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By A. E. DICKINSON, President
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SCULPTURE IN THE OCTOBER ISSUE

In the October issue, among the notable examples of collaboration between architect and sculptor as selected by a national questionnaire, was shown the Boston Public Library. It may not be generally recalled at this time just what was the work of the various sculptors contributing to McKim, Mead & White's design.

To Augustus Saint-Gaudens are due the three carved panels over the main entrances. The central panel, however, is an adaptation of one designed by Kenyon Cox. Augustus Saint-Gaudens also was commissioned to design, for each of the two pedestals in front of the library, three seated figures. These figures, however, never got beyond the initial stage, but these preliminary models were photographed and enlarged to the proposed full size, and set up upon the stone pedestals in Boston. They were very remarkable and were regarded by Saint-Gaudens as his most important and successful work, as far as they had gone. The head of Minerva on the keystone of the central arch is also by him.

Louis Saint-Gaudens, his brother, is responsible for the two lions on the main staircase. Daniel C. French was the designer of the bronze entrance doors.

Domingo Mora was the sculptor of the book-marks carved in the discs between the arches and immediately below the cornice of the building. They were in their design exact copies of the original printed ones.

Frederick MacMonnies was the sculptor of the Bacchante which was placed in the centre of the courtyard pool. This statue, which was presented to the library by Charles F. McKim, was admirably suited for its location, but was criticised for its alleged immodesty, and it was finally withdrawn by McKim and is now in the Metropolitan Museum of New York. Mr. MacMonnies is also the sculptor of the bronze statue of Sir Harry Vane, former governor of Massachusetts.

On the New York Custom House, of which Cass Gilbert was the architect, the twelve standing figures near the top of the building represent the nations of ancient and modern times which have been great in sea commerce or sea power. From East to West they are as follows: Greece, by F. E. Elwell; Rome, by F. E. Elwell; Phoenicia, by F. W. Ruckstuhl; Genoa, by Augustus Lake- man; Venice, by F. M. L. Tonetti; Spain, by F. M. L. Tonetti; Holland, by Louis Saint-Gaudens; Portugal, by Louis Saint-Gaudens; Scandinavia, by Joannes Geleert; Germany, by Albert Jaegers; France, by Charles Graffy; England, by Charles Graffy.

During the World War the figure of Germany was changed into Belgium by Attilio Piccirilli.

Crowning the building in the centre are the arms of America, by Carl Bitter. The head in the key-block, over the central arch, is adorned with the wings of Mercury, god of commerce. Over the door in the vestibule are the arms of the City of New York, with windmills and beavers, by Andrew O'Connor.

The large groups at the level of the first story represent the four great continents: Asia, Europe, America, and Africa. These four groups are the work of Daniel Chester French.

ARCHITECTS HONORED AT THE PAN-AMERICAN CONGRESS OF ARCHITECTS IN BUENOS AIRES

Information is somewhat meagre as to the success of American architects who exhibited at Buenos Aires, and what has come to us is badly garbled as to Spanish interpretations of American names. We apologize in advance therefore for possible mistakes and omissions in the following list:

A. Premio de Honor and Diploma—
Charles Z. Klauder, Philadelphia, for his Tower of Learning, at Pittsburgh.

B. Gold Medal and Diploma—

C. Silver Medal and Diploma—

Pierpont & Walter S. Davis, Los Angeles.

D. Honorable Mention—

STUDENT AWARDS AT THE PAN-AMERICAN CONGRESS

A total of thirty-one designs was submitted by the various American universities represented in the competition in Buenos Aires. Seven gold medals, three silver medals, and seven honorary mentions were awarded the American students by the jury.

In addition to taking first honors at the exhibition by virtue of the high awards made to all its exhibits of student work, the University of Pennsylvania's Department of Architecture was further honored by the selection of one of its designs to represent the work of American schools in competition with that of schools of all other countries. This was a design for "A Centre for the Exhibition of Building Materials," by John Lane Evans, Philadelphia. Evans won the John Stewardson foreign travelling scholarship, took sophomore honors while a student at the University, and also was awarded the Brooke Gold Medal, the American Institute of Architects Medal, and the Historic Ornament Medal.

INTERNATIONAL CONGRESS OF ARCHITECTS

The United States participated in the eleventh International Congress of Architects, which met at The Hague and at Amsterdam, August 29 to September 4, with the aim to restore the world alignment in architecture disrupted by the World War, it is an-
SCHOOL building today is a matter of design and beauty. There's a wide gulf separating the little red schoolhouse from the above imposing structure.

However, it is still just as important to build sturdy, permanent schools, as it was years ago when utility was the prime prerequisite.

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You will find our "Sweet's," pages A20-A24 and A199; and B1545.

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nounced by William Harmon Beers, of 333 Fourth Avenue, chairman of the Committee on Public Information of the American Institute of Architects.

Six delegates to the Congress had been appointed by the president of the Institute, Milton B. Medary, Jr., of Philadelphia. They were:

William Emerson, Boston, head of the Department of Architecture in Massachusetts Institute of Technology; Frank E. Wallis, National City Bank, Paris; Charles Butler, 56 West 45th Street, New York; Major George Oakley Totten, Jr., Washington, D.C.; Clement W. Fairweather, Metuchen, N.J.; Egerton Swartwout, 18 West 34th Street, New York. Professor Emerson is first vice-president of the Institute.

An American Section of the Permanent Committee of the Congress to be held under the auspices of the Government of Holland, has been organized with Cass Gilbert, of New York, as chairman. Other members of the Section are:


January 23–27 in the West Baden Springs Hotel, West Baden, Ind. The show coincides with the ninth annual meeting of the Associated General Contractors.

Additional attendance will be composed of non-member builders and contractors, architects and members of highway and public improvement bodies. These will come from all parts of the country also, with a particularly strong contingent expected from the Indiana-Kentucky-Ohio area.

**AMERICAN CONSTRUCTION COUNCIL**

THE Sixth Annual Convention of the American Construction Council will be held in St. Louis, Mo., at the Hotel Statler, December 1 to 3, inclusive.

The plans under way for this convention promise the greatest meeting the Council has yet held.

**WEST COAST WOODS COMPETITION**

SOMETHING of the extent to which woodwork may be toyed with for architectural effect is revealed in the winning design of the recent competition for a house design featuring West Coast woods. The winner of the $2,000 first prize, Otho McCrackin, of Hutchinson, Kansas, gives his specifications (his design is reproduced herewith):

The competition was sponsored by the Washington State Chapter, A.I.A., with J. Lister Holmes, of Seattle, as professional adviser. The jury was made up of: Emery Stanford Hall, of Chicago; Henry C. Hahn and Louis C. Jager, of New York City; W. R. B. Willcox, of Eugene, Ore.; and David Myers, of Seattle. The second prize, $500, was awarded to Angus McD. McSweeney, of San Francisco.

**A CORRECTION**

IN the October issue, in which Mr. Cortissoz's article on "Wood," the following sentence was inadvertently printed:

"The competition was sponsored by the Washington State Chapter, A.I.A., with J. Lister Holmes, of Seattle, as professional adviser. The jury was made up of: Emery Stanford Hall, of Chicago; Henry C. Hahn and Louis C. Jager, of New York City; W. R. B. Willcox, of Eugene, Ore.; and David Myers, of Seattle. The second prize, $500, was awarded to Angus McD. McSweeney, of San Francisco.

**NON-CERTIFIED ARCHITECT**

UNLESS he informs his client that he is not a licensed architect at the time a contract is made, that contract is null and void for the architect who is not licensed, is the decision of the California Court of Appeals in the case of Payne vs. De Vaughn and Spaugh (No. 4140).

The plaintiff architect who loses the case called himself "Architectural Engineer," and although he had a signed contract for his work, this was declared null and void, the owner having later employed a licensed architect.

The decision concludes:

"We conclude with the following:

"The competition was sponsored by the Washington State Chapter, A.I.A., with J. Lister Holmes, of Seattle, as professional adviser. The jury was made up of: Emery Stanford Hall, of Chicago; Henry C. Hahn and Louis C. Jager, of New York City; W. R. B. Willcox, of Eugene, Ore.; and David Myers, of Seattle. The second prize, $500, was awarded to Angus McD. McSweeney, of San Francisco.

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The decision concludes:

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Nelson Frii .............. Baltimore, Md.
Thomas Macben .............. Baltimore, Md.
Howard L. Shay .............. Moylan, Pa.
Wm. C. Noland .............. Richmond, Va.
W. A. Meinor .............. Huntington, W. Va.
Stanley Mathews .............. Cincinnati, Ohio
Orville F. Ballinger ........ Toledo, Ohio
Geo. W. Maher .............. Chicago, Ill.
Alfred M. Saxe .............. Chicago, Ill.
Robert S. DeGolyer .............. Chicago, Ill.
M. B. Rissman .............. Chicago, Ill.
Chas. N. Agroe .............. Detroit, Mich.
Albert C. McDonald .............. Detroit, Mich.
Louis Kamper .............. Detroit, Mich.
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School at Aston-sub-Edge, England

ARCHITECTURE
New York vs. Chicago in Architecture

By Lewis Mumford

The New Yorker who prides himself on the architecture of his skyscrapers is perhaps a little surprised to know that most of the European architects who visit this country regard New York merely as a stopping-place on their pilgrimage to the Middle West. The Chicagoan, who has begun to take pride in buildings like the Chicago Tribune Tower, done more or less in the New York manner, will perhaps be equally surprised to find out that it is not the Tribune Tower nor the Jeweler's Building that attracts the pilgrim, but a number of great structures which date back to an ancient period in Chicago's history—that before the World's Fair.

The New Yorker has been told that he has created an original architecture, and the forms created by the set-back ordinance are indeed often original: the few such buildings that can actually be seen deserve a good part of the praise that is showered on them. The architecture of Chicago, however, is original in an even deeper sense: it has been one of the chief sources of the modern movement in Europe and it owes its originality not to conditions imposed by the municipal authorities in the attempt to preserve a little air and sunlight, but to the efforts of a great school of architects. The capital skyscrapers of New York, like the Barclay-Vesey Building, The Shelton, and the Radiator Building, are finer than anything that has lately been built in Chicago: the lake city, on the other hand, has the more significant historic examples. There is no Eastern architect upon whom European attention is so firmly centred as upon Mr. Frank Lloyd Wright; there is no other American architect in our history who has had such a deep influence outside his own country. The architecture of Chicago is a blasted promise; that of New York is a crippled and handicapped fulfilment. And here my parallels and antitheses must end, and I shall try to explain these singular facts.

Chicago rose in the seventies from a shantytown gutted by fire into an adolescent metropolis. The decades of the seventies and eighties were days of great dreams and remarkable fulfilments. Some one during this period—and it is curious that I have never met a Chicagoan who had the remotest idea who it was—conceived of thrusting great boulevards and parkways through the rectangular city, long before D. H. Burnham elaborated a grandiose plan for Chicago in conscious imitation of Napoleon III's Paris. The architects were equally busy; and although they found themselves sinking their foundations onto the water-table in the business district near the lake front, they began audaciously, under pressure from the business man, to send their structures higher and higher into the air. There is no actual scarcity of land in Chicago, and never has been; therefore the geographer-of-the-chair who traces the skyscraper to New York's narrow, waterhemmed sites must learn a little economics if he is to
discover why the skyscraper developed so lustily in Chicago.

The economics are indeed simple. The era of railway building was coming to an end in the eighties and the steel companies had to find a new outlet for their mills. They popularized, if they did not actually create, our modern method of steel-frame construction; and they so made possible higher buildings at a relatively cheaper cost. At first high land values promoted congestion; but it took only a little while for the financier to discover that the reverse was equally true; congestion promoted high land values. The skyscraper was there to turn the trick. As to who actually invented steel-frame construction, the point is of little importance; according to standard authority it was used in a factory in France at least a decade before it was applied in America; and it was adopted quickly on this side because we have in back of us a tradition of wood-frame construction: our combustible cottages were similar in principle to the fire-proof skyscraper! More than one architect must have been driven into this new method of relieving the task of the clumsy bearing wall. Given the situation, the invention itself was almost inevitable.

While a new structural form was being born, an old form, that of solid masonry, was coming to its first maturity in America. Perhaps the best examples of this architecture are in Chicago. H. H. Richardson brought this older architecture to the Middle West; his Marshall Field Warehouse is one of the finest examples of nineteenth-century industrial building that I have seen anywhere; and the residence he designed at 1801 Prairie Avenue is not merely the best specimen of his own domestic work, but one of the minor classics of modern architecture. These buildings of Richardson's are neglected by our generation; but they deserve our pious admiration far more than the corpse-like remnants of the Federal period which it is nowadays fashionable to admire; and I am happy to say that the Chicago Chapter of the American Institute of Architects lately took steps to preserve this house, which fortunately remains in a run-down neighborhood on the South Side, where land values have not yet risen so prohibitively as to make the retention and up-keep of the house an impossibility. (It is now the Architects' Club of Chicago.)

