

THE AMERICAN ARCHITECT

The ARCHITECTURAL REVIEW

VOL. CXXV

WEDNESDAY, JANUARY 2, 1924

NUMBER 2436



HALF TIMBER CONSTRUCTION AS SEEN AT ITS BEST IN FRANCE

HALF TIMBER

Scattered Observations and Sketches made in France

BY SAMUEL CHAMBERLAIN

THERE are rare spots in France, hidden throughout a hundred towns and villages, where the atmosphere of a medieval world is authentically preserved by a towering old timbered house. The sight of one of them, battered, warped and crumbling, shooting up at grotesque angles on a dingy street, has inspired many an artist to laudable things. They are appreciated in some quarters and kept in repair, objects of a dormant civic pride which asserts itself only when a movie photographer or an idiot on a sketching stool calls attention to the charm of the place.

Others are woefully neglected, looked upon as worthless old shells that soon must collapse under the axe of the housewrecker, to be replaced by a thoroughly cold and unfeeling, but to be sure, most "practical" type of house that is often built nowadays. The watchful eye of the State, therefore,

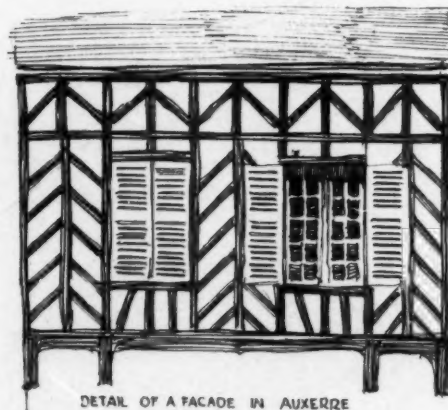
has to be on the alert to restrain unappreciative landowners from tearing down some of the finest relics. One of the noblest half timbered structures in the Touraine, a splendid weather beaten old hulk in Chinon with a dejected "list to port," its windows an assortment of broken glass and cobwebs, a squalid family of screeching children on the ground floor, had already been turned over to the axe-wielders when the Beaux-Arts officials stepped in and converted it into an immune "monument historique."

Rouen, of course, is honeycombed with old houses. The extent of them is not appreciated until one begins to wander through the labyrinth of side streets and alleys that give access to much of the town. Caen, Lisieux and Bayeux are famous on account of them. Blois, Compiègne, Auxerre, Tours and Bourges are all plenteously

(Copyright, 1924, The Architectural & Building Press, Inc.)

endowed with them. In the little hillside town of Joigny, near Auxerre, is an astonishing affair; a house whose principal facade is bent around a street corner and covered with an elaborate network of carved, grimacing timbers that take the form of the Tree of Jesse. The brickwork and the carving on this house merit all the available superlatives, and were not the writer a timid and

no discordant note anywhere. The red and white checkered curtains, drawn in at the middle with a broad strip of ribbon, the rather banal wood carving, the spreading old wrought iron shop sign, even the lettering carved and gilded on the lintels, all were in a state of perfect, too perfect, preservation. There had to be some explanation, and a camouflaged interview with the portly "patron"



FROM ORIGINAL SKETCHES BY SAMUEL CHAMBERLAIN

cautious correspondent, it would here be set down, save for its fanciful framework which is open to criticism, as just about the finest example of timber and brick construction in France.

A varied few houses are here shown, with an attempt to reveal some of the differences in construction. The antique shop in Compiègne is a surprisingly complete affair. There seems to be

revealed it. The movies had restored all the ailing portions to make an authentic background for some of the lively scenes in the French version of "The Three Musketeers."

One spot in Beauvais, the sunny Place Jeanne Hachette, has been appreciated and zealously cared for by the natives, with the result that one obtains a very fair idea of how a medieval public square



AN ANTIQUE SHOP, COMPIEGNE

FROM THE ORIGINAL SKETCH BY SAMUEL CHAMBERLAIN

might have appeared in all its original color and freshness. We first saw it one sunny morning when the gravelled clearing was swarming with picturesque rustics, arrived in town with their varied wares for market day. Once under the protecting awning of a cafe terrace, one became a leisurely witness of a most turbulent and fascinating panorama. Across the way, under a broiling sun, a damp and rotund peasant was shouting hoarsely before a formidable mound of cabbages. Stuck under his hat were two huge cabbage leaves to shelter his fat neck. Next to him, a little man with a ferocious moustache was violently demonstrating the virtues of a collapsible, reversible, non-breakable umbrella, flinging it in the air, punching it, tearing at it, and all the while carry-

ing on a vociferous monologue, much to the restrained amusement of his audience. The man with the patent garters of stretchable tin was not far away. His leg, covered with a dubious gray cotton underwear, was perched on a soap box to



A TYPICAL NARROW STREET



AUXERRE

serve as a demonstrator. The garters didn't go so well, so a few minutes later he appeared in a new spot with a tray of patent necktie attachments and a celluloid collar. Under a canvas-covered stand, a meek little man with a sweet, uncultivated voice and an utter lack of self-consciousness, was singing a silly waltz song, while a strange youth, with a face that somewhat resembled a pickerel, was playing it softly on the violin. The housewives and children forsook the drygoods stands for a moment and clustered about. Some of them even invested fifty centimes for the song.

Rising up over the tops of a thousand canvas shelters were the old half timbered houses, preserving through their very appearance of well painted newness an effect which one readily imagines existed in the sixteenth century. True, there could not have been blatant colored signboards, screeching forth recommendations of

"Kodak" or "Pneus Stock Dunlop" or "Charlot" at the Cinema Palace, but there were countless bits of atmosphere which seemed not of this age, giving the whole thing an air of fanciful unreality. This was after the second aperitif, I will admit. At the far end of the square, perspiring painters on the top rungs of long, spidery ladders were carefully painting brown timbers on two graceful, creamy-white buildings. This was quite a shock until a closer inspection revealed that the origi-

London plane sped through the blue sky. The scene was a bit too complex to absorb at once. But Beauvais was entirely unforgettable at first glance, despite the thermometer. The finest old houses in Beauvais, inset with sparkling old polychrome brick and tile, are on obscure side streets and not on the square, regrettably enough.

To point out that old half timber construction, before being decorative, is essentially structural, is to be guilty of being rather inexcusably obvious.



AUXERRE

A FINE EXAMPLE OF HALF TIMBER WORK IN AUXERRE

FROM THE ORIGINAL SKETCH BY SAMUEL CHAMBERLAIN

nal timbers were still faintly in evidence under the white paint. A smiling maid drew up a clothes basket and began to exhibit strange sculpture in the form of coarse, lava-textured, red rubber sponges, so well known to the morning tubbers. Very pliable the material would seem to be, for it assumed the forms of Chinese laundrymen, teddy bears, Zulu belles, bungalows, warships, crocodiles, windmills and kangaroos.

Overhead could be heard the persistent purr of a motor, and soon the silvery form of a Paris-

Mention is made because it is undeniable that some of the half timber work seen in America aims first at being decorative, and misses its mark for want of possessing the underlying motive of being structural. Plentiful as are the examples in France, there is comparatively small diversity in framework, due largely to the aforementioned structural purpose.

Such a thing as surface facing to give the effect of half timber is apparently unknown in France, a fact which can hardly be deplored. Rare indeed

are the examples of this practice in America which carry conviction. An architect usually detects them as easily as a barber spots a toupee.

It is interesting to note that when bricks are used to fill the interstices between the timbers, they are usually laid in a manner to fit the opening most conveniently, even though that be vertically or on an angle.

Although in form there prevails a relative simplicity, in detail, of course, some of the old houses are most elaborate, even rivalling at times the complexity and handiwork of the stone carving

of the period. The heavy first story lintel and the brackets supporting it, the cornice if there happened to be such a thing, and often the main vertical supports, seem to be the most logical and favored members on which the wood carver might show his skill.

That the influence of good antique examples can lead to equally good modern half timber work is proven at Rouen, where the builders, surrounded by any number of splendid types, have produced many half timbered houses of a charm and originality hardly excelled by their predecessors.



A BASKET SHOP AND MOTOR FILLING STATION
FROM THE ORIGINAL SKETCH BY SAMUEL CHAMBERLAIN

DEFINITION in MODERN ARCHITECTURE

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

IT is the custom of most newspapers, and of many magazines, technical or otherwise, to publish about the first of each year some sort of review of what has happened during the twelve months preceding; there are political reviews and commercial reviews, and reviews purely historical; there are records of stock fluctuations which interest some and records of sporting events which interest many; there are reviews of theatrical productions, and some reference is generally made to the exhibitions of painting and sculpture which have been held. The references to architecture are few, and are generally submerged in the real estate sections, and treat chiefly of suburban growth or of the commercial development of a new Rue de la Paix in New York, Chicago or St. Joe, Missouri. This seems deplorable, of course, but after all it is natural enough, for how can the architecture of a year be reviewed or even defined? The chronology of actual events is quite a definite thing. There may be differences of opinion about the demonstration in Corfu or as to the qualifications of Smith for the all-Eastern football team, but there can be no doubt of the date on which the Italian fleet entered the harbor or any question that Yale beat Harvard and Princeton. But architecture has no such definition; it is not of a day or a year. A building finished this year of grace 1923 might conceivably have been designed in 1913, and certain parts of it in 13 B. C. There are no startling changes in architecture. It always has been, and always will be, a thing of gradual growth; the periods and styles, evident enough in a history of architecture, were so connected one with another that any definite line of demarcation is quite impossible; the Classic architect did not say in sudden inspiration that he was tired of doing Ionic columns, and that he would design a brand new order for his next temple and would call it Corinthian, nor did the Gothic designer make an overnight resolve he would do no more Decorated work but would develop the Perpendicular.

This lack of definition is particularly evident in modern architecture, for there is now no style that is general, nor has there been one for the last hundred years. There have been changes and improvements, to be sure, but the changes are changes in construction, and the improvements are those of convenience. The one great difference between modern architecture and what preceded it is that in former days architecture and construction were one and the same, while now the construction is a framework of steel, and the

architecture is anything you please that will cover the framework. In the good old days a column was a real column that carried the load above it; now a column more often than not is merely ornamental and could be done away with altogether without disturbing the entablature above it which is carried on steel beams and trusses. The design is not now the development of the construction; it is entirely independent of it. The whole thing is made too easy for the designer, or rather for the draftsman as the former title hardly applies. He can draw anything he pleases and be happy in the assured conviction that it can be safely erected by an intricate combination of steel columns, beams and cantilevers and other such devilish contraptions. His elevation is not the logical expression of the construction because the construction is merely an illogical method of supporting his elevation; the cart is a mile or two ahead of the horse.

Now, the blame for such a condition must fall upon the high building and upon the greed that made the high building possible; in other words, upon commercialism. It is commercially a good thing for the owner of a valuable plot to erect a building which will house ten times as many tenants as the ground should hold, but it is a very bad thing for the owner of an adjoining property who has the misfortune to be squeezed between two high buildings; it is pleasant to have an office on the twentieth floor, but it is decidedly unpleasant to have an office on the third floor opposite. Still the high building is here, and the question is not how to prevent it, but what are we going to do about it? Fortunately, something has been done, and that something is a good deal; something much more vital than a mere application of detail or a vain attempt to express the construction. The generally growing adoption of the zoning ordinances and the forced setting back of the upper stories have had not only a practical value in getting more light and air into the rooms, but have had a very pronounced effect upon the architectural appearance. The earlier buildings were built apparently with a naive idea that the fronts only were visible; whereas in reality on account of the narrowness of the streets only a few stories of the front could be seen, but the whole flat expanse of the side, naked and unadorned, stuck up in the air like an exaggerated and often used sign board, crowned with a miscellaneous jumble of chimney stacks, pent houses and water tanks. In a few instances attempts were made to improve the silhouette; some of



FORTY YEARS AGO

DRAWING FOR THE HALL OF A PRETENTIOUS HOUSE ON A LARGE ESTATE IN MAINE

(Reproduced from *THE AMERICAN ARCHITECT* of January, 1884)

these attempts took the form of towers and were generally successful, the Bankers' Trust, the Singer Building, the Metropolitan Life and the Woolworth Building, but generally the high building was a poor thing architecturally and was only impressive from the deck of an incoming liner. The recent buildings are a decided improvement in mass and sometimes in detail. The outline is softened by the set-backs and generally the tanks and stacks are covered in the termination of the roof; the huge, projecting cornices have been eliminated and the decks of the set-backs form pleasant terraces for the fortunate

occupants of the adjoining offices. It is not good, because the whole principle of the high building is wrong, but it is better than it was, much better, and like most improvements has become general only because it was obligatory. Any architect that had the temerity, ten years ago, to suggest such a thing would have been promptly fired by the irate commercial client.

Now that the mass of the building is receiving its proper consideration, what of the enclosing envelope, the detail, the design of it? What has been and what should be done? Shall it have the old tripartite division of base, shaft and cap, or



HALL IN HOUSE OF THOMAS H. FROTHINGHAM, FAR HILLS, N. J.

OFFICE OF JOHN RUSSELL POPE, ARCHITECTS

shall it be striated to emphasize the verticality, and more difficult of all, in what style shall it be—Classic or Gothic or Renaissance or ultra-modern? In a previous article, in fact in several previous articles, I have expressed the strong personal opinion that there can be no distinctively modern style, not because of the lack of inventiveness of the modern architect but because of modern construction. As I see it, with the end of masonry construction came the end of the incentive to build logically. In a building with a skeleton frame, our columns, our arches, our vaults and domes are mere shams of veneering, more substantial but no more constructive than the architecture of exhibition buildings. The only logical treatment of a skeleton structure is that generally seen in our new factories in which the constructive members both vertical and horizontal are covered with concrete and the voids filled with iron sash and glass. It is in fact the acme of logic and of convenience but by no stretch of the imagination can it be called architecture.

Personally I see no solution, that is, no logical solution. I admire often the feeling of verticality in a Gothic office building, but I do not care to see applied to a commercial structure forms that I instinctively associate with a cathedral. I admire often the expression of loftiness in the recent work of Mr. Saarinen but I do not care for the modernistic treatment, nor can I see the intense logic in either of the above examples; the vertical lines do in a way express the steel columns, but there is no expression of the horizontals which are equally important. I have been much interested in the recent commercial domestic work here in New York, the hotels and Allerton Houses and such, which are treated almost wholly in brick with a picturesque quality about them that is entirely charming even if its appropriateness may be questioned, and I have seen commercial work treated in a Classic manner

which was distinctly good, but in it all there is nothing that is new, even the modernistic stuff is a distorted and ill-conceived rehash of old forms.

The only solution, which is not really a solution at all, is to go on doing as we are doing now; to clothe the framework in some pleasing and more or less appropriate manner and let it go at that. If we want vertical expression, put it on, and if our artistic soul yearns for columns and pilasters put them on, and do it as well as we can. It is not logical, but then neither is the Greek temple logical in its development; neither are the Roman Baths logical when the concrete construction was faced with marble and bronze, nor is the Renaissance cathedral with its outer and inner dome, nor our Colonial work with its wooden quoins; and yet they are all beautiful. And if we can make our own buildings beautiful, if we can secure a noble silhouette and can clothe the framework in a beautiful manner, it matters little how it is done, or whether it is logical or not. We have done then all that can be done.

It might be inferred from what I have written above that I felt that the entire future of modern architecture was commercial, but this is not my feeling in the least; the great bulk of our building will be commercial, it is true, but the real architecture will be the monumental and domestic work. To these classes the improvements in construction will not be so detrimental; it may even be beneficial if rightly used. The monumental work now done in this country is uniformly excellent and far and away better than that done elsewhere, and our domestic work is generally appropriate, well designed and extremely good. By the word appropriate I mean appropriate to the locality and to the climate. We no more build small houses in the Mission style in New England, nor Colonial in the far West. The larger work is really fine and the smaller often charming; the advance has been great.

ARCHITECTURAL ENGINEERING

ARCHITECTURAL engineering has become the most important element of building construction. In money value, it is a large portion of its cost. It comprises those things which make a building stable, habitable, sanitary and usable. But for the ready response of architectural engineering to the demands made on it, building construction would have attained an *impasse* many years ago. Architectural engineering includes structural engineering, heating and ventilation, refrigeration, plumbing and sanitary equipment, fire protection, electrical equipment and artificial illumination, natural illumination, horizontal and vertical transportation and acoustics.

STRUCTURAL engineering includes the designing of the foundations, the bearing walls, the frame of columns, girders and beams and the structural parts of floors and roofs. The steel frame has been developed to a high degree of perfection. It has made the modern, high building possible. Modifications of the standard forms of steel frame design have been developed recently to conform to the demands of the set-back and tower type building.

The standard reinforced concrete frame has not been affected by these types of buildings. The natural limitations that height imposes on this type of construction do not forecast any immediate changes in the well established standards. Some important developments in the combined structural steel and concrete frames have been made recently. As the theory of structural design has been fully developed, the attention of investigators and engineers is now largely diverted to a study of the physical and mechanical properties of concrete in its more intimate aspects. The character of the aggregate, the amount of water used and the duration of mixing, technique of transporting and depositing the mixture and their influence on the strength and durability of concrete are being investigated. These are in the nature of refinements, important and increasingly valuable. This work is being conducted by the Bureau of Standards and the various experimental laboratories of our leading universities.

An increasingly important factor in concrete construction is the matter of simplifying and cheapening the cost of forms. Improvements in the making and use of metal forms have been notable. This is one of the great problems yet to be solved.

The important matter of waterproofing concrete is still being intensively studied. Its effectiveness as such and its influence on the strength of the concrete have been subjected to some important tests and the results will soon be available.

HEATING and ventilation engage the attention of that very important organization, the American Society of Heating and Ventilating Engineers. Its committee on research is doing a most valuable work in all branches of the science. It is devoted more particularly to what may be called refinements. Designing methods have become much more comprehensive and include factors that were not deemed necessary some years ago. Cost of construction, more accurate fulfillment of imposed conditions and conservation of fuel, have been impelling factors in these improvements.

The propriety and effectiveness of mechanical ventilation and air conditioning have been questioned in some sources. Nothing has been presented as yet, which would materially affect the present practice.

Electrical heating has not been perfected to that stage where it can be used generally with economy at the present usual cost of electric current. There is no doubt but that heating units will soon be produced which will transform electrical current into BTU in a cheap and effective manner.

Refrigeration has been confined principally to commercial uses and with increasing success. Attention is being directed to the use of refrigeration for the personal comfort of persons. The possibility of converting a heating apparatus to a cooling apparatus has been demonstrated. The cooling does not cost any more than heating and there is a strong probability that future plants in certain types of buildings will be so designed as to serve the dual use of heating and cooling.

PLUMBING and sanitary engineering naturally include everything pertaining to the use of water. Extremely high buildings have made necessary the designing of circulating systems for high pressures. This extends to the special design of valves, fixtures and pumps. The movement, instituted by the Department of Commerce, toward confining the manufacturing of fixtures to a restricted range of standards will probably do away with a great deal of confusion arising from many similar articles having little important

variation. The industry of sanitary fixture manufacturing has always been ready to supply the demands for specially designed fixtures for the practice of hydrotherapy and all forms of sanitation involving the use of water.

Machinery for the cleansing of linen and preparing it for re-use, has been greatly improved. The laundry industry has made advances in line with all other improvements and it is organized and conducted in a very scientific manner. Buildings and parts of buildings in which the work is done are designed for this special use in order to reduce cost of operation and conserve the health of those engaged in the work.

The mechanical equipment of the modern kitchen involves a wide range of devices in which the use of electricity for all purposes is becoming increasingly evident. The kitchen, like the laundry, is planned so as to be operated with the least amount of labor and expenditure of power and fuel and all in compliance with the best sanitary regulations.

FIRE protection involves three things: the construction of buildings so that the combustion of the contents is confined to the place of its origin until extinguished; mechanical devices for the extinguishment of fire and facilities for safe means of egress.

At the present time there is little indication of any great improvement in and discovery of existing fire-resisting materials. Better adaptations are being made as the physical and mechanical properties of materials for this purpose are better understood. The greatest problem in fire-resisting construction appears to be the protection of exterior openings against conflagration conditions. To do this successfully will require such modifications of doors and windows as might seriously affect the exterior architectural design. Perhaps some compromise must be made. Architects and engineers are all quite conversant with fire-resisting construction. The greatest drawback to better construction is the attitude of the majority of building owners. Increased penalties for poor construction and making a property in which a fire originates liable for damage incurred by its neighbor, appear to be the only ways to overcome this condition.

Mechanical fire extinguishing devices are being improved constantly. They are automatic in operation but unfortunately they must depend on human beings for maintenance. Automatic and manual signalling systems are necessary and valuable adjuncts to all fire extinguishing apparatus. Safe egress from buildings is receiving increasing attention. It does not appear that this has as yet been reduced to the most simple forms. The basis of all such regulations must be the behavior and movement of people under fire con-

ditions. The kinds of people, their age, mental and physical conditions are all important factors. The use of the building by the various types of occupants is also to be considered. It is to be hoped that some agency will undertake an investigation of the human factor of this problem.

ELECTRICITY is widely distributed for many uses throughout a building. The applications of electric power have been well established for several years. The principal improvements have been in electric lamps and their use for lighting. The science of artificial lighting has been developed very rapidly and the limit of improvement has not been approached. Exterior illumination is being developed for several purposes. The correct lighting of workyards during the night results in a great reduction in accidents and in greater efficiency of workmen. For display advertising little improvement can be made except in size of the display. The mechanical devices for operating change programs are well standardized. The illumination of the exterior of buildings is a new problem. The usual method has been simply to floodlight the building. Such lighting is generally designed after the building is completed. The method of today is to plan the illumination during the designing of the exterior walls. Architectural designing in the future must, in certain instances, be made for the conditions of daylight and night illumination. Some distinctive examples of this new aspect of architectural designing and illuminating engineering are now in the making.

THE use of daylight has not received the careful investigation and experimentation that it should. The control and direction of daylight are being accomplished by mechanical means, synchronized with the movement of the sun. These mechanisms also are controlled for certain conditions by the intensity of the daylight. By means of these new methods a uniform distribution of daylight can be secured in any desired position. The whole field of natural illumination will probably from now on receive more attention than in the past. It is only in recent years that the value of proper light intensities has been appreciated. The first improvement in these conditions was made in schoolhouses, in many states regulated by law. In the industries, illumination was neglected although its importance as an economic factor was little appreciated. As a means of preventing accidents it was made a subject of regulations in many of the more advanced states. The necessity for the proper lighting of art galleries, museums and other display places is becoming more appreciated. Light is now more often

being used for the purposes of the occupancy, an application long neglected.

THE commissioning of architects for the designing and construction of bridges has caused a decided protest to be made by bridge engineers, which is but natural. The prevailing opinion seems to be that all engineers, including bridge engineers, are destitute of any knowledge or appreciation of the aesthetics of design—outlanders to the realm of the fine arts. Modern bridge engineering has been developed within the past sixty years as the progress in manufacturing wrought iron, steels of improved grades and reinforced concrete have made them available. It is a new science without traditions or specific inherited culture. It has been developed with extreme rapidity and largely under conditions demanding the utmost economy consistent with stability. The monumental bridge is a modern thing in this country. A survey of bridges, which by their nature are rightly susceptible of aesthetic treatment, discloses a steady improvement in that quality favorably comparable with architectural development during a like period and under like conditions. Bridge designing must always be essentially a structural engineering work. Architects should become conversant with the engineering principles of bridge design and with the aesthetics of bridge design as differentiated from the aesthetics of building or architectural design, before expecting recognition in this class of construction in association with bridge engineers.

HORIZONTAL and vertical transportation enters into every kind of buildings except dwellings. In the industrial field, horizontal transportation is an important factor. It is carried on by surface systems of industrial tracks and electric motors and trailers operated without tracks. Overhead tracks and modified forms of trolleyage are best adapted for many uses. Gravity and belt conveyors are also used. The improvement in conveying apparatus of all kinds has been very great in recent years. The principal advantages are the reduction in labor costs, the regular and non-interfering traffic and the uniform speed of operation. The building must be designed from its inception to accommodate all of these means of transportation. The engineer must make his preliminary design for this traffic conjointly with the architectural design.

Vertical transportation has been developed along the lines of greater speed employing automatic devices to insure safety. The tall building requires high speed elevators in order to reduce their number and thus occupy less space.

The extremely tall building has presented some new and unusual conditions which have made necessary the designing of a new type of elevator. High speed requires the use of improved quick-acting door operation and floor level adjustment. Elevator design and construction have been developed consistently with building progress. Considering the loads, stresses and high speed and intermittent operation, the absolute safety of the modern elevator is truly remarkable.

ACOUSTICS. Sound and its relation to building construction are being given increased attention. The necessity for preventing the transmission of sound through and by the parts of a structure is becoming better recognized. The fact that sound is easily transmitted through the usual type of construction has led to a tacit acceptance of that condition, like many other things overlooked as being a matter of course. The suppression of noise is recognized as an economic necessity. Past methods have been, in many instances, very effective and their availability and purpose have not been appreciated as they should have been.

The science of acoustics, as applied to building construction, is being reduced to a definite basis and auditoriums are now designed with the surety that a preconceived condition will be attained. The positive measure of the relation of sound to materials makes this possible. The elimination of chance in these matters is one of the great advances in recent years.

THE Carnegie Corporation of New York has appropriated the sum of \$108,000 for the study of engineering education under the direction of the Society for the Promotion of Engineering Education. The work will be carried on through a period of three years. It will study the process by which the curriculum of fifty years ago has come to its present form; it will seek to set forth the nature and weakness of the curriculum as at present administered; and it will indicate such modifications or developments as would seem to make for a sound, well balanced, and fruitful course of study for engineering students.

The membership of the Society for the Promotion of Engineering Education totals 1,645, of which 17 are architects and 8 are architectural engineers. It is strange that this should be the case. A correct appreciation of the important part that engineering has in the building industry and its influence on architecture, should cause architects and architectural engineers to take a keen and active interest in the work of this society, especially at this time.

CONSTRUCTION and COST of OPERATION

THE design of building construction and equipment is influenced by the cost of materials and operation. When steam coal could be secured at a cost of \$0.85 to \$1.25 per ton on cars at destination, economy in fuel consumption was not of great importance. Under these conditions central heating plants could be operated at a profit. With fuel costing ten times as much, a readjustment becomes necessary. This changed condition affects not only the heating plant but building construction as well and architects should take special precautions so to build as to conserve the heat generated.

This is clearly shown in a paper by Samuel R. Lewis* printed in the November *Journal* of the American Society of Heating and Ventilating Engineers, from which is quoted in part:

We have built more elaborate buildings as years passed, and have equipped them with more elaborate heating apparatus. Occasionally we have found it convenient to connect two or more buildings with pipes so heating them from a single fireplace. Generally, when we have done this, the buildings have been conventional in construction, and the heating systems have been the same as the separate heating systems, and the fuel cost has been the same as for the separate buildings, plus whatever loss there was due to transmission between the buildings.

It has come to be pretty generally admitted that conventional central station heating, as by hot water or steam, cannot be done at any less cost to the individual building served than the cost of operating the individual plants. Factors such as space saving, convenience, continuous service and cleanliness, rather than cost, have come to be the selling features of district heating.

The investment costs of conventional group heating are large, and maintenance and transmission charges are high, since it is hard to keep hot pipes, with their high rates of expansion, properly protected and insulated when buried underground. There has been recently a readjustment of rates for the central heating service, even when by-product steam was used, and the necessity of such readjustment is proved by the number of plants which have failed financially, or which have been abandoned. The service is so desirable, however, and anyone who has had it so dislikes to give it up that the service company can obtain prices considerably higher than the cost of individual operation.

We are familiar with the general practice for group heating. Forced hot water, or steam without return of condensation, are the two most popular systems. Most of the buildings served by district heating companies are old buildings which have their old boilers and chimneys, and which use the old piping and radiators to a great extent. The transmission pipes are usually very indifferently insulated and drained. For a few institutions pipe tunnels with good access and high grade insulation are provided. In too many cases the tunnels are merely small pipe ducts with an attendant very high transmission loss. In far too many cases, the pipes were merely covered with asbestos and buried in the ground, without even a drain, in the hope that water would stay out and heat would stay in.

At almost any group heating plant one can remember seeing, on a Winter's day, the underground services traced by the melted snow. Above some of them there are visible clouds of vapor rising, so great is the heat loss when water is permitted to reach the hot pipes. I have seen in a large and presumably modern institution the concrete hot pipe conduit serving for some 400 ft. of its length as a storm sewer, and running a stream during every storm

which would fill a 6-in. pipe. No wonder they thought they had to have a new boiler plant, because the old one was too small!

We cannot meter hot water heating service very satisfactorily. Since the individual owner pays a flat rate, he wastes heat, finding it easier to hoist a window than to turn off a radiator. With steam, the returning of condensation to the plant is difficult when there is any great distance to go, yet the wasting to the sewer of vast quantities of hot distilled water, as is now done, is extravagant and improper in the long run.

I have suggested that low grade gas might be manufactured for groups of buildings within the reasonable pipe size range, with local fires, automatically controlled, and am convinced that along this line we will find at least a lower investment and a saving in fuel.

Our thought, however, seems to have been given to the generation and transmission of the heat rather than to the buildings in which it was to be used and their ability to conserve it. We have scratched gravel to get more water to fill a leaky bucket, instead of plugging some of the leaks. Buildings as we build them are not very often considered especially from the heat-conserving standpoint. Too often four walls and a roof to keep out the rain are about all that is asked.

The possibilities for improvement are greater than one ordinarily imagines. For instance, I was recently asked by an owner what difference, if any, it would make in the heating plant for his proposed single story building if the roof were changed from a gypsum tile construction to a solid cement construction, inasmuch as by the change he would save some \$600. To my surprise, on very careful analysis we found that 1,300 sq. ft. of radiation would have to be added, making the cost say \$1,800 more than the original cost, and he would burn to supply this added radiation at least 45 tons of coal per season.

CEMENT ROOF

Cost of added radiation	\$1,800.00	
Less cost of this roof	600.00	
Total increased cost of building	\$1,200.00	
Annual interest and depreciation		\$120.00
Annual added fuel, 45 tons		450.00
Total added annual expense, cement roof		\$570.00

GYPSUM ROOF

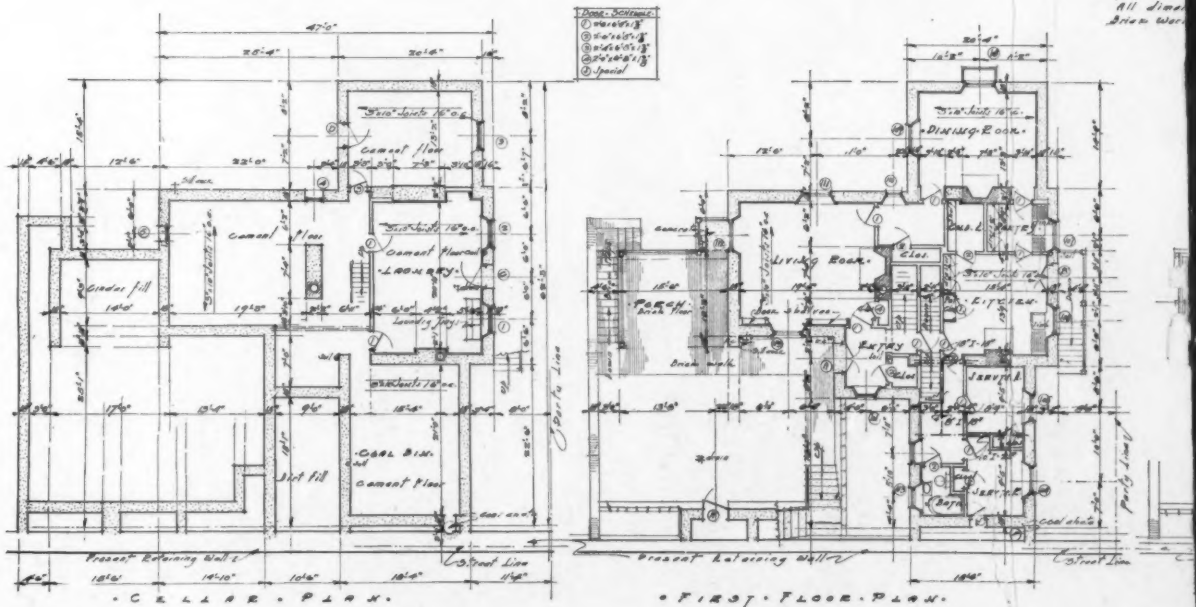
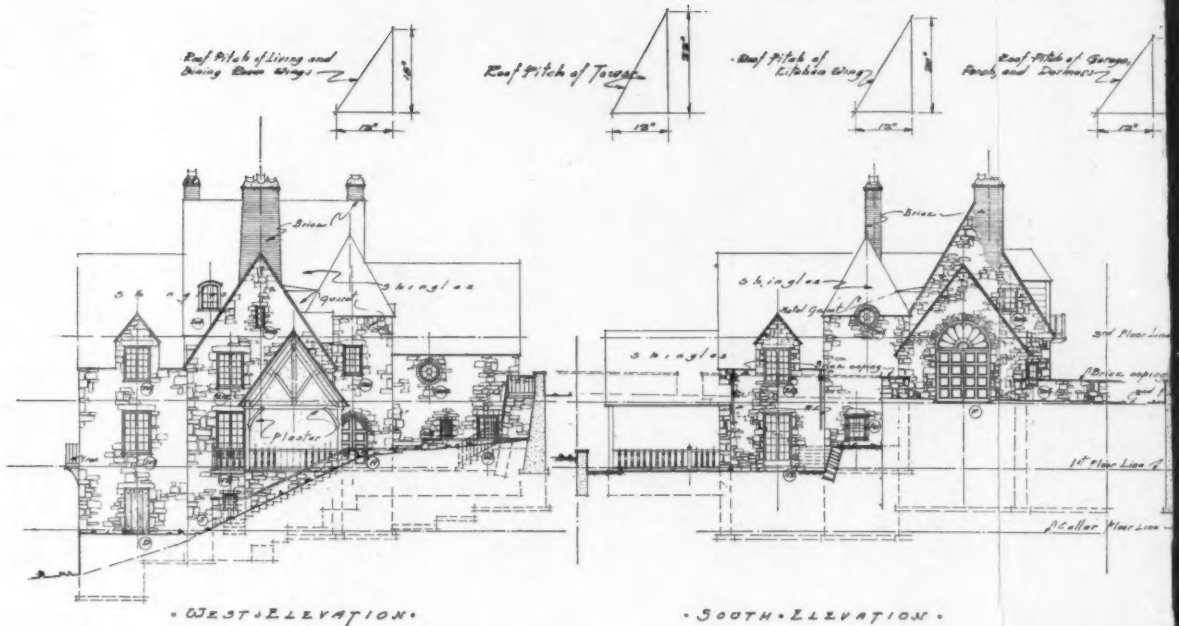
Extra cost of this roof	\$600.00	
Annual interest and depreciation		60.00
Annual saving for gypsum roof		\$510.00
Investment return 85 per cent		

I can cite many illustrations of similar purport. One of the first things a competent heating plant designer should do is to exert his influence toward the proper construction of the building.

All large cities carry a higher general average outside temperature than the country adjacent. The escaping heat from the walls, the heat from the tremendous power expenditures, to say nothing of that from the lights, and the waste products of combustion, all tend to raise the mean temperature of cities several degrees.

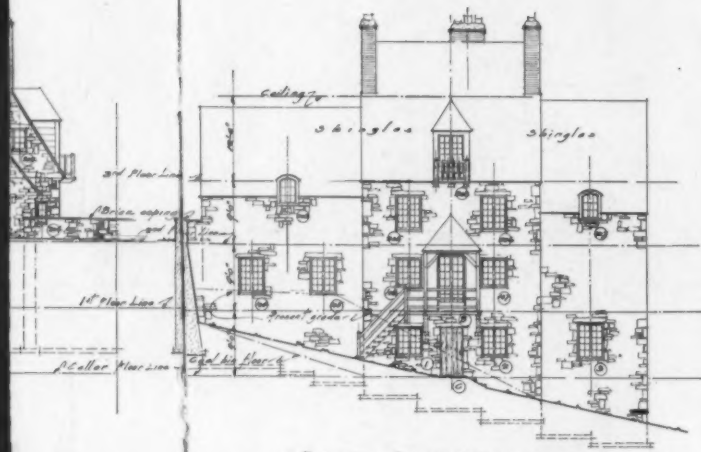
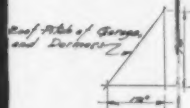
This example shows the importance of considering not only the initial cost of construction but the influence of the type of construction or material used on other elements of the building. Other costs are involved and possibly added annual expenses. It all goes to show that architects must consider their projects as a whole and use nothing without careful study as to its relation to other parts of the structure.

*Consulting Engineer, Chicago.

