THE
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Entered as second class matter May 22, 1903, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Printed in U. S. A.
If you take an ounce of dry sand, an ounce of dry gravel, and an ounce of dry cement and place each in a separate dish in the sun and add an ounce of water to each, you can find out an important fact about concrete.

After a few hours, there will be no moisture in the sand—it will weigh an ounce again. There will be no moisture in the gravel—it, too, will weigh just the original ounce. But the cement will have become a different mass. Instead of a dry powder, it will be a dry solid and it will weigh slightly more than an ounce—the water has added something.

Water, being volatile—that is, having a tendency to evaporate—entirely vanishes from any substance unless a chemical inter-action holds some part of the water permanently. Cement does this. However, this additional fact is to be observed, an ounce of dry cement plus an ounce of water does not result in a two-ounce solid. Why?

The process we term “setting” in concrete always involves some evaporation of the mixing water. Think of the amount of water you use to make concrete. It is enough to make sand, gravel and cement a workable mass, easily sluiced or poured—much more water than the cement will permanently retain. Much of the water obviously will evaporate leaving in the concrete mass millions of tiny spaces. Concrete is porous because one volatile substance, water, is used in making it.

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ARCHITECTS' ANNOUNCEMENTS

Announcement is made that the office of Louis H. Rush, architect, 1520 Locust Street, Philadelphia, Pa., has been closed indefinitely.

Warne, Tucker, Sillung & Hutchison, architects, Charleston, W. Va., are revising their files in accordance with A. I. A. document No. 172, and would be pleased to receive manufacturers' samples.

William Westerfield Havens, architect, builder, engineer, announces the removal of his office from 227 East 178th Street, to 400 East Tremont Avenue, Bronx, New York City.

Chas. M. Losejager, R.A., architect, announces that he has dissolved his office from 102-46th Street, Corona, L. I., to his residence at 1801-147th Street, Whitestone, L. I. and will there continue the practice of architecture and building operations throughout the City of New York. He has also opened an office at 50 Glen St., Glen Cove, Nassau Co., L. I.

Rowe, Dillard & Rowe, architects, announce the removal of their offices to Suite 1916, Engineering Building, 205 West Wacker Drive, Chicago, Illinois.

Fuller & Stickle, architects, announce that they have dissolved partnership. Mr. Fuller will stay in the present office 721 Commerce Building, Erie, Pa., and Mr. Stickle has moved to 227-28 Commerce Building, Erie, Pa. Both request manufacturers' samples.

W. Ward Williams, registered architect, announces the removal of his office to Suite No. 712-713, Fitzsimons Building, 331 Fourth Avenue, Pittsburgh, Pa.

William Reichert, formerly a member of the firm of Ottenheimer, Stern & Reichert, and Sidney C. Finck, formerly associated with the same firm, announce the formation of a partnership for the practice of architecture. The new firm of Reichert & Finck has its offices at 35 South Dearborn Street, Chicago.

George C. Nimmons & Company, architects, announce the removal of their offices to 333 North Michigan Avenue, Chicago, Ill., and the change of the firm name to Nimmons, Carr & Wright to include George Wallace Carr and Clark C. Wright who have been associated with the firm as partners for the last eleven years.

Joseph A. Graft, architect and engineer, has established his office for the practice of architecture and engineering at Box 764, Pittsburgh, Pa., and would appreciate receiving manufacturers' samples.

Rudolph P. Miller, consulting engineer, announces the removal of his offices to The Architects' Building, 101 Park Avenue, New York City.

Leon E. Stanhope, architect, announces removal of his office to the Thirty-First Floor, Pittsfield Building, 55 East Washington Street, Chicago, Illinois.

Harry M. Haskell and Leo E. Considine, architects, have formed a partnership under the firm name of Haskell and Considine, with offices at 612-620 Hulett Building, Elmira, New York.

Edwin S. Richards, Jr., and Manfred Mancusi-Ungaro have formed a partnership operating as Richards & Mancusi-Ungaro, architects, in the Federal Trust Building, 24 Commerce Street, Newark, N. J.

Preston J. Bradshaw, architect, has moved to larger quarters at 718 Locust Street, St. Louis, Mo.

William Templeton Johnson, A.I.A., architect, announces the removal of his offices from 502 Electric Building to 1400 San Diego Trust and Savings Building, San Diego, Calif.

Raymond G. Clifford, architect, has moved from the Gerlinger Building to 616 Guaranty Building, Portland, Oregon.

Harold O. Sexsmith and Walter W. Wade announce the formation of a partnership for the general practice of architecture, under the firm name of Sexsmith and Wade, architect and engineer, 6311 Hollywood Boulevard, Rooms 209-210, Hollywood, Calif.

The office of Holabird & Roche, architects, has been moved from Room 1400, 104 South Michigan Ave., to Room 900, 333 North Michigan Ave., Chicago, Ill.

Partnership in the architectural firm of Denham, Van Keuren & Denham has been dissolved. The practice of architecture will be continued by E. B. Van Keuren, Inc., at 407 Comer Bldg., (formerly Age Herald Building) 2nd Ave. & 21st St., Birmingham, Ala.

Charles Anderson, architect, has moved from 171 Madison Ave., to 420 Lexington Ave., New York City.

William L. Margraff, architect, has opened an office at 228 No. La Salle Street, Chicago, Ill.

Chas W. Valentine, architect, has moved from 445 Milwaukee St., to 373 Broadway, Milwaukee, Wis.


Berenson & Moses, architects, formerly of 30 Allyn Street, have moved to 352 Asylum Street, Hartford, Conn.

Carl E. Moore, architect, is now located at 345 Grant Street. Old address: 117 W. 5th Ave., Gary, Ind.

Ed. G. Hoefer, architect, 728 Keith Bldg., East 17th & Euclid, Cleveland, Ohio, formerly of Best & Hoefer, 838 Keith Bldg., requests manufacturers' samples.

A. P. Coolidge, architect, has moved to 229 Cherry Street from Interstate Bank Bldg., Helena, Arkansas.
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The three panels in polychrome terra cotta shown on the reverse side were designed by Messrs. Dennison & Hironis, Architects, to adorn the façade of the new building of the Beaux-Arts Institute of Design, 304-306 East Forty-fourth Street, New York City. They represent the three great seats of learning in the arts of Architecture, Sculpture, Painting—Athens, Rome, Paris.

The architectural setting for the panels is shown on pages 498, 499 and 502 of the current issue of the magazine.
Dennisson & Hrones, Architects
Rene Chamberlain, Sculptor

These studies were made from plaster models with applied color.

Polychrome Terra Cotta panels for the facade of the new building of the Beaux-Arts Institute of Design, New York City.
THE NEW BUILDING OF THE BEAUX-ARTS INSTITUTE OF DESIGN

DENNISON & HIRONS, ARCHITECTS

BY PHILIP L. GOODWIN

In the last three years the architectural work particularly, and the departments of Sculpture and Mural Painting, have increased so greatly that the old building of the Beaux-Arts Institute of Design, at 126 East 75th Street, has been crowded beyond its capacity. This building was formerly the private stable of Mr. Jacob Schiff and was bought by Lloyd Warren in 1914 and occupied by the Institute in the following year. It served the purpose excellently until a few years after the war, when the expansion of the work of the Beaux-Arts began to take on extraordinary proportions. The old building became thoroughly unsatisfactory practically over night, both as regards space for exhibitions, for the ornamental sculpture class and the life class, and particularly for the administration of the Institute. It was also threatened with complete submersion by two large apartment houses. All this would not have been sufficient reason to move out had it not been for the position of the school. It is so definitely on the East Side and quite a distance from the Forty-second street centre, or even the Fifty-ninth street centre, that it did not seem likely to be other than out of the way for many years to come.

The committee in search of a new site decided that the Forty-second street centre was the best one. As we could not afford to get plenty of space and still be very close to Grand Central Station, a site was found on high ground, directly adjoining Tudor City within two blocks of Forty-second Street and looking directly up to the Graybar Building. It is at this site, 304 and 306 East Forty-fourth Street, that the new Beaux-Arts Building is about to rise.

The competition for the new building, which was held last November, was won by Frederic C. Hirons with a very simple, very architectural and very appropriate design; it has been slightly modified but contains the original characteristics of the sketch. The building consists of a high basement, which includes the gallery of the exhibition hall, three floors and a set-back apartment on the roof. There has been great discussion as to the material to be used. It would have been fine to have
stone or marble, but quite out of the question on account of the cost. Space and facilities were absolutely necessary and the whole plan has been very largely based on utilitarian considerations. Beside good proportions, however, it would seem suitable to have something to differentiate this building from the loft building, for if the architects themselves do not care enough about beauty to make some slight sacrifice for it, how can they induce other people to do so? It is hoped that some day the two pieces of sculpture may be carved, although they will appear only as rough blocks to begin with. The statues shown on the design are also things of the future. Maybe some good friends of the Institute will take enough interest to present these and, at the same time, provide some commissions for sculptors.

The basement, beside the boiler room and machinery room, has a large storage space for old drawings and scenery for the Beaux-Arts Ball, etc. A large, well ventilated dining room adjoins the kitchen. There is also here a place for the sculptors' clay. The first floor has enough additional office space to take care of present requirements, with some expansion. It is well adjusted for modern metal filing cabinets and space saving devices of various kinds. The small vestibule gives another opportunity for decorative treatment by murals, provided special funds for this purpose are forthcoming. This and the façade are the only portions that furnish the slightest architectural opportunities. The vestibule leads into a large exhibition hall, sixty-five feet by forty-eight feet, with a wide gallery around it which can be used for the loges for the Paris Prize when they are needed, and for ordinary exhibition space at other times. At the back is more space available for future office expansion. Trap-doors are placed in the floor for letting the drawings down to the storage space below. Plain painted brick or plaster walls and unfinished ceilings prevail throughout.

The second floor has additional exhibition floor space which may not be required at first, but at the present rate of expansion will surely be needed before long! There is also a library on this floor for which the Carnegie Foundation has provided a fund. The whole exhibition space amounts to something like two and a half times what we now have. The third floor is simply a loft floor, entirely open, devoted to the ornamental sculpture class and an office for the resident executive secretary, Mr. Clarke. The fourth floor is exactly like the third floor and is given up to the life class and the secretary's studio. The top floor is partly covered by Mr. Clarke's apartment; this has a set-back forming a balcony on
PERSPECTIVE DRAWING OF THE NEW BUILDING
BEAUX-ARTS INSTITUTE OF DESIGN, NEW YORK
DENNISON & HIRONS, ARCHITECTS
NEW BUILDING OF THE BEAUX-ARTS INSTITUTE OF DESIGN, NEW YORK

DENNISON & HIRONS, ARCHITECTS
NEW BUILDING OF THE BEAUX-ARTS INSTITUTE OF DESIGN, NEW YORK

DENNISON & HIRONS, ARCHITECTS
WORKING DRAWING SHOWING FACADE DETAIL
NEW BUILDING OF THE BEAUX-ARTS INSTITUTE OF DESIGN,
NEW YORK
DENNISON & HIRONS, ARCHITECTS
the front and a sort of roof garden at the rear, where it is not taken up by skylights.

The new building will be amply provided with plumbing facilities, fireproof staircases and as much glass area as is possible. These are things that were conspicuous by their scarcity in the old building. It will be entirely fireproof as well. In embarking on the new building it has been a difficult question to foresee the future. At present the Institute forms a clearing house for a very large number of architectural schools all over the United States. The number of drawings that pour in for each judgment is so large that not only has it exhausted the physical space of the old building, but almost the powers of the juries. Time alone can show whether the work will continue to expand or whether some new solution will be necessary to make the judgments better still, in order to maintain the high standard—the highest in the country—which has existed in the past. Although it is not an agreeable occupation to all, and perhaps not one in which architects excel, members of the Beaux-Arts Society and Institute should actively try to spread information on the work going on here. The public is inclined to think of the place exclusively as one that has a Grand Ball once a year. Until it is more fully informed of the great and useful work that is being done, they will not give the Institute as much support as it needs and deserves.
ENTRANCE TO A MAUSOLEUM—ORNAMENT DERIVED FROM THE PLATONIC SOLIDS THE TETRAHEDRON AND ICOSAHEDRON

Fig. 7
ORNAMENT FROM THE PLATONIC SOLIDS

BY CLAUDE BRAGDON

When I delivered to the editor of The Architectural Record the manuscript and drawings for my second essay on "Ornament from Magic Squares" with the bright assurance that there would certainly be more to follow, despite his unfailing hospitality to these children of my brain, some vision of the Infinite may have for the moment daunted him, or perhaps it was only a glimpse of the ghost which haunts all editors, the Average Subscriber. Anyway, he suggested that by way of variety I should write an article on a subject of great moment to the architectural profession, because so deeply involved with the future development of the art itself. I was asked to discuss those modifications of form and design which a building undergoes or should undergo—by reason of the use of this or that material, or the employment of one or another structural method. I was to consider the architectural art not as an array of passing fashions, but as the expression, in terms of form, of varying functions.

This seemed an excellent idea, and I set to work on it at once; but presently something happened—the sort of thing that at one time or another grips every sincere artist and gives him the reputation of being "temperamental." I found that instead of writing, as I intended, about architecture as a revelation of the qualities of various materials and as a dramatization of structure, I was "still harping on my daughter"—still discussing the mathematics of the arts of design. I am reminded of a story told by E. S. Willard, the actor. He had made such a success in "The Professor’s Love Story" that he engaged Barrie, the author, to write for him another play, and they were in the habit of meeting often to talk it over. The first act went very well, but after a time Willard noticed that he saw less and less of Barrie, and that when they did meet he was constrained and embarrassed. When called to account for this, Barrie said, "Well you see this isn’t your play at all, Willard, it’s turning out to be a woman’s play, and I can’t seem to help it either," and their negotiations came to an end.

More thrifty than Barrie, I shall try to give the editor something at least of what he has asked for, and at the same time advance the discussion of mathematics as a source of design; accomplishing this dual purpose by developing fresh ornamental motifs through new devices, and then showing what modifications these would naturally undergo when interpreted in terms of different materials.

The reasons for undertaking this quest for a new ornamental mode, and for the belief that it is to be found in mathematics, are doubtless by now familiar to the reader and need not be repeated for the third time. Abandoning for the time being research along the line of magic square formations, let us go prospecting elsewhere. The reason why I so reiterantly employ this figure is because in this quest we are indeed miners, not searchers after already minted money worn by use and stamped with the heads of ancient emperors, but prospectors for that virgin gold which must be extracted from the hard rock of mathematics with labor of the mind, refined by the creative imagination, and then shaped into forms of beauty sufficiently compelling to woo all misguided seekers after pirates’ gold into these same delectable mountains where are King Solomon’s mines, let us call them, since their riches yield only to the courageous and the wise.

Now what every miner wants to find first and above all is the mother lode—the par-
ent source of all the gold uncovered by chance here and there. In our particular quest this would have its correspondence in the archetype, the form of all forms, the class of all classes. One of these archetypes, and the most inclusive and universal, is the logarithmic spiral, which is at the root of Best-Maugard’s “Method of Creative Design” and of Jay Hambidge’s “Dynamic Symmetry.” In this essay I shall deal with certain others, more suited to my present purpose. These are the so-called five Platonic solids, the symmetrical polyhedrons of three dimensional space: the tetrahedron, the hexahedron, the octahedron, the dodecahedron and the icosahedron, having respectively four, six, eight, twelve and twenty polygonal faces, as shown in illustration 1. Now, if to these we add the point at the beginning and the sphere at the end, we have a seven-fold series, archetypal in the same sense that Hambidge’s “root rectangles” and Best-Maugard’s “seven forms” derived from the spiral are archetypal, the generating figure of the Platonic solids being the sphere.

The unique, the “cosmic” character of these solids has been recognized from the most ancient times. Among the playthings of the infant Bacchus, each having its own symbolical significance, were “dice” in the form of the five Platonic solids, the implication being that upon these patterns all things in the universe are built, an idea curiously in accord with modern conceptions with regard to atomic disposition and molecular structure. Ancient Greek philosophers and modern theoretical physicists are alike in their belief that the mystery of the constitution of the universe is revealed nowhere so clearly as in number, and Plato is in singular accord with the atomists when he attributes the difference between

![Fig. 1](image-url)

![Fig. 2](image-url)
ancient philosophy and of modern science are in the true sense archetypal, the "significant forms" of which we are in search. Let us therefore force them to yield the particular thing we seek. This should not be difficult, for Nature herself points out the way, having preempted these figures for her own pattern-making, along with the logarithmic spiral, the ovoid, and other generic forms, as even the most cursory study of botany and crystallography makes plain. Having discovered, for example, that the iris and the snowflake are both related to the icosahedron, we have only

the elements to differences in the arrangement of units in space.

Although Plato in his "Timaeus" is the earliest authority for the allocation "Platonic figures," it is to Pythagoras that Proclus attributes the discovery of their elements and proportions, while Theaetetus was the first to write at any length about the octahedron and icosahedron, as he was probably the first to construct all five theoretically and investigate fully their relations to one another and to their circumscribing spheres. Plato assigns the four solids to the four elements, earth, fire, air and water (the material principles, according to Empedocles, from which the universe was evolved), and the "vessel" in which they are all contained he conceives of as the sphere, which he identifies with the dodecahedron, approximating, as it does, the spherical form, and involving an element different from the other four, the regular pentagon.

These, then, by the testimony both of

![Fig. 3](image3)

![Fig. 4](image4)

![Fig. 5](image5)
to follow Nature's method, not by blindly copying her patterns without insight or understanding, but making, with insight and understanding, new patterns of our own.

The first necessary thing is to become thoroughly familiar with the five forms under discussion, and the best way to do this is to make models of them according to the familiar kindergarten method of cutting and folding, transforming them from plane figures into solids of three-dimensional space. It would be better still could we have models of them in glass, for then the far side would be visible as well as the near side, and the interesting and intricate relationships of lines could be studied by simply turning them about in one's hand. Lacking these glass models we shall be reduced to the study of their plane projections—the projections of the solids, that is—as transparent figures, for only by so considering them will we find the thing we seek.

Illustrations 2, 3 and 4 show, first, the five forms as opaque solids of three-dimensional space; second, the same "unfolded" in the two dimensions of a plane, and third, certain chosen aspects of the forms in plane projection, that portion of them contained in the hemisphere most distant from the eye being shown in dotted lines, thus indicating the effect of transparency.

Now out of the material contained in these diagrams, if employed with skill and imagination, it is possible to construct many admirable patterns, the proof of which lies in the fact that throughout the remaining illustrations no other motifs for ornament have been introduced, and it would have been easy to multiply examples. The illustrations themselves give a sufficient indication of the method: the unfolded or projected figures representing the various polyhedrons yield a linear pattern which, employed either singly or in symmetrical repetition, is readily translated, with the aid of the aesthetic sense, into ornament. The mathematical framework is only the point of departure, so to speak: straight lines may be translated into curves, or the generating figure may be used only to determine the shape, size and disposition of ornamental motifs of an utterly different character, its reciprocal, as it were, in the same sense that the fleshly envelope is the
Reciprocal of the skeleton, each cavity of the one answering to some protuberance of the other. Illustrations 6, 7, 8 and 11 represent a direct translation of the projected solids into essentially geometrical ornament, while in illustrations 5, 9, 12 and 13 the generating figure is only obscurely present, indistinguishable, indeed, though the determining factor of the design nevertheless.

The point I wish to make is the same I have tried to make in discussing magic squares: namely, that some forms are more significant than others, by reason of possessing certain interesting mathematical properties, and of illustrating certain mathematical truths. These the designer should search out and use, for by so doing he will snare, so to speak, a beauty transcending his personal power of evocation altogether. The particular manner in which he makes use of them his aesthetic intuition will determine, and his efforts will test out his powers as a navigator "on faery seas forlorn" no less surely than as though he set out sailless and rudderless. For these mathematical aids to design are indeed like sail and rudder, but captain and compass they are not—so save in the hands of a good navigator they are either useless or dangerous, and by a good navigator I mean one who knows at all times where he wants to go, and is able at all times to use the means at his disposal for getting there.

Approaching the subject of ornament now from a different angle, more in accordance with the suggestion of the editor—as affected, that is, by the material or medium employed—it should be stated again as at the beginning that this is a matter of much moment, and too little regarded by the architect. Housed of old in the same body, a gulf now separates the artist and the artizan. Not only are they twain, but often they neither see nor know one another and the mental processes of the designer are as much a mystery to the craftsman who executes the design, as the physical processes he goes through are a mystery to the artist. This lack of understanding and cooperation is bad for both of them and its results are bad: some precious and vital quality has leaked out of the arts of space, they are too often either false or inexpressive. For one of the minor, though far from negligible, functions of the minor arts of space, as it is of the major art of architecture, is to show forth the quality of different materials— their strength, their delicacy, their native beauty of color and texture; they are put through their paces, so to speak, under the skilled directing hand of the artist-craftsman. In ancient times and among primitive...
peoples this particular function of art was fulfilled, as one might say, automatically, because the artizan was also the designer, and to him there was no way other than the right one. But to-day in civilized countries, by reason of a different consciousness and changed methods of production this canon of aesthetics is continually violated. Let me quote, in this connection, from one of my Scammon lectures, in which I assume the ungracious task of enumerating the shortcomings of the modern architect.

"The architect fails to think and work in terms of his materials."

"A proof of this failure is found in the common practice of substituting one material for another—wood for iron, terra-cotta for stone, stone for concrete, or vice versa—by reason of their difference in cost or to suit the whim of a client, without essential modifications in design. One of the most important functions of architecture is thus violated—the showing forth of the splendor and beauty (be it a beauty of strength or of fragility) of different materials, making the most of the unique characteristics of each.

"Now the beauty of terra-cotta, for example, is not less than that of stone, but it is different. Witness a Della Robbia lunette and a carved granite Egyptian bas-relief. Imagine the terra-cotta arcades of the Certosia of Pavia carved in stone. One would fairly ache at the thought of so much wasted labor, and feel a sort of terror at so great a weight so insufficiently supported. On the other hand, were the heavily rusticated street facade of the Pitti palace in Florence translated, without change, from stone to terra-cotta, the result would be no less distressing. There would be no charm of detail and texture to compensate for the splendid ponderosity of stone."

Yet today one of the most common practices in the building trades, fostered and sponsored by architects, is the imitation of one material by another—sheet-metal mahogany doors, rock-faced cement blocks, linoleum encaustic tile and all the rest. This practice is not defensible unless lying is defensible, and I can think of no argument to justify it unless it be the negative one that these are deceptions by which nobody is deceived—like fibbing for the sake of being polite. Of course meretriciousness of this order is attractive to the type of mind to whom plated ware and imitation gems are attractive, but it is one of those things which now pettifies and vulgarizes the noblest of all the arts of space.

In order to illustrate the sort of thing to which I have reference, let us consider only this one example, because it is so typical: the imitation of stone forms in cement-concrete. We can still sometimes afford to build our buildings of stone, but not our bridges, and the necessity of making the bridge balustrade of cement-concrete is therefore usually imposed. How is this necessity met? Up to now, in the vast majority of cases by making a continuous solid paling with no slightest pretense to aesthetic interest, or by imitating the conventional stone balustrade with its mouldings and balusters—impractical, difficult, and expensive to make, each one separately dowelled—totally false to the character of the material. For unlike stone, the nature of concrete is monolithic: it is poured in forms, which are removed after the cement has hardened. Simple shapes, flat surfaces, straight lines, the general absence of mouldings, particularly those with minute curves or reentrant angles—forms with these characteristics are easiest and cheapest to make and therefore most characteristic of the material. In illustration 10, "B" shows a bridge balustrade designed according to this general formula, for which any carpenter could make the forms, in contrast to "A," which would cost a great deal more and require an altogether different order of
skill and talent. I think that any open-minded critic would concede to "B," the greater beauty if only on the strength of the dictum, "Every increase in fitness is an increase in beauty."

Illustration 9 shows how profoundly ornament is modified by the nature of the material. For the three examples the same fundamental form has been used, an icosahedron in plane projection. When translated into brick, all that survives is the general outline; but the entire figure can be translated into leaded glass with scarcely the change of a phrase. In the perforated marble panel, though the generating figure is not apparent, it controls and determines the entire pattern.

