

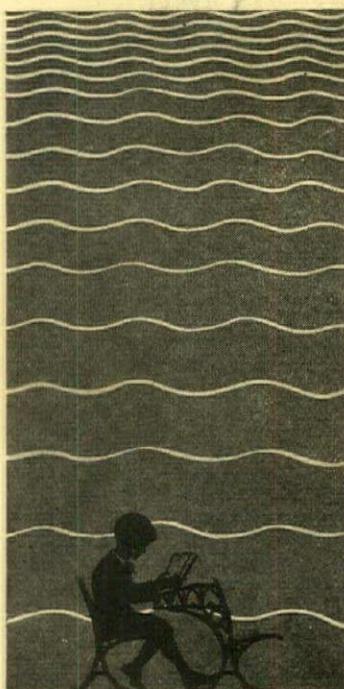


AMERICAN ARCHITECT

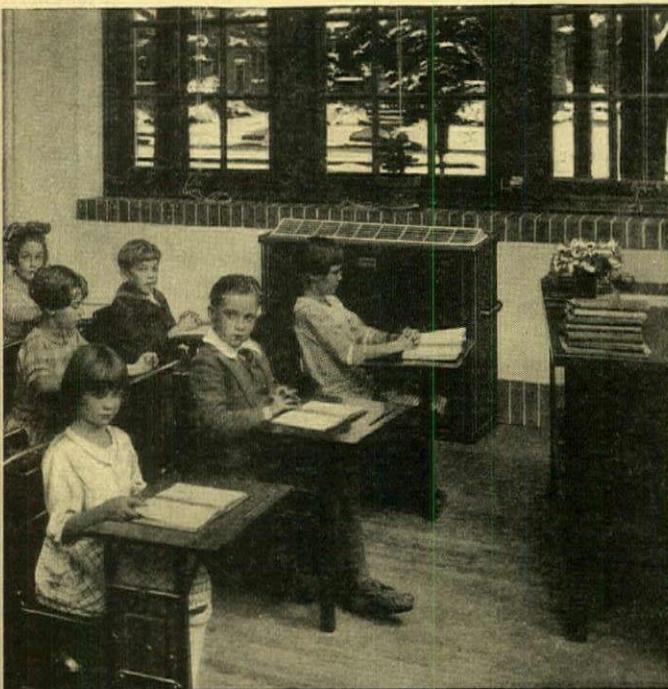
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February 1932

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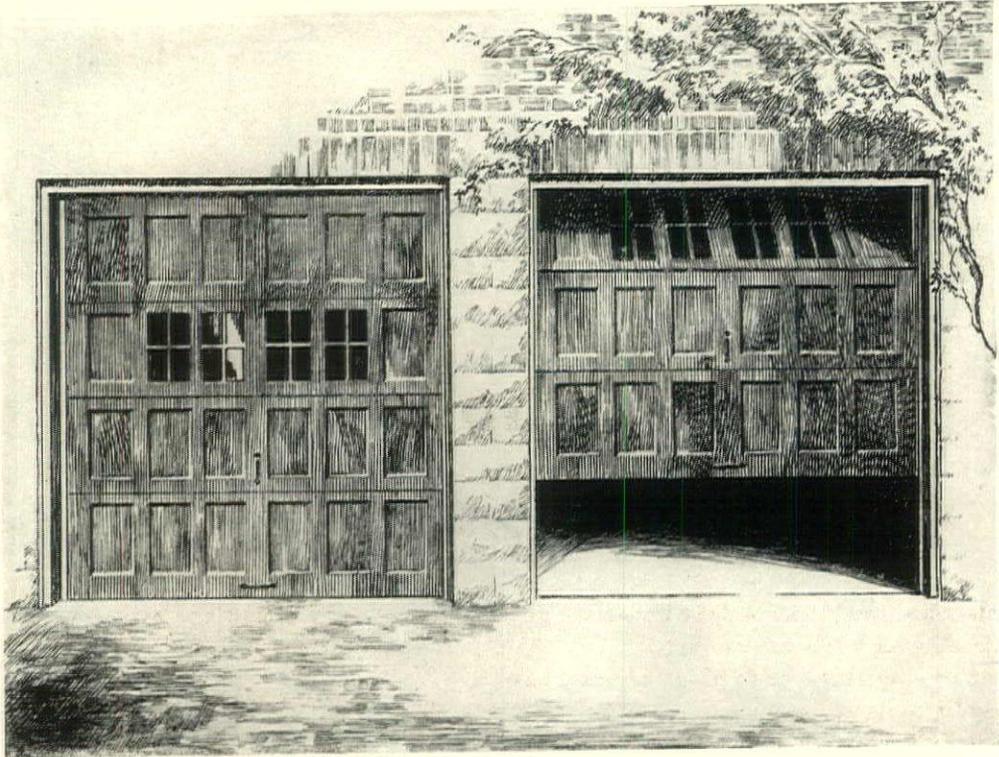
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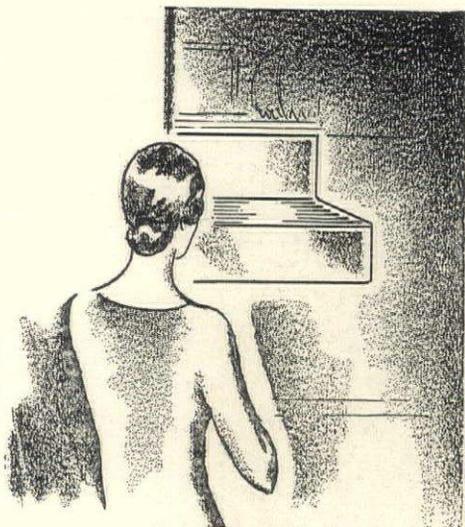
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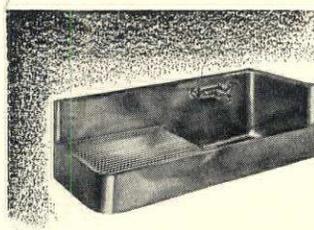
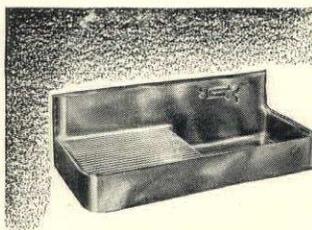
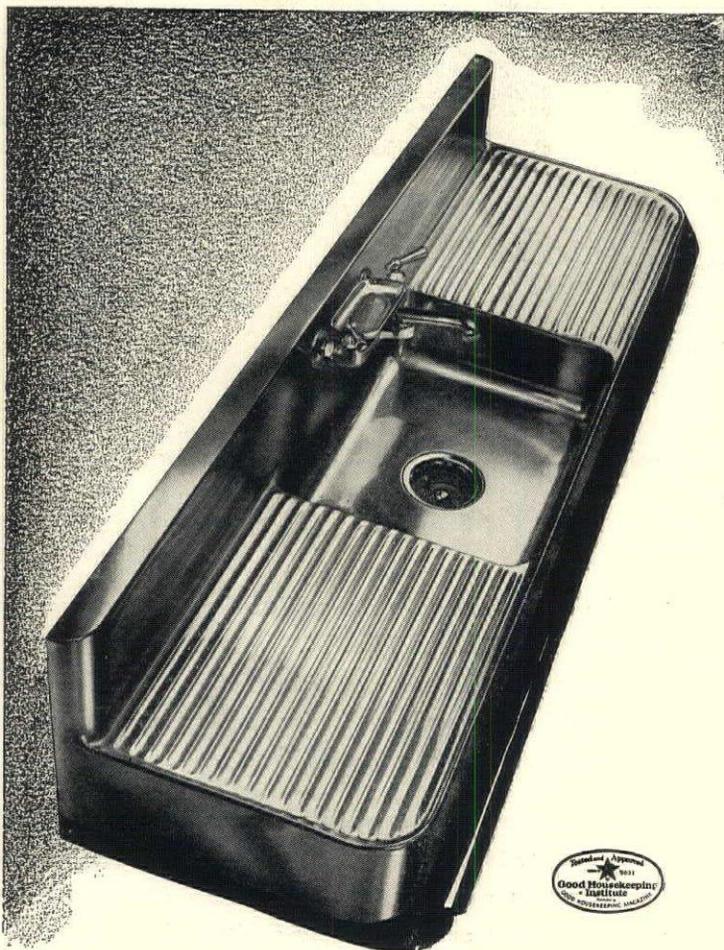
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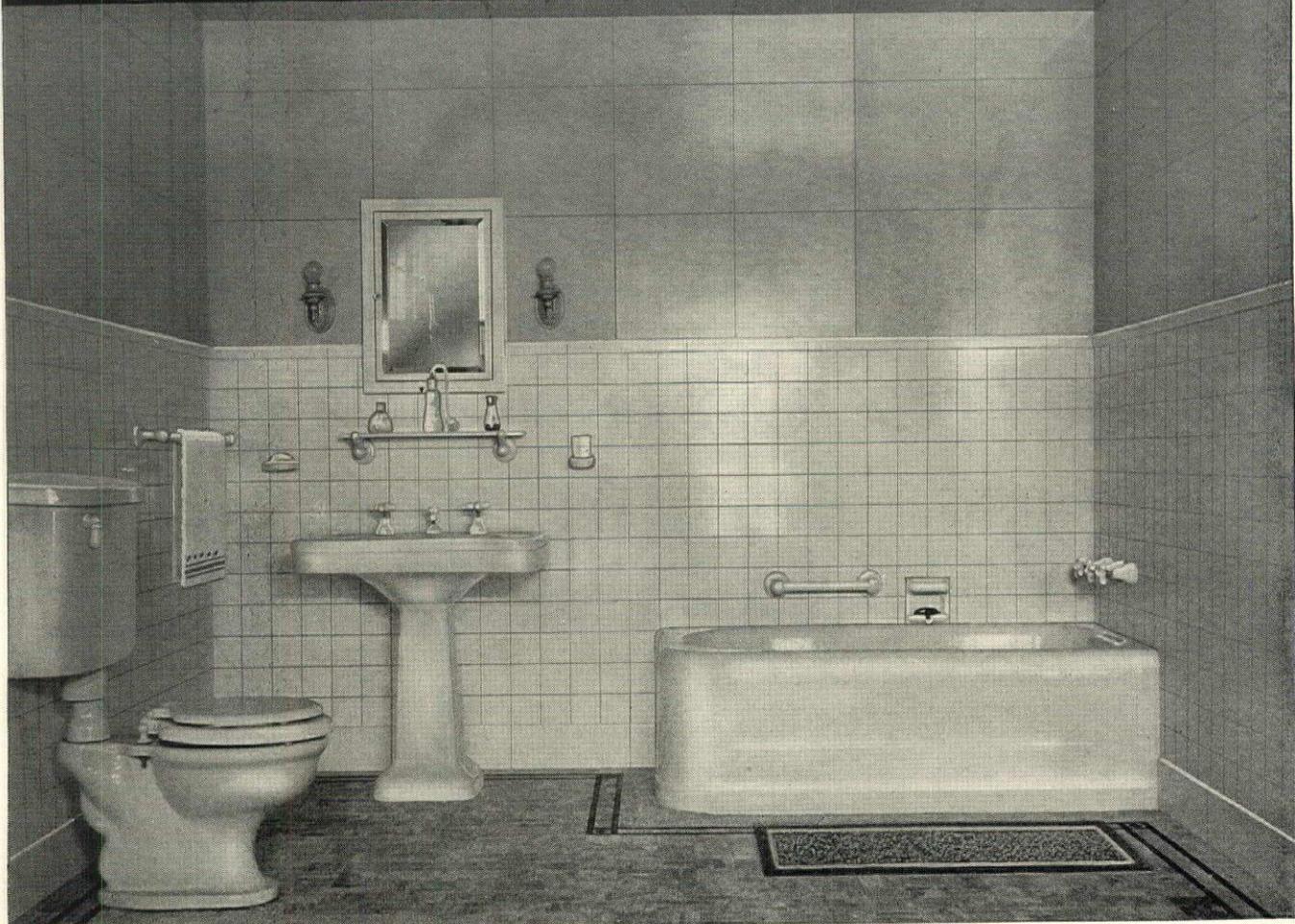


ABOVE—Double drain board Monel Metal kitchen sink. Made in nominal sizes of 72" x 21" and 60" x 21". **LEFT**—Single drain board Monel Metal kitchen sink. Available in both left- and right-hand drain board models. Made in nominal sizes of 50" x 21" and 41" x 21". **RIGHT**—Monel Metal corner kitchen sink. Corner splasher at bowl end, drain board either right- or left-hand. Made in nominal sizes of 51" x 21" and 42" x 21".

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FOR FEBRUARY 1932

WALTILE



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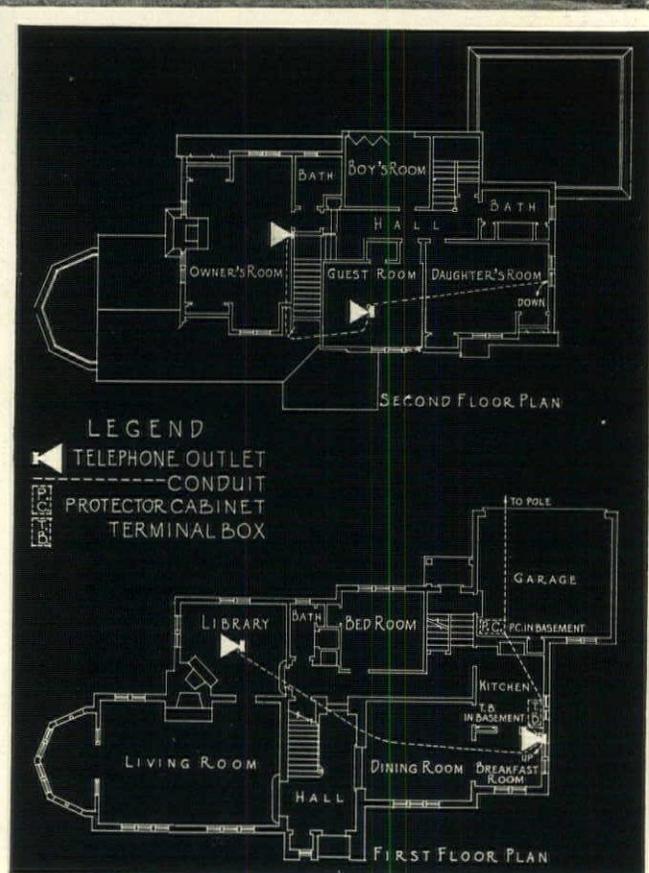


Telephone convenience is provided for in the residence of Mr. S. J. Simonson, Stanley Park, Yakima, Washington, by built-in conduit connecting five outlets, including one in the basement. E. G. THEMELI, Architect, Yakima.

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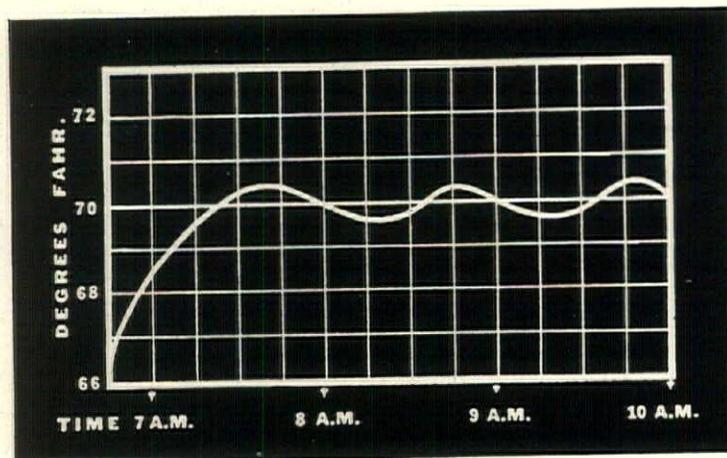


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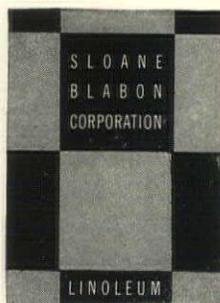
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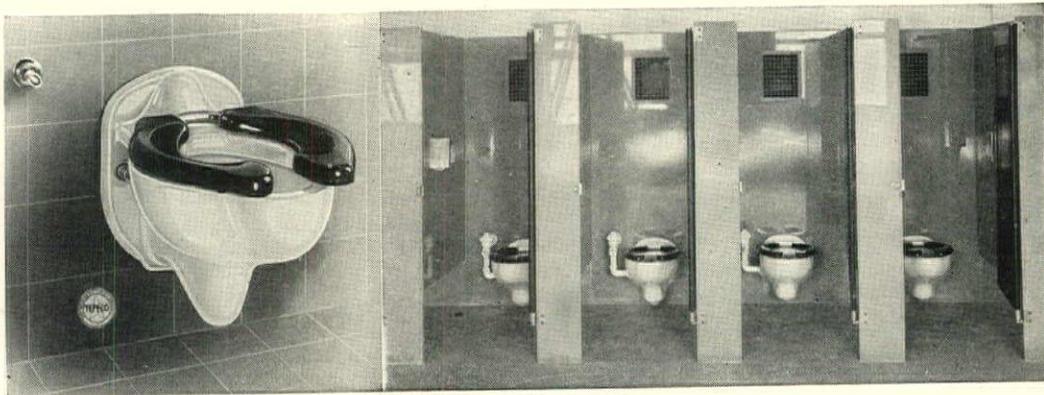
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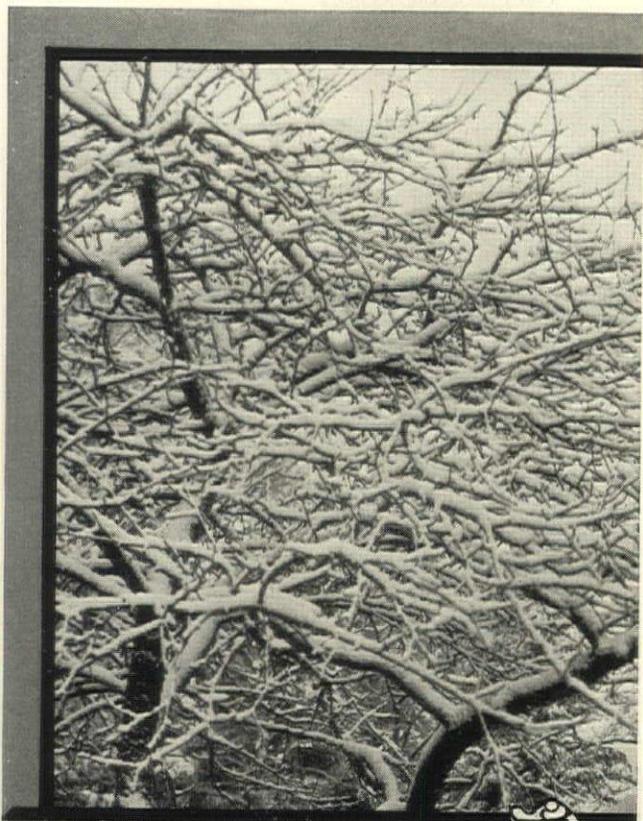


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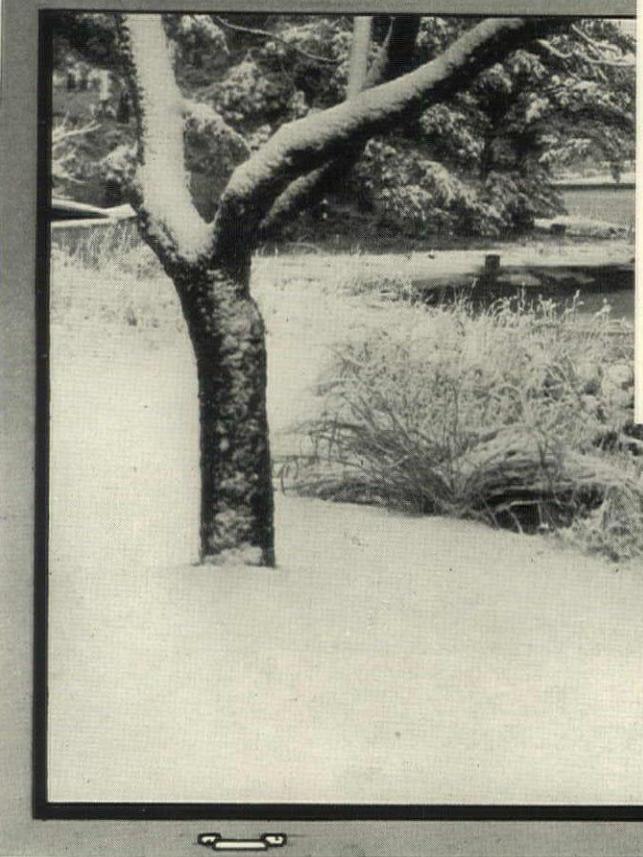
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Architects
Salubra used in all bedrooms and corridors.



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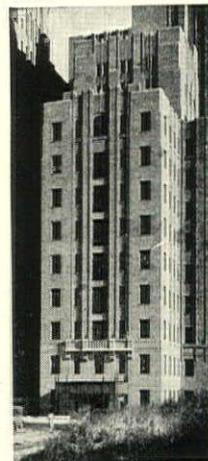
WILL WASH



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Willoughby St., Brooklyn
Voorhees, Gmelin & Walker
N. Y. C., Architects
Salubra used in corridor, business office, dining rooms, etc.



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Connecticut
Julius Gregory, New York
Architect



Apartment, 999 W. 12th St.
New York City
Emery Roth, N.Y.C., Architect
Salubra used in all corridors.

AMERICAN ARCHITECT

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FOUNDED 1876



This Month's Cover

AN OLD STREET IN BOURGES

COLORFUL indeed is the old city of Bourges, France, where the street scene reproduced on this month's cover was painted. The public gardens of the old town are delightful and the cathedral, with its stained glass, is often called one of the wonders of Europe.

The country around Bourges is very attractive, being rather flat but well wooded with little streams and canals lending additional charm to the snug country houses and prosperous farms.

Julius Delbos paints and instructs in New York, exhibiting at prominent galleries abroad as well as in the United States. He started to paint at the age of ten but had no instruction until he was twenty, when he began to study in various studios in France and sold his first picture.

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*

ERNEST EBERHARD, *Managing Editor* WALTER E. DEXTER, *Advertising Manager*
RAY W. SHERMAN, *Editorial Director* R. F. GARDNER, *Business Manager*

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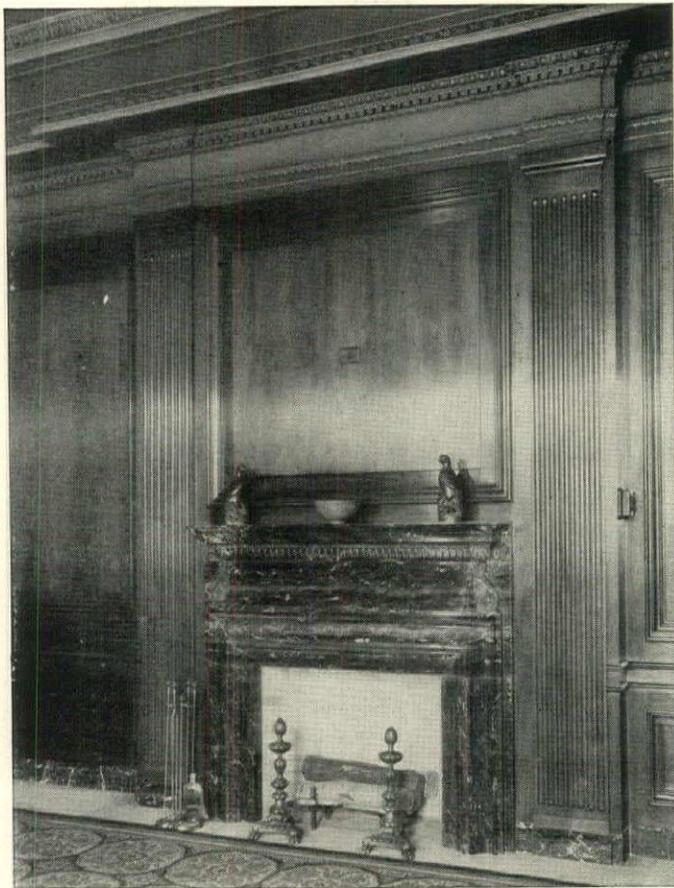
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BUSINESS—Selling ideas proved useful in getting jobs

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Fireplace detail—The Ohio Bell Telephone Building, Cleveland, Ohio, wired in Youngstown Buckeye Conduit by Hatzel & Buehler. Electrical Contractors—Architects Hubbel & Benes

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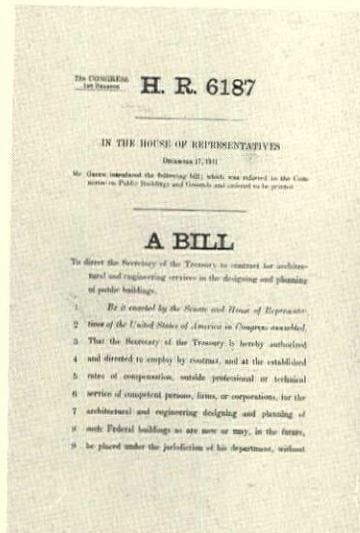
General Offices—YOUNGSTOWN, OHIO

YOUNGSTOWN

GALVANIZED SHEETS PROTECT * * * SAVE WITH STEEL

A Bill that MUST NOT FAIL

By Benjamin F. Betts, A.I.A.



FOR some fifty years, at opportune times, architects have fought to secure a change in the status and duties of the Office of the Supervising Architect of the Treasury. In every instance, AMERICAN ARCHITECT has stood squarely behind the architects of the United States and afforded them every facility at its command.

- In December, 1930, this magazine again actively opened up the question of engaging architects and engineers in private practice to plan and design federal buildings. This was done as a means of speeding up the government's public buildings emergency program and to secure a better recognition of local character and suitability in all government buildings wherever they may be built.
- On December 16, 1931, bill H. R. 6187, prepared by the Public Works Committee of the American Institute of Architects, was introduced in Congress by the Hon. Robert A. Green of Florida. This bill was published in full in the January, 1932, issue of AMERICAN ARCHITECT.

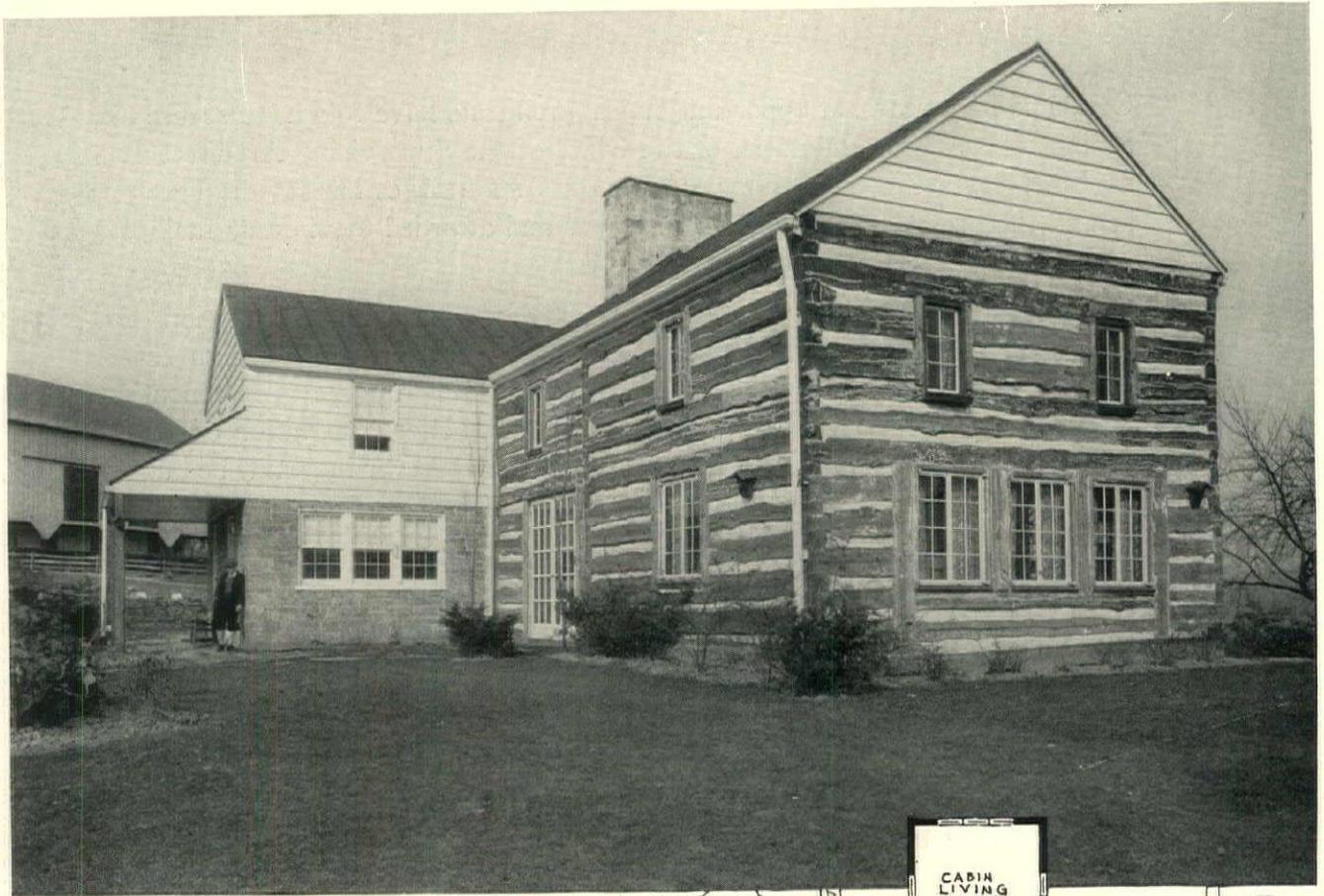
ARCHITECTS throughout the United States now have an opportunity to unite in a common cause that is of vital interest to every taxpayer. Every architect should contribute such personal effort as may be necessary to assure the passage of this bill.

- Write or telegraph your Congressman. Sign the petition published in AMERICAN ARCHITECT, issue of May, 1931. Get all interested persons to sign the petition. If you do not have a copy of the petition, copies will be furnished upon request.
- If *you* are asked for information that will help the cause and it is within your power to supply it, do so promptly. Don't put it off until tomorrow. This bill has been sponsored by architects. The men who have taken the lead should be given the support of every architect in the United States.
- Bill H. R. 6187 *must not fail*.

THIS » » »

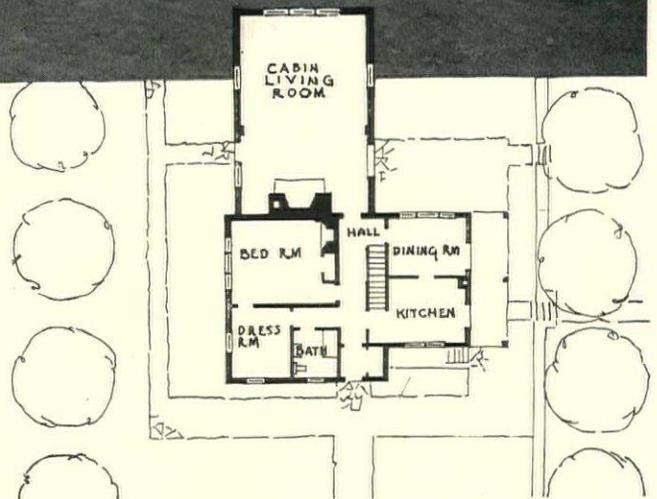


BECAME THIS » » »



AN OLD LOG CABIN on the farm of Grant McCargo, Dorseyville, Pa., formed the nucleus of a new house. The rebuilt cabin became a living room twenty by thirty feet and two stories high. The addition is in cinder concrete block and frame. On the second floor of the new part are two bed rooms, bath and dressing room

Frederick Bigger, A.I.A., and Harry Viehman, A.I.A., architects. The photographs are by Brady W. Stewart





THE STRONG HORIZONTALS of chinked logs retain the lines of the old pioneer log house, upper windows serving but to admit additional light into the interior of the two story living room, which is finished similar to the exterior

THE MODERN PART, below, offers a contrast to the hewn timbers which characterize the older portion. Yet the clapboards and cinder concrete blocks are by their very frankness an honest solution of the problem of combining old and new



» » » Should the A. I. A. THE ARCHITECTS' SMALL



"Why
should the A. I. A.
sponsor sale
of stock plans"
says

SEYMOUR WILLIAMS, A.I.A.

President—New Jersey Chapter, A.I.A.
Member 1928 Small House Committee of the A.I.A.

FROM the inception of the Architects' Small House Service Bureau, Inc., there has been a growing objection among members and chapters of the American Institute of Architects to the use of the Institute's name by the Bureau. It is felt that the Institute cannot ethically or morally continue its connection with this favored Bureau to the exclusion of all other professional agencies or permit this Bureau to continue its flagrant broadcasting of a control that gives great weight and dignity to the Bureau, in spite of the fact that this claimed control does not exist.

It is believed that the Institute, having fostered the growth of the Bureau to a point where it can obtain national publicity for itself and compete with the younger men of the profession on a price cutting fee basis, should long ago have admitted the error of any attempted control of or connection with any group or bureau as a separate entity within the national organization, and particularly with one that is in the "stock plan" business.

It is further felt that the Institute should require the Small House Service Bureau to discontinue in its literature the use of the phrase "controlled," or even "endorsed by the Institute," as it is not a true statement. The Institute has no control whatever over the Bureau. It is a discriminatory phrase, setting before the nation one special group to the exclusion of the individual practicing architect.

The Bureau sets up unfair competition which is not removed by its statement that all architects doing small house work, whether or not members of the Institute, may join the Bureau. If these architects exercise their

right of free will and remain outside the Bureau, so they can retain their personality and put a name instead of a number on their plans, the Bureau does not remove itself from competition with them but proceeds with high powered salesmanship to compete on a basis of fees so low as to place these particular architects *hors de combat*.
(Continued on page 82)

THE Architects' Small House Service Bureau has been a storm center ever since its foundation. The Bureau has again become the subject of attack by the Architects League of Northern New Jersey, which wrote a letter to all chapters of the American Institute of Architects. This letter was published in the December 1931 issue of *American Architect*. The two accompanying articles were prepared at the request of the editors of *American Architect* so that architects might be familiar with both sides of the story.

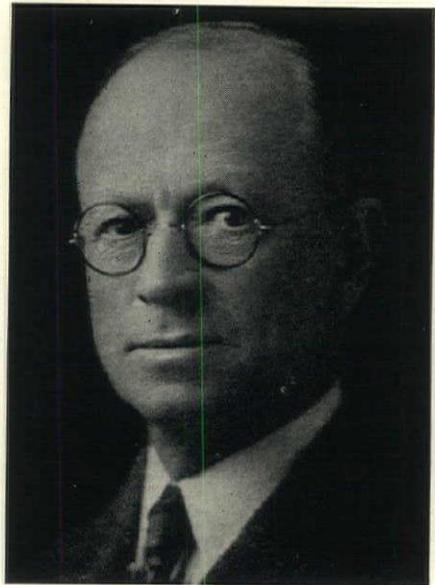
• To clarify the situation, *American Architect* desires articles on this subject. The articles may defend or attack the Bureau. They should be not more than 1,500 words long and be in the hands of the editors by March 1. Seventy-five dollars will be paid for each one published.

Continue to Sponsor HOUSE SERVICE BUREAU

"Results
justify affiliation
of bureau
with A. I. A."
says

ALBERT L. BROCKWAY, F.A.I.A.

Member Board of Directors,
American Institute of Architects



THE Architects' Small House Service Bureau was established eleven years ago by a group of prominent architects—members of the American Institute of Architects—who acted because the profession realized that the owner of the small home was at the mercy of the speculative builder, the vendor of stock plans based upon catalogs illustrating designs of mediocre character and in many instances ugly beyond words. The result of the action of this group was endorsement by the officers of the American Institute of Architects, which endorsement has been repeated at various times.

The stock plans referred to were actively sold to lumber and building material dealers and resulted in the exploitation, without mercy, of small home builders and purchasers who had no conception of the function of the professional architect or of the desirability of retaining such professional service and who, in addition, thought such service to be a luxury.

From the point of view of the American Institute of Architects the work undertaken was a contribution by the profession towards the welfare of communities made up largely of small homes for men of small means. It was undertaken deliberately as an educational program with the thought of contributing without material reward.

Results attained during eleven years amply justify the creation of the Architects' Small House Service Bureau. It has revolutionized the small house problem in the United States. It has enabled the builders of small homes to obtain the advice of leading members of the profession, which otherwise would not have been

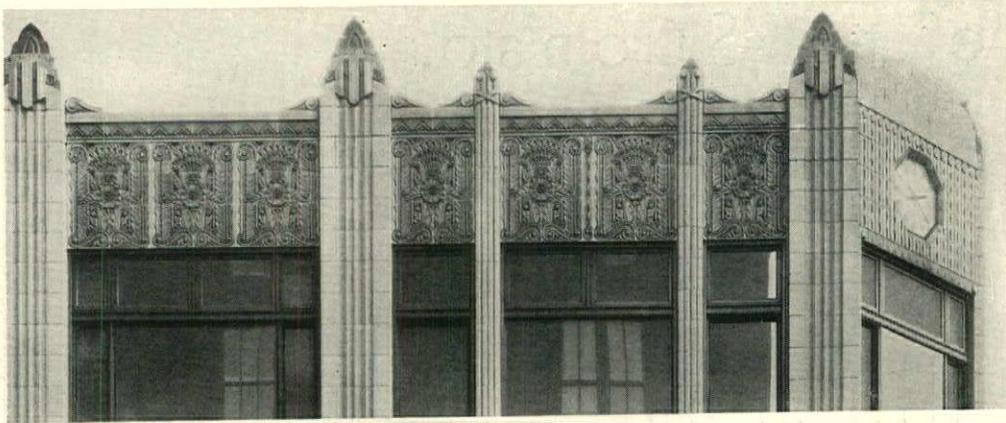
available. Through the work of the Bureau, today the actual cash value and increase in asset value of good design and good construction is realized as never before, thus adding to the material wealth and security of the small home owner. It has brought about tangible and important results in educating the public to the value of good design and as a result has greatly reduced the market for the catalog of horrible stock plans and has materially raised the level of quality in the planning, construction and exterior appearance of the small home.

