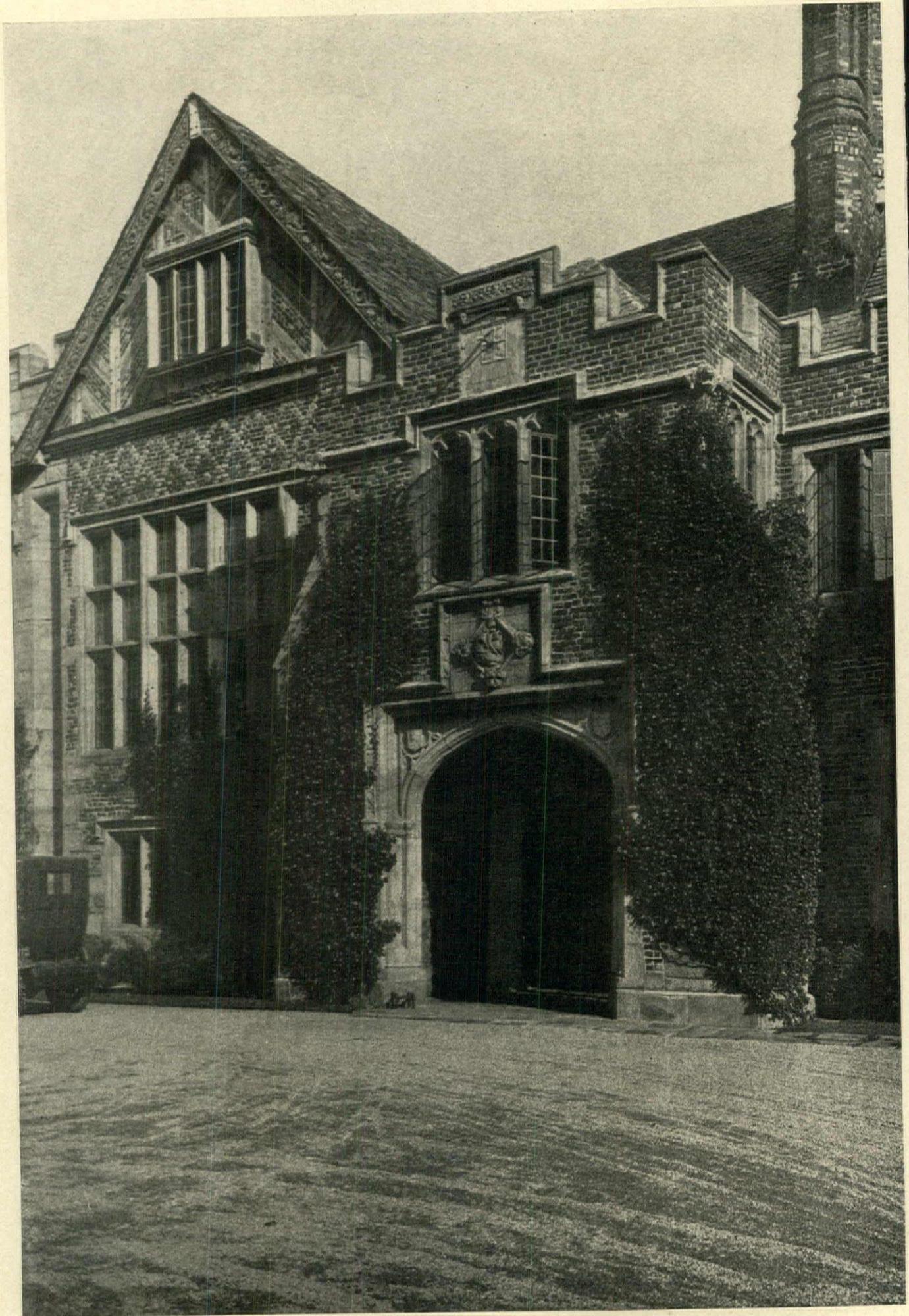
The architect who has originated a design sees "in his mind's eye" every single detail. He knows exactly how he wants his materials handled to produce the desired effect. To impart this knowledge to the builder and through him to the man on the job is among the hard tasks of an architect's practice. Rendered drawings, water color sketches, pencil notes, are all supplied and yet the craftsman has not grasped the essence of the thing. In desperation the architect goes on the work in exactly the same way as did the "master builders" of the middle ages. He en-

deavors to the full extent of his mental power to "get it over" to the workmen.

For many years architects have pursued the same methods in preparing working drawings. While specifications have become more specific, working drawings more complete, they only touch the rim of the artistic handling of materials. When the workman knows his craft, the architect's work is simplified, but it seems to be the rule that our so-called "skilled labor" can, to use a printer's term, only "follow copy," and that their ability to originate is limited. The problem is, therefore, to give the workman "copy" that he can understand, and with which he may proceed to a certain degree of success. In the office of John Russell Pope, architect, this difficult problem has been solved very successfully.

All worth while things are evolved from the simplest elements. During many years of successful practice Mr. Pope has designed and completed a wide range of types of buildings. These buildings, mostly of large size, have been marked

\*The illustrations of this article as well as the series presented in the plate section following have been reproduced from Mr. Pope's original negatives.



HOUSE OF STUART DUNCAN, NEWPORT, R. I.

JOHN RUSSELL POPE, F.A.I.A., ARCHITECT

Built in 1914. This photograph made in 1923. Compare with the photograph of Compton Wynyates, on opposite page



COMPTON WYNYATES MANOR HOUSE, WARWICKSHIRE

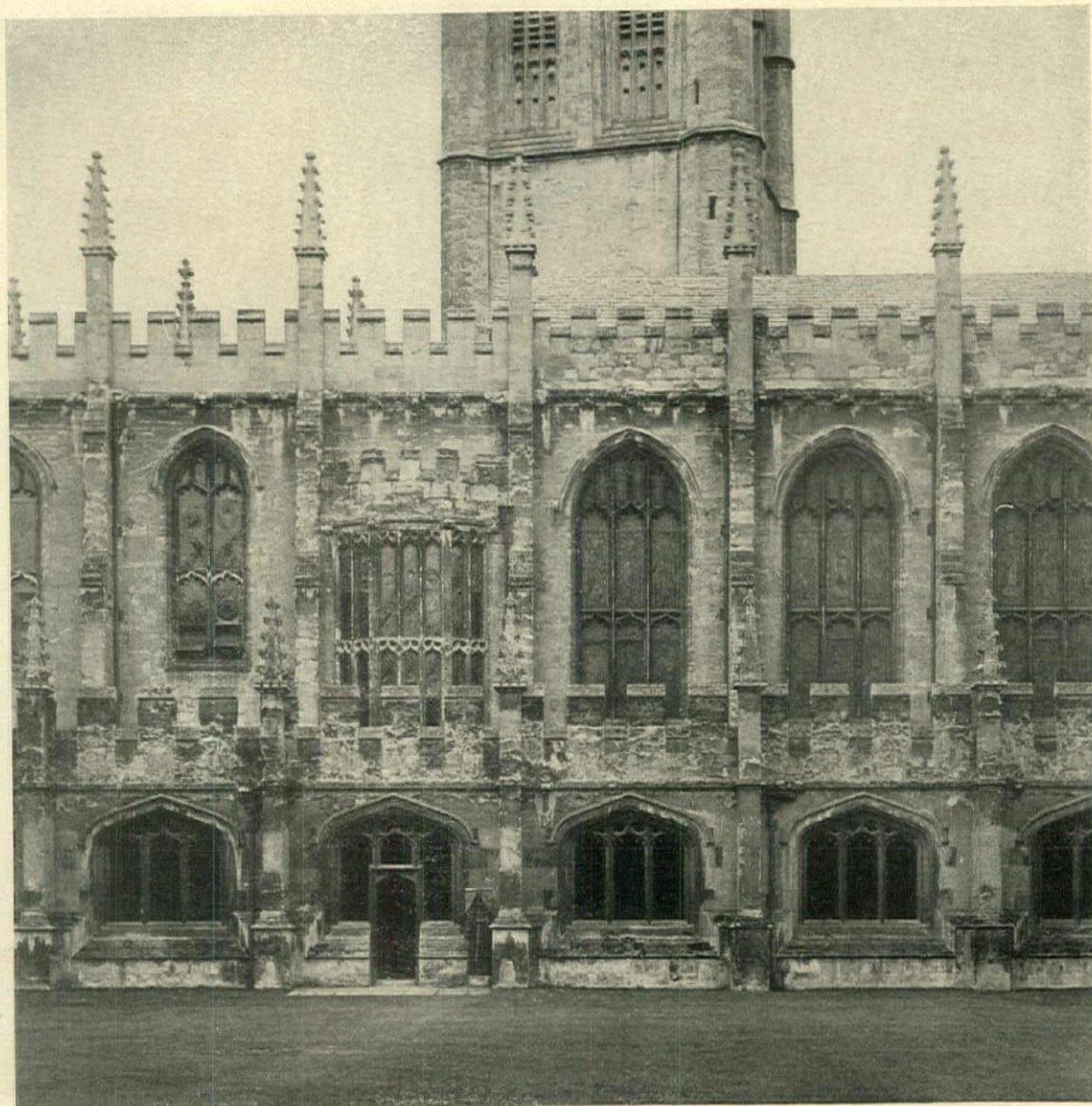
"WORKING PHOTOGRAPHS"

The beginning of this house dates from 1515-1520. It is built of thin red brick with stone freely introduced. The walling in places is relieved by simple diapers. The gable is half timber with plaster filling. Contrast this picture of a house more than 400 years old with that of the Duncan house built less than ten years ago

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

by distinctive features of planning, designing and more particularly in the original manner of handling materials, as in the patina on new metal that produces an appearance indistinguishable

are not always essential to good building construction or the best artistic result. We are reminded of the young artist who, when asked why he didn't paint glorious skies of rich vermilions, cad-



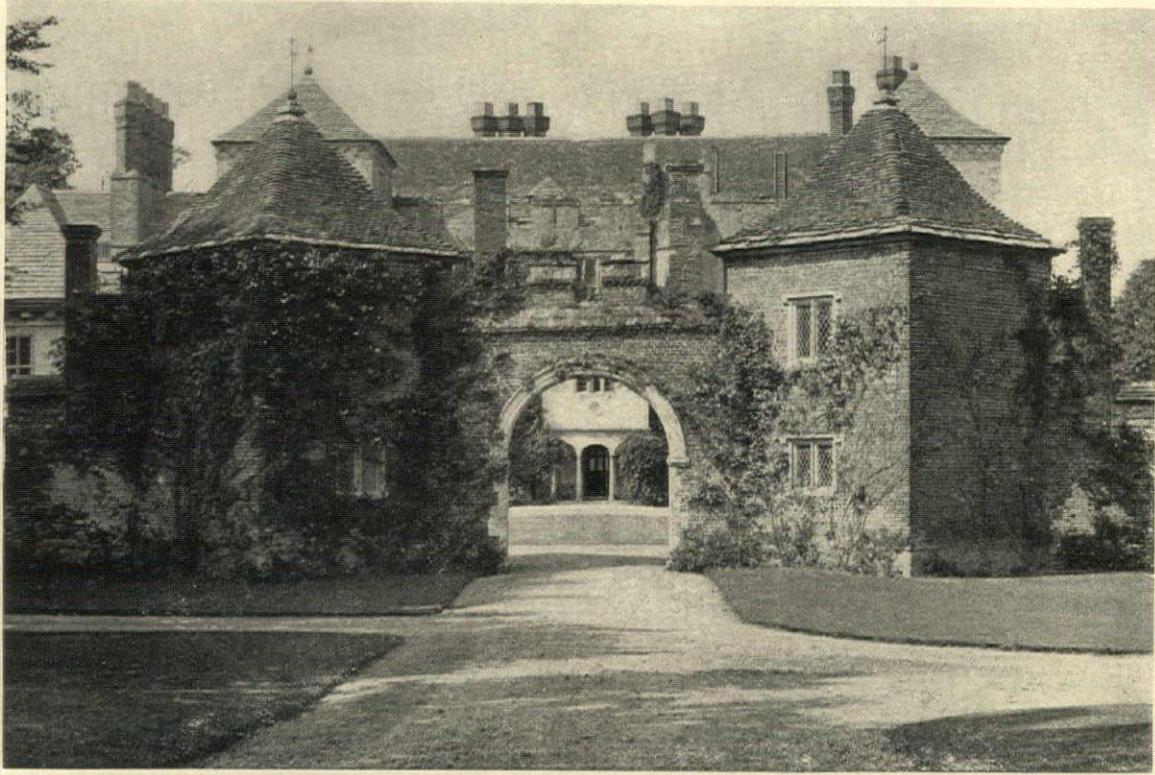
OXFORD

from century old exposed materials, slate weathered in all the lichen grown qualities of old tiles, stonework and wood in a manner believed a craft secret and buried with the early craftsmen who originated it. All of Mr. Pope's buildings and particularly his pretentious country houses are existing evidence of this artistic handling of materials.

In a number of instances where houses by the Pope office have been illustrated in *THE AMERICAN ARCHITECT*, attention has been directed to the fact that the finest architectural and artistic effects have been secured by the use of the lowest priced materials. The highest priced materials

miums and purples, replied that he couldn't afford it. "That sort of thing," he said, "cost two dollars a tube." Great painters, particularly the "Old Masters," produced pictures that are now worth fabulous amounts, that were done with the cheapest colors on a painter's palette. It is difficult to impress on the modern workman the fact that high cost does not mean the best results.

Mr. Pope has but recently returned from England. This was no vacation visit, no architectural junket to wander afield in search of recreation. The motive was created as a result of a carefully thought out plan to procure material for a series of graphic presentations suggestive of



RINGWOOD, HANTS



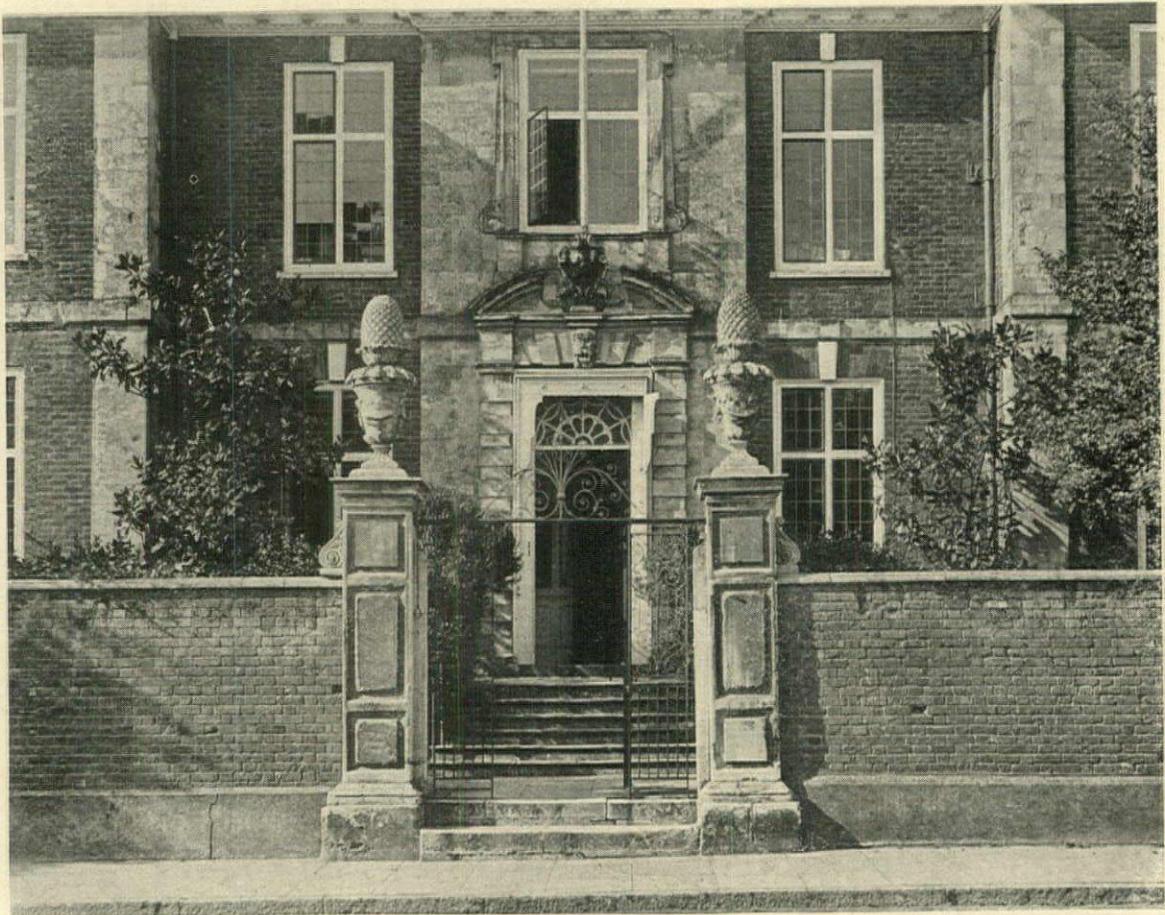
ROADWAY, BEAULIEU, HANTS

The wattled fences, climbing rose vines and the weathered slate and stone of this neighborhood present the finest suggestions for the artistic handling of modern materials

details of construction. These details were primarily to aid him in "showing the craftsmen" how certain results were to be obtained. While in England he made a series of hand camera snapshots. Along highways and byways, in cathedral cities and smoke begrimed manufacturing towns, on the banks of slow moving picturesque rivers, Mr. Pope searched for everything that had a practical and artistic value. These things he photographed with much skill and a well educated artistic sense of the point of view. The result of this artistic effort is a series of enlargements from well made negatives. No architect's office in this country, we feel sure, possesses a more complete series of details. Every detail of exterior building construction is represented. -Odd combinations of materials and every material known to the English builder are shown. In short, a wonderful collection of most valuable stuff.

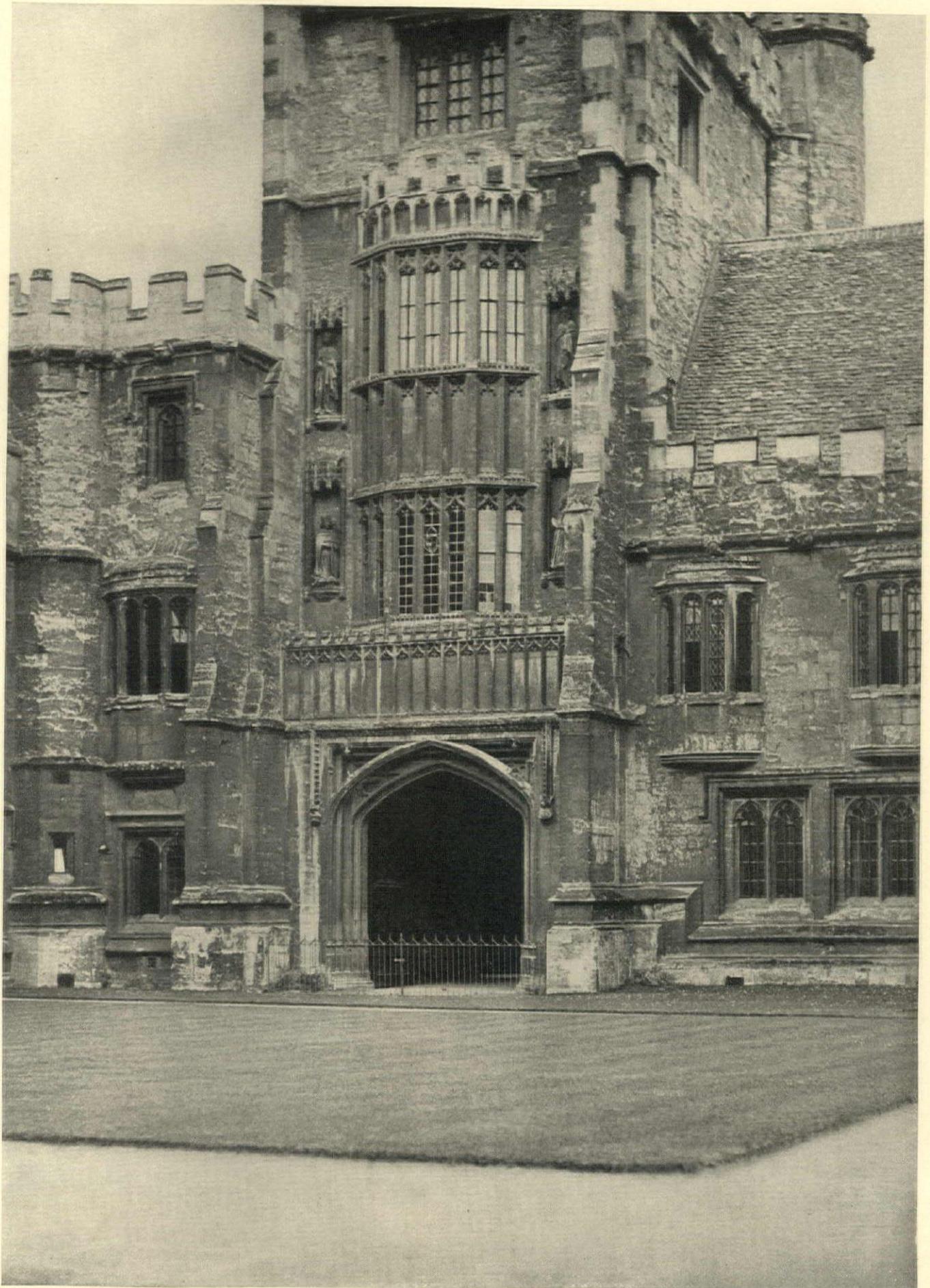
These photographs are not merely to refresh the mind of the architect or to provide suggestions for designers. They have a more practical value. They are "working photographs" to accompany working drawings. From the negatives selected showing the detail and general aspect of the work desired, a full sized enlargement or solar print is made and these photographs are incorporated with the drawings. By this means the man on the job can visualize a result that he can easily comprehend, and with the example before him proceed with certainty to carry forward an effect that he could not by any other means produce.

The accompanying photographs are enlargements to fit these pages and illustrate the idea it is meant to convey. In addition they show how valuable an adjunct to construction a simple and inexpensive method can be made to serve.



CHICHESTER, SUSSEX

A fine combination of materials blended to an attractive texture

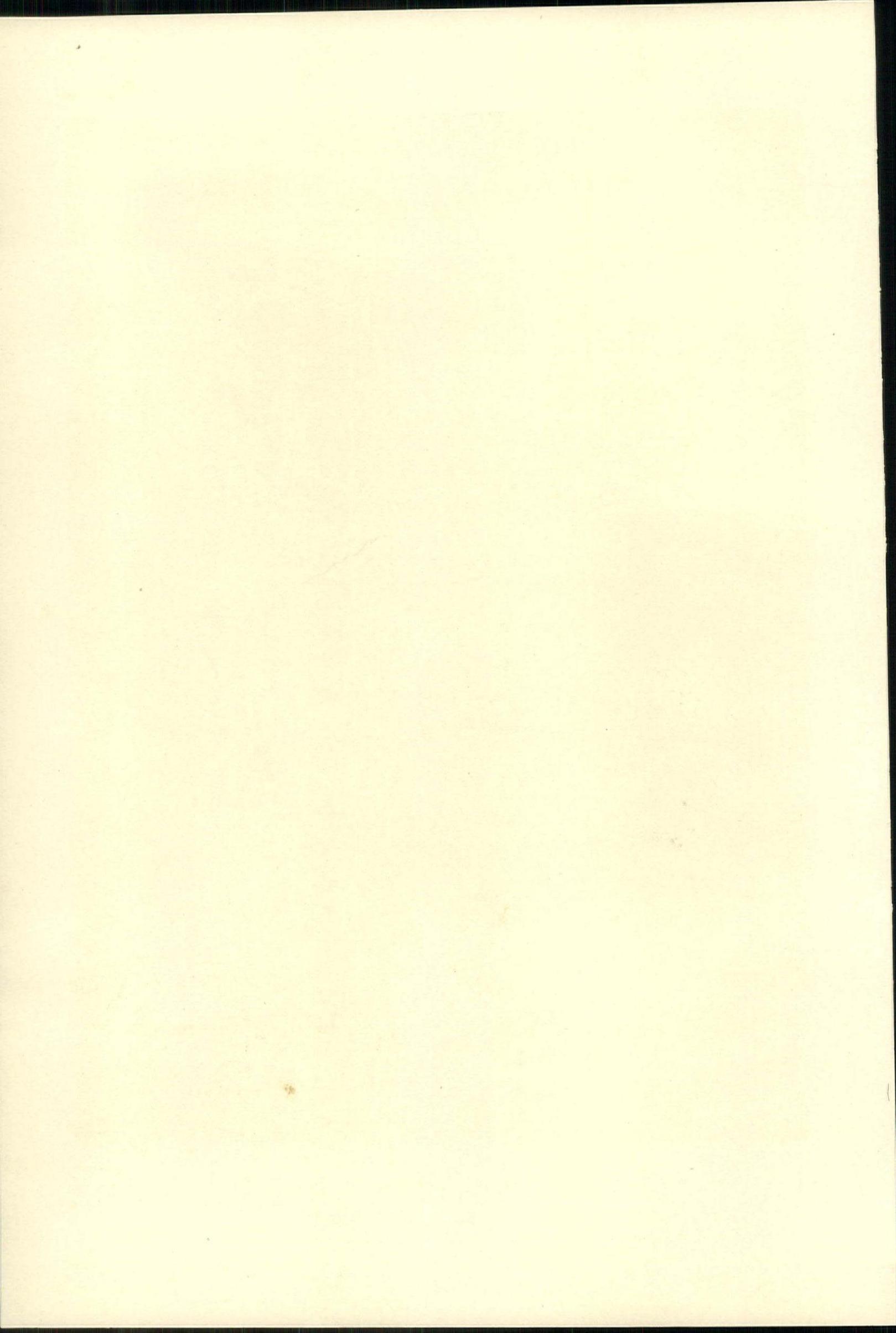


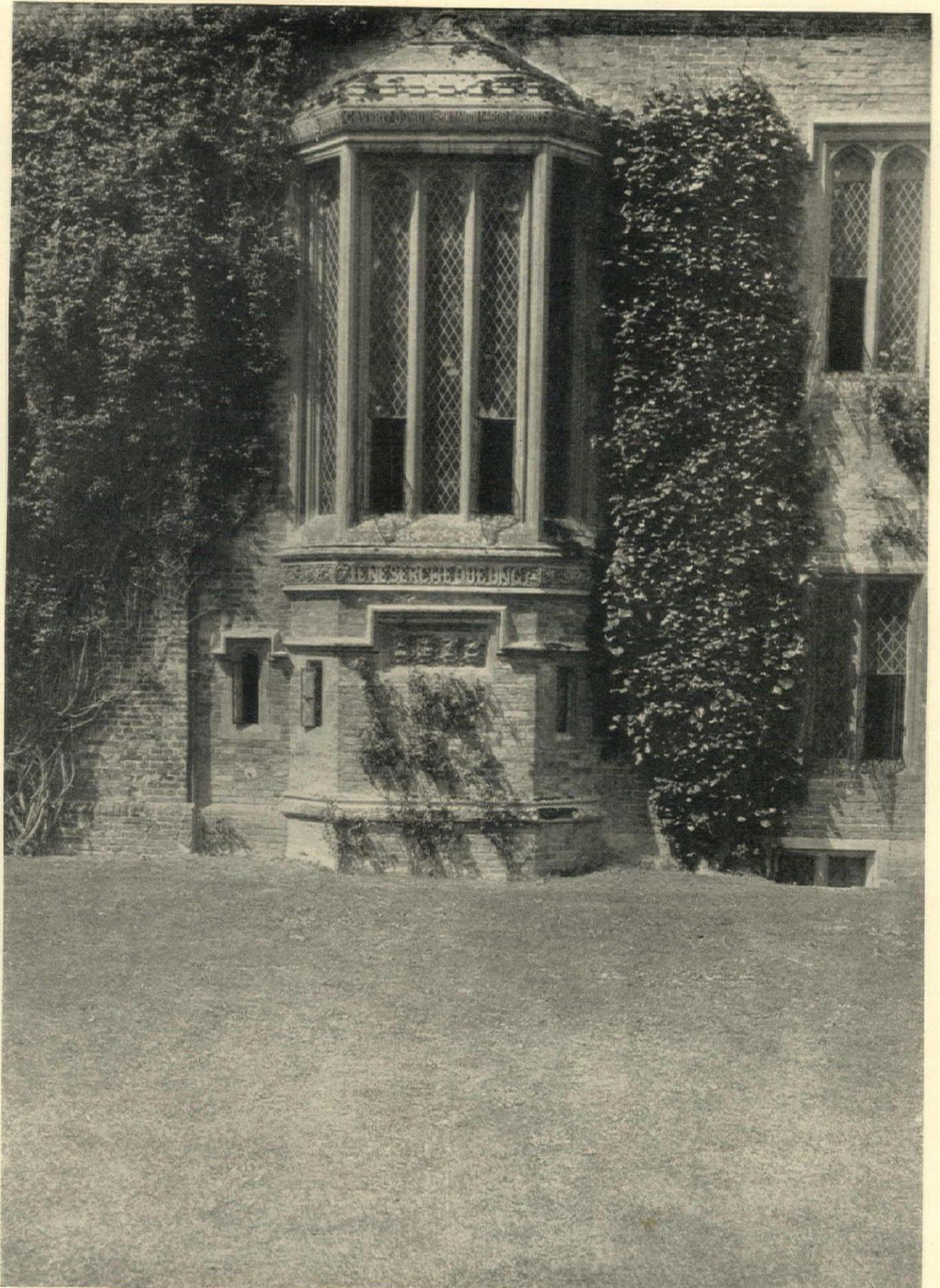
OXFORD

"WORKING PHOTOGRAPHS"

The artistic handling of materials and the fine effects of centuries of weathering are shown in this illustration

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



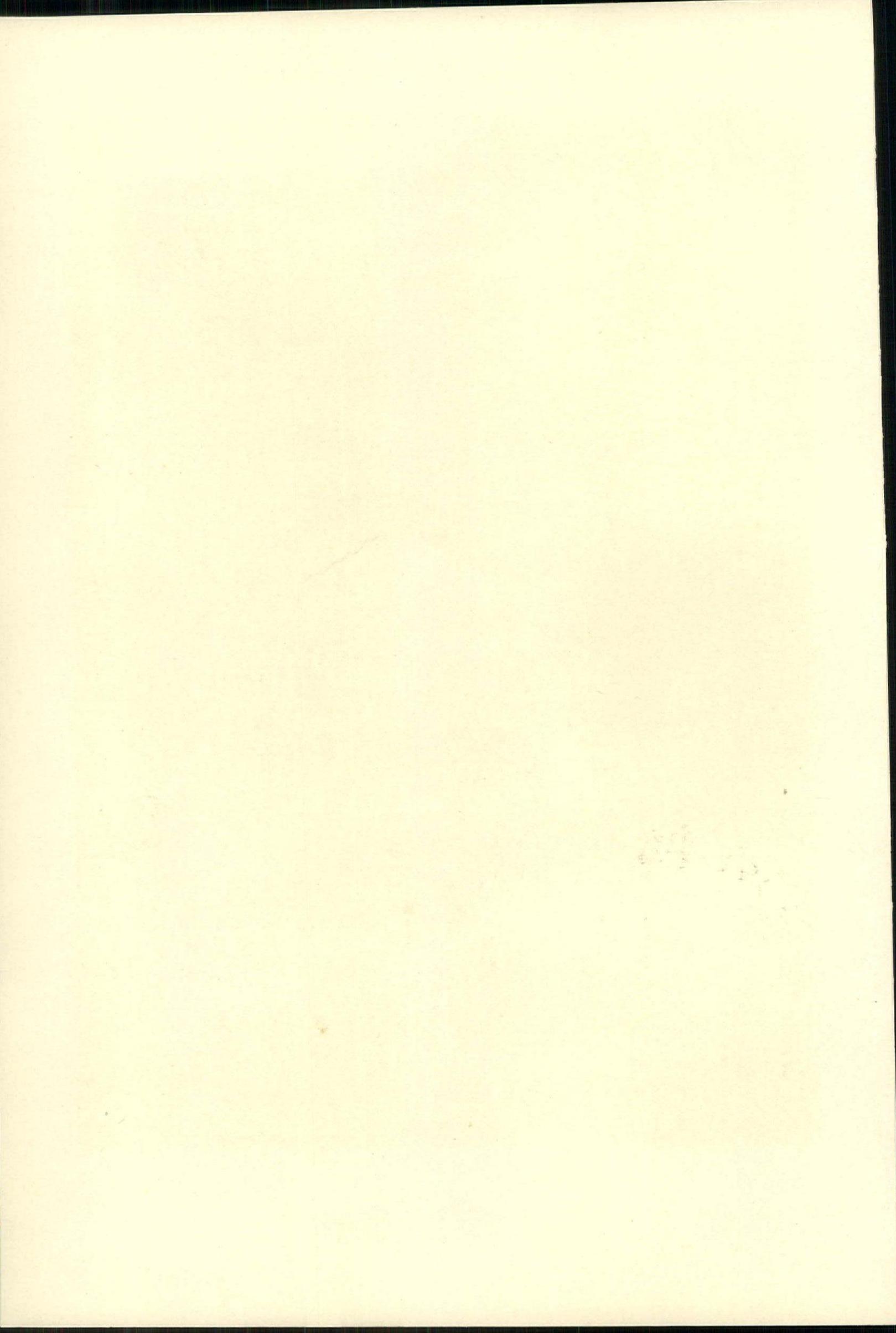


OXFORD

"WORKING PHOTOGRAPHS"

A characteristic detail in a locality abounding in material of the finest suggestive value

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



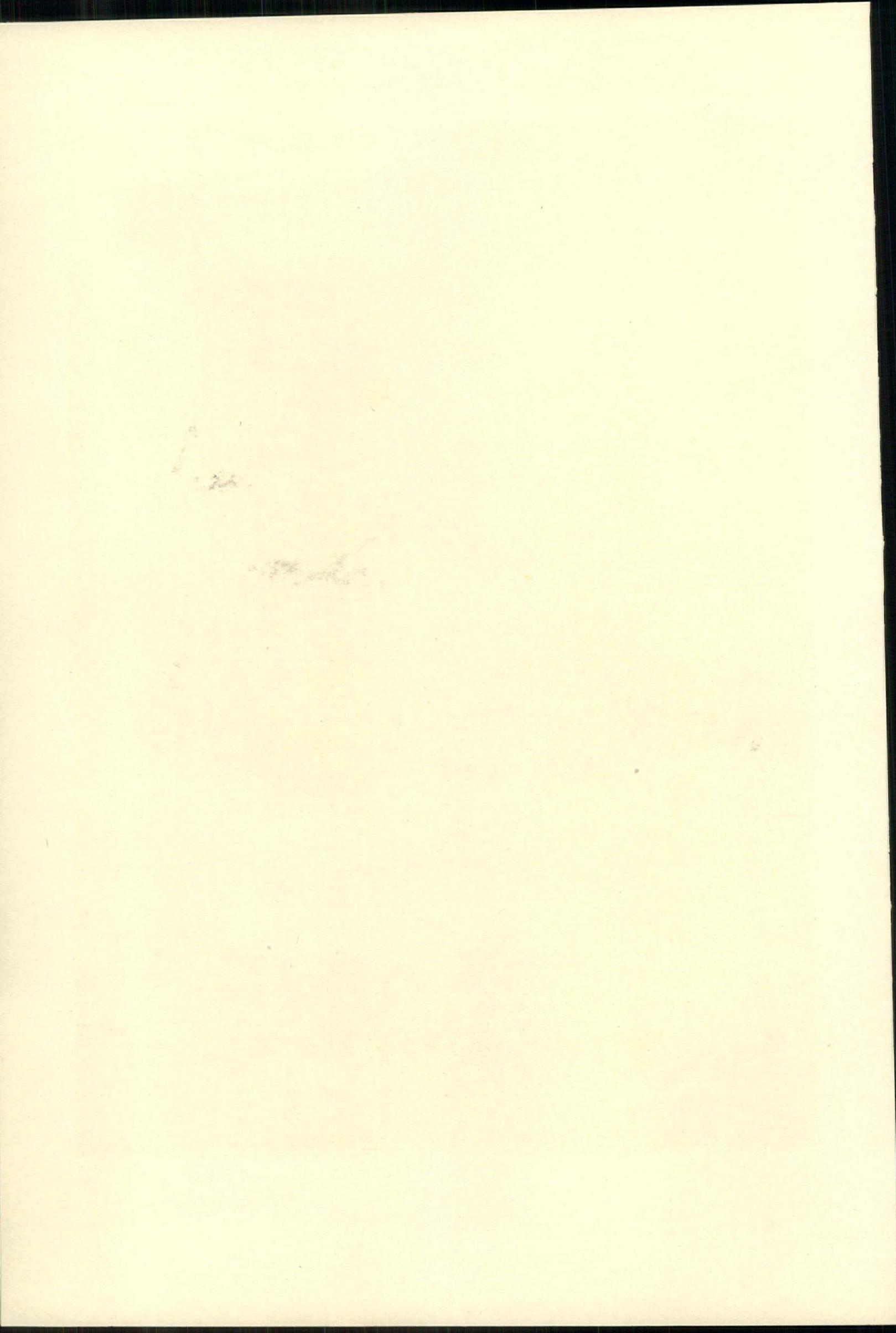


SALISBURY, ENGLAND

"WORKING PHOTOGRAPHS"

A characteristic bit in this old English town. There appears no incongruity in this intermingling of architecture of widely apart periods. The color and good form are evident even in this black and white reproduction

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



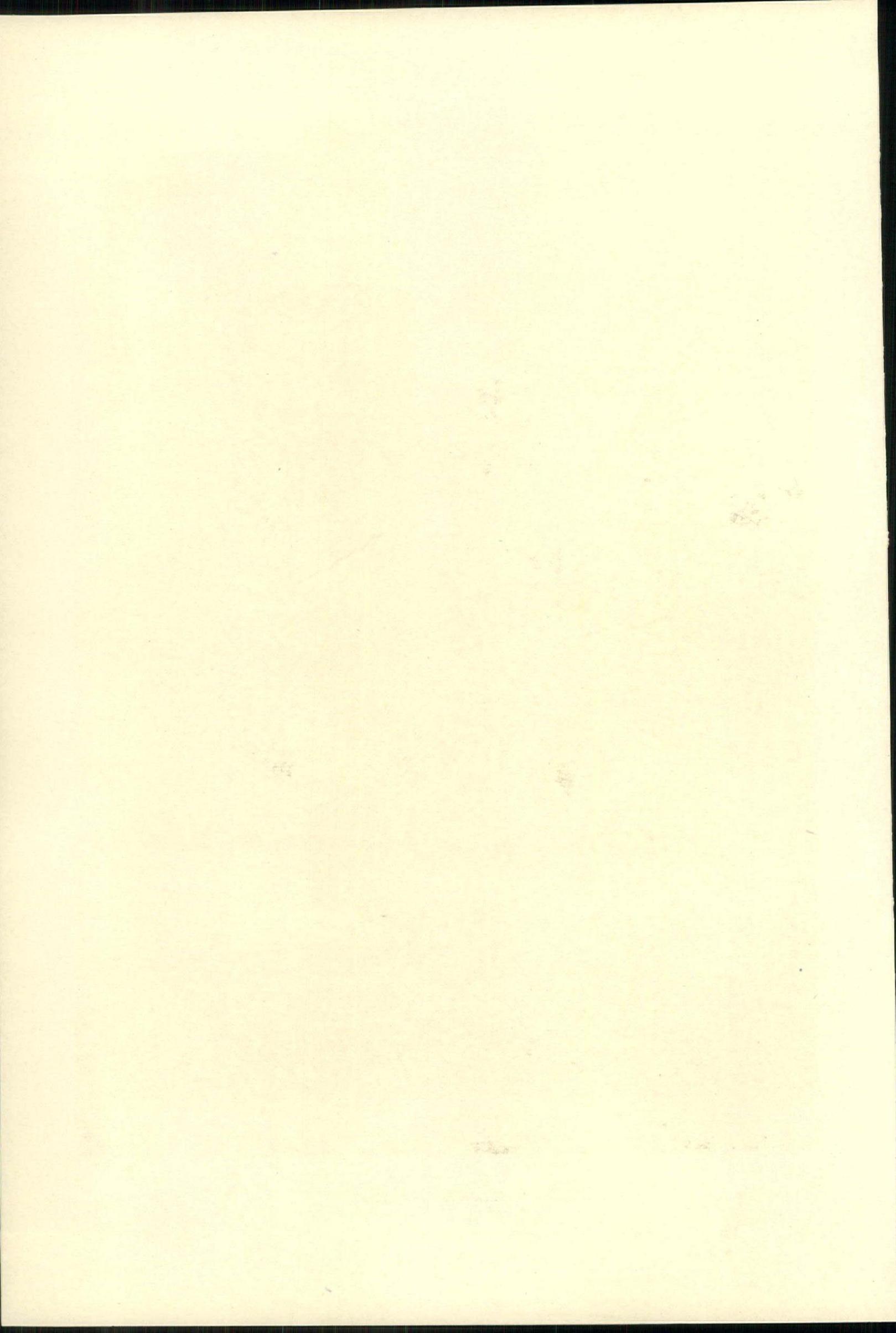


SALISBURY, ENGLAND

“WORKING PHOTOGRAPHS”

Salisbury, on the Avon, is one of the oldest of English towns. Its history dates from the early part of the XIII century. The fine result of a combination of well handled materials, and the mellowing touch of time is well shown in this illustration

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



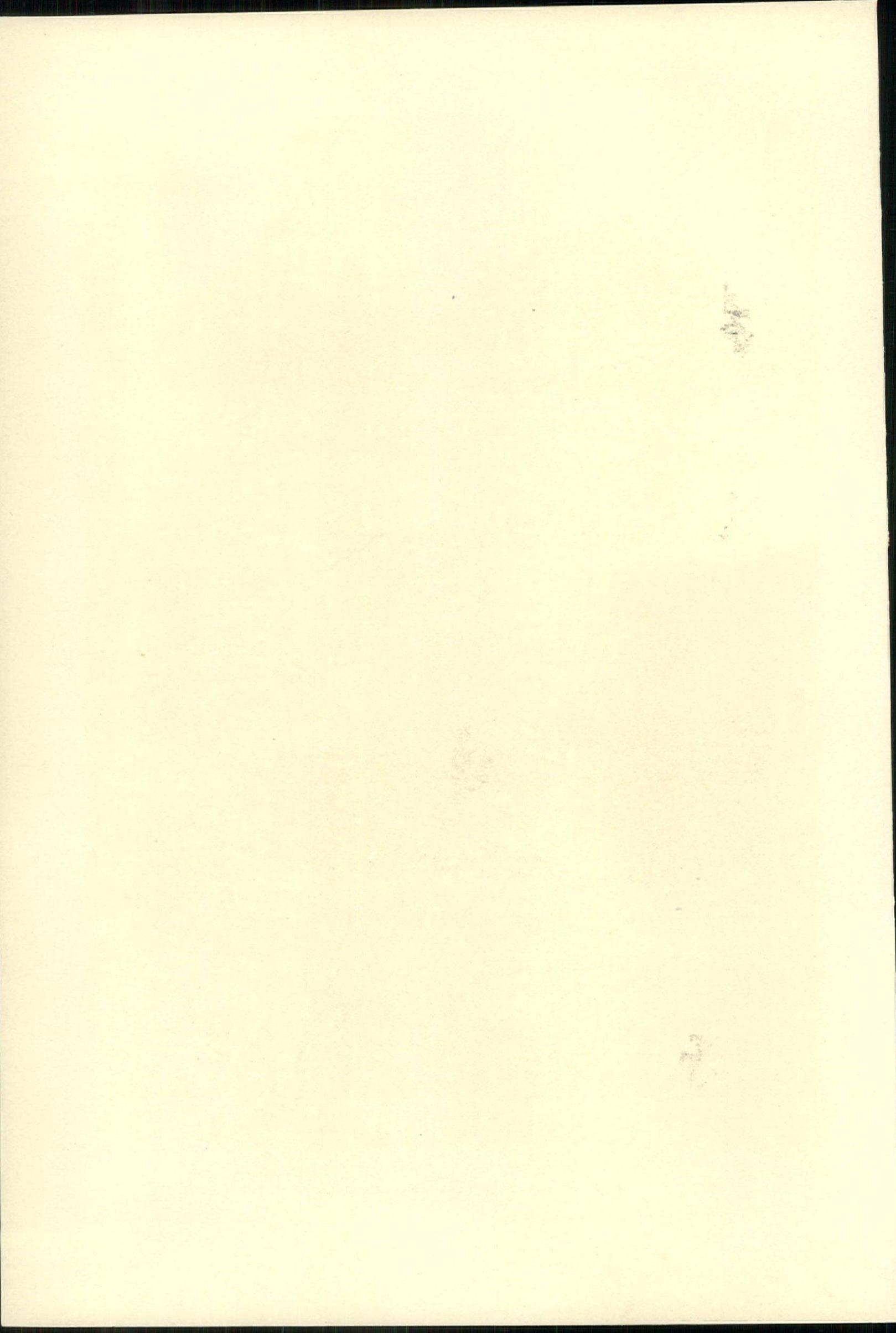


WINCHESTER, ENGLAND

"WORKING PHOTOGRAPHS"

Fine example of English half timber work

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



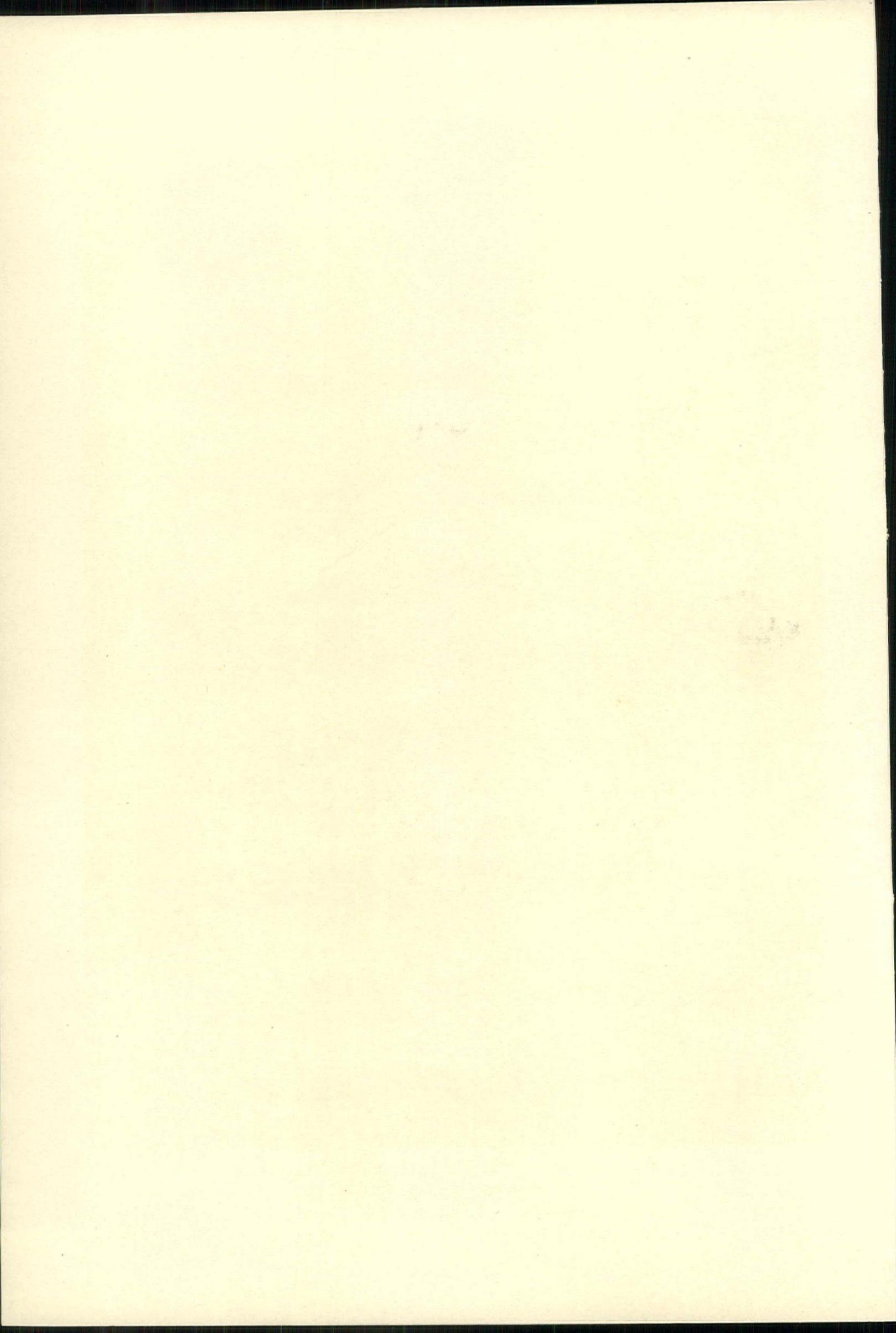


GATEWAY AND PART OF THE OLD CITY WALLS OF WINCHESTER, ENGLAND

"WORKING PHOTOGRAPHS"

Here again, old and newer periods of architecture live in absolute harmony

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



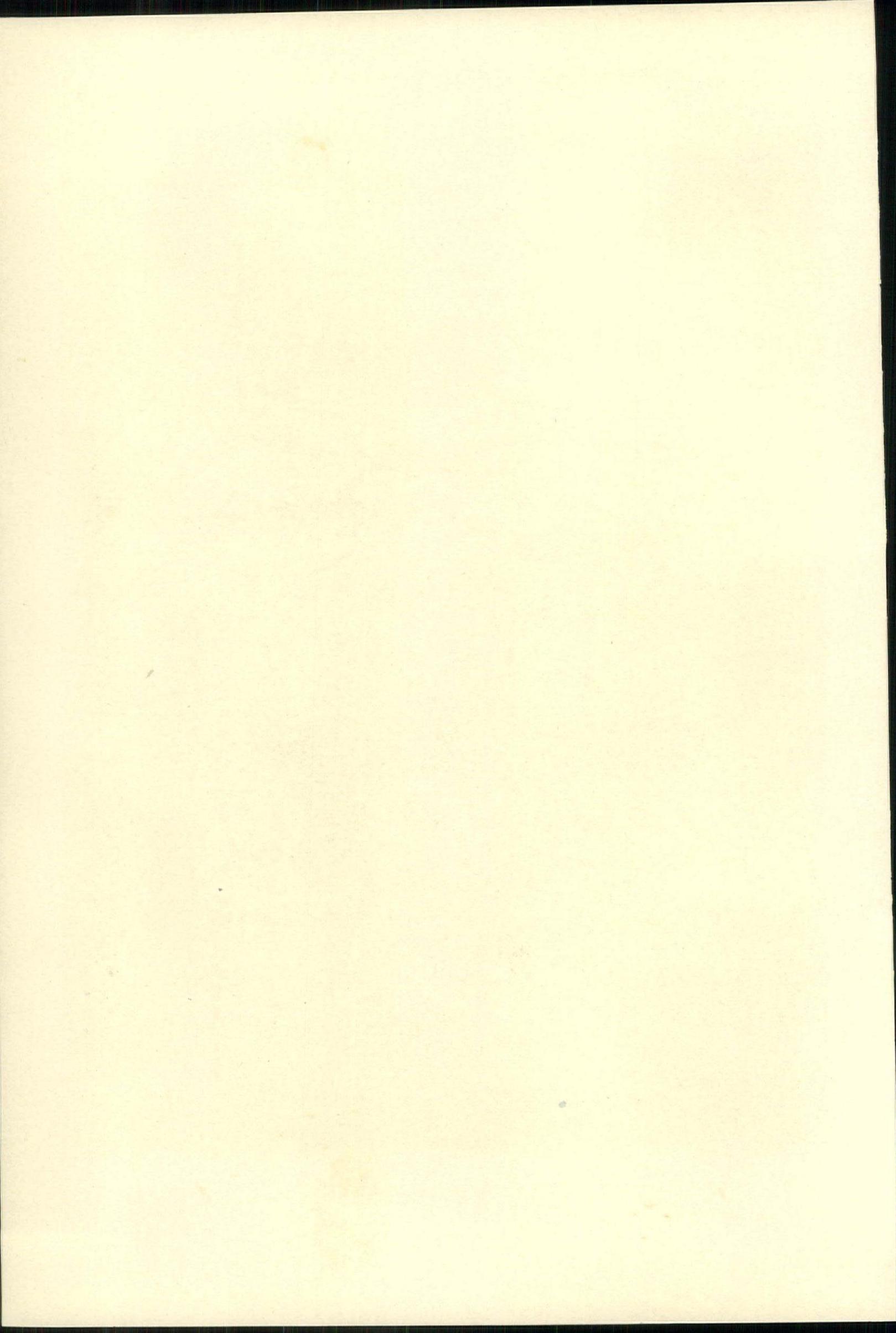


NEAR WINCHESTER

"WORKING PHOTOGRAPHS"

A good example of an English country house, a style that has exerted good influence on the trend of design in the United States

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



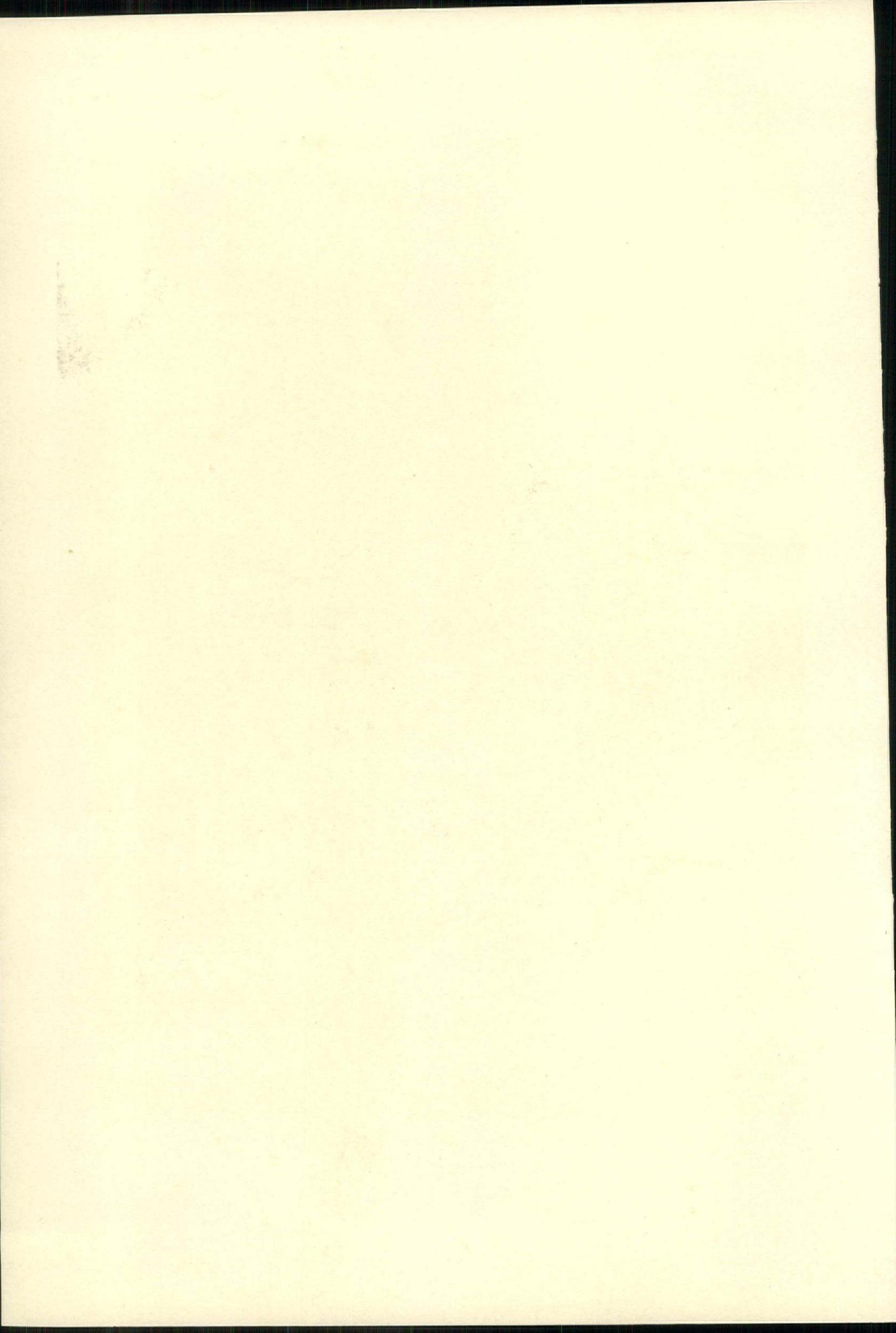


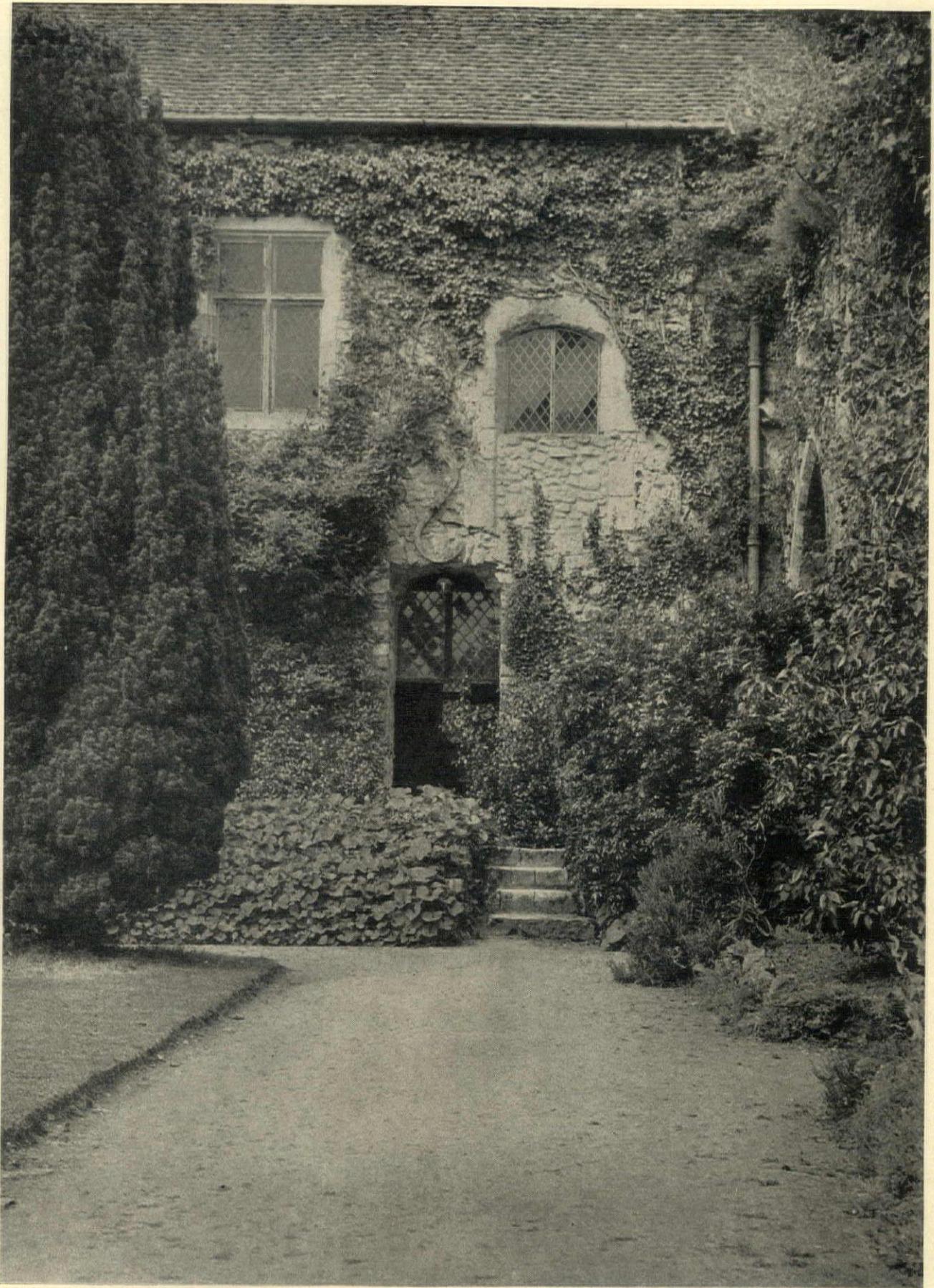
BEAULIEU ABBEY, HANTS

"WORKING PHOTOGRAPHS"

