The Architects’ Responsibility

By Edwin Bergstrom, F.A.I.A.

Address at the Twelfth Annual Convention of the
Associated General Contractors of America

The architects’ responsibility to the construction industry is the subject which I have been asked to speak to you about. I shall not speak of the functions of an architect or of his responsibilities as an individual, but rather of his duties and obligations as an element of a great industry, and therefore of his responsibility to the other elements of that industry. To do this it is necessary to identify those elements.

The construction industry is most complex and the simplest building operation brings together many classes of labor and many kinds of materials. There is no other single industrial operation that requires the thought of so many minds and the labor of so many hands. Every material that goes into the building operation must have been worked over and fabricated into a finished product before it can be wrought into the structure and finish of a building. To make these products, to bring them to the building site and to form them into the structure and finish requires a vast amount of labor, and that labor is skilled labor, almost entirely. It is evident then that labor and the producers of the materials of construction are two fundamental elements of the construction industry.

The constructors who bring together the materials of construction and the equipment to erect them into a building and who bring together the labor to form and fit and fasten those materials are a third fundamental element of the construction industry. Those who plan and design the building are a fourth essential element, and the banker who supplies the money for the building and its construction is the fifth element. The owner is the final element, and the one on which the others depend.

There are then six fundamental elements in every building operation. The owner, the banker, the designer, the producer, the constructor, and labor must each and all function in order that a building shall be produced, and are the elements that must be considered in every discussion relating to the construction industry. It is true that there are many other activities which relate to the industry, but they have been grafted on to or have grown out of these six fundamental elements, for better or for worse. What is important is that every discussion of the industry must comprehend and include all of the six essential activities, not as the efforts of individuals and not as the efforts of individual groups, but always as joint and collective efforts. The activities of each group must function cooperatively with the activities of every other group and synchronize therewith in order to produce a building. If there is a duplication of efforts or an overlap of activities, or if one group undertakes activities not within its understanding and sphere, or if there is a lack of collaboration
between the groups and one group fails to recognize its dependence on the other groups and remembers not that the industry is the important thing, then waste and confusion result, the public suffers and loses confidence, and the industry is harmed.

It is the function of the owner, one of the six fundamental elements of the building operation, to pay money out to all the five other elements. Four, if not five, of those other elements are dependent on that one unit for their livelihood and their existence. If we think of what these four elements take from that one unit, and of all the other activities that take livelihood from the same source, then we realize how insatiable are the calls on the resources of that one unit, and how important it is to the five basic dependent groups that those resources shall not be dissipated or wasted. I submit that there is no problem before the building industry today which is more fundamental and important than the regulation, protection, and conservation of those resources.

It must be the duty and the immediate responsibility of your group and our group and of the four other elements of the industry to recognize and maintain the distinctive functions of the fundamental elements in the industry; to cut down the surfeit of overhead that obtains in the industry; to eliminate costly and wasteful methods from the industry; to adjust the number of working days or the working hours to the conditions that must soon obtain in the industry; to build up competency, proficiency and efficiency of the members of the groups, and to ensure the integrity of the building operation. To that end every one of the elements should examine not only its own aims and motives and activities, but their collaborating relations to ascertain whether their combined endeavors are leading the industry. The most cursory of such examinations should convince any of these elements that the conservation of those resources whereof the groups derive their sustenance has not been a prime consideration up to the present time. It would seem the most simple economics that none of the five groups should attempt or be permitted to take undue tribute from the common source, but that all thereof should collaborate to conserve those essential resources and to regulate their flow into the industry.

Granting these basic elements and their combined responsibilities to the industry, it is not difficult to define and to differentiate the functions and responsibilities of each group.

The architect under this scheme of things has one function to perform in the industry and only one. That function is to practice architecture. It takes only three words to define that function and beyond the field enclosed within those three words the profession should not go. The function of each of the other four groups that derive their livelihood from the owner can be as simply stated. The banker's function is to supply money; the producer's to supply materials; labor's to supply the hands; and the builder's to construct the building. This is the construction industry stated in its simplest terms, and I think it is fundamental that each of those groups shall return to and perform only the basic activities that are so simply stated, and shall eliminate therefrom all that is unnecessary and extraneous, before the construction industry can hope to function efficiently and without waste.