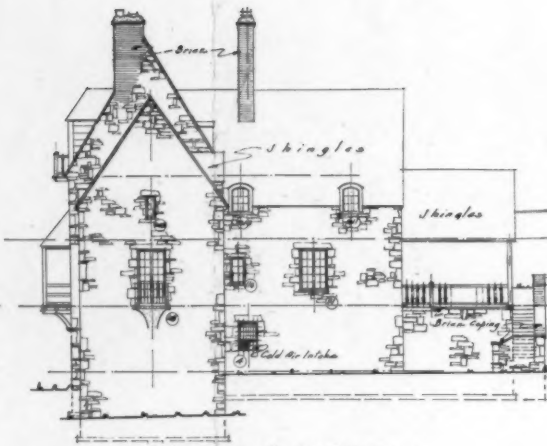


MATERIAL USED
 Stone Work
 Brick Work
 Hollow Tile
 Wood and plaster

HOUSE OF F. C. STILEMAN, CHESTNUT
 MELJOR, MEIGS & HOWE.



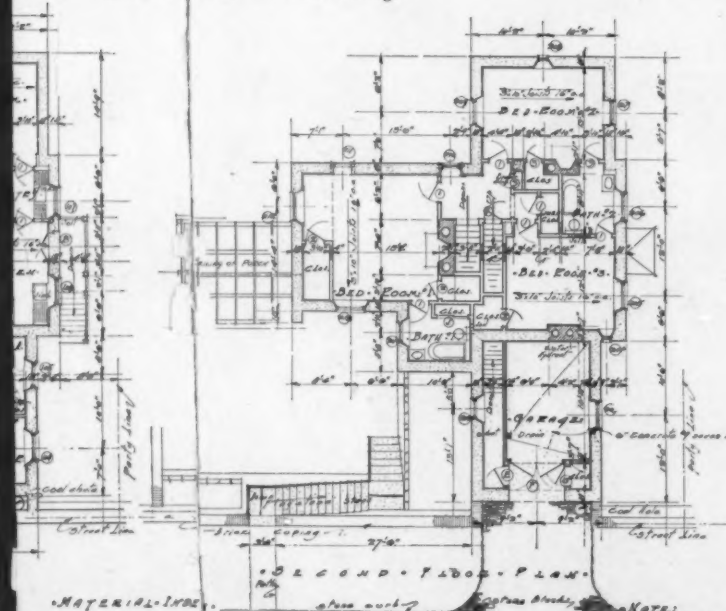
• EAST • ELEVATION •



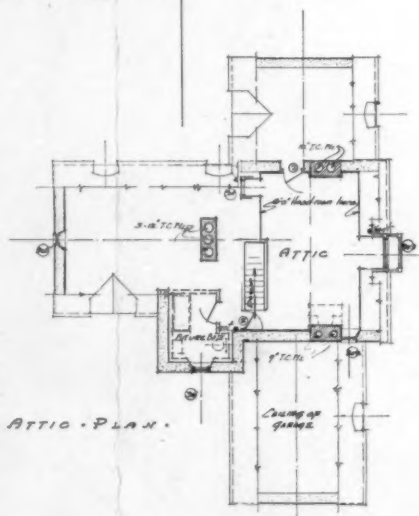
• NORTH • ELEVATION •

Notes:
All dimensions read to face of
brick work, stone work and studding

DATE	LIST OF CHANGES
2-14-22	Location of Windows 1st Floor
2-18-22	Location of Windows 2nd Floor
2-18-22	Location of Windows 3rd Floor
2-18-22	Location of Windows 4th Floor
2-18-22	Location of Windows 5th Floor
2-18-22	Location of Windows 6th Floor
2-18-22	Location of Windows 7th Floor
2-18-22	Location of Windows 8th Floor
2-18-22	Location of Windows 9th Floor
2-18-22	Location of Windows 10th Floor
2-18-22	Location of Windows 11th Floor
2-18-22	Location of Windows 12th Floor
2-18-22	Location of Windows 13th Floor
2-18-22	Location of Windows 14th Floor
2-18-22	Location of Windows 15th Floor
2-18-22	Location of Windows 16th Floor
2-18-22	Location of Windows 17th Floor
2-18-22	Location of Windows 18th Floor
2-18-22	Location of Windows 19th Floor
2-18-22	Location of Windows 20th Floor
2-18-22	Location of Windows 21st Floor
2-18-22	Location of Windows 22nd Floor
2-18-22	Location of Windows 23rd Floor
2-18-22	Location of Windows 24th Floor
2-18-22	Location of Windows 25th Floor
2-18-22	Location of Windows 26th Floor
2-18-22	Location of Windows 27th Floor
2-18-22	Location of Windows 28th Floor
2-18-22	Location of Windows 29th Floor
2-18-22	Location of Windows 30th Floor
2-18-22	Location of Windows 31st Floor
2-18-22	Location of Windows 32nd Floor
2-18-22	Location of Windows 33rd Floor
2-18-22	Location of Windows 34th Floor
2-18-22	Location of Windows 35th Floor
2-18-22	Location of Windows 36th Floor
2-18-22	Location of Windows 37th Floor
2-18-22	Location of Windows 38th Floor
2-18-22	Location of Windows 39th Floor
2-18-22	Location of Windows 40th Floor
2-18-22	Location of Windows 41st Floor
2-18-22	Location of Windows 42nd Floor
2-18-22	Location of Windows 43rd Floor
2-18-22	Location of Windows 44th Floor
2-18-22	Location of Windows 45th Floor
2-18-22	Location of Windows 46th Floor
2-18-22	Location of Windows 47th Floor
2-18-22	Location of Windows 48th Floor
2-18-22	Location of Windows 49th Floor
2-18-22	Location of Windows 50th Floor
2-18-22	Location of Windows 51st Floor
2-18-22	Location of Windows 52nd Floor
2-18-22	Location of Windows 53rd Floor
2-18-22	Location of Windows 54th Floor
2-18-22	Location of Windows 55th Floor
2-18-22	Location of Windows 56th Floor
2-18-22	Location of Windows 57th Floor
2-18-22	Location of Windows 58th Floor
2-18-22	Location of Windows 59th Floor
2-18-22	Location of Windows 60th Floor
2-18-22	Location of Windows 61st Floor
2-18-22	Location of Windows 62nd Floor
2-18-22	Location of Windows 63rd Floor
2-18-22	Location of Windows 64th Floor
2-18-22	Location of Windows 65th Floor
2-18-22	Location of Windows 66th Floor
2-18-22	Location of Windows 67th Floor
2-18-22	Location of Windows 68th Floor
2-18-22	Location of Windows 69th Floor
2-18-22	Location of Windows 70th Floor
2-18-22	Location of Windows 71st Floor
2-18-22	Location of Windows 72nd Floor
2-18-22	Location of Windows 73rd Floor
2-18-22	Location of Windows 74th Floor
2-18-22	Location of Windows 75th Floor
2-18-22	Location of Windows 76th Floor
2-18-22	Location of Windows 77th Floor
2-18-22	Location of Windows 78th Floor
2-18-22	Location of Windows 79th Floor
2-18-22	Location of Windows 80th Floor
2-18-22	Location of Windows 81st Floor
2-18-22	Location of Windows 82nd Floor
2-18-22	Location of Windows 83rd Floor
2-18-22	Location of Windows 84th Floor
2-18-22	Location of Windows 85th Floor
2-18-22	Location of Windows 86th Floor
2-18-22	Location of Windows 87th Floor
2-18-22	Location of Windows 88th Floor
2-18-22	Location of Windows 89th Floor
2-18-22	Location of Windows 90th Floor
2-18-22	Location of Windows 91st Floor
2-18-22	Location of Windows 92nd Floor
2-18-22	Location of Windows 93rd Floor
2-18-22	Location of Windows 94th Floor
2-18-22	Location of Windows 95th Floor
2-18-22	Location of Windows 96th Floor
2-18-22	Location of Windows 97th Floor
2-18-22	Location of Windows 98th Floor
2-18-22	Location of Windows 99th Floor
2-18-22	Location of Windows 100th Floor



• SECOND FLOOR PLAN •



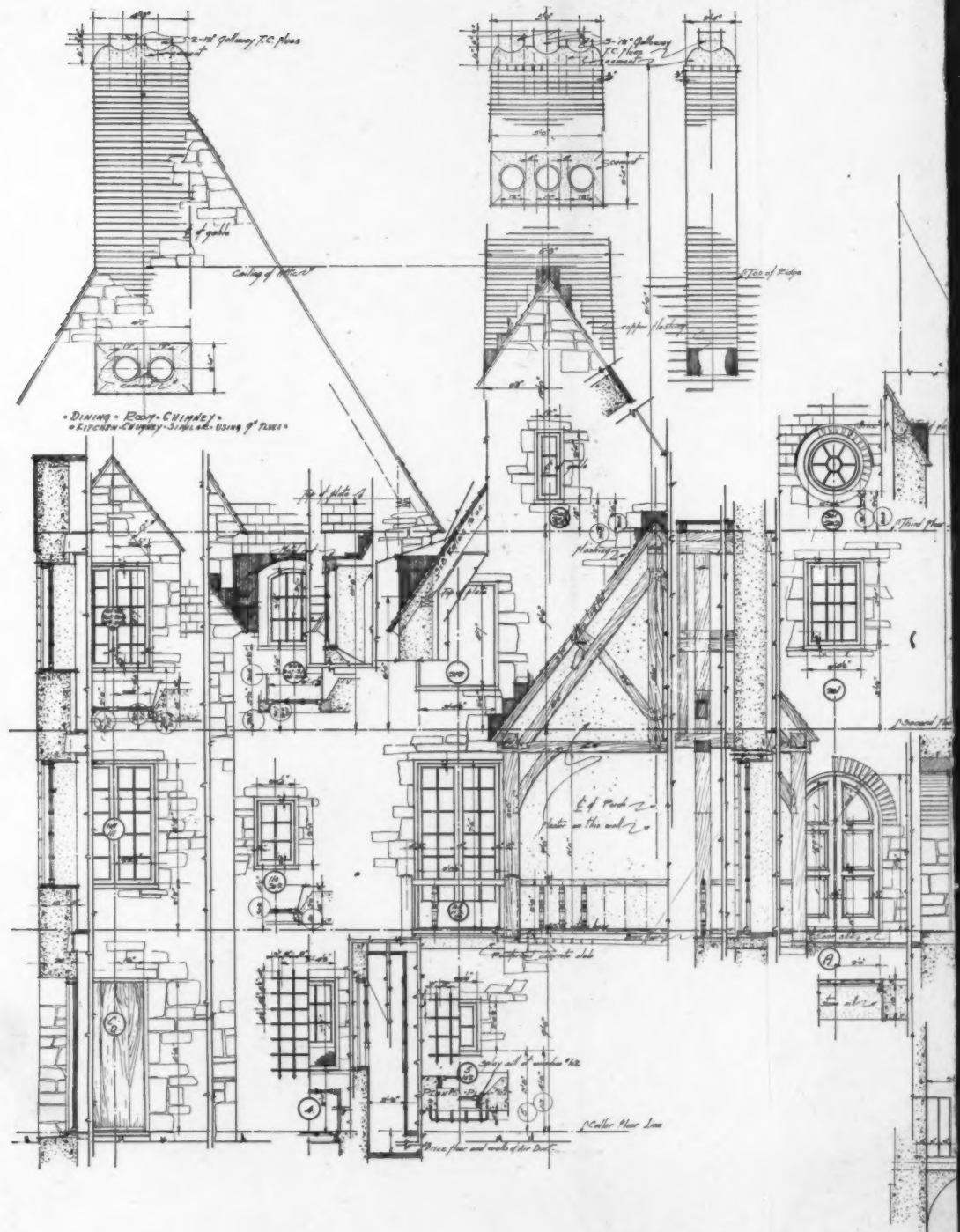
• ATTIC PLAN •

- MATERIALS:
- Stone Work
 - Brick Work
 - Yellow Pine
 - Wood and plaster

NOTE:
See drawing #134-1A for
heating layout, lighting layout and
steel work.

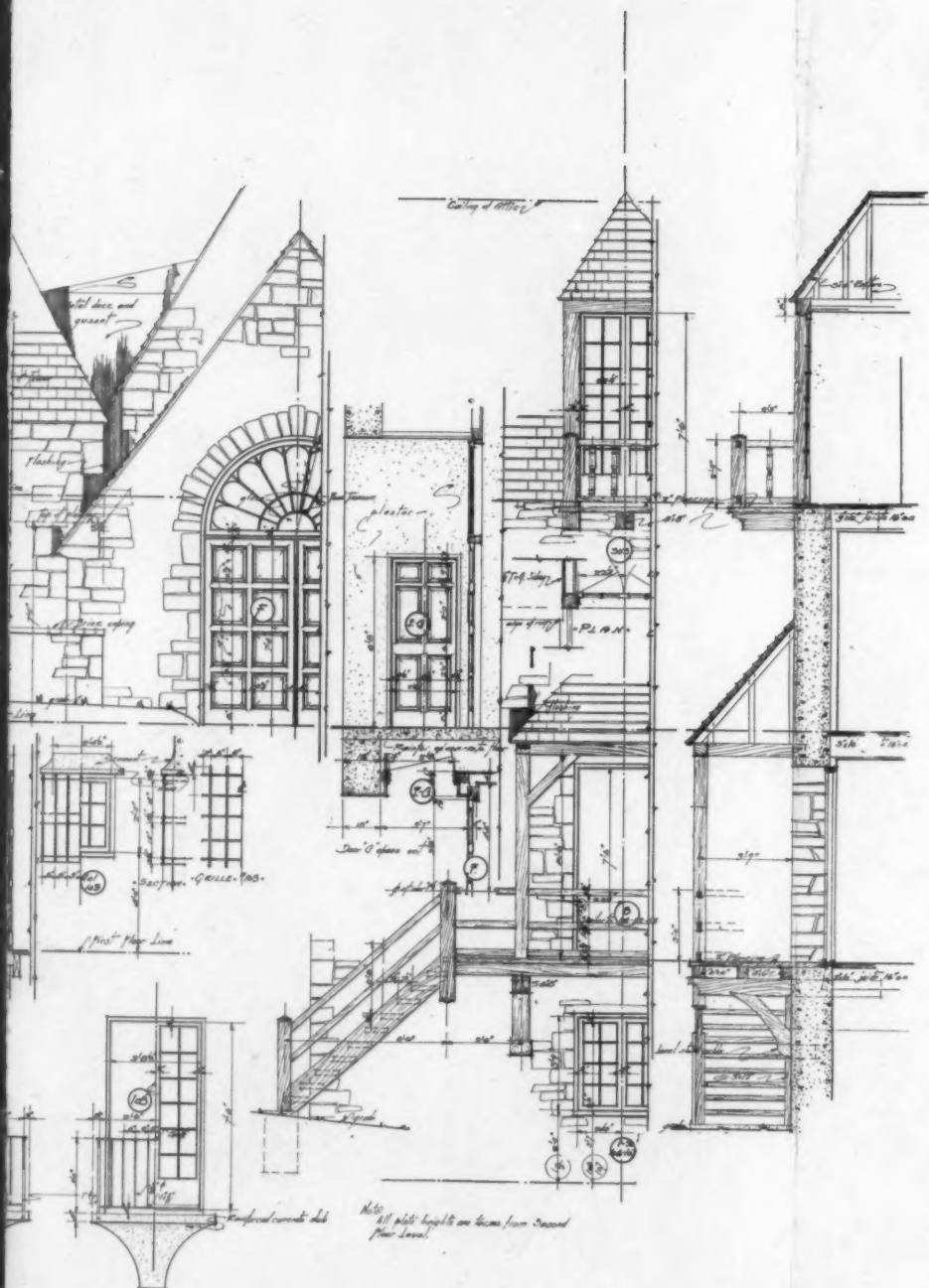
• SPECIAL NOTE •

KEMAN, CHESTNUT HILL, PHILADELPHIA, PA.
FOR MEIGS & HOWE ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT

MELLOR, MEIGS & HOWE, A



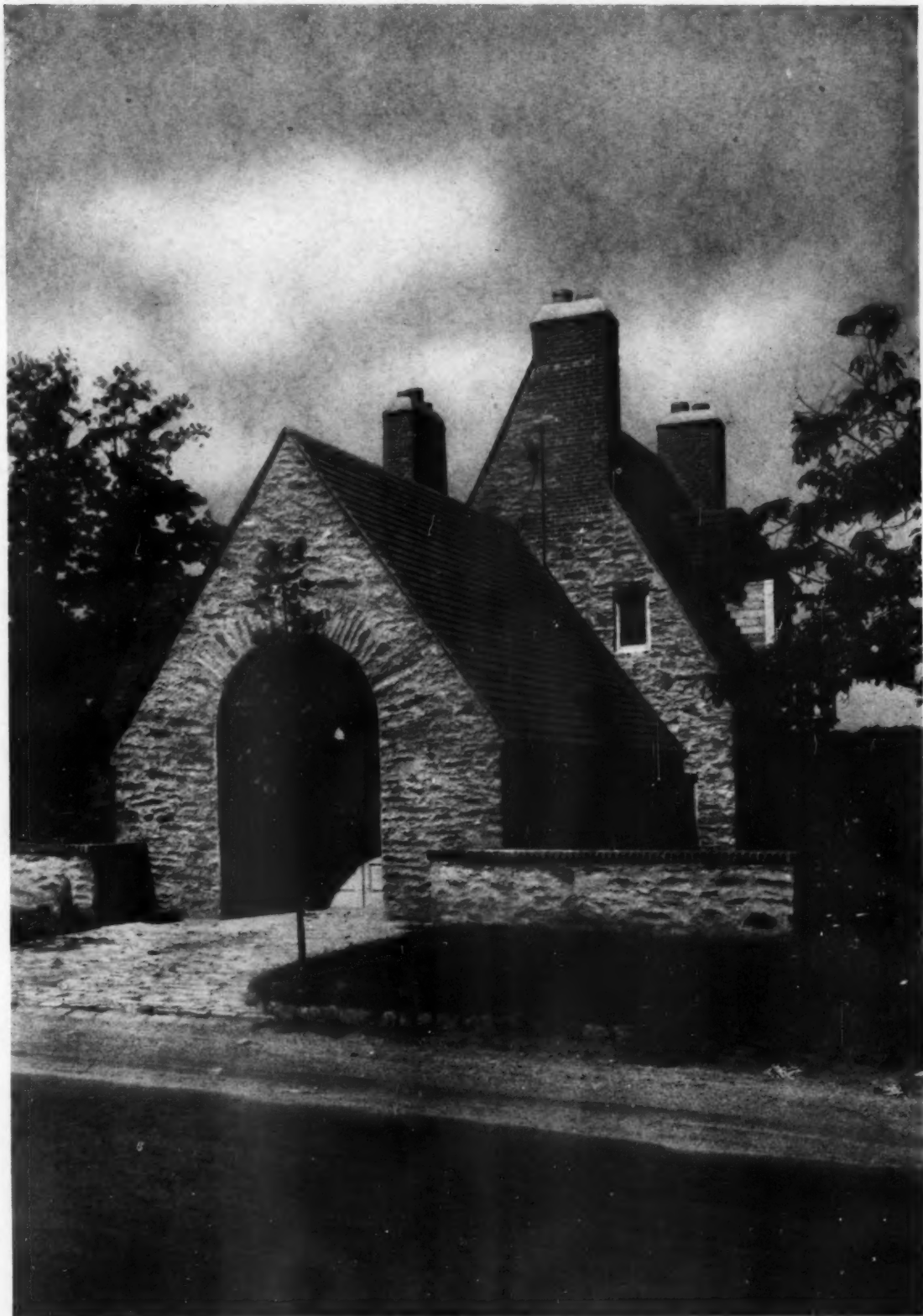
HILL, PHILADELPHIA, PA.

ARCHITECTS



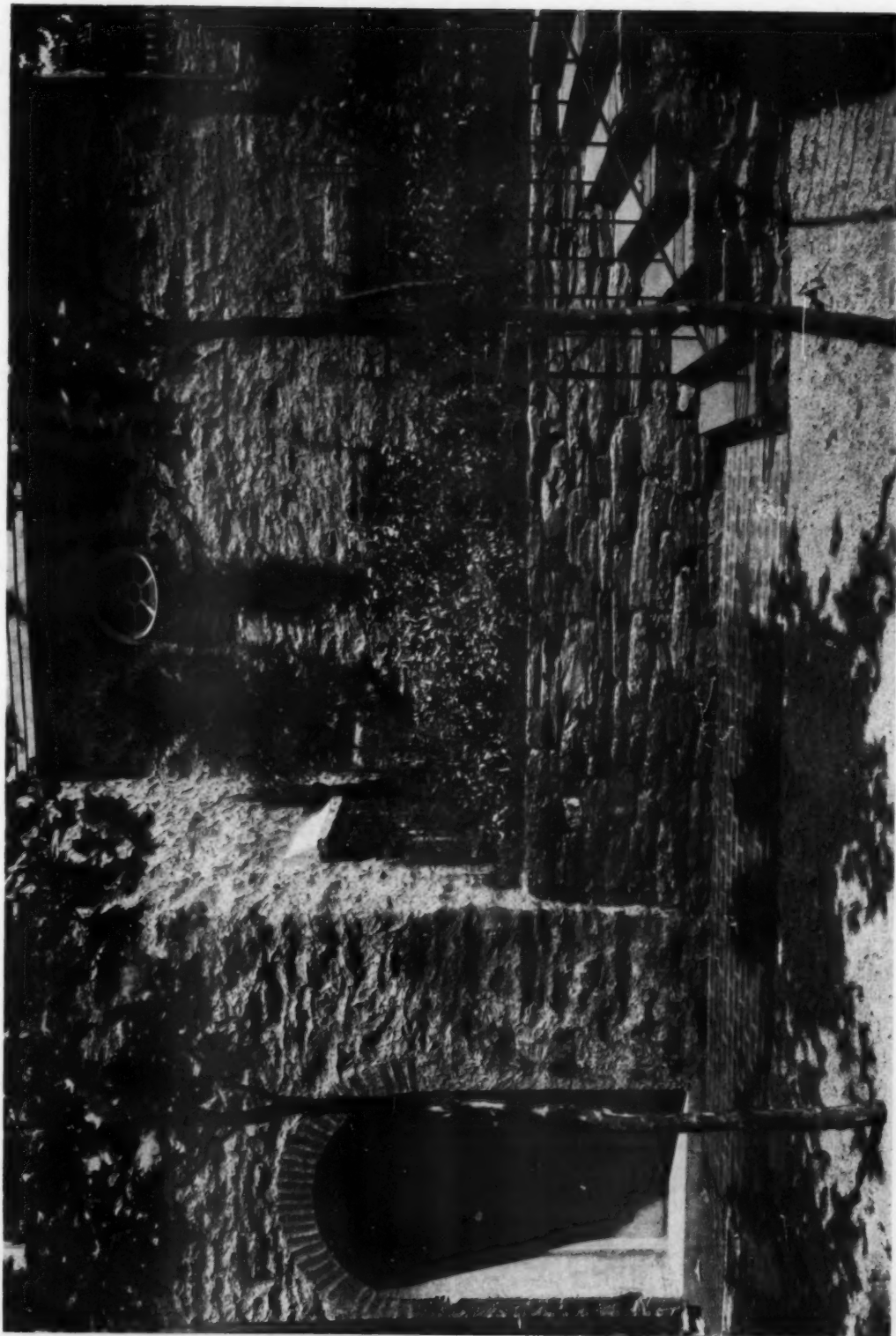
HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS

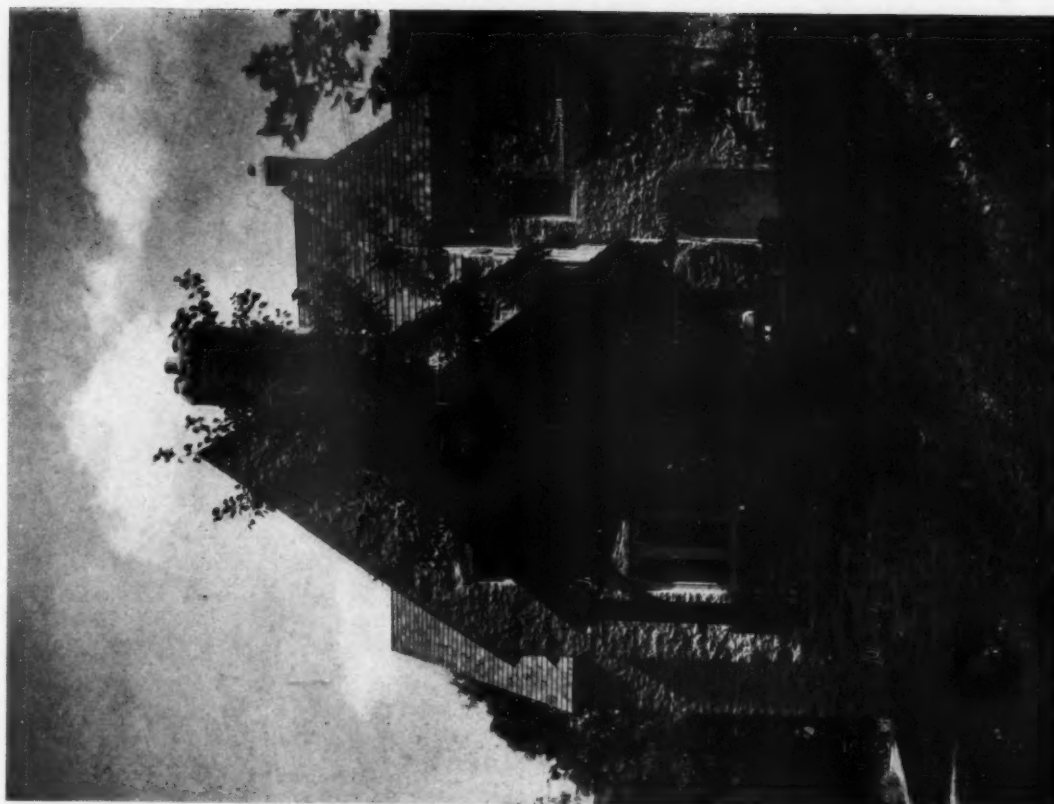
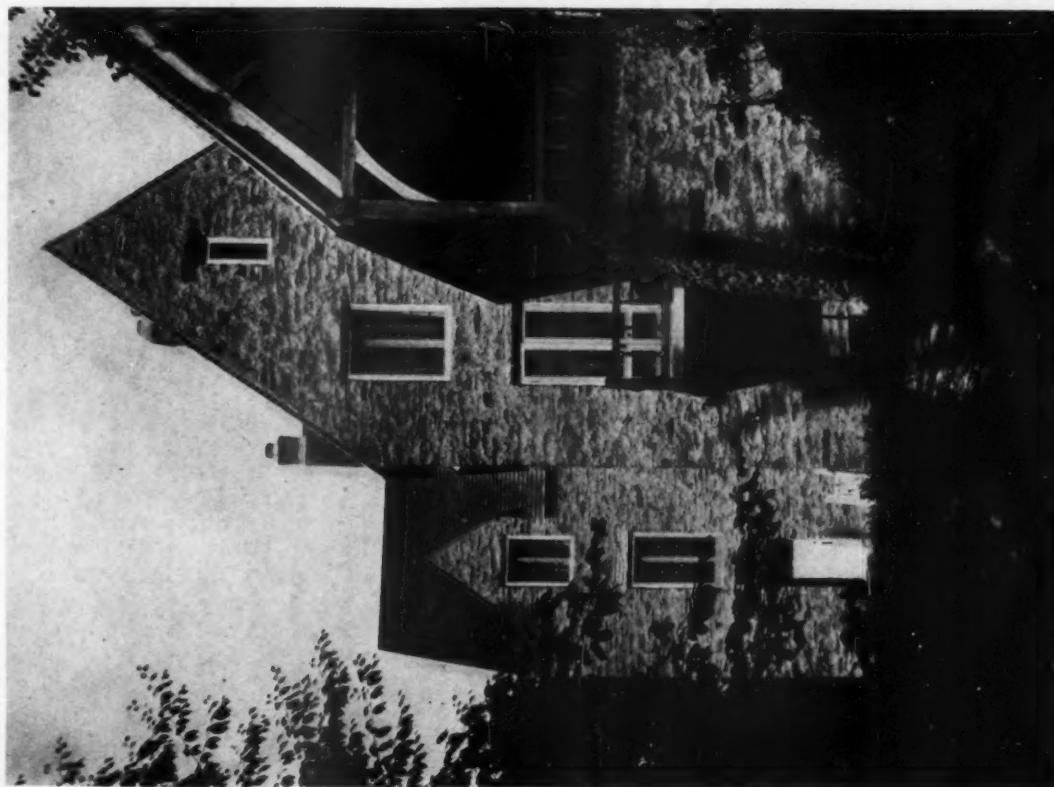


HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.
MELLOR, MEIGS & HOWE, ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS



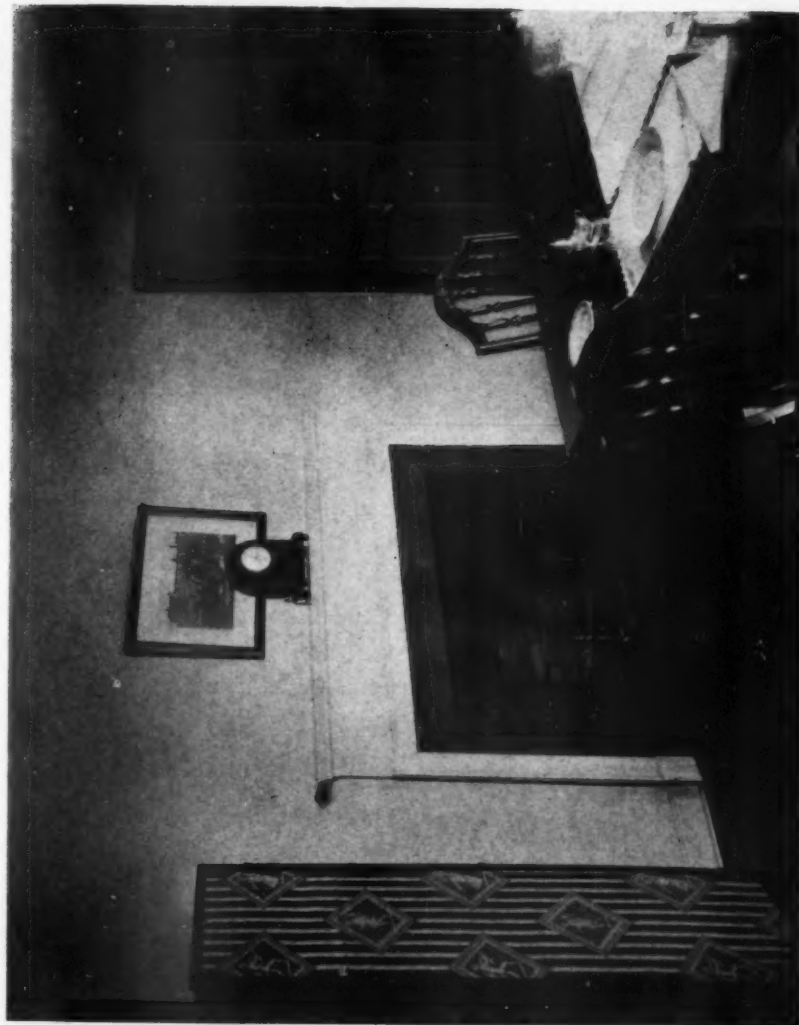
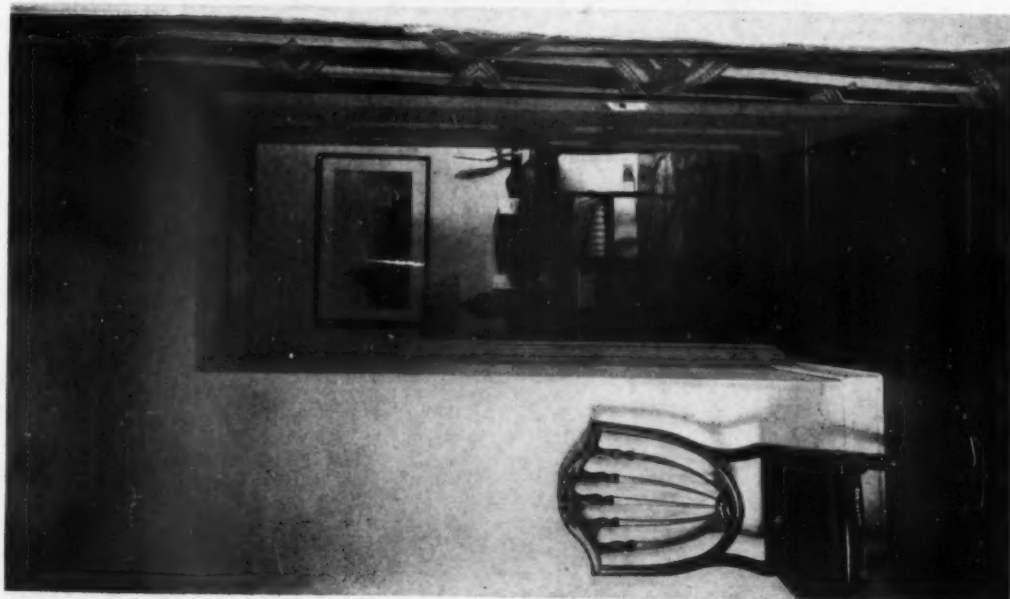
HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEIGS & HOWE, ARCHITECTS



HOUSE OF F. C. STIKEMAN, CHESTNUT HILL, PHILADELPHIA, PA.

MELLOR, MEICS & HOWE, ARCHITECTS

THE LAW *as to* ARCHITECTURE

FOR many months, we have considered together, in the Legal Department, the various legal phases of the architect's practice, and of the relationships existing between him and the client and contractor. It has been suggested that in this issue a word may be in order with respect to the development in general of the law applicable to architects and to the building operation.

In the earlier days of architecture, the practice of the profession was an infinitely less complicated proposition than it is today. The building problem was a simple one. The business elements which little by little have taken their places in the conduct of his work by the modern architect were largely absent. The complexities of modern industrial conditions were lacking. The problems, which now face the architect in a great city such as London or New York, had not yet arisen. The architect was free to give his attention to design and construction, with a very moderate regard for any other consideration.

In these days of towering structures, of steel and constantly changing methods of construction, of militant trade unions, of strikes and rush work, the picture is very different.

Years ago, however, many of the legal fundamentals were established in English and American law—such as the right of the architect to payment for the reasonable value of work done or, when the compensation was agreed upon, to the stipulated price. The courts established the fact that the architect owed to his client the usual obligation of a professional man—good faith and honest attention to his client's rights. They held that he could not have any interest in the work conflicting with the rights of his client. They pointed out that he was expected, as a professional man, to be skilled in his profession and to exercise reasonable care and diligence in his practice of it. They decreed that, as the agent of the client, he must not exceed the powers of agency granted to him. They outlined to some extent the limits of his duties in the matter of supervision and the rights in and to the plans as between him and the client and the contractor.

As time went on, the law was called upon to deal with new problems entering into the work of the architect and of the contractor. New developments and conditions entered into the work of planning and of construction. The needs of

A Review of the Development of the Law applicable to Architects and to Building Operations By Clinton H. Blake, Jr., of the New York Bar

modern country and city life, the development of new methods of building and of new building materials, and the tendency of people to flock to the great cities, brought with them new perplexities and new necessities.

The modern skyscraper and the modern apartment house

were developed to meet the needs of American life. The building and tenement house departments became of real importance in the building operation. The modern laws governing fire prevention came into being. The cost plus contract was developed. The labor market became uncertain and the cost of materials a matter of conjecture only. Labor demanded and was accorded shorter hours, the workmen's compensation acts, the enactment of lien legislation and the like. The corporation became a fixture in modern industrial life. In a hundred respects the practice of architecture became complicated and more exacting. The architect found himself compelled to recognize the changed conditions and to adjust himself and his organization to them.

The law developed and became more voluminous and exacting as all of the foregoing changes took place. The law of agency was applied to the increasing phases of his work in which the architect is called upon to act for the client. His judicial functions as arbitrator became established and recognized. A new body of law was built up with respect to his duties and liabilities in the issuance of certificates. The lien law was developed so as to cover not only the rights of the subcontractor and materialmen, but the rights of the architect as well. Practically all the states in the United States have recognized the necessity for lien legislation and many of them have generally recognized the soundness and fairness of the doctrine that the architect is just as much entitled to protection under the lien laws as is the contractor, subcontractor or materialman. The theory upon which a mechanics' lien is based is that the person performing the services or providing the materials has enhanced the value of the real property. Certainly the architect who is responsible for the plans for the building erected upon the property and who supervises the work of construction, definitely and directly adds his share to the improvement of the land.

The lien laws, being purely statutory and not founded on the common law, differ in various states and countries. In some, the protection is much

broader than in others. One state will grant a lien to the architect only in the event that he has supervised the work. Another will grant it to him without any supervision being shown. The latter position seems to me to be the logical and fair one. If the architect has prepared the plans and specifications used in the work, he has certainly qualified as one who has performed services for the improvement of the real property. He should, as such, be entitled to lien protection, whether or not he has added supervision to his other services. Another example of the development of the law as it pertains to the profession is the movement for the registration of architects. Beginning in earnest very recently this movement has gained momentum with increasing rapidity until now laws providing for and regulating the registration of architects are in force in many of the states. Gradually the court interpretations of these laws will build up a body of decisions with respect to them, exactly as has been the case with lien and similar legislation.