Early English stonework at its best in color and texture

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

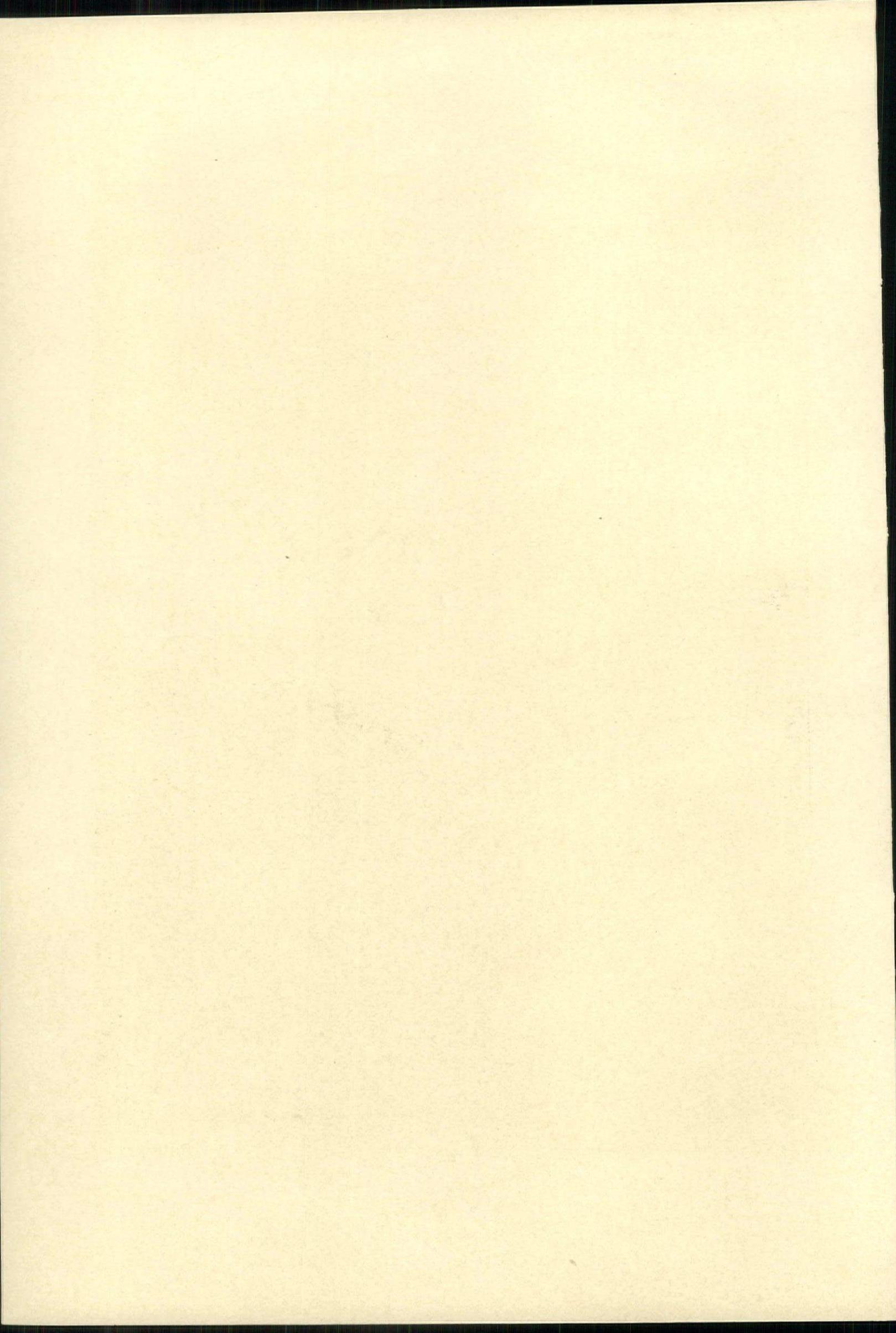




BEAULIEU ABBEY, HANTS

"WORKING PHOTOGRAPHS"

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



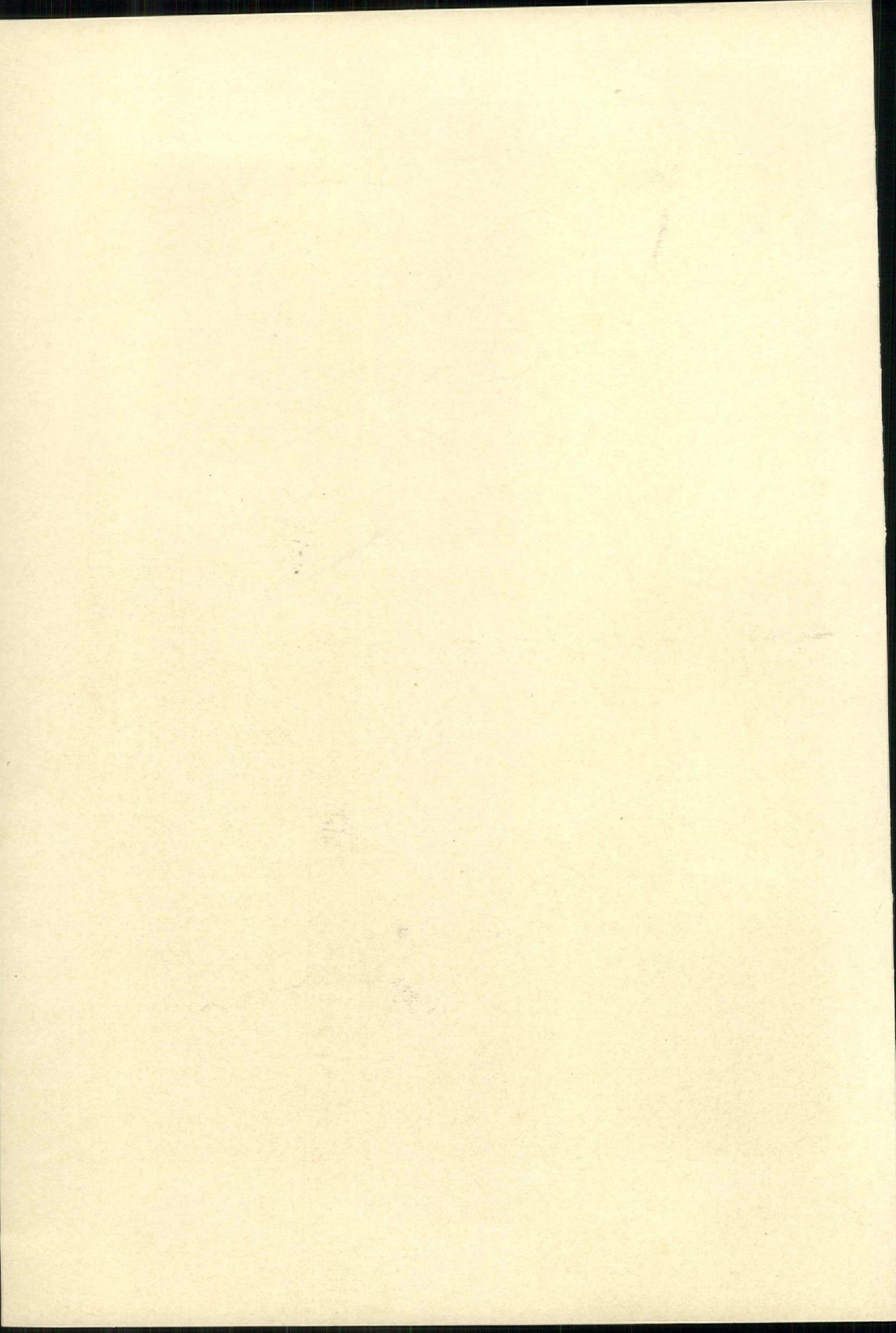


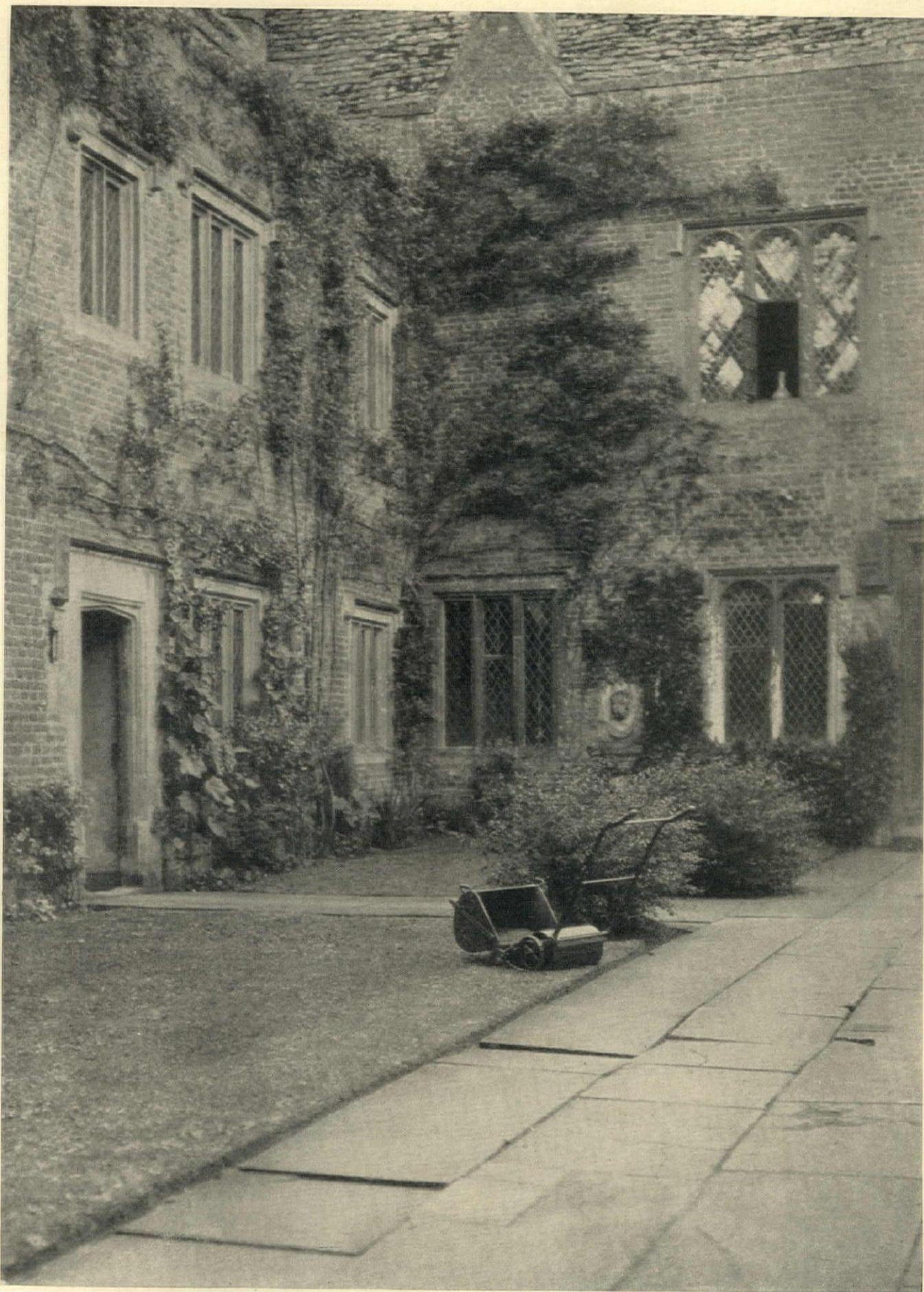
NEAR BEAULIEU, HANTS

“WORKING PHOTOGRAPHS”

The suggestive value of a “bit” like this is very great. In an effort to approach a similar effect in modern work, this illustration will convey more truth than the most carefully prepared drawing

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

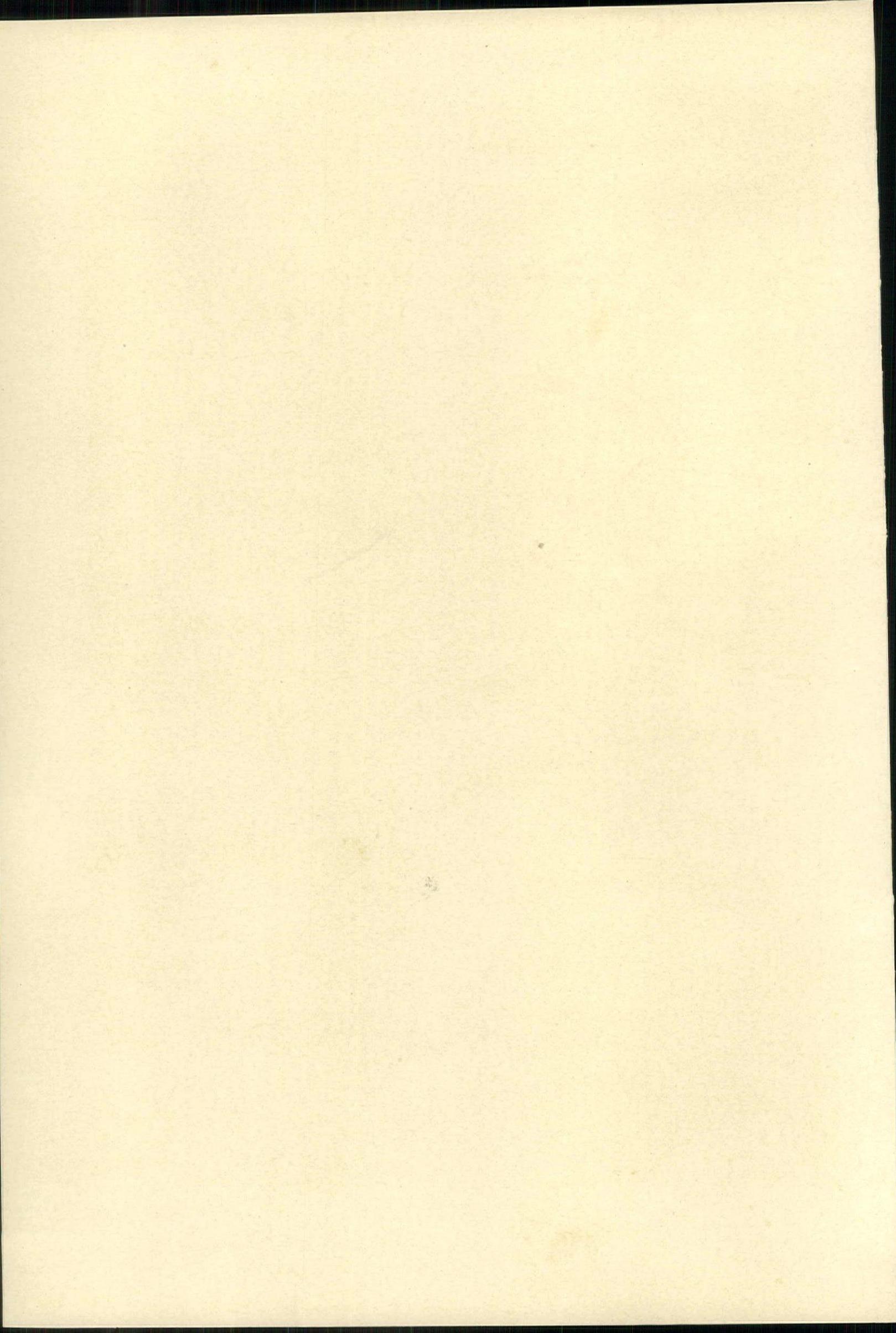




THE COURTYARD, COMPTON WYNYATES, WARWICKSHIRE

"WORKING PHOTOGRAPHS"

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



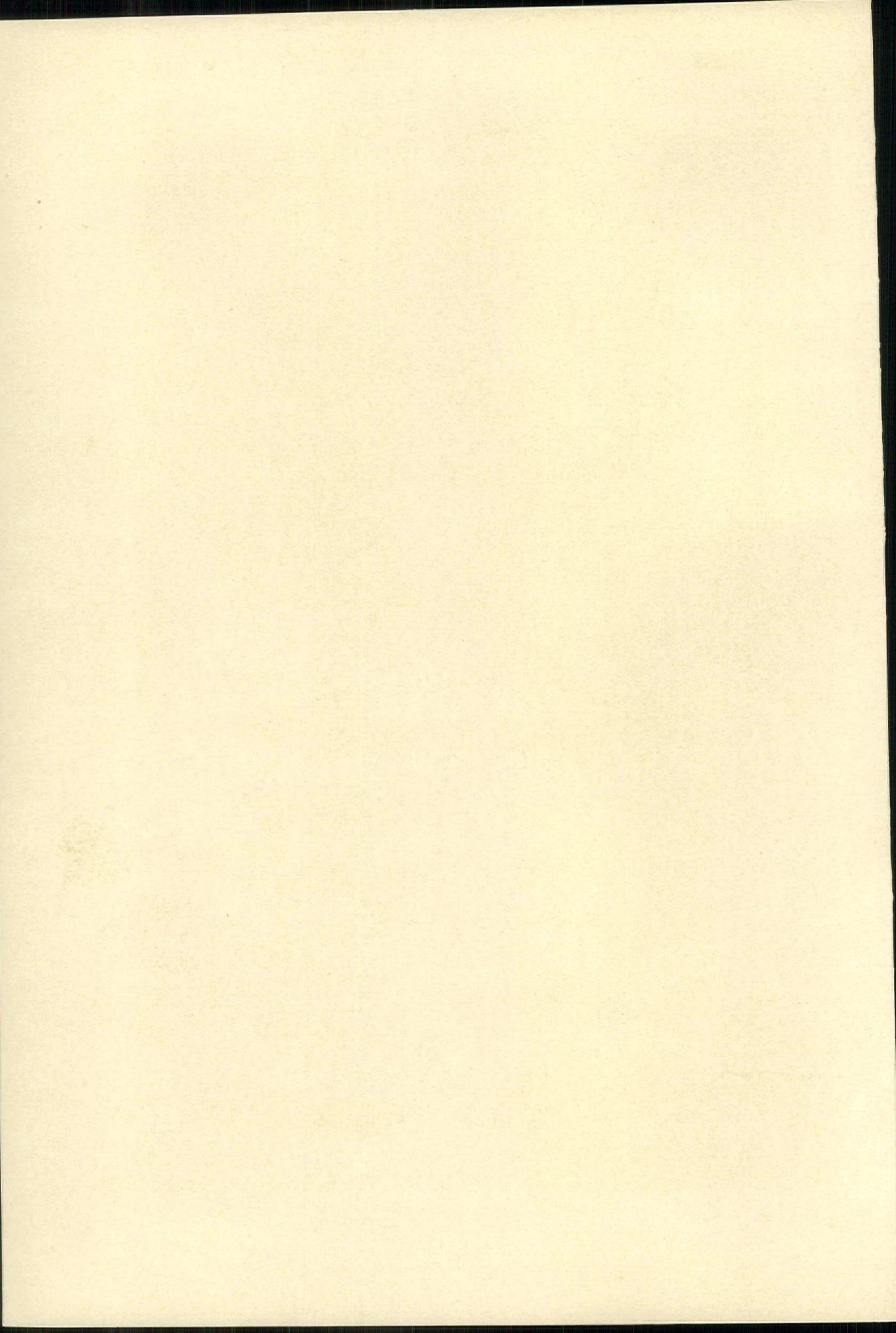


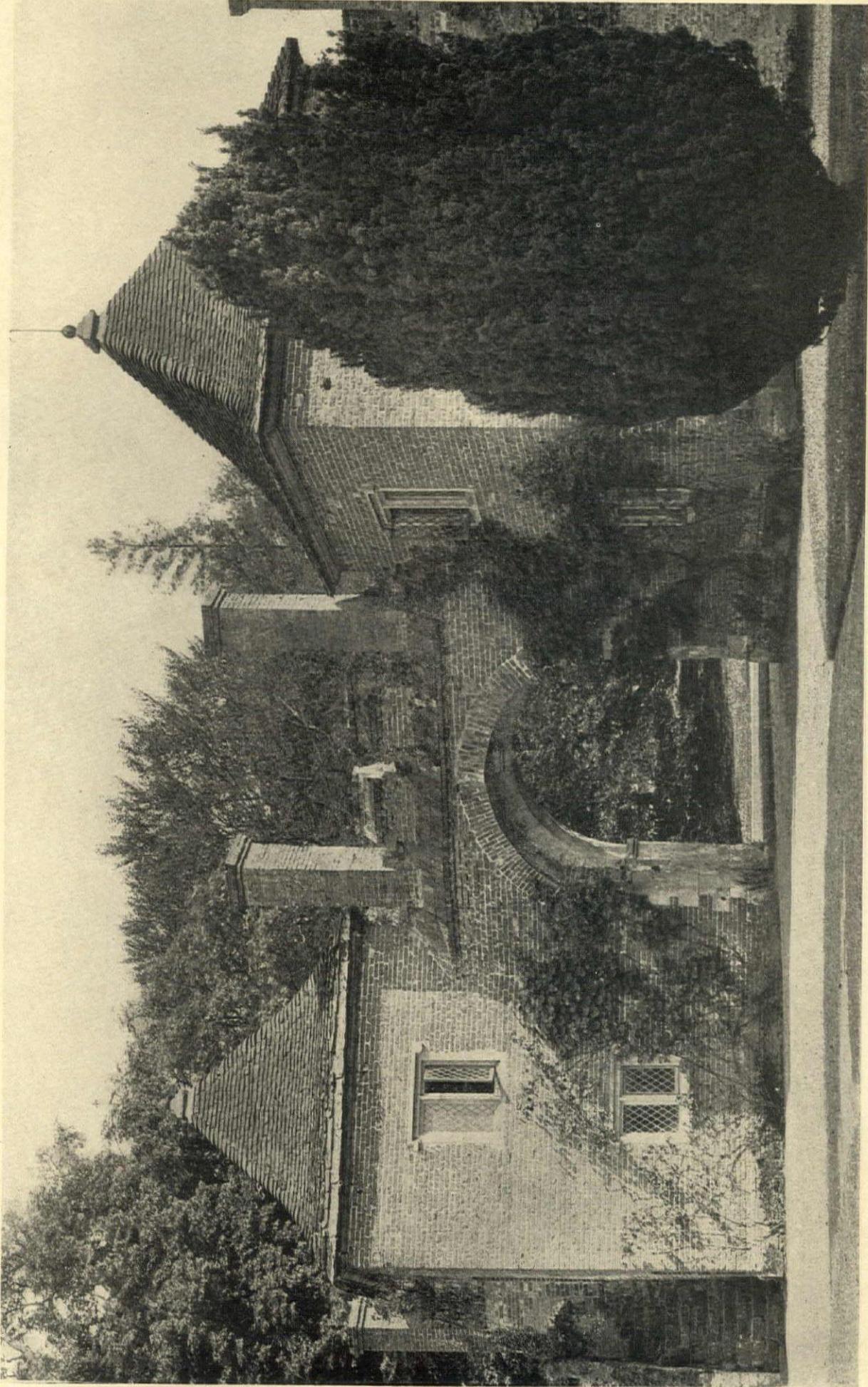
COMPTON WYNYATES, WARWICKSHIRE

"WORKING PHOTOGRAPHS"

The arms over the doorway are those of Henry VIII

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

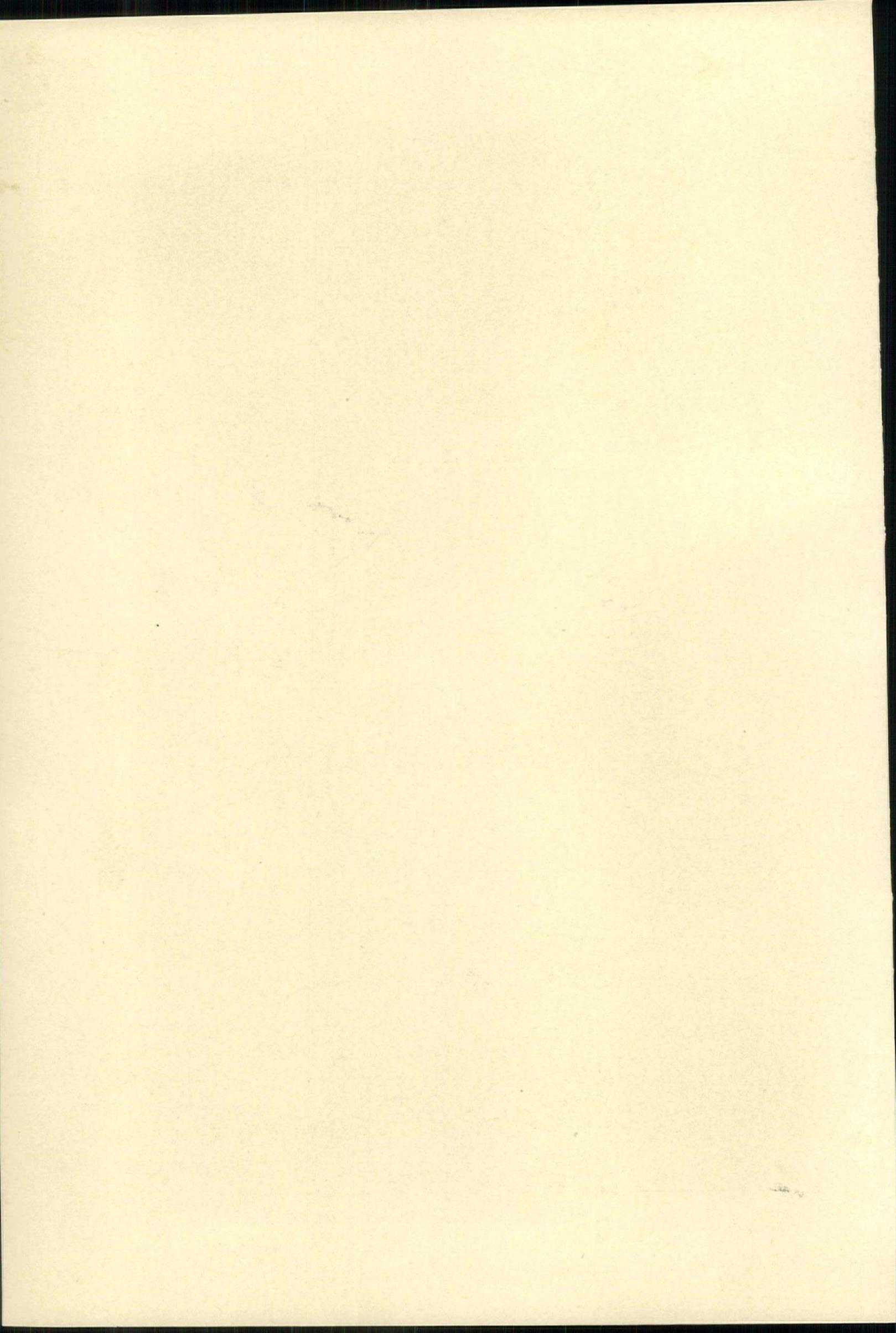


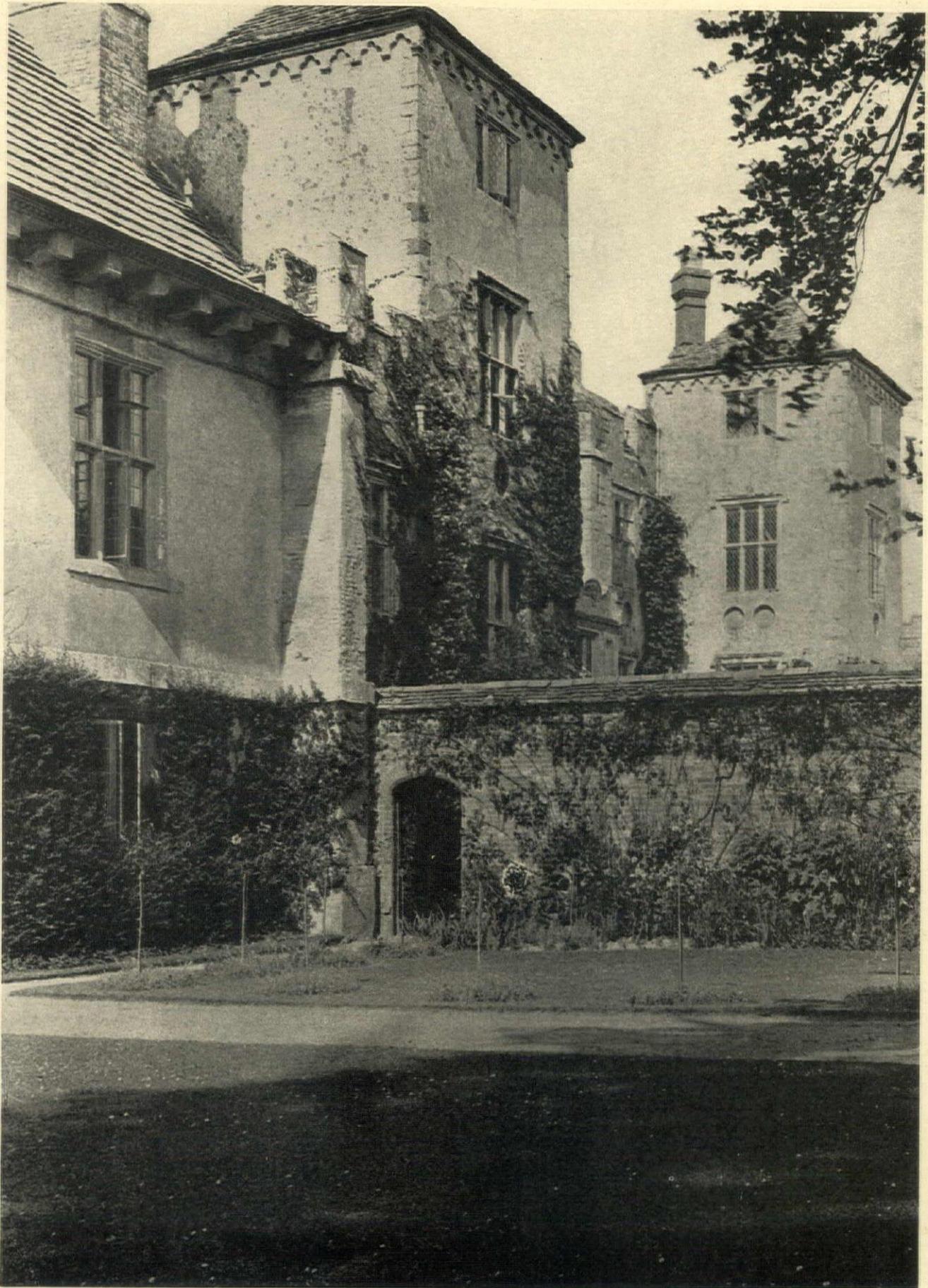


RINGWOOD, HANTS

"WORKING PHOTOGRAPHS"

(From a photograph by John Russell Pope, F.A.I.A., Architect)

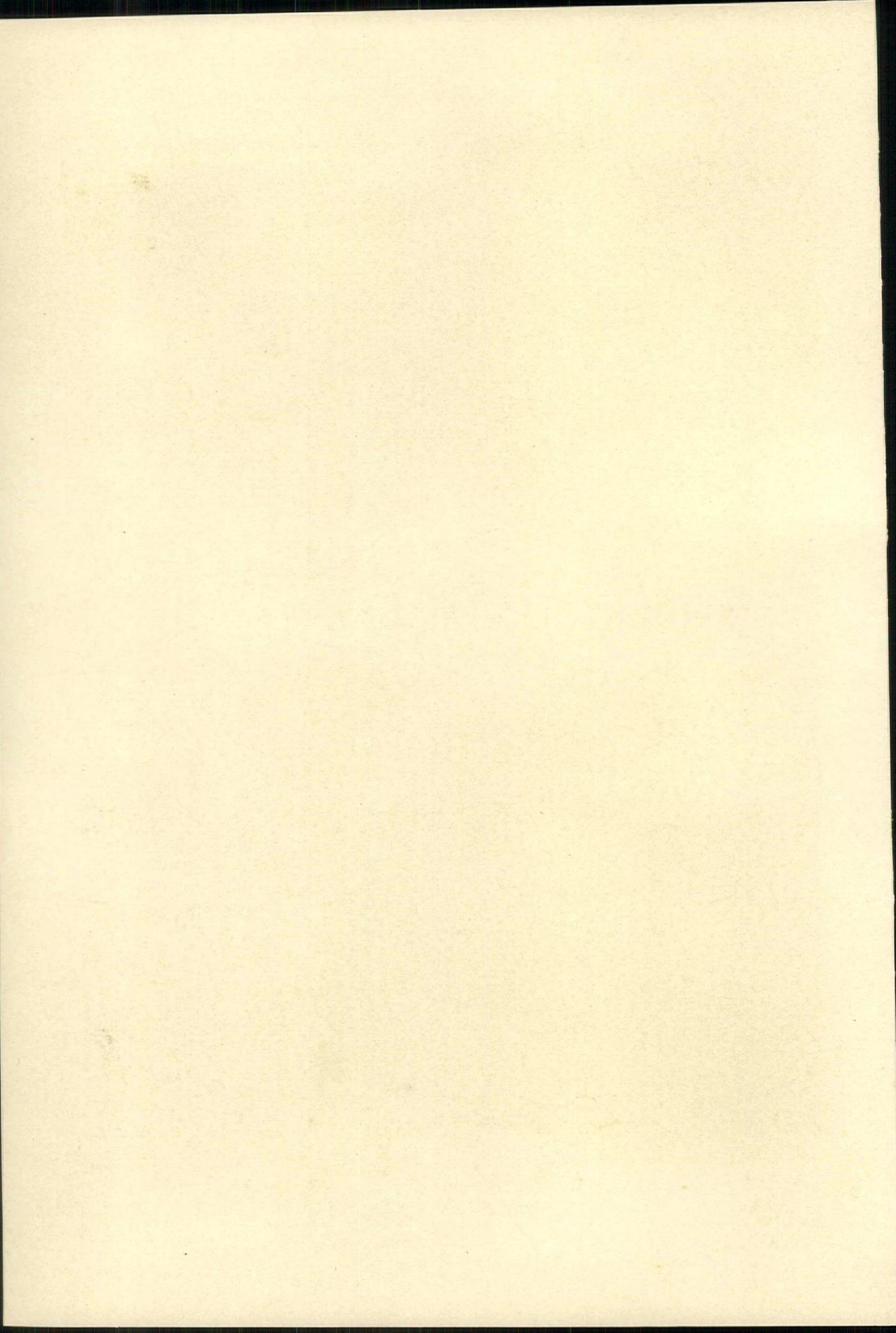


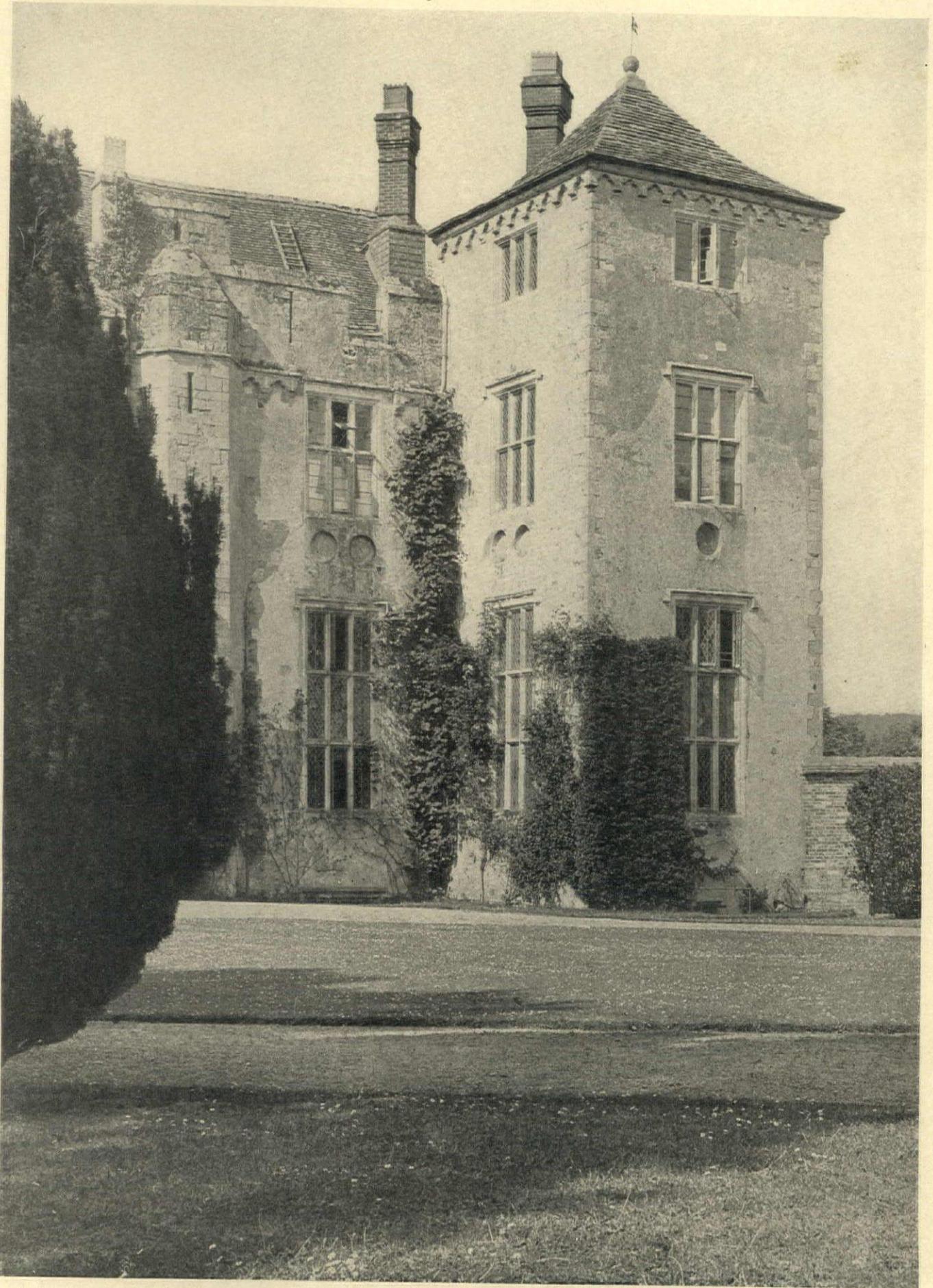


RINGWOOD, HANTS

"WORKING PHOTOGRAPHS"

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*

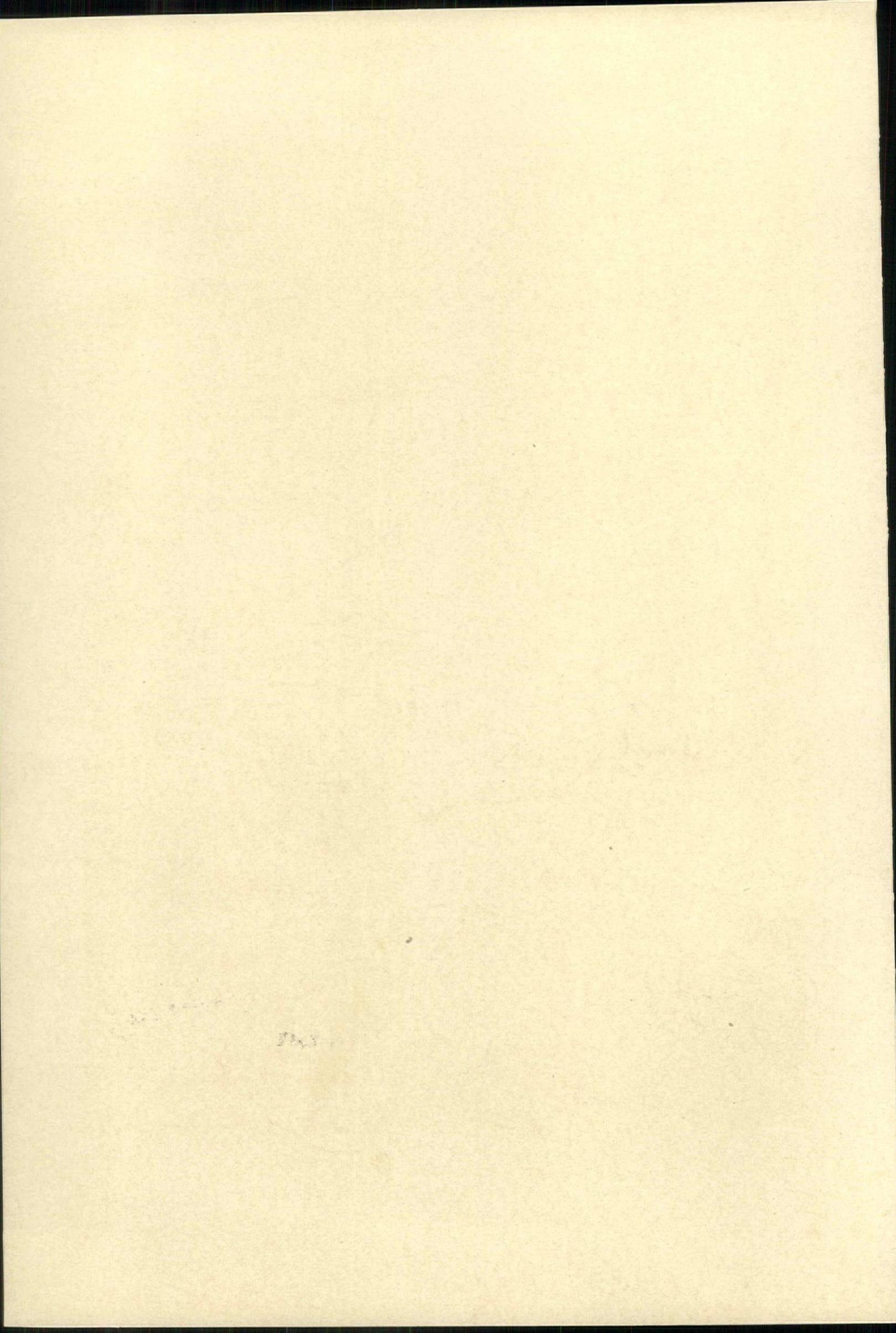


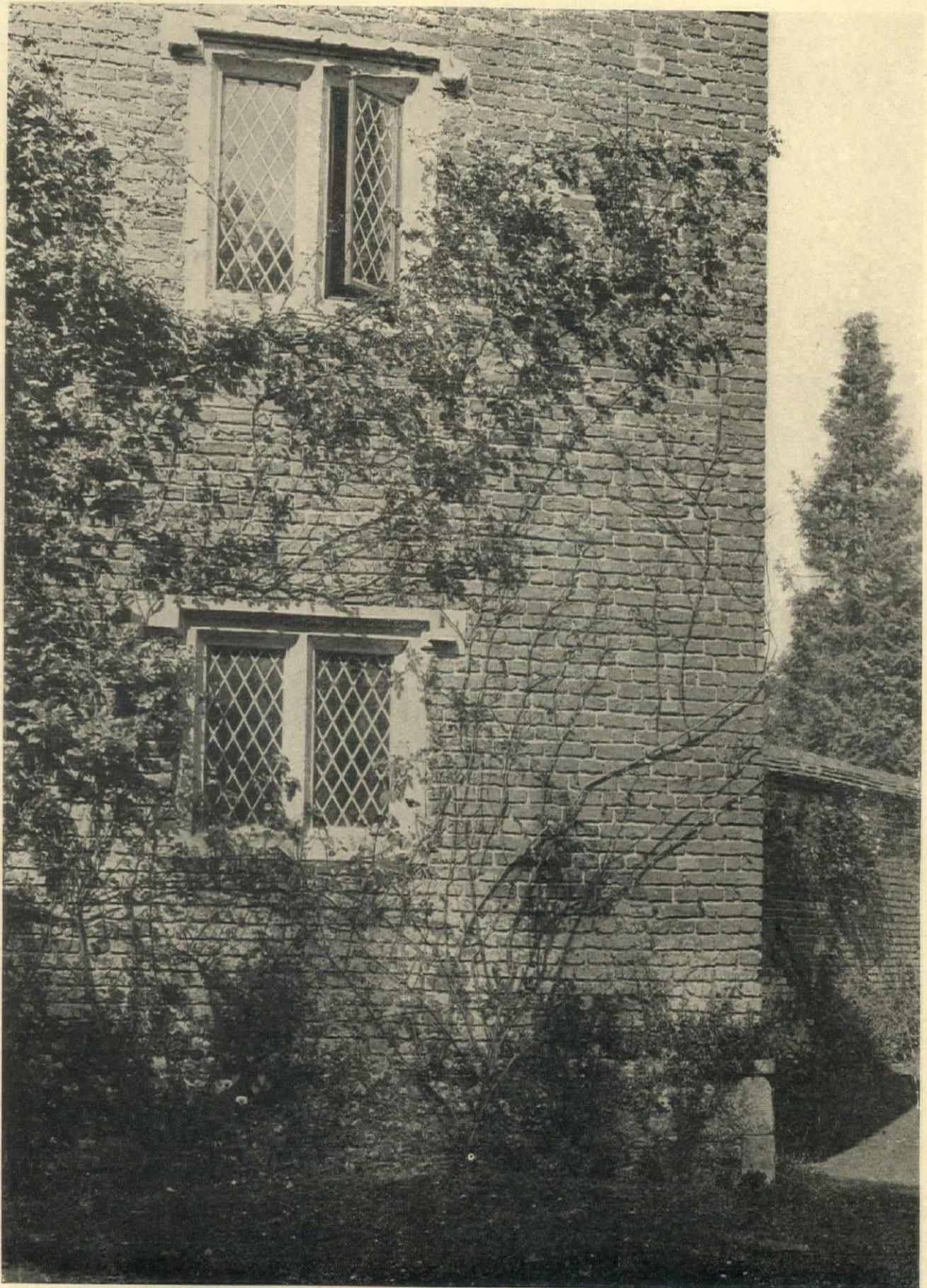


RINGWOOD, HANTS

"WORKING PHOTOGRAPHS"

(From a photograph by John Russell Pope, F.A.I.A., Architect)

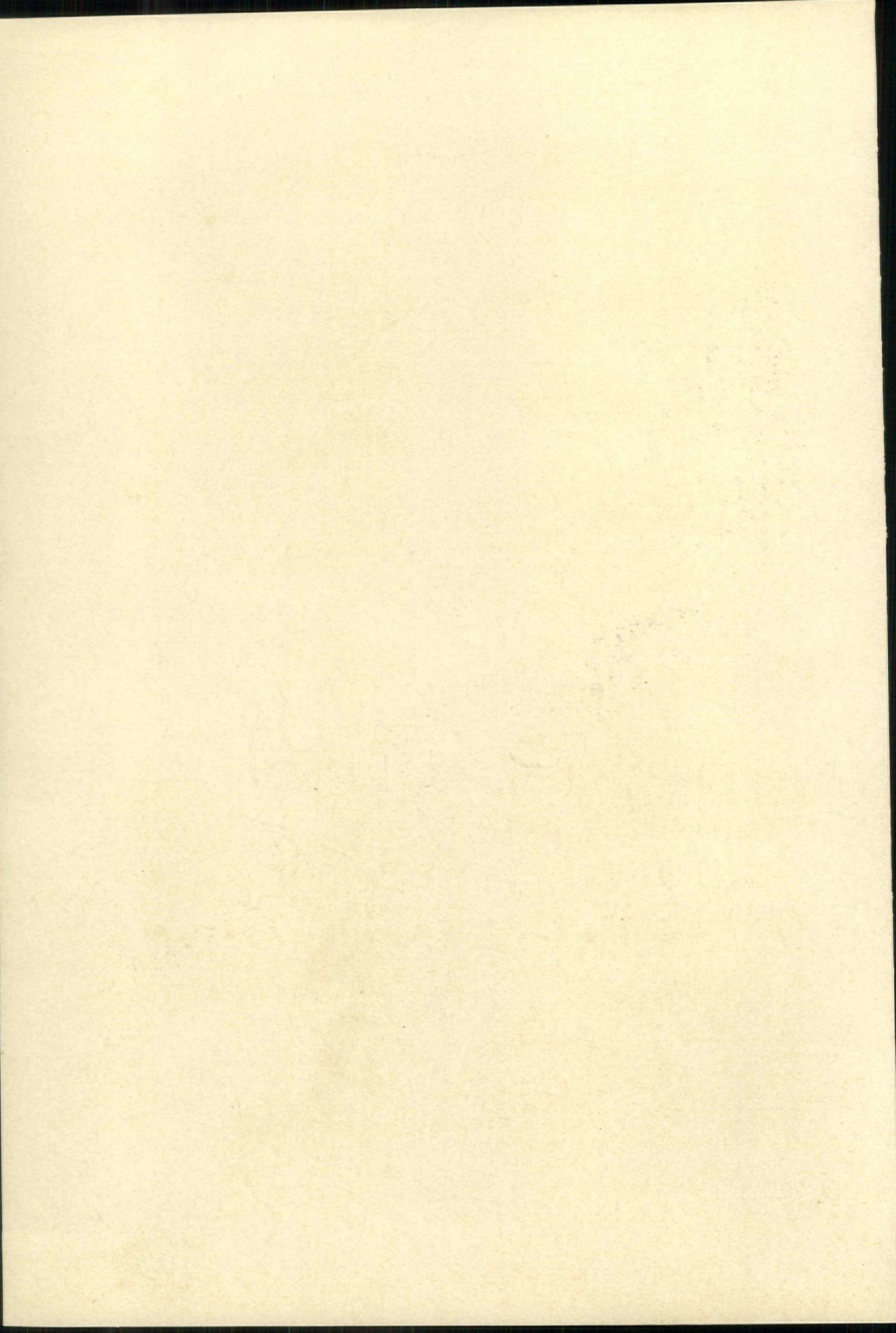




RINGWOOD, HANTS

"WORKING PHOTOGRAPHS"

*(From a photograph by John Russell Pope, F.A.I.A., Architect)*



# REVIEW of RECENT ARCHITECTURAL MAGAZINES

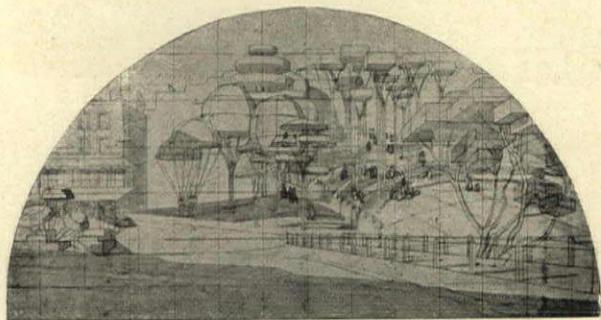
BY EGERTON SWARTWOUT, F.A.I.A.

PROBABLY not more than one in a thousand American readers ever sees an English architectural magazine, and there is an equal probability that the same relative proportion holds true in England. This is a great pity. The variety and beauty of our illustrations would be most attractive over there, and the high quality of their printed matter would, or rather should, appeal to us; and more than all this, is the good that would come to both of us in the exchange. It has been, therefore, the policy of these reviews to pay rather more attention to the English magazines than to our own, so that there could be conveyed to our readers some general idea of what is being built in England and what is being said there about matters architectural. To our way of thinking by far the most constant and by far the most valuable feature in the English magazines for the past two years is their attitude in regard to commercialism and the evils attendant upon its blatant modern development. The proposed

origin in this country, the only difference being that very little is said about such things over here, and that being a younger nation we have relatively few old buildings the destruction of which would be regarded as a crime, and few streets whose demise would attract the attention given to the passing of Regent Street.

For there has been given to it a good deal of attention. Quaint old engravings showing the original design have been unearthed and printed together with histories of the scheme and portraits of Nash who designed it, and old photographs, one of which we reproduce, showing a quiet, leisurely sort of street with hansoms and no motors, a street where people could and did shop with pleasure and profit; views of the Quadrant and the Arcade and then, in contrast and as a sort of horrible example of what not to do, photographs of the new Regent Street of plate glass and signs and motors, each newer building doing its level best to elbow its neighbor out of the limelight. Architecturally such a comparison is, if not odious, rather unfair. Some of the new buildings are good, that is to say, good of their kind; no better indeed, but certainly no worse,

From "The Architectural Review," London



VALE OF HEALTH, HAMPSTEAD HEATH

(From a Study by H. Weaver Hawkins)

destruction of many of Wren's London churches to make way for commercial buildings, the cheap-john-building, the electric signs, the disfigurement of the country lanes and roads following the advent of the charabanc, the dismemberment of beautiful estates and the building upon the ground thus obtained the smug and depressing housing developments, the high building propaganda and the thousand and one things by which beauty is destroyed in the name of efficiency, but in reality for a pittance, and often only for a promise, of profit. There is nothing particularly new to us in all that; perhaps we might even say that the more rampant forms of commercialism had their

From "The Architects' Journal," London

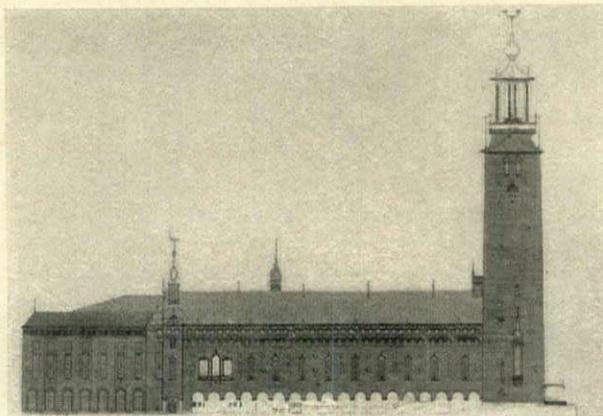


REGENT STREET OF THIRTY YEARS AGO

than most of our modern streets, and some of the buildings show more competence in design than do some of Nash's, but as a street, as a complete scheme, the old was simple, dignified and sometimes charming while the new is restless, commercial and often flatulent. There was a sense of

unity and scale in the old street that was remarkable. The buildings were inexpensive and of stucco, and the design and detail of the units were nothing notable, but as a big scheme it was remarkably handled. There was variety in its unity which is well worth studying. Note in the illustration the projecting pavilions at the bend in the street, the rounded and domed corner and the projections and gables further down. It had not the dignity of the Rue de Rivoli nor of the Place Vendome, and it was built of cheaper mate-

From "The Architectural Review," London



SOUTH ELEVATION  
THE STADSHUS, STOCKHOLM

rials but somehow it was more interesting, and its destruction is a great loss to London. We here in New York have nothing, nor ever had anything, to compare with it. The old terrace on Twenty-third Street was interesting largely because of the trees and gardens in front of it; Lafayette Terrace was very good but small, and the North side of Washington Square was charming before the alterations, but these were fragmentary and domestic.

There was an article some months ago in *Architecture*, London, which brought up a very good point, that the charm and the fitness of the street were due to the fact that the scale was a human scale, and that a man standing in front of an old shop window seemed to be about five feet nine and the articles in the window seemed in scale with him, whereas in the new buildings a man seems relatively about three feet high and the articles made for children, and that this correct feeling of scale was really a commercial asset. There is a good deal to this point, and there are even now in New York many indications of appreciation of it. The more expensive and exclusive places are relatively small and are on side streets, the scale of the front is small, even the glass is subdivided into small panes; everything is subdued and the doors and ceilings are low, rather in contradiction, we understand, to the

prices quoted inside. In commenting on this point we are not, of course, suggesting that new stores should be affectedly built in the manner of the small shops of a hundred years ago; it is merely a question of the correct scale and not of imitation of bygone work.

And, anent imitations, there has been a good deal of attention given lately to a short article in a recent number of *The Architects' Journal*, London, by Clough and H. Williams-Ellis with the rather unusual title "Mock Turtle or Guile Defended" in which the authors have some nice things to say about the use of imitations, imitation marble, imitation glass and synthetic stone and other shams, the gist of it being that it is often wiser to use these fakes than to spend the client's money on the real thing, etc., etc., all cleverly written and as it seems to us with the tongue in

From "The Architectural Review," London



SOUTH FRONT  
THE STADSHUS, STOCKHOLM

the cheek with the gentle idea of getting a rise out of someone. If that was their intention, they have succeeded admirably. The average Briton reads his paper hard, and with difficulty resists his first inclination to sit down and write a letter to the Editor about it, and in this case there are many letters for and against. In this country as in all countries there is a good deal of guile and some Mock Turtle, but it is rather happily confined to the cheaper grade of theatrical or commercial work. There has been rather a run on synthetic things lately, on stone as well as on other materials, not quite so solid. Necessity may excuse the latter but imitation stone is just imitation stone, and that only at first; after a time it ceases to be anything at all. One does not have to stand on the high ground of ethics in dealing with sham building materials; they fall because they are unpractical and unenduring.