The members of my profession have always practiced architecture, but the architect, historically, has not always been a professional man. Just what constitutes a profession today, as distinguished from a business, is not clearly defined. At one time it may have denoted that the person practicing a profession had undertaken and passed through long years of study, preparation and apprenticeship, but today anyone who can wield the clippers and the shears deposes that he has reached a professional status. I think it is important that the architects should practice as a profession, and that the professional idea should be encouraged in the building industry. The professional man has a little different slant towards industry and business than has the business man. The professional man may not have more integrity and he may not be so efficient as the business man, but generally he is not quite so ruthless. His training and education and all the traditions of his profession inculcate in him a background of altruism and idealism that he should not lose and that should make him want to see a job through and well-done according to his light and his ability rather than to cut his performance to fit the compensation that he is to receive for it. Generally, the architect is not aggressive, because the nature of his responsibilities leads to other attributes. But I think he has a very real, if intangible something to give to the industry. I think it important that he inject into that business something of the professional attitude of mind. In doing so he will unconsciously absorb more of business into his profession. The American Institute of Architects has formed an affiliation with the Producers' Council, just to bring this about. The Producers' Council is a group of nearly one hundred of the producers of our principal building materials, organized nearly ten years ago by a few architects and producers who felt the lack of complete understanding between their groups and who had a vision of bringing about the things I have
set out. The direct collaboration has brought only good to both organizations. The professional viewpoint is surely permeating the members of the Council and I am certain that they will bear witness that their business has not suffered thereby. They are looking at industry in just a bit different way, and just as surely our organization has been absorbing from them the finest ideals of business. Some of us think that this sort of contact with the other elements of the construction industry would have very far-reaching results in solving the fundamental problem I have submitted to you.

Right here I want to leave with you the thought that this Council of Producers meets annually in convention, and simultaneously with the convention of The American Institute of Architects, and at the same place. We mingle freely in our meetings, and our discussions. The conventions of the architects without the producers and the producers meeting without the architects could never have reached the mutual understandings we now have. I seriously commend this idea to your consideration.

It does not seem good that two of the most important collaborative groups in the industry should discuss the problems of that industry by themselves.

To plan and design buildings is a prime function of the practice of architecture, and yet that may not be a greater responsibility for the architects than to bring the professional viewpoint into business, and to be the agency to bring the fundamental problems of the industry to the other groups and insist on their collaborative solution. But let us consider their responsibilities as planners and designers.

Traditionally it is the function and the responsibility of the architect to grasp and interpret the wants of the owner and to translate the building that his imagination builds for that owner into words and blue prints, so that all the groups of the industry can visualize exactly that dream, and in their turn can translate it into terms of money and materials and labor and therewith build for the owner the useful and beautiful building that the architect has dreamed. The plans of the architect are the key to the building operation, and the architect must always guide and synchronize the efforts of the other groups, if his building is to grow and function and be placed in the surroundings as he dreamed.

The owner must always depend upon the planner of his building, and the planner can bring about the results the owner expects only if he controls the materials that are to be used to form the building and their use and incorporation in that building. It seems important that this function and responsibility of the architects should not be lost sight of, but rather that it should be jealously encouraged and insisted upon by all the other elements of the industry. The architect functioning as the planning and the supervising element of the building operation is traditionally sound practice, and fundamentally it is a sound allocation of responsibility.

To plan and design a building safely is not a monopoly of our profession or of the practice of architecture. Any person who understands the stresses and strains that are developed in and by a building and who knows the strength of materials and their characteristics, and who has had the engineering knowledge to calculate those stresses and strains, and to use and interrelate the materials in the building so as to utilize their strength and make the building and its construction safe, is certainly qualified to design the building. But to design a building that will be structurally safe only is not practicing architecture, though it is an essential of that practice. The practitioner of architecture must always assume the full responsibility for making his building safe and if he has not the engineering qualifications himself to design it so, then he must employ those who have the knowledge.

The practice of architecture requires that the architect shall do much more than to arrange the structural elements of the building so that they result in a stable structure. He must arrange those necessary structural elements so that they shall have orderliness, a pleasing outline, proportion, and distinction.