Illustrations 11, 12 and 13 represent all-over designs in which the dodecahedron in plane projection has been used as the determining figure, and they are also meant to show how the design is conditioned by the material. As in the former example, the leaded glass panel shows the fewest departures from the generating figure, because metal and glass lend themselves to geometrical patterns of this order with an especial ease and grace.

In the wrought iron design, on the other hand, the generating figure is scarce distinguishable, determining only the major elements and proportions. This is because heated iron is so readily bent that it flows as naturally to curves as does glass to straight lines, to which cutting is easy and bending impossible. The encaustic tile design lacks the interest of color, its very raison d'être, which must be left to the imagination of the reader. In this the basic figure is useful only as a frame, to determine and establish the major and minor units of the design.

More extended comment on the illustrations should be unnecessary: if they do not speak for themselves it is no use speaking for them. But whether or not they speak eloquently and convincingly, I feel sure that the reader will concede my main contention, that art is an expression of the world order, and therefore it is highly logical for the artist to seek inspiration where that world-order is writ clearest—in the field of number and geometry.
PORTFOLIO
OF
CURRENT ARCHITECTURE

"Kingwood"
Residence of Charles K. King, Esq., Mansfield, Ohio
CLARENCE MACK, ARCHITECT
WILLIAM PITKIN, JR., AND SEWARD H. MOTT, LANDSCAPE ARCHITECTS

FEATURING
COUNTRY RESIDENCES
"Kingwood"
Residence of Charles K. King, Esq., Mansfield, Ohio
CLARENCE MACK, ARCHITECT
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Residence of Charles K. King, Esq., Mansfield, Ohio
CLARENCE MACK, ARCHITECT
Residence of Mrs. Richard B. Fudger, Los Angeles, Calif.

ROLAND E. COATE, ARCHITECT
Residence of Mrs. Richard B. Fudger, Los Angeles, Calif.
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Residence of Mrs. Richard B. Fudger, Los Angeles, Calif.
ROLAND E. COATE, ARCHITECT
Residence of Mrs. C. A. Woodcock, Glens Falls, N. Y.

TOOKER & MARSH, ARCHITECTS
Residence of Mrs. C. A. Woodcock, Glens Falls, N. Y.

TOOKER & MARSH, ARCHITECTS
Residence of Mrs. C. A. Woodcock, Glens Falls, N. Y.
TOOKER & MARSH, ARCHITECTS
A Small House in Atlanta, Georgia

LAWRENCE FUNKE, ARCHITECT
A Small House in Atlanta, Georgia

LAWRENCE FUNKE, ARCHITECT

Photo: Tebb & Knel/
Entrance Door
Residence of Mr. and Mrs. A. Harris, White Plains, N. Y.
HERBERT LIPPMANN, ARCHITECT
IN THE experience of the contemporary American architect the club-house assumes many different forms. It varies between the picturesque bungalow of a suburban golf course and a monumental building on a block front in some big city. But one of the most interesting of its forms, requiring at the same time something unusual in the way of design and an extremely complicated plan, is the students' union which has been or is being erected on the campus of many American universities. For these buildings must satisfy, not only all the catering, living and social needs which an ordinary club-house must satisfy, but they must also take care of a miscellaneous assortment of student activities. The students' union is not only a club-house which may have to serve one or several meals a day to fifteen hundred people, but an office building, a concert hall, a large assembly-room, a theatre and sometimes a gymnasium. It must, consequently, be a large building. Yet it should, like all club-houses and collegiate buildings, retain a certain domestic and reticent aspect, which forbids it to look as large as it is. One of the purposes of a university union is to neutralize in part for the student the feeling that he is a ward in an institution—to help him to the feeling that he is a citizen in a society and a human being in a fellowship. The union building should above all avoid the appearance of an institution. It should look like an inviting and accommodating haven in which a student has a right to behave like himself.

In the case of Willard Straight Hall, which is illustrated herewith, the architects, Messrs. Delano and Aldrich, were in a sense expressly commissioned to build a club-house which should by its looks ask the stranger-student in and promise him a warm welcome and congenial company. Willard Straight, after whom the building is named, was a graduate of the class of 1901 who had a positive gift for being attentive and kind to other human beings. Although he himself was an unusual social success at college, he may have remembered the forlorn feeling which overtakes many a shy freshman when he first matriculates at a large modern university. He may, perhaps, have remembered that in the case of Cornell, whose students are more apt to come from farmhouses and small towns than from cities or big preparatory schools, a large proportion of the entering class are perhaps peculiarly in need of domestication. They would find themselves much sooner in their new surroundings if something were done to make them feel that the university was a friend as well as an instructor, and offered them a fireside at which they could warm their hands and feet. At all events, when he died in December, 1918, there was found a provision in his will which bequeathed a certain amount of money to carry out a purpose of this kind. His widow, after considering carefully how such a purpose would best be realized, decided to build on the Cornell campus a university club-house which would, she hoped, help the strange student to feel at home and subsequently to provide means under one roof for the carrying on of all the non-athletic and non-academic student activities. It was important, consequently, that Willard Straight Hall should express in its design, as well as in its decoration, organization and policy, the fraternal and humane object which its founder had in mind.
DELANO © ALDRICH, ARCHITECTS

WILLARD STRAIGHT HALL, CORNELL UNIVERSITY, ITHACA, N. Y.

DELANO © ALDRICH, ARCHITECTS

Photograph: Folsom
WILLARD STRAIGHT HALL, CORNELL UNIVERSITY, ITHACA, N. Y.
DELANO & ALDRICH, ARCHITECTS
Before coming to a consideration of the design, it may be worth while to indicate the kind and variety of accommodation which, in return for the payment of a small fee, Willard Straight Hall offers to the Cornell student. The reader may get some sense of this by consulting the plans of the several floors which are published herewith. The main floor contains a spacious lobby decorated with wall paintings by Ezra Winter, which express with propriety and with a versatile imagination, the various aspirations associated with an intellectual life. On the axis with the entrance is the Memorial Hall to Willard Straight, which in scale and largeness of design is comparable to Harvard Hall in the Harvard club-house of New York. But while Harvard Hall is under-lighted from windows at only one end (the windows on one long side give upon a narrow court and afford little light) Willard Straight Hall, being similarly lofty, yet being lighted from spacious windows on three sides, is on the contrary in need of having its light subdued.

Through the generosity of some alumni of the university, and particularly of Willard Straight’s own class, a plan is now being considered to substitute stained glass for the ordinary glass which now fills the sashes. If this is done it will relieve the students who occupy the hall during the day from being too much exposed to sun and sky and not sufficiently enclosed. It will make of it more of a room in which to live, yet without taking away from its large nobility of style. The hall is used ordinarily as a lounge, but concerts are held in it on Sunday afternoons and other times, and on appropriate occasions it is given over to class dinners, dances and other festive purposes. On the other wing of the same floor there is another men’s lounge which is really a library, a common lounge for students of both sexes, and two smaller lounges for women.

Below this main floor there is a basement, which, however, is a basement only in front. For the Willard Straight Hall is built on the side of a hill...
which slopes gradually down to Cayuga Lake. So that a floor which is only a basement in front is in the rear a full-fledged story. It is by using the slope of the hill that the architect has obtained sufficient space to house on a still lower level the multifarious student activities which, if they had been provided for more conspicuously, would have made the building look too big for a club-house. As it is he has placed the necessarily spacious kitchens and store-houses in the less well lighted front of the basement floor, and the dining-rooms, large and small and for men and women, in the better-lighted rear rooms. By increasing the area of the building on the lower levels, he has obtained on their roofs two magnificent terraces overlooking the lake, which provide outdoor rooms in warm weather; and he found abundant space for a small theatre, which is one of the most attractive, useful and popular parts of the edifice. The theatre and the rooms which are used for society meetings, offices and the like, are approached, of course, by separate entrances on the lower levels, so that the main entrance is not too much of a passage-way.

The upper part of the main building contains a billiard-room, a card-room, a dormitory for visiting athletic teams, and about a score of bed-rooms.

It is a singularly ingenious plan which meets successfully almost as many diverse and supplementary needs as a modern battleship. It takes full advantage of its superb site. In every possible way life in the building looks out upon the lake. Cornell uni-
READING ROOM AND LOUNGE
WILLARD STRAIGHT HALL, CORNELL UNIVERSITY, ITHACA, N. Y.
DELANO & ALDRICH, ARCHITECTS
The University is extraordinarily fortunate in its location. The lake is a large and long body of water, at the bottom of a spacious trough or valley. The slope down to the lake falls many hundred feet in a distance of a mile or more, and the slope on the other side takes about as long to attain a similar height. The view across the water to the opposite hill is most satisfactory as steady company. It is grand without artificiality or restlessness. The distance and the levels are well-proportioned and the land itself has the appearance of being well-cultivated, rich and fruitful. It is an appropriate site, not for a villa, but for a living community such as a university. It is not a conventionally picturesque or pretty outlook. It is commonplace in composition and it is lacking in incident. But it remains much more satisfactory than most merely picturesque views. It is a comely but still essentially homely and rural countryside which looks as if it existed chiefly to be tilled and yield crops.

The situation of the university has not been used to any great architectural advantage, but neither on the whole has it been spoiled. Cornell has managed to keep a
somewhat homely, miscellaneous unpretentious collegiate atmosphere, appropriate to a university which is partly supported by the state and which is distinguished particularly for its agricultural school. Willard Straight Hall fits naturally into these surroundings. It is not too formal. Neither is it too picturesque. The façade is a carefully balanced composition in a somewhat loose and free style. But it avoids pretensions of any kind—the pretension either of being an important institution or of being picturesque and eccentric. It finds space for one of the noblest rooms in any university in this country, and for literally a multitude of petty conflicting requirements. Yet it does this without strain or pose or practical inconvenience. It provides the students of Cornell of both sexes with a gracious and hospitable mansion which is in a very real sense their own. It provides them with a community house to which they belong from the beginning as human beings, in which they will not be lectured and instructed and graded, and which asks nothing in return except a small fee and the ordinary decencies of human intercourse.

For practical purposes the students control
the building. The final governing body is a board which is appointed by the trustees of the University. It is made up of the president, three professors, three trustees, three alumni, the comptroller, the dean of women, two undergraduates who serve by virtue of the office which they hold as president of Willard Straight Hall and of the student council. This government meets, however, once a year and concerns itself only with finances and matters of broad policy. The director of the hall is appointed by the board of governors and is directly responsible to it. The actual administration of the building is confided to a board of managers. It is made up of fifteen members, of whom ten are undergraduates, elected by the student body. Eight of the undergraduates are men and two women, which corresponds roughly to the comparative number of students of the two sexes in the university. Of the ten seven are seniors and three juniors. Besides the ten undergraduates there are three members of the faculty, a resident alumnus and the director of the hall who serves ex officio. The chairman of the board of managers, who is also president of Willard Straight Hall, is a senior. The secretary is also a senior. The board of managers meets regularly every third Friday, and matters that come up between these meetings are handled by the executive committee which is made up by the secretary and the president of the board, the senior woman, and the director. It is stated that notwithstanding the existence of the board of governors, the board of managers feel themselves in a very real sense obliged to exercise administrative authority—as much authority, let us say, as a house committee would exercise in an ordinary club.

The chief drawback to the building at present is merely a repetition of the chief drawback of the union. It is too new and too inexperienced to serve and to look its purpose. After the Cornell student body has lived in it for a generation there will be a different story to tell. By that time, Cornell will, we hope, have become, in company with other American universities, more of an intellectual community and its student body will as a part of its common mental life carry on a variety of new and, let us hope, somewhat more leavening activities. Among those which are already accommodated in Willard Straight Hall, the one which obtains and deserves most space is the theatre. The students' dramatic club, under intelligent and enthusiastic faculty guidance, give throughout the college term a succession of plays amounting almost to one a week, and these performances, to judge from one sample, are at least creditable. They certainly provide a convincing example of a student activity which is more likely to be personally liberating and socially educational than, say, the playing of an athletic team or the editing of a college paper. Probably in the future activities of this kind, in which there is less competition and to which the victory over an opponent is less important, will gain at the expense of athletics, and as they gain, a community house such as Willard Straight Hall will mellow in its appearance and in its functioning. It will help both the students and the university administration to cultivate voluntary social and educational projects and interests, and by housing them under one roof give those who pursue them an increased sense that they are being carried on as part of the increase of one society.
IN THE CAUSE OF ARCHITECTURE

BY FRANK LLOYD WRIGHT

V. THE MEANING OF MATERIALS—THE KILN

I see Tang glazes and Sung soft-clay figures from Chinese tombs in my studio as I write,—a few of the noble Tang glazed horses that show Greek influence,—and Han pottery. Some fragments of the Racca blue-glazed pots and the colored tiles of the Persians in Asia Minor—"the cradle of the race,"—Egyptian vessels and scarabs.

It appears from a glance the oven is as old as civilization at least—which is old enough for us.

Our interest is not archaeological but architectural and begins with a lump of peculiarly pliable clay in the hand of the man who wants to make something useful and at the same time beautiful out of it,—at the time when he knows he can bake it hard enough to make it serviceable. Then it all begins to grow rapidly in the experimental search for different clays. The grinding of minerals, to make paste for a flux to pour over the vessels to make them impervious and beautiful—and the legion of earnest chemical experiments that followed.

The research of craftsmen for several hundred centuries have laid up treasure and all but lost it but for a specimen or two—times without number.

The remains are a fascinating record of man's creative endeavor on his earth. A record that tells more of him probably than any other—for in it we find not only pottery and building but painting, sculpture and script intimately related to the life of all the peoples who have inhabited the earth—since cave-dwellers built their fires.

All the materials we know, seem at one time or another in a state of flux. Fire is father-creator to them all—below ground. Light is mother-creator to all that rise in air out of the ground. Back to Fire again goes that which Fire made to be fused with man's creative power into another creation—that of his use and beauty.

Anything permanent as a constructive material comes into man's hands by way of Fire, as he has slowly learned to approach in "degrees" the heat in which his globe of earth was formed—and courage to set what he has himself made, again at its beneficent mercy. He knows much. But fire knows more and has constant surprises for him.

He will never exhaust them all—nor need to.

He has the Brick.

He has the Tile.

He has the Pot and Bowl.

He has the Vase.

He has the Image.

He may color them all—forever so far as he knows—with the hues of nature and qualify each according to any or all the sensibilities he has—taught by the qualities he loves in the work of Nature all about him.

We have hitherto been speaking of "natural" materials. The natural material here is of earth itself. But to produce this material known as Ceramics, another element, that of the artificer, has entered with Fire.

This product should therefore be nearer man's desire—molded, as it is, by himself. His creation is seen in it. What he has sensed of the story of his creation, he has put into it.

He sees as he is and this record will tell us what he sees, how he sees—as he sees it.

He has seen nothing he is not himself. He is the imaginative geometrical tracery of the Persian and Moor and the noblest
brick buildings man has ever erected. He is the noble sculpture and pottery of the Han Dynasty in China, as well as the Satsuma and Nabeshima of Japan. His is the story painted on the pots and bowls of Greece no less than the flowered plaques of Byzantium, or upon the utensils of the Indian cliff dweller.

His sense of form he took from those forms already made as his natural environment. In his striving for excellence in quality he was taught what to love by stone, leaf and mold and flower—the book of 'trees,' the mosses and mists and the mosaics of foliage in the sun. Especially in China where his sense of Nature was profound did he learn from them. When he was at his best, he interpreted what he saw.

When he was inferior, he imitated it.

But always, superior or inferior, he was its reflection in his Ceramics as in a mirror.

And in spirit looking away from himself, his eyes fixed on Gods as God or God as Gods—fashioning and firing and building as he himself was burning, all the while, better than he knew.

What has Man to show for the Brick? I should offer the brick buildings of Asia Minor—Persia.

What he has to show for his Tile? Wherever Persian or Mohammedan influence was supreme.

What he has to show for the Pot and Bowl? Chinese pottery.

What he has to show for his Vase? The Grecian urn.

To show for his Image? Those of Egypt, Greece and China.

The modern contribution to Ceramics as building material is 'Terra Cotta.' A poor name for an important material—but so it is named. I suppose ‘earthen-ware’ seemed inadequate or not specific.

And it is the greatest opportunity for the creative artist of all the materials he may choose. It is, of course, burned clay in any color or glaze for entire buildings—pottery buildings! Earthenware on a great scale.

Modern terra-cotta has known but one creative master—only one—Louis H. Sullivan.

He is dead. His work in terra-cotta will live long after him. His was the temperament and the imagination that naturally found in this impressionable material the ideal medium for his genius. Terra-cotta lives only as it takes the impression of human imagination. It is a material for the modeler. It is in the architect's hand what wax is in the sculptor's hand.

After the material takes shape, the surface treatments are all a matter of taste. They are limitless in quality and style.

And the chief business of terra-cotta has been to imitate stone. It would imitate anything else as readily—with gratitude—it seems. It is the misfortune of anything impressionable to be called upon to give imitations. Mimicry is all too human. To imitate is the natural tendency of men. Not Man.

But Louis H. Sullivan's exuberant, sensuous nature and brilliant imagination took terra-cotta—and it lived. It no longer asked permission of the Styles. It was itself because it was Louis H. Sullivan. In it this master created a grammar of ornament all his own. And notwithstanding certain realistic tendencies, an original style of ornamentation out of the man, astonishing in range, never lacking virility.

Into the living intricacy of his loving modulations of surface, 'background'—the curse of all stupid ornament—ceased to exist. None might see where terra-cotta left off and ornamentation came to life. A fragment of Sullivanian Terra-cotta—were we at some remote period of time to be excavated—would be found with a thrill. It would mean that a man lived among men, among artifacts, at a dead time in Art.

The Sullivanian motif was efflorescent, evolvent, supported by tracery of geometric motives—bringing up the clay in forms so delicate and varied and lively.
BRICK MASSES
THE LARKIN BUILDING, BUFFALO, N. Y.
FRANK LLOYD WRIGHT, ARCHITECT
that no parallel in these respects exists.

We may see, for once, how completely a
negative material can be appropriately
brought to life by the creative artist. It
is reassuring.

Is there in Architectural history another
man who out of himself not only created
an exuberant type of beautiful architectural
relief but furnished it forth, always consist-
tent in style, in amazing variety that could
not have ended but with his death? Even
toward the last of his life, enfeebled, dis-
illusioned but indomitable, he drew with
all his old-time freshness of touch a series
of beautiful designs that show no falling off
in power whatever—even in spontaneity.

His ornamentation was the breath of his
life. Clay came into his hand, that both
might live on forever.

Because, now that we know what terra-
cottra can be, and how it can be, we shall
never be satisfied to see it degraded to imi-
tation again—not satisfied to see it imitating him.

Taught by him we should learn how to
use it. If not so well as he, at least on prin-
ciple for its own sake as he did. His sense
of Architecture found a fulness of expres-
sion in the plastic clay. Few architects ever
find any such expression in any medium
whatsoever.

Terra-cottra should revere him as its God,
sing his praises, but, better than that, be
ture to his teaching which would mean
more to him than psalms in his praise and
his statue in the hills.

In the terra-cottra or pottery of Earthen-
ware building we may have, today, the sum
and substance of all the kiln ever gave to
architecture.

Modern methods have made the complete
terra-cottra building, inside and outside, as
definite a possibility as was the Han vessel
in its time or the Greek vase. But—who
would look upon it in its present state after Sullivan left it, as a work of Art?

It cannot live either on its own texture or color—to any great extent. And as for its design? It is a mendicant feeding on crumbs from the table of the styles.

Why? Is it because Sullivan is dead? Did this most valuable of modern achievements in ‘material’ die with him, as it never really lived until he came?

No. Materials never die. This material is only asleep, waiting for some master to waken it to life.

Here, young man in architecture, is a golden opportunity quite boundless so far as imagination goes. Rescue the royal beggar from penury and slavery.

Where is the pottery-building beautiful in form and texture and color—as such?

Why are there not thousands cleaning themselves in the rain—warming themselves in the sun—growing richer with age instead of dingy and sad and old? Why do they look cheap and soon stale?

Just because there are no good pottery designs for good pottery buildings—so how can the pottery be good with no more inspiration than that?

A neglected minion of the Machine!

By way of terra-cotta we are here arrived at the matter of Ornament. Because terra-cotta chiefly lives by virtue of the human imagination in ornamentation.

As we intend to discuss ornament by itself on its merits, later, let us say now that true ornament is of the thing, never on it. The Material develops into its own ornamentation by will of the master. He does not impose forms upon it. He develops it into forms from the within which is characteristic of its nature—if he is “the master.”

We may see this in Sullivanian Terra Cotta. The only limit to Sullivan’s treat-
ment was the degree to which the substance of the pliable clay would stay up between the thumb and finger and come through the fire. Background disappeared but surface was preserved. There was no sense of background, as such, anywhere. All was of the surface, out of the material. So no sense of ornament as applied to Terra-Cotta, because Terra-cotta became ornament and ornamented itself.

Terra-Cotta was this master's natural medium because his sense of beautiful form was the subtle fluctuation of flowering surface, song-like, as found in organic plant-life—the music of the crystal is seen as a minor accompaniment only.

The tones of the main theme are those of organic efflorescence—growth as it is performed by plant species. This idea of growth was the theme—invariably—which he glorified.

He created a "species" himself—and kept on creating others.

This procedure of Growth intrigued his imagination—inspired him. "Organic" was his God-word, as he traced Form to Function.

When, I suggested, as I once did, that quite as likely the function might be traced to the form, he disposed of the heresy—by putting it on a par with the old debating-school argument as to which came first, the Hen or the Egg. His interpretation was to him the Song-of-creation and he never tired of singing it. As it was visible to him in the growth of the plant he saw it in all—as indeed it may be.

Think of this when you see his synthetic motifs in his sentient Terra-Cotta.

And realize that there are ways of making a pottery building, the joints of the material becoming unit-lines in the pattern of the whole—which he, the pioneer, touches upon but was called away before realization or called away to realization—who knows?—and imagine the glorious marvel of beauty it might be.

I remember going to Palermo some years ago to see the mosaics of Monreale. I had just got into the Cathedral-square and lifted my eyes to that great work when to the left I saw—or did I see it—for some moments I thought I dreamed—there against the sky—no not against it, of it, literally of the sky was a great dome of pure Racca blue.

I forgot the Cathedral for quite some time in the wonderful blue dome so simple in form—a heavenly thing. I have never recovered from it. And that effect was "Ceramic." Why not Terra Cotta? The old qualities in color firing can not be dead!

* * *

To illustrate a simple use of brick I refer for noble examples to Ispahan, Sari, Veramin, Amol, Samarkand, Bokhara, and, of course, tile and pottery as well. Unfortunately I have little brickwork to my credit. I have chosen a few examples that show the walls solidified by emphasis of the horizontal joint, and examples showing the brick-pier and mass as I feel it to be natural in brick construction today. Brick is the material we in Usonia know and love best. We probably have brought brick-making to a pitch of perfection never existing in the world before at any time. And we use it, on the whole very well. Not only is the range inexhaustible in texture and color and shape, but the material itself is admirable in quality.

Together with it go all those baked-clay vitreous hollow bricks and hollow tiles which are probably the most useful of all materials in building in our climate.

* * *

Usonian tiles and mosaics do not reach the quality of ancient or even contemporary materials of this nature. There is enough good material, however, to warrant a more general use which would inevitably cause it to grow better—and our day needs this development.

The nature of the mosaic either of stone, glass or ceramics is a truly architectural medium—useful in this era of the Machine and lending itself to plastic treatment with
no insult to its nature. I should like to see whole buildings clothed in this medium.

Our pottery is imitative. We have had Teco, Rookwood and other types—all deserving experiments with something of originality in most of them. But none proceeding on principle to develop style, but of the nature and character of the process.

The "vessel" does not inspire us, it seems, as it did earlier people. Perhaps because we know no such need of it as they knew. I have chosen some natural "vessels" to show the help nature generously offers in the matter, to mention only one humble resource.

