The Challenge to Architectural Education
BY MATLACK PRICE

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ROME PRIZES

THE American Academy in Rome has announced its annual competitions for fellowships in architecture, landscape architecture, painting, sculpture, and musical composition.

In architecture the William Ruth-erford Mead fellowship is to be awarded, in landscape architecture the Kate Lancaster Brewster fellowship, in sculpture the Rinehart fellowship, and in musical composition the Walter Damrosch fellowship.

The competitions are open to unmarried men not over thirty years of age who are citizens of the United States. The stipend of each fellowship is $1,250 a year with an allowance of $300 for transportation to and from Rome. Residence and studio are provided without charge at the Academy, and the total estimated value of each fellowship is about $2,000 a year.

The Academy reserves the right to withhold an award in any subject in which no candidate is considered to have reached the required standard.

The term of the fellowship in each subject is two years. Fellows have opportunity for extensive travel and for making contacts with leading European artists and scholars.

Entries for competitions will be received until February 1. Circulars of information and application blanks may be obtained by addressing Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York.

SOCIÉTÉ DES ARCHITECTES DIPLOMÉS MEDAL

NEW YORK UNIVERSITY has been awarded the University medal of the Groupe Americain de la Société des Architectes Diplômés par le Gouvernement Français, for the general high quality of work done in the department of architecture of the College of Fine Arts during the past academic year, as announced by Frank Cheney Farley, president of the Groupe.

The medal has been awarded annually since 1920 to the architectural department of the college or university having the best record of accomplishment in the teaching of architecture among the lines followed by l'Ecole des Beaux-Arts in Paris. The medals, designed by Louis Bottee, noted French sculptor, are supplied by the parent society in France and hence are of semi-official character.

Thirty-three schools and departments of architecture in the United States, which follow the methods of l'Ecole des Beaux-Arts, are eligible for the award. Records of students in the competitions of the Beaux-Arts Institute of Design are used as a guide in determining the recipient of the University medal.

Institutions which have previously received the award are University of Pennsylvania, 1920; Carnegie Institute of Technology, 1921, 1928; Massachusetts Institute of Technology, 1922; Columbia University, 1923; Yale University, 1924, 1926, 1933; Catholic University of America, 1925; University of Illinois, 1929; Harvard University, 1927, 1930; New York University, 1931; and Princeton University, 1932.

ST. LOUIS'S MODERN HOME EXPOSITION

THE St. Louis Modern Home Exposition, comprising four hundred exhibits and a dozen "shows within a show," is to be held in the Exposition Hall of the new St. Louis Municipal Auditorium, January 5 to 13. The exposition was originally scheduled to be held in November, but was postponed to the later date at the request of the Federal Housing Administration.

MODERN HOUSING INSTITUTE

DEAN E. RAYMOND BOS - SANGE of the New York University College of Fine Arts has announced that more than a score of housing experts, architects, and authorities on city planning will cooperate with the department of architecture of the University in presenting a Model Housing Institute.

The Institute will be under the direction of Dr. Carol Aronovici, director of the Housing Research Bureau of the City of New York, and will extend from November 26 until March 11. The number of students admitted will be limited to forty.

Experts in various fields who will cooperate will include: Frederick Ackerman, technical director of the New York City Housing Authority; Mrs. Elizabeth Bussing, manager of several large New York apartment houses; Harold Buttenheim, editor, American City; Henry Churchill, one of the founders of Housing Study Guild of the City of New York; Abraham Goldfield, chairman of the Housing Committee of the American Association of Social Workers; George Gove, executive of the New York State Housing Board; Arthur Holden, chairman of the Land Utilization Committee; S. Clements Horsley, authority on modern building materials; Henry A. Isacis, authority on legal aspects of housing; Robert D. Kohn, former president of the A. I. A. and first director of the Housing Division of the National Reconstruction Administration; Charles Lamb, member of the Slum Clearance Committee of New York; Albert Meyer, chairman of the Housing Study Guild of New York; Lewis Mumford, author and critic; Bernard J. Newman, member of the Philadelphia Housing Administration; Ira S. Robbins, attorney for the New York City Housing Authority; R. H. Shreve, executive director of the Slum Clearance Committee; Clarence Stein and Henry Wright, joint architects of the Sunnyside development in Queens and Radburn, N. J.; Ralph Walker, chairman of the New York Chapter of the A. I. A., and chairman of the City Planning Committee for the City of New York; Coleman Woodbury, director, National Association of Housing Officials; Roy Smith Wallace, executive of National Recreation Association.

POWER SHOW

THIS year brings the Eleventh National Exposition of Power and Mechanical Engineering, held in Grand Central Palace, New York City, December 3 to 8. The Power Show is held at the same time as the annual meeting of the American Society of Mechanical Engineers.

PRINCETON-YALE ARCHITECTURAL COMPETITION

PRINCETON and Yale held their annual architectural competition which was won this year by Yale. Wendell S. Clough of Barre, Vt., a third-year student in the Yale School of Fine Arts, won the leading award, First Mention Placed. Princeton won three First Mentions with R. W. Olson, E. B. Willauer, and R. L. Worcester. Yale won two First Mentions with Bernard Beck and Henry C. Flagg.

Each school submits ten problems to a jury composed of three architects and one member of each faculty. The subject chosen for this competition is "The Power Show."
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CARL LOVEN
A New Approach to Lighting Design

By Eugene Clute

Some very interesting examples of a new method of designing lighting fixtures have made their appearance recently, pointing the way to the solution of the problem of designing for electric light and at the same time securing decorative suitability. This method consists in determining the general form of the fixture in accordance with what may seem to be the best means of meeting the practical requirements, but modifying the form and adding ornamental detail to give the desired decorative character.

This is the reverse of the traditional procedure, which is to start with a form derived from an earlier means of lighting, such as the branched chandelier intended for candles, and to introduce electric light as a concession to practicality.

It is a stride beyond engineering design and functionalism toward the decorative. In this method, both the practical and the esthetic elements of design are given due consideration, the former taking the lead and the latter giving the requisite character and beauty.

This new approach to the designing of lighting has come about as a result of the efforts of many designers to use electric light properly and with the best possible decorative effect, keeping pace with the improvement in electric lamps and with the trend of thought and taste in architectural design. It has not been arrived at consciously, or taught, or agreed upon, but it is a fact. It seems desirable to bring out the underlying principles of this method, and this can best be done, probably, by a brief consideration of the current methods of design and an examination of some of the outstanding examples of the ways in which this new method is working out in practice.

It is only natural that designers should have first taken the line of least resistance by simply placing electric bulbs on the arms of candle fixtures or enclosing the bulbs in lanterns. This did not disturb their habit of designing and left the period style designs practically unchanged, especially since the expedient of setting the bulbs on the tops of imitation candles was promptly adopted.

These electric candles, as commonly employed, have never been convincing, however, and the hard mechanical form of the lamp bulbs was always out of harmony with the sensitive lines and forms of good period fixtures. Bulbs made in the form of a twisted flame are no better, for they are clumsy and inharmonious. The smaller plain pointed electric lamps are neater, but leave much to be desired. Concealing the bulbs under shades of silk or other material has not proved to be satisfactory, for such shades are neither architectural nor truly decorative. They have always been disliked by most architects as fussy additions, though they have been favored often by woman clients.

The most serious fault with the adaptation of candle fixture designs to electric light is that it fails to recognize one of the essential differences between electric lighting and candle lighting—the fact that even a single electric bulb of ordinary wattage gives many times as much light as a candle flame. Chandeliers for candles have numerous branches because many candles were needed to produce fairly adequate illumination. When electric bulbs replace candles on such a fixture the result is dazzling and garish. Even a single bare bulb is a source of concentrated light of too high intensity for the eyes. Unless the lamps are farther from the eyes than they usually are in a room, they should not be bare; nor does the frosting of the bulbs afford sufficient protection.

At this point it may be well to note a method that is employed, where the cost is not a deterrent, to overcome these difficulties while using electric light in a fixture of purely historic de-
Indirect lighting pendant designed by Walter W. Kantack for a recessed entrance to French & Co., antiquarians. The fixture is of hand-wrought brass repoussé work, gold plated.

This consists in using electric candles made of wax with runs of wax down their sides and miniature electric bulbs at their tops, each bulb wrapped in a piece of cat-gut twisted into the shape of a flame. These lamps, though somewhat brighter than candles, are of very low power and the effect of candle lighting is well simulated. This is probably the limit of ingenuity and painstaking care in maintaining consistently the appearance of historic truth in the face of modern conditions. It does skillfully and thoroughly what ordinary adaptations of candle fixtures attempt crudely and half-heartedly.

In addition to being wrong in principle, it is prohibitive in cost for most people. This refinement in the adaptation of candle fixtures commands admiration as a tour de force, but it has no bearing upon the solution of the problem of lighting-fixture design.

In short, the traditional method of designing lighting fixtures, by adapting other types of light sources to electricity, either disregards or artfully dodges the problem. It has continued because the better fixtures of this kind have in themselves the beauty and good decorative character of the fully developed older styles, and their shortcomings in other respects have been overlooked. So long as our architecture remained a veneer of historic forms denying the actual modern construction, such lighting fixtures were consistent with the architecture. But the past few years, as we all know, have seen profound changes in the practice of design.

While the adaptation of candle fixtures and
A lighting fixture of bronze and glass in the bar of Hotel Roosevelt, New York City. Designed and executed by A. Ward Hendrickson & Co., Inc.

A fixture in the Restaurant Henri Charpentier, French Republic Building, Rockefeller Center. Designed and executed by A. Ward Hendrickson & Co., Inc.
lanterns has prevailed in this country, there has been a constant endeavor on the part of many architects and designers in Europe to design fixtures essentially electric and of satisfactory decorative character. This has been going on ever since the end of the nineteenth century, with but indifferent success in most instances.

In the early days of the modern style movement, some thirty to thirty-five years ago, European designers took the electric drop-cord as the basis of their lighting-fixture designs. Surely, a light-giving glass bulb hanging on the end of a wire was characteristic of electric illumination and of nothing else.

Austrian architects grouped these drop cords together, letting them hang straight down from a square plate upon the ceiling and uniting them below with a square horizontal frame. The bulbs were bare, usually, and a design touch was often supplied by a metal disc or flange, just above the bulb, where it entered the socket. At about that time, French designers were using the drop-cord slanting down from the ceiling to the ends of the branching arms of a fixture body of cast bronze; this in a modelled Art Nouveau design of sinuous lines from which the bulbs dangled. Often the cords were crossed or formed into a decorative network. Then the Austrian and German designers began to favor the single straight cord or fixture stem, with a bulb or group of bulbs at its lower end, surrounded by a shirred petticoat shade of fabric—a hackneyed expedient that has contributed so generously to faded color schemes and dust.

The French designers took to experimenting with planes of glass with lamp bulbs back of or above them. So, when a large number of Americans became interested in modernism through the Exposition of Decorative Arts in Paris in 1925, our designers began turning out fixtures of glass planes. Some of them were good, but most of them were very bad.

Ever since there have been illuminating engineers, they have been talking about the better use of electric light and trying to bring it about. But their contribution to lighting-fixture design and to decorative lighting in general has been almost nothing until quite recently. This has been so because the illuminating engineer has, naturally enough, lacked an adequate knowledge of architecture and interior decoration, and the men possessed of this knowledge have not often cared to avail themselves of his help. Wedded to the traditional method of fixture design and shocked by the engineer's esthetic deficiencies, they have largely ignored him. During the past few years architects and lighting-fixture designers generally have been more concerned with the mannerisms of European modern designers and with fanciful creations of their own devising than with the proper use of electric light. Now, however, there are...
many evidences of a disposition on the part of designers to get down to fundamentals in lighting-fixture design, not forgetting the decorative element.

The doctrine of emphasized functionalism, though it falls short in practice, has had a good effect in that the passing interest in it has helped to bring about a better recognition of engineering considerations as among the essential bases of artistic design.

Then, too, the swing of modernism toward historic sources of design inspiration, without the abandonment of any of its really good principles, more particularly in the manner known as the “Classic Modern,” is providing an acceptable type of design to replace essentially traditional interior architecture and decoration.

The net result of all of these things, so far as the designing of lighting is concerned, is the new approach to the problem, which may perhaps be described as functionalism plus decoration, often with more or less of the historic element.

The main controlling factor in present-day lighting-fixture design is the brightness of the modern electric lamp, against which the eyes must be shielded. Exposed bulbs on imitation candles or otherwise employed are undesirable because this protection is not afforded. A cylinder of frosted glass or other translucent material surrounding the lamp meets this requirement, is honest and can be brought into harmony with period design. It is the logical successor to the electric candle. There is no need of arbitrarily avoiding the form of fixture with branching arms simply because candle fixtures had such arms. They may just as well hold electric lights. But the superiority of electric lamps over candles as light sources should be kept in mind and the lamps limited accordingly in number and wattage.

Since the larger lamps of higher wattage are relatively more efficient than lamps of lower wattage, it is reasonable to use these larger lamps and to design accordingly. This means some form of indirect lighting, usually from a fixture which shields the lamp with an opaque reflector, directing the light as desired.

Indirect lighting is rapidly becoming something very different from the sort of thing it has always been. It does not need to be crude and destructive of the charm of interior architecture and decoration; the light sources that produce it...
can be excellent in decorative design. Most of the lighting fixtures shown herewith are for indirect lighting.