In *The Architectural Review* (London) for January there are a number of very good photo-

graphs of the Stadshus at Stockholm, a recently completed building by Ragnar Ostberg of which we reproduce interior and exterior views. It is very large and very original and very theatrical and, being novel and theatrical, it will probably attract a good deal of attention and much favorable comment. Like most modernistic work it seems unstructural. The massive brick tower appears firm enough but the plain brick wall adjoining comes heavily down on an unsatisfying arcade, the brick arches having but one rowlock course. The Golden Hall is probably gorgeous but an exaggerated effect of scale is obtained by the disposition of the furniture and by the broad, low stools. There is more than a little Mock Turtle about it and some guile.

In the same magazine Mr. Walter Bayes writes on the "Grammar of Drawing and on the Establishment of Relativity" and seems very much put

From "The Architectural Review," London



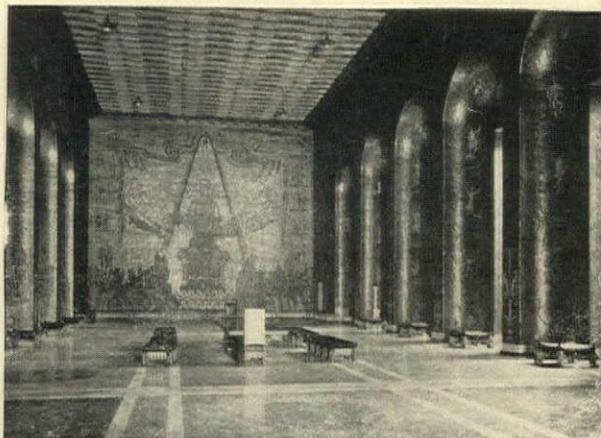
COUNCIL CHAMBER  
THE STADSHUS, STOCKHOLM

out because Mr. Frank Emanuel referred somewhere to him, Mr. Bayes, as one of a "little ring of art anarchists and revolutionaries." Mr. Bayes is quite sure he is not, and to prove it shows some results of his teachings—for example look at exhibit 4 which he calls the Vale of Health, Hampstead Heath. To be sure there seem to have been no seekers after health in the vale when the drawing was made but what of that? If Mr. Bayes *was* a Bolsheviek would he not have had the vale filled with soap box orators and approving mobs? What he has not done surely proves his case. The trees, of course, are novel but at least they are not wild; very self-contained trees, we should say, and so also in that charming little bit "The Lake" which at first glance seems to show a flock of cash registers going West in a strong breeze, but by reading the text you discover that they are not cash registers but clouds. None of your free, wild Bolsheviek clouds but controlled and shaped as clouds should be. How could a

man who can so control nature be a Bolsheviek? Mr. Emanuel clearly has lost his case.

In the field of American architectural magazines there is a newcomer, *The Architect*, of New York, of which five numbers have appeared. In offering our congratulations to the Editor we add also our apologies for this belated reference, which is only excusable because until a week or so ago no copies of it had reached our office, and naturally no reviewer ever buys a magazine. That is one of the few things that reconcile us to our

From "The Architectural Review," London



THE GOLDEN HALL  
THE STADSHUS, STOCKHOLM

position. The magazine is very well gotten up; the paper good and the illustrations if not always novel are well selected and well printed, though their effect is somewhat marred by the reverse. The Associate Editors are architects of the highest standing in their own and in other professions and we would not be surprised to hear that Captain Traprock was to be assisted by Archy and Clem Hawley. This publication is doubly interesting because it is one more step down the primrose path that in the last few years has stretched invitingly before all heretofore strictly technical magazines. *The Architects' Journal* of London owes much of its interest to the monthly causeries of Karshish; *Architecture* of London has had articles by G. K. Chesterton, Hilaire Belloc, Shaw and a host of others; even the staid *Journal of the American Institute of Architects* in one number forgot its City Planning and Parlor Socialism and covered the last convention in a style only approached by the *Daily News*, and now carrying this still further and introducing a touch of poetry into the usually drab committee questionnaire we find the following in a printed document from the Committee on Architectural Relations:

2. "What should be the attitude of architects to so-called group practice, or, as it has been called, 'hunting in packs'?"

3. Is it right for architects to do business on the reputation of the dead or retired, especially when they lack the inspiration and touch of the vanished hand, and need restraint, as by the voice that is stilled; and what should be the attitude of architects to this business method?
  4. Should architects practice on a strictly professional basis, or should they be unprofessional and yield to the embraces of the commercial elements of the building business?"
- Now, as we happen to have no relations who have anything to do with architecture we do not

quite understand the allusions to group practice or as it is poetically called "hunting in packs," so we can only define our attitude as one of watchful waiting.

There is a Freudian significance to number four which is repellent to us and we refuse to answer, but number three is really very fine, very fine indeed. It only goes to show what a grand thing poetry is and how a touch of it can enliven the most prosaic work. If the canons of ethics now could only be reduced to iambs! or even free verse. Everything is getting better and better, thanks to the Post-War Committee.



AS THE ARTIST PAINTER SEES ARCHITECTURE  
REPRODUCTION OF A PAINTING BY ABBOTT GRAVES OF A DETAIL OF  
A HOUSE BUILT IN KENNEBUNKPORT, MAINE, IN 1812

# BEAUX-ARTS INSTITUTE of DESIGN

ACTING DIRECTOR OF THE INSTITUTE—WHITNEY WARREN

ARCHITECTURE—RAYMOND M. HOOD, DIRECTOR

SCULPTURE—EDWARD FIELD SANFORD, JR., DIRECTOR INTERIOR DECORATION—FRANCIS LENYGON, DIRECTOR

MURAL PAINTING—ERNEST C. PEIXOTTO, DIRECTOR

## Special Notice to Students

*BY special arrangement with the Society of Beaux-Arts Architects, there appears in each issue of THE AMERICAN ARCHITECT an average of five pages devoted to the presentation of drawings selected from the Beaux-Arts Institute of Design exhibitions, and also the listing of awards and the promulgation of all notices to students. These matters will be exclusively presented to students of the Beaux-Arts Institute of Design through the pages of THE AMERICAN ARCHITECT. By arrangement with the publishers of THE AMERICAN ARCHITECT, a special student subscription rate of \$5.00 per annum has been secured. Further particulars with reference to this service to Beaux-Arts students may be obtained by addressing THE AMERICAN ARCHITECT, 243 West 39th Street, New York City.*

## OFFICIAL NOTIFICATION OF AWARDS

JUDGMENT OF JANUARY 22, 1924

FIRST PRELIMINARY COMPETITION FOR THE  
17TH PARIS PRIZE  
OF THE  
SOCIETY OF BEAUX-ARTS ARCHITECTS  
"MONUMENTAL ENTRANCE TO A THOROUGH-  
FARE"

A passage for pedestrians is pierced through the center of a city block 200 ft. deep. This is a much used and important circulation. It is 40 ft. wide, between two buildings whose cornices are both 50 ft. from the sidewalk. One end of this thoroughfare faces on a public square, and an entrance motive of a beautiful and monumental character is desired and is the subject of this competition.

These two buildings are placed 10 ft. back from the building line and are classical in style.

JURY OF AWARDS:—H. O. Milliken, W. A. Delano, P. A. Cusachs, J. C. Levi, J. O. Post, W. Warren, B. W. Morris, J. H. Hunt, R. H. Hunt, W. S. Wagner, W. Van Alen, D. M. Kirkpatrick, and D. McLachlan, Jr.

NUMBER OF DRAWINGS SUBMITTED:—112.

AWARDS:—

PLACED FIRST AND FIRST MENTION: P. Goodman, Atelier Licht, New York City.

PLACED SECOND AND FIRST MENTION: G. Smith, Univ. of Minnesota, Minneapolis.

PLACED THIRD AND FIRST MENTION: A. F. Euston, Atelier Hiron, New York City.

PLACED FOURTH AND FIRST MENTION: R. H. Crawford, Univ. of Southern Cal., Los Angeles.

PLACED FIFTH AND FIRST MENTION: L. I. Kahn, University of Pennsylvania, Phila.

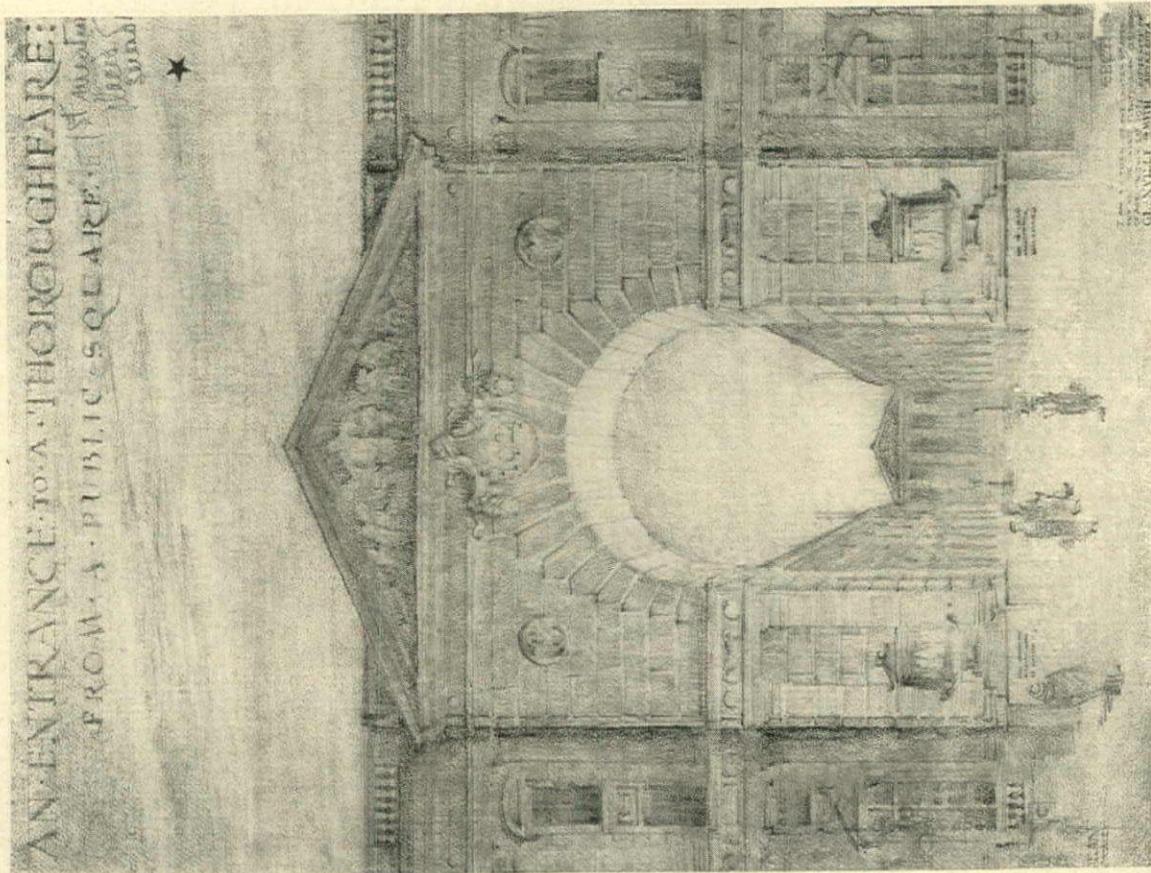
PLACED SIXTH (FIRST ALTERNATE) AND SECOND MENTION: N. J. Schlossman, The Chicago Atelier, Chicago.

PLACED SEVENTH (SECOND ALTERNATE) AND SECOND MENTION: J. L. Evans, Univ. of Pennsylvania, Phila.

SECOND MENTION: R. C. Danis, Catholic Univ., Wash., D. C.; R. L. Minkus, The Chicago Atelier, Chicago; C. Leonardi, C. H. Dornbusch, B. Schlanger, and H. R. Robinson, Columbia University, N. Y. C.; L. A. Whelan, H. J. Powell and V. H. Stromquist, Harvard Univ., Cambridge; G. D. Conner, 845 Ainslie St., Chicago; H. C. P. Harth, Princeton Univ., Princeton; A. B. Galion, Univ. of Illinois, Urbana; R. B. Bloomgarten, Univ. of Kansas, Lawrence; E. W. Molander, Univ. of Minnesota, Minneapolis; A. M. Butts and T. J. Mathews, Univ. of Pennsylvania, Philadelphia; T. Jacobsen, Univ. of Washington, Seattle.

## THE PARIS PRIZE

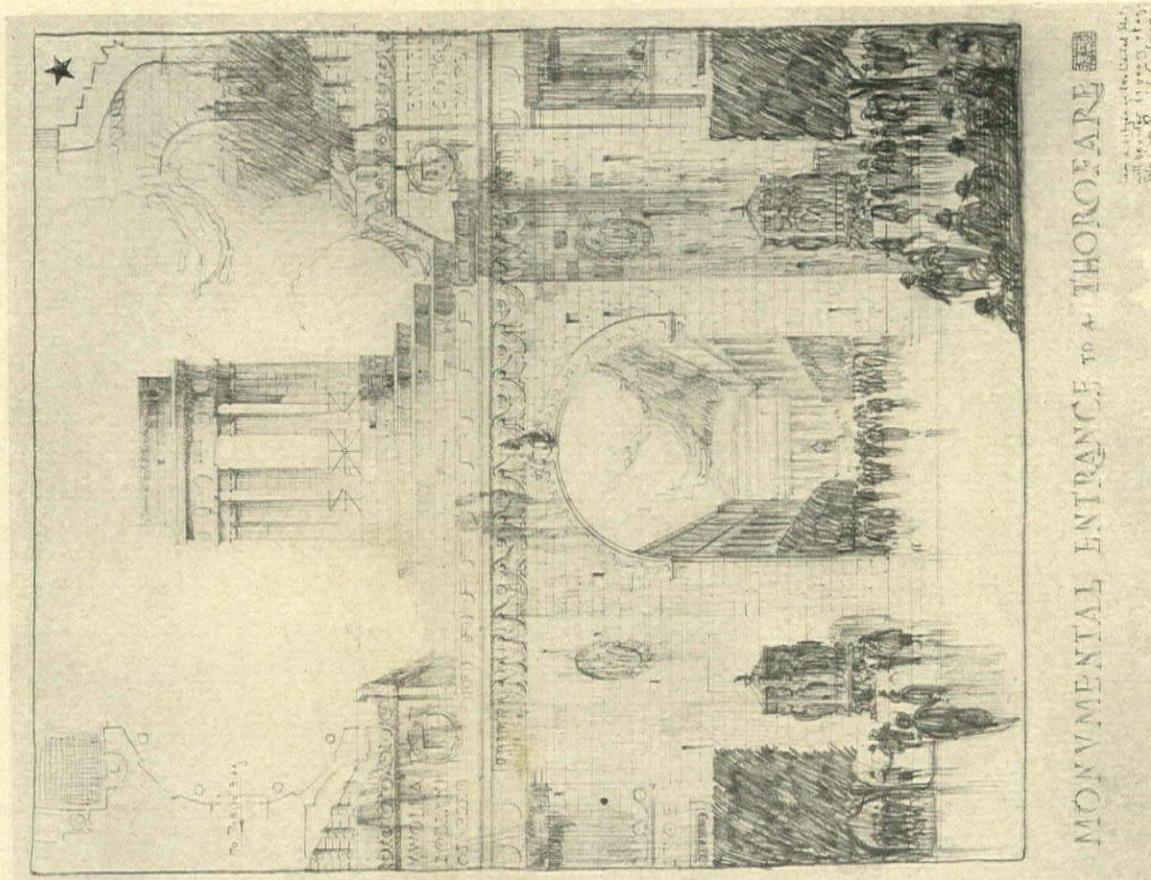
*The judgment in the First Preliminary Paris Prize, which appears above, will be followed in the May 7 issue with results of the Second Preliminary. The final award and illustrations will be in the issue of August 13.*



PLACED SECOND  
FIRST MENTION

G. SMITH

UNIV. OF MINNESOTA

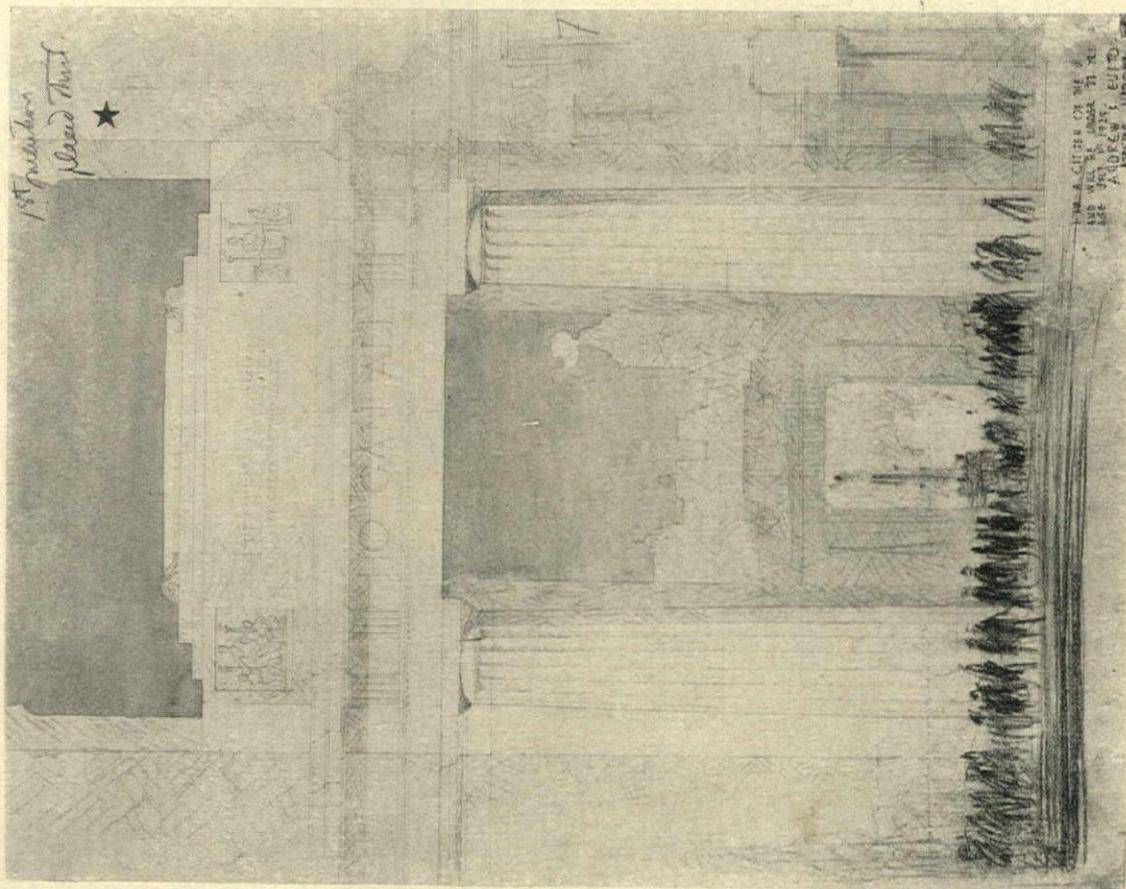


ATELIER LIGHT

PLACED FIRST  
FIRST MENTION

F. GOODMAN

FIRST PRELIMINARY COMPETITION FOR 17TH PARIS PRIZE, SOCIETY OF BEAUX-ARTS ARCHITECTS  
A MONUMENTAL ENTRANCE TO A THOROUGHFARE



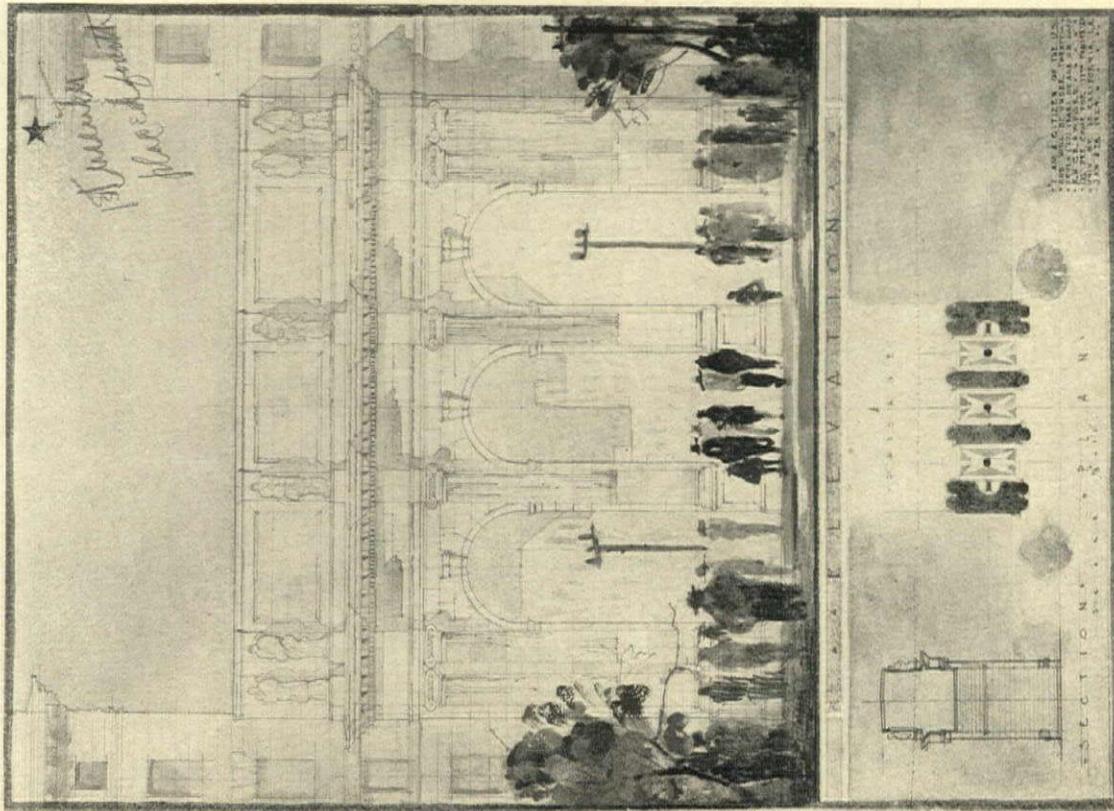
A. F. EUSTON

PLACED THIRD  
FIRST MENTION

ATELIER HIRONS

PLACED FOURTH  
FIRST MENTION

UNIV. OF SO. CAL.

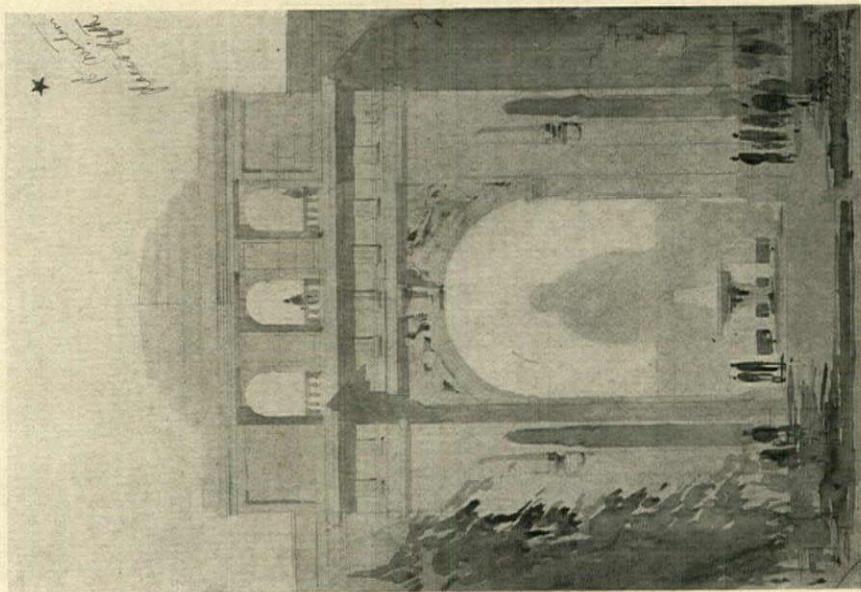


R. H. CRAWFORD

PLACED FOURTH  
FIRST MENTION

UNIV. OF SO. CAL.

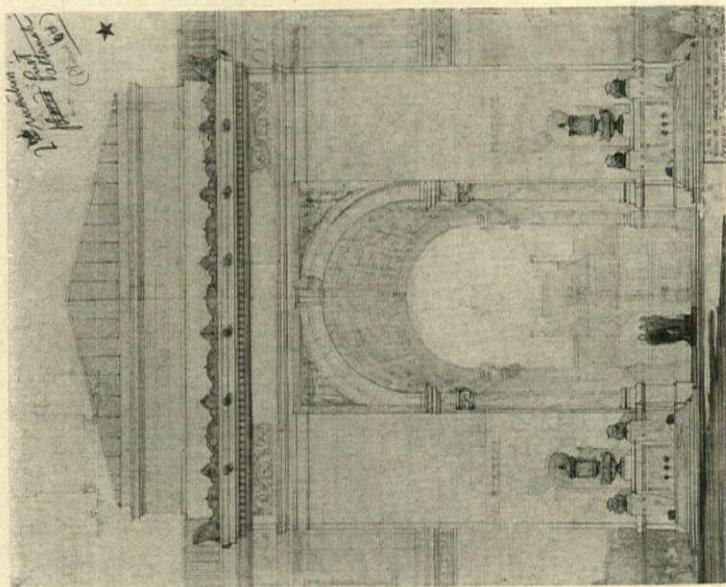
FIRST PRELIMINARY COMPETITION FOR 17TH PARIS PRIZE, SOCIETY OF BEAUX-ARTS ARCHITECTS  
A MONUMENTAL ENTRANCE TO A THOROUGHFARE



L. I. KAHN

PLACED FIFTH  
FIRST MENTION

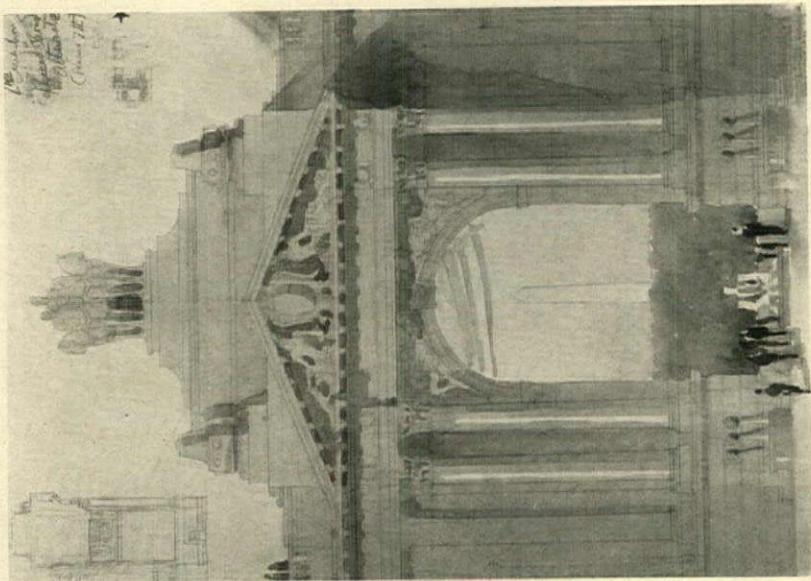
UNIV. OF PENN.



N. J. SCHLOSSMAN

PLACED SIXTH (FIRST ALTERNATE)  
SECOND MENTION

CHICAGO ATELIER



J. L. EVANS

PLACED SEVENTH (SECOND ALTERNATE)  
SECOND MENTION

UNIV. OF PENN.

FIRST PRELIMINARY COMPETITION FOR 17TH PARIS PRIZE, SOCIETY OF BEAUX-ARTS ARCHITECTS

A MONUMENTAL ENTRANCE TO A THOROUGHFARE

# ARCHITECTURAL ENGINEERING

## FOUNDATIONS for the GEORGE WASHINGTON NATIONAL MASONIC MEMORIAL, ALEXANDRIA, VA.

HELMLE & CORBETT, Architects—OSGOOD & OSGOOD, Consulting Architects

THE construction of the George Washington National Masonic Memorial at Alexandria, Virginia, has progressed beyond the cornerstone laying early in November, 1923. This, our finest, most dignified and largest memorial is located in a commanding position on the edge of a high plateau overlooking the city and the Potomac valley. It dominates the entire surrounding country and from great distances will be the visual focus from every viewpoint. It is a fit and worthy memorial to a great American, erected by members of the Masonic Fraternity. The memorial was designed by Helmle & Corbett, architects and Osgood & Osgood, consulting architects.

The site was thoroughly explored by means of test wells sunk to considerable depths. Unusual soil conditions were encountered. The underlying clay formation was found to be of a disintegrated character indicated by well pronounced fissures, generally of a vertical trend. Through these fis-

made for the terraces and approaches in front of the building. At points distributed about the site of the building, spaces were leveled off to the exact elevation of the underside of the foundation and



protected from the weather during the making of the tests to determine the resistance of the soil to loads. The test records are therefore a measure of the virgin soil resistance. The test blocks were made of 28" and 42" metal pulleys which were filled with concrete, both faces level and true. On each test block was placed a square steel plate on which was imposed the test load. A mast was erected on the test block and held in a vertical position by six steel cables, each of which passed over the top of an A frame to a suitable anchorage. The

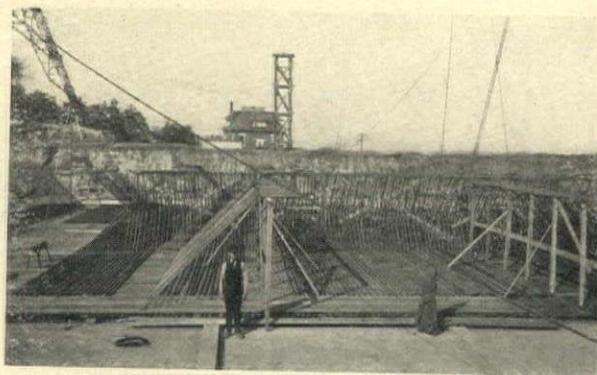
mast was adjusted to a vertical position and so maintained by turnbuckles inserted in each guy line. On cross arms near the base of the mast the



PREPARING A SITE FOR TEST

tures, at a comparatively shallow depth, there was a considerable flow of water. As a protection for the building foundations an intercepting drainage system which surrounds the building, has been installed. By this means a known moisture condition is maintained in the supporting soil and the load distribution was designed accordingly.

A general excavation was made of the building site approximating the level of the underside of the foundation. Other excavations and fills were



REINFORCING PARTIALLY IN PLACE IN THE 9'-0" THICK PORTION OF THE FOUNDATION

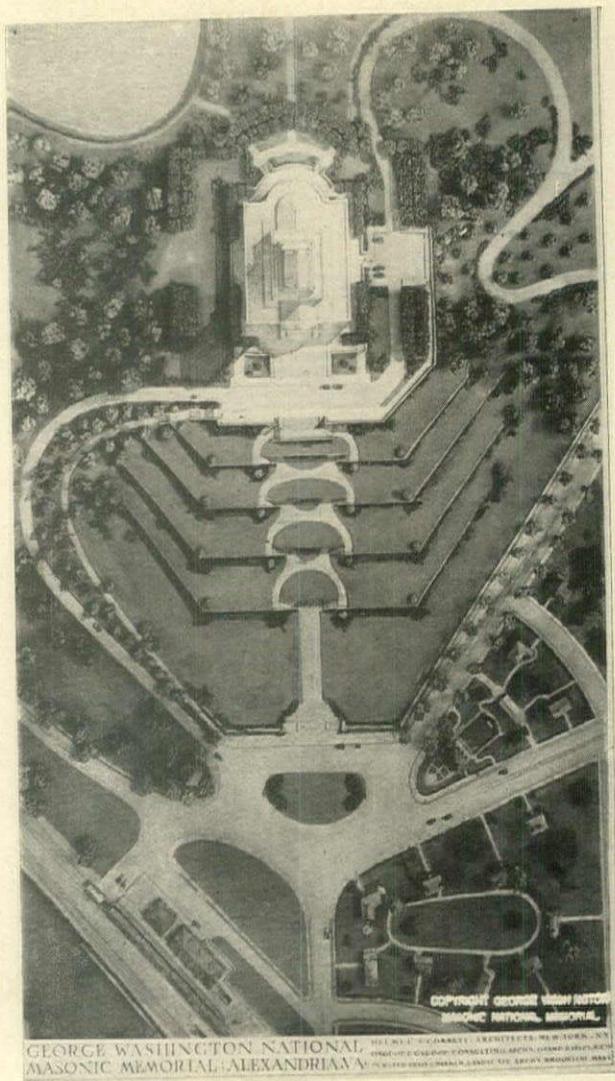
test load of railroad rails was placed in regular increments which were proportional to the area of the test block. From two A frames on opposite sides of the area a couple of steel cables were suspended which continued over the A frames to suitable anchorages. From these cables was suspended

an apparatus for raising, moving and placing the railroad rails in position.

At regular intervals within the building area, long bolts were driven into the ground with the heads projecting. The bolts were protected by pieces of cylindrical tile. Before the load was applied elevations were taken of the test block and boltheads. As the loads were increased new

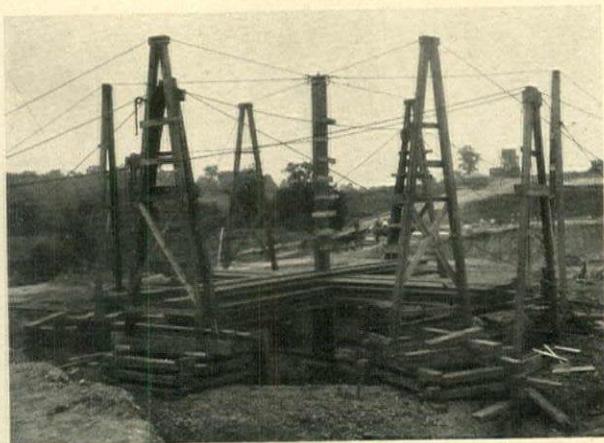
loads thus established, the foundation was designed.

Instead of a number of isolated foundations, they are combined into one reinforced concrete



PLAN OF LANDSCAPE, TERRACES AND APPROACHES  
OLMSTED BROS. & PARKER, LANDSCAPE ARCHITECTS

levels were taken and recorded, the test block being depressed and the boltheads raised. In many kinds of soil the test block would have simply been pressed into the ground with little or no disturbance of the surface of the adjacent ground. In this instance, there was a distinct disruption and raising of the soil, the amount being shown by the changed level of the boltheads. The safe resistance of the soil was assumed to be that load which caused the raising of the bolts and a displacement of the surface. On this assumption and the safe



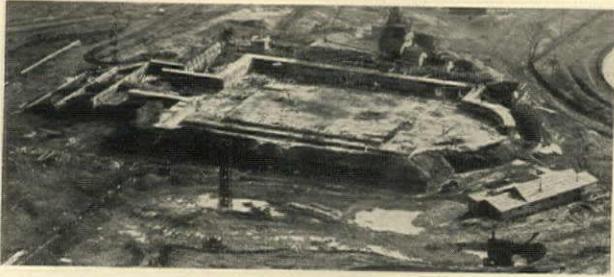
SHOWING METHOD OF MAINTAINING THE MAST WITH TEST LOAD OF RAILROAD RAILS

slab or mat, covering the entire building area. The thicknesses of the mat and the disposition of the reinforcing steel are so proportioned as to distribute the total load uniformly over the entire area. The extreme dimensions of the mat are 171'-0" x 254'-4". It is of different thicknesses, 4'-6", 6'-9" and 9'-0" respectively. The thickest portion is



SHOWING THE BASE OF THE LOADED MAST RESTING ON THE TEST BLOCK AND BOLTS PROTECTED BY TILES

87'-0" x 100'-2" in size and is immediately under the high portion of the main structure. Outside of this foundation is an extensive system of foundations which support the retaining walls that limit the terraces and which support the steps of the approaches.



AIRPLANE VIEW FROM REAR

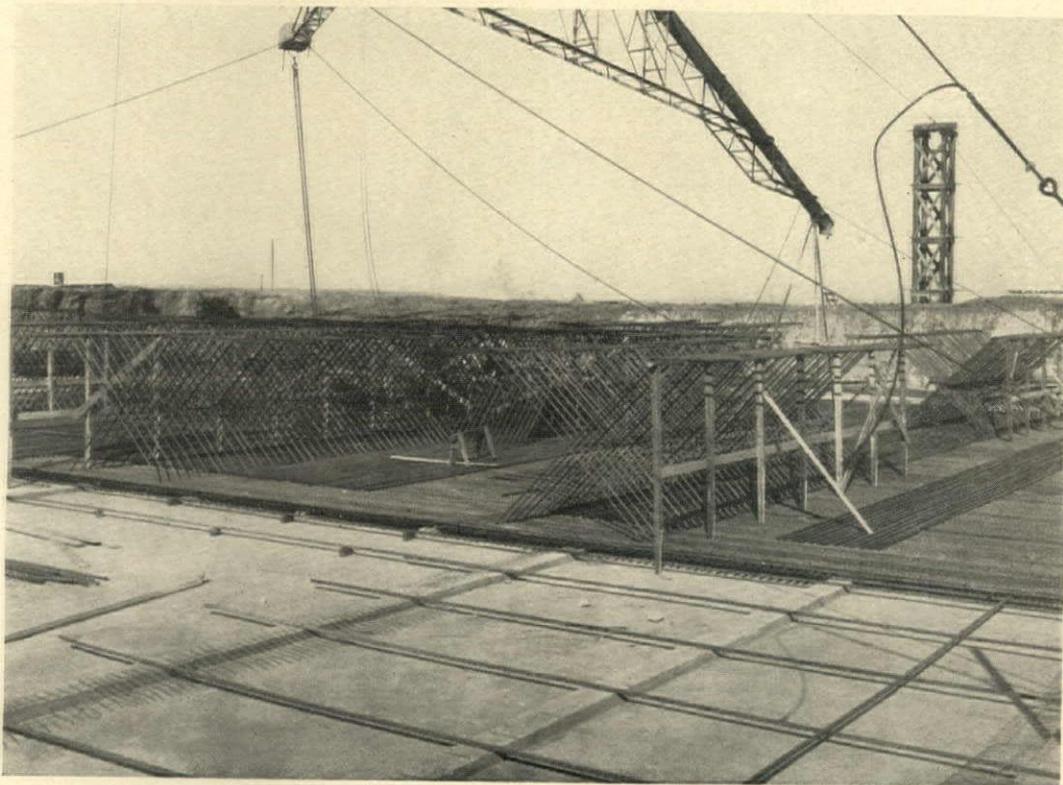


AIRPLANE VIEW, SHOWING MAIN APPROACH

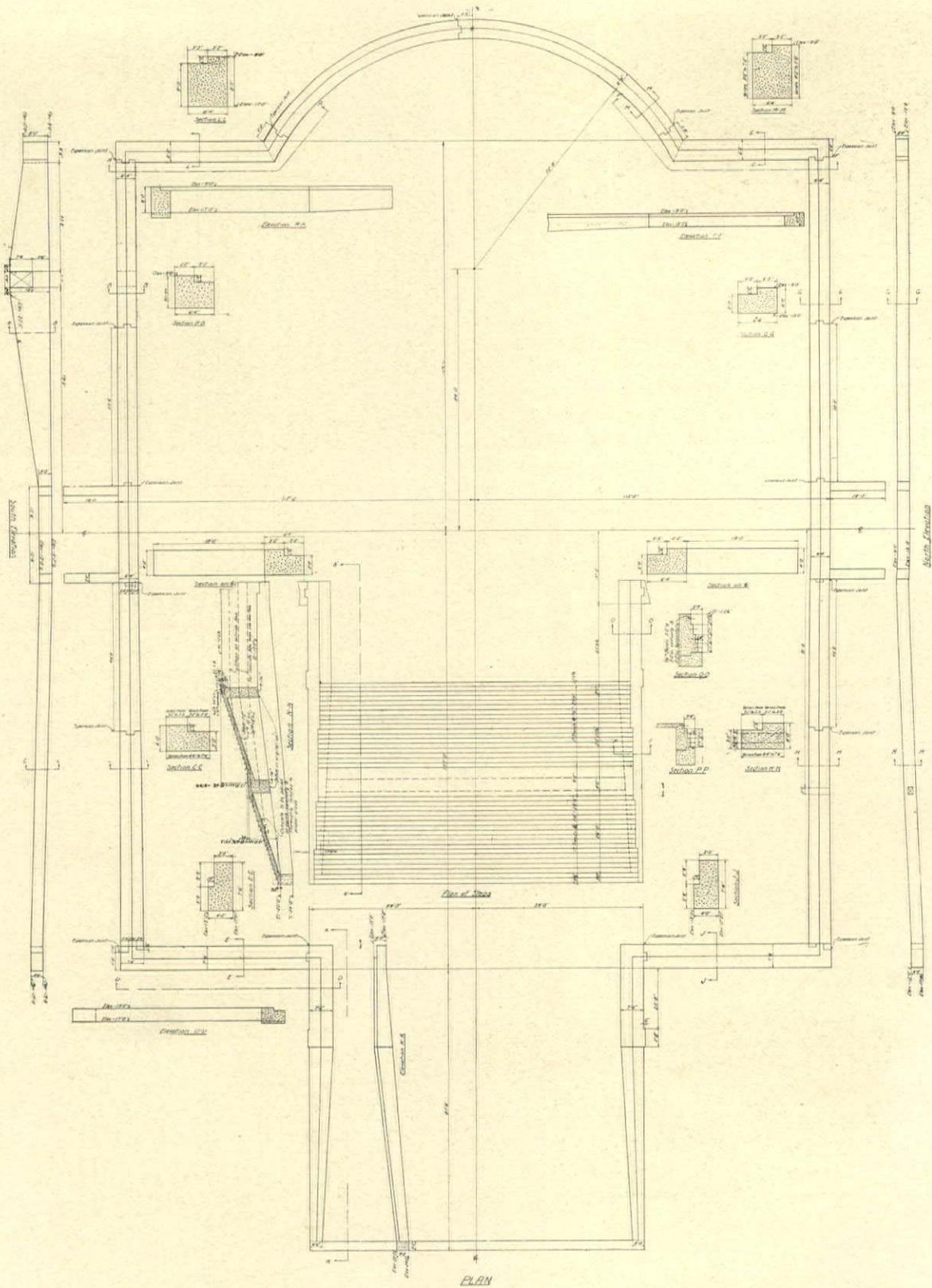
In constructing the concrete mat, a 3" layer of plain concrete was placed over the area as fast as the ground was brought to the proper level. On this 3" sheet of concrete, ridges were formed as shown in the illustration. These served to support the reinforcing steel at the correct level and also in some instances to outline the walls of the superstructure. This 3" sheet of concrete serves another and very important function in construction. When the supporting soil of a foundation becomes saturated by rain it is extremely difficult, almost impossible, to place and maintain the reinforcing steel in correct position. There is also an intermixing of mud and concrete in the lower portion of the foundations which is not desirable. It was found that the added cost of this sheet of concrete was more than offset by the savings in labor cost resulting from working on a substantial

and clean surface. The quality of the foundation was also maintained as designed.

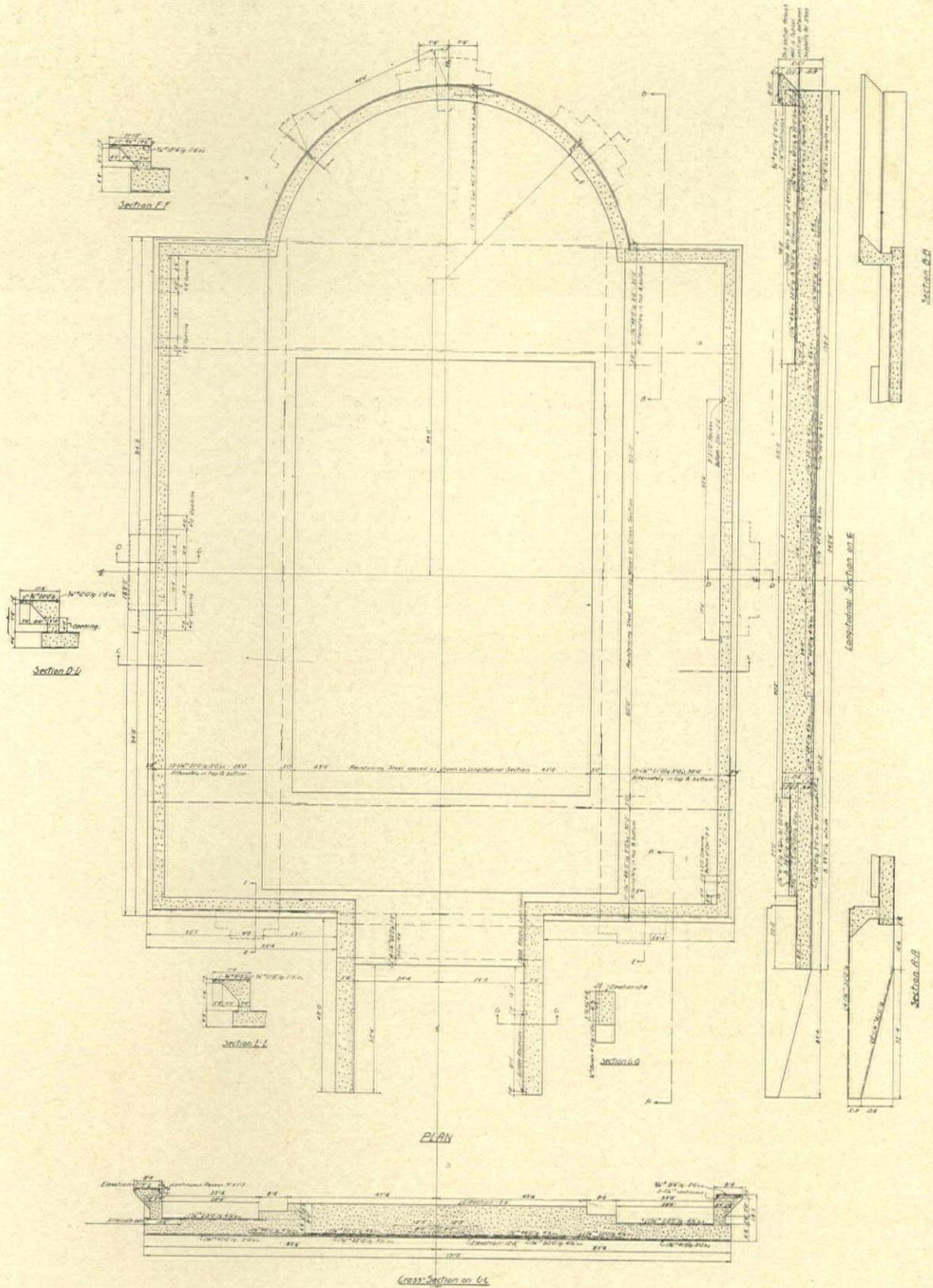
The concrete was made of a 1:2:4 mix with gravel as the coarse aggregate. Of the 12,500 cubic yards of concrete placed in the foundations, 9,000 cubic yards were contained in the mat foundation. The reinforcing steel consisted of 720 tons of bars and 18 tons of tie steel. The construction plant was carefully planned and the working forces well organized. The mat was placed in



VIEW OF 3" LAYER OF PLAIN CONCRETE ON WHICH THE FOUNDATION WAS POURED. RIDGES OF CONCRETE USED TO SUPPORT AND MAINTAIN POSITION OF REINFORCING BARS. PORTION OF STEEL DIAGONAL BARS IN PLACE



PLAN AND SECTIONS OF FOUNDATIONS FOR TERRACE WALLS AND PRINCIPAL APPROACH  
GEORGE WASHINGTON NATIONAL MASONIC MEMORIAL, ALEXANDRIA, VA.  
HELMLE & CORBETT, ARCHITECTS—OSGOOD & OSGOOD, CONSULTING ARCHITECTS



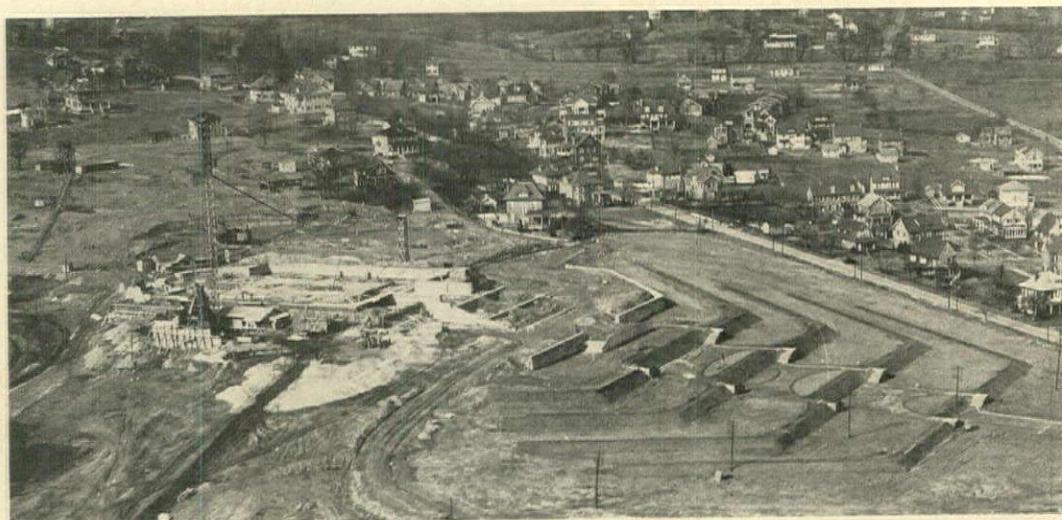
PLAN AND SECTIONS OF PRINCIPAL FOUNDATION  
GEORGE WASHINGTON NATIONAL MASONIC MEMORIAL, ALEXANDRIA, VA.  
HELMLE & CORBETT, ARCHITECTS—OSGOOD & OSGOOD, CONSULTING ARCHITECTS



CLOSE-UP VIEWS OF 28" TEST BLOCKS TAKEN AFTER THE TEST LOAD HAD BEEN REMOVED, SHOWING THE CHARACTERISTIC DISTURBANCE OF THE SOIL AT ASSUMED POINT OF ULTIMATE RESISTANCE

fifteen sections, poured alternately. The mixing and placing of the concrete were carried on continuously during 302 hours of elapsed time. Of this time, but 6 hours were consumed in shutdowns

for oiling and minor repairs, making the net working time 296 hours. The contract was executed by the Cranford Company under the immediate direction of C. A. Warthen.



AIRPLANE VIEW OF FOUNDATIONS AND APPROACHES

## CONTRACTORS FAVOR *the* QUANTITY SURVEY

IT is always with interested anticipation that one awaits the annual convention of the Associated General Contractors of America. This association is one of the all too few organizations that assume definite positions and accomplish positive results. Since its organization five years ago, it has favored the use of quantity surveys. It has entered into discussions and agreements with other technical and professional organizations, including The American Institute of Architects, concerning the desirability and use of quantity surveys.

The majority of such organizations meet and resolve, adjourn and forget. This is not true of the A. G. C. and realizing the pressing need of the protection secured by quantity surveys it has, through several of its chapters, made use of them. The institution of Survey Bureaus has, like many other desirable activities, had its greatest growth in the Central and Western states.

At the fifth annual convention of the Associated General Contractors held in Chicago, January 21-24, 1924, R. L. Reisinger of the R. L. Reisinger Co., Milwaukee, Wis., made a report of the workings and benefits of the Survey Bureau which is operated by the Milwaukee chapter. Two things Mr. Reisinger clearly establishes—the practicability and the desirability of the quantity survey. A brief abstract of Mr. Reisinger's address follows:

The pioneering work has been done. Quantity survey is now established nationally as is evidenced by the fact that during the past year we had inquiries from fifteen localities, including ten chapters of the Associated General Contractors, asking for information regarding organization and operation and asking us to submit forms and methods of take-off. Several of those making inquiry have already started to function and others will soon do so.

The question has been asked, whether a Bureau of Quantity Survey can successfully function as a chapter activity. Permit me to submit to you briefly the financial summary of the Bureau operated by the chapter in Milwaukee. This Bureau has been in operation for more than ten years. We have a surplus fund of \$9,000.00 invested in high-grade securities. We have on hand today in cash \$6,000.00. We have over \$7,000.00 in gilt-edge accounts outstanding. Practically \$5,000.00 has been apportioned back to our members in the form of dividends and we intend to disburse an additional \$5,000.00 some time in February. In addition to this we have paid in the form of dues, fees and underwriting expenses and the expenses for the attendance of our members to the A. G. C. conventions, etc., approximately \$9,500.00. In addition to this, we have paid the dues of our membership in the State Association and in the Employers' Council. We spent approximately \$1,000.00 fighting a strike in 1920. We spent over \$2,000.00 in an advertising campaign to boost building in the dull period of 1921. We have contributed to all worthy charities and to community funds; our association has two dinners a month. This money has all been earned by our Quantity Survey Bureau.

In a general way, Quantity Survey Bureaus are bringing about a much closer relationship between the archi-

tect and contractor; and this is being done through the sifting down and the correct interpretation of plans and specifications. We all know that there is rarely a set of plans and specifications that do not need considerable renovating, questioning and correcting and, to be more specific, they are very often incorrectly drawn.

Through the work of the Quantity Survey Bureau and the direct contact thus brought about between the Bureaus and the architects and engineers, the ambiguous and doubtful statements in the specifications and the incorrectness in the plans are being clarified. There still seems to be a considerable aloofness between the contractor, architect and engineer and when questions arise in the interpretation of the plans and specifications it is considerably easier, in most cases, to obtain the facts through the medium of the Survey Bureaus. The surveyor, being an uninterested party in the ultimate contract, can ask the architect or engineer questions, which to him might seem, at least, brutally frank.

In the number of years in which we have been operating we have yet to hear of a loss sustained by a member through the incorrectness of estimated quantities.

On projects ranging from \$5,000.00 to \$100,000.00 the fee is one-half of 1%; on projects ranging from \$100,000.00 to \$300,000.00 the fee is three-tenths of 1%; on projects ranging from \$300,000.00 to one million dollars the fee is slightly less than two-tenths of 1%. Estimating fees are payable thirty days after the signing of the contract.

Of course, we fully realize that quantity surveys should come from the architects and engineers. That day is still in the future and consequently we have done the next best thing to assure the elimination of error in the most practicable degree possible, by establishing our own Bureaus for the contractor's benefit. Architects are daily becoming more impressed. We do not, at this time, recommend the guarantee of the survey in the event of its being furnished by the architect or engineer, but we do recommend the use of it as a check against error. We sincerely believe the task of preparing quantities is a part of the architect's duty and that it could be done more economically in the architect's office by the draftsman making the plans because he would be more familiar with the items entering into the structure.

Allow me to digress for a moment from the subject to one that is very much akin to quantity survey. That is the subject of incomplete plans and specifications. One of the worst abuses that are heaped upon the contractors, is a set of plans and specifications that leave much to the imagination. A contractor is asked to guess what the architect or engineer has in mind and then guess what it will cost to complete this mind picture, and after he has his proposal made and accompanied it with a certified check, he then finds out that the designer had something entirely different in mind and it is up to the contractor to go through.

In this connection, I desire to read three paragraphs from an article by E. L. Harrison, an architect, appearing in a recent issue of the Members' Service Magazine of the Memphis Chapter of the Associated General Contractors:

"We believe the time will come when contractors will require a clear idea of the building requirements before bidding on work.

"The first step in awarding a fair contract for building construction is the furnishing of a complete and definite set of plans or drawings supplemented by a concise and comprehensive specification. Probably more disputes have arisen between owner, architect and contractor through ambiguity of plans and specifications than any other single cause.

"It is very easy for the architect whose office is crowded with 'rush work' to turn out a half finished set of plans and specifications, but it is not so easy for the builders to guess what the architect will require built into the job afterward."

The practicability of preparing quantity surveys in an architect's office by the draftsman who makes the plans, is questionable. In the first place, the architectural draftsman is rarely a competent estimator. Experience in that work and a wide acquaintance among estimators establish the fact that men who are educated as civil and structural engineers are the best fitted for that work. The reason is apparent. They are so taught and the nature of their work and its responsibility are such that extreme accuracy is one of their characteristics. This is not a distinguishing trait of architectural draftsmen. A competent estimator is a specialist and his work cannot be done by inexperienced persons. There is but a limited number of architectural offices that have a sufficient volume of work to justify the regular employment of a quantity surveyor.

The rational solution of the matter appears to

be the use of independent Survey Bureaus which supply the quantity lists to the architect and the contractors. This service should be paid for by the owner either direct or through the architect. The owner pays for estimating expense in any event and it can be done much more cheaply and better by well organized Survey Bureaus than by the present unscientific method. It is incomprehensible why architects do not actively favor the use of quantity surveys. The benefits to them, as well as to the owner, are clearly shown by Mr. Reisinger. The outcome of this movement is assured because it is an economic necessity, and its general acceptance will be established by the Associated General Contractors and allied contracting organizations. This could be accomplished more quickly with the co-operation of architects, individually and organized, who should adopt the quantity survey in their practice.

#### HANDBOOK FOR ARCHITECTS AND BUILDERS

THE annual handbook published by the Illinois Society of Architects has become a recognized institution. It is a very tangible evidence of the service which this organization renders to its members as well as to all other architects who may have occasion to design buildings in Chicago and the state of Illinois. With the special articles, tables and working data comprising a large part of its contents, this handbook has become a valuable reference work for everyone having to do with the design and construction of buildings. Aside from the membership lists of the Illinois Society of Architects, the Illinois Chapter, A. I. A., and the registered architects in Illinois, it contains the registration laws, the building code of Chicago and other codes and regulations which pertain to building construction.

The new matter in Vol. XXVI, 1923, includes the newly adopted Chicago zoning laws and the revised sanitary code. The 656 pages of this publication are an indication of the scope of its contents. The painstaking work devoted to the preparation of this handbook is characteristic of everything which the Illinois Society of

Architects undertakes and stamps it as a leader of architectural organizations.

#### LIMESTONE HOUSES OF MODERATE COST

AN Indiana limestone house is generally associated with an impression of costliness, which is really unwarranted. In order to demonstrate that this material can be used in houses of moderate cost, the Indiana Limestone Quarrymen's Association, Bedford, Indiana, has published a portfolio of designs for dwellings constructed with walls faced with rough-sawed quarry-run stone. The portfolio consists of sixteen designs of different styles of architecture on different sized lots. A plot plan, floor plans and perspective illustrate each house. A description of the principal features of the plan and the plot plan accompanies each design.

The designs were made by Olsen & Urbain, architects, Chicago. This publication is well worth the consideration of architects and is furnished to them free of cost, and also to draftsmen applying for it on the business stationery of their employers.



