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The Practice of Architecture

MANY things give indications of changes in the making. Through conversation, correspondence or reading these signs are constantly recurring testimonies, and a tabulation is unconsciously made of them until the ideas become insistent in their presence. To verify the general impression, a systematic collation of all the evidence is in order.

In arriving at a conclusion by this mental process, it will be found that among the diverse problems demanding attention at this time, one of manifest importance is that of the attitude of the public toward the architect and of the architect in his relations to himself and others.

The practice of architecture is probably today, more than ever before, a matter of barter and trade. The monies invested in building structures demand a return service which represents full value. This value is measured in the adaptability of the structure to its use, its durability and its appearance. These three factors are the fundamentals of correct planning and to render adequate service it appears to be essential that the architect should fully qualify himself to meet these basic requirements.

An analysis has been made of a great amount of data pertaining to this subject and the majority opinion has been condensed into the following five paragraphs which embrace the most common of the points developed. This brief consensus of opinion is not intended to cover the multitude of conditions that exist in such relations, but it is thought that possibly it comprises the basic factors.

1. The business of architecture is inseparable from the profession of architecture. Together they comprehend the originating, promoting, designing, planning, directing and controlling the construction of buildings and their appurtenances.

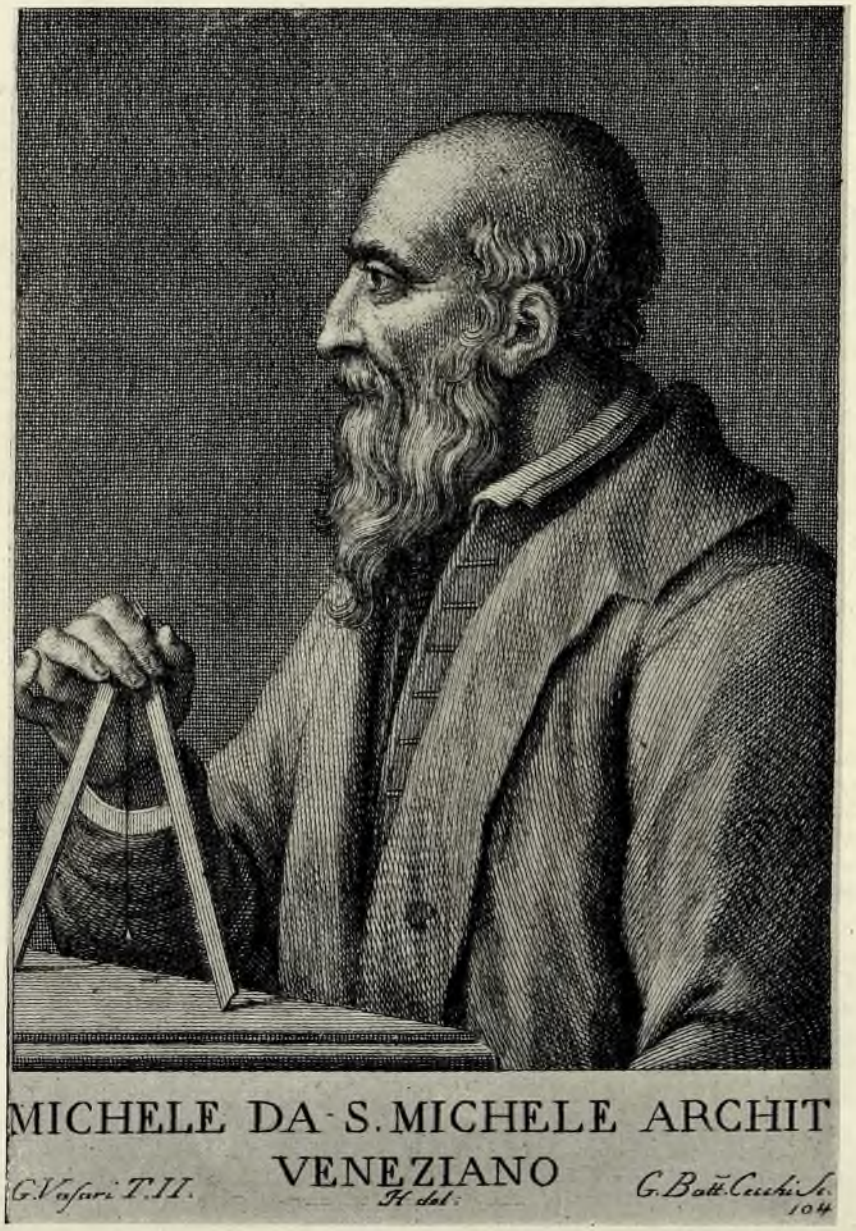
2. To develop a general demand for architectural service—without which only limited opportunities for practice will be presented—the architect must, as an individual and collectively, employ proper and effective means to create a universal appreciation of its intrinsic value.

3. To fully perform his function, the architect must organize, equip and operate his business so as to render complete service in the production of plans and specifications for everything embraced in the construction, equipment and furnishing of buildings.

4. He must furnish complete and detailed supervision of construction and be closely identified with it. He must be responsible financially, as well as morally, for all of his acts, including the correctness of design, the completeness and accuracy of plans, specifications and details, and the construction of the building in accordance therewith; his responsibility to be contingent only on his being accorded freedom in deciding all matters of structural design, mechanical equipment and the selection of materials and workmen.

5. He must control and regulate the business affairs of the building operations to safeguard all interests. He must be fair and impartial in deciding all questions within his jurisdiction, but where other interests are involved he must submit the controversy to arbitration.

(Reprinted from issue of November 27, 1918)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THE SPARROW HOUSE IN THE STREET VIEW, IPSWICH, SUFFOLK, ENGLAND

The Sparrow House and the Rabbit House

By JOY WHEELER DOW

HAPPILY, there is going to be no shortage in our supply of architectural inspiration, even if the Germans do destroy some mediæval churches, and devastate parts of Flanders and France;—but every subject is not, at once, so remarkable, so "busy" and so beautiful as is the ancient Sparrow house in the Butter Market at Ipswich, England, erected in A.D. 1567. For a chance acquaintance with it, as far back as 1893, I am indebted to the interest taken in me by a friend who had made a collection of Wolseyana, i. e., literature and prints relating to Henry VIII's great cardinal—the erstwhile butcher-boy of Ipswich.

There were comparatively few architectural photographs published in 1893, and none of the universal post-cards. There were no half-tones of the Sparrow house with its marvelously pargeted façades, its tremendous eaves and frowning overhang, published in books, as there are today; and therefore it was little known except to people whose affairs or love of discovery carried them into out-of-the-way corners of England like Suffolk. From a steel engraving which I borrowed, representing the Sparrow house as it appeared in the time of William Sparrow, Esquire, and before it was turned into an emporium and sadly dismantled within, I made a

sketch which I knew would be available some day. That day, however, did not arrive until 1904, some eleven years afterward, when one afternoon, I realized I was taking a train, at last, out of the smoky, Liverpool Street Station in London, bound for Ipswich. Rarely had I shown the sketch I had made, to anyone. I proposed to *keep* the Sparrow house until I built a home for myself. Here was a rare, historic prototype awaiting transposition into a modern theme to make an ideal home for someone, and I thought it might as well be—me.

There are a number of interesting old buildings in Ipswich. There is a charming walk to be taken through Gainsborough Lane approached by a meandering, rural path through private estates. The respective boundaries are indicated by quaint stiles after the manner of Mother Goose architecture, the path being hedged in from the adjoining lawns and gardens—one of those inalienable rights of way enjoyed by the public in England from time immemorial—but the Sparrow house is the main attraction.

Of course, you will be told that Charles II took refuge here for a night during a problematical period of his fortunes (it may have been so) and you are tempted to presume Cromwell, also, once stabled his horse in what is now the garage. The Sparrow house was renovated about the time of the Restoration, and the royal arms crowned by the initials "C. R." appear in the wall spaces between the fascinating oriels. From this mute testimony, I should infer that the royal acquaintance amounted to something lengthier than a one night stand. These are the incidents, however, even if sometimes apocryphal, that create architecture, and develop it. Without their influence acting upon me through the medium of this ancient dwelling, I could no more have sat down and planned the Rabbit house at Wyoming, New Jersey—out of whole cloth, invented it as it were—than I could have invented a chapter of the history of England.

GARDEN FRONT AND TERRACE, RABBIT HOUSE, WYOMING, N. J.

Many people think that an architect simply takes pencil and paper and proceeds to sketch from his imagination about as freely as you would sketch the House that Jack Built to amuse some child. I have been complimented for having evolved a design so "startlingly original" as the Rabbit house. and for "having gotten away with it." I assure you I am not nearly so clever. When the wolf is at the door I can go into the garden and dig, I can go into the woods and fell trees, I can go out into the world to bargain and trade for a living, but I can do nothing about the design of a new house—a design equal in merit to that of the Rabbit house. Instead of the wolf's cry of want driving the demons off. as Bertuccio in the play of the "Fool's Re-

venge" says the "blessed church bells" do, the fiendish noise merely draws more demons about me. I cannot collect my thoughts. I must wait for the planchette to move. I cannot see to make a mark, literally, on my paper until some charitable inspiration burns over the drawing-board and in that manner illumines it.

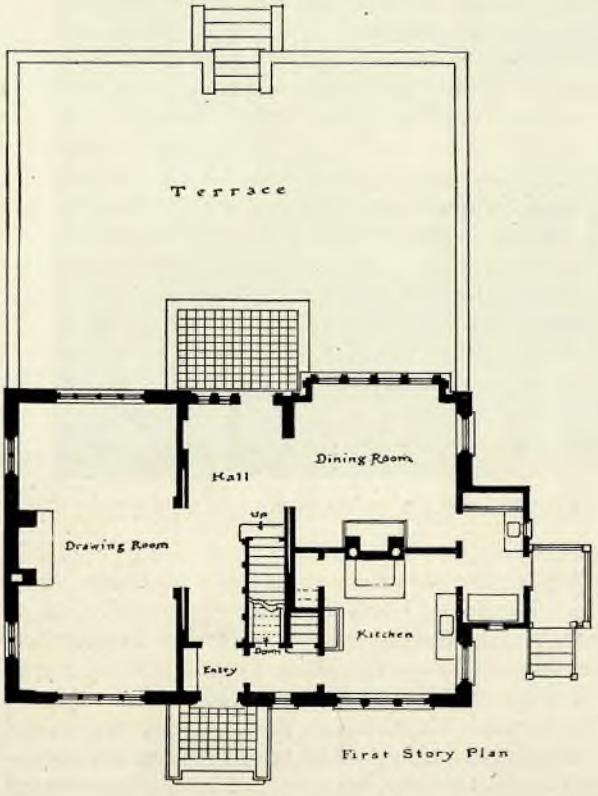
People affect to sneer at what they call the pose of an artistic temperament. There is no such thing as an artistic temperament, really, some eccentric equation. If you are a good man you are an artist in your particular channel of usefulness. If you are a bad one, then, in the gentle words of the Earl of Beaconsfield to the noisy voter who interrupted his speech—"You oughtn't to be." The inspiration I am talking about is the element of godliness that is in every one of us, as it was in the Savior preeminently, the centrifugal incentive to exploit as much faith, hope and charity in the world through the chosen medium, in this case architecture, as lies within our power. Now, when you stop to consider that this inspiration of ours is not the first of its line but a reincarnation of predecessors which have repeatedly visited our antecedents since as long ago as the inception of the design for the Sparrow house in the sixteenth century, and made them, in turn, its votaries, you can understand how the thing operates —why it is a peremptory long-distance call.

"Soldiers!" said Napoleon at the Battle of the Pyramids, "forty centuries are watching your achievement." But it was not the vast size of Cheops, nor the miracle of transporting the huge stones for its construction that appealed to this prodigious military captain (cribbed from Victor Hugo) so much as it was the *people* who did the stunt—those Egyptians, those pharaohs, those dynasties—the personal element and dramatic story, the Pyramids epitomized so dynamically as to awaken spirituality even in a foreign invader bent on ruthless conquest. If the Pyramids, handicapped by their negative environment of arid sand, could have gotten Napoleon on the 'phone where one of our psycho-analysts would have failed before so positive an adversary, may we not readily understand how easy it is for the Sparrow house in a setting of quaint graciousness to captivate the art student in quest of just such inspiration? Like the Pyramids, it is not so much the architectural fabric as it is the intimate home history of England we read in every significant motive and detail; and that means

THE SPARROW HOUSE IN THE BUTTER MARKET, IPSWICH, SUFFOLK, ENGLAND

our own home history, only an earlier chapter of it, still more romantic and absorbing.

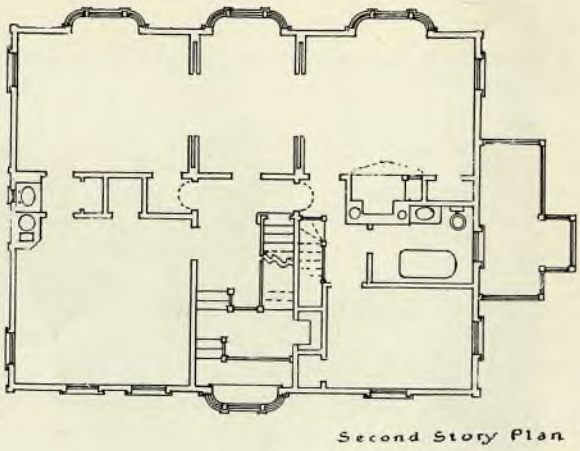
The Sparrow house takes its name, legitimately, from the family with whose fortunes it was long-time connected, but all the rhyme and reason there was in calling its American adaptation "the Rabbit house" existed alone in the lively imagination of the architect who fancied his accomplice in the conspiracy resembled a rabbit. In the central oriel of the garden front there is a carved rabbit bearing a banner charged with the letter E and flanked by the initials of the builders surmounted by coronets. There are rabbits also in cartouches inserted in the leaded work of the windows, and other devices of a more or less personal nature besides Mdlles. Lapine are distributed about other parts of the house. The commercial argument condemns this sort of thing. It is thought to militate against the ready sale of a piece of property in case it becomes desirable to sell. But that commercial argument is now a back number. People are only too glad to buy places, I have discovered, with these sentimental touches. The value of an historic dwelling at



RABBIT HOUSE

Portsmouth, N. H., is enhanced materially because the autograph of our erratic admiral, John Paul Jones, happens to be scratched with a diamond on a pane of glass in one of the windows, and the present owner of the Perry mansion in Providence, R. I., religiously preserves the busts of the founders of the estate in 1789, which preside over its charming, Colonial gateway, though no family relation whatever exists.

Unquestionably most curious of all the curious features of the Sparrow house is the archaic style of pargeting which ornaments its wall surface. It is not the classic pargeting that ornaments the famous Roman villas, but a distinctly genre, home-made-looking pargeting which, like the school of Flemish painting with its distorted not to say gro-



RABBIT HOUSE

tesque figures intended to be human, is a work of art just the same. It seemed to me to be useless to attempt anything of this kind for the Rabbit house, for I was convinced that one of our American winters would soon put any pargeting completely out of business. The next most remarkable feature is the oriels, unless it be the heroic cornice which forms a roof for the oriels.

Folks wonder how all these odd and curious windows of the English houses open. Well, they don't open, leastwise many of them do not. You see, at the time of the introduction of glazed windows into houses other than those belonging to the princes and noblemen in England, when the great building activity of the Tudor reigns began, it was like some wonderful modern improvement of our own day to be able to contemplate at leisure the inclemency of the weather without, through windows formerly draught pockets, and yet be snug and comfortable within. Only a "d. f." ever thought of opening the casements to defeat the very purposes for which they were designed. Even today, in the wayside inns (they call them "pubs"), you will find that the windows of the coffee room (dining-room of gentility) like as not are stationary. Once I had to change my lodgings simply because of this, and I am no

DETAIL OF WEST FRONT, RABBIT HOUSE

fresh-air fiend at that; but fancy a coffee room the next morning without ventilation! Many of these "pubs" are merely drinking places and refuse lodgers at the risk of losing their licenses, so I suppose they think it matters little about ventilating the coffee room while the bar reeks with odors of stale beer to remind an American of the typical cheap gin mill in his home town.

All the chambers of the mediæval dwellings were virtually sleeping-out porches, and the inmates had about all they wanted of that kind of "rough house." Instead of looking upon their unglazed windows as fun they regarded them as the source of unspeakable discomfort, and hailed with delight pieces of translucent horn, varnished paper or anything that would keep the pitiless gusts from the Archangel sector of Russia off the backs of their necks. If a casement is made to open there has to be a certain amount of play at the points of contact, and when the wind rises to a 70-mile per hour tornado and the temperature has a rendezvous with zero, as happens every winter in America, an isolated dwelling is bound to be well ventilated, even when all the windows and doors are closed as tightly as may be, but now comes along the fresh-air fiend, and what does he want us to do? He wants us to equip ourselves with Eskimo sleeping outfits, open all our bedroom windows and let the furious gale do its worst. Has he an object in returning to aboriginal life? He has, but it is not commendable. He desires to be able to eat to satiety all the indigestible things that appeal to a surfeited palate and let the outdoor oxygen digest the curiosities he put into his stomach.

The middle sections of the wondrous oriels of the Sparrow house apparently do open. I examined them once, but there was so much unusual detail to remember about the house that I cannot say now. I knew, however, that casements anywhere near that size would be wrenched from their stays and hinges by the first American storm that came along, so that I made the transom bars of the Rabbit house oriels continuous through the frame, hanging the transom sashes from the top. The sections thus divided reduced the size of the sashes opening in pairs to 1 ft. 6 in. x 2 ft. 10 in., which offered to the wind only such resistance as I calculated the American hardware, always too light for the part it has to play, could withstand.

Having once lived in the Rabbit house, I can testify that its windows will admit the free air in quantities sufficient, and more than sufficient, for the respiratory requirements of any American family not too numerous for the size of the building. It is seldom necessary to open every window in a house anyway, especially small, oddly-shaped windows. Moreover, as the casements made to open admit air to the full capacity of the opening in the window frame, their ventilating capacity is double that of the usual double-hung window sashes. It is not generally realized that the sun never shines, the wind never blows and the rain never beats in England quite so fiercely as they often do in America.

NORTH ELEVATION AND GATE, RABBIT HOUSE

Whatever merit there is in the terrace of the Rabbit house I cannot claim. It was built after the property passed beyond my control. I miscalculated on an hallucination which pursued me that I was a kind of architectural Meissonier, and that as nobody would dream of piecing out a canvas by Meissonier either with one's own work or that of a less skillful artist, I rested assured that no purchaser of the Rabbit house would think of changing anything without consulting the architect. But the question of money that pervades everything in America pervaded this also, and fearful my plan would mean too great an outlay, my opinion was not sought.

WEST FRONT, RABBIT HOUSE, WYOMING, N. J.

I had planned for a very different kind of terrace than what is there. I began to think my critic was right in his casual statement: "This is a very expensive house; everything about it is expensive!" Consequently, one day when a cloud appeared on the horizon I obtained a copy of the familiar questionnaire of a local real estate dealer. I complied with all the hard-as-nails memoranda about modern improvements, such as a gas range, number and kind of laundry tubs, bathrooms, Welsbach lighting fixtures, size of lot, legal incumbrances, tax rate, etc., etc., to the best of my ability. The fact that the Rabbit house was a reincarnation of the great Sparrow house at Ipswich seemed unimportant to the real estate agent. In Greece they would have *helped* rather than *discouraged*. Instead of *taxes* there would have been a *subsidy!*

The paper, however, I returned to the agent with a message adapted to the requirements of the average intelligence as I had found it. It was a message not unlike the sententious one that General Lee on the morning of April 2, 1865, dispatched by an orderly to Jefferson Davis, as the President of the Confederacy sat in his pew at service in St. Paul's Church—"I can no longer hold Richmond!"

Observations on Types of Memorials

By A. L. Brockway, *F. A. I. A.*

THE victory of the Allies in the great war and the returning of soldiers, marines and members of the navy have set the people thinking as to what should or could be done in each community appropriately to commemorate not only the part taken by the United States as a whole in this great conflict, but more especially to commemorate the participation of the men of each immediate community in the great result. The consequence has been a variety of suggestions from everybody interested as to the kinds of construction which should be utilized to express the appreciation of the nation for the heroes in its army and navy, both the dead and the living.

In order promptly to celebrate the return of our army it has been necessary to do a good deal of work of a temporary character, as was, of course, proper. In some cases this temporary work has been authorized as a suggestion or full sized model of what might later become a permanent construction. This is notably true of the arch in New York City; but in the majority of cases the local effort at a commemorative treatment has been without any idea of permanence. Of course, in many instances enthusiasm and haste have led to the erection of arches and other things which have been neither particularly beautiful nor appropriate, excepting as repeated for instance in the large electric sign: "Welcome Home" or some other phrase which comes undoubtedly from the heart of the people, but which is put in a form which pleases neither the eye, the sense of proportion nor the sense of color. It is regrettable that we have had some misguided efforts, as these could in many instances have been avoided. Of course, these temporary treatments will soon disappear; but it should be apparent that anything and everything done by the people of the United States to commemorate their participation in this World War should be most carefully and deliberately considered and should not under any circumstances be hurried into. We were deliberate enough in considering everything before this nation finally plunged into the world controversy; but when we did go in, it was with a consciousness that we were fighting for fundamental and great principles upon which the life, safety and very being of this nation depended.

No matter what the relative importance of our contribution may have been, the contribution itself in resources and in human lives was tremendous. The conviction of this nation that nothing transcends the moral and spiritual qualities of human life should be expressed in the creation of permanent monuments, with a care and deliberation which will result in forms of beauty appropriate to what we believe are its fundamental characteristics. In other words, our contribution as a nation to the history of the world and our contribution to art in the form of monuments should, as heretofore, constitute a physical record to go down to posterity and should be, as those monuments have been, expressive of the lives, the thoughts, the ambitions and the daily duties of the people. The great monuments of the past are exactly such expressions of the nations which created them. We here would not be true to our duty today if we calmly appropriated the forms determined upon to commemorate victory by peoples of the past. Those monuments expressed the ideas of the time in which they were created; they expressed the ambitions and the principles of living and of the attitude of one nation toward another; they were truthful records of all these things and have been valuable in helping us to estimate what those peoples thought and believed and to draw lessons from their lives and actions which might in a measure guide us.

Were we always to take, for instance, the Triumphal Arch as expressive of victory, should we not take into consideration the following facts: That, practically originated by the Roman Empire, the Triumphal Arch invariably commemorated the return of victorious armies laden with spoil taken from conquered nations and brought back to Rome to increase its riches and embellish the city. Such wars were wars of aggression and conquest involving annexation of territory and subjugation of conquered peoples. The Triumphal Arch, then, was adorned with sculptures and bas-reliefs portraying the returning soldiers with their captives, laden with the public and private property which had been wrung from the conquered countries.

In spite of the beauty of Rome as the result of this world conquest, are we, the American people, ready to say that our contribution to commemorative architecture is to be the adaptation of forms created and employed to celebrate such events? The Roman victory arch affords a typical example of the way in which history is depicted in the art of the times, but if we examine the career of natons still more ancient, like Syria, Persia, Egypt, Greece, we will find in every case that the monuments erected express and typify the racial char-

acteristics, make a record of the lives of the people of each nation and are of value for that very reason.

One hundred years hence, when our descendants look back upon the United States as it emerged with lofty spirit from this last struggle, shall we be judged as having lived up to our great possibilities if we devote our building efforts in the next period of years to the erection of monuments in any way associated with such events of the past? Certainly not. Rome, representing the climax of civilization, was practically destroyed as a great nation by the influx and overrunning of barbarians, and we look at a succession of centuries filled with the suppression of the individual, in which he was the victim of superstition and exalted mysticism, resulting in the restraint of the creative powers.

As we approach that period in the history of Europe when the death blow is given to feudalism and we enter that great epoch of cathedral building, we recognize that once more the individual was coming to the front in the communities; and the bishops in espousing the cause of kingly power and centralized authority, involving with it in some measure the cause of the common people, succeeded in arousing the great support of the mass of people as directed against the feudalistic and monopolistic nobility; so we have springing from the efforts of the people themselves the great cathedral churches of the 13th, 14th and 15th centuries, expressive once more of the lives and the thoughts, and the desires of the people of those countries.

It should be interesting to note that these wonders of architecture which every traveler in France and England admires and loves were not the gifts of rich individuals but of the great mass of people themselves, as they should be. There were no Carnegies or Rockefellers at that time, and the kings themselves were not rich enough to build these buildings all over France and England as they were built. On the other hand, if, for instance, one should follow the development of the residences of the individual from the earliest down to modern times, he would find expressed in these buildings the conditions of life, the political status of the individual and would see in them a reflection of the relative value of the people in the general contribution to the progress of the world.