Aside from statutes so drafted as specifically to include and apply to architects, the members of the profession and the owner and the contractor are subject to and governed, among others, by the general laws of contract, agency and negligence. The contracts between them are subject to the usual rules of legal construction and interpretation. The extent of compensation due is measured, in the absence of contract, by the common law rule of reasonable value.

So throughout the practice of his profession, the architect, whether knowingly or not, is protected by and subject to the operation of the laws applicable to the character of work which he undertakes and the services which he performs.

Probably the most recent laws, especially drawn in connection with and made applicable to the architectural profession, are those relating to the registration of architects. This movement, which has really started only within the last few years, has gained surprising momentum, and it will not be long, I believe, before the state which has no

architects' registration law will be conspicuous as an exception to the general rule. The provisions for registration vary naturally in the different states, and a reading of the statute in each state is necessary to determine to just what extent the legislature has covered the subject and the effect of the statute which it has adopted. The underlying principle in all of them is substantially the same, however, and the purpose aimed at is in the interests both of the public and of the profession. The public is protected from practice by incompetent architects or those not entitled to the title of architect, and the profession itself is strengthened in the elimination of many who could not properly and ethically claim membership in it, but who have nevertheless posed as architects and undertaken to act as such.

Another development of help, both to the profession and to the public, is the increasing tendency among architects, and especially among architectural societies, to keep in touch with current legislation. A committee, which intelligently keeps in touch with legislation suggested and adopted, and applying to the profession and reports with findings and recommendations to the local chapter, can be of tremendous help. Many laws are suggested which are dangerous and unsound. Others are suggested which are based on public interest and the highest standards of the architectural profession. It is certainly to the interest of the architect to see that sound and contributive legislation affecting his profession is encouraged and supported, and that unsound legislation is detected and its adoption prevented. Architects, as a body, can do much in the way of educating public opinion, not only in matters of art and the problems involved in the building operation, but in matters involving legislation as well. A strong live architectural society, taking an interest in all current legislation affecting housing conditions and the profession generally, will not only be of benefit to the profession, but will be a real asset to the community in which its activities are carried on.

ENTABLATURE IN THE BASILICA OF CONSTANTINE IN ROME

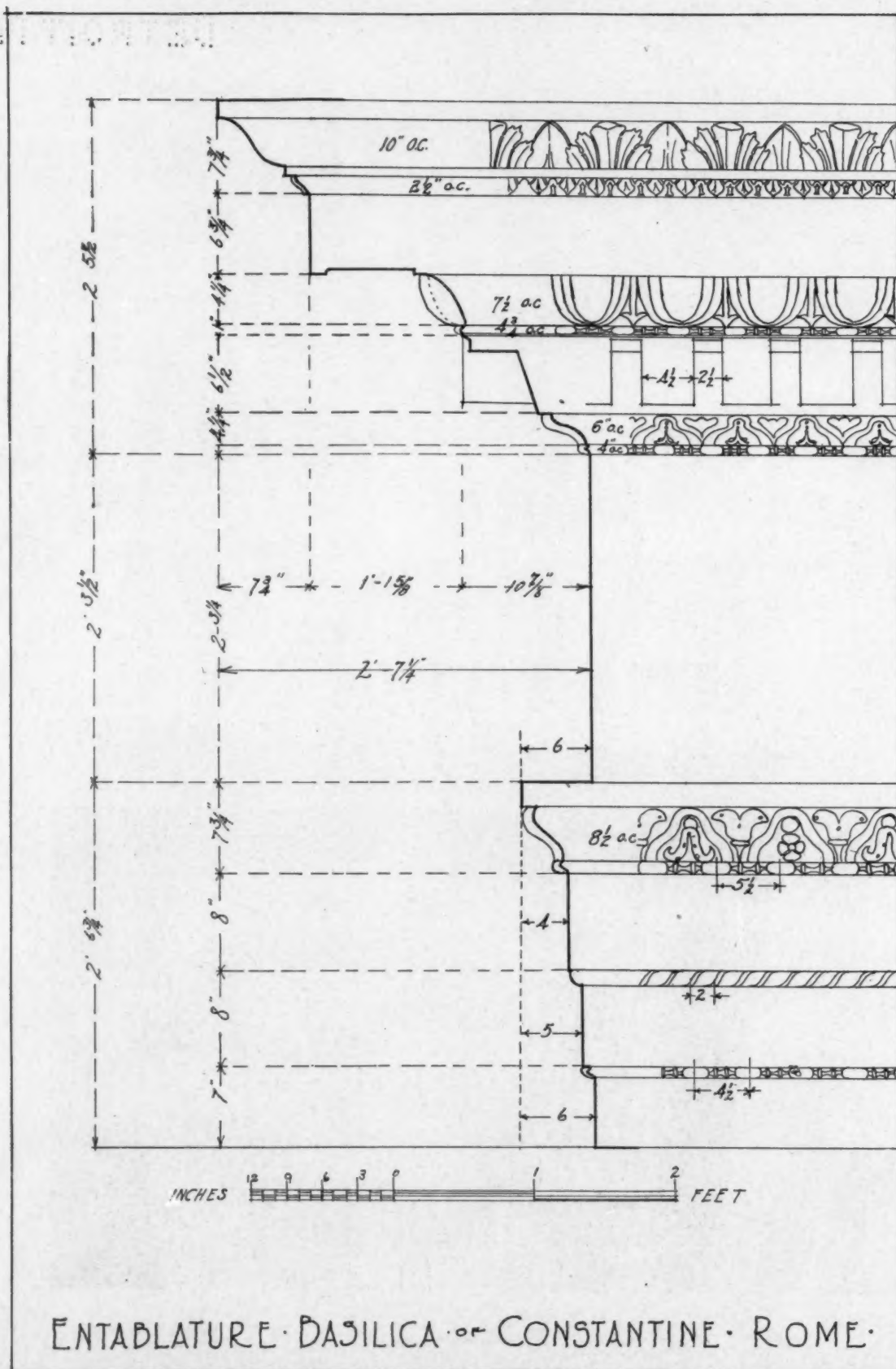
MEASURED AND DRAWN BY ROBERT M. BLACKALL, ARCHITECT

AT the upper end of the Forum in Rome not far from the Arch of Titus, is located the Basilica of Constantine. It was erected in the first part of the fourth century, by Maxentius, and afterward altered by his conqueror, Constantine, whose name it bears. All that is left of the three colossal arches is a small portion of the entablature which is shown in the accompanying drawing and photograph.

The entrance to the Basilica originally faced the Coliseum, but afterward the Sacra Via. It was a basilica of three halls with a vaulting of vast span, which has served as a model for later architects. It is claimed to have been used in the Basilica of St. Peter, where the nave vaulting is of the same width. In ground plan the Basilica of Constantine is rectangular in form, over 100 yards long and 87 yards wide. The principal apse opposite the entrance from the Coliseum is only partly preserved. When the second opening was made on the side next to the Palatine, the second apse was added. In front of the central pillars of the Basilica stood eight Corinthian columns of white marble, only one of which exists and now stands in front of the church of Santa Maria Maggiore.

NUMBER I, SERIES III
FRENCH AND ITALIAN DETAILS





MEASURED AND DRAWN BY ROBERT M. BLACKALL, ARCHITECT

NUMBER I, SERIES III
FRENCH AND ITALIAN DETAILS



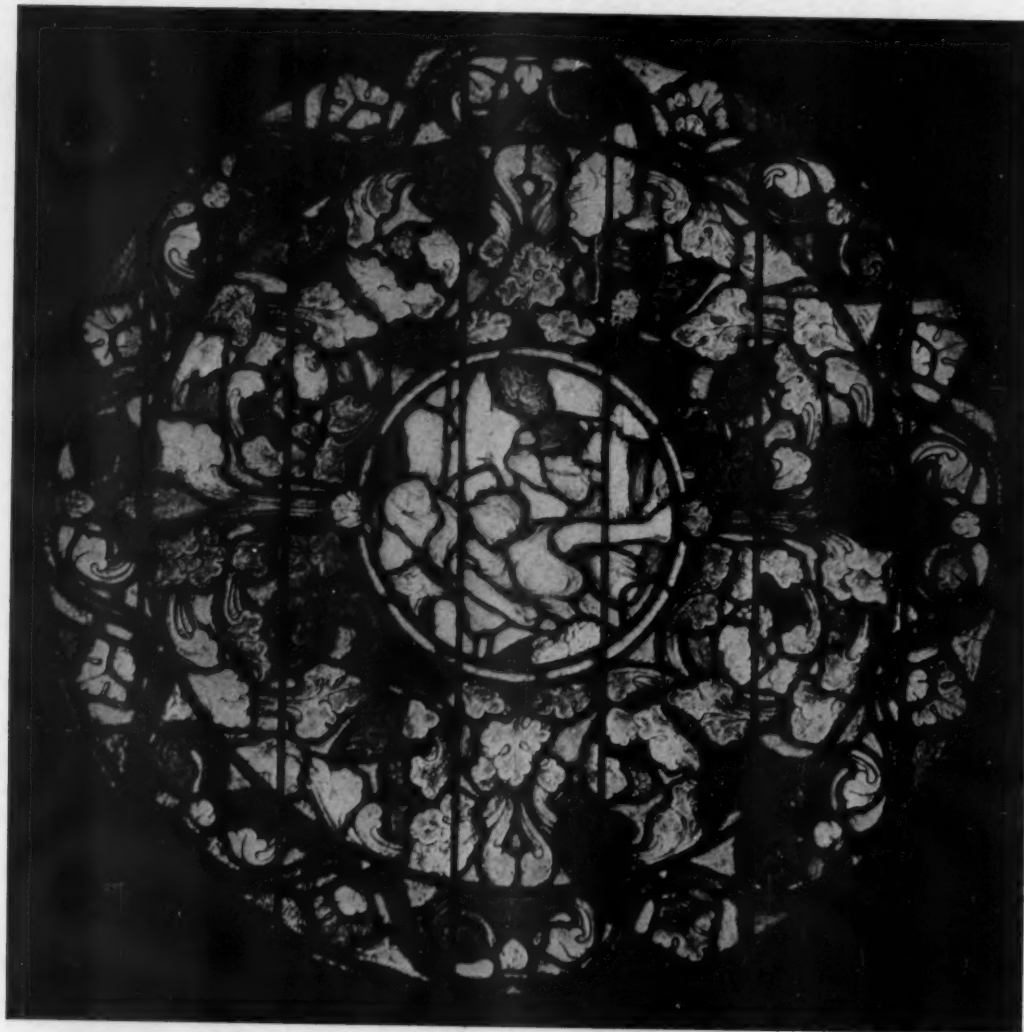
CHAPEL



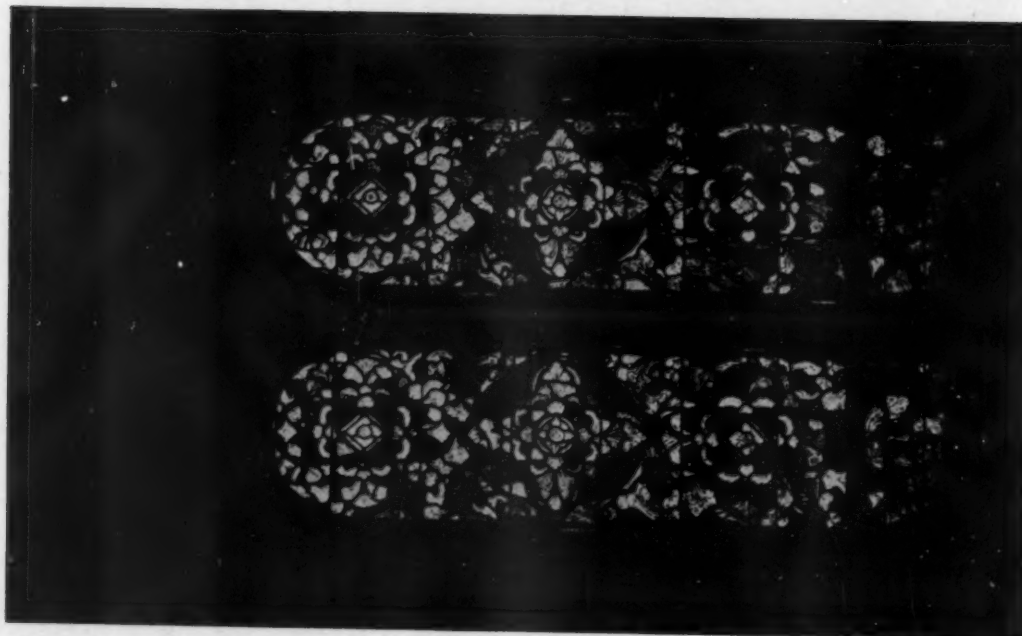
COMMUNITY ROOM

CHURCH OF ALL NATIONS, NEW YORK

JULIUS GREGORY, ARCHITECT



THE ROSE WINDOW
WINDOWS OF PAINTED GLASS IN THE CHURCH OF ALL NATIONS, NEW YORK
DESIGNED AND PAINTED BY GEORGE PEARSE ENNIS
JULIUS GREGORY, ARCHITECT



TWO OF A SET OF WINDOWS

A QUESTION of ETHICS

A Communication from C. H. Blackall, F. A. I. A.

EDITOR, THE AMERICAN ARCHITECT,

SIR:

THE one factor which has had more to do than any other in the development of the fine art of architectural practice in this country, is the architectural press. No more unselfish, devoted, painstaking work was ever expended in raising the standard of any calling than has been displayed by the editors and publishers, who, starting with the initial publication of THE AMERICAN ARCHITECT in the 70's, have been continually striving to uphold the best traditions of our profession and to call out and emphasize the presentation of the best work which our architects have produced. The standards have always been high and it is therefore a source of regret that a new tendency seems to be sweeping into the architectural journalistic field which does not promise well for the future attitude of those to whom we like to look for our ideals. We expect high things from those who are our leaders. We look for altruistic motives and for a degree of self sacrifice which is an inevitable part of the lot of every leader. At the same time we should be glad to feel that such labors and such sacrifice were rewarded not merely by the applause and co-operation of the readers, but also by substantial financial returns which would enable the magazines to continue their good work and extend their influence; but when the monetary returns approach a point where they are of more importance than the ethical attitude, or where the desire to extend the business of an architectural journal is carried to the extent of making the business end the ruler, we are then in a fair way to lose our leaders and see our ideals smothered under mere commercialism. This is not a theory; it is a condition; and it is beginning to show itself by the excessive amount of advertising which some of our architectural journals admit to their pages, an amount so out of proportion to the reading or illustrated matter that the architectural journals cease to be purely such and become an imposition on the readers who are asked to lend their countenance and support to the exploiting of the advertiser who will pay the highest price.

This is not a new condition, but the extent to which it has developed in a very few years does not bode well for the profession. Not many years ago some of the architectural societies, in their endeavor to make both ends meet and to present interesting architectural exhibitions, conceived the idea of helping out the expenses by admitting advertisements to their illustrated catalogs. It was

a species of polite blackmail which was practised quite successfully on builders and supplymen who drew their trade from the good-will of the architects, but though it was theoretically false in principle, it was never carried to the extent of dominating the idea of an architectural catalog. But now we find advertisements creeping into even the editorial pages, a thing which might be endured in a magazine like the *Ladies' Home Journal*, or the *Saturday Evening Post*, but which in a professional journal when carried to the extent of alternating dignified illustrations with advertisements is so utterly vulgar and so lacking in the simplest elements of good taste and professional ethics that it arouses the feeling of wondering what might not come next. When a magazine in one issue will print fifty or sixty pages of illustrations and text and several hundred pages of advertisements, it cannot be reasonably denied that the publishers are exploiting the good-will of their readers and are forcing this advertising matter on their notice, against their wishes and to an extent which makes the paper no longer a professional journal but an advertising medium. It is time that this practice should be stopped if the architectural journals are to continue to exercise the influence they have had in the past. It is not right that commercialism should be carried to the extent of stifling the professional spirit, and while we wish the publishers every possible financial return, the extent to which the purely architectural matter can be smothered under advertisements is something which ought to be most carefully reconsidered by most of our journals today.

Furthermore many feel it is not right that the architects, who make the journal in a way by their contributions and by the illustration of their work, should have thrust under their notice any advertisements which are dishonest in their nature, which misrepresent facts and material, or which are foreign to the purpose of the magazine. It is not difficult to draw the line, if the primary purpose of the paper, that of an architectural mentor and guide, is always kept foremost in mind, and the advertisements censored so that it is an honor as well as a business advantage to be included in the pages, and if the insistence shall be that the architectural element must predominate.

It is perfectly possible and desirable to return to the spirit which animated the architectural journals in their earlier days and which we so sadly need in these busy, grasping days. We want leadership and encouragement. Unfortunately architects can give such leadership and encourage-

THE AMERICAN ARCHITECT—THE ARCHITECTURAL REVIEW

ment one to the other only very rarely. As a necessity the architect works by himself. We are obliged, therefore, to look to the architectural papers for ethical support and for artistic encouragement in our endeavor to keep architecture one of the fine arts, but if the present excessive, avaricious spirit of measuring success by the number

of pages of advertising is to continue, we might far better shut up our publishing offices altogether and refuse to have anything to do with the magazine which places business and advertising ahead of architecture.

C. H. BLACKALL

Boston, Mass.



THE DONIPHAN BRIGADE ON THE SANTA FE TRAIL
SECTION OF FRIEZE ON SOUTHERN FACADE, MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

A. STIRLING CALDER, SCULPTOR—TRACY & SWARTWOUT, ARCHITECTS



SYMBOLIZING THE LOUISIANA PURCHASE EXPOSITION, 1904

SECTION OF FRIEZE ON SOUTHERN FACADE, MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

A. STIRLING CALDER, SCULPTOR—TRACY & SWARTWOUT, ARCHITECTS



HERNANDO DE SOTO



READING THE PROCLAMATION OF THE ADMISSION OF THE TERRITORY OF MISSOURI
TO THE UNITED STATES

SECTIONS OF FRIEZE ON SOUTHERN FACADE, MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

A. STIRLING CALDER, SCULPTOR—TRACY & SWARTWOUT, ARCHITECTS

INTERIOR ARCHITECTURE

The FIELD of INTERIOR DESIGN in the UNITED STATES

A Review of Two Decades, Some Comments on the Present and a Look into the Future



It is remarkable how an architectural design, which presumably is based on such stable principles as good taste and proportion, can so soon become out of date and lose in general regard many of its elements of refinement. Many of us can look back twenty to twenty-five years and recall the atrocities of architectural design executed in those times. As we, a nation, grow older, we become more and more educated in the necessity of eliminating the non-essentials and learn better to discriminate between the good and the bad. Our ability to refine those things that are commonplace, which is, after all, art itself, is further increased as the years go by. Here is reproduced a photograph of a living room which was published in *THE AMERICAN ARCHITECT* in 1906, designed by an architect of New York, well known then and now, who would no doubt be the first adversely to criticise his own design and point out its faults. This change in our ideas of good taste undoubtedly signifies that there has been developed a new and finer standard of appreciation of things artistic. Further, it shows that in the development of a distinctive American style of decoration we still have a long road to travel. It proves also the steadfastness of period designs.

Unfortunately, many people, both architects and clients, dislike the word "period." To one it means something too stereotyped for originality, while to the other it represents that which is beyond their means. Period designs, as now used, mean rather accepted standards of good taste, and serve as models for the architectural treatment of modern work. No room or interior, no matter how simple or how elaborate, is beyond the scope of good taste. An original period design acts only as an inspiration or a model for our pres-

ent so-called "period" rooms, and must be adapted to modern proportions and working and structural conditions. Such adaptation of these standard designs is not stereotyped as often supposed, but requires much skillful originality and is the basis of all good design.

Twenty years ago The room of twenty years ago, as illustrated, represents an adaptation of the Louis XVI period to American conditions of the twentieth century. The high ceiling prohibited the correct proportion to the wall panels, and, to retain the proportion and scale of the period,—the main features of all period design,—the wall space between the top of the fixed wall panels and the cornice was treated as a frieze, with relief ornament designed

in garlands and cartouches suggestive of the period. While the effect cannot be praised nor be considered true Louis XVI design, it was both practical and original and no doubt far better than ruining the scale by ill proportioned panels. The result of such cases as this was the lowering of ceilings generally and at once a chance for more accurate feeling. Twenty years ago, in a room like this, measuring, say, 15' x 25', the ceiling was anywhere from 12 to 15 feet, while today it is

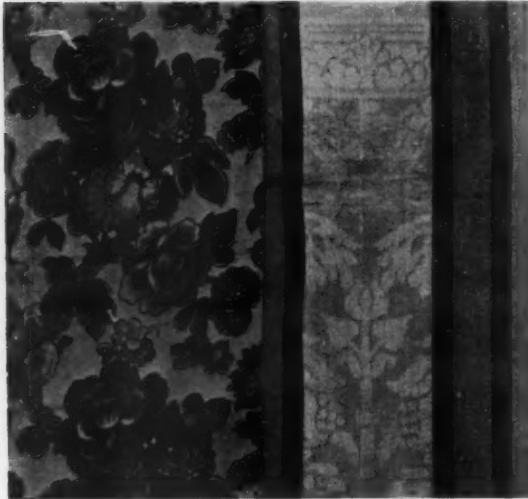


Reproduced from *THE AMERICAN ARCHITECT* of twenty years ago. The French periods were evidently in vogue then. By eliminating the ornamental frieze and lowering the ceiling, the room would, no doubt, be very attractive. That same ornamental frieze was the result of American adaptation of the Louis XVI proportions

rare that a ceiling in the same size room is over 10 feet. Here is immediately an illustration of elimination of non-essentials in structural conditions. The proportion of the wall spaces is thus much more adaptable to good design. The architect, therefore, materially, though perhaps unconsciously, helped decorative art in this country by his knowledge of the periods and by his method of adaptation and interpretation.

Reproduction and Adaptation All designs come under one or the other of these two headings,—reproduction and adaptation. Reproduction of authentic period designs is the

only means of producing designs in true period detail. Accuracy in line, proportion, ornament and color are all necessary in reproduction. The other class, adaptation, includes all those designs inspired by some motive of period detail applied to modern use and methods of construction and finish. If the old adage that there is nothing



The chintz on the left is an adaptation of a Jacobean design in soft colorings. The drapery material on the right shows decided English influence of the Elizabethan period in design, applied to a two color striped fabric

new under the sun be true (and so far as good design is concerned, it seems to be), then this is our only means of creating original designs in good taste. Such a design is generally called a period design, while in reality it shows only period influence. In fact, it may have been influenced by more than one period. Here is originality of the highest caliber. The designers of the sixteenth and seventeenth centuries were given credit for originating the ball and claw foot, while actually they were only adapting the dragon and his pearl used by the Chinese years before. The Adam brothers gave the Louis XVI details a Classic accent and the result has been called by their name ever since. Our own Colonial is only a conglomeration of certain features of the English, French, Dutch and Spanish, and yet no one questions its originality or right to survive.

The American Style As regards interior architecture specifically, the word period is used in a somewhat ambiguous sense. A room to be in a period design must be accurate to that period in every detail. There was no place in Marie Antoinette's boudoir in the Petit Trianon for an Italian console or an Adam chair. Yet the Louis XVI room of the present, as we choose to call it, seems to be lacking in interest if there

is not a note of contemporary period design in its furnishings. It is, then, the combining of correct contemporary period designs which is the basis of the popular American style of the present time. In the design of the various features and details of the interior decorations and furnishings, where several standards of good taste are thus used as inspiration in the same scheme, the necessary element of harmony to be embodied in each adaptation opens a tremendous field for skillful originality. Historically, there are certain periods more appropriate to combine than others, because of their direct influence on each other. However, a clever designer, in adapting a motive to his purpose, need not be limited to this field in the choice of his inspiration.

The highest standard of good taste, as accepted today, is that founded on the fundamental principles of architectural design and composition. For instance, the panelled wall treatment, so popular nowadays in rooms of all types and sizes, might have its inspiration traced to several dif-



Wall papers of very different origin. The one on the left is a very accurate adaptation of an Italian Renaissance design of the sixteenth century, probably a brocade, while the one on the right is a sample of the bouquet type of French chintz, reproduced quite literally in bright colors. The Italian design is printed on paper in two tones of gray

ferent periods. Such panelling was common in Louis XVI's time; panelled walls were features of both the William and Mary and Queen Anne periods; the Georgian period is, too, characterized by wall panels, while they were frequently used in Colonial rooms. Each period, of course,

had certain characteristics which featured its own panels, as size and shape, detail of mouldings, arrangement and construction. But an arrangement of wall panels suggestive of the Queen Anne, of proportion and scale typified by Louis XVI, formed with wood mouldings, of the detail of William and Mary's time, applied to the plaster walls, a distinct feature of the Colonial period, may make a pleasing design, but absolutely not a period design, although its every detail were in-

revival of interest in the Colonial style, now very evident, is probably due to this same element of varied inspirations on which the style is grounded. So, after all, do not speak too harshly of the "periods" for they actually furnish you with much inspiration and many good ideas. Adapt these ideas to your own purposes and in your own original way and your endeavors will be highly commended and you will be furthering the cause of art in this country.



INTERIOR, HOUSE ON PARK AVENUE, NEW YORK, DELANO & ALDRICH, ARCHITECTS

A modern American living room, based on good taste, good lines and proportion. While all of the details may be directly inspired by some period, there has been no attempt made at producing a period room, but rather in the adaptation of several periods, a note of harmony has been established between each and all. The wall panelling in deal is reminiscent of William and Mary, the console and mirror are no doubt Adam, several of the chairs and the bench are Queen Anne and the mantel is Georgian. The ensemble, as worked out by the architects, is very pleasing, comfortable and livable.

spired by period motives. The rough plaster wall treatment, also popular and in good taste now, can be traced to the Italian school, but was extensively employed by the Spanish, the Flemish and the Tudor periods as well. Furnishings in any or even all of these periods of inspiration would be proper in such rooms, and this tremendous field of selection is, no doubt, the reason for much of their popularity and success. The

Development in Stock Designs

In the development of this new appreciation, the commercial value, too, of the art quality has been recognized throughout all industries. In manufacturing plants, artists have taken the place of draftsmen as designers and the result has been a decided change for the better in all materials offered in the market today. Reproduction of authentic period designs is here also the only means

of producing materials of true period detail. Would that this procedure were more generally used in the manufacture of stock goods! This does not in any sense embrace the "copy" of the antique as it so often appears with its worm holes and shattered surfaces. Even in reproduction, modern methods of manufacture are apt seriously to affect certain details, but effects similar to the original may still be preserved. These are produced by the eliminating of unnecessary details in design and ornament and expensive elements of construction, while adhering strictly to the original lines, proportion and structural features of the model. This process requires the best in mechanics and art to be worthy of respect, for otherwise the charm of the original will be lost. These effects, when interpreted properly, can be carried out at a much less cost than an accurate reproduction and put good designs within everybody's reach, in itself a worthy cause.

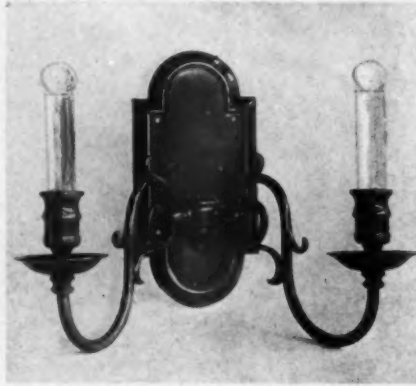
The expression, "similar effects," brings to mind the one blot on the market of the present time. The phrase is used by those same fakers who employ its famous contemporary, "get away

with it." The market is full of so-called "similar effects." An original authentic design, as, for instance, the Windsor chair, is shorn of most of its charm and of all its beauty of original hand made construction in the product frequently offered today under the same name. As an inspiration, it might be the cause of a well designed

modern chair, but, in the loss of its structural features, in effect as well as in fact, it is no more a Windsor chair. The title, a Windsor Chair, is the selling feature, and must be preserved. Consider the difficulties arising from selling by name in another branch. The painter's instructions called for walls of French gray. On completion, the time of the final tour of inspection, the architect found a color far from what he had expected. But the painter called in evidence, the paint can, boldly marked "French

Gray." Standards in name and quality should be maintained by all manufacturers.

Happily, however, there is to be found throughout the market generally and in much greater proportion, a decided trend toward better designs, inspired by all standards of good taste, adapted



REPRODUCTION OF OLD ENGLISH SCONCE
ADAPTED TO MODERN LIGHTING FACILITIES



MODERN FRENCH ART
COMPAGNIE DES ARTS FRANCAIS, ARCHITECTS

This style seems to be making itself felt in Paris just now, but it is a great question whether it will ever be adopted by world artists as a period. It has a suggestion of Empire, L'Art Nouveau and Oriental in its make-up, a rather unique combination. Can it be possible that in twenty-five years from now we will be studying these designs for inspiration?

to modern working conditions. This field, which includes so much in which all are so deeply interested, in that life itself is so closely related thereto, extends from the strictly structural product to that group of interior architectural materials which are found in every home. The manufacturer of upholstery and drapery fabrics offers an assortment of materials in true period designs and colorings to satisfy the most fastidious, pleasing adaptations to suit the simple modern home, and a line of plain goods of almost unlimited textures and tints. The lighting fixture houses carry in stock various designs in all the periods, accurate reproductions and clever adaptations. The furniture manufacturer has answered the demand for the art quality by including in his patterns reproductions of the best models obtainable, less expensive effects in good lines and proportion for those of moderate means, and original adaptations on a par with the high standard of good taste attained in this age.

Prophecies are seldom worth the paper they are

written on, but it is interesting to try to see **The** through the surrounding haze what the **Future** future has in store for us. Is our sense of artistic appreciation to continue to develop to such an extent that there will soon be a truly American period to add to the list? Probably not until the present working materials become extinct, or, in the process of evolution, the scale of the human being will change. For the next twenty-five years, it would be safe to predict that the refining of the commonplace will continue down to the most minute detail, and that simplicity, backed by our ever increasing sense of good line and proportion and our better judgment in the use of color, will be the accepted standard of good taste in this democracy of the United States.

Acknowledgment is made to the following firms for their cour-

tesy in supplying illustrative material: M. H. Birge & Sons Co., F. J. Emmerich Co., Glasner Bros., Kensington Mfg. Co., Orinoka Mills, Richter Furniture Co., Witcombe McGeachin & Co.



The manufacturer who carries in stock reproductions of authentic period models is co-operating with the architects. This is a stock table reproduced from an old Colonial model in mahogany



Group of stock furniture, showing accurate feeling of several of the English periods. The armchair is of Gothic origin of the early sixteenth century; the refectory table is of Elizabethan influence, and the oak settee and gateleg table are decidedly Jacobean. In their adaptation to modern working conditions, the proportions and structural features of the inspirational models have been carefully preserved

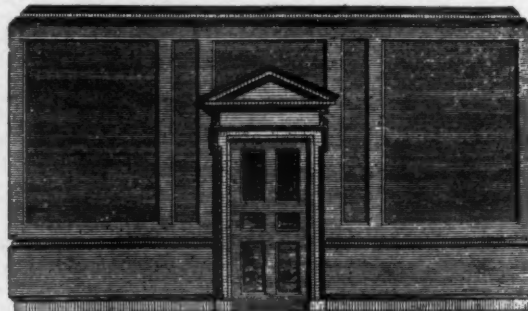
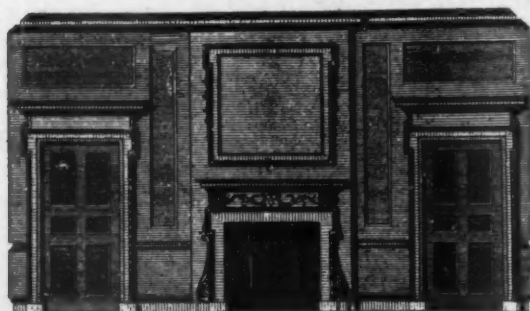
ENGLISH INTERIOR ARCHITECTURE in the XVIII CENTURY

IN the days of the eighteenth century, when England was rich in architects of distinction, with such men as James Gibb, Isaac Ware and Abraham Swan, the architect was much more than a designer of rare ability. He was a decorative craftsman as well. The owner of a house often called in his architect to set out the table decorations for a state dinner and on many occasions the architect is known to have designed even the patches worn by her ladyship at the feast.

A collection of designs for interior decorations, selected from the published work of Abraham Swan, has just been compiled by Arthur Stratton, and published in book form in England. The seventy odd plates which the book includes are

However, he seldom used much ornament, and, quoting him again, noting a riotous use of it, he says that "a multitude of ornaments stuck on, as we sometimes see, without meaning, breeds nothing but confusion, and the beauty of each individual is lost in the crowd."

In their main lines, Swan's decorative schemes rely principally on the division of the walls into three parts, the surbase, a panelled surface and an entablature or cornice. He points out the danger of disproportionate dados and cornices and calls attention to certain rules governing good proportion. For instance, when the entablature is large and the dado high, the room appears lower than it really is, whereas a light entablature and a dado



OPPOSITE SIDES OF AN EIGHTEENTH CENTURY ROOM. REPRODUCED TO SHOW THE ADAPTABILITY OF DESIGN OF AN EARLIER PERIOD TO PRESENT STYLE

(Reproduced from "Some XVIIIth Century Designs" by Abraham Swan)

rare specimens of eighteenth century designs. There are sixteen plates devoted to wall elevations of various rooms of the home, all drawn carefully and accurately to scale. Each represents a room which could be readily applied and adapted to the modern home. It is easy to understand, from a mere glance at the illustrations, that Swan was an experienced builder and woodworker and that his clientele was found amongst the journey-men builders who built homes and decorated houses for the middle classes, and not amongst those who desired their halls and salons to be adorned in elaborate schemes in which they might display their fine clothes. And herein lies their value to the architect today.

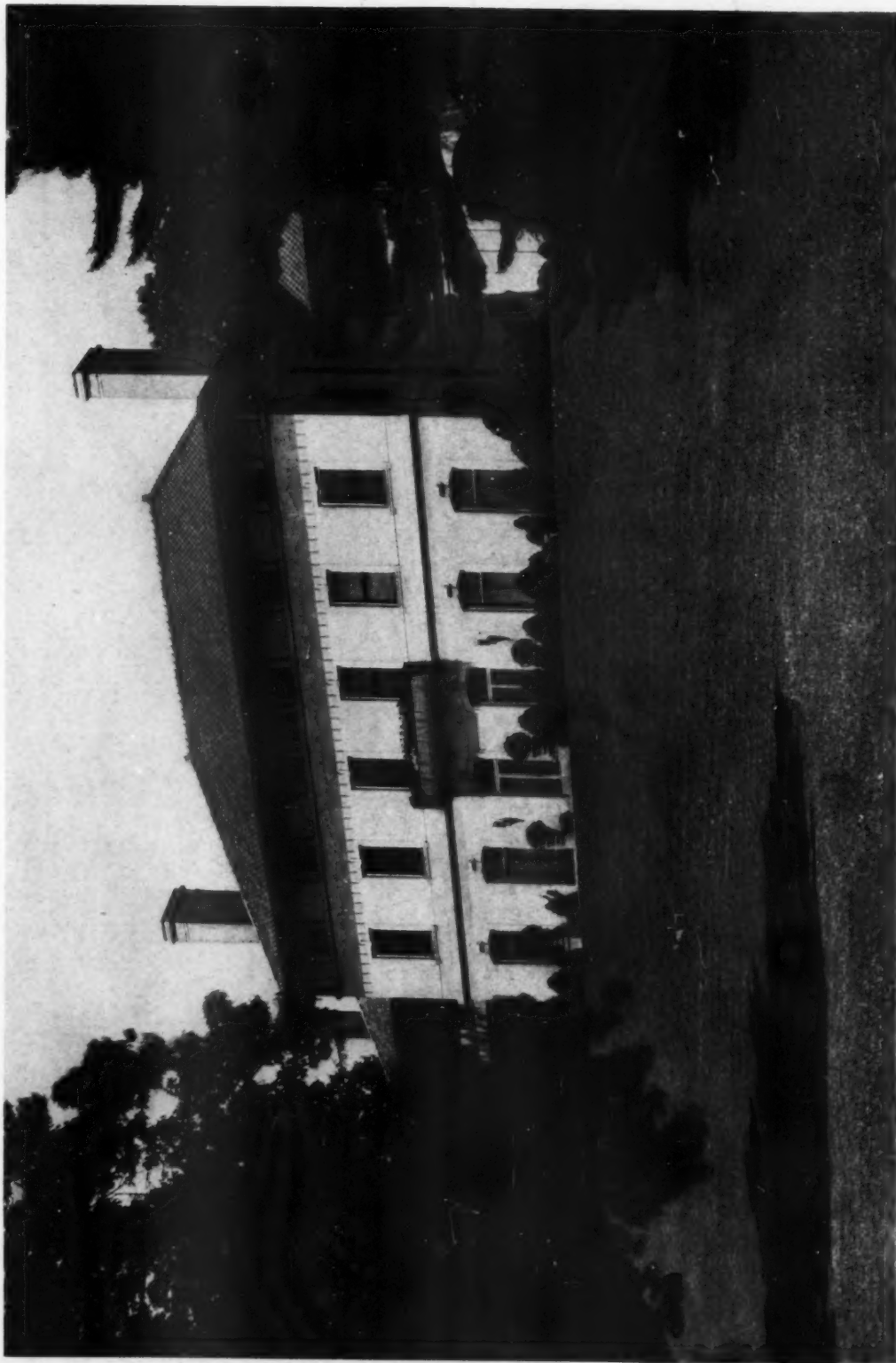
To show further that the designs were made even for purposes of adaptation, Swan in one of his own publications of an earlier day tells his readers that if they do not "exactly fit the size of your rooms, the dimensions may be enlarged or contracted, so as to suit your size."