Richardson's example was not lost on the younger Chicago men. The best of them, like John Root and Louis Sullivan, adopted his point of view and method without taking over his earlier mannerisms; their work derives from the freer, later Richardson—it is our great misfortune that, like Root himself and Goodhue, Rich-
ardson died at a relatively early age, just when his work had begun to show experimental vigor—the Richardson who was working through his antiquarian pre-occupations into buildings, warehouses, railroad stations, cottages, town houses, which were wholly in the manner and mood of his own time. Two of these early Chicago skyscrapers divide honors between them: Adler and Sullivan's Auditorium Building, and Root and Burnham's Monadnock Building. The Monadnock is perhaps the more remarkable. It is a masonry building, without steel supports, fifteen stories high; with walls that at their base are almost fifteen feet thick. In spite of this solidity, the walls are bayed with windows, and every possible ray of light is brought into the offices. The total effect is elephantine; massive in form, but in its gestures firm and delicate. The Monadnock Building has the grave severity of an Egyptian statue from one of the great periods; every line is essential; there is not a single spot of ornament to hide or lessen this severity; it lives by its naïve vitality and by no borrowed grace. In short, the Monadnock Building was a true primitive in skyscraper masonry; it offered a solid foundation and it left the way clear for further developments.

Have the developments taken place? Yes, but not in America. The European architects who came to Chicago during the World's Fair were not particularly captivated or overwhelmed by the great show of classical buildings that the Eastern architects had planted around the Midway. What they took to Europe was the memory of the Monadnock Building and the other structures which were done in the same ruthless, direct, and original fashion. The Americans who look to-day at the work of Gropius and Mendelsohm and Taut in Germany, of Oudt in Holland, of Garnier and Le Corbusier and Mallet-Stevens in France, do not perhaps realize that the inspiration of this work came largely from America, and in particular from Chicago. The place to study the development of American architecture from the foundation laid down in the eighties and the early nineties is—Europe. The men who continued this line of development in America, Louis Sullivan and Frank Lloyd Wright, had a hard, up-hill time of it; for architecture in America lost its native bias in the nineties, through the fashionable examples of Hunt, McKim, White, Hastings, and their followers: it gave itself over to reproduction and adaptation, and in its modern forms it continued to exist only in factories, warehouses, and finally office buildings, in matter-of-fact forms which promised, but themselves usually lacked, the living touch of great architectural design. To-day the best modern buildings in Chicago—if one excludes the

*Warehouses of Hibbard, Spencer, Bartlett & Co., Chicago. Graham, Anderson, Probst & White, Architects*
gymnasium at Northwestern University, some of Mr. Wright’s residences and Mr. Barry Byrne’s churches—
are within this department: the Butler Brothers’ Ware­
houses, the Pennsylvania Freight Terminal, and the
Spencer-Bartlett Warehouse.

Unfortunately, these buildings are buried under a
great heap of meretricious architecture, built by mod­
ern methods, with a highly mechanized modern equip­
ment, but dull in design and feeble in all the apologies
for ornamental beauty: office buildings surmounted by
Temples of Love or steel towers with lanterns supported
by steel buttresses that affect to fly—buildings of this
character outweigh in quantity and in their effect on
public appreciation the direct, sincere work that still
endeavors to keep its head above water. To-day the
architecture of Chicago is lost in a deluge of mean­ing­
lness vulgarity; its vast moving-picture theatres, its
classic stadium, the dull and merely grammatical
Gothic of the University of Chicago buildings—all these
things represent a sad falling away from the heyday of
energy and originality. Mr. Wright’s jolly dance-hall
and restaurant, Midway Gardens, has been outrageously
transformed by redecoration out of any semblance to
its original interior; and the building itself might be
torn down, one suspects, without causing the average
Chicagoan the slightest pang of regret, certainly with­
out the realization that it was originally one of the
gayest monuments of modern architecture in our
country.

As a relief from this vulgarity and neglect and dilap­
idation, one turns back to New York. Here, it is true,
most of the good things cannot be seen a few years
after they are built, so strong are the forces of conges­
tion and so weak are our efforts to provide approach­
able sites; but the total effect of the city suggests disci­
pline and order and the sort of elemental good taste
that goes along with these spare virtues. The Bronx
tenement and the Park Avenue apartment differ in
scale and price but not essentially in design; and day
by day architects slough off their weak details and their
absurd ornamental excrescences, or, like Mr. Ely Kahn
or Mr. Henry Churchill, employ an original artist to
introduce fresh modern designs in the entrance way,
the elevator door, the letter-box, and the intimate de­
tails of these great masses. If this movement keeps on
another few years, the architects of New York will have
cought up with their original exemplars in Chicago.
That will be something like progress!
Light for Ornament

By A. L. Powell

MR. POWELL, WHO IS MANAGER OF THE ENGINEERING DEPARTMENT, EDISON LAMP WORKS, OF THE GENERAL ELECTRIC CO., PRESENTED A PAPER OF WHICH THE FOLLOWING IS AN EXCERPT, BEFORE THE RECENT CONVENTION OF THE ILLUMINATING ENGINEERING SOCIETY, IN CHICAGO.

A French ornament consisting of a bronze figure about 18 inches high mounted on a marble base. Held aloft is a basket of conventionalized fruit in colors.

A few years back, artificial light was relatively so expensive that all our energies were devoted to developing an appreciation on the part of the public of the advantages of proper artificial lighting for purely utilitarian purposes. It has taken a long while for us to arrive at the point of thinking of light as an ornament. Now, however, light sources have reached such a point in efficiency, and cost of current has become so low, that we are at the threshold of a new era in lighting. We can well afford to use light liberally for beauty's sake alone.

It is obviously beyond the province of this paper to attempt to analyze all the ramifications of light for ornament or decoration, for they are indeed legion, and we must confine our attention to just one phase. The home is beyond doubt a place to start to build up a public consciousness of light as a decorative medium.

We have heard much talk of decorating with light in the home, and every little while some one asks the question: "What about color lighting for the living-room or dining-room?"

To answer this, we must appreciate that there is a radical difference between the home, which is purposely planned for rest and relaxation, and the theatre, dance-hall, or public building where we remain for only short periods. In some public buildings general lighting in color is perfectly feasible and desirable at certain times. We go there to be amused, entertained, or even startled. In the home, however, one cannot live comfortably with general lighting of pure color, such as red, green, blue, orange, yellow, etc.; it becomes annoying and uncomfortable. The only livable variations from the unmodified light of our common illuminants are in the direction of slight tinting, toward the yellow or toward daylight. If, then, we cannot use color in lighting in its generally accepted sense in the home, how are we to employ light as ornament?

The answer is simple—by confining the color in a rather intense form over limited areas. In other words, we should superimpose on the general illumination spots of high light in color. A luminous ornament is always more fascinating and more attractive than some piece of ornament that is of the same general brightness as its surroundings. To illustrate its simplest form we may consider two translucent decorated vases: one in its normal state sitting dull and lifeless on the table, a part of the picture, it is true, but scarcely noticed among the many other things which...
A R C H I T E C T U R E

A R C H I T E C T U R E

attract the eye; the other enclosing and concealing a
small lamp, so small the brightness of the vase is ex-
tremely low, yet powerful enough to cause the object to
become luminous, to show up the details of decoration,
and to provide a high-light in the general picture which
the room creates. A painting would be most uninter-
esting without its high-lights; a room is equally so.

For many years the writer had been thinking along
these lines and some time ago constructed several light
ornaments of crude, yet relatively effective types. It
was the skill of the French artists and designers, how-
ever, which made him appreciate more than ever be-
fore what we are overlooking in this country in not
having an adequate line of light ornaments available
to the public.

To determine whether the public was really in a
mood to appreciate these light ornaments we secured
from France quite a few samples which we installed
in the Edison Lighting Institute. The Institute, as
most of you appreciate, is visited by many thousands
each year, our audiences varying from the grammar-
school child to the executives of large corporations and
welfare organizations, etc., with a high percentage of
the gentler sex. We have found from experience that
a cross-section of the comments of our visitors is fairly
representative of public opinion about lighting.

To get back to our story, it can safely be said that
there has been scarcely a visitor who has not commented
with enthusiasm on these light ornaments. If we had
been in the retail business or had a desire to sell those
that we had, in every group there would have been
several people leaving the Institute with one of the
ornaments in their possession. As a matter of fact,
although it has meant considerable inconvenience to us,
we have been forced to send back to
France on several
occasions for extra
specimens to meet
the requests of vis-
itors who insisted on
having this one or
that one for their
own homes.

It is natural that
the French, with
their inherent sense
of the artistic fitness
of things, would seize
the opportunity, and
design equipment
which is especially
well suited. There
was another condi-
tion, however, which
made this develop-
ment more simple
for them than it was
here in America.
They had available for this service an extremely small 10-watt 115-volt lamp. This lamp has a diameter of approximately one inch, and a total height, including socket, of less than two and one-half inches. Up to a few months ago the smallest thing an American manufacturer could use on 110-volt circuits without the use of a transformer or an external resistance was either the S-14 bulb lamp with medium screw socket or the D-10 bulb lamp and candelabra screw socket. The overall length of the smaller of these combinations is something over four inches.

If one has to start to design a decorative piece around a light source and a mechanical part which is quite large, the resultant product is likely to be ugly, ill-proportioned, and inartistic. Fortunately we now have, or shortly will have available for this service, a 10-watt Mazda lamp in a small bulb, probably S-11 with intermediate screw base, which when mounted in a typical receptacle gives an overall height of less than two and one-half inches. This should remove any obstacle to the design of suitable equipment.

Light ornaments in France have taken many forms, some of which are shown in the accompanying illustrations. Many of them are called "parfum-brûles," or perfume-burners, from the fact that the area above the lamp is slightly depressed, and a few drops of perfume placed in this is vaporized by the heat from the lamp, giving—as well as interesting, fascinating lighting—a pleasing odor throughout the apartment.

The few typical examples of the French designs shown have been chosen, as far as practicable, to show characteristic specimens of different basic constructions, and of course form by no means a complete catalogue of the variations which are available.

Space and printing costs prevent the inclusion of more illustrations, and, in spite of the wonderful praiseworthy work the French have done, they have by no means exhausted the possibilities along this line. The few examples given merely show the method of approach. Translucent marble, fabrics, horn, sea-shell,
and many other materials can all be used to produce novel effects.

There is literally no such thing as too many light ornaments around the home, provided they are well chosen and properly placed. One of the homes with which the writer is familiar uses eight of these light ornaments in the living-room and adjoining hall. At first thought one would say the place must look like a fixture show-room, yet each of the ornaments used is so carefully chosen and seems to fill its niche so beautifully that a most entrancing picture is created without any suggestion of splurge.

It is well to close with a word of warning to the equipment manufacturers. Light ornaments may be either artistic and beautiful and desired by every one with any taste, or they may be crude, grotesque, and ugly, and of the type that persons with feeling would not allow in their homes. If we in America offer the public the wrong sort of equipment we are likely to kill this project before it ever comes into being.

In general we should try to carry out the same delicate feeling and artistic sense that the French have shown. Light ornaments must not be "cheap" in the narrow sense of the word; they must not be garish; they must not have crude, inartistic decoration. Simplicity is far to be preferred to elaborateness of design. This does not mean that, with American methods of mass production, the product cannot be inexpensive, but in general price must be a secondary consideration to effect and workmanship. It is important to cater to the point of view of the connoisseur. The experience of the few merchants who have been dealing in luminous ornaments indicates that many persons who would not hesitate to quibble over the price of a utilitarian lamp readily spend much larger sums for luminaries which are obviously works of art rather than merely utilitarian sources of illumination.
The memorial is at one end of a community field and consists of the central monument, shown above, and two dressing-rooms for athletic teams. The fronts of the latter are memorials, one to the war mothers, the other to the conquering spirit of brave men.
WAR MOTHERS' MEMORIAL

IN HONOR OF
THE STEADFAST WOMEN
OF FRANKFORD
WHO DINED THEIR SONS
TO FIGHT
AGAINST THE POWER OF EVIL
ON BATTLEFIELDS IN ALIEN LANDS
ARMED THEM WITH
THEIR OWN ENDURING COURAGE
THEIR OWN SACRIFICE
AND BELIEF
IN THE MIGHTINESS OF GOD


One of the team dressing-rooms
Detail of upper stories
LAKE-STATE BANK BUILDING, CHICAGO, ILLS.