It would seem apparent, therefore, that in considering types and kinds of monuments the American people in their various subdivisions should take careful account of the past and appraise themselves before trying to build something which should in itself be as accurate a record as possible of just what the American nation is. Now, this does not necessarily mean just one type of building, nor one kind of monument. Our minds probably have been so fixed upon the big things involved in this war and in the peace negotiations now going on that possibly we have lost sight of many of the smaller details of life, which go to make up a community. For instance, our mind is so absorbed by the larger aspects of the League of Nations, that we are quite likely to lose sight of the question as to whether we, the United States, a League of States, and then again a League of Cities, a League of Civilized Communities, both in the city and in the country, are completely devoted to a League for Peace among ourselves in all the activities of life and that we do not anywhere desire to progress ourselves at the expense of any other one of our colleagues; whether in the life of each of our cities we realize the fact that in the interest of the community and the greatest good for all, each individual must of necessity curtail and perhaps give up some of the things which he is apt to consider as a prerogative of liberty and freedom. Such considerations must be firmly ingrained in our natures and we must fully realize them before we can successfully express them in architectural form, as we should, thus consecrating ourselves to the high position which we certainly hold, and must fill, and of which we are conscious as the result of this great world war.

"Slow to Anger!" It is a matter of history that we entered the war from altruistic motives, one of the few instances in the history of the world where a nation consecrated its resources and its citizens to the upholding of the fundamental principles which we are pleased to call the Principles of Democracy, upon which the life of a republic depends. We did not go in for aggression, for conquests of nations or territory. We did not go in to come back laden with loot as the victorious armies of ancient times, and subsequently, have usually done. We went in, as we all know, for principle. The principle is typified in all of the nobler and loftier moral and spiritual qualities of man representing the individual in any nation. Our armies are returning free from the degradation or desecration of stolen property taken from the conquered. They are returning almost in a spirit of exaltation because of the quality of the achievement which is in every way commensurate with the loftiness of the grounds upon which we entered into the conflict.

It would seem to me, therefore, that the character of the monuments or of the buildings which are to be erected in this country should be commensurate with all of these things, and I cannot see personally the appropriateness of the Triumphal Arch or of those monumental symbols of ancient times commemorating events of fundamentally and radically different character. I believe that the monuments which we erect should be expressive of our lives,

devoted and appropriated to the requirements of the daily life of the people of our various communities; that they should not only afford opportunities for development along idealistic lines; but should in a measure consecrate to the nation of the future the ideals which have lifted this people to the mighty effort which has been exerted. I can see in the humblest and most ordinary of daily duties of routine an opportunity for the development of the character of the individual, and thus of the nation, in thrift, the avoidance of waste in daily living and the organizing of our facilities in the cities to accomplish this for the great mass of citizens.

Those humble elements are just as essential in the make-up of character as the spiritual and speculative things which occupy the dreamer in the community. Both are essential: both are necessary. And as Emerson has so beautifully put it in his poem of "Each and All": "Thou knowest not what argument thy life to thy neighbor's creed hath lent." We have given a wonderful exhibition of what this nation can do when roused to a man, as it was; how we can consecrate our energies, resources and efforts to save the life of a nation. When we recognize and realize that many things had to be done by Government, exercising centralized control, in order to accomplish the purposes in view, and when we remember that such centralization of authority had hitherto been jealously regarded, and that in the past we probably would have at no time been willing to admit that so much authority should be centralized in Government, are we not as a result of that centralization in a position to consider such things more rationally and with a broader view than we previously were? Has not this experience taught us that some things which we apprehended are not so dangerous, and has it not shown us in what ways to guide and control such centralized authority?

When we stop to remember that Government is really ourselves and is but a type of political machinery for enabling us all to participate in doing things for the benefit of all, is it not then perhaps a rational proposition to consider that Government may be the proper medium through which the construction of memorials such as we are contemplating should be undertaken? We do not hesitate in many civic matters, such as city halls, court houses, school buildings, fire stations, etc., to entrust these contructions to the city authorities. The same applies to institutions belonging to the state and also to the nation. Why not, therefore, utilize this same medium for erecting the memorials which are to come? Those things in our communities which are obviously for the benefit of all and which go to make up the comfort and well-being, both physically and spiritually, of every community, of which I have already mentioned markets, schools, etc., and to which should be added places of public assembly for the discussion of matters affecting the welfare of all our institutions, as a rule our American Nation, while keenly appreciating, has nevertheless failed adequately to utilize and develop. The Greeks and Romans were keen for these places of public assembly, both in the shape of buildings and in open space; and it would seem to me that such treatments of our cities in the creation of open places of assembly surrounded by monumental buildings devoted to the Fine Arts, to politics as the science of Government, to great orchestral concerts, to great addresses by the great statesmen and orators of the world, might easily express both the ideals and the better elements in the life of the American people and be at the same time consecrated as a memorial to those who did their part in this war. The development of this idea is a thing which every community owes to itself to provide, and if followed out and developed to the utmost it should be easy to visualize the type of commemorative monuments which could be erected in memory of those who made the supreme sacrifice and which could at the same time be dedicated and consecrated to the finer qualities of this great nation.

In some such way as this, we as people would be contributing, as did those who contributed to the upbuilding of the great cathedrals of the middle ages, wherein they in their turn consecrated themselves to the better and loftier aspirations within them. It is unquestionably the duty of a community to educate its young, not only as we endeavor ordinarily in our public school systems; but it should go beyond that and extend to our universities. It is a humiliation to think that so many of our universities and institutions of learning are dependent upon the munificent generosity of some merchant prince who has accumulated a fortune out of all bounds. We ought not to be looking for such gifts. We ought to be collectively giving them ourselves.

Now, all of these considerations are not new. The philosophy of history makes clear that such thoughts as these are what animated most of the great people of the past and the difficulties which we have to contend with are but a repetition of the same difficulties they contended with. If the question of a memorial in any locality is hampered by questions of cost, there is nothing unusual about that—it was invariably, so far as we can determine, one of the conditions of the past in the creation of the great monuments, whether of architecture, sculpture or painting. Excepting only where the rights of the individual were so subordinate as to result in slavery, as was probable in the case of such

monuments as we see in Egypt, could a king or monarch build regardless of cost and life. What I have in mind particularly are the difficulties with which Michael Angelo contended in the work which he did for the Holy See. When we look at the wonderful decorations in the Sistine Chapel, it is difficult for us now to realize that the jealousy of those who opposed him with the Pope, and the lack of funds, should have interfered with him and held up his work. When we consider that this was the case, therefore, our problems are nothing which should disconcert us. They simply call for thought, devotion and patience and a recognition that if we are true to our opportunities and to those who died in the struggle so that our principles might live and nations such as ours might continue, we cannot fail. I have one predominating thought in all this consideration, one that looms large and which somewhere, somehow by the ablest men that we have I hope to see commemorated. The French erected a column at Versailles which was dedicated to the "Assemblée Constituante." They considered this Assemblée of sufficient importance as a preliminary to the French Republic to erect this monument in its honor. I believe that one of the greatest monuments that this nation should erect should be one dedicated especially and solely to the Constitution of the United States and that it should be the affair of this nation as a whole. Aside from the Magna Charta, no other document in the world has had the influence upon the rights and liberty of the individual, and of enabling the individual collectively to establish a government founded upon right reason and truthfully reflecting the political possibilities of the individual, equal to the Constitution of the United States as originally formulated and adopted by that great body of truly creative statesmen so early in our history. Around that document for one hundred and thirty years the growth and development of these United States have taken place. It has met every emergency. Its wonderful conception is still as strong today, if not stronger, than it was when formulated. It is one of the inspiring documents of history undoubtedly, and it would seem to me, in this struggle through which we have just been, it has been tried out and found to be not wanting and that it has offered the basis in principle and in thought for the creation for that League of Nations which we are about to see consummated. The influence of this document upon our nation and now upon the other nations of the earth is one which cannot be lightly touched upon. It is so profound and inspiring as to make one feel very small individually in considering it in all its ramifications and aspects. What I would do in commemorating in this country the successful achievement of the war would be to try to erect buildings and monuments of a type and kind which would keep everlastingly before our eyes these great principles and thoughts of the government upon which the United States was founded, and thereby consecrate the lives of this people of ours eternally in and through such monuments not only to the heroes who have returned, but to those who have made the supreme sacrifice in order that this nation might live, and to make possible in this country future generations of the character which this Constitution and this great nation deserve.

DECORATION BY HARRY W. RUBINS

THE AMERICAN ARCHITECT

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VOL. CXV APRIL 9, 1919 NO. 2259

Democratizing the Institute

TWO years ago the architectural profession was in a sad state. Its pessimists believed that its very existence was in jeopardy, and its optimists could not ignore the difficulties then besetting the practice of architecture. But the war, with all its attendant horrors, had its beneficial side; it exerted a refining and strengthening influence that restored among architects themselves a previously waning appreciation of their true usefulness. It cast out doubt of the future, with the result that today there is a consensus in the profession, something that did not exist when the United States entered the war; and, moreover, that consensus is progressive. As far as sentiment, desire, willingness to serve, are concerned, the profession is prepared for progress. In some quarters, at least, there is a determination to go ahead that will not be denied. All indications point to a greater future for architecture and architects in America, and unquestionably the time has come to forget the troubles of recent years that attention may be concentrated on constructive planning for the future. Henceforth let "The Future" be the text.

It has been demonstrated that a large measure of American progress in professional and business life is based on efficient organization effort, and it is equally certain that the American professional and business structure is cumbered with many inefficient organizations that retard rather than promote progress. These are the chief causes of the vast difference between the accomplishments of similarly constituted professions and trades.

In the field of architecture there is but one national organization; there should be but one, and it should be as efficient as human ability can make it. Much of the future of American architecture is dependent on the wisdom or lack of wisdom displayed in the councils of the American Institute of Architects.

Without attempting any discussion of the past of the Institute, certain facts about its present status seem to merit contemplation:

Its membership represents the best class in the profession, but not *all* of the best class. Therefore, it is not completely representative of the men who, throughout this country, are morally entitled to call themselves architects.

Its constitution and by-laws were drawn under conditions far different from the present situation, and in some respects are deemed by some of its most active members inadequate or ill-formed for today's needs. Chief among the points of criticism heard by THE AMERICAN ARCHITECT is the allegation that the plan of executive organization and operation of the Institute is not in accord with methods that have been demonstrated sound by other organizations of comparable character.

It should be understood that in submitting the proposals that follow, and accompanying comments, THE AMERICAN ARCHITECT is making no effort to attempt interference with the executive and legislative processes within the American Institute of Architects. Such an effort would constitute the height of impertinence. It is the desire of THE AMERICAN ARCHITECT merely to bring to the attention of the entire membership of the Institute and all of those other architects who should be members of the Institute, certain questions of policy on which expressions have been had from some of the country's leading architects; in other words, to stimulate thought for the benefit of the entire profession, in the belief that every legitimate architect, regardless of membership in the Institute, has a legitimate interest in the future of the Institute as the only mouthpiece of the profession.

With this purpose, THE AMERICAN ARCHITECT submits the following proposals, with some of the reasons that have been urged in their behalf by architects, but without itself expressing an opinion for or against any of them:

Proposal One.—Amend Section 1, Article 10, of the by-laws to provide that officers of the Institute shall be elected by letter ballot of all members of the Institute in good standing, the official ballot to carry the names of duly nominated candidates, but every

member being privileged to insert the name of and vote for any candidate not appearing on the ballot.

Comment: It is urged that this method of procedure has been proved in many other organizations, notably, for example, the American Society of Civil Engineers, and that it results in a desirable democratization of the organization, making the self-perpetuation of an objectionable administration impossible. Moreover, it gives every member who pays his dues and charges, a voice in the selection of the officers who control the destinies of the organization, regardless of his presence at the annual convention, and is in line with current tendencies and practice in government and in organizations, business and professional. It is suggested that such a change will result in a material increase in the membership by making membership privileges more attractive, and thus will increase the revenue of the Institute.

Proposal Two.—Provide by proper amendment of the by-laws for a system of referenda, whereby the board of directors of the Institute or any group of twenty or more of its members may, under proper safeguards, consult the entire membership and secure its views on questions of general consequence.

Comment: Such a referendum plan has been in effect in the Chamber of Commerce of the United States since that organization was formed, and has exercised a powerful influence over legislation and national policies. It gives the entire membership of an organization an opportunity to express its views in connection with issues and policies affecting the entire profession.

Proposal Three.—Amend the by-laws to provide for the consolidation of the office of Secretary with the position of Executive Secretary, in the position of Secretary-Manager. The occupant of this position to be a salaried executive, selected by the board of directors, on the basis of his qualifications as an executive, and to exercise the functions usually undertaken by the managing executive in similar organizations.

Comment: It is suggested that practically every successful national organization is operated on this plan, employing a "permanent" secretary, whose function is to manage the business of the organization. Under the guidance of a competent secretary the work goes on uninterruptedly, regardless of changes in administration. The secretary-manager becomes thoroughly acquainted with every phase of the work, and acts as an efficient and practical aid to the president and other executive officers who come into office, usually, without intimate knowledge of the details of the organization's work and the routine methods which necessarily are employed in carrying it on.

Examples of organizations that pursue this policy are:

American Society of Civil Engineers. Charles Warren Hunt has served as secretary and as actual manager of the society since 1895. This organization has 8968 members.

American Society of Mechanical Engineers, 8720 members. Calvin W. Rice has occupied the secretarial position since 1906.

Chamber of Commerce of the United States. Elliott Goodwin has been executive-secretary and D. A. Skinner assistant secretary since the organization was formed.

Proposal Four.—Contingent on the adoption of proposals two and three, amend all articles of constitution and by-laws which now place the government of the Institute entirely in the hands of the local chapters and the board of directors, so as to provide that the chapters shall have power to make recommendations to the board of directors, to call for referenda, etc., but placing all power in the membership, working through the officers and directors, and making them directly answerable to the membership.

Comment: None necessary, as such action would obviously follow if Proposals One and Two were adopted.

Proposal Five.—Amend Section 2, Article 10, of the by-laws so as to give the president of the Institute the powers usually placed in the hands of the executive head of such an organization.

Comment: Under the present by-laws, the powers of the president are so restricted that he can be charged with little if any responsibility for the conduct of his administration.

* * *

While THE AMERICAN ARCHITECT is not yet privileged to quote specifically the authors of the foregoing comment, it now places these five proposals before the membership of the Institute and invites their criticism and comment.

Criticism and Comment

Build Now?

The Editors, THE AMERICAN ARCHITECT:

The Department of Labor, real estate exchanges and architectural publications unhesitatingly advise the immediate resumption of building operations. THE AMERICAN ARCHITECT, in its issue of March 12, 1919, under the caption "Build Now!" gives some encouraging letters from bankers and others concerning the prospects for loans on property to permit us to "Build Now!" But I cannot avoid the feeling that the injunction to "Build Now!" should be followed by a "?" instead of an "!."

Of all the letters published, that of D. Everett Waid, President of the Board of Examination and Registration of Architects of New York, seems to discern the real or most important cause for retardation and inaction in building enterprise, namely, uncertainty and risk. "Owners will not willingly proceed as long as they fear a fluctuation in prices and a complete tie-up when a building is half constructed." This uncertainty and apprehension does not arise from fear that the contractors will raise their prices after having contracted to complete the building for a stated sum, or that the material dealers will increase the cost after agreeing to a price. Where, then, is the "Fluctuation in prices" which Mr. Waid says is the deterrent? Would it not be more accurate to say: Increase in wages? Whoever heard of wages "Fluctuating" downward, and have we not the assurance of the Department of Labor that they will not "fluctuate" downward?

If it be true that the brokers and bankers are willing to lend money for building operations while this uncertainty or apprehension exists as indicated in the letter of Mr. Samuel H. Beach, President of the Savings Banks Association of New York, who says that a strong feeling prevails in financial circles that small annual payments of principal should be required on all mortgage loans, and *if under such a plan of loaning money the lender would* be *safe* in making a fairly liberal loan, even based on prevailing high costs, then the gradual reduction of the principal *would counterbalance the possible eventual fall of values to a lower level.* Therefore, if the banks will lend money, even on less liberal terms than formerly, but on assured terms; if the contractor will complete the building for a fixed amount, and the material dealers will supply materials for the contract price, where is the uncertainty, the risk, the "fluctuation in prices" and the fear that the building will be "tied-up when half constructed?" The owner who contemplates building can make a plain contract with the architect, his banker or building association and dealers in materials to render their respective services and materials at a fixed amount that will not fluctuate; but over 60 per cent of his outlay will be for labor, and how and with whom can he contract with any reasonable assurance that this part of the work will not fluctuate or increase to such an extent as to exceed the limits of the loan, and thereby tie-up the work? Under such circumstances, who is responsible for the feeling or uncertainty and apprehension as to the ultimate cost of the building? Is there any man or body of men, any association or any corporation that the building owner can turn to for bargain and agreement as to the limit of cost of the work and with the same assurance, that such limit of cost for labor will not be exceeded, as he has in the other expenses entering into the construction of the building? If it be true, as Mr. Waid has said, and as I believe, that it is the uncertainty and risk and fear of fluctuations on costs and future values that discourage immediate resumption of building operations, and such uncertainty and risk is due to our inability to deal with any parties competent to make a reliable contract, would it not be reasonable to ask the Department of Labor to assist in the movement to "Build Now," which they so ardently advocate, by fostering or creating either in or out of the present labor organizations some association or corporation which may bargain and agree on the limit of cost of labor for a building?

SNOWDEN ASHFORD.
Municipal Architect, Washington, D. C.

[EDITOR'S NOTE: It is obvious that the instability of labor can in no wise affect an owner as relating to the construction cost of his building, where he holds a contract for a fixed sum with a responsible builder. Any loss, by reason of increase in labor costs, would then fall on the builder or contractor.

If the contract was on a cost plus basis, then any change in wages would correspondingly affect the owner.

Of course, even in the first instance any interruption in the building operations due to strikes would affect the owner to the extent of delaying the date of completion of the building, involving a certain loss of income and increase in carrying charges.

In the second instance the loss to the owner would be both in an increased construction cost and possibly in delayed completion.]

Beaux-Arts Institute of Design

Director of the Institute—LLOYD WARREN

Architecture—WILLIAM F. LAMB. Sculpture—JOHN GREGORY.

Interior Decoration and Industrial Art Design—ERNEST F. TYLER. Mural Painting—ARTHUR CRISP.

Official Notification of Awards—Judgment of March 4, 1919

FIRST PRELIMINARY COMPETITION FOR THE TWELFTH PARIS PRIZE OF THE SOCIETY OF BEAUX-ARTS ARCHITECTS

PROGRAM

The Annual Committee on the Paris Prize proposes as subject for this Competition:

"A BANK BUILDING"

General—A large city bank desires to have a small branch bank building in the fashionable residential district of the city. In addition to being fireproof, burglar-proof, well-lighted by daylight and conveniently arranged, it should be made so dignified and beautiful both inside and out that it will be the bank's best advertisement. To this end, the directors have decided to have nothing but the bank's quarters in the building, and to spare no expense to get the best possible design.

Dimensions—The level lot is at the corner of two important streets, with a frontage of 50 ft. on the main street and 100 ft. on the side street.

Requirements—The interior of the building shall consist of one large banking hall, extending the whole height of the building, subdivided below by means of grilles and partitions into two distinct parts:

1. Public Part, with a Ladies' Room and a President's Room opening directly off of it, and preceded by a Vestibule.

2. Private Part, equally large, for the bank clerks, officers, etc., including a large vault and stairs to the basement.

JURY OF AWARD: R. H. Dana, Jr., F. A. Godley, T. Hastings, J. O. Post, F. H. Bosworth, Jr., R. M. Hood, W. S. Wagner, M. J. Schiavoni and L. Ayers.

Number of drawings submitted—62.

AWARDS:

Placed First and 3rd Medal—L. Williams, Columbia Univ., N. Y. C.

Placed Second and 1st Mention—F. M. Hodgdon, Atelier Rebori, Chicago.

Placed Third and 3rd Medal—H. G. Anthenen, Univ. of Pennsylvania, Phila.

Placed Fourth and 3rd Medal—A. E. Middlehurst, Cornell Univ., Ithaca.

Placed Fifth and 3rd Medal—M. A. Bernhardt, Univ. of Pennsylvania, Phila.

Placed Sixth (1st Alternate) and 3rd Medal—R. H. Segal, Patrons—G. & E. Blum, N. Y. C.

Placed Seventh (2nd Alternate) and 3rd Medal—J. P. Roberts, Univ. of Pennsylvania, Phila.

MENTION:—E. A. Eames, Boston Archtl. Club, Boston; R. W. Craton, Columbia Univ., N. Y. C.; E. O. Shakespeare, Univ. of Pennsylvania, Phila.; D. W. Orr. Yale Univ., Sch. of Fine Arts, New Haven.

Three New York Art Conventions this Spring

Three art conventions are to be held in New York City this Spring. The Eastern Arts Association will bring art teachers from all the Atlantic states and as far west as Ohio for its sessions April 17, 18 and 19. The middle of May will see the members of the College Art Association and the American Federation of Arts assembled for a week with two sessions a day at the Metropolitan Museum of Art.

There are more than one hundred art societies in New York and of these twenty-five are chapters of the American Federation of Arts.

Education along practical art lines, which is one of the special interests of the Art Alliance of America, will be shown in its galleries at 10 East 47th Street from April 5 to April 19. Every school in the city which includes design in its curriculum will be represented. In addition the trade schools that teach any of the artistic industries will make a showing. Thus the Vocational School for Boys, at 138th Street near Fifth Avenue, will send commercial design and sign painting; there will be jewelry made by the crippled boys at the Red Cross Institute for Crippled and Disabled Men; and lettering by boys from the Institute for the Deaf. In all, twenty-six will be represented.

The work will be exhibited not by schools but grouped as follows: Graphic arts; textiles; fashions; metal; wood; stone, clay and glass; leather, toys, novelties; interior decoration and stagecraft.

During the convention of the American Federation of Arts, the Art Alliance galleries will be devoted to a special exhibit of Graphic Arts organized in co-operation with the American Institute of Graphic Arts. The exhibition will include posters, magazine covers, advertisements, pamphlets, letterheads, lithography, color printing, containers, labels, wrappers and photographs.

PLATE 113

HOUSE OF WILLIAM H. REID, SPRINGDALE, CONN.

ARTHUR LOOMIS HARMON, *ARCHITECT*

PLATE 114

HOUSE OF WILLIAM H. REID, SPRINGDALE, CONN.

ARTHUR LOOMIS HARMON, *ARCHITECT*

PLATE 115

HOUSE OF WILLIAM H. REID, SPRINGDALE, CONN.

ARTHUR LOOMIS HARMON, *ARCHITECT*

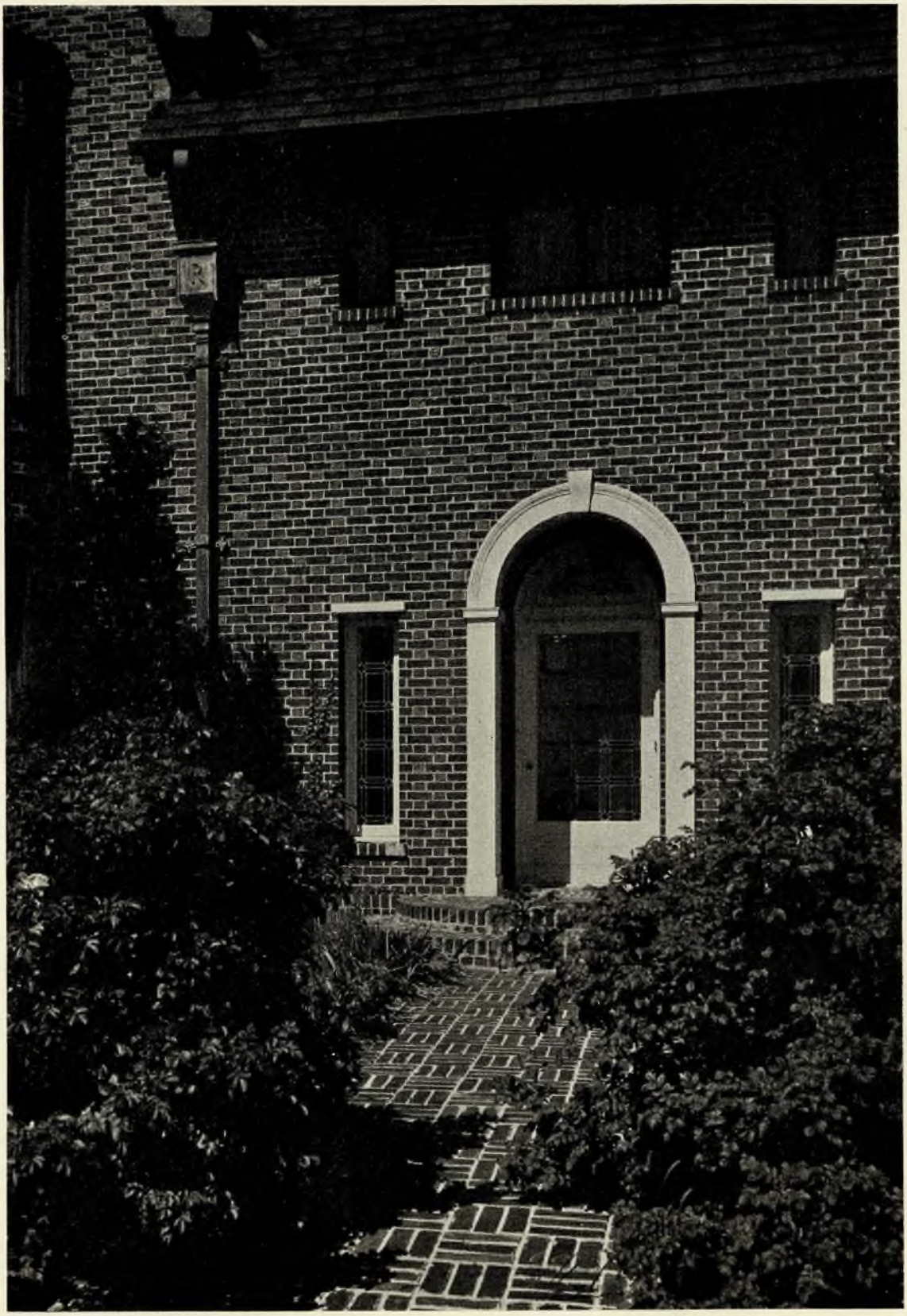

PLATE 116

HOUSE OF WILLIAM H. REID, SPRINGDALE, CONN.