Like all movements of this kind it cannot help arousing antagonism. Opposition to it brings before the public and also the profession at large, particularly the members of the Institute, the fine accomplishments resulting from the work of the Bureau. The crux of the arguments in opposition is that the Bureau is competing with the work of the individual architect in the field of domestic architecture and making it difficult for the architect to get work and earn his living. The case of the young architect just starting is also cited as being made more difficult because of this situation.

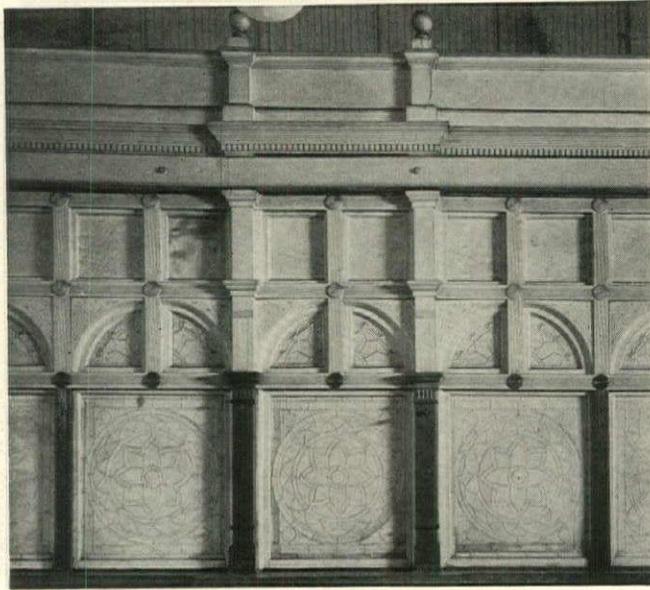
Such argument is unsound from an economic point of view. The citizen who buys something wants to get one hundred cents for a dollar, and that is the point of view from which this subject must be approached. The result is what interests the home builder more than how he accomplishes it.

For opponents of the Bureau to stress the question of competition admits weakness. Competition is the life of trade and competition has always existed in the architectural profession as in every other profession. The profession might well

(Continued on page 84)



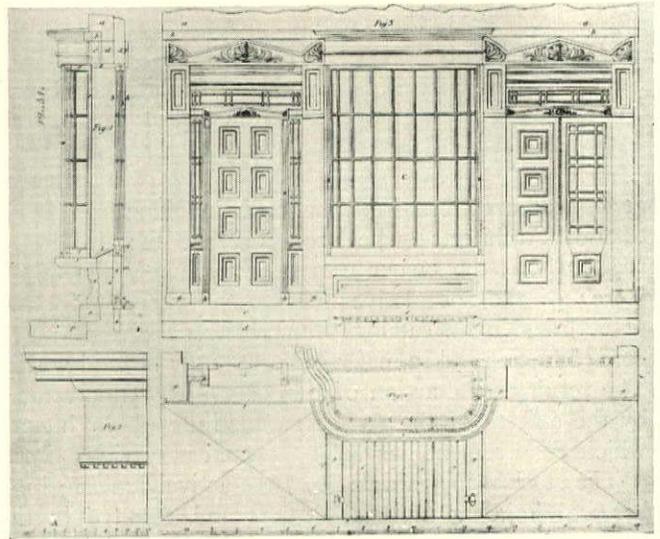
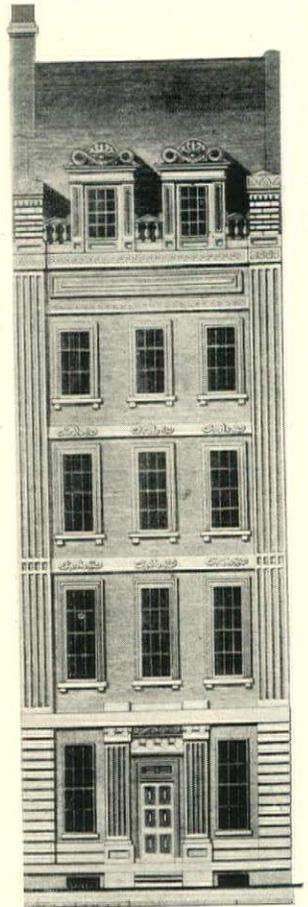
WURTZ



WURTZ

"POPULAR" MODERNISM and "popular" Victorianism. In both may be seen the same unthinking use of current architectural slang developed in the search for novelty

STRANGELY MODERN are these two plates—at right and below—from Lafever's "Architectural Instructor," 1829. Ornament in both is derived from Greek forms



IS
ORIGINALITY
Leading Us Into a

NEW VICTORIANISM?

By Talbot Faulkner Hamlin, A.I.A.

THE sudden eruption of new forms in architecture is not unprecedented. The beginning of the Baroque in Italy was such an occurrence, and ever since similar movements have from time to time appeared. During the nineteenth century there was a ferment of taste, which eventually developed into what we know now as Victorianism. An examination of its causes and results should throw light on the correspond-

ing twentieth century movement, popularly known as "modernism."

That name—Modernism—covers inadequately a great number of diverse styles and movements, individual and local, with differing aims. Behind them all lies one common striving—the search for originality, for new forms, a feeling that traditionalism is a bar to creative design. Behind most of them, as well, is the rationalization of this search into the theory called "expressionism": that is, the theory that (Continued on page 70)



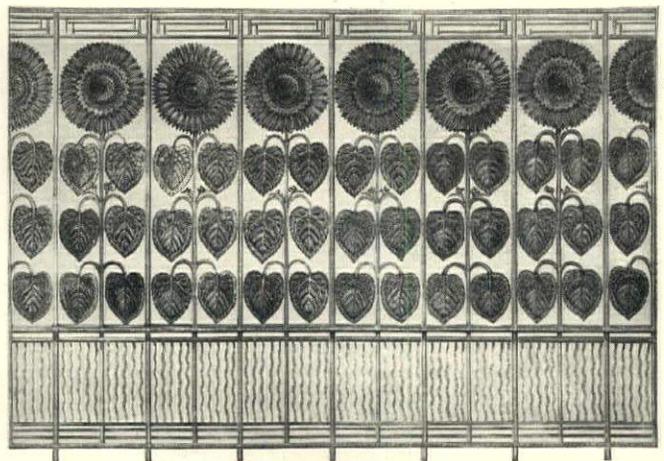
HEDRICH BLESSING



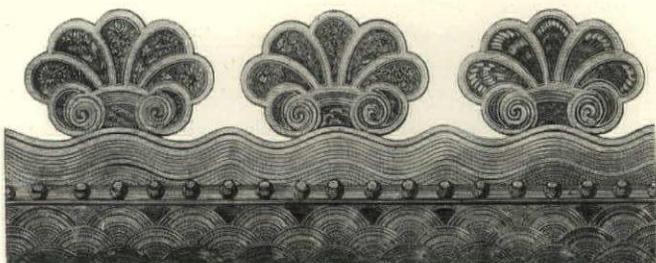
MODERN AGE

1876 AND CONTEMPORARY cabinets compared. Both cater to a "popular" style rather than logical creation

MODERN CREATIVE DESIGN where no mere fashion nor unthinking modernism fetters imagination. Modern materials and methods are used to devise a new and valid modern beauty. The A. O. Smith Research Building, Minneapolis, Minnesota. Holabird and Root, architects



FROM CENTENNIAL EXPOSITION, 1876. Ironwork with conventionalized naturalism and geometry combined. The vertical wavy lines and rectangular treatment at top resemble a great deal of popular "modernist" ornament



» » » The President's

BY BENJAMIN F. BETTS, A.I.A.

Editor of American Architect

IF the 3,500 people who attended the President's Conference on Home Building and Home Ownership in Washington, December 2-5, 1931, did no more than focus attention on home building and ownership, their time would have been well spent.

The conference can become a great influence in improving American architecture and living conditions, with greater use of the nation's architectural talent if its findings are applied and the data secured are used.

Of immediate effect may be the realization of the President's plan for a mortgage discount bank to finance building and the appointment of a committee to carry on the work of the Conference on Home Building and Ownership so ably begun.

Of importance in future years will be the effect of the various recommendations made by the different committees—providing the recommendations are given serious consideration and put into operation when deemed beneficial.

As a result of the conference invaluable data on housing have been brought together in one place and made available to all interested parties. The reports represent the thought of some of the best minds and intelligence in the field of housing and allied interests in the United States. For the first time closely allied groups in the housing field have met on common ground for an exchange of opinions, ideas, and information. Probably for the first time in history laymen and technicians have had an opportunity to discuss a problem of mutual concern. The conference showed us what we know about housing; what we need to know; and how separate activities must be brought into harmonious relationship if good housing is to become a reality.

President Hoover addressed the opening meeting of the conference on the evening of December second, setting forth the purpose and importance to the nation of the work of the thirty-one committees which had been working for more than a year on their reports. The following three days were devoted to numerous individual committee meetings at which tentative reports were presented for discussion.

Financing entered, in some form, in almost every report and is a question of paramount importance. According to the Finance Committee's report sound financing should be based upon an equity of about twenty-five per cent of the value of the property. This report contains a warning, under the heading *Proposals for Stimulating Building*, relative to the danger of overproduction in housing at the present time. This reads as follows:

"... These (suggestions to stimulate building) would be helpful to their proponents and create a slight wave of benefit to unemployed artisans, but would only result

in an increase of residences for sale in a market already demonstrably over-supplied, and have an adverse effect upon the already deflated values of existing homes.

"There are thousands of homes . . . either held by a tenuous thread by their owners, or have become involuntarily owned by mortgagees who are striving to sell them . . . for acquisition cost or less. . . . There are a surprising number of instances where occupants of residences are paying nominal rents to avoid vacancies. . . . There are many cases where rentals have been reduced to meet downward income conditions, with result that little if any revenue remains after paying taxes, insurance, and repairs. To the foregoing must be added the tens of thousands of vacant residences which are for rent at greatly reduced figures. Generally speaking, these groups must be stabilized before health can be restored to the home building industry, and there also must be taken into serious consideration the tendency for the occupancy of apartments."

A significant statement is made in the report of the Committee on Design relative to the importance of architects taking as much active interest in the design of small houses as they do in larger homes, public or commercial buildings.

"... If builders are to secure competent design and advice on the preparation of designs for individual homes and for grouping them effectively, certainly architects should organize their services so as to provide standardized units of service to be economically available to large and small operators. The architect should master the intricacies of costs and the statistical knowledge necessary to an understanding of the economic foundation of this work. Good stock plans are an essential, and architects might well give their attention to developing stock designs suitable for the local market."

Shop Fabricated Houses

THE report of the Committee on Construction made no predication as to the future of the fabricated house, but did take cognizance of the fact that completely shop fabricated houses are being attempted. Whether the fabrication will be for the complete house with units of standard rooms or for standard units of a type capable of ready assembly at the job is undecided. It has been established, however, that through design in advance of large scale production and the organization of the work according to good factory methods savings can be produced in addition to those due to materials. While such savings are possible under present methods, it is believed that new developments will permit still greater economies in this direction.

Conference on Housing

The fabricated house was discussed also in the reports of the Committee on Technological Development and the Committee on Farm and Village Housing. Both reports view the practical solution of the small house problem, as respects cost, as one involving new methods of shop fabrication. The possibilities and limitations of shop fabrication and resulting economies that can be thus effected in both design and construction were fully covered.

The Committee on Types of Dwellings arrived at the following conclusions: The basic evil in bad housing is land overcrowding. The basic reason for land overcrowding has been speculation in land prices. Pressure on the land has, however, been reduced due to decreased rate of population growth, decentralization of places of employment, good roads, and zoning and city planning. In many cities there is an indication that rows of two-family houses and one-family houses are losing favor.

According to the report of the Committee on Kitchens and Other Work Centers there is a need for research that will result in perfecting wall and floor coverings and finishes that are smooth, washable, durable, and inexpensive. Apparently there is also a demand for a standard size, sanitary, easy to clean, and inexpensive kitchen sink.

The report of the Committee on Fundamental equipment is in effect a handbook on heating, ventilating, air conditioning, plumbing and sanitation, electric wiring and lighting, and refrigeration as they apply to the small house. Relative to air conditioning, the report states that within the price range of \$2,000 to \$10,000 houses, air conditioning and cooling for the entire house "will generally be found too expensive. . . . Humidification may and should be employed, however, and where warm air furnace heating is used, this as well as the filtering of the air may be accomplished reasonably. . . . Reasonable cooling for summer may be applied to one or more rooms."

Architects Should Help Educate Public

THE summary of the Committee on Home Information Services and Centers indicates a need that architects might well study with the idea of finding a satisfactory solution. This refers to the establishing of bureaus to provide practical, reliable and disinterested information to prospective home builders, home buyers, and those who would like to remodel present homes. The committee found that, while the information and advice needed can now be obtained, the sources are scattered; that the amount, type, reliability, and quality varies widely in different communities; and that many commercial and educational organizations give unreliable and inaccurate advice. The report also states that publicity and educational programs at present are entirely inadequate since they do not reach the people seeking information. "Fly-by-night" real estate and mortgage concerns mulct the public in many communities, fleece the prospective home builder because *(Continued on page 90)*

RECOMMENDATIONS

•

LOWER COSTS

through large scale operations

•

CHEAPER FINANCING

of first and second mortgages

•

BUILDING ADVICE

for the public through central bureaus

•

INDUSTRY DECENTRALIZED

wherever possible

•

EDUCATION OF THE PUBLIC

through publishing information contained in the committee's reports

•

HOUSING RESEARCH FOUNDATION

endowed by private interests

•

SUPERVISION AND INSPECTION

through establishing cooperative bureaus in all cities

•

ARCHITECTS

to design more small houses

•

BLIGHTED URBAN AREAS

developed instead of suburban areas, the government assisting private financing



Cutting costs with ARC WELDING

By A. F. DAVIS, Vice President Lincoln Electric Co., Cleveland

TWENTY years ago the advantages of structural arc welding were pure theory. In 1917, with the erection of the first arc welded steel structure, the theoretical advantages of the process became hypothetical. The erection of more than one hundred buildings of welded steel construction has since changed the hypothetical advantages into facts.

A discussion of the economics of welded construction involves three factors, namely: design, shop fabrication, field erection.

Design is all-important for it affects the costs of fabrication and erection. The architect and structural engineer must therefore take full cognizance of the time and labor required to reproduce and erect their designs in steel. To do this requires an understanding of the methods of fabrication and erection of welded steel.

Simplicity is a fundamental advantage of welded design. This is attained because two members can be joined, by welding, directly to each other without a third or connecting member; whereas to join two members by riveting requires an additional member. Figure 1 shows this graphically. This advantage is responsible for a small saving in designing and detailing. It should be borne in mind, however, that regardless of the simplicity of welded design the stress at every connection must necessarily be calculated and the required amount of weld metal specified. This procedure is of course

necessary in riveted design, which being more complicated entails more work.

The great economy of welded design is due to the fact that it calls for less material. A simple example is illustrated by Figure 1. Now, compare the designs for a beam seat in a load of 45,000 lbs., detailed in Figures 2 and 3. The riveted design calls for three members; the welded design requires only one. Similar economies are also apparent in the case of welded as against riveted truss design. Suffice to say that in one case the redesign of a 135 ft. riveted truss for welded construction effected a 25% saving in weight. Such savings are attained through elimination of gusset plates and the use of shapes more efficient in welded design. In structures where many trusses are necessary the saving possible through use of welded trusses cannot be ignored.

Welded design of plate girders will also result in cost savings. Compare the amounts of material required by the sketch of riveted design, Figure 4, and the welded design, Figure 5.

The simplicity of welded design means more than the mere saving of weight or material. In the fabrication shop it is apparent in a different form.

The handling of material is a large item in the cost of shop fabrication. Naturally fewer pieces and less weight to handle mean lower fabricating costs. With this in mind, refer to the above (Continued on page 62)

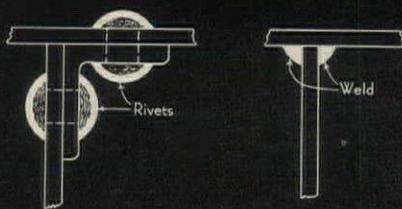


FIG. 1: One member eliminated when connection is welded

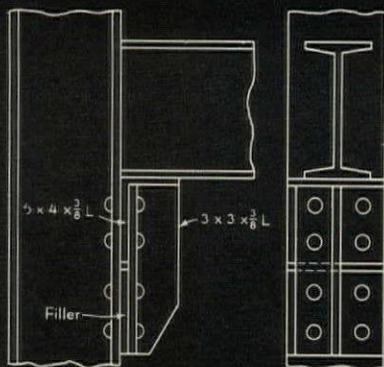


FIG. 2: Three members required for riveted beam seat

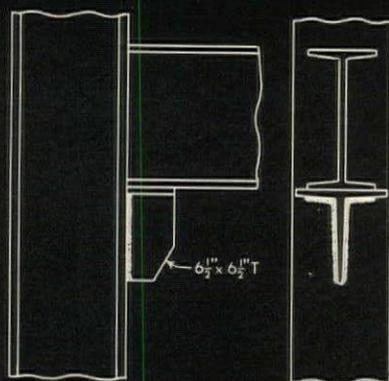


FIG. 3: One member required for welded beam seat

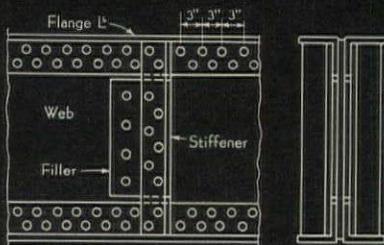


FIG. 4: Riveted plate girder. Compare material used with amount in Fig. 5

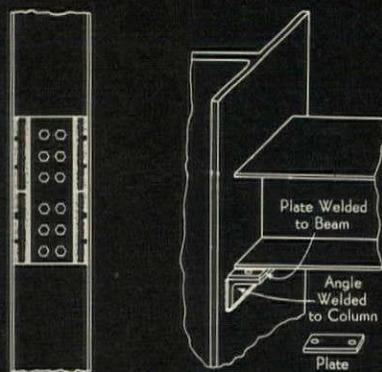


FIG. 6: Punching of column eliminated by patented column splice

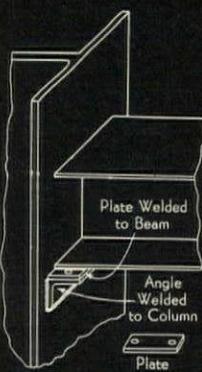


FIG. 7: Beam to column connection which eliminates punching of main members

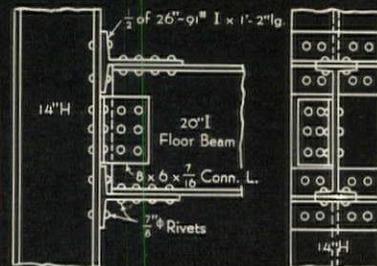


FIG. 8: Typical T type of riveted wind bracing connection

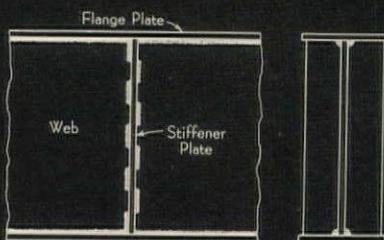


FIG. 5: Illustrating economy of welded plate girder for same load as Fig. 4

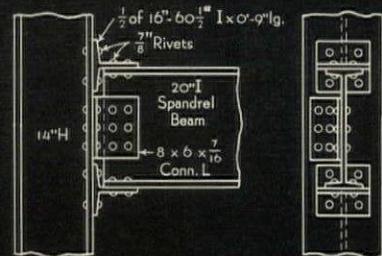


FIG. 9: Detail of exterior riveted T type wind bracing

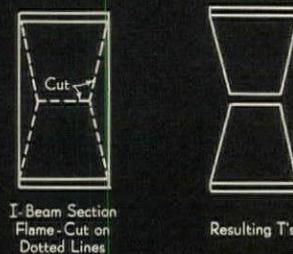


FIG. 10: Large T's for wind bracing are cut from I-Beam Sections

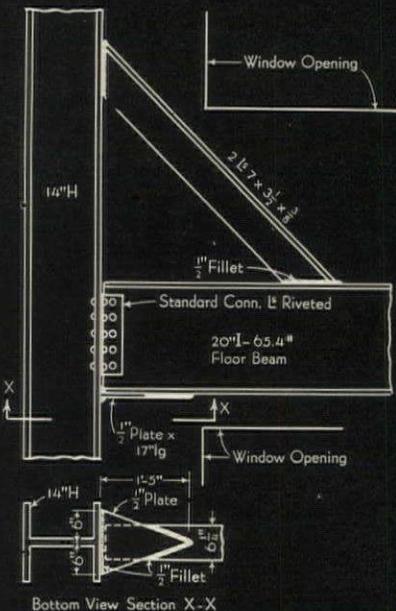


FIG. 11, at right: Arc welded knee brace, which can often be used to replace the riveted T type wind brace

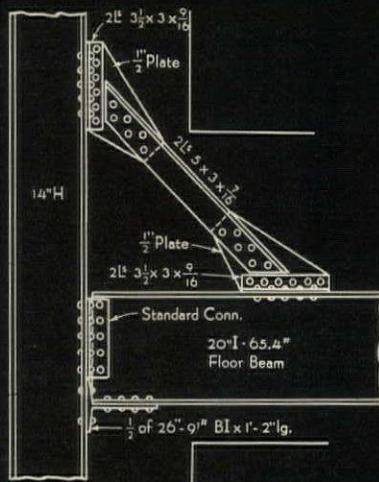


FIG. 12: Riveted knee brace connection which corresponds to the welded connection in Fig. 11 and has the same strength

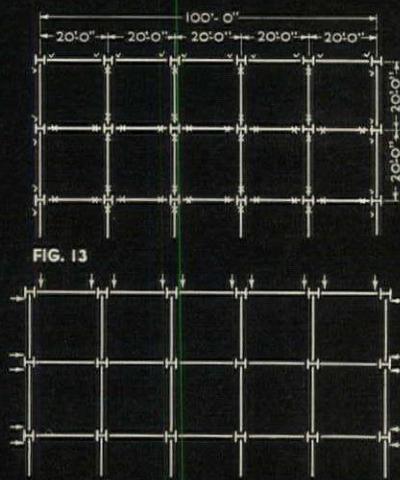


FIG. 13

FIG. 14: The use of welded knee braces instead of the riveted type wind brace is illustrated in these partial floor plans of a recently built 40 story building. The usual erection procedure is not changed

»»» "IF I WERE AN ARCHITECT"

By IRVING A. RYTTEBERG, President, Sumter Brick Works, Sumter, S. C.

// "IF I Were An Architect—How Would I Conduct My Business?" . . . That's a funny question for you to ask *me*. In the first place, I am not one, although I have lived with them and associated with them for twenty years.

Well, since you ask me, I would say that the first thing I would do, if I didn't already have the training myself, would be to get a business manager to run my office and business. It has been my observation that very few architects are good business men. Few that I have met know their cost of operation or keep an itemized cost account. They have their fixed fees, but never know until the end of the year whether they have made a profit, or on which jobs they made or lost money.

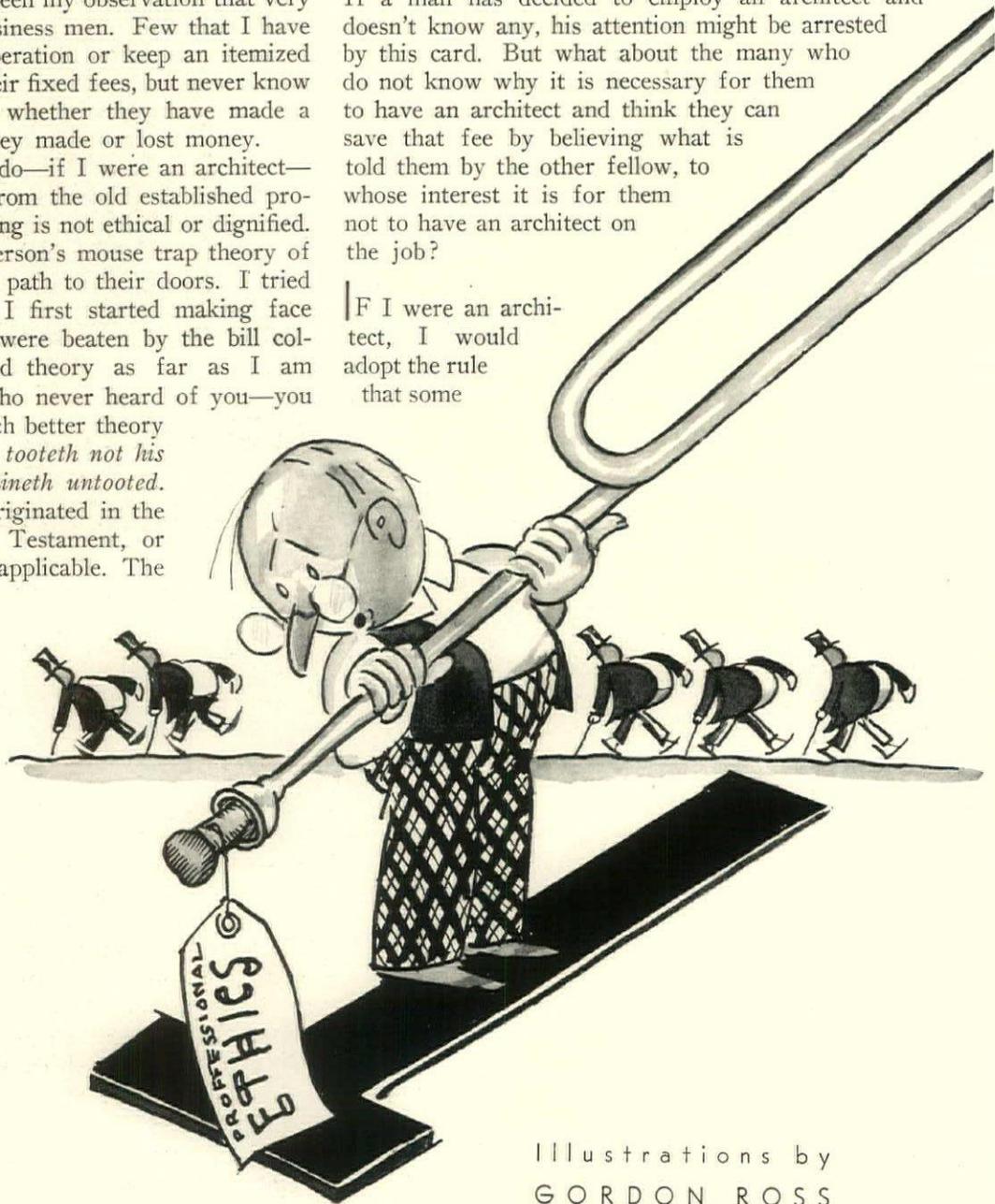
The next thing I would do—if I were an architect—would be to break away from the old established professional idea that advertising is not ethical or dignified. Architects still live by Emerson's mouse trap theory of the world making a beaten path to their doors. I tried that theory myself, when I first started making face brick, and the only paths were beaten by the bill collectors. That's an exploded theory as far as I am concerned. To the man who never heard of you—you do not exist. Here's a much better theory I heard recently: *He who tooteth not his own horn, said horn remaineth untooted*. I don't know whether it originated in the Old Testament, the New Testament, or with Will Rogers, but it is applicable. The mouse trap theory belongs to the age of the horse and buggy and won't work in the days of the automobile and airplane.

No, I can't tell you how they should advertise; that's not my business. But I do know that the advertising should be done by men experienced in that line, who know how to make their work reach the average man. When I say *average man*, I mean those who are really unfamiliar with the real duties, services and benefits rendered by an architect. The ones who are going to build a fine, expensive

home or a large apartment or office building known better than to attempt anything like that without the services of a good architect. But it's the man who builds a moderate priced operation who thinks he can do it by listening to the contractor or realty man, and his name is legion.

You say that many architects do have their cards in the newspapers?—Yes, that's very nice and dignified; but it doesn't get them anywhere in the way I speak of. If a man has decided to employ an architect and doesn't know any, his attention might be arrested by this card. But what about the many who do not know why it is necessary for them to have an architect and think they can save that fee by believing what is told them by the other fellow, to whose interest it is for them not to have an architect on the job?

IF I were an architect, I would adopt the rule that some

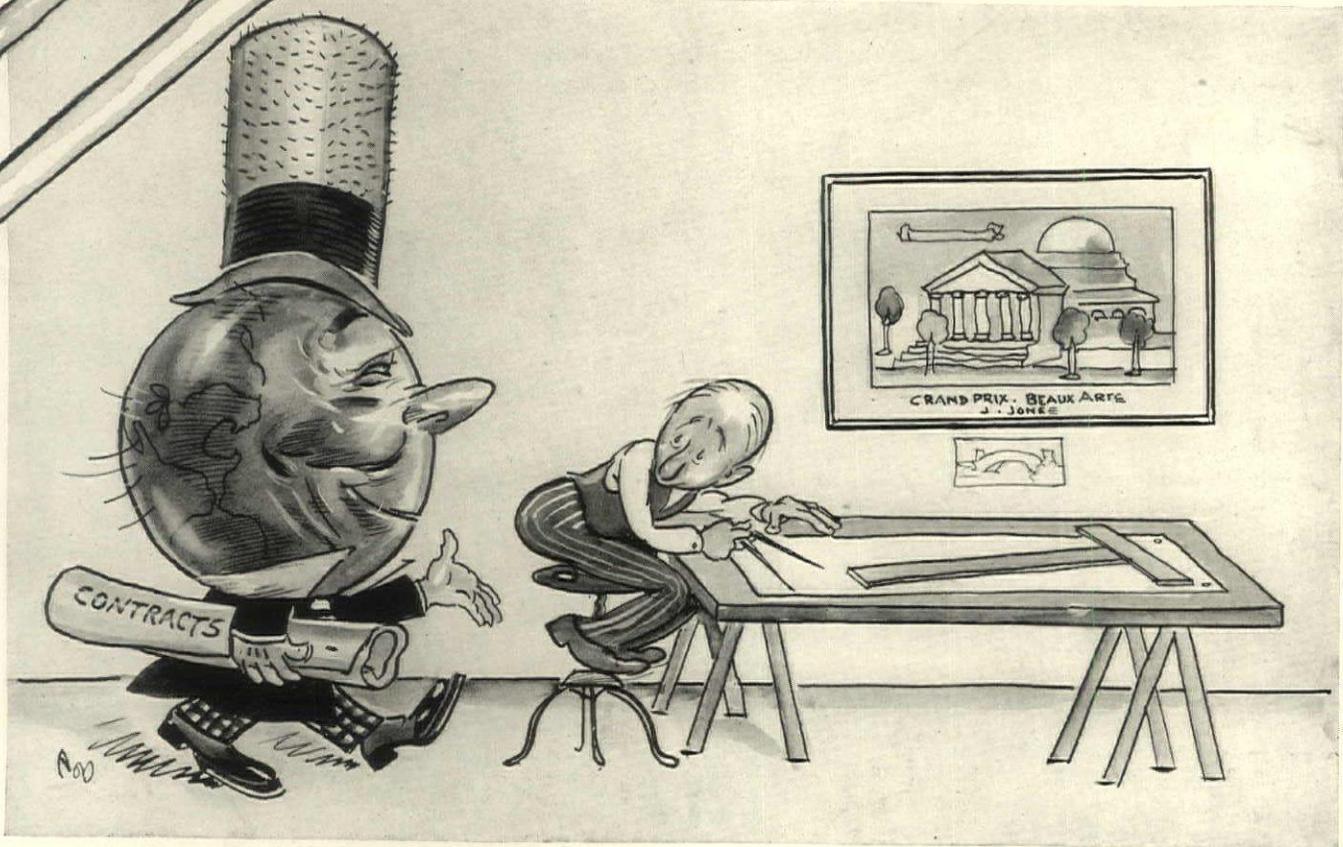


Illustrations by
GORDON ROSS

AMERICAN ARCHITECT

"Emerson's Mouse Trap
Theory of the World
Making a Beaten
Track to Their
Door" Versus . . .

. . . "He Who Tooteth
Not His Own Horn
Said Horn Remaineth
Untooted" . . .



of the architects have already adopted in regard to salesmen. I would have certain hours in which to see them, and adhere to it, except by appointment. There is no way of estimating the amount of time lost (which means money) by salesmen who make repeated calls at an architect's office to tell him the same story over and over again. I have sat in architects' offices and not only seen this, but the reaction to it—meaning that the too persistent salesman talked himself out of a job.

If I were an architect, I would be more careful than many architects are in answering letters from manufacturers. I don't mean circular letters or advertisements, but letters in regard to specific materials and samples sent by request. What do I mean by that? Well, I have had a rule never to send samples or leave

samples in an architect's office except by request. Yet frequently they do not acknowledge their receipt or reply to a letter asking if they were the kind wanted or anything else. If the manufacturer acted in this manner—well, there'd be fireworks, and he might be blacklisted.