By these means the architect injects beauty into the structure, and beauty in a building does not impair its usefulness or add to its cost. Beauty in the building itself and beauty in its surroundings has a direct commercial value. Mr. Albert Kahn, an architect of world-wide knowledge, said on this point in Cleveland last month:

"The importance of building handsomely is greater in this country today than ever because of the dire need for beauty in most of our cities' structures. What could be sadder than the aspect of many of our streets and boulevards? No system, no relation of one building to another, a scandalous lack of respect for orderly grouping and consideration for one another. It falls within the domain of architecture to correct this evil so common in our country. Abroad, there is greater regulation, therefore a better order. Beauty is as important a factor in the field of architecture as ever and he who does not recognize his obligations to the community, he who fails to discharge his duty in this respect, is unworthy of the title of architect."
This addition of orderliness to plan and proportion and distinction to structure is the distinctive contribution of the architects to a building problem, and this contribution distinguishes the practice of architecture. This sharp distinction between the practice of architecture by architects and the designing of buildings by those without the architectural training and background should be kept very clearly in mind. It has been said that architecture begins where structure leaves off, but that is not quite so, for architecture is based on structural forms and uses and arranges them in pleasing form and proportion. If by their practice of architecture, the architects do not invest the buildings with charm and if they neglect to consider them with reference to their surroundings and their placement on property, then they have been unjust to the owners and to their communities.

The practice of architecture carries other grave responsibilities, and the responsibilities increase as buildings grow more complicated in their details and appointments. To meet these increased obligations, the architects are being forced to abandon their cherished hopes to practice architecture as artists and to make architecture a pure art. If the architects are to perform the duties imposed on them by the construction industry and to meet efficiently and promptly the obligations that are accruing to the practice of architecture, then they must use business procedure in their profession. It is the architect’s duty and responsibility to give accurate and responsible estimates of cost; to eliminate visionary and idealistic planning; to effect economies in construction and designing, so that materials will not be wasted and so that the erection of the buildings will be speeded; to prepare accurate and complete specifications and other documents, and eliminate therefrom the ambiguity and looseness that invite trouble and extras; to prepare their drawings and to make their decisions and to issue their certificates and notices promptly, so that costly and inexcusable delays will be avoided; to forward the laws regulating the construction and use of buildings; to assume without equivocation the responsibility for errors in the documents which they prepare, and to give the fullest cooperation, assistance and consideration to those who are operating under those documents. These are all grave responsibilities which must be met by the architects.

But there are still other responsibilities that are inherent in the practice of architecture. The architects should be consulting experts in regard to building laws and restrictions and real estate values, and in regard to the obsolescence and depreciation of buildings and their equipment; and in regard to the cost of operating buildings devoted to commercial and industrial uses and the income that may be derived therefrom. They should know and understand thoroughly the methods of financing buildings, and should be advisers in that regard, and particularly it is their responsibility to advise regarding the useful purpose of proposed construction, in order that the flow of the owner’s resources shall be protected and conserved, and that investments in unnecessary, untimely and wasteful buildings shall be avoided. This latter responsibility is a serious obligation that should be foremost in the minds of every element of the industry, and concerted pressure should be exercised by them continuously, in order to regulate the flow of money into the construction industry, and to make impossible the vast inflations that occur periodically in the construction of buildings. The sooner the industry recognizes that its stability and earning power is greater with an even flow of money into that industry, the quicker will the pressure of the groups be exerted to prevent uneconomic building. This is a major program that is commended to your earnest attention.

I think that Mr. Kahn in the address I have referred to summarized the architects’ duties very clearly. He said it was their responsibility—

“To plan carefully so as to save waste and with a view to the future to make possible expansion when necessary, to construct economically without resorting to cheap materials which in the end prove costly, to encourage the development of new materials and make use of such after careful investigation, to design logically so as to gain maximum aesthetic results, to serve the owner’s interests to the best of one’s ability and in a thoroughly business-like manner, to see to it that he obtains that which he is entitled to, to treat both owner and contractor fairly, and to have in mind at all times the aesthetic and practical welfare of the community.”