ARTHUR LOOMIS HARMON, *ARCHITECT*

PLATE 117

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PLATE 118

A GALLERY FOR ITALIAN PAINTINGS IN THE CLEVELAND MUSEUM OF ART

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A GALLERY FOR ITALIAN PAINTINGS IN THE CLEVELAND MUSEUM OF ART

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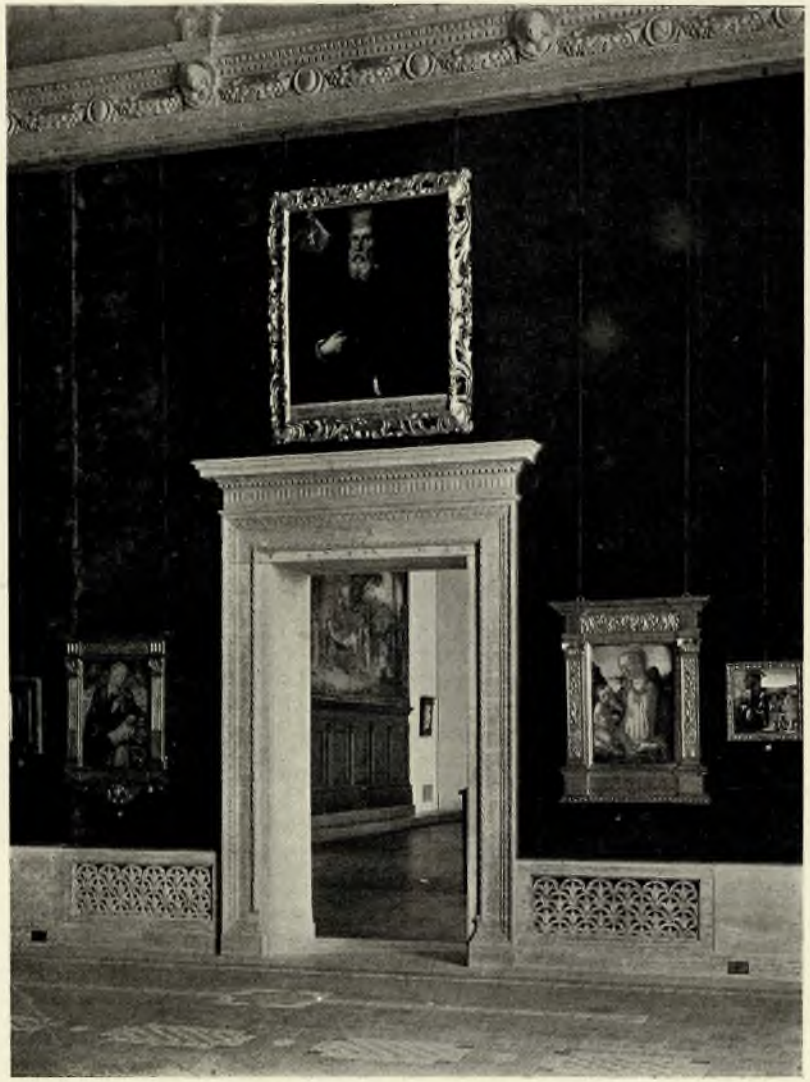


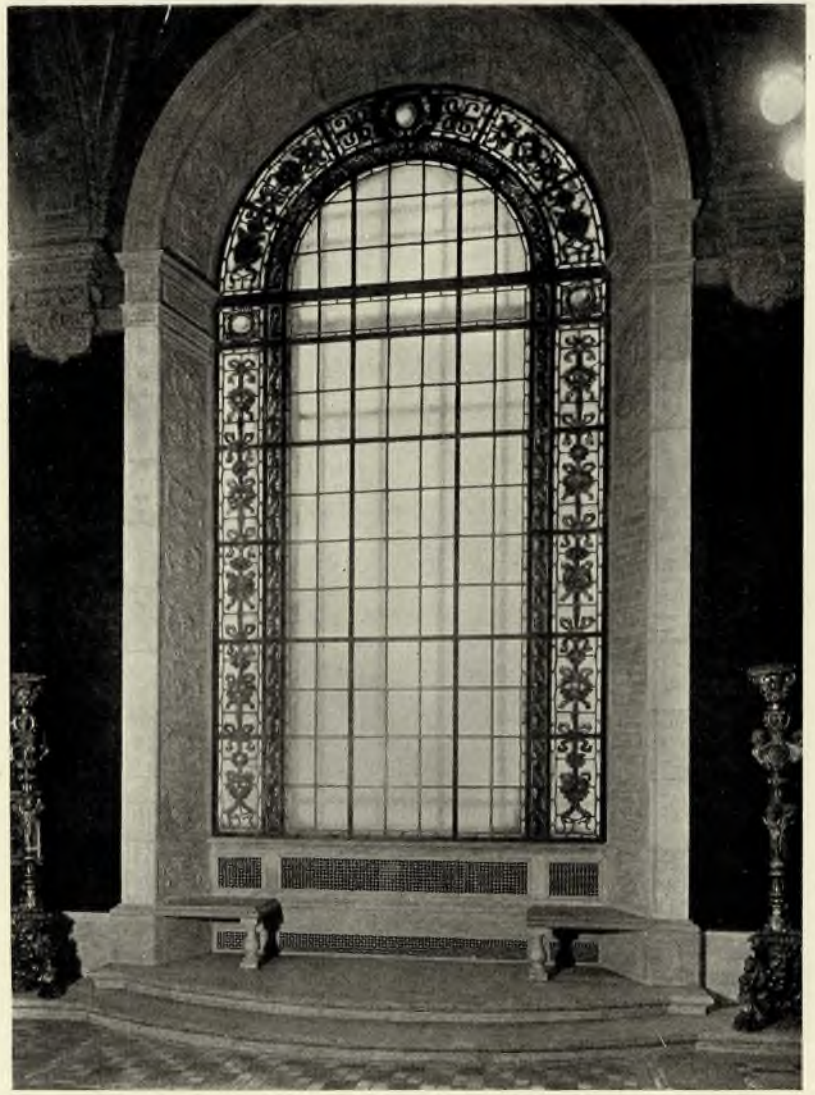
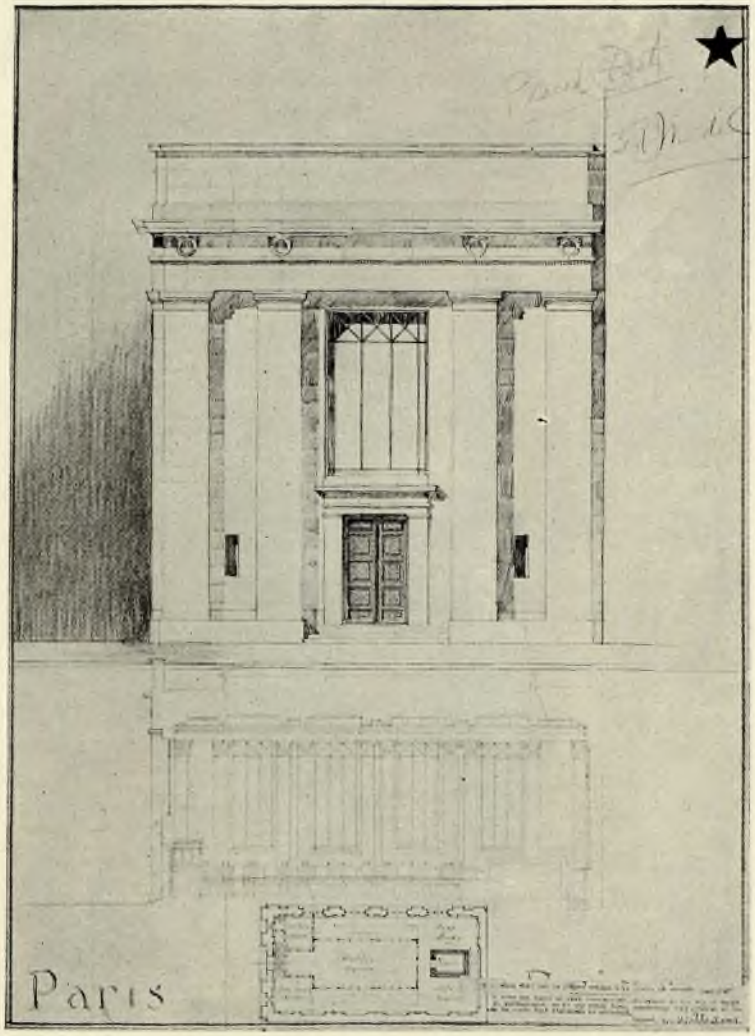


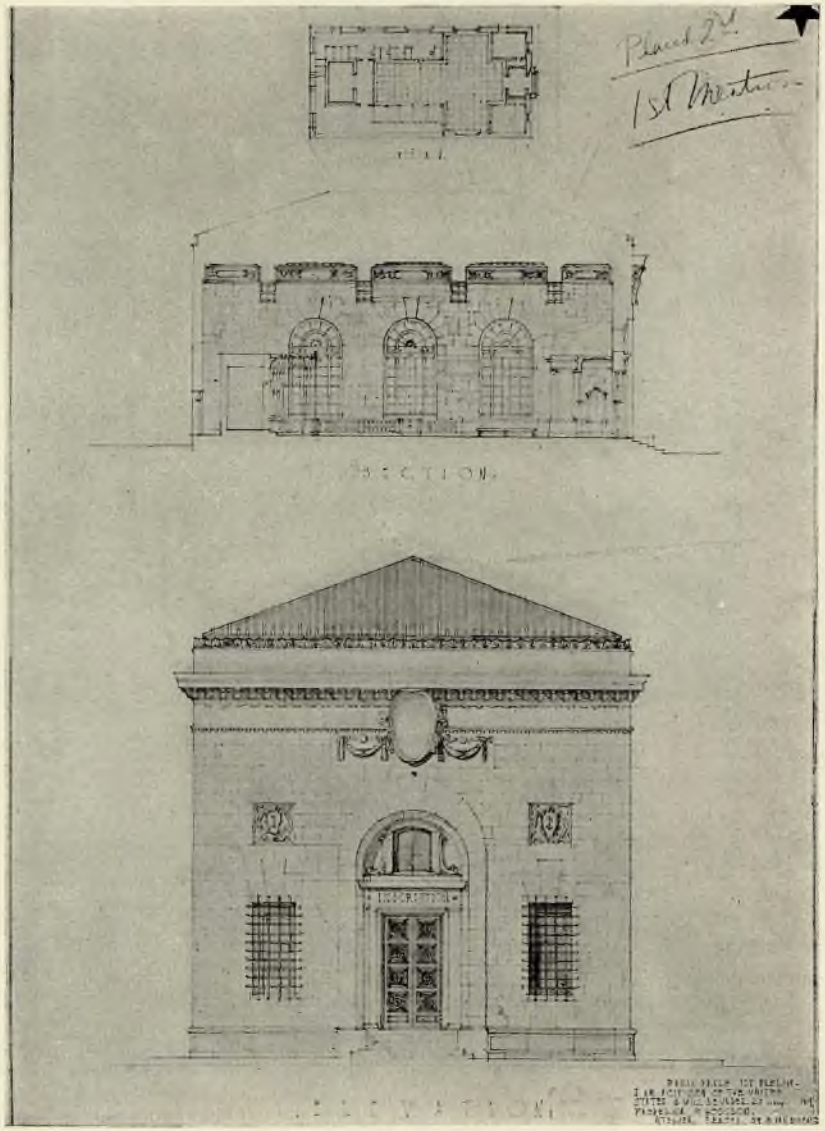
PLATE 120

A GALLERY FOR ITALIAN PAINTINGS IN THE CLEVELAND MUSEUM OF ART

ARTHUR LOOMIS HARMON, *ARCHITECT*



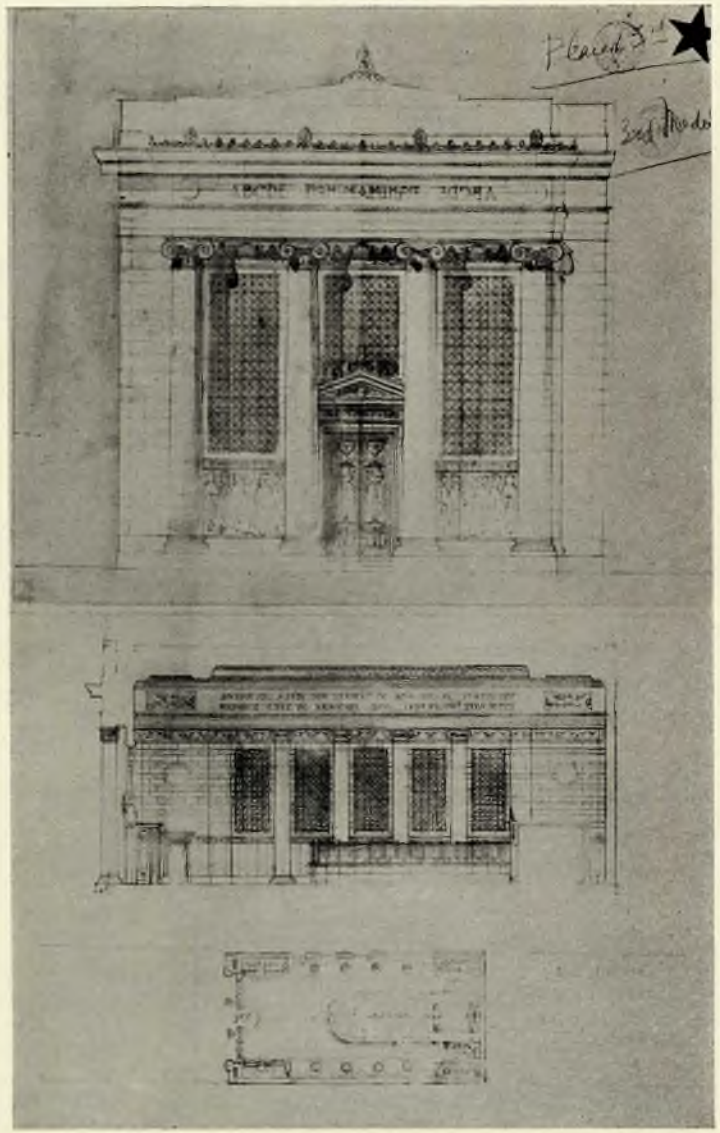
PLACED FIRST AND 3RD MEDAL—L. WILLIAMS, COLUMBIA UNIV., N. Y. C.



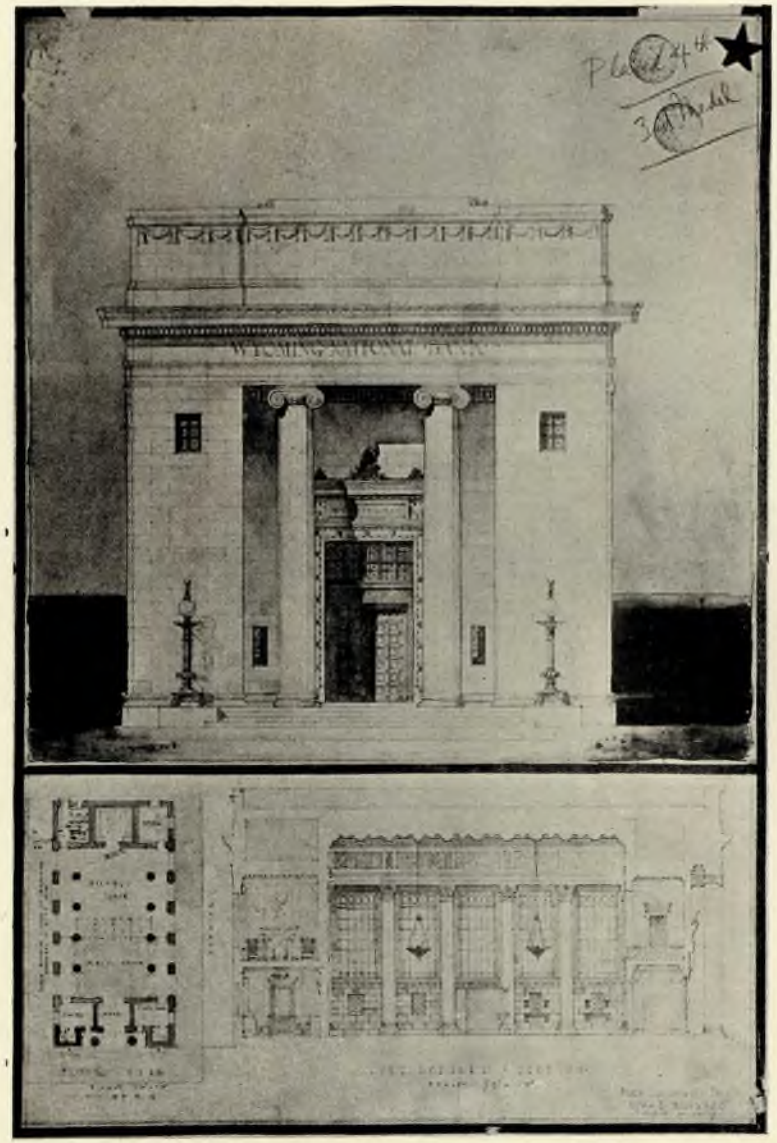
PLACED SECOND AND 1ST MENTION—F. M. HODGDON, ATELIER REBORI, CHICAGO

FIRST PRELIMINARY COMPETITION, TWELFTH PARIS PRIZE

STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN



PLACED THIRD AND 3RD MEDAL—H. G. ANTENEN, UNIV. OF PENNSYLVANIA, PHILA.



PLACED FOURTH AND 3RD MEDAL—A. E. MIDDLEHURST, CORNELL UNIV., ITHACA

PLATE 122

FIRST PRELIMINARY COMPETITION, TWELFTH PARIS PRIZE

STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN

Current News

Owen Brainard

Owen Brainard, associated with the architectural firm of Carrere & Hastings, died suddenly of heart disease, on the evening of April 2. He was visiting at the house of friends when stricken.

Mr. Brainard was a man of rare personality. His untimely death—he was but fifty-four years old—will shock a large number of associates and friends who held him in the most affectionate regard.

As a consulting engineer he stood at the head of his profession. His rare abilities commanded respect, and his counsel and advice were widely sought as those of a man whose knowledge was founded on the most profound learning. His loss to the professions of architecture and engineering is very great, and will be more fully realized when his absence is noted from the many activities in the future, which, if he were yet alive, he would very largely dominate.

Born in 1865 in Haddam, Conn., Mr. Brainard came to New York as a young lad, where he attended the usual courses in public and private schools. He became employed by Carrere & Hastings in 1893 as consulting engineer, and had been associated with them ever since. Mr. Brainard's accomplishment in his profession is principally to be seen in the many monumental buildings where he has contributed as consulting engineer.

The measure of his wide activities in two professions is to be noted in the fact that he held membership in all of the important societies in the fields of architecture and engineering.

Southern California Chapter Holds Monthly Meetings

The one hundred and twenty-third regular meeting of the Southern California Chapter, A. I. A., was held on February 11, President H. M. Patterson in the chair. Fifteen members attended. As guests of the Chapter were present Perry Sawyer, representing the Building Trades Development Committee, and George Gove, architect, of Tacoma, Wash.

Under Committee Reports, Mr. Krempel, for the Committee on "Contracts and Specifications," stated that he had been in consultation with Mr. Weeks of Seattle upon the subject of Quantity Surveying, and suggested that it might be of interest to members if Mr. Weeks were invited to address a meeting of the Chapter in the near future.

For the Committee on "Competitions" the Secretary reported that the Committee had been in consultation with the Supervisors of the County of Santa Barbara relative to the proposed competition for a Courthouse; that information had been given out that the competition was to be held, and the Committee hoped to have the program made in compliance with the Institute rules.

Mr. Bergstrom, for the Committee on "Permanent Legislation," reported having attended meetings of the Joint Committee of the Technical Societies within the past few days, when the proposed State Licensing Law for Engineers was being discussed. The Committee recommendation to the Chapter was not to endorse the bill in its present form; thereupon it was resolved that the Chapter endorse the action of the Technical Societies in opposing the passage of the bill in its present form.

Mr. Allison, for the Committee on "Public Information," reported having met with the Joint Committee of the Technical Societies and taking up with them the method and means of obtaining employment for the returned soldiers.

The President introduced Mr. Perry Sawyer, who spoke on the subject of building conditions and future prospects of the country, and of California in particular. Mr. Gove gave a short talk on Chapter activities in the Washington State Chapter.

The one hundred and twenty-fourth regular meeting of the Southern California Chapter, A. I. A., was held on March 11, Mr. Lyman Farwell presiding and nine members present. Mr. Henry Rosenthal of Cincinnati, editor of the "Building and Loan Association News," attended as guest.

For the Committee on "City Planning," Mr. Withey reported that the mayor had appointed a Civic Center Committee for the purpose of studying the problem and making a recommendation to the mayor and council for the establishment of a Civic Center for Los Angeles. Although the mayor had agreed to place three architects on this commission, none were included in the final appointment; that the President of the Chapter had written a letter to the mayor, regretting he had not seen fit to include architects in this appointment, nevertheless offering the services of the Chapter in so far as the mayor might care to call upon it. Mr. Withey added in conclusion that the Chapter Committee was closely following the work of the Civic

Center Committee and would shortly offer some suggestions to bring to their attention the interest the Chapter has in this matter.

The Committee on "Competitions" approved the Competition Program for the Santa Barbara County Courthouse.

The Committee on "Permanent Legislation" met with the Joint Committee of the Technical Societies for further discussion of the proposed Licensing Law for Engineers. The Secretary read a letter from the Secretary of the Joint Committee of the Technical Societies, which briefly was to the effect that the proposed law is entirely unsatisfactory and urges that the measure be not passed at this session of the legislature.

Mr. Patterson reported a meeting of several members of the Chapter with Bert L. Fenner, an Institute Director, at which were discussed matters concerning the work of the Post-War Committee of the Institute. There were also present at this meeting Mr. Schnaittacher, President of the San Francisco Chapter, and Mr. Johnson of the Washington State Chapter.

Mr. Rosenthal was introduced and spoke on "National Housing."

Washington Chapter A. I. A. Sponsors Bill to Regulate Use of Title

A new bill providing for the registration of architects has been submitted to the Washington state legislature with an appeal for its enactment, by the Washington State Chapter of the American Institute of Architects. The bill proposes to regulate the use of the title "Architect" states the *Improvement Bulletin*, by requiring all persons using it to have a certificate of registration, which may be obtained from an examining board upon proof of an established practice in the state, by presentation of certificates obtained in other states or diplomas from accredited universities or schools, or by passing an examination. The bill submitted was accompanied by the following preamble:

"In presenting this bill to the State Legislature we would clearly and firmly have impressed upon its members that the bill is not intended to, nor does it, prevent any person of any calling whatever from making drawings for buildings of any character, but regulates only the use of the title Architect. This, on the face of it, must show clearly a genuine lack of desire to monopolize or restrict the work of designing buildings, and also real desire to be of service to the public and indirectly to the profession. It is generally conceded that the public at large is almost universally ignorant of the functions of an architect and of the minimum qualifications for the practice of our profession. And this ignorance is but natural when we recall how seldom the individual undertaking to build, employs an architect. And still further, having once built, and by experience having gained some knowledge of the functions and the necessary qualifications of the architect, how seldom he again builds without employing an architect, making of value the experience thus gained. It is to protect this individual in the first instance largely, that this bill operates. It affords him some assurance of at least minimum qualifications in the architect he employs, of which, in the present conditions, he is likely to have little. If the unqualified practitioner has not the ethical consciousness to restrain him from foisting himself on the public as a qualified one, then as in other professions, he should be restrained by law. If he be ignorant of the minimum requirements as herein presented, then, these present a standard for him to attain.

"The law as drawn, sets a standard of education for the time being and gives evidence that the architect so registered has had the proper training and experience brought about through academic training and subsequent practice or that he has acquired in practice for a long period a comprehensive knowledge of architecture, and has presented proof of this knowledge. This fostering the educational standard brings to the public a better service, procuring a minimum requirement by law as exists in the professions of law and medicine and other professional and technical occupations. It checks license to do that which is bad and provides punishment for so doing."

The Post-War Committee

Is a committee representative of

The entire Profession of Architecture.

Its comprehensive program has been condensed to form a questionnaire, and mailed, as far as known, to every architect in the United States.

The Committee, desiring the fullest cooperation, asks that architects who have failed to receive a copy notify the Secretary, who will promptly mail one.