There are many ways in which indirect lighting can be accomplished. It is not necessary to convert the ceiling into a too bright expanse of white and rob all the objects in the room of the proper expression of their forms, through the elimination or reversal of shades and shadows. Indirect lighting installations have done this for so many years that these faults are associated in our minds with this kind of lighting. As a matter of fact, an installation is now in progress in which the ceiling will be in semi-darkness, and there are many examples of indirect lighting that make very effective use of different intensities and of well-handled light and shade. Light may be reflected from the walls or from the ceiling or from special reflecting surfaces forming part of the fixtures. For example, in one of the fixtures shown here light from tubular lamps in vertical reflector troughs is projected upon the back plate of the fixture, which is so designed as to distribute it mainly in a horizontal direction. This is what is known as directed-indirect lighting, a coming type. There is also semi-indirect lighting and direct-indirect lighting. The crudity with which it has been employed has done an injustice to the possibilities of indirect lighting and retarded its acceptance for a quarter of a century or more. But that is becoming a thing of the past.

The lack of good decorative design in indirect-lighting fixtures was also unfavorable. For one thing, the source of the light was not properly announced. The lighting unit was concealed in an oil jar, a flower pot, or a half-urn on the wall, and one was left in some uncertainty as to the source of illumination. Now, care is often taken to enliven the fixture itself with light from within. Sometimes this is done by using overlapping leaf forms so arranged that a little light is received by the outer surfaces of the inner leaves, or louvers are arranged to catch some light. There are a number of other ways in which this can be done: for example, by edging the bowl of the fixture with a row of crystals.

The progress that has been made in the past nine years, more especially in the past five years, is amazing. In 1925 this country was not represented at the exposition in Paris, for it was felt that we had nothing to show. Now, America is rich in work in the arts, and may well be regarded as the leader in decorative lighting.
The Prado was built to provide a pleasant and shady open space for the inhabitants of Boston's North End, and at the same time to open up a vista between two of Boston's historic churches. The Prado extends over an irregular space, as shown by the plan below, between Christ Church and St. Stephen's Church, a distance of four hundred eighty feet. At its widest point it measures eighty-five feet. Most of this land was covered with tenement houses and stores. Altogether seventeen houses were purchased and torn down. The illustration at the left shows Christ Church. For the pavement the landscape architect has used brick, with bands of bluestone to form a pattern.
This is what the Prado was before demolition started in October, 1933.

In the foreground is a granite fountain measuring thirty feet in diameter. The whole pavement is laid on a concrete slab.

Shade is provided—and it will be increased—by forty-seven European linden trees and thirty-one Lombardy poplars.

Paul J. Weber
A glimpse of St. Stephen's main entrance through the tenement houses that formerly stood on the site.

A nine-foot wall of old brick surrounds the entire Prado, with a continuous stone seat on the inside.

The Prado as seen from St. Stephen's Church, looking across Hanover Street in the foreground.
The view from Christ Church over the Prado. The church has its own small garden, entered through the wrought-iron gates. Unity Street divides it from the end of the Prado.
The Challenge to Architectural Education

By Matlack Price

In an age when so much established precedent in so many fields is being challenged, re-examined, and made over, it should not be surprising that architectural education finds itself in need of a new orientation, a new set of ideas. The challenge comes alike from today's students and from their prospective employers.

In my own student days, which were thirty years ago, architecture was architecture—and there was no question about it, or about how it was to be studied. Everything about it was predictable, known in advance. There was no question about what the architect was going to do: it was only a matter of how well he was going to do it. Architectural design was measured by taste and scholarship, and the training was planned and administered accordingly, changing not at all from year to year. Originality and imagination were frowned upon, and there were more students and young architects who admired Louis Sullivan and Frank Lloyd Wright, in 1900, than were encouraged to admit it, or dared to, at least in the company of their elders and betters.

We were told, and with ample sanction in fact, that we should hope to grow up and be (if such aspiration were not too high) like McKim, Mead & White, Charles A. Platt, Carrère & Hastings, Cass Gilbert, Arnold Brunner, and Daniel Burnham.

McKim, Mead & White were the law and the prophets, and rightly so, for had they not rescued the fair goddess Architecture from the slough of ignorance and folly into which she had fallen, and placed her high upon a finely scaled Renaissance throne?

On the chaste brick façade of Nelson Robinson Hall, where architecture is taught at Harvard University, stone tablets bore (and still bear) the names of Bramante, Brunelleschi, and others of the great hierarchy of architectural law and order, of architectural respect for classic precedent.

What has happened that these names no more evoke reverence, or even respect in the modern architectural student? Was the architecture that we learned in the decade 1900-1910 a false thing, or useless, as sterile and out-moded as eighteen-year-old students today tell us that it is? And if this were indeed so, are these same students endowed with such amazing critical insight as to discern it? We did not know so much in 1905, could not, that is, pretend to the architectural clairvoyance of today's students, who see McKim, Mead & White as a bungling trio of old pattern-followers. But suppose we put these modern youths on probation for the moment; suppose, even, that we honestly feel that they are aesthetically immature—still there is some serious thinking and some serious work to be done by a few people who know and understand architecture as a whole; whose memory, not to speak of their training, extends back—back, at least, prior to 1930. The Empire State Building, and the R. C. A. Building in Rockefeller Center loom high, but they do not stand on the edge of the universe, with nothing behind them but void space. A great many years of architecture lie behind them, but the face of today's architectural student is so naively set toward the future that his curiosity will explore only in that direction, for all that he is without a compass or directions.

Whether he deserves it or not, I shall not here attempt to say, but this same young architectural student needs a restatement of the old immutable architectural truths—even though he may not have the wit to demand such a restatement. The profession of architecture and, specifically, the professors and instructors, every faculty of every architectural department today owes him this restatement.

"But that will be hard to do. Who is to do it? Architecture is an established, fixed subject." I do not care how hard it may be, it has got to be done, and quickly. Who's to do it is the immediate problem of every university and architectural school in the country; and architecture, today, however well its background may be established, is anything but "fixed."

This very day, while I am writing this, architectural students are rejecting the old statements and the old truths, demanding new truths that will square with the buildings of the Century of Progress Exposition. It does not matter a particle whether you or I accept those buildings; the students are accepting them and looking to their instructors to tell them something about them that they will be willing to believe.
They may not be told any new truths—for there are no new truths. Statements of values, appraisals—yes—and without fear or prejudices we owe it to the student to sanction, nay, to encourage, the scrapping of many old half-truths. And we may, if strategy be necessary, restate the old truths in such a way that they may appear entirely new—and so be accepted. Later, when mature understanding comes to his aid, the young architect will be able himself to make his own peace with precedent, adjust himself honestly and intelligently to the trends of his time, and face the future with confidence and integrity.

When I studied architecture in that McKim, Mead & White building in Cambridge, adorned with the great names of long-dead architects, I could not have foreseen a day when architectural students would feel that the names and works of the men of the Renaissance in Italy would hold no meaning or value for them.

I could not have foreseen, either, that a day might come when I would find myself in the position of a substitute instructor in architectural design in a school of marked standing and attainment, noted particularly for its output of admirably trained graduates. Last year, however, this was my unexpected opportunity, not to say privilege. It was a privilege, because I might not otherwise have come to know today's architectural student—the architect of tomorrow. I might have gone on thinking of him as not greatly otherwise than "myself when young." But he is quite otherwise.

There was the initial shock of finding, as a whole, an attitude toward past architecture that ranged from contemptuous indifference to heady resentment that a study of all this "historic junk" should be required at all. Of what possible value could any architecture be without chromium steel? And with this general attitude went an absurd complacency—pathetic, if it weren't annoying—an utterly callow notion that could only be explained by adherence to a notion that architecture really began about 1930—or perhaps 1925 at the earliest (though I doubt if any among those students knew the significance of the French Exposition of 1925)—and that architecture is in the process of culmination in such of its evidences as the Empire State Building, Rockefeller Center, and the work at the Century of Progress Exposition.

It may well be that the profession, the practicing architect in search of draftsmen, have been so preoccupied with the astonishing and subversive changes in our architecture, in our whole architectural philosophy, that they have overlooked the problems involved in teaching the modern manner. They have not, that is, made clearly known to the schools their need of young men trained otherwise than they themselves were trained—trained in a different kind of architectural thinking. Nor, so far as I know, have they given the schools much constructive advice or encouragement. The new Columbia experiment, to be tried out for the first time this year, is perhaps the beginning of a new approach.

It is easy to deplore teaching methods and objectives as antiquated, impractical, obsolete. Most people, in any profession, who take the trouble to criticize the schools at all take this attitude, and many of them become set in the attitude for the unfortunate reason that they are right. Teaching, they say (and, as above, often rightly), is seldom less than ten years behind the march of world trends in its subject—so what is to be expected of architectural teaching, when the most conspicuous evidences of modern expression in architecture have happened largely in the past ten years? No good, certainly, will come of making believe that nothing has changed: si monumentum requiris, circumspice.

Educators, no doubt checked by the very real weight of their responsibility, hesitate to change the curriculum. More often than is the case, however, they would do well to begin a change by enlarging their point of view to the extent of re-examining their curricula. Nothing should prevent or delay the beginning of change, particularly in teaching, because a complete change is often difficult to put into effect quickly. Years elapse before it may become fully operative.

It would be a comparatively simple matter if nothing needed to be changed but the courses: the major difficulty lies in quickly effecting a corresponding change in teachers' minds and attitudes. In mechanical terms it is, and has always been, a problem in synchronization to adjust the varying speeds of teaching, learning, and the march of events. Teaching in science has long kept pace with scientific progress; it was thought disgraceful to be behind the times, to fail to integrate in teaching the latest development in the laboratory. But the case with architectural teaching, today, is quite otherwise. Since the days of the Italian Renaissance, when
the teachers were also the men who were writing the architectural history of their time, the teaching of architecture has fallen behind the practice; the present vastly accelerated tempo of architectural thought and performance makes the difference between its teaching and practice disturbingly apparent. It is in this that lies the challenge to the schools and universities, rather than in the essential rightness or possible error of the whole doctrine of modern architecture.

I cannot see the question of the abiding merit of modern architecture and design in general as being anything like so important as evolving a system of architectural education and instruction that will endow its students with the vital kind of taste, perception, and discrimination—an equipment which will enable them to understand, directly, and control the trend—any trend. As it is, we are in danger of having our trained younger men mostly trained in so reactionary a mould that they will be unable to adjust themselves to the new architectural ideas, while our untrained younger men will lack the intellectual equipment which they must have if they are to cope with the whole or any part of the modern problem of design.

I am thinking, obviously, of the design of public and business buildings rather than the design of houses, and I am thinking of design rather than of engineering and construction. In this last, as in scientific curricula, new developments, methods, and materials have found their way into the classroom in a better synchronization than is apparent in the design courses.

It is inevitable that the practising architects best able to teach the new architecture are the very men who are too busy creating it to detour into teaching. Here and there significant experiments are being made, as with the tutor system to go into effect in the Columbia Architectural School this year, and the “patron” proposal of the Educational Committee of the American Institute of Architects. Columbia, I read, is farming out groups of students to work under certain assigned architects, because of a growing doubt of the value today of the old Beaux-Arts projet, or competition method of training. The new experiment, like anything of the kind (the ateliers of the New York Society of Beaux Arts Architects, for instance) must rest on the teaching personality of the architect. At its best, this scheme would give the student the benefits of the realistic and personal training of the apprentice in Renaissance Italy. Inevitably the success will be attended by the conditions of any plan that depends on the personal equation rather than upon an established and uniform body of educational doctrine. To any given student, the tutor to whom he is assigned cannot but make a vast difference, whether for good or ill.

But what, you may well ask, is to be taught, supposing the architectural curriculum is to be rewritten? Largely, the educator’s problem is to define the objectives of modern architectural education and training—first to himself, and then, as early as possible, to the student. Sooner or later the educator must take the student into his confidence—and the sooner the better. If this definition of objective be achieved—and it is of the essence of the whole problem—the answer to the more obvious question: “What shall we keep and what shall we scrap?” will work itself out naturally and realistically. I think it will be found by any one, whether he be an architectural radical or an architectural fundamentalist, that modern education in this field is not so simple as the mere decision to keep this or that architectural doctrine, and scrap this or that which seems “out of date.”

What, after all, do we mean by “out of date”? Are we talking in terms of time or of taste? If the first, we are committed to a highly arbitrary procedure, because nearly the whole history of architecture, in common with the other arts, is full of revivals of one kind or another. Isn’t much of our modern architecture Neo-Classic, or at least trying to be? Suppose the chapter called Classic is deleted from architectural education as being “out of date,” how is our student to design intelligently, or even design at all, in Neo-Classic? He is all too likely to do something that may be “Neo,” but which lacks even Classic implications. And so it goes—you are in a dangerous game when you begin to decide that any reputable style or phase of architecture has reached the absolute end of its usefulness, and may be scrapped.

But if you are talking about taste, that is a very different matter, and one far closer to the essence of architectural education than anything so irrelevant as time.

Taste is timeless and universal—or should be—and is the only true guide to architectural excellence. It is difficult to teach, but repays the effort, and if the school takes the stand that “taste” is a thing too vague to teach, why not
at least make the effort to study the evolution of architecture in terms of taste? One difficulty arises, in the scarcity of teachers who have real insight and accurately sensitive perceptions. But in a study of architecture as a humanly conditioned expression of taste, the student would learn at least one very important truth—that most examples of bad taste in architecture, and most eras stigmatized as low in taste, correspond in a way that is more than coincidence with poor design.