All these things I have set out seem to suggest the major responsibilities of the architectural profession to the construction industry. If I have set those responsibilities clearly before you, I hope you will get therefrom that our profession admits those responsibilities and assumes the obligations that are entailed. It intends to do its full duty to ever increase the competency and efficiency of its members and to make them fully qualified to maintain their rightful position and undertake their full responsibilities as a group in the construction industry. But when that is said and done, we must remember, and you as a group must remember, that severally we are but parts of one great unit of human endeavor, and that our thoughts and activities and our actions must be as joint partners in an undertaking and must be of the industry as a whole. This is the great responsibility.
The San Antonio Convention

As IT SEEMS TO THE PRESIDENT

The architects of the United States have had plenty of spare time this past year to think up criticisms of the present practice of the profession, of the public's attitude toward the profession, of the Government's attitude towards the architect, of the architect's attitude toward his fellow architects, and of the Institute's failure to correct all the faults of these attitudes. Consequently there are enough subjects crying for discussion at our next Convention—April 14, 15, and 16—to fill up four San Antonio programs. There is one topic to which we must give ample time, one hardly considered at the Thirty-sixth Convention—Public Works. We must consider what has been done this year to meet the emergency situation regarding Public Works. Not only the tendency to bureaucratic architecture, but very serious still, we must get the considered opinion of the delegates on what should be the future policy of the Institute toward the question of the employment of architects in private practice for public buildings. The Institute's Committee on Public Works will report through its Chairman, Mr. Arthur W. Rice of Boston. The Convention will be asked to consider not only the tendency towards what some believe to be bureaucratic architecture as in the office of the Supervising Architect of the Treasury, but very extensive developments in the same direction in states and cities.

The subject of uniform registration laws has suddenly taken on a new importance this year because of the effort of a special committee (under the chairmanship of past-President D. Everett Waid) to reach an agreement with a committee of distinguished engineers on what should be the scope of each profession as defined in registration or licensing acts. Serious differences of opinion have developed between certain engineers and the conclusions reached by their engineer representatives in conference with the architects; and in direct contrast some architects have found fault with what their architect representatives have concluded in a preliminary way with the engineers. The Convention will afford an opportunity for a thorough airing of this controversy.

For the evening devoted to the work of the Education Committee the topic is still unsettled; but it has been suggested that this most active of our groups shall carry over last year's discussion of "Contemporary Architecture" into the field of education: What direction should be given to the courses of study in a school of architecture which wants to train men to meet the new problems of design which are evoked by the new materials, the new social conditions and the freer spirit in art expression? Whether or not this is the subject to be discussed the Committee promises to arrange for an interesting evening. It is hoped that Mr. Charles Butler or Mr. Louis LaBeaume, or both, will preside at this session.

Another unexpected development of the year will probably find itself echoed in the Convention program. It is reported that the Real Estate Boards as represented by their National Association (or at any rate the "developers" in this Association) have said that the era of sub-division of plots and "lot" sales is over, perhaps for good. People seeking a home want to buy the finished product, or at least one in a settled community. These real estate men think that they will have to develop such communities as a whole—they say they will need the architects—they wonder if the architects are ready to cooperate. This opens up a broad subject. Do the real estate men understand what great progress has been made in land sub-division—street design, as against individual house design? Regional planning? Do most of the architects understand it? These subjects will be discussed by a group of especially qualified men from the two fields involved. The chairman of this meeting, Mr. William Stanley Parker, will also outline his work as a member of the planning group of President Hoover's Commission on Housing.

The West Texas Chapter has expressed the wish that this Convention be made "as practical as possible so as to furnish the visiting architects information that will be of value in everyday practice to * * * the smallest architects who constitute probably 85 per cent of the membership." For this reason I am suggesting to the Board that a session be devoted to "The Architect at Work" or "The Growing Scope of the Architects' Function." What are architects doing in different parts of the country to extend the scope of their work; to work out the economics of the projects presented to them, and to initiate building projects of their own volition? Do they come into competition with other architects on such schemes? What are they doing to place themselves in the building process in the position of the doctor who writes the prescription, rather than that of the drug clerk who merely fills a prescription written by someone else? What does the architect charge for this service when the projects are important? We hope this session will develop into a symposium led by forward-looking men in the smaller communities as well as the big men in the larger ones, and that they will be ready to stand...
up for a question and answer hour afterwards—a round table discussion (in which all may participate) of right interrelations between architects as well as other practical problems.