A feature of his designs is the simplicity of detail, depending almost entirely on good proportion for results. Ornament, when included, shows a tendency toward French Baroque rather than the more restrained detail of the British school.

of moderate size give an effect of height. If a room is ten feet high, he advised two feet five inches for the dado and for every foot increase in the height of the room he advocated an additional three-quarters of an inch for the dado. He always seemed to give the cornice a height equal to one-eighteenth the height of the room. These are practical rules and their application can be studied in the series of plates on designs, together with the details of dados, cornices, and panel mouldings, which are shown in the next thirty-five pages.

The rendering of each drawing reproduced is worth careful study, the scale being very freely drawn but very accurate at the same time. The detail of the mouldings and ornamental members are in the highest type of architectural rendering. All drawings are to scale with full size measurements attached, allowing of easy adaptation. Some of the staircase details are actually works of art and on the whole the book is worthy of the highest praise.

Some XVIIIth Century Designs For Interior Decoration with details selected from the published works of Abraham Swan. By Arthur Stratton, Fellow of the Royal Institute of British Architects. London, John Tiranti & Company, 13 Maple Street.



HOUSE OF V. S. MULFORD, MONTCLAIR, N. J.
HISS & WEEKES, ARCHITECTS

2



LIVING ROOM

HOUSE OF V. S. MULFORD, MONTCLAIR, N. J.
HISS & WEEKES, ARCHITECTS

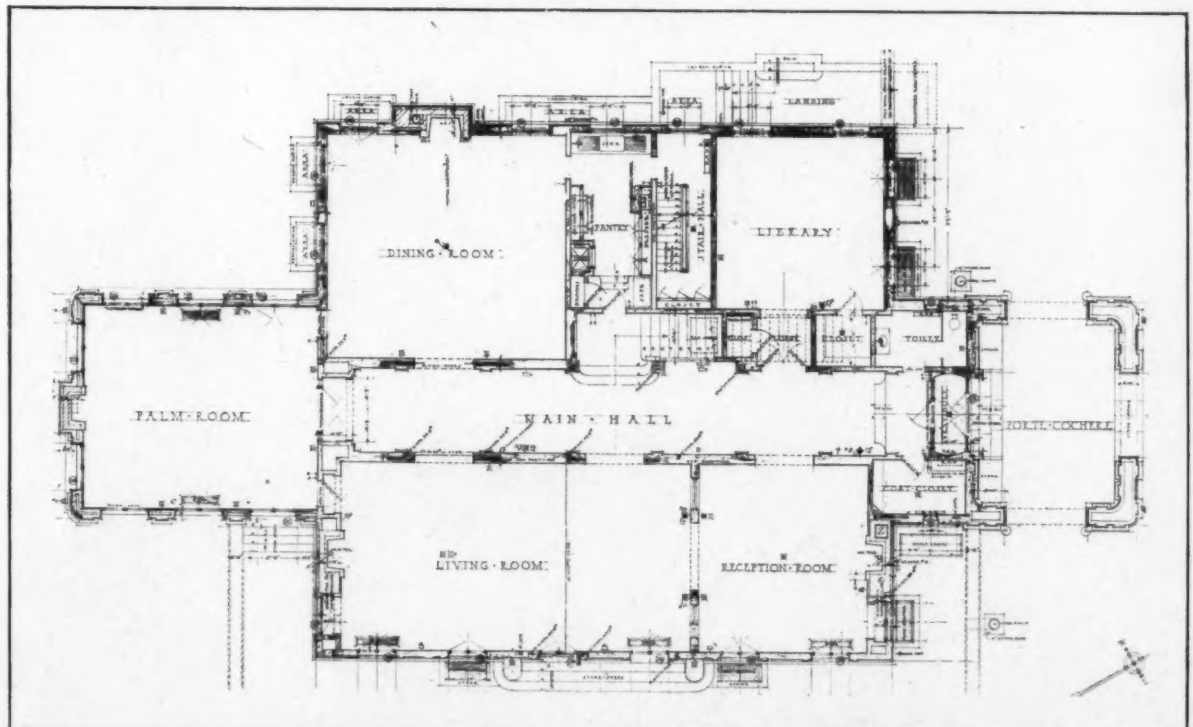


DINING ROOM

HOUSE OF V. S. MULFORD, MONTCLAIR, N. J.
HISS & WEEKES, ARCHITECTS



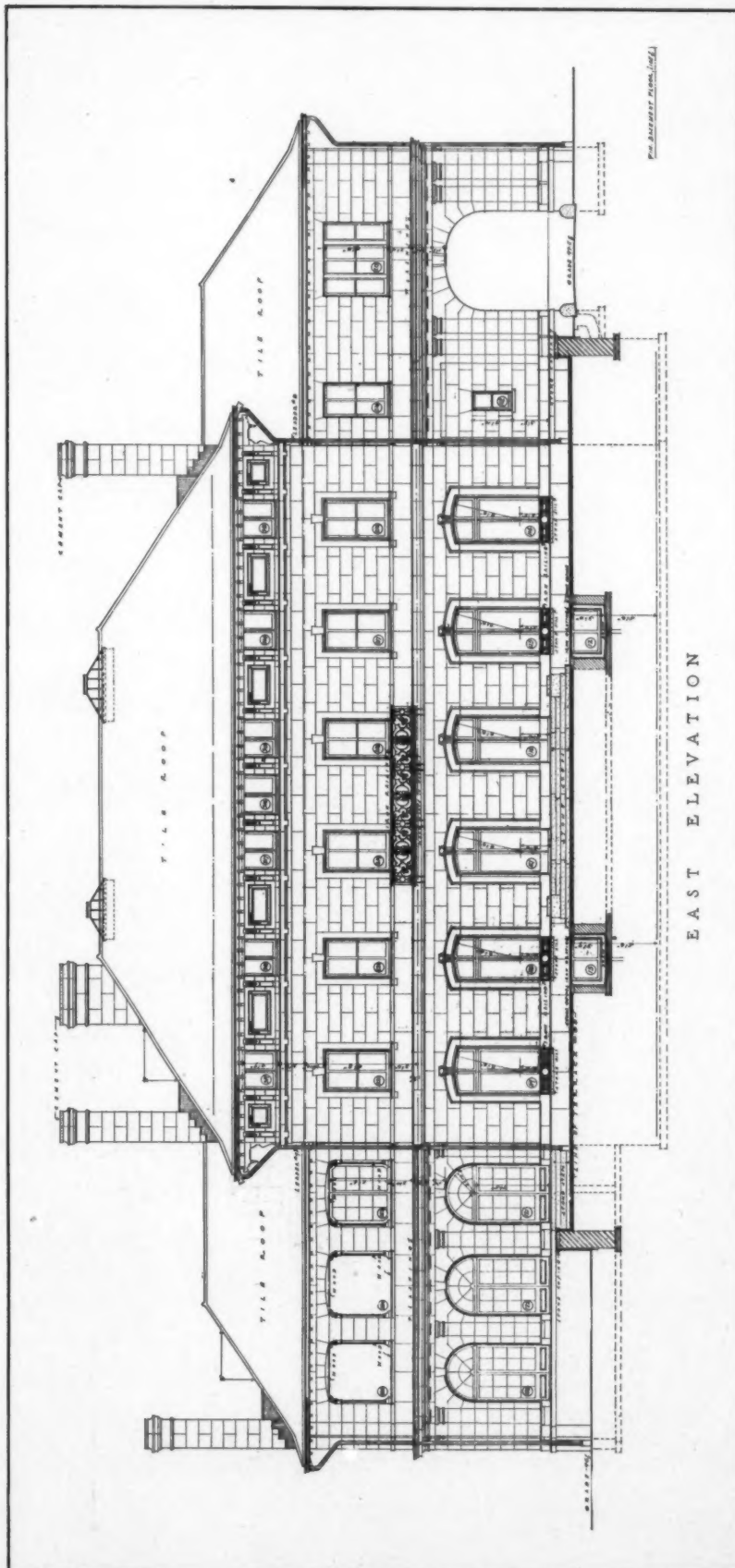
VIEW IN GARDEN



FIRST FLOOR PLAN

HOUSE OF V. S. MUFORD, MONTCLAIR, N. J.

HISS & WEEKES, ARCHITECTS



HOUSE OF V. S. MULFORD, MONTCLAIR, N. J.
HISS & WEEKES, ARCHITECTS

LETTERS FROM *an* ARCHITECT to HIS SON ABOUT to BEGIN PRACTICE in a SMALL CITY—V

BY FRANK E. WALLIS, F. A. I. A.

MY DEAR DICK:—

I WONDER if old age "as it casts one longing, lingering look behind" carries with it the right to mumble memories between toothless gums. It would seem so after you have listened to the peopled old baldheads who have never even worn a crease in their mental trousers, those old men who growl and spittle over what was done when they were young—Them were the days—"but could youth last and love still breed," I doubt that statement would be made to include every phase and all men. I doubt it most seriously when it implies, as it seems to imply, that the young men of the earlier days were one hundred per cent plus, while those of the present day are not only minus but growing more so. I began my architectural life in 1876 when I was but fourteen. And through the continuing volumes and chapters of the varying phases of professional life, from that date to this year of grace, I may affirm with little danger of successful contradiction that the architectural world as represented in its youth today in their ambitions, insistence and results has progressed and improved far beyond the dreams of the greatest optimist.

The average architect of the 80's and 90's perpetrated such architectural monstrosities as would make the second Gold Dust Twin of today blush with shame. These architects did everything, and did everything badly, the home villages and the country clubs, the shop fronts, churches and bar rooms, state capitols and railroad stations, shirt front office buildings and back side roof tanks of this vintage are still in evidence.

—Ode to them—

"If ye want churches or temples or palaces
Built anywhere from Quebec to where Dallas is,
Pair o' new shoes or a new pair o' galluses,
Sind for thim airy, they'll dhraw ye the plans."

I had the great good fortune of office and personal intimacy with many of the kings of those days, beginning as I did, my apprenticeship with that charming gentleman and architect, F. W. Chandler—"Pop" Chandler—who is still living, and ending my period of hired man and assistant with the king of kings, R. M. Hunt, who died too soon—in 1895. You, of course, remember Hunt, for you were given his name—Richard—with the superstitious hope that mayhap the name would carry some of his character with it.

I must, old man, regurgitate a bit, referring in one of my letters to you on the necessity of association with other men in your town and membership in Commerce Chambers, *et al.* I had in mind then, to nail a memory for you, a memory of broad vision, broad mind and unselfish devotion to a group, to the society and to the other fellows, for the good of all, for the good of the profession at large. Hunt had these and did these things as no living man did or is now doing them. Hunt had the sweetness of character and manner which you find in a girl of fifteen, he had the pep and power of Vulcan and his anvil strangely and intimately interwoven in his character as the warp and the woof of fabrics are interwoven. God rest his splendid soul—I miss him after these years, for you could speak the truth and the whole truth with him, without the necessity of circumlocution which seems so needed in these later years, and with no chicanery nor play of theatricals.

Some letters ago, wherein I referred to factories and to your trusteeship, I think that I neglected to broadcast an idea for you. Don't confine your sense of trusteeship to a shoe factory, a lamp factory or a cash register grouping. We have with us this evening, Mr. Brain Factory, the School; Mr. Religious Sentiment Factory, the church; and Mr. Goodfellowship Factory, the club; with Mr. Bargain Counter Factory, the retail shop—so dear to our wives and other women relatives.

Problems are they, as the factory is a problem, special problems and difficult ones. And here, of course, without doubt you will have the opportunity to meet various members of that most prolific and charming family—the Buttinskies—Mr. Bunk Buttinsky, Mrs. Hokum Buttinsky and the Horse Radish Buttinskies, the Misses Borax Buttinskies, the artistic ones also, and the engineers. In the branch of engineers you will no doubt hobnob over your drafting table and in your club with that most soul satisfying one, Mr. Efficiency Engineer Buttinsky—he reminds me always of a Welsh Rabbit, for Mr. Efficiency Engineer Buttinsky is mostly if not always neither efficient, nor is he an engineer, as the Welsh Rabbit is neither Welsh nor is he a rabbit—he is but a piece of cheese.

It would seem that the Buttinskies and the various brands of cheeses must be first cousins, which of them originated or were laid first I am

uncertain. Look it up in the latest edition of "Who's Who in Busybody Land," published by —Bunk, Bunkum and Borax—and printed by the Know-it-all-Press.

Enough of this serious consideration; it always makes my head ache and my heart sore when I remember that I have left my pet brick at home. You will meet all of them, many, many times and I must warn you that you may not lose your head or your heart with these charming people, for they are sweet and lovable as the income tax is sweet and lovable and much sought after. You cannot aspire to their place in the sun for the Gods of Olympus have marked them with the goldenrod and the poison ivy. Citizen Fixit, your old friend, is far removed, a forty-second cousin I believe, at least he isn't in it with them.

"And now, if e'er by chance I put
My fingers into glue,
Or madly squeeze a right-hand foot
Into a left-hand shoe,
Or if I drop upon my toe
A very heavy weight,
I weep, for it reminds me so
Of that old man I used to know—"
—Buttinsky—

Now that we have had tea with the Buttinsky family and the Gold-Dust Twins, let us proceed with the analysis and possible solution of your latest job. I ween that it will be a much more pleasing occupation.

A home, a house, a domicile, a job wherein your magic wands of fact and fantasy may have their play,—tell the children of your client, the story of the iron and the copper gnomes beneath the sod, of the waving timber and the towering pines who whisper together in the wood, of their final resting place, tell them of the toiling magnates, of the banks, the railroads and boats, the sweating stevedores, steam, and noisy mills, the busy brick, the Nordic stone, take them with you, soul and soul, and weave the house and them together, so that it shall be theirs through life, and theirs alone, not yours. They play, they grow, they go to school, then come again with bride or groom, they play and grow and school and wed, and you with care and taste, you with magic wands of fact and fantasy, you fabricate the architectural garment which enfolds them, stays with them through life, colors their growth and affects their sentiment as men and women need and cry for. You are the trustee of brains and good taste—you are the god of destiny.

Take the father to the Lodge where the secrets of your craft are housed, sit you in the East as the master sits, open the books to him, for him, have him know and understand the mason and his trowel, the carpenter and his plane, and the

other needed specialists, the plumber, steam fitter, electric man and the others of the regiment—omit the dead hand of Greece and Rome, scrap the five orders and bring this down to date. Let him enjoy and pay and in the paying and the pleasure let him build his home with facts and fancy.

Contour his ground and mold your scheme with sun and Summer breezes right, with views and vistas composed and massed, and properly affiliated with porches, sun rooms, living and sleeping quarters.

Do it with your associates and assistants, with your engineers and cabinet and interior men. The job must dominate you all for its own honor, then it's dollars to doughnuts that your pleased client will be anxious to repeat, either for himself or for a friend, this is the essence of which I wrote you some time ago, for you do hold his friendship, you mayhap have sold yourself to him either as artist or architect, but you have not only built but as well taught a great lesson; he knows that though fond of a Piranesi you are also enamoured with drains and wiped joints; that is the architect of it.

In your mass composition of plan and of exterior, study first, in the plan, directness, ease of communication, consider it more or less as you would consider that basis problem—a factory—for you must have efficiency with your ease, the system of the plan must enwrap the habitants, technique is hidden and technique and science give way to color and proportion, brothers all. Your exterior must, in the telling of the plan, tell it properly and truthfully, not blatantly nor with blare of trumpets. You must compose your mass, for the details are but children of this mass.

I remember here, a young man in the Court of the Chateau at Blois last year, with the air of an overtrained classicist, a Tech student, frantically scratching the minute profiles and molding details of the Louis XII wing, getting them out of scale and wrong mostly. My query as to why he did not study the mass composition, with its varying shades of color, window openings and color frames, with the shades and shadows and their relative values, brought forth his reply—"Oh, I know all about that." So—who told you? "Prof. — of Tech. has told me to waste no time on mass composition." Poor boy!

Your plan, your exterior, your interior, cabinet work and hangings must all of them move along in harmony if so that you wish to have a complete and harmonious whole. I once built a Georgian house of this character, with its English garden and fountain and the other necessary and orderly appurtenances, with my interior cabinet man associated, the interior plans had been laid out in consultation with Madame, but, worse luck, my client had a school boy friend who had been

in the iron business, and from a gosling had had himself transformed into that swan, the decorator, (a broker)—he and his lady associate, completed my labor of love and I had business elsewhere and went away.

Some years ago, our Architectural League had a dubious argumentation evening on the question of architect and decorators, as to which of them began, which of them stopped, and where and when.

Have your cabinet man associate with you as a member of the Lodge, as you have your mechanical equipment engineer and other technicians, but you as architect must have perfect self-command and absolute control of your material; you must sit in the East, from which point you will be able to control your associates and eliminate brokers. These brokers, or middle men, not knowing themselves how to create or to compose form and color, have developed a patter of glibly suggestive phrases, spats, patter and standardization, and the poor buyer worships with gugging eyes. Standardization is the slayer of originality and standardization is the God of the high altar which we Americans worship. People discuss the price of coal, their favorite bootlegger or efficient standardization, until your heart and head ache together.

The efficiency engineers and the standardization expert may be useful in their place, sometime, somewhere; they should be used as a means to an end, not as the—end of all things.

I mind me here of an experience I once had with both types serving on a building committee, to which my plans were subject.

The working plans for two buildings, laid out on tissue paper in pencil, with plans, elevations and cross sections, carefully figured and co-ordinated, ready for and offered for criticism, suggestion and discussion, before the final tracing cloth inked finales were made, for which we had allowed two or three months' time. These plans were finished in ten days' time, working eighteen hours daily, tracing cloth with India ink and beautiful red ink figure lines, purely and simply

because these two stupids had insisted that plans should be inked before they would consent even to look at them. Infant prodigies they were, both efficiency engineer and standardization expert. Some suggestions were made for minor changes and approved by the architect, but tissue paper and pencil process sheets were not finished layouts, declared these supreme one track men.

Your professional interior decorator is more likely than otherwise to have a similar one track mind, not being creative nor trained in design or architecture he must of necessity fall back on conventions, "Custom doth make dotards of us all," or, perhaps, he peruses the magazine sections of our Sunday newspapers where some anaemic young girl exposes the secret of cabinets in the style of Louis XVI; cabinets and dressers made from soap boxes or discarded wardrobe trunks—clever.

Too frequently your client will listen to this "bunk." If you fail to suppress this movement, move away—always after expression. Do you remember that most wonderful artist of the Seventeenth and Eighteenth Centuries—Grinling Gibbons—his first introduction to the King and Queen by Evelyn, as quoted from his Diary, shows that the old chaps were also compelled to overcome both stupid ignorance and official stupidity.

"The King being called away left us with the Queene,—a French peddling woman, one Mad. de Boord who us'd to bring petticoats and fanns, and baubles out of France to the Ladys, began to find fault with several things in the worke, which she understood no more than an asse or a monkey. So, as in a kind of indignation—I caused it to be carried back to the chamber, finding the Queene so much governed by an ignorant French woman." This refers to the famous carving of Tintoretto, the stoning of Stephen by Gibbons.

My dear boy, if things were not as they are, if there were no fights left in your world, you would suicide yourself because of the monotony and the grayness of it, so buck up, architect in embryo.



INTERIOR, HOUSE OF W. P. HANSON, LA CANADA, CAL.

HARWOOD HEWITT, ARCHITECT

ECONOMICS *as* RELATING to ARCHITECTURE

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

FINAL statistics are not yet available, but it seems practically certain that 1923 has been one of the most notable years in the history of the building industry. It has been distinguished by a group of economic forces of fundamental importance. Perhaps the most paramount of these has been the acute shortage which existed during the early months of the year and which will probably carry new building started during 1923 to new and record heights. As the year progressed, however, this shortage lost a great deal of its original intensity.

Now the alleviation of the severity of this deficit has been accomplished by the enormous volume of new construction undertaken and completed during the year. The heaviest activity occurred in the first and second quarters of 1923 when the industry was positively pushed beyond its capacity to produce. A breathing spell was imperative and a halt was called. Remedial measures, unfortunately, came too late to arrest the acute advance of costs, which, with the aid of well directed publicity, became an actual barrier to the industry's progress.

Recession supplanted advancement, and in June, July and August, our curve (Chart 1) corrected for seasonal variations and long-time growth took a decided slump. High costs under the stimulation of bonus payments rose higher

and, as employers bid against each other for help, the labor shortage increased. This scarcity of workmen was relieved somewhat, to be sure, by the recession in the number of new jobs begun during the Summer but this slackening tension in labor circles was not and has not been reflected perceptibly in the trend of building costs. What advance there has been in wage scales has practically offset the mitigating effect of the decline in

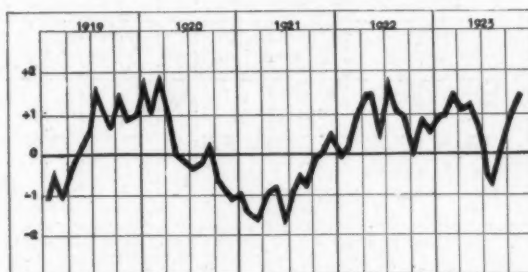
material prices, and costs, as a consequence, have held stubbornly to their present high levels.

The rising valuation of new construction had a most notable effect upon the mortgage money market very early in the year. This marked increase in values called bankers' and investors' attention to the fact that the price of construction and of improved property had not undergone a post-war readjustment in values, as had most other commodities and so a further buoyancy in valuations

quite obviously brought up the question of a possible future depreciation. This precautionary feeling, born of a lack of complete confidence in the industry's future and of a fear of an ultimate liquidation, resulted in slightly higher interest rates, a notable increase in the rigor with which new construction loans were scrutinized, and the practice of making the owner finance a greater part of the new construction himself. Neither bankers nor investors have revised their attitude toward new construction and there is not likely to be much of a revision as long as values persist at their present altitudes.

The outlook for 1924 is at the moment an optimistic one. Demand, actually and potentially, is comfortably heavy. For the first six months

CHART I
VOLUME OF NEW CONTRACTS AWARDED



The above curve shows the trend of the value of contracts awarded in the twenty-seven states covered by the F. W. Dodge Corporation. It is not corrected for the influence of price trends which accounts for the relatively high showing made in the late months of 1919 and the early ones of 1920, but it has been corrected for seasonal variations and long-time growth. The curve is now reflecting the unusually heavy volume of contracts which are being awarded in these late months when the amount of building begun is normally light. This unusual intensity presages a busy Winter and an active Spring.

(Copyrighted 1923—American Chamber of Economics)

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

of the new year, the prospect favors a maintenance of a moderately high rate of building activity. What takes place subsequent to that time will probably turn on economic trends which are sure to develop in the Spring time. Costs have yielded only stintingly but any unusual activity will certainly strengthen their undertone and start them climbing again. Finally, inasmuch as there is no hope for an immediate reduction in costs or a reappraisal in new construction valuations, there is little likelihood of an immediate change in the policy of bankers and investors toward the class of risk offered by new construction at present prices.

Now the building industry is a highly seasonal industry and any discounting of immediate trends should make allowance for the usual seasonal variations. The graphic picture of the normal seasonal fluctuations, based upon a ten-year average of the F. W. Dodge statistics, is offered in Chart II and it affords the architect an idea of what takes place in a normal building year. Further, the construction industry, as shown by the Dodge statistics, has had a rather striking growth element which must also be taken into account in discounting a given situation especially when comparison is made with previous years. Chart III portrays in its light diagonal line the trend of this growth element. Now Chart I shows the trend of the values of contracts awarded, as reported by the F. W. Dodge Corporation, after the seasonal variations and the elements of long-time growth have been eliminated. Theoretically it is affected only by the elements of prosperity and depression in the building trades, but actually another influence still remains, the effect of inflation and deflation in values. The curve is not corrected for this factor.

The most important and yet the most potent economic puzzle in the industry today is the determination of the length and breadth of the present scarcity in building. This shortage is the backbone of the demand for new construction at present, just as it was in 1923, and its dimensions are the key to what is to happen in the building trade tomorrow. The statistics of the industry furnish only a rough, crude and not

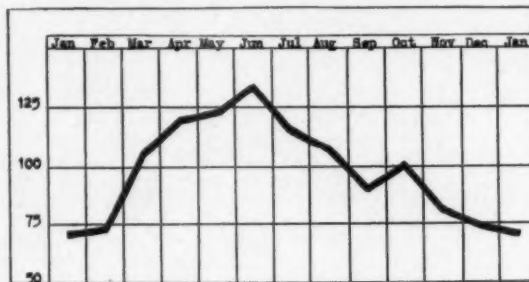
wholly dependable clue to the remaining power and significance of this once prodigious economic factor. In conservative circles the construction deficiency is still believed to be considerable, but the basis of this opinion is couched wholly in conjecture. In some localities observing students of the situation will venture the opinion that the supply of certain classes of building has exceeded the demand. In another locality, still another type of structure will have about equalized prevailing need for space with the current supply, and a shortage will still exist in other types. And so it goes. There is no doubt, for example, that much public building remains to be done in a generally large area and it is probably similarly true that some equalizing activities in various types of building and in just as varied localities must be done to even up what appears to be a spotty situation.

Converting this remaining deficit in building to a normal supply is very likely to require all of six months. It may take longer, and again it is possible that it may be accomplished in less time. An advancing standard of living, if it advances sufficiently, will swell still further the requirements for more adequate shelter facilities, thus maintaining the industry at a rapid pace for many months to come.

Again, high and rising rents may attract more builders, as may also the maintenance of an active market for improved property at relatively higher prices. But these demand factors, with the exception of an advancing standard of living, derive a greater part of their strength from the prevailing dearth of construction and inasmuch as this deficit is apparently in the final stages of its descendancy, a statement may be made in all candor that the building situation is entering its most speculative and tricky period.

Another development promising to prolong the life of the present prosperity in building is what appears to be a slow but steady march of general business to still more prosperous elevations. The stock market is apparently forecasting favorable conditions for the first six months of 1924, and industrial sentiment is conservatively optimistic, although not sanguine. Profits and dividend declarations in some industries have been particularly gratifying; in other lines they

CHART II
SEASONAL TREND IN BUILDING INDUSTRY



Seasonal influences play a major role in the building industry's year and Chart II pictures that seasonal trend from January to January. The industry's monthly gains very often lose their brilliance when allowance is made for this seasonal factor. The above curve was constructed from a ten-year average based upon the values of contracts awarded as reported by the F. W. Dodge Corporation.

(Copyrighted 1923—American Chamber of Economics)

have been most disappointing and discouragingly meager. Prosperity to be genuine, salubrious, and sound must be general and inclusive, and shared by all industries alike. It would seem now that such sluggish lines as petroleum, shipping, leather, farm machinery, chemicals, paper, tires and copper would have to show some further improvement and profitable activity before prosperity can possess abiding vigor.

Forward buying has been light and is likely to continue to suffer in comparison with more active periods of the past for there is every indication that consumption will move in 1924 at its present and sane pace. Indeed consumption can hardly be expected to undergo any radical change while there is such outstanding discrimination in the incomes of the various classes of the community. Until the maladjustment in purchasing power of these various classes is corrected buyers' resistance to high prices will serve as a club to check inordinate price advances, for these purchasers "out of economic favor" are numerous. Because purchasing power is so irregularly distributed, disjointed and of such inco-ordinated potency, and because industrial activity is likewise checkered and uneven, commodity prices in 1924 are not likely to sustain much of an advance. On the other hand, it is difficult to see how prices can possibly be depressed on account of the ample supply of credit, the prevalence of optimism, and a comparatively easy money market. So it seems that prices will move much after the fashion they have in 1923, that is, horizontally with a moderate net gain. Costs in industry generally are high and there is little hope of any downward revision in the first half of the new year, for that would probably have to come about as a result of a widespread industrial depression. If prices move markedly higher, however, there is every probability of a similar movement in costs, particularly in the wage element of costs. Money rates show little immediate promise of rising to very high altitudes during the year because the commercial demand for accommodations has little

prospect of being large, and except for the usual seasonal movement in interest rates, the money market is expected to move in a fairly sideways fashion with the trend, if any is discernible, slightly upward. So much for general business.

With all of the demand factors favoring the maintenance of the industry's activity in a higher than normal plane for the first half of 1924, building costs are obviously in no immediate danger of a recession. Indeed, their undertone is one of potential strength. A conservative movement within the industry itself will tend to strengthen these costs. On the other hand, an active movement such as occurred last Spring will

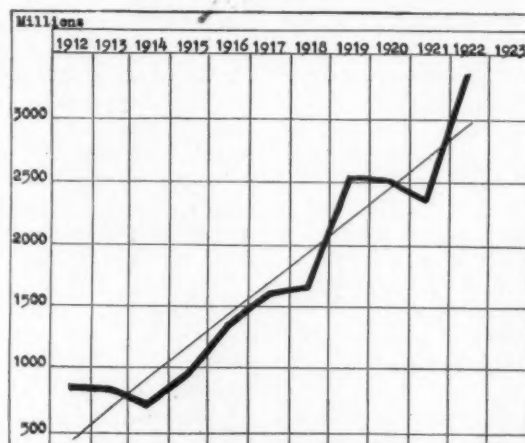
loose the leash and start them bounding upward again. Only necessary building, then, should be undertaken, and other factors permitting, this necessary construction should be started as early as possible in the seasonally light months.

Material markets have undergone a greater part of their seasonal declines already. Purchases for Spring business will strengthen these markets, however, and the degree of their rise will depend upon the intensity of the industry's activity and the volume of new building begun, the accumulation or shortage of stocks, the transportation facilities, labor controversies, and the trend in general prices.

Although these markets have been soft and weak, the immediate outlook favors an increased firmness and strength as Spring approaches.

Wages are still rising but the rate of advance has been slowing down chiefly because the industry's pace slackened in the late Summer and early Autumn months. If Spring ushers in renewed activity, and the opinion is that it will, then there are sure to be scattered struggles for greater power and greater pay. This contingency is all the more real because labor controversies are under way in representative localities, because employment is full and a busy six months are ahead, and finally, because prices, valuations, and yields are represented by impressively large figures. It is apparent, then, that the Spring time

CHART III
LONG-TIME GROWTH IN BUILDING



The growth element in the building industry is striking, and its trend is here indicated by the light line in the above chart. The heavy line is the value of contracts awarded in twenty-seven states (F. W. Dodge Corporation) on an annual basis. The years of depression and prosperity are clearly shown, but it must be remembered that the curve has not been corrected for the influence of inflation or deflation in prices. Such a readjustment would obviously lower the 1919 peak and the 1916-1917-1918 and 1921 depressions.

(Copyrighted 1923—American Chamber of Economics)

will be psychologically and strategically correct for launching a drive for higher wages under the threat of a forced shortage of workmen.

A general campaign for higher wages, however, seems unlikely, unless, of course, the opportunist or speculative element takes the bit in its teeth and again pushes the industry beyond its capacity to produce, at the same time inaugurating bonus wages and premiums for immediate delivery of materials. Many developments, which have characterized 1923, will tend to suppress such unwarranted practices in the new year. For example,

costs have risen and demand is not as urgent and impassioned as it was. Then, the market for new construction has probably reached its maximum intensity and certainly it is to be hoped that rentals will not contribute further to the costs of living. And, finally, the money market has already taken a distinct and definite position in regard to further increases in values produced by higher costs. The speculator, then, is not likely to figure as prominently in 1924, as he did in 1923. The industry, it is true, can progress very well without him.

AUTOMOBILES OR HOMES

HOUSING BETTERMENT, the bulletin of the National Housing Association, states in a recent issue, that one factor contributing to the present shortage of dwellings available for rent is attributed in some quarters to the large investment in automobiles and their original cost and maintenance. It is pointed out that the married man who, for example, buys a small car and pays from \$400 to \$600 for this pleasure vehicle, could have purchased a cottage or bungalow and lot, paying in cash on account the amount that the automobile costs, and, with the help of a Building Association, have acquired title to the property and ultimately by payment of dues and interest become the absolute owner of a home without increasing his outlay beyond the ordinary monthly rental.

Persons of larger means frequently pay from \$2,000 to \$3,500 for a car beyond their means, who reside in rented apartments or houses who, without regard for the future, are living for the present. The money thus expended would provide for payment on the purchase of a very comfortable home and ultimately bring satisfaction, happiness and independence.

The Cleveland Trust Company, in a recent statement, point out that the American people are spending \$2 for automobiles for every \$3 of outlay for new buildings, not merely for dwellings but for all kinds of new buildings. They add that:

During the past four years motor expenditures have amounted to about \$6,600,000,000 and those for new buildings about \$10,000,000,000, according to the banks' computation.

Commenting on this situation the *American*

Lumberman in an article entitled "Autos or Homes for June Brides?" has the following to say:

There is no gainsaying the fact that the automobile people are strictly on the job in the race for the consumer's dollar. Equally incontrovertible is the proposition that much of the money being expended for pleasure cars should be invested in homes. These thoughts are inspired in part by a "blurb" in the advertisement of a well known car, appearing in the current magazines, reading as follows:

"Some day in June, when happy hours abound, a wonderful girl and a wonderful boy will leave their friends in a shower of rice—and start to roam. Then life will surely slip its tether and youth will be full of the promise of happy days to come. Give them a (name of automobile), the bright sky overhead, the green turf flying by—and just beyond the hill a thousand miles of open road—then a quiet inn for dinner."

The effusion serves to emphasize the fact that the number of young married people who place possession of an automobile ahead of possession of a home is so large as to cause apprehension in the minds of all who have the future welfare of the country at heart. It is the home, not the automobile, that is rightly said to be the bulwark of the nation. But nowadays instead of building a home, or saving for one, the average newly married couple rent a few rooms and live in their car. In a majority of cases the luxurious limousine or touring car of the advertisement turns out to be a flivver and the "quiet inn" degenerates into a frowsty cafeteria or delicatessen.

The figures quoted are undoubtedly a serious factor in the present housing shortage.

BEAUX-ARTS INSTITUTE of DESIGN

ACTING DIRECTOR OF THE INSTITUTE—WHITNEY WARREN

ARCHITECTURE—RAYMOND M. HOOD, DIRECTOR

SCULPTURE—EDWARD FIELD SANFORD, JR., DIRECTOR

INTERIOR DECORATION—FRANCIS LENYGNON, DIRECTOR

MURAL PAINTING—ERNEST C. PEIXOTTO, DIRECTOR

THE WARREN PRIZE

The gift of Messrs. Whitney Warren and Lloyd Warren offered for excellence in planning a group of buildings.

FIRST PRIZE—\$50.00. SECOND PRIZE—\$25.00.

"A SUMMER COLONY"

A real estate company has bought a tract of land on a south shore to develop as a restricted summer colony. The property is approximately 2,000'-0" long and 1,000'-0" deep. Along the northern side, parallel to the shore, runs a railroad on which at some point a station will be located. The automobile high road, connecting with the nearby metropolis, runs parallel to the railroad between it and the shore. The land is comparatively level, save that toward the western end it rises to form a bluff about 75'-0" high at the water's edge.

The intention is to develop a complete colony which means that it must include beside sixty or seventy residential sites, a section for shops and other necessities for the community. In this section there will be the grocer, druggist, butcher, general merchandising store, post office, one or two public garages, etc. In addition there should be a small public library, an inn, an assembly hall to be used for community purposes, and also a moving picture theatre. As is frequently done in communities of this character, the above elements may be combined with one another or with the shops, as desired.

On the shore where a neck of land runs out to form a harbor will be a yacht club, and adjoining and a part of it will be the bathing beach.

JURY OF AWARDS:—R. M. Hood, W. Warren, H. R. Sedgwick, J. M. Howells, H. Bacon, D. Barber, E. H. Denby and H. B. Price.

NUMBER OF DRAWINGS SUBMITTED:—90.

AWARDS:—

PLACED FIRST:—(H. C. FOR PRIZE):—P. B. Nichols, Cornell Univ., Ithaca.

PLACED SECOND—FIRST PRIZE—\$50:—H. C. Douden, Carnegie Inst. of Tech., Pittsburgh.