No sooner does the educator focus his mind upon the real nature and meaning of design than he begins to see that here may lie the central necessity of all architecture, and therefore the necessity, lacking which, modern architecture would fail. Because the older doctrine of architecture was one of "adaptation" is an insufficient reason for going on teaching it as though this were still so. And the student, moreover, knows it isn't still so. He may yet want to know, clamor to know, what architecture is, but he knows that it isn't what it was, certainly in the matter of externals.

Today the architectural desideratum is creative design. It would be unwise, here, to attempt an examination of the extent to which modern architecture is, in fact, creative: the word conveniently, and with sufficient accuracy, serves as a distinguishing term. But architecture itself, in essence, has not changed so completely as many people suppose. The change is one of emphasis rather than of fundamentals. Yesterday it was scholarship and precedent, today it is daring and imagination—creative design. The important thing is to recognize the differences and the similarities, and to convince the student that the similarities are as much to be studied as the differences.

It is true enough that the change in emphasis in the modern architectural objective calls for a different kind of thinking. It is equally true that today's student will not be capable of doing that different kind of thinking unless he is given a different kind of educational deal. It may be objected that architectural students have always been taught "design." Yes—but hasn't it always been "out of the book"? Haven't students been taught to recognize design when they see it (even on their own drafting-boards) rather than given the ability to be designers? To train designers is a large order—larger, in fact, than most schools or their instructors have been capable or willing to undertake. The student has been exposed to design as a desirable accomplishment—and the school hoped that he might, some day, become a designer.

If the editor of this magazine were to challenge me, or even urbanely to suggest, that I might establish my contentions by writing a specific curriculum, I could only feel that it would be a pleasant exercise to do so: in the present article, I can only feel that such a curriculum, in all its detail, might overburden the editor's goodwill and the reader's patience.

For the moment I would like to suggest three things which I would feel to be essential, both objectively and subjectively, as affecting the whole structure of a truly modern architectural curriculum.

1. A new analysis of architectural design, so directed as to rationalize and co-ordinate precedent and the new creative design. This would perform the tremendously valuable necessity of examining the essential nature of design, and of seeing it as immutable, unaffected by transient fashions.

2. New ideas in the study of style-sources. This department of architectural education is in need of a really intelligent overhauling. Creative design being what it is, there is very little actual origination. For this reason a study of sources as a basis for what is called creative design is of great importance to modern architecture.

There is plenty about the new architectural doctrine, both in theory and practice, that is sound and that represents a real advance, with unpredictable possibilities. Designing in mass, subordination and integration of detail, "functionalism," new materials—the whole vista of future architecture was never more legitimately exciting. But how is today's student to avail himself of the maximum advantages of all these powerful potentials without sound training in design—far more basic and vigorous than was ever needed by his father?

3. New techniques in teaching architecture. Too much architectural teaching has been of a kind to create in the student's mind the idea that all good architecture is something that was, hallowed by the mists of time, and that today's architecture, if it would achieve merit, must be like it. At the same time there was an inescapable implication that nothing done today could equal the old things; it could hope, at best, to be a pallid imitation.

Whether this be true or not (as often enough it may be), it makes a mighty poor doctrine to
teach young and ardent architectural students. Some of them simply don’t believe it (and tell you so); the others don’t want to believe it. It is a doctrine that defeats ambition before it has a chance to grapple with architecture in any realistic manner. When I say that today’s student—youth being what it is—doesn’t believe this, I speak from my experience in my recent temporary sojourn as a substitute instructor. Not that I tried any doctrinaire instruction. Instinct and inclination saved me from any such mistake—but there were plenty of ways of sensing the student attitude.

Looking back at architectural education, as I experienced it, there was a great deal taught about architecture, but of architecture itself, very little indeed. We were never allowed to come to actual grips with it. This, again, is a question of emphasis, as well as of the technique of teaching, and it is of the essence of the school’s problem today to see that architecture is taught as a living subject, not as a body of fact and form embalmed in history’s pages.

Given the feeling that architecture is, and has always been, a flow as continuous as a river, synchronous with civilization, enriched with racial cultures, and you have at least a chance of getting the student involved emotionally. It must somehow get into his blood: he must feel architecture, or, as they say nowadays in educational language, he must experience architecture. The finest of the new buildings appeal to his emotions: the old ones don’t. Somehow, and it is the individual instructor’s problem, the old must be dramatized as a means of intelligently appreciating and developing the new.

If the student thinks that Bramante was just an old bird (Italian, wasn’t he?) that the professor gave us a spiel about in that dumb History of Architecture course—but the real architect is the fellow who could design an Empire State Building—there’s something awfully wrong in the technique of teaching and in the whole job the school should be trying to do to make the student see architecture as a whole. Wrong as the modern student attitude is, I would not lay all the criticism at his door. Granted, the teacher’s problem is much more difficult than it was before. Often he must feel that he is vainly marshalling dim battalions of ghost-architects out of a dead past to combat vivid and dramatic realities of the present—but that is not to say that he may not succeed, and, in succeeding, give his students a far better equipment toward modern design than they could otherwise hope to have.

The unnecessary fallacy at the heart of the battle between precedent and innovation is to allow or admit the idea that there should be any battle.

There is such a thing as architectural illiteracy, just as there is illiteracy in speech and writing—and the profession of architecture is no place for illiterates today, any more than it has ever been. The accident of living in the twentieth century confers upon no one a magically revealed culture. I was unable to detect any such miracle, even in an incipient stage, in the class which I studied last winter.

I could not but compare the keen architectural intelligence of many draftsmen with whom I have worked, who, though denied a school foundation of familiarity with the past, had come to know and respect it through their first-hand understanding of the meaning of all architecture. This suggests a definite orientation for my imaginary curriculum, which I shall probably write: if for no other reason than to feel better about the whole thing in my own mind.

There is, for one thing, the wholly unnecessary and stupid conflict between the "practical" and "cultural" orientation of any curriculum. As in the conflict between old and new, the central mistake is to recognize or allow any conflict at all. Among many of the foremost architects of this country I have never been able to perceive that culture and a practical, realistic equipment are mutually exclusive.

It is all very well to say that those who are responsible for architectural education should be "open-minded"—of course: that is an admirable and intelligent attitude at all times in all departments of life. But the open mind, today, needs to be open for the exit of fallacious ideas as well as open to the admission of new ones. Above all, the old ideas need re-examination and restatement. A new liberalism is afoot in the whole educational field, from the progressive schools up to the universities. Harvard University, for example, faces forward under the new leadership of Dr. James Bryant Conant. Others obviously will follow. Dr. Conant said, in his opening address: "When knowledge ceases to expand and develop it becomes devitalized, degraded, and a matter of very little importance to the community... A zest for intellectual adventure should be the characteristic of every university."

And of every architectural school.

ARCHITECTURE

DECEMBER, 1934

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Proposed International Amphitheatre for the Chicago Stock Yards, seating ten thousand. A. Epstein, structural engineer

The Union League Club of Chicago has a new Steel Room with photographic murals of the industry by Kaufmann-Fabry, photographers

"Better Homes in America's" $9000 model house on Park Avenue, New York City. Roger H. Bullard and Clifford C. Wendehack, architects

Cambridge University's new library, recently opened by H. M. the King. Sir Giles Gilbert Scott, architect

New home of the Royal Institute of British Architects, Portland Place, London. G. Grey Wornum, architect. Bronze doors by James Woodford, sculptor

Public Library now under construction for Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, architect
in Photographs

Proposed armory building for Minneapolis, Minn. P. C. Bettenburg, architect and engineer

Model of superintendent's residence for Morton Arboretum, Lisle, Ill. Holabird & Root, architects

New bar, Joseph Urban room, Congress Hotel, Chicago. Scott & Teegen, architects; Eastman Decorating Co.

Theodore Roosevelt Memorial Wing, Museum of Natural History, New York City, is nearing completion. Office of John Russell Pope, architect

Gretl Urban, daughter of the late Joseph Urban, is at work on a series of murals for the Hotel Bossert ballroom, Brooklyn

Proposed Indoor Sports Building for the University of Minnesota. Clarence H. Johnston, architect
BOOK REVIEWS


There have been monographs published from time to time, particularly in more prosperous years, recording the architectural works of the larger firms. This particular monograph goes far ahead of anything that has been produced in this country in sumptuous presentation, the processes utilized, and the care and discrimination employed in the selection of the illustrations. It was begun in 1924, and has required nearly nine years to complete. The edition is printed for private circulation, and is limited to 24th edition of the familiar handbook on structural steel.


Bringing into one compact pamphlet the result of experiments over a wide area. Procedure for demolition by consent of the owner and also for demolition under the police power, with the minor factor of salvaged material.


The author of "Sticks and Stones," "The Brown Decades," "The Golden Day," and other works, with his fresh viewpoint and incisive pen might have been expected to turn out a great book under the title above. Whatever the expectations might have been, the result far exceeds them, for here is an amazingly comprehensive picture of man's efforts to better his environment. It was Theodore Roosevelt, was it not, who once said that his greatest ambition was to write a history of civilization? That is practically what Lewis Mumford has done in this book. It is a work capable of bringing enduring fame to its author, and a great service to mankind.


The report has taken the form almost of an encyclopedia on the subject. Many qualified writers have contributed to it, covering every phase of this insect and the problems he has brought to mankind. A large part of the book is biological, another large part deals with problems outside the architect's field, but there is a full treatment of dangers to wood construction and the methods developed for combating them.


This is in effect equivalent to walking through the National Galleries and the Vatican with a brilliant observer who knows pictures and who "knows what he likes." Just as a sample, he says that if you can shake yourself clear of the shackles of childish familiarity and the atmosphere of bogus culture, you will get a thrill from the Sistine Madonna, which "is beautiful though oily." The one thing we have against Clive Bell is that he writes two books—one in the text matter and the other in footnotes, and hooks them together by numbers.


The author has for several years been conducting a column in a New York newspaper under the same title, answering the thousands of questions from puzzled home-owners as to every conceivable phase of the maintenance of a dwelling. Out of this ripe experience of learning what matters trouble the house owner most, Mr. Whitman has brought together a well-arranged compendium of information that will help the owner to keep his home in the good condition in which presumably it was delivered to him by the architect and builder.

ARCHITECTURE

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The Søndermark Chapel and Crematorium lies between two stately avenues and is given added dignity and privacy by a deep approach around a simple panel of lawn.

Plan of the main floor: 1. Chapel; 2. waiting-room; 3. crematory; 5. receiving-room; 6. morgue; 7. dressing-room; 8. the columbarium, a vine-shaded court of memorial urns; 9. enclosed court; 10. administration quarters.

EDVARD THOMSEN AND FRITS SCHLEGEL, ARCHITECTS

Chapel and Crematorium, Copenhagen, Denmark
North end of Chapel. There is no organ screen; the speaking pipes have been made to contribute the decorative value of the instrument, aided only by color. Walls are of black plaster divided by sunken bands of yellow.
Sanctuary end of the Chapel, its white plaster walls bearing colored symbols of the Four Evangelists and the Crucifixion.

Over the Chapel entrance is a sculptured figure in granite by Utzon Frank. The urn niches will be covered with memorial tablets.

In addition to the niches on the front, permanent memorial repositories for the ashes are provided in this rose-arbored columbarium.
Better Practice

By W. F. Bartels

HEATING—Continued

Besides this the architect should make sure that the boiler specified will stand the load imposed upon it by these heaters, taking into account the added task of heating hot water. One apartment-house superintendent complained loudly and long that he could not get heat up in the morning. Because the tenants did considerable complaining also, I thought it advisable to inspect the plant. I found that the boiler was good only for the standing radiation. When steam was started in the morning there were two places for it to go. One was into the radiators, the other into the line into the tank where it was to heat the water for domestic use. The tank was cooled over night so that the result was that the steam entering it was condensed almost as quickly as the steam entering the radiators. The superintendent was ordered to shut the steam line going into the hot-water tank until the house was warmed up, but even then it was quite a chore to get both steam and hot water on a cold day.

An indirect heater is one in which the water to be heated goes through a coil. The latter is enclosed in a casing into which the water of the boiler is conducted by means of two pipes below the water line of the boiler (Fig. 1C). The architect must make sure here also that the boiler will be equal to the additional demands made upon it. Then, too, the pipes from the boiler must be of the size called for by the manufacturer.
of the indirect heater. Too often, in an effort to save hot-water heat in the boiler, the holes will be bushed down (Fig. 1D). This usually results in the indirect heater not working properly, and not enough steam being obtained. The top line of the indirect heater should enter the boiler below the water line.

In some systems where "street steam" (that is, steam supplied from a central plant) the condensate is used to preheat the domestic hot water so that steam can be saved. In most cases the condensate would have to be cooled off before it is discharged, so it is evident that on this system there is a great saving. Apparatus for accomplishing this purpose is called a heat exchanger.

Of great importance on boilers are the cleanouts. If the piping is so arranged that the boiler is lower than the highest part of the system, then it is not necessary to have cleanouts on the return lines, but if this is not the case then the return lines should be equipped with some means of being cleaned, such as a valve and a cap (Fig. 1E). All boilers should be equipped with proper safety valves and damper regulators, not only that the system may work smoothly and uniformly, but in order that coal may be saved (Fig. 1F). Proper safety valves and gauges must be provided so that the boiler will be protected and the amount of power as well as the fuel used will be measured. One important feature often omitted on boilers is a protector. This apparatus is adapted for low-pressure cast-iron boilers, and operates by means of a difference of water pressure in the boiler. For the amount it costs the protector affords, its installation is well worth while.