The Committee further desires to receive suggestions from organizations of the Building Trade and Contractors. A requested number of copies will on request be forwarded to these organizations for distribution.

This is the most important movement to place architectural practice on the highest plane that has been made in recent years.

CO-OPERATION WILL INSURE SUCCESS.

Write to Secretary, Post-War Committee,
1741 New York Avenue, Washington, D. C.

Architects Aid with Memorial Suggestions

The Wisconsin Chapter, American Institute of Architects, has offered its services gratuitously in the way of making suggestions and giving advice, both as to location and design of memorials and monuments erected in the state by various organizations in commemoration of Wisconsin soldiers and sailors. Gerrit J. DeGelleke, 725 Caswell Block, Milwaukee, is president of the Wisconsin Chapter.

Portland's Extensive Building

The City of Portland, Ore., is actively working with the United States Department of Labor to establish a building campaign in its own section. As now proposed, that city contemplates the erection of at least two thousand houses this year. Portland now has a population of about 430,000, steadily increasing, while the number of buildings annually erected has for the past eight years been declining. As Oregon is the source of an immense lumber supply, and there is also an abundance of skilled labor, the outlook is reported to be most encouraging for building activities which may absorb at least a part of the surplus labor.

The Progress of Craftsmanship in Brazil

The American consul at Rio Janeiro reports that before the European war furniture and other manufactures of wood were imported into Brazil to the value of more than a million dollars annually, but today Brazilian and Italian workmen in that country are able with Brazilian woods to imitate imported furniture so perfectly that the resulting article is often more beautiful than the model.

While the Amazon district and the extreme north are famous for their dyewoods and Parana is the home of Brazil's soft wood, Rio de Janeiro and Sao Paulo are the great woodworking centers. Furniture-making now in Brazil has reached the stage where its product can compete with the most particular of world markets. In some of the factories the lumber used is all kiln-dried before working. The workshops are equipped with modern machinery, including American machines for veneering purposes. The artisans work on the hardest and most beautiful of Brazilian woods; they do hand carving and inlaid work with a wonderful degree of excellence. Handsome inlaid trays and table tops may be had at a moderate price containing twenty or more varieties of wood. "Imbuya" is the finest wood for furniture making. It comes in a large variety of colors and grains, is hard but easily worked and after kiln-drying, is almost indestructible.

A number of proprietors and foremen in furniture factories have learned their trade in the Lyceo de Arts e Officios, at Sao Paulo, a school that teaches industrial arts and manufactures various articles. The students work in the shops for three or more years, then leave to become foremen in other factories or do special order work on their own account.

There are more than three hundred varieties of woods in the Sao Paulo region alone. As a whole Brazilian forests not only abound in the finest of woods but are of enormous extent. Except for a few plateaus, the forests of Brazil stretch from the Atlantic to the heights of the Andes. Transportation facilities are developing slowly and the labor supply is a constant problem in every Brazilian industry, but with its enormous resources Brazil should become one of the world's principal sources of lumber.

For a Pershing Highway

An organization has been formed in Lincoln, Neb., to exploit the construction of a "Pershing Highway," which is proposed to extend from San Francisco to New York.

Governor Samuel R. McKelire has sent invitations to governors of states through which the highway is proposed to pass, asking their co-operation.

The highway would be built along cities and towns in which the principal events in General Pershing's life took place, including Laclede, Mo., where he was born.

The School House Problem

The Bureau of Education has estimated that not less than $500,000,000 worth of new school buildings will be needed by the fall of 1920 before adequate service may be forthcoming, and large quantities of building materials accumulated by the Government in process of its war activities could be made available for this purpose.

A writer in the *Manufacturers' Record* points out that the facilities for proper instruction of children in the grade schools are woefully inadequate, overcrowding is so common that it has ceased to cause comment, buildings are poorly ventilated, badly lighted and altogether out of keeping with the educational ideals of this nation.

The war-time cessation of schoolhouse building has caused a deficiency to accumulate, which has resulted in hundreds of thousands of children having to attend classes in buildings entirely unsuited to the purpose. No one needs to be reminded that such a condition is bad for the future of these children and harmful to the ideals of the country itself. From the standpoint of Americanism alone, it is highly important that every city provide generously and wisely for its school system.

Furthermore, a comprehensive school building program would call for a large labor force, and present circumstances make this another point in its favor.

Late News from Architectural Fields

Special Correspondence to THE AMERICAN ARCHITECT

Organize for "Own-Your-Own-Home" Campaign

WASHINGTON, D. C., April 7.—Eighteen cities are organizing for an own-your-own-home campaign along the line suggested by the U. S. Department of Labor. Campaigns either are in progress or about to open in Billings, Mont.; Charleston, W. Va.; Chicago; Cleveland; Denver; Jacksonville, Fla.; Johnstown, Pa.; Lynchburg, Va.; Middletown, Conn.; Milwaukee, Wis.; Philadelphia, Pa.; Portland, Ore.; Salt Lake City, Utah; Seattle, Wash.; Spokane, Wash.; Staunton, Pa.; St. Paul, Minn.; and Toledo, Ohio.

In each of these cities there is a marked shortage in dwellings, and the campaign is being waged as a civic movement with the co-operation of every organized element interested in municipal and social problems.

In sixteen other cities tentative plans are under way, and it is expected from them will come many more vigorous campaigns for home owning and home building. In all these cities civic clubs, financial interests, municipal officials and labor organizations are being appealed to by the Department of Labor to lend assistance in starting such campaigns.

Since labor is so important an element in the home building projects, labor organizations are being invited and urged to take a conspicuous place in the campaign work in each community. Most of the homes built in this sort of a movement are for laborers and salary earners, and the building of these homes provides employment for the building trades and common labor. This double benefit in the home building movement has been recognized by many communities, and the response has been very promising.

Institute to Widen Scope of Organization

WASHINGTON, D. C., April 7.—In order to give the program of the Post-War Committee the widest dissemination and the broadest contact, the executive council has decided to invite the architectural societies of Canada and all societies in states wherein there happens not to be a Chapter of the Institute, to the annual convention, next month, of the American Institute of Architects at Nashville, Tenn. The program will be the most important topic of the discussion, and all members and non-members alike will be asked to talk freely on the provisions as they have been outlined by the committee. Authorities in charge of the arrangements for the convention anticipate an unprecedented gathering of the members of the profession.

Urge Co-operation of Builders and Labor

WASHINGTON, D. C., April 5.—The stabilization plan of the Builders and Manufacturers Exchange for building construction in the District of Columbia has been indorsed by local officials, according to a letter received this week by Edward H. Mealy, secretary of the exchange.

One of the principal plans of the stabilization campaign is to bring about closer co-operation between the builders and labor. It is proposed that the labor organizations maintain their wage scale of 1918 throughout the year from April 1 next to April 1, 1920. The material dealers are also to be urged to agree to the lowest possible prices, while contractors are to consent to a minimum profit.

Several of the labor organizations have already announced their intention of co-operating in the movement, and it is expected others will take the same course.

Building Reports Optimistic

WASHINGTON, D. C., April 5.—Franklin T. Miller, director of the Division of Public Works and Construction Development of the Department of Labor, summarizes data gathered from all parts of the country regarding building and construction work as follows:

"There is justification for the optimism in several significant developments of the last two weeks. The revival in business, for which some have been waiting and others working, seems to be on the way. This is indicated, in my opinion, by these circumstances:

"Bank clearings are comparatively large. The territory which in 1917 showed ten billion five hundred millions in bank clearings for January, and in 1918, in the same month, showed eleven billion eight hundred millions, in January, 1919, showed fourteen billion five hundred millions. Retail business is unusually active and is showing improvement from week to week, and there is a noticeable acceleration of advertising activities, which indicates confidence in future business possibilities.

"For the first time since 1907 real estate in the metropolitan district of New York City is active, some of it speculative buying indicating a conviction in the minds of the investors that real estate prices are to advance and present real estate prices are not abnormal but quite otherwise.

"Building statistics indicate very clearly there is a gradual improvement. Municipal building permits in November last were 6 per cent of normal, in December they were 10 per cent, in January 20 per cent, while in February they were from 35 to 40 per cent.

"The revival is more marked, however, outside the larger cities, and is especially noticeable in the Middle West. Allowing for the difference in money values, the contracts awarded for construction throughout the country in February, 1919, are 97 per cent of the five-year average for the same month. Of these February contracts 91 per cent were for private projects and 9 per cent for public. Of the private contracts 55 per cent were for residential property, 25 per cent mercantile and 20 per cent industrial.

"It is still difficult to get a realizing sense of the effect of present inflation upon prices of building materials and labor and to realize that neither have increased in proportion with other commodities or with the cost of living; and yet, it appears, the investing public generally is coming to an understanding of these facts. While other commodities and the cost of living have increased one hundred per cent and more since the beginning of the war, the advance in construction costs on such buildings as do not require steel is only about 48 per cent; on such buildings as require steel the advance approximates no more than 87 per cent. Construction costs, therefore, in their upward tendency, have not kept pace with other commodities and the cost of living."

Financial and Commercial Digest

As Affecting the Practice of Architecture

The Stabilization of Commodity Prices

The stabilization of prices by the industrial board of the Department of Commerce on basic commodities has taken a temporary suspension due to the inability of the confrères to come to an agreement among themselves and with the board. In making the announcement of the conclusions of the steel men, the board anticipated that the other industries would adopt a similar course in meeting the suggestions of the board, but it has been admitted the action regarding steel was exceptional.

The lumber, brick and cement industries were confronted with peculiarly individual problems, and the representatives to the conferences were able to speak only for their particular companies. The lumbermen have had to delay further conference with the board until accurate data could be supplied showing production costs as compared with selling prices. It was necessary to postpone the meeting until the early part of next week, awaiting the preparation of adequate statistics. It is understood the cement men are waiting for the return from Chicago of Mr. George N. Peek, chairman of the industrial board, before any announcement is made as to the results of their conference.

Definite announcements as to price agreements affecting the commodities considered will not be made by the industrial board until all concerned have finished their labors, according to an official of the board. It is expected, however, real stabilization of prices will result from the negotiations now in progress.

May Resume British Trade

A study of British import restrictions, effective March 1st, has led the American Manufacturers' Export Association to the conclusion that any temporary loss of British trade would enable American manufacturers to concentrate on other markets, and that the imposition of these restrictions was not to be taken as an indication of permanent British policy. It is asserted by George E. Smith, president of the association, that he has official and unofficial information that the policy was of temporary expediency and that the British had no intention of erecting a trade wall, which, if duplicated by other countries, would destroy her own foreign commerce.

The keeping of a certain percentage of goods manufactured in other countries upon a restricted list, the statement said, represented merely the attempt of the British to put their own house in order, and there was no necessity for abandoning American branch houses in England, because normal conditions would be restored in six months or a year. Mr. Smith added that there was a disposition on the part of the American Government to take up with the British any particular statement of facts which showed that special hardship was being worked on a specific industry.

Predicts Business Boom

That a boom in business throughout the United States is imminent and that the unemployment situation will be cleared up within two months, are the predictions of William C. Redfield, Secretary of Commerce. Wise men, states Mr. Redfield, are starting up their industries despite a rising market, and the Federal Industries Board has started the ball rolling by lowering the price of steel. The coming of Spring will start building operations, and the harvest within a few months, and this will mean a big impetus to business generally.

The Federal Industries Board, Secretary Redfield says, does not attempt to regulate business or "doctor" it, but will merely form a medium for discussion of the country's needs by experts in various branches of industry and will bring together the big buyer, the business man who sells or manufactures, and the workingman who produces, and will function much after the fashion of the Department of Labor's subsidiary boards.

Bill to Establish Home Loan Banks

The next Congress will be asked to enact legislation necessary to the establishment of a system of Federal Home Loan Banks. A tentative bill has been prepared and has been mailed to all officers and committees of the U. S. League of Building Associations. This tentative bill provides that the building and loan associations be permit-

ted to organize regional banks, capitalized by the associations and operated by them under government supervision. The purpose of this is to provide a regional bank which will perform for building associations a service similar to that performed by the Federal Reserve Bank for the commercial banks, and by the Federal Land Bank for the National Farm Loan Association.

Owing to the congestion in important legislative matters in the last Congress, it was impossible to obtain consideration for the Federal Home Loan Bank project. The tentative bill, with such revisions as may be considered prudent, will be introduced, however, in the next Congress, and it will carry with it the influence of the national and State organizations of building and loan associations.

Discuss Stimulation of Construction

Stimulation of construction activity, the promotion of home building and transportation conditions in lumber shipments were topics discussed at a recent conference of representatives of retail and manufacturing lumber interests held to discuss trade extension.

Specific action by the committee of retailers was taken, looking to the appointment of a committee to go to Washington to lay before Director-General Hines the desirability of the railroad administration placing further control upon the use of transit shipments of lumber.

Discussion was made of the desirability of securing standardization of nomenclature, sizes and grades for all competing species of ordinary structural lumber. This was put into a resolution which will be submitted for the consideration of the regional associations of lumber manufacturers.

It was likewise recommended to the lumber manufacturers that some provision be made for the more careful, more rigid and systematic inspection of lumber, possibly through the medium of joint inspection by both manufacturers and retailers.

Studying Construction Activity in Europe

Industrial conditions in Europe, with special reference to the building business, are being investigated by R. R. Otis of Atlanta, Ga., a member of the Employers' Industrial Commission of the U. S. Department of Labor.

The commission was sent abroad under the auspices of the Information and Education Service of the Department of Labor, and its aim is to collect data from European sources which will enable the United States to profit from what has been experienced and what is being accomplished abroad in the interest of better relations between employer and employee, and in the interest of business as a whole.

One of the subjects that will be investigated is the methods of the government and the attitude of the employers in handling problems of production that arose during the war. Special reference will be made to the adjustment of labor disputes both as to wages and to labor's voice in management.

Ante-War Conditions Again

Now if we had the 4,000,000 immigrants that this country would have received if the war had not commenced, says *Engineering World*—if we had our 2,000,000 soldiers home again—if adjustments had been made and if we were all working steadily in the pursuits of peace—if we had the $3,000,000,000 to $5,000,000,000 worth of domestic structures of which we are short and the shortage of which is causing increase in rents (and rentals growing out of this shortage cumulatively increase the cost of every necessity of life)—if we had these things and were all working steadily, and if there were no exceptional draft on our products from abroad, prices might again be what they used to be.

The New Steel Prices

Commenting on the announcement at Washington of the new steel prices, *The Iron Age* states that they are undoubtedly the result of a compromise, represented in concessions by the manufacturers. Probably the most helpful indication as to future stability in the prices of steel products is the clearly established attitude of the Industrial Board toward this important question. Stabilization is apparently the aim of the board, and the present established prices may for this reason be regarded as a minimum for some time at least.

An interesting comparison by *The Iron Age* of the new schedule of prices with preceding schedules, is as follows:

	Peak, July, 1917	First Govt. Price, 1917	Open Market, Jan. 1, 1919	New Agreed Prices
Pig iron, basic, gross ton	$53.00	$33.00	$30.00	$25.75
Billets, 4 in., gross ton	100.00	47.50	43.50	38.50
Steel bars, 100 lb.	4.50	2.90	2.70	2.35
Structural shapes, 100 lb.	4.50	3.00	2.80	2.45
Sheared tank plates, 100 lb.	9.00	3.25	3.00	2.65
Black sheets, No. 28, 100 lb.	10.00	5.00	4.70	4.35
Tin plate, 100-lb. box	12.00	7.75	7.35	7.00
Wire nails, keg	4.00	3.50	3.50	3.25
Rails, standard Bessemer, gross ton	....	55.00*	55.00	45.00
Rails, standard open-hearth, gross ton	....	57.00*	57.00	47.00

*Unregulated.

Late Quotations in Building Material Markets

Somewhat heavier orders and a slightly more solid tone to the trading marked activity in the building material field the past week. Prices held firm in practically all branches, giving the indication that there will be no sudden drop in the near future. There has been no increase in business in the steel industry, as was expected with the lowering of prices by the Industrial Board. The new obstacle that has arisen with the impression that the Railroad Administration had refused to accept the newly established steel prices, supplies a serious block against the early renewal of purchases.

The attitude of purchasers of steel may be altered when fuller knowledge of what influenced Mr. Hines to refuse the price schedule. Until it was learned that the Railroad Administration and the Industrial Board were at loggerheads, commercial users of steel have appeared to be waiting only a signal from the Railroad Administration, which uses 25 per cent of the output in normal years, to place a large tonnage of contracts. There is an idea now prevalent that if the market is to be thrown open the trade will wait for lower prices.

There has been a small increase in the volume of lumber-yard business, due to increased small-house construction, but the situation is far from normal yet.

New York

Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York City are as follows:

BRICK—
Common (for Borough of Manhattan only), per thousand $17.85

CEMENT—
Per bbl. in 15 cent bags $3.25

COOPER SHEETS—
At the mill, hot rolled, 16 oz., base price, per lb... 22½c.
(From jobber's warehouse add 2 to 3 cents.)

GALVANIZED SHEETS—
Nos. 18 and 20 gauge, per lb. $25.90
No. 26 ..... 6.20
No. 27 ..... 6.35

GLASS—
(Discounts from manufacturer's price lists)
Single strength, A quality, first three Brackets..... 80%
Single strength, B quality, first three Brackets.... 79%
Double strength, A quality 80%
Double strength, B quality..... 82%
Plate—up to 5 sq. ft. 82%
Plate—over 5 sq. ft. 84%

GRAVEL—
1½ in. (Borough of Manhattan only) per cu. yd.... $3.25
¾ in. (Borough of Manhattan only) per cu. yd.... 3.25

GYPSUM—
Plaster Board
(Delivered in Boroughs of Manhattan or Bronx)

27 x 28 x 1	35 cents
27 x 48 x ¼	32 "
32 x 36 x ¼	21 "
32 x 36 x ⅜	21 "
32 x 36 x ½	23½ "

Plaster Blocks
(Delivered in Borough of Manhattan or Bronx)

2 in. solid per sq. ft.	7½ cents
3 in. solid 12 x 30 per sq. ft.	10½ "
3 in. hollow	10½ "
4 in. hollow	12½ "
6 in. hollow	17½ "

HOLLOW TILE—
Interior, 2 x 8 x 12 split furring per 1,000 sq. ft...$ 70.00
and 15 cents thousand pieces.
Interior, 3 x 12 x 12 split furring per 1,000 sq. ft.. 102.00
Interior, 4 x 12 x 12 split furring per 1,000 sq. ft.. 114.75
Interior, 6 x 12 x 12 split furring per 1,000 sq. ft.. 153.00

LATH—
Eastern spruce, per thousand $6.50

LIME—
Common, 300 lb. bbls, per bbl. ..... $ 3.50
Finishing, 300 lb. bbls. per bbl. 3.70
Hydrated, in paper bags, per ton 17.25

LUMBER—
(All Prices F.O.B. New York)

Yellow pine, flooring, No. 1, common, per thousand, flat grain	$ 42.00
N. C. pine, flooring, Norfolk, Va., 13/16 x 2½...	43.00
Hemlock, base price	36.00
Spruce, random 2 in. cargoes	38.00
Spruce, wide cargoes	52.00
Cypress, by car, and factory selects 5/4.....	59.00
Cypress shingles, 6 x 18 (Heart)	10.00
Oak, quartered, (Red)	96.00
Oak, plain, flooring, (Red)	72.00
Oak, white flooring	72.00
Maple, No. 1, 13/16 x 2 in.	57.50

PIPE—
Cast iron,

6 in. and heavier	$57.70
4 in.	47.70
3 in.	67.70

Wrought,
(Discounts to jobbers for carload lots on the Pittsburgh basing card; Freight rates from Pittsburgh to New York, in car loads, per 100 lbs., are 27c.)

Butt Weld

Steel,	
Black, ⅛ to 3	50½ to 57½%
Galv., ⅛ to 3	24 to 44 %
Iron,	
Black, ⅛ to 1½	29 to 39 %
Galv., ⅛ to 1½	2½ to 23½%

Lap Weld

Steel,	
Black, 2½ to 6	53½%
Galv., 2½ to 6	41 %
Iron,	
Black, 2½ to 6	34½%
Galv., 2½ to 6	21½%

PLASTER—
Neat wall cement in 15 cent bags, per ton $20.30
Finishing plaster 24.00

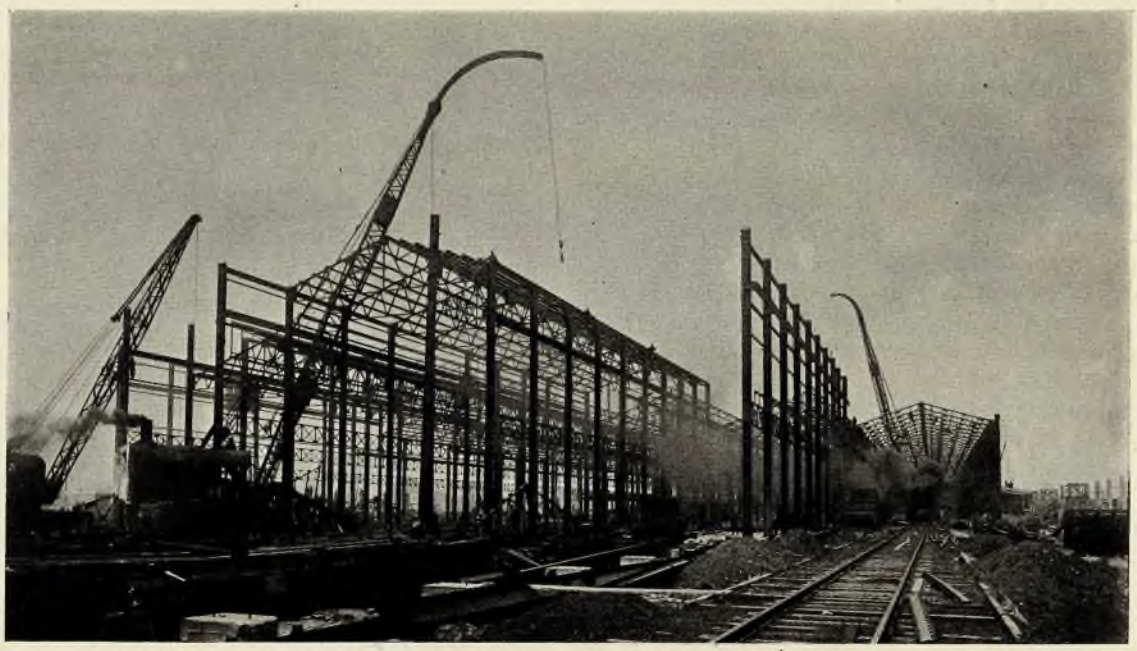
RADIATION—

STRUCTURAL STEEL—
Beams and channels up to 15 in. per lb. ..... 2.45c.
Beams and channels over 15 in, per lb. ..... 2.45c.
Angles, 3 to 6 in..... 2.45c.
Zees and tees ..... 2.45c.
Steel bars, half extras, from mill ..... 2.35c.

REINFORCING BARS,
Iron .....
Steel .....

SAND—
Per cu. yd. (Borough of Manhattan only) $2.25

Department of Architectural Engineering



Erecting steel frame with locomotive cranes.

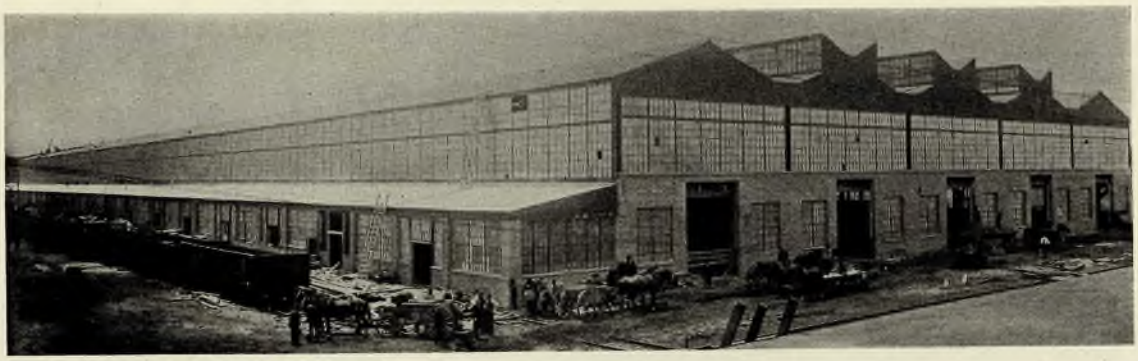
Ford Shipbuilding Plant, River Rouge, Mich.

THE Ford Motor Company's Eagle Plant is located on the River Rouge, just outside of the city of Detroit, and three miles from the Detroit River. It adjoins on the north the Ford Motor Company Blast Furnaces, now under construction.

The plant was constructed for the sole purpose of manufacturing patrol boats for the United States Navy. It comprises a group of several buildings, a launching slip, a transfer table for shifting the boats from the construction tracks to the launching slip, a basin and fitting-out docks and sheds. The basin and fitting-out docks are part of the permanent construction of the blast furnaces. The buildings consist of a material storage and punching shop, transformer building, assembling shop and power house.