C. W. & GEO. L. RAPP, ARCHITECTS
The Lure of Provins

By Gerald K. Geerlings

ILLUSTRATED WITH PENCIL DRAWINGS BY THE AUTHOR

PARIS for the tourist is just Paris, the "simply divine" epitome of all that which the prim-and-proper home town forbade. But one of the curses of architecture is that Paris cannot be that for the architect. On sailing he may have boasted to his thirsty friends that he would lap up the Montmartre for them, but, when he essays to do so, dawdles too long over the text-book foundation for architecture. Sooner or later he discovers that the personality of Paris architecture insists on flavoring every drop of Burgundy or Triple-sec. Early or late, sober or happy, Paris persists on being architectural. A glorious revel for the flapper but a continuous object lesson for the ever-harassed architect! And so, enter Provins!

Only about fifty-five American miles and a few American dimes distant from the Place de l'Opera is Provins, once the third city of France (after Paris and Rouen). Fortunately for the itinerant and franc-shy architect, Provins has never ascended into the three-asterisk class in Baedeker, or so much as demurely announced itself in architectural books. Consequently it offers the ideal hunting-ground for the architect who likes to put his conscience in its place by announcing that he is not squandering his time but investing it in surroundings "adaptable" to his practice, as well as affording him a spot in which to frisk about and discover at least one brand-new chef-d'œuvre for every café.

There are legions of houses which would induce any client to mortgage his limousine and even his loud-speaker to reproduce one of them; there is a home for the aged which would rejuvenate the most decrepit; a stronghold sufficient in itself to inspire a dozen new zoning set-back ideas; a batch of walls, moats, gates, and fantastic compositions to incite the ruination of a whole water-color pad with gobs of luscious jade, vermillion, chrome orange, and cerulean blue.

In its infancy, in the third century, Provins was a Roman military outpost. Charlemagne established a "heavyweight" class of fortress and a moat. In the heyday of her prosperity Provins had above 80,000 inhabitants, and enjoyed two hundred years of eminence preceding the fourteenth century and the English invasion. Under the influence of the Counts of Champagne (and what city would not!) she became celebrated industrially in addition to her military and ecclesiastical prominence. Henry IV besieged her during the religious wars in 1589, and turned the final trick which industrial disputes and English invasions had unfortunately begun. Provins steadily "declined" in a historical sense from then on, but from an architectural standpoint moulded and mellowed. True, the town has not yet been made to appear with all the perfection of a Hollywood "set," nor been restored to the nth degree as have Carcassonne and Aigues-Mortes. The holiday attire of a colorful past is still visible though threadbare. Some of the plumes have been plucked and others badly frayed, but their quills still sit at a jaunty angle. At present the population is about 9,000, although very few inhabitants ever seem in evidence. When they do it seems to be for agricultural purposes outside the town, or observation of queer foreigners when within the town.

Like all well-bred towns, there is an upper and lower division, and like all French towns they are full of interest. The lower is entertained by two energetic little streams, the Durteint and Voulzie (a colorful suggestion for the names of twins), which do all the fancy back and side steps of a modern dance, gossiping the while and making merry along the fronts of the houses,
Thibaut-le-Chaussonier, Count of Champagne, is said to have seen St. Catherine tracing the plan with a sword. She was an excellent architect, if the story be true, for a similar building might happily serve the purposes of a country club, a day school, a glorified country residence, or a beautiful what-not. Surrounding the three sides of the front court are delightful loggias opening on a formally planned garden. The rising terraces of gray stone walls, the range of greens in the clipped trees, climbing vines, and brilliant vegetable tops, surmounted by cream stucco walls and soft lavender roof of the building, compose a most harmonious mosaic of color.
under their rear washing-sheds, and striving as valiantly as any two little streams can to bring Venice and her Lido to the very doorsteps of the Provinsites. There are churches in Gothic, Romanesque, and Picturesque—to restrain the exultant visitor from becoming too heathenish in his delight. St. Ayoul grew actively from the twelfth to the sixteenth centuries, and passively since then in annexing texture. A corner hexagonal turret would excite a Hollywood producer to build up an entire spectacle around it. The near-by tower of Notre-Dame-du-Val, a relic of a sixteenth-century Gothic church, was undoubtedly intended as a knock-out composition for sketching from all angles. Ste. Croix, a thirteenth, fifteenth, and sixteenth century edifice, as well as St. Quiriace (from 1160 on), are worthy architectural shrines, lacking only in publicity agents, or

**Tour César**

*The original keep was built in the twelfth century, the strong rampart added by the English in the fifteenth, while the present roof and parapet date from the seventeenth*
their progeny would extend from Maine to Mexico. A little market-place specializes in trimmed rows of trees, that beautiful architectural adjunct of all French towns which we never allow ourselves to duplicate. Whether we do not know how to grow and trim plane (sycamore) trees, or whether we cannot bear the thought of cutting off their tender twigs, is one of the unsolved mysteries of America. Anyway, Provins has its delectable little square shaded by these neatly interlacing trees.

The upper town is girdled by the austere remains of walls, moats, towers (Tour aux Pourceaux and Tour aux Engins), and gates (Porte de Jouy and the Porte St. Jean). The latter, still in a fair state of preservation, marks the start of the road to Paris between straggly orchards and bravely tilled fields. Alluring paths and roadways try to skirt the walls, and after a fashion eventually make their way through a maze of brambles, thickets, flowering shrubs, and groves of trees. The focus within the ramparts is the Place du Châtelet, its borders embroidered by fascinating houses of varying manner and mien. These and many others with characteristics like cover-designs for dream-houses offer enticing views at every hand, but for amazing qualities are not to be compared with the subterranean passages which once honeycombed the entire upper town. At present these are to be entered only at the crypt of the Grange des Dimes, accompanied by the cobbler who squats across the street. He is probably one of the outstanding wits of France, but as yet has not been commercialized by C. C. Pyle. In his introductory speech within the old tithe barn, where some very miscellaneous antiques moulder, he raps the head of a battered and chipped Venus, and (unchivalrously) for the benefit of the ladies observes: "Voilà—solide." Or, fumbling in a venerable sarcophagus, digs out a cigarette remnant with: "Les Romains fumaient aussi."

So, in all dignity, a brimful bumper of architectural Triple-sec to Provins—where no tourist asks in Timbuctoo French how to buy a complete Wall Street quotation, where medieval hotels serve "red ink" as a matter of course (and after a stay of several days charge only what you think must be the account for one day), where there is architecture aplenty, but not so scholastic that it makes your memory realize its deficiencies, where there is rich color and running water, and where time is not reckoned in commuting trains but in centuries!

To Provins—"bottoms up"!
NOTES

GYMNASIUM, Y. M. C. A., JERSEY CITY, N. J.

JOHN F. JACKSON, ARCHITECT

Materials:

Ceilings plastered; walls brick and unplastered in gymnasium and rooms under visitors' gallery.
Floors—wood in gymnasium, cement in visitors' gallery, cork on running-track.
Base in gymnasium, ¾" x 4" wrought iron.
Railings for visitors' gallery and running-track, of iron pipe.
Steel sash with wire-glass, upper sections pivoted.
Doors, flush wood.

Running-Track:

6' 6" wide with ends a continuous semicircle—preferable to practice of having two abrupt turns at each end with short straightaway between.

Visitors' Gallery:

Ingeniously worked in above rooms required for storing apparatus, rowing-machines, punching-bags, etc.; gives spectators an opportunity of viewing an exhibition or match at a level only slightly above performers' heads; provides double seating capacity with running-track when maximum seating is required, as for basket-ball tournament, etc.

Basket-ball Field:

In addition to notes on diagram (see over) the following quotation from the 1927-28 rule book applies to floor markings: "The face of the backboard should be two feet from the end wall, but on short courts when the backboard is placed against the wall there shall be an end line, the inner edge of which is two inches out from the wall. On narrow courts when the playing court is the full width of the floor there shall be a side line, the inner edge of which is two inches out from the wall."

Handball Courts:

Where the lines of handball courts are near those of other games, as basket-ball, volley-ball, etc., it is advisable to paint them a different color as an aid to players. Most courts are placed too close together; the "playing field" as noted on the diagram is self-explanatory as to the amount of room really needed.

This is the thirteenth in a series of measured drawings by Mr. Geerlings, of which the subjects chosen are among those occurring in modern practice. The intention has been to select the best available solutions of problems that are likely to be troublesome to the architect who has not met similar ones before, and to reproduce these painstakingly, with photographs and helpful data.

Subjects that have already appeared are: A Shop-Front Show-Window (Starrett & Van Vleck, Architects), November, 1926; Interior Details of a Fifth Avenue Shop (Starrett & Van Vleck, Architects), December, 1926; Teller's Cage and Bank Screen (York & Sawyer, Architects), January, 1927; Apartment-House Details (McKim, Mead & White, and James C. MacKenzie, Jr., Architects), February, 1927; Hotel Office Details (Geo. B. Post & Sons, Architects), March, 1927; Cigar-Stand, Hotel Roosevelt, New York (Geo. B. Post & Sons, Architects), April, 1927; School-Building Details (Guilbert & Betelle, Architects), May, June, and July, 1927; Barber Shop, Hotel Roosevelt, New York (Geo. B. Post & Sons, Architects), August, 1927; Beauty Parlor in the same hotel, September, 1927; Telephone and Telegraph Room and Newspaper and Candy Stand, October, 1927. The next drawing will cover some ward details from the Roosevelt Hospital, New York, by York & Sawyer, Architects.
"It was the strong communal spirit, giving unity of purpose to the varied facilities of individuals, that made possible the production of the noble arts of the Middle Ages.... The capricious and irresponsible individuality of the time, together with the confused complexity of ideas and aims, gave rise to most of that which is open to criticism in the Fine Arts of the Renaissance."

CHARLES HERBERT MOORE, in "Character of Renaissance Architecture."

BUSINESS AS USUAL

THE Chicago Tribune's very recent survey of business conditions indicates that business is expanding in a substantial and well-sustained movement. The prospect is unquestionably brighter than a year ago. At that time production and trade during the summer of 1926 had been on an unseasonably high plane; we faced a saturated market, and a check last autumn was inevitable. The present autumn finds a very different set of conditions. Summer production and distribution volumes have been moderate. There has been no over-production, no excessive out-of-season drive for business, no saturation of the consuming public. Added to all this is the indication that the farmer's income for 1927 will be a cool billion dollars more than he got in 1926.

In the building industry it seems likely that the year will close with something like a 2 per cent decrease over 1926. It is a significant fact, however, that building permits in the twenty-five leading cities show, for the first time in months, an increase over the corresponding month of last year. One month's record does not necessarily mark a distinct trend, but upon the data at hand it would seem that, outside three or four cities of the first rank, the curve has turned upward once more.

"The attempt at prettiness has too long been the curse of architecture, the attempt to capture the elusive beauty of the craftsmanship of past centuries in our day, when the men and the social organism of which they were a part have passed into the limbo of history."

SIR LAWRENCE WEAVER, in "Cottages."

BETWEEN THE MILLSTONES

WE confess to a large measure of sympathy for the subcontractor. His path is not strewn with roses, even at best, and there are points at which he treads gingerly upon a very thorny way. For instance, just what is the legal status of an order from the architect directing the subcontractor to perform certain work which is an extra, and directing that this be charged to the general contractor or to the owner? Is the architect's relationship with the owner or general contractor such that he has the legal right to order work or materials in their names? In case of a suit being necessary for collection, would the courts regard such an order as binding upon the third party? It is certainly doubtful, and yet a request on the part of the subcontractor for a direct authorization often results in haughty resentment on the architect's part, if it does not actually bar any future business relationship.

A somewhat similar problem faces the subcontractor if he dares to ask the architect for credit references as to an owner for whom he is invited to work. The architect certainly has no intention of guaranteeing payment by the owner, yet he is impatient or resentful, as a rule, of such fundamentally reasonable effort on the subcontractor's part to keep his business on a rational basis of business safety.

As to the authorization of extras, it is so much the better practice for all concerned—the architect most of all—for the architect to have the owner authorize every extra over his own signature, that this procedure must soon come to be universally followed.

In the other matter, it seems to us that the subcontractor would secure an owner's credit rating more accurately and with less embarrassment to all concerned if he sought this through the usual business channels.

"Within five years Rome must become the most wonderful city of the world in the eyes of all people on the globe."

MUSSOLINI.