Another device that is well worth its investment is a system of piping called a "Hartford connection." A little extra piping comprises the entire material necessary for its installation. The labor to install it is almost nil. This method of piping consists in running the wet return (the latter is the piping in which the condensate or water lies) just below the water line in the boiler into a return line from the main to the bottom of the boiler. This prevents a jump in the water line and provides a safety factor, in that if there is a break in the wet return line the boiler will not lose water as quickly. Besides this the steam cannot blow the water out of the boiler. It is well to provide a drain at the bottom of such a connection so that the wet return line can be cleaned out (Fig. 1G).

2—Piping and Fittings

The quiet operation of a steam plant is a necessity, and in this the piping plays an all-important rôle. The pipes must let the steam circulate fully and freely, and allow the condensate to return without noise to the boiler. Where the steam begins its work over again. But first the weight and kind of pipe should be considered. Is the pipe to be steel, wrought iron, or brass, and is it to be of standard weight or extra heavy? If it is to be concealed it would be desirable to call for extra heavy, and more expensive, material. The manufacturers will be glad to furnish catalogues giving the weights and thickness of the pipe you wish to use. The use of brass pipe in steam work might at first thought seem to be rash extravagance. But where steam is to be handled, with the injection of various water softeners, and the piping is concealed, it is likely to be wise economy over a period of years. The condensate of this steam very often has a deleterious effect upon all steel or iron pipes.

Too often where the steam line comes out of the boiler it is bushed down. This will tend to cause the steam to carry water with it, as well as prevent the proper flow of steam into the lines. Therefore bushings at this point should be prohibited (Fig. 2A). In fact, it is well to prohibit bushings in the entire system except at radiators, where they are permissible under the radiator manufacturer's direction. It is generally considered good practice to have the pipes pitch in the direction of the steam flow. If the pipes pitch against the steam flow, they should be one pipe-size larger. Similarly a horizontal run should be one pipe-size larger than the riser going up from it (Fig. 2B). Should it be necessary to pass over a beam, this can be done providing steps are taken to prevent the trapping of the line. No steam main should be less than eighteen inches above the water line of the boiler. If the distance should approximate this, or present the possibility of dropping below it, then the line must be stepped up.

This can be done by providing the proper drip and air valve at this point, as shown in Fig. 2C. Where branches are taken off the main lines it should be ascertained whether there is sufficient pitch to the main so that there is no possibility of water lying in the pipe and not running back.

The branches must be so laid out that there will be sufficient room for a proper swing to be installed. Allowance must be made in all steam work for the natural expansion of piping. Nowhere is this more essential than in risers, and particularly where non-ferrous radiation is used. The risers and branches must be properly fastened, otherwise there is great danger not only that the radiator will make a noise but it may even be lifted from its position so that it will not operate. All branches going from a riser to a radiator should be provided with cast-iron elbows to take up all possible expansion (Fig. 2D). Never should the practice of "nipping off the riser" be countenanced—a means of connecting the radiator directly to the riser by means of a nipple. It is evident that with the movement of the riser the radiator will alternately be lifted up and let down, and that this cannot go on very long without the nipple snapping off (Fig. 2E).

Where risers are the sole heating elements in rooms, such as kitchens, baths, and attics, and where radiators are attached, it is well to have tees left at the floor level and closed with brass plugs. If ever necessary in the future, radiators can then be installed without ripping out piping or breaking fittings (Fig. 2F). Where risers are run exposed through rooms there must be a certain amount of space left between them and the wall so that it is possible to plaster, tile, or paint the wall without too much hindrance from the pipes.

Pipes should be supported by means of adequate hangers. No straps, wire, or other makeshift devices should be tolerated. Pipe hangers of several types are made for the purpose and should be used. In the hanging of the heavy pipes, rollers are provided on the hangers so that the pipe may move without difficulty. Special hook-shaped hangers are made for attaching to the wall so that the return lines may be properly carried (Fig. 2G). The hangers must be spaced about ten feet apart for ordinary pipe, and closer for small pipe, to prevent
sagging. They must be securely fastened, because if they are not and one sags or is torn down, the steam line may have a trap as a result.

Pipes that leak on first being installed are sometimes calked by the mechanics to avoid doing the job right—which would be to do it over again. Pipes should be covered in most cases so that the heat may be conserved. If the pipe is laid in a semi-exposed position—such as in roof fill—after the magnesia covering has been applied a layer of hair felt should be wrapped around this and finished off with a layer of building paper. Where a steam line is to be exposed to the weather, successive coats of hair felt and tar paper are necessary. Very often the pipe insulation is finished off by having a canvas covering sewed on over it, thus affording additional protection to the insulation. Where a steam line is laid in a confined space there must, of course, be room left for the expansion of the lines.

Piping near the boiler must be properly supported so that there is no strain on it, either through the weight of the pipe or through expansion and contraction.

In vapor and vacuum systems it is well to provide for dirt pockets, so that the traps will not become clogged because of foreign matter. These traps are an important part of the system. Providing the appropriate and best type is most important. Very often it is well to provide dirt strainers ahead of the traps so that the latter are not put out of commission by pipe scale, etc. (Fig. 2H).

In hot-water piping the architect must keep in mind that the only thing causing the water to flow is the difference in the temperature of water and the fact that hot water tends to rise. When this is fully comprehended the architect will see to it that there is no unnecessary friction in the lines, no sharp bends, no sudden turns. Only then will the hot-water system be a success. Where it may be necessary to get more circulation than is possible by depending solely on physical forces, there are on the market circulators which will enable the system to be stepped up, thus giving more heat to the radiator and obtaining more heat from the boiler.

3—FITTINGS

Steam fittings should be "standard" or "extra heavy cast iron, steam pattern." Too often if they are not specified the architect may suddenly find that ordinary plumbing fittings (which are malleable)
have been used. It is far better to have reducing fittings called for than to allow bushings to be used on any of the lines. Where close nipples are used they should be "extra heavy"; otherwise, they are very likely to snap off, due to the reduction of material at the thread.

Sleeves for pipes passing through walls or floors may well come under the heading of fittings. Too often they are entirely forgotten. They should be heavy enough to maintain their shape and should prevent the steam line from coming directly or indirectly in contact with any wood. Floor plates should be provided around all risers.

Expansion joints may be of several types. These joints are used to take the place of swings or loops, and by their use considerable space can be saved. There is a packless type of expansion joint which, as its name indicates, does not need to be packed. It is made on the order of a bellows and takes care of any ordinary expansion. Also there is the packed type of expansion joint, which requires attention to the packing every so often. Whatever the type of expansion joint used—even in the case of a pipe swing—an access door should be provided so that if there is any trouble the joint may be exposed and repaired.

The modern radiator is generally of the tube type, it having been found that this type gives off more radiation for the material and space involved. The radiator will be furnished with a shop coat of paint, and this is too frequently followed by silvering or bronzing, as called for by most specifications. Tests by some of the leading universities have shown that this is not the best means of obtaining the most heat. It has been found that silvering and bronzing act more like insulators than conductors. A thin coat of good paint or enamel is the best method. When it is recommended that radiators be painted it does not mean, however, that a heavy paint or any ordinary enamel be used. If this is done, cracking and peeling are bound to develop, and will make the owner wish that nothing at all had been used.

Concealed radiation is making great strides in both popularity and utility. The "convector" (as they are called, instead of "radiators") are made both of iron and of non-ferrous metals. The latter are of course much the lighter. Therefore it is well to call for them to be securely and thoroughly fastened. Otherwise a slight movement of the swings connecting them would cause dislocation, which would probably interfere with their operation, such as might happen if the steam inlet end were lifted higher than the closed end in a one-pipe job (Fig. 3A). When the convector is put in the wall it is advisable that the rest of the wall not only be protected against the direct heat, but that as much as possible of the heat be deflected into the room. Therefore behind the cabinet which is furnished, or in back of the sheet-metal convector and along the sides, there should be asbestos boards, hair felt, or similar insulating material. If the outlet for the heat is not directly in the top of the cabinet, it is better that the top of the form be curved so that the heat will be thrown outwards (Fig. 3B).

The difference between globe and gate valves should be kept in mind while writing a heating specification. A globe valve is superior when modulation or throttling is required, while in a water line it is better to use a gate valve. When a globe valve is to be used in a steam line it is better that it be specified to be turned on its side. This will allow the steam to pass through before the condensate which might settle behind the valve.

On a one-pipe steam job the steam cannot be regulated by turning the valve in modulation. This is because the condensate has to return through the same space that the steam is entering, and there will be a conflict between the steam and the water at this point. With a vapor or a two-pipe vacuum job it is possible to control the amount of steam passing through a valve. There are on the market today valves which are in automatic charge of radiators, called thermostatic control valves. They are equipped with thermostats and can be set for any room temperature desired. They then take care of the heat by themselves, shutting off the steam when the room gets above the set temperature, and turning the steam on when the temperature falls below.

Many one-pipe steam systems are being converted to so-called vacuum systems by means of non-return air valves. These can also be installed on new work to great advantage. These valves exclude the air from the system and thus keep the radiators hot longer, as well as making it easier to get up steam. The system must be airtight to get the best results. A compound gauge should be used in connection with these valves, so that the amount of vacuum may be determined. It is well also to call for a quick vent at the end of the mains. This valve is made on the same principle as the radiator valves, except that it is larger and rids the lines of air more quickly. The quick vent valves should be installed beyond the last riser so that all the air is taken out and as little water as possible reaches the valve (Fig. 3C).
The architect has used local fieldstone in combination with common brick of a dark salmon color, and hand-made shingle tile for the roof in reds, browns, and burgundy.

FRANK J. FORSTER, Architect

House of George G. Bass, Greenwich, Conn.

ARCHITECTURE
DECEMBER, 1934
The architect has made good use of his local stone in saving the big ones for the corners and lintels—faithful to the best traditions of stone masonry.
The entrance court. Across the court at the left is the little garden house with its tool room. Belgian blocks are used for the paving in a pattern shown on the plan.
A view from under the lych-gate, looking across the west front. All of the woodwork in evidence is new oak which has been stained a weathered brown.
Another view of the west front, looking toward the enclosed court. The half-timber work, with its brick nogging, is of structural timbers doweled and pinned together.
The east terrace, in which the paving of flagstones is laid on a sand bed, with grass seed sown in the joints. The lintel over the long window, being too long for the available stone, was built of reinforced concrete, its face roughly picked out.

All of the exterior woodwork is of oak. The lamps flanking the entrance doorway were especially designed, as was all the hardware. The architect has used an old millstone in the paving before the entrance.
The entrance hall. Oak, stained warm brown, shellacked and waxed, has been used for the interior woodwork, with some exceptions. The plaster has a natural sand finish.
The dining-room as seen from the breakfast alcove. In the latter, pine boards with a molded edge have been used for the walls, combined with an oak trim. The cretonne hangings are of colors that tone in closely with the woodwork.

The breakfast alcove as seen from the dining-room. Quarry tile in reds and browns have been used for the floor, and the chairs and table are old Swiss pieces.
In the living-room one whole long side is panelled in pine. The floor is of oak in random-width boards, screwed down and plugged. Ceiling beams are of oak with a molded edge.

A view from the library, looking across the end of the living-room into the entrance hall. The architect tooled a local stone for the fireplace lintel. Over the oak rafters are laid pine boards of random width, planed and stained.
Another view of the library. Oak has been used here for the trim, and the architect was able to procure some old oak to use with the new as rafters.

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ONCE upon a time we heard of an architect who did a large country house, but lost money because he lavished unstinting time on all the minute details. He consoled himself by thinking that at least the job was worthy of him, even though it was hard on his family. After it was all complete, his final fee paid, and the wealthy client delighted with his domicile, a fire burned it to the ground. The client re-commisioned the architect to reproduce the house exactly as it had been. It was done, and the architect made such a handsome profit that he was able to take his family to Europe for the summer, just as though he had been a business man.

The moral of the story seems to be that this particular architect had the good fortune to do what every manufacturer does every day of his profitable existence. If every tenth house in the architect's office could be a duplicate, there would likely be a profit. Since that is improbable, perhaps every tenth of each job could be a "repeat," or built from stock details.

On any set of house plans one of the items which demands more lines per square inch, and more details per square foot of floor area, is the bathroom—plan and details. Yet if you study the matter it seems sensible to conclude that there is a peak point beyond which there is no sense in evolving custom bathrooms for each house. It is logical to reason that if a tub maker ran his business as does an architect when drawing the details for a bathroom, the former would not sell a stock product from his warehouse, but would make a special tub ¾" wider and ¾" longer than the previous one made for a certain size room. Such a tub would be unprofitable to make, and the client would feel it excessively expensive to buy—even at a price less that its cost.

Surely it must be possible for the architect to start with certain stock bathrooms when the house is first being planned, and treat this space with the same hands-off respect which is accorded the space allotted the necessary area for a car in the garage, a range in the kitchen, or a bed in the bedrooms. Perhaps there should be seven types of bathrooms boiled down to stock plans and details, as shown on page 339, perhaps there should be ten. That is up to the architect's decision. But during the present interim when business is not rushing, it would seem good sense to draw up some stock details which will save time later. It is good policy in any case to keep one's hand in training.