The joint session of the Institute with the Producers' Council will be held on Monday, the 13th of April. It will probably devote itself in part to the consideration of two topics—"Cooperation in the Building Industry" and "What shall we do to place quality competition above price competition?" We have asked the new president of the Associated General Contractors, Mr. A P. Greensfelder of St. Louis to participate in this discussion, and to be the Institute's guest also at the other sessions of the Convention.

The National Association of Architectural Registration Boards, the Association of Collegiate Schools of Architecture, and the Small House Service Bureau of the U. S. will all hold meetings on the day preceding the opening of the Convention itself. And California suggests that also on that same Monday all state associations of architects meet in conference to discuss their work and their relations to the Institute.

Like all true youngsters I remember that the amiable beast who is the principal character in Kenneth Graham's "Reluctant Dragon" points out that a banquet always follows any contest and that speeches are a part of every banquet. He agrees to fight St. George (and even pretend he is defeated) because he thinks he will shine as an after-dinner speaker. We are to end the formal proceedings with a banquet and the San Antonio men feel certain that not only the St. Georges of our Convention, but some very sympathetic dragons of other professions will shine on this occasion.

What with the Board of Directors meetings for three days preceding and one following the Convention, plus the "Fiesta" in San Antonio (and then someone suggests that some of us might run down to Mexico City afterwards!) it looks to me like a very busy and interesting Convention. Whether you have the price or not, you had better come.

ROBERT D. KOHN.

The New Building Congress in Memphis

By M. H. Furbringer, A. I. A.

"WHY another organization?" This was the question we had to answer when steps were taken to form a Building Congress in Memphis and yet it required but little effort to force conviction that the reason for bringing another organization into being was the fact that the related interests composing the building industry could not function as separate units and accomplish anything of value to the industry as a whole; and believing it may be of interest to the members of the Institute to know how this undertaking was crowned with success in a relatively short space of time, the writer who had some part in directing the formation of this Congress takes this opportunity of relating the experience.

As the American Institute of Architects sanctions and encourages the welding together of the component parts of the Building Industry into a Congress, the Committee on Industrial Relations has directed its efforts largely to this task, and with the results obtained by Congresses in other places as a guide, the records of which were made available to us, a small group composed of members of the Tennessee Chapter and a committee from the Associated General Contractors made a survey of conditions in our territory and obtained the reaction of those qualified and willing to assist in the formation of an organization into which all the elements of the industry could be asked to join. After this had been done it was thought wise to call into conference at least one representative from every branch of the building industry, including the real estate, financial and supply groups and at a meeting called for this purpose about twenty of those invited responded, when a plan of organization was presented and much enthusiasm developed.

Perhaps I am going a little too fast in relating the developments up to this time and the impression may be gained that we encountered no difficulties as we progressed, but after all it is the results that count and as nothing worth while is ever accomplished without serious effort it would serve no purpose at this time in recalling the preliminary steps; how regular or monthly meetings of the various groups had to be attended by a member of the Committee in order to acquaint the membership of these organizations with the purpose of the Congress we were trying to form and to solicit their aid and cooperation, which, of course, was necessary if we expected their support, and though this took time it was essential and could not be avoided.
The success of any enterprise hinges on the willingness of a few to assume leadership and, of course, there was no exception in this case. Unless those who are trying to convert others are enthusiastic themselves, it usually follows that they make but little progress in anything they undertake or advocate. However, enthusiasm must be linked with facts and the reasons advanced must be sound and logically presented. Each opportunity must be obtained every legitimate means of publicity to acquaint others with the aims and objects to be attained by an organization little known or understood by the groups whose interests can be improved by joining together in a common cause. In this respect we were fortunate in having the active cooperation of our daily papers. Notices of meetings to be held and accounts of proceedings were given a prominent place in the columns of the newspapers and we supplied the reporters with news when anything transpired which would be of interest to those concerned. In this way we kept the issue alive until the time arrived for calling a general meeting, when the matter of forming a Congress was presented to those invited to be present.