* * * *

The Usonian Image, likewise the Vase, is tentative when not openly imitative. We seem to have little or nothing to say in the clay figure or pottery vase as concrete expression of the ideal of beauty that is our own. No sense of form has developed among us that can be called creative—adapted to that material. And it may never come. The life that flowed into this channel in ancient times apparently now goes somewhere else.

A few natural forms found in the Champlain clays seem interesting to me in this connection.

* * * *

Again our subject remains in barest outline—for to go adequately into this most human and important feature of all Man's endeavor to be and to remain beautiful the "kiln" would exhaust interesting volumes.
SUSANNA FOUNTAIN, HOME OF CARL MILLES, LIDINGÖ, SWEDEN
CARL MILLES, SCULPTOR
EVERT MILLES, ARCHITECT
CARL MILLES
SCULPTOR-ARCHITECT
BY KINETON PARKES

The new architecture in Europe reaches its most vehement exposition in Sweden. Architecture is the mother of the arts and Ragnar Östberg in his great Town Hall at Stockholm, recognizing the relationship, has given sculpture and the other plastic forms of expression a maternal home. He has successfully substituted sculptural affection for plastic affectation.

Just outside the city there is a further and cognate manifestation of the relationship, architecturally on a smaller scale but greater in its intimacy, and sculpturally and architecturally satisfying. It consists of the studios, house, gardens and pleasance of Carl Milles.

There are few harbours more beautiful than that of Stockholm and in choosing the position, the artist gave an initial indication of his architectural instinct. It is an ideal setting for the activities of a great artist, on high ground at Lidingö above the Värtan surrounded by pine trees, their trunks ruddy in the sun.

This singular habitat is almost wholly the creation of Carl Milles himself, but his brother Evert Milles, a practising architect, helped in the constructional work. The Milles family is artistic, for Carl and Evert are brothers of Ruth Milles the sculptor—not unknown in America and with a European reputation.

In this domain of beautiful buildings, picturesque walls broken by niches, pergolas and tiled walks, paved courts, ponds, terraces and flagged steps, the muse of sculpture reigns. It is a plastic conception of the finest kind realized with a singular integrity, without ostentation and without error of proportion, for composure is the necessity of art and life to the man who has made this domain wherein to dwell and work.

Carl Milles is slow-moving and slow-speaking, but his phlegmatism is illumined by the fire of genius. His demeanor is almost sad and he speaks gently and only when he has thought out what he wants to say. Sometimes what he says is brightened by a touch of gentle humor. He is very particular as to what opinion he may have to express, for his mind is occupied by the responsibility of his mission—a mission that gives new beauty in plastic form to the world. This weighs on him as he slowly paces the paths of his retreat at Lidingö.

He is by no means unconscious of tradition, little as his work owes to it directly. In his work there is no violation of the plastic or glyptic traditions, for, like all great artists, Carl Milles has realized the obligation which tradition imposes. He feels the weight of this and acutely, but not ponderously, acknowledges it. He says he owes much to Michelangelo and something to Rodin; to Carl Milles we owe what we owe to Michelangelo and Rodin—a new sculptural vision.

Tireless worker himself, Carl Milles makes others work. He has a latent energy which he is able to communicate; he has the will to create but an exuberance of production which is beyond the powers of a single individual. His kinetic energy is catching, and he is able to impose his will on those associated with him. He has always in his studios twenty men cutting granite. One man spends the whole of his time in repairing, tempering, sharpening their chisels. Granite is intractable, but Carl Milles shows his assistants how it becomes docile under his hands, for he is a
believer in carving although he cannot carve everything that issues from his studios himself. But all the essential things are subject to his chisel.

Further, there are the bronze casters, for Carl Milles is a modeller as well as carver. He has no time to make the mould for the castings nor to cast, but his personality passes into his helpers and produces the exquisite patinas which are a characteristic of most of his bronzes. This abounding energy is a feature of both production and finished work. It is communicated to each piece that passes muster in the master’s review. If it fails, it is thrown aside. This vital energy is possessed by all the acknowledged works without outraging the principles of sculptural statics. It is less a vitality of movement than a vitality of spirit that they all possess.

Carl Milles was born at Lagga in Sweden in 1875. After beginning his art education at the Stockholm Technical School he went to the Ecole des Beaux-Arts and remained some years in Paris exhibiting at the Salons, sending to the expositions at Venice and later working in Munich. His health was not good, but the divine fire of art burned with no uncertain flame within him and he surmounted his bodily ailment and became one of the most prolific of the world’s sculptors.

He was but twenty-seven years old when, in 1902, he came into the front rank of Swedish sculptors with his monument of Sten Sture for erection at Uppsala. It was not awarded the prize but was considered so good that the original sketch was developed some years later. From 1910 to 1914, when the memorial was at length finished, the artist worked at it laboriously while his friends collected the funds for its building. It is known as the Battle of Brunkebjärg memorial, for Sten Sture not only founded the University of Uppsala but led the peasant troops in 1471 against the Danes victoriously.

Apart from his own actual architectural activities, the association of Carl Milles with architects has always been close. He believes in the maintenance of the most intimate relations between the structural and plastic arts, and assumes that the highest sculpture is necessarily that which is most architectural in character. Hence the symmetry and rhythm of his work. Whilst his sculpture is highly decorative, he has so contrived to work with his architectural colleagues that it never appears as merely adjunctive but always as a homogenous part of the actual structure. The great bronze doors of the Church of the Revelation at Saltsjobaden and the four fine altar reliefs in the same edifice were done in cooperation with the architect Ferdinand Boberg. The same may be said of his four colossal groups, in black granite, each three and a half yards high, carved almost in the round and representing the development of trade during the thirteenth, fourteenth, fifteenth and nineteenth centuries from barter to world commerce. These surmount the fluted pillars of the façade of the Enskilda Bank in Stockholm, designed by Ivar Tengbom.

His plastic contributions to other buildings include the fine heraldic carving of the royal coat of arms in the centre of the façade of the Royal Dramatic Theatre at Stockholm, as well as two sitting and three standing figures of women and the vivid groups of dancing children on the bases of the columns of the loggia. This building, the work of Fredrik Lilljekvist, owes its distinction largely to the work of Milles and some few others, for by reason of injudicious selection of some of its decorations it is unable to occupy the artistic position destined for it.

Other architects with whom Carl Milles has associated are Nils Asplund, Sigfrid Erikson and Arvid Bjerke of Gothenberg.

The relation of sculpture to architecture is not simple. It forms a complex of considerable subtlety to which too little attention is paid nowadays by either archi-
itect or sculptor. In Gothic and Renaissance times the principles were understood and acted upon. Either in person or in a dual personality, the architect and sculptor were one. It is rare to find this today; it is rarer still to find an acknowledgment of its necessity.

In a building there are two primary considerations—constructive and decorative—and there should be no building permitted perversity that it should ever have been neglected or misconstrued.

In the first place, therefore, the intimacy of the relationship is maintained when the sculpture on a building (either outside or in), is identical with the structure in the form of a frieze, a capital, a pediment, a mural relief. Pheidias, Ictinus and Callicrates saw to this in the Parthenon.

In the second place the intimacy of associ-

which is either without the other. The sub-
tle function of sculpture is that, unlike mural painting, it is structural. Sculpture and architecture, therefore, are linked by a living chord; they are Siamese twins—both are plastic, both are glyptic; both are made out of clay and stone and wood and metal by chisel and moulding tool. Their proper relationship is so obvious that it seems a

ation requires to be respected and preserved. There is much sculpture (exterior and interior) which is as essentially a part of the architectural design as though it formed a part of the actual structure. It is accessory, but it is integral. Architecture is responsible for spaces as well as for places and the function of sculpture in this respect is no less important; rather is it more essen-
tial than in purely structural work. Hence, in the decorated plaza, square, court, garden, sculpture demands and supplies the main factors, for in such designs utility stands less in the way than in buildings. In the design of open spaces beauty, less than use, is the desideratum.

Carl Milles understands these two principles and while he has been able only to a limited extent to exercise his understanding on the first, on the second he has triumphed, for in the realization of his idea of the true surroundings of a great sculptor he has consistently kept in view the architectonic character of the essentials of the sculptural art.

And, in the third place, sculpture is essentially structural although it may not form part of a purely architectural plan of a place or space. Fountains and monuments and grave memorials are good only when they are in spirit and form constructive and fitted to the positions they occupy, for placement of a work of plastic or glyptic art is a function of architecture, the exercise of the faculty of relation. This Carl Milles also possesses and it has enabled his remarkable sculptural powers to function to the finest advantage. He has enriched European plastic art by at least ten of the continent's greatest monuments, and they are all in Sweden.

While engaged on the Sten Sture monument, Carl Milles was fabricating the memorial to the Swedish poet Franzén, in the working of which he exploited the native granite of the country in which so much of his future work was to be made. As to style, apart from his naturalistic animal studies and his portrait busts, nothing of his is more realistic than the two daughters of the poet, Selma and Fanny, who are seated at the base of this statue.

To the same period most of the great monuments belong, the Gustav Wasa and the Rudbeckius included. The former is exceptional in that it is carved in oak and painted, a great figure on a massive architectural base of granite and marble in the Nordiska Museum at Stockholm. It is the most important essay in polychrome sculpture since Max Klinger's celebrated chrys-elephantine Beethoven in the Leipzig Museum; and, in addition to the colored oak, includes ivory, gold and silver. The coat of arms carved in the round on the mouldings of the base is an arresting feature of the architecture.

An architectural setting is also a pleasing feature of the statue of Johannes Rudbeckius, the seventeenth century theologian and founder of schools, who stands on a square base supported by four pillars and is placed outside the Cathedral of Vesteras, of which place he was bishop. His saying "I take off my hat only to God and the Sun" is illustrated by the sculptor in placing a putto holding a gold-rayed sun on the bishop's shoulder where he is seen whispering engagingly into the prelate's ear. The figure of bronze is three metres high and the base of marble and stone two metres.

Carl Milles on his return to Sweden realized two natural features which became of the utmost importance to his work and a spiritual feature no less potent. He discovered not only granite as the material most appropriate and most suitable for the Swedish climate, but the waters of his native country as an incentive no less potent than the myths of Scandinavia.

The waters, the lakes, streams and incursions of the sea pointed to fountains as the finest expression in form to which a plastic artist could aspire, and some of the finest fountains of modern times have resulted. Modern architecture has a few fine examples to show both on the American and the European continents and Carl Milles has added to the number.

The most important is the great Fountain of Industry in front of the Polytechnic at Stockholm, the Cerberus Fountain showing hunting dogs in relief, an immense bronze basin with a green patina raised on a base of polished granite. This fountain forms the centre of the details of the Monument
CERBERUS FOUNTAIN (BRONZE AND GRANITE) OF THE MONUMENT OF INDUSTRY, STOCKHOLM

THE GREAT FOUNTAIN, HOME OF CARL MILLES, LIDINGÖ, SWEDEN
CARL MILLES, SCULPTOR
of Industry, another prominent feature of which is the granite gateposts surmounted by carved hounds in granite, a metre and a half high.

In the market place of the town of Halmstad is the beautiful Europa fountain, the central group of which supplies a startling new version of the old myth form. But it is to the sculptor’s own garden that a return must be made for the real charm of the fountain found here more intimately than in the public examples. Here the very spirit of living water is captured and here is the very marriage of sculpture and architecture. Here the real design of the fountain may be studied, the design that includes the play of the waters. No fountain is complete unless it is at play. Here, too, the real style of the sculptor’s work may be studied, for, left to please himself, he has allowed his imagination to be his only guide. The style is the man—composed, deliberate, sound in its traditions, not traditional but original, owing nothing to any individual or school of the past or of the present—genial, provocative, stimulating, compulsive.
ALLIED ARTS
AND
CRAFTSMANSHIP

PAVEMENT PANEL IN BRONZE, PRINCETON UNIVERSITY, N. J.

GAETANO CECERE, SCULPTOR
HELMLE & CORBETT, ARCHITECTS

Featuring
SCULPTURE
MURAL DECORATION
LANDSCAPE ARCHITECTURE
THE CRAFTS
NAIAD WITH FISH—IN GREEN BRONZE

STATUE ON THE TERRACE OF PILLARS, HOME OF CARL MILLES, LIDINGÖ
CARL MILLES, SCULPTOR
A DETAIL OF THE GREAT FOUNTAIN, HOME OF CARL MILLES, LIDINGÖ

CARL MILLES, SCULPTOR
GARDENS OF THE RESIDENCE OF C. L. KING, ESQ., MANSFIELD, OHIO
WILLIAM PITKIN, JR. AND SEWARD H. MOTT, LANDSCAPE ARCHITECTS
GARDENS OF THE RESIDENCE OF C. L. KING, ESQ., MANSFIELD, OHIO
WILLIAM PITKIN, JR. AND SEWARD H. MOTT, LANDSCAPE ARCHITECTS
DOOR TO TREASURE ROOM, CHRIST CHURCH, CRANBROOK, MICHIGAN
OSCAR BACH, CRAFTSMAN
BERTRAM GROSVENOR GOODHUE ASSOCIATES, ARCHITECTS
(The repoussé steel panels are inlaid with gold and silver; the frame is of repoussé steel on heavy oak)
AcTIVE INTEREST in our formative architecture is now some forty years old, at least, that much may be assumed from dates of publications in the field. It has been a forty year period of ruthless destruction followed more or less suddenly by a largely unguided adulation, the former running amuck generally among the better buildings, while the latter fastened usually upon those less significant. During that time, and of course for scores of years before, men beheld Colonial and other early work without perceiving its merit; indeed, what merit could one ascribe to a McIntire house, a Savery highboy, or a Stiegel bottle in comparison with Franco-American Renaissance country residences, walnut étagères, brown stone fronts, Turkish cozy corners and wax flowers en aspic?

Slowly recognition came; as though the awakening which has made our architecture improve so rapidly in the last twenty years had brought also—and as a logical counterpart—a new reasonable interest in the work of the past on our own soil. And this is easily understood, for the study of records is one of the ways toward progress. It was not long before books and periodicals began to feed that interest. In fact, Early American titles now represent a regular feature in publishers' lists. The result has been most beneficial. Many buildings have been preserved or restored; as have also many lesser items of furniture and other portable objects. With greater knowledge of the things themselves, methods of preservation and restoration—the bugbear of the archaeologist—have also improved. That alone is a prodigious gain. Museums and private collectors have been busy assembling material of Early American provenience; the American Wing at the Metropolitan Museum has had a record breaking attendance. The description Early American has been generally accepted as the best inclusive term covering our art from the beginnings through about 1825, embracing those of more limited meaning formerly used, such as Colonial, Georgian, Pioneer, Puritan, Early Republican, Federal, some of which now take their legitimate places as names of divisions—temporal or regional—of Early American art.

Throughout, this interest has become more and more thorough, appreciative and sensible; schwärmerei for the sentimental or the antique is gradually giving place everywhere to a sane regard growing out of an honest study of the material. Good things are separating themselves in the minds of the people from the mass of those that are merely old things. Incidentally there is now a flourishing and daily increasing trade in Early American antiques that formerly were only attic clutter; the capacity of attics, both then and now, has achieved eighth place among the wonders of the world, and the endless and indefatigable labor of Early American cabinet makers (and their modern helpers working in double shifts) is striving for the ninth.

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EARLY AMERICAN ARCHITECTURE AND THE ALLIED ARTS—A BIBLIOGRAPHY

Supplement to the close of 1927*

BY RICHARD F. BACH

In The Architectural Record, vol. 38, no. 2, Aug. 1915, page 231, to vol. 42, no. 3, Sept. 1917, p. 283, was published a series of reviews entitled: Books on Colonial Architecture; and in vol. 38, no. 1, Sept. 1915, p. 382, to vol. 42, no. 2, Aug. 1917, p. 189, was published: A Bibliography of the Literature of Colonial Architecture. Both were brought to date as of the close of 1917, in vol. 44, no. 1, 2, July and August 1918, pp. 85-90, 175-80. The compilation entitled: Early American Architecture and the Allied Arts—A Bibliography, in March to July 1926, included all titles previously listed as well as all that appeared from Jan. 1918 to the close of 1925.
During a number of years it has been our plea, many times urged and as often though always passively agreed to, that our early architecture must be not only preserved, but above all recorded; for there are many reasons why one might not be able to preserve a building, but none against its measurement, study and publication. In fact, in these pages, as long ago as November 1917, appeared an article entitled: The Final Record*, an extended argument in behalf of adequate documentation of the treasures of Early American architecture, from which we quote: By these three steps will the final record of Early American architecture come into being—cataloging existing Early American buildings; establishing a collection of books and other data on Early American architecture, placing this in some centrally located library of deposit and keeping it up to date; drawing up an ideal form of publication for instructive as well as comprehensive books on Early American architecture, encouraging the publication of others patterned after such adopted form.

Now, a decade later, this work has been begun, though still lacking an inclusive plan, the catalogue suggested, or an ideal form of volume. The beginnings made, in addition to any general interest evidenced by collectors, publications and an increased appreciation among laymen, are anchored to three separate and in their own lines highly significant undertakings. First, the Metropolitan Museum of Art opened (1924) an American Wing, a kind of text-book of Early American art with illustrations in three dimensions in the form of room arrangements ranging from 1640 to 1825, and at the same time undertook to make an inclusive record of Early American art both in its Library and in its Reference Collection of Photographs, all publicly available. Second, The Architectural Record published (March to July 1926) a complete bibliography under the title: Early American Architecture and the Allied Arts: A Bibliography, covering all publications of interest in this field to the close of 1925 and which is brought to January 1, 1928, by the present article. Third, the American Institute of Architects has published a complete and authoritative photographic record of early work in Charleston, South Carolina. These three efforts we regard as fundamentally important and as contributing directly to the final record of our formative art, of which many chapters have yet to be written and of these not a few will be without illustrations unless the processes of photographing, measuring and drawing are pursued more diligently than at present is the case.


In the pages following are listed titles of books and periodical articles which have appeared in 1926 as well as some earlier items first discovered in that year. They are grouped in classifications exactly in accord with those used when the inclusive compilation was published (March to July 1926), and for convenience the skeleton of the scheme is presented again. In its earlier form the Bibliography listed certain general titles, as of series of measured drawings or of photographs; in view of the interest of the material these series have now been analyzed and individual items inserted in their proper rubrics, though their actual date of publication may antedate 1926. Again, several series have been added to during the year and for the sake of completeness such titles have been entered here again in their completed form, to render double reference unnecessary. From time to time, when subsequent addenda sections are published in these columns, a similar procedure will be followed; by this means the reader is assured of the completeness of the Bibliography. And by completeness we wish to imply not the absolute of a quantitative maximum of titles that might
be set down, but rather the relative of thoroughness as to the quality of titles that it has been found wise to include.

"A bibliography is somewhat like a ship under headway; equipped for service, supplied with needed materials and instruments to gauge speed and course, but unable to reach port without intelligent use of all these facilities. And in the running of the ship the master has at his command not only knowledge and purpose, but also imagination. The dangers which are not charted may be suspected and therefore the more easily conquered. And, finally, to do its work properly, the ship carries only essentials and each has its place. So in the preparation of this Bibliography, the reader's imagination has been considered by the editor as an asset rendering his work more valuable. Cross references have not been resorted to, and he who is interested in Phyfe furniture will seek his quarry not only under furniture, but will remember that biography may also be a possible source. There is no field of human effort or interest which can dispense with imagination and succeed: bibliographies and their use are no exception. It will be the real test of value for these classifications if that quality, frequently requisitioned, serves to make out of dry rubrics of words and figures an instrument of current usefulness."

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**OUTLINE OF BIBLIOGRAPHY AND INDEX OF CLASSIFICATIONS**

I. **General Works**

II. **Churches**

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   1. General
   2. New England States
      a. Region as a Whole
      b. Separate States or Groups of States
      c. Separate Cities, Localities or Individual Houses
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   2. Churches
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      a. Furniture and Furnishings, Interiors, Woodwork
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      d. Pottery
      e. Silver and Pewter
      f. Textiles
      g. Wall Papers and Wall Paintings
      h. Miscellaneous
   7. Biography
   8. Bibliography
### I. GENERAL WORKS
(Including a few regional descriptive and historical)

**Dow, George Francis**  

**Metropolitan Museum of Art**  
*Addresses on the Occasion of the Opening of the American Wing*. Octavo; pp. 34. New York; The Metropolitan Museum of Art; 1925. $5.00.

**Waters, Thomas Franklin**  

**Whitaker, Charles Harris**  

### II. CHURCHES

**Faris, John T.**  


### III. DWELLINGS

#### 1. General

**Lathrop, Elise**  
*Historic Houses of Early America*. Octavo; illus. New York; Robert McBride & Co.; 1927. $10.00.

**Major, Howard**  

#### 2. New England States

- **a. Region as a Whole**  
  No additions

- **b. Separate States or Groups of States**  
  No additions

- **c. Separate Cities, Localities or Individual Houses**  
  No additions

#### 3. Middle States

- **a. Region as a Whole**  
  No additions

- **b. Separate States or Groups of States**  
  No additions

- **c. Separate Cities, Localities or Individual Houses**  
  No additions

#### 4. Southern States

- **a. Region as a Whole**  
  No additions

- **b. Separate States or Groups of States**  
  No additions

- **c. Separate Cities, Localities or Individual Houses**

**Curtis, Elizabeth Gibbon; Kimball, Maxwell; and Holden, Arthur C.**  

**Sadler, E. H.**  

**Simons, Albert and Lapham, Samuel, Jr., editors**  

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*(To be continued in the next issue of The Record)*
NOTES AND COMMENTS

CALIFORNIA BACKGROUNDS

As is common with people removed from metropolitan centers, Californians have in the past been more or less solicitous of the approbation of outsiders. Time was when we pointed with pride to things which were more our good fortune than our merit. I can myself remember when considerate "easterners" showed voluntary admiration for the climate and the scenery, and a willingness to be intrigued by the gold output and the size of turnips and oranges. I recall a college address delivered during my undergraduate days by some eastern university president or dignitary whom I have now forgotten. Yes, he said in substance, your sunshine is wonderful, and your flowers and your agricultural products and your Yosemite Valley and Lake Tahoe, and your timber and numerous other resources. And having thus worked us into a complacent enthusiasm for our vicarious virtues, he proceeded to ask, But what have you yourselves contributed? Given these physical bases for a distinctive culture, what are you doing to realize it? Visitors were then not generally so frank.

Well, the gold output has ceased to interest even professional Californians. I believe that chambers of commerce and Californians Incorporated do not so much as refer to the "Golden State." We have also come to realize—even to admit—that in fruits and vegetables flavor is not necessarily commensurate with size. Interest in Yosemite Valley and Lake Tahoe is shifting; from objects of pride they are becoming sources of revenue, while those of us to whom nature offers literal re-creation pack further into the range to escape ukuleles and tips. Climate is still occasionally mentioned, though its field of exploitation has been moving from the center southward. In short, Californians are ceasing to expect admiration for their luck, and the significant thing is that along with this declining naivete has been growing a recognizable cultural development.

Certain intellectual and artistic interests have long been manifest. From fairly early times until recent ones San Francisco enjoyed a theatrical reputation—not for production, but for discriminating taste. I have lately had the opportunity of hearing several actors and critics testify to the respect in which San Francisco's verdict was held. Several western literary figures have been decidedly more than local and ephemeral. The plastic arts, however, have been the latest to approach distinction and focus attention.

Architects first became aware that somebody was looking when the bungalow emerged. Don't ask me what is a bungalow or why. It is one of those unscholarly subjects which can shatter a reputation for scholarship, like the origin and nature of jazz and the source of its name. The French are peculiarly fond of probing such questions. I look to some Gallic savant to give us a natural history of the bungalow which will make it seem like a really important matter. Meanwhile, whatever a bungalow is and however it came about, Californians and outside observers unite on its being an interesting contribution. At least it was until the speculative builders took it up. But to succumb to crass commercialism is no sign of weakness; the best things of life do.