PLACED THIRD—SECOND PRIZE—\$25:—Miss D. Dickinson, Cornell Univ., Ithaca.

PLACED FOURTH:—Jerry Loeb, The Chicago Atelier, Chic., Ill.

PLACED FOURTH:—L. Timotheeff, Columbia Univ., N. Y. C.

CLASS "B"—I ANALYTIQUE

"A WELL HEAD"

An American lady wishes to embellish the courtyard of the new Art Museum in her native city. Opposite the entrance to this court is a wall with a blank arch. Against this arch but standing free, she proposes to erect a Well Head consisting of a well curb, two columns fifteen feet high, and above an entablature or ornamental metal feature from which will be suspended the pulley and bucket. The columns and well curb should stand on a platform two steps high, which can be round, square or polygonal in form.

JURY OF AWARDS:—R. M. Hood, H. O. Milliken, W. Warren, W. E. Shepherd, Jr., E. H. Denby, R. H. Pearce, H. Bacon, E. S. Hewitt, H. B. Price, C. Gilbert, Jr., F. C. Hiron, A. E. Flanagan, G. S. Koyl, D. D. Ellington, A. L. Kocher, and E. A. Parks.

NUMBER OF DRAWINGS SUBMITTED:—299.

AWARDS:—

FIRST MENTION PLACED:—W. C. Ilgenfritz, Atelier Cunningham, Wash., D. C.; E. R. Roller and W. Simboli, Carnegie Inst. of Tech., Pitts.; W. M. Baxter, Miami Archtl. Club, Miami; G. W. Rustay, D. L. Elinsky and R. W. Robinson, Pennsylvania State College—Dept. of Archt., State College; J. C. Ehrlich, Atelier Sibley, Palisade.

FIRST MENTION:—H. Rosenberg, Atelier Blum, N. Y. C.; D. K. Morrison, Carnegie Inst. of Tech., Pitts.; N. P. Thompson, Georgia Sch. of Tech., Atlanta; R. T. Leslie, Jr., Atelier Hiron, N. Y. C.; L. C. Mechling, Jr., Pennsylvania State College—Dept. of Archt., State College; L. C. Hedrick, Univ. of Illinois, Urbana; E. Studds, Yale University, New Haven.

SECOND MENTION:—A. E. Keller, Archtl. League of K. C., Kansas City; P. N. Youtz, J. H. Weston, P. Trapini, A. D. Lueders, S. Lotto, N. Rodriguey, T. Baumann, E. G. Friedlander, A. C. Fohey, A. Castillo, F. R. Dunn, S. Pelton, R. P. Hughes, J. J. Black, J. J. Schlick, S. Lewkowitz, A. I. Goldberg, J. R. Birchfield, F. Calamita, E. Hurley and M. Grodinsky, Columbia Univ., N. Y. C.; E. A. Dacey, Atelier Cunningham, Wash., D. C.; J. W. D. Thompson, Atelier Cromarty, Ottawa, Canada; F. G. Rice and N. Van Powell, Atelier Cairns, Memphis; E. Love, R. H. Cutting; J. F. Palumbo, M. N. Goodwin, G. T. Popiden, H. Rosenberg, F. C. Boldry, A. C. Lackey, R. I. Winters, H. E. Wagener, H. Fink, R. Harkless, J. Paul, C. A. Markley, J. F. Glover, E. G. Wheeler and K. Fulmer, Carnegie Inst. of Tech., Pitts.; L. M. Faber, Cleveland Sch. of Art, Cleveland; G. Franz, Cincinnati Archtl. Soc., Cincinnati; J. Boehle, E. F. O'Connell, S. Ackerman, L. Stillman, A. G. Schwarz, M. Kalkin, M. Kalka, F. A. Denz, J. Blumenkranz, D. J. Ellis, J. L. Knipper and H. A. Cook, Atelier Corbett-Koyl, N. Y. C.; A. R. Forester, Atelier Denver, Denver; M. J. Bochnie, Atelier Foster, Wilkes-Barre; H. Neubeck, Atelier French Curve, Trenton; G. A. Boyle, S. Seki, E. C. Blanks, W. I. Gresham, F. M. Daves, J. S. Robeson, A. W. Heery, Jr., W. H. Breen, J. A. Davis, R. H. Howard, G. Long, M. O. Saggus, S. M. Ayers, T. Y. Horan, S. Franklin, J. O. Stakely, M. Smith, and R. R. Nash, Georgia Sch. of Tech., Atlanta; D. C. Kline, C. M. Meigs, C. N. Wentworth, R. Gittelman and G. E. Moore, George Washington Univ., Wash., D. C.; L. A. Turcotte, J. L. Delamarre and R. Clement, Atelier Hiron, N. Y.; R. H. Fox, Atelier Harding, Westfield, Mass.; R. B. Johns, E. L. White, J. N. Arnold, W. B. Durand, R. Smith, Jr. and E. Cain, John Huntington Poly Inst., Cleveland; A. Getzlaff, Atelier Kirchhoff, Milwaukee; F. Krause, D. Koethout, P. A. Conklin and H. B. Smith, Los Angeles Archtl. Club, Los Angeles; H. R. Astheimer, Atelier Licht, N. Y.; H. O. Nelson, W. W. Baggesen and T. H. Nielsen, Miami Archtl. Club, Miami; C. Tatore, Patron—L. Fentnor, N. Y.; E. A. Salmon, Patron—J. G. Rogers, N. Y.; L. A. O'Brien, Atelier Northup, Winston-Salem; C. E. Jones, S. D. Legge and D. Andrews, Ohio State University, Columbus; C. R. Schlicher, S. C. Faller, W. B. Eschenbech, J. K. Bixler, C. R. Griener, E. G. von Storch, D. E. Kennedy, W. J. Ward, Jr., H. K. Urffer, S. I. Becker, B. E. Schaner and R. S. Huffman, Pennsylvania State College—Dept. of Archt., State College; J. J. Storey, R. H. Carlburg, T. O. Menees, W. Nevara, E. Herter and D. S. Nelson, Atelier Parsons—Chic. Archtl. Club, Chicago; I. van der Gucht, G. B. Dudley and M. C. Fleming, Princeton University, Princeton; R. C. Williams, I. H. Springer, F. T. Howeling, H. W.

Taylor and E. L. Cereghino, San Francisco Archtl. Club, San Francisco; M. Schaffers and E. L. Kempton, Syracuse University, Syracuse; J. A. Scott and A. N. McAninch, South-West Atelier, Little Rock, Ark.; P. L. Murphy and K. E. Adams, Tulsa Archtl. Club, Tulsa; J. Andrews, J. J. Kohler, H. E. Johnson, Jr., H. Beyer, S. Berger, G. A. Hart, F. R. Lyster and F. L. Petrillo, "T" Square Club, Philadelphia; R. J. Potter, Thumb Tack Club, Detroit; K. Helms, E. W. Vollintine, J. L. Hamilton, Jr., H. Sobel, H. W. Thomas, N. P. Kramer, R. H. Kloppenburg, H. J. McKee, M. T. Warthen, J. W. Geegg, R. Isenbarger, A. Temple, D. S. Vorkoitis and F. R. Roberson, Univ. of Illinois, Urbana; J. B. Eldridge, E. C. Burke, R. N. Wakefield, G. A. Stannard, H. H. Watkins and M. Linscott, Univ. of Kansas, Lawrence; N. E. McIlvain, F. Parsons, J. Hughes, R. Allison, C. E. Smith, E. C. Abrams, J. E. Belden, E. E. Anderson and S. Shimoyama, Univ. of Southern California, Los Angeles; Helen Graham, F. N. Nagamine, G. Bentley and N. Strohn, Univ. of Washington, Seattle; E. Dunlap and J. L. Orrick, Univ. of Virginia, Charlottesville; R. E. Schwab and E. C. Lea, Univ. of Louisville, Louisville, Ky.; W. F. Young, Atelier Vorse, Des Moines; C. L. Jones and M. Katzman, Atelier Wynkoop-Seymour, N. Y. C.; M. B. Smith, P. R. MacAlister, S. Dulcher, J. H. Messineo, L. B. LaFarge, D. Holden, G. M. Stickney, G. W. Harley, S. F. Jeter, Jr., C. F. Chowenhill, N. E. Iovanna, G. M. Cohen, P. Petrofsky, M. B. Ives, H. G. Lindsay and P. M. Duncan, Yale University, New Haven, R. L. Cox, Atelier Norfolk, Norfolk, Va.

H. C.:—E. G. Flohr, Pennsylvania State College—Dept. of Archt., State College.

CLASS "B"—I PROJET

"THE ENTRANCE TO A STADIUM"

The main entrance to a great stadium is by an opening 50 ft. wide giving access directly into the field, flanked by two great ramps rising 60' to the promenade which is level with the topmost seats. The ramps will also give access to two intermediate promenade levels.

A suitable architectural treatment of this entrance motive is what is called for, therefore the stadium proper need only be indicated in the 3 drawings to the extent necessary to explain the relation of the entrance motive to it. Not more than 200 feet need be shown in the elevation. The ramps and portal are to be an integral part of the structure although they may project their full width. They shall not, however, project more than 60 ft. from the outer wall of the stadium. The ramps may be covered or not and may take a circular form or be a single or an angular series of planes. The question of expense is not of importance and any material from concrete to marble may be used.

JURY OF AWARDS:—H. O. Milliken, E. S. Hewitt, W. E. Shepherd, Jr., F. A. Godley, J. W. O'Connor, R. H. Pearce, P. A. Cusachs, C. Gilbert, Jr., J. Lambert, H. W. Corbett, E. A. Parks, A. L. Kocher, G. M. Simon, F. C. Hiron, O. Faelton, D. D. Ellington and G. S. Koyl.

NUMBER OF DRAWINGS SUBMITTED:—205.

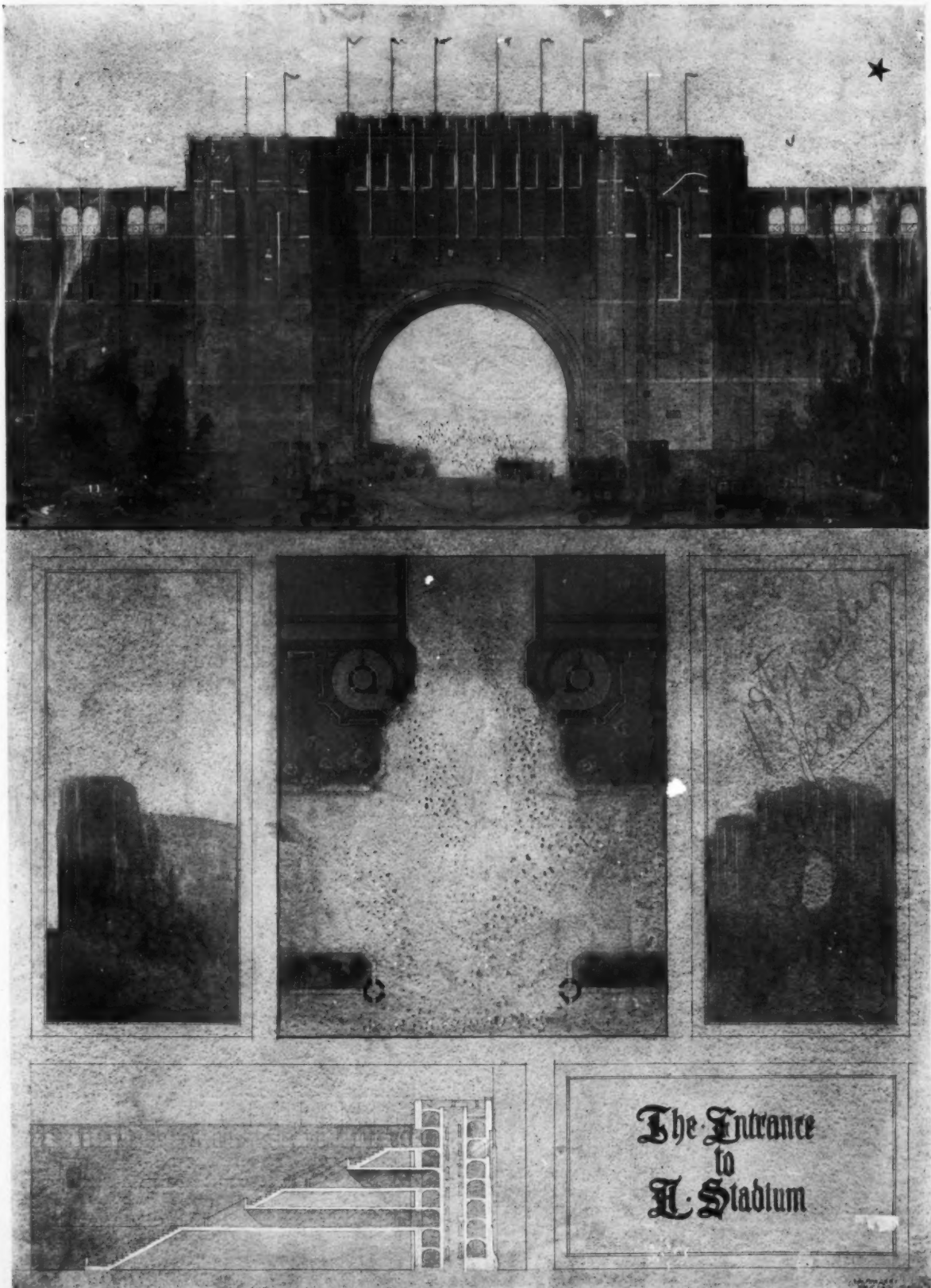
AWARDS:—

FIRST MENTION PLACED:—H. H. Owen, Columbia Univ., N. Y. C.; J. E. Tillotson, Carnegie Inst. of Tech., Pitts.; W. Ferrari, Yale Univ., New Haven.

FIRST MENTION:—R. V. Merwin, A. M. Koch and B. Schlanger, Columbia Univ., N. Y. C.; P. H. Sload, A. M. Ham, H. I. Lynch and S. Fiordelise, Carnegie Inst. of Tech., Pitts.; F. J. Schlosser, John Huntington, Poly. Inst., Cleveland; V. M. Reynal and E. Sheppard, Atelier Licht, N. Y. C.; E. C. Newcomb, Univ. of Illinois, Urbana; W. H. Schilling and F. C. Johnson, Yale University, New Haven.

SECOND MENTION:—G. E. Kirkpatrick, B. Barber, R. M. Pott, R. J. Young, W. B. Tubby, Jr., C. L. Douglas, J. H. Robb, C. F. Hart, P. V. Olinsky, W. W. Hook, H. T. Turner, Rafael de Cardenas, Beatrice Boerum, J. M. Villavicencio, N. R. Mastrangelo, V. Rambusch, R. De Joannis, C. M. Cowan, G. S. Dudley, J. Fernandez, J. Coggeshall, K. C. Kruchten, W. H. Jones, A. Goodman, F. E. Gilson, and C. H. Jagemann, Columbia Univ., N. Y. C.; J. S. Douglas, R. J. Kredel, C. A. Lundquist, W. S. Forsyth, M. A. Brace, E. M. McMillin, H. L. Carter, J. R. Reed, R. R. Young, H. W. Damon, Jr., F. J. Taylor, G. A. Deacon, E. Constantine, L. Swiger, V. S. Tilbrock, H. C. Lippincott, Jr., L. L. Osborn, A. F. Muhl, W. F. Koppes, J. P. Crowgey, A. M. Felstein, U. Schoenberger, A. H. Rousseau, D. C. Doig, V. McGowan and H. H. Thayer, Carnegie Inst. of Tech., Pitts.; P. Sanfilippo, Atelier Corbett-Koyl, N. Y. C.; R. M. Hovanetz and E. M. Watson, Cleveland Sch. of Art, Cleveland; Dorothea Porter, Atelier Cunningham, Wash., D. C.; J. L. Reynolds, E. F. Hunt and G. T. Bassett, Catholic University, Wash., D. C.; F. O. Kellman and M. J. Slack, Atelier Denver, Denver; D. Sutton, M. Peele, J. F. Wolfe, J. H. Lapish, C. M. Woodward and T. S. McClelland, George Washington University, Wash., D. C.; A. B. Merry, A. P. Almond, B. C. Hogue, A. L. Bartlett, J. R. Britt, R. W. Didschunite and A. Chandler, Georgia School of Tech., Atlanta; H. W. Swenson, J. J. Murno, W. H. Deitrick, Jr. and H. A. Simpson, Atelier Hiron, N. Y. C.; L. A. Balicki, R. B. Aley, A. E. Shrimpton, J. O. Cahill, E. F. Horley, R. W. Pearson and F. Rennison, John Huntington Poly. Inst., Cleveland; L. Korn, M. Sabransky and G. B. Briney, Los Angeles Archtl. Club, Los Angeles; W. G. Eichler, 1623 Cornelia Street, Brooklyn, N. Y.; C. M. Williams, Ohio State University, Columbus; J. F. Mullins and H. Shacklette, Pennsylvania State College—Dept. of Archt., State College; G. M. Nedved and H. F. Bossert, Atelier Parsons—Chicago Archtl. Club, Chicago; E. K. McNinch and T. G. Ruegg, San Francisco Archtl. Club, San Francisco; F. Raudenbush, H. G. Rieber, F. F. Schumann, J. E. Jackson, F. J. Duane and C. Ward, "T" Square Club, Philadelphia; H. B. Collins, Thumb Tack Club, Detroit; R. Jenks, W. P. Cunningham, G. L. Geery, and H. Petersen, Univ. of Kansas, Lawrence; W. A. Rolleston, L. D. Babcock, W. E. Fraser, W. I. Hamby, Jr., and F. H. Naegele, University of Illinois, Urbana; H. W. Wilms, C. D. Fairchild, W. Kleine, and A. Fehr, University of Texas, Austin; E. S. Marrotte, Atelier Wynkoop-Seymour, N. Y. C.; S. C. Haight and D. Douglas, Yale University, New Haven.

H. C.:—D. D. Streeter, Columbia Univ., N. Y. C.; D. L. Spooner, Georgia School of Technology, Atlanta; H. W. Johnson, Pennsylvania State College—Dept. of Archt., State College; V. Galier, W. R. Harer, C. A. Langzettell, and W. F. Ziegler, Atelier "T" Square Club, Philadelphia; K. G. Reeves, H. F. Pfeiffer, C. T. Paul and C. T. Miers, University of Illinois, Urbana.

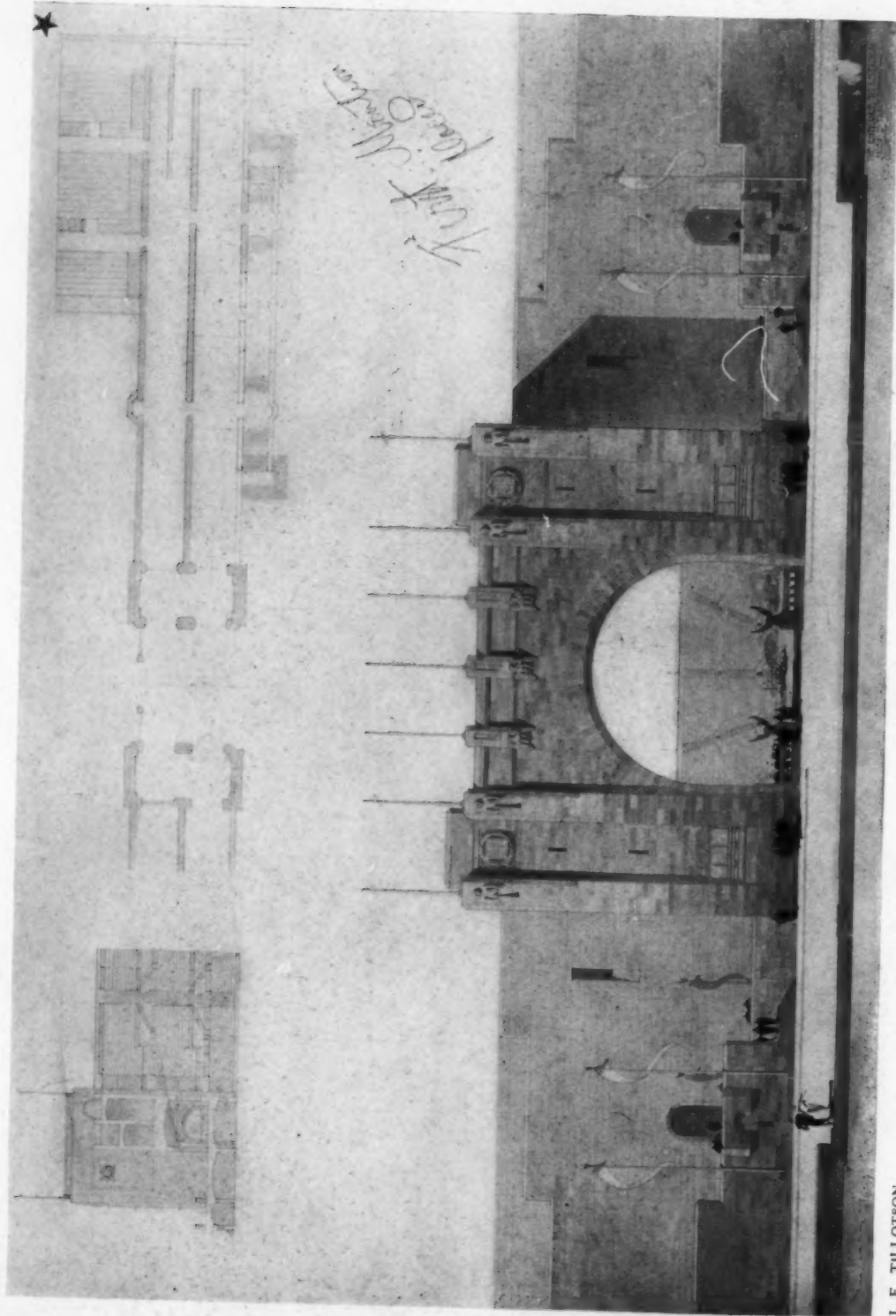


W. FERRARI

FIRST MENTION PLACED

YALE UNIVERSITY

CLASS "B"—I PROJÉT—THE ENTRANCE TO A STADIUM
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

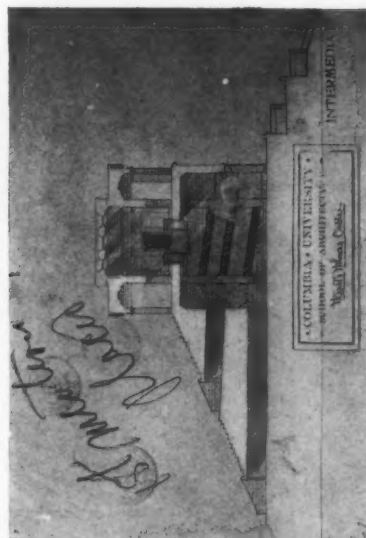
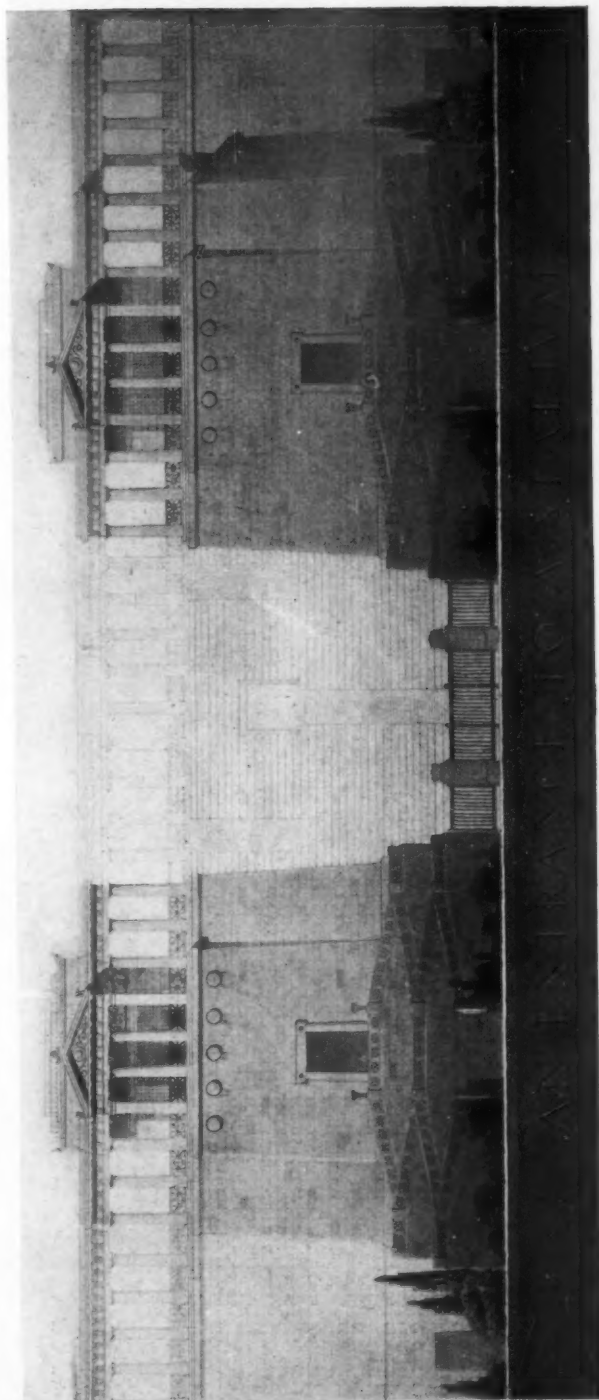


J. E. TILLOTSON

FIRST MENTION PLACED

CLASS "B"—I PROJECT—THE ENTRANCE TO A STADIUM
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

CARNEGIE INST. OF TECHNOLOGY

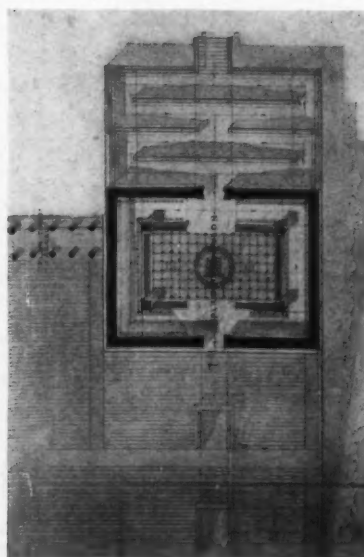


COLUMBIA UNIVERSITY



FIRST MENTION PLACED

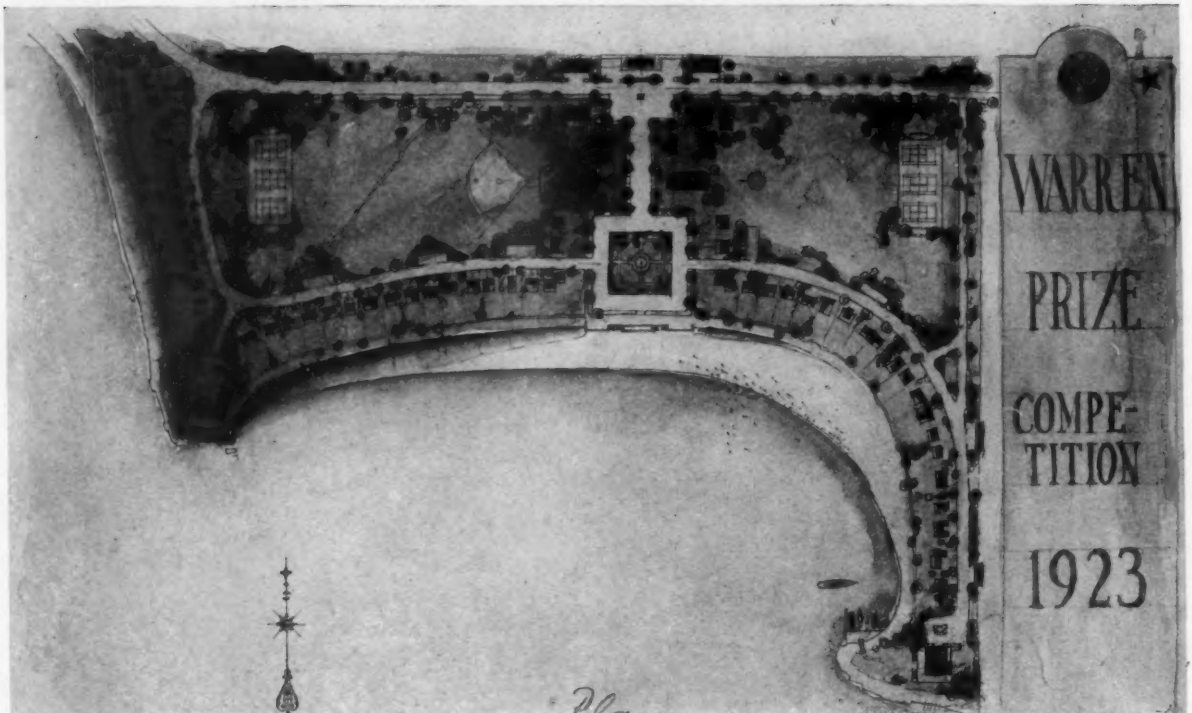
CLASS "B"—I PROJET—THE ENTRANCE TO A STADIUM
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN



H. H. OWEN

THE DETROIT EDISON CO.

DEC 2 1924



H. C. DOUDEN

PLACED SECOND (FIRST PRIZE)

CARNEGIE INST. OF TECHNOLOGY



D. DICKINSON

PLACED THIRD (SECOND PRIZE)

CORNELL UNIVERSITY

WARREN PRIZE COMPETITION—A SUMMER COLONY
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN



INDUSTRIAL HOMES FOR B. B. & R. KNIGHT, INC., RIVER POINT, R. I.

LOCKWOOD, GREENE & CO., ARCHITECTS AND ENGINEERS

SPECIFICATIONS

IT is somewhat difficult to present a review of the accomplishments of the past year in increasing or solidifying the knowledge of specification writing. The field of endeavor is so large, and there are so many phases of each branch of the work that even a cursory glance over specification matter produced during the past year shows an amazing amount of new material made available. There are, however, several factors in the advancement of specification knowledge that stand out in particular and deserve attention.

In the United States there are four agencies devoting their entire energies to the preparation and promulgation of specifications of an authoritative character. These are: The American Specification Institute, The Federal Specifications Board, The American Engineering Standards Committee, and The American Society for Testing Materials.

The American Society for Testing Materials and the work it is doing in the preparation of specifications for basic materials, is thoroughly understood. A number of its more recent specifications present stipulations covering the utilization of basic materials. The other agencies have been organized since the World War and it is probable that architects are not wholly familiar with the great amount of good work they are accomplishing. It is gratifying to know that these organizations are the leaders in the accumulation of authentic and authoritative specification data and that they are accumulating a sufficient amount of matter to indicate the value of the work and to demonstrate the effective work that can be accomplished and should most certainly be done, in the years to come.

While it is trite to say that architects' specifications generally have been prepared more as an onerous duty rather than from a desire to lay down certain stipulations to govern the construction and the finish of materials, it is possible to say that the past year has seen quite an improvement in the specifications used by various architectural offices. It seems that only since the World War has there been a realization that specifications for building construction and equipment must be more carefully drawn, and since a detailed analysis of fundamental factors involved in the writing of specifications must be made before correct specifications can be written, the wealth of material that is being made available to architects not only by the agencies named above, but also by other technical agencies, trade organizations and individual manufacturers and producers, form a large basis for study.

The American Specification Institute has recently published its "Specification Record," which contains most of the bulletins issued by them to date. These bulletins are as follows:

- Suggestion with respect to Card Indexes
- General Specification Outline for Building Construction and Equipment
- An Analysis of a Specification
- Matters Preliminary to Contract
- Standard Specifications for Furnishing of Structural Steel, Cast Steel and Cast Iron for Buildings
- Standard Specifications for Erection of Structural Steel, Cast Steel and Cast Iron for Buildings
- Explanatory Notes with reference to Form of A.S.I. Specifications
- Tentative Specifications for Reinforcement Steel
- Tentative Specifications for Composition Roofing
- Tentative Specifications for Furnishing of Oolitic Limestone
- Tentative Specifications for Testing of Concrete and Steel for Buildings
- Tentative Specifications for Steel Water Tank and Tower
- Tentative Specifications for Wet Automatic Sprinkler System
- Tentative Specifications for Vacuum Cleaning System
- Tentative Specifications for Excavation, Filling and Grading
- Tentative Specifications for Steel Breeching
- Tentative Specifications for Wood Pile Foundations
- Tentative Specifications for Pivoted Bucket Conveyor
- Tentative Specifications for Water Tube Boilers
- Tentative Specifications for Asphalt Membrane Waterproofing
- Tentative Specifications for Concrete Pile Foundations
- Tentative Specifications for Plain and Reinforced Concrete
- First Draft of Tentative Specifications for Automatic Temperature Regulation Equipment
- First Draft of Tentative Specifications for Air Filter
- First Draft of Tentative Specifications for Mechanical Draft System
- First Draft of Tentative Specifications for Traveling Grate Stoker



THE architect and interior decorator find in wallpaper a medium of artistic expression so flexible that it leaves ample scope for versatility and originality.

Moreover, in wallpaper of appropriated design there is always a note of authenticity that has resulted from its use for centuries in all the more important periods of interior decoration.

In adapting the artistic con-

ceptions of other days to the requirements of modern life, architects are more and more advising the use of authentic wallpapers in the many tasteful designs that are now available.

Send for our *Architect's Service Bulletin* which offers practical co-operation in supplying architects samples of wallpaper and other aids to the solution of specific problems in the decoration of walls.

WALLPAPER MANUFACTURERS ASSOCIATION
of the United States

461 EIGHTH AVENUE

NEW YORK



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

First Draft of Tentative Specifications for Turbine Driven, Centrifugal Boiler-Feed Pump

First Draft of Tentative Specifications for Well Drilling and Casing

Outline for Tentative Specifications for Architectural Terra Cotta

The Federal Specifications Board now has available for public distribution specifications covering building construction and equipment materials as follows:

Portland Cement

Petroleum Products and Methods for Testing

Linseed Oil, Raw, Refined, and Boiled

Basic Carbonate White Lead, Dry and Paste

Basic Sulphate White Lead, Dry and Paste

Turpentine (Gum Spirits and Wood Turpentine)

Zinc Oxide, Dry and Paste

Leaded Zinc Oxide, Dry and Paste

White Paint and Tinted Paints Made on a White Base—Semipaste and Ready Mixed

Red Lead, Dry and Paste

Ocher, Dry and Paste

Iron-Oxide and Iron Hydroxide Paints

Black Paint, Semipaste and Ready Mixed

Volatile Mineral Spirits for Thinning Paints

Composite Thinner for Thinning Semipaste

Paints when the Use of Straight Linseed Oil is not Justified

Water Resisting Spar Varnish

Asphalt Varnish

Liquid Paint Drier

Flat Interior Lithopone Paint, White and Light Tints

Interior Varnish

Large Tungsten Filament Incandescent Electric Lamps

Lumber (Grading and Inspection Rules)

Asbestos Millboard

Cutout Bases

Non-Refillable Cartridge Enclosed Fuses

Flexible Non-Metallic Tubing

Dry Cells

Insulated Safes and Cabinets

Snap Switches

Rubber Covered Wires and Cables for Ordinary Purposes

Water Resisting Red Enamel

Gloss Interior Lithopone Paint, White and Light Tints

Revisions in the following standards were accepted at the 1923 meeting of The American Society for Testing Materials for publication as tentative:

METALS

Specifications for Structural Nickel Steel
Specifications for Steel Castings

Specifications for Welded and Seamless Steel Pipe

CEMENT, LIME, GYPSUM AND CLAY PRODUCTS

Specifications for Drain Tile

Specifications for Clay Sewer Pipe

Specifications for Cement-Concrete Sewer Pipe

Specifications for Calcined Gypsum

MISCELLANEOUS MATERIALS

Specifications for Purity of Raw Tung Oil

Method of Test for Apparent Specific Gravity of Sand, Stone and Slag Screening

Method of Test for Soluble Bitumen

Methods of Sampling and Analysis of Creosote Oil

Methods of Testing Cotton Fabrics

Definitions of Terms Relating to Paint Specifications

Under the new tentative standards, the following specifications and methods were accepted at the 1923 annual meeting of The American Society for Testing Materials, for publication as tentative standards:

METALS

Specifications for Non-Ferrous Insect Screen Cloth

GYPSUM

Specifications for Gypsum Partition Tile or Block

PAINTS AND OILS

Method of Test for Specific Gravity of Pigments

Methods of Testing Oleo-Resinous Varnishes

WATERPROOFING MATERIALS

Specifications for Asphalt Mastic for Use in Waterproofing

Specifications for Bituminous Grout for Use in Waterproofing above Ground Level

Specifications for Bituminous Grout for Use in Waterproofing below Ground Level

Specifications for Felted Fabrics Saturated with Bituminous Substances for Use in Waterproofing

Specifications for Woven Cotton Fabrics Saturated with Bituminous Substances for Use in Waterproofing

Specifications for Burlap Saturated with Bituminous Substances for Use in Waterproofing

The American Engineering Standards Committee has during the past year given its approval on a number of the specifications adopted by the Fed-



The SHERATON, Boston, Mass.: Strickland, Blodget & Low, Architects; Chase & Gilbert, Engineers and Contractors; Sanitas Manufacturing Co., Jobbers; Robert Robertson Co., Plumbers

KOHLER

And THE SHERATON

KOHLER

This name, unobtrusively fused into the enamel of every Kohler fixture, is a guaranty of genuineness and of these distinctive Kohler qualities—(1) the beautiful snowy whiteness of the durable enamel; (2) the uniformity of that whiteness in every fixture.