Here again we were fortunate for we invited and secured the acceptance by the President of the Institute, Mr. Robert D. Kohn, to make the principal address. The mayor of our city in a few well chosen words welcomed Mr. Kohn and bid godspeed to the Congress. Short talks were made by representatives of each group. Messrs. Bayard Cairns and Walk Jones for the architects, J. A. Angus, President of the local chapter of the Associated General Contractors of America for the builders, E. O. Bailey, a prominent realtor, W. R. Herstein, President of the Memphis Chamber of Commerce, Jake Cohen, Editor of the Labor Review, and others spoke briefly, endorsing the formation of a Congress and pledging the support of their groups.

However, we counted on Mr. Kohn to "sell" the idea to those present and having come from New York for this purpose, it was gratifying to notice the close attention which he received from the audience, composed of representatives of every element of the building industry and the applause at the close of his address confirmed the wisdom of those who extended the invitation in their happy selection of the speaker. On the conclusion of Mr. Kohn's address the chairman announced he would entertain a motion to form a Building Congress as outlined in the constitution which had previously been prepared and was read to those assembled. A motion having been made and seconded, a short discussion followed in which the sentiment was overwhelmingly in favor of proceeding to form an organization and the resulting vote was unanimous. Another motion instructing the chairman to appoint a Committee on Membership was likewise carried, and the final vote was to arrange a meeting at an early date for the purpose of electing permanent officers and adopting a Constitution and By-Laws.

The attendance far exceeded our expectations and clearly indicated the interest which it is possible to arouse in an undertaking which has for its objective the establishing of better relations among the elements of an industry of such wide scope and potential possibilities as to affect the welfare of a large portion of the human race. The meeting was held at noon in the ball room of the Peabody Hotel, and at each plate was placed a card which the guests were requested to sign if they desired to join when the organization had been completed. On collecting these pledges we were gratified to learn that a large percentage of those present had signed in the affirmative, assuring the success of the undertaking in its very beginning.

No organization or society can long exist unless it performs a service or if it benefits only a few, nor can its existence be justified by selfish motives even though it is often contrary to human nature to be unselfish. Ideas have not been entirely discarded in these days of complex and interrelated economic and social conditions. Individual prosperity is the result of the prosperity of a whole industry, if it is to endure. The by-product of an industry sometimes exceeds in value the original product. If we succeed in accomplishing nothing else but the establishing of better human relations between all the elements of the building industry, we may rest on our laurels, confident that this by-product, as we may call it, justifies the efforts of those who are sincere in their assumption of leadership the purpose of which is to raise the building industry to a higher plane; and to give it a voice which can speak and be heard in the interest of the public and of the industry itself. This is the task to which we have dedicated ourselves in Memphis, and the untiring zeal and sincerity of purpose of a small group of men who had the vision to see and the willingness to do, has brought into being the Memphis Building Congress.
Selecting an Oil Burner.*

In selecting a burner it is well to obtain in advance all the information possible, keeping in mind experiences of other purchasers, and not to seek the "best" burner but rather one that is handled by a reliable organization which employs capable men to "service" their product. It is safe to conclude that such an organization will handle at least a reasonably good product.

One reads of companies who maintain that they have a burner which cures all heating ailments. They ship the burner together with printed instructions for installation. If such a device operates at all satisfactorily upon installation it is due to good fortune only. Previously to the selection of a burner, a study of the individual heating problem involved always should be made if the best results are to be attained. If the plant has heated the home satisfactorily with coal, the problem is simplified somewhat but not entirely solved.

**Items to be considered.** The following items especially should be considered in selecting an oil burner:

1. **Reliability of local representative, stability of business.** A first-grade burner improperly installed, or without opportunity of procuring service, will be unsatisfactory.

2. **Grade of fuel which burner is capable of burning.** Tests show that the burners which burn the relatively low grades of oil attain the greatest economy. The type of fuel available in the community is to be kept in mind in selecting a burner.

3. **Amount of noise.** A burner which is noisy is highly objectionable. The purchaser may insist on a noise clause in his contract so that in the event that the noise proves unbearable after a reasonable trial, the contractor shall remove the burner and relieve the purchaser of all obligations.

4. **Amount of cleaning or attention required.**

5. **Accessibility.** Some buyers insist upon a burner which may readily be removed and allow the replacement of grates in order to return to coal burning in the event that the oil burner should fail or if current becomes unavailable for some time. Some owners, especially in isolated places, suffer loss of electric power for days at a time during severe storms; or the roads may be impassable so that the service man may not be available for a considerable time. Such an owner should insist upon a burner which can be pulled out by inexperienced help in order that he may return temporarily to the use of coal.