If the bungalow was artistically a small beginning, it none the less set much more considerable forces moving. Here were outsiders concerned with something so simple and natural that it had not occurred to California architects to take it seriously, and neglecting our earnest efforts to conform to eastern standards. The inference was inescapable. Architects began attending to what was required rather than to what they imagined others might expect of them. This habit of independence has grown on California architects until now we are not bothered by what outsiders think of our work.

This statement may sound a little arrogant and hence misleading. There is a human approval for which we all have a weakness; or perhaps I should say a penchant, since within proper bounds it is really a commendable attitude. It is a satisfaction to think that our architecture is viewed with approval. But the important point is that we are not designing it with any presumed outside approval in view. Which, of course, is exactly one of the reasons why outsiders find it interesting. And which, again, is sufficient evidence that we have outlived our one-time provincialism. For this characteristic manifests itself not so much in the exhibition of local differences as in apprehension at exhibiting them. In other words, the essence of provincialism is the fear of being thought provincial.

When eastern architects profess interest in the work being done in California I am inclined to believe them. In the first place, were such not the case there appears to be no motive for their mentioning the subject at all. And in the second place, it is a pleasure to credit them with discernment. For, to be quite frank, I really think our current design is in large part among the best being done in the country today.

Just why this should have come about is of course an exceedingly complex matter, on some aspects of which I may have something to say in more detail
at another time. Sufficient to observe in passing that many of the laws supposed to determine these things with precision, and to which our histories cavalierly submit unprotesting past epochs, won't work now. Modern conditions modify much of their force, even supposing them ever to have had their alleged validity. Take the effects of local materials, for instance. It is practically as easy, sometimes easier, to get materials from the ends of the country, if not of the earth, as those existing nearby. Transportation and accidents of industrial development tend to that. There is therefore almost no section of the country which presents marked individuality in building materials. Compare social conditions in California with those of other parts of the country, and consider how much they really explain. The much-exploited effects of climate turn out to be more psychological than directly physical. And so on. No, the deterministic approach, unleavened by a little common sense and more imagination, will not yield much on California architecture. I am really inclined to believe that one of the principal reasons we are doing some of the most interesting architecture in the country is because some of the best architects in the country are in California.

Irving F. Morrow

AN UNWISE REQUEST

The District of Columbia Commissioners request a temporary site upon the Mall for the farmers' market, ignoring the visible example of temporary buildings now destroying the utility and beauty of the Capital parks. The thought of adding a more unsightly object to their number is difficult to conceive.

The want of wisdom in requesting a park site for the objectionable structure, will be appreciated by a visit to the present market. On market days prominently in evidence are the unsightly portable stands, the dilapidated wagons, the forlorn horses and the scattered waste. The farmers leave upon the ground broken chicken coops, egg cases, decayed vegetables and débris of all kinds.

Instead of the stately buildings and formal parks of L'Enfant's plan we would have the farmers' market. Temporarily? We know and should not forget the long life of temporary buildings. When we celebrate the two hundredth anniversary of Washington's birth, citizens and foreigners will see flimsy stucco buildings and possibly a farmers' market upon the Mall instead of the order, dignity and beauty, which he with a broad vision contemplated.

Why do the District Commissioners make such an unwise request? The market must be removed to make way for the new Internal Revenue Building. It is easier to put this place of barter with its unsightly accessories on the Mall than to select a permanent site. The District Committee in the House of Representatives has approved a site in the southwestern section of the city on the river where it will mar the connecting link between the War College and Potomac Park. The Efficiency Bureau strongly disapproved this location giving many good reasons for their action. The final selection of a permanent site must run the gauntlet of the House and Senate. With strong factions opposing each other it may be long before the question is definitely settled, hence the request for a place upon the Mall. The Commissioners with the possible failure to secure the Mall make a supplemental request for the use of B Street adjoining the park for portable stands and sheds with the Mall as a parking place for motor cars. As B Street borders the park and will be the main thoroughfare to the Memorial Bridge, it is unsuitably, being only less objectionable because they cannot make a temporary permanency in the street.

Let us recall briefly the flimsy structures placed on the Mall, under protest, as war emergencies. The frame stucco buildings between Third and Tenth Street not only destroy the beauty of the landscape, but bar the development of L'Enfant's plan, neglected for the past one hundred and thirty-nine years. These unsightly buildings preempt the ground where L'Enfant proposed his most imposing composition, the open vista between the Capitol and the Washington Monument, bordered by formal avenues of trees and stately buildings.

The most serious blunder perpetrated as a war measure are the reinforced concrete buildings erected by the War and Navy Departments on Potomac Park. These structures are good for at least a hundred years. They make futile the fine composition of the Park Commission which contemplated a densely wooded tract where these buildings thrust out their ugly prongs. Visitors to the shrines of our greatest Americans are distracted by their ugliness. Although their demolition is estimated at two million dollars, I believe the pride of the people in their Capital City and their reverence for Washington and Lincoln will insist upon their removal.

The temporary structures in Washington should be a warning not only to Government officials but to the city authorities of the country.

Roosevelt's breadth of thought and clear vision was illustrated when he ordered the destruction of the abandoned Pennsylvania Railroad station on the Mall, while Congress was preparing to wall in the train shed to fit it for Government offices. Although the House of Representatives went into hysterics over his supposed usurpation of power, investigation
proved he was acting within his rights. Had Roosevelt vacillated, the ugly train shed would have proved another barrier to park development.

The Institute as the guardian of the Park Commission plan should see that no permanent or temporary structures are erected in Washington that may hamper or prevent the speedy execution of the L'Enfant and Park Commission Plans.

The Washington Post in a forceful editorial says:

"The Mall belongs to the Nation. It has a more valid right to remain undefiled by ugly buildings than the farmers' market has a right to exist. If the Commissioners and Congress cannot find any other site for the market than the parkway that extends between the Capitol of the United States and the Washington Monument, let the market be abolished entirely. No backward step should be tolerated in the great work that is now under way for the beautification of the National Capital."

GLENN BROWN

Mr. Greening has built five such cottages, which mark the attainment of perfection in log cottage construction. The logs used are second growth green white pine. He has these cut in the winter and peeled, leaving part of the cambium (inner) layer of bark. In the peeling process, by varying the shape and size of the cuts made through the cambium layer to the white wood below, many beautiful effects are secured.

After peeling, a coat of boiled linseed oil is applied with a paint brush to the logs. In a couple of weeks, another coat is given. When this coat is dry, the logs are ready for use. If the logs were not so treated, when they became dry the cambium layer would loosen and come off. The oil sets the bark so it remains on the log permanently. It also renders the logs impervious to water. This is a prime consideration. In the drying process, the oil retards checking to a large extent and if any small checks do appear, it makes them waterproof, thus preventing them from enlarging by the action of sun, water, and ice. The oil has still another use. It brings out the grain of the wood accentuating, in this way, the
THE ARCHITECTURAL RECORD

Harry L. Spooner

NEW HOUSING FOR OLD PARIS

A street in Paris was recently opened by the French triumvirate of authority—the Minister of Commerce, the Prefect of the Seine and the Prefect of Police. This street, according to the magazine "Housing," consists entirely of houses "built on the most approved principles of hygiene and on plans which recall some ultra-modern exposition of decorative art rather than the staid, uniform apartment houses of Paris.

'Situated in a district of Auteuil, which has retained its century-old trees and still boasts of many open spaces, the new street has been named rue Mallet-Stevens, after the distinguished French architect who designed this experiment in house construction.

'Seen from the outside the buildings present an entirely different aspect from those in the surrounding streets. Balconies, windows in rows and sloping roofs have disappeared. Stories are undefined, some being higher or lower than the adjoining ones. Windows are of huge size, and more like those of some modern factory than of a private home.

'The walls are in gray cement, the roofs have been replaced by terraces, and every block presents a complicated geometrical figure of parallel straight lines, from which curves have been banished.

'The architect's idea was to make architecture subservient to comfort. The houses are, as it were, built from inside outward. When the rooms are large and airy, the windows are proportionately wide and high. But there is nothing hideous about these dwellings. The outer openings are painted in all colors blending harmoniously with the gray of the walls.

'The terraces are like hanging gardens, and on the sidewalks and window ledges there is a profusion of flowers and dwarf trees, which give the rue Mallet-Stevens the appearance of a street in some doll city.

'At first sight this new street of ten houses out in the Auteuil district looks like crazy geometric puzzles. It is all made of reinforced concrete, built in cubes and cylinders in the most fantastic manner.

'Enormous windows add to its queer very twentieth century look. It is only after the eye gets used to certain things that one begins to see elegance in the structure of these houses of the future.

'And once inside the houses of this queer street one realizes that the architect had some far better purpose than building an elegant frontage. He built his house from the inside out. He has tried to make a street of habitable dwellings, convenient, airy, full of light, easy to work in, comfortable and harmonious.

'The oddness of the outside does not appear at all indoors. The doors, windows and stairways are placed so as to give the maximum convenience. These houses are built for living in, just as an automobile is built for running on the road, and because they fit their purpose they are elegant. There is nothing superfluous.

'For the first time the flexibility of cement in place of stone as a construction material has been fully taken into account. Dwellers in these houses are not lodged in a square divided into more or less convenient parts. Around what they need in the way of living space a protective cover of cement has been built. Just as the house gives room for everything that is needed in a modern habitation, so it has no waste spaces.

'In only one thing does this street resemble every other street in Paris, and that is that there is nothing in it for rent.'
MEASURED DRAWINGS

EARLY AMERICAN ARCHITECTURE

HOUSE NEAR WILLIAMSBURG, VIRGINIA
OLD DAIRY, WILLIAMSBURG, VIRGINIA

Photo, Metropolitan Engraving Co.
OLD DARY
WILLIAMSBURY, VA
HOUSE NEAR LOCUST GROVE, VIRGINIA
THE ARCHITECTURAL RECORD

ARCHITECTURAL RECORD SERIES
EARLY AMERICAN ARCHITECTURE
THE ARCHITECT'S LIBRARY

MAJORCAN HOUSES AND GARDENS
Byne, Arthur, and Mildred Stapley.

Majorcan Houses and Gardens. Folio. Helburn. 1928. $5.00.

The Byne and Stapley books are always intelligent. In many such collections of photographs, while the photographic work is as good, the selection of things photographed seems haphazard and miscellaneous; but Mr. Byne is an architect and a draughtsman, and his selections and drawings are made with knowledge, purpose and plan. The texts of such books too are apt to be meagre or perfunctory or verbose, and the texts of the Byne and Stapley books are admirable.

A generation ago the Balearic Islands were seldom visited or described, but now Majorca, the largest of them, has become almost a resort. It can be reached conveniently from either Barcelona or Marseille, and has many foreign residents. Yet its character and appearance are unchanged. Palma, the capital, got its name from the victory of Cecilius Metellus over the Carthaginian in 123 B.C. It was taken by the Moors in the 9th century, again by the king of Aragon in the 13th century, and the land parcelled out among the conqueror's captains. On the basis of that military aristocracy arose a still more opulent aristocracy of commerce, with a flourishing trade with Italy and the Levant. The splendor of Palma in the 15th and 16th century was often remarked. The great families in the 17th century lived in an almost regal style, and a surprising amount of their sumptuous furnishings is still there, not in museums but as the ordinary accompaniment of family life.

Of Moorish architecture there is hardly a trace remaining outside of certain vaults and foundations in Palma. "The story of domestic architecture in Majorca begins with a sort of medieval fortified manor transplanted from Catalonia and adapted." Every knight who received a grant of land in the general division or "repartimiento" of the 13th century, was required to fortify his house. Majorca was peculiarly exposed to Moorish piratical attacks for centuries. This fortified Catalonian style was modified in the 16th century in Palma partly as the result of a conflagration, and in the rebuilding features less medieval, more Italian and renaissance, appeared. Some country houses still retain medieval features, but the more interesting ones were built or remodeled in the 17th and 18th centuries. The last building period in Palma was 1650-1750 (pl. 152). The old patriarchal system was then breaking up. It was a ruinous modus vivendi when the families were enormous. Estates began to be divided, and small lots were even sold to the peasants. Large holdings of the monasteries were put up for sale. The new homes were built in the island tradition. In general these country houses are simple and spacious, but the change from the cramped intricacy of the medieval seems to have been made without transition.

The designation of these country houses is a curious abbreviation. Son Oleza, Son Borga, Son Fortuny, means Oleza's house, etc. and Son is a contraction of So es de En Oleza, or This is of Mr. Oleza. A son, so to speak, is a gentleman's farmhouse as distinguished from a villa for recreation, or from the estate itself which is called a possessio or predio.

Water is scarce in Majorca, and that is one determining condition. The island is wild and rugged, and in the mountains a beautiful view is almost unavoidable. The problem was to harmonize the house to its setting and make the right approach. The solutions are of many kinds. One of them has rocks and fountains above the roof line, pool and pergola below the house; another on a leveled hill top has gigantic terraces and a wide flung road. While a Castilian country house is usually planted directly on the highway with its amenities inside in the patio, a Majorcan has an exterior composition of fruit trees and terrace. The gardens are usually small and simple without sculpture or polychrome tiles. Most houses are surrounded with a high balustraded platform, which in reality is a watershed to an underground cistern.

Gothic Majorca was built of stone, but the 17th and 18th centuries introduced rubble and stucco. The stucco is generally of a warm ochre tint, sometimes banded with sea-green and blue. The Majorcan patio is not an outdoor living room, as in Andalusia. In country houses it is the focus of the farm life (pl. 85); in Palma it serves as an approach to the main stair, and the architectural treatment is reserved for the stair and loggia. The arches are curiously flat (pl. 142 or 149).

Sixteen palaces and country houses are described separately in some detail. La Granja may be taken as an example of a country house (pl. 20, 21, or 23). The property passed from the Arabs to the Cistercian monks, then to the Vida family, and finally to the Fortuny family, who still hold it and who built most of the present house in the 17th century. It stands on a steep hillside, with a cascade behind of abundant water falling into a rock garden. There is a pool and pergola in front. Architecturally it is an important example. The façade is a composition of two towers and an arched gallery. The stucco is a soft ivory tone with pale green window trimmings, and the gallery is of a yellowish sandstone.
Majorca seems always to have had a vigorous local craftsmanship. Carpets were woven on the island, furniture carved and upholstered, friezes and dados painted by local artists. The Spanish window grille or reja is seldom found, but there is a wealth of iron balconies. Majorca glass rivaled that of Venice and Valencia. There is a peculiar island fabric called "catalufa," thick, shaggy, woven of raw silk and used for wall hangings (see pl. 178).

ARTHUR W. COLTON

HOW AMERICA BUILDS

Neutra, Richard J.


IN THIS BOOK Mr. Neutra, the Austrian aide of Frank Lloyd Wright in the building of the Imperial Hotel in Tokio, now an American architect practicing in the west, answers for German readers the interesting question, "How does America build?" Even were this all he did the book might have interest in America: for thus to have the new building methods of our time summarized and analyzed by a foreigner to whom European methods and our own are both familiar, brings before us many phases of these methods which we know too well to appreciate in full their implication. The very completeness with which Mr. Neutra omits consideration of traditional frame and masonry construction is highly significant. It is his claim that the super-personal style-formation now in development, originated in the United States, while some of the theoretical speculation was and is done abroad.

But Mr. Neutra goes further than his programme perhaps implies, and discusses the traffic question which is so closely related to the question of our building methods; and in this discussion he offers suggestions with regard to automobiles for handling both the matter of distribution and of garaging, and with regard to trains for railroad stations devoted to commuting traffic. His scheme for a large commuting station is interesting and ingenious both in plan and in design and his "Rush City" would be fortunate to be so well provided.

He further considers the relation between the almost universal use of taxis and private automobiles and the zoning question both as regards New York and Chicago, and proposes essentially a scheme (such as neither New York nor Chicago approach, but rather Cleveland, Detroit or Hartford), with a business center of rather high buildings surrounded by a wide-spread ing of low building zone for residences, apartments and the necessary adjuncts, theatres and so forth, to large city life. Thus the first third of his book is of a theoretical but not utopian nature, outlining the conditions which control American building, how they are regulated and how they might well be further regulated to give to our cities something of the logical organism which, with somewhat less advanced traffic conditions, the newer Central European city planners have sought—as for example in the enlargement of Cologne or Vienna.

The central third of his book is devoted to a discussion in great detail of the new Palmer House in Chicago as a typical example of American large scale city building. This requires in America no particular comment since it is of conventional steel construction.

The concluding section is again, like the introduction, to a large extent theoretical and takes up various new methods of construction for use in small scale buildings. The first of these materials is a sort of standardized concrete plate (made in St. Louis) used on a reinforced concrete or steel skeleton: a method of building which one would associate rather with the experimentations of the Dessau Bauhaus in Germany than with America where wood and masonry traditions still seem all but universally dominant in such small scale construction as is considered "Architecture." This method is illustrated with plans and perspectives which are perhaps even more convincing from an artistic than from a structural point of view. One can only hope that such attractive modern designs are really practical and possible in the suburbs of "Rush City." The costs are said to compare favorably with those of conventional American wood construction. He also discusses the "Knitlock" system of reinforced construction used in the last few years by Frank Lloyd Wright in his California houses and already described by Andrew Rebori in The Record.

In conclusion Mr. Neutra discusses the aesthetic effect of the use of the materials and methods he advocates both in downtown "Rush City" and in its suburbs. He gives as well illustrations of technical details such as windows in skyscrapers, doors in garages, model kitchenettes and fitted...
EXPRESSION IN CONCRETE

T. P. BENNETT, F.R.I.B.A.


It is proper, in reviewing the text of this book, to consider the American section first. This is very fully illustrated by plates at the end of the book supplemented by a number of analytical studies. These plates have one feature in common—namely, an inadequate recognition of the claims of modern methods of concrete construction. In several magnificent examples which include a monumental archway, churches, hotels and temples, the constructive methods employed have been relegated to a place of secondary prominence while motives of enrichment, door and window incidence, and silhouette seem to have engaged the whole attention of the designers. That this is not the final word in the expression of concrete architecture in America one is assured, and in this connection I cannot do better than quote Irving K. Pond, former President of The American Institute of Architects, and F. S. Onderdonk of the University of Michigan.

"We have, in this country, developed a wide variety of textures and surfaces," says Mr. Pond, "but we have in small measure as yet developed the constructional side as has been done in other lands, particularly in Germany and France. This is a field in which the structural imagination may well be allowed to play; a field in which our designers, with their material instinct for bigness and spiritual instinct for simplicity, should be eminently successful."

Professor Onderdonk says: "Although the new material has wonderful possibilities, the architects of our generation scarcely realize what a treasure has fallen into their hands. As all parts of a concrete building are tied together by steel reinforcing rods, joints as well as minor mouldings which separate bases, shafts and caps from each other in traditional styles are no longer necessary or desirable. Large smooth planes contrasting with openings piercing the concrete wall are the result; this must eventually result in the creation of a concrete tracery."

Both these authorities cover the theoretical field, yet I think I am right in saving that up to the moment of writing there are no examples extant in America of this approved practice.

If the statement near the end of the book is true, then the outlook for architecture is gloomy indeed. "The tendency of all industries," he says, "appears to be in the direction of the employment of a small number of skilled men and a large number of operatives who are unskilled or only slightly skilled." This means that the buildings of the future are to be produced by unintelligent people for the most part—i.e., people of slavish mentality. But, as I have said, certain of the author's deductions are difficult to accept. Personally, I believe that the architecture of the future will demand as the first requirement that everyone concerned shall be more than slightly skilled and shall be much more than slightly interested. Many—too many—of the buildings of the present time show evidence of the fact that they were produced by the methods advocated by the author. Is it too much to hope that the author may be wrong in his deduction?

Again, the fundamental differences between Roman and modern works are summarized for present-day construction as follows:

1. Greater economy of cost.
2. Reduction of period of erection.
3. Maximum amount of daylight in all rooms.
4. Reduction of number and extent of obstructions on plan.
5. Relatively low floor heights.
It would seem that these are not fundamental differences—they are secondary or even more remotely removed results. The fundamental differences in the matter are the combined use of steel and concrete, the exact knowledge of the properties of this combination, and the scientific application of this knowledge to the constructional problems of modern work. The author attributes lack of mathematical knowledge to early historical construction (be it noted that mathematics is only a humble handmaid of science) and hints that he will further investigate the difference mentioned above numerically, but one is disappointed by being confronted next by the announcement of the principle of using one material as a constructional element and covering it with another. One would have expected the author at this point to indicate at least the basic fact underlying the matter, which is the tensional property of Ferro-concrete, but there is no reference to it.

In the opening chapter "originality" is referred to as an expression of individuality, and individuality is in all arts a contemporary characteristic. If this be true, then Louis Quinze and Strawberry Hill Gothic horrors are both original and individual. And so they may be—but with vicious, modish frippery at the heart of them. Originality and individuality of worth come only from the sincerity of purpose of the designer. It is difficult to avoid complete dissonance from the author in regard to many things in this book, but in none more so than in his deduction that touches upon constructional expression.

The author produces for the expression of modern architecture "the dominating idea of verticality" and produces it as the result of constructive impulse. Let it be stated as a simple fact that the true expression of modern architecture is no more dominantly vertical than horizontal—rather less so, in fact. The example taken to illustrate the dominating idea of verticality is very far from being conclusive proof of the author's hypothesis. Page 8, paragraph 1, runs as follows: "The main vertical constructive element is repeated as a number of bays on the façade, and a suitable lighting element is obtained by dividing these bays with suitable vertical features." But on turning to the illustration which is to bear out this assumption (plate XL showing the Hollywood Terminal Building) we find there is scarcely a sign of the repeated vertical constructional element referred to, and no sign at all of the horizontal element which everyone knows to be there, and which in actual fact dominates the whole hidden skeleton. It is only necessary to consider the amount of steel laid horizontally in a modern building with the amount fixed vertically to arrive at a just estimate of what is the dominating idea.

Messrs. Morgan and Walls and Clements, the architects of the building in question, were entitled to make their design as vertical in expression as they liked, but I do not think the author is justified in attributing to it a mediaeval modernism which does not exist and which should not exist. In the present transitional state of architecture, I think it is regrettable that the author of this book did not make the following distinction clearly and emphatically, for it is one that is intimately bound up with the development of concrete architecture, and it is this:

Concrete construction is one thing—ancient—chiefly compressional.
Ferro-concrete construction is another—modern—chiefly tensional.

In a book which sets out to review the whole field of "architectural design in concrete" the omission of such a vital distinction and the emphasis of it is a grave defect. Heretofore, tensional forces in a building were considered to be disastrous agents leading straight to disruption. Now we can lock them up with the complete assurance of continually increasing safety. This means that we have the astounding
phenomena of a new constructive material to our hand that only awaits scientific application to modern architectural problems, and as yet we have practically no new architecture. A casual glance at history will show conclusively that a new architecture invariably comes with a new constructive material and here we are with practically none.

Let me conclude with the following extract—page 24, last paragraph—"It is therefore of the greatest possible importance that at frequent intervals a survey should be made of the efforts of the individual designer to produce façades, interiors, color compositions, textures and ornament which represent his personal ideas." This is the author's own summary of his intention in publishing the book called "Architectural Design in Concrete." Façades, interiors, color, textures and ornament, but very little about the great new constructional principles which have in their heart the source of inspiration of all the noble works of the future. It would almost seem that the root of the matter is not of prime importance to the author and one is forced to say in conclusion that the book is chiefly an excellent collection of plates.

S. Woods Hill.

LIST OF NEW BOOKS ON ARCHITECTURE AND THE ALLIED ARTS

ARCHITECTURE

Architectural League of New York.


An annual record of important work in the field of architecture, crafts, sculpture and decorative painting.

Cafés, Bars, Restaurants.

Paris: Construction moderne, 1927. 2 plans, 38 plates. obl. 4°. 75 fr. 725.71

A collection of photographs showing both exteriors and interiors of Parisian cafés and restaurants, arranged alphabetically under architects.

Harrison, Frederick.

York Minster. London: Methuen & Co., Ltd., 1927. xii, 212 p. Front., plates, 12°. 6s. 726.6

Bibliography, p. 204-205.

A study of the history and architecture of this English cathedral by its vicar-choral and librarian. Small half-tone illustrations from photographs.

Keyser, Charles Edward.