Sheldon Hall, Warwickshire, England, from which the room as shown, in part, on a following page was taken. The room is the second from the right on the ground floor, and the original framework of the five casement windows as seen here is now set up in the galleries of Charles of London, Decorators

## INTERIOR ARCHITECTURE

### *The Jacobean Period of Decoration*



HE term "panelled room" was originally used to describe a room in which the walls from floor to ceiling were constructed of a series of wood panels, varying in size and shape according to the period or style of the design.

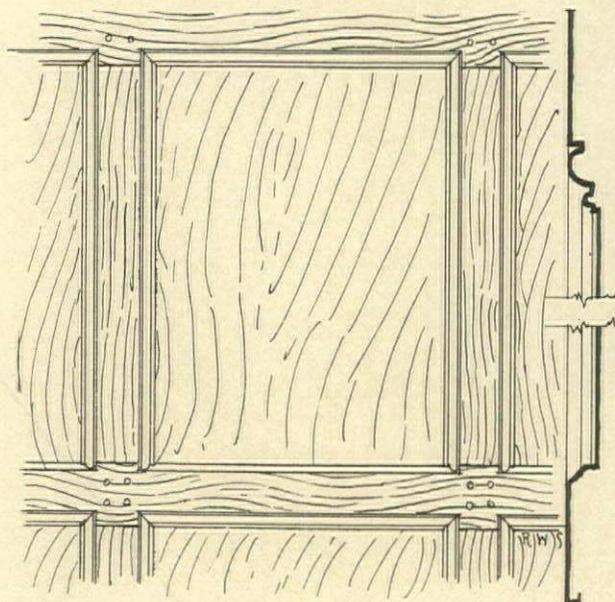
As generally applied, this embraced the Elizabethan, Jacobean, William and Mary and Queen Anne periods, although there were frequently rooms in the Georgian and the contemporary styles of France which might accurately be called panelled rooms. Today, however, the expression is used to describe a room of any style of decoration in which the wall treatment takes the form of panels, no matter how constructed. Wood rails applied to plaster walls forming panels, in which wallpaper is sometimes hung, or even wood mouldings applied to and painted in the same color as the plaster seem sufficient to specify it as a panelled room. Of the several types of original panelled designs, none is more applicable to the proportions and structural conditions of the modern house than the Jacobean period. For lack of any other way in which to limit the beginnings and endings of different period designs, the dates of the reigning House that occupied the throne, and for whom the style was named, have been considered as the dates of the style. These dates are not, of course, accurate in any connection, but as much so, no doubt, as any could be.

The Jacobean period follows immediately after the Elizabethan and dates from the accession of James I in 1603. It is positively known that Inigo Jones carried on the details of the Elizabethan style for at least forty years after that date, however. The Jacobean period comprises the House of Stuart, and covers the reigns of James I in 1603. It is positively known that and James II, ending in 1688. Theoretically, the Jacobean is the second stage of the Renaissance in England. The influence of the Italian, with whom the Renaissance originated, is evidenced in many of its details but many of its later ideas came bodily from the Flemish. This whole idea has been well summed up by some one who said that the English "saw the Italian Renaissance through Flemish spectacles, and then gave it a native interpretation." That was possible, as the relations between England and the Low Countries were very close at the time, being bound together by ties both political and religious, and all at swords' points with anything Italian.

Still growing slowly away from Gothic ideas, at a time when the home was but a man's fortress, the Jacobean house was yet far from comfortable. Architectural decorations were its main feature and what furniture there was, was not made for comfort or mere decoration. Every piece in the room had its purpose from a practical standpoint, and, although ornamented so as

not to appear out of place in its decorative surroundings, it was noticeably simple in outline and construction and so was typical of all the work of the period. The furniture of the Jacobean style has always been closely cherished by Americans through purely sentimental reasons, for the first pieces of furniture to be brought into this country after the settling of the Colonies were original Jacobean pieces.

The principal characteristic of the period, accented above any of its other features, is simplicity of construction. In every detail it is carpenter-built. Ornament and decoration were added afterwards, and, although there was often abundance of it, it did not depart from the original straight lines and flat surfaces and seldom appears in the outline. Thus occasioned by the manner of the carving, the ornament is formed by gouging, generally in low relief. Even slanting digs with the carver's tool often sufficed. The

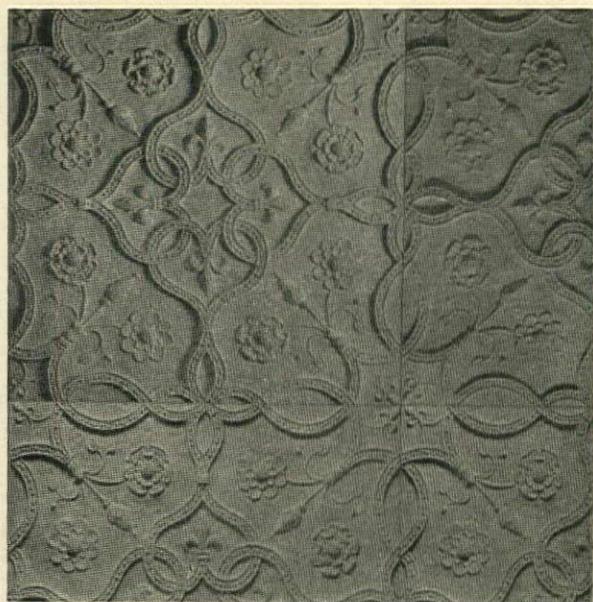


Illustrating the earliest form of Jacobean panel construction. Rails were of one piece and wooden pegs were used for securing the framework. Mouldings were worked out of the solid and returned on themselves at the top corners, stopping against a splayed surface at the bottom. Later, the top moulding was replaced by a simple scratch mould. Out of this developed the modern form of construction, of applying loose mouldings to the square edges of the frames, mitred at the top corners and stopping against a splay at the bottom.

marks of the carpenter and joiner are evident throughout all wood construction by its grooves, dovetails and framings, and the effect of the artificer is also to be seen in the crudeness of the plaster and stone details.

Generally speaking, for it is only in this way that any style can be considered, walls of Jacobean period rooms were formed of a series of oak panels surmounted by a barrel-shaped ceiling, elaborately enriched. The panels were small, of nearly square proportion, averaging in

an ordinary sized room about ten inches wide by twelve inches high, and were arranged in a series of from five or six to the height. An interesting feature of the original construction was the free-hand manner of laying out the panels. Slight variations in widths produced an effect that relieved the panelling of any monotony which might be due to equal spacing. Examples of this method of construction in modern work are all too scarce, but the Commons Room in the Harkness Memorial at Yale University by James Gamble Rogers, and the restoration of an old London house by Wm. Gedney Beatty, both of which have



An interesting Jacobean ceiling, formed of intertwining ribs, and ornamented with the characteristic Tudor rose, fleur-de-lis, and sprigs.

been illustrated in *THE AMERICAN ARCHITECT*, are notable exceptions.

The capping of Jacobean panelling consisted of a small architrave, frieze and cornice moulding, the members of which were frequently enriched. Often the top row of panels was treated with a carved motive, in the effect of a decorative frieze, and a cornice moulding alone served as a capping. The panels in the top row were sometimes made of slightly different proportions from the lower ones, to act in this same manner. The panel mouldings, as were all mouldings in fact, were in the crude style of the carpenter and generally continued around three sides of the panel, stopping at the bottom against a chamfered surface, evidence again of the joiner's hands. Unlike the preceding style, the panels were not often carved or ornamented, but the plainness thus brought about was more than compensated for by the rich and elaborate ornamentation of the chimney piece and the ceiling. The chimney piece was strictly the feature of the wall

decoration. A carved shelf moulding was, as a rule, supported by simple flat pilasters, sometimes carved in an eccentric pattern inspired by the Flemish, or by a strap motive taken from the Elizabethan style. This shelf in turn supported other pilasters or caryatides which flanked richly carved or inlaid panels and all were surmounted by an enriched entablature. The fire arch was of stone, in the flat pointed effect of the Tudor, with stone facings, hearth and curb.

beams were ornamented in keeping with the style. The barrel-shaped ceiling, so common, supplied additional space for ornament and for this reason alone was popular. Where ceilings were flat, they were mostly low, and sometimes the wood paneling was separated from the ceiling by an ornamental frieze.

The lines of the ornament of the Jacobean style were marked by Italian influence, as suggested, although the scrolls were drawn in a more free-



PRESIDENT'S DESK IN THE BOARD ROOM OF THE HUMBLE OIL & REFINING CO., HOUSTON, TEXAS

CLINTON & RUSSELL, ARCHITECTS

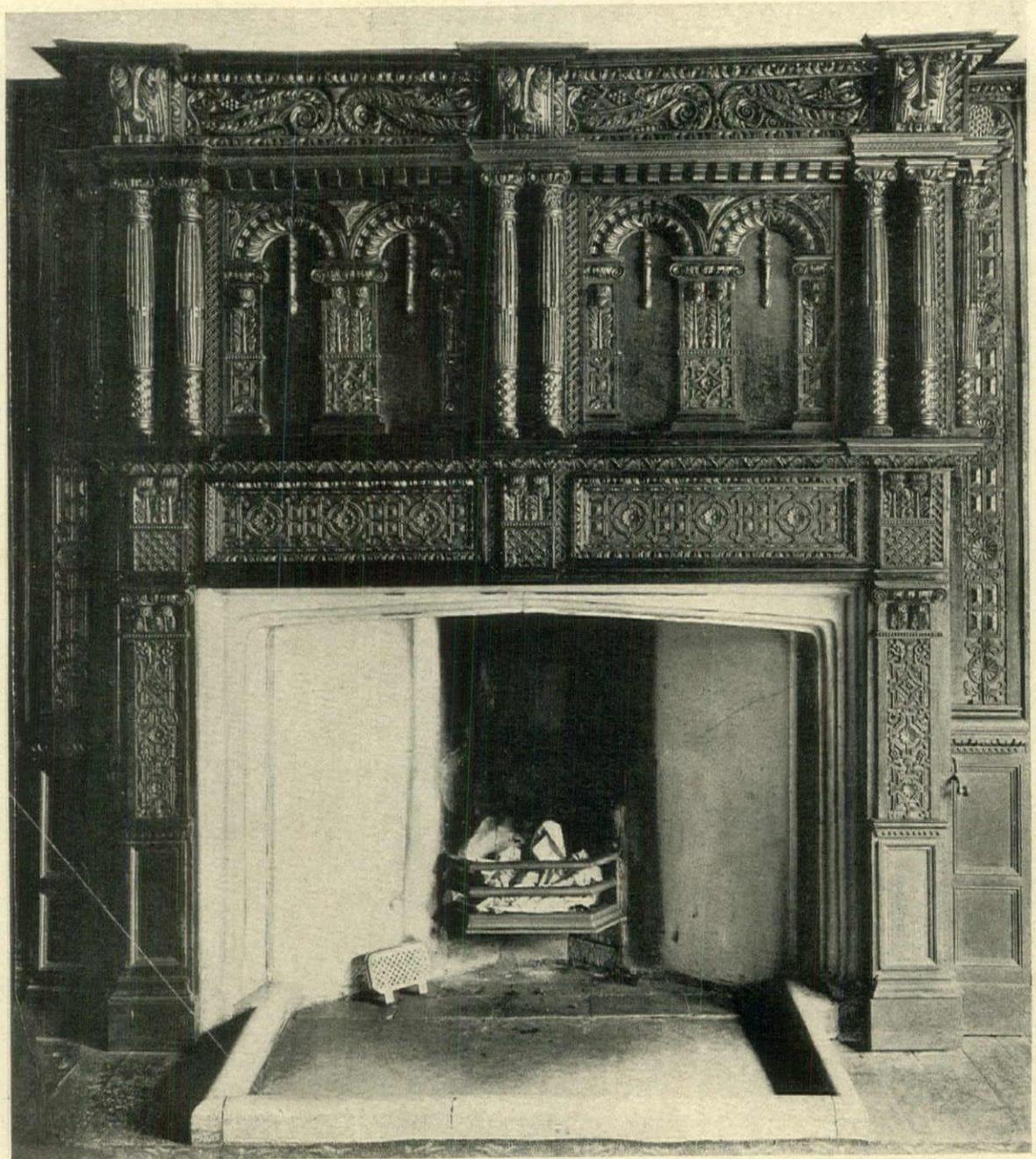
While the design is necessarily limited by certain commercial features of a modern office building, the panelling of the walls and the ornamental barrel ceiling are inspired by the motives of the Jacobean period. The furniture is made from special designs by the architects in accordance with characteristics of the early Stuart days

Second only to the chimney piece in elaborate decoration was the ceiling, which was a mass of ornamental plaster. All over geometric patterns prevailed, formed of moulded ribs in all manner of curved angles and panels. Panels were often set with shields of arms, heraldic beasts and floral scrolls, while the corners and intersections of the ribbings were enriched by fleurs-de-lis, sprigs, rosettes and leafage. Occasionally beams divided the ceiling into several sections, and each section was then treated similarly. The soffits of the

hand and crude manner. In general design, they adhered to the Italian motives, starting from a vase or leaf and combining in its course fruit and foliage, and ending with a real or mythical treatment of the human figure or an animal form. Another typical design of enrichment, in fact one which is distinctly Jacobean in character, is also based on classic motives. It is in the shape of an arch supported by two pedestals. This design was used on practically all square panels where ornament was desired. Wainscot panels, over-

mantels, chair backs and cupboard doors abounded with it. The various members of its composition were richly carved in typical ornament, gouged out of the flat surfaces, the elongated acanthus

Roman guilloche. The semicircle inscribing a leaf motive was also used as a repeating or running pattern. The Tudor rose, grapes, pineapples, and their leafage were often in evidence.



CHIMNEY PIECE IN A ROOM FROM SHELDON HALL, WARWICKSHIRE, ENGLAND

The entire room is now set up in the galleries of Charles of London, Decorators. It is a beautiful example of early Jacobean work in rich oak. The arch treatment in the overmantel panels is very conspicuous and the carving of the frieze is very characteristic of the style. The carved ornament of the mantel proper in strap designs is reminiscent of the preceding Elizabethan period. The fire arch, hearth and curb are of stone

leaf in the pedestal, tool digs in the mouldings of the arch and a sprig with leaves and roses in the semicircular panel which they inscribed. When a running pattern was needed, it frequently took the form of interlocking circles, after the old

Floors in Jacobean times were generally in keeping with the crude, free-hand feeling of the other details. Rough hewn oak planks, of random widths, were frequently seen and made a pleasing setting for the other work. They were



JACOBEOAN ROOM IN OFFICE OF IRVING & CASSON—A. H. DAVENPORT CO., DESIGNED AND EXECUTED BY THEM

The arch design with which the top row of panels is carved is a distinguishing feature of the period. Notice the same treatment on the doors of the cabinet. The chair is a good example of the Flemish influence, with its richly carved back frame and stretcher. Observe the character of the carving, especially in the seat frame of the chair, where the design is gouged out of the flat in low relief

joined in the carpenter manner so typical of all the wood construction, with dovetails and pegs. Although such floors, by their irregularity and interesting unevenness needed no covering, especially in those days when home comfort was unknown, still they were often spotted with beautiful Oriental rugs, imported from the Far East. Simple, but heavy old brass lighting fixtures were a conspicuous part of a Jacobean room. Chandeliers frequently had as many as twenty-four candles. Throughout the entire room is a decided air of mellowness, pronounced in the oak wall panels and floor, but always present, even in the colorings of the draperies, furniture covering and lighting fixtures.

To describe the features and peculiarities of the architectural work of the Jacobean period is to describe its furniture also, for in those days furniture was so much a part of the construction. The simple and crude lines of the carpenter are just as much in evidence here. Legs of chairs and tables were square and straight, and chair backs arose straight from the seat. The earliest type of chair of this period was what is now

known as the Wainscot Chair, so called on account of its similarity in design and construction to the wainscoting. The seat was nothing but a plank of wood, the back was a framed panel in straight lines and the legs were square and straight. If there were arms, they projected straight from the back, of the same width throughout, shaped slightly to the arm at the top. Besides this type of chair, the early furniture included few different pieces. Chests, cupboards and benches were practically the only other pieces to be seen. With the inauguration of the Flemish influence, at a slightly later date, furniture took on a more varied design, twisted and turned legs appeared and ornament increased and changed somewhat in character. Frames of chair backs, stretchers and legs were richly carved in strikingly Flemish designs, while the flat surfaces were brought into unity with



Section of oak plank flooring typical of Jacobean rooms. The planks are of random widths, rough hewn, and the effect is crude and free-hand, but in keeping with the spirit of the period

the constructive ornament by the application of enrichments after the manner of original Jacobean tendencies. Acknowledgment is made to Wm. A. French & Co., Jacobson & Co., and James F. Nuno for illustrative material supplied.



Influence of the Jacobean period on modern manufactured furniture. The simple lines and the character of the ornament are true to Jacobean ideas, but a certain amount of refining of detail has been necessary to make the furniture appropriate to modern surroundings

NEW YORK CHAPTER IS BUSY

THE New York Chapter, A. I. A., has held two very interesting meetings this month. On February 8, a luncheon meeting was held at which Thomas Hastings gave an interesting account of the inception and development of his design for a Soldiers Memorial to be erected in Central Park. Mr. Hastings illustrated his address with lantern slides and drawings. Considerable discussion followed concerning several phases of the project which indicated a lively interest among the members of the Chapter.

In lieu of the annual regional conference, the New York Chapter extended an invitation to the members of the Brooklyn, Buffalo, Central New York, Connecticut, New Jersey, Philadelphia and Rhode Island Chapters to attend the meeting of February 13, with the approval of Regional Director, B. W. Morris. Every member outside of the New York Chapter was invited to be the personal guest of Mr. Morris.

The principal matter of discussion was the relationship between the real estate and financial interests and the architects. President D. E. Waid introduced Mr. Morris who conducted the conference. Charles G. Edwards, President of the New York Real Estate Board; Dr. Charles V. Paterno, a leading real estate and building operator; Frederick H. Ecker, Vice President of the Metropolitan Life Insurance Company, and E. A. McDougall, President of the Queensborough Corporation, explained the position of the real estate operator, owner and financier. Lansing C. Holden spoke of architectural ethics and William P. Bannister discussed certain phases of the registration law.

The symposium was conducted after dinner and as a natural result of a meeting of so many elements of the building industry a lively discussion was maintained until a late hour.

The meetings of the Chapter held this month are up to the high standard set by President Waid.

PERSONALS

Orrin F. Stone, architect, has moved from 750 E. Washington Street, Pasadena, Cal., to 993 North Wilson Avenue, that city.

Orville L. Clark, architect, has moved his office from 923 to 517 Chapman Building, Los Angeles, Cal.

Henry Pruess, architect, announces a change of address from 3121 South Jefferson Avenue to 2115a Arsenal Street, St. Louis, Mo.

Wm. Herbert, architect, has moved his office from the City Hall to the Rosenberg Building, Santa Rosa, Cal.

Howard Leland Smith, architect, announces the removal of his office from 101 Park Avenue to 505 Fifth Avenue, New York City.

Clyde M. Hites has recently established an office at 300 Commercial Building, Louisville, Ky., for the practice of architecture. Manufacturers are requested to send catalogs and samples.

Walter Earle Bort, architect, announces the establishing of offices for the practice of his profession at 601-602 Wilson Building, Clinton, Iowa.

M. J. Murphy, architect and builder, announces that he has moved his offices to 1020 Bardstown Road, Louisville, Ky. Manufacturers' catalogs and samples are desired.

It is announced that William F. Bowen, architect, has moved his office from 818 Union League Building, Los Angeles, Cal., to suite 508 in the same building.

Arthur Kelly and Joseph Estep, architects, announce that they have moved their offices from 1201 Van Nuys Building to 2512 West Seventh Street, Los Angeles, Cal.

D. Harry Jamieson announces the opening of a suite of offices in the Campbell Building, Paducah, Ky., where he will be available for consultation on any problem or contemplated plan in architectural or structural engineering.

Announcement is made that Jefferson D. Powell, architect, has moved his office from 709 Bisbee Building to 412 Professional Building, Jacksonville, Fla., where he would be pleased to receive manufacturers' catalogs and samples.

WAID RESIGNS AS PRESIDENT OF NEW YORK STATE BOARD OF EXAMINERS

IT is learned that D. Everett Waid who, since the foundation of the New York State Board of Examiners for Registration of Architects has been president of that body, has resigned.

Donn Barber has been appointed to fill the vacancy on the board created by Mr. Waid's resignation. The new president of the board has not yet been designated.

A CORRECTION

THE Philadelphia shop front, designed for Joseph C. Ferguson and presented in our issue of January 30, was, due to misinformation furnished by the photographer, incorrectly attributed to William B. Koelle. This shop front, we now learn, was designed by Savery & Scheetz, architects, Philadelphia.

# ECONOMICS *as* RELATING to ARCHITECTURE

Economic Factors Which Underlie Construction Activity—Prepared for  
THE AMERICAN ARCHITECT by the American Chamber of  
Economics, Incorporated\*

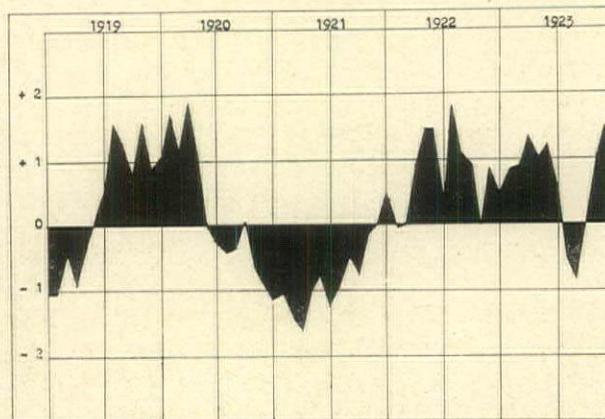
## THE OUTLOOK

**N**EW building continues to progress with extraordinary intensity and velocity. Final January statistics have not appeared at this writing, but early estimates indicate a heavy building month. Final figures may fall short of November and December heights, however, for January construction normally is about 4 per cent less than December's volume, and again, the weather in January was more rigorous and severe in its inclemency. Nevertheless, demand for shelter retains all the vigorous and energetic insistency that it so conclusively displayed in the late Autumn and early Winter months. Fostered and stimulated by somewhat lower costs, and a desire on the part of builders to get their jobs started before these costs begin their expected Spring ascension, demand for new building has been prodigious considering the season of the year.

The short term outlook very strongly favors a continued busy Winter and an active Spring. Six months of record building appear to face the industry. The actual total of construction for the year will be determined largely by the nature in which this Spring building is accomplished. At best, however, unmistakable signs of a slowing down of the general pace in which the industry has been progressing for the

past two years are expected to develop in the late months of 1924. A moderate decline would have a wholesome effect upon business. A decided slump is emphatically not in prospect—not with general economic conditions as fundamentally sound as they are today—but the industry will have achieved its big job, the effacing of its deficit, and will settle down to a more normal pace consistent with the year to year requirements of the industry.

VOLUME OF CONSTRUCTION



The black spaces above and below the line (0) represent the volume of construction (expressed in dollars) above and below normal. The heavy Winter building in the late months of 1923 has brought the curve well above normal. The indications are that building will persist in these high planes for at least the first six months of the new year. The chart is corrected for seasonal variation and for long-time influences. The figures used are the F. W. Dodge reports for the 27 states

(Copyright, 1924, American Chamber of Economics, Inc.)

## THE STATISTICAL POSITION

Final statistics show 1923 to have been a record year in the building trades. The value of contracts awarded in the 27 states covered by the F. W. Dodge Corporation last year ran about 5 per cent ahead of 1922. The uncommon surge in new building during the final three months of 1923 is manifested by the fact that the volume of new construction started during that quarter ran some 23 per cent ahead of the same period in

1922. Contracts awarded during December, 1923, surpassed new jobs begun in December, 1922, by 25 per cent. All previous construction records in New York State, Northern New Jersey, the Pittsburgh district, and the Northwest were broken. Contemplated work reported during the year and in the 36 states was 86 per cent in excess of work actually started during that period. The normal excess is about 50 per cent. This may be taken as a rude index of the existing demand. The excess of contemplated work, however, has been abnormally large since the war.

Building started in January and February hints at a projection of this same heavy movement. The seasonal variation favors February

\*The American Chamber of Economics conducts a consultation and educational service for executives, in economic principles. Its Supervising Director is George E. Roberts, Vice President of the National City Bank of New York. Co-operating with the Chamber are James B. Forgan, Chairman of the Board of First National Bank, Chicago; Frank A. Vanderlip, Financier and Economist, New York; Samuel Insull, President, Commonwealth Edison Company, Chicago; Joseph H. Defrees, Ex-President, United States Chamber of Commerce; Henry S. Prichett, President, Carnegie Foundation; Edward J. Nally, Managing Director, International Relations, Radio Corporation of America.



A. RAYMOND ELLIS, ARCHITECT  
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over its predecessor in the volume of the new jobs to be started, for the normal excess of February over January is about 3 per cent. In February the Spring rise usually begins to assert itself.

#### THE VANISHING DEFICIT

The volume of Spring business will probably play a role of more than ordinary importance this year. A normal season would undoubtedly prolong the good times that the industry enjoys today. A hectic and wildly active season, on the other hand, would only shorten the present prosperity. The significance of the movement of building during the coming six months is disclosed in a very interesting statistical picture of the state of demand for new construction prepared by the Copper and Brass Research Association. This Association estimates that the building deficit on July 1, 1921, totalled approximately \$8,085 million. On January 1, 1922, this scarcity has been reduced to approximately \$6,364 million. The Association believes that some \$4,910 million was expended on building in 1922, of which some \$3,125 million financed normal requirements of the year. It follows, then, that in 1922 the shortage was reduced some \$1,785 million. In 1923 approximately \$5,923 million was invested in new construction, and \$2,618 million applied against the deficit. The dearth of new building on January 1, 1924, the Association says, approximates \$1,961 million, and estimating normal building requirements at \$3,125 million, and expenditure of \$5,000 million—or a year of building equalling in volume either 1922 or 1923—would practically eliminate the deficit. Now it must be asserted in all candor that estimates of the volume of building accomplished, the normal annual requirements, and the amount of the deficit, all vary widely. They are as different as their sources. There is common feeling, however, in the fact that a great deal of the deficit that has been accruing since 1914 has been obliterated.

Obviously the industry is entering its most speculative and hazardous stage. The uncertainty of the duration of the present volume of building is, of course, developing as the deficit shrinks. Speculative builders will find the status of future profits more than ordinarily perilous. It is more than doubtful whether speculative construction on a very wide scale will afford compensation commensurate with the risk. Six or eight months ago, when the shortage was more substantial and the prospective duration of the demand promised a prolonged period of high yields, increasing rents and a quick turnover of improved property in a realty market that was rising, the speculative advantage was in its ascendancy. Today it appears to have passed its zenith. Some speculators will make money in 1924, but the hazards will be greatly multiplied.

Speculative building for these reasons is not expected to be as heavy in the coming month as it was last Spring. If this expectation becomes an actuality, the menace of bonus payments, premiums for immediate delivery of materials, and the snowballing of wages will be largely mischief-makings of the past. It is reasonable to suppose, on the contrary, that that cult of speculators who always begin operations on the peak of a movement will begin again with their usual vigor this Spring. It is further reasonable to suppose that their kind may be numerous enough to make the situation uncomfortable and expensive for the builder who has a legitimate job in hand.

A number of factors existing by virtue of the persisting potency of the dwindling deficit, still becloud the direction of the true economic trend underlying the industry. Rents, for example, are at record heights, and rentals for some classes of shelter are still rising. This trend of yields is always an attractive bait to the speculative builder. In the early stages of a very active movement in the building industry, rising rents undoubtedly reflect the widening spread between the demand for and the supply of shelter. In the later stages of the cycle, however, when the intensity of a movement has apparently passed its culmination, high rents no longer reflect a statistical position of ascending strength. Rents are like wages, their movement is very sluggish, and the equalization of the supply of shelter with the demand for it will have become a rather well matured actuality before the fact is registered in the trend of rents. Rents, then, are not an index of sufficient sensitiveness to depict trends of underlying importance.

Another attractive feature, which frequently deceives the prospective builder, is the active market for improved construction. The turnover of such property in the early part of last year was very heavy. Prices were rising, and they have since held their strength. A moderation, suggestive of stabilization, has characterized this market of late months, and conservative opinion has it that the peak of its activity has passed. The trend of events in the coming Spring will tell definitely. Meanwhile, the builder has been able to get out of a piece of construction as much as he put into it, and a sufficient margin to pay him for his trouble.

All of these more or less temporary factors tend to lure the opportunist element, which is always seeking to make the most of any given set of conditions. Such factors distort the perspective, and by a display of gaudy lights obscure the main trend. There is no denying the fact that they do reflect a need for some types of building, but can the builder turn this need into cash before the demand crumbles? Cheaper apartment houses, tenements, and the moderate to low-priced dwellings are in active demand. Slightly less urgent



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is the call for public buildings, schools, hospitals, and certain kinds of public utilities. The indications are that 1924 will erase completely the existing deficit in many of these types of structure if the movement within the industry develops to the proportions it now suggests.

#### THE INDUSTRIAL OUTLOOK

With the building shortage becoming both an uncertain and negligible factor in the situation, the backbone of the demand in months to come will be measured by the income of individuals and enterprises. Their income will measure their power to build homes, to pay taxes or buy bonds to build schools and public buildings, to buy securities to erect apartment houses and industrial structures, and to make the generous donations which finance the buildings of memorials, clubs and churches. In the immediate past the industrial future has leaned very heavily upon the prosperity of the building and construction industry. This has been an abnormal relationship. Now the drift is slowly the other way. The building industry will look for its demands in the fortunes, actual and prospective, of industrial, commercial and financial enterprise.

Business has had a good year, a reasonably profitable year in most industries. A similar period of active turnover of merchandise at a moderate, and in a large number of cases adequate margin of profit is in prospect. For the past three months the average price of twenty representative industrial stocks, selected by Dow, Jones & Company, has been rising without any marked interruptions. Confidence is progressing in an elevated plane. Easier money, prospects of lower costs through a reduction in taxes, and early activity in some of the more important and more representative of the basic industries, all point to a heavier volume of more profitable business. These factors, together with such positive demonstrations of earning power as the declarations of increased and in some cases extra dividends, explain the buoyant trend of stock prices.

Prosperity, however, is still of a checkered character. Good times, to be truly profitable, should be more general. Activity and the margin of profit in such industries as iron and steel, railroad equipment, automobile, and building and construction have been reasonably satisfactory. On the other hand, such industries as chemicals, dyes, leather, tires, rubber, paper, agriculture, copper, and farm equipment are sluggish in their progress and discouraging in their profits. The new year may bring a further equalization of this prosperity for the trend, although very slow, is in that direction.

A second weakness, and one of long standing, is the persisting lack of balance in the purchasing power of various commodities. So many bushels

of corn used to buy so many pairs of shoes. War and post-war economic disturbances stretched and warped these old relationships beyond all recognition. Since 1920 the tendency has been toward the correction of this lack of equilibrium in the exchange value of the products of industry, and the time will probably come when something near their former relationships will have been re-established.

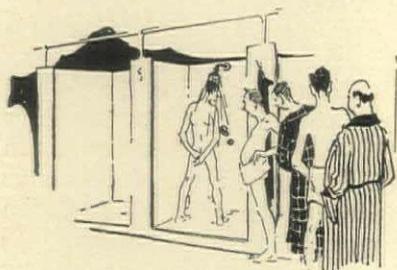
The situation has been made worse by the inequitable distribution of incomes since the war. Owners of enterprises in the more fortunate industries and the organized workingman have received the lion's share of the increases since the cessation of hostilities. The farmer, the salaried man, and the owners of the less fortunate enterprises have suffered to the extent that the other classes have gained.

It is unlikely that these features will reflect themselves in a declining rate of consumption, particularly if employment continues full. Nevertheless, it is difficult to see how such spotted purchasing power can support a *pronounced* advance in commodity prices. Yet persistently high wages, low inventories, and especially the prevalence of cheap and abundant credit favor very strongly a moderate rise in values. A wider margin between costs and selling prices will put business in a much easier position. Consumers' resistance to repeated advances in prices, however, may prevent the attainment of a comfortable margin, and heated competition to make a profit on turnover alone may ensue. An easier employment condition and the prospective cut in taxes are the two bright spots on the horizon of costs.

An early liquidation of industrial and agricultural indebtedness, and the continued importation of gold, together with the usual year-end settlements, transfers, and disbursements have increased the supply of money seeking employment and resulted in a depression of interest rates. All through January and the opening days of February the market was easy and credit was abundant. Reawakening industry and the preparation for Spring needs in agriculture will again employ the surplus funds which the demands of an active stock and an active bond market have not absorbed. The immediate outlook favors slightly firmer interest rates, but the fractional rise shows no indication of impeding the present and prosperous progress of industry.

#### COSTS ARE RISING

Construction costs are rising slightly. The *Engineering News-Record's* index for January 1 was 218 compared with 217 on December 1. The gain was only moderate, to be sure, but reflects slightly firmer values in all components of the index. Costs open the new year 13 per cent above



**They Stood in Line  
at the Union League Club**

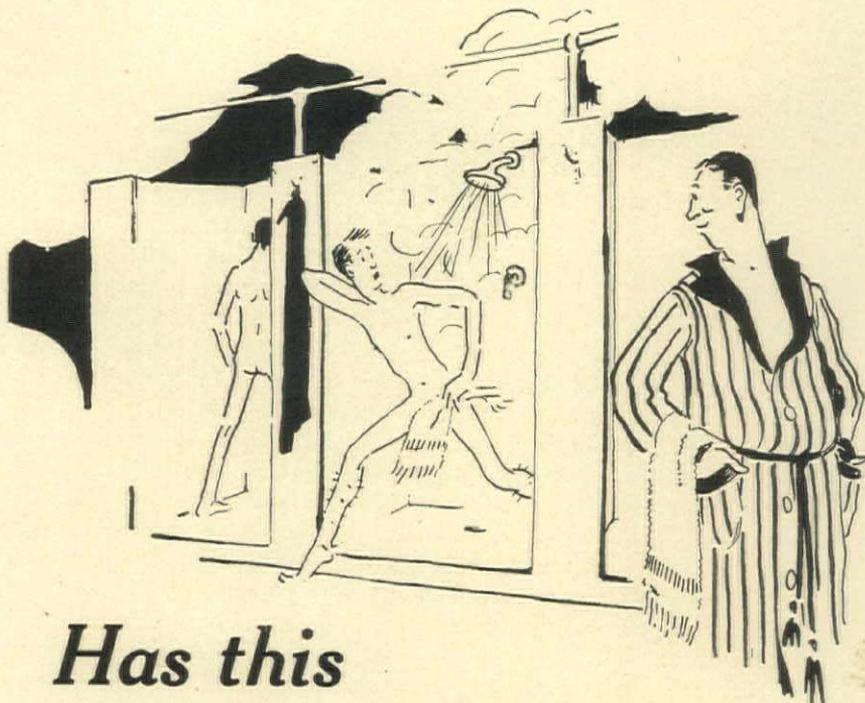
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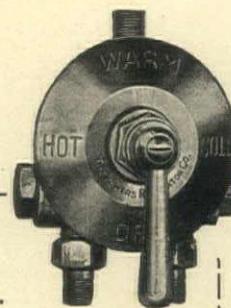
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last year's opening. The outlook strongly favors a rising level of costs, with the earliest increases occurring in the materials markets.

Materials prices, according to the Bureau of Labor, closed the year at the lowest level for the twelve-month period. They are still more than 25 per cent above the general commodity price level. January's index, which has not appeared at this writing, will probably reveal a further decline, but if recent gains are held, a rise will probably be disclosed when the February figure is computed. Dealers report that stocks in general are low, and that demand, although governed largely by the weather, is firm and lively beneath these surface hinderances. Repeated cold snaps have made buying spurdy, and chiefly for immediate needs, but the comparatively heavy demand is said to be absorbing shipments as fast as they are received.

Stocks of cement are accumulating as production and shipments decline during the season when plants are usually running on part time because of repairs and the necessity of taking inventories. A strong prospective demand, comparatively moderate reserves, and unrevised cost factors make lower prices improbable. Quotations were at their lowest point in the late weeks of November, when *The American Contractor's* composite price was \$2.44. By slow stages this quotation has worked up to \$2.47. The market's undertone is firm, and higher prices will probably feature the Spring months.

Conservative opinion holds that plant stocks of brick are adequate for immediate needs, but some apprehension is evinced as to the Spring demand, which is expected to be huge. Some plants, consequently, are being run throughout the entire Winter. Prices have displayed moderate irregularity, and February has opened with demand temporarily lighter, and prices slightly weaker. A stronger market is in prospect.

Lumber prices have also been moving with some irregularity. Southern pine has been in good demand, and the market strong. Douglas fir, on the other hand, has been weak. Closing of the mills for repairs and inventories has caused production to dip slightly under normal, according to the National Lumber Manufacturers' Association. Orders and shipments during the past four weeks have been 25 per cent and 10 per cent respectively ahead of production. This strong

statistical position, prospects of good demand, and no moderation in costs all presage firm and higher prices as the season advances.

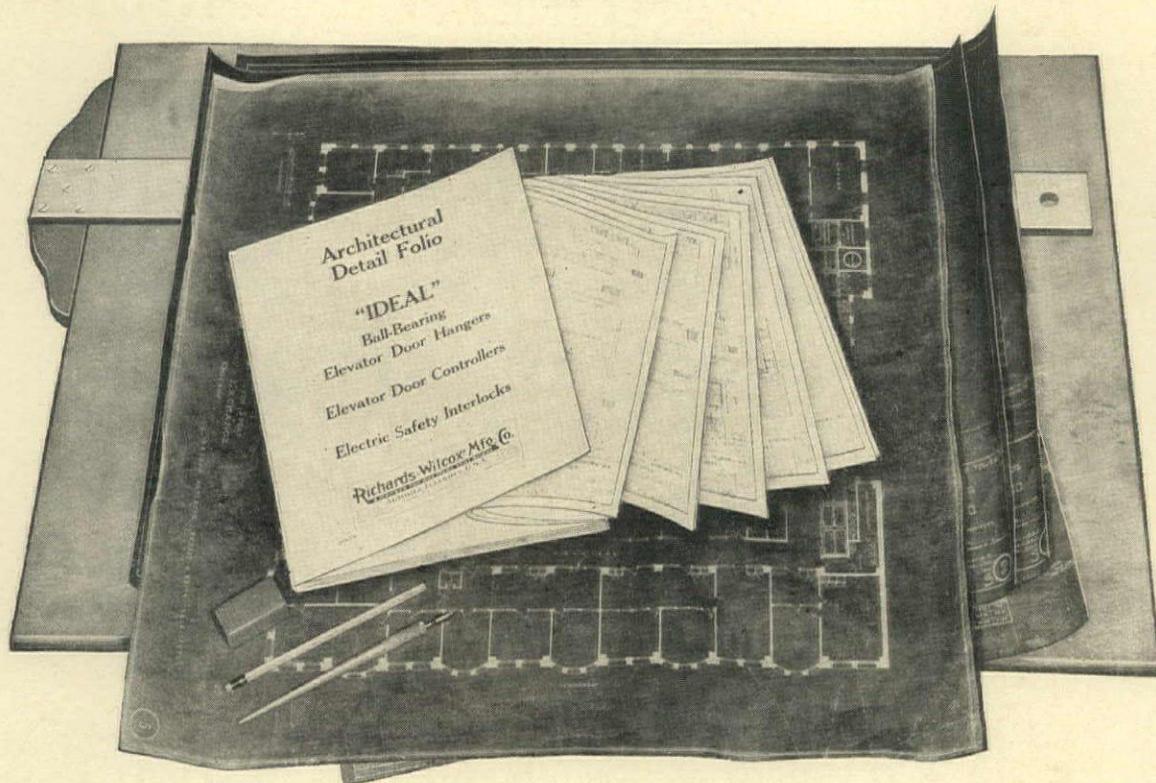
Sales of structural steel have been the heaviest since the early months of last year, and are reported to be running more than 25 per cent ahead of a year ago. Bookings are increasing, and the industry is said to be operating at about 85 per cent of capacity. Heavy contracts have put the industry in a strong position, and unyielding costs suggest a firm to rising market.

Labor costs appear to be stabilizing. According to *The American Contractor*, there were fewer wage changes in December than during any month in the past two years. The disappearance of bonus payments has resulted in reduced construction costs, but wage increases still exceed the cuts. The number of these increases has been diminishing since August, but the highest wages in history are being paid the skilled laborers.

The outlook promises no reduction in these costs. Prospects of a heavy building season ahead, promises of a moderate rise in prices of the necessities of life, and with no increase in the supply of labor apparent, it is difficult to see how wages can be expected to work lower. They may move still higher.

The greatest shortage exists in the plumbing, steamfitting, plasterers, bricklayers and tilelaying trades, but the supply of skilled mechanics in other lines is also below normal. Some skilled workmen are said to be coming in from Europe, but not in sufficient numbers to have any appreciable effect upon the situation. New methods of apprenticeship have likewise been summoned to relieve the stringency. There is no shortage of unskilled laborers.

Mortgage money rates have not changed, but the increased supply of credit has made accommodation slightly easier to get. Bankers still insist upon ample protection in the form of sufficient equity to absorb any moderate decline in values. Lower costs, lower valuations, and a reappraisal of the whole situation on a lower and more deflated plane will be necessary before the banker can revise his opinion of the risk involved in new construction loans. The time when such a reappraisal can be made is still many months removed, but it is approaching. The indications are that the transition from a higher to a lower plane will be a gradual one.



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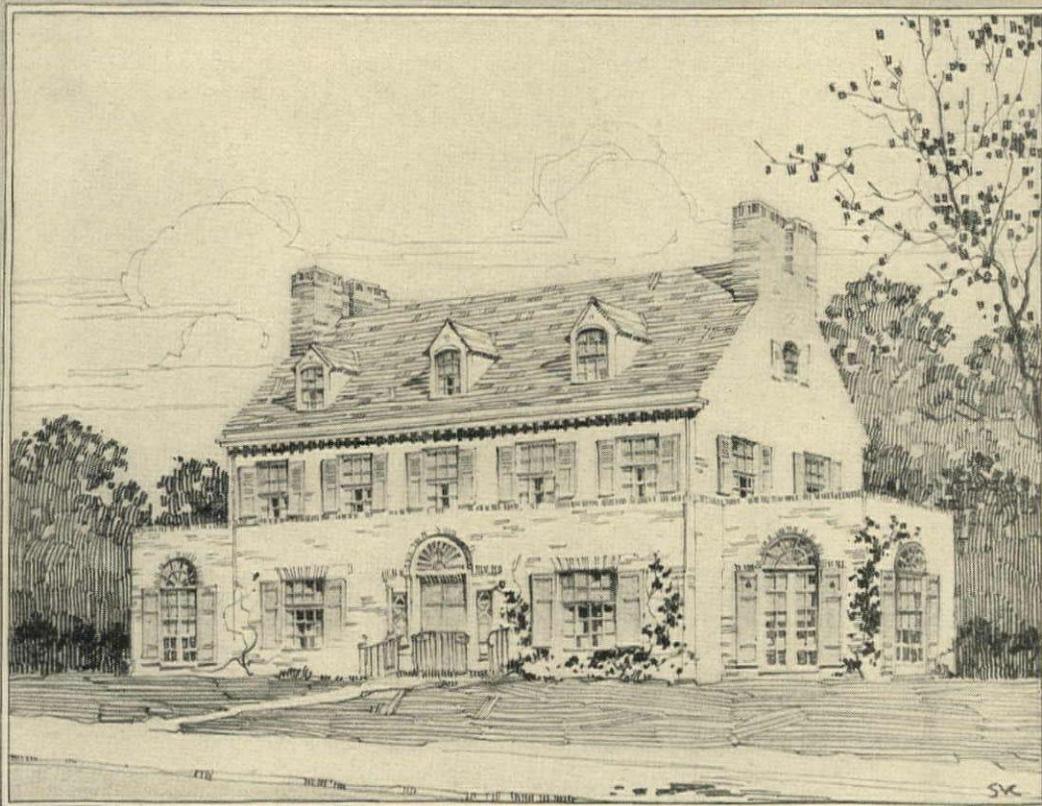
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**The Bayley Manufacturing Company**, 732-766 Greenbush St., Milwaukee, Wis.

480. *Bulletin No. 23*. This bulletin is descriptive of the Bayley Turbo-Atomizer, the Bayley Turbo Air-Washer and Air Conditioner, for cleaning, cooling, tempering, humidifying and dehumidifying air. It contains an interesting treatise on air conditioning methods together with useful tables and a set of specifications. 32 pp. Ill. 7½ x 10½ in.

## ARCHITECTURAL IRON WORK—See also Ornamental Metal Work

### ASBESTOS—See also Lumber—Roofing

**Johns-Manville Co.**, New York, N. Y.

372. *Catalog No. 304*. A treatise on the manufacture and uses of Johns-Manville Building Materials made of asbestos and mastic for all places exposed to fire or corrosion. 100 pp. Ill. in colors. Board covers. 8½ x 11 in.

### ASBESTOS ROOFING—See also Roofing

**The Phillip Carey Co.**, Lockland, Cincinnati, Ohio.

380. *Asbestos versus Fire*. Booklet in colors. Contains information about asbestos; data on Carey Prepared and Built-up Asbestos Roofing; pictures of buildings on which they have been used. 15 pp. Ill. 6 x 9 in.

### ASH HOISTS—See also Hoists

**Gillis & Geoghegan**, 545 West Broadway, New York, N. Y.

320. *General Catalogue*. Contains specifications in two forms, (1) using manufacturer's name, and (2) without using manufacturer's name. Detail in ¼ in. scale for each telescopic model and special material handling section. Fully illustrated with photographs of actual installations and descriptive matter of same. 20 pp. 2 colors. 8½ x 11 in.

## BRICK

**American Face Brick Association**, 1754 People's Life Bldg., Chicago, Ill.

103. *The Story of Brick*. Contains the history of, and basic requirements of building brick, artistic, sanitary and economic reasons, comparative costs, and fire safety with photographs and drawings, and illustrates ancient and modern architectural works of note in brick. Size 7 x 9¼ in. 56 pp.

137. *A Manual of Face Brick Construction*. The history of brick making, types of face brick, showing details of construction for walls, chimneys and arches. Details of use of tile and brick construction and different types of bonds are given. A series of plans and elevations of small brick houses, descriptions, useful tables and suggestions are illustrated and described. Size 8½ x 11 in. 116 pp. Price \$1.00.

155. *The Home of Beauty*. A booklet containing fifty prize designs for small brick houses submitted in national competition by architects. Texts by Aymar Embury II, Architect. Size 8 x 10 in. 72 pp. Price 50 cents.

371. *Architectural Details in Brickwork. Series One, Two and Three*. Each series consists of an indexed folder case to fit standard vertical letter file, containing between 30 and 40 half-tones in brown ink on fine quality paper. These collections are inspiring aids to all designers. Sent free to architects who apply on their office stationery; to others, 50 cents for each series.

454. *Bungalow and Small House Plans*. Four booklets containing plans for attractive small brick houses, containing 3-4, 5, 6, and 7-8 rooms. 50 pp. Ill. 8½ x 11 in. 25 cents each, \$1.00 for the set.

## BRICK AND TILE—See also Brick

**B. Miffin Hood Brick Co.**, Atlanta, Ga.

561. *Pottery*. A beautifully prepared and illustrated book and portfolio of work executed with the products of this company. Included are "Riviera" Mission Roofing Tile, "Riviera" Shingle Roofing Tile, Rubble Random Tile and Quarrie Tile for walks, floors and terraces, fireplace tile and Hood Brick. Many of the illustrations are in full color and give an excellent impression of the results attained. Printed on one side for convenient filing. 45 pp. Ill. 9½ x 12¼ in.

## BUILDING CONSTRUCTION

**Cement-Gun Company**, Allentown, Pa.

563. *Report on Gunite Walls*. A report of fire tests made by Underwriters' Laboratories on Gunite walls, resulting in giving them a three-hour fire resistance classification. 90 pp. Ill. 6 x 9 in.

**Concrete Engineering Co.**, Omaha, Neb.

347. *Handbook of Fireproof Construction*. An illustrated treatise on the design and construction of reinforced concrete floors with, and without suspended ceilings. The Meyer Steel-form Construction is emphasized and tables are given of safe loads for ribbed concrete floors. 40 pp. Ill. 8½ x 11 in.

**Curtis Companies Service Bureau**, Clinton, Iowa.

662. *Better Built Houses*. Vol. XIII. This volume contains floor plans and perspectives of 21 two family houses. The designs were made by Trowbridge and Ackerman, Architects, New York, and illustrations rendered by Schell Lewis. Printed in sepia on heavy cream paper. Sent free to architects, east of the Rockies, requesting it on business stationery, otherwise price \$1.00. 24 pp. Ill. 9 x 12 in.

**David Lupton's Sons Company**, Philadelphia, Pa.

529. *Catalog C, Second Edition*. A catalog of steel shelving with bolted adjustment, also steel bins and racks, utility cabinets, bench legs, bench drawers, tool cabinets and stands, tote boxes, foremen's desks, waste bins, etc., 39 pp. Ill. 8½ x 11 in.

**Milwaukee Corrugating Co.**, Milwaukee, Wis.

F796. *The Milcor Manual, Catalog No. 20*. A manual of fire-proof construction explaining the uses of Expanded metal lath, steel domes, corner beads, metal casings and accessories. Designing data, details and specifications. 64 pp. Ill. 8½ x 11 in.

**Portland Cement Association**, 347 Madison Ave., New York City.

595. *Concrete Floors.—Proposed Standard Specifications of the American Concrete Institute*. Specification with explanatory notes covering materials, proportions, mixing and curing. Plain and reinforced slabs are covered as well as one and two course floors and wearing courses. 18 pp. 6 x 9 in.

**Truscon Steel Company**, Youngstown, Ohio.

317. *Truscon Floortyle Construction, Form D-352*. Contains complete data and illustrations of Floortyle installations. 16 pp. Ill. 8½ x 11 in.

318. *Truscon Standard Buildings, Form D-398*. Describes Truscon Standard Steel Buildings, with diagrams, illustrations of installations, descriptive matter and list of users. 48 pp. Ill. 8½ x 11 in.

319. *Truscon Building Products, Form D-376*. Contains a brief description of each of the Truscon Products. 112 pp. Ill. 8½ x 11 in.

320. *Modern School Construction, Form D-396*. Contains illustrations of schools, with typical elevations, showing advantages of Truscon Products for this construction. 16 pp. Ill. 8½ x 11 in.

## BUILDING DIRECTORIES

**The Tablet & Ticket Co.**, 1015 West Adams St., Chicago, Ill.

517. *Office Building Directory*. Bulletin illustrating and describing directories made by this company providing for any required number of names. Frames of wood or metal with glass cover or doors. Name strips with one quarter inch white letters furnished. Size 7 x 10 in. 4 pp.

## BUILDING HARDWARE—See Hardware

## BULLETIN BOARDS

**R. W. Clark Mfg. Co.**, 1774 Wilson Ave., Chicago, Ill.

588. *Clark Directories and Clark Changeable Bulletin Boards*. Two pamphlets describing the Clark Changeable Bulletin Board and Directories for Office Buildings, Hotels, Business Buildings, etc. 8 pp. and 4 pp. Ill. 6¼ x 9 in.

**The Tablet & Ticket Co.**, 1015-1021 West Adams Street, Chicago, Ill.

516. *T. & T. Changeable Bulletin Display Boards*. Describes bulletin boards with changeable type which has a self-spacing device so the lettering always looks neat and regular. 24 pp. Ill. 6 x 9 in.

## CABINETS

**Hess Warming & Ventilating Co.**, 1204-7 Tacoma Building, Chicago, Ill.

386. *The Hess Sanitary Medicine Cabinet Lockers and Mirrors*. Description with details of an enamelled steel medicine cabinet for bathrooms. 20 pp. Ill. 4 x 6.

## CASEMENTS—See Doors and Windows

## CEDAR LINING—See Lumber

## CEILINGS, METAL

**The Edwards Manufacturing Company**, Cincinnati, O.

193. *Pamphlet* of 32 pages describing metal ceilings and wainscoting. Well illustrated, with list prices and rules for estimating. 7 x 10 in.

## CELLAR SASH—See Doors and Windows

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*Burned Clay Products*  
*Atlanta Ga*

## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## CEMENT

The Carney Co., Mankato, Minn.

448. *The Bond That Guarantees the Wall.* Attractive catalog for architects, engineers, contractors, and dealers. Describes fully the characteristics, durability and economy of this nature-mixed cement that requires no lime. Contains simple formula for mixing and illustrations of Carney-laid buildings. 24 pp. Ill. 8½ x 11 in.

599. A circular describing improvements in manufacturing the material, cost comparisons, physical tests and specifications for use. 4 pp. Ill. 8½ x 11 in.

690. Attractive Circular describing late improvements in manufacturing Carney Cement, cost comparisons, physical tests, specifications and testimonials. Contains four page list of Carney-built buildings in all parts of the United States with architects' and contractors' names. 8 pp. Ill. 8½ x 11 in.

Durastone Co., 422 East 3rd St., New York, N. Y.

418. *Durastone Brand Cement.* A description of a cement which matches any stone or marble, any color or texture. Can be cast in molds and also used for walls or plain surfaces. Illustrations are given of beautiful work executed with this material. 12 pp. Ill. 8½ x 11 in.

Louisville Cement Co., Inc., Louisville, Ky.

694. *Brixment for Perfect Mortar.* A description of the chemical and physical properties of Brixment, advantages of its use in mortars for brick and stone masonry, tests of strength and directions for use. In cover for filing. 16 pp. Ill. 8½ x 11 in.

Portland Cement Association, 111 West Washington St., Chicago, Ill.

636. *Concrete Data for Engineers and Architects.* A valuable booklet containing the reports of the Structural Materials Research Laboratories at Lewis Institute, Chicago, in abbreviated form. It is of great value to writers of specifications. 18 pp. Ill. 8½ x 11 in.

650. *Concrete Floors.* Contains the tentative specifications of the American Concrete Institute for concrete floors of all kinds, with notes on floor finishes, coverings, typical construction designs and computing data. 16 pp. Ill. 8½ x 11 in.

## CHAIRS—See Furniture

The B. L. Marble Chair Co., Bedford, Ohio.

587. *Office Chairs, Catalog No. 31.* Describes a complete line of seating fixtures, for offices, directors' rooms and other places consisting of stationary and swivel chairs, settees and couches, both plain and leather upholstered. Also stenographer's chairs, stools, waste baskets, coat trees and accessories. 75 pp. Ill. 9 x 12 in.

## CHUTES—See also Laundry Equipment

Edwin A. Jackson & Bro., Inc., 50 Beekman St., New York.

171. Booklet showing general construction and size of chutes to receive coal. Two types are built into the foundation wall with glass panel in place of cellar window; another type is placed flush with the ground, and is placed adjacent to wall, or can be placed near the street curb. Size 3½ x 6¼ in. 16 pp.

## CLOCKS

Landis Engineering and Manufacturing Co., Waynesboro, Penna.

469. *Landis Electric Time and Program System.* A collection of bulletins No. 100, 110, 120, 130, 150 and 160, dealing with master and secondary clocks, equipment, time stamps, etc. Bound in expandible filing cover of tough paper. 48 pp. Ill. 8½ x 11 in.

## COLUMNS

Lally Column Co. of New York, 334 Calyer Street, Brooklyn, N. Y.

122. *Lally Columns. Handbook.* Detailed construction diagrams for various types of steel construction. The text describes advantages of endurance and economy of the column. Various tests, tables of sizes, dimensions, weight, carrying capacities, and data on other structural materials are given. Size 4% x 6% in. 81 pages.

## CONCRETE, REINFORCED—See also Reinforcing Steel

## CONDUITS—See Pipe

## DAMP-PROOFING—See also Waterproofing

## DOORS AND WINDOWS

Andersen Lumber Company, Bayport, Minn., (formerly South Stillwater).

559. *Complete Catalog for Architects and Builders.* Describes Andersen Standard Window Frames and Cellar Sash Frames, which are in 7 units instead of 57 and may be assembled and nailed in 10 minutes. Shows uses in special construction for it comes in 121 sizes and styles. 24 pp. Ill. 7¼ x 10¼ in.

Crittall Casement Window Co., Detroit, Mich.

672. *Crittall Universal Casements, Catalog No. 22.* Contains complete description, photographs, specifications and details of steel casement windows for banks, schools, residences, churches hospitals, set directly into masonry and with auxiliary frames. 76 pp. Ill. 9 x 12 in.

695. *Crittall Solid Steel Reversible Windows, Catalog No. 1-24.* A catalog explaining the advantages of reversible metal windows for office buildings, schools, hospitals and other substantial buildings. Details of construction and specifications. 20 pp. Ill. 8½ x 11½ in.

Dahlstrom Metallic Door Co., Jamestown, N. Y.

674. *Architectural Catalog.* Illustrated catalog showing styles and types of Dahlstrom Standard Construction Hollow Metal Doors and Trim, Conduite-Base, etc. Also various types of frames, jamb construction and architectural shapes. 178 pp. Ill. 8½ x 11 in., in loose leaf.

Henry Hope & Sons, 103 Park Ave., New York.

65. *Hope's Casements and Leaded Glass.* Portfolio. Gives specifications, description and photo-engraving, of Hope Casements in English and American Architecture, full size details of outward and inward opening and pivoted casements, of residential and office types. Size 12¼ x 18½ in. 32 pp.

The Kinnear Manufacturing Company, Columbus, Ohio.

455. *Steel Rolling and Folding Doors and Shutters. Catalog No. 52.* This catalog is devoted to service doors adaptable to buildings of all classes, piers, factories, warehouses, etc. Illustrates their use and contains tables for designers and detailers. 96 pp. Ill. 8 x 11 in.

David Lupton's Sons Co., Philadelphia, Pa.

526. *Catalog No. 11, Service Products.* A complete technical catalog for the engineer and contractor of large industrial plants and business buildings. Contains full architects' specifications and details for laying out industrial, school and office sash, partitions, doors and skylights for large projects. 191 pp. Ill. 8½ x 11 in.

527. *Lupton Casements and Double Hung Windows.* A book showing details and applications of steel casements and steel plate windows for the higher grade of banks and business buildings. Complete details and specifications. 41 pp. Ill. 8½ x 11 in.