BUILDING CODES AND THEIR BLUE LAWS

THE Western Society of Engineers urges a determined fight on the part of architects and engineers against certain outgrown restrictions imposed by building codes, that impede progress and prohibit the use of new and improved construction methods and materials. Antiquated restrictions, perhaps adopted years ago, before the days of modern scientific construction, exist in almost every city. Our building codes should be fluid rather than fixed, just as modern construction is fluid and never static. It is unlikely that any real progress will be made in this regard until the making of building codes is taken out of the hands of those who are sometimes influenced by political considerations or by well-organized lobbying rather than by technical principles. If these codes could be put in the sole control of a commission made up of representative architects, engineers, builders, city planners, and similarly qualified technical experts, their purpose would unquestionably be achieved.
A new vista from Central Park, showing New York's two newest hotels. At left, over the trees, the Ritz Tower; the tall tower is that of the Sherry-Netherland (Schultze & Weaver, Architects); at the right is the Savoy-Plaza (McKim, Mead & White, Architects)
The Installation of a Carillon

The Installation of a Carillon

The Installation of a Carillon

Charles L. Hillman, Architect, Tells of the Unusual Problems Met in Hanging Thirty-Two Tons of Bells in an Old Tower

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The Installation of a Carillon
Carillon Installation, First M. E. Church, Germantown, Pa.  
Charles L. Hillman & Son, Architects
for the compound girders. This arrangement has several advantages over the original plan: The load is distributed over eight points on the masonry instead of four, and at the points of greatest strength; the diagonal beams, being short, were easily handled and required less cutting into the walls for bearings; and it was possible to do this work before the carillon arrived, thereby expediting its erection; also because the compound girders did not have to be so long as originally designed, it facilitated their handling.

 Provision for allowing the sound of the bells to escape from the bell-chamber was an important item. There were twin windows in each side of the tower, divided mid-height by stone transoms, and having stone louvres. The tympanums in their heads were solid. The louvres were removed and the tympanums in the heads were cut out, and, as an additional sound outlet, a pent-house with louvred sides was constructed on the roof. Under the pent-house the rafters were cut out and framing pieces put in, supported by four short Georgia pine posts, which are supported by two 15-inch I-beams spanning the tower. It was foreseen that these beams would facilitate the handling of the bells and frame by providing fastenings for tackle and hoists; therefore each one was made strong enough to carry the heaviest bell in midspan.

 As previously mentioned, the rocking shafts operating the bell clappers are connected to the clavier by wires, which pass through a slot in the floor of the bell chamber; this slot is 6 feet long by 2 inches wide, and had to be accurately located. Also there are two trapdoors in the ceiling of the clavier-room and the bell-chamber floor to enable the carillonneur to hear the bells distinctly while playing. To place the trapdoor and slot frames, the brick floor arches were shored and cut, and concrete frames strong enough to take the thrust of the arch were cast in situ, the concrete extending above the floor to form curbs.

 Connection was made to the present heating system and a steam riser run to radiators in the clavier-room. Because of the strenuous exertion required to play the carillon, bathing facilities are a great convenience; therefore a lavatory with cold water connection was installed in the clavier-room.

 Additional footings were given the tower walls by cutting through a corner and bridging the load.

 The rough walls of the tower below the bell-chamber floor were furred and lined with wall-board, the joints being covered with battens. The walls of the bell-chamber were flush-dashed with Portland cement and sand.

 The agreement with the bell founders provided for the landing of the carillon on the wharf at Philadelphia. At this point the owner assumed responsibility. A cantilever was placed across the tower on the parapet and anchored down by means of a cable fastened under a corbelled buttress on the church side. The jambs of one of the windows in the bell-chamber were carefully cut out sufficiently to allow the largest bell to pass. The bells and heavier members of the frame were hoisted by a power-winch on a truck until they were above the sills of the belfry windows, when they were made fast to a hand-hoist secured to the steel roof-beams. As the power-winch was eased off the hoist pulled the bells through the window and swung them clear inside; then, by using a second hoist, they were easily and quickly placed in position. The largest bell had 3 inches clearance through the opening in the jambs, and passed without touching. While the hoisting was being done new jamb stones were being cut, and were ready to set when it was finished.

 In addition to the playing clavier there is a practice clavier, which is similar to the playing one except that it is not connected to the bells but to small metal tubes of corresponding tones, set in a wooden frame above the levers. This permits the carillonneur to practise without ringing the bells. There is also an ellacombe manual or chiming apparatus, fastened to the wall on the landing of the stairs leading to the clavier-room. This consists of eight ropes fastened to a wood frame, and connected to eight of the larger bells for the purpose of tolling or chiming them.

 All openings in the belfry, including the pent-house, are screened with copper fly-netting to exclude snow; in the windows this is backed up with heavy galvanized iron screens to prevent birds flying through it.

 The pastor's room in the church and the clavier-room are connected by telephone. In the tower vestibule is a memorial tablet stating that the carillon is the gift of Mr. and Mrs. William H. Shelmerdine as a memorial to their son.
ANNOUNCEMENTS

D. Leonard Halper, architect, has opened his Cleveland office for the practice of architecture at 7016 Euclid Avenue. He will be pleased to receive a complete file of manufacturers' catalogues and samples.

Walter P. Crabtree, of New Britain, announces that his son, Walter P. Crabtree, Jr., has been taken into partnership under the firm name of Walter P. Crabtree & Son, architects, and the opening of new offices in the Capitol Building, 410 Asylum Street, Hartford, Conn.

S. Grant Alexander has changed his offices from the Chamber of Commerce Building to 113 East College Street, Asheville, N. C.

BOOK REVIEWS


In the shadow of the Palace at Versailles stand a number of comparatively modest houses of the seventeenth and eighteenth centuries, the homes of various members of the court circle. There are throughout these dwellings a quiet elegance, a delightful ingenuity of plan, a sophisticated simplicity that mark a group unique, and incidentally one full of suggestion for the modern adaptation. The photographs are well chosen and well printed, the drawings in a particularly sympathetic key.


If any architect needs ideas for the minimum house, here they are.


The late W. H. Ward's volumes, first published in 1911, have long occupied a very important niche in architectural literature. Ward's breadth of view, his deep knowledge of his subject, his painstaking accuracy, and his clear and concise style have combined to make an enduring work. The present edition is revised to incorporate Ward's later and fuller knowledge, with a preface by Sir John Simpson, M.A., past president R.I.B.A., and additional illustrations.


An alphabetical arrangement of information as to the meaning and use of symbolic motives in the art of the past. It should prove of real value to art students and teachers, to travellers, and to artists generally. The latter would find it a convenient means of checking or adding to their knowledge of symbolic forms.


A most comprehensive presentation of a subject on which the latest possible information is sought. In addition to the matters of combustion, burner types, mechanical draft, automatic control, installation, and servicing, the author gives the Underwriters' regulations, oil-burner ordinances, and a chronological list of burners classified as to type.


TEMPLE EMANU-EL, SAN FRANCISCO, CALIF.
BAKEWELL & BROWN AND THE LATE SYLVAIN SCHNAITTACHER, ARCHITECTS
TEMPLE EMANU-EL, SAN FRANCISCO, CALIF.

BAKEWELL & BROWN AND THE LATE SYLVAIN SCHNITTACHER, ARCHITECTS
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TEMPLE EMANU-EL, SAN FRANCISCO, CALIF.  From half-inch scale detail
BAKEWELL & BROWN AND THE LATE SYLVAIN SCHNITTACHER, ARCHITECTS
The Pacific Coast delights to indulge its playful spirit in the design of its theaters. The two photographs above, reminiscent of totem poles of the Northwest, show the Fifth Avenue Theatre, Seattle.

An indication of the fact that American architecture is beginning to influence our London brethren is found in this model of a housing scheme by Topham Forrest, F. R. I. B. A., Chief Architect of the London County Council.

Architectural News in Photographs

A new building that helps to make interesting the skyline of Brooklyn on its famous heights is the Leverich Towers Hotel. Starrett & Van Vleck, Architects.

Newark's new home of the New York Telephone Co. maintains the exceptionally high standard of our telephone buildings generally. Voorhees, Gmelin & Walker, Architects.

Los Angeles's new city hall is nearing completion, its high white tower a landmark. John C. Austin, John Parkinson, and Albert C. Martin, Associated Architects.
ARCHITECTURE

A VILLAGE DRUG STORE, Saybrook, Conn.

Although the site is said to have been used for some kind of use since 1770, the present building has only recently been remodeled by Francis J. Nelson, architect, who put in the doorways, display windows, and the gold mortar in the pediment.
Color Schemes of Adam Ceilings—III

From accurate copies in water color by Gerald K. and Betty F. Geerlings of the original studies by the Adam brothers now in the Sir John Soane Museum, London. These faithfully follow the colors but do not pretend to retain the exact delineation of the ornament.
House of Martin T. Flanagan,
South Mountain Avenue,
Montclair, N. J.
lucian e. smith, architect
Stairway and loggia

Entrance from living-room

HOUSE OF MARTIN T. FLANAGAN
MONTCLAIR, N. J.
LUCIAN E. SMITH, ARCHITECT

FIRST FLOOR PLAN

SECOND FLOOR PLAN
"When is a door not a door?" we have all heard the moss-aged reply, "When it is a-jar," but the hardware contractor knows better. His answer is "When it has a 2-inch stile."

As a matter of record, a door stile may be dieted down to 2 inches in width, and still digest a cylinder-lock with 1-inch back-set, providing that the thickness is no less than 3 1/4 inch and the door not too large. However, it is equally a matter of record that hardware advisers are reluctant about such an emaciated stile, pointing out that a damp season, a ruffled temper, and bulging biceps may combine to do the door no good. Window casements sneak under the 2-inch stile classification, however. A door stile pared down to its advisable minimum probably comes closer to being 3 inches, with a 1 3/4-inch back-set lock, although if there is a pair of doors, 2 1/2 inches may suffice happily. When the reduced stile of 3 inches or less is employed, the lever handle is a necessity, of course, and offers the opportunity of making the simple mistake of extending in the wrong direction unless the doors are carefully marked on the plans, both as to swing and which of a pair is "active." A common practice is to assume that if a pair of doors is to swing in, the right door (from the outside) is the "active" member. The hardware contractor is in his happy hunting-ground when the stiles are of a common dimension throughout a job and ample in width, but he is willing to accept responsibilities if stiles are variable providing that door swingings are shown, and special conditions are marked on plans, with not only stile widths given but thicknesses as well. One of the foremost gray-hair producers, say the hardware men, is the residential job where the client and architect take turas playing havoc with the door and hardware schedule without keeping said documents up to date or informing the contractors involved. The result ends usually with too few locks that fit, and too many words that do.

The day was, and now is passing, when the cremorne or cremone bolt, with a lot of accredited French ancestry, was a popular chaperone to every pair of French doors. Both numbers and varieties of the cremone are growing less, but the client still lives who gets perfect satisfaction from them on 2-inch to 3-inch stile French doors. If one door is to remain closed while the other is open, he may even wish to have one on each door. After interviewing members of the hardware profession, The Clinic comes to the conclusion that both the client and contractor would be the richer if more information were placed on estimate drawings. In the absence of a lump-sum allowance, the same estimator may "figure" the job two ways. He can submit a low price in order to get it, and trust that the architect is not intending to interpret too many extras between the lines of his vague specifications, or require too many items not shown on drawings which are covered only in general clauses; in these the contractor and his heirs are bound to furnish anything which will contribute to the artistic ensemble. Or, he may estimate the job so as to "play safe," and therefore let his chance-taking competitor walk off with the dotted line. Modern catalogues offer complete information for him who would seek to avoid trouble later. There is the story of the architect who specified a certain hinge by number, but covered himself by a protective phrase, serenely tucked away, which absolved him and his inaccuracies forever and a day. The contractor estimated and furnished the article specified by number, only to find on the job that they fitted on the doors no better than his bill for an "extra" fitted the architect's sense of personal error.

The excavator has the advantage over the hardware contractor, not only that his services need fit less accurately, but that he is not the last contractor on the job, when the client wants protection on his doors, so that he can move in with his stamp collection and radio. Any slips in excavating are as nought compared with a doorknob's absence. Thus it is that at the crucial moment, when each keyless second strikes agony in the heart of the owner, the hardware contractor arrives just in time to be showered by the culminating wrath for all previous delays. Unfortunately, in these days of involved shipments and delayed deliveries, the hardware cannot be ordered until the cabinet or mill work is detailed by the architect, and since special equipment is not to be had for the asking in a twinkling, the real cause (stage whisper) is often traceable to delinquent architect's details.

Casement windows should have stile and rail widths and thicknesses clearly marked on plans from the start. If they are changed later a revised schedule should be sent in to the interested contractors. Fasteners, catches, and the like can make for no end of irritation when this information is omitted, and the hardware contractor must obtain his data from the mill instead of from the architect's organization.