A list of Norman tympana and lintels with figure or symbolical sculpture still or till recently existing in the churches of Great Britain. 2d ed. rev. and enl. London: Elliot Stock, 1927. lxxxiv, 80 p. Front., plates. 4°. 35s. 729

A long and detailed introduction reviews the literature of the subject, discusses the dating of examples, and describes the sculptured ornament. The catalogue lists individual examples alphabetically by location. There are, in addition, a topographical classification; indexes of illustrations, of subjects and of places, with a list of photographers.

Marçais, Georges.


Bibliography, p. 421-441 and 917-929.

A chronological and a regional study of the architecture of the western Muhammadan world.

Mixer, Knowlton.


A discussion of typical examples of the early domestic architecture of New England in relation to the historical background of the period.

Poley, Arthur F. E.

St. Paul's Cathedral, London; measured, drawn and described by Arthur F. E. Poley. London: Printed for the author, 1927. xvi, 29, vii p. Front., illus., 32 pl. 1 ed. f°. 6 guineas. 726.6

At head of title: Erected 1675-1710.

Printed at the Chiswick Press.

"Mr. Poley's beautiful drawings of St. Paul's represent several years of devoted labour and the result is worthy of the splendid building which forms their subject. For the first time, there will be available for students of architecture an accurate and complete record of what is, on the whole, the finest example of neo-classical architecture in existence."—Introduction by Sir Reginald Blomfield.

Power, Ethel B.

The Smaller American House; fifty-five houses of the less expensive type selected from the recent work of architects in all parts of the country. Boston: Little, Brown & Co., 1927. x, 100 p. Illus. (incl. plans). 4°. $5.00. 728

A volume of illustrations from photographs, with brief descriptive captions, grouped according to the building material employed. There is an index of architects and of owners.

Requa, Richard S.

Architectural Details, Spain and the Mediterranean. Cleveland, Ohio: J. H. Jansen, 1927. 41 l. 144 pl. F°. $20.00. 729

"The securing of the photographs and half-toned reproductions contained in this work were made possible through the co-operation of the Monolith Portland Cement Company of Los Angeles, California."
THE ARCHITECTURAL RECORD

By special arrangement with them this edition was published. Excellent reproductions from photographs illustrating characteristic examples of façades, doorways, grilles, balconies, roofs, towers, courts and garden details.

WALTERS, SIR JOHN TUDOR.


ALLIED ARTS

BAYARD, EMILE.


Borenus, Tancred, and E. W. TRISTRAM.

English Medieval Painting. Firenze: Pantheon, 1927. 66 p. Illus., 101 pl. 4°. £4 146. 759-2. An illustrated manual for students and amateurs. (A chronological study covering the twelfth through the early sixteenth century, with a special chapter on technique. Wall paintings and panel pictures are reproduced in drawings and water colors by Professor Tristram.)

BosserT, HELMUTH THEODOR.


FOREIGN PERIODICALS

Reviewed by Henry-Russell Hitchcock, Jr.

The periodicals here reviewed give a more consistent and intelligible picture of current architecture than did the varied lot of last month. For the present it would seem that the German architects (with Schneider the furthest to the left, and Kaufmann the furthest to the right), have the most definite and mutually understandable programme. The tendency of the more important German periodicals to devote practically an entire number in plates and text to one architect or group of related architects, certainly gives the foreigner a better idea of the dominant style than the more casually chosen material in the other European journals. Die Baukunst in this month's number devoted to Tessemow, and Moderne Bauformen devoted to the work of the Vienna architects, offer a most satisfactory picture of the typical work of architects who are neither reactionary nor revolutionary in their programme - the architectural center, so to speak, to which most of the civic work in the other periodicals belongs.

The British periodicals show, amid a mass of reminiscent work, little that is different in spirit from the majority of work on a similar scale produced in America. There are, to be sure, one or two houses in which the continuance of tradition seems less binding than with us, with more of simplicity and less negative in quality. It is also significant that the very completely modern house by the well known and long established firm of Sir John Burnet and Partners compares very favourably with the most advanced French, Dutch and German work. The plan however is closer to the American norm.

ENGLAND:

The Architects' Journal. January 18. A housing development at Weybridge by Louis de Soissons and Arthur W. Kenyon. Some rejected designs...
for the Shakespeare Memorial Theatre.


Feb. 15. Mosaic decorations by Boris Anrep in the chapel at Keir, Dunblane, Scotland.


The Architect and Building News.


*Illustrated in these pages.
THEATER, DIE KOMÖDIE, BERLIN, BY OSKAR KAUFMANN
From Die Kunst, Feb., 1928

a modern house, both by Alejandro Virasoro.

CANADA:

GERMANY:
Moderne Bauformen. Feb. The number is devoted to work by Vienna Architects, Strnad, Hoffmann, and others. Interiors and students' work is included. Standardized modern interior and exterior doors from Frankfurt am Main.


*Illustrated in these pages.
WE BELIEVE that unusual interest will be felt by architects in one of the most pleasing of the products of our Vermont quarries—our Emerald Dark Unfading Green Slate.

This roofing slate, split to three-sixteenths thickness, affords a most charming combination of tint and texture, adaptable as regards color to virtually any type of residential architecture and absolutely non-fading under all circumstances. It has been used to extraordinarily good effect in some of the most interesting of modern residential work, and we ask your consideration for it on your next undertaking of this type.

See Sweet's for details—page A458

O'BRIEN BROS. SLATE CO., INC.
GRANVILLE, NEW YORK
TRAVELING EXHIBITS

The Portland Cement Association announces the following information regarding a traveling exhibit of prize-winning designs in the T-Square Club Competition for duplex and semi-detached houses of concrete masonry.

The photos sent out have been enlarged to 15x20 and mounted on heavy board backing suitable for display. There are eleven drawings in the set and they will be shipped by express, charges prepaid, to any architectural club or chapter of the A.I.A. interested in the same. Shipment will be made in a suitable container to prevent the photos from being damaged in transit and a description of the drawings will accompany the exhibit.

The T-Square Competition was conducted, first—for the purpose of obtaining competent architectural studies in the design of semi-detached and duplex houses of concrete masonry. Then it was the hope that attention would be brought to the distinctive possibilities of concrete as an economical structural medium.

Clubs wishing to obtain these drawings as an exhibit should write to W. F. Lockhardt, District Structural Engineer, Portland Cement Association, 347 Madison Avenue, New York City.

WAYSIDE REFRESHMENT STAND COMPETITION

The prizes in the second Wayside Refreshment Stand and Gasoline Station Competition have been awarded. The competition is forwarded through the medium of the Art Center of New York and the American Civic Association of Washington, D.C.

The purpose of the competition is to better the appearance of the roadside stands which, through ugliness of conception or carelessness of construction, are beginning to menace the beauty of highways and countryside.

The first prize of $500 was won by Henry Ives Cobb, Jr., of New York City for a refreshment stand and gas station. It is colonial in design and, according to the prize jury, "stands out from all the drawings submitted for its sheer charm." The second prize of $400 went to Malcolm P. Cameron, also of New York, whose Spanish mission design was treated with tile and stucco. The third prize of $300 won by Sam F. Swales—a structure shingled and clapboarded. Morley Geesey won...
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These are the simple reasons why Andersen Casement Frames are becoming so popular with architects seeking casement charm and beauty with utility and economy.

For Andersen Frame information check and mail coupon below.

The Architectural Record, June, 1928
fourth prize of $200, the fifth going to A. S. Cropsey and Charles Leonbardi.

William E. Frenaye, Jr., was winner of the first prize of $500 in the design in the competition for separate refreshment stands. Mr. Frenaye designed a rustic structure which the jury characterized as "delightfully simple and straightforward and exceptionally economical." Franklin Scott received the second prize of $400. The third prize of $300 went to Laurence Doubleday of Ithaca, N. Y.; fourth prize of $200 to James A. Britton of Boston, Mass., and fifth prize of $100 to Burton A. Bugbee of Ithaca, N. Y.

CHICAGO ARCHITECTS AND COMPETITIONS

In the selection of the architect for the new auditorium to be built in Chicago, the Bulletin of The Illinois Society of Architects strongly favored a world-wide competition with no intention to detract from the ability of Chicago architects.

"Chicago," says the Bulletin, "is especially proud of the Tribune Tower, the architects of which were selected by means of an open competition held under the regulations of the American Institute of Architects. Nebraska is the proud possessor of a new State capitol which is recognized as one of the most magnificent buildings standing. The architect of this building was selected by means of an open competition. Los Angeles has its new public library which was handled in the same way, and there are dozens of other instances where important public and monumental buildings receive the benefit of the best architectural talent in the country through the medium of a competition."

OUT-GRIMMING GRIMM

The following item appeared on the Bulletin Board of the Architectural League of New York:

"Once upon a time there was Herpert Crory, Editor, "The New Re-

SCHOOL PRIZE

For performing the best work among the competing uni-

CIRCULATING ART

The Arts Council of the city of New York has instituted a plan whereby objects of art may be borrowed, taken to the home for a limited period and then exchanged, just as one does a book from a library. Mr. Harvey Corbett has characterized the method adopted circulating such art objects. "The present exhibition," he says, "is an in-

BACK COPIES OF THE ARCHITECTURAL RECORD

The Architectural Record frequently receives requests for back numbers of The Record. Subscribers who wish to dispose of such issues should communicate with L. N. Harvey, Circulation Manager, The Architectural Record, 115 West 40th Street, New York City. We also have on file addresses of architects who have bound volumes of The Record available for purchase. Inquiries for these volumes should be addressed to Mr. Harvey.

CONTRIBUTORS

Philip L. Goodwin, architect of New York City; Chairman of Building Committee, Beaux-Arts Institute of Design. Herbert Croly, Editor, "The New Republic"; formerly Editor "The Architectural Record."

Claude Bragdon, architect; stage designer; author of "Beautiful Necessity," etc.

Irving F. Morrow, architect, member of firm Morrow and Morrow, San Francisco; Associate Editor, "The Architect and Engineer."


Kineton Parkes, English critic of art; author of "Sculpture of Today"; contributor to Athenaeum, Studio, etc.

PROFESSIONAL ANNOUNCEMENTS

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Construction Statistics 154
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Advertising Section

The Architectural Record, June, 1928
EVERY building is a materialization, a realization of some architect's vision. Unique in design, this Institute stands as a significant contribution to modern architecture by Eugene H. Klaber and Ernest A. Grunsfeld, Jr. Here, they have planned a structure that is worthy of sincere study. In its construction, the outside brickwork has been handled in an interesting manner.

This building is another example of the fact that Sargent offers hardware suitable for every type and every class of building. Sargent locks and trim, Sargent pieces of solid brass and bronze, are sound building investments for any type of structure. Sargent Hardware is long lasting, carefully and faithfully made. Of time-defying materials, all moving parts are exactly machined and fitted to insure a minimum of wear, and long years of certain, silent operation. Sargent cylinder locks, secure, firm and thief-resisting, can be master-keyed in any practical combination for use in public or semi-public buildings.

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*Hardware Manufacturers*

**NEW HAVEN, CONN.**

New York: 94 Centre Street
Chicago: 150 N. Wacker Drive (at Randolph)

---

The Architectural Record, June, 1928
Representatives of the leading manufacturers of wrought iron in various parts of the country met at the Duquesne Club recently and formed the Wrought Iron Research Association, the principal object of which is to gather and disseminate information about this time-honored metal.


Samuel Cabot, Inc., of Boston, Mass., have signalized their fiftieth anniversary in several distinctive ways, one of these consisting of the publication of a small booklet containing twelve reproductions on tinted stock, hot pressed, of steel portrait engravings of old time architects including Palladio, Sansovino, Bernini, etc. The reproductions are very well executed and well worth framing. Should any architect have been overlooked in the distribution of these sets of portraits, Samuel Cabot, Inc., will be happy to forward a copy on request, as long as the edition lasts.

An informational and technical service for users of lumber and wood in other forms has been established by the National Lumber Manufacturers Association. This service will be rendered at their request to those having construction, manufacturing or utilization problems, in specific cases, and generally through bulletins compiling results of various research activities.

Thirty consultant engineers and specialists have already been retained by the Association for this service. They are located in groups available to every section of the country and are prepared to handle problems related to construction, architecture, engineering, agricultural and industrial uses, forestry, merchandising, wood technology, lumber grades and a multitude of other topics.

The technical staff of the Association is continuously engaged in fundamental research and in addition maintains a continuous association with the Forest Products Laboratory of the United States Forest Service, at Madison, Wisconsin, the Forest Service headquarters in the United States Department of Agriculture, the United States Bureau of Standards and the Wood Utilization Committee of the U. S. Department of Agriculture, all at Washington. It also maintains a system for securing information on the peculiarities of wood and new practices in production and distribution from forests and mills. Further information may be secured from the headquarters of the Association, Transportation Building, Washington, D. C.

The Second National Fuels Meeting arranged for those who are interested in the production, distribution or utilization of fuels and heat will be held in Cleveland, Ohio, September 17 to 20, 1928. The Meeting will be under the auspices of the Fuels Division of the American Society of Mechanical Engineers. Further particulars may be secured from Mr. H. M. Hammond, Publicity Committee, 1050 Ivanhoe Road, Cleveland, Ohio.

Albert Pick & Company—(furnishings, equipment and supplies for hotels, restaurants and institutions)—announce that their entire general offices are now located in new quarters in their main building, 1200 West 35th Street, Chicago, Illinois. This, they state, makes possible the concentration of their entire executive, sales, merchandising and operating organization under one roof.

We are informed that a license arrangement has recently been completed between The Permutit Company and the Paige & Jones Chemical Company whereby the Paige & Jones Company is privileged to sell Zeolite softeners under the Gans (Permutit) patents, and that both present and future users of Paige & Jones Uplow Zeolite Softeners may operate them without being involved in any way legally.

Official announcement is authorized by The Northwestern Terra Cotta Company of the purchase of the Advance Terra Cotta Company located at Chicago Heights, Illinois. The Northwestern Terra Cotta Company now owns and operates four terra cotta plants and one crucible plant. The latter is the Chicago Crucible Company located at Chicago. The four terra cotta plants are located at Chicago, Chicago Heights, St. Louis and Denver. The new plant at Chicago Heights, modern in every way, considerably increases the facilities of The Northwestern Terra Cotta Company, already the largest as well as the oldest manufacturer of terra cotta in the world.

Following a recent session of the convention of the American Concrete Institute, thirty-four manufacturers of concrete stone held a meeting and formed the Association of Cast Stone Manufacturers, with the following officers:

President, C. Van de Bogart, Economy Concrete Co., New Haven, Conn.
1st Vice-President, Wm. P. Eddy, Onondaga Litholite Co., Syracuse, N. Y.
2nd Vice-President, M. A. Arnold, Arnold Stone Co., Jacksonville, Fla.
Secretary, Frank M. Brooks, Brooks Art Stone Corp., Pasadena, Calif.
Temporarily, C. G. Walker, of the Portland Cement Association, 33 West Grand Avenue, Chicago, is the active Secretary.
There is only one Tapestry brick in the world. It is made by Fiske from a special clay found only at their Tapestry plant in Ridgway, Pa. The rich blending of colors in Fiske Tapestry Brick is the result of a special method of firing that our brick-making experience of sixty years has developed. Tapestry Brick is made only at this plant. No other plant can duplicate it—not even one of our own.

To protect everyone, from the architect who wants Tapestry Brick used on the job to the owner who thinks he is getting it, the name "Tapestry" is plainly marked on each Tapestry Brick.

Fiske & Company, Inc.

New York: 17 W. 46th Street  Boston: 115 Federal Street

Plants

Buckeystown, Md.

In addition to Fiske Tapestry Brick, Fiske & Company, Inc., also makes exclusively a number of other high-grade Face Brick.

The Fiske line includes

Tapestry Antiques
Caledonian
Milton Reds
Darlington Grays

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Fiske Brick

The Architectural Record, June, 1928
CONSTRUCTION STATISTICS

From the records of F. W. DODGE CORPORATION, Statistical Division. The figures cover the 37 states east of the Rocky Mountains and represent about 91 per cent. of the country's construction volume.

First Quarter, 1928

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number of Projects</th>
<th>Valuation</th>
<th>Number of Projects</th>
<th>Valuation</th>
<th>Per cent. of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Buildings</td>
<td>5,814</td>
<td>$199,622,100</td>
<td>2,423</td>
<td>$157,282,400</td>
<td>79%</td>
</tr>
<tr>
<td>Educational Buildings</td>
<td>674</td>
<td>75,900,900</td>
<td>579</td>
<td>73,488,600</td>
<td>97%</td>
</tr>
<tr>
<td>Hospitals and Institutions</td>
<td>209</td>
<td>29,317,000</td>
<td>152</td>
<td>28,093,100</td>
<td>96%</td>
</tr>
<tr>
<td>Industrial Buildings</td>
<td>1,441</td>
<td>121,653,600</td>
<td>507</td>
<td>43,329,000</td>
<td>36%</td>
</tr>
<tr>
<td>Military and Naval Buildings</td>
<td>39</td>
<td>2,722,200</td>
<td>16</td>
<td>1,061,900</td>
<td>39%</td>
</tr>
<tr>
<td>Public Buildings</td>
<td>241</td>
<td>17,493,000</td>
<td>142</td>
<td>16,185,300</td>
<td>93%</td>
</tr>
<tr>
<td>Religious and Memorial Buildings</td>
<td>476</td>
<td>26,078,200</td>
<td>343</td>
<td>23,840,400</td>
<td>91%</td>
</tr>
<tr>
<td>Residential Buildings</td>
<td>31,770</td>
<td>707,365,900</td>
<td>8,915</td>
<td>467,234,400</td>
<td>66%</td>
</tr>
<tr>
<td>Social and Recreational Projects</td>
<td>603</td>
<td>62,555,000</td>
<td>383</td>
<td>57,865,200</td>
<td>93%</td>
</tr>
<tr>
<td>Total building</td>
<td>41,267</td>
<td>$1,242,709,900</td>
<td>13,500</td>
<td>$868,400,300</td>
<td></td>
</tr>
<tr>
<td>Public Works and Utilities</td>
<td>2,825</td>
<td>242,357,100</td>
<td>65</td>
<td>56,166,600</td>
<td></td>
</tr>
<tr>
<td>Total construction</td>
<td>44,092</td>
<td>$1,485,067,000</td>
<td>13,565</td>
<td>$874,016,900</td>
<td></td>
</tr>
<tr>
<td>Total construction, First Quarter, 1927</td>
<td>37,706</td>
<td>$1,398,776,100</td>
<td>12,248</td>
<td>$860,224,200</td>
<td></td>
</tr>
</tbody>
</table>

General Trend of Building and Engineering Construction
As shown in this picture, header brick bonding is easily accomplished with Structolite Tile. Practically all patterns of bonding are easily adaptable to a simplified construction without requiring continuous brick work clear through the wall.

Camera tells why
this tile outranks other masonry

With insulating value as its outstanding characteristic (Heat conductivity per square foot per hour 8" tile, 332 B.T.U.—Peebles) Structolite Tile offers to the architect and builder a number of advantages not to be found in any other building material.

Manufactured "neat" of Structolite cement—no sand or other aggregate being used—it is: Very light in weight. Pure white in color. Uniform in strength and appearance. Accurate in dimension with no warping. Easily cut with trowel or saw—no shattering. Nailable—no wood strips or blocks required. Fireproof of course. Better construction and more thorough insulation with no added cost.

Write for further facts about this superior insulating and load-bearing tile.

UNITED STATES GYPSUM COMPANY
Fireproofing Dept., 300 W. Adams St., Chicago, Ill.

As shown in this picture, header brick bonding is easily accomplished with Structolite Tile. Practically all patterns of bonding are easily adaptable to a simplified construction without requiring continuous brick work clear through the wall.

The finished construction is better than ordinary masonry in that it gives the effectiveness of an additional separate insulation without the added cost.
French Modern

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A recent example of the Pearlman technique in Bronze and Engraved Matted Crystal Plaques. Full particulars and Brochure of Installations on request.

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Designers and Makers of Exclusive Lighting Fixtures

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CHICAGO, ILL.
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FROM THE PUBLISHERS

HOEKER, Katharine.

SITWELL, Sacheverell.

DORAU, HERBERT B., AND ALBERT G. HINMAN.

BAILEY, L. H.

ROFFE, William J.
A Satchel Guide to Europe. (Revised and Enlarged by William D. Crockett). 1928. 4th Annual ed. cvi. 596 pp. Ill. maps.) 4 1/2 x 6 1/2 in. Cloth. $4.00. Leather. $4.00.

HOPKINS, R. Thurston.

KIMBALL, Fiske.


WILSON, Ernest H.

GRAY, Greta A. M.

Eberlein, Harold Donaldson, and Roger Wearne Ramsdell.

GOULD, Mr. and Mrs. G. Glen.

THOMAS, Minor Wine, Ph. D.

(Continued on page 157)
ARCHITECTS know by experience that the only stuccos that have successfully withstood the test of time are true-cement stuccos—that is, stuccos made with either portland cement or BRIXMENT.

It has been definitely proved, however, that the same characteristics that make BRIXMENT preferable to portland cement and lime for masonry make it equally preferable to these two materials when used for stucco.

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All the unusual advantages of BRIXMENT for stucco have been clearly presented in this new, compact, conveniently-arranged book—strength, permanence, economy, water-resistance, uniformity, color, estimating data, specifications etc. “BRIXMENT for Stucco” will make a valuable and helpful addition to your data file.

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(∗Please check whether Architect  or Contractor □)
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Hence, the unusually high percentage of all Franklin Pottery installations (40% for 1927) that have been the direct result of architects' specifications. Franklin Pottery (Inc.), Lansdale, Pennsylvania. Member Associated Tile Manufacturers. See our catalog in Sweet's.
Dresden — Interlocking

Announcing—a new shale Interlocking Shingle

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Most adaptable to the better designed low-priced home, industrial housings, commercial and educational buildings.

Economical in factory cost as well as installation—light in weight for the lighter substructures.

The European practice of the use of standard straight barrel mission tile for hips and ridges is most pleasing as well as economical in precluding the necessity for costly trimmings and cut work.

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Made in a “velvety” combed texture only. Samples and descriptive literature will gladly be sent on request. Address all tile inquiries to Dept. “R”, Daisy, Tennessee.

B. MIFFLIN HOOD COMPANY
ATLANTA, GEORGIA

"Above All Things Use Hood Roofing Tile"

The Architectural Record. June, 1928
Residence Models as Low as $95.00
— and the masonry adds but little more when regular chimney is used.

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See Sweet's, write for Kernerator catalogues or phone your local Kernerator representative. Offices in 89 cities.

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RECENT TRADE PUBLICATIONS (Continued)

FURNITURE, STEEL

CASCMENTS, STEEL

HEATERS, UNIT
"How to cut heating costs." Features and advantages of the Trane system of unit heating. Cost and general information on unit heating. Partial list of installations. The Trane Company, La Crosse, Wisconsin. 8 1/4 x 10 1/2 in. 18 pp. Ill.

JOISTS AND STANCHIONS, STEEL

INCINERATORS

PARTITIONS, METAL

WATERPROOFING
"Masterseal" colorless surface waterproofing for preserving the beauty of buildings of stucco, brick, concrete, natural or artificial stone, etc. Description of treatment and directions for applying. The Master Builders Company, Cleveland, Ohio. 3 1/2 x 6 1/2 in. 6 pp. folder. Ill.

INSULATING BOARD

CEMENT
Carney Cement for brick and tile mortar. Installations including Lake Shore Drive Hotel, Chicago, Book Tower, Detroit, etc. Advantages. Specifications. The Carney Co., Mankato, Minn. 8 1/2 x 11 in. 20 pp. Ill.

(Continued on page 162)
A Non-Slip Ceramic Mosaic Floor—Wet or Dry

Alundum Ceramic Mosaics with Vitreous Mosaics

A pitch of 1 1/2 inches per foot in the entrance and lobby of this theater necessitated a non-slip walking surface. The architectural treatment called for a decorative effect, too. Standard field and border patterns of mosaics were selected, using brown Alundum Ceramic Mosaic Tile colorfully combined with red, white, black, and green vitreous tile. The result is both practical and attractive.