Present indications all point to the greatest building activity of the immediate future being in the small-house field. Formerly it was deemed unprofitable for an architect to undertake any house costing less than $10,000. There should be no reason why, with the proper thought and repetition of bathroom and kitchen details, trim, stairs, etc., the architect cannot do himself a good turn by specializing in small houses for even less than $5,000, and do the community an even greater service. In the past the builder has seized the opportunity which the architect has scorned.

In the minds of most architects there is a certain stigma connected with resorting to stock details. When it comes to bathrooms this is a little difficult to understand. If the architect has no objections to using stock fixtures, why should he not employ stock overall dimensions? The time may not be far off when an entire bathroom will be sold as a stock product, and when that time comes the architect will doubtless use it without reservations. In the meantime there is no good reason why the architect should not evolve his own stock bathrooms, as far as possible, and when a new job comes in, merely have the stock details traced or blueprinted. If, between now and the time when the architect's office becomes busy, he were to evolve the best bathroom details of which he is capable, the bathrooms built from them later will doubtless be superior to custom-drawn jobs rushing out when the office force is working nights trying to keep abreast of pressing work.

The full-page drawing with bathroom plans is meant to be of practical help in getting out quarter-inch-scale plans. This page can be shovelled under the working drawing sheet and the fixtures traced. Each type is also drawn reversed to facilitate meeting most conditions which may arise. If there are rooms of unusual shapes, naturally the suggested plans as they stand will not fit, but the general ideas will probably be of help. It is left to the architect to draw up typical door and window-jamb details, various wall elevations showing electrical outlets, etc., with certain variables left blank, such as the type of heating panels.

There are a number of house truisms which every architect knows, but well-known as they are, the majority of them frequently seem to slip the mind in a charrette. The following paragraphs may serve as a useful check list at a rush moment, to be amplified as new ideas and materials are developed. Or, they may save time when a new and untried hand joins the office crew.

HOUSE PLAN
In the small house the proportion of the cost of plumbing to the entire total is so large that it is important to have the bathroom over the kitchen. In the large house this may be immaterial. Then too, houses shed their basements, having only one nest of pipes to insulate below ground is less expensive than two. When sketch plans are being drawn, if one of the mandatory conditions the architect imposes upon himself is that of arranging bathroom over kitchen, it sometimes is helpful in determining where the second-floor hall shall be, and the stairs. The greater the excellence of a house plan, the smaller its second-floor hall. Any builder can produce a tasteful second floor, but a good architect should discard all schemes which do not have minimum hall area. When the bathroom is over the kitchen, usually it will work out best if the stair lands near the bathroom door. Therefore it is apparent that from the very start on the first-floor plan, the stairs should be studied in relation to kitchen-bath (see marginal sketch below).

IDEALLY the pipes to the bathroom should be in a partition, not in an out-

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Standardizing the Bathroom

By Kenneth Edmunds

DECEMBER, 1934

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side wall. Recent kitchen recommendations favor one which is about 8' wide. This module will approximate the long dimension of the bathroom on the floor above, and simplify the partition layout by continuing that of the kitchen vertically to form the end of the bathroom.

**BATHROOM PLAN**

The most important fact to remember in laying out the fixtures is that the most economical job is one in which all three are on the same wall, as in type A, or in an easily piped sequence as in type D.

When the bathroom is between two rooms and each has a door into it, there is always the unsolved problem of how to make the person leaving the bath remember to unlock the other door. There should be some simple automatic device invented and marketed which would lock and unlock both simultaneously. This could be done electrically, but there would have to be a simple emergency method of releasing the lock in case of a short circuit or a discontinuance of the power, as in type C, or in an easily concealed in the wall, as in type D.

Often, when the plumbing pipes cannot be housed in a partition, instead of being in the outside wall they can be condensed in the corner with the wall furled at 45° to hide the pipes. In such a case it may work out advantageously to place the toilet on this 45° wall. If there is a door to the side of the fixture it can be nearer the corner of the room than through the toilet were in right-angles. The toilets in Pullmans are placed thus at a 45° angle because of the limited space.

Minimum sizes are given on Figures 1 and 2—not an absolute minimum, but a reasonable dimension for adequate fixtures. In cases of necessity, reference to plumbing catalogues will disclose that these dimensions can be whittled down still more. Minimum clearances are given on Figure 3. Figure 1 shows what is probably the minimum sized bathroom, with an arrangement which is perfectly practical even though a bit cramped. It would measure 5'-9" by 4'-10".

**REMODELLING**

Each house will present its own problems and possibilities for adding a bathroom or two. The following suggestions may serve as reminders:

1. Between bedrooms several arrangements are possible, such as those in the marginal sketches.
2. A new bathroom can be built at a level with a stair landing and extending toward the outside, the space below it being an outside room for garden implements, bicycles, etc.
3. The basement may conveniently provide a shower bath, lavatory and toilet for the family with growing boys, particularly if the basement be adequately lighted and well ventilated, and there is a recreation room there. While the location is not ideal, if there is no other place for a much-needed bathroom, it is better than none.
4. When installed in bedrooms, lavatories relieve bathroom usage to such an extent that an extra bathroom may not be needed if a toilet be added in the basement for outside help and emergencies. In this connection it is worth investigating the new pre-fabricated units which have been on the market for the last eighteen months. Needless to point out, it will be an advantage to have the lavatory in a wall recess or a closet so that it can be hidden by door or hanging.
5. Wash rooms on the first floor under staircases, or in a newly added ample vestibule, may be the only possible substitute for a full-fledged bathroom where none can be added on the second floor or off the stair landing.

**BATHROOM DETAILS**

A window should never be placed over a tub unless there is absolutely no other location possible. If a window must be there it is preferable to make it a casement, for when it sticks, as it is almost certain to, it is easier to push or pull open than to turn the window as is necessary with a double-hung sash.

For remodelling work where there is no room for a linen cupboard outside the bathroom, and where the latter is crowded, it may be possible to get a shallow one over the end of the tub. No one stands up at the head end of a tub. By the same token there can be a cupboard above the toilet tank.

The usual lock on a bathroom door is a thumb turn on the inside, below the knob latch, and only an escutcheon below the knob on the outside, into which fits a removable, emergency key. Every household with children sooner or later goes through the throes of looking madly for this emergency key while young Oswald has locked himself on the inside and threatens to drink up the contents of the medicine cabinet while standing on the edge of the lavatory. From personal experience it would seem that the old Colonial houses which had simply a latch for ordinary purposes of keeping the door closed, and a bolt that rode well above the reach of children, solved the problem in the simplest manner, though it still left the pro-

**Figure 1**

![Figure 1](link)

**Figure 2**

![Figure 2](link)

**Figure 3**

![Figure 3](link)
lem of how to aid one who has locked himself in the room and thereafter lost consciousness.

Moldings are as out of place in a bathroom as in a hospital. Doors should be perfectly flush on the inside. Trim should be eliminated, or reduced to a minimum.

Soundproofing is worth while if the living rooms of the house are adjacent to the bathroom.

One of the most difficult problems to solve is that of preventing leakage between floor and tub when the latter has been sunk in the floor. Water is apt to run down between the two and discolor the ceiling below.

FLOORS

The following may serve as a check list of possible materials:

(1) Ceramic tile—now can be obtained in colors, and is the most practical tile for floors. Quarry or similar tile can be used but is generally confined to kitchens. Glazed tile is dangerous and in any case will not wear well.

(2) Linoleum—particularly good for bathrooms, providing it is so laid with waterproof cement that no moisture will get under it. There are various grades and thicknesses, and a full line of colors and patterns. Stock strips about ¾” and 1 ½” are also available.

(3) Rubber—a comfortable, resilient material, usually deemed better for a kitchen than a bath because of the detrimental effect of medicines, strong caustics, etc.

(4) Cork—an admirable material in appearance, but better on the walls than the floor because of the difficulty of maintaining a surface impervious to water and which will not spot. The color is unfortunately changed by waxing, and wherever chemicals spill. It is questionable whether it is absolutely sanitary for bathroom flooring.

(5) Asphalt tile—an inexpensive material not without its drawbacks as a bathroom floor, because oils stain it, as well as certain chemicals.

(6) Wood—not unusual in old houses or summer cottages, but presents a difficult problem of making the surface waterproof so that the joints will not suffer, or the ceiling below. The paint used should be the variety recommended for decks or porches, which will resist water and alkalis. Shoe strips at the baseboard must be fitted with great care.

(7) Marble—a satisfactory floor so long as a porous variety is not used, because the latter will stain and change color.

(8) Cement—not to be used unless waterproofed. It is sometimes rejected by building inspectors because of porosity.

(9) Compositions—some of them, as one of magnesite, is particularly useful for alterations, and light in weight. In general, composition flooring must be laid only over its own type of screed, and not over concrete, for it may peel.

WALLS

Wall materials vary according to locality and desirability for different types of bathrooms, so the following ones are not compared to each other, but given as a check list:

(1) Tile—where free of alkalis it can be satisfactory for shower stalls, or as wainscot. Color can be mixed in the cement, or the surface painted afterward.

(2) Plaster—an economical material and still widely used from the floor upward for inexpensive work. It should be applied over metal lath or composition board to avoid cracks.

(3) Tile—a highly desirable material now that there are many types of texture and color from which to choose. The only drawback has been the tendency for occasional units to fall out, but this can be prevented by careful supervision at the time of erection.

(4) Marble—another highly desirable material, providing the client does not object to the cost. While the initial cost may be high, at least there are few if any upkeep expenses, and the effects possible are unsurpassable.

(5) Structural glass—like marble, it is highly desirable, expensive, but making up in its lack of upkeep costs and its distinctive effects in color and design. Designs can be etched on it. When applied to plaster by means of a special cement, the plaster should first be given a coat of shellac.

(6) Steel—its surface is made to look like marble, wood, tile; also in geometric designs, plain colors, etc. It is a relatively new product, but of course will not crack when the building settles.

(7) Bakelite (Formica, Micarta, etc.)—a synthetic product usually laminated over wood, and supplied in finishes among which are plain colors, or effects imitative of wood, marble, etc. It has a high polish and is impervious to anything that might ordinarily be used in a bathroom. While relatively new, it has withstood severe tests on exterior show-windows.

(8) Cork—a beautiful material in color and possible effects, varying in color from a deep chocolate to a pale tan. It can be applied directly to the plaster with special cement or mastic. Sound-deadening is one of its advantages are practically eliminated.

(9) Linoleum—in itself a most satisfactory product, but it requires special care to prevent moisture from getting behind it and causing trouble. A special paste is applied to the wall, ¾” brads are nailed along the top, as well as a special cap when the linoleum is used as wainscoting. Corners also present a problem.

(10) Canvas, oilcloth, and their modern improvements—materials of the canvas variety should be imbedded in white lead and rolled on; some of the others are applied with ordinary wall-paper paste, but when moisture gets behind they may have a tendency to come off.

(11) Composition boards—the non-porous variety are best for a bathroom, but should be so worked out that joints are practically eliminated. Most boards come in long lengths and 4’ widths, so that with careful planning the joints will occur only at the corners.

(12) Asbestos board—the finished product looks like anything but asbestos, since it imitates marble, tile, etc., and comes in plain colors. In sheets it is nailed in place, joints are puttied, and a cap-molding is run along the top edge.

(13) Wall paper—its success will largely depend upon how well the paste adheres all over. It is sometimes varnished with good effect.

LIGHTING

The height of luxury in lighting not so many years ago was to have a bracket on each side of the medicine cabinet. Within the last few years there have been many new developments, such as indirect lighting in a ceiling panel, adjustable and semi-indirect vertical lighting units at the sides of the medicine-cabinet mirror, light coming from the back of the mirror, horizontal semi-indirect lighting tubes for the top of the mirror, moisture-proof bulbs in the tub-shower recess, and an ultraviolet ceiling fixture.
The house as it was—the ordinary run-of-the-mine row house, for which Philadelphia, Pittsburgh, St. Louis, and other cities will have to answer on Judgment Day.

Mr. Wolfe brought the façade back to an unpretentious respectability with surprisingly little change—new sash, removal of the applied wood heads, a new doorway, cleaned brickwork, and some white paint.

Office of Lawrence Wolfe, Architect
Pittsburgh, Pa.
The Reflecting Pool

Edwin Babcock Morris

The public in general resents weather. It is especially resentful of cold weather and hot weather. Cold weather it treats with aloof disapproval. There is a feeling, what with oil-burners and closed automobiles, that winter may be considered as under control. But summer!

Therefore schemes for the annihilation of hot weather receive respectful attention. The term "air-conditioning" was soothing. The more perfected term, "air-conditioning," arouses unbridled enthusiasm, promising, as it does, not only frigidity but the complete emasculation of hot weather. How charming it would be for Mr. Average Citizen to sit back in his air-conditioned house and laughingly watch the fulminations of a torrid but comically ineffectual summer.

Yet there are some drawbacks to the frustration of heat and humidity. You can bench summer in theory but in practice it is apt to come back strong in the ninth inning and bat out a home run.

If climate is solely an engineering matter, air-conditioning is pure progress. If climate, however, is a device of nature for furnishing oxygen and sunshine, then air-conditioning is not an unmixed blessing.

The air-conditioning experts take a chunk of outside air, mix it with somewhat more than twice as much tired air people in the building have just finished breathing, launder it, freeze it, dry it, heat it up a little, and force the resulting concoction back into the building. This gives an atmosphere very pleasant to the skin, but it isn't fresh air.

The temptation will be, when and if air-conditioning becomes general, to hasten from one air-conditioned space to another—from office to restaurant, to theatre, and, mayhap, to air-conditioned home.