HARDWARE AND STILES

Not infrequently in residential work three arches have French doors in the centre, flanked by double-hung sash. When 3 1/4" scale details are made it becomes evident that, unless the stiles of the doors are cut down to 3 1/2" to 3" in width, the amount of wood showing at the head rail will differ widely between the doors and windows. From a design standpoint the three openings should appear alike.

To save his client money by obtaining more definite estimates, the architect might well dimension stile and rail widths and thicknesses, and meeting-rail section, for all openings requiring special or high-priced hardware.
You know these men by reputation — do you know them by sight?

W. Duncan Lee, A. I. A., Richmond, Va. Has special distinction as designer of private residences.

Walter P. Crabtree, New Britain, Conn., engaged in the general practice of a busy industrial city.


N. Max Dunning, F. A. I. A., Chicago, is Director of the Structural Service Department, A. I. A.


Leonard Schultze

Schultze & Weaver

who build hotels from coast to coast and whose latest achievement is the Sherry-Netherland, New York.

S. Fullerton Weaver, C.E.

George Bain Cummings, A. I. A., Conrad & Cummings, Binghamton, N. Y.

W. Duncan Lee, A. I. A., Richmond, Va. Has special distinction as designer of private residences.

Robert K. Fuller, A. I. A., Denver, Colo.

FIRE HEADQUARTERS, PHILADELPHIA, PA.
ARCHITECTURE’S PORTFOLIO
OF
COLONIAL
TOP-RAILINGS
OF WOOD

Subjects of Previous Portfolios

STAIRWAY DETAILS (GEORGIAN, EARLY AMERICAN, ETC.)
February, 1927

PANELLING OF THE ENGLISH TYPES
January, 1927

STONE MASONRY TEXTURES
March, 1927

FANLIGHTS AND OTHER OVERDOOR TREATMENTS
May, 1927

DOOR HARDWARE
August, 1927

TEXTURES OF BRICKWORK
June, 1927

IRON RAILINGS
July, 1927

ENGLISH CHIMNEYS
April, 1927

GABLE ENDS
October, 1927

PALLADIAN MOTIVES
September, 1927

Subjects in Preparation for Future Issues

Beaméd Ceilings
Built-in Bookcases
Chimney Tops
Circular and Oval Windows

Leaded Glass Medallions
Cornices of Wood
Decorative Plaster Ceilings
Garden Steps

English Fireplaces
Floors of Wood
Elevator Doors
Garden Gates

Garden Walls
Rain-conductor Heads
Stucco Textures
Treillage
"ROCK HALL," LAWRENCE, LONG ISLAND

FRAUNCES'S TAVERN, NEW YORK, 1719

HAROLD E. PADDON

SALEM, MASS.

LAURENCE H. FOWLER

FRANCIS A. NELSON
ARCHITECTURE'S Competition VII—Report of the Judges

In Competition VII, the programme of which called for an altar in a Roman Catholic Chapel, designed in the style of the Italian Renaissance, the judges take pleasure in awarding the prizes as follows:


There were two rather conspicuous faults in the bulk of the entries this month—a lack of understanding of scale, and a lack of knowledge of the style prescribed by the programme. The latter fault is one that may quite possibly be charged against a lack of sufficient "documents" on the part of the contestants—either such a lack or insufficient energy to go to the library and dig up the books. The former fault, a failure in scale, is undoubtedly one that is not so easily cured. In fact, one of the judges remarked that it is perhaps the most common of all shortcomings in architectural competitions generally, since a real feeling for scale is the last thing an architect masters—if ever.
ARCHITECTURE'S COMPETITIONS

GENERAL CONDITIONS

Henry H. Saylor, Editor of ARCHITECTURE.

Compensation to Competitors: ARCHITECTURE will pay to the winners of each competition, immediately after receiving the jury's judgment, the following:

For Design placed First... $150.00
" " Second... 75.00
" " Third... 30.00 in books*
" " Fourth... 20.00 in books*
" " Fifth... 10.00 in books*

*Those to be chosen from the Art and Architectural Catalogue of Charles Scribner's Sons.

In addition to the above awards, which are made for each one of the monthly competitions, ARCHITECTURE will present three medals at the end of the twelfth competition, one of gold, one of silver, and one of bronze, to the three designs chosen from among the monthly winners which, in the opinion of the jury, show the greatest merit in design.

Eligibility: Architects, draftsmen, and students are invited to enter one or all of these monthly competitions. It is not necessary that a competitor be a subscriber to ARCHITECTURE. A competitor may submit one or more designs in any of these competitions, but not more than one prize will be awarded to a competitor in each.

Requirements: One sheet (paper, not cardboard) only is required for the presentation of each design. It must be exactly of the size indicated in the sketch diagram herewith, the border margins left blank excepting for the nom de plume or other identifying device. The drawing may be in line or wash, or both, but if in wash it should be in monochrome, preferably in India ink. Indicate all scales graphically. To preserve the anonymity of drawings, each is to be signed with a nom de plume which is also written upon the outside of a blank white envelope containing the competitor's name and address. Drawings may be sent flat or rolled, and are to be addressed "ARCHITECTURE, Competition No. —, 597 Fifth Ave., New York, N. Y." The closing times given below are for receipt of entries at the office of ARCHITECTURE, rather than the closing by postmark date—this being necessary in order that judgments can be made and published in the following issue of the magazine. In justice to all, no questions regarding the competitions can be answered.

Drawings awarded prizes become the property of ARCHITECTURE for publication and for any other use at the publishers' discretion. Other drawings will be returned to the senders only if postage is included.

Programmes for Competitions IX, X, and XI

Competition IX. Closing December 1, 1927, at noon.
Subject: Working-drawings of a Palladian window in the gable end of a shingled house. Show all details required for proper execution of the work, utilizing whole sheet as nearly as possible. Design will count 70 per cent, excellence of drawing 30 per cent, in the judging.

Competition X. Closing January 2, 1928, at noon.
Subject: The fireplace end of a living-room in a house adapted very simply and inexpensively from the Spanish. The width of the room is 15 feet; height, 9 feet to bottom of ceiling-beams. Show elevation of room end at 1/4-inch scale; plan and section of fireplace, and any larger-scale details.

Competition XI. Closing February 1, 1928, at noon.
Subject: A gasoline and service station on the outskirts of a New England town. The property is a southeast corner, 100 feet square. Show plan of whole plot, two elevations, and a birds'-eye perspective.
Collaboration Between Architect and Contractor

By W. A. Starrett

VICE-PRESIDENT, STARRETT BROTHERS, INC.

Such a wealth of speculation—l might say idealism—is unfolded by the possibilities of collaboration between architect and contractor—or, more properly, between architect and builder—that to begin the subject almost anywhere leads to so wide a range of possibilities that one must almost from the first select some important phase and stick closely to that text, lest he unconsciously launch out into a general dissertation on the whole building business. Yet there is much to be said on the question in a general way if we first get a few of the definitions squarely set forth.

Collaboration may be of very different kinds, according to the time and occasion and the nature of the business arrangement that governs the problem in hand. Yet the ideal collaboration must start very early and, indeed, might properly be called the collaboration between the owner, architect, and builder. If the builder also is a contractor, who agrees to perform for a given price, the collaboration could well begin when the problem is under consideration for its solutions, and long before that price is fixed. How often do we all see those completed drawings all crisscrossed with changes, and addenda representing a belated collaboration between architect and contractor, when, through the twelfth hour of business closing, the project is cut and slashed and emasculated to bring it within a financial budget that was about the first determined factor of the problem.

But even when this budget is not inflexible—when a come-and-go is squarely faced by the owner—how often the fresh knowledge and fresh point of view of the builder, gained by the intensive pursuit of a large, going business where costs and methods are constantly before his mind, bring a tardy recognition that some things could be better, some things could be changed, and, indeed, some things omitted, all to the betterment of the project.

There is no use talking collaboration unless we define where it begins and under what auspices it is approached. "You boys get together and work it out," is the refuge of a bewildered mind, particularly when the owner has made a fiduciary deal with one element—the architect—and invited caveat emptor in his hard-driven bargain with the contractor. There is very little opportunity for collaboration here. Few architects and owners realize the tares that such a deal is liable to sow. The wonder of it is that things work so well under such contending forces, and it is to the credit of the contractor that so many of these alliances come through successfully.

Idealized, collaboration should start when the project is conceived. Let the owner regard the builder as he does his architect—a co-equal adviser who has valuable knowledge of ways and means and the costs thereof—who has pride and joy in accomplishment and whose concern is not to see how much he can make, but how well it can be done.

Here we have the true professional basis and the foundation of all the great economies of construction. Management, yes, and painstaking supervision—everlasting vigilance as to costs as the work progresses, alertness to clear definition and organized forethought—all these all must be of the essence of the builder's ability. But these are only a part. The big decisions, the selection of the elements—the factor of actual and probable cost laid side by side and weighed with the question of desirability—there is where the money and time are saved in rich measure.

In the building of great metropolitan structures, two things are spent, time and money. No one is more prodigal of time than the average owner in the early days of consideration of his project. Important decisions are postponed for no other reason than that they are difficult—and they are often difficult because of the uneasiness at what they cost and what they entail. On these the competent builder can throw light; yet he is generally kept aloof, or, indeed, not consulted at all, and the conferences go lamely on their way, vague assumptions as to costs mounting their predecessor, until the final awakening—where was the builder? He was out in the market-place with a vast amount of pertinent knowledge, but held aloof awaiting that field day and elimination race which should in some way recoup the owner from imagined losses that would come to him through taking the builder into his original conferences.
The building industry is an ever-changing complexity. New forms and new methods are constantly arising, and of these, both as to practicability and availability, the owner and architect should have specific confirmation. The builder is best qualified to give these, but he must know the basic problem and be in the conferences before it is too late.

Let the owner and architect cease to regard the builder as a vendor of buildings, for such he is not. The fallacy leads to a deal of trouble and unending misunderstanding. If, after the owner and architect have fully digested the money value of their decisions and the true nature of the function the builder performs, it is desirable to agree upon the cost, then the builder properly becomes a contractor, and, after all, all he is guaranteeing is the cost of a certain number of elements, the total being the money value of the decisions reached.

Then collaboration in its finest sense has been accomplished and the results can be gratifying to all concerned.

There is a vast field here, and it starts away back with the understanding of what the building business really is—not a lot of scrambling claimants who pretend to be able to do anything cheaper than any one else, but a sound, logical business that recognizes its responsibilities, its problems, and its limitations; that has something to offer in the way of an immensely valuable service; whose claim to recognition comes of long experience and mature judgment. Architects of considerable standing and experience recognize these things, and in recognizing them they lay the foundation for the most effective and fruitful collaboration. Co-operation becomes synonymous with it, and the outcome is the rich reward of a fine accomplishment.

Charles Keck, Sculptor

Carrere and Hastings, Architects

Office Procedure of Ludlow & Peabody

By Robert W. Blodget

EARLY all architects’ offices are organized to handle the work which comes to them, in a systematic manner. However, as the circumstances surrounding the various jobs are never exactly alike, the system has to have a certain degree of flexibility. The work in our own office generally moves through its various stages in about the manner outlined below.

It used to be considered sufficient to have a letter of authorization from the owner, and, in fact, architects in many cases were reluctant to broach to their client the subject of a formal contract. This letter usually did not cover many of the points where there might be possibility of dispute and left the door open for all kinds of misunderstandings in case of suspension or termination of the agreement, changes in working drawings and specifications, etc. I am glad to say that the majority of architects now realize that carrying on business without having their relation with the client definitely established by a contract is most unbusinesslike, and are presenting contracts to their clients for signature. The American Institute of Architects has standard contracts covering the several accepted forms, and we always have one of these contracts signed in the initial stages of the work.

The programme comes next. We examine the building plot and surrounding conditions, developing the requirements of the owner by a series of conferences, and study the problem in its relation to local laws, ordinances, etc.

The sketches are next in order, and there may be a great many sketches made before all the issues are settled. The sketches determine the character of the architecture, set-backs, courts, the number of stories, and the plan of each floor, number of elevators, staircases, etc., as well as all other important features of the building. We, at this stage, generally go over the sketches with the building department and any other departments having jurisdiction, in order to make sure they agree with our interpretation of the code, in all important respects.

During the sketch stage we have an architects’ survey made of the premises, determining accurately all angles, levels, relation of adjacent walls, sewers, water lines, gas mains, etc., and also have test borings made to determine the nature of the strata on which the building will rest.