528. *Steel Windows for Apartment Houses, Residences, Offices, and Schools.* Booklet on "out-at-side" windows of casement appearance for medium priced residences. Covers also steel basement windows, and types of steel windows suited for Schools, Hospitals and Office Buildings of moderate cost. 16 pp. Ill. 8½ x 11 in.

583. *Lupton Steel Windows. No. 110.* A catalogue covering types of sash suitable for small to medium sized industrial and office buildings. Contains everything needed for the average builder in compact form. 70 pp. Ill. 8½ x 11 in.

S. H. Pomeroy Company, 282 East 134th St., New York, N. Y.

614. *Solid Metal Double Hung Window. Type "A." Bulletin A.* Complete specifications and details of sash, frame, stools and stool and apron. 4 pp. Ill. 8½ x 11 in.

Truscon Steel Co., Youngstown, Ohio.

315. *Truscon Steel Sash.* A catalog containing designing data, tables and views of Stock Sash installations. 6 pp. Ill. 8½ x 11 in.

348. *Truscon Steel Sash.* This handbook has been prepared for detailers and specification writers. The descriptions are clear and the details are complete. 80 pp. Ill. 8½ x 11 in.

638. *Daylighting Schools.* A treatise on the daylighting and window ventilation of school buildings quoting eminent authorities, illustrated with diagrams of lighting data and details of suitable windows. 28 pp. Ill. 8½ x 11 in.

The J. G. Wilson Corporation, 2 East 36th St., New York City.

656. *Wilson Rolling Partitions and Hygienic Wardrobes. Catalog "P."* Complete catalog of vertical and horizontal wooden rolling partitions and ventilated wardrobes with disappearing doors. 32 pp. Ill. 6 x 9 in.

## DRAFTING MATERIALS

American Lead Pencil Co., 220 Fifth Ave., New York, N. Y.

268. *Booklet C-20. Venus Pencil in Mechanical Drafting.* An interesting illustrated booklet showing the possibilities of the Venus Drawing Pencil for drafting. 6 x 9 in.

Joseph Dixon Crucible Company, Pencil Department, Jersey City, N. J.

325. *Finding Your Pencil.* A book explaining the various degrees of hardness of the Eldorado pencil and the grade most suitable for every man who uses a pencil be he business or professional man, clerk or draftsman. Accompanied by a color chart of Dixon colored crayons. 16 pp. and 4 pp. in color chart. Ill. in colors. 3¼ x 6 in.

## DRAINS—See also Plumbing Equipment

The Josam Manufacturing Co., 2d and Canal Sts., Michigan City, Indiana.

630. *Josam Floor, Shower and Roof Drains. Catalog F.* A loose leaf catalog illustrating complete line of adjustable drainage devices for floors, shower baths, roofs, swimming pools, railroad and deck drains, special use drains, strainers and accessories. Details and dimensions. 55 pp. Ill. 8½ x 11 in.

631. *Josam Plate Numbers.* A loose leaf portfolio containing blue print details with dimension schedules of drainage fixtures for floors, showers, roofs, decks and special uses. 25 pp. Ill. 8½ x 11 in.

## DUMB-WAITERS—See also Elevators

Kaestner & Hecht Co., 1500 No. Branch St., Chicago, Ill.

598. *Electric Dumb-waiters. Bulletin No. 520.* Illustrated catalog, 8 pp. 8½ x 11 in.

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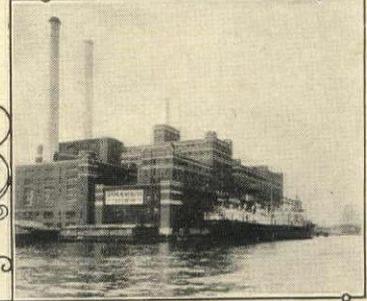
RICHMOND TRUST Co., Richmond, Va.  
Architects, Streett & Van Vleet  
Contractor, John T. Wilson Co.



PUTNAM DEPARTMENT STORE, Davenport, Ia.  
Architect, Graham, Anderson, Probst & White  
Contractor, Geo. A. Fuller Co.



STEARNS COUNTY COURT HOUSE, St. Cloud, Minn.  
Architects, Toltz, King & Day  
Contractor, Chas. Skooglan



AMERICAN SUGAR REFINERY, Baltimore, Md.  
Architect, Chas. T. Mann  
Builders, Stone & Webster, Inc.



ROOSEVELT JUNIOR HIGH SCHOOL, Cedar Rapids, Ia.  
Architects, Rugh & Zalesky  
Contractor, Theo. Stark & Co.



WESTMINSTER COMMUNITY BLDG., Detroit  
Architect, Geo. M. Lindsey  
Builders, Stone & Webster, Inc.

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

## REFERENCE LIST OF BUSINESS LITERATURE—Continued

**DUMB-WAITERS—See also Elevators -**

**Sedgwick Machine Works**, 144 West 15th Street, New York.

60. *Hand Power Elevators and Dumb-waiters in Modern Architectural Construction.* Illustrated catalogue. 4¼ x 8¼ in. 80 pp.

**ELECTRICAL EQUIPMENT—See also Lighting**

**Frank Adam Electric Co.**, St. Louis, Mo.

296. *Catalog No. 25.* A catalog and price list of knife switches, switchboards, panel boards, steel cabinets, switchboard material. 83 pp. Ill. 3 x 10½ in.

**Benjamin Electric Mfg. Co.**, Chicago, Ill.

671. *Benjamin Industrial Lighting Equipment. Bulletin No. 52.* Contains lighting data and general information, complete catalog of reflectors, interchangeable devices, vapor proof units, indoor and outdoor equipment, store and office fixtures, show case lighting, fittings and accessories. 80 pp. Ill. 8 x 10½ in.

**Harvey Hubbell, Inc.**, Bridgeport, Conn.

297. *Electrical Specialties. Catalog No. 17, 1921.* This catalog contains descriptions with prices of the thousand and one items connected with electric light, electric alarm and small electric appliance installations in modern buildings. 104 pp. Ill. 8 x 10½ in.

**The Hart & Hegeman Mfg. Co.**, 342 Capitol Ave., Hartford, Conn.

699. *H. & H. Electrical Wiring Devices, Catalog "R."* Catalog of a complete line of switches, sockets, plugs, receptacles, plates, rossettes, cut-outs, electrics and accessories. Two identical catalogs in two sizes. 152 pp. Ill. 5 x 6¼ and 8 x 10½ in.

700. *Gold and Silver Star Switches.* A new type of switch with composition base having a gold star or a silver luminous star in on the button. 4 pp. Ill. 3½ x 6 in.

**Minneapolis Heat Regulator Co.**, Minneapolis, Minn.

570. *The Minneapolis Thermostatic Relay Switch.* Used in connection with any Minneapolis Thermostat, provides a means of temperature control for automatic oil burners, electric refrigerating apparatus, electric heating units and any similar equipment where it is necessary to operate an electric switch in accordance with temperature changes. 4 pp. Ill. 8½ x 11 in.

**National Metal Molding Co.**, Pittsburgh, Pa.

481. *Liberty Rubber Insulated Wires, Cables and Cords.* A descriptive catalog of insulated wires, cables and cords for electric wiring. Contains much special information together with useful tables. 20 pp. Ill. 6 x 9 in.

**ELEVATORS—See also Dumb-waiters and Hoists**

**A. B. See Electric Elevator Co.**, 52 Vesey St., New York.

169. Photographs and description in detail of elevator equipment manufactured by the A. B. See Electric Elevator Co. Size 6 x 8 in.

**Kaestner & Hecht Co.**, 1500 No. Branch St., Chicago, Ill.

597. *Electric Traction Elevators, Bulletin No. 500.* Illustrated catalog describing gearless traction elevators and worm-gear traction elevators. 31 pp. 8¼ x 11 in.

**Kimball Brothers Company**, Council Bluffs, Iowa.

330. *Kimball Elevators.* An illustrated catalog of hand power, sidewalk, and garage elevators and dumb-waiters and electric passenger, freight and push button elevators. 32 pp. Ill. 7¼ x 10½ in.

**Otis Elevator Co.**, 260 Eleventh Ave., N. Y. C.

651. *Otis Geared and Gearless Traction Elevators.* Leaflets describing all types of geared and gearless traction elevators with details of machines, motors and controllers for these types. Illustrated. 8½ x 11 in.

**Richards-Wilcox Mfg. Co.**, Aurora, Ill.

335. *"Ideal" Elevator Door Equipment.* Catalog showing elevator door hangers for one, two and three speed doors, also doors in pairs and combination swing and slide doors. Door closers and checks. 24 pp. Ill. 8½ x 11 in.

**ELEVATOR LOCKS**

**Elevator Locks Co.**, 119 No. Washington St., Peoria, Ill.

536. *M-C-K Safety Elevator Locks.* A description of locks for elevators which mechanically lock the power and gate automatically, while gate is open; keep power locked until gate is securely closed; securely lock gate before power can operate; control the landing. Contains several pages of names of contented users. 24 pp. Ill. 4 x 9¼ in.

**ESCALATORS**

**Otis Elevator Co.**, 260 Eleventh Ave., N. Y. C.

652. *Elevators and Inclined Elevators.* A comprehensive catalog illustrating the use of escalators for transporting people in stores, subways, railroad stations, theatres and mills; also inclined freight elevators for stores, factories, warehouses and docks adjustable to tide levels. 22 pp. Ill. 8½ in.

**FENCE**

**The Stewart Iron Works Company**, Cincinnati, Ohio.

456. *Book of designs "B."* A book of fence designs full of suggestions for architects. All illustrations are from photographs. 80 pp. Ill. 9½ x 12 in.

**FILTERS—See Air Filters****FINANCING OF ENTERPRISES**

**S. W. Straus & Co.**, 565 Fifth Ave., New York, N. Y.

183R. *Forty Years Without Loss to Any Investor.* A book describing the Straus Plan of investments. This firm underwrites and sells only first mortgage serial bonds secured by newly improved income producing properties, or high grade industrial properties. 37 pp. Ill. 5 x 8 in.

**FIRE DOORS AND SHUTTERS—See Doors and Windows****FIRE ESCAPES**

**The Dow Co.**, Louisville, Ky.

F795. *The Dow Spiral Slide Fire Escape.* A folder containing a general description, advantages and diagrams of this type of fire escape. 8 pp. Ill. 4 x 9½ in.

**FIREPLACES AND MANTELS**

**Colonial Fireplace Co.**, 4619 Roosevelt Road, Chicago, Ill.

675. *Everything for the Fireplace.* A catalog showing a complete line of well designed andirons in various finishes; portable, club and basket grates; wood holders, firesets and Franklin stoves; folding screens, spark guards and fenders; hoods and set grates; gas logs, electric fires, ash traps, cranes and kettles and head throats and dampers. 24 pp. Ill. 8½ x 11 in.

**H. W. Covert Co.**, 137 East 46th St., New York.

79. *Hints on Fireplace Construction.* Diagrams of construction and installation of Covert "Improved" and "Old Style" dampers and smoke-chambers, and other fireplace accessories. Size 5½ x 8½ in. 12 pp.

**Edwin A. Jackson & Bro., Inc.**, 50 Beekman St., New York.

92. *Dampers, Chutes, Doors and Dumps.* Illustrated catalog. Equipment and appurtenances of various types, construction and installation, data, dimensions and prices.

**Peerless Manufacturing Company, Inc.**, Louisville, Ky.

513. *The Lure of the Fireplace.* This booklet contains information and diagrams for the design and building of fireplaces, together with descriptions of modern domes and dampers so that a fireplace will work effectively at all times. Contains many illustrations of tasteful mantel designs. 24 pp. Ill. 5 x 7 in.

**FLOOR COVERING—See Flooring****FLOORING. SUB—See also Stucco Base****FLOORING**

**Armstrong Cork Co., Linoleum Department**, Lancaster, Pa.

222. *Business Floors.* A handy reference on floors for public and semi-public buildings, containing specimen specifications, directions for laying and other helpful data. Illustrated in color. 6 x 9 in.

223. *Armstrong's Linoleum Floors.* A handbook for architects, published in the file form (8¼ x 11 in.) recommended by the American Institute of Architects. A technical treatise on Linoleum containing general information, tables of grades, gauges and weights, specimen specifications, and detailed directions for laying linoleum. Profusely illustrated in colors.

**The Barber Asphalt Co.**, Philadelphia, Pa.

659. *Genasco Trinidad Lake Asphalt Mastic.* A book describing its manufacture, uses and methods of application, including application over old floors. Separate specifications for flooring, waterproofing and roofing uses. 34 pp. Ill. 6 x 9 in.

**Bonded Floors Co., Inc.**, 1421 Chestnut St., Philadelphia, Pa.

615. *Standard Specification for Installation of Battleship Linoleum Over Concrete.* A booklet containing specifications and explanatory notes for laying Battleship Linoleum Over Concrete and Wood, with detailed drawings. 8 pp. 8½ x 11 in. A. I. A. File No. 28. Ill.

653. *Gold-Seal Treadlite Tile.* An illustrated booklet showing Treadlite Tile installations and containing general information, specifications, etc., with reproductions of the product in colors.

669. *Distinctive Floors.* An attractive publication illustrated in color, describing Gold Seal Rubber Tile for floors. 8 pp. Ill. 8 x 10¼ in.

**The Long-Bell Lumber Co.**, R. A. Long Building, Kansas City, Mo.

204. *The Perfect Floor.* Tells how to lay finish and care for Oak Flooring. 16 pp. 14 illus. 5½ x 7½ in.

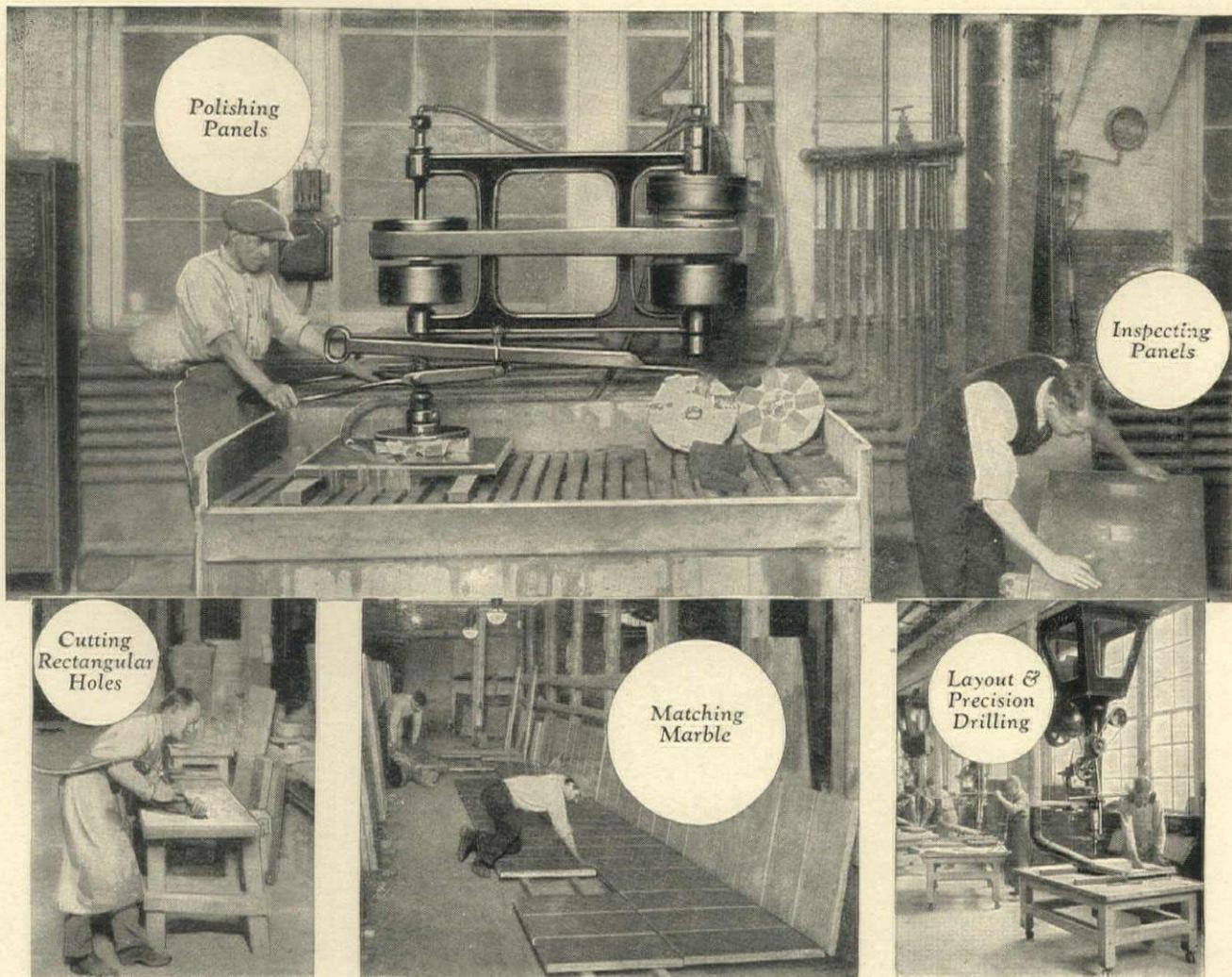
**The Marbleloid Co.**, 461 Eighth Ave., New York.

61. *The Universal Flooring for Modern Buildings.* Illustrated booklet. Describes uses and contains specifications for Marbleloid flooring, base, wainscoting, etc. Size 6¼ x 9¾ in. 32 pp.

523. *Marbleloid for Schools.* A bulletin showing schools in which Marbleloid flooring is used. It is a composition flooring applied in a plastic state. Other bulletins show where it has been used in various classes of buildings. 4 pp. Ill. 3½ x 11 in.

**Franklyn R. Muller Co.**, Waukegan, Ill.

242. *Asbestone Flooring Composition.* A book describing uses of and giving specifications and directions for Composition Flooring. Base. Wainscoting, etc. 8½ x 11 in. Ill.



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Marble and slate panels are polished *after* they are drilled. Each panel is carefully inspected before going to the assembly floor.

G-E Switchboard panels are obtainable in shock and moisture proof compounds and in marble, slate and steel.



This is the third part of a story of the building of quality switchboards which we trust may be placed in your file No. 31c2. Later we shall tell you about the use of Steel Switchboards.

**General Electric  
Company  
Schenectady, N. Y.**

54C-84

# GENERAL ELECTRIC

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## FLOORING

- Oak Flooring Bureau**, 1014 Ashland Block, Chicago, Ill.  
**493. Modern Oak Floors.** A book that tells the complete story of Oak Flooring 24 pp. Ill. 6½ x 9¼ in.  
**The Rodd Co.**, Century Bldg., Pittsburgh, Pa.  
**688. Redwood Block Floor Booklet.** A treatise on the advantages of Redwood Block Floors in factories, warehouses, hotels, office buildings, department stores, hospitals, etc. Details, dimensions and specifications for installing. 14 pp. Ill. 4 x 9 in.  
**Stedman Products Co.**, South Braintree, Mass.  
**585. Stedman Naturalized Reinforced Flooring.** A circular describing a product formulated from rubber reinforced with cotton fibre, made in various colors and used for floors, wainscoting, sanitary base, stair treads, interior decorative units, wall coverings, table and desk tops and drain mats. 6 pp. Ill. 8½ x 11 in.

## FLOORS—See Building Construction

## FRAMES—See Doors and Windows

## FURNACES—See Heating

## FURNITURE—See Chairs

## GARAGE CONSTRUCTION—See also Building Construction

## GARAGE INCLINES AND RAMPS

- American Abrasive Metals Co.**, 50 Church St., N. Y. C.  
**677. Feralun Anti-Slip Treads for Garage Inclines and Ramps.** F17p. A folder explaining the advantages of and illustrating the actual use of Feralun Anti-Slip Treads on ramps and inclines in public garages. 2 pp. Ill. 8½ x 11 in.

## GARBAGE DESTROYERS

- Kerner Incinerator Company**, 1029 Chestnut St., Milwaukee, Wis.  
**384. The Sanitary Elimination of Household Waste, M-3 Folder.** Description of construction, installation and operation of the Kernerator for residences. Illustrated by views of residences in which the Kernerator is installed, with cuts showing all details. 15 pp. Ill. 4 x 9 in.

## GARBAGE RECEIVERS

- Edwin A. Jackson & Bro., Inc.**, 50 Beekman St., New York.  
**170.** Booklet showing general construction and sizes of garbage receivers to be placed underground for suburban use; also types to be built into the wall of city homes and apartments; also types for suburban wall with opening on inside for the maid and outside for the garbage man. Size 3½ x 6¼ in. 16 pp.

## GARDENS

- Julius Rochrs Company**, Rutherford, N. J.  
**406.** The Ten-Ten books issued three times a year—covering nursery stock in general, such things as fruit trees, roses and perennials. Also one general greenhouse catalog, listing orchids and greenhouse plants.

## GLASS

- Plate Glass Manufacturers of America**, First National Bank Bldg., Pittsburgh, Pa.  
**484. The Part that Plate Glass Plays in the Life of Every Man.** An illustrated folder describing the many uses of plate glass. Ask also for special circular for work in hand. 6 pp. Ill. in color. 3½ x 6¼ in.

## GRANITE—See Stone

## GUNITITE

- Cement Gun Company**, Allentown, Pa.  
**504. The Cement Gun, Its Application and Uses.** Reprint of a paper by Byran C. Collier, M. Am. Soc. C. E. A description of what the cement gun is and how it works, together with reports on tests. 21 pp. Ill. 6 x 9 in. Ask also for companion pamphlet "Gunite Slabs" containing working tablets for designers and reports on slab tests. 30 pp. Ill. 6 x 9 in.

## GUTTERS AND DOWNSPOUTS—See also Roofing

- The New Jersey Zinc Co.**, 160 Front Street, New York, N. Y.  
**226. Zinc Spouting.** Describes leaders, gutters, etc. "Made from Horse Head Zinc," giving information concerning their economy and durability. 8 pp. Ill. 6 x 9 in.

## HARDWARE

- Albith-Prouty Co.**, Danville, Illinois.  
**596. General Catalog No. 90.** This catalog embraces a description of a complete line of door hangers and tracks, garage door hardware, spring hinges, rolling ladders, fire door hardware, overhead carriers, light hardware and hardware specialties. 144 pp. Ill. 7¾ x 10½ in.  
**P. & F. Corbin**, New Britain, Conn.  
**540. Automatic Exit Fixtures.** A catalog of fixtures that provide a ready exit at all times, as a child can operate them with ease. Doors to which they are applied can always be opened from the inside, even when locked against entrance. 4 pp. Ill. 8¾ x 11¾ in.

**Monarch Metal Products Co.**, 5060 Penrose St., St. Louis, Mo.

- 438. Monarch Casement Hardware.** A book describing hardware for casement windows. This Manual and folder comply with all suggestions made by the Structural Service Committee of the A. I. A. 18 pp. Ill. 7½ x 10½ in., in heavy folder for vertical file properly indexed.

**Richards-Wilcox Mfg. Co.**, Aurora, Ill.

- 336. Modern Hardware for Your Home.** Catalog of hangers for vanishing French doors; "Air-Way" multifold hardware for sun parlors and sleeping porches; "Slidite" garage door hardware. 24 pp. Ill. 8½ x 11 in.  
**435. Distinctive Garage Door Hardware. Catalog No. A-22.** This is more than a catalog. It is a treatise for architects and builders on the door equipment of garages, covering sliding, folding and combination sliding and folding doors, with their hardware. 94 pp. Ill. 8½ x 11 in.  
**436. Sliding Door Hardware. Catalog No. A-17.** A catalog of sliding door hardware of Parallel, Accordion and Flush Door partitions. 32 pp. Ill. 7 x 10 in.  
**632. Distinctive Garage Door Hardware. Catalog A No. 20.** A complete treatise on garage doors of every kind both hand and mechanically operated with description of standard and special hardware and accessories. 66 pp. Ill. 8½ x 11 in.

**Russell & Erwin Mfg. Co.**, New Britain, Conn.

- 609. Russwin Period Hardware.** A brochure illustrating hardware trim in twelve architectural styles or periods. 71 pp. Ill. 5 x 8 in.  
**610. Catalog of Hardware, Volume Fourteen.** A complete catalog of building hardware, trim, locks, butts and accessories. 359 pp. Ill. 8 x 11 in.

**Sargent & Company**, New Haven, Conn.

- 560. Sargent Locks and Hardware for Architects.** The latest complete catalog of locks and hardware. 762 pp. Ill. 9 x 12 in.

**The Stanley Works**, New Britain, Conn.

- 11. Wrought Hardware. New 1921 Catalog.** This new catalog describes additions to the Stanley line of Wrought Hardware, as well as the older well known specialties and various styles of butts, hinges, bolts, etc. 376 pp. Ill. 6½ x 9½ in.  
**12. Garage Hardware. Booklet, illustrated.** Garages and their equipment, such as hinges, hasps, door holders, latch sets, chain and hand bolts, showing illustrations and text with dimensions of garages, describing the Stanley Works product. Size 6 x 9 in. 24 pp.  
**13. Eight Garages and Their Stanley Hardware.** Booklet Plans, drawings and complete hardware specifications. Size 5 x 7 in. 32 pp.  
**127. The Stanley Works Ball Bearing Butts.** Booklet, illustrated. Description with full size illustrations of many typed butts and their parts, dimensions and finish. Size 5 x 7½ in. 32 pp.  
**495. Stanley Detail Manual.** A catalog in loose leaf binder, consisting of five sections on Butts, Bolts, Blind and Shutter Hardware, Stanley Garage Hardware, Screen and Sash Hardware. Detail drawings are given, showing clearances and other data needed by detailers. 116 pp. Ill. 7½ x 10½ in.

**Vonnegut Hardware Co.**, Indianapolis, Ind.

- 309. Von Duprin Self-Releasing Fire Exit Devices.** A catalog and educational work on panic-proof, burglar-proof self releasing exit devices for doors and windows of buildings of any kind of occupancy. 41 pp. Ill. 8 x 11 in.  
**310. Prince Self-releasing Fire Exit Devices. Supplement to Von Duprin Catalog No. 12.** Contains valuable information for architects on the selection, detailing, etc., of Prince devices for doors and windows to insure safety against fire panic. 32 pp. Ill. 8 x 11 in.

## HEATERS—See Water Heaters

## HEATING

- American Radiator Company**, 104-108 W. 42nd St., New York, N. Y.  
**427. Ideal-Arcola Heating Outfits.** A book describing a system of hot water heating for small and medium size houses. The boiler is placed in a room and resembles a stove. No cellar required. The ash carrying reduced to a minimum. 24 pp. Ill. 6 x 8½ in.  
**Crane Company**, 836 So. Michigan Ave., Chicago, Ill.  
**241. Steam Catalogue.** A book containing full descriptions of the complete line of Crane valves, fittings, etc. 800 pp. Ill. 6 x 9 in.  
**The Farquhar Furnace Company**, Wilmington, Ohio.  
**355. Healthful Helpful Hints.** A discussion of furnace and chimney design and capacity for hot air heating and ventilation 16 pp. Ill. 4¾ x 9¼ in.  
**356. A Plain Presentation to Dealers.** A book of selling talk for dealers in Farquhar Furnaces. Four model heating layouts are shown and there is a page of useful "Do and Don't" advice. 24 pp. Ill. 8½ x 11 in.  
**General Boilers Company**, Waukegan, Ill.  
**444. Catalog No. 7.** A catalog completely describing the construction and operation of Pacific Steel Boilers. Contains also specifications and price lists. 32 pp. Ill. 6 x 9 in.  
**The Hart & Cooley Co.**, New Britain, Conn.  
**703. H & C Wrought Steel Grilles.** A new type of ventilating grille permitting passage of air but not sight, also plain square mesh grilles, made of steel, bronze and brass. Details and specifications. 4 pp. Ill. 8½ x 11 in.



**SARGENT**  
HARDWARE

HOTEL WINDERMERE EAST  
Chicago, Ill.

C. W. & Geo. L. Rapp  
Architects  
Thompson-Starrett Co.  
General Contractors



VIEW OF MAIN ENTRANCE AND WING

THE gathering of families into the multiple-residence buildings of our large cities has presented new problems in design and equipment.

**SARGENT**

LOCKS AND HARDWARE

which have been used in many hotels and apartment houses combine the convenience of operation and the maximum of protection with the artistic merit that is appreciated by people of taste.

**SARGENT & COMPANY**

NEW HAVEN, CONN.

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Chicago, 221 W. Randolph St.

“Details to which Standard Hardware can be applied” are printed in our catalogue. We have additional copies of these pages, bound with a cover, that we shall be pleased to send to Architects and Architectural Draftsmen upon request.

Reprinted from *The American Architect—The Architectural Review* February 13, 1924.

Specifications of most products advertised in *THE AMERICAN ARCHITECT* appear in the *Specification Manual*

## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## HEATING

**Hess Warning & Ventilating Co.,** 1209 Tacoma Bldg., Chicago, Ill.

178. *Modern Furnace Heating.* An illustrated book on the Hess Welded Steel Furnaces. Pipe and Pipeless, notes for installation, sectional views, showing parts and operation, dimensions, register designs, pipes and fittings. Size 6 x 9½ in. 48 pp.

**Illinois Engineering Co.,** Racine Ave., at 21st St., Chicago, Ill.

501. *Illinois Heating Systems. Vapor Details Bulletin 20.* This bulletin contains typical plans and elevations of heating systems, with description of details and "Standards for Computing Radiation and Boiler Sizes" of the Chicago Master Steam Fitters' Association. 18 pp. Ill. 8 x 10¼ in.

502. *Illinois Bulletins.* No. 102 contains detailed description with capacities and dimensions of Eclipse Pressure Reducing Valves. 20 pp. Ill. Nos. 202, 302, 452, 502 and 703 describe, with illustrations, Steam Specialties, Back Pressure Valves, Stop and Check Valves, Exhaust Heads, Balanced Valves, Separators, Steam Traps.

**Jenkins Bros.,** 30 White St., New York, N. Y.

235. *Catalog No. 12.* This catalog contains descriptions of all the valves, packing, etc., manufactured by Jenkins Bros. Includes also dimensions and price lists of valves and parts. 271 pp. Ill. 4 x 6¾ in. Stiff paper cover.

237. *The Valve Behind a Good Heating System.* This booklet describes Jenkins Radiator Valves, Automatic Air Valves and other valves used in connection with steam and hot water heating. 16 pp. 4½ x 7¾ in. Stiff paper cover.

**Johnson Service Company,** 149 Michigan St., Milwaukee, Wis.

391. *The Regulation of Temperature and Humidity.* A description of the Johnson System of temperature regulation and humidity control for buildings; showing many kinds of thermostatic appliances for automatically maintaining uniform temperatures. 63 pp. Ill. 8½ x 11 in.

392. *Johnson Electric Thermostat, Valves and Controllers.* A catalog of devices mentioned in the title. 24 pp. Ill. 3½ x 6 in.

**Kewanee Boiler Co.,** Kewanee, Illinois.

574. *Fire Box Boilers, Catalog No. 76.* A description of smokeless steel firebox boilers with complete data of capacities and dimensions of the brick set and portable types. 35 pp. Ill. 6 x 9 in.

575. *Power Boilers, Catalog No. 73.* A complete description of brick set horizontal tubular power boilers with full and half-front setting. Also smokeless tubular boilers with down draft furnace and steel casing. Also steel portable locomotive boilers, grates, breechings, cast iron fronts, air receivers, storage tanks and accessories. 35 pp. Ill. 6 x 9 in.

**Minneapolis Heat Regulator Co.,** Minneapolis, Minn.

600. *Minneapolis Dual Control.* This circular describes in detail the No. 65 Hydrostat and No. 70 Pressurestat and their application for the automatic heat control of hot water, steam or vapor systems. 12 pp. Ill. 3¼ x 6 in.

**Richardson & Boynton Co.,** New York, N. Y., Chicago, Ill., Philadelphia, Pa., Providence, R. I., Boston, Mass.

290. *The Richardson Vapor Vacuum-Pressure Heating System.* An interesting book which presents in clear non-technical language the principles of Vapor-Vacuum-Pressure heating; the economy over ordinary steam heating, steam and hot-water systems may be altered to use this principle with views of buildings where the V-V-P system is installed. 14 pp. Ill. 8 x 11 in.

291. *Perfect Warm Air Furnaces.* No. 203. Contains a full description of various types of warm air furnaces and parts, with dimensions and necessary data. 24 pp. Ill. 8 x 10½ in.

292. *Perfect Cooking Ranges.* Description and dimensions of the complete line of the new high enamel finish Richardson Perfect ranges, with charts and information regarding combination coal and gas cooking ranges. 40 pp. Ill. 8½ x 11 in.

**Tuttle & Bailey Mfg. Co.,** 2 West 45th St., New York, N. Y.

395. *About Radiator Enclosures.* A booklet showing how easily and effectively unsightly radiators may be concealed by enclosures which adorn a room. 15 pp. Ill. 6¾ x 9¾ in.

396. *Special Designs, Catalog 66A.* A book of designs for grilles, screens, registers and ventilators to be used in connection with heating installations. Made of bronze, brass, iron and steel. 40 pp. Ill. 6¾ x ¾ in.

**Utica Heater Company,** Utica, N. Y.

557. *Utica Imperial Super-Smokeless Boilers.* These boilers burn all fuels and consume soft coal without smoke. The illustrated catalog contains complete technical data with lists of illustrations. 76 pp. Ill. 8½ x 11 in. (Separate bulletins may be had featuring the following buildings: Schools, Churches, Public Buildings, Apartments, Hotels, Residences, Industrial Buildings, Office and Theatres.)

558. *Warm Air Heating.* A folder featuring warm air heating equipment including *New Idea* pipeless furnaces, Superior pipe furnaces and *Super-Smokeless* furnaces for burning soft coal.

## HEATING AND VENTILATION

**American Blower Co.,** Detroit, Mich.

361. *Sirocco Service.* A quarterly publication containing descriptions of heating and ventilating systems installed by the American Blower Company, together with useful data for architects and engineers. 16 pp. Ill. 8½ x 11 in.

362. *General Catalog "ABC" Products.* A book full of useful data for all men who have to deal with heating and ventilating problems. 132 pp. Ill. 8½ x 11 in.

645. Special bulletins describing in detail all of the apparatus in their general catalog. Sent on request. Ill. 8½ x 11 in.

**Buffalo Forge Co.,** 490 Broadway, Buffalo, N. Y.

215. *Buffalo Fan System of Heating, Ventilating and Humidifying.* Catalog 700. This contains a general discussion of heating and ventilating under four heads. Part 1, Public Buildings. Part 2, Industrial Plants. Part 3, Buffalo Apparatus. Part 4, Fan Engineering.

**Garden City Fan Co.,** McCormick Bldg., Chicago, Ill.

673. *New Sectional Catalog No. 200.* Describing the latest improved cycloidal multivane fans for heating, ventilating and drying also standard steel plate fans and pipe coil heaters. Details, capacity tables and specifications, 24 pp. Ill. 7½ x 10½ in.

**The H. W. Nelson Corporation** (formerly Moline Heat), Moline, Ill.

411. *Univent Ventilation. Architects' and Engineers' Edition.* A scientific treatise on ventilation for schools, offices and similar buildings; with 40 pages of engineering data on ventilation for architects and engineers. 72 pp. Also "Supplement A" on Air Conditioning. 12 pp. Ill. with half-tones, line drawings and designing charts. 8½ x 11 in.

## HOISTS—See Elevators and Ash Hoists

## INCINERATORS—See Garbage Destroyers

## INSULATION—See also Stucco Base

**The Celotex Co.,** 111 W. Washington St., Chicago, Ill.

701. *Celotex Insulating Lumber.* An insulating material made from cane fibre in form of boards of various lengths and thicknesses. Specifications, physical properties and tests. Several catalogs, booklets and leaflets.

**Insulite Division, Minnesota & Ontario Paper Company,** International Falls, Minn.

487. *Universal Insulite in Building Construction.* Describes a clean, sanitary, odorless and vermin proof board made from selected waterproofed wood fibres, felted into light, strong, uniform sheets. Examples are given for use indoors and outdoors together with details and useful data. 37 pp. Ill. 8½ x 11 in.

**United States Mineral Wool Co.,** 280 Madison Ave., New York.

83. *The Uses of Mineral Wool in Architecture.* Illustrated booklet. Properties of insulation against heat, frost, sound, and as a fire-proofing, with section drawings and specifications for use. It gives rule for estimate and cost. Size 5¼ x 6½ in. 24 pp.

## IRON AND STEEL—See also Metals

**The American Rolling Mill Co.,** Middletown, Ohio.

658. *The Story of Commercially Pure Iron.* A most interesting booklet recounting the historical development of iron and its present day manufacture in commercially pure, durable form. 48 pp. Ill. 6 x 9 in.

682. *What's Under the Galvanized Coating?* A booklet describing the process of galvanizing, its protective service and also the necessity for pure iron as a basis for galvanizing. 16 pp. Ill. 3¼ x 6¼ in.

## KITCHEN EQUIPMENT—See also Stoves

**Bramhall, Deane Co.,** 261-A West 36th St., New York.

59. *The Heart of the Home.* Booklet, illustrated. Deane's French Ranges (all fuels), cook's tables and plate warmers. Size 6 x 9 in. 32 pp.

## LATH, EXPANDED WOOD

**Expanded Wood Lath Corporation,** 818-155 N. Clark St., Chicago, Ill.

605. *Ex-Wo Expanded Wood Lath.* An expanded wood lath made in sheets and attached to a sheathing paper. Description, directions for installation, specifications and tests. 2 and 4 pp. Ill. 9 x 11½ and 7½ x 11 in.

## LATH, METAL

**Ameriann Steel & Wire Co.,** Chicago, Ill.

228. *Stucco Houses Reinforced With Triangle Mesh Fabric.* A pamphlet containing valuable data on stucco work with tables of quantities of material and many illustrations of houses covered with stucco applied on Triangle Mesh Fabric. 24 pp. Ill. 6 x 9 in.

**Concrete Engineering Co.,** Omaha, Neb.

346. *How to Use Ceco Lathing Materials.* An illustrated treatise on the use of expanded metal lath. Contains construction details and complete specifications, with sample piece of lath in pocket on cover of book. 16 pp. Ill. 8½ x 11 in.

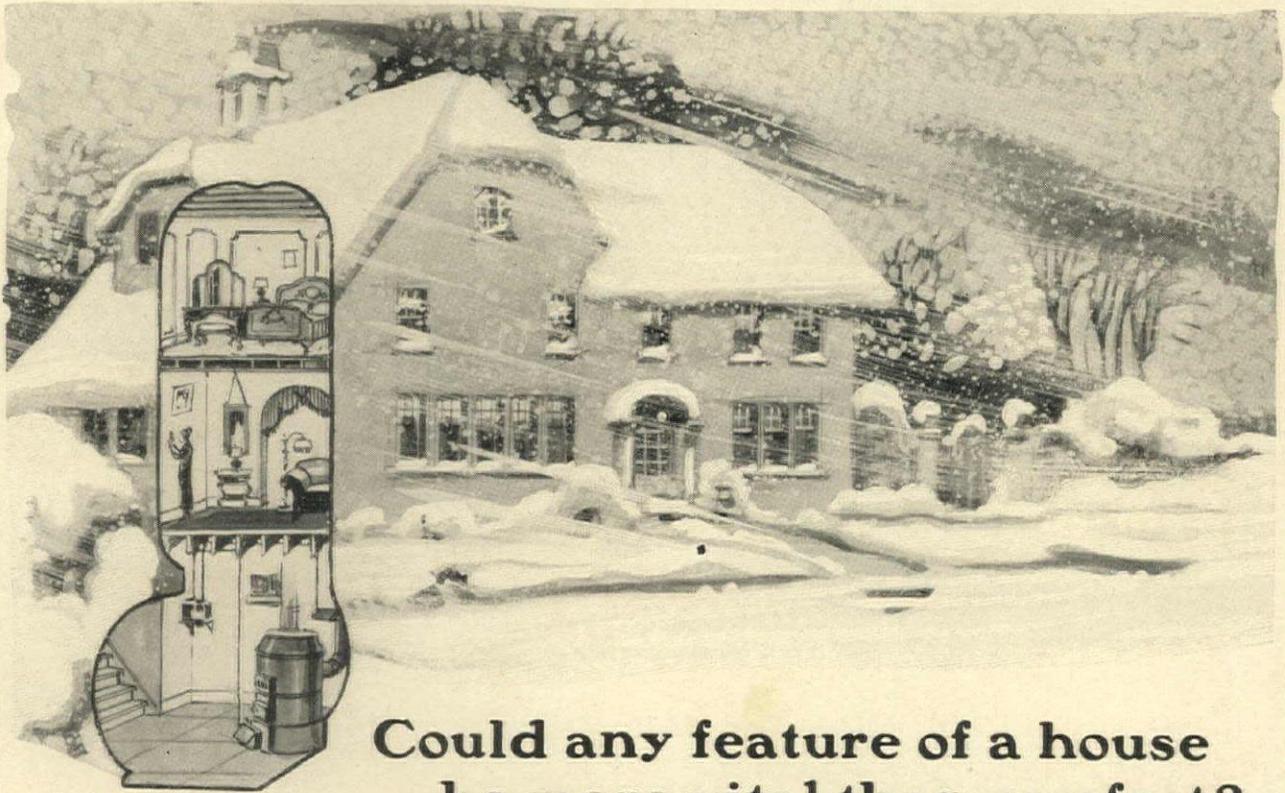
**The General Fireproofing Co.,** Youngstown, Ohio.

592. *Building for Permanence and Beauty.* A booklet containing illustrations and plans of residences with stucco exteriors and describing proper stucco construction on Herringbone Metal Lath. 36 pp. Ill. 5½ x 7¾ in.

685. *The Right Angle.* A monthly magazine devoted to fire-proof construction involving the use of metal lath, expanded metal and steel lumber. Specifications and details. Circulation free to architects and contractors. 16 pp. Ill. 8½ x 11 in.

**Truscon Steel Company,** Youngstown, Ohio.

316. *Hy-Rib and Metal Lath.* Tables, general data and illustrations of Hy-rib and metal lath construction. 6 pp. Ill. 8½ x 11 in.



## Could any feature of a house be more vital than comfort?

The primary purpose of a house is to protect against the elements, chiefly the blasts of winter. Century after century man has improved his heating ideas until today a great variety of appliances furnish him any degree of heat he may desire. But not one of them, of itself, relieves him of the burden of constant supervision. This hand regulation with even the most efficient heating plant, still means inconvenience, uncertainty, waste of fuel, and unhealthy temperature variations.

### Last Word in Heating Improvements

The problem is solved at one stroke by installing the Minneapolis Heat Regulator. For 39 years the Minneapolis—first completely automatic thermostatic regulator—has been giving perfect satisfaction to householders.

It cannot logically be excluded from any house supposed to have all modern advantages. A heating plant without it is only a half measure in comparison.

The Minneapolis Heat Regulator is easily and quickly attached to any type of heating plant, either new or old, using any fuel. Warm air furnace, hot water, steam or vapor heating plants, or district steam. Particularly needed on oil burners.

The Minneapolis maintains any desired temperature indefinitely. It changes, automatically, to a lower night-time temperature and back again to a higher day-time temperature, at the desired hours.

And all these advantages of comfort, convenience, health and economy it affords at a cost that seldom runs as high as 1 per cent of the total, even in modest homes.

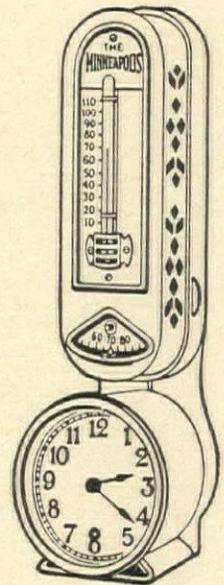
Installation requires no changes in plans or blue prints. It is only a matter of running a concealed wire from the living room wall to the motor in the basement. As simple as installing a telephone.

*Free literature upon any phase of home, industrial or institutional heating mailed to architects upon request.*

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"The HEART of THE HEATING PLANT"



Branch offices in large cities render a complete installation service. At other points specifications should call for installation by a heating contractor.



## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## LAUNDRY EQUIPMENT

Chicago Dryer Co., 2210 N. Crawford Ave., Chicago, Ill.

66. *Laundry Appliances*. Illustrated catalog. Descriptions of Laundry Dryers, Electric Washing Machines and Ironing Machines, especially adapted for use in residences, apartment buildings and small institutions. Size 8½ x 11 in. 48 pp.

The Pfandler Company, Rochester, N. Y.

581. *Glass Lined Steel Laundry Chute*. Catalog describing a glass lined steel laundry chute with flushing ring at top and drain connection at bottom, specifications, dimensions and details adapted to hospitals and hotels. 14 pp. Ill. 5½ x 7½ in.

## LIGHTING—See also Electrical Equipment

Frank Adam Electric Co., 3649 Bell Ave., St. Louis, Mo.

629. *The Control of Lighting in Theatres*. A book describing means for complete control of lighting the stage, auditorium and other parts of theatres with distribution schedules and specifications. Also applications of control to Masonic buildings, schools and colleges. 32 pp. Ill. 8 x 11 in.

Cooper Hewitt Electric Company, 95 River Street, Hoboken, N. J.

553. *Industrial Lighting Briefs*. No. 1 deals with Industrial Lighting in theory and practice. No. 2 deals with the engineering of illumination with Cooper Hewitt Lamps. No. 3 deals with the quickness of response of the Hand to Eye. Each 4 pp. 8 x 10½ in.

E. Erikson Electric Co., 6 Portland St., Boston, Mass.

613. *Erikson Reflectors, Catalog No. 90*. Description of and details for installing reflectors in show windows, display cases, art galleries, rug racks, banks, churches, and other buildings. 32 pp. Ill. 6¼ x 9½ in.

I. P. Frink, Inc., 24th St. and 10th Ave., New York.

150. *Light Service for Hospitals, Catalogue 421*. A booklet illustrated with photographs and drawings, showing the types of light for use in hospitals, as operating table reflectors, in-oline and multi-tube concentrators, ward reflectors, bed lights and microscopic reflectors, giving sizes and dimensions, explaining their particular fitness for special uses. Size 7 x 10 in. 12 pp.

218. *Picture Lighting, Booklet 422*. A pamphlet describing Frink Reflectors for lighting pictures, art galleries, decorated ceilings, cove lighting, the lighting of stained glass, etc., and containing a list of private and public galleries using Frink Reflectors. 24 pp. Ill. 5¼ x 7 in.

219. *Frink Reflectors and Lighting Specialties for Stores, Catalog No. 424*. A catalog containing a description of the Frink Lighting System for Stores; the Synthetic System of Window Illumination; and a number of appliances to produce the most effective lighting of displayed objects. 20 pp. Ill. 8 x 11 in.

220. *Frink Lighting Service for Banks and Insurance Companies, Reflectors, Catalog No. 425*. A very interesting treatise on the lighting of offices; with details of illustrations and description of lamps and reflectors. Contains a list, covering several pages, of banks using Frink Desk and Screen Fixtures. 36 pp. Ill. 8¼ x 11 in.

Harvey Hubbell, Inc., Bridgeport, Conn.

401. *Hubbell Flush Door Receptacles*. Description of a safe, convenient and practical wall outlet de luxe for fine residences, clubs, hotels, public buildings and offices. 4 pp. Ill. 8 x 10 in.

Mitchell Vance Co., Inc., 503-511 West 24th St., New York, N. Y.

369. *Catalog No. 25*. A descriptive catalog, with prices, of the "T. R. B." Lighting Unit, for perfect distribution of light without glare and without shadows. 24 pp. Ill. 8 x 10 in.

## LIME

The Ohio Hydrate & Supply Co., Woodville, Ohio.

494. *A Job that Took a Million Years*. A description of how limestone is formed and how it is later converted into lime. All the processes are shown in detail and the uses of lime are illustrated. 16 pp. Ill. 8½ x 11 in.

## LINCRUSTA-WALTON—See also Wall Covering

The Lincrusta-Walton Company, Hackensack, N. J.

519. *Lincrusta-Walton*. This book gives directions for buying, caring for and applying Lincrusta-Walton; together with color chart and many pages showing patterns. 67 pp. 8½ x 11 in. Ill. Bound in boards.

## LOCKERS, STEEL—See Factory Equipment

## LUMBER

Arkansas Soft Pine Bureau, Little Rock, Ark.

649. *Arkansas Soft Pine Handbook*. An exceptionally well prepared book containing technical descriptions, grading rules, standard molding designs including those by the American Institute of Architects and the National Lumber Manufacturers' Association. Price 50 cents. 82 pp. Ill. 8½ x 11 in.

E. L. Bruce Co., Memphis, Tenn.

533. *Now the Cedar Clothes Closet*. A book illustrated in colors describing "Bruce Cedaline," for lining clothes closets as a complete protection against moths. 12 pp. Ill. 4¼ x 6 in.

The Long-Bell Lumber Co., R. A. Long Building, Kansas City, Mo.

203. *From Tree to Trade*. This book tells the story of the manufacture of lumber. Gives an idea of the scope of the business and the care and attention given to the manufacture and grading of Long-Bell trade-marked products. 100 illustrations. 48 pp. 8½ x 11 in.

The Pacific Lumber Company of Illinois, 2060 McCormick Bldg., Chicago, Ill.

363. *Construction Digest*—The use of California Redwood in residential and industrial construction. Contains illustrations, grading rules, specifications and other technical data for architects and builders. 16 pp. Ill. 8½ x 11 in.

364. *Engineering Digest*—The use of California Redwood in industrial construction and equipment for factories, railroads, mines and engineering projects. 16 pp. Ill. 8½ x 11 in.

## LUMBER, ASBESTOS

Asbestos Shingle, Slate & Sheathing Co., Ambler, Pa.

54. *Ambler Asbestos Building Lumber*. Catalog illustrated. Describes uses of this fireproof product for both exteriors and interiors. Tables of sizes and illustrations of various types of buildings in which it has been used. Size 8½ x 11 in. 32 pp.

## MAIL CHUTES

Cutler Mail Chute Co., Rochester, N. Y.

294. *The Cutler Mail Chute, Model F*. Describes the Cutler Mail Chute in its standard form, known as Model F. Contains data for rough floor openings not included in the Mail Chute contract. 16 pp. Ill. 4 x 9¼ in.

## MANTELS

Edwin A. Jackson & Bro., Inc., 50 Beekman St., New York.

90. *Wood Mantels, Portfolio*. Wood mantel designs of various types and openings, giving dimensions, projections and showing fireplace grate designs. Size 9 x 6¼ in. 32 pp.

## MARBLE—See Stone

The Georgia Marble Co., Tate, Pickens Co., Ga., New York Office, 1226 Broadway.

634. *Why Georgia Marble is Better*. Booklet 3¾ x 6 in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

635. *Convincing Proof*. Booklet 3¾ x 6 in. 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of architects and sculptors.

## METALS—See also Iron and Steel—Roofing

American Brass Co., Main Office, Waterbury, Conn.

138. *Price List and Data Book*. Illustrated. Loose-leaf Catalog. Covers entire line of Sheets, Wire Rods, Tubes, etc., in various metals. Useful tables. Size 3¾ x 7 in. 168 pp.

385. *Copper Products*. Illustrated price list and tables of weights. Covers copper for roofing purposes, including strip copper for forming into leaders, gutters, valleys, flashings, etc. 64 pp.

American Sheet & Tin Plate Co., Frick Building, Pittsburgh, Pa.

452. *Reference Book, Pocket Edition*. Covers the complete line of Sheet and Tin Mill Products. 168 pp. Ill. 2½ x 4½ in.

Bridgeport Brass Co., Bridgeport, Conn.

483. *Seven Centuries of Brass Making*. A brief history of the ancient art of brass making and its early (and even recent) method of production—contrasted with that of the Electric Furnace Process—covering tubular, rod and ornamental shapes. 80 pp. Ill. 8 x 10½ in.

Copper & Brass Research Association, 25 Broadway, New York, N. Y.

466. *How to Build a Better Home*. A book on building written for the prospective builder. It contains keyed illustrations of houses and details of houses and should be of value to architects in explaining technical terms to clients. 30 pp. Ill. 7¾ x 10½ in.

Rome Brass & Copper Company, Rome, N. Y.

473. *Price List No. 70*. A loose-leaf binder containing full price list of Rome Quality products, together with useful tables. 5½ x 7¼ in.

## METAL MOLDINGS

National Metal Molding Co., Pittsburgh, Pa.

152. *Hand-book for the Man on the Job*. An illustrated book of fittings and methods with description and instructions for installing National Metal Molding under all conditions; a book meant to be conveniently carried and used on the job. Size 4¾ x 6 in. 102 pp.

## MILLWORK—See also Lumber—Building Construction—Doors and Windows

## MORTAR—See also Cement

Louisville Cement Company, Inc., Louisville, Ky.

311. *Brixment, the Perfect Mortar*. The reading of this little book gives one a feeling that definite valuable information has been acquired about one of the oldest building materials. Modern science has given the mason a strong water-resisting mortar with the desirable "feel" of the best rich lime mortar. 16 pp. Ill. in colors. 5½ x 7¾ in.

## MORTAR COLORS—See also Paints, Stains, Varnish

Ricketson Mineral Paint Works, Milwaukee, Wis.

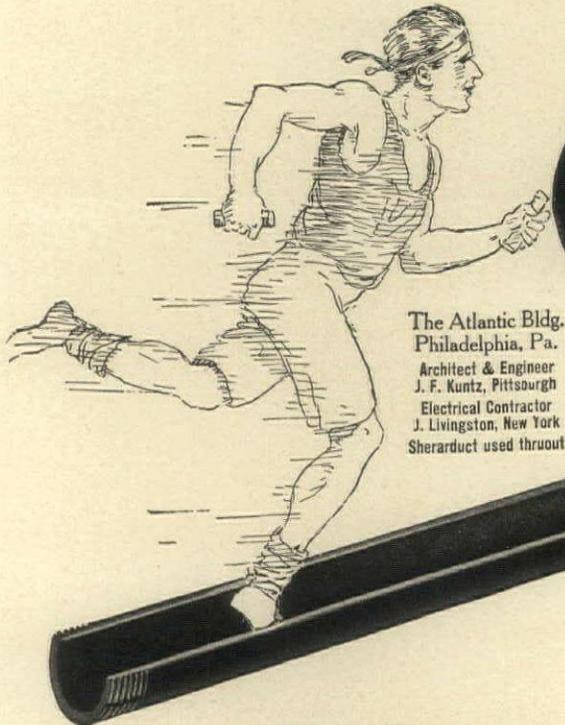
376. *Ricketson Mortar Colors*. Two interesting folders with color card for these well known fadeless mortar colors in use for 35 years. 3¼ x 6 in.

## OFFICE EQUIPMENT

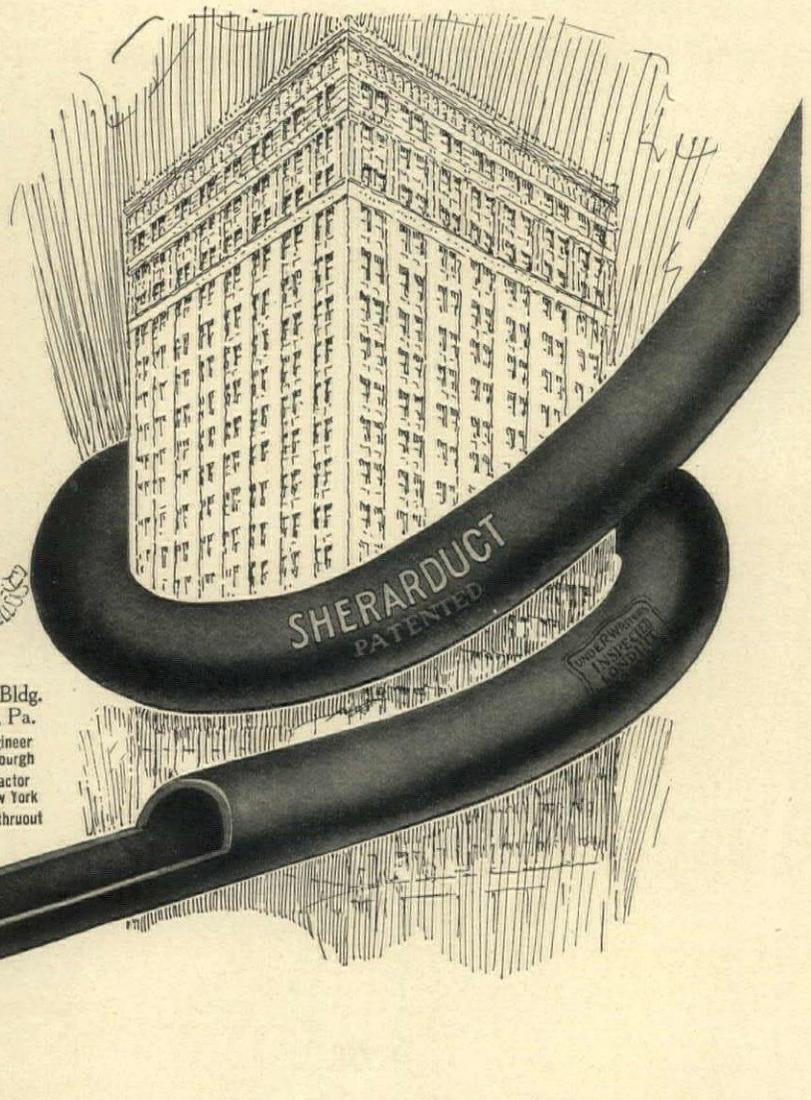
Art Metal Construction Company, Inc., Jamestown, New York.

542. *Art Metal Steel Office Equipment*. A descriptive catalog of art metal shelves, filing cases, lockers, desks, bookcases, plan files, safes and furniture. 128 pp. Ill. 8½ x 11 in.

# A Race Track for Wiring



The Atlantic Bldg.  
Philadelphia, Pa.  
Architect & Engineer  
J. F. Kuntz, Pittsburgh  
Electrical Contractor  
J. Livingston, New York  
Sherarduct used thruout



**S**MOOTH as an ice-coated, glassy sidewalk—and in all fishing jobs it is smoothness that counts—SHERARDUCT is a veritable race track for wiring.

Through the long level stretches, down partitions, along walls, around bends and corners, your wire emerges through SHERARDUCT before you realize it is fairly started.

This smoothness of SHERARDUCT, coupled with its easy bending qualities and many other desirable features, is assurance that any job, large or small, will be done on time.

Take the sure track—the race track—to quick and easy wiring by specifying and using SHERARDUCT.