It is a delicious thought. But how about the big outdoors? What is summer for if it isn't to provide air and sunshine? Who is going to sit out of doors on terraces, or dig in gardens, or wham a tennis ball, or curse on greens, if he has been accustomed to sit by an air-duct? What epicure, trained to mechanical atmosphere, will go out into God's great uncooked air?

It's a rhetorical question. Perhaps there will be many who will. But the urge is going to be greater to stay indoors. Our comfortably heated buildings keep us housed more and more, in winter. Air-conditioned places will increase the lure of indoors for summer.

Perhaps it is just an old-fashioned sentiment. But it seems wasteful to be under roof when one might be under sky. The joy of living is certainly increased when one can see sunshine and breathe hundred-per-cent air. There is the feeling of health and strength and vitality.

I look jealously at air-conditioning. It is bound to come and stay, and it is a precious comfort to the skin. But—in more ways than one—it is not so hot.

Mr. Louis LeBeaume wrote me one day to ask, "Were the great works of architecture, which we both admire, the manifestations of individual genius, or were they designed by Public Bureaus?"

There is a very interesting thought embodied in his question—a thought which is quite close to being an architectural principle.

The question refers, of course, to masterpieces, to those deathless structures which attain a success that could not be predicted at the time of their design and stand amid applause for generations—the grand slams, the holes-in-one.

The thought that naturally arises is: Is the production of such rare orchids the main object of architecture? Is an architect a cloistered genius producing masterpieces? Or is he an organizer of ideas, a researcher of materials, a marshaller of craftsmen, a person whose pencil strokes are the mere beginning of a series of steps requiring a considered understanding of stones and people?

I am not sure which of the above represents the highest aspiration of the architect, but I am inclined to believe that it is the steady producer of architecture and not the grand-slam bidder who best fulfills his destiny.

Architectural masterpieces are to a considerable extent the result of fickle fortune. The McKim, Mead and Whites do not always design Columbia Libraries, the Charles Platts always Freer Galleries, the Shreve, Lamb and Harmons always Empire State Buildings.

But architecture nowadays has come to be a thing of wide scope. It is a big business covering the co-ordination of many trades and subprofessions. The other day I was looking at Latrobe's Stephen Decatur house on Lafayette Square—grand old thing that it is—and thinking how simple the preparation of the plan would be—with no mechanical equipment, no fireproof framing, no steel sash, no wide variation of materials.

It is no longer the mere loving touch of the soft pencil. There enters into it organization. It is not genius alone, except insofar as genius is the infinite capacity for taking pains. It is the ability to cover many requirements and build them into architecture.

I like to think of the architect or the architectural organization not as a person or a team aiming at great glory and big headlines, but as deriving keen satisfaction from the mere fact of co-ordination of the problem into its best architectural result.

If it is a sewage disposal plant, to which people would naturally not flock as a person or a team aiming at great glory and big headlines, but which has been nevertheless made a good piece of architecture, the architect has made his contribution to the community.

The Sullivan Joneses and the Louis Simoneses, working with public architectural organizations, have their place. Sir Christopher Wren did most of his work as a salaried architect to the Crown. It is the organizations, no matter what their affiliation or background, which strive for the spread of architecture, that are important. I should rather contemplate ten buildings which any architectural processes had been stepped up from the mediocre to the good than one stepped from the good to the sublime.
' Saturday, September 29. — The Federal Housing Administration estimates that loans totaling a million dollars a day are being made under the plan for rehabilitation and minor improvements to homes. Just what effect this installment buying of improvements has had upon slum rehabilitation is yet to be determined. It is a pity that architects are not better geared to the work of constant and close supervisory service, in which event they would have been kept busy at designing and supervising these small operations. The main promise of the National Housing Act, however, as it appears to me, still lies in another branch of its provisions—the providing of first mortgage money to the extent of 80 per cent of the value of the property, with an amortization plan covering twenty years, and insurance of the mortgage during that period. With that provision of the Act in effect, we should see a lot of new building next spring.

Monday, October 1. — Lunched with Charles Ely, Alfred Githens, and Frank Holden, hearing of the progress Githens and Wheeler (Baltimore librarians) are making with their book. It becomes clear that the whole basis of public library conduct—is its planning, administration, maintenance—have changed radically since the shower of Carnegie libraries provided intellectual stimulation. Githens says that a loft would serve better as the basis of a modern library than many of the elaborate monuments of a few decades ago. Flexibility is now the prime essential.

Tuesday, October 2. — The first unit of Knickerbocker Village was opened today with elaborate ceremonies before a gathering of five thousand interested spectators. Ex-Governor Al Smith, the Honorable Jesse H. Jones, Robert Moses, Aaron Rabinowitz—presiding—and most of the housing enthusiasts, were to be seen here and there in the throng. There has been a lot of argument about this project for which the R. F. C. made a big loan. The State Housing Authority approved the project, and the city waived some of its rights to make it possible. It is a twelve-story, elevator project, with rooms renting at an average of $12.50. Naturally, at this rate it does not re-house the people who originally dwelt on this land. The half that is completed, however—eight hundred units—is ninety-eight per cent rented, and insurance of the mortgage during that period. What seems to have happened is that Mr. Fred F. French has replaced the very worst slums with modern housing adapted to clerical workers in the downtown section.

Wednesday, October 3. — Lunched with Waldron Faulkner before his departure for Washington, where he is planning to establish another office. His thoughts these days are, however, largely on the subject of private schools, and he thinks there should be a book on the subject, which perhaps he himself will write. The subject of public schools has been fairly well covered, but the private school remains a problem that has to be worked out in each individual case.

Thursday, October 4. — Kenneth Mur­chison spoke to a luncheon gathering at the League today—the message of an architect trans­formed into a banker. Now that he has stepped out of the architectural field he sees the architect more clearly, and says that he is "composed of one part art, one part frozen music, and one part plumber."

Saturday, October 6.—A recent feature article in The Washington Post lays the blame for our failure as a nation to solve the problem of low-cost housing and slum clearance upon three parties: organized labor, industry, and government. Organized labor demands too large a share of the building dollar. Industry, although aware of the benefits of mass production, has failed to present any semblance of a united front and a partnership with labor, which would re-employ building trade workers, create a demand for materials, and reduce costs. The government—federal, state, county, and municipal—has hesitated to exercise condemnation rights, and has failed to act efficiently as a co-ordinator.

Monday, October 8. — Lunched with Ely Jacques Kahn, discussing his forthcoming book on design. He has some rather startling things to say about our president’s methods of “teaching design—the result of his little jaunt around the world learning how they pass on this. One speaker suggested that we might well start the discussion with a definition of low-cost housing. What is this elusive thing that we have talked so much about? The most general or more or less facetious replies, one being, "the sort of housing we have never had and never will get." I tried to phrase a definition myself: shelter that meets the minimal requirements of decency for those who have never been able to afford such shelter.

The Editor’s Diary

The Editor's Diary

December, 1934

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Thursday, October 18.—Two days ago Mount Holyoke College touched off its new heating system, which marks a rather startling step away from the accepted type of central-station heating. The system consists of a battery of one hundred twenty electric oil furnaces, each of which embodies a boiler, motor, and pump, the whole being as used in house heating—a system in which any desired number of the units are operated at one time, as needed to supply the heating demands of the moment. Another startling departure from the usual practice lies in the fact that the steam risers, originating in the top of each unit, are immediately drawn down to a basement below the boiler room. The group as a whole has a total of about one thousand boiler horsepower, heating twenty-four buildings.

Monday, October 22.—Better Homes in America in cooperation with the Columbia Broadcasting System today inaugurated the series of broadcasts from the garage of the “Little House” buil by Stotz and C. V. Starrett on Park Avenue. It will be recalled that Roger H. Bullard and Clifford Wendehack designed a house for a building committee of the Associated Architects of New York, J. C. Kettl and C. M. Stotz, in 1914. The house has a total of about one thousand six hundred and twenty electric oil furnaces—a system in which any desired number of the units are operated at one time, as needed to supply the heating demands of the moment. Another startling departure from the usual practice lies in the fact that the steam risers, originating in the top of each unit, are immediately drawn down to a basement below the boiler room. The group as a whole has a total of about one thousand boiler horsepower, heating twenty-four buildings.

Harrison Gill and I went to a meeting of the New York Society of Craftsmen tonight, meeting under the chairmanship of its president, Maurice Heaton, and had a long and interesting discussion on the difference between a master craftsman and an industrial designer. A master craftsman conceives and executes his work as a whole—a curious anomaly on its present Park Avenue site, nestling in among large apartments. It promises to be the last word in ingenuity of plan and extent of science’s contribution to the art of living. There is one thing I am afraid I can never forgive the architects—a fake chimney on one end of the building, putting there apparently for the sake of symmetry of façade. I thought we had long since passed the day when one would go so far out of his way to be untrue in architecture.

Tuesday, October 23.—Charles M. Stotz and C. V. Starrett in from Pittsburgh with the results of two years’ work representing a survey of the early architecture of western Pennsylvania. The western half of the State was combed through every back road and byway in the search for anything of significant value in architecture, built before 1860. The amount and quality of material found is amazing. For some mysterious reason, in our search of early American architectural monuments, we have skipped entirely over this part of the country, though there are houses ranking with Mount Pleasant Mansion near Philadelphia, reminiscent touches from Scotland, France, and England, as well as from the East Coast, and as most of us know, a fairly large bulk of work showing the Greek Revival influence. The results of this survey, more to the taste of the auspices of the Pittsburgh Chapter, A. I. A., and under C. M. Stotz’s direction as chairman of the committee, should by all means be made a part of the recorded history of architecture in this country.

Friday, October 26.—Edward L. Bernays gave us a particularly pertinent bit of advice yesterday when he spoke before the architects at luncheon in the League club house. A fundamental principle of public relations technique is to have someone else tell the world how good you are—"we are advertised by our loving friends"—all of which bears out the conviction I expressed the other day to the effect that the architectural profession might produce no good whatever by perpetually clamoring at Washington for its share of the loot.

Monday, October 29.—Dear old England has just opened an exhibition of mechanical gadgets. The New York Times correspondent tells us that there are rubber collar buttons attached to the shirt, reversible neckties, automatic rubber cleaners, egg decapitators, and a lot more of the fruits of man’s ingenuity and everlasting search for comfort. Nevertheless, we see no signs and hear no news of the Englishman making any improvement in the way he carries coal up stairs to heat his house with an open fire—if you care to call it heated.

Wednesday, October 31.—Spent most of the day in the semi-annual meeting of The Producer’s Council, on which occasion were discussed many matters of vital interest to the building industry.

At luncheon we were instructed in the amazingly manifold uses of cork products. In the afternoon J. C. Bebb, president of the Council, emphasized the necessity for maintaining in our public and private buildings an abiding respect for materials—there is obvious danger in the present insistence by public officials upon building within arbitrary limits of materials. Under Mr. Bebb’s toastmastership, Robert H. Catherine, assistant deputy administrator of the Federal Housing Administration, told us many of the details of Titles II and III of the National Housing Act which are shortly to be made public. M. J. Beirn, vice-president of the American Radiator-Standard Sanitary Corporation, spoke enthusiastically about the results of his company’s well-organized efforts to make of Title I of the Housing Act a business opportunity. Frederick L. Ackerman pointed out that it seems likely, according to the present setup, that loans will be made under Title II for housing projects on the basis of the technical skill shown in their development. This is now recognized that these buildings were obsolete when they were erected. Maximum coverage was an essential to secure a maximum loan, thereby defraying the public of light and air which the technical skill would have been able and eager to furnish. In these loans now to be made and insured, the first essential is a high degree of technical skill, production of light and air and a minimum of coverage under the other bounds of cost and public needs.
THE NINETY-EIGHTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF

MODERN LIGHTING FIXTURES

Subjects of previous portfolios are listed below at left and right of page

Below are the subjects of forthcoming Portfolios

Circular Gothic Windows
JANUARY

Tile Roofs
FEBRUARY

Molded Brick
MARCH

Dormer Windows
APRIL

Entrance Seats
MAY

Overdoors, Interior
JUNE

Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up about six weeks in advance of publication date.
Winchester (Mass.) Public Library
Robert Cott;
Kilham, Hopkins & Greeley

Goelet Building, New York City
E. H. Faile & Company

Irving Trust Company, New York
Voorhees, Gmelin & Walker
Kantack & Company, Inc.

Lurelle V. A. Guild
Chase Brass & Copper
Company, Inc.