When the sketches are in final form and have been approved by the owner, the working drawings are started by the drafting-room. As the first step, a job captain is appointed to have charge of this job, and he may have from two to a dozen men under him. The
job captain has direct charge of preparation of the drawings, and all instructions from the firm are given to him. The preparation of the drawings is supervised by firm members as it progresses.

When the working drawings are about ten days from completion, the specification writer begins the specification, and we try to time matters so that the specification will be completed and typewritten two days after the working drawings are completed.

As soon as the working drawings and specifications are completed, the necessary blueprints are prepared and are put in the hands of a previously selected list of bidders for estimate.

At the same time that the drawings go to bidders, we prepare the necessary papers and file the drawings with the building department and any other departments having jurisdiction, and endeavor to secure a final ruling from them while the bidding is progressing, so that if any changes are demanded, the necessary adjustment can be made in price before the contract is signed.

When the bids are received they are presented to the owner and, if satisfactory, a contract is negotiated with the successful bidder and the construction work is begun by the contractor.

As soon as it is definitely established that the job will go ahead, we start our scale and full-size details, and prepare these in sequence agreed on with the contractor.

As the construction work progresses, our superintendent inspects the work at regular intervals to see that the job is progressing satisfactorily, that the quality of the work is proper, that the architectural effects are satisfactory, and to give any necessary interpretations of the drawings and specifications. If the work costs over $500,000 it is usually advisable to place on the job a clerk-of-the-works, whose duties include checking of accounts and the constant inspection of the work.

When the work is of considerable size, subcontractors' meetings are usually organized. These meetings are held weekly and are for the purpose of bringing about better understanding and co-operation between the various trades involved and between the architects and subcontractors. Each subcontractor gives a report of the progress and necessities of his work, tells the architect's representative what he wants in the way of drawings or instructions, and is allowed to air any grievances.

It is usually advisable to hold in the architects' office a weekly conference of executives, at which a member of the architects' firm, the general contractor and his superintendent, and the consulting engineers discuss the general progress and conduct of the work.

At intervals during the progress of the construction shop drawings from the subcontractors for steel, stone, terra-cotta, marble, ornamental plaster, trim, etc., are received and are checked by us and approved, or returned for correction.

At regular intervals during the progress of the construction, payments are made to contractors, after their requisitions have been checked by the superintendent in co-operation with the accounting department of our office.

When the work is claimed by the contractor to be complete, we make a painstaking check-up with the drawings and specifications and make note of any omissions or unsatisfactory work. When these matters are attended to, we issue final certificate to contractors, which, with the payment of our own final bill, closes the job off the books.

Of course, the above outline merely touches the surface. There are the architects' cost records (which we try to keep very accurately), bookkeeping, general administration, correspondence, conferences with clients, contractors, subcontractors, etc., and many other services of a miscellaneous character, which are necessary throughout the duration of the job.

**The Office Personnel of Ludlow & Peabody**

**New York City**

*First Row, Sitting (left to right): Ernest G. Mason, William Orr Ludlow, Charles Samuel Peabody, Robert W. Blodgett, Robert W. Mautz, Paul W. Drake*

*Second Row, Standing (left to right): Harold R. Stroh, Gladys R. Benson, Ruth R. Weiss, Emanuel Kandel, Lewis Gersh, William H. Baum, Thomas W. Craddock, Barrett Alger*

*Third Row, Standing (left to right): John H. Victor, Muriel Van Hoosear, Charles J. Hoffman, Arthur H. Gilksen, Frank Kirkpatrick, Charles E. Nelson*
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The vast size of our office buildings, the large number of hospitals, the intense reading requirements of our universities, the delicate experimental work of our modern laboratories, the long rows of merchandise in our department stores—these things must have proper lighting diffusion.

Artificial light that has as far as possible the qualities of Nature's daylight finds its place as the artificial light of the houses, offices, schools, and factories of the immediate future and, as far as one can now see, of the distant future.

LUPTON CASEMENT WINDOWS

A valuable and handsome new book has just been issued by David Lupton's Sons Co. on their casement windows. It is replete with details and other useful data.

ELECTROL, INC.
The Electrol All-Electric, Entirely Automatic Oil-Burner is fully described in a new folder issued by this concern. This burner has rendered superlative service in many homes and buildings.

"ALPHA AIDS"

An A-No. 1 house-organ from the Alpha Portland Cement Co.

SAFETY STAIR TREAD CO.

A new folder describes the Wooster Safe Groove Treads and Security Nosings.

"STAINPROOF"

The announcement by the Master Builders Company of Cleveland, Ohio, inventors of Colormix, colored integral concrete floor hardener, of "Stainproof," a new method and material for protecting new floors, indicates that with this phase of the work protected, the entire process of producing a perfect concrete floor has now been brought under exact control.

LATEST IN EFFICIENCY KITCHENS

A sink, a china closet, and an electric refrigerator are all included in a space no larger than a piano-box in kitchen equipment designed for the magnificent ten-unit, 4,000-apartment Tudor City development in New York. This compact kitchen unit, set in a recess in the wall, and hidden by curtained doors when not in use, was worked out by architects of the Fred F. French Company, the builder, and Frigidaire Corporation.

"TRIANGLE NEWS"

This house-organ, from the Richardson & Boynton Co., always contains a great deal of interest.

WARREN WEBSTER

A new booklet announces another new product for use in Webster systems of steam heating—the Webster drip trap. This is a compact, easily installed heavy-duty trap, with float-valve mechanism for handling water of condensation, and thermostatic valve for handling air.

ARCHITECTURE'S SERVICE BUREAU FOR ARCHITECTS

ARCHITECTS AND EVERY ONE INTERESTED WILL FIND HERE THE LATEST AND MOST UP-TO-DATE INFORMATION ON BUILDING EQUIPMENT AND ACTIVITIES IN THE INDUSTRY. THESE PUBLICATIONS MAY BE HAD BY ADDRESSING ARCHITECTURE'S SERVICE BUREAU FOR ARCHITECTS, 57TH FIFTH AVENUE, NEW YORK. OUR SERVICE BUREAU WILL OBTAIN ANY OTHER CATALOGUES OR DATA YOU REQUIRE.

"KELVINATOR ELECTRIC REFRIGERATION"

This book has been written to aid the architect or builder of to-day in arriving at a practical solution of the problem of refrigeration. The development of electric refrigeration to its present extent has made possible a source of cold which is silent, uniform, and completely automatic. Kelvinator presents herein complete data to enable the architect or builder to select the proper Kelvinator equipment for all classes of refrigerating usage.

MINWAX CO.

A new folder discusses the function of waterproofing in connection with concrete exposed to the weather.

NATIONAL LIME ASSOCIATION


FITZGERBINS BOILERS

Bulletin No. H-7 describes Fitzgibbon Steel Heating Boilers, which are compact, brickless, and dependable.

SHOWER AND FIXTURES

The Speakman Co. is issuing some very good leaflets on its new art line in shower and fixture designs.

JAMISON AND STEVENSON IN MERGER

A short time ago there was brought about the merging of the productive, distributive, and financial facilities of the two largest and oldest manufacturers of cold-storage doors and allied products. The parties figuring in this huge pooling of interests were the Jamison Cold Storage Door Company, Hagerstown, Md., and the Stevenson Cold Storage Door Company, Chester, Pa.

CELESTIALITE

Architects will find these samples and booklets from the Gleeson-Tierbout Glass Co. of extreme value: A fragment of the glass to show the unique three-layer construction; Catalogue No. 77, illustrating plain Celestalite; Folder illustrating decorated Celestialite units; A. I. A. folder with descriptions and uses.

"ONONDAGA CUT CAST STONE"

The Onondaga Limestone Co., pioneer in the manufacture of Cast Stone, presents this new book to architects that they may have complete information on the characteristics and possibilities of this building material. Manufacturing processes, methods of finishing, and practical suggestions for its most efficient use are offered, with illustrations of the most popular finishes.

BURKON CO.

This concern has recently issued a pamphlet, "Corrosion in Kitchen Waste Systems," by M. W. Smith. The writer discusses a wide variety of problems involving corrosion.
Wood Window Detail Suggestions

**Detail A:** An Austral Window with Plaster Jambs Suitable for Schools, Office Buildings, Etc.

**Detail B:** An Austral Frame Adapted to Stone with Hard Wood Interior Finish.

**Detail C:** Mullion Through Upper Jamb With I Beam Reinforcing.

**Detail D:** Mullion Through Lower Jamb With T Bar Reinforcing.

**Detail E:** Suggested Treatment for Concrete Walls.

**Detail F:** Showing a Terra Cotta Mullion Reinforced with An I Beam.

**Detail G:** Showing a Terra Cotta Mullion Reinforced with Angles.

Please mention Architecture in writing to manufacturers.
The Way One Architect Solved The Link-up of Residence and Glass Garden

It has all the advantages of handiness for the owner, and believe you will agree, has none of the hitched-on-effect that such link-ups so often have.

The snug little work room, aside from its essentialness for the greenhouse, also gives ample room for the gardening tools that usually clutter up the garage.

The greenhouse proper is 18 x 33 and of iron frame construction. The straight, in place of the curved eave, was used because of its closer complement to the work room lines.

It is heated by hot water with an independent boiler in the work room cellar.

Being independent, not only works for coal economy but affords a control most favorable to the plants.

Having been building greenhouses for over half a century, we are in a position to cooperate with you to the fullest meaning of that much abused word.

LORD & BURNHAM CO.
Irvington, N. Y.

Continental Bank Bldg., Chicago, Ill. 30 East 42nd St., New York St. Catharines, Ontario, Can.

Please mention Architecture in writing to manufacturers
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and deed

A GOOD boiler, a good looking boiler, a coal-saving boiler is this Capitol. There is in it that harmony of appearance with purpose which well foretells its efficiency. Designed to provide thrifty warmth, it looks the part openly and honestly, exhibiting the pleasing economy of line which inheres in all ably designed things.

The broad shoulders of fine-grained iron, the stout ribs of each section, the ample doors, and a generally satisfying air of competence, shine cleanly forth.

Smoothly covered with painted canvas over an insulation of asbestos cement, Capitol square boilers offer appearance more than equal to others and give savings in cost not possible in ornamented heat-makers. And insulated thus, the Capitol's lusty fire thrives on amounts of coal that would starve many another boiler. For none surpasses the Capitol in sparing the coal pile.

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Architects can secure particularly pleasing effects by using an economical Capitol square boiler for the basement den. On request, we will send complete installation data for your files.

UNITED STATES RADIATOR CORPORATION - DETROIT, MICHIGAN

6 factories and 32 assembling plants serve the country. For 37 years, builders of dependable heating equipment.
Choose Any Color~
it can now be yours in a floor of enduring Maple

MAPLE floors in color! Picture the charm and comfort they will lend to the rooms of your home. Today you can have them—at moderate cost.

By a process recently discovered, Maple flooring—hitherto available only in its natural golden hue—is made to take a permanent, even stain of any tone you choose.

From light, cool green to deep, mellow brown, from delicate sky blue to rich, rare ebony!

And with this transparent staining, the delightful natural pattern of the wood becomes more visible—develops a richness never before seen in any floor.

Thus Maple, long known to be the smoothest, most resilient and comfortable, most enduring of all fine flooring materials, now offers you a wealth of distinctive new opportunities for color harmony throughout your home.

If you are planning to build or re-floor, choose Maple for the floors...enjoy this element of color and the homelike atmosphere which only a product of nature can bring.

And know that, in selecting Maple, you are assured of flooring satisfaction that will last as long as the home itself. Write for the free illustrated booklet, 'The New Color Enchantment in Hard Maple Floors.'

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Guaranteed Flooring—

MFMA The letters MFMA on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture, and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade mark is for your protection. Look for it on the flooring you use.
The FAT of the Lime is harder...

You can get more out of Urschelime architecturally because it is better adapted to most any kind of treatment. You can develop surprising and pleasing effects. For real lime plaster beauty, sturdiness and better acoustics, specify Urschelime.

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GENERAL MOTORS BUILDING
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Engineer: Clyde R. Place
General Contractor: G. Richard Davis & Company
Plumbing Contractors: J. L. Murphy, Inc.
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As in other of America's foremost buildings, "NATIONAL" was selected for the major pipe tonnage — another proof of high quality and dependable service.

"NATIONAL" Butt-weld Pipe (sizes ½ to 3-inch) is the only pipe made by the Scale Free Process.

NATIONAL TUBE COMPANY
Frick Building, Pittsburgh, Pa.

Please mention Architecture in writing to manufacturers
The Organ Screen here illustrated, is taken from the interior of the Trinity Lutheran Church of Fort Wayne, Indiana.