NORTON COMPANY
WORCESTER, MASS.

The Architectural Record, June, 1928
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Best Materials

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CONCRETE CONSTRUCTION


WALL DECORATION


GLASS


REFRIGERATION


VENTILATING SYSTEM

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The Architectural Record. June 1928
THE
ARCHITECTURAL
RECORD
PUBLISHED
MONTHLY
JUNE, 1928
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MODEL NO. 5 TRUSCON CASEMENTS
in Single and Combination Units

Truscon announces a new and distinctive type of steel casement, Model No. 5, in factory-built single and combination units. These Casements are a forward step in casement window equipment possessing a high degree of beauty, utility, permanence and economy.

Model No. 5 Truscon Casements are delivered complete ready to fill the opening and can be set up in place for the glazier with a minimum of field labor.

These Casements provide the latitude so desired by the architect and builder in the execution of his design and assure to the owner lasting satisfaction and the greatest investment value.

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ESTABLISHED 1893
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Put "Outside Icing" in the BLUE PRINTS of Homes and Apartments

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Ice refrigeration is so economical and satisfactory that a great many people prefer it. With outside icing facilities, it is the last word in convenience. The iceman relieves the housewife from any responsibility for keeping the ice chamber filled. That's his job.

The architect who incorporates this valuable feature in his plans is rendering a service which his clients will appreciate very highly.

The Architectural Record, June, 1928
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*Herringbone Doublemesh Metal Lath* meets every test that is required for a good plaster base

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*Herringbone Doublemesh is made by the maker of Genfire Steel Casement and Basement Windows, T-Bar and Plate Girder Joints, Duplex Steel Bridging, Steel Lintels, Stucco Steel, Corner Bead, Concrete Reinforcing and other fire-safe building products.*

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but Pondosa Pine remains the same useful wood

America is evolving its own architecture. Architects are no longer satisfied to restate the ideas of their predecessors. New forms are being created; details and designs improved. Yet with all this change, nothing can replace good wood for finishing purposes.

Wherever a soft-wood finish is required, you can trust your reputation to Pondosa Pine. Doors and sash of this good wood stay snug and true. Sidings and baseboard remain firm and tight. Used for stairways, mouldings, built-in features, and all interior trim, Pondosa gives years of splendid service. The finish keeps smooth and even; few repaintings will be necessary. Continual use will have little effect on Pondosa.

There is an abundant supply of Pondosa Pine, trademarked at the mills to protect the user. Western Pine Manufacturers Association, Portland, Oregon.
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The American Contractor is one of the periodicals of F. W. Dodge Corporation, publishers also of Dodge Construction Reports, Architectural Record, Sweet's Architectural Catalogue, Sweet's Engineering Catalogue, Graphic Review, and Record and Guide.
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Pure, lustrous white—or easily tinted

The two Camden, New Jersey, hospitals shown above are painted for lasting, cheerful cleanliness and good looks. Both of them use Barreled Sunlight as best fulfilling their exacting requirements.

Barreled Sunlight Gloss gives a rich enamel finish with a “depth” peculiar to itself. It reflects adequate light free from glare. Its surface is so smooth and unbroken it can’t hold dirt embedded and washes like tile—without wearing away.

Barreled Sunlight Flat produces a surface extremely handsome and uniform.

Barreled Sunlight Semi-Gloss strikes a nice balance between the Gloss and Flat.

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Guaranteed to remain white longer than any gloss paint or enamel, domestic or foreign, applied under the same conditions.

Sold in large drums and in cans.
For priming, use Barreled Sunlight Undercoat.

See our complete catalog in Sweet’s Architectural or Engineering Catalog.

U. S. GUTTA PERCHA PAINT CO.,
22-F Dudley Street, Providence, R. I.

---

Left—The West Jersey Homeopathic Hospital at Camden, New Jersey. Here 800 gallons of Barreled Sunlight have been used for interior painting—in pure white and buff tint.

Below—The Cooper Hospital, at Camden, New Jersey—a satisfied user of Barreled Sunlight for the past several years.
Outside beyond the harbor a deep-tuned whistle announces the approach of a great ocean liner racing for her port, with a new trans-Atlantic record. Overhead the roar of powerful motors signals the conquest of the air. In the studio the click of a switch sends a radio message around the globe. This is the day of speed... of wonders... of progress unrestrained.

In the midst of these bewildering changes, great towering structures rise along the avenues of America's leading cities. Others are being planned. Each one seems more beautiful, more enduring, more wonderful.

The genius of the modern architect and the skill of his plans will stand as wonders of this age; for while he brings forth a new interpretation of beauty and charm he has endowed his creations with enduring qualities. There has been no compromise with dependability in the selection of materials used—only products of acknowledged leadership entered these magnificent edifices.

The pipe lines... the very arteries of these great structures... how necessary that they should efficiently perform... that they should not fail. Underneath floors and behind walls, they silently and faithfully carry on... meeting the increasing demands of passing years, that service shall endure.

The New York Life Building, illustrated, is another addition to the long list of America's superstructures whose major pipe tonnage is "NATIONAL"—The Recognized Standard for Building Purposes.

**NATIONAL TUBE COMPANY**

**PITTSBURGH, PA.**
**SOUTHERN RAILWAY PASSENGER STATION**
**GREENSBORO, N. C.**

Architect: Fehrenheimer and Wagner, New York
Contractor: Consolidated Engineering Co., Baltimore

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**Good Buildings Deserve Good Hardware**

Hardware and O. Henry

Here in the new station at Greensboro, his home town, O. Henry would see at train time humanity in the raw—the hurrying hundreds he loved, all intent on their own missions, gay or tragic, setting out on hopeful journeys, seeking fresh fortune, returning to face joy or sorrow, meeting, parting.

What does the hardware on the new station mean to them? No more than it means to users of any public place. It means little or nothing. But to the Southern Railway, the hardware on the Greensboro station means much—part of its service to patrons. It knows that in Greensboro there will be no inconvenience because of faulty hardware. It knows that the hardware will not call attention to itself, will not interrupt service to its patrons. It knows very well why the new station is equipped with Good Hardware—Corbin.

Corbin butts on which doors swing easily and surely. Corbin door checks that close doors quickly, gently, quietly. Corbin latches that work unceasingly. Corbin locks that guard. All have their part in making the way easier for hurrying, anxious, absorbed travelers who must never have cause to think of them.

P. & F. CORBIN Since NEW BRITAIN New York Chicago Philadelphia

The Architectural Record, June, 1928
Residence at Noble Vista, Jenkintown, Philadelphia, Pa. Rendering by Herbert S. Kates; Ridgeway and Tomlinson, architects and builders.

Ampinco

Showers & Bath Fixtures

AMPINCO represents the far-sighted choice. For in addition to furnishing immediate satisfaction, they can be relied on for long-term usage and freedom from repair needs. Our illustrated catalog will show you how the line is varied to meet all construction needs. Write The American Pin Company Division, Scovill Manufacturing Company, Waterbury, Connecticut.

A SCOVILL PRODUCT

Scovill means SERVICE to all who require parts or finished products of metal. Great factories equipped with the last word in laboratories, and modern machinery manned by skilled workmen, are at your disposal.
HAND hewn beams above—walls of caen stone and a floor of mellow golden copper colored tile. A reception hall exquisite in its simplicity and old world grandeur.

The floor is of brown Faience Tile set in a random design. Six inch squares, three inch squares and three by six tiles are used. The border is of the same shade in decorated Faience and the base repeats the same tone.

*Specification Writers*—New and simplified standards have been adopted for classifying and packing tile. To insure delivery of the specified grade of tile on any particular job members of the Associated Tile Manufacturers furnish grade certificates and sealed packages—in accordance with simplified practice recommendations No. 61 U. S. Bureau of Standards. A brochure explaining these new and simplified standards will be mailed to any architect on request.

**ASSOCIATED TILE MANUFACTURERS**

20 Graybar Bldg., 420 Lexington Av., New York, N. Y.

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**KERAMIC TILES**

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| Cambridge Tiling Co., Covington, Ky. |
| Federal Tile Co., Columbus, Ohio |
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| Mosaic Tile Co., Zanesville, Ohio |
| National Tile Co., Anderson, Ind. |
| Olean Tile Co., Olean, N. Y. |
| The C. Pardee Works, Perth Amboy, N. J. |
| Rossman Corporation, Beaver Falls, Pa. |
| Standard Tile Co., Zanesville, Ohio |
| The Sparta Ceramic Co., East Sparta, Ohio |
| United States Encaustic Tile Works Indianapolis, Ind. |
| United States Quarry Tile Co. Parkersburg, W. Va. |
| Wheatley Tile & Pottery Co. Cincinnati, Ohio |

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*The Architectural Record, June, 1928*
IN CHICAGO, in 1884, the first skyscraper in America was built—the Home Life Insurance Building, still standing at LaSalle and Adams Street. Carnegie Steel Company furnished the steel beams used in this building. They were Bessemer steel.

Many improvements in structural steel have been made since that time. Today, the new Carnegie Beam Sections represent the latest improvements in structural steel design.

IN CHICAGO, in 1928, these new Carnegie Beams are being used in the construction of the 19-story Edgewater Beach Apartment Hotel, at Sheridan Road and Bryn Mawr Avenue.

For apartment house construction, or for tower buildings where typical floors exist, these new sections are especially suitable. The constant-depth principle, exclusive with this new series, effects substantial savings in detailing, in fabrication and erection.

Carnegie Steel Company
Pittsburgh ~ Penna.

The Architectural Record, June, 1928
To express fittingly the concepts of our own time requires a flexible medium capable of infinite variety in permanent color effects. Outstanding success awaits those who capitalize the opportunity which the resources of Terra Cotta offer. It is the coming material for the new style.
Beautiful Stucco Effects . . . made truly permanent

Fashioned after the style of a Spanish grandee's palace, this new Santa Barbara Biltmore, with its richly tinted stucco walls, is another example of architectural beauty made permanent.

Here the YPS Stucco Method, as in thousands of beautiful structures throughout the country, has formed a vital part of the foundation for attractive exterior effects. Here, again, YPS Stucco-mesh, properly centered in the stucco slab by YPS Economy Stucco Nails, is responsible for this permanent result. For data and specifications see YPS pages in Sweet's Architectural Catalogue.

An interesting article featuring the Santa Barbara Biltmore will be found in the February issue of Architect and Engineer.
No Rubbing—Yet a Fine “Rubbed” Finish!

No costly rubbing! No day-to-day drying delays!
Here’s an aristocratic, artistic, distinctive finish that combines beauty, economy and speed!

Mimax Architectural Lacquer

Saves days of time — dollars of cost!
Merely mix Lacquer and Stain and apply in one coat. Wipe off surplus in twenty minutes! Interior ready for use same day!
Do finishing without waiting for completion of other work. Dries so fast there’s no danger of disfigurement from dust and dirt!

One—Two—THREE coats a day!

Write for Architect’s Specification Book on all Mimax Architectural Lacquer finishes.

Pittsburgh Plate Glass Co.

Paint, Varnish and Lacquer Factories, Milwaukee, Wis.

Newark, N. J., Portland, Ore., Los Angeles, Cal.

Pittsburgh Plate Glass Co.

The Architectural Record, June, 1928
Home is a Woman's Domain
Convenience and Safety her right

If women could be technically informed of Panelboard features of safety and dependability, as well as attractiveness of finish, very likely you would not recommend any other kind.

They always enthuse when they find Panelboards part of the home equipment; for while it cannot be explained to them they recognize the virtues at once.

Full co-operation from all offices, estimates and catalog furnished free, gladly.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS


The Architectural Record, June, 1928
New Kohler Faucets
with interchangeable “insides”

Here are improved types of fittings to be included in the Kohler line of superior plumbing brass.

The new self-closing faucet on the lavatory illustrated above permits an easy changeover to the compression type without disturbing the faucet body, by simply unscrewing the self-closing unit and inserting in its place a compression unit. The combination lavatory fitting allows the same interchange.

The self-closing units give an even flow of water simply by pushing the oscillating handle in any direction. When the handle is released the faucet closes promptly. The compression units open at half turn and give a strong, even flow of water.

Both the self-closing and the compression types are designed to make the replacement of wearing parts easy. The compression unit has a removable seat unit, with encased removable swivel disc washer. The finest materials are used and long life and satisfactory service assured.

The Kohler line of plumbing brass contains many other new and superior fittings which will appeal to your more discriminating clients. You may find it advantageous to keep in touch with these important developments by reading the Kohler of Kohler News. If you are not receiving this interesting monthly publication, please send us your name.

Kohler Co., Founded 1873, Kohler, Wis. - Shipping Point, Sheboygan, Wis. - Branches in Principal Cities

Kohler of Kohler
Plumbing Fixtures
Today you may offer the home builder fire-safe walls and ceilings at no greater cost than for inflammable construction! Arch Lath—the fire-safe plaster base—makes this possible.

Arch Lath is a plaster saver! Due to a distinctive arch design, only the correct amount of plaster is permitted to squeeze through the openings for perfect “key”. There is no piling up of plaster between walls, the hidden waste that runs up the plastering bill.

Arch Lath is a time saver! Immediately after application, the first coat of plaster may be scratched and made ready for the second coat. There is no delay, waiting for plaster to dry. There is no need to remove and re-erect scaffolding. The sheet of Arch Lath is so RIGID that it takes the force of the trowel without “giving” at any point thereby assisting rapid, efficient workmanship.

Arch Lath is a labor saver! Because it is nearly a solid sheet of steel, Arch Lath is very rigid and therefore easy to handle and erect. One man can place the sheets and nail them up. Nail hole starters facilitate application.

Arch Lath—the ideal plaster base! A firm scratch coat is possible on Arch Lath because the arches “grip” the plaster at many angles. This security is best demonstrated by the fact that one sheet of Arch Lath (27”x96”) grips the plaster at 8064 points. It is because of this perfect anchoring that the new plaster texture effects are properly executed on Arch Lath at low cost.

Let us send you additional information and a sample of Arch Lath for close-up inspection.

ARCH LATH

Building Materials Backed by a Generation of Experience
HOSPITALITY

—in the modern manner

Number 2. This illustration is from a booklet entitled “Analyzing the Problem of Resilient Floors in Clubs, Lodges, Apartments and Hotels”—one of a series of booklets on polychrome resilient floors.

Each booklet gives suggestions for the proper use of resilient floors in a different type of building. A complete set of the booklets is yours for the asking.

Painted by A. Magnauti
Analyzing the Problem of Resilient Floors in
CLUBS, LODGES, APARTMENTS and HOTELS

When you send for a book offered free in an advertisement, we know you want information—facts that you can get at quickly. We know the architect hasn’t time to wade through five-page chats about extraneous matters.

The very title of this new booklet, "Analyzing the Problem of Resilient Floors in Clubs, Lodges, Apartments and Hotels," is in itself a time saver. This book concentrates on a group of buildings, the flooring problems of which are closely related.

If you do not design this type of building, you need not waste a second reading this book. Other titles in the series will be more useful to you.

See the yellow panel above for a complete list of this set of booklets. The information in each is concisely presented. These studies of resilient floors were written by architects—not by an optimistic advertising department. By the chart method (shown above) a great deal of ground is covered in very little space.

We think that you will find these booklets useful—and worthy of preservation in your information file. Write for your set.

BONDED FLOORS COMPANY, INC.
General Office: Kearny, N. J. Branches and distributors in principal cities

BONDED FLOORS
Resilient Floors Backed by a Guaranty Bond
Stop Guessing!

Prevent cutting concrete floors by installing Orangeburg Underfloor Duct System when building

Many structures, especially office buildings, must be planned without definite knowledge of the points at which electrical outlets will be required. In other cases a few outlets are wanted at first, more later on.

Whether the position of outlets and their number is known exactly, or is entirely conjecture, the use of an Orangeburg Underfloor Duct System settles simply, economically and for all time the whole matter of floor outlets for every type of electrical service—light, power, bell, or telephone.

The Orangeburg Underfloor Duct System is made in both Fibre and Metal. While the Fibre system is preferable for all installations, it is essential for floors with a cinder fill. Fibre duct used in such installations will not corrode and provides a cheaper, roomier wireway than any other material. For thin monolithic floors, the metal system is sometimes necessary.

Whether of Fibre or Metal, the system provides a tunnel or ductway for wires which may be opened at any point by merely drilling a small hole in the floor. This system once installed, with parallel lateral runs at intervals of five or six feet and header runs at much greater intervals, amply provides for all future electrical equipment and relocation of existing equipment.

Johns-Manville, sole selling agents of the Orangeburg Underfloor Duct System, maintain an engineering staff who offer their services without obligation to architects and consulting engineers to assist them in planning their layouts.

Specify an Orangeburg Underfloor Duct System for every building of permanent construction.

JOHNS-MANVILLE
Sole Selling Agent for
THE FIBRE CONDUIT CO., ORANGEBURG, N. Y.

Orangeburg Junction box and cross-under fitting.
"Certified by Centuries of Service"

"Certified by Centuries of Service," the prize winning slogan adopted by the National Lumber Manufacturers Association, applies particularly to Shevlin Pine. For centuries, Pine like this has proven its worth as the nation's building material.

Colonial housewrights recognized the workable qualities of Pine and employed it to produce attractive woodwork. Many of the homes they built are still standing today and stamp Pine as the economical building material in the long run.

Today it is Shevlin Pine

Today Shevlin Pine is the ideal building material. Its close, fine grain and uniformly even texture work under tools with a willingness.

Nails feel at home in its close fibre and fine texture. They readily penetrate this wood even at the very edge without splitting it. The fibre closes in, grips the nails tightly and the boards stay put.

The nation's oldest homes testify to the ability of Pine to withstand centuries of abusing weather.
A New Source of “Old Fashioned” White Pine

There is no shortage of quality Pine lumber. Shevlin has sufficient Pine holdings in selected districts to meet the demand for decades.

The new Shevlin Northern White Pine mill at Blind River, Ontario, will supply 100,000,000 feet of lumber yearly and 90% will be exactly the same species of Pine used in colonial days.

The stand is said to be the largest virgin tract of Northern White Pine on the continent. Selective logging and scientific reforestation promises an indefinite supply.

Specializing in Pine

When you select Pine make certain that it is produced by specialists as there are many kinds and many sources. For more than forty years the Shevlin interests have logged and milled selected Pine for all purposes.

You can secure Shevlin Pine from leading lumber dealers. There are five varieties: Shevlin Pondosa Pine, Shevlin California Sugar Pine, Shevlin Northern White Pine, Shevlin Norwey Pine and Shevlin California White Pine.

Use Coupon for Booklet

The coupon below is for your convenience in obtaining “Specify Shevlin Pine.” This thirty-two page booklet is full of information about Pine—its uses, characteristics and physical properties.

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902 First National-Soo Line Bldg., Minneapolis, Minn.
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The Henry House at North Bennington, Vt. was built in 1769. The wide Pine clapboards and the porch with its square Pine columns give an atmosphere unique in old homes of the North.
Blaw-Knox Steel Roof Sheathing offers the ultimate in efficiency and economy as a supporting surface for any specified insulation and roofing. This copper-bearing, galvanized steel roof sheathing is extremely strong, light weight, non-corrosive and unshrinkable. It has met with the warmest approval of owner and contractor alike because it replaces such heavy and expensive materials as gypsum and concrete and reduces the dead load on supporting members. It is firesafe and its use results in reduced insurance and fire safeguard.

It can be erected in less time than other types of roof sheathings and allows construction to be carried on regardless of the weather. It is a better material with decided features of economy. We will be glad to send you detailed specifications without obligation.

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Just Off the Press
Down through the years to the present day, stately columns have added a classic note to many of the world's outstanding works of architecture.

The Municipal Building at Niles, Illinois, a suburb of Chicago, is a notable example not only of the happy use of beautiful columns, but also of fine cooperation between the architect, the builder and those trained and experienced craftsmen in the Hartmann-Sanders studios.

Upon request, we gladly send Catalog R. 47 of Columns or Catalog R. 53 of Model Entrances. Hartmann-Sanders Co., 2152 Elston Avenue, Chicago, Eastern Office and Showroom: 6 East 39th Street, New York City.

HARTMANN-SANDERS
Pergolas
Colonial Entrances
Koll
Rose Arbors
Garden Equipment
Columns

The Architectural Record, June, 1928
These 3,000 Windows Cleaned Safely and at Low Cost

Williams Reversible Window Equipment was installed on 1,600 windows in the original unit of the First National Bank Building in Detroit, in 1921. After seven years of satisfaction with this equipment, the owners again ordered it for the great addition now nearing completion. In all, there will be nearly 3,000 Williams Equipped Windows in this huge structure. This equipment will insure economical and safe window cleaning for the life of the building because both sides of the glass can be cleaned from inside the building.

THE WILLIAMS PIVOT SASH COMPANY
E. 37th Street, at Perkins Ave., Cleveland, Ohio

Write now for illustrated catalog.

WILLIAMS REVERSIBLE WINDOW EQUIPMENT
Consider carefully the economies possible in modern granite practice. Through these plates or our service department, suggestions or detailed information are at your disposal.

NATIONAL BUILDING GRANITE QUARRIES ASSN.
31 State St., Boston, Mass.
H. H. Sherman, Secy.

On request a complete folio of these Granite Studies will be reserved for you

The Architectural Record, June, 1928
For the world's largest hospital

The Columbia-Presbyterian Medical Center in New York City will, when completed, occupy about nine city blocks. It is said to be the largest hospital in the world.

Four Jennings Vacuum Heating Pumps have been installed—for removing condensate and air from the heaters for the hot water heating system and for the domestic hot water supply.

NASH ENGINEERING CO., 13 Wilson Road, South Norwalk, Conn.

RETURN LINE AND AIR LINE VACUUM HEATING PUMPS~CONDENSATION PUMPS~COMPRESSORS AND VACUUM PUMPS FOR AIR AND GASES~STANDARD AND SUCTION CENTRIFUGAL PUMPS~HOUSE SERVICE PUMPS~SEWAGE EJECTORS SUMP PUMPS
Architects are specifying Hardinge Fuel Oil Burners

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The Architectural Record, June, 1928
STERLING LIFELONG BLACKBOARD

Guaranteed for the Life of the Building
A. I. A. File No. 35-b.-12
FREE—TO ARCHITECTS

Prepared for you by our architects—ready for your files—fifteen pages of plans, elevations, and detailed specifications for the installation of this foremost Blackboard. Guaranteed for the life of the building by a 46-year old institution. Hundreds of thousands of feet of Sterling are giving Sterling performance daily, in better schools throughout America. Black—and black all through. A finer writing surface, and a body that seasons and improves with age. Warp and buckle proof—strictly fireproof. Easy on eyes and nerves—and schoolboard pocketbooks too. If you don’t know all about Sterling Lifelong Blackboard send for free sample and A. I. A. File No. 35-b.-12. Address Department Y.S.6

Weber Costello Co.
Chicago Heights Illinois.
Another New Departure in Grilles!

In announcing an additional line of beautiful cast bronze ornaments, for use in conjunction with Tuttle & Bailey stamped steel grilles, this House closes in still further the gap between ordinary stamped and Period design cast grilles. For, while lower in cost than cast grilles, an appearance of high quality and the effect of depth and richness is accomplished where these Ornamental Steel Grilles are installed.

Architects and Builders are invited to write for illustrations of designs available, both as to grilles and grille ornaments. Or we shall gladly estimate on any special requirement of your own.

TUTTLE & BAILEY MFG. CO.
Makers of FERROCRAFT Heating and Ventilating Grilles
441 Lexington Avenue, New York City

ORNAMENTAL Steel GRILLES
The strikingly beautiful McKinney hinge straps and handle shown here are representative of the "Alhambra" design, one of a number of McKinney patterns fashioned in Forged Iron. The inspiration for this graceful design comes from the masterly examples of ironwork found in southern European architecture of earlier centuries, notably that of Italy and Spain.

For dignity and rugged strength of character alone, the Alhambra, the Warwick and other pieces of McKinney Forged Iron warrant the wide-spread acclaim with which architects have received them.