If I were an architect I would have a distinct understanding with my clients that after they had approved the contract document there would be no changes in my specifications. While a great many architects adhere to this rule, the rank and file, for one reason or another, do not. I could tell you many answers I have received when I questioned architects about this. I think most of them are afraid of antagonizing their clients and possibly losing business. Yet on the other hand I have seen a good many jobs spoiled (*Continued on page 64*)

NEW
POSSIBILITIES
IN
Reinforced
Brickwork

By

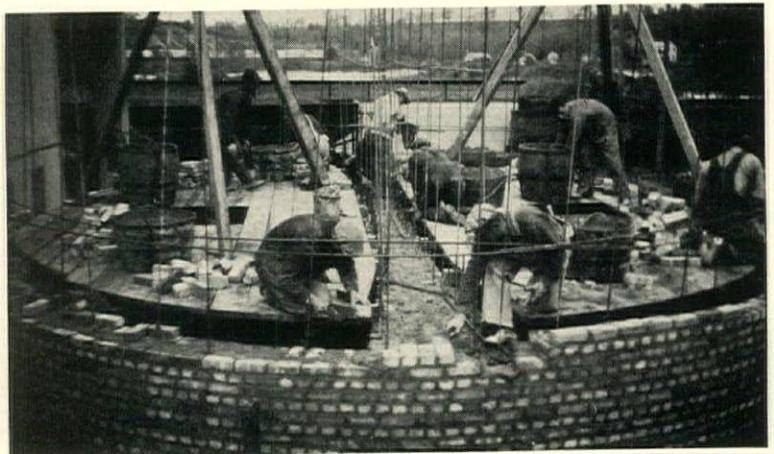
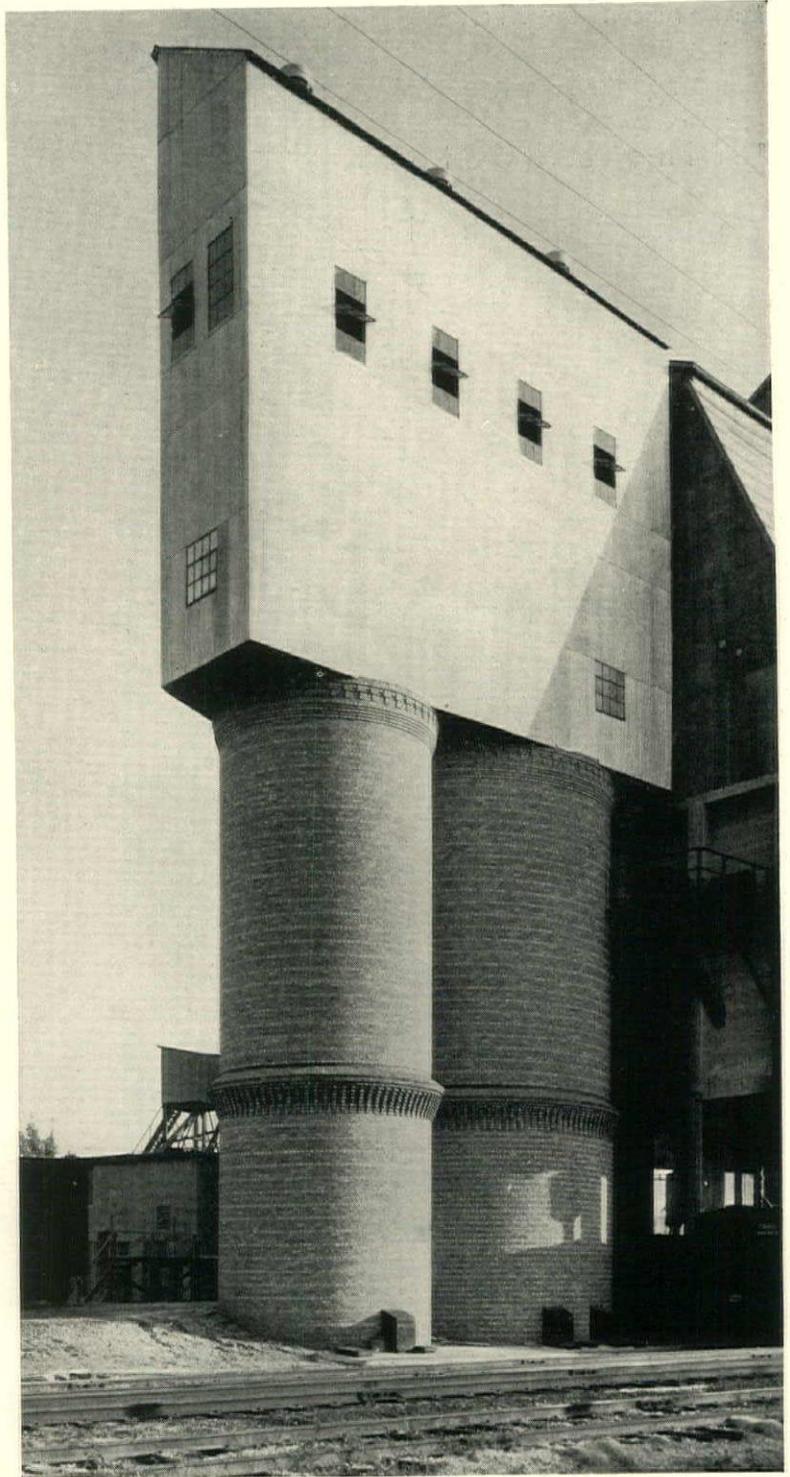
L. B. LENT

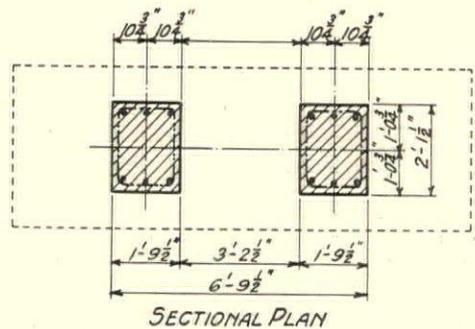
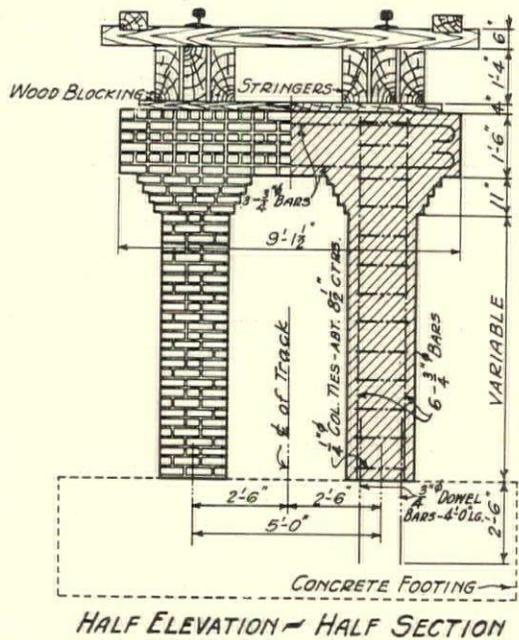
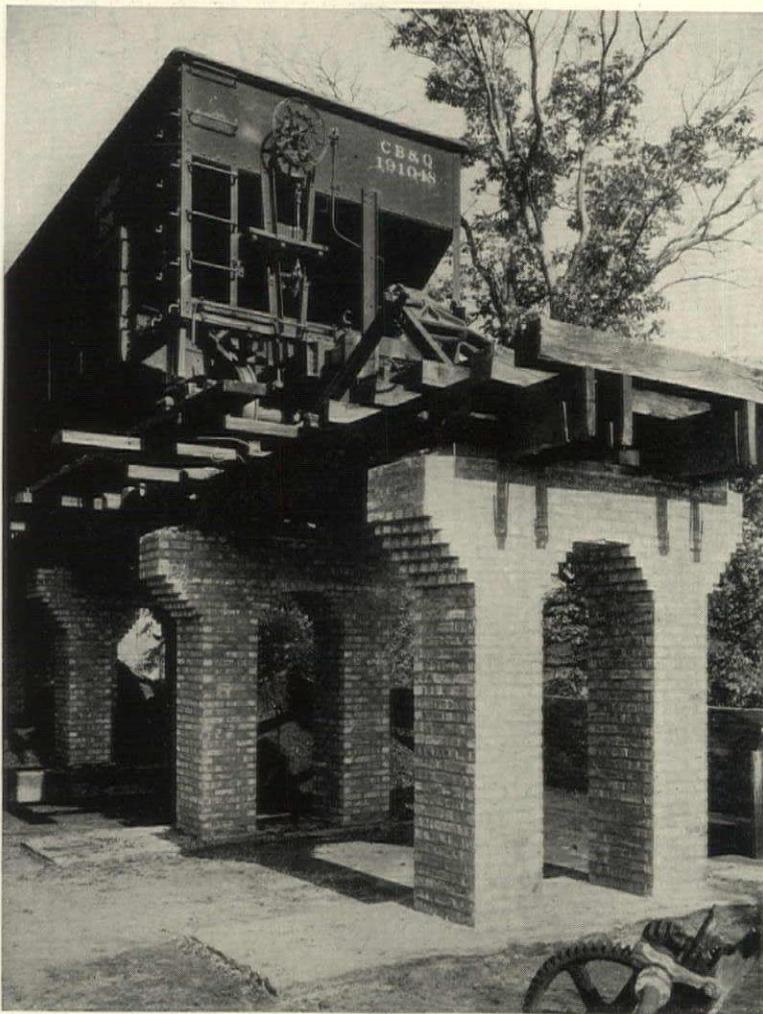
Consulting engineer, Cleveland

THE use of reinforced brickwork in this country is new, but this type of construction is old, much older, in fact than reinforced concrete. The first instance of which we have record is Brunel's Classic experiments in 1836. He found that steel laid in brickwork enormously increased flexural strength, just as might be expected, if we analyse the probable performance of this combination.

Mr. Eugene S. Powers, a Philadelphia architect, in a little booklet published in 1923, reported experiments with reinforced brickwork beams from which he found that "it is possible to make brick masonry as truly monolithic as concrete, and with reinforcing placed as in concrete beams and slabs, to serve in their stead." Other experimenters have found substantially the same results.

But it has remained for the engineers and architects in far off India to make wide practical application of this knowledge. For about fifteen years past, reinforced brickwork has been used extensively in the building of structural parts in a variety of buildings. All kinds of beams and slabs and combinations thereof, floors and roofs, stairs (plain and spiral), overhanging cornices and cantilevered balconies, as well as other structural work, have been built of reinforced brickwork. It has been found





REINFORCED BRICKWORK PIERS spaced about 13' on centers support a railroad siding at Wedron, Ill. Position and size of reinforcement are shown in the detail drawings. Designed by Hugo Filippe

FUNDAMENTAL FACTORS

Designed like reinforced concrete

Floor beams carrying 30 tons common in India

As easy to construct as ordinary brickwork

No forms or supports needed
for vertical construction

For floor slabs or beams,
simple centering required

■ **AT LEFT** sand storage bins at Wedron, Ill., under construction and completed. Brick walls are 13 1/2" thick up to 22' height, and 9 1/4" thick for the upper 30'. Vertical 1/2" reinforcing round bars are space 21 1/2" on centers. Horizontal reinforcement consists of 1/2" and 3/8" round bars. Designed by Hugo Filippe

thoroughly satisfactory and less costly than other forms of construction.

This proven success in India has stimulated research and trial in our country, so that we now have much accumulated knowledge and several examples of actual structures. Our experience has, however, covered only since 1929 so that it is not surprising that designers in this country possess but little information about this interesting method of construction. Indeed, many have but little notion of what is meant by reinforced brickwork. Perhaps a brief explanation will make it plain.

In a simple slab the steel reinforcing rods are laid in the mortar joints of the brickwork in such a position that they will, under a bending load, resist tensile stresses and develop the maximum effective depth of the slab, i.e., as near the bottom as possible. The brickwork, of course, resists compressive stresses above the neutral axis.

When the steel is imbedded in mortar, and brickwork joints are well filled with mortar, ample bond strength between steel and mortar and between bricks and mortar is developed to cause the slab to act as a homogeneous mass. (Cont'd. on page 58)

» » » PLANS ARE OWNED

The Architect's Ownership May be Retained Only

THESE is probably no legal question which architects more generally misunderstand than ownership of plans and specifications. Although the decisions of the courts have for many years been substantially uniform in their handling of this question, a very considerable majority of practicing architects are still of the opinion that the plans and specifications are and remain at all times the property of the architect, irrespective of whether or not there is any agreement to this effect between the architect and the client. This is not and never has been the fact. On the contrary, the courts, since the earliest decisions on the subject, have held, and still hold that, in the absence of a specific agreement between the architect and the client providing otherwise, the ownership of the plans and specifications vests in the client who orders and pays for them; that the architect, by accepting the order and delivering the plans and accepting payment for them, relinquishes any claim to ownership with respect to them and transfers this ownership to the client.

A. I. A. SCHEDULES MISLEADING

• The reason probably that there is so much misconception of this rule on the part of architects is that the schedules of practice of the Institute and the various chapters and architectural societies provide very generally that the plans are to remain the property of the architect. Architects who are familiar with this general provision assume that this is the general rule and legally effective. The difficulty with the situation is that a mere statement to this effect in the schedule of charges or similar documents of an architectural society is not binding upon a client, unless it is in some way brought home to him and directly or impliedly agreed to by him. No amount of custom in the profession is sufficient to charge the client with liability or to alter his general legal rights unless that custom is translated into the form of a contract, or unless it be shown that the client is cognizant of it or directly or impliedly agrees to it.

It is not necessary that the agreement that the plans shall belong to the architect be in writing. It is not even necessary technically that there be a verbal agreement specifically mentioning this point. If the architect, before proceeding with the work, hands to the client, for example, a schedule of professional charges, either of an architectural society or of his own preparation, which states that the plans shall belong to the architect, and tells the client that his services will be performed in accordance with the provisions of this schedule, this will suffice. It is assumed that the client will then make himself familiar with the contents of the schedule and, if he fails to do so, the fault is his and he will not be allowed to plead ignorance.

It is, however, never advisable to depend on a verbal agreement in a matter of this kind. With absolute good

faith on both sides, memories will nevertheless differ as to what was said, as to whether the architect specifically told the client that the ownership of the plans would remain with the architect, whether the client agreed to this, whether the architect handed the client a schedule of charges and directed his attention to it and what agreement in general, if any, was arrived at. Where the agreement is in writing, none of these misunderstandings or ambiguities will result. If there be a written agreement between the parties to the effect that the plans and specifications remain the property of the architect and that title in them does not pass to the client, this provision will be recognized by the courts and enforced and the architect will be protected on this fundamental point. It is sufficiently fundamental and sufficiently important so that, in a case involving a job of real importance, the architect should see to it that a written agreement covering his title to the plans and specifications is entered into.

The exact form of the written agreement is largely immaterial. It can be incorporated most easily in the contract covering the architect's services, if there be such a contract. It can be covered, if desired, in the form of a simple exchange of letters. The essential thing is that there should be some written word over the signature of the client, agreeing to the understanding that the plans and specifications belong to the architect. Any agreement of this kind will at once take the case out of the operation of the ordinary legal rule to which I have referred. The agreement and not the general rule of law will control and the architect's title to the plans will be secured.

In cases of special importance I have found it advantageous to copyright the plans. There is some question as to exactly what protection this gives. As a practical matter, it has, I find, been extremely helpful in preventing an unauthorized use of plans and in giving general notice to everyone that the plans covered by the copyright are legally protected.

HOW TO COPYRIGHT PLANS

• Copyrighting of plans falls under one of two different provisions of the copyright law. The first provides for copyrighting of published works of a scientific character, and the second relates to the copyrighting of unpublished works. In the case of a published work, it is necessary that there be affixed to the work the usual copyright notice stating that it is copyrighted. This notice should be attached to the work when it is first published, but the application for the copyright is not made until after publication. In the case of an unpublished work, there is some doubt as to the necessity of using the copyright notice. The wisest course, however, is to use it. It is a nice question whether architects' plans are to be considered as published or as unpublished works. On the whole, I am of the opinion

BY THE CLIENT

When Certain Legal Precautions Are Taken

By CLINTON H. BLAKE

Blake & Voorhees, Counsellors-at-Law, New York

that it is safer to class them as published works, on the theory that they are published in the view of the law when they are filed in the Building Department or in other public offices.

The procedure involved is merely to file an application and a copy of the plan to be copyrighted. The application and plans are filed with the Librarian of Congress and not in the Patent Office. In the case of a published work, two copies of the plans should be filed; in the case of an unpublished work, one copy. The filing fee in each case is nominal.

In rare cases, where a plan involves some unusual arrangements, ideas or structural elements, a patent may be secured.

THIRD PARTY CAN USE PLANS UNLESS COPYRIGHTED

• There is a distinction between the right of the client to make use of the plans and the right of some third party to avail himself of them. The agreement between architect and client that the ownership of the plans shall remain with the architect protects the architect against the client, but not necessarily against some third person.

The general rule is that any product of mental labor embodied in writing or in some other material form, such as architectural plans, is the property of its author. The courts have held, however, that, with respect to plans and specifications, when once they have been filed with the building department and the architect has supervised the construction of the work and received his compensation, the architect has in effect published his work to the world and made it public property and has no further exclusive right in it.

While the client could not take advantage of this doctrine, if an agreement covering the ownership of the plans is entered into, it is quite possible that a third person might claim that, as to him, the plans are public property and that he can make such use of them as he sees fit. This, of course, is done repeatedly in cases where ideas embodied in plans and elevations are adopted and used by others. It is something which the profession can not very well prevent and which in ordinary cases it would not pay it to try to prevent. In special cases, however, the copyrighting of the plans may be effective and prevent encroachments by third parties as well as by the client on the property rights of the architect.

There are cases now and then in which the client, having paid for the plans and used them as proposed, proceeds to use them in connection with other buildings and to have these erected either under his own super-

vision or in collaboration with some other architect. Cases of this kind arise with comparative rarity, but are not uncommon in real estate development work, where many houses of the same general type and class are being erected. Where the architect is doing work of this type, it is a desirable precaution for him to incorporate in the contract with the client a provision to the effect that the plans shall not be used for any work other than the single job referred to in the contract. If the client then desires to use the plans for additional buildings, it is a simple matter for him to make a supplemental agreement with the architect whereby the latter will be employed to supervise the work and receive a fair compensation for so doing.

Some architects have been under the impression, apparently, that if the contract between the owner and the contractor contains a provision that the plans and specifications shall be the property of the architect, this will suffice. Such is not the case. The architect can not safely rely upon the provisions of a contract to which he is not a party and which might be waived readily either by the owner or by the contractor. If the architect secures a simple agreement direct from the client covering the matter of ownership, all uncertainties on this point will be removed and the architect's right to the plans and specifications clearly and properly defined.

The court decisions on this matter are comparatively few. They are substantially unanimous, however, in sustaining the legal proposition to which I have referred, and embrace decisions of the state courts in this country, of the United States Supreme Court and of the English courts as well.

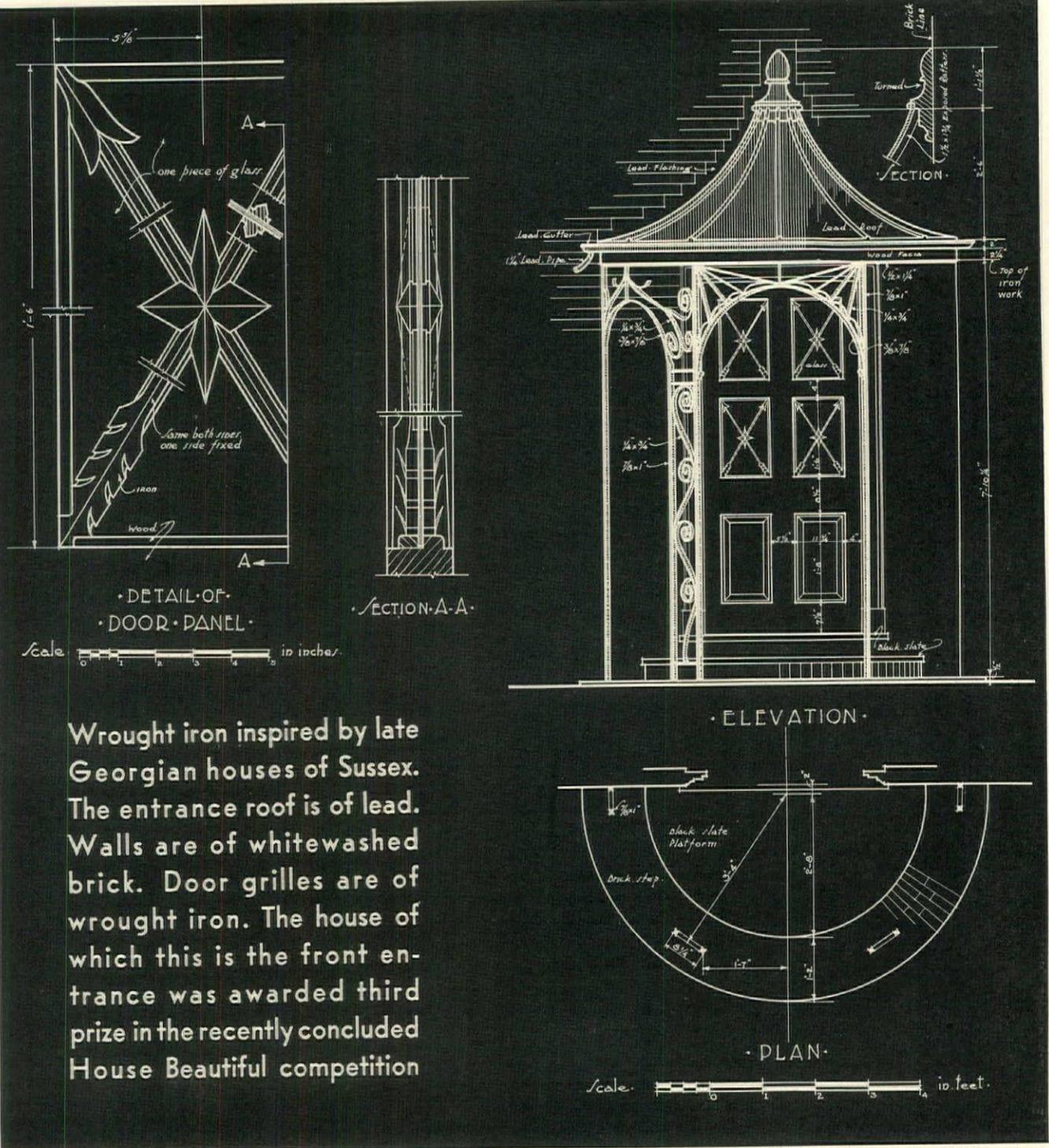
COURT DECISIONS ON OWNERSHIP OF PLANS

• Among the earlier cases cited many times with approval are the following:

- Wright v. Eisle, 86 N. Y. A. D. 356;
- Windrim v. Philadelphia, 9 Philadelphia 550;
- Gibbon v. Pease, 1 Kings Bench (English) 810;
- Smithmeyer v. U. S., 147 U. S. 342.

It is interesting to note that the last case is to the effect that the architect has no intrinsic property right in the design which he turns over to the client, *unless it is patented or copyrighted*. The clear inference is that by copyright or patent the right of the architect may be protected. The case of Gibbon v. Pease cited also holds that a custom that the architect is entitled to the plans, after they have been paid for and the building completed, is unreasonable. Unless both parties know of such custom and enter into the contract with the custom in mind, the owner's rights to the plans will not be affected.

This last doctrine was laid down in the case of Hill v. Sheffield, 117 N. Y. S. 99. In that case the plaintiffs, who were architects, (Continued on page 77)



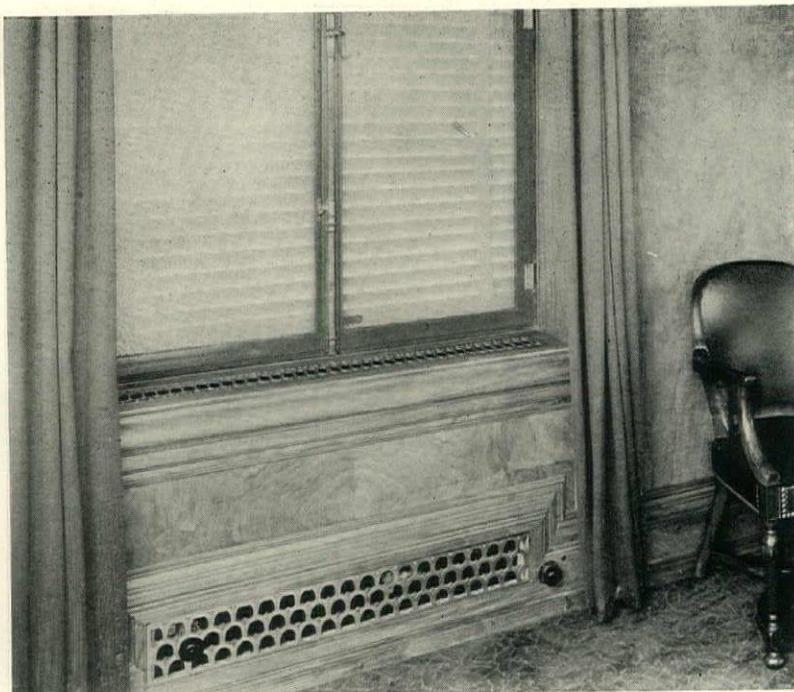
Wrought iron inspired by late Georgian houses of Sussex. The entrance roof is of lead. Walls are of whitewashed brick. Door grilles are of wrought iron. The house of which this is the front entrance was awarded third prize in the recently concluded House Beautiful competition

» » » An Architect's Own Doorway

Residence of George R. Thompson,
 Architect at Hempstead, Long Island
 Detail Drawings by Arthur H. Gilkison



Half of the window unit is devoted to the radiator, half to ventilation. The supply duct is run on ceiling below



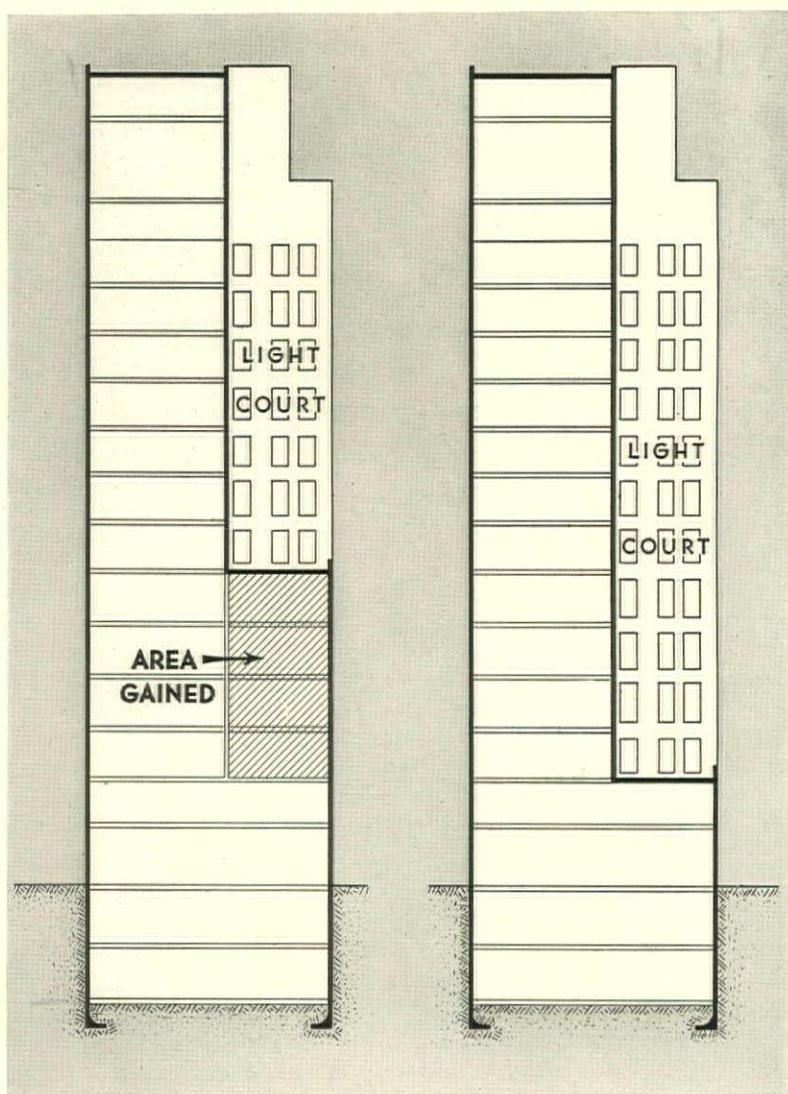
20% GAIN
in Rentable
Area Through

AIR CONDITIONING

It is natural that a business man contemplating investing a large sum of money in a commercial building should be more interested in the amount of rentable floor area than in the aesthetic quality of the design. So, when his architect tells him that he can gain twenty per cent in rentable floor space, he naturally is all attention and wants to know how it can be done.

John Parkinson and Donald B. Parkinson, Los Angeles architects, made just such a proposition to the financiers of the Banks-Huntley Building. They explained to their clients that air conditioning was not simply a matter of allowing every room in the building to be comfortably cool on warm days and comfortably warm on cool days; or of raising the humidity in the rooms in winter and lowering it in summer; or of eliminating dust and dirt, as well as street noises, by keeping the windows closed. But they pointed out that decided economic advantages were to be obtained by installing an air-conditioning system in the building. And it was this phase of the architects' statements that aroused the interest of their clients.

WITHOUT AIR CONDITIONING an interior light court was required on the second floor; with air conditioning, the court could be stopped at the fifth floor





MOTT

RENTS WERE HIGHER in the lower floors than they would have been if air conditioning had not been installed in the Banks-Huntley Building, Los Angeles. John and Donald B. Parkinson, architects

The architects showed by means of drawings how it would be possible to increase the floor area of the building twelve thousand square feet. This increase was made possible due to the fact that without air conditioning an interior light court would be required down to the second floor, whereas with air conditioning the court could be stopped at the fifth floor.

An investigation of buildings erected in other cities showed that tenants are willing to pay higher rentals for space in air-conditioned buildings than for similar space in the same locality in buildings not so equipped. Increase in the demand for space in buildings so equipped, or a higher percentage of occupancy, also was indicated.

Cost and operating figures showed that the rental income from

BY D. T. ROBBINS

of Ralph E. Phillips
Consulting Engineer
Los Angeles, California

the floor space gained more than offset the cost of installing and operating the air-conditioning system.

The Banks-Huntley Building is located on an inside lot 60' x 130' and is twelve stories high, with adjoining five and six story buildings on both sides. Of the twelve stories, five are built over the entire lot area, the upper seven floors being reduced by a light court 25' x 45'. The total rentable floor area of the building is 62,350 square feet. If the light court had been extended to the second floor, the rentable area would have been only 58,000 square feet. Since, in the light of past experience, it has been indicated that air conditioning permits rental increases and assures fewer tenant changes, the owners believed that they were justified in proceeding upon this assumption. Assuming that the space in a building like the Banks-Huntley Building without air conditioning would rent for \$3.00 per square foot and \$3.50 per square foot with air conditioning, but assuming 80% occupancy in both cases, it was found that the annual rent without air conditioning would be \$139,200 and with air conditioning \$174,580, an increase of \$35,380 annually. With automatic control of the entire mechanical plant no greater engine room force would be required in this type of building. Therefore the increased operating cost due to the installation of air conditioning would be the cost of power consumed and repairs and maintenance of the plant.

One hundred eighty tons of refrigeration were installed, divided into two units of sixty and one hundred twenty tons. In Los Angeles, it is necessary to operate both compressors for about three months of the year, the large unit for about six, and the small unit for three months, the fans and pumps being operated throughout the year.

During the period when the entire refrigerating plant is operated the total power consumption for air conditioning, including refrigeration, fans and pumps, is 53,350 kilowatt hours per month. With the large unit operating, the power consumption is 44,550 kilowatt hours per month and with the small unit 32,750 kilowatt hours per month. For this power consumption the annual cost in Los Angeles is \$5,390.

(Continued on page 74)

WHETHER THEATRE » » » The Acoustics

By W. K. FRIEND

Acoustical Engineer, American Seating Co.

SINCE the advent of the talking pictures, much of a popular nature has been written on the subject of acoustics. The information published has been eagerly received because the problem of poor acoustics has confronted most of the owners of the theatres designed primarily for the silent movie. There is a point of importance, however, about which information has been meager. This point is the effect produced upon the acoustics of a room by the audience.

Before entering upon any discussion of this point it is well, in order to get a broad view of the subject, to review briefly the three most important factors governing the acoustics in rooms; namely, the volume, shape, and reverberation in the room. The audience from an acoustical standpoint, as will be pointed out later, has a bearing only upon the reverberation.

The requirements for satisfactory acoustical conditions in a room, as far as volume is concerned, vary with the loudness or the intensity of the sound used in it. Since the latter usually varies between large limits, it is necessary to strike a happy medium in the room size. Fortunately, the human ear is able to perceive sound over a large range of intensity and is provided with a means of protection as the intensity increases. The ear hears what is termed the loudness of the sound, which is proportional to the logarithm of the intensity. This explains why a band of one hundred pieces, for instance, although ten times as intense in sound as a band of ten pieces, is perceived by the ear as having a loudness of but twice the ten piece band.

ROOM SIZES FOR VARIOUS PURPOSES

CONSEQUENTLY a room, if satisfactory for speaking, can be used acceptably for an orchestra of several pieces, for instance, without over-taxing the comfort of the auditors. Thus it is seen that room size can vary within reasonable limits without impairing the acoustical qualities. General rules for governing room size from the acoustical standpoint were published in the *AMERICAN ARCHITECT* of September and October, 1930, in the article, "How to Design an Auditorium Where it is Easy to Hear."

The next of the three most important factors is the shape of the room. More has been written on this point than on size, and justly so.

The shape determines to a large degree how the sound energy emitted from the sound source is distributed throughout the room. What is desired is an even distribution so that hearing conditions in some parts are

good, not at the expense of hearing conditions in other parts. Everywhere the sound should be interpreted with clearness and with practically the same loudness. This precludes any echoes or sound concentration centers or any of the many defects classed under improper distribution and controlled by the shape of the room. Many statements may be made concerning the proper shape of the room, the more important of which follow:

DON'T LET SOUND FOCUS

THE most important condition to be guarded against is the concentration or focusing of sound. Curved walls have a tendency to do this in much the same way as curved reflectors focus light, and their use should be accompanied by analysis of the conditions. A good rule—as stated by Davis and Kaye in "Acoustics of Buildings,"—to follow in the case of curved ceilings, is—the radius of curvature should not be less than twice the height of the room. The rule also applies to curved walls and their corresponding dimensions of the room. Floors should be inclined and platforms or stages elevated to avoid shadow effects upon the sound by auditors seated in front. Openings under balconies should be high enough to let sufficient sound energy penetrate near the rear.

The last of the three factors is that of reverberation, and it is on this point that the audience has a definite bearing. Excessive reverberation is the cause of most of the poor acoustics and consequently demands the most attention.

Excessive reverberation, it should be remembered, is the lingering of sound in a room to the detriment of the understanding of subsequent sound. A sound produced is reflected back and forth from the seats, floor, walls, and ceiling, a portion being absorbed at each reflection until its intensity is so reduced that it becomes inaudible. If it takes the sound too long to become inaudible, it remains in the way of succeeding sound and thus an overlapping effect is produced, in which syllables or words are not clear and distinct and hearing is difficult and tiring. Excessive reverberation may be termed a "hollow barrel" effect. An exaggerated condition of this phenomenon is found when one speaks down a well or cistern.

A certain amount of reverberation is acceptable but where it is excessive its reduction is accomplished by placing in the room materials or objects capable of absorbing sound energy to a high degree and thus lessening the reflections and consequently decreasing the time it takes each syllable or word to become inaudible. There

IS EMPTY OR FULL Should Be the Same

REVERBERATION must be the same whether auditorium is empty or full

SHAPE OF ROOM governs distribution of sound

EVEN DISTRIBUTION of sound is essential

CURVED WALLS and ceilings tend to focus sound

ROOM SIZES may vary without impairing acoustics

A 100 PIECE BAND is heard but twice as loud as a 10 piece band

is a matter of common experience to notice how much better hearing conditions become in some rooms as the size of the audience increases. This, and the fact that satisfactory correction is determined for average audience size, indicates that the audience plays an important part in the acoustics. The audience reduces the reverberation time, but if it happens to take more auditors to give satisfactory conditions than are ordinarily present in the room, the difference between the absorption furnished by a satisfactory number of people and that furnished by the average

is a certain upper limit value for the reverberation period in each room to which the reverberation must be reduced in order to have the most satisfactory hearing conditions. This limiting reverberation period for satisfactory hearing is called the optimum reverberation period. Adult people in ordinary dress possess the ability to absorb comparatively large amounts of sound energy due to the soft and porous nature of clothing worn, and to its considerable area. It is because of this that the audience has such a marked effect upon reverberation in a room.

TO COMPUTE REVERBERATION

THE generally accepted method of computing the reverberation time in a room for various audience sizes has been published many times and will not be repeated here. It is sufficient to state that the reverberation time varies inversely with the absorption. In other words, generally speaking the more absorption there is in a room proper, in addition to that furnished by the ordinary materials of construction, the better the acoustics.

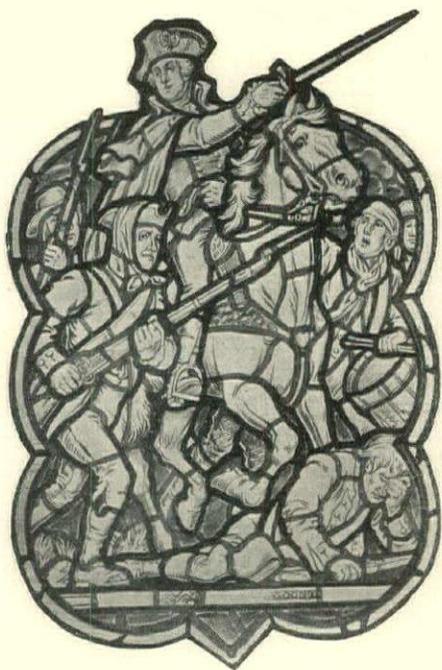
Computations are usually made to determine the amount of wall treatment necessary to give satisfactory reverberation with an average size audience present. It

audience is made up by adding absorptive materials of some kind.

CHANGES IN SIZE OF AUDIENCES

WHAT is desired is unchanging reverberation time at or below the optimum for all audience sizes. The modulation or changing of the reverberation time with changing audience is undesirable. It means that hearing conditions, unless counteracted, tend to change from poor to noticeably better as a room approaches capacity. In rooms used for dramatic or musical rehearsals, as well as audience performances, the acoustical conditions surrounding rehearsals are often far different from actual performance conditions. This is annoying to artists, as their renditions sound differently under the two conditions and a conscious effort toward adjustment is necessary in order to obtain what they deem the proper reaction to themselves. School auditoriums are also often used for small group instruction and low reverberation at no audience is consequently desired.