It is a good example of sympathetic interpretation of architects design by our Wood Carving Division.
A new 36-story skyscraper now towers 546 feet above the street in the very center of New York's financial district. Massive in design, constructed of granite, limestone and brick, the Equitable Trust Co. Building has already become a new landmark.

It stands on a well-known corner, the site of the historic red-brick Mills Building, in its day considered the largest and best-equipped office building in the world. Adjoining is the well-known structure of J. P. Morgan & Co.

In the Equitable Trust Building, every precaution is being taken also to safeguard the future tenants against unsatisfactory service of any sort. It is significant that genuine Jenkins Valves were chosen for use throughout the plumbing, as well as for the all-important fire protection service. Jenkins Bronze Valves, Jenkins Iron Body Valves, globe, gate and check types, in standard, medium and extra heavy patterns—all are represented in this building.

The specification of Jenkins Valves is well worth your while as it insures your clients of long trouble-free service. The Jenkins Diamond mark without which no valve is a Jenkins, signifies a valve of 60 years' good repute, a valve well designed and well made from analyses proved metals.

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80 White Street ...... New York, N. Y.
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JENKINS BROS., LIMITED
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Please mention Architecture in writing to manufacturers
“Having tried your corkboard out on my own house, I am confidently recommending its use to my clients.”
—Carina Eaglesfield Mortimer
Architect

“I am confidently recommending its use to my clients”

CARINA EAGLESFIELD MORTIMER, Architect, of New Haven, Conn., used Armstrong's Corkboard for the insulation of her own home in New Haven. And after experiencing the benefits of cork insulation during both winter and summer, Mrs. Mortimer wrote:

“As you possibly remember, our house has a jacket on the walls and roof of your corkboard. Last winter the house heated very quickly and held the heat remarkably long, keeping the coal bills well below estimate. The hottest days this summer the house was cool, many degrees lower than any city house I have been in before in the summer, notwithstanding the fact that we have no attic and use the room under the roof for master bedrooms.

Having tried your corkboard out on my own house, I am confidently recommending its use to my clients.”

The advantage of cork-lining the house for both comfort and economy is unquestionable. From the structural standpoint also, Armstrong's Corkboard meets every requirement. The recommended thicknesses—1½-inch for walls and 2-inch for roofs—are easily erected in a single layer. Plaster is applied directly to the cork without lath. Furthermore, corkboard is non-absorbent, vermin-proof, and fire retarding.

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The 7 products shown in this advertisement are those used in the famous "Genfire 7-point Houses" throughout the country. If you wish further information on all of these products write us and we will send complete literature.

Herrin
Doublemesh

Please mention Architecture in writing to manufacturers
of Your Plaster?

This is the famous Doublemesh — 8 plaster-gripping steel strands to the square inch. Your assurance of safety, beauty and long-time economy.

HERE on this page you can see the Herringbone mesh with its double rows of steel strands. The unretouched photograph on the opposite page shows the back of a wall plastered on Herringbone Doublemesh. This photograph illustrates how the plaster curls through and around the mesh in opposite directions forming a permanent bond.

The fact that Herringbone Doublemesh has withstood shocks such as the Santa Barbara, Mexican and Japanese earthquakes proves the superiority of the Doublemesh principle. When you use Herringbone you have positive assurance that your interiors will remain free from cracks and lath streaks. You know, too, that your walls are stronger, more rigid and firesafe. Actual use will point out construction economies in Herringbone. We will gladly furnish you full details of Herringbone construction. Complete literature will be sent on request.

GENFIRE STEEL COMPANY
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MANUFACTURERS OF COMPLETED LINE OF FIREPROOF BUILDING PRODUCTS, ALSO WATERPROOFINGS AND CONCRETE PRESERVATIVES.

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They are concrete evidence of Crescent Leadership—extending over a period of 35 years, and based on Speed, Efficiency and Economy of Operation.

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laid in mastic, directly over cement, without nails or wooden studs. Or over subfloors, using one nail only to each block. An exclusive (patented) Bruce oak flooring development that adds more than its cost to the selling value of a home or apartment.

At last! a beautiful block pattern oak floor at very little greater cost than the usual strip flooring. The Bruce fabricated block solves the problem of the design floor for the average home or apartment, affording greater distinction in principal rooms, and giving the investment builder an opportunity to achieve variety and interest in floors.

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Now used as an ice-pick!
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But when door butts wear down, the cost of new ones, plus the cost of replacement, greatly exceeds the cost of Stanley Ball Bearing Butts if you specified them originally.

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The elevators in this hotel are completely Wagner equipped.

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LINE your house with it and you will be assured of an indestructible fire-proof and vermin-proof guard at very little expense.

Being a perfect insulator it keeps out the cold air in winter, affording a remarkable economy in fuel, and for the same reason keeps out the heat in summer.

A house protected with Mineral Wool is many degrees cooler in summer than any other.

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The adoption of the AMBLUCO Non-Slip Stair Treads in all these schools is strikingly significant of this purpose.

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Depends upon the refrigerator cabinet. Regardless of the type of refrigeration you plan to use—the quality of the installation will be no better than the quality of the cabinet.

OREOLE Refrigerators—by virtue of scientific design—painsstaking construction and heat-saving insulation—develop maximum efficiency from ice or machine.

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Architects who require assistance in developing specifications and budgets for FURNITURE, UPHOLSTERY and DRAPERIES will find the REINHARD COMPANY an important factor in handling the many details incidental to the successful completion of their work. Reinhard facilities have been called upon in the decorative treatment of many of the country's notable public buildings, clubs, hotels, and residences, and they can serve you with equal success and thoroughness. Write for 1928 Catalog.

References:

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Temperature rise not more than 40° Centigrade in the hottest spot. Built in all standard sizes from 1/8 to 40 horse power.

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LESS than one-fourth of all fireplaces are successful. The other 75% smoke, throw off soot, burn poorly, unevenly or not at all. It isn't a question of cost. Some of our most expensive fireplaces won't permit a fire. It's because they are constructed wrong and have poor equipment in them.

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Better still, write and let us send you a complimentary copy of the authoritative Fireplace Book—the Donley Book of Successful Fireplaces. Study the Plans in it, read what causes fireplace evils and how to avoid them. In this same book are 59 beautiful designs for external construction. Many are of brick, others are of stone, wood, etc. Get your copy now.

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The Donley Brothers Co. 13955 Miles Avenue • Cleveland, Ohio

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Swartwout Surveys are prepared by Swartwout engineers under your own direction and without obligation to you. They are furnished as a means of guaranteeing your clients positive ventilation. Recommendations are backed by Swartwout and are deserving of their place in your blue prints.

Acquaint us with the work you are now undertaking and we will gladly have a qualified Swartwout engineer call at your office.

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Sheet Metal Work that Resists Rust!

The destructive enemy of sheet metal is rust. It is successfully combated by the use of protective coatings, or by scientific alloying to resist corrosion. Well made steel alloyed with Copper will last longest. Insist upon

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Add safety to satisfaction, with full protection from lightning, fire, and weather. Keystone Copper Steel gives superior service for roofing, siding, gutters, spouting, flashings, metal lath, tanks, and all uses to which sheet metal is adapted. Look for the Keystone included in brands. It means better sheet metal work. Send for our Roofing Tin booklet—valuable to architects and specification writers. We manufacture Black and Galvanized Steel Sheets and Roofing Tin Plates for every requirement in the building construction field.

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Apollo Best Bloom Galvanized Sheets
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A POIXO-P2ROXSTOSB
Rust-resistant sheets give increased service and added permanence to your building construction—the highest quality sheets produced for galvanized sheet metal work. Keystone COPPER STEEL Roofing Tin Plates make clean, safe, attractive and satisfactory roofs, supplied in grades up to 80 pounds coating, specially adapted to residences and public buildings. Added to general excellence, metal roofs may be painted to harmonize with the color scheme of the building—an important feature which is often overlooked. KEYSTONE quality products are sold by leading metal merchants, and are used by first-class roofer and sheet metal workers.

American Sheet and Tin Plate Company
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Higgin Weatherstrips are made for casement and double hung windows and for doors. They are installed only by Higgin trained mechanics. Let the Higgin expert in your vicinity give you the benefit of his experience and training in making up all your weatherstrip specifications. If you do not know him, ask the factory.

THE HIGGIN MANUFACTURING CO.
Kansas City, Mo. Toronto, Ont., Canada

HIGGIN
ALL METAL Weatherstrips

Please mention ARCHITECTURE in writing to manufacturers
Kings Highway Baptist Church, Brooklyn, N.Y. Homer, Corbett and Harrison, Architects

Hammer Beam Trusses were constructed by
McKEOWN BROS. COMPANY, INC.
Contractors and Engineers
21 EAST 40th ST., NEW YORK 5235 SO. KEELER AVE., CHICAGO
Manufacturers of Wood Trusses of all Types
Estimates and Service Sheets sent on request

Please mention ARCHITECTURE in writing to manufacturers
When Concrete MUST Be Waterproof ABSolutely

SPECIFY

Dragon

To the qualities that have made standard Dragon Portland Cement famous since 1889 (early hardening, superior strength and unvarying uniformity) Dragon Super Cement now adds that of being Waterproof Absolutely. Dragon Super Cement with nothing but the usual aggregates and usual mixing methods produces waterproof, oilproof concrete highly resistant to the attack of frost, sea water, acids, alkalis and other destructive agents.

LAWRENCE CEMENT COMPANY
302 BROADWAY, NEW YORK

Regarding Dragon Super Cement—Send your data on waterproof concrete to:

NAME
ADDRESS
TITLE

The Lawrence Cement Co.
302 Broadway • New York

District Offices:
Boston and Philadelphia

Please mention Architecture in writing to manufacturers
MUNICIPAL AUDITORIUM
MINNEAPOLIS
Croft & Boerner, Arch'rs. and Eng'rs.

Reflected the Spirit
of Minneapolis

To Croft & Boerner of Minneapolis goes the credit for this imposing edifice to serve as an auditorium for their municipality—a fitting reflection of the progress of this thriving Northwest metropolis!

In this structure Halsey Taylor Drinking Fountains were specified, wall types and pedestals of the type illustrated at the left.

Their sanitary advantages as well as their distinction and practical utility make them the foremost in their field and an ever increasing favorite with architects everywhere.

THE HALSEY W. TAYLOR CO., WARREN, OHIO
Largest Manufacturers of Drinking Fountains Exclusively

HALSEY TAYLOR
Drinking Fountains
Automatic Stream Control

Please mention Architecture in writing to manufacturers
ONLY with Natural Slate can permanent inspiration be injected into your creations.

The stamp of the Genuine is instantly apparent in a slate roof. The colors never fade—some may weather as if actually growing in sympathetic accord with their ever-changing environment, a really pleasing feature that stirs the deepest imagination.

The strong appeal in the above illustration is accentuated by a careful intermixture of contrasting unfading blue blacks with both permanent and weathering shades of purple, green and rustics.

For duplication of this roof specify Mettowee Stone roof design No. 1438.

Please mention ARCHITECTURE in writing to manufacturers
BATCHELDER PAVERS permit all the color subtleties of an Oriental Rug, or they may be used in contrasts to the extremes of "Velvet Black" and "Oyster White". These colors are the same throughout the thickness of the tile and will always remain the same. Our Pavers have the texture that comes only from a hand-made product. They may be obtained in many sizes and shapes. If color and texture are virtues, then permanence is equally desirable. These pavers are as nearly permanent as a clay product can be, —fired to high temperatures, semi-vitreous, non-slip. They have a tough, compact body that will challenge time and wear. With all these things to their credit they should lend dignity and charm to any environment. They are used for wainscots as well as pavements.

BATCHELDER-WILSON COMPANY

LOS ANGELES
2633 ARTESIAN ST.

CHICAGO
38 SO. DEARBORN ST.

NEW YORK
101 PARK AVE.
whose drawing shown below received honorable mention in the recent VAN DYKE Pencil Drawing Competition says: "In the past years I have used and experimented with many kinds of pencils in rendering my street scene subjects in which I have lately specialized. Must frankly say that No. 600 Van Dyke Drawing pencil in its various grades and fineness of quality has given results that I have looked for a long time."

An attractive portfolio showing reproductions of the prize winning drawings and those which received honorable mention in the VAN DYKE Pencil Drawing Competition will be sent upon receipt of thirty cents in stamps.

Drawn with VAN DYKE PENCILS
by LOUIS HECHEACLEIKNER

VAN DYKE Drawing Pencils are made in seventeen degrees reliably consistent today, tomorrow or whenever you buy them. They are the outcome of the 78 years of experience of the oldest pencil factory in America.