6. **Availability of gas or electricity.** Some of the simpler burners of the vaporizing type require no auxiliary power, whereas some require gas. The atomizing type generally requires gas or electricity—sometimes both.

7. **Capacity.** It is, of course, essential that the oil burner selected shall be of such capacity as to provide for the maximum heating demand. The practice of manufacturers in supplying different heating capacities varies considerably. Some manufacture a series of burners which are of similar construction but of various sizes and oil-burning capacities. Others make two or three types of burners, each of which can be so adjusted as to fit a range of heating demands. Still others make but one burner and depend upon adjustments to accommodate the various heating requirements. The quantity of oil which must be burned can be determined approximately from the amount of radiation installed, or in the case of a warm-air installation the equivalent heat-unit may be used as a basis. It is sufficient to assume a maximum requirement of about one-fifth gallon of oil per hour for each 100 square feet of direct hot-water radiation, and about one-third gallon of oil per hour for each 100 square feet of direct steam radiation. These figures are approximate peak demands to be used only for determining the size of burner mechanism which should be supplied. It is not to be expected that the burner will operate at this rate during the entire season, therefore these figures can be used for computing the seasonal fuel consumption.

8. **Price.** The simple gravity-feed vaporizing type requires only meager equipment and has an apparent attraction because of the low initial cost, which for some types is less than $50. However, the gravity-feed burners require the higher-priced distillates and burn these with relatively low efficiency. Also, from the standpoint of convenience, the vaporizing types are not as satisfactory, in general, as the atomizing type.

Some vaporizing types of burners have the outward appearance of an atomizing type—that is, motor, full automatic control, etc. These types run up in cost, in some instances equalling the cost of the atomizing burners. Their combustion is considerably more efficient than that of the simplest type, but the fuel recommended for them is the higher priced distillate.

With the atomizing type the equipment is more elaborate, and the cost therefore runs higher than for the vaporizing type. Atomizing burners, installed, range in cost from about $400 to $1,000, including a fair-sized oil-storage tank.

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*Abstracted from circular 405 of the U. S. Department of Agriculture.*
Protection Against Termites.

Entomologists of the U. S. Department of Agriculture say that even timber set in concrete is not safe from damage by termites if the concrete is porous, for the termites, or white ants, may still find their way through crevices to the wood and riddle the timber.

Termites have been found guilty of riddling wooden foundations of buildings, the under surfaces of floors, furniture in general, stored paper, old shoes, and cotton fabrics and yarns. They often do considerable damage on hidden surfaces before it becomes evident.

Dr. T. E. Snyder, entomologist of the U. S. Department of Agriculture, author of a recently revised bulletin dealing with the termite problem, points out that termite damage can be prevented by proper construction of buildings, disconnecting wood from the ground, or replacing it with concrete or metal, and by chemical treatments of wood.

Copies of Farmers Bulletin 1472-F, Preventing Damage by Termites or White Ants, can be obtained free by writing to the U. S. Department of Agriculture, Washington, D. C.

With the Editors—From February Numbers

The American Architect.

In enlarging the original house built by his elder brother, Washington said: "Nothing but durable materials shall be used in this house"; to his good taste we are indebted for a living example of a house designed with refinement and restraint. Of the multitudes who have visited and who will visit this historic shrine there must be few who have not been impressed by its beauty or have failed to realize that Mt. Vernon was not only the country seat of the "father of our country" but that it is also the symbol of what a good house should be.

A good house takes its place gracefully in its environment. It fits its site. It meets the specific requirements of those who live in it. If it meets these needs well, it must of necessity express something of the personality and individuality of its owners. It is a house built of honest materials and honest workmanship. True to itself it typifies the spirit of a home-loving people.

The American City.

As a definite suggestion, we urge that in every industrial city the mayor or other outstanding local leader invite a representative group of business, financial and professional men to confer with him at an early date on the local housing problem; that this meeting be preceded by the assembling of definite facts, figures and photographs of slum districts and sub-normal housing conditions; and that emphasis be given to the challenging opportunities which now exist to furnish needed employment in the building trades and to solve the housing problem for that all too large industrial army whose homes are not fit habitations for human beings.