In order to get low, satisfactory reverberation for an empty room and maintain this same optimum condition practically constant without (Continued on page 92)



Snatching victory from defeat



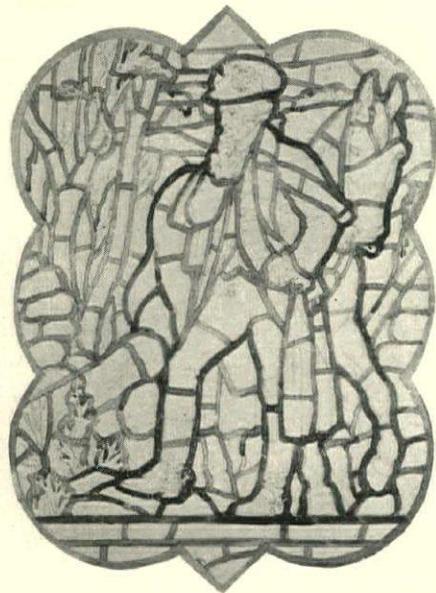
Presiding at Federal Convention



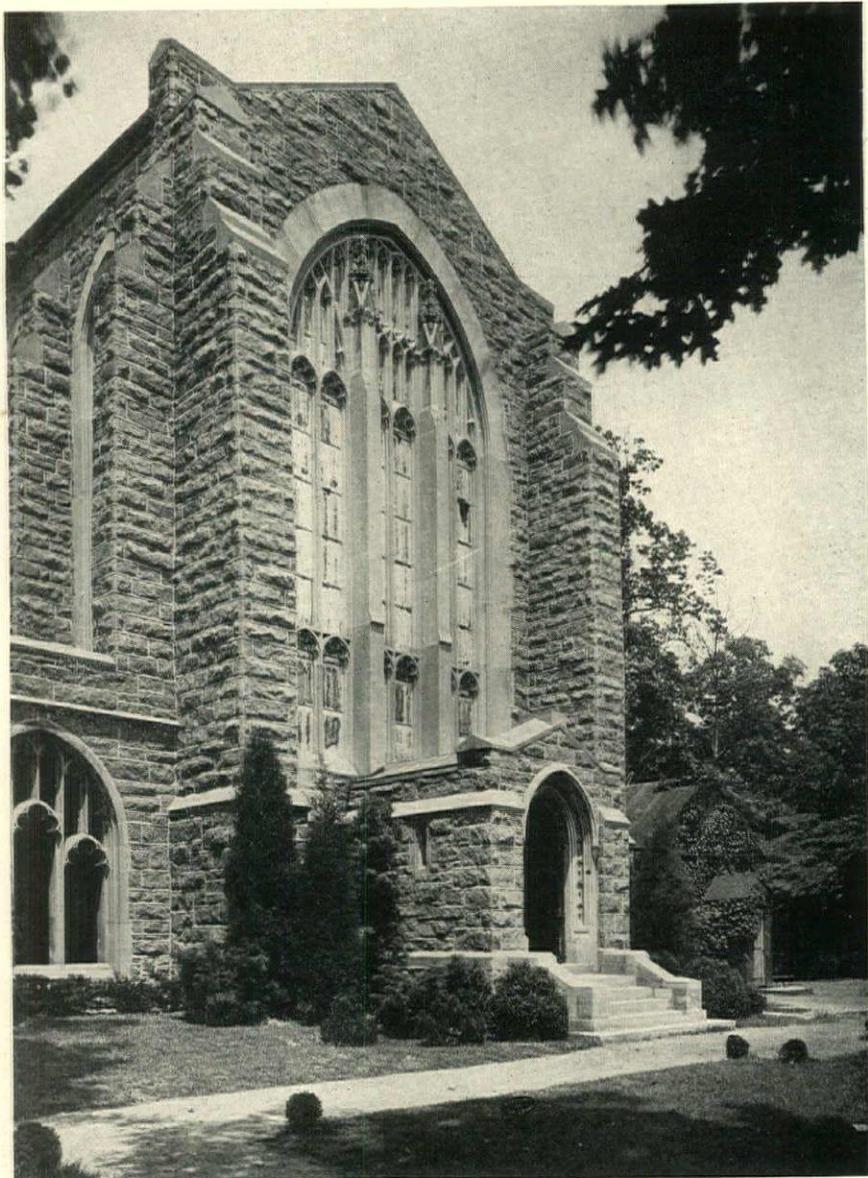
At home



In church



Revisiting Valley Forge



GILLIES

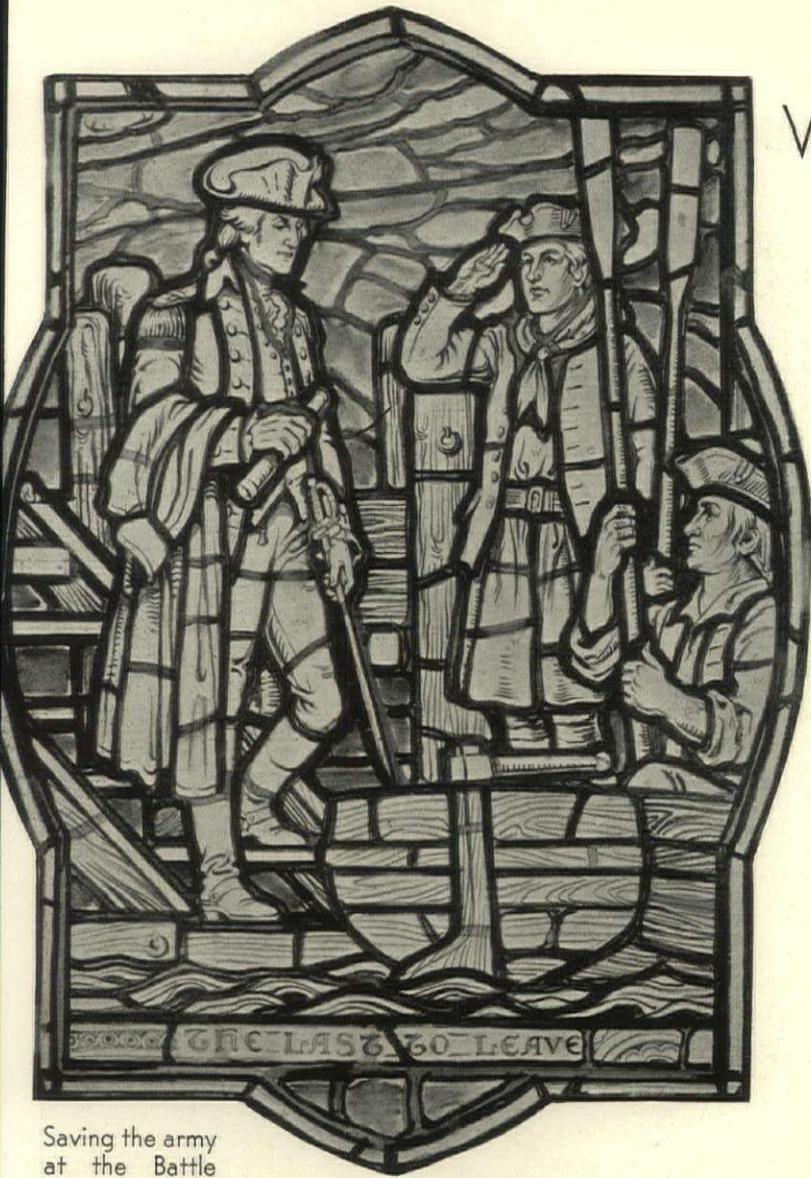
LEADED GLASS WINDOWS in the Washington Memorial Chapel are memorials to the men and women who made the United States. This chapel is the first of several units which will comprise the completed memorial

Washington's Life

PICTURED
IN MEMORIAL
WINDOW

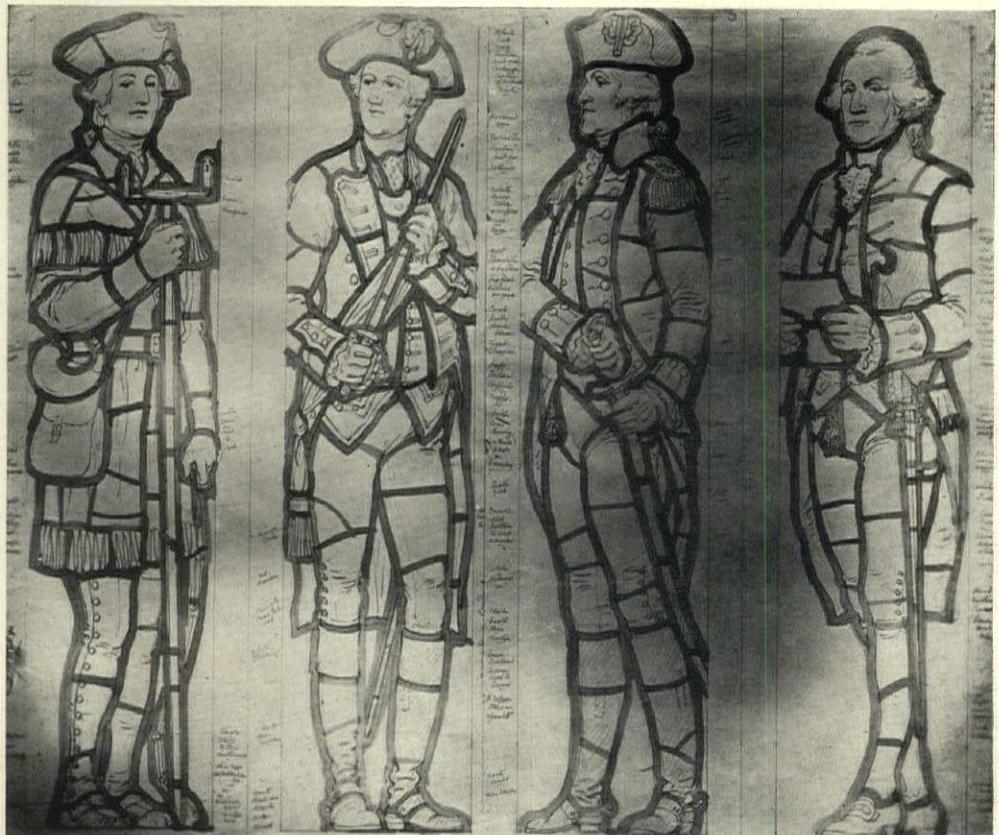
Cartoons from which
designs in leaded glass
were made for the
Washington Memorial
Chapel at Valley Forge

Zantzing, Borie
and Medary
Architects

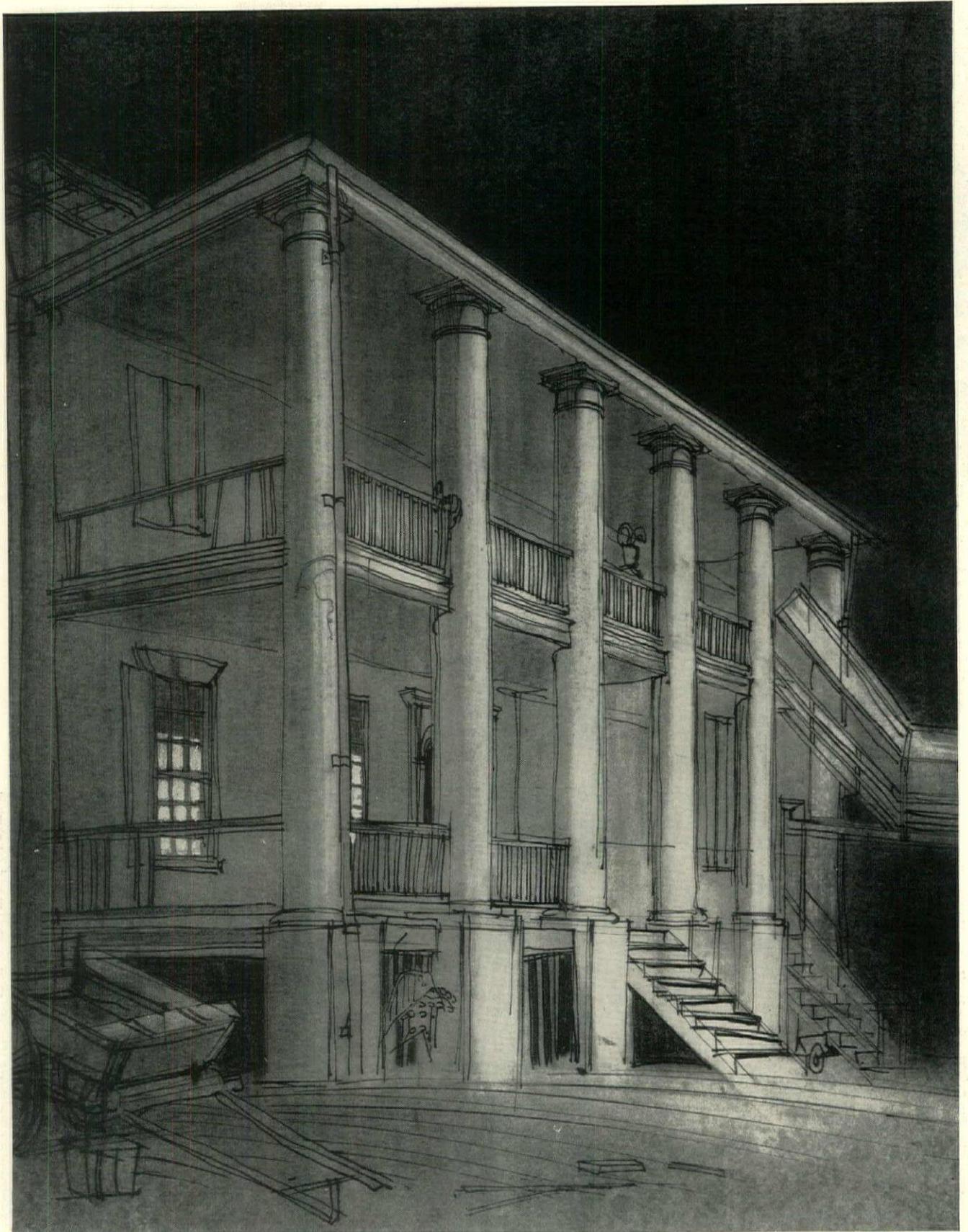


Saving the army
at the Battle
of Long Island

At one end of the chapel
is the George Washing-
ton memorial window, car-
toons for part of which
are reproduced. At the
other end, over the altar,
is the Martha Washing-
ton window. Other me-
morial windows are at
the sides of the chapel.
The windows were de-
signed and executed by
the D'Ascenzo Studios



Young Surveyor . . . Virginia Colonel . . . General of the Continental Army . . . President



Rear colonnade and balcony of the old Duncan house, Natchez, Miss., now used as a golf club. Drawn on tracing paper with ink, charcoal and pastel

AMERICAN SKETCHES

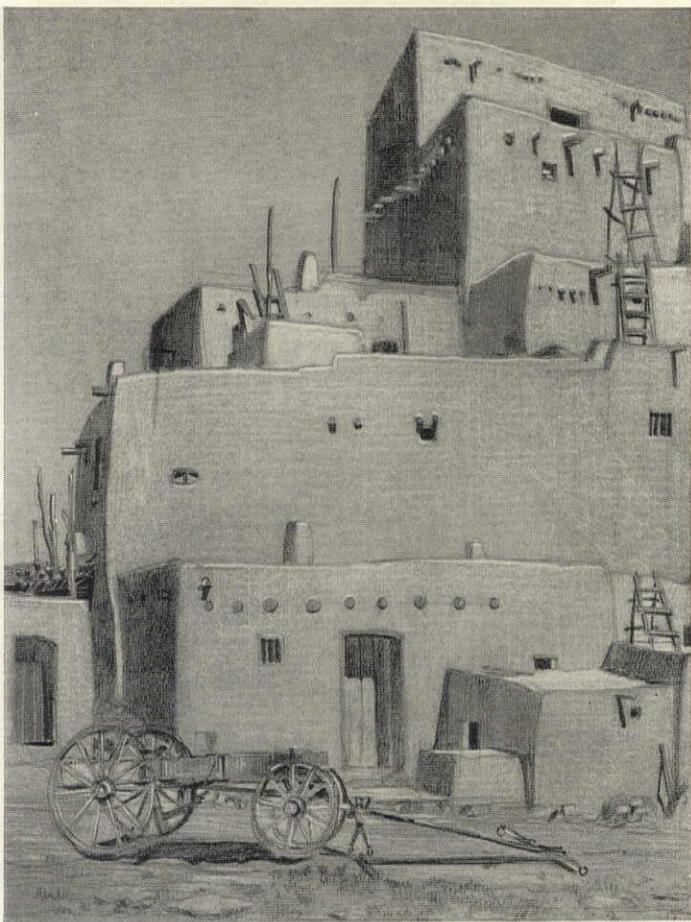
By Philip G. Freeman

Holder of Commonwealth Fund Fellowship
in Architecture, England

■ The English fellowship held by Mr. Freeman, tenable for two years, is for the purpose of traveling and studying architecture in America, the sketches presented being made on that trip. Last summer he journeyed through the United States traveling about 17,000 miles. Mr. Freeman is dividing his time between study at Yale, specializing in office buildings and apartments, and assisting in office and competition work with Francis Keally, New York

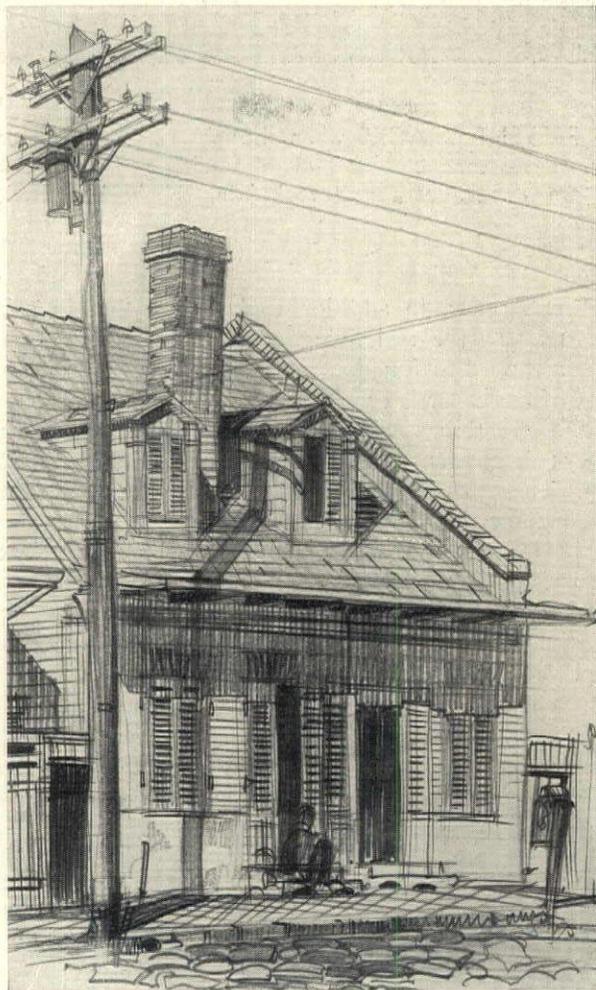


RANCHOS DE TAOS, NEW MEXICO. The Mexican Church. Drawn with Conte chalk on cameo paper



PUEBLO DE TAOS, NEW MEXICO

Adobe dwellings. Drawn on pastel paper with Wolff and colored pencils



NEW ORLEANS. Small houses near the docks. Drawn with Wolff pencil on 'cameo' paper

To Get a Dry CELLAR

By Edward F. Hammel

President Hammel Engineering and Construction Co., Mt. Vernon, N. Y.

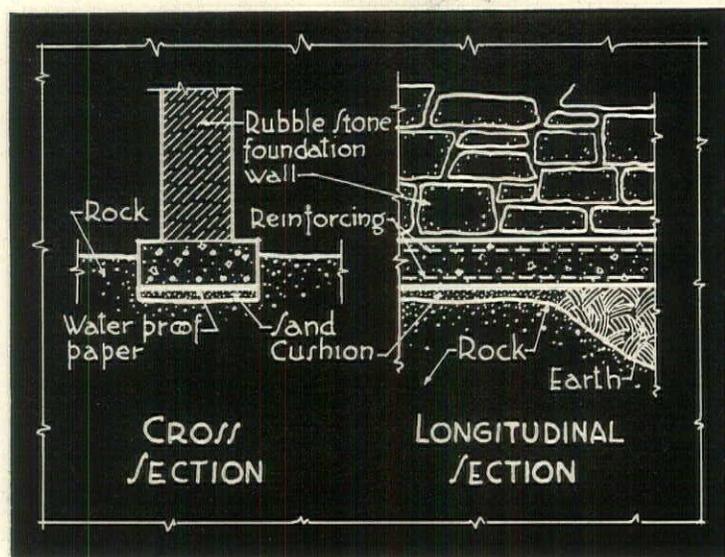


FIGURE 1

TO PREVENT CRACKS when footings rest on both earth and rock, a sand cushion and reinforcing rods, at top and bottom where earth and rock join, should be provided

THE cellar, in addition to housing what in effect may be the real living room of a house, is often arranged to function as a garage as well. Such use of the cellar is economically sound. There are, however, three things which mitigate against cellar occupancy; dampness, condensation and inadequate ventilation. The purpose of this article is to offer some suggestions for their prevention.

The information here given is based on experience, the writer having made it a point to inspect houses at varying periods after completion and occupancy, and has thus checked up on the efficiency of the methods employed.

It is not always possible to indicate on plans and in specifications all that is necessary to secure a dry cellar prior to exposing actual conditions at the site. Even when test pits are dug they often fail to reveal true conditions. A careful inspection upon completion of the cellar excavation, and prior to commencement of any masonry work is essential. Provision then can be made immediately for any changes should conditions vary materially from those anticipated. When sand or gravel is encountered there is little danger of trouble from ground water, and expensive damp proofing and drainage systems may be modified or eliminated.

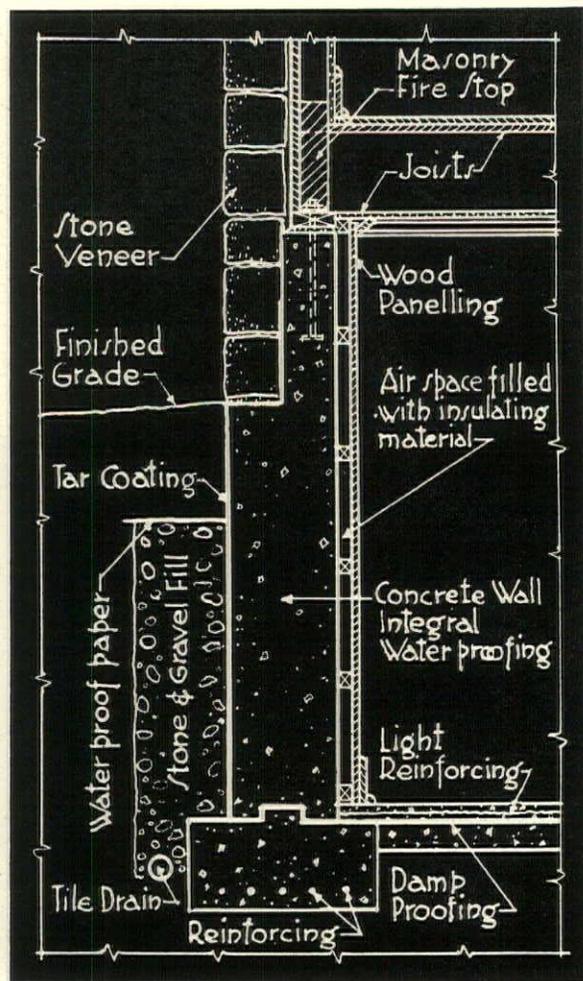


FIGURE 2

DAMP PROOFING foundation walls and cellar floor. Tile drain and stone fill may be omitted unless ground water is bad, in which case tile should be connected to an adequate drain

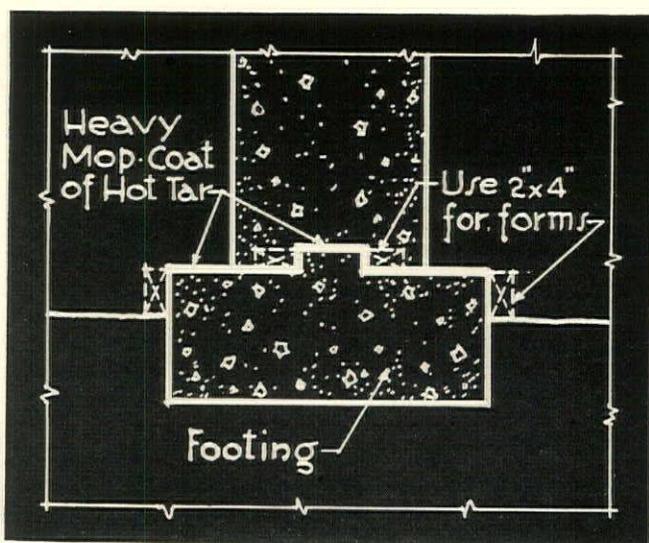


FIGURE 3

CAPILLARY ATTRACTION, which causes water to work up through wall, can be prevented

Data relative to local ground water conditions should be obtained. An excavation showing absolutely dry in August might have a foot of water if dug in April. Oc-



GILLIES

BASEMENT ROOMS LIKE THIS have developed a new necessity for cellars built as dry as upstairs rooms. Recreation room in a house designed by Lewis Bowman, architect

asionally springs, which dry up at times, and at other seasons send forth large quantities of water, are encountered. Foundations built in such localities must be well protected. Porous earth with an underlying strata of clay or rock will become saturated in rainy weather, the excess moisture seeping through unprotected walls. While it is possible to damp proof a cellar from the inside, should bad conditions develop after completion, it is more costly and seldom entirely satisfactory.

This article describes methods of damp proofing and not waterproofing. Therefore where a foundation must resist a constant head of water, walls and floors should be designed to resist hydrostatic pressure. In such cases ordinary damp proofing methods designed to keep moisture from penetrating masonry will be found ineffective to resist water pressure.

Irrespective of how well a wall is damp proofed, unequal settlement will cause the foundation walls to crack and open a breach for moisture to penetrate. Good footings are essential to a dry cellar. Where rock and earth are encountered in the same excavation, concrete footings are placed on a sand cushion as shown in Fig. 1. Unless this is done unequal settlement will occur at the junction of earth and rock, causing the foundation wall above to crack. Even when the entire excavation is in earth, it will often be found that the soil bearing capacity

varies, this also being conducive to unequal settlement. Unless the subsoil is uniform throughout it is safer to use a few reinforcing rods in the footings. Four to six $\frac{3}{8}$ " diameter rods will usually prove adequate. The reinforced footings will then bridge over any soft spots in the subsoil and settlement cracks are unlikely to occur. The cost of such reinforcing in place should not exceed ten cents per linear foot; about sixteen dollars for a foundation 30' x 50'—rather economical insurance against cracked foundation walls.

WHEN the concrete footings are thoroughly dry, they should be given a mop coat of hot pitch or tar. This is a precaution seldom taken, but is essential to securing a dry wall. At some seasons of the year the ground under the footings will be damp or wet. Capillary attraction in the concrete will suck the moisture from the ground, through the footings and up into the foundation walls. Irrespective of the efficiency with which the exterior face of the foundation walls is damp proofed, the unprotected footing is the Achilles' heel, ever vulnerable to the attack of moisture from below. Such footings should be constructed as shown in Fig. 3.

Proper inspection of the foundation walls *while they are being placed* is essential. Unfortunately buried work is sometimes slighted. (Continued on page 68)

As It Looks

A Plan 144 Years Old

DURING the past year or so a pleasant indoor pastime has been that of thinking up new three, five or ten year plans. B. F. Affleck, president of the Universal Atlas Portland Cement Company, offers a gentle reminder that "America has been operating under a successful plan for 144 years. And, at the present time, perhaps some proponents of legislative panaceas of doubtful economic value are also forgetting that the American Plan has stood the tests of time since September 17, 1787, when the Constitution of the United States was completed."

How Much Building?

THERE will be 17.5% more building in 1932 than in 1931, according to figures compiled by the Copper & Brass Research Association. Excluding public works, the estimated total is \$3,420,000,000. The greatest increase is expected in the central and middle western states. For the first time in four years, residential building is likely to exceed 50% of the total. Fewer commercial and industrial buildings are expected, but the forecast predicts more educational and public buildings, hospitals, hotels, churches, and residences. *AMERICAN ARCHITECT*, in an editorial in its December issue, expressed for the first time a feeling that the depression had hit bottom and that slightly better conditions might be hoped for. The survey of the Copper & Brass Research Association is another indication that this opinion was well founded.

Elevators and No Service

IT speaks well for the efficiency of modern elevator service that we seldom if ever speculate on what would happen if all the elevators in a large office building went out of service at the same time. A recent issue of "Buildings and Building Management" describes a near instance of this, which happened in a thirty-story office building in an eastern city. All express cars were idle from about nine to ten o'clock in the morning. The mechanical situation was perplexing because the cars would not operate yet "the motor-generators were turning merrily." Some thirty mechanics and engineers worked feverishly to locate the trouble, testing everything in sight. To make a long story short, some one finally discovered that the motor-generators were "turning backwards" due to an unannounced change made in the high-tension service line by the power company. The manager of the building, expecting to find a horde of raving tenants in the lobby, was surprised to find that the prevailing sentiment was one of curiosity and sympathetic understanding. But one tenant, confined in one of the stalled cars, was distressed due to an important telephone call he had to make. This was easily solved by making a telephone connection from the car, through the building switchboard, to the telephone exchange.

Advice From La Beaume

IN an address made at the laying of the cornerstone of Givens Hall, Washington University, St. Louis, Louis La Beaume had something worth while to say to the students of architecture. Incidentally, practicing architects can profitably read and ponder upon Mr. La Beaume's advice.

"You young architects of tomorrow have a high mission, for as we judge the culture of vanished epochs by its architectural remains; so will the civilization which we are building be largely judged by the architecture we leave behind us. The day of slavish copying, of servile imitation is drawing to a close. You are confronted by a new and everchanging world and your art must reflect the conditions which create it. Technique is important in your art as in all the arts, but mere technique is vanity and flippancy."

Our Money's Worth Wanted

STATEMENTS have been made by representatives of the Office of the Supervising Architect of the Treasury to the effect that it is cheaper to maintain a government architectural office than to engage private architects to design government buildings. Even if this were true—and its truth is open to question—the additional expense could mean but slight increase in our national taxes. But citizens would be unlikely to complain of any reasonable increase if they knew that they were obtaining better planned and more beautiful buildings. Since government buildings are in the nature of permanent structures, better designed buildings would automatically become better and sounder investments. Good buildings enhance local standards and values. Utilization of local labor and materials helps to stabilize local industry. We object to paying taxes only when we feel we are not getting full value for our money.

If the Public Is to Know

"ADVERTISING is the only effective means of combating the inroads of cures of various kinds being offered the public," according to Dr. Horace Whiteacre, president of the Washington State Medical Association. He maintains that physicians must advertise to "win back the confidence of the public and acquaint them with proper medical service." "Cures," so far as the practicing physician is concerned, are quite comparable to "stock plans." Another medical organization, the Hudson County Medical Society of New Jersey, has voted to use newspaper advertising following favorable comment on the society's advertising last May, which warned the public of diphtheria. Every profession is having its troubles through failure to keep the public properly informed, and all must sooner or later come to realize that to keep confidence and good will quality of service should be made known to all—which means advertising.

to the Editors . . .

More Attention To Homes

ACCORDING to James Wallen, an advertising writer, in the next few years the American people are going to give greater attention to their homes than they have done in recent years. This writer bases his prediction on the fact that "The automobile is about to be considered just what it is—a vehicle of transportation—and not a home on wheels." There may be much in what Mr. Wallen says, for it is true that today there is not much fun in driving for the sake of driving and more and more we think of the automobile as a means of getting quickly from one place to another. Let us hope that Mr. Wallen's forecast is correct.

Small House Service Bureau

CONTROVERSY has arisen at frequent intervals over the founding and operation of the Architects' Small House Service Bureau. If the Bureau and its method of operation are fundamentally right it is unlikely that there would be any pronounced opposition to it. If the idea of the Bureau is all wrong, it could not exist for more than ten years in the face of strong opposition. So one is forced to the conclusion that may be the Bureau is both right and wrong.

In any event, the pages of AMERICAN ARCHITECT are open for discussion of this topic in the hope that some good may come of it. In this issue there is published an argument for the Bureau written by A. L. Brockway of Syracuse, N. Y. and another against the Bureau by Seymour Williams of Rahway, N. J. Under "The Readers Have a Word to Say," there will be found a letter on this subject from Harry Lucht, Secretary, The Architects League of Northern New Jersey.

One, Two, Three, Four

WHAT'S in a number? To some people a number means good luck; to others it may be a street, bank book or year. Here is one that at least offers a moment's diversion. One, two, three, four is the number of the house in which Horace Peaslee, Second Vice President of the American Institute of Architects, resides in Washington. His telephone number is one, two, three, four. Each of these adds up to ten; his 1932 automobile license is eight two, also adding up to ten. This should please the students of numerology.

Competition Confusion

CLERICAL mistake in connecting the sealed envelopes with the designs submitted in the competition for a memorial to be constructed at Harrodsburg, Kentucky, is stated by the War Department to have been responsible for the incorrect announcement that Boris Riaboff and Robert Garrison were the winning competitors. The correct names of the winning competitors were Francis Keally and Ulric Ellerhusen. The

mistake was discovered by an architect familiar with Mr. Keally's design, who viewed the drawings on exhibition after the jury had made its award. This is not the first competition in which error has occurred. Competitions are hazardous and costly. Why continue to carry a students' game into business?

Pictures in the Dark

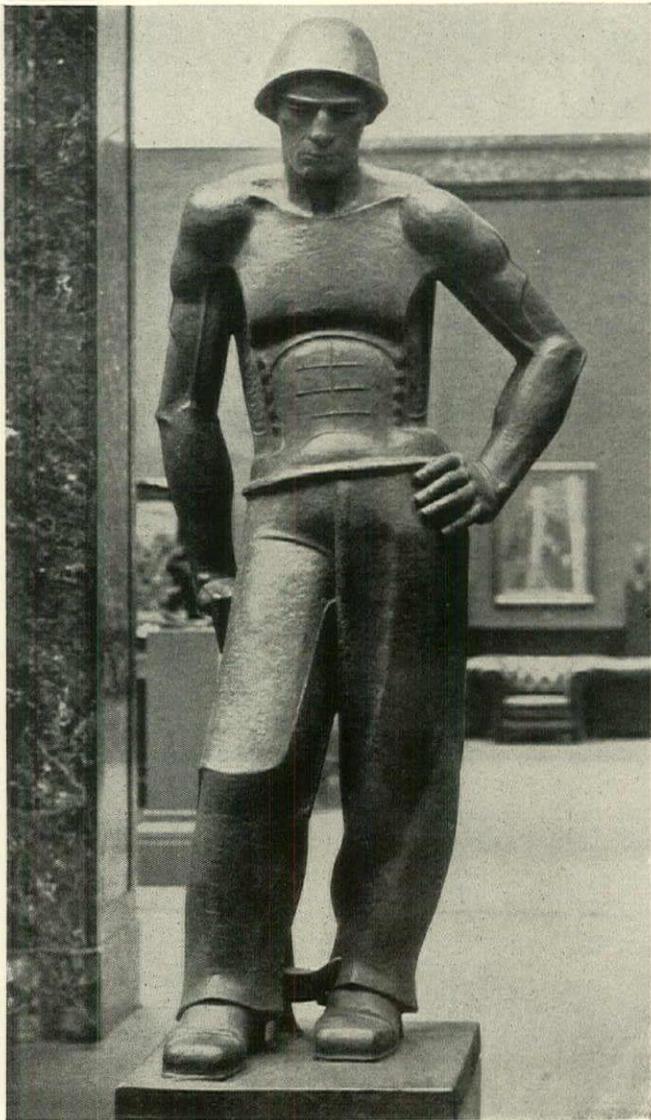
A FEW months ago these pages contained comment on the utilization of flash light bulbs that have been perfected and called attention to the fact that it would not be amiss to provide electric circuits for such bulbs in meeting rooms where photographs would probably be taken. Shortly after that an announcement appeared in the newspapers to the effect that new developments in emulsions for photographic plates and films will make possible the taking of photographs *in the dark*. This is accomplished through the utilization of infra-red light rays that are of such length that they are invisible to the eye, rays of such strength that photographs may be made with short exposure on plates made sensitive to them. With the perfection of these plates all that need be done is to set up and focus the camera, shut out all but the infra-red rays of light for a short time—the room appears to be dark—close the camera and switch the light on again. Things are happening fast!

Bills in Congress

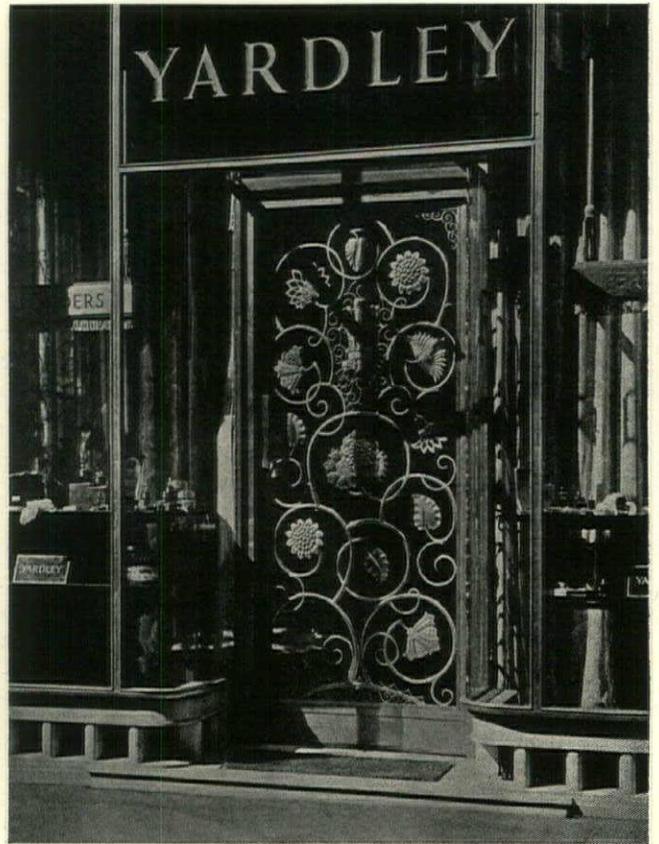
IN addition to the bill sponsored by the American Institute of Architects and introduced in the House of Representatives by Congressman Green on December 17, 1931, making it mandatory for the Supervising Architect of the Treasury to contract for architectural and engineering services, several other bills of interest to architects have been introduced.

On December 21, 1931, Congressman La Follette introduced in the Senate Bill S.2419 to create an Administration of Public Works. This bill affects only such construction work as may be construed to be public works activities. It is intended to provide for a "more effective coordination and correlation" of Government public works in order to accelerate public construction during the present emergency. The Administrator of Public Works would have charge of certain work now under the jurisdiction of the War Department, the Reclamation Service, Bureau of Public Roads, and the Office of the Supervising Architect of the Treasury.

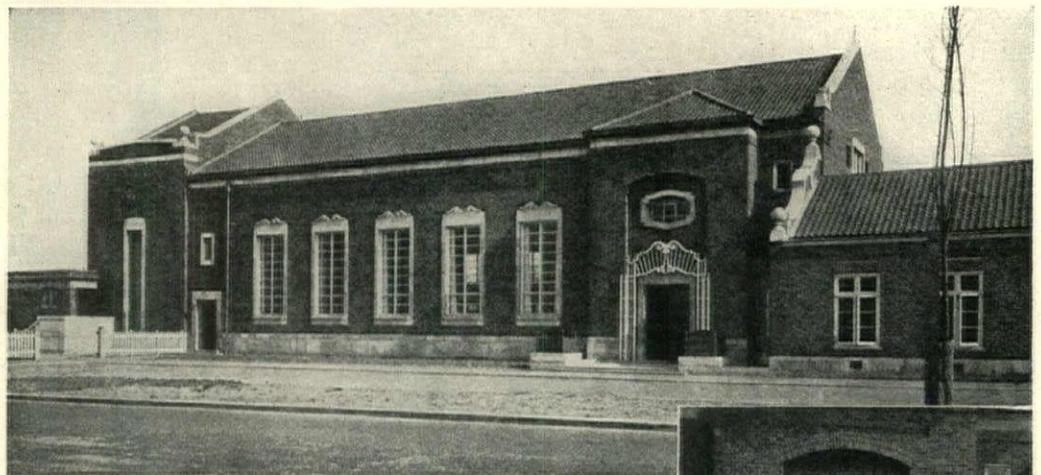
Congressman Fulmer, on December 18, 1931, introduced Bill H.R.6307 in the House of Representatives. This bill would grant "the Secretary of the Treasury authority to employ a local State resident architect in the construction of Federal buildings." This bill stipulates that for Federal buildings or additions to existing buildings costing more than \$10,000 the Secretary of the Treasury "shall employ . . . a local State resident architect, provided a competent, qualified architect is available within the State."