*A small Sherardized copper disc, ground down in center to show alloying of the zinc with the copper will be sent free to Architects and Electrical Engineers on request.*

## National Metal Molding Company



WORLD'S LARGEST PRODUCERS OF ELECTRICAL CONDUITS AND FITTINGS



1080 Fulton Building, Pittsburgh, Pa.

Represented in All Principal Cities

[2]

# Sherarduct

**The Rigid Conduit That Bends**

*Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual*

## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## OFFICE EQUIPMENT

**The General Fireproofing Co.**, Youngstown, Ohio.

686. *Allsteel Office Furniture*. A descriptive catalog of steel office furniture, filing cabinets, desks, tables, counterheights, steel shelving, fireproof safes. 96 pp. Ill. 5½ x 7¾ in.

**PAINTS, STAINS, VARNISHES—See also Waterproofing Samuel Cabot, Inc.**, 141 Milk St., Boston, Mass.

341. *Cabot's Old Virginia White and Tints*. Describes a specially prepared "flat" white which architects say gives "the whitewash white effect." Also describes tints perfectly flat in tone giving the "pastel effect." Used on wood, brick, stone, and stucco. 16 pp. Ill. 4 x 8½ in.

**Joseph Dixon Crucible Co.**, Jersey City, N. J.

324. *Dixon's Silica-Graphite Paint*. A pamphlet describing the physical properties of silica-graphite paint and especially the wide difference between it and other protective paints. Contains also sample color card with specifications. 20 pp. and 6 pp. in color card. Ill. 3¼ x 6¼ in.

**National Lead Company**, 111 Broadway, New York, N. Y.

389. *Color Harmony*. Color card for glass finish and flat finish together with useful notes on painting and a collection of approximate formulas for obtaining the colors shown on the color card. 8 pp. Ill. 3¾ x 8½ in.

390. *Dutch Boy Flating Oil*. A booklet describing the characteristics of flat and glass paints, volatile thinners and a treatise on methods of obtaining special paint surfaces together with formulas. 24 pp. 3½ x 6 in.

**The New Jersey Zinc Co.**, 160 Front St., New York, N. Y.

227. *Painting Specifications*. A booklet full of useful information concerning paint mixtures for application on various surfaces.

**Ripolin Co., The**, Cleveland, Ohio.

419. *Ripolin Specification Book*. 8 x 10¼ in., 12 pp. Complete architectural specifications and general instructions for the application of Ripolin, the original Holland Enamel Paint. Directions for the proper finishing of wood, metal, plaster, concrete, brick and other surfaces, both interior and exterior, are included in this Specification Book.

**Standard Varnish Works**, 443 Fourth Ave., New York, N. Y.

565. *Immaculate Distinction*. A book describing Satinette Enamel, and enduring white enamel for interior and exterior use. Specifications are given for use on new and old work, metal, plaster, etc. 22 pp. Ill. 5 x 7 in.

566. *Architectural Reference Book, Third Edition*. A readily accessible and concise compilation of practical finishing information from which specifications readily can be written on varnishes, stains, fillers and enamels. 24 pp. Ill. in colors with samples on wood, etc. 8½ x 11 in.

## PILES, CONCRETE

**Raymond Concrete Pile Co.**, 140 Cedar St., New York.

156. *Raymond Concrete Piles—Special Concrete Work*. A booklet with data concerning the scope of the Raymond Concrete Pile Co., for special concrete work. It classifies piles, showing by illustration, text and drawings, the relative value of special shape and manufacture of piles. It gives formulae for working loads, and relative economy. Size 8½ x 11½ in. 60 pp.

## PIPE—See also Metals

**Bridgeport Brass Company**, Bridgeport, Conn.

556. *Brass Pipe and Piping; When and How it Should be Used*. Bulletin No. 15. This book contains valuable tables, charts and examples for the design of hot water installations, with illustrations of details and connections. It also discusses the use of pipe of different materials; various processes for preventing rust and corrosion in iron and steel pipes. It is a valuable treatise for all architects and engineers. 47 pp. Ill. 8 x 10½ in.

**A. M. Byers Company**, Pittsburgh, Pa.

679. *What is Wrought Iron?* Bulletin 26 A. Contains the definition of wrought iron, methods of manufacture, chemical and physical characteristics; advantages of wrought iron as a pipe material; service records from old buildings equipped with Byers Genuine Wrought Iron Pipe. How to tell the difference between iron and steel pipe. 40 pp. Ill. 8 x 10¾ in.

680. *The Installation Cost of Pipe*, Bulletin 38. Contains cost analysis of a variety of plumbing, heating, power and industrial systems, with notes on corrosive effects in different kinds of service. 32 pp. Ill. 8 x 10¾ in.

**The Duriron Company**, Dayton, Ohio.

548. *Duriron Acid-Proof Drain Pipe*. This is a handbook for the architect and engineer on Duriron drain pipe fittings, exhaust fans, sinks, etc. Contains specifications for installations, detail dimensioned drawings, reports on corrosive tests, long partial list of successful installations, etc. 20 pp. Ill. 8 x 10½ in.

**National Tube Co.**, Frick Bldg., Pittsburgh, Pa.

670. *National Bulletin No. 25B, 3rd Edition*. Devoted to the installation of steel pipe in large buildings, architectural anti-corrosion engineering, gas piping, specifications and tables of strength and properties. 74 pp. Ill. 8½ x 10¾ in.

**Rome Brass and Copper Company**, Rome, N. Y.

509. *Bulletin No. 1, Seamless Brass Pipe*. This bulletin illustrates in colors nine installations of hot water heaters between range boiler, basement furnace, tank and instantaneous heaters for one and two-family houses and larger buildings. Contains also a number of estimating and designing tables, rules and formulas. 22 pp. Ill. 7½ x 11¼ in.

**A. Wyckoff & Son Co.**, Elmira, N. Y.

397. *Wyckoff Wood Pipe*. Catalog No. 42. A description of machine-made woodstave pipe and Wyckoff's express steam pipe casing. Contains also a number of pages of useful formulas and tables for hydraulic computations. 92 pp. Ill. 6 x 9 in.

## PIPE COVERING

**The Philip Carey Co.**, Lockland, Cincinnati, Ohio.

379. *Pipe and Boiler Coverings*. Catalog 1362. A catalog and manual pipe and boiler coverings, cements, etc. Contains a number of valuable diagrams and tables. 71 pp. Ill. 6 x 9 in.

## PLUMBING EQUIPMENT—See also Drains

**Bridgeport Brass Co.**, Bridgeport, Conn.

461. *Plumbing Supplies*. Catalog of adjustable swivel traps; basin and bath supplies and waste; basin and sink plugs; low tank bends; iron pipe sizes of brass pipe. 20 pp. Ill. 8 x 10½ in.

**Crane Company**, 836 So. Michigan Ave., Chicago, Ill.

240. *General Plumbing Catalogue*. A very complete and well illustrated booklet describing the complete line of Crane plumbing goods. 80 pp. 8½ x 11 in.

**Philip Haas Company**, Dayton, Ohio.

524. *Catalog B*. This catalog contains a complete description of the full line of waterclosets made by this company, together with illustrations of combinations for every type or class of service. Wall hanging closets are an innovation here fully described. A feature of interest to designers is the series of roughing in plates with dimensions. 91 pp. Ill. 6¾ x 9¼ in.

**Jenkins Bros.**, 80 White St., New York, N. Y.

236. *Jenkins Valves for Plumbing Service*. This booklet contains all necessary information about Jenkins Valves commonly used in plumbing work. 16 pp. Ill. 4¼ x 7¼ in. Stiff paper cover.

**Kohler Company**, Kohler, Wisconsin.

209. *"Kohler of Kohler."* A booklet on enameled plumbing ware describing processes of manufacture and cataloging staple baths, lavatories, kitchen sinks, slop sinks, laundry trays, closet combinations. 48 pp. Ill. 5½ x 8 in. Roughing-in Measurement Sheets 5 x 8 in.

531. *Catalog F*. This is a complete catalog of Kohler enameled ware for plumbing installations, together with high grade fittings. There is also a brief and interesting description of the manufacture of high grade enameled ware and a statement of the facts about Kohler village one of the discussed experiments in modern industrial town building. 215 pp. cloth bound. Ill. 7½ x 10¾ in.

**Thomas Maddock's Sons Company**, Trenton, N. J.

696. *Vitreous China Plumbing Fixtures*. A valuable and complete catalog of vitreous china lavatories, drinking fountains, bidets, water closets, urinals, slop sinks, bathtubs, kitchen sinks and laundry trays, also seats, faucets, bathroom fixtures and accessories. Completely illustrated with roughing in diagrams. 242 pp. Ill. 8 x 11 in.

**Speakman Company**, Wilmington, Del.

691. *Speakman Showers and Fixtures*, Catalog H. A complete catalog treating of everything pertaining to the mixing and control of water used in all kinds of shower and tub baths, lavatories and sinks, also strainers, drains and traps. Complete roughing-in measurements are included. A valuable catalog. 20 pp. Ill. 4½ x 7¾ in.

**The Vulcan Brass Manufacturing Co.**, Cleveland, Ohio.

678. *Paragon Brass Goods*, Catalog C. New catalog showing sectional drawings, illustrations and text describing exclusive feature of "Paragon" self closing basin and sink faucets and stops; high pressure ball cocks, vitreous china bubblers, compression and quick-compression work. 60 pp. Ill. 7½ x 10½ in.

## PUMPS

**The Dayton Pump and Manufacturing Company**, Dayton, Ohio.

475. *Electric House Pumps and Water Supply Systems*. A heavy paper binder containing illustrated bulletins 8½ x 11 in. These bulletins describe pumps as well as complete automatic electric and gasoline water supply systems and all accessories, together with specifications, detail drawings and tables of dimensions. 48 pp.

**The Goulds Mfg. Co.**, Seneca Falls, N. Y.

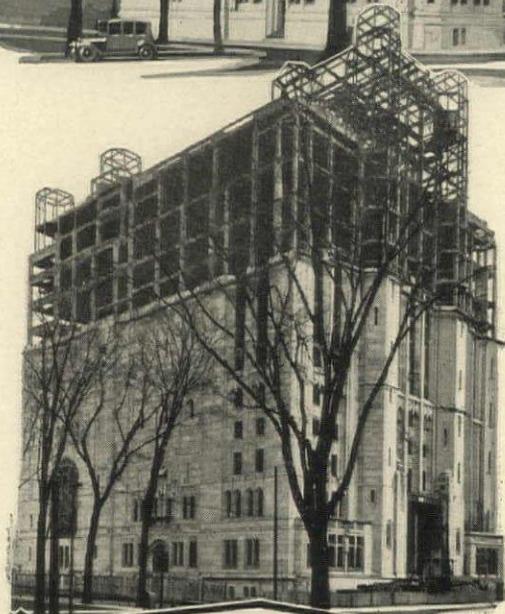
387. *Power Pump Bulletins*. There are 22 of these bulletins treating on piston, plunger, air pressure, vacuum, triplex and centrifugal pumps. Bulletin 112 and Bulletin 122 containing the theory of pumps together with power pump data are of especial value to engineers in the offices of architects. 16 to 36 pp. Ill. 8 x 10 in.

**Leader-Traher Co.**, Decatur, Illinois.

626. *The Pumping Engineer*. Booklets containing engineering data, specifications, details and dimensions of hand power, gasoline engine or electric motor driven pumps for water systems with hydro-pneumatic tanks; force, milk and special pumps with complete line of accessories. 170 pp. Ill. 4 x 7 in.

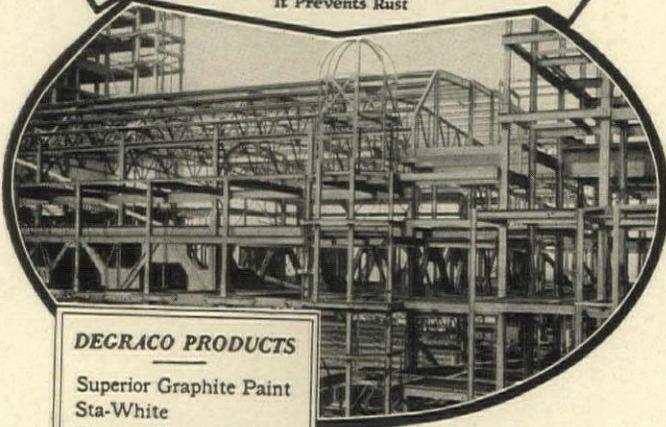


Geo. D. Mason & Co. Architects



**SUPERIOR GRAPHITE PAINT**

*It Prevents Rust*



**DEGRACO PRODUCTS**

- Superior Graphite Paint
- Sta-White
- Degraco House Paint and Varnish
- Degraco-Tone-Flat wall finish
- Degraco Brick and Concrete Paint
- Anti-Aqua-Damp-proof coating
- Degraco Gas Holder Paint
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The splendid new Masonic Temple at Detroit is more than a fine building---it is an expression in stone and steel of high and enduring ideals.

Degraco Paints were applied, shop and field coats, on the 8,000 tons of steel in this structure.

For true economy in the protection of metal no wiser choice can be made.

**DEGRACO PAINTS**  
All Colors for Your Particular Needs

MADE BY  
**Detroit Graphite Company**

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*Manufactured in Canada by Dominion Paint Works, Limited, Walkerville, Canada.*

**DETROIT U.S.A.**

*DEGRACO PAINTS are sold through branch offices with warehouse stocks in all principal cities.*

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## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## REFRIGERATION

- The Automatic Refrigerating Co., Hartford, Conn.**  
**298. The Mechanics of Automatic Refrigeration and Automatic Refrigeration for Hospitals and Sanatoriums.** Two essential booklets for the library of designers and specification writers. 24 and 28 pp. Ill. 8½ x 11 in.  
**370. Automatic Refrigeration for Retail Markets.** A valuable treatise on the subject matter mentioned in the title. 30 pp. Ill. 8½ x 11 in.
- Baker Ice Machine Co., Inc., Omaha, Nebraska.**  
**661. Baker System Refrigeration.** A catalog explaining the application of refrigeration for hotels, hospitals, institutions and restaurants requiring up to 50 ton daily capacity including mechanical details and specifications. 20 pp. Ill. 9 x 12 in.
- Jamison Cold Storage Door Co., Hagerstown, Md.**  
**569. Heavy Duty Cold Storage Doors. Catalog No. 10.** Complete description of both hinged and sliding cold storage doors for every equipment. Also description of cold storage windows and ice chutes. 79 pp. Ill. 5½ x 9 in.

## REFRIGERATORS

- The Jewett Refrigerator Company, 27 Chandler Street, Buffalo, N. Y.**  
**655. Manual of Refrigerators.** This manual completely describes the construction of refrigerators for use in hotels, clubs, hospitals, institutions and residences, with specifications. Numerous plans showing size and arrangement of refrigerators in kitchens, service and lunch rooms are included. 30 pp. Ill. 8½ x 11 in.  
**698. Jewett Solid Porcelain Refrigerators.** This improved refrigerator has an interior finish of one-piece solid porcelain ware for both food and ice compartments. Complete line with dimensions, types and prices. 22 pp. Ill. 8½ x 11 in.
- McCray Refrigerator Co., Kendallville, Ind.**  
**472. Refrigerators and Cooling Rooms. Cat. 53.** A catalog of cooling equipment for hotels, restaurants, hospitals, institutions, colleges and clubs. Catalog No. 96 deals with refrigerators for residences. 52 pp. each. Ill. in colors. 7½ x 10 in.

## REINFORCING STEEL—See also Concrete, Reinforced

- Rail Steel Products Association, Reinforcing Bar Division, Arcade Bldg., St. Louis, Mo.**  
**582. Rail Steel for Concrete Reinforcing.** A book describing the manufacturing, fabrication and physical properties of rolled, billet and rail steel bars with specifications for their use. 84 pp. Ill. 8½ x 11 in.

## RESTAURANT EQUIPMENT—See Kitchen Equipment

## ROOFING—See also Slate—Metals—Shingles

- American Brass Company, Main Office, Waterbury, Conn.**  
**515. Copper Roofing. Service Sheet.** This service sheet contains details for laying copper roofing together with standard specifications. 17 x 22 in. folding to 8½ x 11 in. printed both sides.
- American Sheet & Tin Plate Co., Frick Building, Pittsburgh, Pa.**  
**463. Copper—its Effect Upon Steel for Roofing Tin.** Describes the merits of high grade roofing tin plates and the advantages of the copper-steel alloy. 28 pp. Ill. 8½ x 11 in.
- Asbestos Shingle, Slate & Roofing Co., Ambler, Pa.**  
**53. Ambler Asbestos Corrugated Roofing.** Catalog gives complete data for specifying, drawings, methods of application, tables, etc. Size 8½ x 11 in. 20 pp.
- The Barber Asphalt Company, Land Title Bldg., Philadelphia, Pa.**  
**422. Standard Trinidad Built-Up Roofing Specifications.** Contains two specifications for applying a built-up roof over boards and two for applying over concrete. Gives quantities of materials and useful data. 8 pp. 8 x 10½ in. Ask at same time for Good Roof Guide Book. 32 pp. Ill. 6 x 9 in.
- 702. Specifications.** A pamphlet containing standard specifications for Genasco Standard Trinidad Lake Asphalt Built-up Roofing, Genasco Economy Trinidad Lake Asphalt Built-up Roofing, Genasco Membrane Waterproofing and Genasco Asphalt Flooring. Illustrated with sketches showing construction. 16 pp. Ill. 8 x 11½ in.
- The Phillip Carey Co., Lockland, Cincinnati, Ohio.**  
**378. Architects' Specification Book on Built-Up Roofing.** A manual for detailers and specification writers. Contains complete details and specifications for each type of Carey Asphalt Built-Up Roof. 20 pp. Ill. 8½ x 11 in.
- The Copper and Brass Research Association, 25 Broadway, New York, N. Y.**  
**468. Copper Roofing.** Weights of various roofing materials. Up-to-date practice in the laying of copper roofs—Batten or wood rib method, Standing seam method, flat copper roofs, Copper shingles. Suggestions for avoiding error and obtaining the full value of copper. Decorative effects and how to obtain them. Flashings, reglets, gutters and leaders. Cornices, Copper-covered walls. Specifications. 32 pp. Ill. 8½ x 11 in.

**The Edwards Manufacturing Company, Cincinnati, Ohio.**

- 535. Shingles and Spanish Tile of Copper.** This book, illustrated in colors, describes the forms, sizes, weights and methods of application of roof coverings, gutters, downspouts, etc., of copper. 16 pp. Ill. in special indexed folder for letter size vertical files.

**Ludowici-Celadon Co., Chicago, Ill.**

- 120. Roofing Tile.** A detailed Reference for Architects' Use. Sheets of detailed construction drawings to scale of tile sections of various types and dimensions, giving notes of their uses and positions for various conditions of architectural necessity. Size 9½ x 13½ in. 106 plates.

- 154. The Roof Beautiful.** Booklet. Well illustrated with photographs and drawings, giving history and origin of roofing tile, and advantages over other forms of roofing. Types shown by detailed illustrations. Size 8 x 10¼ in. 32 pp.

**The Richardson Company, Lockland, Cincinnati, Ohio.**

- 492. Viskalt Membrane Roofs.** Contains specifications for applying Membrane roof over boards and also for applying over concrete. Illustrated with line drawings of several approved methods of flashings. 3 pp. 8½ x 11 in.

**Rising and Nelson Slate Company, 101 Park Ave., New York, N. Y.**

- 496. Tudor Stone Roofs.** This leaflet discusses colors and sizes of Tudor hand-wrought slates; deals with the service given to architects and tells how the material is quarried for each product after careful drawings and specifications are prepared in co-operation with architects. Special grades are described in detail and illustrations are given of buildings with Tudor slate roofs. Contains also specifications of laying slate. 4 pp. Ill. 8½ x 11 in.

- 571. Tudor Stone Roofs.** A brochure describing the 7 special grades of Tudor Stone and the 7 grades of commercial slate produced by this company with illustrations of many structures on which it has been used. 28 pp. Ill. 6 x 9½ in.

**Vendor Slate Co., Easton, Pa.**

- 333. Occasional brochures on architecturally pertinent phases of roofing slate sent on request. See also listing under Slate.**

## ROOF CONSTRUCTION

**Porrete Mfg. Co., 2 Verona Ave., Newark, N. J.**

- 258. Porrete Roof Decks.** An illustrated circular describing Porrete (a new light-weight concrete) for use in fireproof roofs for all buildings. 4 pp.

## ROOF-LIGHTS—See Glass Construction

## SAFES

**Art Metal Construction Company, Inc., Jamestown, New York.**

- 544. Measured Protection.** A catalog of steel safes for all office purposes, tested by Underwriters' Laboratories and bearing the Underwriter label. 32 pp. Ill. 8½ x 11 in.

## SANDSTONE—See Stone

## SASH—See Doors and Windows

## SASH CHAIN AND CORD

**Samson Cordage Works, Boston, Mass.**

- 586. Samson Sash Cord.** Specifications and condensed descriptions of Samson spot window sash cord, Samson mahogany wire center sash cord and accessories. 24 pp. Ill. 3½ x 6¼ in.

## SCREENS

**American Wire Fabrics Company, 208 So. La Salle St., Chicago, Illinois.**

- 305. Catalog of Screen Wire Cloth.** A catalog and price list of screen wire cloth, black enamelled, galvanized, aluminoid, copper, bronze. 30 pp. Ill. 3½ x 6¼ in.

**The Higgin Manufacturing Co., 5th and Washington Ave., Newport, Ky.**

- 353. Screen your Home in the Higgin Way.** A description of Higgin door and window screens with practical data. 16 pp. Ill. 8½ x 11½ in.

**New Jersey Wire Cloth Company, 614 South Broad St., Trenton, N. J.**

- 409. A Matter of Health and Comfort. Booklet No. 2331.** A booklet telling all about screens, the durability of copper and its superiority over all other metals for screen purposes. 16 pp. Ill. 5 x 7¾ in.

## SHINGLES—See also Roofing

**The Phillip Carey Co., Lockland, Cincinnati, Ohio.**

- 381. Carey Asfaltslate Shingles.** Folder containing illustrations of attractive buildings and residences on which Carey Asfaltslate Shingles have been used. Describes this type of shingle, showing its special claims and advantages.

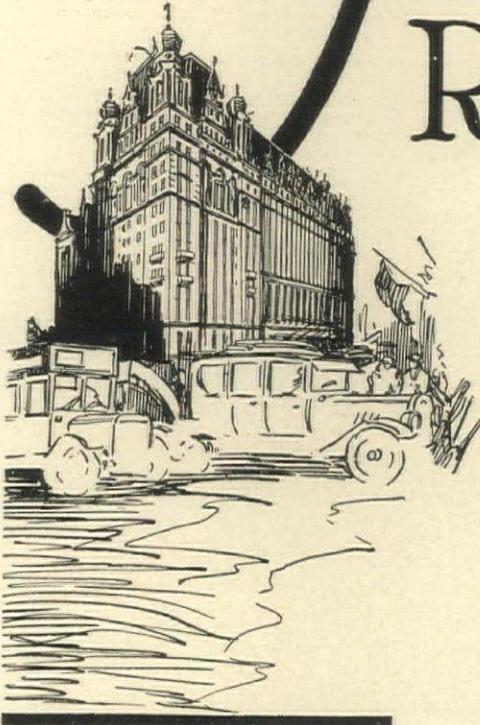
## SIDEWALK LIGHTS—See also Vault Lights

## SLATE—See also Roofing

**Vendor Slate Co., Inc., Easton, Pa.**

- 332. The Vendor Book of Roofing Slate for Architects.** Contains original information on slate in various architectural uses; history, geology, sundry practical matters; complete descriptive classification; extended treatise on architectural roof design and specifications. 24 pp. Ill. 8½ x 11 in.

# Jamison Refrigerator Fronts



**Give Your Built-in Refrigerators the Same Efficiency as is Attained by the Largest Packing and Cold Storage Plants in the Country**

Owners of the country's largest packing houses—the foremost cold-storage plants—the finest ice cream factories—insure the efficiency of their plants by taking pains in their selection of the Door which is to prevent leaks and thereby save them vast amounts of money yearly. This same efficiency can be assured your hotel, apartment house, hospital, restaurant and institution clients on their built-in refrigerators. Their problem may not be as large as those of the great packing houses—but it is equally as important.

Jamison Refrigerator Fronts are built under the same patents, of the same materials, and with the same care as JAMISON DOORS. They enable you to furnish your client a built-in refrigerator of the same principles as those of the largest cold-storage plants in the country—one that will save him money in the long run through the preventing of heat transmission.

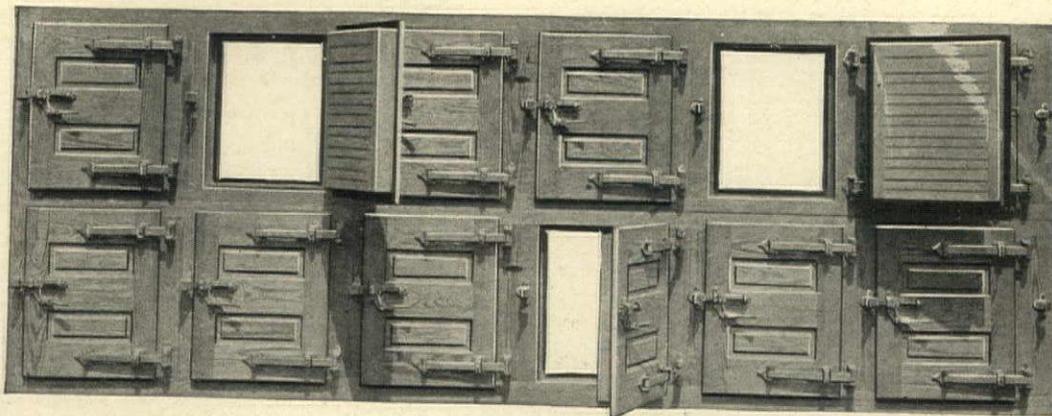
These refrigerator fronts are furnished in units containing any desired number of doors or windows. You will find it interesting to read our catalog which covers fully the subject of Refrigerator Fronts and contains blue-print details showing how to arrive at size wall openings required.

*Write for this Catalogue. It is of regular 8½x11 inch size—Made to fit into your files conveniently to be referred to whenever the occasion demands. Address Desk No. 12 please*

**Jamison Refrigerator Fronts  
for Built-In Refrigerators in**

**Hotels  
Hospitals  
Clubs  
Cafes  
Apartment Houses  
General Institutions  
Private Homes  
Colleges**

**Jamison Cold Storage Door Co.**  
Hagerstown, Md., U. S. A.



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## REFERENCE LIST OF BUSINESS LITERATURE—Continued

STAINS—See also Paints, Stains, Varnishes  
STEEL JOIST CONSTRUCTION

Truscon Steel Co., Youngstown, Ohio.

641. *Truscon Steel Joist Data Book*. Complete data of steel joists giving properties, dimensions, safe loads, coefficients of deflection, details of connections, specifications, directions for installations. 32 pp. Ill. 8½ x 11 in.

## STAIRWAYS—MOVABLE

The Bessler Movable Stairway Co., Akron, Ohio.

541. *The Modern Way Up*. A book describing a stairway that helps utilize attic space. 1. folds up in the ceiling and is concealed when not in use. Letters are given from contented users. 24 pp. Ill. 4¾ x 7¾ in.

## STONE

The Appalachian Marble Company, Knoxville, Tenn.

503. *Appalachian Tennessee Marble*. A new booklet on the qualities to be demanded in marble and a treatise on Tennessee marble by T. Nelson Dale (Retired Geologist, U.S.G.S.). Contains also illustrations of the plant of the company, buildings in which Appalachian Tennessee Marble has been used and four-color process plates of the six major Appalachian marbles. In tough paper indexed cover. 12 pp. Ill. 8½ x 11 in.

Indiana Limestone Quarrymen's Assn., P. O. Box 503, Bedford, Ind.

265. *Folders, Series D*. Structural detail and data sheets showing methods of detailing cut stone work in connection with modern building construction. 4 pp. each. 8½ x 11 in.

366. *Standard Specifications for Cut Stone Work*. This is Vol. III, Series "A-3," Service publications on Indiana Limestone, containing Specifications and Supplementary Data, relating to best methods of specifying and using this stone for all building purposes. This valuable work is not for general distribution. It can be obtained only from a Field Representative of the Association or through direct request from architect written on his letterhead. 56 pp. Ill. 8½ x 11 in.

693. *Indiana Limestone Homes, Series B, Vol. 5*. A portfolio containing sixteen designs for small and moderate-sized dwellings of different styles of architecture and sizes of lots. Plot plan, floor plans, perspective and description. Free to architects and draftsmen requesting same on employer's business stationery. 84 pp. Ill. 8½ x 11 in.

National Building Granite Quarries Assn., Inc., 31 State Street, Boston, Mass.

410. *Architectural Granite No. 1 of the Granite Series*. This booklet contains descriptions of various granites used for building purposes; surface finishes and how obtained; profiles of moldings and how to estimate cost; typical details; complete specifications and 19 plates in colors of granite from various quarries. 16 pp. Ill. 8½ x 11 in.

## STORE FRONTS

Detroit Show Case Co., Detroit, Mich.

77. *Designs*. A booklet. Store fronts and display window designs, giving plans and elevations, and descriptions. Size 9¼ x 12 in. 16 pp.

78. *Details*. Sheets of full size details of "Desco" awning transom bar covers, sill covers, side, head and jamb covers, ventilated hollow metal sash and profile of members. Size 16 x 21½ in. 3 sheets.

The Kawneer Company, Niles, Mich.

467. *A Collection of Successful Store Front Designs*. Illustrations of recently erected modern store fronts with all framing covered with solid copper. Maximum show window surface secured by these designs. Many classes of occupancy shown. 64 pp. Ill. 6¾ x 9¼ in.

530. *Catalog L, 1922-1923 Edition*. Details of solid copper store fronts construction. This is a treatise on the installation of copper store fronts and contains sectional and detail views of Kawneer sash, corner and division bars, jambs, sill and transom bar coverings and other members. Intended for the detailer. 32 pp. Ill. 8½ x 11 in.

## STOVES

George M. Clark &amp; Co., Division of American Stove Co., 179 No. Michigan Ave., Chicago, Ill.

458. *Gas Stove Catalog No. 114*. A complete catalog of Clark Jewell gas stoves; water heaters; room heaters; ovens; waffle irons; cake bakers; hot plates; etc. 76 pp. Ill. 6 x 9 in.

Dangler Stove Co., Division of American Stove Co., Cleveland, Ohio.

459. *Measured Heat Cookery, Catalog No. 161*. A catalog of gas cooking stoves, ranges and water heaters; featuring the Lorain Oven Heat Regulator, a device for obtaining uniform heat without constant supervision. 72 pp. Ill. 7¼ x 10¾ in.

## STUCCO—See also Cement

Portland Cement Association, 347 Madison Ave., N. Y. C.

594. *Portland Cement Stucco*. Illustrated leaflet of recommended practice for Portland Cement Stucco. Contains data on materials, proportions, application and curing. Table of colors for various tints, photographs of surface textures and drawings of construction details also given. 15 pp. Ill. 8½ x 11 in.

## STUCCO BASE

The Bishopric Manufacturing Company, Cincinnati, Ohio.

451. *Bishopric for All Time and Clime*. A booklet describing Bishopric materials; giving building data, detailed drawings and specifications. Illustrated with half tones from photographs of houses built of Bishopric materials. 52 pp. Ill. 8 x 10½ in.

## TELEPHONES

Automatic Electric Co., 945 W. Van Buren St., Chicago, Ill.

683. *Architect's Specifications for Interior Telephone System*. A complete and short specification for the installation of interior telephone systems adapted to all kinds of buildings and uses. 4 pp. 8½ x 11 in.

684. *The Straight Line*. A booklet devoted to interior communication by use of private automatic exchanges and the P-A-X Code Calls. Description of switchboards, instruments and accessories. 38 pp. Ill. 5 x 8 in.

Stromberg-Carlson Telephone Mfg. Co., Rochester, New York.

304. *Inter-Communicating Telephone Systems. Bulletin No. 107*. A pamphlet giving just the information required for the installation of intercommunicating systems from 2 to 32 stations capacity. 15 pp. Ill. 7¾ x 10 in.

## TERRA COTTA

Atlantic Terra Cotta Company, 350 Madison Avenue, New York, N. Y.

425. *Questions Answered*. A brief but full description of Atlantic Terra Cotta and its use in buildings. 32 pp. Ill. 5¼ x 7 in.

551. *Monthly Magazine, Atlantic Terra Cotta*. January issue illustrates use of terra cotta in combination with stone in the Scottish Rite Cathedral, San Antonio, Texas. 16 pp. Ill. 8½ x 11 in.

National Terra Cotta Society, 19 West 44th St., New York City.

664. *Standard Specifications*. Contains complete detailed specifications for the manufacture, furnishing and setting of terra cotta, a glossary of terms relating to terra cotta and a short form specification for incorporating in architect's specification. 12 pp. 8½ x 11 in.

666. *Color in Architecture*. An illustrated treatise upon the principles of color design and appropriate technique. 38 pages. Ill. 8½ x 11 in.

667. *Present Day Schools*. Illustrating 42 examples of school building architecture with an article on school house design by James O. Betelle, A. I. A. 32 pp. Ill. 8½ x 11 in.

668. *Better Banks*. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bossom, architect. 32 pp. Ill. 8½ x 11 in.

The Northwestern Terra Cotta Co., 2525 Clybourn Ave., Chicago, Ill.

96. *Architectural Terra Cotta*. A collected set of advertisements in a book, giving examples of architectural terra cotta, ornamental designs and illustrations of examples of façades, of moving-picture houses, office buildings, shops, vestibules and corridors in which Northwestern Terra Cotta was used. Size 8½ x 11 in. 78 pp.

## TILE—ORNAMENTAL

The Associated Tile Manufacturers, Beaver Falls, Pa.

358. *Home Suggestions*. A new book in colors describing and illustrating the use of tiles in floors, walls, ceilings, fireplaces, garages, for exterior embellishment, etc. Full of suggestions. Sent to architects on request. 7½ x 10¾ in.

359. *Basic Information on Tiles*. Book giving practical information on ingredients, processes, gradings, sizes, shapes, colors, finishes and nomenclature. Sent to architects on request. 7½ x 10¾ in.

374. *Basic Specifications for Tilework and Related Documents. No. K-390*. This specification is prepared in a very systematic manner for the use of architects and builders. It is printed on one side of a sheet with facing page blank to receive memoranda. Various colored sheets make reference easy and simplify greatly the work of a specification writer in specifying tilework. 38 pp. 7½ x 10¾ in.

375. "Work Sheets" for Specification Writers. To be used in connection with "Basic Specification for Tilework and Related Documents." 16 sheets 7½ x 10¾ in.

## TIME CLOCKS—See Clocks

## TOILET PARTITIONS—See Wainscoting

## TRIM—See also Doors and Windows

## TRUSSES—See Building Construction

## VARNISH—See Paints

## VAULT LIGHTS

American Three Way Luxfer Prism Co., 13th Street and 55th Court, Chicago, Ill.

424. *Daylighting. Catalog 21*. A complete catalog on glass prisms for use in transoms, sidewalk and floor lights, skylights, etc., for lighting places inaccessible to direct daylight. Contains also measurements, specifications and other data required by designers. 42 pp. Ill. 8½ x 11 in.

## VENTILATION—See Heating and Ventilation

# The Architect's Own Specification For Tilework

The work of the architect or his specification writer, as far as it pertains to tilework can be simplified to a single paragraph such as the following (or one of similar purport) which is quoted from the work sheets furnished as scratch pads for architects offices.

## TILEWORK

Furnish all materials and labor necessary for the completion of the tilework according to the accompanying drawings and the following specification and schedules. The Basic Specification for Tilework, First Edition, 1921, as issued by the Associated Tile Manufacturers, Beaver Falls, Pa. in so far as any portion is applicable to this building, is hereby declared to be and is made a part of the contract to have the same force and effect as the written in full in this specification (except as it may be modified herein.)

The Basic Specification does not mention by name the product of any manufacturer of tile, but is a general document applicable to any kind of tile installation over any type of construction.

The Basic Specification for Tilework is not a document intended to be copied. It is distinctly a reference document. It was prepared by our consulting architect in cooperation with other architects throughout the country and others qualified to contribute and enhance its value.

A copy of the Basic Specification should be in all reference files. Work Sheets, schedules, specification reminder and checking list will be supplied upon request.



ASSOCIATED TILE MANUFACTURERS  
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## REFERENCE LIST OF BUSINESS LITERATURE—Continued

## VENTILATORS

The Burt Manufacturing Co., Akron, Ohio.

207. *General Catalogue* covering entire line of Ventilators, Exhaust Heads and Filters. Separate leaflets on each type of ventilator, vent and damper.

525. *The Great Outdoors Brought Inside*. In this book is a description of the new rectangular combination skylight and ventilator; the Burt fan ventilator for removing odors, fumes, etc., when atmospheric conditions interfere with the gravity process; and a table giving prices, dimensions, weights and gauges of iron of the Burt Ventilator. Some good general information about ventilators is included. 16 pp. Ill. 3¾ x 6¾ in.

## WAINSCOTING

The Vitrolite Company, Chamber of Commerce Building, Chicago, Ill.

648. *Toilet Partitions and Wainscoting*. *Architects Tile Bulletin No. 7*. Describing the uses of Vitrolite, its physical properties, details of installation and specifications. 32 pp. Ill. 8½ x 11 in.

## WALL COVERING—See also Lincrusta-Walton

Standard Textile Products Co., 320 Broadway, New York, N. Y.

111. *Sanitas, Modern Wall Covering*. Folio. Plates of color renderings of various interiors, with suggestions for the library, living room, dining room, boudoir, kitchen and church wall covering, using Sanitas. Size 11½ x 6 in. 15 plates.

112. *Sanitas, and Its Uses*. Booklet. Text and color illustrations of Sanitas as a wall covering, with tables for wall and ceiling measurements. Notes on sanitary character, cleanliness and durability of Sanitas. Size 5 x 7 in. 28 pp. 6 color plates and 2 sample sheets.

113. *Sanilining Sanitas Lining and Prepared Lining*. Folder. Notes on durability and cleanly character of the above three products. Size 3¾ x 6 in.

114. *Hints to Decorators*. Booklet. Instructions and specifications for the application of Sanitas, with notes on finishes and material. Size 5 x 6¾ in. 20 pp.

## WATER HEATERS

Ruud Manufacturing Co., Pittsburgh, Pa.

567. *Ruud Gas Water Heaters*. Bulletins in filing folder describing instantaneous automatic water heaters for small homes and special uses, multi-coil automatic storage systems, automatic storage systems and tank water heaters. Details for connections, hot water service and specifications. 19 pp. Ill. 8½ x 11 in.

589. *Ruud Automatic Storage Systems*. Catalog of automatic hot water storage systems for domestic, industrial and commercial uses. Details, capacities, dimensions and other data. 24 pp. Ill. 6 x 9 in.

590. *Ruud Multi-Copper-Coil Automatic Storage Systems*. Catalog describing automatic hot water storage systems of large capacity for large residences, apartment buildings, hotels, hospitals, gymnasiums and factories. Details, capacities and dimensions for complete line. 32 pp. Ill. 6 x 9 in.

## WATERPROOFING—See also Dampproofing

The General Fireproofing Co., Youngstown, Ohio.

646. *The Waterproofing Handbook* (Sixth Edition). A revised edition of this valuable book treating of sub-structure and super-structure waterproofing, cement and wood floor preservatives, technical paints and coatings and GF waterproofings, preservatives and their uses. 72 pp. Ill. 8½ x 11 in.

## WATER PURIFICATION

The R. U. V. Company, Inc., 165 Broadway, New York.

606. *Ultra Violet Ray Sterilization*. Bulletins treating of water sterilization for homes, hotels, office buildings, hospitals, schools, industrial plants, breweries, ice plants, swimming pools, water works and other places. Ill.

## WATER SOFTENERS

The Permutit Company, 440 Fourth Ave., New York.

105. *Permutit (Water Rectification Systems)*. Illustrated booklet. Describes all methods of softening water, including the original Zeolite process. For homes, hotels, apartment houses, swimming pools, laundries and industrial plants. Size 8½ x 11 in. 32 pp.

482. *Bulletin No. 1600*. This bulletin treats of the value of soft water in the house and describes the Wayne Domestic Water Softening System. 6 pp. Ill. 8¾ x 10½ in.

Wayne Tank and Pump Co., Fort Wayne, Ind.

687. *Water Softening and Filtration*. A valuable treatise on the subject of slow-acting and quick-acting types of water softeners and their application to commercial, industrial and domestic uses. The construction of and uses for Wayne Pressure Filters are also adequately described. 32 pp. Ill. 8¼ x 10½ in.

## WATER SUPPLY—See Pumps

## WEATHER STRIPS

The Diamond Metal Weather Strip Co., Columbus, Ohio.

616. *The Diamond Way*. A catalog of full size details showing the application of Diamond metal weather strips to double hung and casement windows and doors with complete specifications. 34 pp. Ill. 8½ x 11 in.

The Higgin Manufacturing Co., 5th and Washington Ave., Newport, Ky.

354. *Higgin Metal Weather Strips*. A booklet of considerable value to architects and builders on the use of weather strips. Ask also for the companion book on "The Reason Why." Each booklet 12 pp. Ill. 6 x 9 in.

Monarch Metal Products Co., 5020 Penrose Street, St. Louis, Mo.

512. *Monarch Metal Weather Strips*. The publication embodies all the suggestions for advertising literature made by the Committee on Structural Service of the American Institute of Architects. It contains a treatise on leakage around windows together with description of Monarch Metal Weather Strips. Contains many detail working drawings. 48 pp. Ill. 7½ x 10½ in.

## WINDOWS—See Doors and Windows

## WIRE AND CABLE—See Electric Wire and Cable

## WOODWORK—See also Doors and Windows—Lumber

Curtis Companies Service Bureau, Clinton, Iowa.

663. *Keeping Down the Cost of Your Woodwork*. A book illustrating Curtis interior woodwork and built-in cabinets and fixtures designed by Trowbridge and Ackerman, Architects, New York. Colored illustrations and details. 16 pp. Ill. 7 x 9¼ in.

Hartmann-Sanders Company, 6 East 39th St., New York, N. Y.

334. *Catalog No. 47*. Illustrating Kell's Patent Lock Joint wood stave columns for exterior and interior use. 48 pp. Ill. 7½ x 10 in.

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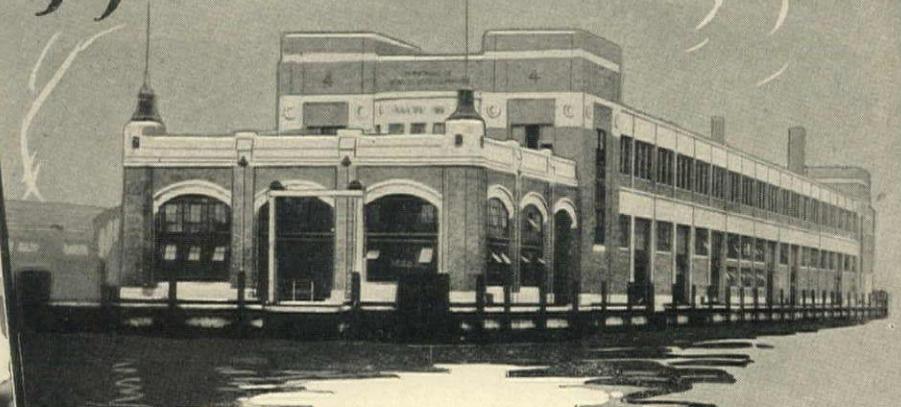
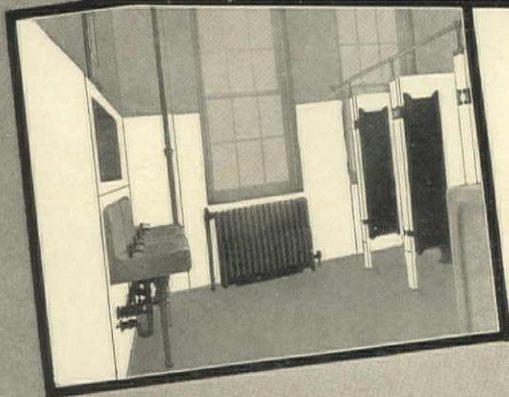
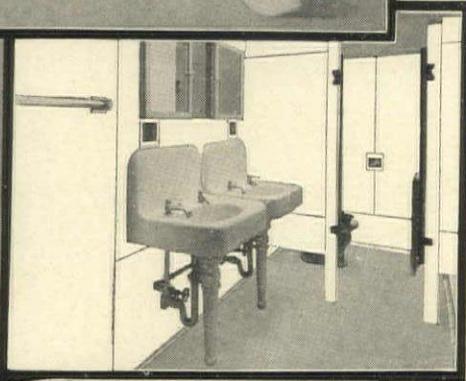
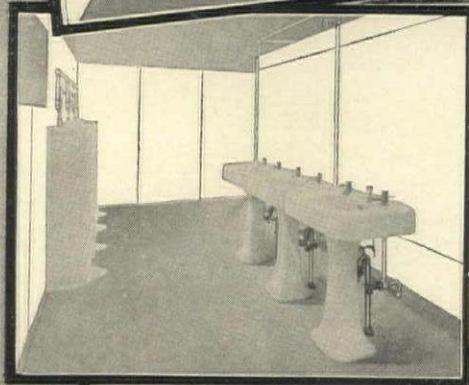
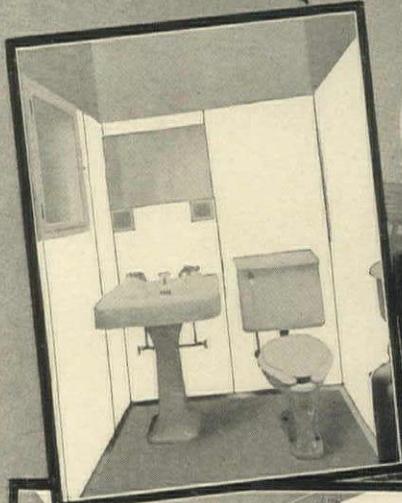
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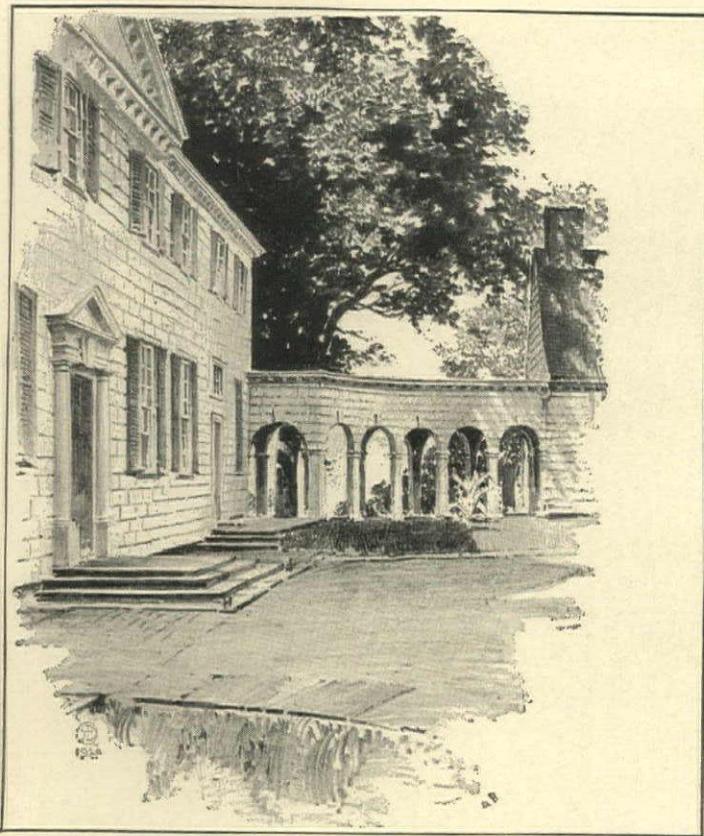
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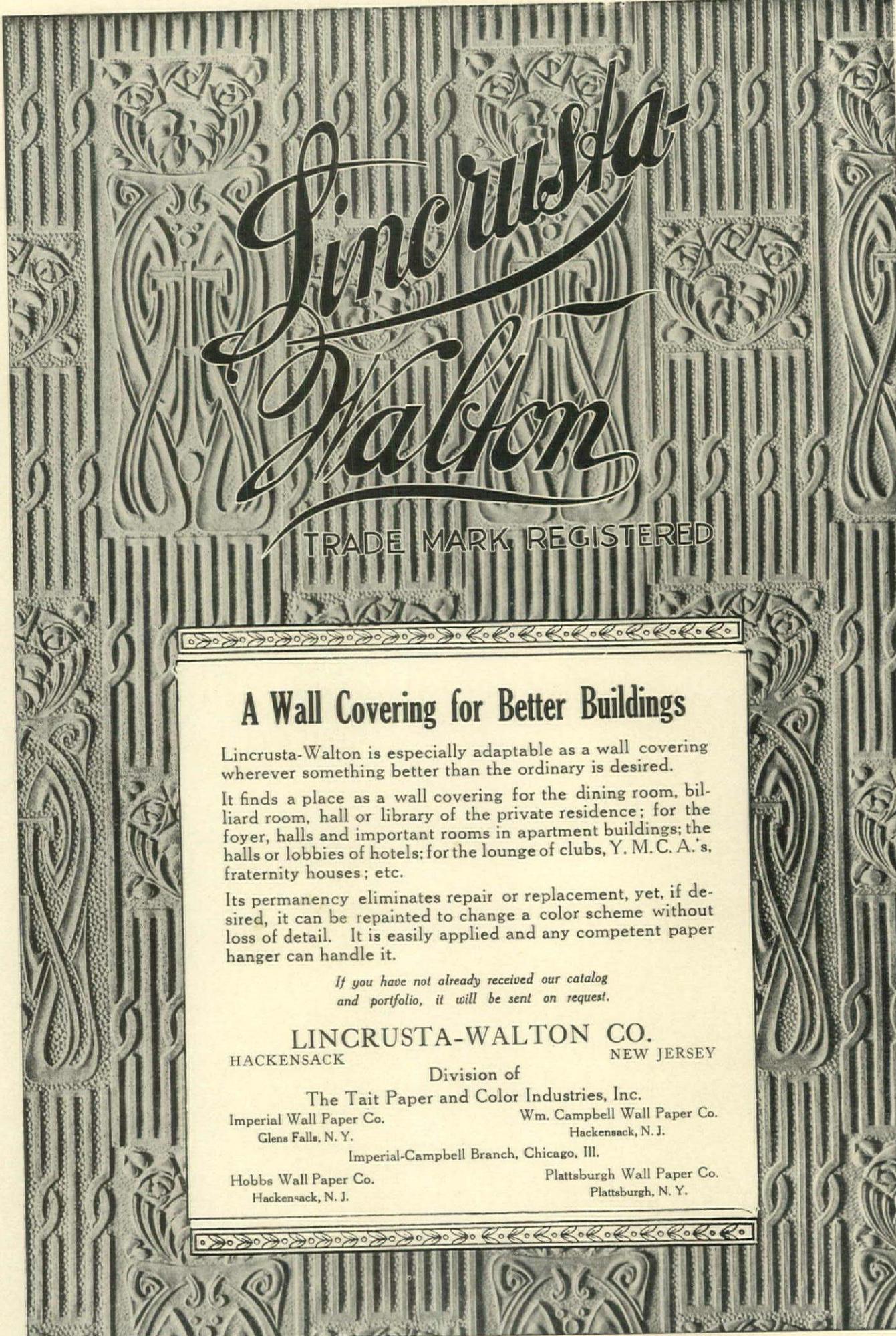
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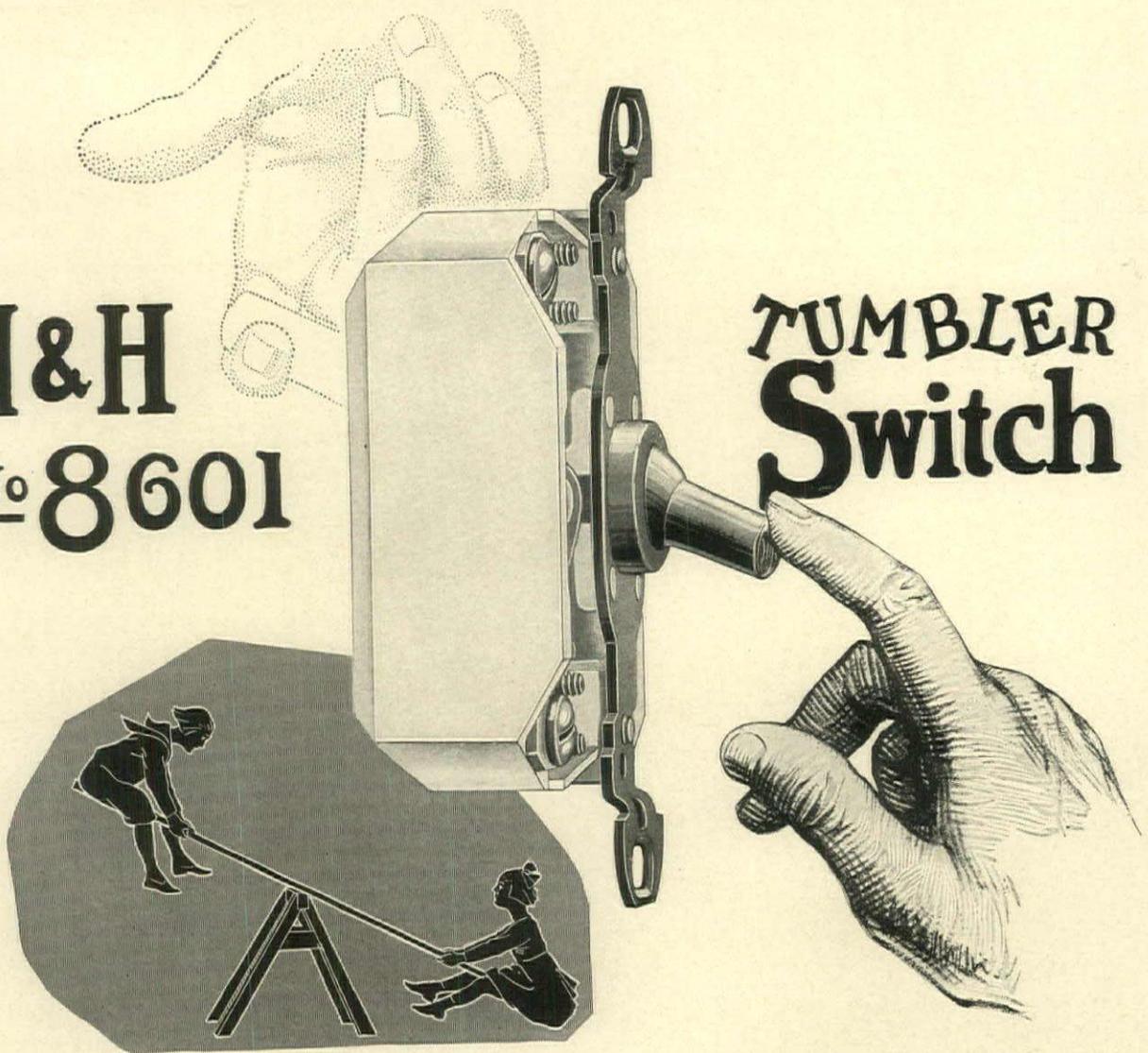
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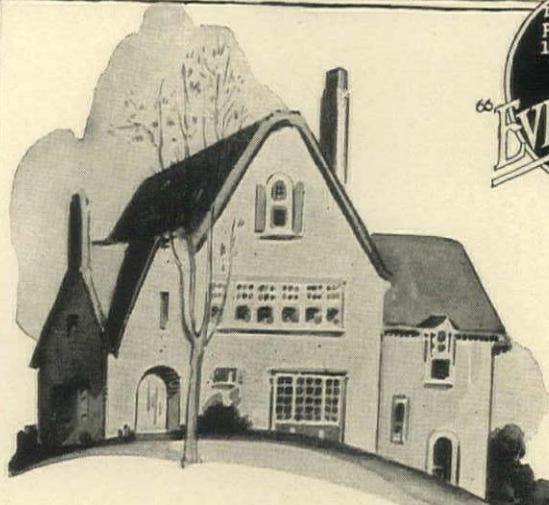
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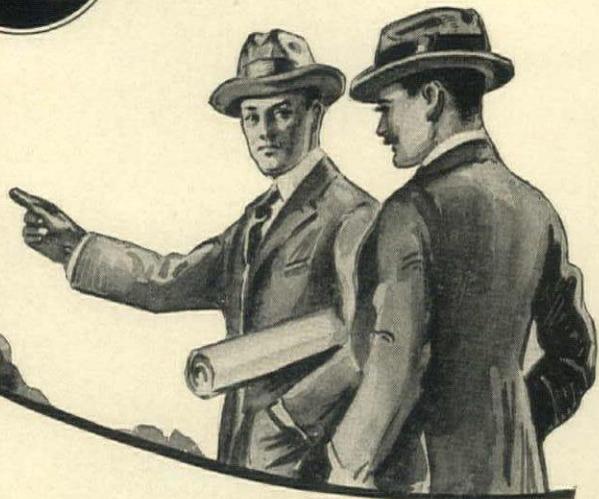
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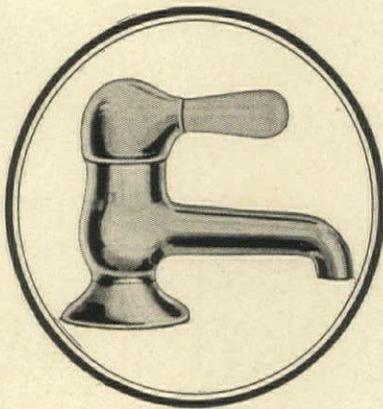


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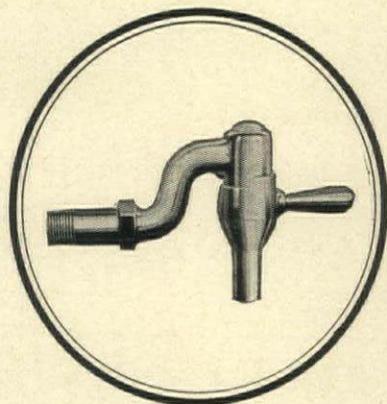
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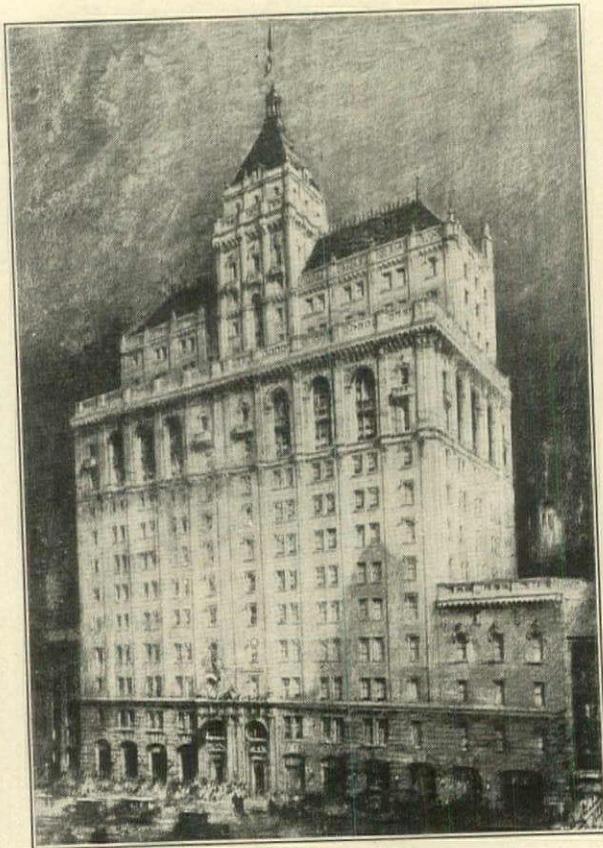


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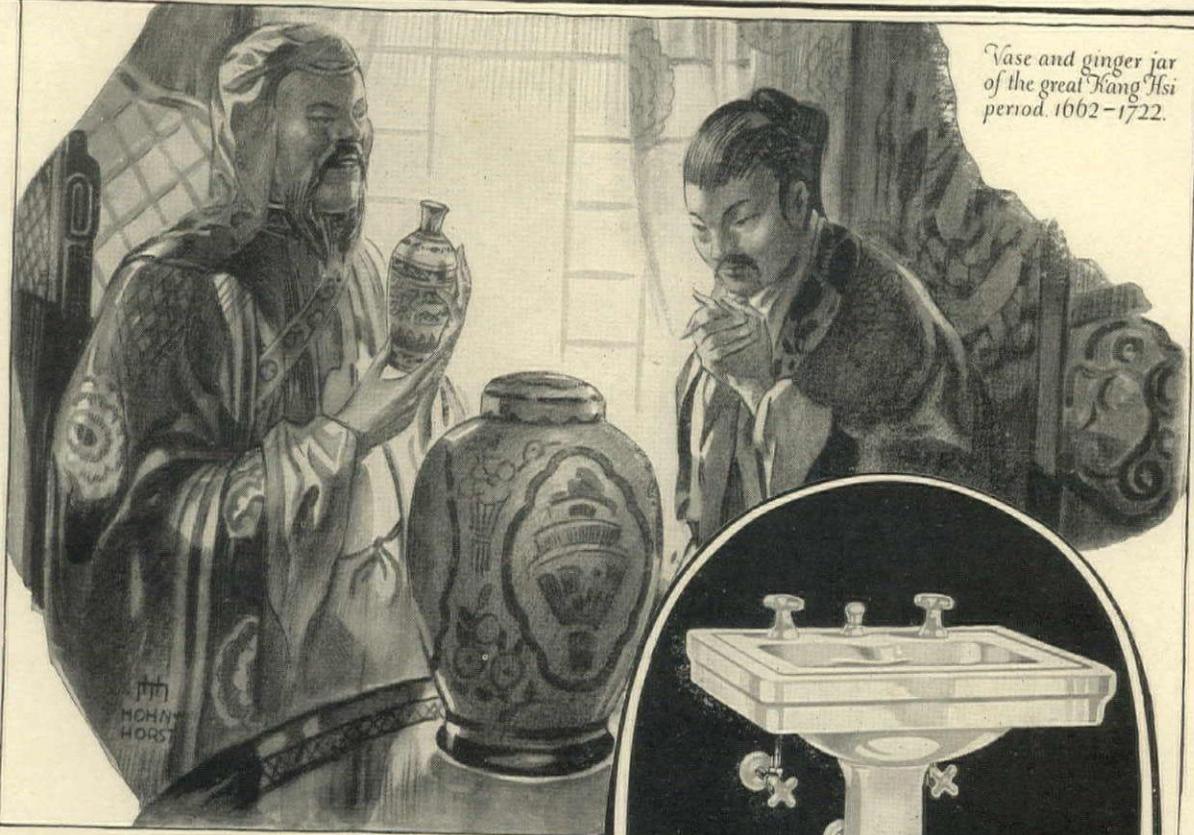
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Compania Italo-Americana de Lima  
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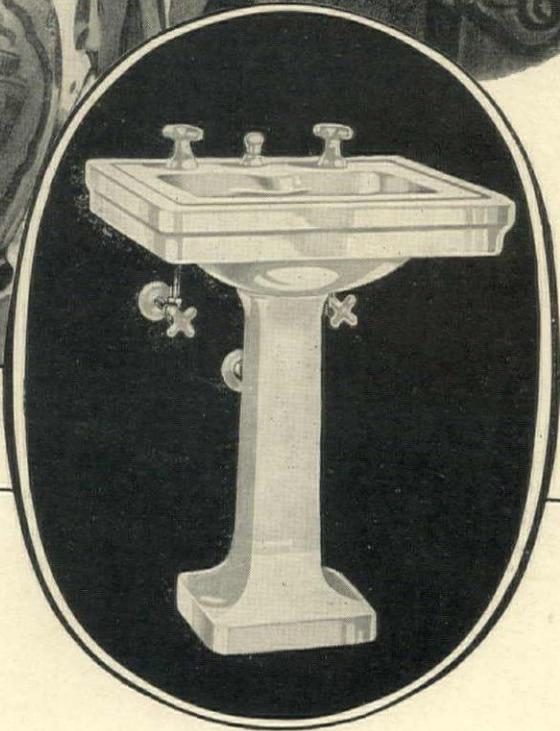
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# MADDOCK *Sanitary* Fixtures



*Vase and ginger jar of the great Kang Hsi period. 1662-1722.*

*“objets d’art”*



THOMAS MADDOCK bathroom appointments are in harmonious accord with the home in which every detail of equipment is inconspicuously correct.