The Sheraton, situated in Bay State Road, overlooking the beautiful Charles River Basin, is one of Boston's newest and finest apartment hotels.

The exterior design of this building is an adaptation of the Georgian style. The interior is designed in the Adam period, with furniture in the style of Sheraton.

An unusually attractive feature is the spacious main dining room, scarcely thirty feet from the water and giving through large windows a sweeping view of the water front.

The Sheraton has 132 suites of from one to four rooms. The bathrooms have tiled walls and floors and are fitted with Kohler "Viceroy" recess baths.

KOHLER OF KOHLER

Kohler Co., Founded 1873, Kohler, Wisconsin
Shipping Point, Sheboygan, Wisconsin

BRANCHES IN PRINCIPAL CITIES

MANUFACTURERS OF ENAMELED PLUMBING WARE AND KOHLER AUTOMATIC POWER AND LIGHT 110 VOLT D. C.

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

eral Specifications Board and The American Society for Testing Materials and has before its various committees many other projects, especially those which have not heretofore been given close attention. Numerous subjects thus being studied have more to do with matters not directly of interest to the architect.

The earnest specification writer will investigate all sources of information before preparing specifications of new materials or methods. Many clients are absorbing enough information relative to building costs to realize that it is necessary for the architect to be as thoroughly practical and as economical in constructing a building as is humanly possible. Never before have there been conditions similar to those that have obtained in the last few years, where it has been so necessary for the architect to study his use of materials and methods in order to insure not only the receipt of bids that will warrant the construction of the building but that will eliminate possibilities for extras. The architect cannot excuse himself by saying that he has not the information necessary to investigate. Through all of the agencies that are constantly working for the advancement of knowledge respecting materials and methods used in building construction, the architect will always be able to find sufficient material to enable him to form judgment on what materials or methods should be used to insure the production of a building exactly suited to the needs of the client, not only for the first year of its occupancy, but throughout the long life that good construction will insure.

The architect must understand the necessity for a more complete study of specifications and the following excerpt from a resume of the organization and work of the Federal Specifications Board, written by N. F. Harriman, Vice-Chairman, is of interest in this connection:

"The work of the Federal Specifications Board is closely related to the general subject of standardization, and standardization of specifications is the first and most essential step in the economy that arises from the purchase of materials in large quantities. It is a necessary factor in the improvement of the quality of materials purchased and the adaptation of quality to definite uses. The purchase of materials in accordance with well defined standards, understood and agreed upon by the purchaser and producer alike in the contract, is the only way by which materials can successfully be purchased by competitive bids. With such standards the Government is enabled to take advantage of this method in securing the lowest price that can be obtained for an article of the required standard. Without them the reputable bidder is not only at the mercy of the unscrupulous one, but the Government is deprived of the legitimate economy resulting from this method.

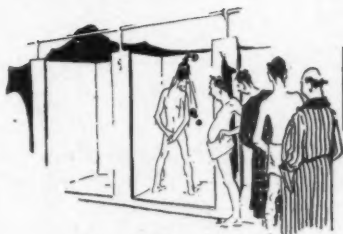
"The suitability of an article for the service required is equally important, otherwise money would be wasted in the purchase of materials of a quality better than needed, and great losses would result from the use of cheap but low grade materials. The great value of specification standardization from the standpoint of the Government, lies in consolidated purchases to a single standard specification for a given article. This results in economy. From a military standpoint supplies can more readily be purchased in an emergency, owing to standard reserve stocks and a greatly enlarged market.

"The selection of a specification for standard without due regard to the manufacturing problems involved would be equally as serious as for manufacturers to establish them without a careful consideration of the needs of the purchaser. In the selection of specifications for Government use the Federal Specifications Board is co-ordinating these two interests in a manner which is fair to and understood by both the manufacturer and the user, and will in time base all Government purchases on correct standards of quality and practice. This procedure will, no doubt, serve in time as a model to be followed by large corporations, municipalities, States and the public. In fact, several such cases have already occurred."

The Department of Commerce has undertaken the preparation of a dictionary or handbook of specifications for supplies purchased by Federal, State and Municipal Governments and public institutions, with the object in view of bringing about the widespread use of specifications by these agencies as a basis of purchase for supplies. This work grew out of a meeting in May, 1923, of State purchasing agents from all over the country, at which the co-operation of the various States was assured. On June 11 a conference of various national organizations interested in purchase specifications from the point of view of both producer and consumer was held for the purpose of organizing an Advisory Committee.

The Department of Commerce is now preparing a classified list of some 5,000 specifications of interest to public purchasing officials, which it is proposed to send to the interested organizations and individuals for comment so that it may be made as complete as possible before publication. A list has also been prepared of 20,000 items of interest to Federal, State and Municipal Governments and public institutions for which there should be specifications. Thus approximately 75 per cent of the supplies purchased are not covered by specifications.

In a recent announcement the Department of Commerce stated that individuals and groups for which the dictionary is being prepared have given assurance that they will welcome its appearance and co-operate actively in its preparation.

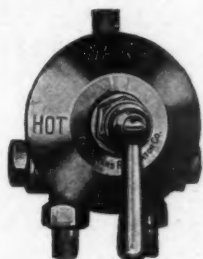


**They stood in line
at the Union League Club**

The showers of this prominent Chicago club were formerly equipped with ordinary mixers. The management decided to test the Powers Mixer on one of the showers. Members say that the men quickly found out that it did all we claim for it and actually stood in line to use it.

Some Recent Installations

Illinois Athletic Club, Chicago, Calumet Country Club, Homewood, Ill., Big Oaks Golf Club, Chicago, Postl's Health Club, Chicago, Frank Carsey Health Club, Cubs Ball Park, Chicago, Lake View Golf and Country Club, Port Credit, Canada, Cleveland Athletic Club, Evanston Golf Club.



Style A
For Exposed
Piping

The Powers Shower Mixer

Comes in 4 styles. For exposed and concealed piping. Made of solid brass with nickel plated dial and handle. It is ruggedly built and has no delicate parts to get out of order.



Has this ever happened to you?

Have you ever been cheated out of a pleasant, enjoyable shower by a sudden, unexpected "shot" of cold or scalding hot water? This menace to your complete enjoyment of a safe and comfortable bath is eliminated by the Powers Shower Mixer.

30 years of Specialization in temperature control behind this Mixer

The Powers Shower Mixer is different from all other mixers. Turn the handle of the ordinary mixer to "Warm," and if cold water is drawn from nearby showers, faucets, flush valves, etc., the reduced pressure on the cold water line allows a "shot" of hot water to reach the bather. Ordinary mixers give no protection against changing water pressures.

How the Powers Mixer Works

A simple all-metal pressure balancing valve instantly equalizes the pressure of hot and cold water before they enter the mixing chamber, so that regardless of pressure changes, a Powers Mixer always holds the temperature of the water right where you want it.

Bul. 154 gives full information and roughing-in dimensions. May we send it?

THE POWERS REGULATOR COMPANY

Over 30 years of specialization in automatic temperature control

2797 Greenview Avenue, Chicago

ATLANTA
BALTIMORE
BOSTON
BUFFALO
BUTTE, MONT.
CHARLOTTE, N.C.

CINCINNATI
CLEVELAND
DES MOINES
DETROIT
EL PASO

HOUSTON
INDIANAPOLIS
KANSAS CITY
LOS ANGELES
MILWAUKEE

MINNEAPOLIS
NASHVILLE
NEW ORLEANS
NEW YORK
PHILADELPHIA

PITTSBURGH
PORTLAND
ROCHESTER
ST. LOUIS
SALT LAKE CITY

SAN FRANCISCO SEATTLE
CANADIAN OFFICES
TORONTO WINNIPEG
MONTREAL CALGARY
HALIFAX VANCOUVER

2450-A

A SERIES OF ARTICLES BY RALPH ADAMS CRAM

BEGINNING in our issue of January 16, and continuing for one issue each month during February, March and April, there will appear in *THE AMERICAN ARCHITECT* a series of articles by Professor Ralph Adams Cram, setting forth his impressions during a recent extended sojourn in Spain.

Professor Cram, by reason of long architectural experience, his fine ability as a trained observer, combined with a most scholarly style of expression, is peculiarly fitted to write on this topic.

It is confidently believed that no previous description of a country so rich in its art of architecture will have been more interestingly set forth.

CONJUNCTIVE WEEK-END PROBLEMS

THE Massachusetts Institute of Technology Department of Architecture has this year initiated a change both in the number and in the nature of the problems offered, this having again been done with the full co-operation of architects' offices, the School of Architecture at Harvard, Department of Architecture at the Massachusetts Institute of Technology, and the Boston Architectural Club.

Five problems are to be presented, each being given out on a Friday evening at 5 o'clock and due the following Monday at 9 o'clock, the offices having agreed to release such of their draftsmen as took the problems from office demands on the Saturday morning in question.

Two prizes are offered, one of \$50 and one of \$25, for each projet, and the results of the first attempt have already demonstrated the wisdom of this change as 15 drawings were submitted, half a dozen of which were of a very high order.

HENRY GILLETTE WOODMAN SCHOLARSHIP

THE Henry Gillette Woodman Scholarship for 1923 has recently been awarded to Gerald Kenneth Geerlings who received the Bachelor's degree in 1921 and the Master's degree in 1922 from the Department of Architecture of the University of Pennsylvania.

This scholarship was founded by the bequest under the will of George B. Woodman, deceased, in memory of his son and provides for the payment of expenses, or toward the expenses, of one year's travel in Europe of a student or graduate of the Architectural Department. The scholarship is open to any holder of a degree who completes at the University of Pennsylvania the requirements of either of its degrees in architecture.

ANNUAL ARCHITECTURAL AWARDS OF THE FIFTH AVENUE ASSOCIATION

THE Fifth Avenue Association recently made its annual medal awards for the best new and altered buildings completed in the Fifth Avenue section during the year 1923.

John H. Towne, Chairman of the Board of Directors of the association, presented the medals to the owners of the buildings which, in the opinion of the Board of Directors, upon the recommendation of its Committee on Architectural Harmony, deserved the honors.

The committee which makes these awards is appointed jointly by the association and the New York Chapter of The American Institute of Architects. The committee is composed of three lay members and three architects.

Every building in the Fifth Avenue section completed during the past year that was eligible for consideration under the terms of the contest was inspected by the committee. The laymen and architect members made their inspections separately, after which they held a joint meeting and recommended to the Board of Directors the awarding of the medals.

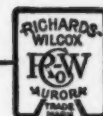
First prize for new buildings, a gold medal and diploma, was awarded to the building known as 383-385 Madison Avenue, owned by the 385 Madison Avenue, Inc. The building is in a modernized Renaissance style of architecture, and the Madison Avenue front is entirely Indiana limestone.

The first prize for altered buildings, which also includes the awarding of a gold medal and diploma, was awarded to the building known as the Prudence Building, 331 Madison Avenue, the owner of which is the 331 Madison Avenue Corporation. The building has been altered in the spirit of the Renaissance, and the new façade is a combination of limestone, brick and terra cotta.

In addition to the awards made to the owners of these buildings, diplomas were also awarded to Cross & Cross, architects, in recognition of their work in designing the prize winning new building at 385 Madison Avenue and also to Severance & Van Alen, architects of the prize winning altered building of the Prudence Company.

RECONSTRUCTION OF RHEIMS TO BE COMPLETED IN FIVE YEARS

IN outlining the fourth year of the work of the Rheims Co-operative Society for the Reconstruction of Rheims at a recent general meeting it was stated that 180,000,000 francs had been spent in Rheims during 1923. It was further expressed that if the State was able to continue its aid in this work, the reconstruction of Rheims should be completed within five years.



“IDEAL” Elevator Door Hardware is Now STANDARD High Grade Equipment

In America's most famous buildings—office, hotel and apartment structures—“IDEAL” Elevator Door Hardware is giving noteworthy service. Its careful design and durable construction eliminate unnecessary maintenance expense; its safety features prevent accidents; its efficient and *silent* operation pleases tenants.

R-W “IDEAL” hardware is recognized as standard high grade elevator door equipment. It includes automatic door controller and check, and hangers for single-speed, two-speed and three-speed elevator doors; for doors in pairs, operating from both sides, and combination swing-out doors.

Every architect will find it helpful to have our catalog D-21 in his reference file. Write for a free copy today.

New York
Boston
Philadelphia
Cleveland
Indianapolis
St. Louis

Richards-Wilcox Mfg. Co.
A Hanger for any Door that Slides

AURORA, ILLINOIS, U.S.A.

RICHARDS-WILCOX CANADIAN CO., LTD.
Winnipeg LONDON, ONT. Montreal

Chicago
Minneapolis
Omaha
Kansas City
Los Angeles
San Francisco

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

SULGRAVE INSTITUTION BUYS ANCESTRAL HOME
OF JOHN ADAMS

PURCHASE of the ancestral home of John Adams, second President of the United States, at Flore, Northamptonshire, England, was recently announced by the Sulgrave Institution of the United States. The cottage, in the adjoining yard of which are buried twenty-one members of the Adams family, will be restored and used as a center for the work of promoting friendship among the English-speaking peoples, which is the chief *raison d'être* of the Sulgrave Institution.

THE FUTURE OF CANBERRA

A CAMPAIGN has been started to bring about the abandonment of Canberra, the proposed Australian Capitol, the expenditure on which has already reached £1,500,000, states a recent issue of *The Architect*, of London. It was originally projected on account of the rivalry between the claims of Melbourne and Sydney, the worst reason possible for the foundation of a new city, and one which can hardly be expected to secure good and permanent results. Looking at the map of Australia it may be described as a settlement round the South, East and West coast of a continent, the populating of which is effected by penetration from the coast, hindered by the difficulties of irrigating the interior. It is therefore clear that the natural centers of population and business are likely to be situated on the coast and not some way inland as Canberra is placed. Either Sydney or Melbourne are therefore better natural positions, especially the former, placed on one of the finest natural harbors in the world.

Chicago was, of course, made by the fact that it was a natural railway center in proximity with the great wheat areas of the middle West and had the facilities for water carriage given by the Great Lakes, but we have never heard that Canberra had much to recommend it but surroundings of some beauty and the fact that it was neither Sydney nor Melbourne.

HOUSEKEEPING WITHOUT TEARS

UNDER this telling title a contemporary describes the heaven which some thirty women have found at Bournville, states *The Architect*, London, in one of its recent issues.

A communal kitchen to cook—communal housemaids to clean—central heating—hot water day and night—a beautiful garden and lawn tennis courts—three delightfully furnished sunny little rooms—and 25s. weekly rent.

The twenty-four single flats—there are four double flats and four bed sitting rooms besides—comprise bedroom, sitting room and "service" room. The "service" room contains two large

cupboards, a white enamel sink, a tiny larder with a slate slab, and a gas grill; so residents who wish it are independent of the communal dining room. There is a bathroom for every four residents.

The cooking and catering are under the capable direction of a Scotswoman trained in domestic service at Edinburgh. But the greatest of all recommendations is that expressed in the heading! Would not Tearless Tenements prove an attractive title for a new Settlement?

TO MARK HISTORIC SITES

DESIGNS for a series of tablets marking sites of historic interest in the days of early New York were recently submitted to the Municipal Art Commission by the Allied Patriotic Societies. The proposed tablets are to be small, relating in tabloid form the historical association of the site marked, and are to be placed on lamp posts in front of the famous spots.

Drawings for two tablets are now before the commission, and plans for thirty-five more are being accumulated by the Historical Society. The era first to be considered is the early Dutch history of New York. The corner of Maiden Lane and Broadway and Wall Street, at the intersection of Broadway, are the sites suggested for the first two tablets to be selected.

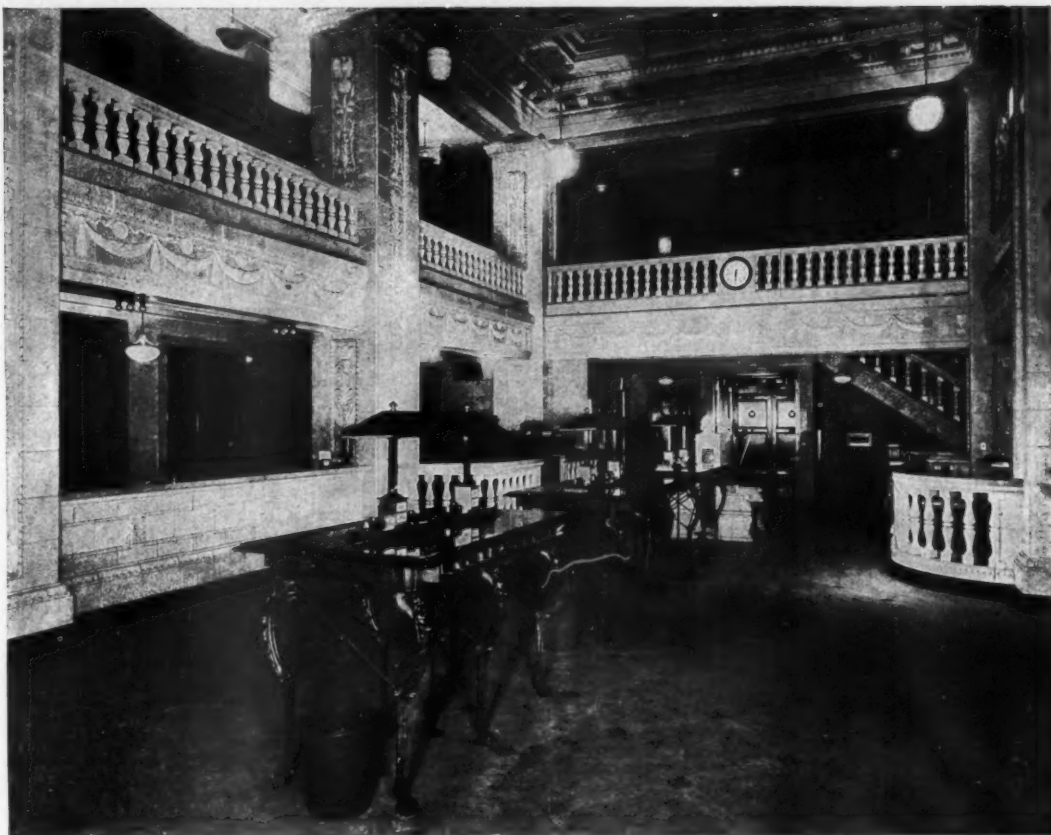
If erection of the first marker proves successful it has been suggested that similar landmarks be placed all over the city, drawing attention to notable incidents connected with the city's growth.

GLASS ROOFS IN EAST INDIES

DUTCH EAST INDIANS may truthfully be said to "live in glass houses," and neither is it a stony country. The homes of Europeans and many of those of the wealthier natives have roofs of uniform red tiles, made of the red clay of Java, and glass tiles, giving a skylight effect over the entire roof.

EXHIBITION OF INDUSTRIAL ART

THE Metropolitan Museum of New York has announced the opening of its annual exhibition of Industrial Arts for January 14, 1924, to continue till March 2. The principal purpose of the exhibition, as heretofore, is to show effectively the artistic progress of American manufactured products, and the scope of the work to be shown includes all branches of marketable materials. An interesting feature of the type of the exhibit is that all products are to represent actual stock patterns, not special order work or isolated examples. This gives a decided general interest to it which would not be possible under other conditions.



Matt glazed Terra Cotta of a softly mottled pinkish buff used for balustrades, balcony and counter facings.

MAIN BANKING ROOM, J. F. WILD STATE BANK
INDIANAPOLIS, INDIANA

Fermor Spencer Cannon
Architect

FOR INTERIOR FINISH

Beautiful Color Effects.

Appealing Surface Textures.

Elaborate and Rich Modeling.

All without excessive cost and offering a solution which is unhackneyed and satisfying.

Literature assisting effective specification will be sent on request. Address:

NATIONAL TERRA COTTA SOCIETY

19 WEST 44th STREET

NEW YORK, N. Y.

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

THE MULLETT POST OFFICE IN NEW YORK

THE people of New York are still hoping for action in the matter of the removal of the Post Office in New York. With the creation of a new civic center on Center Street and the allotment of an appropriate site for the proposed new Post Office, it was believed that the Federal Government would speedily act to remove the old Post Office building on the southern part of City Hall square and restore that historical location to its former dignity. Nothing definite has yet been accomplished, and New York is now being fed with promises of early action in exactly the same way as for a decade past. The present Post Office building also houses the Federal Courts. The accommodations are now and have been for a long time notoriously inadequate. The sanitary conditions have been seriously criticized. As an example of bad architecture the building is notorious and mars a location that is dignified by the City Hall, McComb's masterpiece. There is a strongly expressed sentiment on the part of the people and the City government in favor of razing this unsightly structure and the Federal Government has expressed willingness in the matter. "Red tape" is now the sole preventive and the sooner it is cut, the better.

BRUSSELS OVERFLOWS INTO THE SUBURBS

RECENT information received from Brussels through United States consular reports, indicates that that city is suffering from the housing shortage in common with all other cities of the world.

Although the population of the center of the town has decreased by as many as 22,000 persons during the decade ending 1920, the suburbs surrounding Brussels have shown a proportionate increase of population. This was naturally to be expected, for with the demand for houses and the cessation of building activities during the war, the houses in the center of the town have naturally become greatly in demand and have become too expensive to be used as dwellings and families have, therefore, moved out to make room for commercial houses and office buildings.

In Greater Brussels the number of houses increased from 1910 to 1920 by 6.35% and the number of families living separately in the same period by 13.49%, though the population itself increased by only 4.37%. The number of families per house was 242 for every 100 houses in 1910 as against 258 per 100 houses in 1920. In Brussels itself opposite tendencies have been at work. For, though the number of houses there has diminished in this period, the proportion of persons living in them has even diminished still more, viz., by 7.73%.

In Greater Brussels room overcrowding has slightly increased. In 1910 there were 74,402 lodgings with 314,287 occupants making 43%

of the population. In 1920, 74,826 families were inadequately housed, the definition of "inadequate housing" being that there was more than one person per room.

ZONING LIGHTING FACILITIES OF CITIES

POINTING out the great waste that is involved in the present method of street lighting and the lack of adaptation of the lighting facilities of a city to the needs of the different sections of that city, Charles J. Stahl in a recent issue of the *American City* points out the great advantages to be obtained in not merely zoning the lighting facilities of a city, but developing them in connection with a comprehensive plan of city development. He says:

"Putting into effect the practice of designing street-lighting systems along with zoning or expansion plans, permits standardization, simplified supervision, reduced maintenance costs, and the most efficient arrangement for transmitting energy to centers of distribution."

In working out a system of rules that should guide correct procedure in the designs of ornamental street lighting installations Mr. Stahl states that:

"The justifiable expenditure for street lighting may be graded according to traffic density."

This scheme he develops in an extraordinarily interesting and logical way and we commend his article to all persons interested in the scientific and rational development of our cities.

TO MAKE THE WHITE HOUSE SAFER FROM FIRE

MAJOR GEN. BEACH, chief of engineers of the army, in a recent report to President Coolidge states that the White House is not a safe abode. Remedial measures should be taken, reports Gen. Beach, to prevent a possible calamity. Congress is requested to appropriate \$400,000 for reconstruction.

Col. C. O. Sherrill, Superintendent of Public Buildings and Grounds, is also quoted in Washington despatches as saying that the danger at the White House was in the upper story and roof, neither of which was fireproofed when the White House was renovated in 1902.

"A preliminary study of the situation in the interior upper portion of the Executive Mansion has indicated a condition which renders the building unsafe, both from the standpoint of security in the structural features and the fire hazard present," said Gen. Beach. "These conditions have been called to the attention of the President, and his authority for the inclusion of the item submitted herewith (\$400,000) has been requested. While such approval has not yet been secured, the item is tentatively included herein."

The upper inflammable portion of the White House dates back to 1815, when the structure was rebuilt after it had been burned by the British.



Just What "Frink" Stands For In The Lighting World

IN case you too are under the impression that Frink is the name of a reflector, this will set you straight.

Frink is the sign of a Service. A Service that develops and sells ideas for unusual methods of electric illuminating. A Service that sells results.

Incidentally, we manufacture and deliver the equipment necessary to produce the results we sell.

Starting before the days of electric lighting, for over 66 years this service has been developed through hundreds of thousands of contracts.

Frink Service reaches everywhere that electric lighting can be used. There is seldom a job too small for it to be economically employed. Certainly none is ever too large.

At any time one of us would be glad to explain our Service more in detail, or confer with you over any lighting problem you may have.

I. P. FRINK Inc.

24th Street and 10th Avenue, New York

Chicago
Seattle

Boston
Buffalo

Detroit
Birmingham

Cincinnati
Philadelphia

San Francisco
St. Louis

Cleveland
Atlanta

CANADA:

Associated with Robert Mitchell, Ltd., 64 Belair Ave., Montreal

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

REFERENCE LIST OF BUSINESS LITERATURE

A service arranged for the use of the Architect, Specification Writer, and Architectural Engineer.

This list of the more important business literature of Manufacturers of building material and equipment is published each issue. Any of these publications may be had without charge, unless otherwise noted, by applying to The American Architect and The Architectural Review, 243 West 39th Street, New York, or obtained directly from the manufacturers. Either the titles or the numbers may be used in ordering.

AIR CONDITIONING—See also Heating and Ventilation

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

480. *Bulletin No. 23*. This bulletin is descriptive of the Bayley Turbo-Atomizer, the Bayley Turbo Air-Washer and Air Conditioner, for cleaning, cooling, tempering, humidifying and dehumidifying air. It contains an interesting treatise on air conditioning methods together with useful tables and a set of specifications. 32 pp. Ill. 7 1/4 x 10 1/2 in.

AIR FILTRATION

Midwest Air Filters, Inc., 100 E. 45th St., New York City.

642. *Dust Problems and Their Solution*. A discussion of the problems of supplying clean air for ventilation and industrial purposes, covering the complete line of Midwest Air Filters. Drawings, photographs, installation sizes, specifications, tables, etc., make it a practical handbook on the subject for architects and specification writers. 48 pp. Ill. 8 1/2 x 11 in.

ARCHITECTURAL IRON WORK—See also Ornamental Metal Work

ASBESTOS—See also Lumber—Roofing

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

372. *Catalog No. 29*. A treatise on the manufacture and uses of Johns-Manville Building Materials made of asbestos and mastic for all places exposed to fire or corrosion. 100 pp. Ill. in colors. Board covers. 8 1/2 x 11 in.

ASBESTOS ROOFING—See also Roofing

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

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

ASH HOISTS—See also Hoists

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

329. *General Catalogue*. Contains specifications in two forms, (1) using manufacturer's name, and (2) without using manufacturer's name. Detail in 1/4 in. scale for each telescopic model and special material handling section. Fully illustrated with photographs of actual installations and descriptive matter of same. 20 pp. 2 colors. 8 1/2 x 11 in.

BRICK

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

103. *The Story of Brick*. Contains the history of, and basic requirements of building brick, artistic, sanitary and economic reasons, comparative costs, and fire safety with photographs and drawings, and illustrates ancient and modern architectural works of note in brick. Size 7 x 9 1/4 in. 66 pp.

137. *A Manual of Face Brick Construction*. The history of brick making, types of face brick, showing details of construction for walls, chimneys and arches. Details of use of tile and brick construction and different types of bonds are given. A series of plans and elevations of small brick houses, descriptions, useful tables and suggestions are illustrated and described. Size 8 1/2 x 11 in. 116 pp. Price \$1.00.

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

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

454. *Bungalow and Small House Plans*. Four booklets containing plans for attractive small brick houses, containing 3-4, 5, 6, and 7-8 rooms. 50 pp. Ill. 8 1/2 x 11 in. 25 cents each, \$1.00 for the set.

BRICK AND TILE—See also Brick

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

561. *Pottery*. A beautifully prepared and illustrated book and portfolio of work, executed with the products of this company. Included are "Riviera" Mission Roofing Tile, "Riviera" Shingle Roofing Tile, Rubble Random Tile and Quarrie Tile for walks, floors and terraces, fireplace tile and Hood Brick. Many of the illustrations are in full color and give an excellent impression of the results attained. Printed on one side for convenient filing. 45 pp. Ill. 9 1/2 x 12 1/4 in.

BRONZE TABLETS

Newman Manufacturing Co., 416 Elm St., Cincinnati, Ohio.

644. *Newman Bronze Tablets*. A booklet containing more than 100 illustrations of bronze tablets and memorials made by this company. Price lists of plain bronze tablets with extra charges for special styles and architectural borders. 48 pp. Ill. 9 x 12 in.

BUILDING CONSTRUCTION

Cement-Gun Company, Allentown, Pa.

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

Concrete Engineering Co., Omaha, Neb.

347. *Handbook of Fireproof Construction*. An illustrated treatise on the design and construction of reinforced concrete floors with, and without suspended ceilings. The Meyer Steel-form Construction is emphasized and tables are given of safe loads for ribbed concrete floors. 40 pp. Ill. 8 1/2 x 11 in.

Curtis Companies Service Bureau, Clinton, Iowa.

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

David Lupton's Sons Company, Philadelphia, Pa.

520. *Catalog C, Second Edition*. A catalog of steel shelving with bolted adjustment, also steel bins and racks, utility cabinets, bench legs, bench drawers, tool cabinets and stands, tote boxes, foremen's desks, waste bins, etc., 39 pp. Ill. 8 1/2 x 11 in.

McKeown Bros. Co., 21 East 40th St., New York, N. Y.

434. *Clear Floor Space*. A folder showing uses and advantages of McKeown "Lattis" and "Bowstring" long span wood roof trusses. 4 pp. Ill. 8 1/2 x 11 in.

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

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

Truscon Steel Company, Youngstown, Ohio.

317. *Truscon Floorplate Construction. Form D-352*. Contains complete data and illustrations of Floorplate installations. 16 pp. Ill. 8 1/2 x 11 in.

318. *Truscon Standard Buildings. Form D-398*. Describes Truscon Standard Steel Buildings, with diagrams, illustrations of installations, descriptive matter and list of users. 48 pp. Ill. 8 1/2 x 11 in.

319. *Truscon Building Products. Form D-376*. Contains a brief description of each of the Truscon Products. 112 pp. Ill. 8 1/2 x 11 in.

320. *Modern School Construction. Form D-396*. Contains illustrations of schools, with typical elevations, showing advantages of Truscon Products for this construction. 16 pp. Ill. 8 1/2 x 11 in.

BUILDING DIRECTORIES

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

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

BUILDING HARDWARE—See Hardware

BULLETIN BOARDS

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

588. *Clark Directories and Clark Changeable Bulletin Boards*. Two pamphlets describing the Clark Changeable Bulletin Board and Directories for Office Buildings, Hotels, Business Buildings, etc. 8 pp. and 4 pp. Ill. 6 1/4 x 9 in.

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

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

CABINETS

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

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



Detail of Residence, Newtonville, Mass. Frank Chouteau Brown, Architect

A CHARMING angle with canopied entrance. The rich tone of the brick, the wide flush-cut joints, the soldier belt course, and rowlock and soldier sills are all simple elements, but form together a most attractive whole. Another example of the artistic possibilities of standard size face brick. If you admire beautiful brick-

work you will be interested in "Architectural Details in Brickwork." The half-tone plates, issued in three series, each in an enclosed folder ready for filing, will be sent to any architect requesting them on his office stationery. Address, American Face Brick Association, 1754 Peoples Life Building, Chicago, Illinois.

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

CASEMENTS—See Doors and Windows**CEDAR LINING—See Lumber****CEILINGS, METAL**

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

CELLAR SASH—See Doors and Windows**CEMENT**

The Carney Co., Mankato, Minn.

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

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

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

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

Louisville Cement Company, Inc., Louisville, Ky.

518. *Brickset for Perfect Mortar.* Attractive booklet, with tabbed cover for filing, containing information, in both descriptive and tabular form, regarding the physical properties and manufacture of this special cement for brick and stone work. Contains reports of testing laboratories and contractors on results attained with its use. Size 8½ x 11 in. 90 pp. Illustrated.

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

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

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

CHAIRS—See Furniture

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

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

CHUTES—See also Laundry Equipment

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

171. Booklet showing general construction and size of chutes to receive coal. Two types are built into the foundation wall with glass panel in place of cellar window; another type is placed flush with the ground, and is placed adjacent to wall, or can be placed near the street curb. Size 3½ x 6½ in. 16 pp.

CLOCKS

Lands Engineering and Manufacturing Co., Waynesboro, Penna.

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

COLUMNS

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

122. *Lally Columns. Handbook.* Detailed construction diagrams for various types of steel construction. The text describes advantages of endurance and economy of the column. Various tests, tables of sizes, dimensions, weight, carrying capacities, and data on other structural materials are given. Size 4½ x 6½ in. 81 pages.

CONCRETE, REINFORCED—See also Reinforcing Steel**CONDUITS—See Pipe****DAMP-PROOFING—See also Waterproofing****DOORS AND WINDOWS**

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

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

Crittall Casement Window Co., Detroit, Mich.

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

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

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

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

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

H. E. Holbrook Co., 444 Massachusetts Trust Bldg., Boston, Mass.

F783. *Whitco Casement and Transom Hardware.* A folder describing a self-contained fixture for transoms and casements, having no butts or adjusters and with all operating hardware concealed. 6 pp. Ill. 4 x 9 in.

The Kinnear Manufacturing Company, Columbus, Ohio.

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

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

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

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

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

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

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

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

Truscon Steel Co., Youngstown, Ohio.

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

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

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

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

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

DRAFTING MATERIALS

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

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

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

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

DRAINS—See also Plumbing Equipment



Lupton

COPPER STEEL

RESIDENCE WINDOWS

The Lupton "projected" movement prevents rattle and permits easy cleaning (both sides) from interior. ✓ ✓ The cost is very moderate.

DAVID LUPTON'S SONS COMPANY

2201 E. Allegheny Avenue

Philadelphia

Write for name of nearest dealer

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

DRAINS—See also Plumbing Equipment

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

630. Josam Floor, Shower and Roof Drains. *Catalog P.* A loose leaf catalog illustrating complete line of adjustable drainage devices for floors, shower baths, roofs, swimming pools, railroad and deck drains, special use drains, strainers and accessories. Details and dimensions. 56 pp. Ill. $8\frac{1}{2} \times 11$ in.

631. Josam Plate Numbers. A loose leaf portfolio containing blue print details with dimension schedules of drainage fixtures for floors, showers, roofs, decks and special uses. 25 pp. Ill. $8\frac{1}{2} \times 11$ in.

DUMB-WAITERS—See also Elevators

Knestner & Hecht Co., 1500 No. Branch St., Chicago, Ill.
598. Electric Dumb-waiters. *Bulletin No. 500.* Illustrated catalog, 8 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

60. Hand Power Elevators and Dumb-waiters in Modern Architectural Construction. Illustrated catalogue. $4\frac{1}{4} \times 8\frac{3}{4}$ in. 80 pp.

ELECTRICAL EQUIPMENT—See also Lighting

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

296. Catalog No. 25. A catalog and price list of knife switches, switchboards, panel boards, steel cabinets, switchboard material. 83 pp. Ill. $3 \times 10\frac{1}{2}$ in.

Benjamin Electric Mfg. Co., Chicago, Ill.

671. Benjamin Industrial Lighting Equipment. *Bulletin No. 52.* Contains lighting data and general information, complete catalog of reflectors, interchangeable devices, vapor proof units, indoor and outdoor equipment, store and office fixtures, show case lighting, fittings and accessories. 80 pp. Ill. $8 \times 10\frac{1}{2}$ in.

Harvey Hubbell, Inc., Bridgeport, Conn.

297. Electrical Specialties. *Catalog No. 17, 1921.* This catalog contains descriptions with prices of the thousand and one items connected with electric light, electric alarm and small electric appliance installations in modern buildings. 104 pp. Ill. $8 \times 10\frac{1}{4}$ in.

Minneapolis Heat Regulator Co., Minneapolis, Minn.

570. The Minneapolis Thermostatic Relay Switch. Used in connection with any Minneapolis Thermostat, provides a means of temperature control for automatic oil burners, electric refrigerating apparatus, electric heating units and any similar equipment where it is necessary to operate an electric switch in accordance with temperature changes. 4 pp. Ill. $8\frac{1}{2} \times 11$ in.

National Metal Molding Co., Pittsburgh, Pa.

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

ELEVATORS—See also Dumb-waiters and Hoists

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

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

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

597. Electric Traction Elevators. *Bulletin No. 500.* Illustrated catalog describing gearless traction elevators and worm-gear traction elevators. 31 pp. Ill. $8\frac{1}{2} \times 11$ in.