THE MOUNTAINEER
by Rudolf Belling,
exhibited at the Ex-
position of Artists
Society, Essen, Ger-
many. From "Die
Kunst," November



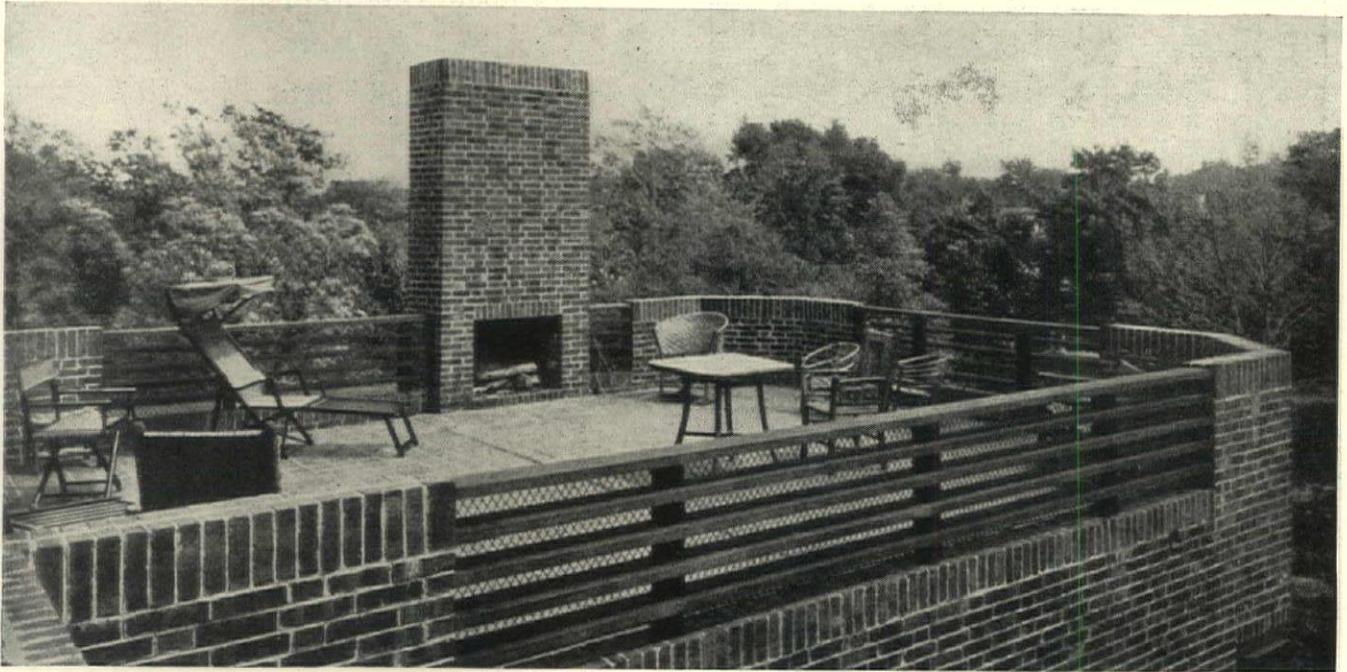
SCENT SHOP entrance doorway on the ground floor of Yardley House, London. The shops were designed by Yardley Ruhlmann of Paris. Reco Capey designed the gilt bronze entrance door. From the November issue of the "Architectural Review"



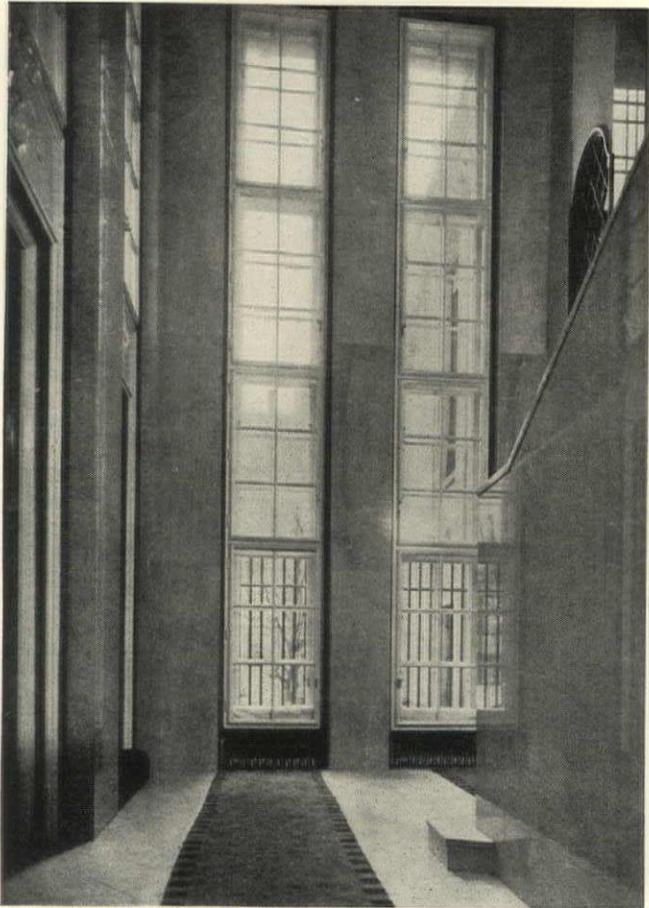
RECREATION CLUB, Billingham, Stockton-on-Tees, England. L. H. Bucknell, architect. Exterior walls are built of multi-colored sandfaced bricks with cast stone trim. The roof is covered with red sandfaced, hand-made tiles. The principle facade and main entrance are shown above and at the right. From the "Architectural Review" of London, Nov.



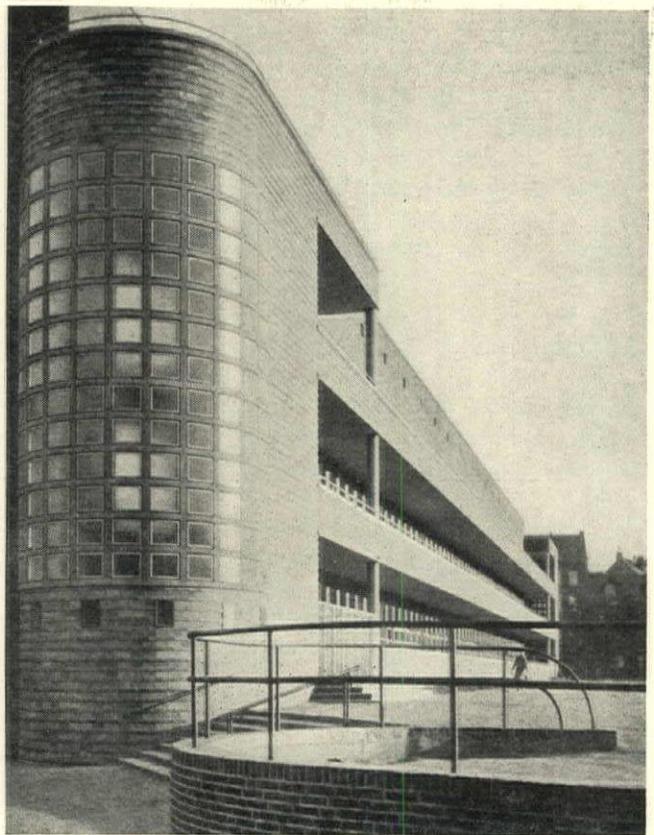
...and ABROAD



OPEN FIREPLACE on the terrace of a country house at Winnetka. Howard T. Fisher, architect. From "Moderne Bauformen", December 1931 issue

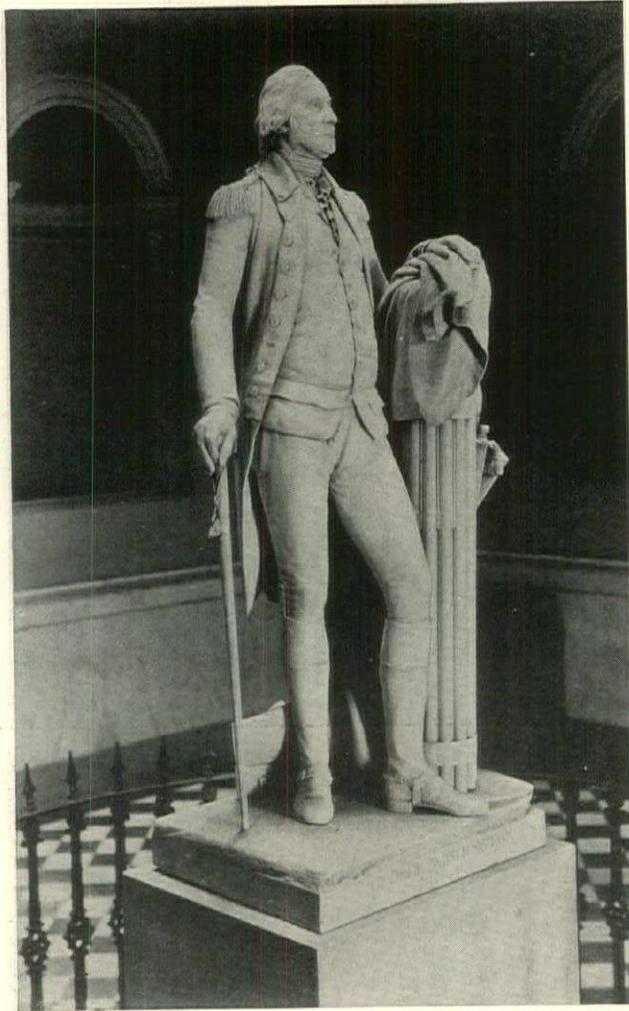


MARBLE HALL, with double windows, and staircase in the House of Panzer, Hietzing. Josef Hoffmann, architect. From "Moderne Bauformen," October, 1931



STAIRCASE WINDOW and balconies in the Kiel Labor Exchange. Dr. Eng and Herr Schroeder, architects. From "Architectural Design and Construction," Oct., 1931

WHAT ARCHITECTS



PUBLISHERS PHOTO SERVICE

\$5,000,000 WAS REFUSED by the Commonwealth of Virginia for this statue by Houdon of George Washington. In the State Capitol Building in Richmond

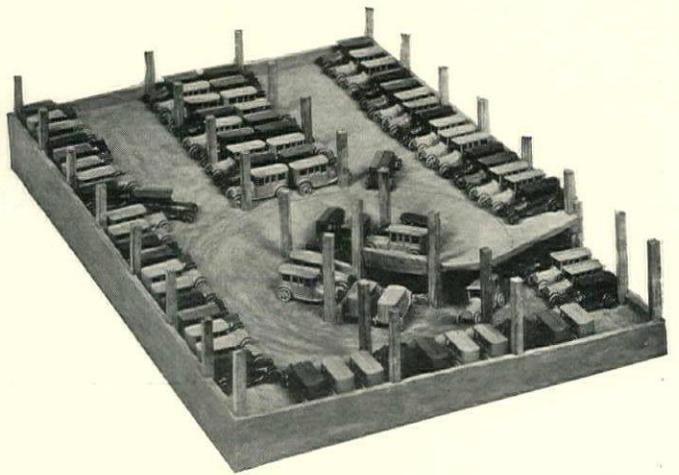
PRESIDENT HOOVER has recommended to Congress that all public works building and construction activities of the government be consolidated into an independent bureau to be known as the "Public Works Administration."

IMMEDIATE REVISION of building trades wage scale is essential if there is to be a spring revival of construction, according to a statement made by Edward M. Craig, executive secretary of the National Association of Building Trades Employers, as a result of a survey among builders in fifty cities. He points out that organized builders are handicapped by collective agreements with building crafts, while the speculative contractors can buy labor at 30% to 40% below the regular scale. The association also states that out of eighteen architectural offices interviewed, they found almost \$34,000,000 worth of new construction frozen on account of present conditions. They believe a wage adjustment will mean a release of this work in the spring.

Two-Level Streets Recommended in New York Regional Plan

New York Houses Financed for 10% Down

Research Bureau Needed to Study \$3,000 Houses Built in a Week



SPIRAL RAMPS FOR GARAGES. Model of saucer spiral system developed by Bishop, Knowlton & Carson, architects and engineers, and Skiles E. Test. Cars can be driven on or off ramp at any point; over 60% of cars can be parked without maneuvering. Grade about 8% at center, diameter 66'. Adaptable to buildings of various sizes and shapes, whether new or old structures

A \$50,000,000 housing development for the East Side of New York City between Brooklyn and Manhattan Bridges has been announced by Fred F. French, builder of Tudor City. It is planned to rent apartments for \$20 a room or less. Fourteen and a half acres have been acquired. The first unit will be a 12 story apartment house having 1,000 rooms.

S MALL HOUSES around New York City are often financed with 10% down; \$8,000 houses have in some cases been sold for as little as \$200 down. It is claimed that there have been very few repossessions.

A BILL providing for the organization of home loan banks, as proposed by President Hoover, has been introduced into the House by Representative Luce of Massachusetts. This bill calls for the establishment of twelve regional banks that would discount first mortgages on houses, thus relieving loan organizations of part of their burden of frozen assets.

ARE TALKING ABOUT

Hoover Recommends One Bureau For
All Government Building

Building Wage Reductions Advocated

\$50,000,000 Housing Development
for New York East Side

"WHAT we most need in this country to revive and maintain prosperity is more government by and for the taxpayers and less government by and for the tax eaters," said Samuel O. Dunn, president of the American Builder Publishing Corp., in an address at the annual convention of the Associated Leaders of Lumber and Fuel Dealers.

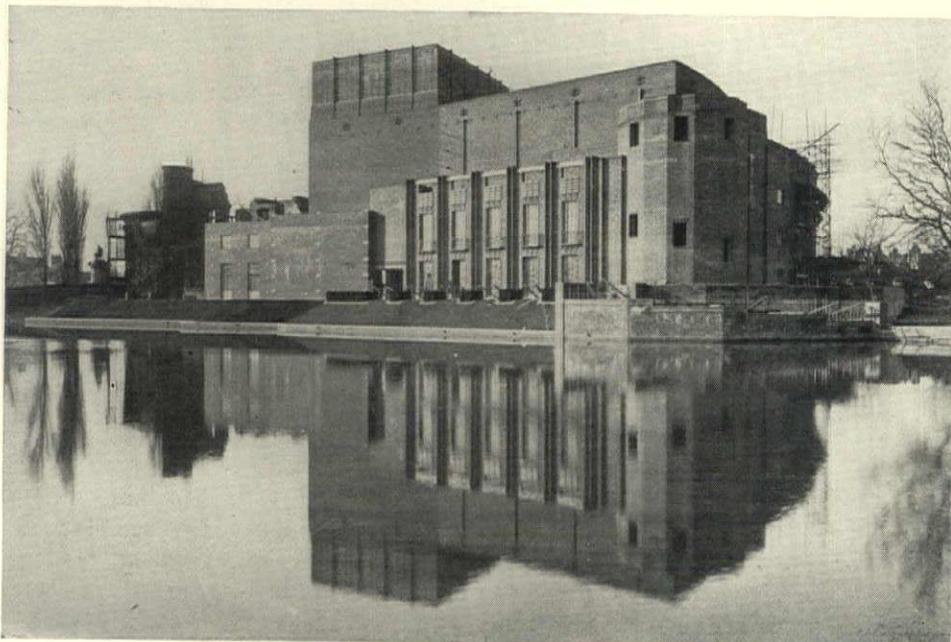
A RESEARCH bureau is needed by the building industry to study how a house can be produced for \$3,000 and erected in less than a week, financing being on a long time basis, according to Wallace W. Harrison of Corbett, Harrison and MacMurray, architects. He says, "It must be fireproof, stormproof and floodproof, full of sunlight, equipped with every modern device, erected by union labor, sold by present material men, and able to pass all building laws."

SEPARATE LEVELS for pedestrians in congested areas with possible second story entrances to buildings, and a limited use of two-level roadways where overcrowded buildings or favorable topography makes them expedient, are proposed by the Regional Plan of New York and Its Environs. Center walks for pedestrians are proposed for streets where trucks make frequent deliveries. In sub-central areas it is proposed that residential buildings should (Continued on page 86)



MURAY-DIEHL

SILVER LEAF mantel. One of objects displayed at the Brownell-Lambertson Galleries, New York, a new service to bring architects and mural painters together and to make available contemporary art objects



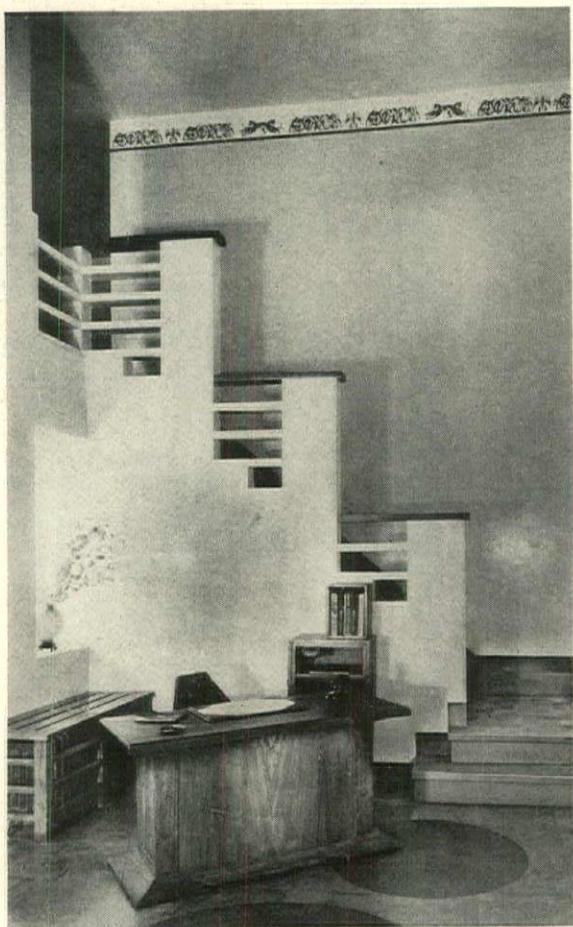
ACME

SHAKESPEARE Memorial Theatre at Stratford, England, nearing completion. Elizabeth Scott, architect. It is placed on the bank of the Avon in the midst of a formal garden and will have a seating capacity of about 1,000

CONTEMPORARY AMERICAN ARCHITECTS

A series of separately issued monographs by Arthur T. North, A.I.A. on Hood, Cram, and Kahn. Published by Whittlesey House, New York. Each bound in different colors and containing a brief historical sketch of the architect whose work is illustrated; size 8 x 9½; indexed; each about 120 pages; price \$3.00 each or \$8.00 for the set of three

It is refreshing to see the most interesting work of famous living American architects presented in an effective and inexpensive fashion. Of no inconsiderable value is the foreword by Mr. North in each book, telling something of the architect's theory of building. Too, the brief discussion of each building illustrated, written after conference with its architect, has no little value. The books will unquestionably be looked at with interest by architects primarily concerned with what is being done in the field of architecture today. Other monographs in the series are planned.



Detail of a Rex Cole Show room, New York.
From "Raymond Hood"

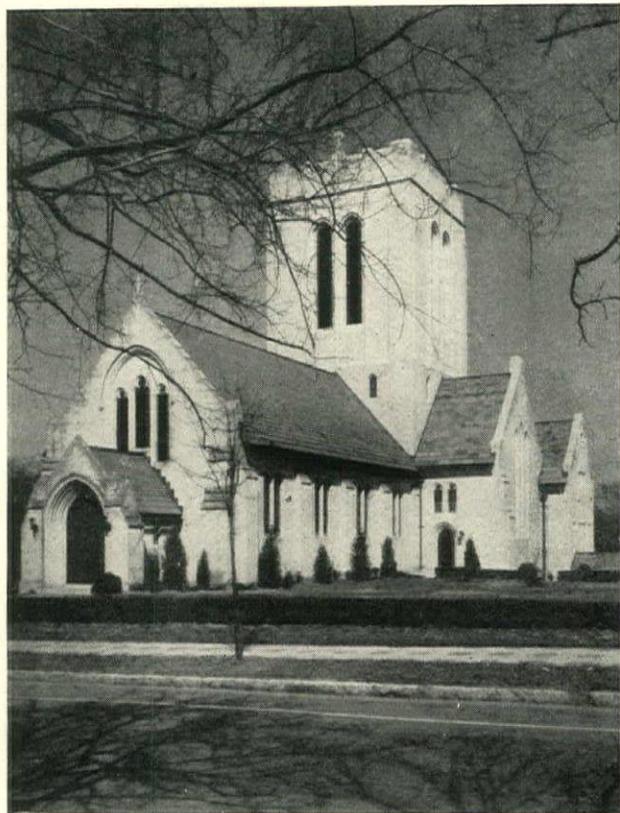
RAYMOND HOOD

(Contemporary American Architects)

MOST architects are inclined to associate the name of Raymond Hood with spectacular buildings such as the Daily News Building and the McGraw-Hill Build-

ing. Such will be surprised to see pictures of quite conservative churches designed by Mr. Hood, of a masonic temple, of residences, and other types of building where his artistic flair is always present with that unusual twist which makes his work so distinctive.

Mr. North says in his foreword: "Holding the belief that architecture is the business of manufacturing shelter for human activities, Mr. Hood has exemplified his belief in a convincing manner by his work. This concept of architecture imposes only one restriction—that the product must be adequately practical as a shelter for human activities; otherwise, the utmost freedom is enjoyed."

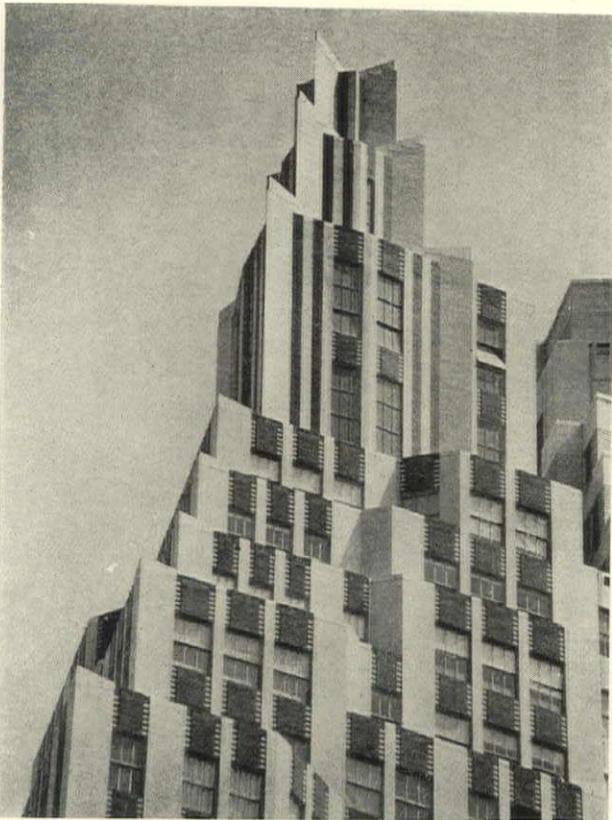


Church of the Ascension, Montgomery, Ala.
From "Ralph Adams Cram"

RALPH ADAMS CRAM

(Contemporary American Architects)

WRITES Mr. North in his introduction, "Some architectural styles, such as the Gothic manifestations in several countries, were invented for and dedicated to a *specific use* which has continued to this day in the original or modified forms. It was this continuity of use and its appropriateness that was the basis of the conception of Cram and Wentworth and their successors, including Cram and Ferguson, of the ideal American Christian Church. A consistent adherence to this ideal did not in any manner prevent their work assuming a wide range of individual expressions, a testimony to their extensive knowledge and understanding, liberally expressed."



Detail, Casino Building, New York. From "Ely Jacques Kahn"

ELY JACQUES KAHN

(Contemporary American Architects)

QUOTING Mr. North's introduction, "At no time, probably, was there a greater need than there is at present for leadership exempt from the influence of traditions which are not consonant with contemporary civilization. This is especially true of architecture. Mr. Kahn evidences in his work a freedom from old-established conventions that are common features of American architecture at this time, and in this he displays an unusual facility that is guided by a cultivated sense of discrimination, and a continuous growth that is essential to the evolution of a great architecture."

KIDDER-PARKER ARCHITECTS' AND BUILDERS' HANDBOOK

By the late Frank E. Kidder: A new edition compiled by Harry Parker, A.I.A., editor-in-chief, and a staff of specialists. Illustrated; indexed; 2315 pages; size 4 1/2 x 7 1/4; price \$8.00

THIS eighteenth edition of a well-known standard handbook has been brought thoroughly up-to-date, many chapters having been revised or entirely rewritten. A number of new chapters have been added.

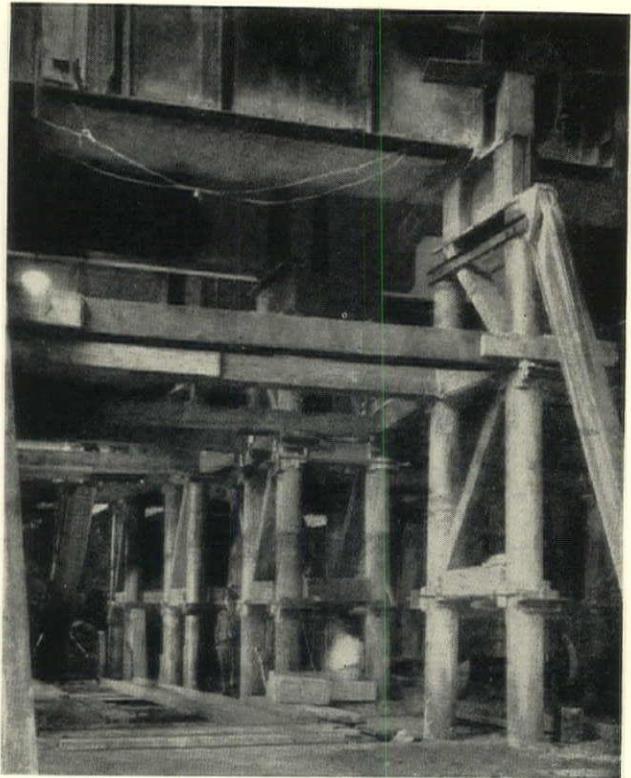
It covers practical arithmetic, geometry and trigonometry; strength of materials and stability of structures; foundations; masonry walls, footings for light buildings, cements and concretes; retaining walls, breast walls and vault walls; reactions and bending moments for beams; wood framing; fireproofing of buildings; reinforced concrete construction; roof-trusses; elevator service; heating and ventilation; acoustics; electric wiring; and many other such subjects.

THE CHOICE OF A BUILDING CONTRACT

By Morton C. Tuttle. Published by the Morton C. Tuttle Company, Park Square Bldg., Boston, Mass. 46 pages; size 6 1/2 x 9 1/2; price \$1.00

A NON-TECHNICAL discussion of the merits and defects of the various forms of contract commonly used in building and engineering operations. Intended to answer the question, "If I sign a building contract of this type, what is likely to happen to me?"

Mr. Tuttle is president of the Morton C. Tuttle Company, well-known building contractors of Boston. He writes well and his discussion of the subject will prove of value.



Lafayette Street subway supported on underpinning piles, showing sway bracing. From "Underpinning"

UNDERPINNING: ITS PRACTICE AND APPLICATIONS

By Edmund Astley Prentis and Lazarus White. Published by the Columbia University Press, New York. Illustrated; indexed; 317 pages; size 6 1/4 x 9 1/2; price \$7.50

THE authors, who are members of the firm of Spencer, Prentis and White, have had plenty of experience in designing difficult foundations. Their book is, therefore, above all thoroughly practical and based on known facts rather than theory.

The book covers preliminary supports, underpinning methods, examples of underpinning, applications of underpinning methods to other work and some aspects of the science of foundations. There are 150 illustrations, an appendix on specifications (including payments), an appendix on legal aspects of underpinning and foundation work, and a glossary of terms used in underpinning.

IN THE HOUSE OF REPRESENTATIVES

December 17, 1933

Mr. Gause introduced the following bill, which was referred to the Committee on Public Buildings and Grounds and ordered to be printed

A BILL

To direct the Secretary of the Treasury to contract for architectural and engineering services in the designing and planning of public buildings.

1 Be it enacted by the Senate and House of Representa-
2 tions of the United States of America in Congress assembled,
3 That the Secretary of the Treasury is hereby authorized
4 and directed to employ by contract, and at the established
5 rates of compensation, outside professional or technical
6 service of competent persons, firms, or corporations, for the
7 architectural and engineering designing and planning of
8 such Federal buildings as are now or may, in the future,
9 be placed under the jurisdiction of his department, without

1 reference to the Classification Act of 1923, as amended, or
2 to section 3709 of the Revised Statutes of the United States;

3 SEC. 2. That such employment shall be based at all
4 times on the highest grounds of proven professional ability
5 in order that our Federal architecture may truly represent
6 our national genius and keep pace with the rapid develop-
7 ment of the arts of architecture and engineering. Archi-
8 tects or engineers shall not be employed without prior
9 submission to the Secretary of the Treasury of satisfactory
10 evidence of their qualifications and experience.

11 SEC. 3. That wherever circumstances warrant, such
12 services shall be contracted for by the employment of the
13 ablest architects and engineers resident in the general sec-
14 tions of the country wherein such Federal buildings are
15 to be erected.

16 SEC. 4. At the discretion of the Secretary of the Treas-
17 ury, the employment of outside architects or engineers may
18 be omitted in connection with public buildings of a total cost
19 for building and site of not more than \$50,000.

20 SEC. 5. That all such individuals, firms, or corpora-
21 tions shall render their services subject to the approval and
22 under the direction of the Supervising Architect of the
23 Treasury, whose duty it shall be to set for the Government
24 in all matters regarding sites, the allotment and subdivision
25 of space, the control of technical detail, the letting of con-

1 tracts, and the supervision of the erection of said Federal
2 buildings.

3 SEC. 6. Nothing in this Act shall be construed to affect
4 the duties of the Supervising Architect of the Treasury in
5 regard to maintenance, alterations, repair, or supervision of
6 either existing or proposed public buildings.

7 SEC. 7. That the cost of compensation for outside pro-
8 fessional or technical services shall be charged to the appro-
9 priation for the construction of the building for which such
10 services are rendered.

11 SEC. 8. All Acts or parts of Acts inconsistent with
12 the terms of this Act are hereby repealed.

HOW CAN WE PASS THIS BILL to Get the Government Out of the Architectural Business?

"I'm afraid they've got us licked, Jim," said old man Baxter ruefully. "I don't see how private architects can prove they can make drawings that cost less than those of government architects."

"Why not?" challenged his friend, an architect who had turned advertising man.

"Well, you see it's this way," replied Baxter, a man highly thought of in the profession for his ability and integrity. "Those government bureaus don't charge up rent, light, taxes, and all the overhead we private architects must take into consideration. And on top of that, they often use standardized sheets and standardized specifications that certainly are time savers even if a lot of them are so out-of-date that, as Representative Hill of Washington testified, the valves specified in a recent job were so antiquated and out-of-date that the plumbing contractor couldn't find them in the catalogs!

"I guess we'll just have to try to keep away from figures and depend on some fine speech-making about beautiful architecture and local traditions."

"Baxter, you're dead wrong. If you are afraid to talk figures, the Treasury Department certainly is not. If everybody talked and thought as you do, the bills in Congress right now would never get out of committee.

"Let me tell you one thing. The public doesn't care a tarnation hoot about the cost of drawings. You admit yourself you may be licked there before you start. Anyhow, the cost is only a few thousand dollars one way or another.

"But what the public, the taxpayer, is interested in is the cost of the completed building and the time it took to build it from the *very day drawings were started*. Right there is your *big* saving.

"You can prove, can't you, that a private architect is able to get a building done quicker and cheaper than can a government bureau?"

Baxter looked at his architect-advertising friend with

a new respect. "Yes, I guess so. When you stop to think of it, a local architect sort of has a habit of thinking in terms of local materials and the local way of building the most economical way. Seems to me that Glenn Brown made a summary back in 1894 which proved that very thing and that his testimony played a big part in getting the Tarsney Act passed."

"Well, why not base your fight on that basis? If you can prove it, why be afraid of facts and figures? Nobody is particularly interested in the cost of drawings—it's the cost of the completed building that counts. And, even if drawings by private architects cost more, what of it if the result is a more up-to-date building at less cost?"

"I guess you're right, young fellow, but how are we going to get those facts?"

"Put it up to the profession itself!"

HAVE YOU ANY FACTS?

BILLS sponsored by the American Institute of Architects and others—intended to get the government out of the architectural business—have been introduced in Congress. If the building industry is to win, it must be well fortified with facts and figures.

● American Architect wants proved facts showing government inefficiency in meeting local building problems or how private architects have completed government work quicker, better or at less expense than the Treasury Department. A minimum of ten dollars will be paid for facts of value, which is intended to cover the cost of the submitter's getting the facts. Information will be regarded as confidential when requested.

● Quick action is desired. Address letters to Editor, American Architect, 57th St. and Eighth Ave., New York

Evidence of Widespread Acceptance of COPPER RADIATION

Below are listed a few of the many buildings in which
Copper radiators have been installed:

<i>Installation</i>	<i>Architect</i>
Waldorf-Astoria Hotel New York, N. Y.	Schultz & Weaver
Empire State Corporation New York, N. Y.	Shreve, Lamb & Harmon
New York Life Insurance Bldg. New York, N. Y.	Cass Gilbert
Michigan Bell Telephone Co. Detroit, Mich.	Smith, Hinchman & Grylls
"The Walnuts" Apartments Kansas City, Mo.	Boillot & Lanch
Manhattan Company Building New York, N. Y.	H. Craig Severance Associated Architect: Yasuo Matsui Albert Kahn
Shaarey Zedek Church Detroit, Mich.	
Medical Arts Building Cleveland, Ohio	Graham, Anderson, Probst & White
Lee Higginson Building New York, N. Y.	Cross & Cross
National City Bank (52 Wall St. also Canal & Bway) New York, N. Y.	Walker & Gillette
New Yorker Hotel New York, N. Y.	Sugarman & Berger
Savoy Plaza Hotel New York, N. Y.	McKim, Mead & White

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ANACONDA COPPER

THE READERS Have a Word to Say

• STANDARD SPECIFICATION FOR ELEVATORS

Editor, AMERICAN ARCHITECT:

IN 1928 a Section Committee, under the American Standards Association procedure, began the preparation of a Safety Code for Elevators. The project was sponsored by the U. S. Bureau of Standards, the A. S. M. E. and the A. I. A. The first edition of the American Standard Safety Code for Elevators was published in 1925. The preparation of this first edition of the code disclosed a lack of knowledge in regard to the design, construction and functioning of auxiliary devices. Consequently, in 1926 the committee established a research fellowship at the Bureau of Standards and initiated a research program which would develop the information required for a future revision of the code.

The revised code was published last summer (1931) and is now available. It should be made the basis of the specification for every elevator installation. The expectation back of the preparation of such a code is that it will be given the force of law through adoption by states and municipalities, and that by such adoption, safety requirements for elevator installations will be uniform. Accomplishment of this highly desirable and advantageous end will be greatly expedited by the use of the code as the basis of architects' specifications. To facilitate such a use of the code, the committee has undertaken the preparation of a standard specification for elevators.

The committee wishes to caution the architectural profession against the use of any alleged standard specifications for elevators not approved by the American Standards Association. This word of caution is spoken because of the character of specimens of such specifications as have come under the eye of the committee.—*Sullivan W. Jones, F. A. I. A., Chairman, Committee on Safety Code for Elevators, American Standards Association, 25 West 45th Street, New York*

• RESENTS GOVERNMENT DEFINITION OF ARCHITECT

CHARLES LENCH sent AMERICAN ARCHITECT a copy of a letter written to Walter J. Greenleaf, The Office of Education, U. S. Department of Interior, Washington, D. C., referring to the editorial on page 19 of the January 1932 issue.

Dear Mr. Greenleaf:

As a teacher of architecture at Columbia, Harvard and Massachusetts Institute of Technology, I am in thorough agreement with Mr. Benjamin F. Betts, Editor of AMERICAN ARCHITECT, who states in the January issue of AMERICAN ARCHITECT that it would have been better had your leaflet No. 10 never been printed. Such gross ignorance of the functions of an architect displayed by the writer of this leaflet will shock most practising architects. Certainly, as Mr. Betts suggests,

it would have been so easy to have had the leaflet read by someone who *knew* before it was printed.

Personally I do not know of any architectural engineers. I do, however, know of structural engineers and individuals who classify themselves as architects and engineers.

Although an architect, I happen to be a member of the Realty Finance Committee of the National Conference on Construction, Washington, D. C. The object of this committee is to undertake an analysis of "the utilitarian purposes of a building and the efficiency with which it may be managed when completed," all of which, according to your pamphlet, is the function of an architectural engineer. It is my humble opinion that from now on you will be deluged with letters from architects in all parts of the country who will resent, as I do, your definition of an architect as compared with that of an architectural engineer. There is not an architectural school in the country today that does not train its students to figure foundations, columns, beams, roof trusses, etc. In order to function properly, an architect must combine a knowledge of proportion with all the other practical matters necessary to construct the building and to assure its success as an economic entity on completion.

May I presume to suggest that should you want a thoroughly modern interpretation of the functions and duties of an architect, you could probably do no better than to consult such an outstanding educator as Dean Harold G. Edgell of the Harvard Architectural School who, by the way, was trained as an artist and not as an architect but who, in my opinion, has a more thorough grasp of the all-round requirements of the modern architect than anyone I have ever talked to.—*Charles H. Lench, architect, 110 West 34th Street, New York*

• MAGAZINES AND BOOKS FOR SALE

Editor, AMERICAN ARCHITECT:

KINDLY note that I have the following for sale: AMERICAN ARCHITECT, July 1924-December 1928 bound, and January 1929 to December 1931 unbound. The Architect, July 1928 to June 1931 unbound.

Guptill's Sketching and Rendering in Pencil, 1 vol. Winning Designs Paris Prize, Pencil Points book, 1 vol.

All are in good condition.—*Henry J. Larreco, 1110 West 51st Street, Los Angeles*

• SKYSCRAPERS ON NARROW STREETS

Editor, AMERICAN ARCHITECT:

FROM time to time it has seemed to me that building great numbers of skyscrapers on narrow streets in congested districts was a great mistake.