Paramount Theatre,
Oakland, Calif.
J. R. Miller & T. L. Pflueger
Paramount Theatre, Oakland, Calif.
J. R. Miller & T. L. Pflueger

State Office Building, Bay City, Mich.
Joseph Goddeyne
Maurice Heaton

Constitution Hall of the D. A. R.,
Washington, D. C.
Office of John Russell Pope

Paramount Theatre, Oakland, Calif.
J. R. Miller & T. L. Pflueger
Cincinnati (Ohio) Union Terminal
Fellheimer & Wagner

Insurance Company of North America, New York City
Shreve, Lamb & Harmon

Fidelity Bank Building, Kansas City, Mo.
Hoit, Price & Barnes

Yardley & Company, Ltd., New York City
The Firm of Ely Jacques Kahn
Paramount Theatre,
Oakland, Calif.
J. R. Miller & T. L. Pflueger

75 Federal Street, Boston, Mass.
Thomas M. James Company

San Francisco Stock Exchange
J. R. Miller & T. L. Pflueger

Louisiana State Capitol,
Baton Rouge
Weiss, Dreyfous & Seiferth

Conference Room of
Holabird & Root,
Chicago, Ill.
Holabird & Root
Western Union Building,
New York City
Voorhees, Gmelin & Walker

First National Bank Building,
Yonkers, N. Y.
Cambridge Wheatley

"Four-fifty Sutter,"
San Francisco, Calif.
J. R. Miller & T. L. Pflueger

Church of St. Katharine of Sienna,
Baltimore, Md.
Henry D. Dagit & Sons
The Iron-Craftsmen

Modern Library Offices,
New York City
Lucian Bernhard
Louisiana State Capitol, Baton Rouge
Weiss, Dreyfous & Seiferth

State Office Building, Bay City, Mich.
Joseph Goddeyne
Maurice Heaton

Martin Maloney Memorial Clinic, Philadelphia, Pa.
Tilden, Register & Pepper
The Iron-Craftsmen

William Cook
Warman & Cook, Inc.
Northumberland County Court House, Sunbury, Pa.
Davis & Rice

Metropolitan Museum Exhibition, 1929
Raymond M. Hood

Business Office

William Cook
Warman & Cook, Inc.

Andrew Crowell
Black & Boyd Manufacturing Company
New Center Building,
Detroit, Mich.
Albert Kahn, Inc.

State Office Building,
Bay City, Mich.
Joseph Goddeyne
Maurice Heaton

The Worcester (Mass.)
Memorial Auditorium
L. W. Briggs Co.,
Frederick C. Hiron;
Cox, Nastland &
Gunnison

Sixty Wall Tower,
New York City
Clinton & Russell;
Holton & George

Lefcourt National
Building,
New York City
Shreve & Lamb
West Side Y. M. C. A.,
New York City
Dwight James Baum

Office Building,
20th Street and
Fifth Avenue,
New York City
The Firm of
Ely Jacques Kahn

Wanamaker's Men's
Store,
John T. Windrim

The Worcester (Mass.)
Memorial Auditorium
L. W. Briggs Co.,
Frederic C. Hironso
Cox, Nutrand &
Gunnison

Bal Tabarin,
San Francisco, Calif.
J. R. Miller &
T. L. Pfueger
Squibb Building, New York City
The Firm of Ely Jacques Kahn

Irving Trust Company Building, New York City
Voorhees, Gmelin & Walker
Kantack & Company, Inc.

Field Building, Chicago, Ill.
Graham, Anderson, Probst & White
The Frink Corporation

Louisiana State Capitol, Baton Rouge
Weiss, Dreyfous & Seiferth
Christian Science Chapel, Glen Cove, N. Y.
Delano & Aldrich

Premier Catering Company, Los Angeles, Calif.
Julius Davidson

Women's Club, Chicago, Ill.
Holabird & Root

The Waldorf-Astoria Hotel, New York City
Schultze & Weaver
Sixty Wall Tower, New York City
Clinton & Russell; Holton & George

Lurelle V. A. Guild
Chase Brass & Copper Company, Inc.

Fidelity Bank Building, Kansas City, Mo.
Hoit, Price & Barnes

Louisiana State Capitol, Baton Rouge
Weiss, Dreyfous & Seiferth

Seaman House Y. M. C. A., New York City
Shreve, Lamb & Harmon
Bedell's Store, New York City
Joseph Urban

Lurelle V. A. Guild
Chase Brass & Copper Company, Inc.

Fisher Building, Detroit, Mich.
Albert Kahn, Inc.

Pennsylvania Railroad Terminal,
Graham, Anderson, Probst & White

Almus Pratt Evans's apartment,
New York City
Evans, Moore & Woodbridge
Louisiana State Capitol, Baton Rouge
Weiss, Dreyfous & Seiferth

Baltimore (Md.) Trust Building
Taylor & Fisher

Bank of Hollywood, California
Aleck Curlett

N. J. Bell Telephone Company Building, Newark
Voorhees, Gmelin & Walker

Harriman Building, New York City
Cross & Cross

William Cook
Warman & Cook, Inc.
ILLUMINATION HANDBOOK

F. 372. A new and simplified method of designing floodlighting installations, known as the "Lumens in the Beam" method, and a simpler way of presenting data for the design of interior lighting installations, features the new illumination handbook which the Westinghouse Lamp Company has just announced. Complete information is provided on every phase of lighting design for the home, office, store, and factory. Tables of design data are necessarily concise and complete and have been revised in such a manner that all essential information is available. Bulletin A-53865 will tell you more about the handbook.

"ALL-STEEL" CABLE EQUALIZER

F. 373. John W. Kiesling & Son, Inc., of Brooklyn, have a bulletin explaining how their "All-Steel" Cable Equalizer fulfills the nine necessary requirements of cable equalizer: 1. Range of Equalization; 2. Uniform Distribution of Tension; 3. Operation with Minimum Friction; 4. Should Require No Servicing or Attention; 5. Required Factor of Safety; 6. Manufacturers' Guarantee; 7. Simple to Install; 8. Low Overhead Room; 9. Fit Standard Car Construction. This bulletin also contains a blue print showing front and side elevations.

DOUBLE CONE VENTILATORS

F. 374. Complete renewal of air is accomplished under the most difficult and unusual conditions by installing "Royal" Double Cone Ventilators, a product of the Royal Ventilator Company. Superior and exclusive construction features include lapped seams, wired edges, and galvanized malleable iron or copper stays so arranged as not to interfere with the passage of air currents, and standing seams which give two thicknesses of metal instead of one. Especially adapted for foundries, powerhouse, factories, and schools.

ELEVATORS FOR ALL PURPOSES

F. 375. We will have the Energy Elevator Company's pamphlet, showing working drawings, specifications, and prices of their electric freight and sidewall elevators, outrigger hoists, hand trucks, and invalid elevators, sent upon request. This pamphlet also includes safety gates and corner-post cars.

FINISHING LIME THAT SATISFIES

F. 376. From Maine to California, plasterers who take pride in producing a better job and who appreciate the ease with which it may be done, prefer White Finish, a product of the Ohio Hydrate & Supply Company. The natural purity of the dolomitic limestone as it comes from the quarry, plus modern methods of manufacture, results in a Hydrated Lime 99.5 per cent pure. It is carefully milled to prevent pits and pops and to absorb readily the water in soaking. May we send you further data on this finish which is guaranteed to meet the specifications of the American Society for Testing Materials?

CONVECTOFIN TAKES THE PLACE OF RADIATORS

F. 377. Convecto Fin is a completely built-in convection heater which may be placed within the wall or against the wall surface, in various combinations of type and style. The typical Convecto Fin consists of a copper fin-and-tube heating element, supported on brackets inside of a furniture steel cabinet and behind a panel having an air inlet and a heat outlet grille. Bulletin No. 6 of the Commodore Heaters Corporation describes this in detail, its construction and installation features, and contains tables of effective heating capacities.

AMPLE HOT WATER AT LOWEST COST

F. 378. The Excelso Double Coil Indirect Water Heater, showing the exclusive Excelso Removable Coil Construction, all copper and brass waterways, and Porcelain Ground Joint Brass Connections, is described in a folder, put out by the Excelso Products Corporation. A copy, showing sectional views and giving data on construction, installation, and performance will be sent you if you will check this number on the card. The manufacturers say that their Indirect Water Heater, connected to steam, vapor, or hot water heating boiler, will produce ample domestic hot-water supply day and night at the lowest known cost, just as long as the heating plant is in operation.

NORTON FLOORS

F. 379. The Norton Company, of Worcester, Mass., have booklets showing the various types of Norton Floors and their broad adaptability—how they are solving the slipping hazard and providing exceptional resistance to wear in a wide variety of places, indoors and out, from department stores and swimming pools to industrial plants. One of the booklets is before us and contains interesting examples of the uses of Alumnum in Alumnum Aggregate for terrazzo in stair tile, floor tile, Ceramic Mosaic tile, etc. We shall be glad to have full information regarding the Norton Floors sent you.

STEEL AGE UNITS

F. 380. The Cory-Jamestown Manufacturing Corporation have a very complete and useful catalogue of their steel office equipment, featuring a few built-to-order installations. Cabinets, desks, drawers, counters, chairs are included, with illustrations, descriptions, and dimensions. Their Engineering Department is at your disposal where special problems are handled efficiently by men of ability and long experience.

CAST GLASS

F. 381. Architectural Cast Glass is made to the architect's special designs by the Steuben Division of the Corning Glass Works and the

WHITE HOUSE STEEL UNITS

F. 382. Janes & Kirkland show, in their catalogue No. 6, why good taste and design in kitchen and pantry equipment need not be sacrificed for efficiency when using White House Units. These sectional steel units have been installed in many of America's outstanding residences, apartments, hospitals, and industrial plants and this catalogue goes into detail regarding construction, finish, fittings, arrangement, installation, detail of designs and sizes.

ENAMELED BRICK

F. 383. We have a most valuable booklet, put out by the American Enamelled Brick Company, going into detail as to various types of brick manufactured by the company, standard and special shapes, properties and special features, specifications, color plates, diagrams and photographs of installations—in short, just about all the working information regarding enamelled brick that could be compiled in ten pages. You will need one of these.

INNOVATION IN WALL TILE

F. 384. The Aetco Tile Bulletin No. 23 shows a color plate of Reflecta Tile, made by the American Enamelled Tiling Company. This tile may be obtained in semi-matt and bright Gloss colors, and the patterns and dimensions are included in the bulletin. This company has a service department for architects and will be glad to help you in any special tiling problems.

1. NOTE —

For your convenience ARCHITECTURE will send you further data or literature pertaining to any advertised product presented in this issue is sent you. Use request card below.

Cards mailed outside the United States must bear postage.
designer is almost unlimited in his creative scope. All glass is made in specially constructed moulds, and the designs and moulds are proprietary to the architect or owner and not used again without special permission. The company has sent us a most interesting booklet with illustrations, diagrams, and full information on the various uses in the treatment and finishing of cast glass for interiors and exteriors, fixtures and pylons, and as grilles for ventilation and diffusion of light. Check this on the card. It will be extremely valuable.

HARMONY BETWEEN FLOOR AND WALL
F. 386. Congoleum-Nairn, Inc., have an abridged catalogue of Sealex floor and wall materials, illustrations, color charts, specifications, and valuable weight, gauge, and color tables. These new materials make a most fascinating contribution to practical floor and wall decoration and will be welcomed by every decorator striving to achieve new, beautiful, and lasting effects.

HANDBOOK OF VENTILATING
F. 387. The ILG Electric Company, of Chicago, have sent us their new condensed catalogue and handbook of ventilating, heating, cooling, and air-conditioning equipment. Purposely made pocket size, this booklet is crammed with usable information for architects and engineers.

WINTER CONSTRUCTION
F. 388. In winter, more than at any other season of the year, it pays to develop high concrete strengths at early periods. Through a basic improvement in process of manufacture, "Incor" 24-Hour Cement cures or hardens five times as fast as ordinary Portland cement. The International Cement Corporation have a pamphlet going into details as to the precautions needed, in cool and sub-freezing weather and how "Incor" Cement reduces winter costs and makes winter schedules possible in cold weather. Tables of heat protection requirements and age-strength diagrams are included.

KOPPERS ROOFING
F. 389. In a graphically illustrated catalogue of their roofing materials, The Koppers Products Company, of Pittsburgh, tells you why you should choose Koppers coal tar pitch materials for roofing. A consolidated table of specifications is included.

OIL HEAT AND AIR CONDITIONING
F. 390. Gar-Wood Industries, Inc., have sent us a copy of their new architect's catalogue, containing full information on their Boiler-Burner Unit, Model "R" Boiler-Burner Unit, Tempered-Aire-Furnace Burner Filter Blower Unit, Indirect or Conditioning Cabinet, Conversion Oil Burner Units, and Automatic Oil Fired Water Heater.

MASONITE BOARDS
F. 391. In the Masonite Corporation's latest catalogue on Quathboard, Preswood, Tempile, and Insulating Lath are details as to uses and installation, heat loss and condensation charts, construction details, and specifications. A catalogue to which you will refer in all problems of insulation, condensation, or acoustics.

"H & H" WIRING DEVICES
F. 392. The listings in this new Hart & Hegeman catalogue bring up to date the complete "H & H" line of wiring devices—recognized leaders for forty-four years. In the past few years this company has designed, developed, and manufactured many new wiring devices, built for a specific need to give the user the utmost convenience from his electric installation. One will be sent you if you check this number on the return card.

WOODEN TRUSSES
F. 393. A turn toward truth in architecture concerning real timbers has resulted in an increasing number of specifications calling for exposed timber trusses. To meet this, McKroon Bros. Co. have issued several folders showing installations of real timber trusses, furnished by them, and these may be secured for your files.

DELCO-HEAT DATA
F. 394. The Delco Appliance Corporation, of Rochester, are presenting their Delco-Heat products in a complete data book for architects and builders. The oil-burners, boilers, and conditioners are described in detail, with color plates, specifications, and blue prints.

GUTH GLO
F. 395. Is the newest development in lighting science, giving very efficient indirect illumination with light distribution exceptionally uniform through 180° zones, both vertical and horizontal. The Edwin F. Guth Company, of St. Louis, give construction details and prices and show practical applications of this type of reflected lighting under balconies and low ceilings, in banking-rooms and auditoriums, in their new booklet. Guth Glo units can also be equipped with Neon tubes for many exterior purposes.