The Architectural Forum.

In the present situation, housing projects may be a more effective means of stimulating building and employing labor than government building programs. In the first place, such projects are not restricted by governmental and bureaucratic red tape, and can therefore be undertaken immediately and efficiently. In the second place, they are economically sound as conservative investments, as recent experiences show the demand for these apartments exceeds the supply. Many cities have more office buildings than they can effectively use at present, more hotels, plenty of theaters and churches, but what city has enough
modern low-cost housing? The large scale building of carefully-planned, low-rental housing fulfills real economic and social needs and is not therefore an artificial stimulus to aid unemployment. It needs promotion by capable architects and the cooperation of financing agencies such as savings banks and life insurance companies.

Architecture.

The Nation issues once more its "Honors Roll for 1930," listing the names of Americans who have, during the past year, performed some distinguished public service, who have made a contribution to art or to literature, or who have merely done something interesting. Under the heading of architecture are the following three names:

Buckminster Fuller, engineer, of New York, for his pioneering work in developing the potentialities of mass production, new materials, and new engineering principles for housing that is practical, cheap and of good design.

Henry Wright, of New York, for his attempt to cope with the congested living conditions of the American city.

Eliel Saarinen, now of Detroit, for the delightful character of the Cranbrook School near that city.

Pencil Points.

(From "Modernism is Still in the Making"—by Wells Bennett.)

The artist finds joy in a new creation and this pleasure is in itself a considerable reward. If, however, our painter, sculptor or architect offers to share his masterpiece with the public he is more than likely to be squelched by a general conservatism. The self-satisfied world is willing that this artistic genius should keep the good news to himself. Modern painting is just emerging from that experience: Sullivan, Wright and their school among the architects were overwhelmed by it. In fact by their very frankness in doing something new and naively enjoying the result the Chicaggoans were inviting discipline. And sure enough, the spanking was administered. The great body of still Victorian architects and art lovers were not amused. Sullivan never capitulated, Wright carried on, but the fun of the thing noticeably subsided. The painter and architect alike need public approval for the nourishment of both soul and body.

The second onslaught of modernism upon America came not from the middle west but from abroad, quite a different matter you may be sure. New York, always more susceptible toward the east, took the full force of the impact and, weakened at home by the flank attack of the Zoning Law, succumbed. That is, she let down the bars to a very noticeable extent. The sturdy remnant of the Chicago pioneers came out of their cyclone cellars, found that the sun was shining, and with loud cries of "I told you so," joined their eastern brethren in the paean to modernism. Happy days were here again. Men were no longer inhibited by the egg-and-dart: in its place was the significant lightning and potato-peeling motif. The flying buttress no longer chained one's fancy: there was the set-back waiting to be developed. From the banal column and lintel, designers had escaped to the wild, free beauty of the cantilever. But even so not all the architects and clients wanted to let themselves go on this modern junket, and the conservatives, though less numerous, have been just as stubborn as ever. Thus we find ourselves where we are today, building lots of modern, and also lots of classic, with here and there bits of Gothic and Romanesque. . . .
emergent pattern and the overbearing weakness of technology's discipline.
I have never been as shaken and troubled as I am by the events of the past week. I am not sure what to say. Men and women from all walks of life, from every corner of the country, have come together to form a new movement. A movement that is not just about change, but about transformation. A movement that is not just about fighting for our rights, but about building a better world.

We are not just resistant, we are not just fighting. We are creating. We are inventing. We are dreaming. We are building. We are creating a future that is not just possible, but inevitable. A future where justice prevails, where equality reigns, where love is the foundation of our society.

We are not just fighting the forces of evil. We are fighting for the forces of good. We are fighting for the forces of love. We are fighting for the forces of compassion. We are fighting for the forces of justice.

We are not just fighting for ourselves. We are fighting for our children. We are fighting for our grandchildren. We are fighting for all those who come after us. We are fighting for a world that is not just fair, but just. We are fighting for a world that is not just good, but great.

We are not just fighting for a world that is not just good, but great. We are fighting for a world that is not just great, but perfect. We are fighting for a world that is not just perfect, but infinite. We are fighting for a world that is not just infinite, but eternal.

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