Chicago's largest office building is now going up across the street from my office here, Marshall Field

THROUGHOUT THE AGES

CHURCHES

HAVE SYMBOLIZED PERMANENCE
AND SECURITY

*St. Cassimer R. C.
Church, Buffalo, N. Y.
Chester Oakley, Archi-
tect, Buffalo, N. Y.*



TRADITION demands that materials of unchanging nature be used for church construction and protection. . . . How desirable that for roofing a product be selected that time and the elements affect only by enhancing its beauty. . . . Ludowici Tile is such a product. . . . The main roof of the church pictured here is covered with Ludowici Spanish Tile—a softly blended mixture of reds, tans and browns with a sprinkling of fire-flashed. . . . On the domes are Ludowici Special Diamond Pointed Shingle Tile—variegated colors—highly

glazed—skillfully laid to produce the desired effect. . . . The beauty, dignity and character of roofs of Ludowici Tile are peculiarly appropriate for ecclesiastical property. . . . We are always glad to furnish samples and information—and to be of assistance. . . . Our catalog is in Sweet's.

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Estate, owners. This is on Adams Street extending from Clark to LaSalle. Adams Street has a street car line of two tracks and two lanes for automobiles, which means that when an automobile stops at the curb momentarily all traffic which cannot get by in the street car tracks stops. It seems unfortunate that owners of this building did not set it back four or five feet so as to provide two lanes on that side of the street instead of one.—*B. F. Affleck, Architect, 208 South LaSalle St., Chicago*

• ARCHITECTURAL ORGANIZATIONS
ENDORSE EFFORTS TO ELIMINATE
A.I.A. SPONSORING STOCK PLANS

Editor, AMERICAN ARCHITECT:

I AM pleased to submit to you the returns in response to the letters of our President, Mr. Clarence H. Tabor, Jr., dated November 7th and 27th regarding the Architects' Small House Service Bureau and its continued control and endorsement by the American Institute of Architects and the United States Department of Commerce.

We are only submitting those of architectural organizations and not individuals. The replies of many organizations are pending upon coming meetings and routine order of business. Letters received from several Institute chapter secretaries indicate that their chapters will also fall in line with those that have already done so.

Those who have replied to date by letter or resolution as opposed to the activities of the Bureau and especially its endorsement by the A. I. A. and the United States Department of Commerce are as follows:

- Hawaii Chapter A. I. A.
- Toledo Chapter A. I. A.
- New Jersey Chapter A. I. A.
- Kansas City Chapter A. I. A.
- Baltimore Chapter A. I. A.
- Central Illinois Chapter A. I. A.
- New Jersey Society of Architects
- Hudson County Society of Architects
- Union County Society of Architects
- New York Society of Architects
- Camden Society of Architects
- Westchester County Society of Architects
- Architects Club of North Hudson
- Long Island Society of Architects
- Brooklyn Architectural Club
- Staten Island Society of Architects
- The Architects League of Northern New Jersey

Only one Chapter thought the Bureau worth defending, replying "that after a brief discussion their opinion was that the Architects Small House Service Bureau as conceived and operated is still functioning in the proper fashion and manner" This is similar to statements made for the Institute by Bureau officials and executives in the past.

It is significant to note that all of these replies were obtained without any personal solicitation or high pressure method speeches addressed to organizations or Executive Committees, but that they are purely voluntary and of self accord.

It is also significant that the entire state of New Jersey is represented by each and every architectural organization including the Institute Chapter. This state is the seventh largest in population in the country and has an exceptionally large residential territory suburban not only to its own large cities but to Philadelphia and New York City as well. Furthermore, the great majority of all of the architectural organizations of Greater New York City are similarly represented as in accord on this matter, representing a population and suburban residential territory exceeding that of any other state in the country. This comprises Westchester County and Long Island, which for years have given the architectural profession some of the finest examples of residential design known.

These combined territories so strongly represented by the profession on this question are of more than ordinary meaning due to the residential field which they represent. The rank and file of the profession at large have been able to observe and judge the results of the propaganda of the Bureau. They now render their decision.

At a recent conference in New York City representatives of the organizations and many prominent architects opposed to the Bureau made known their desires in no uncertain manner to officials of the Institute, among whom were present Mr. Robert D. Kohn, President A. I. A.; Mr. Albert L. Brockway, Regional Director A. I. A., and Mr. William Stanley Parker, President Architects Small House Service Bureau. The latter stated that the Institute and the Bureau were both one and the same thing. When challenged on this question, he answered by stating that he did not intend to convey exactly that but that when the phrase "Controlled by the Institute" was changed to "Endorsed by the Institute" it was the same thing in effect The Institute wants the Government to get out of the architectural business. By precisely the same reasoning and logic it is desired that the Institute itself withdraw from the architectural business as in this connection.

We trust to hear further from readers of AMERICAN ARCHITECT on this question and urge upon all organizations and individuals actively interested in this question to cooperate with us.—*Harry Lucht, Secretary, The Architects League of Northern New Jersey, 432 Palisade Avenue, Cliffside Park, N. J.*

• MORE CRITICISM OF
GOVERNMENT DEFINITION

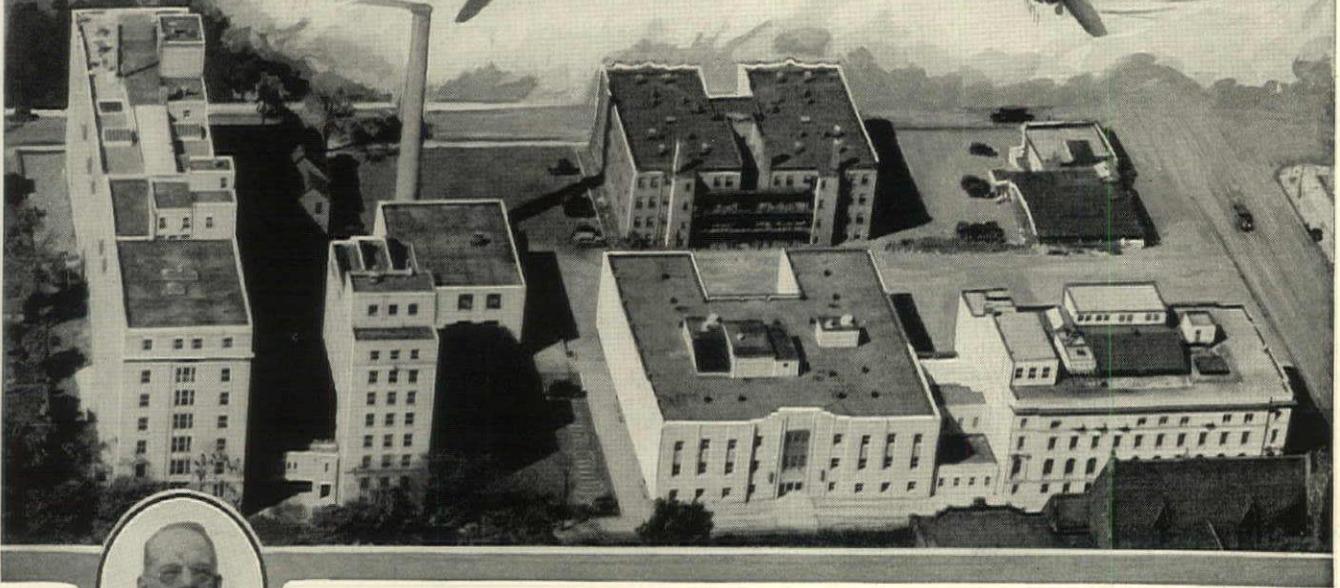
Editor, AMERICAN ARCHITECT:

I AM exceedingly glad to read your editorial criticism of Leaflet No. 10 in the series on "Careers," issued by the Department of Interior. (Page 19, January, 1932.) I am sending for that leaflet. I desire to make comment on it in my own editorial column.

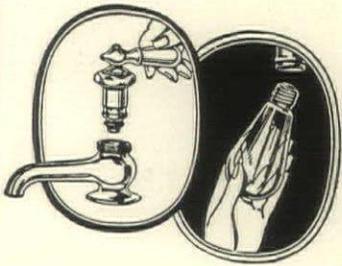
I am glad too to see you take another crack at these supervising architects.

Of course the author of Leaflet No. 10 may well believe what he says when in building the new "bigger and better" Washington, D. C., the government has elected to build a Roman city and not an American city.—*Richard Lloyd Jones, editor The Tulsa Tribune, Tulsa, Okla.*

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R. A. Mullinneau, Chief Engineer,
The Cleveland Clinic Foundation,
Cleveland, Ohio.



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"Five years ago, we started using Chicago Faucets, for the reason that all wear applies only to the standardized renewable unit. We have since found a remarkably low maintenance cost, averaging less than \$3.50 a year in a 300-bed hospital, an 8-story research building and in a 4-story clinic. For this reason they were installed recently in a large addition to the Clinic Building.

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(Signed) R. A. MULLINNEAU

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CHICAGO FAUCETS

» » when FINAL CERTIFICATE is Issued for Defective Structure

By GEORGE F.
KAISER, LL.B.



● WHAT HE DID: An architect issued his final certificate and authorized final payment on a building in which defects later became apparent. These were so serious as to necessitate reconstruction rather than repair. The owner sued the contractor on the contract and recovered judgment for \$10,185 against him, this being the difference, as the court found it, between what the building would have been worth had it been constructed in full compliance with the contract and what it was actually worth as completed. The contract read "Neither the final certificate nor payment, nor any provision in the contract shall release the contractor of responsibility for faulty material or workmanship and, unless otherwise specified, he shall remedy any defects due thereto and pay for any damages to other work resulting therefrom, which shall appear within a period of one year from date of substantial completion."

WHY HE DID IT: The contractor appealed from the

judgment against him insisting that the architect should have discovered the alleged defects and withheld the final certificate and final payment, and that by the issuance of certificate and authorization of payment the architect waived any breach of contract.

WHY HE SHOULDN'T HAVE DONE IT: The appellate court, in deciding against the contractor, pointed out that the architect was only a supervisory architect rather than a building superintendent, and only made periodical visits to the building and in such a capacity that the faulty workmanship and construction were something which could not have been discovered by the exercise of reasonable diligence on the architect's part until after the final payment of the contract price under the building contract, and that the owner was further entitled to recover for the breach of the contract in view of the express provision as to the contractor's liability within one year of the date of substantial completion.

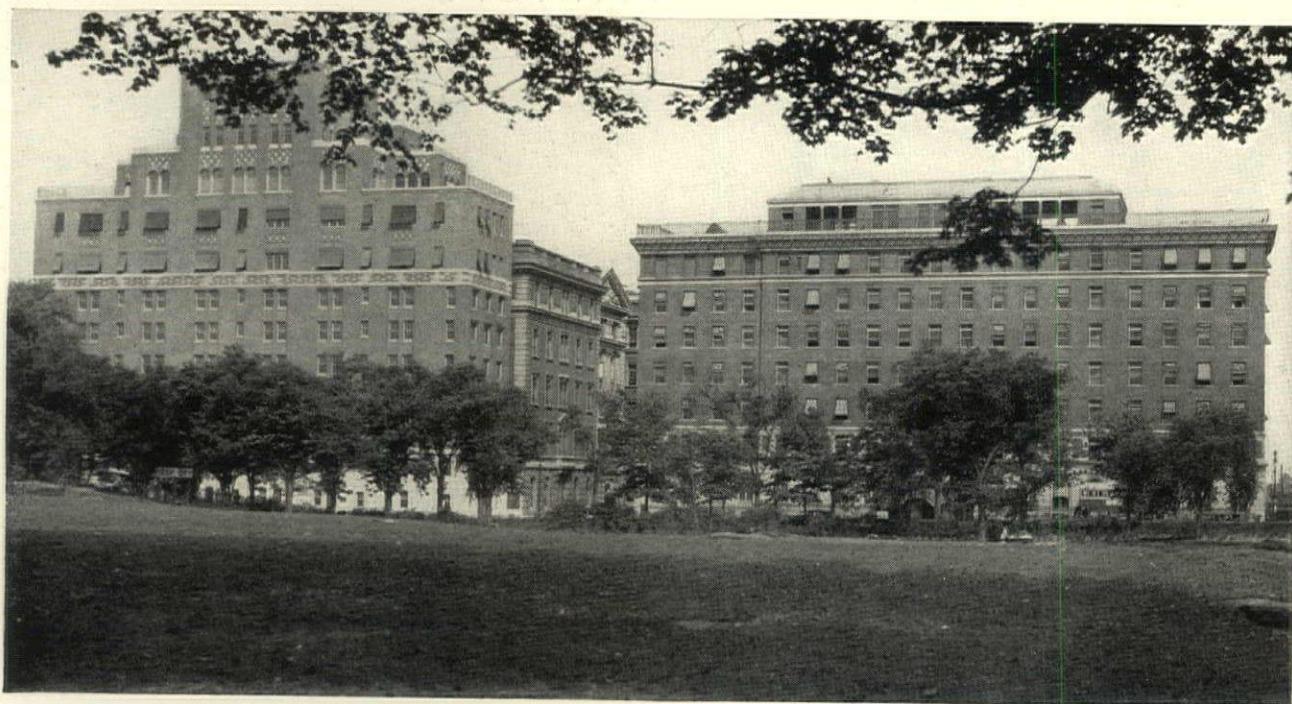
Division of Profits When Associated Architect Dies

● WHAT HE DID: A client designated Brown and Nevins as associate architects to prepare plans for and perform the usual architectural services in connection with the erection of an apartment building. Nevins and Brown agreed orally to share the profits equally. Brown died when the preliminary plans and specifications had been completed. Nevins then made a new contract with the client to personally complete the work. When the representative of Brown's estate learned of this, he made a demand for Brown's share of the profits on the job.

WHY HE DID IT: Brown's representative sued for an accounting on the theory that he had the right to provide another architect to do Brown's share of the

joint professional services, that the agreement was not terminated by Brown's death, and that Nevins had no right to make a new contract for his benefit alone.

WHY HE SHOULDN'T HAVE DONE IT: The court refused to adopt the view Brown's representative took of the matter, and said that while Nevins must account for all the monies earned before Brown's death, the contract between the architect and the client and between Brown and Nevins was terminated by the former's death, for they were not even partners, but merely joint professional associates, and a contract of "such a nature" is terminated by the death or disability of one of the parties making personal performance impossible.



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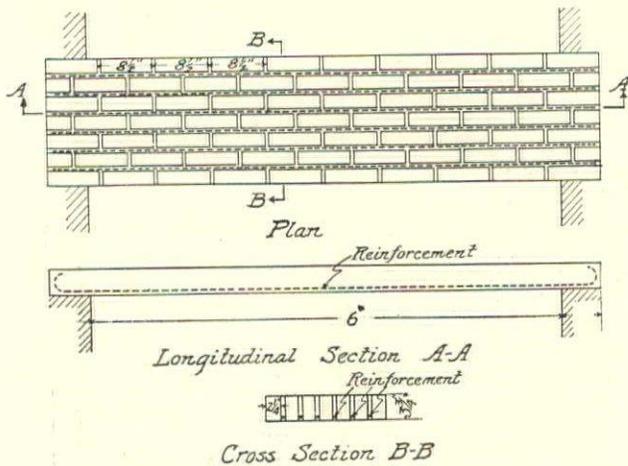


PRINCIPAL CITIES

PIONEERS IN HOSPITAL SIGNALING SYSTEMS

New Possibilities In Reinforced Brickwork

(Continued from page 27)



BARS are placed in mortar joints when constructing a simple reinforced brickwork slab

No matter what form the construction may take, this same combination of steel in tension and brickwork in compression develops flexural or bending strength and so makes for a wide variety of useful applications.

The principles and mathematics of the design of reinforced brickwork are essentially the same as for reinforced concrete. Allowable stress in steel is the same in both cases. Allowable stresses in brickwork are the same as those used in concrete design, due allowance being made for the quality of the brickwork. Bond and shear strengths are essentially the same and the values for moduli of elasticities and their ratios depend upon the character of the brickwork and the degree of loading. Design problems are not difficult of solution and the mathematics of design are available in a pamphlet published by the Common Brick Manufacturers' Association.

The construction of reinforced brickwork offers but little, if any, more difficulties than ordinary brickwork. When built in a vertical plane, or nearly so, no forms or other supports are necessary, the reinforcing rods being placed in the mortar joints as the work proceeds. And this permits rods to be easily and accurately placed with assurance that they are where they belong.

Reinforced brickwork, built in a horizontal plane, of course needs some support during construction and until the mortar sets. Simple centering, consisting of planks supported by posts or struts, is used. Often this is of the roughest character, for earth may be spread over the top and smoothed to the desired form or contour of the brickwork soffit.

Cement-lime mortar—1:1:6 mix—or cement mortar gauged with lime, is satisfactory. Joints should be completely filled and the steel should be well imbedded and surrounded by mortar.

The same precautions for wetting rapidly absorbent bricks in dry weather, and other precautions incident to ordinary brickwork, are all that are necessary for obtaining a good job.

The strength of reinforced brickwork is obviously some function of the cross-section of the steel used, the

compressive strength of the brickwork and the effective depth of the beam or slab or other structure.

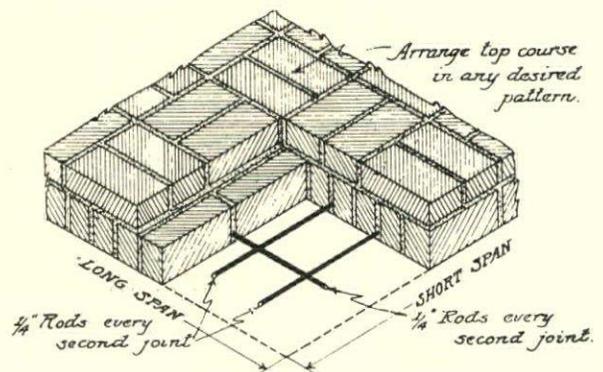
As previously stated, similar structures of reinforced brickwork and concrete have practically equal strengths. Many laboratory tests of a wide variety of structures and of designs, made abroad and in this country, have furnished ample data upon which to predicate design. One or two examples may serve to give the reader some idea of the great increase in strength when reinforcement is incorporated in brickwork:

Three beams, 14' long, 12 $\frac{3}{4}$ " wide, with an effective depth of about 11 $\frac{1}{4}$ ", reinforced with six $\frac{1}{2}$ " square steel bars placed in the lowest horizontal mortar joint, were recently tested at the National Bureau of Standards on a clear span of 12', with the load applied at the quarter points. At the time of the test, the age of these beams was 28 days. The ultimate loads (total) at failure were: 36,700, 41,750 and 37,600 pounds, respectively. Similar beams with no reinforcement would support *no* appreciable loads.

Flat slabs of Chicago brick, 2 $\frac{1}{4}$ " thick, reinforced with $\frac{1}{4}$ " rods laid near the bottom of each longitudinal vertical joint and tested on a clear span of 5 feet showed ultimate strengths (average for 6 slabs) equivalent to a uniformly distributed load of 300 pounds per square foot of slab surface.

Similar slabs, with the brick laid on edge, 3 $\frac{3}{4}$ " deep, with $\frac{3}{8}$ " bars in every other longitudinal mortar joint, about $\frac{1}{2}$ " above the bottom of the slab, and tested on a clear span of 8 feet, an average of six developed ultimate strengths equivalent to a uniform load of 372 pounds per square foot.

Flat slabs, in the form of pre-cast floor slabs, have been tested by the author on four-foot spans. Both $\frac{1}{4}$ " rods in the mortar joints and expanded metal on the bottom were used as reinforcement. Omitting details, the results showed that allowable deflections of $\frac{1}{360}$ of the span were produced by uniformly distributed loads averaging 350 for the rod reinforcement and 500 pounds per square foot for the expanded metal reinforcement. Ultimate loads at failure were considerably higher than these figures. It is obvious that such



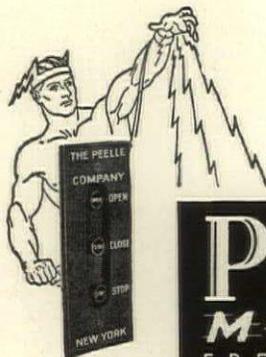
FOR LONG SPANS and heavy loads brickwork slabs, two courses thick and reinforced in two directions, are suitable. The upper course may be laid in a decorative pattern

No *shut downs*

"Freedom from shut down of elevators for door repairs in a plant of this type is to be avoided at any reasonable cost. Peelle Doors installed—operating cost lowered."

*Excerpt from unbiased survey.
Name and details on request.*

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See catalogue in SWEET'S

slabs may be safely used for floor loads of 150 to 250 pounds per square foot. Heavier reinforcement would naturally increase strengths and allowable loadings.

Hundreds of test results are available to those who care to study them, but all results confirm the assertion that reinforced brickwork may be so designed as to develop high flexural strength, and hence find many useful applications which are closed to ordinary brickwork.

The answer to the question—of what significance is this to architects—is that many uses are obvious, others are less apparent. Since reinforced brickwork built in a vertical plane is executed as ordinary brickwork—without forms—walls, columns and piers may be given greatly increased lateral strength and the necessary stability secured with thinner walls—an obvious economy. Moreover, any decorative treatment may be built into such walls, as in ordinary brickwork.

It is perfectly feasible to build the skeleton frame and outer enclosure walls of a building of reinforced brickwork columns and spandrels all in one operation without the use of forms. Simple supports for spandrel beams are all that are required.

The strength of brickwork in direct compression is sufficiently high (2000-3000 lbs. per sq. in. if necessary) to enable 12" walls to carry the gravity loads of a building many stories high. And incorporated reinforcement, which may also be tied in to floors and partitions, will provide ample lateral strength to resist wind loads and develop lateral stability.

Some architects have chosen to build floor systems of reinforced brickwork leaving the beams exposed on the under side, as a decorative feature, and finishing the brick floor surface above by grinding, filling and waxing, to produce a pleasing appearance and an excellent walk-way surface. Floors and roofs of reinforced brickwork are common construction in India and years of severe usage have proven them to be entirely satisfactory.

Overhanging cornices and balconies are easily done in reinforced brickwork. The latter may be carried by cantilever beams or supported on columns.

One hardly need mention that window lintels and brickwork over other wall openings may be built of reinforced brickwork at usually less cost than other forms of construction.

The reader's imagination will suggest many other places where this interesting form of construction will

be suitable and in many cases advantageous and economical. Reinforced brickwork is at once the mass, the load-bearing structure and the decoration without the use of other facing materials.

So far as this country is concerned, we have just started to build this kind of reinforced masonry. Abroad, especially in India, floor beams carrying up to 30 tons are common and floor slabs carrying up to 150 or 200 pounds per square foot are not at all uncommon.

But this mode of construction is found in many other places besides buildings, such as in bridges—including abutments and wing walls—retaining walls and storage bins—especially those of circular plan.

In this country, storage bins, bridge abutments, trestle piers, retaining walls and other miscellaneous structures have been built and have proven satisfactory. Window lintels, both pre-cast and built in place, have been used in several buildings and found to be an inexpensive construction.

Interest is growing rapidly so that we are apparently on the threshold of a rather extensive use of reinforced brickwork. Its performance characteristics are now pretty well known and soon we will have accumulated considerable cost data. When forms are unnecessary, costs are reduced and time saved. At this writing several projects are in the planning, one of them a church near New York in which the floor and other parts will be of reinforced brickwork.

It seems safe to venture the prediction that reinforced brickwork will find increasing favor with architects because of its many advantages, and will therefore appear in many places in a rather wide variety of structures.

In Brebner's classic report to the Government of India, (Notes on Reinforced Brickwork, Technical Paper No. 38, by A. Brebner, C.I.E., Government of India, Public Works Dept.), he lists some of the advantages which have become apparent after several years of use. They are: "Simplicity of construction; good, sound and permanent work involving very low repair charges; fire-proof work; low cost." In addition he cites the advantage that "no special materials of any kind are required, all that are wanted are bricks, cement, sand, and ordinary mild rods or bars." To which we may add that no special plant or equipment is required and, in many forms of construction, no "forms" or other supports are necessary.

NEW BULLETINS

HOUSE INSULATION: ITS ECONOMIES AND APPLICATION. By Russell E. Backstrom. Facts about insulation, compiled from government sources. Discusses various types and their relative advantages and disadvantages. Issued by the National Committee on Wood Insulation. For sale by the Superintendent of Documents, Wash., D. C. Price 10 cents.

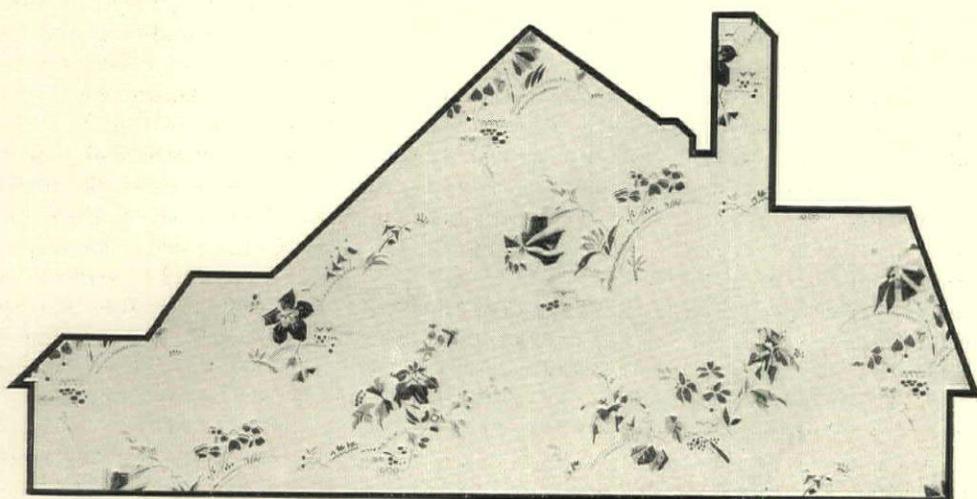
RULES AND REGULATIONS FOR PUBLIC SCHOOL BUILDING CONSTRUCTION. Bulletin 57 issued by the State Council, Department of Education, Harrisburg, Pa.

SOIL-CORROSION STUDIES. By K. H. Logan. Research paper No. 359 of the Bureau of Standards. For sale by the Superintendent of Documents, Wash., D. C. Price 10 cents.

HOW TO OWN YOUR HOME. A handbook for prospective home owners by John M. Gries and James S. Taylor. Issued by the Bureau of Standards. For sale by the Superintendent of Documents, Washington, D. C. Price 5 cents.

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Arc Welded Construction Is More Economical

(Continued from page 22)

mentioned examples of welded and riveted design. To make the riveted connection, Figure 1 (left) requires the handling of three pieces. The welded connection, Figure 1 (right), calls for the handling of only two pieces. To make the riveted connection, holes must be punched in all three members. No punching is required for the welded connection if erection connections are made with clamps instead of bolts. Punching involves more laying out in the shop. Three separate operations are required to make the riveted connection. The welded connection requires only two operations.

From the above comparison of a fundamental detail some of the economies of welded shop fabrication are readily apparent.

In some welded structures the main members, such as columns, beams and girders have been punched, and punched connection angles or plates riveted thereto in the shop. This evidently seemed necessary in order that the members could be secured after erection and prior to welding. Such procedure involved almost as much material handling in the shop as completely riveted fabrication.

ALTHOUGH it is necessary to secure the members after erection preparatory to welding, the punching, and in turn, handling of the main members can be avoided. For example, for a beam to column connection an arrangement similar to that shown in Figure 7 can be used. The shop work required for this type of temporary connection entails the handling and punching of only two small pieces instead of the main members. The angle seat is carried to the column and welded to it in the shop; likewise, the punched plate to the beam. In erection the holes are aligned and the two members then bolted together on each side of the beam.

To eliminate handling and punching of columns, to provide a splice connection, the detail, Figure 6, is satisfactory. Here, four plates are punched, then welded between the flanges of the two columns as shown, leaving enough space between back of the plates and the column web to insert a wrench. Two splice plates are also punched and bolted to one column before shipping to the erection site.

Ingenuity in designing simple details such as those described above results in cost savings in shop fabrication and also erection in the field.

There is also another angle of the economics of shop fabrication which has in some instances kept the cost of welded fabrication almost up to the level of riveting. Fabricators are prone to charge to welding the same overhead as that applied to riveting costs. This is manifestly unfair because welded fabrication involves less expensive equipment and less material handling. Wide awake fabricators, realizing the rapid trend toward welded construction, have set up welding production equipment apart from their older equipment. Thus they are able to keep accurate costs and in turn quote more fairly on welded construction.

On the job, the steel members for welding are placed in position in the same way as for a riveted structure

The members may be held in position by the use of bolts or clamps and after these are tightened the structure is carefully plumbed and it is then ready for field welding.

The erection of staging normally required for making riveted connections in the field is eliminated in the case of welding. To weld a connection only one operator is necessary. The operator merely straddles a beam or in some instances uses a rope sling. The welding machine may be placed where convenient, several hundred feet away if necessary. Structures of 500 to 1,000 tons may be welded satisfactorily by two or three operators with an equal number of welding machines.

There are two important advantages of welding in field erection which probably cannot properly be classed under the heading of economy. Nevertheless the elimination of the deafening racket of riveting and the tossing of hot rivets are decided advantages in favor of welding. Silent erection is advantageous to the building owner as a promoter of good will, particularly when the site is in a congested district, or close to hospitals or schools or when the new structure forms an addition to an occupied building.

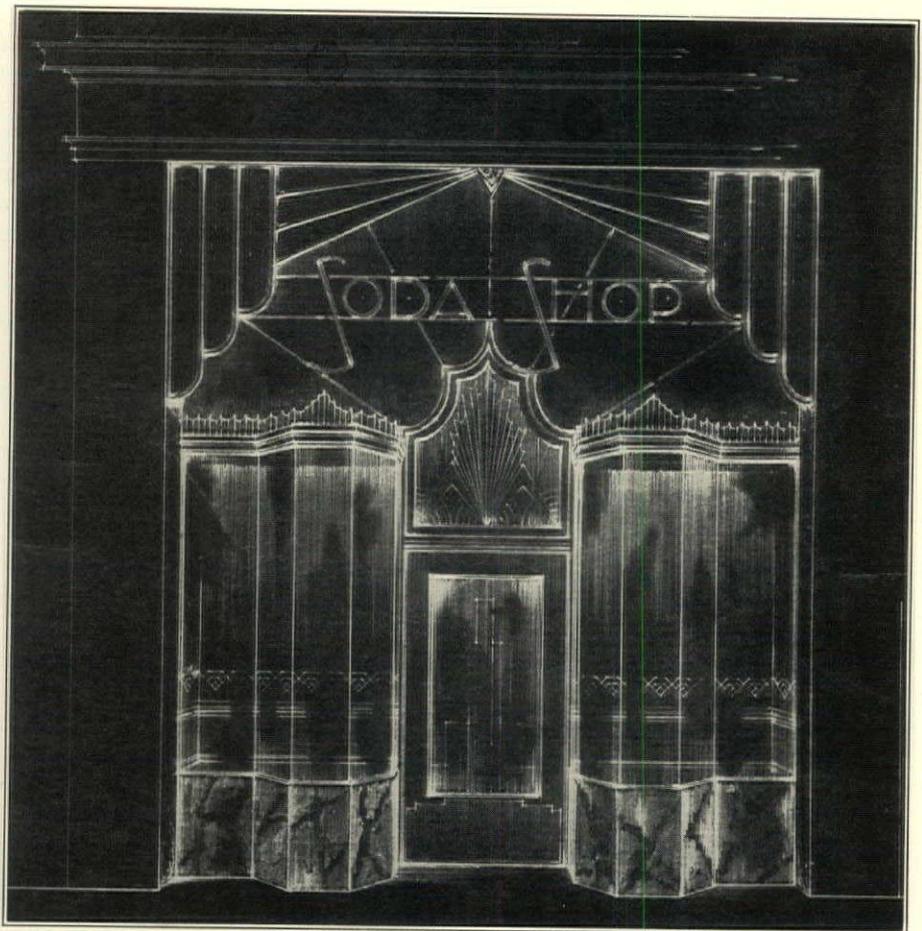
In making additions or alterations to existing structures, welding proves its worth. For example, in tying in beams to exterior columns of an existing structure, only the face of the old columns need be exposed for making beam connections by the electric arc process. In making such connections by riveting it is necessary to clear away the column on opposite sides so that drilling of holes in the column and the backing up of rivets in making the connection can be accomplished. Consider the savings effected by the use of welding in joining a 5 bay, 14-story structure to an existing structure of equal dimensions. It has been found in actual practice that the cost for making welded connections is from one fourth to one third less than the cost for making the connections by riveting. There is an additional advantage in that if the building is occupied, the tenants adjacent to the new structure need not be moved as it is unnecessary to open existing walls in order to tie the beams of new structure into the columns of the old.

FOR those to whom welded construction seems too radical a departure from the traditional methods, it is suggested that at first welding be only partially used in structure fabrication and construction. Such a procedure will prove the economic advantages of the process.

For example, consider the riveted and arc welded types of wind bracing for a tall structure. The prevailing style of riveted wind bracing connection is the T type. It consists of large T's formed from I-beam sections split in two lengthwise, as shown in Figure 10. These T's are riveted at the shop to the columns by a suitable number of rivets and field riveted to the beam flanges, as shown in Figures 8 and 9.

It is often possible to replace advantageously the riveted T type wind brace by the welded knee brace similar to that shown in Figure 11. The knee braces are placed only at the intersection of the spandrel beams

Perspective drawing of Soda Grill in Dempsey Hotel Bldg., Macon, Ga. Desco modernistic Store Fronts, extruded, cast and rolled aluminum are being used for this interesting remodeling job.



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and wall columns, the floors being usually well able to transfer the lateral strains to the wall bracing.

To illustrate the point, consider the partial floor plan, Figure 13, of a recently built forty-story structure.

The position of the riveted T braces, detailed in Figure 8, are indicated by the crosses shown on the floor plan. Check marks indicate the position of the exterior T braces. The exterior braces, Figure 9, need have only one-half the strength required of the interior braces. There are in all 120 T braces per floor.

Figure 14 shows the same floor plan, the arrows indicating the position of the corresponding welded knee braces. There are 40 knee braces per floor. For the case shown in Figures 13 and 14, each knee brace must have, and has, two and a half times the strength of each interior T type connection and five times the strength of each exterior T connection.

THE use of the welded knee brace does not in any way change usual erection procedure. The steel is raised, set, bolted up temporarily and plumbed in the ordinary fashion and then riveted together by means of the beam connection angles. When this has been done the knee braces are placed and welded in position.

Such a procedure speeds up the job, since the riveters have less rivets to drive to obtain a well-squared and plumb structure. The welder operators follow the riveters without interfering with them, and without getting in the way of the masons back of them.

For purposes of comparison, Figure 12 shows a riveted knee brace connection corresponding to the welded connection shown in Figure 11 and of exactly the same strength.

Costs vary so widely that any quoted figures are apt to be questioned. But merely as a comparison the following figures may prove interesting.

Shop rivets cost about 4 cents each; field rivets twenty-two cents each and the large T's and fabricated connections 6 cents per lb., and welding, in the positions indicated, average about \$1.25 per lineal foot. On this basis, the cost of the 120 riveted T brace connections per floor is \$1,334; that of the corresponding 40 riveted knee braces \$1,164. The cost of the 40 welded knee braces, including the riveted standard connection angles, is only \$826, or one-third to one-fourth less than the cost of the riveted types of wind bracing. In all cases the cost of the standard or other load carrying connection is figured in the total. On tall structures the saving effected by use of welded wind bracing represents an amount worth considering. Many other possible applications of welding in structures which can effect substantial economies could be cited.

Those who may be skeptical of the strength and security claimed for welded connections should consider the hundreds of tests which have been made on welded steel construction. Modern welding methods and equipment give joints with finer physical qualities than the parent metal itself. The shielded arc process, for example, insures welds of proper penetration, extreme ductility and 60,000 to 75,000 pounds per square inch tensile strength. Such welds also offer high resistance to corrosion.

To insure good welds several things must be secured. The first is, obviously, satisfactory welding equipment.

The welding current must be stable and the electrodes must be of uniform quality. The actual welding should be done by experienced and reliable operators. As a whole, arc welding operators are more craftsmen than mechanics, and the operator who would knowingly do shoddy, unsatisfactory work is rare indeed.

At the start of a job each operator should be required to make test welds according to the standard specifications of the American Welding Society. Operators who make satisfactory showing in these tests are competent to do structural welding. The tests should be made in the presence of the welding inspector on the job.

When the inspector has satisfied himself as to the competence of the operators it is his duty to check each operator's welding procedure from time to time, also inspecting the welding operation through his shield. By so doing he can tell whether the operator is securing proper penetration into the steel. Even the sound of the arc serves the inspector as an indication of the quality of the operator's welds. By close examination of completed welds a competent inspector can determine the depth of penetration and the soundness of the weld metal. Of course, all welds should be carefully checked against the specifications for size of bead and length.

The subject of weld inspection is best compared to concrete inspection. With concrete all that can be assured is that the proper proportion of concrete is mixed with sand and aggregate and that the concrete has the proper consistency when poured. With welding, the steel in the structure and the electrode are known materials and the operator has been tested for skill. It is not necessary to tear down a welded structure to see if the operator is using his materials correctly. The welding inspector need do no more than satisfy himself as to the uniform quality of the operator's work.

The advancement of welded construction of buildings depends solely upon architects and structural engineers. The wide application and extensive use of welding in many industries where metal products are fabricated has made available for structural fabricators the necessary experience and knowledge of the technique of the process. Structural fabricators will not fail the architect, for he has only to design and specify for welded construction and the steel fabricators will meet his demands.

If I Were An Architect

(Continued from page 25)

by the client listening to the arguments or prices from ambitious salesmen and insisting upon using the wrong materials, and, to my personal knowledge, the wrong brick. I have adhered to the rule of never going to an architect's client without first obtaining his consent and approval, and if I were an architect I would insist that all salesmen did the same. It would save a lot of trouble.

Lastly, if I were an architect, I'd be something else, because as a rule an architect is not only poorly paid for what he does, but in most cases his efforts are unappreciated.