Kimball Brothers Company, Council Bluffs, Iowa.

330. Kimball Elevators. An illustrated catalog of hand power, sidewalk, and garage elevators and dumb-waiters and electric passenger, freight and push button elevators. 32 pp. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

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

651. Otis Geared and Gearless Traction Elevators. Leaflets describing all types of geared and gearless traction elevators with details of machines, motors and controllers for these types. Illustrated. $8\frac{1}{2} \times 11$ in.

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

335. "Ideal" Elevator Door Equipment. Catalog showing elevator door hangers for one, two and three speed doors, also doors in pairs and combination swing and slide doors. Door closers and checks. 24 pp. Ill. $8\frac{1}{2} \times 11$ in.

ELEVATOR LOCKS

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

539. M-C-K Safety Elevator Locks. A description of locks for elevators which mechanically lock the power and gate automatically, while gate is open; keep power locked until gate is securely closed; securely lock gate before power can operate; control the landing. Contains several pages of names of contented users. 24 pp. Ill. $4 \times 9\frac{1}{2}$ in.

ESCALATORS

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

652. Elevators and Inclined Elevators. A comprehensive catalog illustrating the use of escalators for transporting people in stores, subways, railroad stations, theatres and mills; also inclined freight elevators for stores, factories, warehouses and docks adjustable to tide levels. 22 pp. Ill. $8\frac{1}{2}$ in.

FENCE

The Stewart Iron Works Company, Cincinnati, Ohio.

456. Book of designs "B." A book of fence designs full of suggestions for architects. All illustrations are from photographs. 80 pp. Ill. $9\frac{1}{2} \times 12$ in.

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

The Hockenbury System, Incorporated, Penn-Harris Trust Building, Harrisburg, Pa.

313. Your Hospital and Its Financing. An educational work on how to finance a new hospital project and obtain funds for needed extensions to existing institutions. Illustrations are given of six institutions in five states financed by the methods, and through the work of the Hockenbury specialists. 20 pp. Ill. $4\frac{1}{4} \times 8\frac{1}{2}$ in.

314. Financing Your City's New Hotel. A plan is here offered to the enterprising architect whereby his ideas for a new hotel for his home city may be realized. Hotels financed through the work of the Hockenbury specialists are shown, together with testimonials from local business men. 20 pp. Ill. $4\frac{1}{4} \times 8\frac{1}{2}$ in.

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

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

FIRE DOORS AND SHUTTERS—See Doors and Windows**FIREPLACES AND MANTELS**

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

675. Everything for the Fireplace. A catalog showing a complete line of well designed andirons in various finishes; portable, club and basket grates; wood holders, firesets and Franklin stoves; folding screens, spark guards and fenders; hoods and set grates; gas logs, electric fires, ash traps, cranes and kettles and head throats and dampers. 24 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

79. Hints on Fireplace Construction. Diagrams of construction and installation of Covert "Improved" and "Old Style" dampers and smoke-chambers, and other fireplace accessories. Size $6\frac{1}{2} \times 8\frac{1}{2}$ in. 12 pp.

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

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

Peerless Manufacturing Company, Inc., Louisville, Ky.

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

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

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

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

223. Armstrong's Linoleum Floors. A handbook for architects, published in the file form ($8\frac{1}{2} \times 11$ in.) recommended by the American Institute of Architects. A technical treatise on Linoleum containing general information, tables of grades, gauges and weights, specimen specifications, and detailed directions for laying linoleum. Profusely illustrated in colors.

The Barber Asphalt Co., Philadelphia, Pa.

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

Bonded Floors Co., Inc., 35 West 45th St., New York City.

615. Standard Specification for Installation of Battleship Linoleum Over Concrete. A booklet containing specifications and explanatory notes for laying Battleship Linoleum Over Concrete and Wood, with detailed drawings. 8 pp. $8\frac{1}{2} \times 11$ in. A. I. A. File No. 28. Ill.

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

660. Distinctive Floors. An attractive publication illustrated in color, describing Gold Seal Rubber Tile for floors. 8 pp. Ill. $8 \times 10\frac{1}{2}$ in.

The H&H Line of Electrical Wiring Devices

Catalogue "R"

"The line of least resistance"



Start The New Year With The New Catalogue

IT brings the material for 1924's *good jobs!* New lines added, old ones omitted, all prices brought to date.

Complete data on Shallow Switches and Shallow Receptacles, Tumbler Switches and "GOLD STAR" Push Switches, Heater Switches and Panel Board Switches. The new "H&H" Sockets, Renewable Fuse Plugs, Attachment Plugs, Elexits, Wall Plates—an all-inclusive line.

The latest, livest book of Wiring Device progress. Send for it—*while it is!*

THE HART & HEGEMAN MFG. CO. HARTFORD, CONN.

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

FLOORING

- The Long-Bell Lumber Co.,** R. A. Long Building, Kansas City, Mo.
204. The Perfect Floor. Tells how to lay finish and care for Oak Flooring. 16 pp. 14 illus. $5\frac{1}{2} \times 7\frac{1}{2}$ in.
The Marbleloid Co., 461 Eighth Ave., New York.
01. The Universal Flooring for Modern Buildings. Illustrated booklet. Describes uses and contains specifications for Marbleloid flooring, base, wainscoting, etc. Size $6\frac{3}{4} \times 9\frac{1}{4}$ in. 32 pp.
523. Marbleloid for Schools. A bulletin showing schools in which Marbleloid flooring is used. It is a composition flooring applied in a plastic state. Other bulletins show where it has been used in various classes of buildings. 4 pp. Ill. $3\frac{1}{2} \times 11$ in.
Franklyn R. Muller Co., Waukegan, Ill.
242. Asbestos Flooring Composition. A book describing uses of and giving specifications and directions for Composition Flooring. Base, Wainscoting, etc. $8\frac{1}{2} \times 11$ in. Ill.
Oak Flooring Bureau, 1014 Ashland Block, Chicago, Ill.
403. Modern Oak Floors. A book that tells the complete story of Oak Flooring 24 pp. Ill. $6\frac{1}{2} \times 9\frac{1}{4}$ in.
Stedman Products Co., South Braintree, Mass.
585. Stedman Naturalized Reinforced Flooring. A circular describing a product formulated from rubber reinforced with cotton fibre, made in various colors and used for floors, wainscoting, sanitary base, stair treads, interior decorative units, wall coverings, table and desk tops and drain mats. 6 pp. Ill. $8\frac{1}{2} \times 11$ in.

FLOORS—See Building Construction

FRAMES—See Doors and Windows

FURNACES—See Heating

FURNITURE—See Chairs

GARAGE CONSTRUCTION—See also Building Construction

GARAGE INCLINES AND RAMPS

- American Abrasive Metals Co.,** 50 Church St., N. Y. C.
077. Feralun Anti-Slip Treads for Garage Inclines and Ramps. 7 pp. A folder explaining the advantages of and illustrating the actual use of Feralun Anti-Slip Treads on ramps and inclines in public garages. 2 pp. Ill. $8\frac{1}{2} \times 11$ in.

GARBAGE DESTROYERS

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

GARBAGE RECEIVERS

- Edwin A. Jackson & Bro., Inc.,** 50 Beekman St., New York.
170. Booklet showing general construction and sizes of garbage receivers to be placed underground for suburban use; also types to be built into the wall of city homes and apartments; also types for suburban wall with opening on inside for the maid and outside for the garbage man. Size $3\frac{1}{2} \times 6\frac{1}{4}$ in. 16 pp.

GARDENS

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

GLASS

- Plate Glass Manufacturers of America,** First National Bank Bldg., Pittsburgh, Pa.
484. The Part that Plate Glass Plays in the Life of Every Man. An illustrated folder describing the many uses of plate glass. Ask also for special circular for work in hand. 6 pp. Ill. in color. $3\frac{1}{2} \times 6\frac{1}{4}$ in.

GRANITE—See Stone

GUNITE

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

GUTTERS AND DOWNSPOUTS—See also Roofing

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

HARDWARE

- Allith-Prouty Co.,** Danville, Illinois.
596. General Catalog No. 50. This catalog embraces a description of a complete line of door hangers and tracks, garage door hardware, spring hinges, rolling ladders, fire door hardware, overhead carriers, light hardware and hardware specialties. 144 pp. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

P. & F. Corbin, New Britain, Conn.

- 540. Automatic Exit Fixtures.** A catalog of fixtures that provide a ready exit at all times, as a child can operate them with ease. Doors to which they are applied can always be opened from the inside, even when locked against entrance. 4 pp. Ill. $8\frac{3}{4} \times 11\frac{1}{4}$ in.

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

- 438. Monarch Casement Hardware.** A book describing hardware for casement windows. This Manual and folder comply with all suggestions made by the Structural Service Committee of the A. I. A. 18 pp. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in., in heavy folder for vertical file properly indexed.

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

- 330. Modern Hardware for Your Home.** Catalog of hangers for vanishing French doors; "Air-Way" multifold hardware for sun parlors and sleeping porches; "Slidrite" garage door hardware. 24 pp. Ill. $8\frac{1}{2} \times 11$ in.
435. Distinctive Garage Door Hardware. Catalog No. A-22. This is more than a catalog. It is a treatise for architects and builders on the door equipment of garages, covering sliding, folding and combination sliding and folding doors, with their hardware. 94 pp. Ill. $8\frac{1}{2} \times 11$ in.
436. Sliding Door Hardware. Catalog No. A-17. A catalog of sliding door hardware of Parallel, Accordion and Flush Door partitions. 32 pp. Ill. 7×10 in.
632. Distinctive Garage Door Hardware. Catalog A No. 29. A complete treatise on garage doors of every kind both hand and mechanically operated with description of standard and special hardware and accessories. 66 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

- 609. Russwin Period Hardware.** A brochure illustrating hardware trim in twelve architectural styles or periods. 71 pp. Ill. 5×8 in.
610. Catalog of Hardware, Volume Thirteen. A complete catalog of building hardware, trim, locks, butts and accessories. 283 pp. Ill. 8×11 in.

Sargent & Company, New Haven, Conn.

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

The Stanley Works, New Britain, Conn.

- 11. Wrought Hardware. New 1921 Catalog.** This new catalog describes additions to the Stanley line of Wrought Hardware, as well as the older well known specialties and various styles of butts, hinges, bolts, etc. 376 pp. Ill. $6\frac{1}{2} \times 9\frac{1}{4}$ in.
12. Garage Hardware. Booklet, illustrated. Garages and their equipment, such as hinges, hasps, door holders, latch sets, chain and hand bolts, showing illustrations and text with dimensions of garages, describing the Stanley Works product. Size 6×9 in. 24 pp.
13. Eight Garages and Their Stanley Hardware. Booklet Plans, drawings and complete hardware specifications. Size 5×7 in. 32 pp.
127. The Stanley Works Ball Bearing Butts. Booklet, illustrated. Description with full size illustrations of many typed butts and their parts, dimensions and finish. Size $5 \times 7\frac{1}{2}$ in. 32 pp.
405. Stanley Detail Manual. A catalog in loose leaf binder, consisting of five sections on Butts, Bolts, Blind and Shutter Hardware, Stanley Garage Hardware, Screen and Sash Hardware. Detail drawings are given, showing clearances and other data needed by detailers. 116 pp. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

Vonnegut Hardware Co., Indianapolis, Ind.

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

HEATERS—See Water Heaters

HEATING

- American Radiator Company,** 104-108 W. 42nd St., New York, N. Y.
427. Ideal-Arcola Heating Outfits. A book describing a system of hot water heating for small and medium size houses. The boiler is placed in a room and resembles a stove. No cellar required. The ash carrying reduced to a minimum. 24 pp. Ill. $6 \times 8\frac{1}{2}$ in.
Crane Company, 836 So. Michigan Ave., Chicago, Ill.
241. Steam Catalogue. A book containing full descriptions of the complete line of Crane valves, fittings, etc. 800 pp. Ill. 6×9 in.
The Farquhar Furnace Company, Wilmington, Ohio.
355. Healthful Helpful Hints. A discussion of furnace and chimney design and capacity for hot air heating and ventilation 16 pp. Ill. $4\frac{1}{4} \times 9\frac{1}{4}$ in.
356. A Plain Presentation to Dealers. A book of selling talk for dealers in Farquhar Furnaces. Four model heating layouts are shown and there is a page of useful "Do and Don't" advice. 24 pp. Ill. $8\frac{1}{2} \times 11$ in.



It Takes the "OR" from FLOOR

Marbleloid is a flooring that will back up positive assertions. There is no "or," "if," "but" or other qualifying phrase in our promises for a Marbleloid Floor. We tell you, as an architect, that this floor will prove:

Fireproof,	Resilient,
Sanitary,	Light and Strong,
Non-Dusting,	Warm,
Non-Abrasive,	Waterproof,
Non-Fading,	Long-Lasting,
Non-Slippery	Economical,
Free from Expensive Upkeep.	

Furthermore, we substantiate these promises by a strong guarantee. And as our firm makes the material and installs the floor this guarantee throws on our shoulders all responsibility—the architect takes no risk in specifying it.

Marbleloid can be specified safely for new construction or for re-surfacing over old worn-out floors,—over wood, concrete or steel foundations.

Marbleloid is laid plastic, in two coats and sets in a few hours into a seamless, tough body, possessing a fine-grained smooth surface.

Write for Specification, Samples, List of Installations, etc.

Also see Sweet's.

THE MARBLELOID COMPANY - 463 Eighth Ave. - New York City

MARBLELOID

*The Universal FLOORING
for Modern Buildings*

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

8

REFERENCE LIST OF BUSINESS LITERATURE—Continued

HEATING

General Boilers Company, Waukegan, Ill.

444. *Catalog No. 7.* A catalog completely describing the construction and operation of Pacific Steel Boilers. Contains also specifications and price lists. 32 pp. Ill. 6 x 9 in.

Hess Warming & Ventilating Co., 1209 Tacoma Bldg., Chicago, Ill.

178. *Modern Furnace Heating.* An illustrated book on the Hess Welded Steel Furnaces. Pipe and Pipeless, notes for installation, sectional views, showing parts and operation, dimensions, register designs, pipes and fittings. Size 6 x 9 1/2 in. 48 pp.

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

501. *Illinois Heating Systems. Vapor Details Bulletin 20.* This bulletin contains typical plans and elevations of heating systems, with description of details and "Standards for Computing Radiation and Boiler Sizes" of the Chicago Master Steam Fitters' Association. 18 pp. Ill. 8 x 10 1/2 in.

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

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

235. *Catalog No. 12.* This catalog contains descriptions of all the valves, packing, etc., manufactured by Jenkins Bros. Includes also dimensions and price lists of valves and parts. 271 pp. Ill. 4 x 6 1/2 in. Stiff paper cover.

237. *The Valve Behind a Good Heating System.* This booklet describes Jenkins Radiator Valves, Automatic Air Valves and other valves used in connection with steam and hot water heating. 16 pp. 4 1/2 x 7 1/2 in. Stiff paper cover.

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

301. *The Regulation of Temperature and Humidity.* A description of the Johnson System of temperature regulation and humidity control for buildings; showing many kinds of thermostatic appliances for automatically maintaining uniform temperatures. 63 pp. Ill. 8 1/2 x 11 in.

302. *Johnson Electric Thermostat, Valves and Controllers.* A catalog of devices mentioned in the title. 24 pp. Ill. 3 1/2 x 6 in.

Kewanee Boiler Co., Kewanee, Illinois.

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

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

Minneapolis Heat Regulator Co., Minneapolis, Minn.

600. *Minneapolis Dual Control.* This circular describes in detail the No. 65 Hydrosstat and No. 70 Pressurestat and their application for the automatic heat control of hot water, steam or vapor systems. 12 pp. Ill. 3 1/4 x 6 in.

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

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

291. *Perfect Warm Air Furnaces.* No. 203. Contains a full description of various types of warm air furnaces and parts, with dimensions and necessary data. 24 pp. Ill. 8 x 10 1/2 in.

292. *Perfect Cooking Ranges.* Description and dimensions of the complete line of the new high enamel finish Richardson Perfect ranges, with charts and information regarding combination coal and gas cooking ranges. 40 pp. Ill. 8 1/2 x 11 in.

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

395. *About Radiator Enclosures.* A booklet showing how easily and effectively unsightly radiators may be concealed by enclosures which adorn a room. 15 pp. Ill. 6 1/4 x 9 1/4 in.

396. *Special Designs, Catalog 66A.* A book of designs for grilles, screens, registers and ventilators to be used in connection with heating installations. Made of bronze, brass, iron and steel. 40 pp. Ill. 6 1/4 x 9 1/4 in.

Utica Heater Company, Utica, N. Y.

557. *Utica Imperial Super-Smokeless Boilers.* These boilers burn all fuels and consume soft coal without smoke. The illustrated catalog contains complete technical data with lists of illustrations. 76 pp. Ill. 8 1/2 x 11 in. (Separate bulletins may be had featuring the following buildings: Schools, Churches, Public Buildings, Apartments, Hotels, Residences, Industrial Buildings, Office and Theatres.)

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

HEATING AND VENTILATION

American Blower Co., Detroit, Mich.

301. *Sirocco Service.* A quarterly publication containing descriptions of heating and ventilating systems installed by the American Blower Company, together with useful data for architects and engineers. 16 pp. Ill. 8 1/2 x 11 in.

302. *General Catalog "ABC" Products.* A book full of useful data for all men who have to deal with heating and ventilating problems. 132 pp. Ill. 8 1/2 x 11 in.

645. *Special bulletins describing in detail all of the apparatus in their general catalog.* Sent on request. Ill. 8 1/2 x 11 in.

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

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

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

673. *New Sectional Catalog No. 200.* Describing the latest improved cycloidal multivane fans for heating, ventilating and drying also standard steel plate fans and pipe coil heaters. Details, capacity tables and specifications, 24 pp. Ill. 7 1/2 x 10 1/2 in.

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

411. *Univent Ventilation. Architects' and Engineers' Edition.* A scientific treatise on ventilation for schools, offices and similar buildings; with 40 pages of engineering data on ventilation for architects and engineers. 72 pp. Also "Supplement A" on Air Conditioning. 12 pp. Ill. with half-tones, line drawings and designing charts. 8 1/2 x 11 in.

HOISTS—See Elevators and Ash Hoists

INCINERATORS—See Garbage Destroyers

INSULATION—See also Stucco Base

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

497. *Universal Insulite in Building Construction.* Describes a clean, sanitary, odorless and vermin proof board made from selected waterproofed wood fibres, felted into light, strong, uniform sheets. Examples are given for use indoors and outdoors together with details and useful data. 37 pp. Ill. 8 1/2 x 11 in.

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

58. *The Uses of Mineral Wool in Architecture.* Illustrated booklet. Properties of insulation against heat, frost, sound, and as a fire-proofing, with section drawings and specifications for use. It gives rule for estimate and cost. Size 5 1/4 x 6 1/2 in. 24 pp.

IRON AND STEEL—See also Metals

The American Rolling Mill Co., Middletown, Ohio.

234. *Why Steel and Iron Rust.* A booklet full of interesting data. 16 pp. Ill. 3 1/4 x 6 1/4.

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

KITCHEN EQUIPMENT—See also Stoves

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

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

LATH, EXPANDED WOOD

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

605. *Ex-Wo Expanded Wood Lath.* An expanded wood lath made in sheets and attached to a sheathing paper. Description, directions for installation, specifications and tests. 2 and 4 pp. Ill. 9 x 11 1/2 and 7 1/2 x 11 in.

LATH, METAL

American Steel & Wire Co., Chicago, Ill.

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

Concrete Engineering Co., Omaha, Neb.

340. *How to Use Coco Lathing Materials.* An illustrated treatise on the use of expanded metal lath. Contains construction details and complete specifications, with sample piece of lath in pocket on cover of book. 16 pp. Ill. 8 1/2 x 11 in.

The General Fireproofing Co., Youngstown, Ohio.

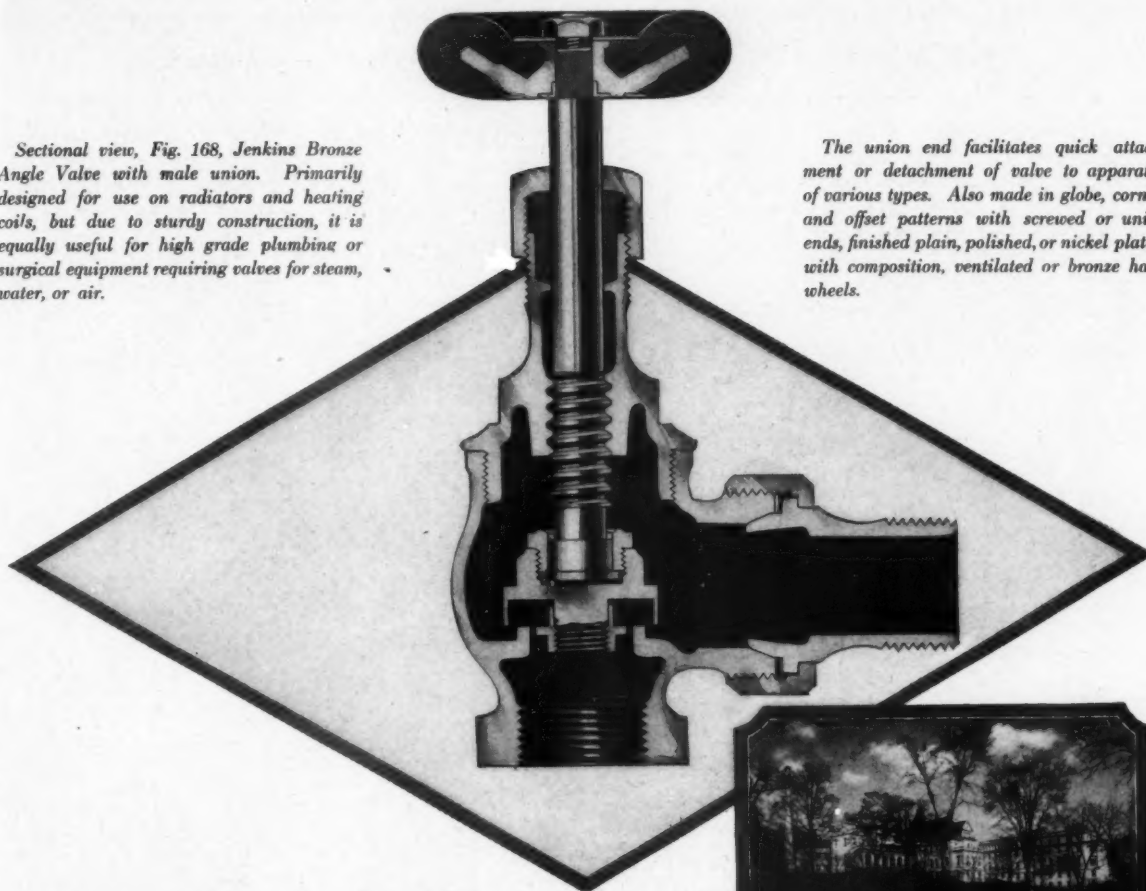
501. *The Right Angle.* Monthly Magazine. March number devoted to theatres and the use of metal lath for elaborate suspended ceilings, stairs, steps and seating. Specifications and details. 14 pp. Ill. 8 1/2 x 11 in.

502. *Building for Permanence and Beauty.* A booklet containing illustrations and plans of residences with stucco exteriors and describing proper stucco construction on Herringbone Metal Lath. 36 pp. Ill. 5 1/2 x 7 1/2 in.

Truscon Steel Company, Youngstown, Ohio.

316. *Hy-Rib and Metal Lath.* Tables, general data and illustrations of Hy-rib and metal lath construction. 6 pp. Ill. 8 1/2 x 11 in.

Sectional view, Fig. 168, Jenkins Bronze Angle Valve with male union. Primarily designed for use on radiators and heating coils, but due to sturdy construction, it is equally useful for high grade plumbing or surgical equipment requiring valves for steam, water, or air.



The union end facilitates quick attachment or detachment of valve to apparatus of various types. Also made in globe, corner, and offset patterns with screwed or union ends, finished plain, polished, or nickel plated, with composition, ventilated or bronze hand wheels.

Good Valves are a paying investment

LIGHT Weight, cheaply constructed valves, as you know, are an increasing liability and discomfort with each succeeding year of use—the older they get the more it costs to keep them in working order.

Good strong valves, on the other hand, are an asset and convenience which years do not alter—low cost of maintenance throughout their long life makes them a paying proposition.

Standardizing on Jenkins Valves provides good valve service for years and years. This state-

ment is borne out in hundreds of hospitals, and other buildings where "Jenkins throughout" means long dependable service and worth-while economy.

Valves in bronze, iron, and steel for all requirements.

JENKINS BROS.

80 White Street,	New York, N. Y.
524 Atlantic Avenue,	Boston, Mass.
133 No. Seventh Street,	Philadelphia, Pa.
646 Washington Boulevard,	Chicago, Ill.
Montreal — Jenkins Bros., Limited — London	



Always marked with the "Diamond"

Jenkins Valves

SINCE 1864

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

LAUNDRY EQUIPMENT

Chicago Dryer Co., 2210 N. Crawford Ave., Chicago, Ill.
66. Laundry Appliances. Illustrated catalog. Descriptions of Laundry Dryers, Electric Washing Machines and Ironing Machines, especially adapted for use in residences, apartment buildings and small institutions. Size $8\frac{1}{2} \times 11$ in. 48 pp.

The Pfaunder Company, Rochester, N. Y.

581. Glass Lined Steel Laundry Chute. Catalog describing a glass lined steel laundry chute with flushing ring at top and drain connection at bottom, specifications, dimensions and details adapted to hospitals and hotels. 14 pp. Ill. $5\frac{1}{2} \times 7\frac{1}{2}$ in.

LIGHTING—See also Electrical Equipment

Frank Adam Electric Co., 3649 Bell Ave., St. Louis, Mo.
629. The Control of Lighting in Theatres. A book describing means for complete control of lighting the stage, auditorium and other parts of theatres with distribution schedules and specifications. Also applications of control to Masonic buildings, schools and colleges. 32 pp. Ill. 8×11 in.

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

553. Industrial Lighting Briefs. No. 1 deals with Industrial Lighting in theory and practice. No. 2 deals with the engineering of illumination with Cooper Hewitt Lamps. No. 3 deals with the quickness of response of the Hand to Eye. Each 4 pp. $8 \times 10\frac{1}{2}$ in.

Display Stage Lighting Co., Inc., 334 West 44th St., New York City.

F782. Theatrical Lighting and Effects. A catalog of lights for every purpose in connection with stages, electrical properties and accessories. 76 pp. Ill. 7×9 in.

E. Erikson Electric Co., 6 Portland St., Boston, Mass.
613. Erikson Reflectors, Catalog No. 90. Description of and details for installing reflectors in show windows, display cases, art galleries, rug racks, banks, churches, and other buildings. 32 pp. Ill. $6\frac{1}{4} \times 9\frac{1}{2}$ in.

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

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

218. Picture Lighting. Booklet 422. A pamphlet describing Frink Reflectors for lighting pictures, art galleries, decorated ceilings, cove lighting, the lighting of stained glass, etc., and containing a list of private and public galleries using Frink Reflectors. 24 pp. Ill. $5\frac{1}{4} \times 7$ in.

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

220. Frink Lighting Service for Banks and Insurance Companies. Reflectors. Catalog No. 425. A very interesting treatise on the lighting of offices; with details of illustrations and description of lamps and reflectors. Contains a list, covering several pages, of banks using Frink Desk and Screen Fixtures. 36 pp. Ill. $8\frac{1}{4} \times 11$ in.

Harvey Hubbell, Inc., Bridgeport, Conn.

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

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

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

Universal Electric Stage Lighting Co., 321 West 50th St., New York City.

F781. Electric Stage and Theatre Lighting Apparatus, Catalog K. A new and complete catalog of lighting apparatus for all stage purposes, exterior sign, flood and stereopticon lights, dimmers, switchboards and accessories. 128 pp. Ill. 8×9 in.

LIME

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

494. A Job that Took a Million Years. A description of how limestone is formed and how it is later converted into lime. All the processes are shown in detail and the uses of lime are illustrated. 16 pp. Ill. $8\frac{1}{2} \times 11$ in.

LINCRUSTA-WALTON—See also Wall Covering

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

519. Lincrusta-Walton. This book gives directions for buying, caring for and applying Lincrusta-Walton; together with color chart and many pages showing patterns. 67 pp. $8\frac{1}{2} \times 11$ in. Ill. Bound in boards.

LOCKERS, STEEL—See Factory Equipment

LUMBER

Arkansas Soft Pine Bureau, Little Rock, Ark.

649. Arkansas Soft Pine Handbook. An exceptionally well prepared book containing technical descriptions, grading rules, standard molding designs including those by the American Institute of Architects and the National Lumber Manufacturers' Association. Price 50 cents. 83 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

533. Now the Cedar Clothes Closet. A book illustrated in colors describing "Bruce Cedoline," for lining clothes closets as a complete protection against moths. 12 pp. Ill. $4\frac{1}{4} \times 6$ in.

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

203. From Tree to Trade. This book tells the story of the manufacture of lumber. Gives an idea of the scope of the business and the care and attention given to the manufacture and grading of Long-Bell trade-marked products. 100 illustrations. 48 pp. $8\frac{1}{2} \times 11$ in.

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

363. Construction Digest—The use of California Redwood in residential and industrial construction. Contains illustrations, grading rules, specifications and other technical data for architects and builders. 16 pp. Ill. $8\frac{1}{2} \times 11$ in.

364. Engineering Digest—The use of California Redwood in industrial construction and equipment for factories, railroads, mines and engineering projects. 16 pp. Ill. $8\frac{1}{2} \times 11$ in.

LUMBER, ASBESTOS

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

54. Ambler Asbestos Building Lumber. Catalog illustrated. Describes uses of this fireproof product for both exteriors and interiors. Tables of sizes and illustrations of various types of buildings in which it has been used. Size $8\frac{1}{2} \times 11$ in. 32 pp.

MAIL CHUTES

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

294. The Cutler Mail Chute, Model F. Describes the Cutler Mail Chute in its standard form, known as Model F. Contains data for rough floor openings not included in the Mail Chute contract. 16 pp. Ill. $4 \times 9\frac{1}{4}$ in.

MANTELS

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

90. Wood Mantels. Portfolio. Wood mantel designs of various types and openings, giving dimensions, projections and showing fireplace grate designs. Size $9 \times 6\frac{1}{4}$ in. 32 pp.

MARBLE—See Stone

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

634. Why Georgia Marble is Better. Booklet $3\frac{1}{2} \times 6$ in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

635. Convincing Proof. Booklet $3\frac{1}{2} \times 6$ in. 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of architects and sculptors.

METALS—See also Iron and Steel—Roofing

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

138. Price List and Data Book. Illustrated. Loose-leaf Catalog. Covers entire line of Sheets, Wire Rods, Tubes, etc., in various metals. Useful tables. Size $3\frac{1}{2} \times 7$ in. 168 pp.

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

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

452. Reference Book. Pocket Edition. Covers the complete line of Sheet and Tin Mill Products. 168 pp. Ill. $2\frac{1}{2} \times 4\frac{1}{2}$ in.

Bridgeport Brass Co., Bridgeport, Conn.

453. Seven Centuries of Brass Making. A brief history of the ancient art of brass making and its early (and even recent) method of production—contrasted with that of the Electric Furnace Process—covering tubular, rod and ornamental shapes. 80 pp. Ill. $8 \times 10\frac{1}{2}$ in.

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

466. How to Build a Better Home. A book on building written for the prospective builder. It contains keyed illustrations of houses and details of houses and should be of value to architects in explaining technical terms to clients. 30 pp. Ill. $7\frac{1}{4} \times 10\frac{1}{2}$ in.

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

473. Price List No. 70. A loose-leaf binder containing full price list of Rome Quality products, together with useful tables. $5\frac{1}{2} \times 7\frac{1}{4}$ in.

METAL MOLDINGS

National Metal Molding Co., Pittsburgh, Pa.

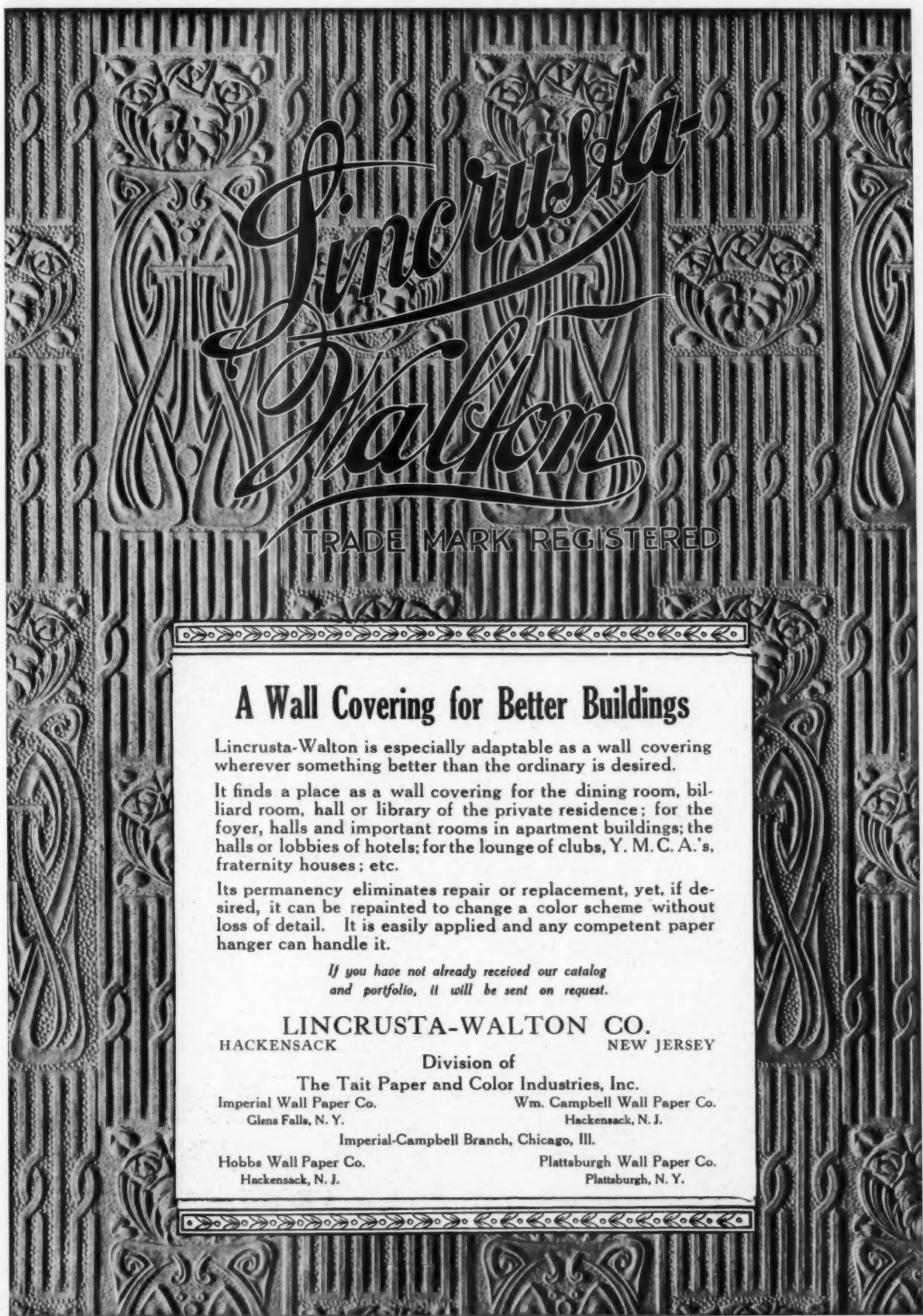
152. Hand-book for the Man on the Job. An illustrated book of fittings and methods with description and instructions for installing National Metal Molding under all conditions; a book meant to be conveniently carried and used on the job. Size $4\frac{1}{2} \times 6$ in. 102 pp.

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

MORTAR—See also Cement

Louisville Cement Company, Inc., Louisville, Ky.

311. Briment, the Perfect Mortar. The reading of this little book gives one a feeling that definite valuable information has been acquired about one of the oldest building materials. Modern science has given the mason a strong water-resisting mortar with the desirable "feel" of the best rich lime mortar. 16 pp. Ill. in colors. $5\frac{1}{2} \times 7\frac{1}{4}$ in.



Lincrusta-Walton

TRADE MARK REGISTERED

A Wall Covering for Better Buildings

Lincrusta-Walton is especially adaptable as a wall covering wherever something better than the ordinary is desired.

It finds a place as a wall covering for the dining room, billiard room, hall or library of the private residence; for the foyer, halls and important rooms in apartment buildings; the halls or lobbies of hotels; for the lounge of clubs, Y. M. C. A.'s, fraternity houses; etc.

Its permanency eliminates repair or replacement, yet, if desired, it can be repainted to change a color scheme without loss of detail. It is easily applied and any competent paper hanger can handle it.