The material is received on cars at the storage building and punching shop, and after passing through the same is transferred on industrial cars of standard gage to the assembling shop. Contrary to usual practice in ship construction, the patrol boats are assembled on a line of trucks moving on standard-gage railroad tracks. These trucks consist of special heavy platforms built on standard railroad-car trucks. As soon as the construction of a boat has reached a particular stage the line of trucks carrying the boats is moved along to the next station. There are seven of these stations on each construction track in the assembling shop.

After going through these various operations the hull of the boat is ready for launching, and, still carried by the trucks, is moved out of the building to the transfer table. This transfer table is of a similar type to that used for shifting cars in railroad and street-railway yards. By this means, the boat is shifted to the track leading to the launching slip. The launching slip consists of a small basin constructed with steel sheet piling and containing a steel bridge supported on hydraulic jacks. The boat, supported on the trucks, runs out on this bridge,



Exterior view.

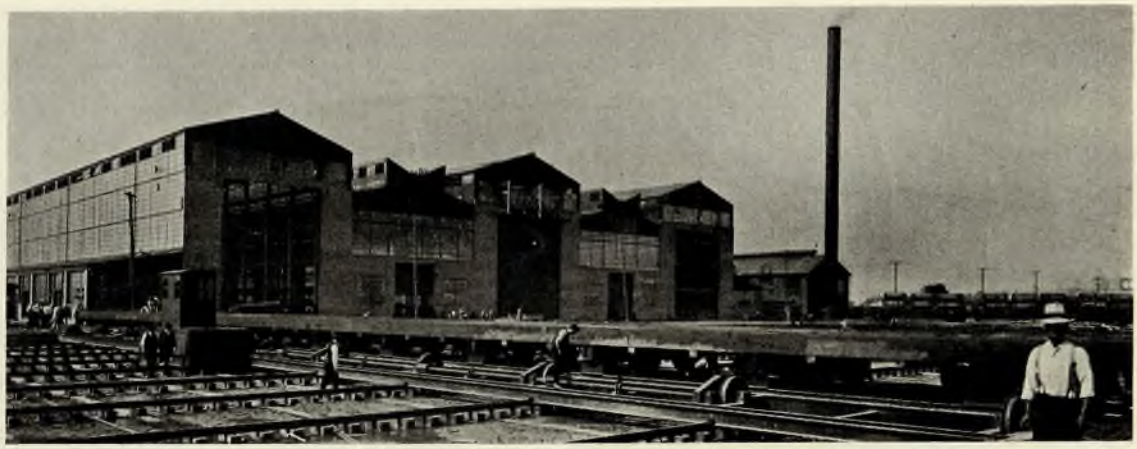
and is thus lowered into the water, from where it is shifted to the fitting docks.

With the exception of the assembling shop, all of the buildings are of a temporary character, and consist of either entire wood framing or brick exterior walls and roofs of wood construction. All of the buildings are one story in height.

There are 94,500 sq. ft. of floor space in the material storage and punching shop, 2200 sq. ft. of floor space in the transformer building, 518,000 sq. ft. of floor space in the assembling shop, 4300 sq. ft. of floor space in the power house, making a total of 619,000 sq. ft.

The assembling shop is, naturally, the feature of the plant in which centers the greatest interest, on account of its unusual size and the rapidity with which it was constructed. This building is 305 ft. wide and 1700 ft. long. It consists of five main bays, each 51 ft. wide, and two low side bays, each 25 ft. wide. There are three ship construction tracks in the building in the two outside and the center main bays, thus enabling operations to be conducted on twenty-one ships at the same time. The other two main bays are occupied by standard-gage service tracks on which the material is delivered to the various points needed. The height of the building under the trusses for 1300 ft. of its length is 36 ft. 5 in. For the remaining 400 ft. the three ship-construction bays are 50 ft. 9 in. under the trusses. This greater height was required on account of the greater height of the hull at the last two stages of operation. The two side bays

Assembling shop showing one of the five main bays and a low side bay. Note the fine daylighting.



Exterior view showing the large doors for passage of hulls and the transfer table to transport the hulls to the fitting basin.

are 14 ft. high. The side bays are used for shop offices, storerooms, toilet rooms, tool rooms and operations of various characters. In one side bay there is a compressor room 160 ft. long.

The entire building is enclosed in brick walls extending on the side walls to about 5 ft. above grade, above which is steel sash. In the end walls the brick extends to the top of the door openings. The roof of the side bays is of wood construction. These bays are of a temporary character, thus providing for the extension of the main bays. The main bays of the building consist of a structural steel frame, steel sash in the side and end walls and a cement tile roof. There are monitors over the three center main bays. Two of these extend the entire length of the building and the other extends for 1300 ft. There are 172,000 sq. ft. of steel sash in the building. The percentage of ventilation in the steel sash is 25 per cent in the monitors and 18 per cent in the side and end walls. There are 4200 tons of structural steel in the building.

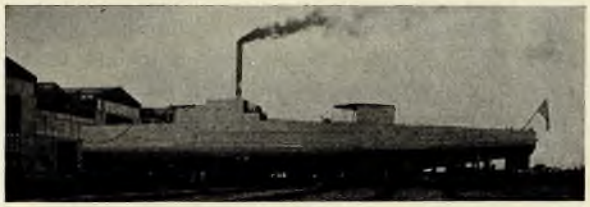
In the three ship construction bays there are runways for 5-ton electric traveling cranes. These runways are not continuous from end to end of building, but are separate for the high and low parts of these bays above described. There are also a number of one-half ton capacity hand jib cranes attached to the columns in the ship construction bays. In the side walls of the building there are double sliding doors in alternate bays. In both end walls there are steel rolling curtains. These curtains are 16 ft. wide by 20 ft. high in all cases except the three openings between the ship construction bays and the transfer table. In these open-

Stern of boat ready to be placed on the transfer table.

Erecting frame with locomotive cranes.

ings the curtains are 32 ft. wide by 42 ft. high, and each is operated by a 5-hp. motor located just above the door head.

The character of the soil being good, the column footings are all independent rectangular reinforced-concrete footings. There is a plank floor in the building, laid on sleepers above 6 in. of cinder fill.



Hull on transfer table ready to be shifted to the fitting dock

In order to give great stability to the ship construction tracks, the ties for the tracks were laid directly on a reinforced-concrete slab 14 ft. wide. The top of both the construction track rails and the service track rails is flush with the floor.

Preliminary sketches for the punching shop and assembling shop were started February 4, 1918. After consideration of various types of separate and combined buildings for the assembling shop, it was decided to adopt a building entirely under one roof as being the most flexible and best adapted for proposed operations. Final plans for this building were started on February 9, and were completed on February 11. The general contract was signed on February 12, and the structural steel contract on February 18. The general contractor started at once on the construction of the punching shop, which was completed on March 30. He also started at once on the footings and foundation walls for the assembling shop.

Structural steel shop drawings for all the typical construction were completed and approved on

Site of plant on March 13, 1918

March 1, and all drawings were completed and approved on March 7. The first structural steel deliveries were made on April 9. Erection started on April 13, and was completed on May 11. The erection was started at the head of the building, or that next to the punching shop. The steel sash and roof work followed the steel erection rapidly, so that work was started on the shop equipment and the first operations on the ship before the building was completed at the opposite end. The first ship was launched July 11, 1918.

The plans and specifications for every portion of this work were prepared and the construction supervised by the organization of Albert Kahn, architect.

Interior view showing the truck on which the hull is assembled

Notes on Chimney Flues

Causes of Poor Draft

By Henry N. Dix, *M.E.*

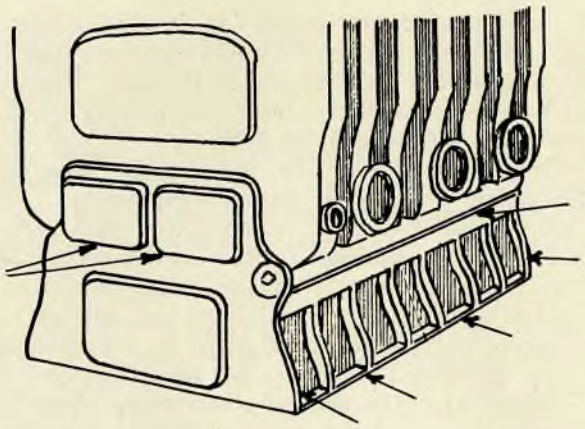
IT is a common opinion that the success of an ordinary heating plant is determined only by trial. It is unfortunately true that many architects accept this opinion and look upon troubles with such plants as a thing to be expected. This is an unfortunate attitude to assume, as it is a tacit acknowledgment of inability to provide for a successful plant with absolute certainty. In the larger plants for industrial and commercial buildings, the plans and specifications for this portion of the mechanical equipment are included with the other such features which are designed by mechanical engineers. The interests in these cases are of such great importance, financially and otherwise, that successful operation is a certainty before construction begins. In the case of the ordinary dwelling or apartment building plant, an unsatisfactory apparatus is considered in terms of personal discomfort, often entirely overlooking the fact that such a plant may involve an extremely wasteful operation and maintenance.

It is estimated that fully twenty-five per cent of the fuel used for heating purposes in this class of installation is wasted. This was not seriously considered in the days of cheap fuel, but in these times of high-priced fuel it becomes a matter of economic importance.

Poor draft is the cause of more complaint about and dissatisfaction with a heating plant than any other one thing. The reasons for this condition are many and are to be found in every factor that enters into the construction of the plant. In discussing this subject, the travel of the air which is absolutely necessary for the combustion of the fuel will be described.

Air is necessary for the combustion of fuel, and it follows that it must be supplied in sufficient quantity. Boiler rooms are located below the first floor, and it often happens that these rooms are hermetically sealed as far as openings for the ingress of air are concerned. The only source of air supply in the majority of cases is that furnished by infiltration made possible by poor building construction. The primary condition is to provide deliberately for the admission of sufficient air to the boiler room. This can be accomplished by installing a grated or louvred panel in the exterior door or by replacing a light of glass in a window with a wire guard or grating. This admission of air must be provided for in order to make the proper combustion of fuel possible, and it will also serve to keep the boiler room dry and free from musty odors.

The first position of the air is under the grates or in the ash pit. The air is supposed to and should enter this chamber only through the draft door provided for that purpose. There is generally no difficulty in securing the admission of air to the ash pit; on the contrary, it often arrives there too easily, or rather, not under control. If it can enter elsewhere than through the draft door,



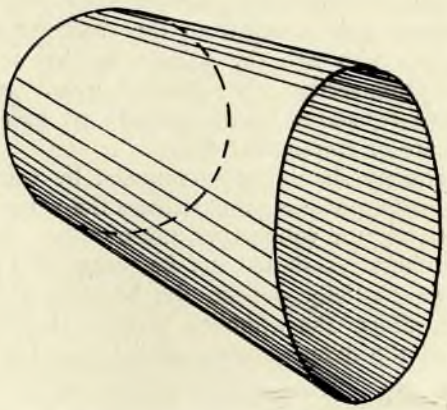
Air leakage below fire bed which prevents proper draft regulation

it is uncontrolled. Trouble is experienced in regulating the fire and it is not controlled by the damper regulator as it should be. A leaky ash pit renders it impossible to satisfactorily bank a fire at night so that it will last and still have sufficient coal available in the morning for quick steaming. These leaks are most frequently found where the base rests on the floor and can be effectively stopped by grouting with cement mortar. At the top of the base frame and in the joints between the sections themselves, and between them and the front and rear faces, are opportunities for air leakage. A careful application of boiler putty will seal these places. The openings of the ash and draft doors must be kept clear and free from ashes in order that they may be closed tightly.

The accumulation of ashes in the ash pit will obstruct the proper flow of air through the grates and may cause the destruction of the grates by warping or melting them. When the draft doors are at the side or rear of the ash pit the accumu-

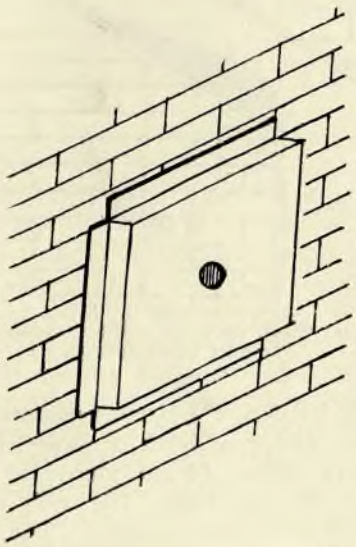
lated ashes may obstruct the passage of the air through these openings. These troubles, however, are those of operation and maintenance rather than those of construction.

After passing through the grates, which must have sufficient opening or free area, the air must pass through the fire bed to make possible the combustion of the coal. The strength of the draft must be proportionate to the depth of the fire bed or the fineness of the fuel. This is governed by the



Distortion of breeching section may interfere with draft

chimney or flue. After passing through the fire bed the heated air and distilled gases pass through the boiler flues where a portion of the combustible gases are consumed. Naturally, these flues must be kept clean and free from soot and ashes in order that

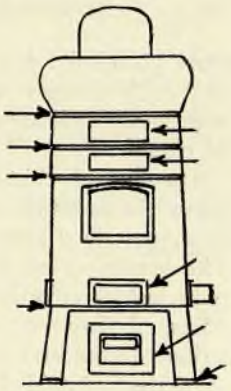


Metal test pan used to discover leakage through brick walls

their area be not reduced and the passage of the air and gases restricted. This is a matter of operation and maintenance rather than one of construction.

Infiltration of air into these smoke flues will greatly reduce the volume of air passing through the fire bed with a consequent impairment of the steaming ability of the boiler. This trouble is common in some types of cast iron boilers, the leaks being found around the clean out doors and frames and the joints in the smoke rings or iron bands that encircle the boiler. Leaks of this kind can usually be stopped by the use of boiler putty or asbestos cement.

In brick set boilers, leakage through the boiler setting is common. These leakages also reduce the volume of air which must pass through the fire bed and are due to the improper laying of the brick or the use of cracked, defective brick. These leakages can be detected by applying a shallow, rectangular metal pan to the wall, throughout its entire surface. The edges of the pan are bedded in putty, making an air tight contact with the brick work. A small hole is placed in the bottom of the pan and the behavior of the flame of a lighted candle placed at the hole will show if leakage occurs through the wall. If the flame is drawn into the hole, air is passing through the wall to the interior of the boiler setting. Pointing up the crack, applying a coat of plaster or asbestos cement will stop the average wall from leaking, although at times it is found that the wall is so poorly constructed that rebuilding is the only remedy.



Air leakage above fire bed which reduces volume of air passing through it. Also leakage below fire bed which interferes with draft regulation

The gases, after passing through the boiler flues and smoke hood, enter a smoke pipe or breeching which connects the boiler and the vertical chimney or flue. The area of this breeching should never be less than that of the smoke collar on the boiler. The breeching should be as short and direct a connecting link as possible. To change the shape of the cross-section of the breeching may reduce its efficiency as much as fifty per cent. This is often done by changing from a circular to an elliptical section in order to make head room, when cramped for room back of the boiler or when entering the base of the chimney. The breeching should be so made and installed that it can be readily removed for cleaning. If more than ten feet long, it

is advisable to cover it with an insulating material. This covering will serve to prevent slowing down the draft by cooling the gases and with some fuels, prevents the condensation of creosote or other products of combustion at this point. The joints in the breeching and the connection to the boiler and the chimney must be air tight to avoid leakage into the breeching or chimney. A candle flame will detect such leakage if it exists.

If there is a damper in the breeching it must operate positively, and its position be indicated correctly. A damper which is loose on its spindle or improperly indicates its position is often a source of trouble.

Narrow rectangular flue. Shaded portion has no draft value and may permit back draft

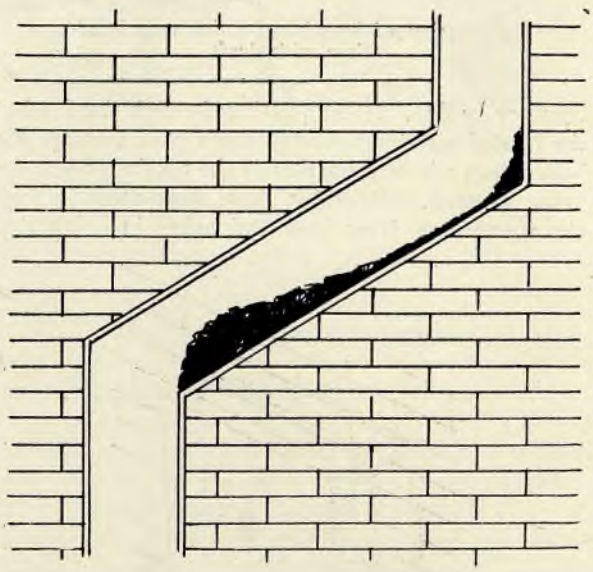
The flue or chimney should have a soot pocket below the entrance of the breeching. An air tight clean out door must be provided for this pocket. The breeching must not project into the flue, thus reducing its effective area. Flues should not have offsets as they may serve as places for the accumulation of soot and ashes. Where offsets are necessary they should have an inclination sufficiently steep to prevent the lodgment of solid matter. With such an offset the flue can be cleaned by passing an object throughout its entire length for the purpose of removing obstructions. Stone chimney caps must have openings as large as the flue in order not to restrict the flue area.

A chimney may be clean and of proper size and fail to draw owing to leakage through its walls. Chimney leaks can be detected by building a smoky fire at the base of the flue and when the flue is completely filled, covering the top so as to prevent further escape of the smoke. If there are leaks the smoke will appear within the building or from an adjoining flue. These leaks are often stopped by lowering a weighted, tight fitting bag into the chimney and pouring fairly thin cement mortar, in considerable volume, on top of the bag. By slowly raising the bag the mortar will flow into the cracks and close them.

Tile flue linings are always preferable as they are more easily made tight owing to the greatly reduced number of joints; they are smooth and offer less friction to the rising gases and are an admirable fire preventative. The space between the tile lining and the brickwork should be solidly filled with cement mortar. Such an open space will permit the downward passage of cold air which will enter the flue through its joints and thus reduce the draft. An unlined flue should have its faces laid as smooth and true as possible to reduce friction and all bricks and other debris removed. Narrow rectangular flues should be avoided as they are of restricted *effective* area. If too long and narrow in section down drafts can occur at the ends.

Flues should be square or round in section. A round flue has the same *effective* area as a square flue whose side is equal to the diameter of the round flue although the square flue has a larger area of cross-section. The round flue will offer less frictional resistance to the passage of gases than the square or rectangular flue.

A chimney should be surrounded by warm air, as the cooling of the gases reduces the velocity and consequently the volume per unit of time. For this reason chimneys should not be placed in exterior walls or partially outside the building. If, for artistic effect, the chimney projects beyond the plane of the exterior wall, special care should be taken with its design and construction. Between the exterior facing of brick or stone and the flue lining, there should be introduced at least two thicknesses of 2-in. hollow tile with every joint solidly filled with cement mortar. The hollow tile should be laid horizontally and will serve as an excellent insulation. Unlined steel stacks, entirely exposed to the weather, are usually considered to have their effective diameter decreased 4 in., due to the chilling action of the cold metal wall.



Offset flue on which soot and ashes may accumulate and restrict effective area

The size of the flue required is a most important matter, the governing factors being height and area. The flue must remove a certain volume of heated gas per hour based on the required fuel consumption in the boiler. If the area is increased the velocity can be decreased and *vice versa;* the volume being the product of velocity and area. A common idea of a good chimney draft is one that will carry a burning piece of paper up the flue when released at its base. This simply indicates velocity. A good draft depends on a volume sufficient to permit the necessary combustion of fuel in the fire box. A 3-in. flue will have the same draft velocity and gauge pressure at its base as a 12-in. flue of the same height, and we would not for a moment consider the 3-in. flue suitable for a chimney. Many persons will argue that a flue has sufficient draft if there is apparently a high velocity of gases. It should be remembered that an effective draft depends on a certain volume of gases being removed, regardless of its velocity.

The air velocity in a vertical flue is in direct proportion to the square root of its height. Based on this, the following formulas are used by the United States Treasury Department and many engineers:

For cast iron boilers, anthracite coal.

$$A = \frac{3}{4}\frac{G}{\sqrt{H}}$$

For lump size anthracite or bituminous coal

$$A = \frac{G}{\sqrt{H}}$$

For small sizes of anthracite and bituminous coal

$$A = \frac{5}{4}\frac{G}{\sqrt{H}}$$

in which

A = area of flue in square feet
G = area of grate in square feet
H = height of stack in feet.

It would seem possible to increase the flue area to a degree that would permit a height of from 5 to 10 ft. This is not true, for several reasons, in practice. A chimney less than 30 ft. in height is very erratic in action, working splendidly at times and at times ceasing to function for no apparent reason. A certain draft tension is required to draw the air through the fire bed, the higher the flue the greater the draft tension produced. The draft tension is the difference in pressure at the ash pit and a point above the fire bed. This is measured in terms of inches of water, the inches being the difference in level of the water in a U-shaped glass tube which has one end open to the atmosphere and the other end connected at a point above the fire bed.

The approximate strength of the draft tension is given in the following table:

Height of flue in feet	Draft tension in inches of water
20	0.146
30	0.219
40	0.292
50	0.365
60	0.438
70	0.511
80	0.585
90	0.657
100	0.730

It is often desirable to know what size of boiler an existing flue will serve. The following table gives an approximate estimate of the amount of coal that can be consumed with a chimney of a given height. The values K are based on an effective flue area of one square foot and in terms of pounds of anthracite coal burned per hour, the coal being of nut or stove size. If smaller sizes, such as pea or buckwheat are to be burned, the values should be *decreased* 10 to 15 per cent.

Height of Flue in Feet	Pounds of Coal per Sq. Ft. of Flue Area per Hour	
	Sectional Boiler	Round Boiler
20	40	30
25	45	34
30	51	38
35	56	42
40	62	46
45	66	50
50	70	53
55	74	56
60	77	58
65	81	61
70	84	63
75	87	66
80	90	68
85	93	70
90	96	72
95	99	74
100	102	76
105	104	78
110	107	80

The average heating boiler will evaporate between eight and nine pounds of water per pound of coal consumed, and this weight of water is termed the evaporative factor, E. It is seldom that the heating boiler is called upon to operate with an overload of more than one-third of its rated capacity. Therefore, three-quarters of the pounds of water capable of being evaporated will represent the steaming capacity of the largest boiler that should be installed at the chimney in question. As each one-quarter pound of water evaporated represents one square foot of steam radiation, four times the amount of water evaporated is the amount

of radiation that can be served by the boiler. This determines the steam rating of the boiler that can be used. The steam rating should be increased 60 per cent to obtain the rating for a hot water heating boiler.

As a formula

Steam rating $= \frac{3}{4} K A E 4 = 3 K A E$

Water rating = 1.6 steam rating

in which

E = the evaporative factor of the boiler

K = the pounds of coal per hour per square foot of flue area

A = area of flue in square feet.

For example, assume a chimney 50 ft. high, 12 in. square and an evaporative factor of 8.5. What size of boiler will the chimney accommodate?

Steam rating $= 3 K A E$

$= 3 \times 70 \times 1 \times 8.5$

$= 1785$ sq. ft.

hence, a boiler with a rated capacity of 1785 sq. ft. of steam radiation can be attached to the chimney.

When making the preliminary plans for a building and before the required boiler capacity is known, the architect can approximately establish the flue size by the following table. The result will serve as a guide only and the exact size can be decided upon when the heating system is designed.

Volume of Building in Cubic Feet			Dia. of Round or Side of Square Flue in Inches				
Type of Building			Height of Flue in Feet				
A	B	C	30	40	50	60	70
20,000	16,000	12,500	7	7	6	6	6
40,000	32,000	25,000	9	9	8	8	8
60,000	48,000	37,500	11	10	10	9	9
80,000	64,000	50,000	12	11	11	11	10
120,000	96,000	75,000	14	13	13	12	12
160,000	128,000	100,000	16	15	15	14	13
240,000	192,000	150,000	19	18	17	17	16
320,000	256,000	200,000	22	21	20	19	18
400,000	320,000	250,000	25	23	22	21	19
480,000	384,000	300,000	27	25	24	23	22
560,000	448,000	350,000	29	27	26	24	23
640,000	512,000	400,000	31	29	27	26	25
720,000	576,000	450,000	32	30	28	27	26
800,000	640,000	500,000	34	32	30	29	28

In this table the type of building is described as follows:

A has 50 per cent of its surrounding wall exposed.

B has 75 per cent of its surrounding wall exposed.

C has all of its surrounding wall exposed.

C also applies to the average garage.

The sizes given in the table are based on furnace size anthracite coal; for pea or buckwheat size or bituminous coal increase 25 to 50 per cent.

For ready reference the commercial sizes of fire clay flue linings are given.

Nominal Size, Inches	Actual Outside, Inches	Actual Inside, Inches	Area, Sq. Ft.
4½x 8½	4¾x 8⅝	3¼x 7	.15
4½x13	4¾x13¼	3 1/16x11¾	.25
4½x18	4½x17	3⅞x15½	.42
6 x12	6 x12	4½x10½	.33
7 x 7	7¼x 7¼	5¾x 5¾	.23
8½x 8½	8½x 8½	7¼x 7¼	.36
8½x13	8½x13	6⅞x11⅝	.56
8½x18	8½x18	6½x16	.72
13 x13	13 x13	11¼x11¼	.88
13 x18	13 x18	10¾x15¾	1.18
18 x18	18 x18	15½x15½	1.66

Round flue linings have their inside diameter the same as their nominal size, while in rectangular flues the nominal size is applied to the outside dimensions.