February **GOOD HOUSEKEEPING** 1932

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GOOD HOUSEKEEPING
Everywoman's Magazine

To Get A Dry Cellar

(Continued from page 41)

If the foundation wall is of poured concrete integral waterproofing should be used. The writer has made tests of many brands of water proofing. Several have shown merit. The difficulty lies in having each batch of concrete supplied with its quota of waterproofing compound properly mixed with the concrete. The responsibility rests too largely on some individual workman. Of recent years it has been possible to purchase cement with the waterproofing agent ground in at the mill. This eliminates the personal equation.

After the forms are stripped the exterior and interior faces of the wall should be examined for defects and poor spots carefully patched with waterproof cement.

Where the foundation wall is of rubble stone, waterproofed cement mortar should be used—at least below grade. Have the first course laid in a rich bed of mortar. Stone masons have a bad habit of laying up the inside and outside face of the wall fairly well, but carelessly filling the interior with small pieces of stone and very little mortar. This must be guarded against.

Cement block walls should also be laid in waterproofed cement mortar. Only the best cement blocks available should be permitted. Some mason contractors make a poor quality of cement blocks in their back yards or on some adjoining vacant lot. Cement blocks should be power tamped and well cured.

In the case of stone or concrete block walls, the exterior face below grade should be plastered to a thickness of not less than one inch by means of two coats of waterproofed cement plaster. The first coat should be scratched and allowed to dry thoroughly before the second coat is applied. In drying, the base coat will develop a lot of fine cracks which the final coat will fill. The average specification on foundation walls stops here. If further damp proofing is deemed necessary felt and tar treatment is called for. Under bad conditions this may be necessary. The writer recommends the following treatment which he has used in many instances and found satisfactory.

AFTER the foundation wall is thoroughly dry, and also the exterior plastering in the case of stone and cement block walls, the footings are swept clear of all dirt and droppings from the exterior plastering.

The entire exterior face of the foundation walls below grade is then given a good mop coat of hot tar or pitch. This need not be put on thickly but it must thoroughly cover the masonry surface.

Unless a drainage system is to be placed around the footings, the walls should be backfilled immediately after the application of the tar coating. Good clean earth should be used for this purpose, thoroughly tamped in layers. Workmen must be cautioned against filling with sharp rocks thrown against the tar coating or damaging the surface with their shovels.

The recommendations given are not expensive. In the case of a house costing \$40,000.00 the additional cost was \$156.00 or a little over one-third of one per cent.

Dampness in the cellar floor can be entirely eliminated under most conditions by placing a base course of

1 : 3 : 6 stone (or gravel) concrete, 3" to 4" thick, over the subsoil, using waterproof cement, and tamping well. This course should be floated to a smooth surface. After the cement is thoroughly dry place a single layer of two ply prepared roofing, lapped six inches at the joints, and cemented with hot tar. When the floor area is covered, mop the entire surface with one coat of hot tar. Then lay 1 : 3 : 6 ordinary cement concrete two inches thick, reinforced with a light two inch chicken wire mesh. Float a $\frac{3}{4}$ " top finish and trowel well. Use an approved brand of hardener in the finish coat.

This treatment has been used by the writer for the floors of many cellar recreation rooms and has always proven satisfactory. Where ground water conditions are bad the entire cellar floor should be damp proofed in the same way. The cost will be found to be nominal.

DURING excessively heavy rainfalls, designed gutters and leaders are often unable to carry away the water as fast as it falls. This water spills from a height of twenty feet or more, saturates the ground around the foundation walls, and tends to work through them, especially where the ground has been regraded above the waterproofing. More care should be given the design of leaders and gutters so that such a condition will not occur. The method of conducting the water from the foot of the leaders needs careful attention.

The following specification clause, which the writer has often encountered, does not tend to secure a dry cellar: "Contractor shall lay a 4" tile drain for each leader. Drains shall empty into dry wells consisting of a pit filled with stone, which shall be located ten feet from house."

Dry wells, unless in sandy or gravelly soil, do not function well except during moderate rains. Dry wells if in clay or loamy soil fill up during heavy rains, and the accumulated water tends to work back to the foundation walls. The foot of all leader drains should be connected to a drainage system, which either discharges into the roadway, where the street gutter will conduct the water to a catch basin, or to a storm water drain.

When drain tiles are used around the outside of foundation walls as shown in Fig. 2 they should connect to an adequate drain, otherwise they will serve no useful purpose. As a rule a dry well should not be relied upon unless it is at considerable distance from the house, and at a lower level than the footings.

By panelling the walls of the recreation room, as shown in Fig. 2, the furred out space in back can be filled by an insulating material. This method will eliminate condensation on the walls during humid weather. Cold water pipes in cellars should be covered with an insulating material to eliminate condensation.

An exhaust fan, similar to those now commonly used in kitchens, operated by a noiseless variable speed motor, will be found helpful in maintaining good ventilation.

By following the suggestions given, the cellar recreation room can be made as livable as any other room, except for natural sunshine and sun ray lamps will prove a good substitute for this.

In the Waldorf-Astoria

DUTCH BOY

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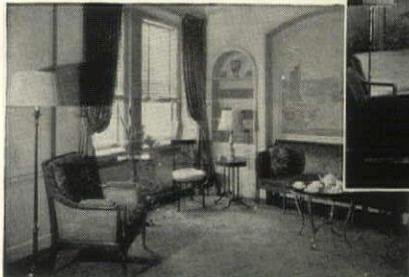
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At Left: A lounge in the new Waldorf-Astoria. Dutch Boy products were also used to insure the lasting beauty of this fine interior.



DUTCH BOY WHITE-LEAD

Is Originality Leading Us Into a New Victorianism?

(Continued from page 19)

Architectural forms should be determined by the materials and problems, and that since we are dealing with a host of new materials and a plethora of new problems, the architectural results must be forms equally novel.

But this search for originality characterized equally the movement of the nineteenth century. Sir John Soane in England, and Schinkel of Germany, were both seeking for it; it was an unexpected accompaniment of the classic revivals. Here in America less learned men, like Minard Lafever, or Alexander Jackson Davis, show the same desire, in some Greek Revival Architectural books like Minard Lafever's "The Beauty of Modern Architecture," or in Davis' drawings in the Metropolitan Museum and the New York Historical Society, there is evident again and again, both in form and conception, despite the Greek inspiration of the details, an attempt at functional expressionism resulting in originality of a high order.

NOT even the statement of the theory of "expressionism" is new. Ruskin, a passionately earnest and often stimulating critic, tainted with narrow romanticism though he was, saw and expressed again and again the value of this type of expressionism. In the "Seven Lamps of Architecture," in "Stones of Venice," the whole theory of expressionism is implicit, and often, as in the "Lamp of Truth," explicitly stated. And if this expressionism in architecture is one of Ruskin's major ideals, in Violet le Duc's criticism, a little later, it is the controlling theory, the foundation of all. The whole "Dictionnaire raisonné," and the even more stimulating *Entretiens sur l'Architecture*, are mainly occupied with the expressionism of material, structure, and function. Violet le Duc seems to adore Gothic architecture precisely because to him it most completely and frankly expressed these qualities.

This movement took twenty years to spread to the general public. In America its enthusiastic popular acceptance was expressed in the Centennial Exposition of Philadelphia. The "Art Journal" (American edition) of that year, in which the Philadelphia exhibits are illustrated and criticized, reveals that the popular development of the theoretical search for originality produced that great mass of overheavy, overdecorated objects that we associate with black walnut—a new material—and horsehair. In architecture the similar development is seen in the turned work, the jig-saw work, the piazzas, towers and mansards, the scalloped shingles, and the ponderous newels that were created by the growing use of machine lathes and machine saws—a new technical process.

The strange thing is those things which seem to us so monstrous, the criticism of the day praised highly, applying theories we still consider valid. The works of Eastlake, for instance, show with what passionate earnestness a desire to express structure, materials, and function decoratively could produce such to us peculiar and often ugly results. What has remained from that dead time, what little seems in it valid, is the result not of the search for originality *per se*; but the urge for good

craftsmanship, honesty of work, and a decorative richness resulting therefrom, which are due to the influence of William Morris and his group.

Why, then, occurred this obvious degradation, in the results of this search for novelty? I believe that, among several causes, these are the most important:

1. The commercialization of the search for originality in order to make new markets for new manufactured goods. This led inevitably to the fact that manufacturers and builders made things and houses to satisfy the masses, who are always the least educated, the least cultured parts of the population.

2. An innate love of richness and decoration on the part of the buying public that results so easily in excess and complexity.

3. A cultural condition, showing in politics, literature, and religion, of unprecedented hypocrisy, arrogance, distortion of values, and dishonesty.

4. The endless facility of the human mind in rationalization, that enables it to apply almost any given theory to almost any given facts.

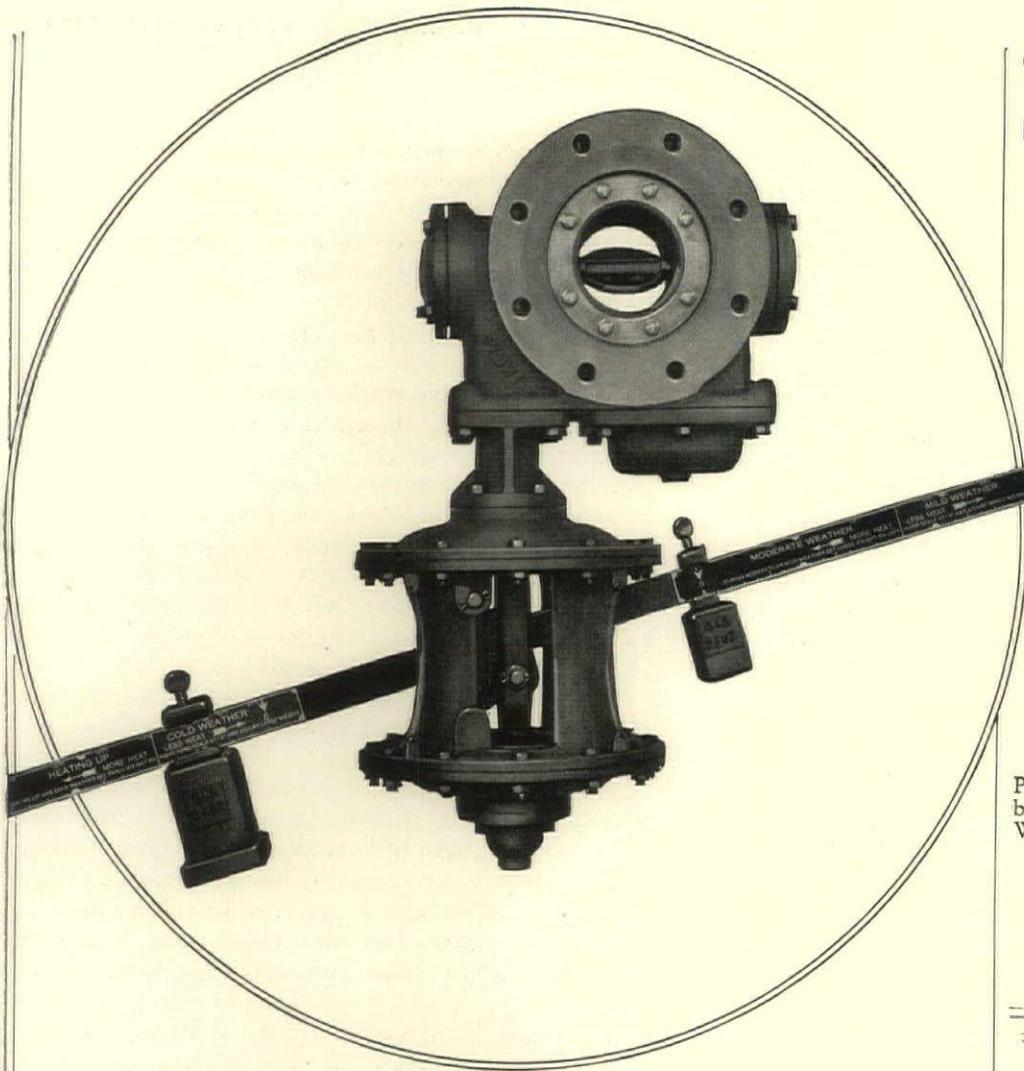
The first of these causes manifestly resulted in the flood of new, expensive furniture, and of endless bric-a-brac that flooded England and America. The last enabled both its sellers and its buyers to persuade themselves that it was beautiful, epoch-making, and expressive of a new age. The third cause undoubtedly controlled much of the ostentatious heaviness of these "new forms."

The examination of the similarities and differences between the forces at work in that nineteenth century debacle and those affecting industrial and architectural art today casts interesting light upon the present trend of taste.

THE first resemblances are striking. In both periods there was great cultural unrest, reflecting economic and political stress. In the mid-nineteenth century the industrial revolution was producing unemployment, riots, revolutionary movements of all kinds. At the present time mass production and its allied growths are doing much the same thing. Both movements seemed and seem in many ways to threaten the whole cultural achievement of their time.

Certainly, too, the commercialization of originality is as definite a factor today as it was in the development of "Victorianism." We go even further, however. They built things to endure—new, to catch new markets, to be sure, but strong. Today manufacturers often build for impermanence to make a continuous market as well as a new one. The results on craftsmanship may be imagined. Instead of the idea of profit being a symbol of the work done, nowadays the work done is merely the symbol of the profits it achieves.

A general love of decoration is also characteristic of today, and is the reason why much of the closely reasoned work of the moment, with its austere simplicity of planes and structure, does not become more popular. Instead, it is the fantastic element in the smaller things that seems to appeal—as though little by



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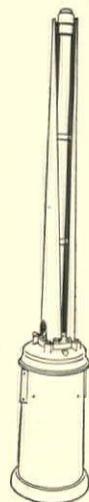
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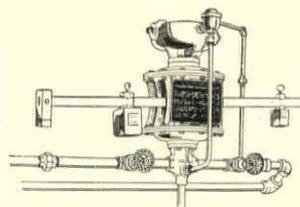
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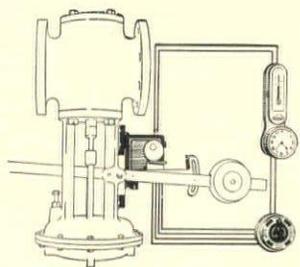
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little we were to develop a new age of bric-a-brac, only substituting shiny brass animals for the shiny china ones of fifty years ago.

We are too close to our own times to allow the final evaluation of the question of hypocrisy in personal, political, and economic life. Yet it does seem as though hypocrisy, like a virus, were circling madly through the veins of government today. On the other hand, in personal dealings between individuals and particularly between men and women, there has been no such honesty and directness and creative sincerity for a century. Both the negative pole of popular hypocrisy and the positive pole of individual skeptical honesty are undoubtedly affecting decorative work today, the former in the cheap modernism of many shops, bric-a-brac, and lighting fixtures, the latter in the quiet, unobtrusive efforts of many of the better architects and decorators.

CERTAINLY the rationalizing ability of humanity has not declined since the fifties and sixties. It may even be that the development of so-called "psychological" advertising has increased the national talent in believing what it wants. We are easily persuaded, with a delightful disregard of categories, that what is new and different must be beautiful because it is of today. And we may be sure that fifty years from now much so called "modernist" works, behind which there is only commercialism or an unthinking slavery to fashion, will seem just as ungainly, stupid, and ugly as the similarly "original" products of Victorianism do today.

Yet there are important differences. The first is the tremendous power of the functional theory in present day artistic criticism. It is considered a truism that a thing, to be beautiful, must *work*, and must in its forms express its working function. This is a healthy idea, eternally at war with the popular demand for merely pretty bric-a-brac.

The second difference is a vague but universal distrust of romanticism. The romanticism of the neo-mediaevalists was a fog over all of Victorianism, but today there seems a really vital search for the classicism of pure form, an attempt to produce, by art, the bigger, deeper emotions that only pure form can reach, and to deprecate the easier sentimental emotional approaches. This trend, like the first, is continually at war with popular taste, for the mass of people are incurably romantic. With such, the modern movement can only substitute a romanticism of this machine age

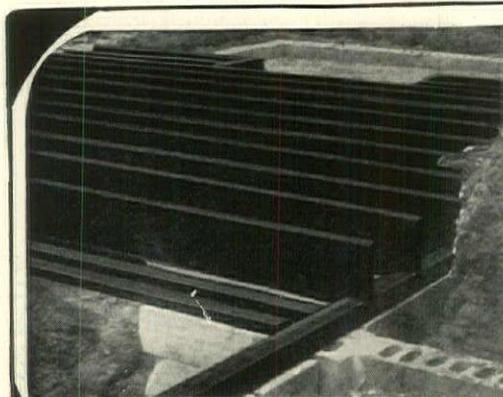
for the romanticism of the past—a substitution of doubtful value, for is the worship of automobiles a finer thing than the worship of the exquisite tastes that flowered from cultured aristocracies?

The business of prophecy is always dangerous. Yet from this analysis certain conclusions seem inevitable. First of all, we may be sure to find always an abysmal difference in quality between the works of a few clear-thinking creators, like Mendelssohn, Hoffman, and Frank Lloyd Wright, and the mass of modernistic buildings and decorative art products, just as there was a chasm between the best work of the Morris workshops and the average decorative work of the mid-nineteenth century. Genius is unpredictable; it is only the popular trend that can be foreseen.

I believe, then, that even in popular taste traditionalism and periodism are, for the time being, dying. I believe that the original inspiration behind the newer, cheaper industrial art products will be the work of modern creative designers, but that the popularization of their work will necessarily mean the loss of much of its essential quality. This is already all too evident, especially in lighting fixtures, where the most grotesque caricatures of sound designs are widely advertised by the cheaper makers.

I believe that in popular taste, at least, the earlier austerity of the best modern European and American designers will achieve little success. This is but natural, for the overemphasis on functional starkness of design is doctrinaire rather than creative, and produces theorizing in building and furniture rather than works of living art. To the public, who give no damns at all for philosophy, the one great virtue of this starkness—honesty—must be almost invisible. What will happen will be that various tricks of the functional designer—banks of windows, corner windows, the absence of mouldings, the use of curves in plan rather than in elevation—will be copied, hit or miss, and used without any relation to their original purposes.

I believe that in architectural ornament and the decorative arts there is soon to be a marked popular reaction against the present-day starkness of much "modernistic" work. Signs of it are already present—and growing. The new lavishness to come will in many ways resemble the crudeness of Victorian complexity, for the old standards are gone, and there is nothing yet to take their place. Even the discipline of naturalism in ornament is for the moment forgotten, and the sense



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Plants—Carbondale, Ill., Grenada, Miss., Louisville, Ky.,
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ARE YOU THE MAN who can make . . or wreck . . their "Great Adventure"?

THEIR new home—and how trustfully they place its details in your hands! For most families, it is the great adventure of their lives . . . this house that you plan for them, translating their hopes and aspirations into brick and timber and stone.

Protect their investment—guard them from the costly pipe repairs that so soon can swallow up their "margin"—by specifying the kind of pipe that has fully PROVED its long life. Through nearly a hundred years, Reading

Puddled Iron Pipe has shown endurance *second to none* in resisting the forces of rust, corrosion, electrolysis and strain. No wonder that unproved pipes like to masquerade under the name "iron"!

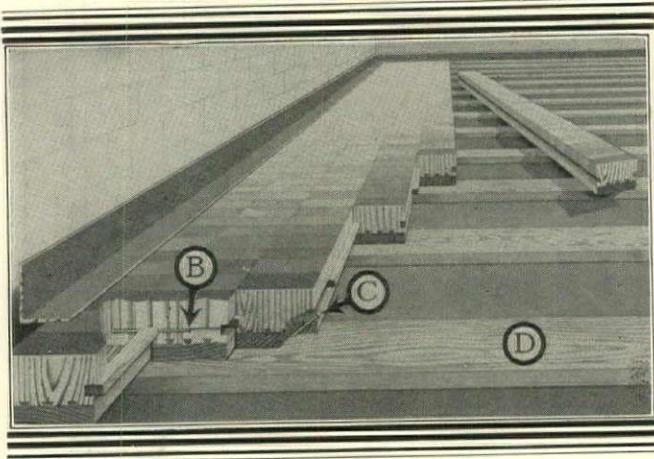
There is a Reading Puddled Iron Pipe for every kind of service. For full information, write us for a consultation with a Reading representative . . . He will give you the facts about the lower cost per year of each kind of Reading Puddled Iron Pipe.

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Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Iron

BLOX-ON-END Gym Floors Eliminate Shin Splints and Serious Heel Bruises



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- B—Lateral Nailing Method
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A floor of BLOX-ON-END possesses a springiness and a cushion-like surface that makes impossible shin splints and heel bruises caused by hard, unyielding floors.

BLOX-ON-END does not come into direct contact with the subfloor. It is laid over 1x4 in. floor strips placed 12 or 16 in. on centers with voids between. This greatly enhances the inherent resilience of the flooring without sacrificing firmness which is so essential to speed in athletics. As it presents an end-grain surface, BLOX-ON-END is non-slip and splinter-proof—other safeguards worth providing.

This Company was the originator of the strip type of block flooring. Genuine BLOX-ON-END was primarily designed for factory use. The beauty, resilience and splinter-proof quality of the flooring appealed to school architects and in the last few years BLOX-ON-END has been installed in the gymnasiums and shops of 500 schools.

Write for Architectural Specifications and Sample

CARTER BLOXONEND FLOORING COMPANY
GENERAL OFFICES — KANSAS CITY, MO. — "IN SWEET'S"

BLOX-ON-END FLOORING
Lays Smooth Stays Smooth
COMES IN 8 FT. LENGTHS THE TOUGH END-GRAIN UP

of refinement coming from the use of traditional styles is altogether dead. More and more ornamental forms, frequently meaningless and overdone—distant imitations of the works of modern French decorators, with a few tricks from the Viennese ateliers, and a few borrowed from American architects—are coming into use. Opposed, stepped, large-scaled leafage much conventionalized, scrolls, radiating forms like bomb explosions, or combinations of them all—these will be the alphabet of our new unthinking popular Victorianism. Just as their cheap furniture designers ran riot with black walnut and jigsaw work, so ours will, in precisely the same manner, run riot with chrome-plated strips, lacquers, and veneers. Complexity will remain, though its dress is new. The piled impractical rectangles of the modern "skycraper" bookcase, the harsh angles of many modern shop-windows dressing fixtures—these are the precise equivalents of the Victorian "whatnot," and express the same unthinking urge.

What then is to be the place of the modern idealistic designer? Here, if anywhere, the differences between today and the period fifty to eighty years ago should be evident. The functional tradition and the new classicism must be the designer's salvation. As creator he must always keep himself above the mere demands of fashion; he must resist the ceaseless suggestions continually thrust at him from shop windows, from the plates of architectural periodicals; he must examine, question, dream, create. Fashion must be seen in relation to its catch-purse. Fashion must be seen in relation to its catch-purse. The true creator must be free of all that.

Frank Lloyd Wright once implied that the term "modern architecture" as a description is incorrect and bad—"architecture" is enough. Only by some similar freedom from a contemporary fashionable stylism—as sterile and deadening as any periodism of the past—can the creator of today achieve the leadership he deserves, and keep alive, during all the meaningless flux of popular fashions, the valid worship of, and achievement of a living beauty.

20% Gain in Rentals Through Air Conditioning

(Continued from page 33)

The additional investment consists of the cost of the plant installed and the cost of constructing the additional space made possible by the installation of air-conditioning equipment. The plant cost \$76,000 and the additional space cost \$20,600.

Repairs and maintenance may be figured at five per cent of the cost of the parts of the system which require maintenance. This portion cost \$40,000. Depreciation was assumed on the basis of fifteen years for the plant and twenty years for the structure. The additional cost for air conditioning was based upon

Power	\$ 5,390
Interest—7% of \$96,600 (cost of plant and additional structure)	6,762
Depreciation—6 $\frac{2}{3}$ % of \$76,000 (cost of plant)	5,067
5 % of \$20,600 (cost of space)	1,030
Repairs and Maintenance—5% of \$40,000....	2,000

Total \$20,249

Deducting the annual cost of \$20,249 from the increased rental, \$35,380, we find a net increase in income of \$15,131 per year, due to the installation of an air-conditioning system, or 15½% on the additional investment of \$96,600. No consideration is here taken of the saving in maintenance of the building due to the reduction of dirt and dust.

The Banks-Huntley Building is occupied largely by stock brokers and it was constructed without interior partitions, allowing the space to be divided and partitions to be installed to suit the individual needs of each tenant. The solid floors offer any desired arrangement of space for board rooms and clerical forces, while the space along the street and alley fronts is suitable for private offices.

The fact that all interior partitions were omitted in the original construction necessitated an extremely flexible system of air conditioning in order to avoid expensive changes to fit the conditions required by each tenant. To meet these exacting requirements, air was introduced upwardly at each window sill. The air outlet was combined in an enclosure covering a concealed radiator. This enclosure is the height of the window sill, the same width as the window and projects into the room eight inches. There are bronze grilles in the front at the bottom and in the top of these enclosures. Approximately one-half of the box is devoted to the radiator and the other half to ventilation. The supply duct is run on the ceiling below, turning up through the floor. For the portions where there are no windows, air is introduced horizontally near the ceiling along the exterior walls of the building and along the corridor walls at intervals of approximately fifteen feet. Exhaust from all space is through louvres over doors, through the corridors, to exhaust grilles in the corridors, continuing through ducts to the exhaust fans. With this method of introducing and exhausting air, the building was occupied with but few changes required to meet the individual partition layouts.

One may think that it might be advisable to seal the windows in a building in Southern California on account of the warm climate that prevails the greater part of the year, and that the system would not be adaptable to cooler climates. This is not true, however. An air-conditioning system is adaptable to any locality except one where the out-door conditions are perfect at all times; and, of course, there is no such locality. In fact, such systems are even more advantageous in locations that have more humid hot weather than that found in California. It might be said that an air-conditioning system is of value to a building owner and manager to the same extent as any other device that adds to the comfort and efficiency of the tenants. It appeals to the real estate operator in the same way that a modern heating system might appeal in preference to, let us say, individual coal stoves in each office.

A NEW course in domestic architecture especially adapted for women has been announced by the New York University College of Fine Arts. Those who satisfactorily complete the course will receive the degree of Bachelor of Architecture and will qualify for New York State architect's registration.

More Beauty Longer Life — Lower Cost



Residence for Mr. and Mrs. E. H. Parks, Hampton Park, St. Louis County, Missouri. Angelo B. M. Corrubia, Architect. Siding and Shingles finished with Cabot's Creosote Shingle and Wood Stains.

WHEN Cabot's Creosote Shingle and Wood Stains are used on shingled roofs or siding, their unfading colors last as long as the wood itself. Because of the way they are made, the stains enter the wood, preserving its texture instead of concealing it with a painty film.

Their beauty lasts still longer because Cabot's Stains are made with genuine refined creosote which usually doubles the natural life of the wood. For example, a house at Cohasset, Mass. had a shingled roof and side walls finished with Cabot's Creosote Shingle and Wood Stains in 1892. At this writing, all shingles on roof and side walls are in good condition and all are in place.

Finally, Cabot's Stains are low in cost and are applied rapidly and economically.

Cabot's Creosote Shingle and Wood Stains

Made by the makers of
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Please send me color card and information
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Code of Ethics of New York Building Congress

A CODE of ethics for its members is being formulated by the New York Building Congress, which comprises representatives from all branches of the building industry and is therefore intended to lay down a "golden rule" for the entire industry. Part of this code is as follows:

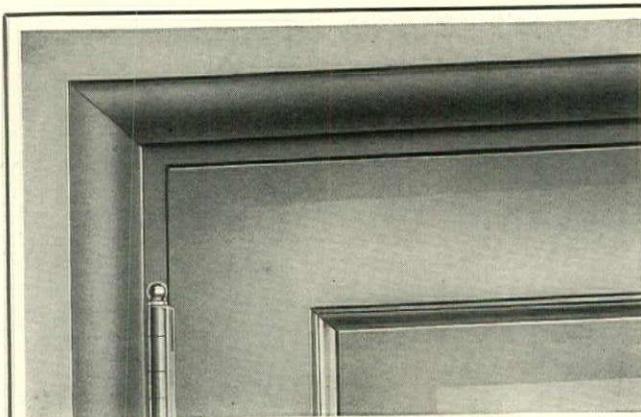
Section 1—No one engaged in the Industry should by acts, agreements or otherwise do anything that will unduly or improperly increase the cost of work, product or commodity, nor deliver inferior quality or less quantity of work, products or commodity than engaged or contracted for.

Section 2—No one engaged in the building industry in any of its branches, should falsely or maliciously injure, directly or indirectly, the reputation, prospects or business of another. The repetition of rumors, not positively known to be true, is but one degree less reprehensible than the making of a statement known to be false. Nor should attempts be made to supplant another after his employment.

Section 3—No one engaged in the building industry should offer or accept commission intended to influence employment, sales or contracts. Such commissions add an overhead cost which the public must eventually pay and which has no economic or moral justification.

Section 4—Everyone engaged in the building industry should participate in those movements for public welfare in which his training and experience qualify him to give competent and disinterested advice. He should support public officials in the proper enforcement of building codes and safety regulations and should take an active interest in the formulation and improvement of such codes.

Section 5—No one engaged in the building industry should resort to or countenance the practice of "Shopping." By "Shopping" is meant any misrepresentation as to the relation of any bid to another bid, the use of the bid of a bidder to whom the awarder would be unwilling to award the work in order to reduce the bid of an approved bidder, or the use of fictitious bids in the effort to reduce legitimate bids.



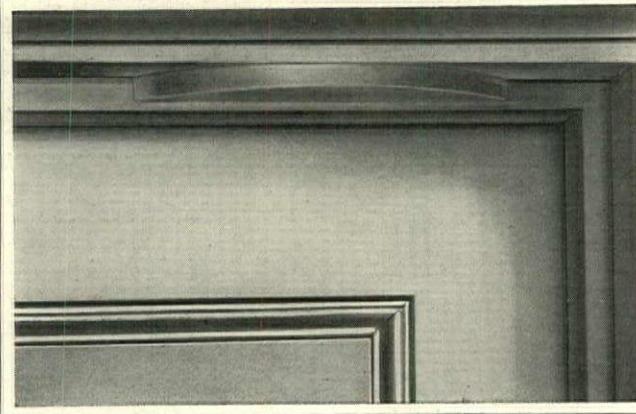
View from inside of door equipped with the new YALE Concealed Door Closer. Note the entire absence of any evidence that the door is thus controlled.

The recent announcement of the new YALE CONCEALED DOOR CLOSER was received with nation-wide interest and enthusiasm on the part of architects and others who have long felt the need for such a device.

*Write for full information,
illustrations of construction, etc.*

THE YALE & TOWNE MFG. CO.
STAMFORD, CONN., U. S. A.

View of the same door from the outside. The only external indication of the closer is the small additional member on the trim to permit the action of the arm.



MENTAL age of the average adult is generally placed at fourteen years. Misconceptions which have arisen from this idea are corrected by Robert H. Ramage, in "Printers Ink," who states: "When we use the word 'intelligence' in everyday life we mean something entirely different from the academic conception of the capacity to learn. We mean a compound of experience, common sense, education, quick wittedness, information, good judgment—in short, mental maturity.

"Our whole difficulty has been that we have confused the popular (and entirely legitimate) meaning of intelligence with its technical definition in the language of the psychologist.

"Whether technical 'intelligence' is full-grown at thirteen, practical mental development continues as long as more facts are digested, and mental maturity develops continuously with experience and knowledge."

Plans Are Owned By The Client

(Continued from page 29)

sued to recover for services in preparing for alterations in defendant's house. The defendant asked that the plans be delivered to him and the architects declined on the ground that they followed the rule of the Institute, providing that the plans were the property of the architects. The court held that, unless it appeared that both parties knew this rule and the contract was entered into in contemplation of it, the custom would not be binding upon the owner. The court found in this particular case that the owner was ignorant of the custom, and held therefore that the drawings belonged to him, that he was entitled to receive them and that the architects could not recover for their services without delivering the plans to him.

Interesting questions have arisen in this same connection with regard to plans submitted in competitions. If the rules of the competition merely invite the submission of plans and provide for an award to the successful architect and say nothing with respect to the ownership of the plans, the tender to the architect of the amount of the award will be sufficient to terminate his right of ownership in the plans and entitle the owner to have them turned over to him free from any claim of ownership on the part of the architect. To this effect see *Walsh v. St. Louis Exposition*, 101 Missouri 534.

On the other hand, the courts have specifically recognized that the architect and owner may, if they wish,

agree that the architect shall remain the owner of the plans and specifications and that such an agreement, if made, is valid and enforceable. See *McCoy v. Grant* (Minnesota), 174 N. W. 728. This case also held that the parties might, if they wished, agree that the employer should not use the plans again without paying therefor.

As a matter of fact, any agreement with respect to the ownership of the plans, the future use of them by the owner, the compensation of the architect if they are again used by the owner, and the like, is valid and enforceable so long as it does not provide for anything which is illegal or opposed to public policy. Within these limitations, the parties may enter into any agreement that they see fit and the right of the architect to enforce the agreement, if made, is clearly recognized. There is nothing against public policy or the law in an agreement to the effect that the ownership of the plans shall remain with the architect, and the plans shall not be used again by the owner for other work or in any other way, without the consent of the architect or without the architect being paid a stipulated additional compensation. On the contrary, such an agreement is reasonable and proper. The courts will enforce it, but they will not set it up themselves arbitrarily or by implication, unless it has been entered into by the parties.

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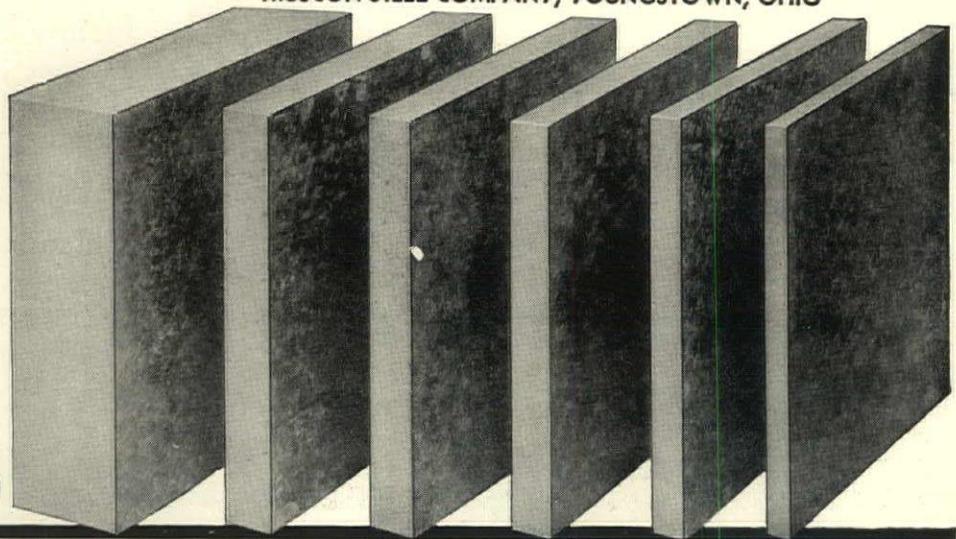
A product of great utility that combines the advantages of commercial insulation with the strength, firesafety, weather-proofness and permanence of steel. Ideal for suspended ceilings, sidewalls, spandrels, door panels, radiator covers, ducts, dryers, small buildings and a multitude of other uses. The manufacturing process permits the utilization of steel in any finish or non-ferrous metals as outer surfaces and insulation of any thickness or other composition as the core.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

Inquiries concerning the development of Ferroclad for your individual requirements are solicited. Write for samples and data.



any thickness desired





Regarding *your* 1932 profits

ONE thing is certain. You, as an architect, cannot expect a satisfactory income from new construction during the coming year. There simply is not enough to go around.

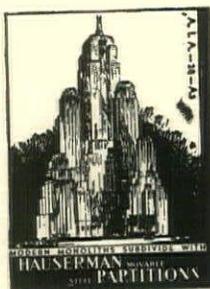
But there is a bright spot in the picture. The intense effort of new commercial buildings to rent their space has resulted in the removal of many tenants from the older buildings. These older buildings are going to do something about this loss of business and you can help them.

They want to modernize their properties. They already have good addresses and attractive exteriors, but the inside of their buildings are obsolete. They can hold their tenants only by making their office space as modern as that of their competitors.

This you can help them accomplish and it offers you a real market for 1932. Go after *this business*.

We can help you help them. For the last two years, Hauserman has seen the handwriting on the wall, and our engineering department has developed a definite modernization plan which is available to any interested architect.

The E. F. Hauserman Company, "Organized for Service Nationally," 6817 Grant Avenue, Cleveland, Ohio. Factory directed planning and erection service from these 13 factory branches: Newark, Kansas City, Detroit, Cincinnati, St. Louis, Philadelphia, Buffalo, Boston, New York, Washington, D. C., Albany, Chicago, Pittsburgh, Cleveland.



See the Hauserman Gold Book of Partitions. Sweet's Catalog—Copy on request.

HAUSERMAN MOVABLE
STEEL **PARTITIONS**

NEW MATERIALS & EQUIPMENT

BRIEF REVIEWS THAT MAKE IT EASY TO KEEP IN TOUCH WITH THE PROGRESS MADE BY PRODUCERS

New Murray Radiator

40M The American Radiator Co., New York, has announced the new Murray Radiator. Instead of close fin construction, this radiator is designed with open flues, which are stated to lessen the tendency towards dirt accumulation and make cleaning a less arduous task. There are three flues per inch of length and this wider spacing, combined with the new oval shaped tubes to which the flues are joined, is said to create a desirable self-cleaning effect.

Air Filter of Glass Wool

41M The Owens-Illinois Glass Co., Toledo, Ohio, has introduced an air filter of glass wool for use in air conditioning appliances. It is called "Dustop" and is low enough in price to make feasible replacement of the complete unit when dirty.