But consider in addition these facts: standard pieces for prompt delivery, accurately gauged for application, texture reflecting the rugged character of the metal itself, a rust-proofed finish in Relieved Iron or Colonial Dead Black Iron, and prices which make your door "possible" when despair at costs seems hovering too close for comfort.


The Architectural Record, June, 1928
Raymond Concrete Piles
dominate the field. Everywhere you see the famous spirally reinforced steel shells being driven to receive the concrete, to act as a protective "form," to resist pressure, heaving, water infiltration—in short, to preserve the length and taper, ground compression and skin friction. Ask experienced foundation men. They'll tell you.

RAYMOND CONCRETE PILE COMPANY
NEW YORK
90 West Street

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The Architectural Record, June, 1928
Rendering by American Seating Company
Plaster Ornament! Just a Detail, but—

a detail that has transformed into a distinctive home many an otherwise ordinary house.

WHY this steady drift toward plaster ornament? Pick up any of the architectural magazines or such periodicals as House and Garden, and notice how, in interior after interior, plaster ornament is being used with amazing effect in all types of dwellings—small as well as large.

In some cases, there is just a suggestion—perhaps a pediment over a doorway, a tiny medallion repeated in the walls of one or two rooms, perhaps an interesting cornice or molding. Often it is an entire ceiling in rich period design.

Of course there is nothing new in plaster as a decorative medium. The real reason for its present popularity lies in the marvelous effects it can create at only slight additional expense.

Today the six firms listed below, in the interest of creating a wider appreciation of plaster ornament, are acquainting the most discriminating section of the public with the real possibilities of this art material. Pre-eminent in the field stand these six firms, through whose catalogues correct plaster ornament is quickly available at moderate cost in all parts of the country.

Models for thousands of designs, ranging in period from Classic to Modern, are always on hand—a wealth of ornamental material from which to choose. Each of the firms, too, employs draftsmen trained in the use of ornamental plaster, and always ready to cooperate in developing new designs and adaptations, and indicate costs.

Architects and Decorators are invited to write to each of the six firms listed below for their individual catalogues.

**PLASTER ORNAMENT for PERIOD DESIGN**

- **Chicago**—THE DECORATORS SUPPLY CO.
  Anchor Avenue and Leo Street

- **Cleveland**—THE FISHER & JIROUCH CO.
  4821 Superior Avenue

- **Detroit**—DETROIT DECORATIVE SUPPLY COMPANY
  4940 19th Ave.

- **New York**—JACOBSON & COMPANY
  103-111 East 44th Street

- **Philadelphia**—VOGT COMPANY
  1242-1244 N. Twelfth Street

- **Chicago**—ARCHITECTURAL DECORATING COMPANY
  1603 South Jefferson Street

P. W. FRENCH & COMPANY, INC., DECORATORS
DUPLEX-A-LITED

DUPLEX-A-LITE illumination is a balanced blend of 20 per cent direct and 80 per cent indirect light. The psychological necessity for an apparent source of light is satisfied, but the entire ceiling becomes the distributing agent for the majority of the light. Hence there are no undesirable shadows. There is, however, a luminous shadow—just enough to give definition to objects.

It is also the most versatile lighting system. Duplex-a-lites can be dressed to harmonize with any surroundings—from a dainty bedroom to the great banking room or auditorium. Duplex-a-lites of several sizes are available, and in a variety of design—both as to form, detail and finish. Special designs can be furnished whenever the quantity justifies.

Every Duplex-a-lite is a source of lasting economy. For each Duplex-a-lite is designed for a single lamp of desired size. This single lamp costs less and develops more light than any group of small lamps of equal total wattage.

We shall be glad to send you a booklet showing the flexibility of this standard lighting system.

DUPLEX-A-LITE DIVISION
OF THE MILLER COMPANY, MERIDEN, CONN.

"Pioneers in good lighting since 1844"

The Architectural Record, June 1928
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HYDRAULIC CELLAR DRAINER

Automatic

ELECTRIC SUMP PUMP

Your seepage problem may be the deep basement for a building where the sewer is not low enough for drainage—or the basement of a residence without adequate sewerage facilities. Perhaps it is the drainage of a boiler room, settling basin, fly wheel or elevator sump, a tunnel or scale pit.

The amount of seepage may be considerable or it may be only a small trickle.

Whatever the conditions, there is a Penberthy Sump Pump or Cellar Drainer which will dispose of that seepage in the most economical manner. Either electrical power or hydraulic power can be used, and there is a size to fit every condition.

Write for details on the Penberthy Automatic Electric Sump Pump and the Penberthy Automatic Cellar Drainer.

Quality is particularly stressed by the use of copper and bronze throughout.

PENBERTHY INJECTOR COMPANY

ESTABLISHED IN 1886

DETOIT

CANADIAN PLANT

WINDSOR, ONT.

The Architectural Record, June, 1928
Lake-Michigan Building, Chicago.
Elevator equipment supplied by Pitt Engineering Company. Architects—Alfred S. Alschuler, Inc.

G-E gearless elevator motor
Outstanding Contributions by General Electric to Elevator Control

1. A system of automatic speed regulation, maintaining through a simple device high schedule speed during rush hours, while facilitating accurate landing.

2. A system of automatic control of acceleration and retardation, resulting in minimum time consumed, combined with maximum comfort.

3. Development of motor and control design for utmost simplicity and lowest maintenance.

4. A simplified and accurately responsive system of automatic leveling for building owners who require the highest grade of elevator service.

**Automatic Speed Regulation**

An original contribution to elevator operation is the G-E system of automatic speed regulation. A simple, sturdy, rotating device is secured to the generator of the variable-voltage set, without added relays. This system, applied to high-speed gearless traction elevators, obtains both the maintenance of high uniform speed under full load—and insuring the handling of maximum traffic during rush periods—and at the same time automatically compensates for gravity and momentum at landing speeds, so as to produce constant drift and make accurate landings possible with simple car-switch control.

The following manufacturers of gearless traction elevators use G-E gearless elevator motors with G-E elevator control exclusively:

- American Elevator and Machine Co., Inc., Louisville
- Baker Iron Works, Los Angeles
- Gurney Elevator Co., New York
- Montgomery Elevator Co., Moline
- Pacific Elevator Co., San Francisco
- Pitt Engineering Co., Chicago
- Warner Elevator Manufacturing Co., Cincinnati

**ELECTRIC**

The Architectural Record, June, 1928

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The New Von Duprin Catalog Is Ready

The largest and finest catalog we have ever issued—containing a wealth of helpful matter—has just been mailed. While we have tried to put it in the hands of every architect doing work which utilizes panic devices, omissions are almost inevitable and if, by any chance, you have failed to receive your copy, a word to us will bring it by return mail.

VONNEGUT HARDWARE CO.
Indianapolis, Indiana
Architects and amateur garden lovers rarely have been so rash as to plan a garden without some thought of fence protection. But many times their choice of fencing has been based on personal preference for one type or another, rather than the ultimate purpose of invisible protection for a matured landscape planting.

Today a new conception influences landscape architects and is finding expression everywhere, in gardens large and small. Fence is selected for maximum protection during the tender youth of gardens, and minimum visibility later.

Cyclone Chain Link Fence closely meets these requirements. It is im pregnably strong to give adequate protection. Plants and shrubs grow up around it undisturbed by outside influences — then it merges with the background thus created and becomes an integral part of a beautiful garden.

Cyclone representatives are ready to give you the benefit of their broad experience in working with architects and owners, developing fencing recommendations from this new viewpoint as the basis of garden planning. The Cyclone Fence Company maintains a nation-wide chain of warehouses, with factory-trained erection crews, to insure prompt service on installations of any size.

Address nearest offices.

Send 25 cents for "Beauty in Gardens," a beautiful collection of typical gardens by noted designers, with text by well-known authorities on garden planning.
1931 Lupton Windows installed in Pittsburgh's largest building

The Grant Building, forty floors high, will be Pittsburgh's largest building and one of the fifteen largest in the country.

In this immense tower of offices, all window openings will be filled with Lupton Steel Windows, all but nine of them being Combination Projected Heavy Casements. These casements are one of the types of high-grade steel windows resulting from Lupton's pioneer standardization of several styles of windows to fit, interchangeably, fifty standard openings. The ventilating portion of these windows is exceptionally efficient in inducing desired air movements and their simplified construction is such as to give permanently satisfactory service with economy.

Lupton is equipped with the experience and the material resources to handle your window requirements for any type of building, for any size of project. When you need windows or window counsel, always consult Lupton.

DAVID LUPTON'S SONS COMPANY
Permanency of beauty on the wood trim in the new Engineers Building is assured with

"38"
PRESERVATIVE
VARNISH

It is significant that "38" Preservative Varnish and other Pratt & Lambert Varnish Products were used on the wood trim in the new twenty-one-story Engineers Building, Chicago.

This imposing structure is another substantial addition to the many in Chicago and elsewhere on which "38" Preservative Varnish was selected as the premier interior finish.

"38" Preservative Varnish, imparts to wood trim a full-bodied film of velvety smoothness which enhances the wood grain and permanently beautifies and preserves.

Architects, painters and owners know "38" as a varnish made expressly for the very highest type of interior work, where durability must be combined with depth of luster and waterproofness. "38" Preservative Varnish has a high gloss which may be rubbed to a satiny dull finish.

It is enduring — many private and public buildings still bear the original coats of "38" which were applied 15 to 25 years ago!

Any inquiry concerning P&L Varnish Products sent to the P&L Architectural Service Department will have prompt attention.

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The Long-Life Enamel
Available in gloss and eggshell finish, in white and six attractive tints. It produces a porcelain-like finish of rare beauty and is so durable that it is guaranteed for three years inside or outside. It is specified by architects on modest homes and large city buildings.

The Architectural Record, June, 1928
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SPECIALISTS IN ORNAMENTAL METAL WORK

We are always glad to estimate on individual designs. Booklets covering each of our various specialties on request. Kindly mention ARCHITECTURAL RECORD.
For that new Bank

Enduring beauty and permanency are assured by the use of Sheldon's Slates for its roof. Also for countertops, wainscoting, base, border, flooring, treads, risers and in other places.

How beautiful, for instance, would our Arabian Red appear there.

In such finish or natural color as may prove most appropriate.

A rare slate, that. Exclusive to our quarries in Washington County, New York, where alone is found a slate genuinely red in color.

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101 Park Ave., Room 514
Atlanta, Ga.
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These features make Sisalkraft “more than a building paper”

Strength
Sisal fibre re-enforced both ways and covered with a double layer of tough kraft outside, Sisalkraft is so strong you can hardly tear a small sample across.

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The double layer of finest asphaltum provides effective waterproofing under the severest conditions of use. Sisalkraft holds water for three or four months by actual test.

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The inner layers of asphaltum are protected by tough kraft on each side. The asphaltum is always in perfect condition. It never dries out, never cracks. Even in winter, Sisalkraft stands handling without damage.

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Both sides of a sheet of Sisalkraft are clean, tough kraft paper, easy to handle, safe to use even as a protection to finished floors and furniture when decorating.

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Sisalkraft retains its protective features indefinitely; there is nothing to deteriorate.

SISALKRAFT has a score of different uses where its combination of desirable features give outstanding advantages in construction. It provides superior waterproof, windproof protection in wall and roof construction. It is especially valuable as a floor lining. It is being used for membrane waterproofing in many places, especially over insulating materials in cold storage construction. Contractors find that Sisalkraft’s strength means easier, faster application. Sisalkraft can be used for temporary protective purposes, and re-used under floors, over sheathing, or in other permanent construction, cutting costs. Better construction with Sisalkraft does not add to the cost.

Samples of Sisalkraft and descriptive bulletins will be sent on request. Try backing up blueprints with a sheet of Sisalkraft for protection against moisture and rough handling.

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228 N. LaSalle Street
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See Sweet’s Architectural Catalog, pages 190-191
The Pennsylvania started this practical test in 1912 when they laid a plain cement floor and a Metallic Hardned floor side by side in their Cleveland station. The hardned portion gets twice the traffic the plain does, yet see the difference. . . . Extract from page six of the new book "PLAIN TALK ABOUT CONCRETE FLOORS," just off the press.

Experiences of 412 plant engineers and owners with different types of cement floor finish are reported in this survey of floor laying methods. Concise, thought-provoking, the book presents startling new evidence on a question that has baffled builders and owners for years, "How to lay concrete floors that will last under modern industrial traffic."

Before specifying another floor send for a copy of this book, sent upon request to architects, engineers, contractors and building owners and managers.

THE MASTER BUILDERS COMPANY
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STAINPROOF
The Modern Curing and Protecting Film
Applied over the surface 36 hours after troweling. Stainproof dries to a tough, air-proof film that prevents staining and marring and insures perfect curing of the concrete. Easily removed after all danger of staining is passed. All new Colormix Floors are protected with Colormix Stainproof.

Red Colormix Floors were selected for the engine room of the Federal Reserve Bank, Cleveland, because of Colormix wearing quality and fine appearance.

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TODAY there is an ever-increasing demand for finer appearance in Power plants. Color? Yes, if it can still retain the necessary hardness. Colormix, hardened and colored all the way through, has successfully combined color and strength in a permanent, dust-free, trouble-free colored and hardened floor that meets every requirement. Thousands of beautiful lasting Colormix Floors are evidence of this fact.

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Naturally, it costs more to manufacture a three-layer lighting globe than a single-layer lighting globe.

But the advantages of the three layers of Celestialite (the only three-layer lighting globe of its kind obtainable) greatly overshadow the slight additional expense.

Only three layers of glass can produce illumination that rivals the beauty of nature's daylight. And Celestialite's "next to daylight" illumination results in:

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Kindly send me free Catalog, A.I.A. file, and fragment of Celestialite showing its three-layer construction

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The Architectural Record, June, 1928
This Textured Wall

can't be

MARRED, CHIPPED

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Why, on finest buildings
Architects are Specifying

Marb-L-Cote by name

SIMPLE tests will demonstrate that
with the charm of hand textured
walls can come today extraordinary
wall permanence and economy.

Make tests, illustrated on this page,
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plied over wall-board. They have con-
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Warmly colored and beautiful re-
liefs of the great decorative periods
are easily produced in Marb-L-Cote.
Completed, they are proof against
chipping, crazing or powderying. Stains
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Marb-L-Cote is specified by name.

Because chemically neutral it sets
up no fumes damaging to the throats
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"burn" the color glaze, hence retains
permanently the most delicate or rich-
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For these reasons Marb-L-Cote has
won favor among decorators. They
give it the time and skill good crafts-
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Complete specification data, with
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will be mailed free.
Address Marb-L-Cote,
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Music room, apartment of Howard L.
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Architects; T. C. Gleich Co., Decorators.

Marb-L-Cote mixes in cold water, applies
easily and covers well. Immediately after
application it may be textured. See photo
at left. It is remarkably workable, does
not stick to hands or tools during texturing.

To test hardness, gouge at Marb-L-Cote
surface with the edge of a coin, as illu-
strated below. Note that it does not powder
or scratch.

Flex a sample of Marb-L-Cote applied over thin
wall-board as shown above. Note the amount of
distortion before cracking begins. Because remark-
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MARB-L-COTE

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The Architectural Record, June, 1928
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Omaha, Neb.—108-112 S. Tenth St.
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INTERIORS IN MOSAIC TILES

This interesting study in Mosaic Faience Tiles has been done in varying tones of green against a background of rich antique buff.

The arched ceiling reflects the soft harmony of the tiled floor, and with wainscot and stairway to match, presents an ensemble as charming as it is distinctive.

Our own Art and Design Department is always ready to co-operate with architects by either preparing and submitting original designs and color combinations or by working up detailed layouts from rough sketches.

Often, however, the architect working in Mosaic Faience Tiles prefers to initiate his own designs—for the almost exhaustless variety of colors, sizes, shades, patterns and textures of Mosaic Faience Tiles gives him a material of singular plasticity and allows the fullest freedom to his decorative skill.

Room displays of Mosaic Faience Tiles and other Mosaic Tiles are maintained in all branch offices of the Mosaic Tile Company. These offices are always anxious to assist the architect by providing him with samples and by arranging estimates through established and responsible contractors.

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NEW YORK  CHICAGO  ST. LOUIS
SAN FRANCISCO  LOS ANGELES

The Architectural Record, June 1928
Another Massive Structure
Built with Metal Lath of Toncan Iron

America's modern skyscrapers are being built to last for generations. All materials are selected for their lasting quality. The outstanding ability of Toncan Copper Molybdenum Iron to resist the attacks of rust and corrosion is the main reason why it was specified for the metal lath of the New York Life Building. In this massive structure 125,000 square yards of Metal Lath made of Toncan Iron will be used.

Architects everywhere are specifying Toncan Iron not only for metal lath in buildings and homes but for cornices, ventilating ducts, ventilators, gutters, downspouting, flashing, roofing, or wherever sheet metal is exposed to the attacks of rust and corrosion.

Send for your copy of the Toncan Book, "The Path to Permanence."

Central Alloy Steel Corporation, Massillon, Ohio

The Architectural Record, June, 1928
Recommend the reliable Kelvinator Electric Refrigerator . . . it's a real service to both clients and tenants

There is a reliable Kelvinator model to meet every building requirement . . . from the neat little "New Yorker" to the large porcelain and French gray models admirably fitted to the needs of the most pretentious home.

In each of these cabinets is the simple, sturdy Kelvinator cooling unit that has been successful . . . and constantly improved . . . since 1915.

The Kelvinator-equipped apartment or home will rent quickly and stay rented. Recommend Kelvinator electric refrigeration . . . you'll be doing a real service to both clients and tenants. Write for our builders' book.

Kelvinator Corporation
Detroit
PRECISION the KEYNOTE

PICTURED here is a section of The Northwestern Terra Cotta Company's fitting department. With the accuracy of a master mosaic, separate units of terra cotta are fitted to form the pattern designed by the architect. When the numbered pieces of terra cotta leave the factory they carry the assurance of precision in fit.

Prior to shipment, every piece is carefully matched and irregularities in shape corrected. Great care is used to effect desired color harmony and to follow faithfully the design of the architect. This unremitting attention to detail has been and is an important factor in establishing and maintaining Northwestern leadership.

THE NORTHWESTERN TERRA COTTA COMPANY

DENVER CHICAGO ST. LOUIS

NORTHWESTERN TERRA COTTA
Baronial splendor at moderate cost

It is really remarkable what beauty the West Coast Woods Architectural Competition uncovered in the treatment of the four giant softwoods of the Douglas Fir region:

Douglas Fir • West Coast Hemlock
Western Red Cedar • Sitka Spruce

Here we show examples of interiors that are triumphs of artistic wood effects... Douglas Fir and West Coast Hemlock paneling of rare beauty... adzed ceiling beams of Douglas Fir... decorative panels of sand etched Douglas Fir.

Permanency combined with artistic charm are happily combined with economy of construction... the moderate priced home can be as baronial as its more pretentious neighbor.

In Douglas Fir and West Coast Hemlock home designers are rediscovering not only the practicability of wood, but its warmth, its life and its decorative charm.

We will be glad to send you, without charge, a brochure of the designers' sketches and construction suggestions for this and many other of the designs submitted in the West Coast Woods Architectural Competition, together with a book describing the four outstanding woods of the Douglas Fir region. Address West Coast Lumber Bureau, 216 Mt. Hood Building, Longview, Washington.

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The Architectural Record, June, 1928
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Name
Address

The Architectural Record, June, 1928
for a name

We are offering $1000 as a prize for the best name and design to apply to our 1/8" Plate Glass. This, in a few words, is a true polished plate glass 1/8" thick. It fits standard sash and takes standard window weights. It brings the cost of complete plate glass installation down to a point where every one can afford it.

This 1/8" plate glass has all the transparency, true vision, beauty and polish of the heavier plate glass which, up to now, has been enjoyed only by wealthy home owners.

The name should be one that is easy to pronounce, easy to remember, one that suggests the article and one that would appeal to the public. It must be dignified and appropriate for a high grade, polished, plate glass.

The design need be only a rough suggestion of a type of lettering or some distinctive way of using the name in a trade mark form. The crudest pencil sketch will be good enough to show the idea. No importance will be placed on the finished appearance of the sketch.

Only architects and those employed in their offices are eligible but each may send in as many suggestions as he wishes.

$1000 in cash will be paid to the one sending in the name and design selected. If the winning name-sketch is sent in by more than one contestant duplicate prizes will be awarded to each.

Judging and selection will be made as soon as possible after July 1st.

The winning name-sketch will be selected from twenty which appeal to the judges as being the best after submission to the Carnegie Institute of Technology for a psychological test.

This psychological test will be based on association, memory value, descriptive value, distinctiveness and pronunciation.

FEATURES TO BE CONSIDERED

This glass is a true plate glass—highly polished.
Clear vision—no distortion.
Light in weight—fits standard sash—uses standard weights.
Costs very little more than ordinary window glass.
Beautifies the home.
Replacements now possible.
Increases the saleability of the house.

PITTSBURGH PLATE GLASS CO.
1618 FRICK BUILDING
PITTSBURGH, PENNA.

Send in your suggestions—with the coupon or not, as you may prefer

Name ____________________________

Architect's Office ____________________________

Address ____________________________

We have a booklet which describes 1/8" Plate Glass which may help you hit upon a good idea and win the prize. It will be sent upon request.

The Architectural Record, June, 1928
The PROBLEM Solved

You may have forgotten that the first use of Zenitherm was for the fire-proof lining of safes. It's rather a far cry from that strictly utilitarian state of years ago to the present Zenitherm. But in that evolution it has lost none of its fire-proof qualities. Evidence of this was demonstrated in the New Jersey Law School fire. Below is a letter from Richard D. Currier, president of the Board of Trustees.

GENTLEMEN: You probably know of the recent fire in our Faculty Room. I was at home when the fire was discovered, but reached the building before the firemen left. At that time and since have been greatly impressed with the fire-proof qualities of Zenitherm.

Examination showed that the fire had started around a defective flue and evidently had been burning for several hours before it finally came through. Had it not been for the Zenitherm floor in the Faculty Room, I do not see anything to have prevented the fire from going directly through to the roof of that building before the firemen reached us. As it was, the damage was confined wholly to that room, with the exception of damage done by chemicals which leaked down to the room beneath. We have always felt that in using Zenitherm we were safeguarding ourselves as much as possible, and the recent fire amply confirmed our opinion as to its fire-proof, as well as its artistic qualities. Yours truly,

RICHARD D. CURRIER
The modern construction of motion picture houses that seeks to bring necessary additional revenue from the floors above has resulted in splendid combination theatre-office buildings, in many of which Halsey Taylor Drinking Fountains are the preferred installation. The Halsey W. Taylor Company, Warren, Ohio.

For THEATRES

The Halsey Taylor "Safety Stream"

At last a practical side-stream—a stream that remains at uniform height regardless of pressure variation, due to automatic stream control—a stream that makes it impractical for lips to touch, because of the distinctive sanitary two-stream projector!

The fixture illustrated at left is one of many attractive vitreous china wall types in the Taylor lines.

No. 616

The pedestal shown is one of many in vitreous china and cast iron, for use in office or industrial buildings.

Write for new Architects' Manual containing description and illustrations of our complete line.

HALSEY TAYLOR
DRINKING FOUNTAINS
THE YEARS MARCH BY
--- BUT NATCO HALTS
DEPRECIATION

Each year depreciation takes its toll, in beauty
and in value, from buildings not built for per-
manence. What was some architect's pride becomes
an eye-sore. What was a paying investment be-
comes a liability.

But structures built of Natco Hollow Building
Tile are left untouched by time. Natco is made of
special clay, mined, molded, and burned in great
kilns to the density of flint, the durability of
granite. Blood brother to the ever-lasting rocks,
it partakes of their permanence.

Natco, the complete line of Hollow Building Tile,
provides a tile for every building need. Natco
Header Backer, Unibacker, Interlocker and Bakup
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walls. NatcoGlor, Combination and Flat Arch Sys-
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No matter which of these Natco products you
use, rest assured you are building for permanence.
The years march by—but Natco halts depreciation.