The top of a chimney should be so constructed and placed that no matter in which direction the wind may blow the air will pass the flue top in either a horizontal or upward direction. Should the air current be otherwise its action will be to build up an air pressure in the mouth of the flue sufficient, at times, to overcome or balance the upward pressure of the rising hot gases. If this happens the flue either ceases to function properly or in extreme cases its action may reverse, causing the coal gas to be forced into the house. To prevent or overcome these troubles it is necessary that the flue be carried above the highest point of the roof, especially in the case of a peaked roof. A little thought at this time in the designing will prevent the necessity of having an unsightly sheet metal extension on the chimney top. There are times when this is beyond the control of the builder, as when a perfectly good draft is ruined by the erection of a higher building nearby. In such a case the use of a rotating or swinging cowl is often resorted to, as such an apparatus is supposed to automatically turn so that there is no opportunity for downdrafts. However, they have the disadvantage, if not cared for, of rusting and thereby failing to rotate as they are supposed to. In many cases a conical piece of sheet metal, with the point up, placed over the flue opening is all that is necessary and should be used wherever possible. When using any of these top pieces care should be taken not to decrease the effective area of the flue.

BUILDING NEWS

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Persons in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

ARIZONA

JEROME, ARIZ.—City plans election in April to vote on $100,000 bonds to build combined fire station and jail.

PHOENIX, ARIZ.—Salt River Valley Hotel Co., care of E. F. Paker, president Southwest Cotton Co., Tolleson Street, plans to build hotel and bungalows on 160-acre site. $500,000.

CALIFORNIA

ATWATER, CAL.—Sunlit Fruit Co. plans to build one-story, 120 x 175 ft., brick and concrete addition to cannery and packing plant. Address F. F. Laney, Atwater. $100,000.

COLUSA, CAL.—Rosenburg & Bros., 334 California Street, San Francisco, are having plans prepared by H. Brawnton, Architect, 334 California Street, for rice mill and warehouse here. $250,000.

COVINA, CAL.—Covina Grammar School District plans to build two or three one-story brick, hollow tile or concrete schools. $150,000.

FAIRFIELD, CAL.—Board of Supervisors, Solano County, proposes building one-story, 100 x 300 ft., brick and frame hospital. C. E. Perry, Jr., 1209 Sutter Street, Vallejo, Architect. $97,000.

LONG BEACH, CAL.—First Christian congregation is having plans prepared by R. H. Orr, Architect, 1301 Van Nuys Building, Los Angeles, for frame and concrete church on Fifth Street and Locust Avenue. $125,000.

LOS ANGELES, CAL.—Pan-American Petroleum Co., Security Building, will build brick and concrete oil refinery on 12-acre site in Vernon Industrial District. T. D. Boyce, engineer, Security Building. $250,000.

LOS ANGELES, CAL.—Board of Education proposes building one and two-story, 132 x 220 ft., brick school on Seventh Street. Allison & Allison, 1405 Hibernian Building, Architects. $90,000.

MARE ISLAND, CAL.—Bureau of Yards and Docks, Navy Department, Washington, D. C., will construct fuel oil storage system at the navy yard here. $400,000.

ORANGE, CAL.—School Trustees plan election April 5 to vote on $150,000 bonds to build auditorium and other buildings at Orange Union High School District site.

RICHMOND, CAL.—Standard Oil Co., 200 Bush Street, San Francisco, let contract to build three-story concrete and brick office and laboratory here to P. J. Walker & Co., Monadnock Building, San Francisco. $250,000 and $175,000 respectively.

SAN FRANCISCO, CAL.—Board of Education soon receives bids for three-story brick and concrete school on Eighteenth and Balboa Streets. J. Reid, First National Bank Building, Architect. $125,000.

SAN FRANCISCO, CAL.—San Francisco Commercial Co. is having plans prepared by McDonald & Kahn, engineers, Rialto Building, for two-story addition to concrete warehouse on Mission Street, near Tenth Street, for Goodyear Tire & Rubber Co. $60,000.

COLORADO

ORDWAY, COL.—Board of Directors, School District No. 12, Crowley County, plans to build school. Montjoy, French & Frewen, Chamber of Commerce Building, Denver, Architects. $80,000.

CONNECTICUT

BRIDGEPORT, CONN.—Swedish Baptist congregation plans to build brick church on Colorado Avenue. A. O. Lawrentes, Colorado Avenue, pastor. E. E. Benedict, 51 Leavenworth Street, Architect. $50,000.

BRISTOL, CONN.—New Departure Mfg. Co., 269 North Main Street, let contract for building one-story, 103 x 283 ft., brick, steel and reinforced concrete factory, to include two-story, 30 x 103 ft., concrete fuel tanks, office and laboratory, to Torrington Building Co., 197 Water Street, Torrington. $250,000.

HARTFORD, CONN.—Indian Refining Co., 596 Windsor Street, will build one-story, 75 x 90 ft., concrete and timber oil storage plant on North Front Street. $35,000.

HARTFORD, CONN.—Board of Water Commissioners proposes building two-story, 29 x 153 ft., brick and concrete garage and office on Union Street. C. M. Saville, 1026 Main Street, chief engineer.

HARTFORD, CONN.—Board of Education is having plans prepared by I. A. Allen, Architect, 904 Main Street, for school on Market Street, First School District. Address H. J. Dillon, 315 Pearl Street. $250,000.

MIDDLETOWN, CONN.—City plans to issue $150,000 bonds to construct memorial building. Address Chamber of Commerce, 303 Main Street.

NEW HAVEN, CONN.—Ryders Printing House, 78 Center Street, will build three-story, 40 x 105 ft., brick addition to printing plant on Chapel and James Streets. F. E. Brown, 11 Autumn Street, Architect. $35,000.

NEW HAVEN, CONN.—A. L. and I. Adelman, 10 Garden Street, propose building five-story brick and steel hotel on Whaley Avenue. J. Weinstein, 6 Church Street, Architect. $165,000.

NORWALK, CONN.—S. Roodner, Ann Street, South Norwalk, will erect business structure, two stories, 100 x 135 ft., brick, on Wall Street here. $75,000.

NORWICH, CONN.—Norwich Free Academy plans to build school. The late W. A. Slayter donated $100,000 for this project.

NORWICH, CONN.—W. W. Backus Hospital, 326 Washington Street, plans to construct new building. The late W. A. Slayter donated $100,000 for this project.

STAMFORD, CONN.—H. and H. Foundry, 770 Pacific Street, will build one-story, 60 x 200 ft., brick foundry on Pacific Street. N. E. Emmons, Washington Building, Architect. $30,000.

STAMFORD, CONN.—A. Spelke, 443 Atlantic Street, purchased site on Main Street and plans to build two-story, 56 x 175 ft., theater and office. $125,000.

STRATFORD (BRIDGEPORT P. O.), CONN.—Raybestos Co., Bostwick Avenue, Bridgeport, plans to build one-story, 160 x 170 ft., brick, steel and concrete addition to factory on East Main Street here. $100,000.

STRATFORD (BRIDGEPORT P. O.), CONN.—O. Christensen, 920 Main Street, Bridgeport, is having plans prepared by F. H. Beckwith, Architect, Post Office Arcade, Bridgeport, for two-story brick theater store and office on Main Street here. $50,000.

TORRINGTON, CONN.—H. Quittner, care of W. E. Hunt, Architect, 182 South Main Street, is having plans prepared for brick and concrete theater on East Main Street. $90,000.

DELAWARE

WILMINGTON, DEL.—Standard Kid Mfg. Co., Fourth and Monroe Streets, is having plans prepared by J. J. Kennedy, Architect, 925 Market Street, for one-story, 40 x 60 ft., power plant. $25,000.

WILMINGTON, DEL.—Tower Hill School Association is having plans prepared by Brown & Whiteside, Architects, Du Pont Building, for two-story school on Seventeenth Street and Tower Hill Road. $250,000.

DISTRICT OF COLUMBIA

WASHINGTON, D. C.—Commissioners of the District of Columbia will construct swimming pools at the Cardoza Playground at First and H Streets, S. W., and at Reservation No. 126, Virginia Avenue and Tenth Street, S. E.

FLORIDA

JACKSONVILLE, FLA.—City Commission will remodel existing dormitory at Police Headquarters.

JACKSONVILLE, FLA.—Virginia Chemical Co., 11 South Twelfth Street, Richmond, Va., is receiving bids for fertilizer plant on Talleyrand Avenue here. $200,000.

JACKSONVILLE, FLA.—J. C. Helsema Co., Ninth Street, will rebuild one-story, 100 x 200 ft., frame mill on Eighth and Ninth Streets. Cost between $75,000 and $100,000.

MELBOURNE, FLA.—Board of Education, Brevard County, let contract for two-story, 113 x 185 ft., reinforced concrete school to W. E. Martin, 915 Seventh Street, Miami. $70,141.

MIAMI, FLA.—Roman Catholic congregation plans to build church. Cost between $100,000 and $150,000.

PENSACOLA, FLA.—Bureau of Yards and Docks, Navy Department, Washington, D. C., will construct boat shed. $50,000.

TAMPA, FLA.—Strand Amusement Co. soon receives bids for theater on Tampa and Lack Streets. $150,000.

IDAHO

BOISE, IDAHO.—Y. M. C. A. plans to purchase site and construct building. $165,000.

TWIN FALLS, IDAHO.—Board of Education plans to build junior high school. B. E. Morse, Twin Falls, Architect. $65,000.

ILLINOIS

CHICAGO, ILL.—Holabird & Roche, Architects, 104 South Michigan Avenue, are receiving bids for three-story, 42 x 66 ft., brick and timber exchange at 25 South Seeley Avenue for Chicago Telephone Co., 212 West Washington Street. $100,000.

CHICAGO, ILL.—H. L. Newhouse, Architect, 4630 Prairie Avenue, has prepared plans for three-story, 65 x 120 ft., brick and timber bank and office on Twelfth Street and Kedzie Avenue for Independent State Bank, 1215 South Kedzie Avenue. $125,000.

CHICAGO, ILL.—Victor Mfg. & Gasket Co., 1956 South Troy Street, let contract to build two one-story, 190 x 460 ft. and 25 x 198 ft., and one two-story, 48 x 125 ft., brick and timber factories on Twelfth Street and Fifty-eighth Avenue to R. F. Nelson & Co., 154 West Randolph Street. $275,000.

CHICAGO, ILL.—Edgewater Beach Hotel Co., 5349 Sheridan Road, will build ten-story, 150 x 150 ft., brick and reinforced concrete hotel at 5400 Sheridan Road. Marshall & Fox, 721 North Michigan Avenue, Architects. $1,000,000.

CHICAGO, ILL.—Whitestone Co., care of Marshall & Fox, Architects, 721 North Michigan Avenue, is having plans prepared for twelve or fourteen-story hotel, 216 x 400 ft., reinforced concrete, on Lincoln Parkway, at Oak Street, to be known as Drake Hotel. $3,500,000.

CHICAGO, ILL.—Department of Public Works, 406 City Hall, is having plans prepared by C. W. Kallal, Architect, 1012 City Hall, for two-story brick and timber police station. $85,000.

CHICAGO, ILL.—Holabird & Roche, Architects, 104 South Michigan Avenue, will build seven-story store and office, 28 x 148 ft., brick and steel, at 127-129 South State Street, for L. E. Waterman & Co., 191 Broadway, New York City. $225,000.

CHICAGO, ILL.—A. E. Whitbeck, care of W. W. Ahlschlager, Architect, 111 West Washington Street, is having plans prepared for building three-story, 135 x 150 ft., brick, reinforced concrete and steel theater and stores on West Sixty-third Street and Union Avenue. $700,000.

EAST MOLINE, ILL.—City will vote on $80,000 bonds to build eight-story, 88 x 162 ft., brick school on Seventeenth Avenue and Ninth Street. Whitsitt & Schulke, Architects, 610 People's Bank Building, Moline, are preparing plans.

INDIANA

MICHIGAN CITY, IND.—Vitzhum & Teich, Architects, 21 East Van Buren Street, Chicago, have designed two-story, 50 x 110 ft., brick and timber bank and office for First National Bank. $65,000.

ROCKPORT, IND.—Commissioners of Spencer County let contract for building two-story, 106 x 112 ft., reinforced concrete and brick courthouse to English Bros., Church and Randolph Streets, Champaign, Ill. $149,-541.

IOWA

AKRON, IOWA.—City will vote on $65,000 bonds to build school. T. Thorson, Forest City, Architect.

BURLINGTON, IOWA.—Board of Education had plans prepared for three-story, 38 x 62 x 64 ft., brick school. W. A. Dunlevy, county superintendent.

CRESTON, IOWA.—Creston Hotel Co., care of J. W. Reynolds, plans to build six-story hotel. $200,000.

DAVENPORT, IOWA.—Tri-City Plate Ice & Cold Storage Co., 1433 West Second Street, let contract for building one-story, 35 x 55 ft., brick ice plant to Vilter Mfg. Co., 872 Clinton Street, Milwaukee, Wis. $50,000.

DAVENPORT, IOWA.—Ewert & Richter Express & Storage Co., 320 East Fourth Street, proposes building eight-story, 128 x 150 ft., reinforced concrete warehouse on Fifth and Iowa Streets. Clausen & Kruse, 316 Central Office Building, Architects.

LE MAS, IOWA.—Western Union College plans to construct administration building. C. A. Mock, president. $85,000.

MARSHALLTOWN, IOWA.—City will vote on $400,000 bonds to build electric light plant.

OTTUMWA, IOWA.—Swedish Lutheran congregation plans to build brick and stone church. $50,000.

SIOUX CITY, IOWA.—Samaritan Hospital, Seventeenth and Pierce Streets, is having plans prepared by Beuttler & Arnold, Architects, 610 Security Building, for building four-story brick addition on Douglas and Pierce Streets. $250,000.

SIOUX CITY, IOWA.—School Board is having plans prepared by Beuttler & Arnold, Architects, 610 Security Building, for fireproof additions to present schools and building one junior high school. $325,000.

SIOUX CITY, IOWA.—Y. W. C. A., 515 Nebraska Street, is having plans prepared by Beuttler & Arnold, Architects, 610 Security Building, for four-story brick building on Sixth and Nebraska Streets. $150,000.

KANSAS

ABILENE, KAN.—Methodist congregation plans to build church. $50,000.

BAXTER SPRINGS, KAN.—City is having plans prepared by C. H. Johnson, Architect, for building five-story, 110 x 142 ft., brick and reinforced concrete memorial on Tenth and Military Streets. Plans include offices, theater and club. $200,000.

MANHATTAN, KAN.—First Methodist Episcopal congregation plans to build church. $150,000.

OTTAWA, KAN.—City will vote on $75,000 to purchase site and build auditorium. E. M. Cusick, city clerk.

TOPEKA, KAN.—State had plans prepared for 25 x 150 ft. addition to State printing plant on Tenth and Jackson Streets here. R. L. Gamble, Topeka, State Architect. $40,000.

WICHITA, KAN.—Sinclair Refining Co. purchased five lots on Walnut Street and plans to build three-story, 50 x 140 ft., brick and reinforced concrete office. $50,000.

KENTUCKY

SCOTTSVILLE, KY.—T. B. Dixon will build three-story brick hotel. R. E. Turbeville, Scottsville, Architect.

MARYLAND

BALTIMORE, MD.—City Baking Co., 500 Equitable Building, proposes building four-story, 58 x 143 ft., reinforced concrete, steel and brick addition to bakery on North Gay Street. J. Freund, Jr., Architect, 16 East Biddle Street. $50,000.

SOLLERS STATION (SOLLERS P. O.), MD.—Aluminum Ore Products Co., Inc., 800 Maryland Trust Building, Baltimore, is having plans prepared for plant to cost $8,000,000. Project includes one four-story, two three-story, two two-story and seven one-story buildings for storage room, machine and forge shops, boiler house, etc., all 75 x 400 ft., steel and brick; also open wood pier with creosoted wood piles. J. E. Aldred, chairman Board of Directors, Consolidated Gas, Electric Light & Power Co., Baltimore, interested.

MASSACHUSETTS

BOSTON, MASS.—Coleman & Gilbert Co., 331 Huntington Avenue, let contract for three-story, 80 x 100 ft., reinforced concrete sales building and auto repair factory at 1257 Boylston Street to N. Hurwitz, Dorchester. $100,000.

CAMBRIDGE (BOSTON P. O.), MASS.—W. H. Taylor & Son, Architects, 50 Bromfield Street, Boston, will build two-story, 90 x 240 ft., brick and concrete factory on Aberdeen Avenue here for Atwood & McManus, Vale Street, Chelsea. $110,000.

CHARLESTOWN (BOSTON P. O.), MASS.—Blackall, Clapp & Whittemore, Architects, 20 Beacon Street, have plans for building eight-story, 63 x 83 ft., brick and concrete storehouse on Rutherford Avenue for Boston *Post*, Boston.

CHELSEA (BOSTON P. O.), MASS.—Winnisimmet Shipyard, Inc., Winnisimmet Street, is having plans prepared for remodeling present building and building ma-

chine shop, blacksmith shop, dry dock and marine railway on Winnisimmet Wharf and Division Street.

NEW BEDFORD, MASS.—W. C. Jones Co., Nash Road, is having plans prepared by T. M. James, Architect, 185 Devonshire Street, Boston, for one-story, 101 x 200 ft., brick warehouse. $50,000.

SOUTHBORO, MASS.—St. Marks School let contract for one-story, 50 x 100 ft., concrete and brick chapel on St. Marks Road to Leighton-Mitchell Co., 95 Milk Street, Boston. $60,000.

SPRINGFIELD, MASS.—United Mfg. Co., 57 Willow Street, will build one-story brick and concrete factory on Birnie Avenue. H. L. Sprague, 310 Main Street, Architect. $35,000.

WORCESTER, MASS.—Morgan Spring Co., West Boyls-Street, plans to build one-story, 41 x 80 ft., concrete addition to plant.

MICHIGAN

DETROIT, MICH.—Walker Bros. Catering Co., 29 Farmer Street, is having plans prepared by J. J. Walsh, Architect, 1327-29 Chamber of Commerce Building, for two-story, 62 x 145 ft., brick and reinforced concrete restaurant and stores at 535 Woodward Avenue. $75,000.

MT. PLEASANT, MICH.—Supervising Architect, Treasury Department, Washington, D. C., will construct United States post office here.

MUSKEGON, MICH.—Occidental Hotel Co., Western Avenue and Third Street, let contract to build addition. Strom-Johnson Construction Co., Muskegon, contractors. $53,500.

PONTIAC, MICH.—Board of Education will build one-story, 110 x 200 ft., brick and timber school. Perkins, Fellows & Hamilton, 814 Tower Ct., Chicago, Architects. $100,000.

PORTLAND, MICH.—Board of Education contemplates building two-story reinforced concrete and brick high school. $80,000.

MINNESOTA

EAST GRAND FORKS, MINN.—Farmers Potato and Grain Association, Grand Forks, N. D., is having plans prepared for potato warehouse here. $50,000.

GREENBUSH, MINN.—City plans to issue $50,000 bonds to build school.

MANKATO, MINN.—Eckman Bros. will build two-story, 30 x 50 ft., garage, 17 x 40 ft. office, 10 x 15 ft. stockroom and 50 x 88 ft. workshop, reinforced concrete and brick. $30,000.

MINNEAPOLIS, MINN.—Salvation Army, 632 Boston Block, plans to build three-story brick addition to hospital on Como Avenue. $52,000.

ST. PAUL, MINN.—Northern Pacific Mutual Beneficial Association, 203 R. R. Building, will build four-story, 120 x 280 ft., brick and stone hospital. L. Bassindale, 421 Capital Bank Building, Architect. $450,000.

WAKEFIELD, MINN.—W. Covender, clerk Board of Education, will build two-story, 65 x 150 ft., reinforced concrete and steel school. Nystrom & Olsen, Palladio Building, Duluth, Architects. $100,000.

MISSISSIPPI

MERIDIAN, MISS.—Supervising Architect, Treasury Department, Washington, D. C., proposes miscellaneous alterations in workroom and basement of the United States public building here.

MISSOURI

COLUMBIA, MO.—University of Missouri plans to build women's dormitory, astrological observatory, home economics building, brick and concrete, on campus, to cost $190,000; also build cattle barn, alter power house, $60,000. A. R. Hill, president.

FULTON, MO.—Westminster College soon receives bids for heating plant on campus. E. E. Reed, president. $25,000.

JOPLIN, MO.—Smith, Rea & Lovitt, Architects, Finance Building, Kansas City, will erect four-story, 103 x 129 ft., brick and reinforced concrete building here for Y. M. C. A., Calumet Building, St. Louis. $250,000.

KIRKSVILLE, MO.—Kirksville State Normal School plans to rebuild gymnasium and dormitory recently destroyed by fire. $100,000.

ST. JOSEPH, MO.—City will vote on $500,000 bonds to build extension to electric light plant. H. Johnson, city engineer.

ST. LOUIS, MO.—University of Missouri plans to build addition to machine shop on campus. A. R. Hill, president. $25,000.

ST. LOUIS, MO.—Jewish Hospital, 5415 Delmar Boulevard, plans to build hospital. A. Waldheim, president. $1,000,000.

MONTANA

FAIRFIELD, MONT.—The United States Reclamation Service, Denver, Col., will construct one five-room cottage, one office, one lodging house, one garage and one stable at the Sun River project, Montana.

NEBRASKA

GERING, NEB.—Scottsbluff County will vote on $250,000 bonds to build courthouse and jail.

OMAHA, NEB.—Skinner Packing Co., 904 First National Bank Building, let contract for building six-story, 65 x 65 ft., reinforced concrete fertilizer plant on South Side to Collins Bros., Omaha. $50,000.

OMAHA, NEB.—E. L. Means, Orleans, is having plans prepared by J. Latenser & Sons, Architects, 632 Bee Building, for six-story, 99 x 120 ft., reinforced concrete warehouse on Eleventh and Dodge Streets here. $100,000.

OMAHA, NEB.—Skinner Packing Co., 904 First National Bank Building, plans to build eight-story, 99 x 132 ft., cold storage plant on Twelfth and Douglas Streets. H. C. Christianson, 7258 Union Avenue, Chicago, Ill., engineer. $500,000.

OMAHA, NEB.—Western Motor Car Co., 2047 Farnum Street, plans to build six-story, 132 x 136 ft., reinforced concrete salesroom and warehouse on Farnum Street, between Thirtieth and Thirty-first Streets. G. L. Fisher, 1429 City National Bank Building, Architect. $350,000.

NEW HAMPSHIRE

LAKEPORT, N. H.—Scott & Williams, 366 Broadway, New York City, are having plans prepared by Lockwood, Greene & Co., Architects, 60 Federal Street, Boston, for building five-story, 60 x 200 ft., steel and reinforced concrete factory.

NEW JERSEY

CAMDEN, N. J.—W. H. Dollar Mfg. Co., 312 North Front Street, is having plans prepared by C. P. Berger, Architect, 1416 South Penn Square, Philadelphia, for building three-story, 53 x 70 ft., brick and concrete factory on North Front Street. $30,000.

EAST ORANGE, N. J.—Ridgewood Co., care of E. V. Warren, Architect, 31 Clinton Street, awarded contract for five-story hotel, 135 x 218 ft., brick and reinforced concrete, on South Munn Avenue, north of Central Avenue, to Kelly-Ackerson Co., 220 Main Street. $600,000.

NEWARK, N. J.—F. Homs, 940 South Nineteenth Street, plans to build six-story, 22 x 69 ft., factory and office at 107 Mulberry Street. Cost between $50,000 and $60,000.

NEW YORK

ALBANY, N. Y.—Board of Contract and Supply proposes building P. S. 19, three stories, 41 x 160 ft., brick and reinforced concrete school on New Scotland Avenue. Fuller & Robinson Co., 95 State Street, Architects. $50,000.

BROOKLYN, N. Y.—Board of Education, 500 Park Avenue, New York City, proposes building P. S. 100, four stories, 100 x 144 ft., brick and steel, on West First Street, to cost $299,500; P. S. 80, four stories, 100 x 144 ft., brick and steel, on West Nineteenth Street, to cost $310,230. C. B. J. Snyder, Municipal Building, New York City, Architect.

BROOKLYN, N. Y.—Circle Garage Co., 250 Coney Island Avenue, will build one-story, 50 x 200 ft., brick and steel garage on Coney Island Avenue and Prospect Place, W. $45,000.

BROOKLYN, N. Y.—V. Guardino, 39 Central Avenue, will build one-story, 90 x 100 ft., brick and steel garage on Central and Forest Avenues. $30,000.

BROOKLYN, N. Y.—Slatwell Realty Co., 1404 Pitkin Avenue, will build one-story, 100 x 120 ft., brick and steel garage on Eighteenth Avenue and Eighty-sixth Street. $25,000.

BROOKLYN, N. Y.—Smith & Son, 132 East Forty-third Street, New York City, will build one-story, 80 x 180 ft., brick and steel garage at 373 Park Avenue here. $35,000.