Domestic Air Conditioning Unit

42M The Holland Furnace Co., Holland, Mich., has placed on the market a residence air conditioner which, in conjunction with the heating system, tempers and humidifies the air, keeps it in motion, and purifies it by removing dust and soluble odors. Summer cooling is effected by the air-washing process. A feature of the installation lies in utilizing the cool air of the basement as an auxiliary cooling medium. The unit occupies less than 10 square feet of space and is installed immediately to the rear of the heater.

New Type Aluminum Paint

43M Aluminum Industries, Inc., Cincinnati, Ohio, has placed on the market a new aluminum paint called "Permite Resalum." Discovery of a new vehicle is stated to give the paint greater coverage, providing a continuous coating of protective and preservative aluminum. Used on metal, wood, fabric, or stone.

New Type Blackboard

44M The American Seating Co., Grand Rapids, Mich., has placed on the market a new type of blackboard called "Metalboard." It offers a vitreous writing surface fused upon Armco iron and is stated to have unusual qualities as a medium upon which to write.

Flush Valve Closets for Private Houses

45M The Murdock Manufacturing & Supply Co., Cincinnati, has introduced the Murdock Alternator Closet which can be installed in private houses as well

as in large buildings, and utilizes $\frac{1}{2}$ in. and $\frac{3}{4}$ in. supply lines with a water flow of 12 gallons per minute. This is made possible by a new invention—an alternator principle—that first sends all the water exclusively to the rim; second, exclusively to the jet; and third, back to the rim for the re-fill.

Vault Ventilator

46M The Bankers Electric Protective Association has added to its line of protection equipment a new vault ventilator which can be used to provide circulation of air through the vault whenever desired. It includes an alarm feature so that if employees are locked in by bandits, the alarm can be sounded. For old or new vaults.

New Type Metal Wall Tile

47M Metal individual tiles that can be set by unskilled labor have been placed on the market by the Sanimetal Tile Corp., 16 West 22nd Street, New York. A light coat of oil cement is applied to the wall, then the metal tiles are put in place. They can be cut with scissors where necessary or readily bent to fit around corners. It is said that irregular surfaces are no bar to the use of these tiles. They come in a variety of colors with corresponding borders.

Self-Cleaning Strainer

48M A self-cleaning strainer for installation on the return line of low, medium and high pressure systems up to 125 lbs. has been placed on the market by Jas. P. Marsh & Co., Chicago. It is claimed to eliminate dirt, grit and scale. The device is self-cleaning and draining when the plug is out or the blow-off valve is open.

Portable Humidifier

49M An addition to the line of Aqualator humidifiers made by the Wilcolator Company, Newark, N. J., has been announced. This is a portable humidifier designed for installation in homes, apartments, offices, etc. It is put up in a console cabinet. Water is evaporated by the centrifugal disc principle. The apparatus will operate about 15 hours without attention.

New Kernerator

50M Model A-1 Kernerator has been announced by the Kerner Incinerator Co., Milwaukee, Wis. It is a complete unit especially suitable where space is limited.

To Get More Information, Use Post Card on "Catalog Insert" Preceding

Should the A. I. A. Sponsor Sale of Stock Plans

(Continued from page 16)

If the Bureau continues as an organization controlled, endorsed, sponsored and approved by the Institute, then the Institute must revise its ethical documents, particularly those sections on the architect's status; on superintendence and expert service; on architect's services; on engaging in the building trades; on offering services gratuitously; on advertising; on competitions; on injuring others. Also it greatly lessens the dignity and usefulness of the Institute to seem to be controlled by the Architects' Small House Service Bureau.

Objectors to the affiliation of the American Institute of Architects with the Architects' Small House Service Bureau want to know how the Institute can consistently stand for high professional ideals and yet permit a stock plan small house bureau to blatantly advertise Institute control, particularly as these plans are advertised and used by lumber and millwork dealers in connection with the sale of their material—not to mention their use by Sears, Roebuck & Company. They want to know how the Institute can, at the same time, ask for national unification with other architectural organizations so they may wield a bigger stick against bureaus handling Federal and State architectural work when the Institute itself, through its own Bureau, is competing with architects doing small houses.

These objectors also want to know how the Institute can justify its approval of the connection between the Bureau and a great financial institution capitalized by the lumber interests which have agreed to make mortgage loans on stock houses built from the Architects' Small House Service Bureau plans.

A MOTION made at the fiftieth convention of the Institute in 1927 was as follows: "That the Board of Directors request the proper committee of the Institute to formulate a plan looking toward the development of a better and more harmonious architectural character in small dwelling houses throughout the country; and to recommend the best means for the *education or instruction* of the public as to what it should have and may get in inexpensive houses." Does the Institute now feel that this has been successfully met through affiliation with the Architects' Small House Service Bureau; that the stock plan is the best form of education; and that the Bureau is the only agency in the profession able to instruct the public?

Why does the Institute permit the Architects' Small House Service Bureau to continue to advertise throughout the United States that the Bureau is controlled and endorsed by the American Institute of Architects when,

TRUSCON The Most Complete Line

Clerespan

TRUSSES

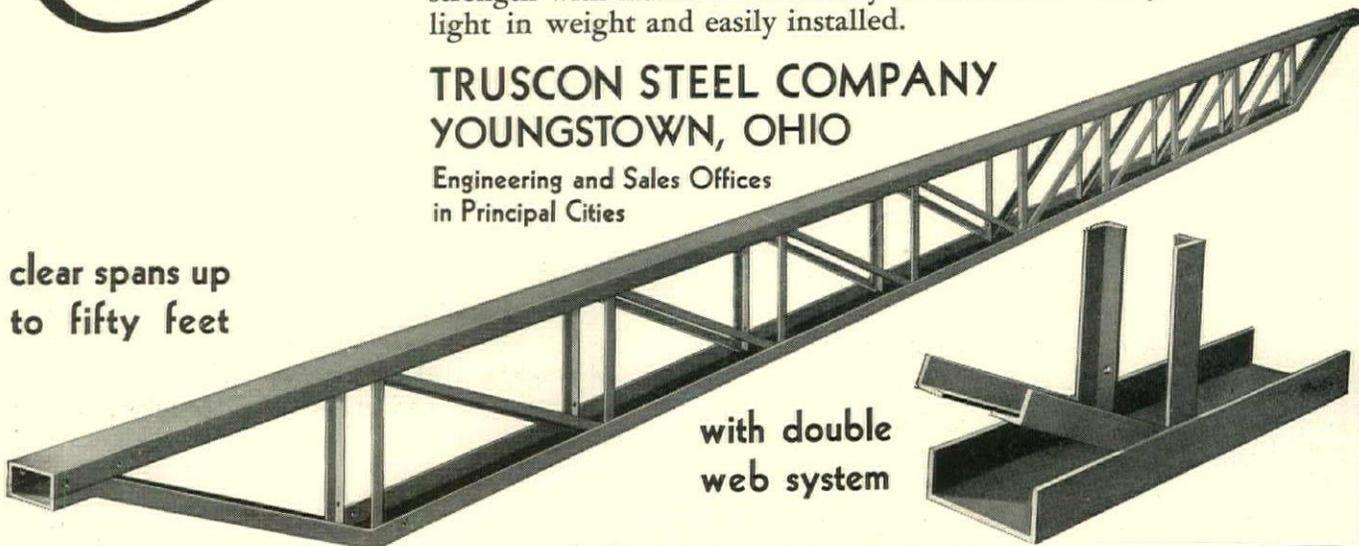
TRADE MARK REG.
AND PAT. APPLIED FOR

Large unobstructed floor areas make any building more useful. You can provide clear spans of fifty feet at moderate cost with Truscon Clerespan Trusses and save the expense of objectionable columns. These electrically welded box girders combine ample strength with maximum economy of materials. They are light in weight and easily installed.

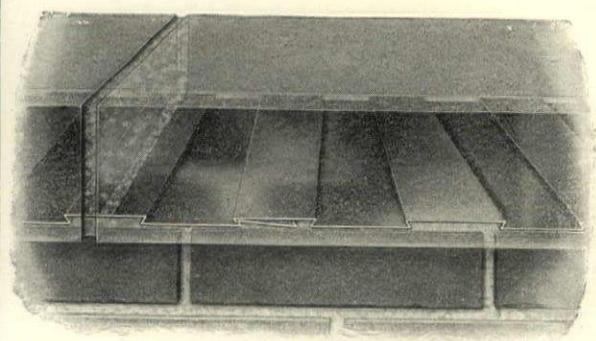
TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

Engineering and Sales Offices
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clear spans up
to fifty feet



with double
web system



Cheney Flashing Installed—
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ELIMINATES—FOR ALL TIME
MAINTENANCE EXPENSE ON PARAPETS
RESULTING FROM SEEPAGE AND LEAKS

CHENEY INTERLOCKING THRU-WALL FLASHING

Time—has proved that Cheney Flashing positively prevents seepage and leaks in masonry walls.

Time—will prove that the first cost of Cheney Flashing is little when compared to the continuous maintenance expense on masonry walls constantly damaged by seepage.

Many outstanding Architects and General Building Contractors now solve all their wall-seepage problems with this time-proved efficient flashing that runs completely through the masonry wall and "does not Break The Bond."

More complete details on request

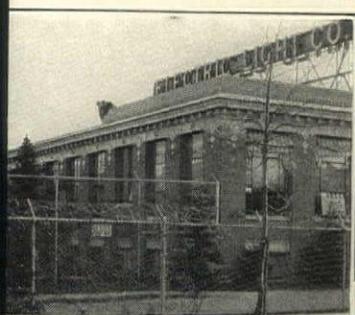
THE CHENEY COMPANY WINCHESTER, MASSACHUSETTS

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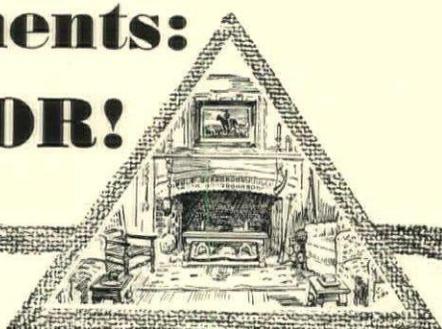


COST \$9,000.00
to tear down and
rebuild this parapet.

\$800.00 worth of Cheney
Flashing now protects the
new parapet against seep-
age and continuous expense
—for all time.



For the leisure moments: COLOR!



THE fireplace, possibly more than any other spot among all the details of architecture, is deserving of color.

It is the place where we rest during our waking moments, and colors are restful. It is a focal point around which other features are arranged, and so should have the benefit of color attraction.

The logical thing to do is to use color in the mortar, which in its un-tinted state is not particularly attractive. Given a well-selected brick or tile and a harmonious color in the joints, you are well started toward a really satisfactory fireplace.

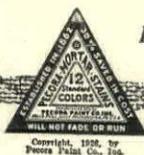
Whatever the detail to be worked out, and whatever the masonry materials, don't overlook color. Above all, don't neglect to assure yourself of uniformity and permanence as well as easy handling and low cost. Pecora Mortar Stains are decidedly worth investigating.



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Third St. and Erie Ave.
Philadelphia, Pa.

Established 1862 by Smith Bowen



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WE DESIGN AND BUILD
SEWAGE DISPOSAL SYS-
TEMS FOR FINE ESTATES,
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COUNTRY CLUBS AND
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*Let us solve your
sewage disposal
problems*

C O N C R E T E
S E P T I C T A N K C O .

604 VINE STREET
CINCINNATI, OHIO

in Convention assembled in 1923, it solemnly stated through committee report and by resolution of the Board of Directors that the Institute assumes "no interest in or approval of any specific acts of the Bureau, in the development of its operation nor any financial interest or control whatever." It assumed no more responsibility for the Bureau's "specific elements of service" than it did for that "of individual members of the Institute." Individual practitioners are not controlled, yet the Bureau advertises that *it* is controlled. It is safe to say that it would be difficult for individuals to obtain the endorsement of President Hoover and the United States Department of Commerce. But the Bureau says it has such endorsement. Why? As for control of the Bureau by the Institute, the writer can state from personal knowledge that no such control exists.

Regardless of the Institute's denial of control, the Architects' Small House Service Bureau has flagrantly flouted the Institute and gone right ahead with its nationally advertised statement, "Controlled and Endorsed by the American Institute of Architects."

At the present time, however, the objection to the continued affiliation of the Institute and the Bureau, and the Bureau's exploitation of this affiliation, has reached such momentum that a great many chapters of the American Institute of Architects have passed resolutions opposing any connection between the Institute and the Bureau. There is also vigorous objection developing on the part of state and local architectural associations. This is going to seriously affect the status of the Institute unless the objection of the New Jersey Chapter made in 1920, and consistently adhered to from that time to the present, is heeded, namely: That the Institute cannot be in the *stock plan business* and, if it isn't, it must not let any *stock plan business* say it is.

(EDITOR'S NOTE: AMERICAN ARCHITECT is informed that although the Architects' Small House Service Bureau did use the word "controlled" up until 1931, only the word "endorsed" is now used.)

Results Justify Affiliation of Bureau

(Continued from page 17)

examine its own house to find out if that is clean or if the hands of the individual architect are clean. Who has not suffered from competition of the unprincipled professional practitioner? And how about the competition from young men just starting, or draftsmen who cut fees in order to secure work, foolishly believing that in securing business that way they are going to establish their own welfare; regardless of what the effect may be upon the profession at large?

In the commercial world established merchandise houses are today competing with the 5 - 10 and 25 cent chain stores, to which may now be added the active retail competition of the great mail order houses. In getting one hundred cents for a dollar the home owner, like the merchandise purchaser, is looking for quality in his investment and in the long run it is quality that saves the situation and establishes business.

Some one recently called attention to the fact that

change is the greatest active competitor for business in general. Should not the architectural profession recognize this fact and in doing so again examine its house to find out if the service which the individual practitioner is selling is based upon giving one hundred cents for the dollar in the matter of professional service?

The architect has always been up against the fair criticism as to his lack of business qualification. This is one of the valuable services given by the Architects' Small House Service Bureau to the purchaser of its plans. The Bureau has always stressed the importance of professional advice. The size of its houses is limited to six major rooms. It has stressed the importance of engaging an architect whenever possible. It has outlined scheduled specifications as a matter of protection to the home owner; it has been and is doing everything possible to strengthen the character and quality of the professional service given to the home owner to justify the sound economic business value of the professional service it renders.

THE latest invasion of the field is by Sears, Roebuck & Co. Curiously enough this does not seem to arouse the opposition of architects. This corporation does not limit its service to the six room house but says in its catalog "Homes of Today" that you may secure from it any kind of a house, from a cottage valued at a few thousand dollars to a forty-room residence, or larger, costing \$75,000 or more. The owner who can afford to spend \$75,000 can afford to employ an architect, and it should be equally apparent that the owner able to swing a \$75,000 house is hardly put to the necessity of financing it on a Sears, Roebuck & Co. fifteen year plan.

Is it not vastly more important that the profession should present a united front to this kind of competition than that we should be wrangling amongst ourselves over the work of a bureau which has so raised the level of architectural design in the small home as to be of great value to any architect designing homes? The Sears, Roebuck & Co. scheme is clearly a merchandising proposition, and in their catalog they plainly state, in trying to justify their guarantee, that they look forward to fifteen years of selling goods to prospective home owners.

Another argument presented by the opposition relates to the use of the word "bureau" by the Architects' Small House Service Bureau. It has been classed with the bureaucratic development in government such as, for instance, the Office of the Supervising Architect of the Treasury, against which the profession is united in opposition to the government being in business. Because the word "bureau" was used as a title for the Architects' Small House Service Bureau by no means places the activities either parallel with or comparable to the work of government bureaus. The two words in the two cases have diametrically opposite meaning. If by any chance any other word had been used to typify the service which has become known as that of the Architects' Small House Service Bureau this thought would not have arisen.

In the case of the Small House Service Bureau its work and its plans are available to anybody desiring to purchase them—even to architects. If any architect finds, for instance, that the owner coming to him for advice sees in a Bureau plan something that appeals

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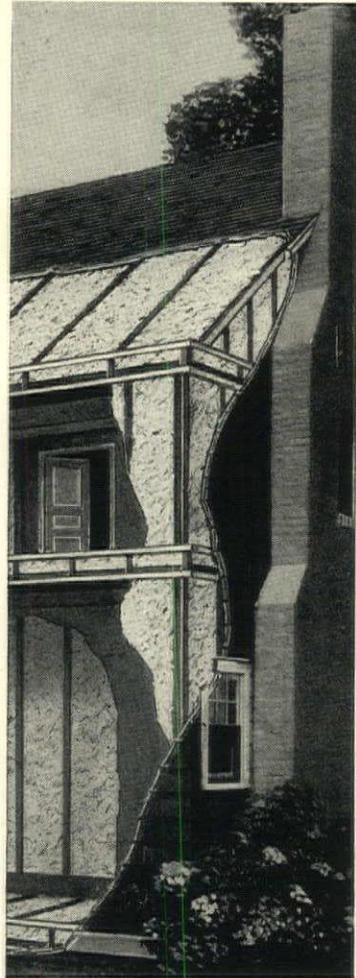
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to him, desires certain changes and also supervisory service, the architect can easily adjust his charge on the basis of the saving in cost of drafting. In other words, the Bureau is actually assisting the professional man who thinks the Bureau is competing with him. As against this, the government bureau is deliberately competing with the private practitioner and competing with loaded dice, having back of it all the influence and weight of government prestige and involving obsolete methods, practices and materials, and also benefiting by the fact that there is no possible competition in securing the job.

I wish again to stress the point that there is nothing to prevent the man whose practice is largely that of designing small houses from taking advantage of the plans of the Architects' Small House Service Bureau in his own private practice. I know that in many instances this is now being done, and can and should be done. The opposition to the Bureau has unfortunately set up a straw man to knock down and this straw man in no way, shape or manner, truthfully represents the work of the Architects' Small House Service Bureau. Abolish the Bureau and what is the situation—unscrupulous competition and the rejuvenation of the catalog of bad stock plans. I have carefully refrained from attempting to quote arguments advanced at the open forum of the New York Chapter meeting December 9, 1931. I have done this because I have the facts in many of the cases quoted by the opponents, and these facts show that the opposition's claims are not correct.

What Architects Are Talking About

(Continued from page 47)

covered not more than 65% and business buildings not more than 75% of the lot area. It is suggested that the maximum cubage be limited to 120 cubic feet for each square feet of lot. Skyscrapers in suburbs are not objected to.

STIMULATION of demand for architectural services was promoted at the recent exhibition of small houses by California architects, held at The Emporium in San Francisco. This exhibition, sponsored by the Northern California Chapter, A. I. A., also helped to provide material for the architectural and building page which appears weekly in the San Francisco Call-Bulletin, edited by Wm. I. Garren, A. I. A.

EDITORS of architectural journals meeting in New York with members of the Committee on Public Works of the American Institute of Architects sent a telegram to the Hon. Robert A. Green, who introduced Bill H R 6187—described in the January issue of *AMERICAN ARCHITECT*—congratulating him and pledging their support to the bill.

NEW developments in architecture will be illustrated by model photographs and designs in an international exhibition of architecture to be held at the Museum of Modern Art, New York, Feb. 10-March 23. The exhibition, which will be under the direction of Philip Johnson, will make a three year tour of the United States. European as well as American design will be shown in the exhibit.

WALLS cast in place around precast studs is an idea being applied to the construction of concrete houses by A. H. Olmsted, builder, Rye, N. Y. Features are 2" x 8" or wider concrete studs spaced not more than 20" o.c. with nailing strips cast on, light wooden outer forms in panels half the story height, inner forms of insulation board bent to recessed form to leave an air space behind the plaster, horizontal reinforcing ties, and tile or pan-ribbed floors. Walls have a thickness of 8" of concrete at the studs, and 3" or 4" between studs; air spaces lined with insulating board between the inner part of the wall and the plaster help insulate and provide space for pipes and wiring.

"LITURGICAL ARTS" is the name of a new magazine published by the Liturgical Arts Society, Inc., 386 Fourth Ave., New York. "It initiates a movement in America whose purpose is to purify the taste used in the decoration and construction of Catholic churches."

THE Federal Trade Commission is investigating the letting of contracts for government buildings to determine if there has been any price fixing or combinations with respect to terms of sale or prices.

WILLIS H. CARRIER, president of the American Society of Heating and Ventilating Engineers, was awarded the John Scott Medal for inventions contributing to the welfare of mankind. Mr. Carrier's medal was awarded for his "invention of processes and apparatus for air conditioning and refrigeration."

COMPETITION for a cover for the House Beautiful Magazine has been announced. First prize is \$500, second prize \$300 and student prize \$250. The magazine expects to purchase several other designs for which \$200 each will be paid. This is the tenth cover competition held by that magazine. New dimensions for the cover will be required. The competition closes May 5, 1932. Information may be secured by addressing the Cover Competition, 8 Arlington Street, Boston, Mass.

SOUTH TEXAS CHAPTER, A.I.A., has concluded an exhibition at the Museum of Fine Arts, Houston, intended to foster a better appreciation and understanding of architectural service. Concurrent with the exhibition, a series of articles by Stayton Nunn, A.I.A., was printed in the Houston Post-Dispatch, and another series by Ernest L. Tutt, district manager of the U. S. Department of Commerce, was published in the Houston Chronicle.

COMPETITION for the A. W. Brown Traveling Scholarship has been announced. Programs will be mailed to approved applicants about March 7; drawings are to be delivered about April 6. This scholarship, awarded for the fourth time, is the gift of the Ludowici-Celadon Company as a memorial to A. W. Brown, its former president. The scholarship is for \$2,000 to be used for travel and study in Europe.

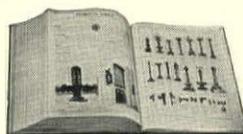
HARVARD UNIVERSITY will set up an architectural clinic, believed to be the first of its kind, under the direction of Charles H. Lench, architect, New York,



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on the theory that students have been trained to function as draftsmen and not as architects. The clinic will therefore seek to coordinate the instruction received in the regular college courses with the business needs of the outside world so that the graduate may be properly equipped to function as an architect.

THE largest order ever placed for limestone was recently given out by the architects of Rockefeller City, also called Radio City, who selected it for the exterior of all buildings in the group. The order ranged from a minimum of 1,600 to 3,200 car loads.

THE first apartment house to have every room equipped with a noise filter silencer and air filter is the twenty story building at 76 West End Avenue, New York, Boak & Paris, architects.

RALPH WALKER, of Voorhees, Gmelin & Walker, recently defined an architect in the following words: "He must be a business man—one who has been intrusted with the spending of money for a client and one who can be depended upon to spend it judiciously and efficiently; he must be a humanist—one who recognizes the physical, mental and spiritual needs and wants of his client, as well as his financial limitations; he must be an engineer, not from the technical point of view, but one who can evaluate the efficiency of the machine which he is about to design and build, and he must be an artist.

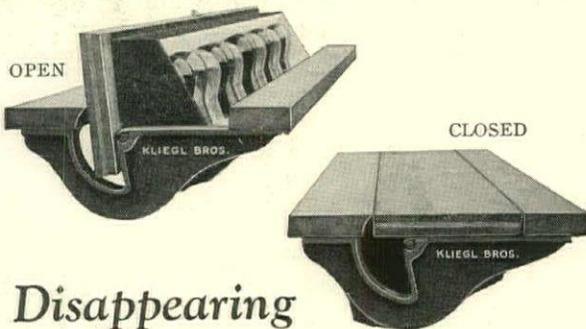
"When these factors are taken into consideration and applied to the design of a building, there is no question as to its usefulness and beauty."

"FLEXIBLE amortization" of real estate mortgage bond issues is recommended by Gerhard Kuehne, a mortgage bond broker, who believes that suspension of amortization payments, in whole or in part, should be provided for in the trust mortgage at the discretion of the trustees. This would help when decreased income in times of depression make it difficult to meet amortization payments.

MASONS in the State of New York are raising funds to purchase the house at Tappan, N. Y., in which Washington signed Major Andre's death warrant. The building dates from 1700 and formed Washington's headquarters from 1780-83. If bought by the Masons, the house will be turned into a national shrine and Masonic memorial. Members of Publicity Lodge 1000, New York, are handling the purchase in order to keep the building from being turned into a road house or a tea shop.

WHY tenants do not renew their leases is a question analyzed by the New York State Association of Real Estate Boards as follows:

1. Unsatisfactory service, decorating or repairs (mismanagement).
2. Undesirable neighbors.
3. Deterioration of the neighborhood or district.
4. Financial reverses or financial success.
5. Increase or decrease in size of family.
6. Change in location of tenant's business.
7. Unsuccessful marriage.



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PERSONALS

LEROY E. KERN, A.I.A., recent technical secretary of the Structural Service Bureau, A.I.A., has opened offices at 25 West 45th Street, New York.

Thomas L. Kerr, architect, chief designer for the past three and a half years with Townley & Matheson, has opened his own office and studio at 419 Metropolitan Building, Vancouver, B. C. for the practice of architecture. He desires catalogs.

Brown & Von Beren, architects, have moved their offices to 295 Sherman Avenue, New Haven, Conn.

Francis B. Jacobberger announces that he is continuing the practice of architecture in the firm founded by his father, the late Joseph Jacobberger, with whom he was associated during the last ten years. Offices are at 208 McKay Building, Portland, Ore.

Frederick W. Mellor, architect, has moved his office to 386 Fourth Avenue, New York.

Chas. W. Oliver, A.I.A., has moved his offices to 2209 Second National Bank Building, Houston, Texas. He would like to receive manufacturers' literature.

Thomas M. James Company, architects, recently announced the removal of their offices to 164 Stuart Street, Boston, Mass.

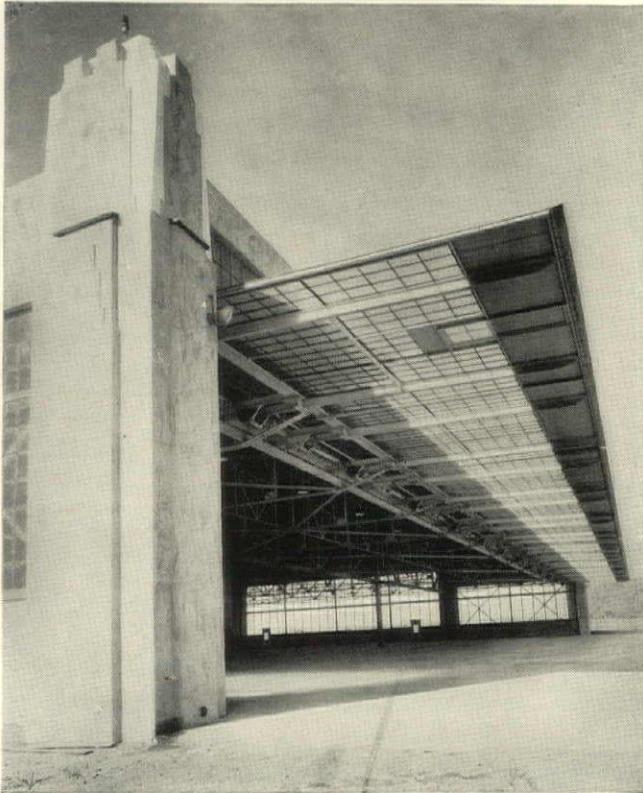
Walter C. Folland, architect, has moved his office to the corner of Colorado Street and Fair Oaks Ave., Pasadena, Cal.

Harry P. Nichols, recently with the American Abrasive Metals Co., has opened an office at 7 Dey Street, New York, where he will act as consulting engineer.

DEATHS

FRANK HOYT FOWLER, A.I.A., died December 8. He practiced architecture in Seattle for twenty years, having designed the Wilsonian Hotel, the Cornelius Apartments, and the Wilson's Business College. He was an authority on masonry and timber construction. For four years he served on the 1918 Building Code Commission. He was at one time president of the Seattle section of the American Society of Civil Engineers.

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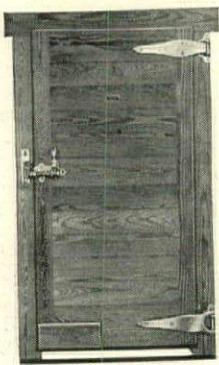
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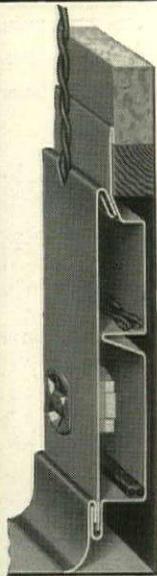
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Conference On Housing

(Continued from page 21)

he does not know where to seek reliable advice, and thereby discourage home building."

The reports submitted at the conference contain a wealth of valuable information on the different phases of housing. Although individual reports of the various committees are not available for general distribution, they will be made generally available both in book form and as paper bound separates within a few months through the Department of Commerce, Washington, D. C. The reports are as follows:

- | | |
|---|--|
| Types of Dwellings | Household Management |
| Fundamental Equipment | Housing and the Community |
| Kitchens and Other Work Centers | Farm and Village Housing |
| Utilities for Houses | Negro Housing |
| Sub-Division Layout | Home Information Centers |
| Business and Housing | Homemaking-Housing and Family Life |
| Industrial Decentralization and Housing | Large-Scale Operations |
| Blighted Areas and Slums | Relationship of Income and the Home. |
| Reconditioning, Remodeling, and Modernizing | |
| Construction | <i>And</i> |
| Design | The following reports of the correlating committees: |
| City Planning and Zoning | Standards and Objectives |
| Finance | Research |
| Taxation | Legislation and Administration |
| Home Ownership and Leasing | Education and Service |
| Home Furnishing and Decoration | Organization Programs, Local and National |
| Landscape Planning and Planting | Technological Developments |



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Reports Regarding Damage Done by Termites

HOME owners should beware of overdrawn and alarming reports of injury to buildings by termites or white ants, warns the U. S. Department of Agriculture. In particular they should be wary when exaggerated statements of this kind form a part of the "sales talk" for a "termite treatment." Many of these treatments are expensive and are not correspondingly effective. Reports to the Bureau of Entomology indicate that sharpers, overemphasizing the real injury that termites are likely to do, are filching from home owners hundreds of thousands of dollars and rendering little or no effective service in return.

State officials and others reporting to the Bureau of Entomology reveal that the termite treatment sharpers are particularly active in the South and in some of the Far Western States. In these areas many cities have in recent years amended their building codes as advocated by the Bureau of Entomology and now require adequate safeguards against termites in new construction.

Salesmen, however, have been exaggerating the danger from termites in an effort to sell treatments, many of which have little or no merit, but which they picture as absolutely necessary to prevent the collapse within a short time of buildings invaded or under alleged danger of being invaded by the termites.

The Bureau of Entomology says that there has been no change in the situation in the South and West as to termite damage; that conditions are substantially the same now as they have been for the last 50 or 100 years. The records indicate that the collapse of a building on account of termite damage is so rare as to be for practical purposes a negligible risk. It is true that where termites have been in buildings for many years—as indicated by emerging swarms of the winged forms—the foundation timbers, and even the floors and adjacent woodwork, may have become so weakened as to make necessary some replacement.

The entomologists point out that an experience of 35 years in termite control indicates that radical reconstruction of the foundations is the only permanent and effective remedy for buildings which, because of original faulty construction, have become heavily infested. Such remedial measures as spraying or fumigation, or even removal of the worst infested timbers, without other protection, are at best temporary. Spraying and fumigation are practically useless.

The only effective remedy for termite damage is to provide termite-proof materials for foundations. This can be done in two ways:

(1) Reconstruct the foundation walls, including cellar and cellar floors, of concrete and stone, using standard mortar; thoroughly fill all openings in masonry or tile construction; and use, where necessary, mechanical barriers, such as metal termite shields. With this protection against entry, movable woodwork placed in such basements and the woodwork of the main and upper floors can be fully and adequately protected from termite damage.

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● At right. Colonial dwelling in Philadelphia, Pa. H. C. Hodgson and A. D. Hill, Architects. Sargent equipped throughout.

● Below. Sargent Colonial patterns. For every type of building Sargent offers a wide choice of correct hardware.



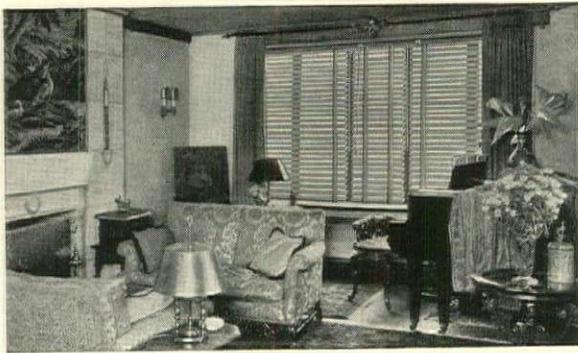
THIS stately doorway shows more than Colonial design at its best. Here is, also, the architects' forethought in handling details. Accordingly, when selecting the hardware Sargent was their natural choice. Sargent Hardware, because it offers a complete range of designs to harmonize with every type of building, is the ideal equipment for the architect's purpose.

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(2) Where in the construction of buildings it is desirable or necessary to use wood touching the ground or near it, this wood and all foundation timbers should be impregnated in an approved manner by one of the standard chemical wood preservatives.

These are the essentials of termite proofing in new construction. In their own interest, house owners are cautioned not to accept any new or easy methods, such as fumigation or spraying of woodwork in place, or soil poisoning, for the control or elimination of termites, until they have assured themselves of the effectiveness of the method by asking advice either from their own State Departments of Agriculture or other competent State authorities, or from the Bureau of Entomology in Washington.

Acoustics Should Be the Same

(Continued from page 35)

undesirable modulation throughout all audience conditions, it is necessary to know accurately the absorption values for the auditors and compensate as much as is practicable for the absorption they bring into the room. This can be done by installing properly designed seating into which suitable materials have been incorporated in the proper amounts. The absorption value of these materials should be about the same as that of the average auditor and should be so placed as to be cancelled by the auditor when he sits in the chair. The absorption of the chair is thus replaced by the auditor's absorption and keeps the total absorption of the room constant within reasonable limits.

The perfect chair from the acoustical standpoint would be a chair which possessed the same amount of absorption both when unoccupied and when occupied by an average adult person. Such a chair is possible, but too expensive to be practicable. Chairs are, however, being made which reduce the difference between unoccupied and occupied absorption so as to give reasonably constant conditions. Experience has shown that if the absorption of a chair when occupied does not exceed the absorption unoccupied by more than from one to one and one-half absorptive units, the modulation of reverberation with various audience size will not be noticeable and consequently not objectionable. In order to assure that this limit is not exceeded, the absorption of the types of auditorium seating used should be accurately determined, both when unoccupied as well as when occupied.

HOME or farm ownership for California veterans is financed by the Veterans' Farm and Home Purchase Act, passed in 1921, and has been taken advantage of by 7,500 veterans. This act provides for lending money for the purchase of a farm or a home, the state advancing the money and amortizing it with interest at 5%. The veterans makes a small down payment, 5% for a \$5,000 house; 10% for a \$7,500 farm.

The observatory on the Empire State Building, New York, took in about \$70,000 in the last eight months. An average of 3,100 people visit the building daily.

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Members of the American Institute of Architects

January 14, 1932

American Architect
57th Street at Eighth Avenue
New York, N. Y.

Attention: Mr. Benjamin F. Betts

Dear Mr. Betts:

We have been planning for some time to write you a letter of commendation on the character and quality of the "American Architect" in its present form, and we shall now actually avail ourselves of the opportunity of doing so.

The magazine has our whole hearted approval of its editorial policy and of the fact that in addition to illustrating current work in splendid manner, you are succeeding in analysing and placing before the architects, the business and practical phases of architectural practice. The latter is of great importance, as architecture and architects in general, if they continue to succeed, must comply with sound business principles and methods as they are understood by the public at large.

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With warmest personal greetings, we are

Yours very truly,
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(Signed) Ben. F. McMurry

A M E R I C A N A R C H I T E C T

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FOR FEBRUARY 1932

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TWO QUESTIONS

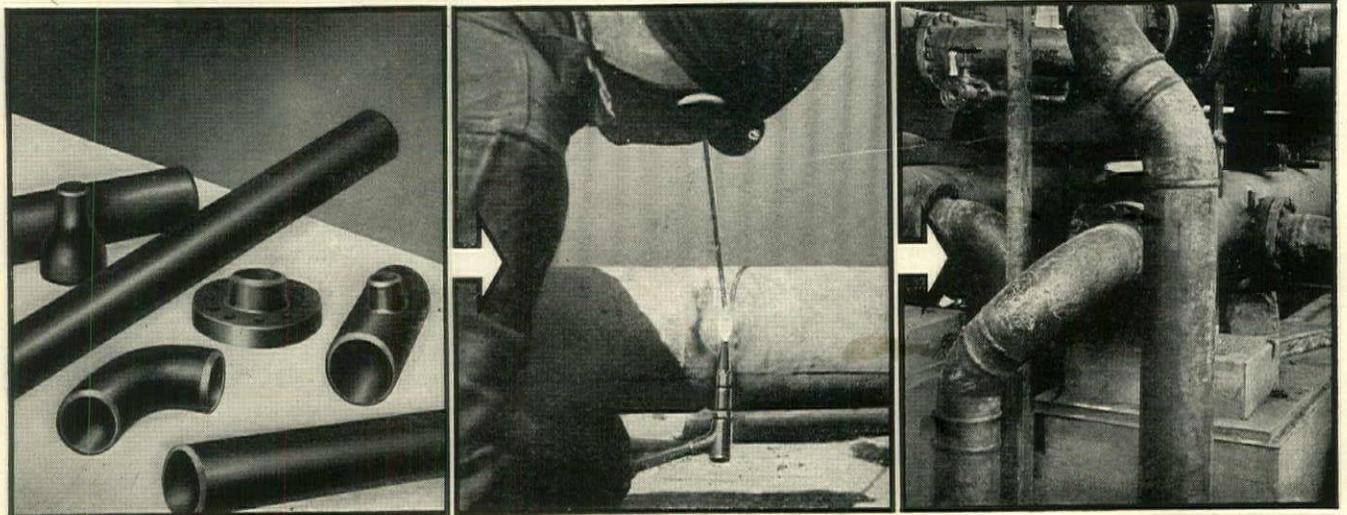
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