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The Architectural Record, June 1928
ARCHITECTS and Decorators are offered the facilities of this House in connection with mantel installations. Not only is a comprehensive variety of period and modern designs available, but we are in a position to furnish mantels made from your own specifications and details without delay.

Cretan Stone is a scientifically developed product—an exclusive Jackson creation. Its beauty is equal to any of the favored natural stones. Although of extreme hardness, Cretan Stone is unusually light in weight, a feature accruing to the advantage of purchasers in shipping and setting up.

Let us send you photographs and descriptions of our regular designs, or quote on Cretan Mantels produced directly from your own details.

CRETAN STONE Mantels

Cretan Stone Mantels are reproduced in our shops by artisans, seasoned in their work by long years of experience in stone artistry. Each mantel is the product of meticulous care and individual effort.

Wm. H. Jackson Company

The Architectural Record, June, 1928
In the Path of the Glacier

On this exposed Vermont Marble deposit are marks which, according to the geologists, were made ten thousand years ago when New England was a land of glaciers. As the huge rivers of ice ground their way southward, advancing barely two feet a day, the rocks embedded in them cut grooves, scratches and flutings on everything within their path. Most of the scars have long since been smoothed away, but here they remain—unconquered by one hundred centuries of exposure—a guaranty of durability for the Vermont Marble buildings of today.

The outcrop of marble which appears in this photograph might easily be mistaken for a river of ice. It ranges in width from ten to twenty feet. The glacier marks run diagonally across the vein of the stone.

VERMONT MARBLE COMPANY - PROCTOR, VERMONT
Branches in the Larger Cities
See Sweet's Catalog for Specifications and other Data

VERMONT MARBLE
FIVE YEARS AGO when the Herman Nelson lightweight, compact, indestructible radiator was placed on the market, it was immediately accepted as the greatest advance in the art of Heating and Ventilation in a generation. It has made possible heating and ventilation dependability and performance hitherto unattainable.

The Herman Nelson Wedge Core Radiator is an exclusive feature of all Herman Nelson Heating and Ventilating Products and accounts for their unequalled performance.
SUCCESSFUL results of the Univent have brought national recognition to the basic idea of unit ventilation. With success has come imitation; but—imitation is not duplication.

Thanks to the architect, this fact is becoming known to the public: the results of Univent Ventilation cannot be duplicated by any other unit ventilator. The Univent’s important features are exclusive to the Univent.

The Univent is a complete individual ventilation machine which draws fresh air directly from out of doors, cleans it, warms it to a comfortable temperature, distributes it gently, silently yet thoroughly throughout the room. Windows may remain shut. Dangerous drafts are eliminated.

For schools, hospitals, telephone companies, office and public buildings, the Univent has created a new standard of helpful, economical ventilation. The Architects’ and Engineers’ edition of “Univent Ventilation” will be gladly sent to you upon request. The Herman Nelson Corporation, Moline, Illinois.
Consider... the final details, the finishing touches... that sell the house... rent the apartment... add convenience to Hotel or Club...

A NECESSITY IN CONVENIENT, COMPACT EQUIPMENT

The bathrooms, kitchens and cloakrooms of today bespeak the importance of final equipment, in articles with "eye and convenience value" far beyond their initial cost. The modern manner of living looks to daily comfort and efficiency in the home... and elsewhere. For example, eliminating the petty annoyances of daily shoe care. Griffinet Cabinets have taken shoe grooming out of the messy, nuisance class. They have answered the question of where to store brushes, cloths, bottles and containers—but above all, settled the problem of where to place your feet when cleaning your shoes. Homes, apartments, college dormitories, institutions, etc., are logical places for the installation of Griffinet Steel Cabinets. Recessed in the wall or attached to the wall, they require no special construction or extra space. They are attractive and practical equipment.

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GRIFFINET Steel Cabinets
for Shoe Cleaning
Can advertising make the architect's job easier...?

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Maddock, through continued, forceful advertising featuring the Improved Madera, is making people conscious of the wisdom of installing this fine, scientifically constructed toilet. The architect who specifies it can now be increasingly sure that it will be welcomed by his client.

THOMAS MADDOCK'S SONS CO. T Trenton, N. J.

MADDOCK'S Improved MADERA

The Architectural Record, June, 1928
When it is 95° F. during the day and 75° F. during the night, the day-time temperature inside of a correctly insulated home need never rise above 75°.

EVERYONE wants the comfort of an insulated home — the coolness it affords in summer, its coziness in winter. And all appreciate the saving in fuel that correct insulation assures. Remember though, that insulation should be installed to create two air spaces within the wall. This method alone assures the greatest benefit with the least material.

Tests by the U. S. Bureau of Standards prove that 1/2-inch insulation, installed to form two air spaces in the wall, has the insulation value of 3/4-inch insulation applied in contact with the sheathing or pressed into place. The economical thickness is 1/2-inch; the economical method is that which makes two air spaces.

FLAX-LI-NUM comes in 1/2-in. sheets (actually 3/16-in. thick) cut and shaped to fit between the studs. They go in quickly, without waste. The 1-inch sheets (actually 1/8-inch thick) come in one piece, ready to install in your roof. Again, FLAX-LI-NUM gives you comfort with economy.

Send for facts about the two-air-space method of insulating homes. Mail the coupon now.

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Send me details of the two-air-space method of insulation and complete information about FLAX-LI-NUM.
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DIVISION OF CONTINENTAL STEEL CORPORATION

The Architectural Record, June, 1928
Pamphlet Data on the Construction Industry

published from time to time by the Statistical Division of F. W. Dodge Corporation in connection with its business service, The Graphic Review. Written in non-technical language and dealing with various phases of the economics of construction, they have been found extremely useful by architects, bankers and leaders in the various businesses connected with construction.

Sent Free Upon Request

1. Construction Estimates for 1928.—A set of estimates in table form, of anticipated construction expenditures, by districts and by general classes of work.

2. Business Cycles: A Non-Technical Explanation.—(Published in 1924.) The basic principles of business cycle theory stated in business language.

3. Looking Ahead in Business.—(Published in 1925.) A discussion in brief outline of the relation of statistics to business planning.

4. Building Contracts and Business Movements.—(Published in January, 1927.) A paper presented before the American Statistical Association, accompanied by charts showing that construction contracts anticipate movements of the stock market, of automobile production and of general business activity, and also by charts showing that investment market curves are the only ones that anticipate construction trends.

5. Trends of Construction and Construction Costs.—(Published in December, 1927.) Reprinted from Real Estate Finance, the year book of the Mortgage and Finance Division of the National Association of Real Estate Boards. A brief discussion of the factors influencing expansion of construction activities; contains a table of index numbers giving comparative construction costs as between 44 large cities.

6. Trends of Investment, Construction and Business.—(Published in December, 1927.) A brief, simple exposition of the flow of money through these three channels. It shows that investment curves forecast construction activity and that contract curves forecast general business activity. These curves are the basis of the analysis presented in the new (1928) Graphic Review.

7. A Continuous Census and Market Survey.—(Published February, 1928.) A description of the daily building census taken by F. W. Dodge Corporation, and the way these census facts are compiled, interpreted and presented to business men.

To

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The Architectural Record, June 1928
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The Architectural Record, June, 1928
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Returns, as tabulated to date, on one portion of the investigation are so interesting from the architect's point of view that we want to tell you about them NOW!

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Founded in 1905 by the editor and publisher of the Architectural Record, Sweet's has always been edited for architects by architects. Its remarkable growth is due in a large measure to this consistent policy. Many architects have cooperated in making each edition better for the entire profession. With the continued cooperation of all architects we can, of course, accomplish much more for you and do this in much less time than without your help.

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The Architectural Record, June, 1928
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The Architectural Record, June, 1928
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The Architectural Record, June 1928
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The Architectural Record, June, 1928
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The Architectural Record, June, 1928
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Write for Bulletin R. 120
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The Architectural Record, June 1928
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State of New York, County of New York, before me, a notary public in and for the State and county aforesaid, personally appeared J. A. Oakley, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Architectural Record, published by F. W. Dodge Corporation, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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The Architectural Record, June, 1913
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For a quarter century those products and inventions bearing the name Dunham have won, and held, through their universally recognized service to the heating industry, the high esteem of architects, consulting engineers and heating contractors throughout the world.

To this world-wide prestige has come a new honor in the invention and development of the Dunham Differential Vacuum Heating System. This system of heating is even more revolutionary in its operation and in the advantages it assures than was the Dunham Thermostatic Radiator Trap which 25 years ago revolutionized an industry and made possible the use of low pressure steam which has been accepted as standard until now.

The Dunham Differential Vacuum Heating System

won immediate and well nigh universal acceptance by architects, engineers and contractors, undoubtedly due in a large part to the good name borne by the products of this company. This acceptance has been more than justified in the phenomenal fuel economies secured by those whose faith in Dunham engineering led them to install the Dunham Differential Vacuum Heating System.

To those interested in actual operating costs during the past heating season in various types of buildings, we will gladly send such data upon request.

C. A. DUNHAM CO.
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Over eighty branch and local sales offices in the United States, Canada and the United Kingdom bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city. An engineer will counsel with you on any project.

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The Architectural Record, June, 1928
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The materials of modern construction—carefully chosen for beauty, strength and durability—must have those qualities protected against the attacks of weather. Waterproofing, both above and below grade, is a positive necessity, a necessity met most fully by the complete line of Genfire Waterproofings and maintenance products—a product for every purpose, exterior and interior.

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Manufacturers of a Complete Line of FireSafe Building Products, also Waterproofings, and Concrete Preservatives

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Hartford, Conn.

Waterproofings And Preservative Products

A SPECIAL PILE for EVERY CONDITION
Not one Pile for all conditions

MacARTHUR Method

COMPRESSED CONCRETE PILES

We drive straight shaft type up to 40 feet long
Pedestal type for heavy loadings on short piles
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Typical All-Steel Pile Driving Equipment
Safe loadings 30 to 35 tons. Depths to 100 feet.

The flexibility of this improved method makes pile driving a speedy process. Compression and proper water ratio makes certain of perfect piles that will safely support your structure.

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Branch Offices:—Chicago, San Francisco, New Orleans, Boston, Pittsburgh, Buffalo, Detroit, Philadelphia, Montreal, Canada.

invisible hinges
(Good Taste + Strength)

Completely invisible when the door is closed. Flush doors—clean lines—no projections. Admittedly the ideal hinge for discriminating work.

A style for every use
See our catalog in Sweet's (pages 1578-9), or write direct to us for samples and complete catalog.

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The Architectural Record, June, 1928
For Those Who Dwell
Far From The Smoke Of Towns

Where the winter nights are cold and long; where on such
nights a man-to-tend-the-furnace is as hard to find as a
bluebird.

Then will your client appreciate, most, automatic heat that
will keep his house always at the Preferred Temperature.

WITH an Electric Furnace-Man in his
furnace or boiler, no matter what kind
it is, he will have safe, clean, hard-
cOal, automatic heat. The Electric Fur-
nace-Man automatically feeds the coal.
It deposits the ashes in a dust-proof can outside the fur-
nace. It burns Buckwheat or Rice anthracite which is from
five to eight dollars a ton cheaper than the large sizes. It
can be controlled by thermostat or by hand from the main
part of the house. It gives him quietly and economically the
Preferred Temperature throughout his house.

The Electric Furnace-Man

Manufactured by

DOMESTIC STOKER COMPANY
7 Dey Street - - - - - - - New York, N. Y.

The Architectural Record, June, 1928
Southern Woods in a Southern Hotel

It is seldom that a building radiates atmosphere as the new Poinsett Hotel does. The hardwood used throughout, the trim of Southern Gum and the doors of Red Gum with figured panels are singularly appropriate. The finished building is a model of the finest products used to advantage, and we have every reason to believe that both architect and owner are more than satisfied with our part of it.

Let us send you full particulars about HYDE-MURPHY Door Work, Cabinet Work and Trim, as well as the Keystone Lock Joint Clamp—(obtainable only on Hyde-Murphy products) On look us up in Sweet's page B1144 Office Partitions.

TAK-A-PART has patented advantages. Write for information.

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Compact, brickless construction
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Proved by forty years of faithful service
Heating Sizes from 300 to 36,000 sq. ft. Steam Rating
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Complete information, ratings and dimensions upon request

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WESTERLY, RHODE ISLAND

Send for our handsomely illustrated booklet giving complete information

The Architectural Record, June, 1918
This New Hinge is molded into the seat itself

Whale-bone-ite's supremacy clearly maintained by this new feature

On the union between hinge and seat depends the permanence of your seat installation. Realizing that the unsanitary metal hinge with its cleaning problem and loosely connected parts was a weakness in closet seats, the makers of the Whale-bone-ite Seat have perfected a new-type hinge which is actually part of the seat itself.

This new hinge is molded in one operation as an integral part of the Whale-bone-ite Seat. Reinforced by a metal die-cast, one-piece insert, it is covered with highly polished Whale-bone-ite. Thus it has the same strength and finish as the Whale-bone-ite Seat itself.

The makers of the Whale-bone-ite Seat offer this newest feature on all models of both closed and open-back seats. Whale-bone-ite is the only seat having the hinge you see pictured here. It is one more reason why you should specify this finest of seats for your building.

WHALE-BONE-ITE TOILET SEAT

THE BRUNSWICK-BALKE-COLLENDER CO., CHICAGO

For free cross-section of a Whale-bone-ite Seat, address Dept. 204 Seat Division, The Brunswick-Balke-Collender Co., 623 South Wabash Avenue, Chicago

The Architectural Record, June, 1928
Tudor City
Apartments
East 42nd St., New York
— designed, constructed, financed by and managed by the Fred F. French Companies. Overlook East River! View! Distinction! Rentals!

THE MID-WEST
INCINERATOR
(Chute-Fed) was chosen for the Second Unit to relieve the discriminating residents of garbage and refuse—without producing bad odors or noxious gases.

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Stairways for all types of Buildings

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Incorporated 1893

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Combustion
Mid-West Grates

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Designed for You by Experienced Roofers
Durable cast iron construction—no springs, no bolts, no loose rings. Doubly protected drain, dome locks in place, weathertight connections. Furnished in four sizes tapped for 3, 4, 5 and 6 inch standard wrought iron pipe thread.

Write for complete data
THE R. C. MAHON COMPANY
Detroit, Michigan

MAHON ROOF SUMPS

The Architectural Record, June, 1928
Distinctive Store Fronts

With the many new Kawneer creations at his command the architect is permitted greater freedom for the expression of his ideals of beauty. Store fronts—practical from the standpoint of merchandise display—and distinctly original in design are now a reality.

The new Kawneer features are fully described in our new catalog M A1 A-26-b-1, copy of which should be in your files. If not, write for another.

THE KAWNEER COMPANY
2723 Front St., NILES, MICHIGAN

SEND CATALOG "M"

Name
Address
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HOLMES & WINSLOW, Architects

The Architectural Record, June, 1928
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**Carney Cement**

*For Brick and Tile Mortar*

**Specifications:**
1 part Carney Cement to 3 or 4 parts sand depending upon quality of sand

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District Sales Offices:
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ST. LOUIS  MINNEAPOLIS

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**Samson Spot Sash Cord**

There is a lot of satisfaction for Architect, Builder and Owner in this durable Sash Cord.

It will carry the sash for years to come, running without noise or jumping. It is solid braided cotton, strong, round, smooth and fully stretched. And it is identified for you by the colored spots, our trade mark.

*Made by*

**Samson Cordage Works**
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You can be sure of this standard product that is alike from year to year. When you recommend Ric-wil you eliminate heating troubles for all time. Full information and estimates promptly furnished upon request.

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This is one of a series of advertisements showing why Rock of Ages is the perfect material for any large memorial form.

**Without knot, stain or other imperfection**

**Rock of Ages Granite** is singularly pure in texture and color. The sculptor's chisel never meets a knot to ruin a delicate bit of carving—nor does moisture or the passage of time bring out discolorations.

Rock of Ages has many times proved itself perfectly adapted to the large memorial or architectural form which commonly includes both broad plain surfaces, and carved ornament.

Inquiries regarding specific problems will receive our immediate and complete attention. Address Dept. B.

**Rock of Ages**

**The Distinctive Barre Granite**

**Rock of Ages Corporation**

**Barre Vermont**
Why Do They Use **ROBRAS 20°-20° Radiators**?

*One User Answers*

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**RHINELANDER REAL ESTATE COMPANY.**

71 NASSAU STREET

NEW YORK

Donald Bankes

Rome Brass Radiator Corp.

1 East 42nd St.

New York City

April

Eighteenth

Nineteen

Twenty-Eight.

My dear Mr. Bankes:

Six months ago, when you assured me that your Robras 20°-20° concealed radiator would appreciably decrease renting resistance and offset the fairly high rentals we expected from the Rhinelander apartments, I was rather skeptical.

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The apartments in this building have rented with surprising ease. No small amount of credit for this should go to your, in the wall, out of the way, radiators. Never in my long experience in renting high class apartments have I had a selling point so understood and appreciated by prospective tenants.

Please accept my thanks for bringing this radiator to my attention. I am,

Very sincerely,

Francis W. Valk

Manager.

In the Rhinelander Apartment mentioned above, twenty-seven thousand feet of Robras 20-20 radiation is used.

It was designed by SUGERMAN & BERGER, architects for the Rhinelander Real Estate Company.

The general contractors were the TAYLOR CONSTRUCTION COMPANY.

The Heating System was laid out by JAROS and BAUM, Heating and Ventilating Engineers, and installed by GEORGE E. GIBSON CO., Heating Contractor.
WITH A BRICK HOUSE DUBOIS LENDS
a softening touch — — —

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Being a product of Nature itself, it adds a soft, rustic touch that relieves the severity of brick.

Made in France, of straight, live, split chestnut saplings, woven closely together, Dubois is gaining an immense vogue in this country because it is not only highly distinctive in appearance but extremely adaptable to American landscaping schemes.

It is easy to erect and lasts a lifetime. No paint is required. It is moderate in cost.

DUBOIS
Woven Wood Fence

Made in France

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Please send, without obligation, your new ALBUM illustrating the many interesting ways Dubois is being used.

Firm
Name
Address

Residence of E. A. Hamilton, Esq.
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W. F. McCallum, Architect

Have You This New Album? We have recently prepared a beautiful album containing photographic studies of actual Dubois installations that cover almost every landscaping problem. The album has received enthusiastic praise from architects everywhere. If you have not obtained a copy, write us, and one will be sent you free.

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CLASSIFIED DIRECTORY OF ADVERTISERS

Alphabetical Index to Advertisers, Page 182

After reviewing advertisements in this issue—consult Sweet's Architectural Catalogue 22nd edition for catalogue and specification information on the products of these manufacturers.

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Knight, Maurice

Anchorage—Masonry
Dovetail Anchor Slot Co.

Architectural Faience
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Architectural Supplies
American Lead Pencil Company
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Artstone
Rackle, George, & Sons Co.

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Kalmian Steel Company
Truscon Steel Company
Youngstown Pressed Steel Co.

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Autoyre Company
Crane Company
Eustis, J. P., Mfg. Company
Hess Warming & Ventilating Co.
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Kalmian Steel Company
Genfire Steel Company
Truscon Steel Company
Wheeling Corrugating Co.
Youngstown Pressed Steel Co.

Beams, Angles, Channels, Etc.
Carnegie Steel Company

Beds—Concealed
Concealed Bed Corp.

The Architectural Record, June, 1913
Plan the Wiring for Radio in Every Room
by the installation of

H&H

DUPLEX RADIO OUTLETS
in Hotels, Hospitals, Clubs etc.

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The radio circuit consists of wiring from main receiving sets in the basement, distributing the radio programs to various rooms through a system of Radio Outlets installed in base-boards. Guests "plug in" with loud-speakers or headsets like plugging into the lighting circuit with electric appliances.

The latest practice, most popular in hotels, is to offer listeners a choice of two programs; two main receiving sets in the basement; wires running to double receptacles. For this we've developed the Duplex Outlet shown above.

The Single Radio Outlet at left takes care of installations with but one main receiving set: one program to connect with. It may be used in the home or in apartments for "radio extensions" to different rooms from a central receiving set. Let us send you a handy little folder with suggestions to pass on to clients, for adding "radio circuits" to their electrical conveniences.

THE HART & HEGEMAN MFG. CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890
Illustrating the Fourteen Typical Installations of

EXCELSO WATER HEATERS

OF STANDARD A. I. A. file-size and showing the best practices for connecting Excelso Indirect Water Heaters to heating boilers under fourteen different conditions, this book furnishes information every architect will want.

ASK YOUR SECRETARY to write for this informative book—today, lest she forget.

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DIVISION OF AMERICAN RADIATOR COMPANY
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Sold and Installed by All Plumbing and Heating Contractors

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Penberthy Injector Co.

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Carney Company, The
Kosmos Portland Cement Co.
Lawrence Cement Co.
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Sandusky Cement Co.
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Cement White
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Bates Valve Bag Corp.

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American Chain Co.
Detroit Steel Products Co.
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Channels
Carnegie Steel Co.
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Hyde-Murphy Co.

Clay Vitrified
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Coal Doors
Kalman Steel Company
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Columns, Porches, Etc.
Hartmann-Sanders Co.
Union Metal Mfg. Co.

Concealed Beds
Concealed Bed Corp.

Concrete Accelerator
Master Builders Co.

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American Steel & Wire Company
Concrete Reinforcing Steel Institute
Genfire Steel Company
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U. S. Gypsum Co.

Concrete Hardener
Master Builders Co.
Sonneborn, L., Sons, Incorporated

Concrete Piling
See Filing Concrete

Concrete Surface Treatment
Master Builders Co.

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Corkboard
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Triple Coil
Double Coil

Sizes for one family or one hundred families

The Architectural Record, June, 1920
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The result is that builders can now have not only a modern toilet partition, but one which has been perfected in the laboratory of experience and combines all of the fine advantages of marble and metal. Descriptive literature will be mailed upon request.

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Representatives in All Principal Cities

MARBLMETAL
Toilet Partitions

The Architectural Record, June, 1928
**TEMPLE GARDEN APARTMENTS**  
BALTIMORE, MD.

A. LOUTHER FORREST  
Architect

J. HENRY MILLER, INC.  
General Contractor

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### TEMPLE GARDEN APARTMENTS

100,000 SPEARPOINT FLOOR CLIPS

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Sanitary and Easily Kept Clean

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Blasteel Nosings meet the tread covering at an angle, binding it in place and protecting the edge from rolling, chipping, wear or deterioration. Complete descriptive matter, samples and prices gladly furnished.

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- Norton Door Closers Co.

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- International Casement Co.
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- Edison Electric Appliance Co., Inc.
- General Electric Company
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- Hazard Insulated Wire Works
- Holtzer-Cabot Electric Co.
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**Elevator Door Hardware—Wagner Mfg. Co.**

**Elevator Doors**
- Feele Company, The
- Security Fire Door Co.
- United Metal Products Co.

**Elevator Inclosures**
- United Metal Products Co.

**Elevator Supplies**
- Wagner Mfg. Co.

**Elevators**
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Union Metal Columns are protected against weather conditions by being galvanized with lead and zinc spelter, both inside and outside.

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Vertical joints of all columns are double lock seamed with seams rolled on inside so that all outside surfaces are smooth and clean.

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Stopped flutes and apophyge at bottom of shaft.

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Cast-iron base, smooth and clean.
ARCHITECTS have exhibited much interest in our new hand-brushed finishes, which when applied—on a still plastic surface—to RACKLE ARTSTONE, afford that artistic "craftsmen" roughness and irregularity of surface and texture so much desired nowadays in structural materials. We would welcome the opportunity to give you full information on this new development—a postal card will bring it.

Our catalogue is in Sweet's—

pages A327-329

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Cleveland, Ohio
Established 1870

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(S) Thomson Proof Door Co...
(S) Trueson Laboratories...
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(S) Traverse Laboratories...
(S) Trueson Steel Co...
(S) Tuttle & Bailey Mfg. Co...
(S) Union Metal Mfg. Co...
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(S) U. & G. Giffen Pclea Paint Co...
(S) United States Gypsum Co...
(S) U. S. Marine Wood Co...
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(S) West Coast Lumber Bureau...
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