BROOKLYN, N. Y.—Miller-Weissman Amusement Co., care of Shampan & Shampan, Architects, 772 Broadway, will build one-story, 75 x 100 ft., brick and steel theater on Manhattan Avenue and Eagle Street. $80,000.

BROOKLYN, N. Y.—St. Marks Amusement Co., 285 Flatbush Avenue, will build one-story brick and terra cotta theater. Careon & Wiseman, 220 Henry Street, Architects. $150,000.

BROOKLYN, N. Y.—J. Bene & Sons, 641 Dean Street, had revised plans prepared by M. Freehof, Architect, 405 Lexington Avenue, New York City, or one-story, 100 x 100 ft., brick and steel factory on Clinton Avenue, near Fulton Street. $35,000.

BROOKLYN, N. Y.—Cohn Bros., Architects, 361 Stone Avenue, will build one-story, 100 x 150 ft., brick and steel garage on Pitkin Avenue and Hinsdale Street for H. Fein, 626 Essex Street. $40,000.

BROOKLYN, N. Y.—F. Savignano, Architect, 6004 Fourteenth Avenue, is preparing plans for one-story, 66 x 100 ft., brick and steel foundry on Sixtieth Street and Twelfth Avenue. $25,000.

BROOKLYN, N. Y.—M. Szczotkowsky, 147 North Sixth Street, let contract for building one-story, 30 x 100 ft., brick and steel packing plant at 149 North Eighth Street to Lustbader Construction Co., 103 Park Avenue, New York City. $55,000.

BROOKLYN, N. Y.—Magid Katzman & Strober, 58 Boerum Place, will build one-story, 100 x 165 ft., steel and brick warehouse, garage and workshop on Jefferson Street, Wyckoff and Flushing Avenues. H. J. Nurick, 957 Broadway, Architect. $50,000.

BROOKLYN, N. Y.—H. J. Nurick, Architect, 957 Broadway, has plans for building two-story, 120 x 160 ft., brick and steel garage, warehouse and workshop on Varick Avenue and Meserole Street for J. H. Werbelovsky, 83 Meserole Street. $50,000.

BROOKLYN, N. Y.—Board of Education, 500 Park Avenue, New York City, received lowest bid for building (a) P. S. 20, five-story, 200 x 193 ft., brick and limestone, on Roebling Street, North Fourth and North Fifth Streets, (b) P. S. 182, five-story, 118 x 192 ft., brick and concrete, on Dumont Avenue and Wyona Street, from P. J. Brennan, 624 Madison Avenue, New York City; (a) $481,650, (b) $464,340.

BROOKLYN, N. Y.—L. W. Boynton, 1183 Fulton Street, will build one-story, 85 x 100 ft., brick and steel garage at 32-38 Schenectady Avenue. S. Millman & Son, 26 Court Street, Architects. $30,000.

BUFFALO, N. Y.—Board of Public Works plans to build barn on Maryland, Hudson and Fourth Streets. A. W. Kreinhede, Commissioner. $80,000.

BUFFALO, N. Y.—T. & E. Dickinson & Co., 472 Main Street, plans to build fifteen-story, 48 x 115 ft., store and jewelry establishment at 618 Main Street. $170,000.

BUFFALO, N. Y.—City Council approved petition for building memorial stadium with 35,000 seating capacity.

CARTHAGE, N. Y.—Board of Education is considering erection of central high school and memorial community center.

JOHNSTOWN, N. Y.—Adams & Co. are having plans prepared for two-story, 145 x 180 ft., leather mill. $65,000.

LONG ISLAND CITY, N. Y.—Factory Construction Co., 44 Court Street, Brooklyn, will build four-story, 100 x 200 ft., brick and concrete garage on North Avenue and the Boulevard. $350,000.

LONG ISLAND CITY, N. Y.—A. Cohen, 212 Fith Avenue, New York City, had plans prepared by D. Seabury, Architect, 12 East Avenue, Pawtucket, R. I., or three-story, 73 x 193 t., brick mill at William and Freeman Streets here. $60,000.

LONG ISLAND CITY, N. Y.—Board of Education 500 Park Avenue, New York City, soon receives bids for building P. S. No. 3, three stories, 105 x 108 ft., brick and steel, on Colonial Avenue, between Livingston and Meteor Streets, here. C. B. J. Snyder, Municipal Building, New York City, Architect. $200,000.

NEW YORK, N. Y.—Greenwich Development Co., 44 Court Street, Brooklyn, will build one-story, 85 x 140 ft., brick and steel garage at 537-549 Broome Street. P. Deckman, president. $125,000.

NEW YORK, N. Y.—Haffen Realty Co., 2804 Third Avenue, will build one-story, 30 x 130 ft., brick and steel factory on Lafayette and Garrison Avenues, Bronx. $30,000.

NEW YORK, N.Y.—Newat Building Co., 200 Broadway, will build one-story brick and concrete bakery and garage on Boston Road and 177th Street, Bronx Borough. $45,000.

NEW YORK, N. Y.—The 181st Street Construction Co., 729 Broadway, let contract to build three-story, 150 x 200 ft., brick and terra cotta theater on Broadway and 181st Street to Fleishman Construction Co., Thirty-ninth Street and Seventh Avenue. $500,000.

NEW YORK, N. Y.—New York Central R. R., Grand Central Terminal, will build one-story, 35 x 180 ft., brick and steel garage and warehouse on Webster Avenue, near Claremont Parkway, Bronx. Ewing & Allen, 101 Park Avenue, Architects. $75,000.

NEW YORK, N. Y.—Wendell Estate, 175 Broadway, contemplates building three-story, 90 x 100 ft., brick and reinforced concrete garage at 142-148 West Thirty-ninth Street. J. B. Snooks Sons, 261 Broadway, Architects. $30,000.

NEW YORK, N. Y.—J. Goldstein, care of J. Fisher, Architect, 25 Avenue A, proposes building two-story, 70 x 154 ft., brick and concrete storage building on East Third and Tompkins Streets. $75,000.

NEW YORK, N. Y.—Industrial School, 418-420 West Forty-first Street, is having plans prepared by G. M. McCabe, Architect, 96 Fifth Avenue, for two-story, 50 x 99 ft., reinforced concrete and brick garage. $50,000.

NEW YORK, N. Y.—60 Wall Street Corp. soon receives bids to build fifteen-story addition. Clinton & Russell, 32 Liberty Street, Architects. $100,000.

NEW YORK, N. Y.—Board of Education, 500 Park Avenue, will build addition to P. S. 43, three stories, 59 x 100 ft., brick and steel, on Brown Place, Bronx. C. B. J. Snyder, Municipal Building, Architect. $93,250.

NEW YORK, N. Y.—Musher & Cox, 140 Liberty Street, are having revised plans prepared by S. B. Eisendrath, Architect, 18 East Forty-first Street, for twelve-story, 49 x 100 ft., brick and limestone store and loft at 255-257 Fifth Avenue. $190,000.

NIAGARA, N. Y.—Union Carbide Co., Union Street, plans to build electric switching station. $45,000.

NIAGARA FALLS, N. Y.—Willys-Overland Co., 1294 Main Street, Buffalo, purchased 26-acre site on Sugar and Lockport Streets here and plans to build tractor plow factory.

RICHMOND HILL (JAMAICA P. O.), N. Y.—Richmond Hill Baptist congregation let contract for brick and limestone church on 114th Street and Ninety-first Avenue to Werner-Huberty Co., 50 Court Street, Brooklyn. $70,000.

ROCHESTER, N. Y.—Beechnut Packing Co., Canajoharie, plans to build two-story, 120 x 180 ft., reinforced concrete addition to plant on Main Street, E. $70,000.

ROME, N. Y.—Board of Education will build two-story school, 103 x 132 ft., brick, on Linden Street. W. T. Towner, 366 Fifth Avenue, New York City, Architect. $150,000.

SYRACUSE, N. Y.—Sun Oil Co., 244 West Jefferson Street, plans to build barrel plant on Sunset Avenue and Turtle Street. C. E. Brown, manager. $60,000.

WARDS ISLAND, N. Y.—State Hospital Commission, Capitol, Albany, will build three-story dining room, 22 x 144 ft., brick, steel and concrete, at Manhattan State Hospital here.

WATERTOWN, N. Y.—United Hotel Co., Buffalo, retained G. B. Post & Son, Architects, 101 Park Avenue, New York City, to prepare plans for new hotel on Washington Street. $500,000.

WESTFIELD, N. Y.—J. Kling, Maysville, plans to build one-story, 64 x 540 ft., brick and timber factory here. $43,000.

NORTH CAROLINA

OXFORD, N. C.—Board of Education will build high school and other schools in Oxford Graded District. $50,000.

NORTH DAKOTA

VALLEY CITY, N. D.—Board of Education plans to issue $91,000 bonds for the new high school.

OHIO

BARBERTON, OHIO.—Park Theater Co., 156 Columbus Street, soon lets contract for building two-story, 48 x 100 ft., brick and concrete theater on Tuscarawas Street. Swirsky & Miller, 701 Peoples Savings & Trust Building, Akron, Architects. $50,000.

BELLAIRE, OHIO.—United Mine Workers of Sub. Dist. No. 5, Bridgeport, will build three-story temple, 82 x 129 ft., brick, on Central Avenue and Belmont Street. F. F. Faris, Schmulback Building, Wheeling, W. Va., Architect. $125,000.

CINCINNATI, OHIO.—Dixie Terminal Co., First National Bank Building, let contract for nine-story office, store, etc., 50 x 180 ft., on Fourth and Walnut Streets,

to Ohio Building & Construction Co., Burnet and McMillian Avenues. $1,000,000.

CLEVELAND, OHIO.—Accurate Machine Co., 1011 Power Building, awarded contract for building two-story, 40 x 160 x 180 ft., brick, steel and reinforced concrete factory and office on East 134th Street and Court Road to Hunkin-Conkey Co., 601 Century Building. $250,000.

CLEVELAND, OHIO.—Cleveland Automobile Co., Hollenden Hotel, will build four-story, 82 x 601 ft., brick, steel and reinforced concrete factory on Euclid Avenue and London Road. Crowell-Lindorff Little Co., 5716 Euclid Avenue, contractors. $1,000,000.

CLEVELAND, OHIO.—J. L. Free Co., 1004 Prospect Avenue, plans to build brick, steel and reinforced concrete garage on East Ninth Street and Bolivar Road. M. Dunning, 304 South Wabash Avenue, Chicago, Ill., Architect. $100,000.

CLEVELAND, OHIO.—G. A. Rutherford Co., 1922 East Eighteenth Street, will build two-story, 80 x 80 ft., brick and steel warehouse and store at 2729 Prospect Avenue. $75,000.

DAYTON, OHIO.—City plans to build ten-story club, 100 x 137 ft., reinforced concrete, on First and Main Streets. $1,000,000.

KENMORE, OHIO.—Board of Education let contract for two-story school, 69 x 127 ft., brick, on North Ninth Street, to H. P. Moran, 425 Second National Bank Building, Akron. $88,250.

LORRAINE, OHIO.—Board of Education will build one-story, 125 x 200 ft., brick and timber school. Perkins, Fellows & Hamilton, 814 Tower Ct., Chicago, Architects. $125,000.

OXFORD, OHIO.—Miami University is having plans prepared by L. G. Dettoe, Architect, Cincinnati, for building three-story brick and reinforced concrete dormitory. $300,000.

STOUTSVILLE, OHIO.—Board of Education will build two-story, 68 x 102 ft., school. $61,000.

OKLAHOMA

OKLAHOMA, OKLA.—National Hotel Co. let contract for building three-story, 75 x 140 ft., hotel at 2310 Exchange Avenue to R. M. Crissman, 2230 West Thirteenth Street. $100,000.

OKLAHOMA, OKLA.—Acme Milling Co., 19 West Washington Street, let contract for rebuilding three-story, 65 x 160 ft., brick warehouse to Campbell & Price, 610 Majestic Building. $35,000.

TAHLEQUAH, OKLA.—City plans to build light and power plant. $65,000.

OREGON

SALEM, ORE.—Crown Willamette Paper Co., West Linn Street, Oregon City, and members of C. K. Logging Co., plan to build plant on Trade and Front Streets here to consist of various buildings; main structure, 80 x 150 ft. $400,000.

PENNSYLVANIA

PHILADELPHIA, PA.—A. Wax, 937 South Street, will build one-story, 95 x 120 ft., concrete and steel theater at 1523-25 South Street. $50,000.

PHILADELPHIA, PA.—J. J. Felin Co., Inc., 4148 Germantown Avenue, let contract for building two-story, 39 x 87 ft., reinforced concrete, brick and steel packing plant to H. E. Baton & Co., 1713 Sansom Street. $90,000.

PHILADELPHIA, PA.—Miller North Broad Storage Co., 2715 North Broad Street, let contract for building six-story, 52 x 108 ft., storage warehouse at 5301-03 Germantown Avenue to J. N. Gill & Co., Otis Building. $75,000.

PHILADELPHIA, PA.—J. J. Felin Co., Inc., 4148 Germantown Avenue, will build three-story, 40 x 89 ft., brick and steel packing plant at 4142 Germantown Avenue. C. B. Comstock, 110 West Fortieth Street, New York City, Architect. $70,000.

PHILADELPHIA, PA.—Gold Medal Bakery Co., 1211 Commonwealth Building, plans to build two-story, 50 x 50 ft., brick and timber factory on Third Street and Washington Avenue. R. Beard, 1211 Commonwealth Building, Architect. $30,000.

PHILADELPHIA, PA.—Loose-Wiles Bisbuit Co., Twenty-third and Arch Streets, plans to build two-story, 80 x 191 ft., reinforced concrete, brick and timber warehouse on Second and Poplar Streets. R. Beard, 1211 Commonwealth Building, Architect. $65,000.

PHILADELPHIA, PA.—P. M. Sax, engineer, Franklin Bank Building, is preparing plans for twelve-story, 43 x 80 ft., concrete, steel and brick factory at 1220-24 Sansom Street.

RHODE ISLAND

ELMWOOD (PROVIDENCE P. O.), R. I.—Providence Body Co., 32 Eagle Street, Providence, proposes building one-story, 80 x 300 ft., mill construction factory, and one-story, 30 x 30 ft., brick office on Elmwood Avenue here. $55,000.

PAWTUCKET, R. I.—Arbeka Webbing Co., Central Avenue, purchased 4½-acre site adjoining present plant and plans to construct new buildings.

PROVIDENCE, R. I.—B. S. D. Martin, Architect, 86 Weybosset Street, proposes building two-story, 70 x 90 ft., mill construction garage on Smith and Orms Streets for F. A. Becker Co., 390 Smith Street. $30,000.

PROVIDENCE, R. I.—Marshak & Hickey, Architects, 310 Strand Building, will build three-story, 42 x 60 ft., brick and steel school on Orms Street for Sons of Zion Society, 89 Orms Street. $60,000.

SOUTH CAROLINA

MCCOLL, S. C.—Marlboro Cotton Mills plans to build one-story, 100 x 300 ft., mill construction plant. Robert & Co., 821 Candler Building, Atlanta, Ga., engineers.

TENNESSEE

MEMPHIS, TENN.—Methodist Churches of Mississippi, Arkansas and Tennessee let contract for building hospital on Lamar and Dudley Streets here to Kaucher-Hodges Co., Calhoun Street. $85,000.

SOUTH DAKOTA

MADISON, S. D.—City plans election to vote on $125,000 bonds to build electric light plant.

TEXAS

DALLAS, TEX.—Shaareth Israel congregation will build white brick and terra cotta synagogue on Eakins and Park Avenues. $100,000.

DE LEON, TEX.—Chamber of Commerce will build four-story reinforced concrete hotel. $118,400.

SAN ANGELO, TEX.—C. C. McBurnett is having plans prepared by H. A. Overback, Architect, Juniata Building, Dallas, for three-story addition to St. Angelus Hotel here. $60,000.

UTAH

PROVO, UTAH.—Utah County plans to issue $250,000 bonds to build courthouse.

PROVO, UTAH.—State Legislature, Salt Lake City, appropriated $75,000 to build addition to hospital here.

SALT LAKE CITY, UTAH.—State Legislature appropriated $75,000 to build assembly hall at State University here. J. A. Wiltsoe, president.

SALT LAKE CITY, UTAH.—General Reduction & Chemical Co., 23 West Second Street, S., plans to build acid plant. $250,000.

VIRGINIA

RICHMOND, VA.—Vincent & Wells Co. plans to build one-story theater, 94 x 123 ft., on Broad and Eighth Streets. Carneal & Johnson, 707 Chamber of Commerce Building, Architects. $150,000.

RICHMOND, VA.—H. T. Barnham, Architect, 509 Chamber of Commerce Building, has designed two-story, 60 x 262 ft., brick, steel and reinforced concrete garage for H. T. Nelson & Co., 302 Mutual Building. $80,000.

WASHINGTON

SEATTLE, WASH.—Seattle Yacht Club, Georgia and Railroad Streets, plans to build three-story clubhouse in Montlake Park. J. Graham, Manufacturers Exchange Building, Architect. $50,000.

WISCONSIN

GREEN BAY, WIS.—City Council plans to build high school. W. L. Kerr, city clerk. $250,000.

SUPERIOR, WIS.—City will vote on $75,000 bonds to build auditorium. M. G. Beckley, city clerk.

WYOMING

GREYBULL, WYO.—School Board, District 41, plans to vote on $60,000 bonds to build two-story school. A. Dietrich, Billings, Mont., Architect.

At the Architect's Service

Let's Face the Facts

"We are on a permanently higher price level, and the sooner the business men of the country take this view and adjust themselves to it, the sooner will they save themselves and the nation from the misfortune which will come if we persist in our present false hopes. . . . . To talk reverently of 1913-14 prices is to speak a dead language today. The buyers of the country have made an unexampled attack upon prices since the armistice by their waiting attitude, and yet price recessions have been insignificant. The reason is that we are on a new price level, which will be found a stubborn reality. Business men are going to find out that the clever man is not the man who waits, but the one who finds out the new price facts and acts accordingly." Thus does Prof. Irving Fisher of Yale University sum up the situation today. And architects can do no greater service to the business of building than to spread these facts broadcast.

Ads. marked E.O.W. appear every other week
Ads. marked E.F.W. appear every fourth week
Ads. marked O.A.M. appear once a month

DIGEST
Of Manufacturers' Data

ARCHITECTS' OFFICE EQUIPMENT

PENCILS:

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

CASEMENT WINDOWS

METAL:

Pomeroy Co., Inc., S. H., 30 E. 42d St., N. Y.

CEMENT AND PLASTER

CEMENT:

Atlas Portland Cement Co., The, New York.

CORNER BEADS:

Milwaukee Corrugating Co., Milwaukee, Wis.

PLASTER:

National Kellastone Co., The, Chicago, Ill.

SPECIALTIES:

General Fireproofing Co., The, Youngstown, Ohio. G-F Cold Rolled Channels. Corner Bead. Wall Ties and Crimped Furring.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. Corner beads, "Kahn" curb bars, "Trus-Con" slotted inserts; "Kahn" adjustable inserts; "Trus-Con" National socket inserts; "Kahn" elastic filler and armor plates for expansion joints.

STUCCO:

National Kellastone Co., The, Chicago, Ill.

CONCRETE REINFORCEMENT

REINFORCEMENT:

American Steel & Wire Co., Chicago-New York.

Berger, The, Mfg. Co., Canton, Ohio.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "Kahn" System reinforced concrete; "Kahn" bars; "Rib" bars; "Rib" lath; "Floretyles," "Floredome," etc.; flat and beamed ceilings of all types.

DAMPPROOFING

(See Water and Dampproofing)

DAYLIGHTING

Berger, The, Mfg. Co., Canton, Ohio.

DOORS AND TRIM

HOLLOW STEEL DOORS:

Interior Metal Mfg. Co., Jamestown, N. Y.; Bankers Trust Bldg., 501 Fifth Ave., New York. Hollow steel doors in all standard sizes.

SLIDING DOOR EQUIPMENT:

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

STEEL ROLLING EQUIPMENT:

Edwards Mfg. Co., The, 319-349 Eggleston Ave., Cincinnati, O. Send specifications for estimate.

WOOD:

Curtis Companies, Clinton, Iowa. Doors, sash, trim, stairways, sideboards, kitchen cupboards, colonnades, etc.

THIS department is intended to assist our subscribers in readily determining the names and addresses of manufacturers of products in which they may be interested, together with brief data about their material.

The headings and sub-headings are arranged alphabetically and have been selected in accordance with the intent of meeting the architect's thought in preparing his specifications.

If the information desired is not found here, it will gladly be supplied by the Service Department of THE AMERICAN ARCHITECT.

DUMB WAITERS

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELECTRICAL EQUIPMENT AND SUPPLIES

CONDUITS AND FITTINGS:

National Metal Molding Co., 1111 Fulton Bldg., Pittsburgh, Pa. "NATIONAL" metal molding for surface wiring; "SHERADUCT" and "ECONOMY" conduits, "FLEXSTEEL" armored cable and a complete line of fittings.

Youngstown (O.) Sheet & Tube Co. "Buckeye" rigid conduit. "Realflex" armored conductor.

COOKING APPLIANCES:

General Electric Co., Schenectady, N. Y.

DOOR OPENERS:

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

LIGHTING SYSTEMS:

General Electric Co., Schenectady, N. Y.

OUTLET BOXES:

General Electric Co., Schenectady, N. Y.

Hart & Hegeman Mfg. Co., Hartford, Conn.

PANEL BOARDS:

Structural Slate Co., The, Pen Argyl, Pa.

RECEPTACLES:

Hart & Hegeman Mfg. Co., Hartford, Conn.

SOCKETS:

Hart & Hegeman Mfg. Co., Hartford, Conn.

SWITCHES:

General Electric Co., Schenectady, N. Y.

Hart & Hegeman Mfg. Co., Hartford, Conn.

WIRES AND CABLES (Insulated):

Electric Cable Co., The, 10 East 43rd St., New York City.

General Electric Co., Schenectady, N. Y.

ELEVATORS AND HOISTS

CONVEYORS:

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Gravity spirals.

DOOR EQUIPMENT:

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

ELEVATORS:

American Elevator & Machine Co., Louisville, Ky.

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Offices in principal cities of the world. Electric, hydraulic, belt and hand power, inclined freight elevators and escalators.

ELEVATORS (Hand Power):

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELEVATOR CABLE:

American Steel & Wire Co., Chicago-New York.

HOISTS (Ash):

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Automatic coal and ash hoists, blast furnace and ship hoists.

FIREPROOFING MATERIALS

Johns-Manville, H. W., Co., N. Y. C.

CAGING OR FORMING:

Mitchell-Tappen Co., 15 John St., N. Y. C.

METAL LATH:

Berger, The, Mfg. Co., Canton, Ohio.

General Fireproofing Co., The, Youngstown, Ohio. Herringbone Rigid Metal Lath. Diamond-Rib Expanded. Key Extended and Genfire Sheet Steel.

Milwaukee Corrugating Co., Milwaukee, Wis.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "Hy Rib," "Rib" lath; "Diamond Mesh" lath.

FIRE PROTECTION

AUTOMATIC FIRE DOOR HARDWARE:

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

FLOORS

COMPOSITION:

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

Johns-Manville Co., H. W., New York City.

National Kellastone Co., The, Chicago, Ill.

FLOOR COATING:

General Fireproofing Co., The, Youngstown, Ohio. G-F Concrete Hardener, Floor Primer and Floor Coating.

Trus-Con Laboratories, Dept. 68, Detroit, Mich. Representatives in principal cities. "Trus-Con" Floor hardener. "Trus-Con Agatex." "Trus-Con" floor enamel.

TILE AND CERAMIC MOSAIC:

Structural Slate Co., The, Pen Argyl, Pa.

FOUNDATIONS

PILES:

Raymond Concrete Pile Co., 140 Cedar St., N. Y. C. "Raymond" concrete piles are made by driving a reinforced steel shell which is left permanently in the ground. This shell is then filled with concrete.

ALPHABETICAL INDEX OF ADVERTISERS ON PAGE 18

FURNITURE AND DECORATIONS

DRAPERIES, UPHOLSTERIES, WALL COVERINGS:

Standard Textile Products Co., The, 320 Broadway, New York. "Sanitas" Tinted, Decorative and Glazed. Fast colors, sanitary. For private homes, hotels, auditoriums, institutions, etc.

ECCLESIASTICAL FURNITURE:

Thomas & Co., Inc., 110 Exchange St., Worcester, Mass.

METAL:

Canton Art Metal Co., Canton, Ohio.

HARDWARE

"AIR-WAY" HARDWARE:

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

BOLTS:

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

BUILDERS' HARDWARE:

Corbin, P. & F., New Britain, Conn.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Sargent & Co., New Haven, Conn.
Stanley Works, The, New Britain, Conn.

BUTTS AND HINGES:

Corbin, P. & F., New Britain, Conn.
Lawson Mfg. Co., Superior and Franklin Sts., Chicago, Ill. "Nu" Jamb Hinge.
McKinney Mfg. Co., Pittsburgh, Pa.
Stanley Works, The, New Britain, Conn. (Ball-Bearing)—steel, brass, bronze.

DOOR CHECKS:

Corbin, P. & F., New Britain, Conn.
Richards-Wilcox Mfg. Co., Aurora, Ill.