GAS CUTTING OF STRUCTURAL STEEL
F. 396. A valuable addition to oxy-acyetylene literature is "Recommended Practices for Gas Cutting of Structural Steel," just announced by the Linde Air Products Company of New York. This is the first complete and authoritative treatment of this subject, and for the first time sets up qualification tests for the predetermination of good workmanship from the standpoint of dimensional accuracy and smoothness of cuts. These tests, of course, apply only to hand blowpipes, and are for the present restricted to the plain low carbon steels. It is certain to become a standard reference work on this subject, as it combines under one cover the material in current regulations as given in bulletins issued by various prominent regulatory bodies. Hence, it will be welcomed by engineers, contractors, architects, supervisors, and inspectors as a reliable means of gauging and controlling the quality and safety of cutting operations.

ADVERTISERS' LITERATURE
A. 189. Bethlehem Steel Corp., Inc. Key to Important Economies 15
A. 190. Bigelow-Sanford Carpet Company A Broad and Flexible Service 11
A. 191. Brunswick - Balle - Colodner Co., The Brunswick Craftsmanship and Service Fixtures . 4th Cover
A. 193. Carnegie Steel Company Efficient Framing Enters the Building Picture . 6
A. 194. Cutler Mail Chute Company Modernize with Cutler 16
A. 195. Faber, Inc., A. W. Castell in First Place 16
A. 196. Faber Pencil Company, Eberhard Kleanit for Cleaning 5
A. 197. Faber Pencil Company, Eberhard Microtonic Van Dyke Pencils and Fixatone 14
A. 198. Johnson Service Company Automatic Temperature Control Systems 18
A. 199. Koh-I-Noor Pencil Company Ideal Crayon for Modern Effects 17
A. 200. Libbey-Owens-Ford Glass Company Single A Strength and Double A Strength 7
A. 201. Otis Elevator Company Modern Elevator Practice in Office Buildings 13
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CARPET COUNSEL

by

The Bigelow Weavers

A broad and flexible service found helpful
by many architects

Our carpet service to architects is complete—from the blue-print stage to supervising installation. We've had many years' experience in working closely with leading architects.

We believe you'll find us helpful in estimating both yardage and costs from your plans—often we've been able to suggest minor changes that resulted in major savings. Our design staff will create patterns for you—or gladly interpret your ideas. We'll recommend the best fabrics for specific spaces—weave them in accordance with Bigelow's traditional standards of quality—supervise every detail of installation.

When you wish the advice of expert Carpet Counsel, write or telephone Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York, New York.

R. G. Hanford, Architect, executed the plans for the recently opened Ionian and Sapphire Rooms in the Deshler-Wallick Hotel, Columbus, Ohio. Both of these beautiful new rooms—like all public spaces, corridors and guests rooms in this fine hotel—are carpeted by the Bigelow Weavers. In the past 35 years, Wallick hotels have purchased more than 200,000 yards of Bigelow carpet!
year's competition was a wayside inn, and the judges were: William F. Brooks of Hartford, Edward B. Caldwell of Bridgeport, T. Merrill Prentice of New York, Professor Jean Labatut of Princeton, and Professor Frederic C. Hironis of Yale.

A NEW TECHNICAL ALLIANCE

A NEW organization of architects and engineers has recently been formed in Westchester County, N. Y.—The Architectural Engineering Alliance. There are now three hundred eighty-six members, including, for the most part, licensed architects and engineers, but also some unlicensed men of architectural or engineering training and experience. The object of the society primarily is to promote and stimulate construction, and to obtain adequate remuneration for its members. The organization will strive to make clearer to the public the real need for professional and technical skill in all building and public works. The Alliance suggests the formation of other chapters in cities or counties, and Harry H. Bassford, treasurer and chairman of the Expansion Committee, will be glad to correspond with bodies considering the possibility of organization in that way. His address is Post Office Box 1001, White Plains, N. Y.

PWA

A SUMMARY of allocations made by the Public Works Administration during the first year of its existence is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans and grants to States, cities, counties, railroads, companies and others for non-Federal projects</td>
<td>$759,549,693</td>
</tr>
<tr>
<td>Federal aid road system construction by States</td>
<td>400,000,000</td>
</tr>
<tr>
<td>Roads in parks, forests, Indian reservations and other public domain</td>
<td>$50,000,000</td>
</tr>
<tr>
<td>Relief highways being built by States</td>
<td>7,437,000</td>
</tr>
<tr>
<td>Civil Works Administration</td>
<td>400,000,000</td>
</tr>
<tr>
<td>Civilian Conservation Camps</td>
<td>313,363,315</td>
</tr>
<tr>
<td>Naval vessels</td>
<td>238,000,000</td>
</tr>
<tr>
<td>Emergency Housing Corporation of PWA</td>
<td>137,664,500</td>
</tr>
<tr>
<td>Farm Credit Administration</td>
<td>100,000,000</td>
</tr>
<tr>
<td>Tennessee Valley Authority</td>
<td>50,000,000</td>
</tr>
<tr>
<td>Surplus Relief Corporation</td>
<td>25,000,000</td>
</tr>
<tr>
<td>Power and reclamation projects constructed by Reclamation Bureau</td>
<td>103,535,000</td>
</tr>
<tr>
<td>Subsistence homesteads</td>
<td>27,000,000</td>
</tr>
<tr>
<td>Soil erosion prevention</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Forest work for improvements in national forests</td>
<td>15,097,745</td>
</tr>
<tr>
<td>Indian service for day schools and other improvements in reservations</td>
<td>15,034,550</td>
</tr>
</tbody>
</table>

Airplanes for army and navy                      | 15,000,000   |
| Army motorization                               | 10,000,000   |
| Shore construction at navy yards and stations  | 31,590,245   |
| Coast Guard for new cutters, patrol boats, airplanes and shore station construction | 25,013,472   |
| Public buildings                                | 67,472,388   |
| Flood control, Mississippi, Ohio and other rivers | 70,024,500   |
| General river and harbor work                   | 70,024,500   |
| Construction at army posts, seacoast defenses and other military establishments | 77,024,500   |
| National park service for improvements to parks and public buildings | 16,079,120   |
| Miscellaneous allotments to bureaus and departments of the Federal Government | 146,701,053  |

Total                                               | $3,923,665,170 |

Secretary Ickes announced on August 12, 1934, that virtually all of the $5,700,000,000 fund had been depleted. The PWA is now looking to the Reconstruction Finance Corporation for additional funds for loans on non-Federal projects. Under the late deficiency act the RFC is authorized to purchase securities now held by PWA up to $25,000,000 worth, at one time. No new applications are being received.

A. S. T. M.

DR. HERMANN VON SCHRENK, consulting timber engineer, St. Louis, Mo., and senior vice-president of the American Society for Testing Materials, has been elected to the office of president. This action was taken by the Executive Committee to fill the vacancy caused by the death of W. H. Bassett, who passed away on July 21 soon after he took office as head of the society.

The vacancy created by Doctor von Schrenk's election was filled by the appointment of H. S. Vassar, as senior vice-president; Mr. Vassar having been elected a vice-president last June.

A. C. Fieldner, chief engineer, Experiment Stations Division, U. S. Bureau of Mines, Washington, D. C., has been elected junior vice-president. No action was taken to fill the unexpired term of Mr. Fieldner as a member of the Executive Committee.

HENRY SPROATT,
1866-1934

HENRY SPROATT, whose firm, Sproatt & Rolph of Toronto, is known not only in his own country, but widely here in the United States, died October 4 after a brief illness. Dr. Sproatt was born in Toronto, June 14, 1866. After attending the Collegiate Institute at Collingwood, Ont., he studied architecture under Arthur R. Denison, beginning in 1882. In 1886 he came to New York to continue his studies for two years.

After travel in France and Italy he took up his practice in Canada as a member of the firm, Darling, Curry, Sproatt & Pearson. It was in 1899 that he formed his partnership with Ernest R. Rolph. Dr. Sproatt in 1920 received the degree of Doctor of Laws from Toronto University.

He was a Fellow of the Royal Institute of British Architects and the Royal Institute of Canadian Architects.

PENROSE V. STOUT, 1887-1934

PENROSE VASS STOUT, New York architect, died in Boston on October 24, after having been stricken in a heart attack soon after delivering a lecture. Mr. Stout was born at Montgomery, Ala., and was graduated from the Alabama Polytechnic Institute at Auburn in 1909.

His early practice was in Pensacola, Fla., and in New York City until the beginning of the war. Mr. Stout enlisted in March, 1917, in the infantry and subsequently was commissioned a first lieutenant and transferred to the air service. He was awarded the Distinguished Service Cross for extraordinary heroism in action near Charnay, France.

Since the war Mr. Stout has been practising in New York, N. Y., and the Carolinas. He was a member of the American Institute of Architects.

PERSONAL

J. Andre Fouilhoux announces that, following the death of Raymond M. Hood, he will assume the unfinished business of the firm of Hood & Fouilhoux, and continue the practice of architecture at 40 West 40th Street, New York City. Work in process will be carried through under the firm name of Hood & Fouilhoux, and new work under the name of J. Andre Fouilhoux.

Waldron Faulkner, architect, announces the opening of his new office for the general practice of architecture at 617 Fifteenth Street, Washington, D. C. Mr. Faulkner's New York City office remains at 101 Park Avenue.
WHAT IS MODERN ELEVATOR PRACTICE
IN OFFICE BUILDINGS?

Signal Control Elevators, first installed in the Standard Oil Building in New York City and since furnished by the Otis Elevator Company for over 350 other high-class office buildings, are now so generally recognized as the accepted standard for modern office buildings that, in recent years, few such buildings have been equipped with any other type of control. Improvements and simplification in design and construction have not only materially reduced the cost of Signal Control but have added so greatly to its flexibility that its field of application has been rapidly extended to embrace the six-story office building as well as the towering skyscraper.

The tremendous advantages of Signal Control from the standpoint of both quantity and quality of elevator service have been so thoroughly established that to install anything but Signal Control in even a moderate-size office building is to risk elevator obsolescence before the building is completed.

For all but intermittent service elevators in low-rise office buildings, gearless machines with Unit Multi-Voltage and two-way self-leveling are taken for granted by most owners, architects and tenants of modern office buildings. Maximum smoothness, convenience and passenger-handling ability require in addition Otis Signal Control which, with recent refinements, now offers the following outstanding characteristics:

1. The pressing of a hall button by a prospective passenger automatically stops the first available car traveling in the desired direction.

2. An audible gong and a hall signal lantern advise the waiting passenger which car will stop and sufficiently in advance of the arrival of the car to permit the passenger to move without unusual haste to the proper opening. The interval by which the light precedes the arrival of the car is adjustable within ample limits to permit each installation to be arranged with that light interval best suited to the requirements of the building. This is a notable advance in the Elevator Art and is accomplished without sacrificing the all-important requirement that only the light corresponding to the car that is to stop shall be illuminated.

3. The car and hatchway doors open automatically as the car stops level with the floor.

4. The car stops automatically at the floor corresponding to the button pressed by the attendant in the car.

5. Excellent service is assured independently of the skill or memory of the operator. False stops are eliminated and the possibility of failing to stop for a waiting passenger is avoided.

6. The control is so arranged that when desired the cars will stop and reverse automatically at the point of highest call. During the morning peak period this new and important improvement adds considerably to the passenger-handling capacity of the elevators, as the time required to travel unnecessarily above the highest point for which there is a car or hall call is completely eliminated—round-trip time is reduced and more trips from the ground floor can be made during the period of intensive service.

This same arrangement, which also includes a buzzer in the car, makes every car available for night service without the additional complication of a night service annunciator.

7. To assure the maximum service of which an elevator installation is capable, it is necessary that they be dispatched with the proper interval and in proper sequence—all of which is accomplished with a minimum of attention on the part of the starter by the Otis Scheduling Device.

The number, capacity and speed of elevators required to provide adequate elevator service in a modern office building can best be determined by taking advantage of the wealth of information assembled by Otis Engineers and based upon extensive tests in existing buildings. All Otis offices are equipped to give complete and detailed information on the subject of proper elevator equipment for all types of buildings, and this service is available to architects and engineers without obligation.

OTIS ELEVATOR COMPANY
Offices in all principal cities
For cleaning up drawings, erasing pencil, charcoal, crayon—use "Kleenit."

No annoying, wasteful mess. No greasy film. Won't weaken fresh ink lines.

Cleans spots off bags, belts, shoes and fabrics. Handy for your dressing table.

Shoes, belts, fabrics—"Kleenit" cleans them quickly, safely, without mess.

In the office, studio, school and at home, you will find dozens of uses for "Kleenit."

Use it for cleaning up books, woodwork, wall paper and fabrics. 10¢ and 25¢.

EBERHARD • FABER
The Key to important economies in designing steel structures

Bethlehem Light Sections—beams, columns, joists and stanchions—round out Bethlehem’s line of structural shapes. They simplify the problem of working out designs that use steel most effectively.

Wherever rigidity and relatively close spacing of the structural members are required, in locations where the load does not call for the use of the heavier shapes, Bethlehem Light Sections bring decided savings. Their economies are especially marked in buildings with comparatively light live floor-loads. Beams of the depth dictated by deflection limits can be spaced closely enough to permit an economical thickness of floor slab, without using more steel than is needed to carry the load.

Similarly, Bethlehem Light Sections are often the logical ones for purlins in roof construction, for ceiling beams, for columns in upper stories where loads are lighter, for struts between columns.

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