If you have not already received our catalog and portfolio, it will be sent on request.

LINCRUSTA-WALTON CO.

HACKENSACK

NEW JERSEY

Division of

The Tait Paper and Color Industries, Inc.

Imperial Wall Paper Co.

Glens Falls, N. Y.

Wm. Campbell Wall Paper Co.

Hackensack, N. J.

Imperial-Campbell Branch, Chicago, Ill.

Hobbs Wall Paper Co.

Hackensack, N. J.

Plattsburgh Wall Paper Co.

Plattsburgh, N. Y.

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

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

Ricketson Mineral Paint Works, Milwaukee, Wis.

370. *Ricketson Mortar Colors*. Two interesting folders with color card for these well known fadeless mortar colors in use for 35 years. $3\frac{1}{4} \times 6$ in.

OFFICE EQUIPMENT

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

542. *Art Metal Steel Office Equipment*. A descriptive catalog of art metal shelves, filing cases, lockers, desks, bookcases, plan files, safes and furniture. 128 pp. Ill. $8\frac{1}{2} \times 11$ in.

ORNAMENTAL METAL WORK—See also *Architectural Iron Work—Metals*

Newman Manufacturing Company, 416 Elm St., Cincinnati, Ohio.

554. *Newman Ornamental Metal Work—Catalog A*. Shows installations of brass, bronze and plated steel railings, grille work, doors, gates, wickets, door hardware, cages, thresholds, frames, marquise, turnstiles, etc. Gives prices for brass railings, pool ladders, bronze tablets, etc. Also shows special metallic fixtures for banks, theatres and other buildings. 64 pp. Ill. 8×12 in.

PAINTS, STAINS, VARNISHES—See also *Waterproofing*

Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

341. *Cabot's Old Virginia White and Tints*. Describes a specially prepared "flat" white which architects say gives "the whitewash white effect." Also describes tints perfectly flat in tone giving the "pastel effect." Used on wood, brick, stone, and stucco. 16 pp. Ill. $4 \times 8\frac{1}{2}$ in.

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

324. *Dixon's Silica-Graphite Paint*. A pamphlet describing the physical properties of silica-graphite paint and especially the wide difference between it and other protective paints. Contains also sample color card with specifications. 20 pp. and 6 pp. in color card. Ill. $3\frac{1}{4} \times 6\frac{1}{4}$ in.

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

380. *Color Harmony*. Color card for glass finish and flat finish together with useful notes on painting and a collection of approximate formulas for obtaining the colors shown on the color card. 8 pp. Ill. $8\frac{1}{2} \times 8\frac{1}{2}$ in.

390. *Dutch Boy Flatting Oil*. A booklet describing the characteristics of flat and glass paints, volatile thinners and a treatise on methods of obtaining special paint surfaces together with formulas. 24 pp. $3\frac{1}{2} \times 6$ in.

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

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

Ripolin Co., The, Cleveland, Ohio.

410. *Ripolin Specification Book*, $8 \times 10\frac{1}{4}$ in., 12 pp. Complete architectural specifications and general instructions for the application of Ripolin, the original Holland Enamel Paint. Directions for the proper finishing of wood, metal, plaster, concrete, brick and other surfaces, both interior and exterior, are included in this Specification Book.

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

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

506. *Architectural Reference Book*, Third Edition. A readily accessible and concise compilation of practical finishing information from which specifications readily can be written on varnishes, stains, fillers and enamels. 24 pp. Ill. in colors with samples on wood, etc. $8\frac{1}{2} \times 11$ in.

PILES, CONCRETE

MacArthur Concrete Pile and Foundation Co., 12 John St., New York, N. Y.

323. *Concrete Pile Standards*. This treatise gives standard details for pile caps with standard specifications for concrete piles and has a valuable chapter entitled, "How a Pile Supports Its Load." Useful tables are presented with worked examples of computation for typical unusual conditions. 54 pp. Ill. 9×12 in.

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

150. *Raymond Concrete Piles—Special Concrete Work*. A booklet with data concerning the scope of the Raymond Concrete Pile Co., for special concrete work. It classifies piles, showing by illustration, text and drawings, the relative value of special shape and manufacture of piles. It gives formulae for working loads, and relative economy. Size $8\frac{1}{2} \times 11\frac{1}{2}$ in. 60 pp.

PIPE—See also *Metals*

Bridgeport Brass Company, Bridgeport, Conn.

550. *Brass Pipe and Piping; When and How it Should be Used*, Bulletin No. 15. This book contains valuable tables, charts and examples for the design of hot water installations, with illustrations of details and connections. It also discusses the use of pipe of different materials; various processes for preventing rust and corrosion in iron and steel pipes. It is a valuable treatise for all architects and engineers. 47 pp. Ill. $8 \times 10\frac{1}{2}$ in.

The Duriron Company, Dayton, Ohio.

548. *Duriron Acid-Proof Drain Pipe*. This is a handbook for the architect and engineer on Duriron drain pipe fittings, exhaust fans, sinks, etc. Contains specifications for installations, detail dimensioned drawings, reports on corrosive tests, long partial list of successful installations, etc. 20 pp. Ill. $8 \times 10\frac{1}{2}$ in.

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

070. *National Bulletin No. 25B, 3rd Edition*. Devoted to the installation of steel pipe in large buildings, architectural anti-corrosion engineering, gas piping, specifications and tables of strength and properties. 74 pp. Ill. $8\frac{1}{2} \times 10\frac{1}{2}$ in.

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

500. *Bulletin No. 1, Seamless Brass Pipe*. This bulletin illustrates in colors nine installations of hot water heaters between range boiler, basement furnace, tank and instantaneous heaters for one and two-family houses and larger buildings. Contains also a number of estimating and designing tables, rules and formulas. 22 pp. Ill. $7\frac{1}{2} \times 11\frac{1}{4}$ in.

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

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

PIPE COVERING

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

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

PLUMBING EQUIPMENT—See also *Drains*

Bridgeport Brass Co., Bridgeport, Conn.

461. *Plumbing Supplies*. Catalog of adjustable swivel traps; basin and bath supplies and basin and sink plugs; low tank bends; iron pipe sizes of brass pipe. 20 pp. Ill. $8 \times 10\frac{1}{2}$ in.

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

240. *General Plumbing Catalogue*. A very complete and well illustrated booklet describing the complete line of Crane plumbing goods. 80 pp. $8\frac{1}{2} \times 11$ in.

Philip Haas Company, Dayton, Ohio.

524. *Catalog B*. This catalog contains a complete description of the full line of waterclosets made by this company, together with illustrations of combinations for every type or class of service. Wall hanging closets are an innovation here fully described. A feature of interest to designers is the series of roughings in plates with dimensions. 91 pp. Ill. $6\frac{1}{4} \times 9\frac{1}{4}$ in.

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

230. *Jenkins Valves for Plumbing Service*. This booklet contains all necessary information about Jenkins Valves commonly used in plumbing work. 16 pp. Ill. $4\frac{1}{4} \times 7\frac{1}{4}$ in. Stiff paper cover.

Kohler Company, Kohler, Wisconsin.

200. *"Kohler of Kohler"*. A booklet on enameled plumbing ware describing processes of manufacture and cataloging staple baths, lavatories, kitchen sinks, slop sinks, laundry trays, closet combinations. 48 pp. Ill. $5\frac{1}{2} \times 8$ in. Roughing-in Measurement Sheets 5×8 in.

531. *Catalog F*. This is a complete catalog of Kohler enameled ware for plumbing installations, together with high grade fittings. There is also a brief and interesting description of the manufacture of high grade enameled ware and a statement of the facts about Kohler village one of the discussed experiments in modern industrial town building. 215 pp. cloth bound. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

The Vulcan Brass Manufacturing Co., Cleveland, Ohio.

214. *Paragon Ball Bearing Self Closing Faucets, Bibbs and Stops—Catalog B*. Illustrated book showing sectional drawings, illustrations and text describing "Paragon" self-closing work, high pressure ball cocks, parts and valves.

078. *Paragon Brass Goods, Catalog C*. New catalog showing sectional drawings, illustrations and text describing exclusive feature of "Paragon" self closing basin and sink faucets and stops; high pressure ball cocks, vitreous china bubblers, compression and quick-compression work. 60 pp. Ill. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

PUMPS

The Dayton Pump and Manufacturing Company, Dayton, Ohio.

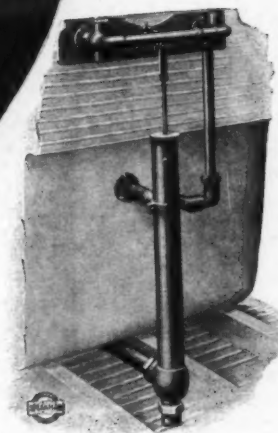
475. *Electric House Pumps and Water Supply Systems*. A heavy paper binder containing illustrated bulletins $8\frac{1}{2} \times 11$ in. These bulletins describe pumps as well as complete automatic electric and gasoline water supply systems and all accessories, together with specifications, detail drawings and tables of dimensions. 48 pp.

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

357. *Power Pump Bulletins*. There are 23 of these bulletins treating on piston, plunger, air pressure, vacuum, triplex and centrifugal pumps. Bulletin 112 and Bulletin 122 containing the theory of pumps together with power pump data are of especial value to engineers in the offices of architects. 16 to 36 pp. Ill. 8×10 in.

Leader-Trahern Co., Decatur, Illinois.

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



SWEATED JOINTS—

Just one of the features of all
Speakman Built-in Showers and
Fixtures



H-2370 Combination of Mixer Shower and Dresher Bath Fixture. There are 12 sweated joints in this assembly.

After threaded joints have been screwed-up tightly and valves put in accurate alignment, comes the lead seal.

After this no matter how the fixture is handled before it reaches the job or whether it is pushed, pulled or strained during the installing operation, these lead seals will never be broken.

Still another feature of all SPEAKMAN Showers and Fixtures is the china. This is the highest grade china that we can buy—American made and extra heavy.

Further details of SPEAKMAN Showers and Fixtures are shown in our Catalog H. We will be glad to send a copy—promptly.

SPEAKMAN COMPANY
Wilmington - - Delaware

SPEAKMAN SHOWERS

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

REFRIGERATION

The Automatic Refrigerating Co., Hartford, Conn.

298. *The Mechanics of Automatic Refrigeration and Automatic Refrigeration for Hospitals and Sanatoriums.* Two essential booklets for the library of designers and specification writers. 24 and 28 pp. Ill. $8\frac{1}{2} \times 11$ in.

370. *Automatic Refrigeration for Retail Markets.* A valuable treatise on the subject matter mentioned in the title. 30 pp. Ill. $8\frac{1}{2} \times 11$ in.

Baker Ice Machine Co., Inc., Omaha, Nebraska.

661. *Baker System Refrigeration.* A catalog explaining the application of refrigeration for hotels, hospitals, institutions and restaurants requiring up to 50 ton daily capacity including mechanical details and specifications. 20 pp. Ill. 9×12 in.

Jamison Cold Storage Door Co., Hagerstown, Md.

569. *Heavy Duty Cold Storage Doors.* Catalog No. 10. Complete description of both hinged and sliding cold storage doors for every equipment. Also description of cold storage windows and ice chutes. 79 pp. Ill. $5\frac{1}{4} \times 9$ in.

REFRIGERATORS

The Jewett Refrigerator Company, 27 Chandler Street, Buffalo, N. Y.

231. *Refrigeration and Health. Vital Facts You Ought to Know.* A booklet outlining the basic requirements of a good refrigerator and explaining how to use a refrigerator to secure best results. 16 pp. Ill. $4\frac{1}{4} \times 7\frac{1}{4}$ in.

The Jewett Refrigerator Co., Buffalo, N. Y.

655. *Manual of Refrigerators.* This manual completely describes the construction of refrigerators for use in hotels, clubs, hospitals, institutions and residences, with specifications. Numerous plans showing size and arrangement of refrigerators in kitchens, service and lunch rooms are included. 30 pp. Ill. $8\frac{1}{2} \times 11$ in.

McCray Refrigerator Co., Kendallville, Ind.

472. *Refrigerators and Cooling Rooms. Cat. 33.* A catalog of cooling equipment for hotels, restaurants, hospitals, institutions, colleges and clubs. Catalog No. 96 deals with refrigerators for residences. 52 pp. each. Ill. in colors. $7\frac{1}{2} \times 10$ in.

REINFORCING STEEL—See also Concrete, Reinforced

Rail Steel Products Association, Reinforcing Bar Division, Arcade Bldg., St. Louis, Mo.

582. *Rail Steel for Concrete Reinforcing.* A book describing the manufacturing, fabrication and physical properties of re-rolled, billet and rail steel bars with specifications for their use. 84 pp. Ill. $8\frac{1}{2} \times 11$ in.

RESTAURANT EQUIPMENT—See Kitchen Equipment

ROOFING—See also Slate—Metals—Shingles

American Brass Company, Main Office, Waterbury, Conn.

515. *Copper Roofing. Service Sheet.* This service sheet contains details for laying copper roofing together with standard specifications. 17×22 in. folding to $8\frac{1}{2} \times 11$ in. printed both sides.

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

463. *Copper—its Effect Upon Steel for Roofing Tin.* Describes the merits of high grade roofing tin plates and the advantages of the copper-steel alloy. 28 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

53. *Ambler Asbestos Corrugated Roofing.* Catalog gives complete data for specifying, drawings, methods of application, tables, etc. Size $8\frac{1}{2} \times 11$ in. 20 pp.

The Barber Asphalt Company, Land Title Bldg., Philadelphia, Pa.

422. *Standard Trinidad Built-Up Roofing Specifications.* Contains two specifications for applying a built-up roof over boards and two for applying over concrete. Gives quantities of materials and useful data. 8 pp. $8 \times 10\frac{1}{4}$ in. Ask at same time for Good Roof Guide Book. 32 pp. Ill. 6×9 in.

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

378. *Architects' Specification Book on Built-Up Roofing.* A manual for detailers and specification writers. Contains complete details and specifications for each type of Carey Asphalt Built-Up Roof. 20 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

468. *Copper Roofing.* Weights of various roofing materials. Up-to-date practice in the laying of copper roofs—Batten or wood rib method. Standing seam method, flat copper roofs. Copper shingles. Suggestions for avoiding error and obtaining the full value of copper. Decorative effects and how to obtain them. Flashings, reglets, gutters and leaders. Cornices, Copper-covered walls. Specifications. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

The Edwards Manufacturing Company, Cincinnati, Ohio.

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

Ludowici-Celadon Co., Chicago, Ill.

129. *Roofing Tile.* A detailed Reference for Architects' Use. Sheets of detailed construction drawings to scale of tile sections of various types and dimensions, giving notes of their uses and positions for various conditions of architectural necessity. Size $9\frac{1}{2} \times 13\frac{1}{2}$ in. 106 plates.

154. *The Roof Beautiful.* Booklet. Well illustrated with photographs and drawings, giving history and origin of roofing tile, and advantages over other forms of roofing. Types shown by detailed illustrations. Size $8 \times 10\frac{1}{4}$ in. 32 pp.

The Richardson Company, Lockland, Cincinnati, Ohio.

492. *Viskalt Membrane Roofs.* Contains specifications for applying Membrane roof over boards and also for applying over concrete. Illustrated with line drawings of several approved methods of flashings. 3 pp. $8\frac{1}{2} \times 11$ in.

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

496. *Tudor Stone Roofs.* This leaflet discusses colors and sizes of Tudor hand-wrought slates; deals with the service given to architects and tells how the material is quarried for each product after careful drawings and specifications are prepared in co-operation with architects. Special grades are described in detail and illustrations are given of buildings with Tudor slate roofs. Contains also specifications of laying slate. 4 pp. Ill. $8\frac{1}{2} \times 11$ in.

571. *Tudor Stone Roofs.* A brochure describing the 7 special grades of Tudor Stone and the 7 grades of commercial slate produced by this company with illustrations of many structures on which it has been used. 28 pp. Ill. $6 \times 9\frac{1}{4}$ in.

Vendor Slate Co., Easton, Pa.

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

ROOF CONSTRUCTION

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

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

ROOF-LIGHTS—See Glass Construction

SANDSTONE—See Stone

SAFES

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

544. *Measured Protection.* A catalog of steel safes for all office purposes, tested by Underwriters' Laboratories and bearing the Underwriter label. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

SASH—See Doors and Windows

SASH CHAIN AND CORD

Samson Cordage Works, Boston, Mass.

586. *Samson Sash Cord.* Specifications and condensed descriptions of Samson spot window sash cord, Samson mahogany wire center sash cord and accessories. 24 pp. Ill. $3\frac{1}{2} \times 6\frac{1}{4}$ in.

SCREENS

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

395. *Catalog of Screen Wire Cloth.* A catalog and price list of screen wire cloth, black enamelled, galvanized, aluminoid, copper, bronze. 30 pp. Ill. $3\frac{1}{2} \times 6\frac{1}{4}$ in.

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

353. *Screen your Home in the Higgin Way.* A description of Higgin door and window screens with practical data. 16 pp. Ill. $8\frac{1}{2} \times 11\frac{1}{2}$ in.

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

499. *A Matter of Health and Comfort.* Booklet No. 2331. A booklet telling all about screens, the durability of copper and its superiority over all other metals for screen purposes. 16 pp. Ill. $8 \times 7\frac{1}{4}$ in.

SHINGLES—See also Roofing

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

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

SIDEWALK LIGHTS—See also Vault Lights

SLATE—See also Roofing

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

332. *The Vendor Book of Roofing Slate for Architects.* Contains original information on slate in various architectural uses; history, geology, sundry practical matters; complete descriptive classification; extended treatise on architectural roof design and specifications. 24 pp. Ill. $8\frac{1}{2} \times 11$ in.



Black and Galvanized SHEETS

Roofing Tin Plates, Fire Door Stock, Etc.



The destructive enemy of sheet metal is *rust*. It is a well established fact that an alloy of copper gives to Steel Sheets and Tin Plates the maximum of *rust-resistance*. Keystone Copper Steel is unequalled for roofing, siding, spouting, gutters, culverts, flumes, and similar uses. It assures roofs and sheet metal work that will withstand the ravages of fire, wear and weather. Shall we send proofs from actual service tests? We manufacture Steel Sheets



and Tin Plates for all purposes and specially adapted to the requirements of architects and builders: Black Sheets, Special Sheets, Apollo and Apollo-Keystone Galvanized Sheets, Corrugated Sheets, Formed Roofing and Siding Products, Roofing Tin Plates, Bright Tin Plate, Black Plate, Etc. Sold by leading metal merchants. Our products represent the highest standards of quality and utility. Write for quotations, also our booklet, *Testimony of a Decade*

American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES:

Chicago Cincinnati Denver Detroit New Orleans New York Philadelphia Pittsburgh St. Louis
Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City
Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

STAINS—See also Paints, Stains, Varnishes

STEEL JOIST CONSTRUCTION

Truscon Steel Co., Youngstown, Ohio.

641. *Truscon Steel Joist Data Book*. Complete data of steel joists giving properties, dimensions, safe loads, coefficients of deflection, details of connections, specifications, directions for installations. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

STAIRWAYS—MOVABLE

The Hessler Movable Stairway Co., Akron, Ohio.

511. *The Modern Way Up*. A book describing a stairway that helps utilize attic space. 1. folds up in the ceiling and is concealed when not in use. Letters are given from contented users. 24 pp. Ill. $4\frac{1}{4} \times 7\frac{1}{4}$ in.

STONE

The Appalachian Marble Company, Knoxville, Tenn.

503. *Appalachian Tennessee Marble*. A new booklet on the qualities to be demanded in marble and a treatise on Tennessee marble by T. Nelson Dale (Retired Geologist, U.S.G.S.). Contains also illustrations of the plant of the company, buildings in which Appalachian Tennessee Marble has been used and four-color process plates of the six major Appalachian marbles. In tough paper indexed cover. 12 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

37. *Indiana Limestone*. Illustrated booklet. Vol. I. of the Limestone Library. Size 6×9 in. 36 pp.

205. *Folders, Series D*. Structural detail and data sheets showing methods of detailing cut stone work in connection with modern building construction. 4 pp. each. $8\frac{1}{2} \times 11$ in.

300. *Standard Specifications for Cut Stone Work*. This is Vol. III, Series "A-3," Service publications on Indiana Limestone, containing Specifications and Supplementary Data, relating to best methods of specifying and using this stone for all building purposes. This valuable work is not for general distribution. It can be obtained only from a Field Representative of the Association or through direct request from architect written on his letterhead. 56 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

410. *Architectural Granite No. 1 of the Granite Series*. This booklet contains descriptions of various granites used for building purposes; surface finishes and how obtained; profiles of moldings and how to estimate cost; typical details; complete specifications and 19 plates in colors of granite from various quarries. 16 pp. Ill. $8\frac{1}{2} \times 11$ in.

STORE FRONTS

Brasco Mfg. Co., Chicago, Ill.

56. *Brasco System of Hollow Metal Store Front Design*. Folio of Detail Sheets. Full size detail sheets 1, 2, 3 and 4. Corner bar, division bar, reverse bar and three-way bar, head transom sill and jamb sections. Sheets $18 \times 22\frac{1}{2}$ in.

57. *Hester System Store Front Construction and Design*. Folio of Detail Sheets. Full size detail sheets, a, b, c and d, of hollow metal store front construction, giving full size sections of head transoms, sill and jamb with moulding profiles and bar cover to house awning construction. Sheets $18 \times 22\frac{1}{2}$ in.

Detroit Show Case Co., Detroit, Mich.

77. *Designs*. A booklet. Store fronts and display window designs, giving plans and elevations, and descriptions. Size $9\frac{1}{4} \times 12$ in. 16 pp.

78. *Details*. Sheets of full size details of "Desco" awning transom bar covers, sill covers, side, head and jamb covers, ventilated hollow metal sash and profile of members. Size $16 \times 21\frac{1}{4}$ in. 3 sheets.

The Kawneer Company, Niles, Mich.

407. *A Collection of Successful Store Front Designs*. Illustrations of recently erected modern store fronts with all framing covered with solid copper. Maximum show window surface secured by these designs. Many classes of occupancy shown. 64 pp. Ill. $6\frac{1}{2} \times 9\frac{1}{4}$ in.

530. *Catalog L, 1922-1923 Edition*. Details of solid copper store fronts construction. This is a treatise on the installation of copper store fronts and contains sectional and detail views of Kawneer sash, corner and division bars, jambs, sill and transom bar coverings and other members. Intended for the detailer. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

STOVES

New Process Stove Co., Division of American Stove Co., 4301 Perkins Ave., Cleveland, Ohio.

457. *Catalog No. 148*. A complete catalog of gas ranges from a single cover hot plate to the most elaborate hotel range. Also lists gas heaters for rooms. 110 pp. Ill. 7×10 in.

Reliable Stove Company, Division of American Stove Co., Cleveland, Ohio.

460. *Reliable Angleiron Gas Ranges*. A pamphlet illustrating hot plates, laundry stoves and a complete line of gas cooking stoves and ranges equipped with the Lorain Oven Heat Regulator. 8 pp. Ill. 8×11 in.

STUCCO—See also Cement

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

594. *Portland Cement Stucco*. Illustrated leaflet of recommended practice for Portland Cement Stucco. Contains data on materials, proportions, application and curing. Table of colors for various tints, photographs of surface textures and drawings of construction details also given. 15 pp. Ill. $8\frac{1}{2} \times 11$ in.

STUCCO BASE

The Bishoprie Manufacturing Company, Cincinnati, Ohio.

451. *Bishoprie for All Time and Clime*. A booklet describing Bishoprie materials; giving building data, detailed drawings and specifications. Illustrated with half tones from photographs of houses built of Bishoprie materials. 52 pp. Ill. $8 \times 10\frac{1}{2}$ in.

TELEPHONES

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

304. *Inter-Communicating Telephone Systems*. Bulletin No. 1017. A pamphlet giving just the information required for the installation of intercommunicating systems from 2 to 32 stations capacity. 15 pp. Ill. $7\frac{1}{4} \times 10$ in.

TERRA COTTA

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

425. *Questions Answered*. A brief but full description of Atlantic Terra Cotta and its use in buildings. 32 pp. Ill. $5\frac{1}{4} \times 7$ in.

551. *Monthly Magazine, Atlantic Terra Cotta*. December issue illustrates the Renaissance Arch in Terra Cotta with beautiful examples from Bologna, Cremona and Piemonte. Also notes on the Japanese earthquake. 10 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

004. *Standard Specifications*. Contains complete detailed specifications for the manufacture, furnishing and setting of terra cotta, a glossary of terms relating to terra cotta and a short form specification for incorporating in architect's specification. 12 pp. $8\frac{1}{2} \times 11$ in.

006. *Color in Architecture*. An illustrated treatise upon the principles of color design and appropriate technique. 38 pages. Ill. $8\frac{1}{2} \times 11$ in.

007. *Present Day Schools*. Illustrating 42 examples of school building architecture with an article on school house design by James O. Betelle, A. I. A. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

008. *Better Banks*. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bosson, architect. 32 pp. Ill. $8\frac{1}{2} \times 11$ in.

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

00. *Architectural Terra Cotta*. A collected set of advertisements in a book, giving examples of architectural terra cotta, ornamental designs and illustrations of examples of façades, of moving-picture houses, office buildings, shops, vestibules and corridors in which Northwestern Terra Cotta was used. Size $8\frac{1}{2} \times 11$ in. 78 pp.

TILE—ORNAMENTAL

The Associated Tile Manufacturers, Beaver Falls, Pa.

358. *Home Suggestions*. A new book in colors describing and illustrating the use of tiles in floors, walls, ceilings, fireplaces, garages, for exterior embellishment, etc. Full of suggestions. Sent to architects on request. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

359. *Basic Information on Tiles*. Book giving practical information on ingredients, processes, gradings, sizes, shapes, colors, finishes and nomenclature. Sent to architects on request. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

374. *Basic Specifications for Tilework and Related Documents*. No. K-300. This specification is prepared in a very systematic manner for the use of architects and builders. It is printed on one side of a sheet with facing page blank to receive memoranda. Various colored sheets make reference easy and simplify greatly the work of a specification writer in specifying tilework. 38 pp. $7\frac{1}{2} \times 10\frac{1}{2}$ in.

375. *"Work Sheets" for Specification Writers*. To be used in connection with "Basic Specification for Tilework and Related Documents." 16 sheets $7\frac{1}{2} \times 10\frac{1}{2}$ in.

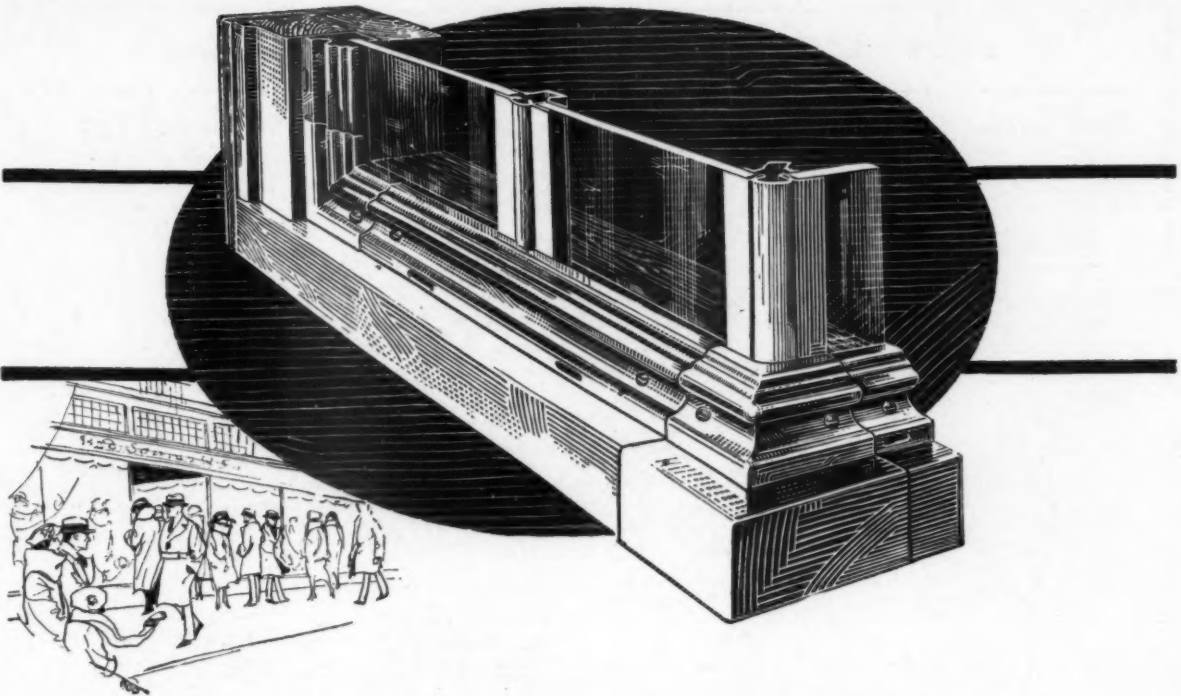
TIME CLOCKS—See Clocks

TOILET PARTITIONS—See Wainscoting

TRIM—See also Doors and Windows

TRUSSES—See Building Construction

VARNISH—See Paints



ALWAYS have we been guided by the practical requirements of architects in the manufacture of Desco Store Front construction. Your problems have been our problems.

We have painstakingly helped to work out the store front specifications for hundreds of architects. This cooperation has led to the utmost simplicity of construction of Desco.

It has resulted in simpler production problems, less cost to us both, fewer parts, and a sturdy, standardized construction that is easily adaptable to any type of front.

That's why architects favor Desco. It is practical, of enduring beauty and moderate in cost.

See Sweet's Catalog—or better still, let us place in your files complete working details and price list.

There is a Desco Distributor near you

DETROIT SHOW CASE CO. 1650 Fort Street West DETROIT, MICH.

(135)

Desco
METAL

STORE FRONTS

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

REFERENCE LIST OF BUSINESS LITERATURE—Continued

VAULT LIGHTS

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

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

VENTILATION—See Heating and Ventilation

VENTILATORS

The Burt Manufacturing Co., Akron, Ohio.

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

525. *The Great Outdoors Brought Inside.* In this book is a description of the new rectangular combination skylight and ventilator; the Burt fan ventilator for removing odors, fumes, etc., when atmospheric conditions interfere with the gravity process; and a table giving prices, dimensions, weights and gauges of iron of the Burt Ventilator. Some good general information about ventilators is included. 16 pp. Ill. 3¼ x 6¼ in.

WAINSCOTING

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

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

WALL COVERING—See also Lincrusta-Walton

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

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

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

113. *Sanalining Sanitas Lining and Prepared Lining.* Folder. Notes on durability and cleanly character of the above three products. Size 3¼ x 6 in.

114. *Hints to Decorators.* Booklet. Instructions and specifications for the application of Sanitas, with notes on finishes and material. Size 5 x 6¼ in. 20 pp.

WATER HEATERS

Rund Manufacturing Co., Pittsburgh, Pa.

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

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

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

WATERPROOFING—See also Dampproofing

The General Fireproofing Co., Youngstown, Ohio.

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

WATER PURIFICATION

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

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

WATER SOFTENERS

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

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

Wayne Tank and Pump Company, Fort Wayne, Ind.

482. *Bulletin No. 1600.* This bulletin treats of the value of soft water in the house and describes the Wayne Domestic Water Softening System. 6 pp. Ill. 8½ x 10½ in.

WATER SUPPLY—See Pumps

WEATHER STRIPS

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

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

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

354. *Higgin Metal Weather Strips.* A booklet of considerable value to architects and builders on the use of weather strips. Ask also for the companion book on "The Reason Why." Each booklet 12 pp. Ill. 6 x 9 in.

Monarch Metal Products Co., 5020 Penrose Street, St. Louis, Mo.

512. *Monarch Metal Weather Strips.* The publication embodies all the suggestions for advertising literature made by the Committee on Structural Service of the American Institute of Architects. It contains a treatise on leakage around windows together with description of Monarch Metal Weather Strips. Contains many detail working drawings. 48 pp. Ill. 7½ x 10½ in.

WINDOWS—See Doors and Windows

WIRE AND CABLE—See Electric Wire and Cable

WOODWORK—See also Doors and Windows—Lumber

Curtis Companies Service Bureau, Clinton, Iowa.

603. *Keeping Down the Cost of Your Woodwork.* A book illustrating Curtis interior woodwork and built-in cabinets and fixtures designed by Trowbridge and Ackerman, Architects, New York. Colored illustrations and details. 16 pp. Ill. 7 x 9¼ in.

Hartmann-Sanders Company, 6 East 39th St., New York, N. Y.

334. *Catalog No. 47.* Illustrating Kell's Patent Lock Joint wood stave columns for exterior and interior use. 48 pp. Ill. 7½ x 10 in.

Efficient
Practical
Lasting



Variety
Of
Equipments

SPECIFY
DIAMOND METAL WEATHER STRIPS
AND
CALKING COMPOUND

REPRESENTATION IN



ALL PRINCIPAL CITIES

THE DIAMOND METAL WEATHER STRIP CO.
COLUMBUS, OHIO

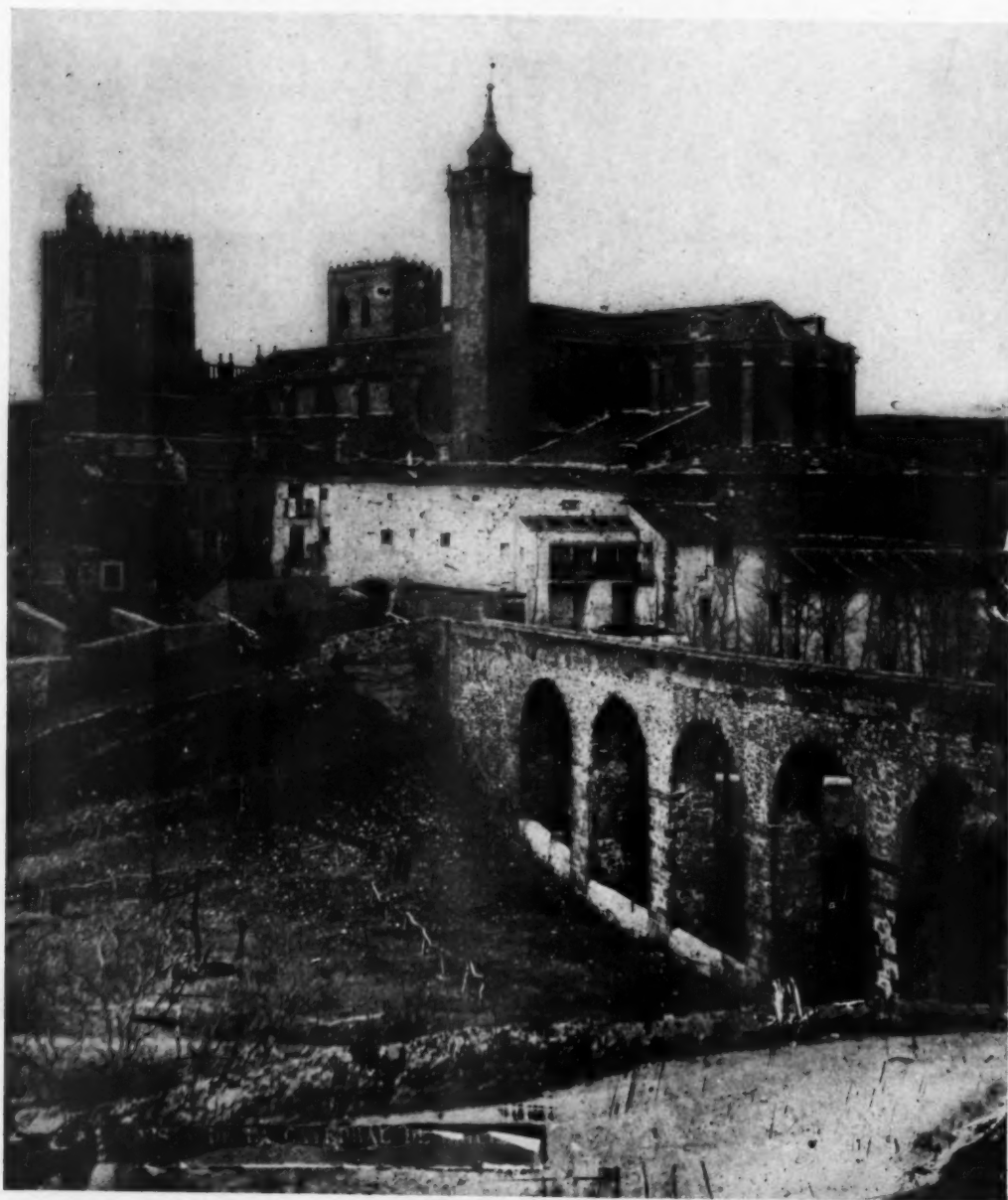
A Complete Set of Blue Print Details on Request

Satisfies
Particular
People



Meeting
All
Requirements

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



A TYPICAL SPANISH TOWN

THE AMERICAN ARCHITECT