GARAGE HARDWARE:

Richards-Wilcox Mfg. Co., Aurora, Ill.
Stanley Works, The, New Britain, Conn. Garage door holders and garage door hinges.

HEATING, VENTILATION, PLUMBING

BLOWERS AND EXHAUSTERS:

Buffalo Forge Co., Buffalo, N. Y.

BOILER FEED WATER PURIFYING APPARATUS:

Permutit Co., 440 Fourth Ave., N. Y. C.

CLOSETS:

Clow, James B., & Sons, Chicago, Ill.

DRINKING FOUNTAINS:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.
Kohler Co., Kohler, Wis.

FILTERS, OIL REMOVAL:

Permutit Co., 440 Fourth Ave., N. Y. C.

FILTERS, WATER:

Permutit Co., 440 Fourth Ave., N. Y. C.

FLOOR DRAINS:

Crampton-Farley Brass Co., Kansas City, Mo.

IRON REMOVAL APPARATUS:

Permutit Co., 440 Fourth Ave., N. Y. C.

LAUNDRY TUBS:

Cahill Iron Works, The, Chattanooga, Tenn.
Structural Slate Co., The, Pen Argyl, Pa.

LAVATORIES:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.

PIPE (Steel):

Youngstown Sheet & Tube Co., Youngstown, O.

PLUMBERS' HARDWARE:

Structural Slate Co., The, Pen Argyl, Pa.

RADIATORS:

American Pressweld Radiator Corp., Detroit, Mich.
Clow, James B., & Sons, Chicago, Ill.

SHOWERS:

Structural Slate Co., The, Pen Argyl, Pa.

HEATING, VENTILATION, PLUMBING—Continued

SINKS:

Cahill Iron Works, The, Chattanooga, Tenn.

SINKS (Slop):

Cahill Iron Works, The, Chattanooga, Tenn.

TANKS (Closet):

Cahill Iron Works, The, Chattanooga, Tenn.

TEMPERATURE INSTRUMENTS:

Taylor Instrument Co., Rochester, N. Y.

TOILET PAPER HOLDERS:

A. P. W. Paper Co., Albany, N. Y.

TRAPS (Radiator):

Dunham, C. A., Co., 1710 Fisher Bldg., Chicago, Ill.
Johns-Manville Co., H. W., New York City.

TRAPS (Steam):

Jenkins Bros., 80 White St., N. Y. C.
Johns-Manville Co., H. W., New York City.

TUBS (Bath):

Cahill Iron Works, The, Chattanooga, Tenn.

TUBS (Laundry):

Cahill Iron Works, The, Chattanooga, Tenn.

URINALS:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.
Structural Slate Co., The, Pen Argyl, Pa.

VALVES (Air):

Jenkins Bros., 80 White St., N. Y. C.

VALVES (Radiator):

Jenkins Bros., 80 White St., N. Y. C.

VALVES (Steam):

Jenkins Bros., 80 White St., N. Y. C.

VALVES (Water Line):

Jenkins Bros., 80 White St., N. Y. C.

VAPOR HEATING SYSTEMS:

American Dist. Steam Co., N. Tonawanda, N.Y.
Moline Heat, Moline, Ill.

VENTILATORS:

Burt Mfg. Co., The, 77 Main St., Akron, O. Manufacturers of all types of ventilators, both stationary and revolving.
Milwaukee Corrugating Co., Milwaukee, Wis.

WATER PURIFYING APPARATUS:

Permutit Co., 440 Fourth Ave., N. Y. C.

WATER RECTIFICATION APPARATUS:

Permutit Co., 440 Fourth Ave., N. Y. C.

WATER SOFTENING APPARATUS:

Permutit Co., 440 Fourth Ave., N. Y. C.

WATER TREATMENT:

Permutit Co., 440 Fourth Ave., N. Y. C.

WATER SYSTEMS:

Deming Co., Salem, O.

HOISTS

(See Elevators and Hoists)

INSULATION (Sound and Heat)

BUILDING:

Cabot, Samuel, Inc., Boston. "Cabot Quilt."
Hydrex Felt & Eng. Co., 120 Liberty St., N.Y.
Johns-Manville Co., H. W., New York City.

LIGHTING FIXTURES

GLASSWARE:

Mitchell-Vance Co., 503 W. 24th St., New York City.

METAL:

Mitchell-Vance Co., 503 W. 24th St., New York City.

MARBLE

Appalachian Marble Co., Knoxville, Tenn.

MUSICAL INSTRUMENTS

ORGANS:

Kimball, W. W., Co., Chicago, Ill.

ORNAMENTAL BRONZE AND IRON

Polachek, John, Bronze & Iron Co., 480 Hancock St., Long Island City, N. Y.

PAINTS, VARNISHES, STAINS

PAINT (Steel Protective):

Dixon, Joseph, Crucible Co., Jersey City, N. J.
Trus-Con Laboratories, Dept. 68, Detroit, Mich. Representatives in principal cities. Trus-Con "Bar Ox" for structural steel and bridges.

STAINS:

Cabot, Samuel, Inc., Boston. "Cabot's" Creosote Stains, Stucco Stains, Brick Stains, Old Virginia White and Old Virginia Tints.

PARTITIONS

METAL:

Berger, The, Mfg. Co., Canton, Ohio.
Interior Metal Mfg. Co., Jamestown, N. Y.; Bankers Trust Bldg., 501 Fifth Ave., N. Y. Interchangeable Hollow Metal Partitions.
Pomeroy, S. H., Co., Inc., 30 E. 42d St., N. Y.

SLIDING PARTITION EQUIPMENT:

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

PLASTER

(See Cement and Plaster)

PLUMBING

(See Heating, Ventilation, Plumbing)

REFRIGERATION

REFRIGERATING APPARATUS:

Johns-Manville Co., H. W., New York City.

REFRIGERATORS:

McCray Refrigerator Co., 607 W. Lake St., Kendallville, Ind.

ROOFING

ASPHALT:

Carey, Philip, Co., The, Rockland, Cincinnati, Ohio. Carey Flexible Cement Roofing. A roofing for all classes of buildings, flat or steep surfaces; concrete, tile or wood sheathing construction. Made of a flexible asphalt cement in sheets 26 in. wide by 36 ft. long.

ASBESTOS:

Johns-Manville Co., H. W., New York City.

CANVAS:

Boyle, John & Co., 112 Duane St., N. Y. C. "Bayonne" Roof and Deck Cloth. Three weights of fabric. Width, 30 in., 46 in.
Hydrex Felt & Eng. Co., 120 Liberty St., N.Y.

SHEET METAL:

American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.

SHINGLES, METAL:

Milwaukee Corrugating Co., Milwaukee, Wis.

SLATE:

Emack, John D., Co., Otis Bldg., Philadelphia, Pa.
General Slate Co., 148 State St., Boston, Mass.
Rising & Nelson Slate Co., West Pawlet, Vt.; 101 Park Ave., N. Y. C. Special slate to architect's design.

TILE (Reinforced-Cement):

American Cement Tile Mfg. Co., Pittsburgh and New York. "Bonanza" roofing tile.

SAFETY TREADS

Am. Mason Safety Tread Co., Lowell, Mass.
Norton Co., Worcester, Mass. "Alundum Tile" for stairs, ramps, elevator door saddles, elevator floors, train platforms, trench covers, vault light inserts, sidewalk inserts, shower baths, swimming pools, etc.
Structural Slate Co., The, Pen Argyl, Pa.

SASH

(See Windows)

ALPHABETICAL INDEX OF ADVERTISERS ON PAGE 18

SASH CORD

Samson Cordage Works, 88 Broad St., Boston.

SHEET METAL

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

FORMED PRODUCTS:

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

Berger, The, Mfg. Co., Canton, Ohio.

METAL CEILINGS:

Berger, The, Mfg. Co., Canton, Ohio.

Canton Art Metal Co., Canton, Ohio.

Milwaukee Corrugating Co., Milwaukee, Wis.

SKYLIGHTS, ROLLED STEEL

Milwaukee Corrugating Co., Milwaukee, Wis.

STAINS

(See Paints, Varnishes and Stains)

STRUCTURAL STEEL

PRESSED STEEL CONSTRUCTION:

Berger, The, Mfg. Co., Canton, Ohio. "Metal Lumber." Pressed Steel Joists and structural members.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "Kahn" pressed steel beams, joists, studs, plates, etc.

STUCCO AND WALL BOARD

PLASTER BOARD:

Bishopric Mfg. Co., The, 744 Este Ave., Cincinnati, Ohio. Bishopric Stucco or Plastic Board. The dove-tailed key locks the plaster. Made of creosoted lath, asphaltmastic and heavy fibre board.

STUCCO:

National Kellastone Co., The, Chicago, Ill.

TERRA COTTA

TERRA COTTA (Architectural):

Midland Terra Cotta Co., 1515 Lumber Exchange, Chicago, Ill.

N. Y. Arch. Terra Cotta Co., Tel. Astoria 700.

TILE

(See Flooring and Roofing)

FAIENCE:

Rookwood Pottery Co., Cincinnati, Ohio.

VARNISHES

(See Paints, Varnishes and Stains)

VENTILATION

(See Heating, Ventilation, Plumbing)

WALL BOARD

(See Stucco and Wall Board)

WATER AND DAMPPROOFING

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

General Fireproofing Co., The, Youngstown, Ohio. Complete line of G-F Waterproofings, Dampproofings and Technical Paints.

Hydrex Felt & Eng. Co., 120 Liberty St., N. Y.

Trus-Con Laboratories, Dept. 68, Detroit, Mich. Representatives in principal cities. The "Trus-Con" line of waterproofing, dampproofings and technical paints to meet all requirements.

WATER SUPPLY SYSTEMS

Carter, R. B., Co., 152 Chambers St., N. Y. C.

WINDOWS METAL

Detroit Steel Products Company. Department No. 9, Detroit, Mich. Fenestra Solid Steel Windows are made from Solid Rolled Steel Bars interlocked by patented Fenestra joints. Ventilators are equipped with adjustable, removable butts. Fenestra Gravity Cam Latch automatically locks ventilators when closed. Patented Channel Section gives ventilators double weathering.

Pomeroy, S. H., Co., Inc., 30 E. 42d St., N. Y.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "United" steel sash in all types; horizontally and vertically pivoted sash; counterbalanced and counterweighted sliding sash; center pivoted and top hung continuous sash; steel and glass partitions; sliding and swinging doors; casement sash of all designs.

CASEMENT:

(See Casement Windows)

WIRE GLASS

Mississippi Wire Glass Co., 216 5th Ave., N. Y. C. Polished Wire Glass—"Romanesque," "Syenite," "Maze," "Pentecor," "Ribbed," "Rough." Figured Wire Glass—"Apex," "Romanesque," "Syenite," "Maze," "Florentine," "Figure No. 2," "Ondoyant," "Pentecor," "Ribbed," "Rough."

WOOD

HEMLOCK:

Hemlock Manufacturers, The, 303 F. R. A. Bldg., Oshkosh, Wis.

RATES for Classified Advertisements

243 West 39th St., New York

Positions Wanted, 75 cents for 25 words or less and 2 cents for each additional word; Help Wanted, Special Notices, Competitions, Proposals, etc., $1 for 25 words or less and 3 cents for each additional word. Ten lines or more 30 cents per line. Copy received until 12 m. Friday. PAYMENTS STRICTLY IN ADVANCE.

Position Wanted advertisements of men who have been serving in the army and who desire to make connection with architects' offices will be inserted free of charge.

POSITIONS WANTED

STRUCTURAL Steel Engineer, graduate, thoroughly experienced, best of references, past ten years chief engineer in charge of estimating, designing, and making contracts, desires position with architect of standing. Address 57-A, care The American Architect. (2257-58-59-60)

ARCHITECTURAL Draughtsman, technical graduate, 26, 5 years' experience on high class work, neat, rapid, desires position in New York City. Address 58-C, care The American Architect. (2258-59-60)

ARCHITECTS—BUILDERS—REAL ESTATE MEN—Man, 35, technical education, unusually broad business and executive experience in architecture, building and real estate, desires high class connection. Address 58-A, care The American Architect. (2258-59)

ARCHITECT, designer, detailer and all around man, with knowledge of engineering, desires to connect with progressive architect, either on a percentage or partnership basis; references. Address 58-D, care The American Architect. (2258-59)

ARCHITECTURAL draughtsman, designing, construction, superintending, structural; will go anywhere; speaks French; best references. Address Box 58-J, care The American Architect. (2258-59)

ARCHITECTURAL draftsman, last four years a structural engineer, now employed upon war work nearing completion; 18 years general experience in good offices, upon business buildings, public and domestic work, on designs, specifications and outside superintendence. American with good references. Best known in New York, but can go anywhere. H. I., Box 137, Brunswick, Ga. (2259-60-61)

A SUPERVISING position, by a registered Architect of New York State. Is up to date, has knowledge and long experience as chief draftsman and superintendent of construction. Address 59-B, care The American Architect. (2259-60-61)

HARVARD graduate, foreign traveled, Institute member, 11 years' experience, 7 years in charge of important work for prominent Gothic office, with small private practice, married, aged 34, wants opening as junior partner or head draughtsman with interest in firm of good standing, where experience in design, specifications and superintendence, business ability, good presence and energy will compensate for lack of money to invest. Will consider any location. Address 59-A, care The American Architect. (2259)

LANDSCAPE architect, with special training in planting and of the work, seven years' experience, desires to become associated with architects in New York or vicinity. Address 57-D, care The American Architect. (2259-60)

POSITIONS WANTED

ARCHITECT, draughtsman, 35, sixteen years' experience, eight in New York City, now with architectural firm in Southern city at good wages, wants permanent work on salary and commission (with later partnership, preferable); good designer; complete working drawings; preliminary sketches; high grade residence specialist; executive ability, ambition, "pep"; take charge of average office; no engineering; ability and trustworthiness merits more than a living wage. Address 59-C, care the American Architect. (2259)

UNIVERSITY graduate, age 29, licensed Illinois architect, at present employed, desires position as draftsman in western or southern office where chance for advancement is assured. Available July 1. Address 59-D, care The American Architect. (2259-60-61-62)

HELP WANTED

ARCHITECTURAL draftsmen for positions open in north central and southern states. Salaries $30 to $50 per week. No advance fee if you mention this advertisement. Address Architectural Dept., The Engineering Agency (26th year), Monadnock Bldg., Chicago, Illinois. (2257-58-59-60)

DRAFTSMEN—Architectural men for designing, detailing and checking general Commercial work. Only first-class experienced men need apply. Send samples of work with full information and salary required in first letter. Smith, Hinchman & Grylls, 710 Washington Arcade, Detroit, Michigan. (2259-60)

WANTED, by large corporation, man thoroughly conversant with methods of introducing specifications in architects' offices and carrying through the sale of paints and varnishes. Must be thoroughly acquainted New York City. State age, experience, salary, references, nationality and 'phone number. Address 57-E, care The American Architect. (2257-58-59)

PERMANENT position for a high grade architectural designer and color man. Location West Texas. Salary $200 to $250 per month. Applicant to submit samples of work with application. Address reply to David S. Castle, Architect, Abilene, Texas. (2258-59)

SPECIAL NOTICE

FRENCH engineer desires to represent on commission in France an interesting business or industry pertaining to construction or public works. Paul Sabin, 3, Rue de Bellievre, 3, Paris, France. (2259)

PROPOSALS

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., March 26, 1919.—SEALED PROPOSALS will be opened in this office at 3 p. m., April 30, 1919, for remodeling the annex to the United States Post Office at Brooklyn, N. Y. Drawings and specifications may be obtained from the Supervising Chief Engineer, 731 Custom-House building, New York, N. Y., or at this office, in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. (2258-59)

SPECIAL NOTICE

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of The American Architect, published weekly at New York, N. Y., for April 1, 1919.

State of New York }
County of New York } ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared FRED S. SLY, who, having been duly sworn according to law, deposes and says that he is the Business Manager of THE AMERICAN ARCHITECT, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:

Publisher—The Architectural and Building Press, Inc., 243 West 39th Street, New York City.

Editors—Wm. H. Crocker, Arthur T. North, 243 West 39th Street, New York City.

Managing Editor—Willard C. Howe, 243 West 39th Street, New York City.

Business Manager—Fred S. Sly, 243 West 39th Street, New York City.

2. That the owners are:

The United Publishers Corporation, 243 West 39th Street, New York City.

That the stockholders owning or holding 1 per cent or more of the total amount of stock of the United Publishers Corporation are as follows:

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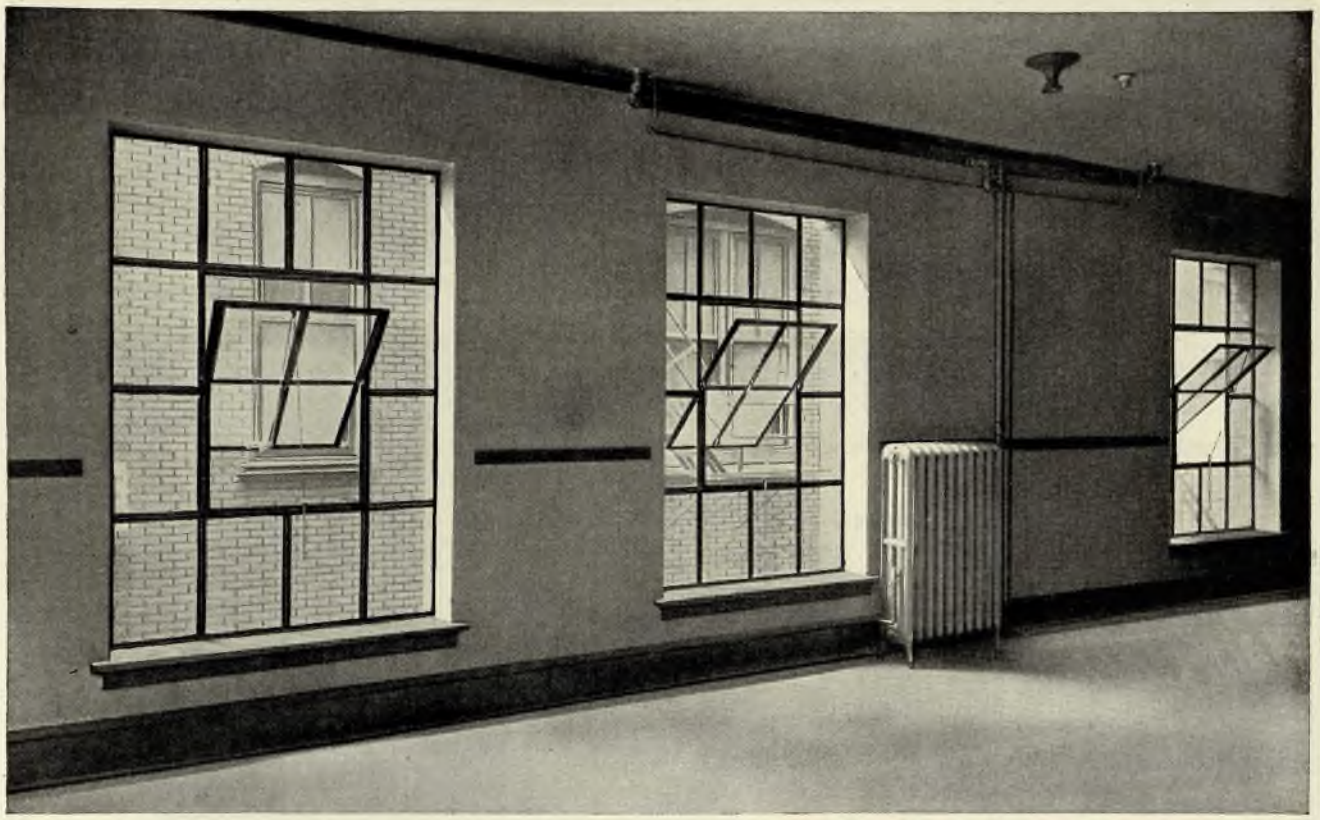
3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

FRED S. SLY, Business Manager.

Sworn to and subscribed before me this 29th day of March, 1919.

[Seal] H. H. MINER, Notary Public.
N. Y. Co., No. 138.
(My commission expires March 30, 1920.)
Register's No. 10088.



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3. Glass is held in place by use of $\frac{1}{16}$″x$\frac{5}{8}$″ No. 16 gauge pressed steel angles. Section No. 118, tapped to outside sash bars, outside ventilator bars, and sash bars around ventilator. Bolted through all other bars.
4. Ventilators may be placed at head, sill or jambs of sash. Two ventilators may be used in one sash unit one above the other if necessary. Ventilators limited in area to 3,000 square inches.
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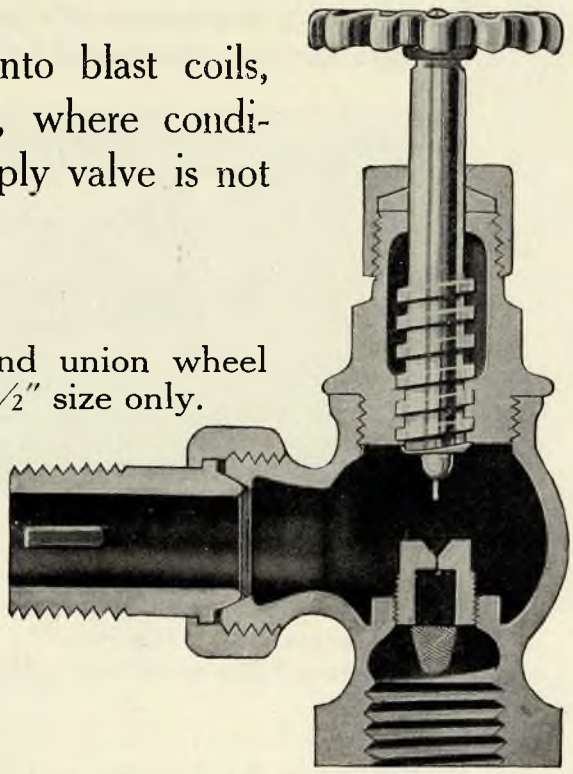

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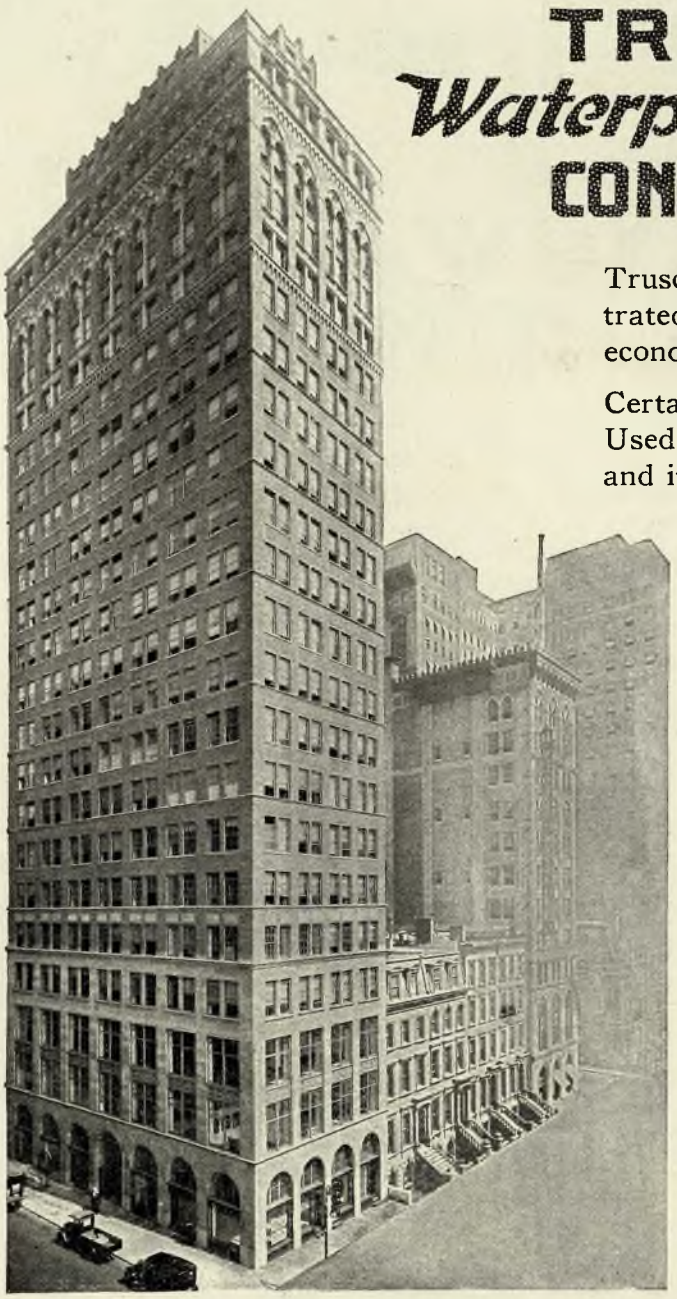

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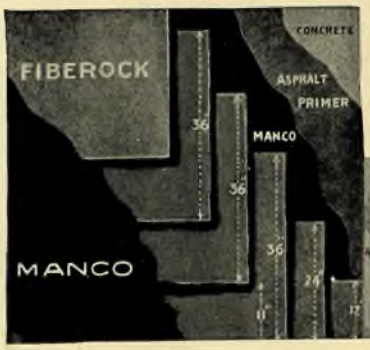

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