## *The MADBURY* K-2000

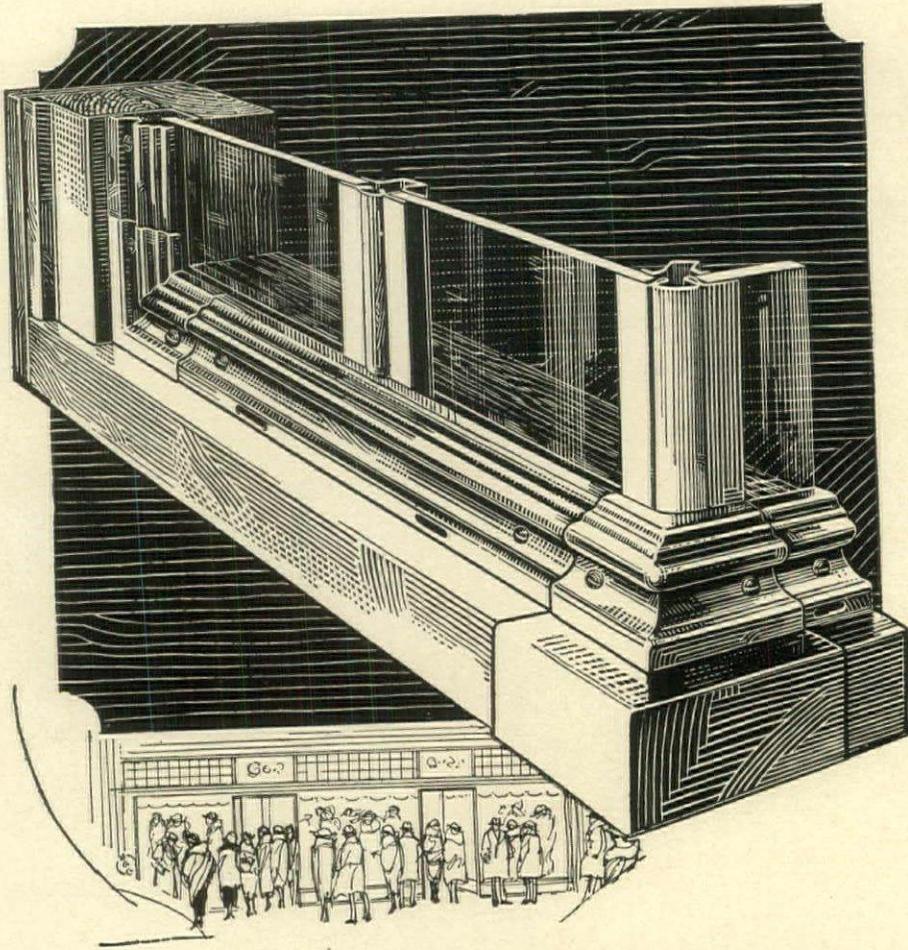
White Vitreous China Lavatory with Integral Supply Nozzle, Cleansing Overflow Feature, Square Bowl, Anti-splash Rim and Square Pedestal. The fittings on the top of the Lavatory are entirely covered with china trimmings. This lavatory is made in the following sizes—  
20 x 24      22 x 27      24 x 30

Our new cloth-bound catalogue contains illustrations, descriptions, specifications and roughing sheets of MADDOCK vitreous china sanitary fixtures. In requesting a copy, please use your business letterhead.



## THOMAS MADDOCK'S SONS COMPANY *Trenton, New Jersey.*

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**T**HE ample resiliency provided by Desco construction is a feature of interest to architects who are particularly concerned with safety to glass.

This is achieved by resting the glass against creosote-dipped blocks placed intermittently throughout the length of the sash. Two creosote-dipped setting blocks are used for each plate of glass to rest upon. Glaziers pronounce this the most practical method of cushioning glass against shocks as well as expansion and contraction.

Breakage is still further guarded against by the semi-flexible sash face plate.

These mechanical features—combined with the practical design and easy assembly, worked out in co-operation with practical architects, is the reason that Desco Store front construction has constantly increased in popularity.

Price list and details of Desco will be sent upon request. We also refer you to Sweet's Catalog.

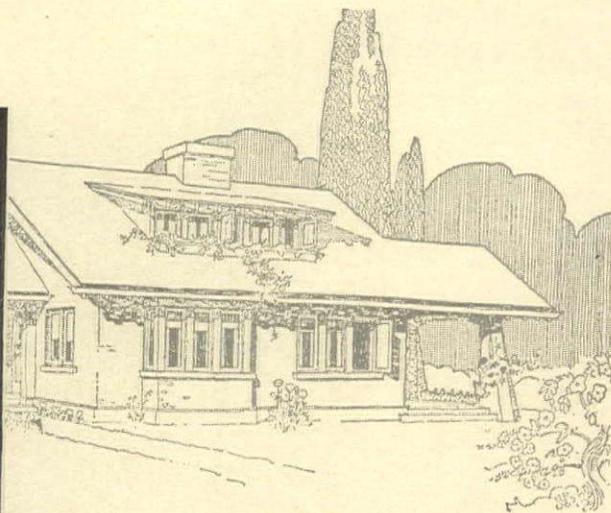
*There is a Desco distributor near you*

DETROIT SHOW CASE CO., 1650 Fort Street West DETROIT, MICH.

**Desco**<sup>134</sup>  
**METAL**

# STORE FRONTS

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## Better Walls for Better Homes

NOTHING adds more charm to the modern home than do beautiful walls. And neither is anything more unsightly than chipped, cracked or blistered walls. Permanently beautiful white walls are easily obtained by the use of



It not only gives a lasting finish, but is also fire-resisting, metal-preserving and acoustics-improving, as well. Also, it is warranted not to chip, crack or blister no matter what type of decoration is applied, whether the walls be tinted, painted, papered or burlapped.



These results are due to the purity and peculiar natural composition, plus the chemical content of the limestone rock from which Ohio White Finishing Lime is made. Its "fatness" or plasticity makes it spread easily and enables the plasterer to obtain maximum coverage with minimum effort.

From humble cottage to luxurious home, theatre or office building, Ohio White Finishing Lime will accomplish the extraordinary because it is a better-than-ordinary Lime.

Write for our booklet "The Tale of the Clam."  
It tells the complete story of lime as produced in  
"The Lime Center of the World."

**The Ohio Hydrate & Supply Co.**  
WOODVILLE OHIO

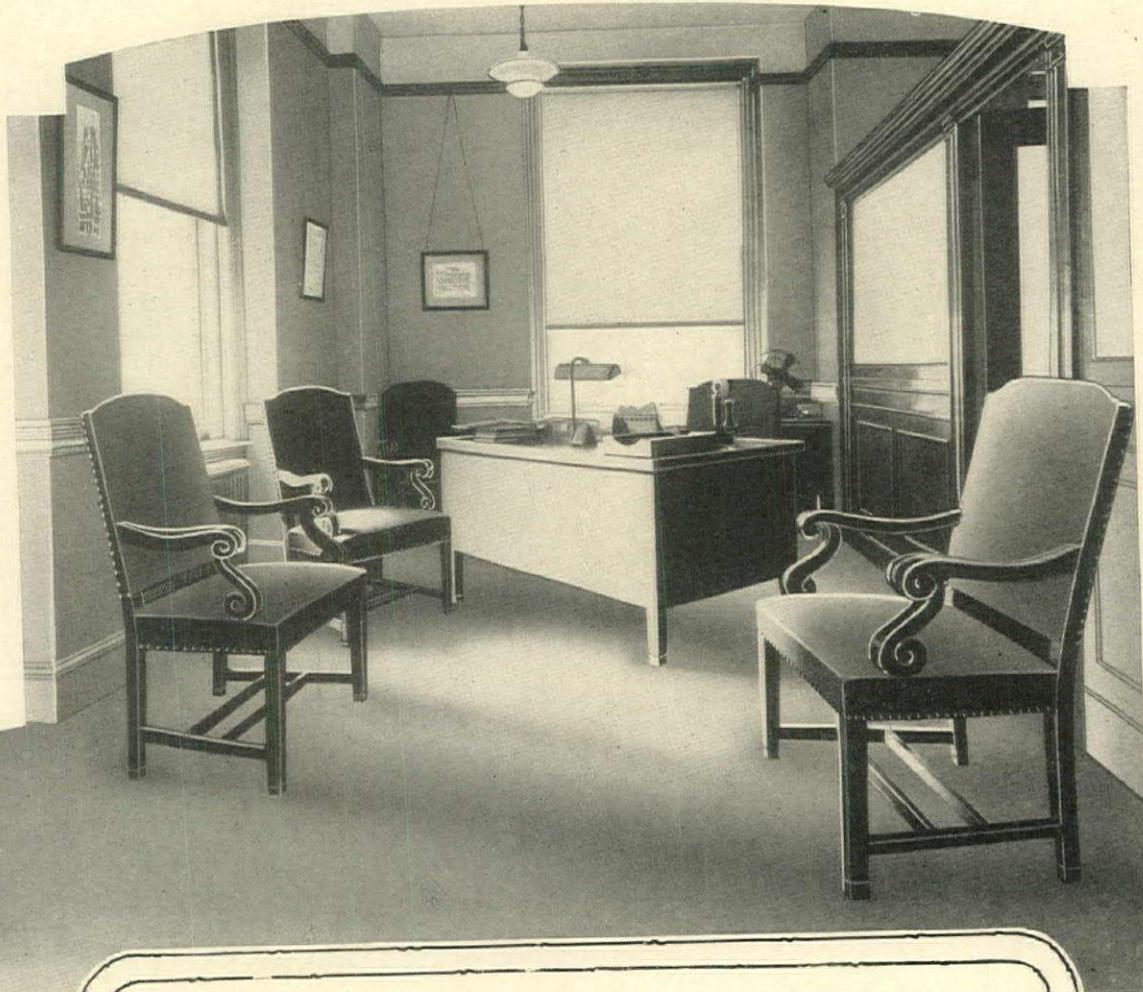
"The Lime Center of the World"



# Armstrong's Linoleum

for Every Floor in the House

Look for the  
CIRCLE "A"  
trademark on  
the burlap back



## Beautiful, Quiet Floors for the Bank

**R**ESILIENCE is the quality that distinguishes linoleum from harder, denser floors—a resilience that insures quiet and means foot comfort for workers.

It is cork that makes linoleum springy. Cork also is tough, non-absorbent, waterproof. A binder of oxidized linseed oil adds to the toughness and resilience.

Cemented in place to the concrete subfloor, a smooth, seamless linoleum floor is easily and efficiently maintained by waxing and polishing. So laid and intelligently cared for, there is practically no wear out to linoleum. Floors laid twenty and

thirty years ago are still apparently as good as new.

The range of Armstrong designs enables you to assign the floor its proper part in the architectural ensemble. Marble and tile patterns, for example, for the public areas, solid color battleship gauges for the working spaces, two-tone jaspés and artistic carpet designs for the private offices and conference rooms.

Finally, if you would learn how moderate is the cost of modern floors of Armstrong's Linoleum, write for samples and the names of contractors who will cheerfully, and without obligation, furnish quick figures on any job, large or small.

Armstrong Cork Company, Linoleum Division, Lancaster, Pa.

A 20

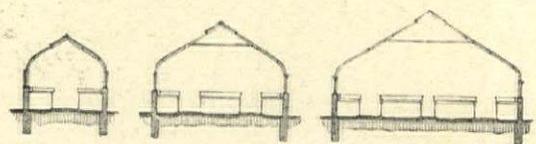


A private office in the American Exchange National Bank, New York City, floored with Armstrong's Green Battleship Linoleum.

For Specifications, see Sweet's, pages 498-503, or American Architect Specification Manual.

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

# Glass Gardens



Number One connects central house and work room.  
 Number Two is the wing houses.  
 Number Three the central house.

There is considerable rather careless talk these days about Service. Apparently when there isn't anything in particular to say they are particular to say that.

Claiming you give a Service is one thing.  
 Having abundant evidence of such Service is quite another.

With over a century's experience in greenhouse building and houses all over the country, from Hell Gate to Golden Gate, it would seem enough to say, that what we have done for others we can do for you. It might, however, be consistent to add that to the Services of our experts, you are without obligation, most welcome at any time.

NEW YORK  
 30 E. 42nd St.  
 BOSTON-11  
 Little Bldg.  
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 CLEVELAND  
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 MONTREAL  
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*Builders of Greenhouses and Conservatories*

EASTERN FACTORY  
 Irvington, N. Y.

WESTERN FACTORY  
 Des Plaines, Ill.

CANADIAN FACTORY  
 St. Catharines, Ont.



### The Top of the Times

Topping and extending the Times Annex involved problems in Terra Cotta construction which are all in the day's work with the Atlantic Company. We have a department to solve all construction problems.

An advantage of a Terra Cotta addition to a Terra Cotta building is that the original Terra Cotta can be cleaned so that it takes up perfectly with the new. Our Service Department is now cleaning the old building.

*Times Annex, New York, Ludlow & Peabody, Architects  
George A. Fuller Co., Builders*

**Atlantic Terra Cotta Company**  
350 Madison Avenue, New York

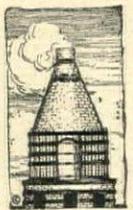
**Atlanta Terra Cotta Company**  
Atlanta, Georgia

Our Department of Standards will be glad to answer questions from Architects relating to Terra Cotta construction. The best time to ask questions is while the Architects' drawings are in course of preparation.

Economy results, and practical construction is assured.

Use of the Standard Specification for Terra Cotta, prepared by the National Terra Cotta Society, is assurance that all bids are based upon doing *at least as much* as the specification requires.

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**Largest Manufacturers of Terra Cotta in the World**

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# EARLY AMERICAN ARCHITECTURE

A Portfolio of Sketches by

**OTTO R. EGGERS**

**T**HE subjects of the 56 sketches in the portfolio are of the greatest architectural interest, and Eggers, in his pencil presentation, has brought out those features of greatest appeal.

The technique also is an inspiration and a help to every lover of the art of pencil sketching.

Printed in black on a wash background of soft amber, the individual prints are well worth framing if so desired. The reduced reproductions on this page, in black and white, can only imperfectly indicate the beauty and value of the subjects.



*Street Bridge, Hartford, Conn.*

## Special Offer

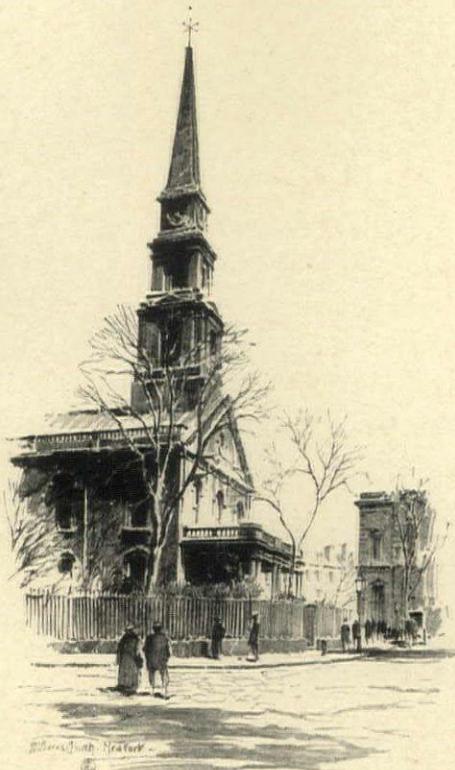
**T**HE regular price of the portfolio, containing the 56 sketches and descriptive monographs of each by Wm. H. Crocker, Editor of *The American Architect*, is \$6.00.

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If you are not entirely satisfied with the Portfolio you can return it and receive your money back. Just fill out the Coupon and forward with your remittance.

The number of Portfolios remaining is limited, and orders will be filled in the sequence of their receipt.



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New York*

The American Architect  
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Date.....

Enclosed is remittance of \$5.00 for which send Portfolio of Eggers' Sketches of Early American Architecture.

I reserve the privilege of returning Portfolio within two days of its receipt if I am not satisfied with it, and you are to refund the full purchase price of \$5.00.

Signed .....

Local Address .....

City..... State .....



*Residence, Kew Gardens, Long Island*

*Walter McQuade, Architect*

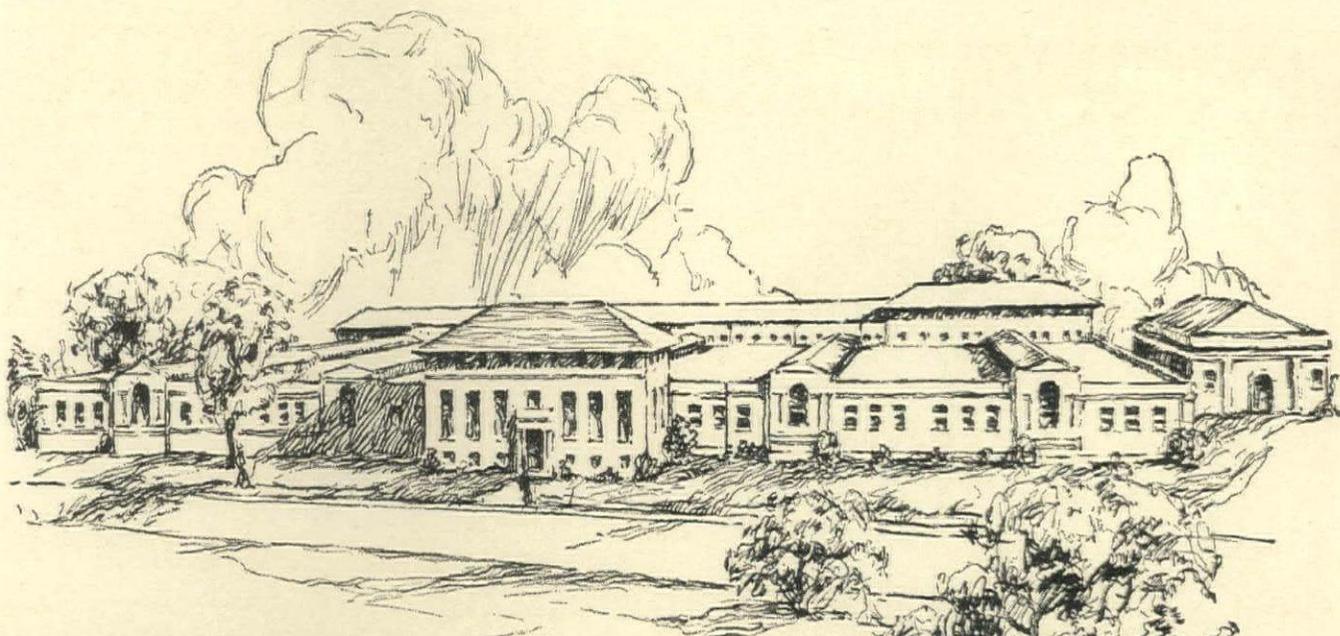
THE monotony of straight lines and sharp angles has been avoided in the roof of this house by gentle curves at dormers and chimneys. This is one of the many instances demonstrating the adaptability of Tudor Stone and Tudor Stone Junior; unfortunately its possibilities for color combinations—which are almost countless—cannot be reproduced photographically.

## **Rising and Nelson Slate Company**

Quarries & Main Office: WEST PAWLET, VERMONT

Office of Architects' Service Department, 101 Park Avenue, New York City. Walter McQuade, Consulting Architect  
CHICAGO PHILADELPHIA BOSTON

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## Largest filtration plant in the world uses BRIXMENT for masonry

THE new filtration plant for the city of Detroit, just opened for operation, covers seventeen acres and has a filtering capacity of 320 M. G. D. — the largest of any filtration plant in the world. In the construction of this mammoth plant, strength and endurance were prime requisites. Quite naturally, therefore, BRIXMENT was chosen for all masonry.

For BRIXMENT is not only more easily adapted to architectural requirements—not only more economical in time, labor and money—but also insures a wall of greater strength and stability. BRIXMENT is a mortar material of standardized composition, resulting in an invariable and uniform mix and a bond equal in ultimate strength to that of the brick itself. No lime. No slaking. Unusually plastic, enabling the mason to do more and better work. Obviously more economical.

Send for convenient, self-filing handbook and list of well-known buildings in which BRIXMENT has been used exclusively for mortar.

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KY.



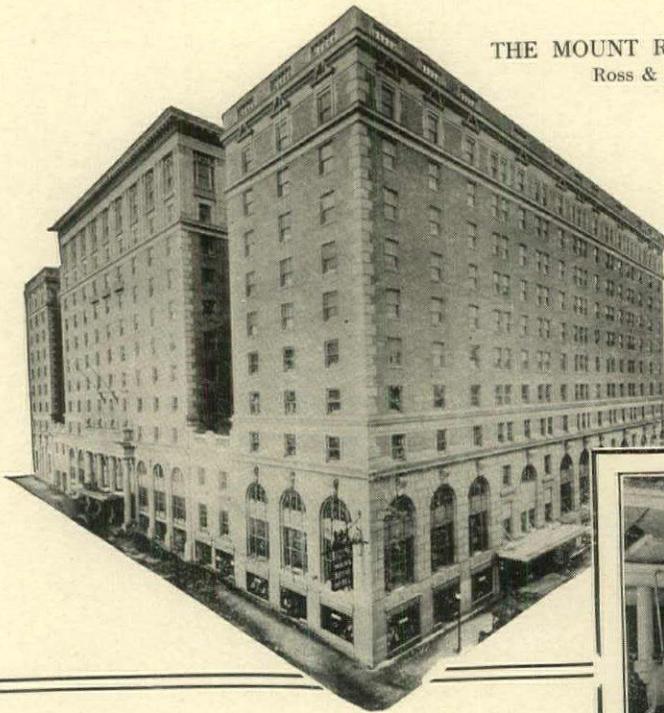
Detroit Filtration Plant, Detroit, Mich. Theodore A. Leisen, Chief Engineer; Frank A. Stevenson, Principal Assistant; Henry A. Hagen, Assistant; W. H. Mueller Co., Contractors for superstructure. BRIXMENT used exclusively for mortar.

*Better Masonry  
at Less Cost*

# BRIXMENT

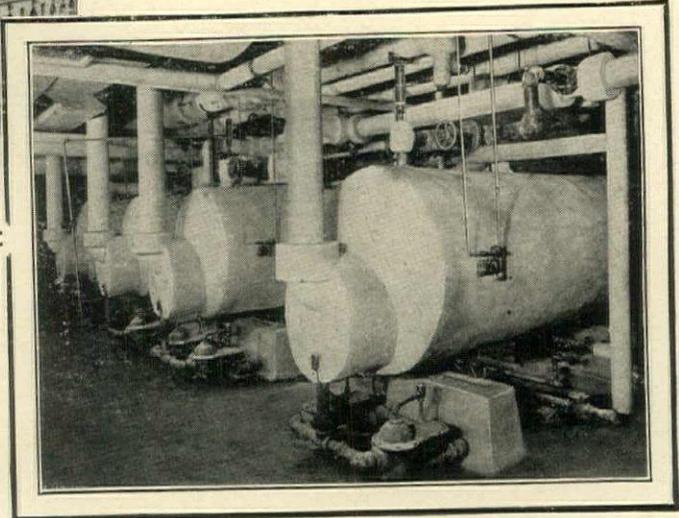
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# ENGINEERING SUPERIORITY



THE MOUNT ROYAL HOTEL, MONTREAL, CANADA  
ROSS & McDONALD, Montreal, Architects

FIVE WHITLOCK-DARLING WATER HEATERS  
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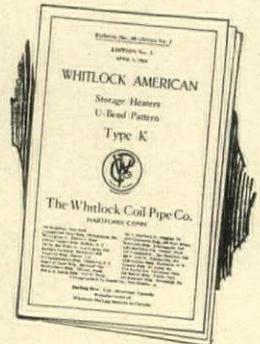
## The Largest Hotel in the British Empire Uses WHITLOCK HEATERS

THE Mount Royal Hotel at Montreal, Canada, is a splendid example of modern construction employing the best and most practical equipment throughout.

All hot water used in the building is supplied by five Whitlock-Darling heaters with a combined heating capacity of 19,000 gallons per hour. These heaters are built by Darling Brothers, Limited, of Montreal, who are licensed to build and sell Whitlock Products in Canada.

The justly earned and constantly maintained reputation of Whitlock heaters is world-wide. Their durability, economy, high capacity and superior engineering refinements have made them the choice of architects and engineers for their most important work.

A Whitlock engineer will gladly furnish you with complete data and blueprints for any hot water equipment installation on which you may be working. No obligation or cost for this service.



Send for Bulletin No. 40 just off the press. It contains useful information and tables which will prove valuable to you.

**The Whitlock Coil Pipe Company**  
130 South Street - - - Hartford, Conn.

We announce the removal of our Boston office from 50 Congress Street to 514 Atlantic Avenue.

# WHITLOCK PRODUCTS

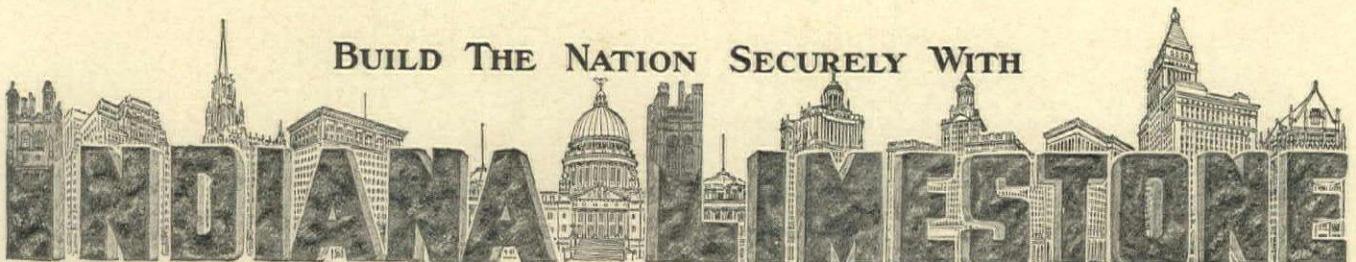
HEAT TRANSFER

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## A valuable book for Architects

A PORTFOLIO of house designs prepared by a leading firm of Architects under the supervision of our Technical Director is just off the press. These designs combine economy of space with attractive arrangement of rooms, and will be a valuable addition to your reference file. This portfolio sent free to Architects requesting it on their office stationery. Address, Indiana Limestone Quarrymen's Association, Box 765, Bedford, Indiana.

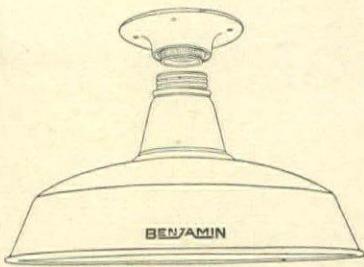


**The NATION'S BUILDING STONE**

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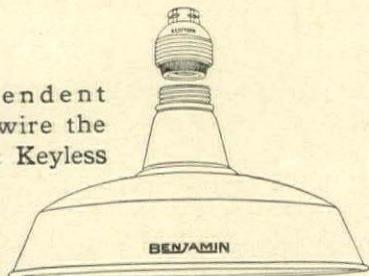
Just wire the Ben-ox Outlet Box fitting in place and get light. When you come to the reflector select the size and style and simply screw in place without disturbing the wiring.



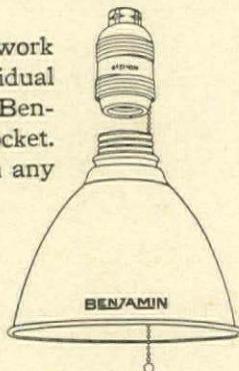
If you wish individual control of the light, use a Ben-ox Pull Chain Socket and get light at once. Then, same as before, when you select the proper reflector, just screw it in place without disturbing the wiring.



For pendent work wire the Ben-ox Keyless Socket in place and get light. Then at any time screw the proper reflector in place without disturbing the wiring.



If with pendent work you want individual control use the Ben-ox Pull Chain Socket. Then, just like in any of the other places, you'll need a reflector. Select the style and size and screw in place.



# BEN-OX

## Interchangeable Equipment for Industrial Lighting

### Easily Wired

The Outlet Box Fitting or the Socket for pendent work, completes the wiring. Large terminal binding screws do away entirely with soldering and taping of joints.

### The Ben-ox Thread

provides a sturdy threaded connection for Outlet Box Fitting or Socket and any Ben-ox Reflector, which may be attached at any time without disturbing the original wiring.

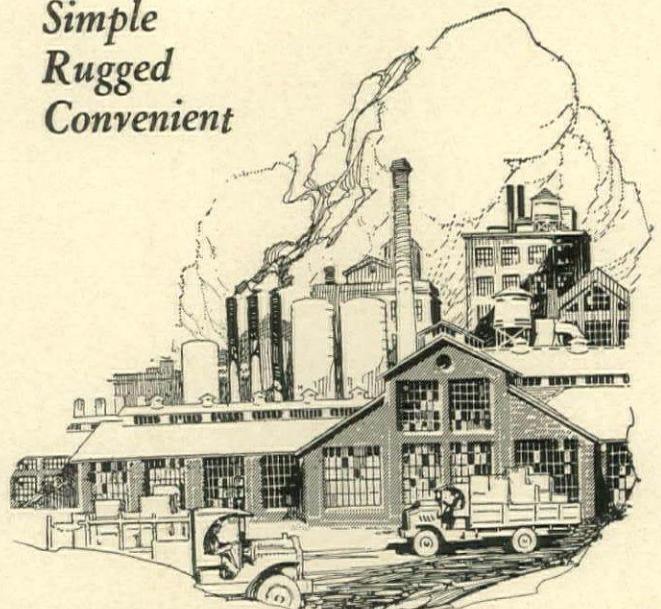
### Reflectors Easily Removed

Where dirty locations make frequent and thorough cleaning desirable, it is the work of but a minute to unscrew the reflector or screw it back again.

### Changes Easily Made

Changes in illumination requirements making necessary a different style or size of reflector may be made without disturbing the original wiring.

*Simple  
Rugged  
Convenient*



Let us tell you the Complete Story of Ben-ox.

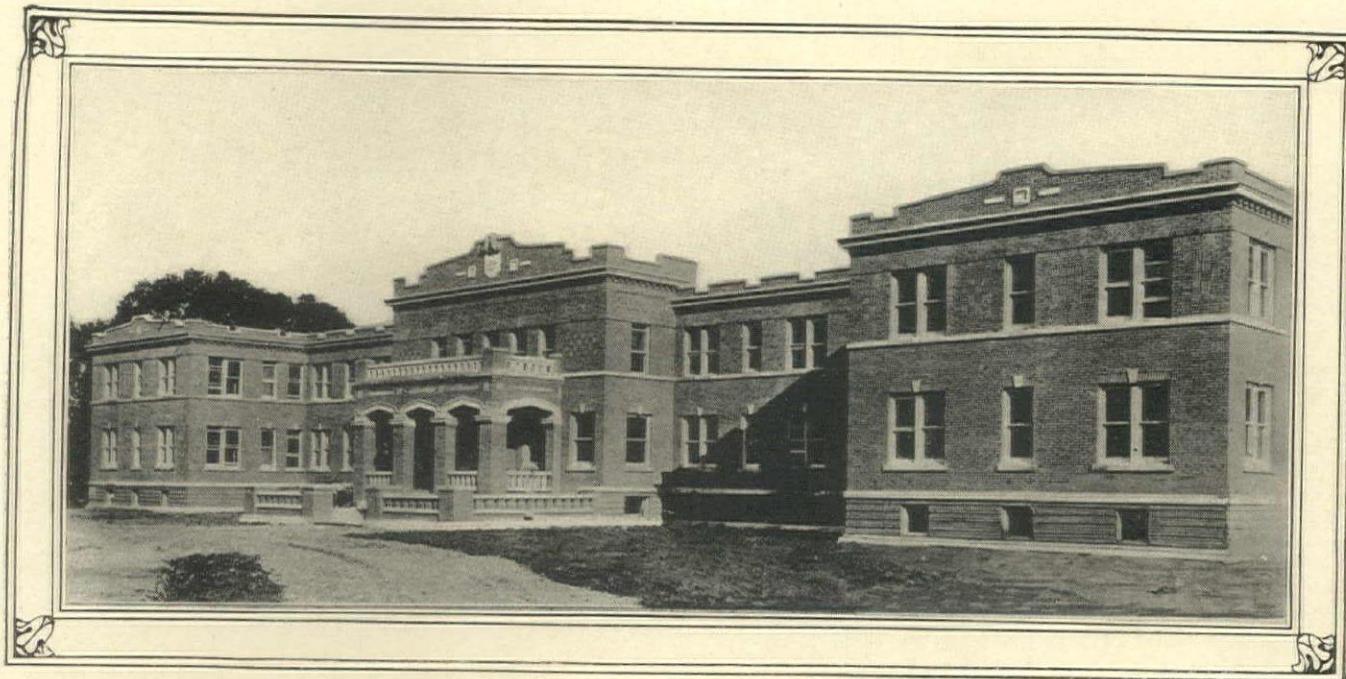
Wherever you go "Notice the Lighting Equipment."

**BENJAMIN ELECTRIC MFG. CO.**

847 W. Jackson Blvd., Chicago

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FROM cellar to roof this building was designed to deliver continuous service at a minimum of cost.

EASTERN STAR  
AND  
MASONIC HOME  
Rockford, Ill.

*Architects*  
Chas. W. Bradley & Son  
Rockford, Ill.

*General Contractors*  
Holm Page Co.

With every material selected on the basis of "What will be the ultimate cost per year?" experienced architects will not be surprised to find the building roofed with Carey No. 8 Asphalt Built-up Specification for they know that the unusually long life of this roof makes its cost per year unusually low.

There is a Carey Specification for every type of building.

THE PHILIP CAREY COMPANY

505-525 Wayne Avenue, Lockland, Cincinnati, Ohio

**Carey**  
**BUILT-UP ROOFS**

"A Roof for Every Building"

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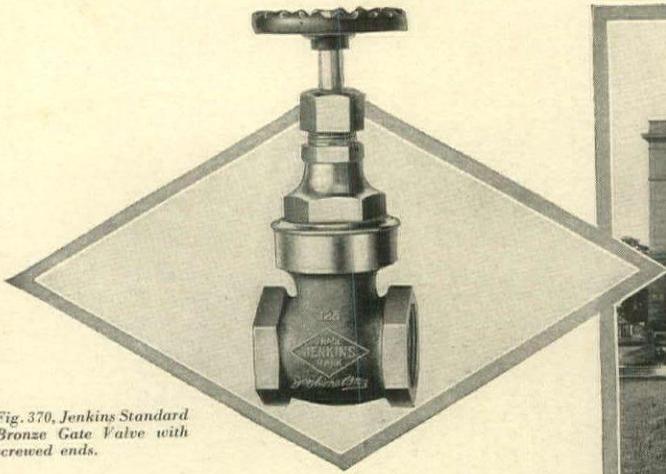
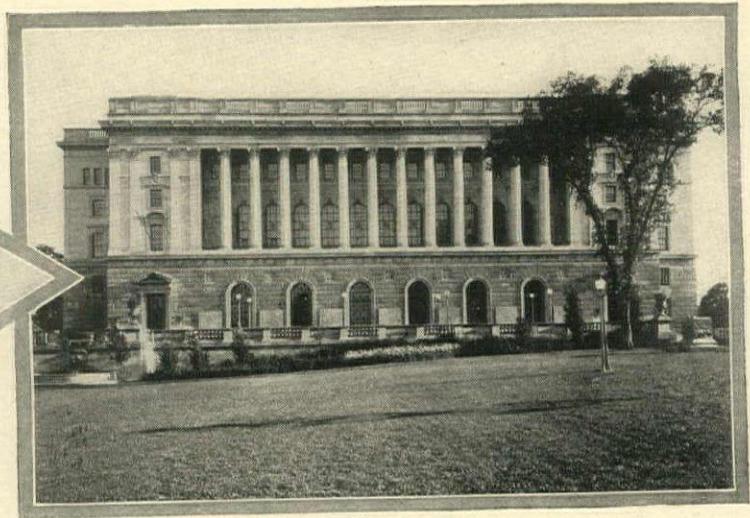


Fig. 370, Jenkins Standard Bronze Gate Valve with screwed ends.



This is the Centennial Memorial Building at Springfield, Ill., Mr. Edgar Martin, Supervising Architect for State of Illinois, and R. Haas Electric & Mfg. Co., Springfield, Ill., Contractors.

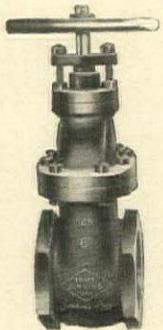


Fig. 325, Jenkins Standard Iron Body Gate Valve with screwed ends.

## For the CENTENNIAL MEMORIAL BUILDING at Springfield, Illinois

IN the State Centennial Memorial Building, Springfield, Ill., as in hundreds of other buildings, Jenkins Valves aid in the proper functioning of the heating and plumbing systems. Three different types of the Jenkins Valves installed are illustrated here.

The reason for this ever-increasing use of Jenkins Valves is obvious. No matter what the conditions of service, they stay tight—at the same time can be easily opened by turning the hand wheel. They are serviceable for years and years, and this long service proves true valve economy.

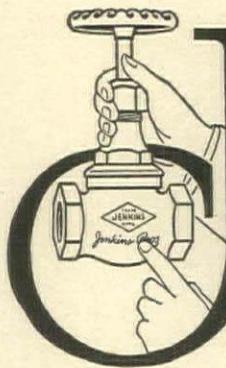
To secure this real good valve service, specify "Jenkins throughout."



Fig. 108, Jenkins Standard Bronze Angle Valve with screwed ends.

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- 524 Atlantic Avenue.....Boston, Mass.
- 133 No. Seventh Street.....Philadelphia, Pa.
- 646 Washington Boulevard.....Chicago, Ill.

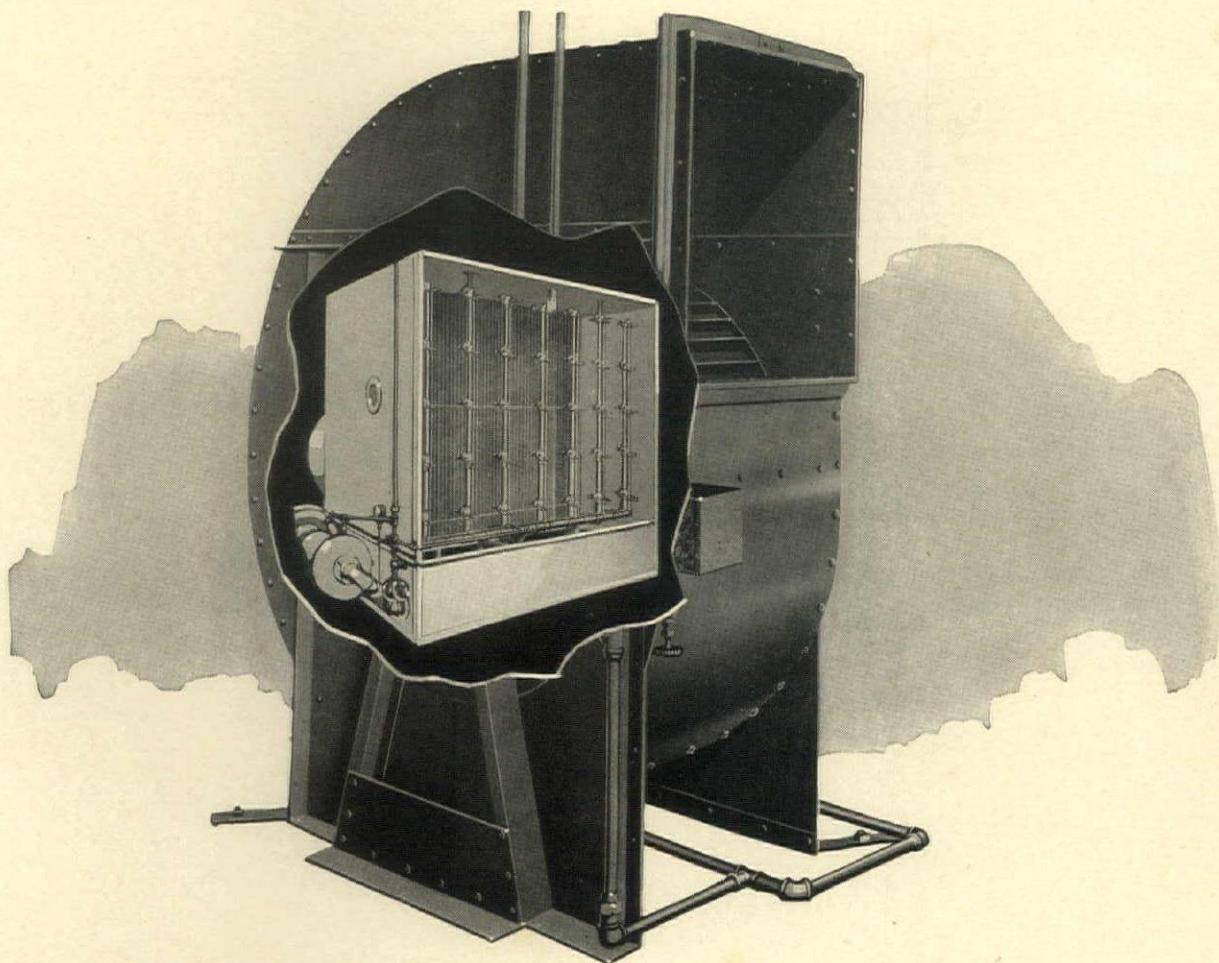


Always marked with the "Diamond"

# Jenkins Valves

SINCE 1864

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## The Air Washing Mechanism is *Inside the Fan!*

All the air that goes through any air washing system must go through the fan. Ordinarily it is washed by a purifier that is separate and distinct from the fan.

Here is a complete air washing system where the washing is done *inside the fan*. The big purifier is done away with—the floor space it occupied and a large part of the cost are saved. With the Air Washing Fan humidity is under more perfect control and there is a decided economy of power and water.

The Air Washing Fan makes it possible to specify air washing equipment in buildings where the conventional system is impractical. Write for carefully compiled bulletins telling why.

AMERICAN BLOWER COMPANY, DETROIT  
BRANCH OFFICES IN ALL PRINCIPAL CITIES  
Canadian Sirocco Co., Limited, Windsor, Ontario

(346)

# American Blower

**"Sirocco"** VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT  
Manufacturers of all Types of Air-Handling Equipment — Since 1881

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## Beauty of Design perpetuated in Copper

Beautiful adaptations of Rome Quality Sheet Copper to articles of practical utility are exemplified in the lanterns made by the Friedley-Voshardt Company.

In the great variety of uses for this metal, none more completely demonstrates its versatility than its use for architectural ornamentation in all forms.

Because Rome Quality Sheet Copper is constantly uniform in structure, size and finish, it forms an ideal basic material in which to perpetuate the ideas of builder, contractor, or architect.

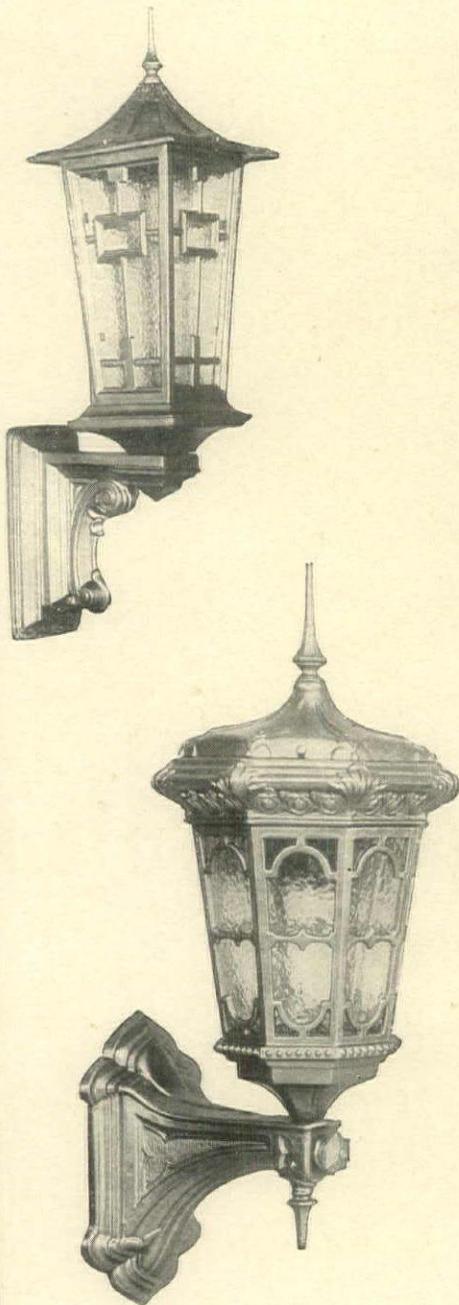
Its working properties commend it to the worker in sheet metal, for absence of foreign substances gives to Rome Quality Sheet Copper superior ductility and close grained surface.

### BRASS COPPER BRONZE

Sheets; rolls; rods; anodes; tubes, brazed and seamless; strips; extruded shapes; angles and channels; tapered tubes and hose pipes; door rail; commutator bars and segments; electrical copper bar; and rivets and burs.

### BRANCH WAREHOUSE:

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*These illustrations are published through the courtesy of Friedley-Voshardt Co., Chicago.*

*Member Copper and Brass Research Association.*

ROME BRASS AND COPPER COMPANY—ROME, N.Y.

BRASS **ROME** COPPER



Thomas Snell Weaver Memorial High School  
Hartford, Connecticut

Frank Irving Cooper Corporation, Architects

In process of construction, and being equipped  
with **RUSSWIN HARDWARE**

Since 1839  
**RUSSWIN**  
RUSSELL & ERWIN  
DISTINCTIVE  
HARDWARE



FOR schools and hospitals, hotels, office and municipal buildings —where builders' hardware that is dignified and beautiful in design and that can be trusted always to function perfectly is an absolute essential—Russwin Hardware has for years been the choice of America's leading architects.

Now, with a splendid list of high class magazines carrying the story of Russwin economy, beauty and dependability to present and prospective home owners, you will find the layman's tendency to consider builders' hardware a minor detail growing less and less—with a proportionately increasing respect for your good taste and sound judgment in specifying "Russwin Hardware throughout" for his home.

Among the noteworthy buildings equipped with Russwin Hardware are: Army and Navy Building, Washington; Cleveland Discount Building, Cleveland; Statler Hotels, St. Louis and Detroit; Post Office, Birmingham, Ala.; Custom House, San Francisco; Elks Club, Omaha; H. C. Frick Residence, Prides Crossing, Mass.; C. Oliver Iselin Residence, Brookville, L. I.

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**England**—Shipping bales of rags from all over the world for making felt for *Certain-teed* roofing and *Floortex*.

**Argentina**—Natives weighing flax for the linseed oil used in *Certain-teed* linoleum, paints, varnishes, *Floortex* and oilcloth.

**Portugal**—Baling cork used in the manufacture of *Certain-teed* linoleum and cork carpet.

**New Zealand**—Weighing kauri gum used in *Certain-teed* varnishes, paint, linoleum, *Floortex* and oilcloth.

**United States**—Mining gypsum from one of the many *Certain-teed* gypsum deposits. Used for *Certain-teed* plaster, gypsum building blocks, plaster of Paris.

**Certain-teed**

This label of a "hundred satisfactions" identifies over a hundred different products, which we know are all right and believe will give you the best value for your money. *Certain-teed* means CERTAIN satisfaction—quality guaranteed.

RES. PAT. OFF. President

MANUFACTURED IN U.S.A. BY

*Certain-teed* Products Corporation

**CERTAIN-TEED PLANTS**

*Each a complete manufacturing unit producing a group of allied products*

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- St. Louis, Mo.
- Richmond, Calif.
- Niagara Falls, N. Y.
- East St. Louis, Ill.
- Acme, N. Mex.
- Grand Rapids, Mich.
- York, Pa.
- Acme, Texas
- Marseilles, Ill.
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**Beyond the rim of the horizon—**

**YOUR** clients depend upon you for the high quality of the materials that go into the buildings you plan for them, no matter where these materials come from, who makes them or how they were made.

It is possible for you to specify, with confidence, over one hundred products made of the finest raw materials, brought from whatever part of the world they are found in their finest form, manufactured in the modern *Certain-teed* plants and distributed, at reason-

**BUILD TO ENDURE**

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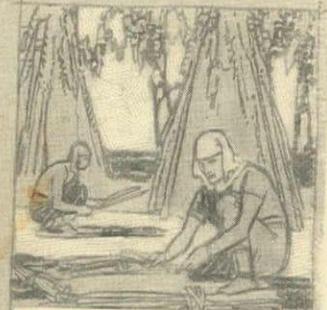
**Our Own South-land**—Picking cotton. Millions of yards of cotton sheeting are used each year in *Certain-teed* oilcloth.



**China**—Husking nuts for wood oil used in *Certain-teed* varnishes, paints, linoleum, oilcloth and *Floortex*.



**Dutch East Indies**—Natives sorting copal gum for *Certain-teed* varnishes, paints, oilcloth, linoleum and *Floortex*.



**India**—Preparing jute for shipment to Europe where it is woven into burlap, then shipped to this country. Millions of yards are used annually in *Certain-teed* linoleum.



**Mexico**—One of the asphalts used in *Certain-teed* roofing and *Floortex* comes from Mexico. Millions of gallons are used annually in the *Certain-teed* plants.

## a host of workers help you serve

able cost, to every part of America.

This confidence you share with your clients. For, year after year, extensive national advertising, as well as products making good in the actual test of service, have made the *Certain-teed* Label nationally known to the great consuming public everywhere.

Consumers readily accept products bearing the *Certain-teed* brand. It is a mark of proved dependability and satisfaction,

# WITH CERTAIN-TEED

Specifications of most products advertised in *THE AMERICAN ARCHITECT* appear in the *Specification Manual*

CERTAIN-TEED PRODUCTS  
of which more than one hundred are  
included in the following  
classifications:

- Asphalt Roofings
- Asphalt Shingles
- House Paints
- Varnishes
- Enamels
- Stains
- Gypsum Plasters
- Gypsum Blocks
- Keene's Cement
- Battleship Linoleum
- Inlaid Linoleum
- Linoleum Rugs
- Oilcloth
- FLOORTEX
- (Felt Base Floor Coverings)
- FLOORTEX RUGS

THIS small town bank realizes it—  
that Granite is the logical medium  
with which to express its stability  
and character.

NATIONAL BLDG. GRANITE  
QUARRIES ASSN.  
31 STATE ST. BOSTON, MASS.  
H. H. SHERMAN, Sec'y



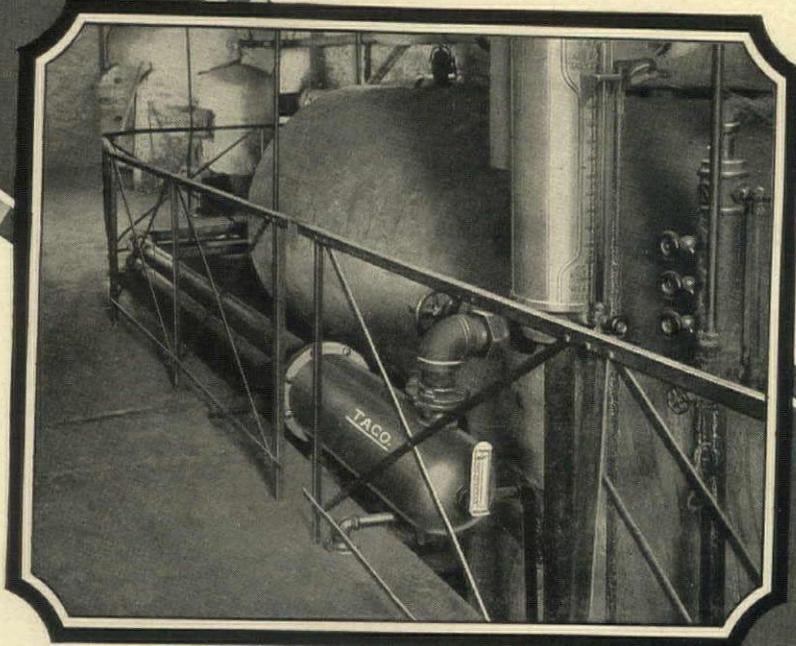
MPANY ·  
FARMERS · TRVST · COMPANY ·  
MARYVILLE · MISSOURI  
WILDER · & WIGHT · Archts · KANSAS · CITY · Mo

V. HAGOPIAN, DEL.

STVDIES · IN · GRANITE · PLATE VIII

On request a complete folio of these  
Granite Studies will be reserved for you.