Please mention ARCHITECTURE in writing to manufacturers
DOMESTIC GOTHIC of the TUDOR PERIOD

By SYDNEY E. CASTLE, F. R. I. B. A.

In this latest work, by the well-known London architect, we are taken through the highways and byways of Old England, and given an absorbingly interesting insight, not only into the domestic architecture of this remarkable period, but also into the ideas and ideals which underlie its origin and development. Teeming with the thoughtful reflections of one who has spent a good part of his life in the sleepy byways where these old houses lie, the purely disinterested vein of the book throughout cannot fail to bring the atmosphere of these old places to the reader.

Written with sympathetic understanding, and in charming style, Mr. Castle's work is in no sense of the word a text book, but, rather, a delightful contribution to architectural literature.

Domestic Gothic of the Tudor Period is profusely illustrated with photographs and with pen and ink renderings by the author, which add much to the practical value of the book.

Price $5.00, postage prepaid

An order for this book may be sent to the International Caseement Co., Jamestown, New York or to any of their Sales Representatives. In Canada, orders may be sent to the Architectural Bronze & Iron Works, Toronto, Ontario.

Please mention ARCHITECTURE in writing to manufacturers.
A Special Feature of Rolscreens—

Cross section of screen guide in which screen travels at side of window. Note lug in edge of screen wire which prevents screen from pulling out—exclusive patented Rolscreen feature.

Rolscreens Eliminate the Fall Screen Storage Labor
SAVING SPACE—EXPENSE—TIME

ROLSCREENS Roll Up and Down
—All Metal Construction

The many noteworthy features of Rolscreens merit their selection where beauty is valued, where convenience, durability and ease of operation, and economy of upkeep are desired.

Rolscreens roll up at a touch. Entirely up they are completely hidden and protected for any length of time, saving much expense. Rolscreens are built in with the windows at no added construction expense. We give 24 hour service during the entire year.

ROLSCREEN COMPANY
PELLA • IOWA

Please mention Architecture in writing to manufacturers
The beauty of interior trim and other millwork must eventually depend on the integrity of the material. The stability of Douglas Fir makes it safe material for such work as this, living room and stairway.

Schack, Young and Myers, Architects

Add the finishing touches with West Coast woods

Finish and trim—interior and exterior—exact careful adherence to correct curve and line—and should last as well and as long as the structural portions of the building. For no matter how beautiful the proportions of cornice and trim, they become defacements if they show deterioration.

Douglas Fir has a texture that enables the millwork man to follow your details accurately—gives you sharp, clean corners, smooth curves and flat surfaces. West Coast Hemlock has a smooth, close-grained texture that takes a finish like a hardwood. It is a splendid base for enamel. Douglas Fir and West Coast Hemlock flooring are light and even in color—and remain so—are smooth wearing, and long wearing. The wide, clear sizes of Sitka Spruce are desirable for drain boards in the kitchen—any use where there is a need for wide, clear pieces that will lay flat and stay flat.

Douglas Fir millwork resists decay—retains its charm. It need not even be all heartwood, although that is an easy specification to meet in Douglas Fir. Sapwood of Douglas Fir has exceptional durability even in exposed places such as exterior trim, verge boards, cornices and gutters, when it is well drained and well ventilated.

Douglas Fir, West Coast Hemlock, Sitka Spruce and Western Red Cedar all make good siding. The Fir is inherently more durable, but the soft and resin-free Hemlock and Spruce are equally durable on a well-painted house. The Cedar, as siding or shingles, will outwear the house, whether painted, stained, or left to weather to its own soft tones.

Paint, stain, varnish, enamel and wax finishing are equally successful on Douglas Fir, West Coast Hemlock, Sitka Spruce and Western Red Cedar. Nails and screws hold tightly—hardware stays in place. Your local millwork concerns can supply finish in West Coast woods to your details or in good stock patterns—at a reasonable price. Why not have specific, technical information on these woods in your files? We will be glad to send it to you. Just address West Coast Lumber Bureau, 12-D Mt. Hood Bldg., Longview, Washington.

Durable Douglas Fir

Important West Coast Woods — Douglas Fir - Sitka Spruce - West Coast Hemlock - Western Red Cedar

Please mention Architecture in writing to manufacturers
Quality "From Mine to Market"

Along the route of "Mine to Market" manufacture, Wheeling Standard Pipe accumulates the qualities essential to continued trouble-free performance at lowest cost.

It possesses 30% more tensile strength than iron pipe—50% greater ductility—and is entirely free from hard spots. The production exceeds the total iron pipe tonnage by thousands of tons per annum.

Because of its distinct economy in both first and last cost, Wheeling Standard Pipe is being used in many of America’s finest office buildings, factories, apartment buildings and in thousands of homes, large and small.

You can write "Wheeling Standard Pipe" into the specifications and know that installations will be uniformly satisfactory. The builder and pipefitter benefit, too.

Wheeling Standard Pipe was used in the New Bank Tower, Detroit, Michigan. 26 years of proven pipe performance is behind every installation.

Architect:
Louis Kromer, Detroit

WHEELING STEEL CORPORATION, WHEELING, WEST VIRGINIA

Please mention Architecture in writing to manufacturers.
Only with Tiles ... can you secure this unique eave effect

Observe the fascinating shadow cast by the irregular eaves of this roof of IMPERIAL Roofing Tiles. Only by employing tiles can you obtain this and other equally interesting effects.

Aside from making a home more picturesque and colorful, IMPERIAL Roofing Tiles have further advantages you ought to know. They keep a house cooler in summer and warmer in winter; provide protection from fire as well as from the elements, and seldom if ever need repairs.

Thus, in the end, they prove themselves the most economical roofing material you can possibly specify. Write for color folder which pictures and describes a wide variety of shapes and shades.


IMPERIAL Roofing Tiles

Please mention ARCHITECTURE in writing to manufacturers.
Just the Right Color Accent

For the wainscot, cap, fascia and brackets pictured above Mr. Strong found—in the soft blue gray of Alberene Stone—just the right color accent for the effect he sought. This color, found only in Alberene Stone, offers the architect unlimited possibilities in color harmonies and contrasts, while the physical properties of the stone meet every requirement. Illustrations of typical work may be had from the Alberene Stone Co., 153 West 23rd Street, New York.

Alberene Stone

A natural stone of diversified architectural utility

Please mention Architecture in writing to manufacturers
LIGNOPHOL

is a penetrating preservative for wood floors

ARCHITECTS and Engineers will be interested in this letter, shown here. It proves Lignophol is no mere surface dressing. This penetrating preservative gets into the interior wood cells and fibres, filling them with natural life-giving gums and oils.

Lignophol protects new and old wood floors against splitting, cracking, warping and rotting.

Linseed oil, shellac, varnish and so-called preservatives cannot do this. They quickly evaporate or wear away and must be renewed ever so often.

You can assure your clients that Lignophol for a period of years will keep their floors looking new and strong. They will appreciate its economy when they know that it saves considerable money that would otherwise be expended in frequent renewals and repairs.

Lignophol Wax Finish—for floors in residences, apartments and for dance floors. Produces a medium or high polish. Already contains wax and need only be polished six hours after applied.

Lignophol is manufactured in four standard colors: Natural, Light Brown, Medium Brown and Dark Brown. Easily and quickly applied with long-handled or flat, wide brush at minimum labor cost. One application lasts for years.

Be sure to specify Lignophol—a Sonneborn Product.

Some Other SONNEBORN Products

LAPIDOLITH

HYDROCIDE
A complete line of water and damp-proofing products for walls, copings, foundations.

CEMCOAT
The paint that stays white when others turn yellow. Can be washed again and again. Adheres to brick or concrete as easily as wood.

L. SONNEBORN SONS, Inc.
114 Fifth Avenue, New York

Please mention Architecture in writing to manufacturers.
Sash Operating Problem No. 22

Operating Top Hung Bank Sash

At the Corn Exchange Bank, the sash are light-weight bronze, some in single and some in double row. All operating parts except those across the face of the windows were to be concealed in the walls.

The shafts were kept on a line with the bottom rail and all exposed parts constructed of solid bronze to correspond with the sash.

Because of the depth of the window jambs at some points, it was necessary to make a special connecting arrangement so that the shaft and vertical rods could be kept close to the sash. Thus the chases would not have to be of excessive depth.

This is one of a group of differing window operating problems that will be presented each month. Reprints of this series of problems will be mailed on request. Likewise a special American Institute File Folder to contain them.

Please mention Architecture in writing to manufacturers
The windows in good taste

In a corner of our home office stands a battery of files filled with photographs of homes in which Lupton Casements have been installed. You would be interested in looking through these pictures, for the variety of window treatment they show. Every type of architecture is represented—from English to Pueblo—every type of construction from log to stone. And you would note that, in each instance,

Lupton Casements have contributed a goodly share of interest and beauty to their surroundings.

In varied groupings or in strict and single simplicity, Lupton Casements lend scale to exterior walls and intimate charm to the rooms inside. They are windows in good taste for every home.

Will you let us send you our newest catalogue, No. C-417?

DAVID LUPTON'S SONS COMPANY, 2227 N. E. Allegheny Ave., Philadelphia

Please mention Architecture in writing to manufacturers
A Modern Invention for Modern Interiors
A Combined Air Circulating and Lighting Unit

NO LONGER need you have the old-fashioned, draft-creating, after-thought fan. Within your chandelier fixture you may have a fan to turn on and off at will—to circulate the air. No drafts result from the Fandolier because the moving air is gently diffused by a patented deflector.

Chandelier manufacturers recognize the importance of the Fandolier by designing their latest models around it. In many hotels, bank offices, restaurants, clubs and private dwellings throughout the United States are to be found the new Fandolier—fan and chandelier. This invention does away with duplication of interior equipment . . . The Fandolier may be ordered through any fixture manufacturer, or you may order direct from us stock units as illustrated in the Fandolier Catalog (A. I. A. File No. 31/23). Truly the Fandolier is a modern invention for modern interiors.

Diagram above shows Fandolier-Chandelier, stock type, ready for installation, which may be ordered direct from us.

Please mention Architecture in writing to manufacturers.
THE dignified beauty of the interior of Fort George Presbyterian Church well reflects the craftsmanship of De Long.

All woodwork from the church seating to the delicate hand-carving on the organ case was designed, executed and installed by us. In this, as in all De Long installations, a responsible officer of our organization personally followed each detail from the time of the first contact with the architect to the final completion of the work.

FURNITURE BY DE LONG
FOR CHURCHES • LODGE BUILDINGS • PUBLIC BUILDINGS

Please mention Architecture in writing to manufacturers
In memory of those who died for our country

It is fitting that the memory of those who gave their lives on the battlefield should be preserved for the nation. Fitting, too, that their deathless valor be enshrined in memorials whose beauty is as enduring as the heroic qualities for which they are the symbols.

In Rock of Ages granite one finds the ideal material for war memorial work. Its pure beauty remains unchanged through time and the stress of weather; its firm, even texture delights the sculptor; it is equally suited to designs that call for broad, plain surfaces or to those demanding intricate carving.

Our Certificate of Perfection, when requested from any memorial dealer, assures you of our personal inspection through the various stages of completion and is your perpetual guarantee against defective workmanship and material.

Write for Booklet "A"

Rock of Ages
"The Flawless Barre Granite"

ROCK OF AGES CORPORATION
BARRE, VERMONT

Please mention ARCHITECTURE in writing to manufacturers
THE CLARENCE BUCKINGHAM MEMORIAL FOUNTAIN, CHICAGO
BENNETT, PARSONS & FROST, ARCHITECTS

WORLD'S LARGEST FOUNTAIN

Exhaustive tests of many building stones resulted in the choice of Georgia Marble as the outstanding material for this great fountain. The elements and the intermittent drenching from the streams of water from the fountain itself will have little effect on Georgia Marble because of its impervious character. Any building stone that can meet the exceptional requirements, which the designers and builders of this fountain laid down, may well be chosen for any important structure where beauty, strength, durability, and workability are of importance.

THE GEORGIA MARBLE COMPANY • TATE • GEORGIA

Please mention Architecture in writing to manufacturers
When the Sidehill Location Necessitates RAMPS

LOCATED on a steep side-hill, ramps were necessary at each entrance to this building. Surfaced with Alundum Ceramic Mosaic Tile they are non-slip in wet weather or in dry.

Wherever conditions require ramps one of the Norton Floors products will usually prove effective. They are slip-proof and exceptionally wear-resisting.

Please mention ARCHITECTURE in writing to manufacturers
# ARCHITECTURE'S SERVICE BUREAU FOR ARCHITECTS

**WHAT TO SPECIFY**

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