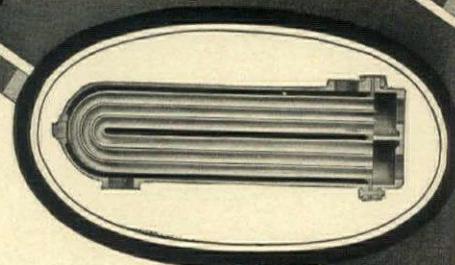
Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual



Trade  
Mark **TACO** Reg US  
Pat Off  
**WATER HEATER**

# Hot Water

*from heat that is  
already paid for!*



**I**F A motor bus carrying ten people stopped for you, how much extra gas and oil would it take to carry you—the additional load?

So little, that the difference is hardly noticeable.

Here you have the whole story of the TACO indirect method for heating water. TACO is attached to the heating boiler below the water line; the boiling water circulates around the copper tubes, connected in turn with the supply tank. This simple hook-up results in a constant supply of hot water day and night.

The significant point is this:

Laboratory tests and hundreds of installations of TACO Water Heaters have shown the additional boiler load to be so slight, that the extra coal consumed is a negligible quantity.

TACO method of heating water is gaining rapidly in popularity. Many apartments, hotels, office buildings, and, of course, homes both large and small, are TACO equipped. We'd like to tell you about some of these installations, and more about the simplicity and efficiency of TACO.

Your name on your letterhead will bring you full details, without obligation.

## Thermal Appliance Company

Incorporated

342 Madison Avenue, New York

For every size and kind of building there is a TACO specially designed



*Simplex Fresnel Sidewalk at "World's Busiest Corner"—Not a Leak for Five Years*

# They're Perfectly Watertight

When 3-Way Sidewalk Lights are properly installed they are tight—weather tight and watertight—to start, and they stay tight. Four Chicago Department Stores have, in the past 5 years, replaced old walks with 3-Way Perfected Constructions. And, under the heaviest traffic loads, with constant street vibration, they've never leaked a drop—nor cracked a glass. Stores can display fine merchandise under 3-Way Sidewalk Lights without fear of damage.

Contractors, for the sake of their reputations, should install only

## 3-WAY SIDEWALK LIGHT CONSTRUCTIONS

**Simplex Fresnel**  
71% Daylight

**3-Way Armored Glass**  
Protected Glass—Instantly Replaceable

**3-Way Standard Simplex**  
Square or Round Lenses

**3-Way Reinforced Concrete**  
Ransom System

*Mail the Coupon for Full Information about Slab  
Installation of these 3-Way Perfected Constructions*

### American 3 Way-Luxfer Prism Co.

Originators and Makers of Prism Transoms,  
Ornamental Tile Transoms, Sidewalk  
Lights, Steelead Skylights

1305 S. 55th St.  
CICERO, ILLINOIS  
Chicago Suburb

358-368 Webster Avenue  
LONG ISLAND CITY, N. Y.

#### MAIL TO NEAREST OFFICE

Please send me complete information re-  
garding your Sidewalk Light Constructions.

Name \_\_\_\_\_

Address \_\_\_\_\_

Business \_\_\_\_\_

# The Test of Time

**COMPO-BOARD**, the wood core board, has been made and sold for over thirty years. Millions upon millions of feet of it have been used in building and for hundreds of other purposes. Some of the wood fibre and other types of wall boards have come and gone, but Compo-Board is still here and is selling in larger volume today than ever.

The lumber dealer, the contractor, the architect each wants to give satisfaction to his trade and clients.

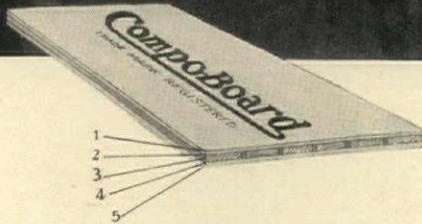
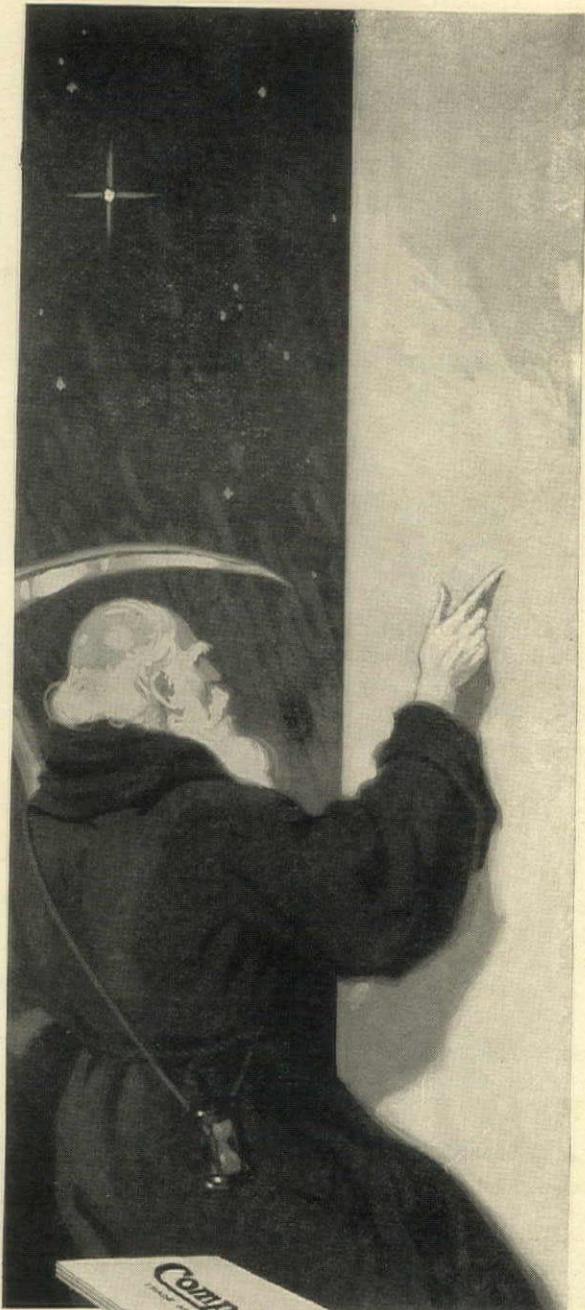
When Compo-Board is specified and used for building or other purposes, records show the owner is always satisfied.

Price is of small consideration when utility is considered.

We can show you many rooms lined with Compo-Board put on thirty years ago. These walls have been papered, painted, kalsomined and finished in every way known, with uniform satisfaction to owners.

Why experiment selling or using doubtful materials when you can use Compo-Board and get positive results.

Just think that question over and write us for samples, prices and full information.



Compo-Board is composed of three parts. The tough covering, Nos. 1 and 5, the wood core No. 3, the cement Nos. 2 and 4. Compo-Board will not warp, buckle, shrink or crack. It is moisture-proof. For wall lining, partitions and hundreds of other uses it has no equal. Compo-Board is handled by lumber dealers everywhere.

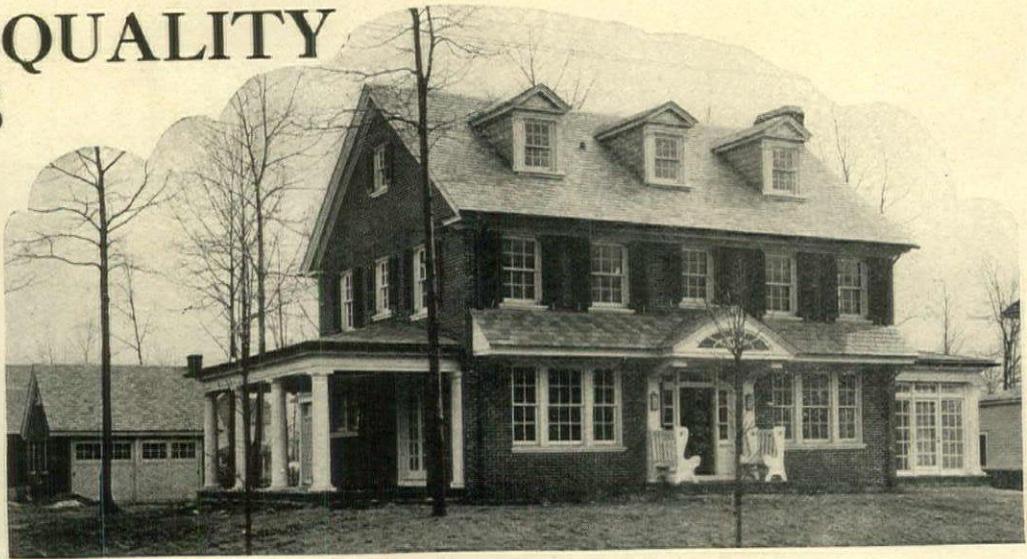
# Compo-Board

Reg. Trade Mark

The COMPO-BOARD COMPANY, Minneapolis, Minnesota

*Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual*

# WHERE QUALITY COUNTS



CHAS. R. PEDDLE, Archt.

COLONIAL ARCHITECTURE is especially difficult to roof satisfactorily. Yet this roof of Vendor Slate supplied from regular stock leaves little to be desired.

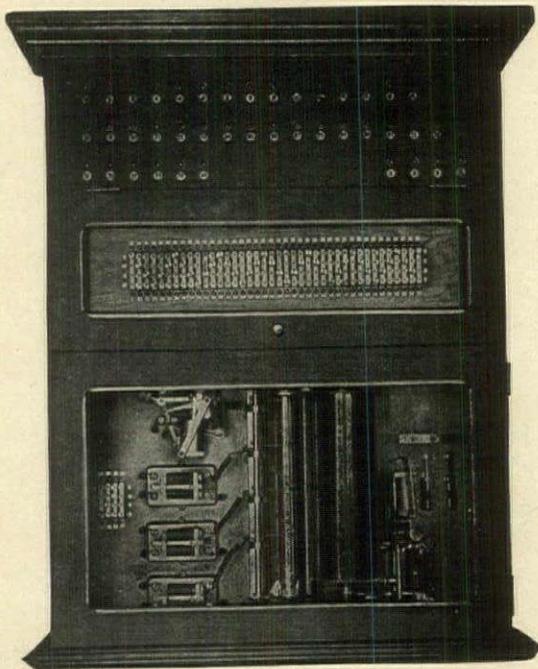
The same quality obtains throughout every detail of Vendor Service and especially into the rarer colors and materials of Vendor Architectural Slate.

Let us handle your slate roofing problem.



• Largest Shippers of Roofing Slate in the World

• **VENDOR SLATE Co. Inc.** •  
• EASTON-PENNSYLVANIA •



## CRITICISMS

of all Program Machines as used in connection with Electric Time and Program Clock Systems, have established the fact that we can offer the trade the simplest, most compact and most flexible equipment made.

### Our Engineering Department

is at your service. Send us your preliminary plans, let us prepare and submit detailed specifications, conduit and wiring layouts, with complete data for your general electrical specifications.

#### Some Users:

Board of Education, Philadelphia, Pa., 125 Installations  
Board of Education, Butte, Montana, 7 Installations  
*and thousands of others.*

See 1922 American Architect Specification Manual page 160

LET US SEND YOU OUR NEW CATALOG

Manufactured and Sold by

**LANDIS ENGINEERING AND MFG. CO.**  
WAYNESBORO, PA., U. S. A.

# DURASTONE BRAND

LIMESTONE, CAEN STONE  
TRAVERTINE INTERIOR  
AND EXTERIOR FINISHES

DURASTONE CO., Inc.

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New York

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“More Than  
Just a Catalog”---



32  
Pages  
of  
Detailed  
Information

Just Off the Press  
H. & C.  
Grille Catalog

THE new H. & C. Catalog has been compiled in a manner that, we believe, will be most acceptable to the architect who is seeking Grilles of dependable durability, as well as harmonious designs.

Complete details of construction, tables of possible opening sizes, with other important information, make this "More Than Just a Catalog." It is a reference book on Grilles and, as such should be in the files of every architect.

Have You Sent  
For Your Copy?

The Hart & Cooley Company, Inc.  
NEW BRITAIN, CONN.

New York

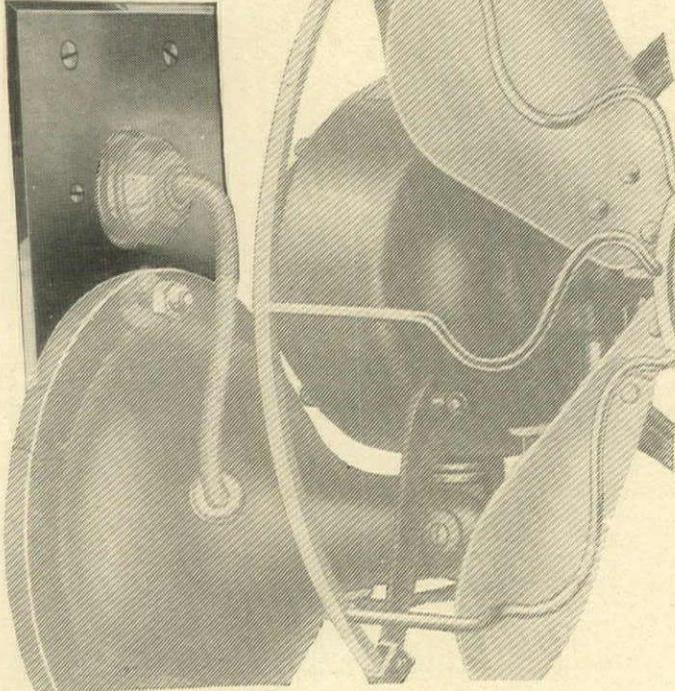
Philadelphia

Chicago

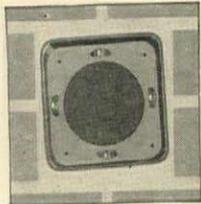
Boston



# HANGER OUTLET



## For the Support and Current Supply of Fans, Heaters and Lighted Pictures



The **FA** Hanger Outlet is substantially built. Consists of a special 4x4x1½ pressed steel outlet box, and adjustable inner ring, (shown above); a flush brass plate, fitted with Hubbell receptacle; and a strong bolt, securely anchored, for supporting Fan, Heater, etc.

Produces a workmanlike finish to a job, is part of the original wiring installation and does away with dangerous, dirt-catching brackets and long, dangling cords.

**FA** Hanger Outlets have been installed in a great many prominent buildings and have an 100% record for satisfaction.

Send for complete description and estimate for your present jobs. No obligation involved.

### Frank Adam

ELECTRIC COMPANY  
ST. LOUIS

**District Offices:**

Detroit, Cincinnati, New Orleans, Dallas, Minneapolis, Kansas City, Indianapolis, Los Angeles, San Francisco, Philadelphia, Denver, Seattle, Chicago, Pittsburgh, New York City.

**Other **FA** Products**

Major System of Theater Lighting Control; knife switches; safety switches; hanger outlets; reversible-cover floor boxes; A. C. and D. C. Distribution Switchboards.



# Atlanta Chooses

## Bruce Oak Flooring the Best Oak Flooring

ATLANTA, GA., boasts many fine apartment buildings and residences. The Peachtree and Pershing Point apartments shown below are two of the newest; and not the least important factor in their appointments is Bruce Oak Flooring, used throughout.

The architects had confidence in the quality and uniformity of Bruce Flooring. Why? Because it is made of the best oak lum-

ber, thoroughly air dried before reaching the kilns. Because it is kiln-dried and manufactured in our own modern plants, under the most expert and rigid supervision. Because it is guaranteed.

The fact that we are the largest makers of oak flooring in the world means economy in production, and assured satisfaction to every user of Bruce Oak Flooring.

*We will be glad to send you literature on strip and design flooring, and to co-operate with you in any way, if you will write us.*

The American Architects' Specification Manual contains our standard specifications.

See our catalog in Sweet's.



Above: Peachtree Apartments Hentz, Reed & Adler, Architects



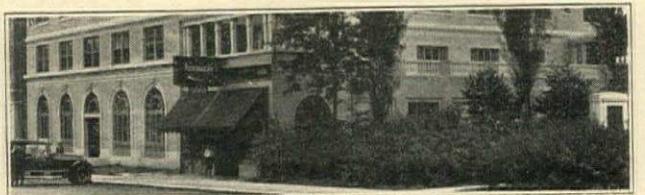
Below: Pershing Point Apts. G. Lloyd Precher & Co., Archts.



## E. L. Bruce Company

MEMPHIS TENNESSEE

Largest Makers of Oak Flooring in the World



Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

# *A lifetime of trouble-free service is assured with each "Buffalo" Fan*

Taking the average human life at 33 years, it is easy to find many instances of Buffalo Fans having operated for this period in schools and other buildings.

The Roosevelt School, Canton, O., has never had a class dismissed for lack of heat in 32 years nor has one cent been spent for repairs to the Buffalo Fan used.

At the Valentine Building, Toledo, O., the Buffalo Fans installed in 1896 are in excellent condition and there is no record of repair parts having been supplied.

*You'll feel proud of such record in your buildings.*



Conoidal Multiblade Fans have greatly increased capacity and efficiency over former types.

## Buffalo Forge Company

444 BROADWAY

BUFFALO, N. Y.



Sketch shows No. 40 sash and No. 6 corner bar at underside of our No. 28 awning transom bar with No. 1469-A undercovering over entrance way and No. 1437-A used as a headjamb in return.

Kawneer Resilient Store Front Construction affords the architect an efficient member for every requirement from lintel to floor and from wall to wall. Full information, details and estimates will be mailed upon request. We have more than seventy branch offices and sales connections from which your requirements can be filled promptly.

**THE Kawneer COMPANY**  
Niles, Mich.

# Kawneer

SOLID COPPER

## STORE FRONTS



Brooklyn Edison Co.'s Building  
McKenzie, Voorhees & Gmelin, Architects

**I**N this new Building the "EMPIRE EXTENSIBLE TYPE" of Steel Partition has been installed throughout in "Record Time."

Other notable installations recently completed are:—

Federal Reserve Bank	Cleveland, Ohio.
New York Telephone Co.	Main Exchange, Bklyn., N.Y.
New York Edison Company	177th St. Office Bldg., N.Y.
Western Electric Company	Jersey City, N. J.
Pershing Square Bldg.	Pershing Square, N.Y.

The "Empire Type" has been endorsed by the leading Architects and adopted as their standard by the largest Corporations.

Write or 'phone for Blue Prints, etc.

**Empire Steel Partition Co., Inc.**

College Point, New York

Tel. Flushing 4009



U. S. Veterans Hospital, St. Louis, Mo.  
J. A. Whetmore, Architect  
Equipped with Kimball Straight Line Drive Elevators

## The Smooth Running Straight-Line-Drive

Smoothness of operation is very essential in hospitals where sick patients are being continually carried up and down. This smoothness is a feature of the Kimball Straight Line Drive Elevator. It is due to the compactness of motor and machine which are aligned and bolted together as a single unit.

Straight Line Drive is exclusively a Kimball design. Kimball Straight Line Drive machines are the outcome of years of elevator research in the Kimball plant and there are many of them in successful operation in this country.

*There is a Kimball Elevator built for every requirement.*

Send for our New Catalog

**KIMBALL BROS. CO.**  
COUNCIL BLUFFS, IOWA

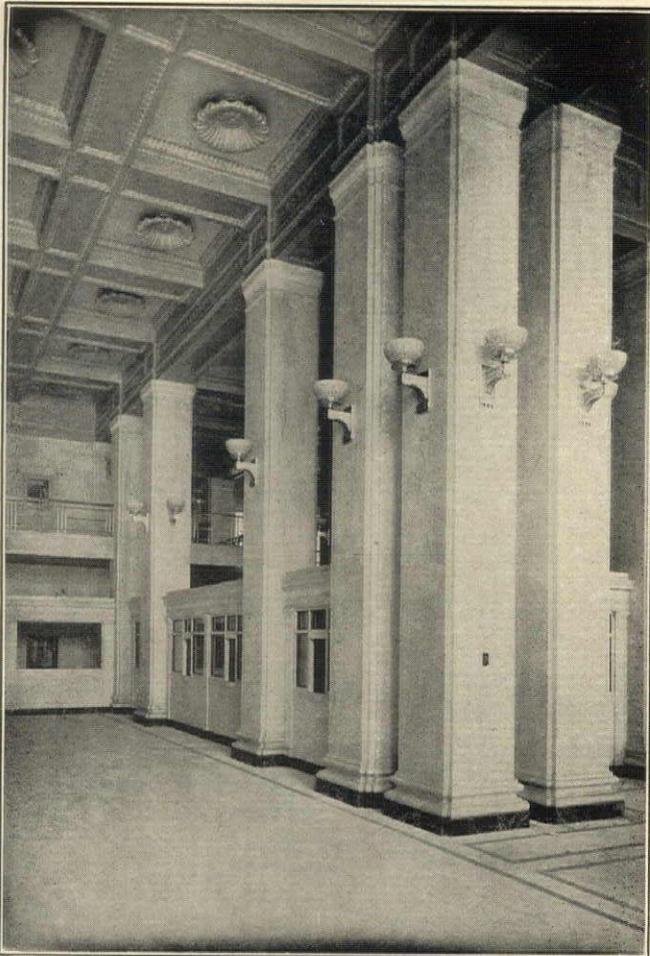
1119-27 9th St.

Council Bluffs, Iowa

KANSAS CITY  
DETROIT  
SOUTH BEND  
ST. LOUIS  
CLINTON  
DES MOINES  
NEW ORLEANS

DULUTH  
MINNEAPOLIS  
DENVER  
SALT LAKE  
DALLAS  
OKLA. CITY  
FORT SMITH





FEDERAL RESERVE BANK, Atlanta, Ga.  
 A. Ten Eyck Brown, Architect  
 Alabama Grade "A" for columns, Alabama Selected "A"  
 for screens, balustrade and floor

The best possible and the most satisfactory service in Interior Marble can be obtained by dealing directly with the Manufacturing Producer.

**THE REASONS WHY—**

1. He has more marble to select from.
2. He can take the necessary waste at a minimum of expense.
3. He cannot evade his own responsibility.
4. His living depends on your satisfaction with work done for you in his marble.
5. He has a pride in his material which insures his best effort on every job.
6. Having the largest stock to draw from, he can make the promptest deliveries.
7. His prices are the most reasonable.

**ALABAMA MARBLE COMPANY**

Main Office, Quarries and Finishing Plant

**GANTT'S QUARRY    ::    ALABAMA**



Re-roofed home of Mr. T. P. Sylvan, Montclair, New Jersey

**RE-ROOFED  
 PERMANENTLY**

The home shown above was originally roofed with wood shingles of first quality. But unlike asbestos and cement, wood is perishable. In a very few years, though the house was still in excellent condition, the roof was gone.

The owner decided to re-roof for the last time and used Mohawk Tapered Asbestos Shingles. Made of best Portland Cement and pure Asbestos Fibre they will easily outlast the house; and roof repairs are at an end. Had Mohawk Tapered Asbestos Shingles been used when this house was built the owner would have been saved much trouble and much expense.

Mohawk Shingles come in six beautiful colors. Their thick butts cast a beautiful, natural shadow line. Come ready to lay. No sorting. No punching. Ordinary roof construction easily supports their weight.

*Sample shingles and circular gladly sent upon request*



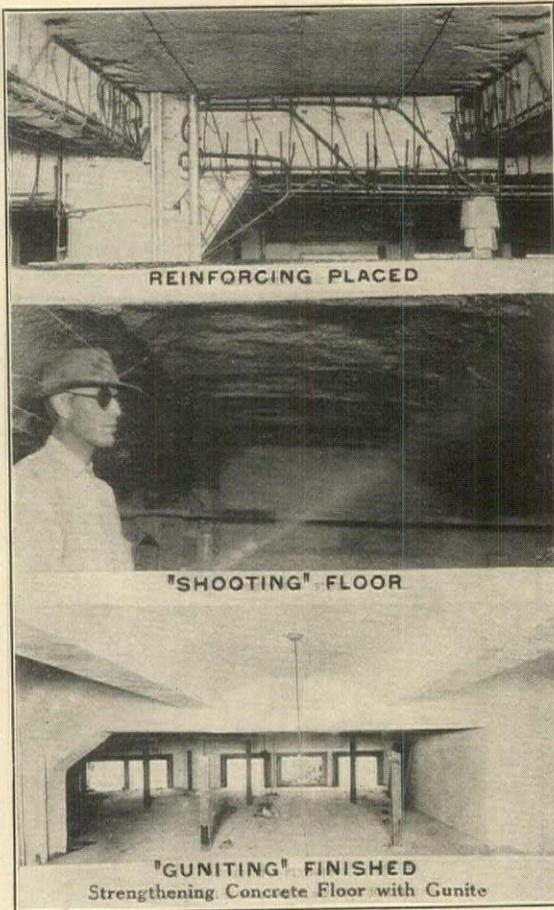
**MOHAWK TAPERED  
 ASBESTOS SHINGLES**

MOHAWK ASBESTOS SLATE COMPANY. UTICA, N.Y.

## Increasing the Safe Live Floor Load from 60 lb. to 200 lb. by the Use of Gunite

There has recently been completed in the Heard Building, Phoenix, Arizona, a most interesting job of strengthening an existing building so that it could carry a safe live load of 200 lbs. in place of the 60 lbs. for which it was designed. The new design was worked out by Mr. L. A. Parker, Consulting Engineer, of Los Angeles, and the work was done by the L. A. Cement Gun Co.

The illustrations show the various stages of the work. The extra reinforcing was placed around the old girders and beams. The Gunite, which bonds perfectly with concrete, forces the new reinforcement to act with the old and thus a monolithic beam results, which could not be obtained in any other way. Then an arch was blown up from beam to beam to strengthen the floor slab.



Gunite was the only practical solution for this job and it is an ideal method for monolithic construction of floors, partitions or walls and also for fireproofing.

Results of tests and full technical information will be sent on request. Specifications may be found on pages 3 to 6 of The 1923 Specification Manual.

**CEMENT GUN CO., Inc.**  
Allentown, Pa.

NEW YORK CHICAGO PITTSBURGH SEATTLE LOS ANGELES

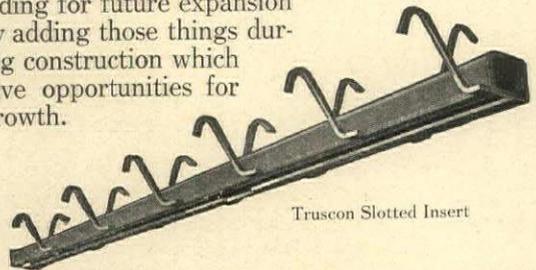
THE "CEMENT GUN" IS NOT A RESTRICTED ARTICLE AND MAY BE PURCHASED AND USED BY ANYONE. In order, however, to insure to all users of Gunite that they will obtain prompt and proper bids we have established a Contract Department, and upon application we will be pleased to have them prepare estimates on your work.



Truscon Inserts in ceiling of new building ready for attachments

## TRUSCON INSERTS FOR CONCRETE

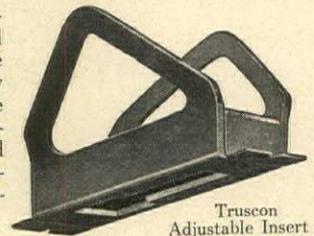
The successful building of today is a result of providing for future expansion by adding those things during construction which give opportunities for growth.



Truscon Slotted Insert

Inserts built into the concrete during construction provide a simple means of attaching shaft hangers, sprinkler systems, fixtures, etc., and eliminate later expensive drilling into the concrete. They save time and permit changes in location of equipment.

Truscon Slotted Inserts are attached to the forms and completely imbedded in the concrete construction. Only the narrow slot flush with the concrete is seen in the completed work. Its improved design makes this insert extraordinarily strong and serviceable.



Truscon Adjustable Insert

Truscon Adjustable Inserts are made of pressed steel and have the same method of application to concrete and adjustment for bolts as the slotted inserts, but without their wide range of adjustability.

Truscon Tapped Inserts are particularly adapted for work where arrangement has been determined before start of construction.



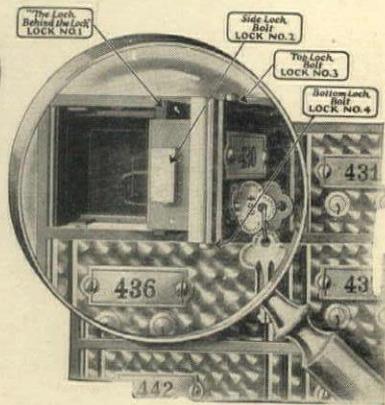
Truscon Tapped Insert

All inserts adapted for  $\frac{1}{2}$  in.,  $\frac{3}{8}$  in. or  $\frac{1}{4}$  in. bolts. Ask us about them

**TRUSCON STEEL CO.**  
YOUNGSTOWN, OHIO.

Warehouses and offices from Pacific to Atlantic. For addresses see phone books of principal cities. Canada: Walkerville, Ont. Export Div.: New York

# PROTECTION

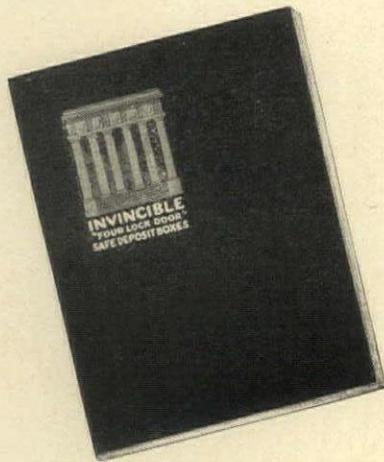


## Safety-plus!

You only *know* real maximum safety when you use Invincible Four-Lock-Door Safe Deposit Boxes—Anything else is dangerous! Why tolerate inferior locks when you can now have—safety plus?

Just one turn of the key and you control four force-resisting locks. The day of door-sledging, lock-punching, hinge-sawing and door-prying is at an end. Invincible Safe Deposit Boxes are the only ones listed as standard by the Underwriters' Laboratories — convincing proof of its superiority.

Why not write for data on the Invincible Safe Deposit Boxes—the standard boxes?



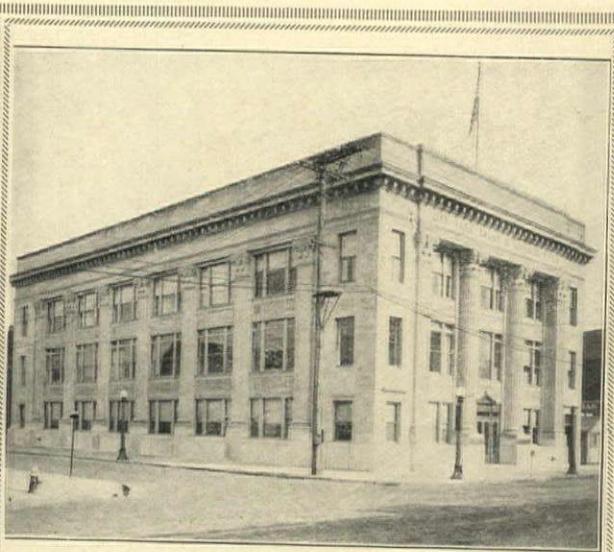
We are confident that you will appreciate having a copy of our illustrated book. Bank architects the country over are writing for this book.

There have been some unusual developments in safe deposit box construction of late and unless you have this handy reference in your files you are under a self-imposed handicap. Without obligation to you we shall be glad to mail you a copy.

## INVINCIBLE Metal Furniture Co.

"Safe Deposit Box Specialists"

MANITOWOC - WISCONSIN



OAK PARK TRUST CO.  
Oak Park, Ill.

HOGGSON BROS.  
Architects and Engineers

## Architects Appreciate Service

**N**OT because Hoggson Bros. specified and used Pomeroy Solid Steel Windows in the Oak Park Trust Co. building, is it a reason to assume that they are the best windows.

But when a firm like Hoggson Bros. calls on Pomeroy time after time to supply windows, there must be a reason for it and there is.

Hoggson Bros. like others know that when they do business with S. H. Pomeroy Co. that promises will be kept, deliveries will be on time and that service will be of the best.

Pomeroy windows are made with the greatest attention to detail. They are perfect in mechanical construction but more important than that—the S. H. Pomeroy Co. stand in back of every window they make.

S. H. POMEROY CO., Inc.  
282-296 East 134th Street New York City

**MISSISSIPPI - WIRE - GLASS - CO.**  
**WG**  
**FIRE RETARDANT No. 52**

**THE WOOLWORTH BUILDING**  
 Cass Gilbert, *Architect*  
 Thompson-Starrett Co., *Contractors*  
 A Wire Glass installation from the  
 Western Union Building, through a  
 Polished Wire Glass installation.

**MISSISSIPPI WIRE GLASS CO.**  
 216 Fifth Avenue  
 New York  
 Chicago St. Louis

SAMPLES DISPLAYED WITH  
 ARCHITECTS' SPECIFICATIONS  
 NEW YORK CITY

# MASTERPIECES IN MARBLE

## The Human Element

Most of the men who help produce Appalachian Tennessee Marble were born and brought up in the marble business. Their fathers and grandfathers were marble workers before them.

Such men regard marble the way a musician regards his favorite instrument or as a painter regards his colors. They see marble, not merely as a quarried product, but see it as the means of creating regally beautiful interiors.

We believe this is one of the reasons Appalachian Tennessee Marble has caused so much favorable comment on the part of architects and contractors who have remarked on its beautiful and exact workmanship.

Those who have visited the huge Appalachian mill and quarry have also remarked on the exceptional living conditions provided for our employees. These include 60 comfortable houses and a big dining house with every modern improvement.

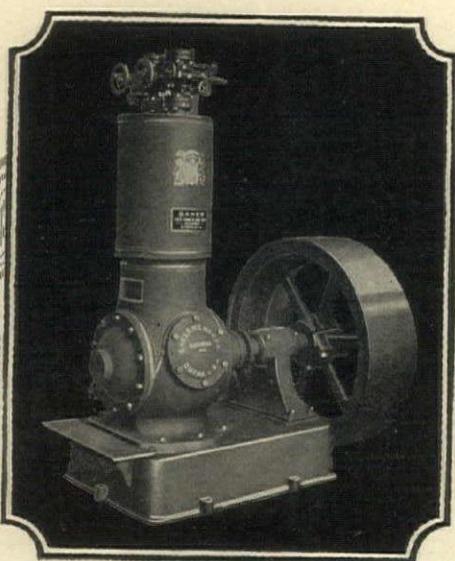
Appalachian employees enjoy their work and like the company they work for. The result is a very small labor turnover.

Architects and contractors can rest assured that orders placed for Appalachian Marble will not be subject to any delays caused by labor troubles.

Without obligating yourself whatsoever, send us your blue prints and specifications for cost estimate on your next interior marble job.



**APPALACHIAN  
 MARBLE COMPANY**  
 KNOXVILLE ~ TENNESSEE



## Good Will

We solicit the good will of architects on the basis of our expert refrigerating engineering service given without obligation; and the honest performance of Baker Ice and Refrigerating Plants under all working conditions.

The Baker Standard Slow-Speed Compressor shown above is the one that has given Baker Compressors their reputation for long and satisfactory wear. Sizes 1 to 50 tons daily refrigerating capacity.

**Baker Ice Machine Co.**  
Incorporated  
**OMAHA NEBRASKA**

Refrigerating engineers and Manufacturers  
of Ice and Refrigerating equipment.

**BAKER SYSTEM**  
**REFRIGERATION**



Residence of Geo. W. Klewer, Architect, 36 Crescent Drive, Glencoe, Ill. Bishopric Sheathing used as sub-flooring, on roofs under shingles, and as Sheathing under Bishopric Stucco-Base. Bishopric Base used on all exteriors. Bishopric Plaster Base used on all interiors

## Bishopric Stucco

OVER

## BISHOPRIC BASE

*The Ideal Exterior and Interior Wall Construction*

**BISHOPRIC STUCCO** in its scientific production, uniformity, great density and tensile strength,—is waterproof—fireproof—sound deadening and provides against contraction or expansion, thereby preventing cracking, checking or chipping of the surface. All the elements of wear and tear have been anticipated in the manufacture of “**BISHOPRIC**.” It is specially treated to eliminate depreciation.

**BISHOPRIC BASE** with its interlocking dovetailed key is an exclusive, patented base or background for stucco. It is a specially designed product, built up of selected and seasoned wood strips, set in a heavy layer of asphalt, on a pure, wood fibre base. It is tough—non-porous—proof against moisture, heat and cold—and highly fire-resistant.



The American Specification Manual, Sweet's, and the Specification Record of the American Specification Institute are first hand sources of information on Bishopric.

Write for “Specifications & Working Details”

*Bishopric is Sold by Dealers Everywhere*

**The Bishopric Manufacturing Co.**  
101 ESTE AVENUE  
Cincinnati Ohio

New York City  
New York

Los Angeles  
California

Ottawa  
Canada



Residence of Mr. Charles M. Schawb, New York City

### In America's Finest Homes

When the "eternal fitness of things" is observed in furnishing and equipping a fine home, there is only one choice of a refrigerator—the Jewett.

The same discriminating judgment that selects a pleasing exterior or fine furnishings is quick to recognize the Jewett as the Only refrigerator to carry a plan of quality throughout.

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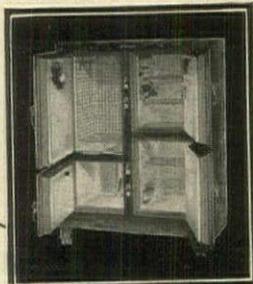
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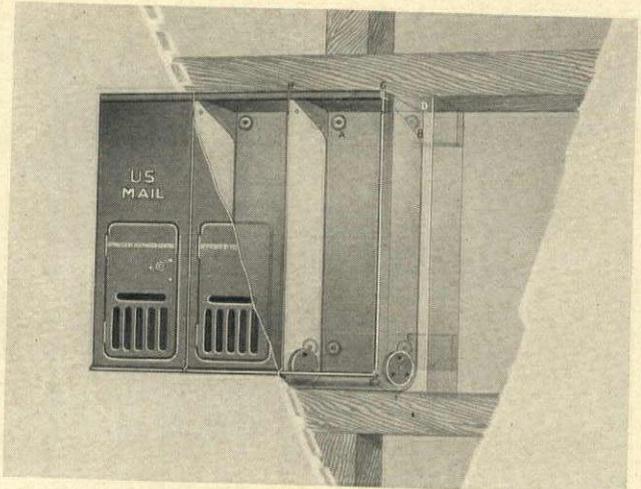
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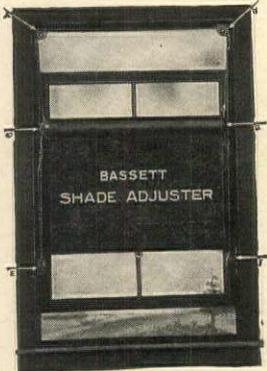
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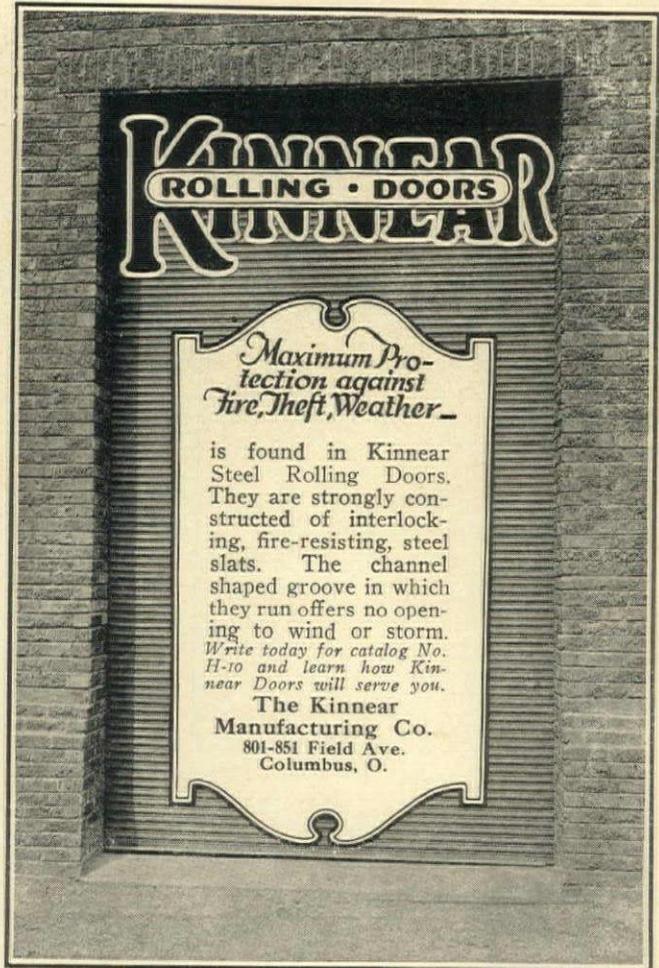
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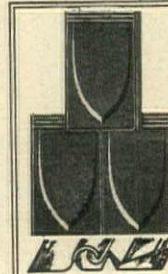


Fig. 157  
Note the construction of patent interlocking Device used on Edwards Metal Shingles and Spanish Tile



Fig. 307  
Metal Spanish Tile for main part of roof.

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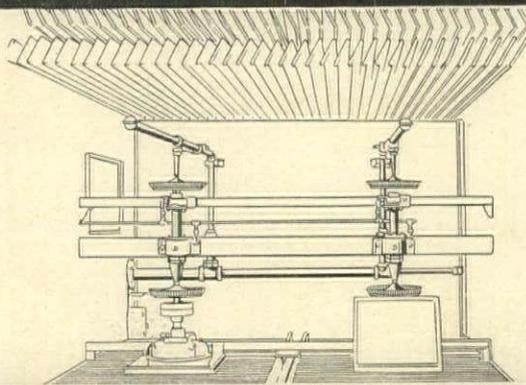
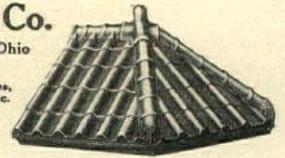
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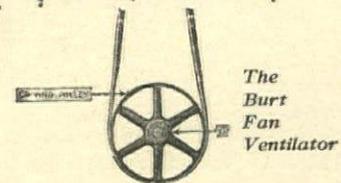
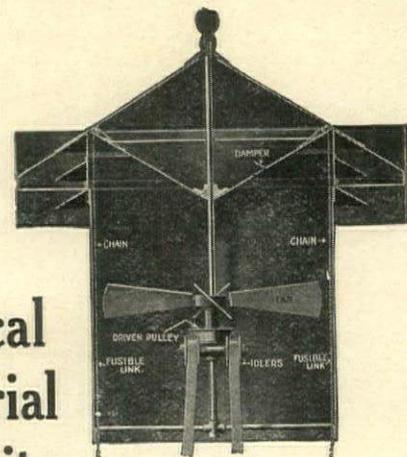
The illustration above shows top view of the atomizer chamber of a

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The four motor operated sprayer discs create a very dense double spray of infinitesimal particles of water through which air must pass before it enters the room. In this passage through the screen solids, dust, soot and other impurities are removed from the air, leaving it pure and sweet as after shower breezes. As a conditioning unit it will keep temperature and humidity uniform throughout the year, regardless of weather conditions. Unique construction of the atomizers keeps the water spray uniform in density and clogging is entirely eliminated. Especially designed for churches, schools, theatres, food producing establishments, hotels, public and office buildings. Write for Booklet.

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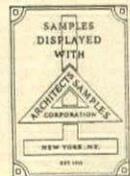
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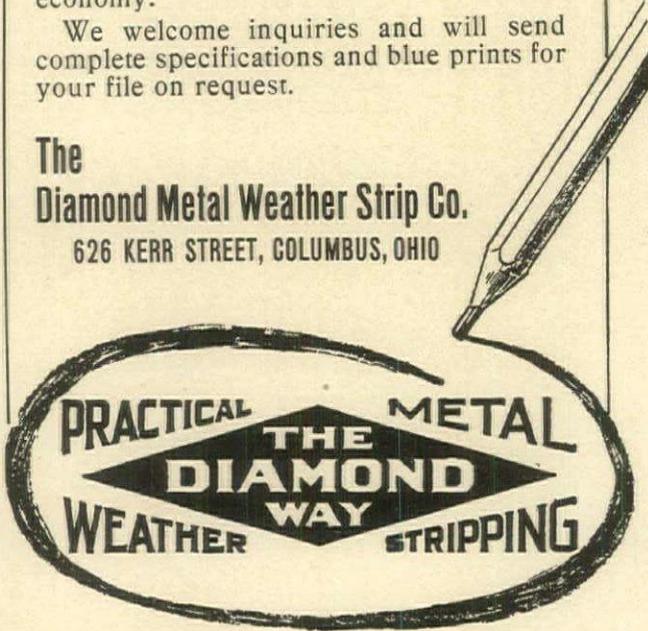
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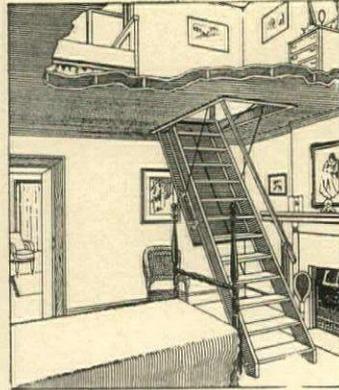
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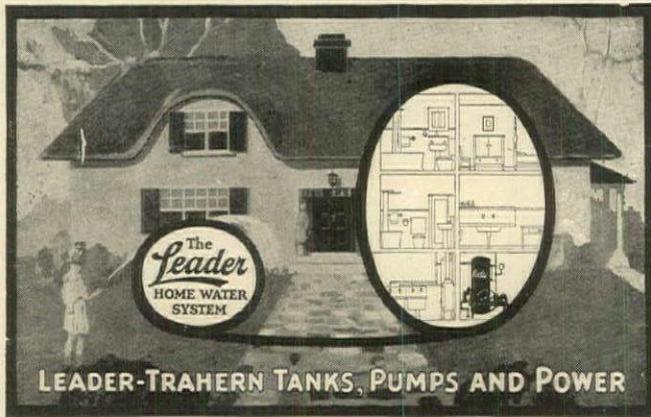


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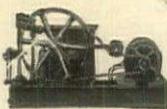
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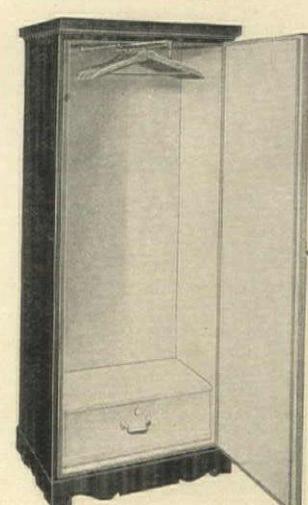
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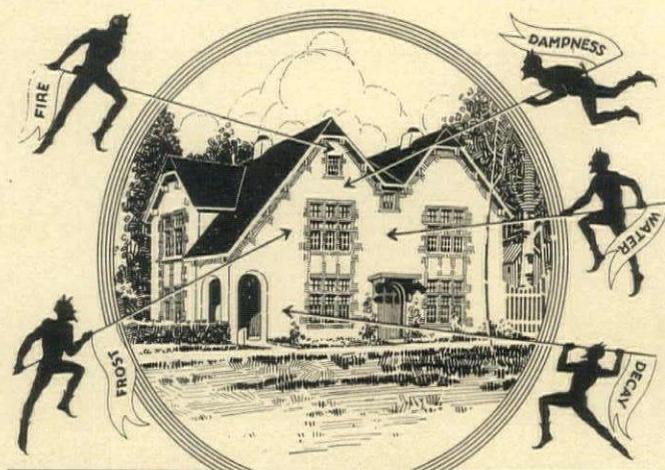
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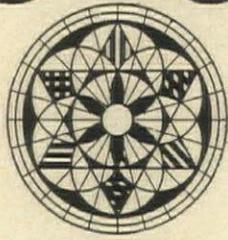
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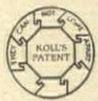
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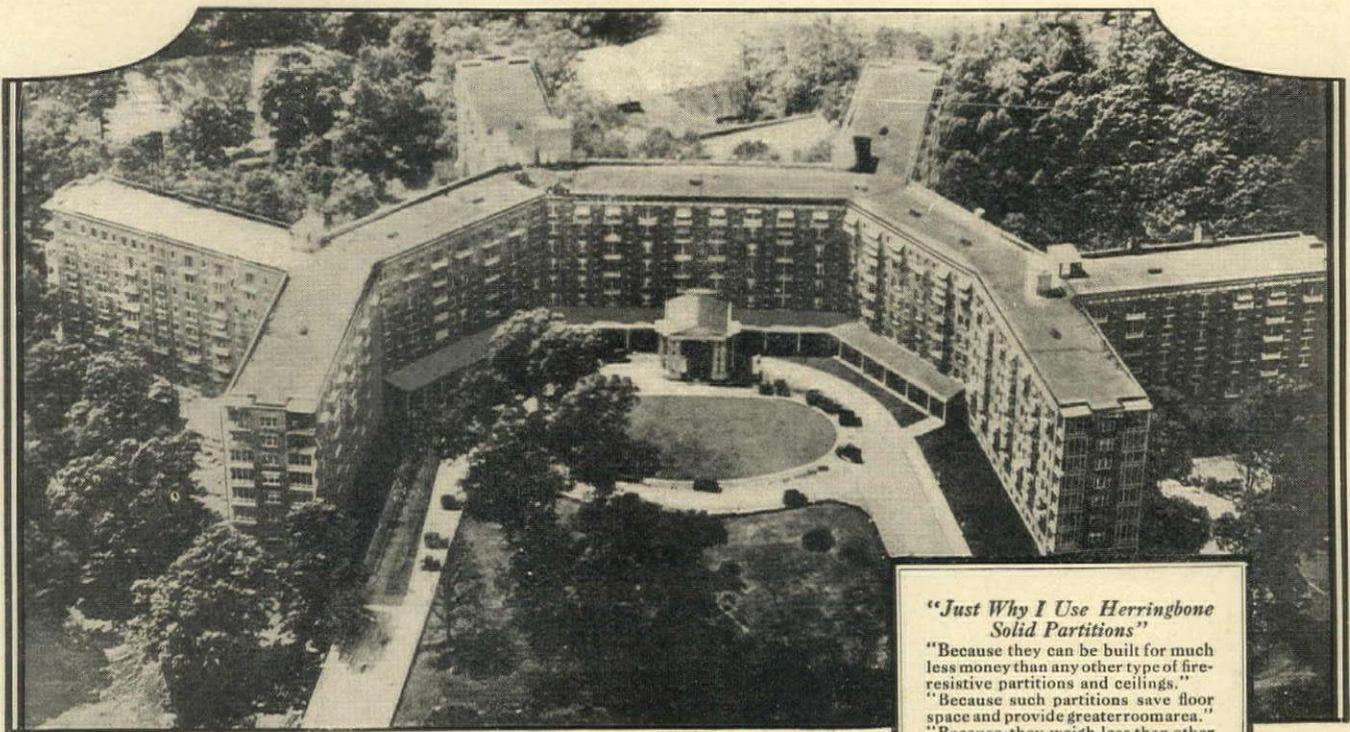
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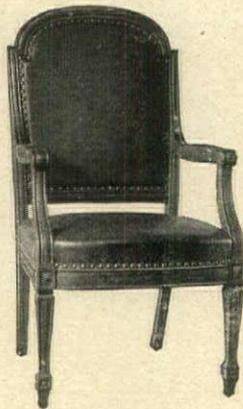
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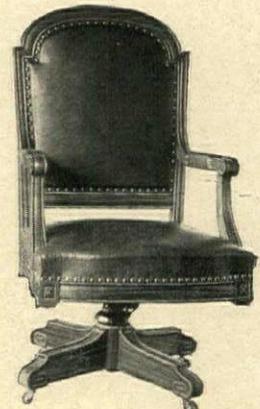
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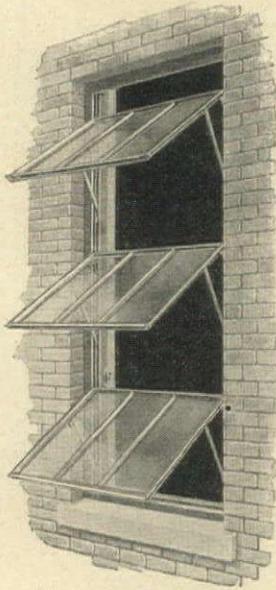
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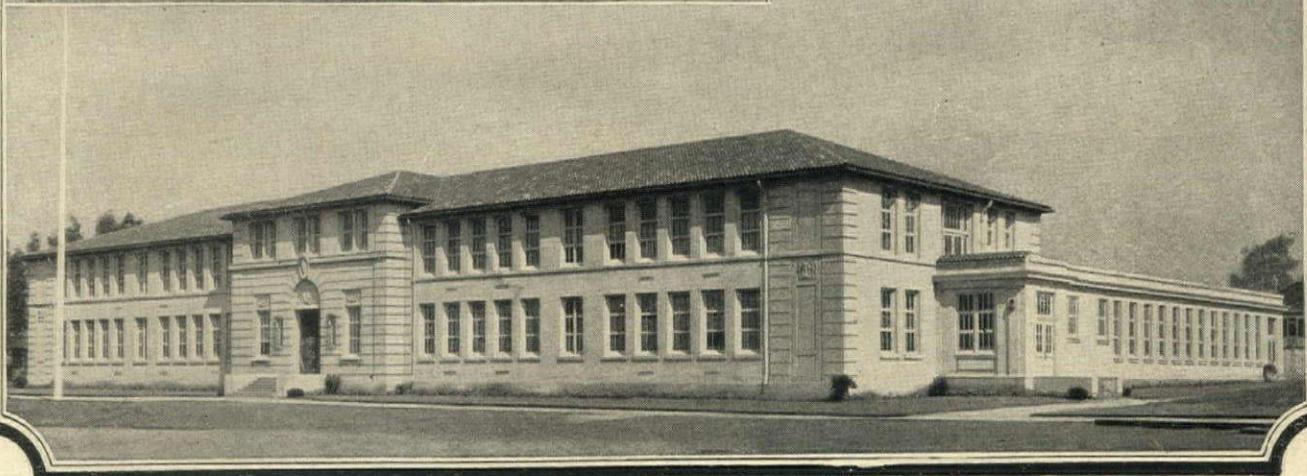
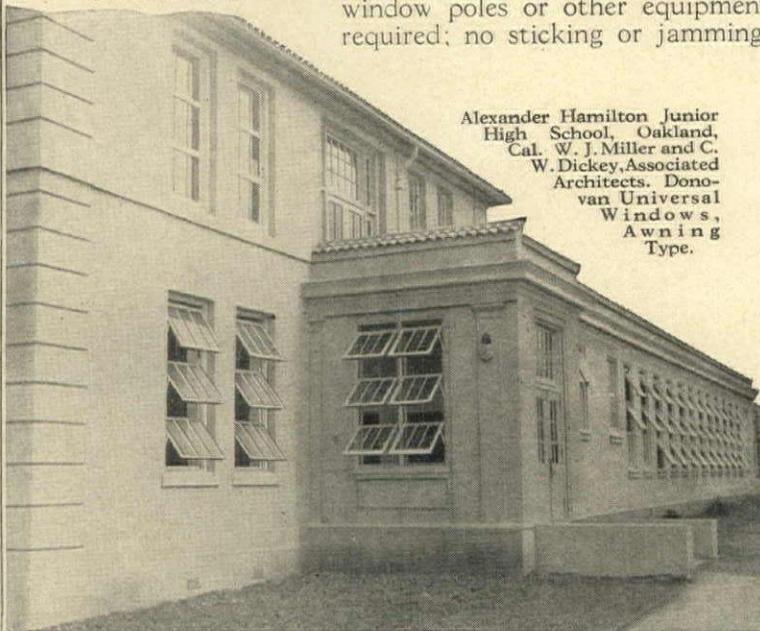
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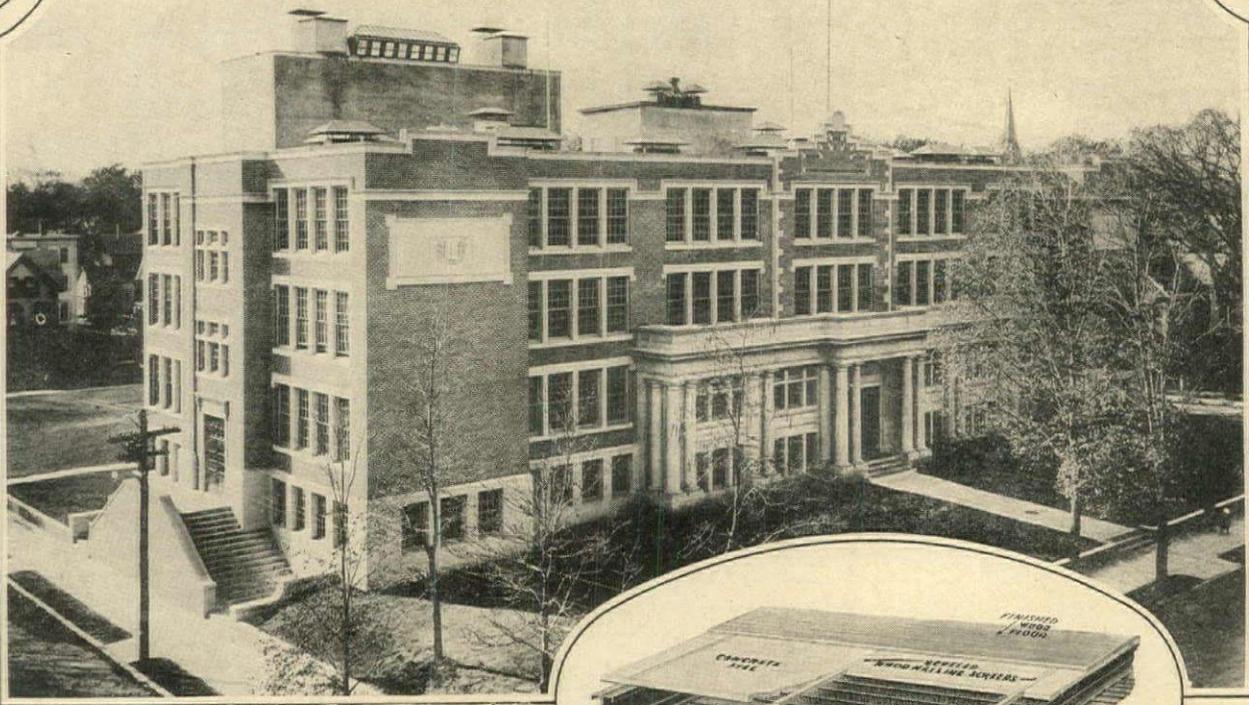
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