

Robert D. Kohn  
Miles L. Colean  
C. John Marsman  
Faber Birren  
Albert Mayer  
W. F. Bartels

PORTFOLIO OF  
BRICK CORNICES

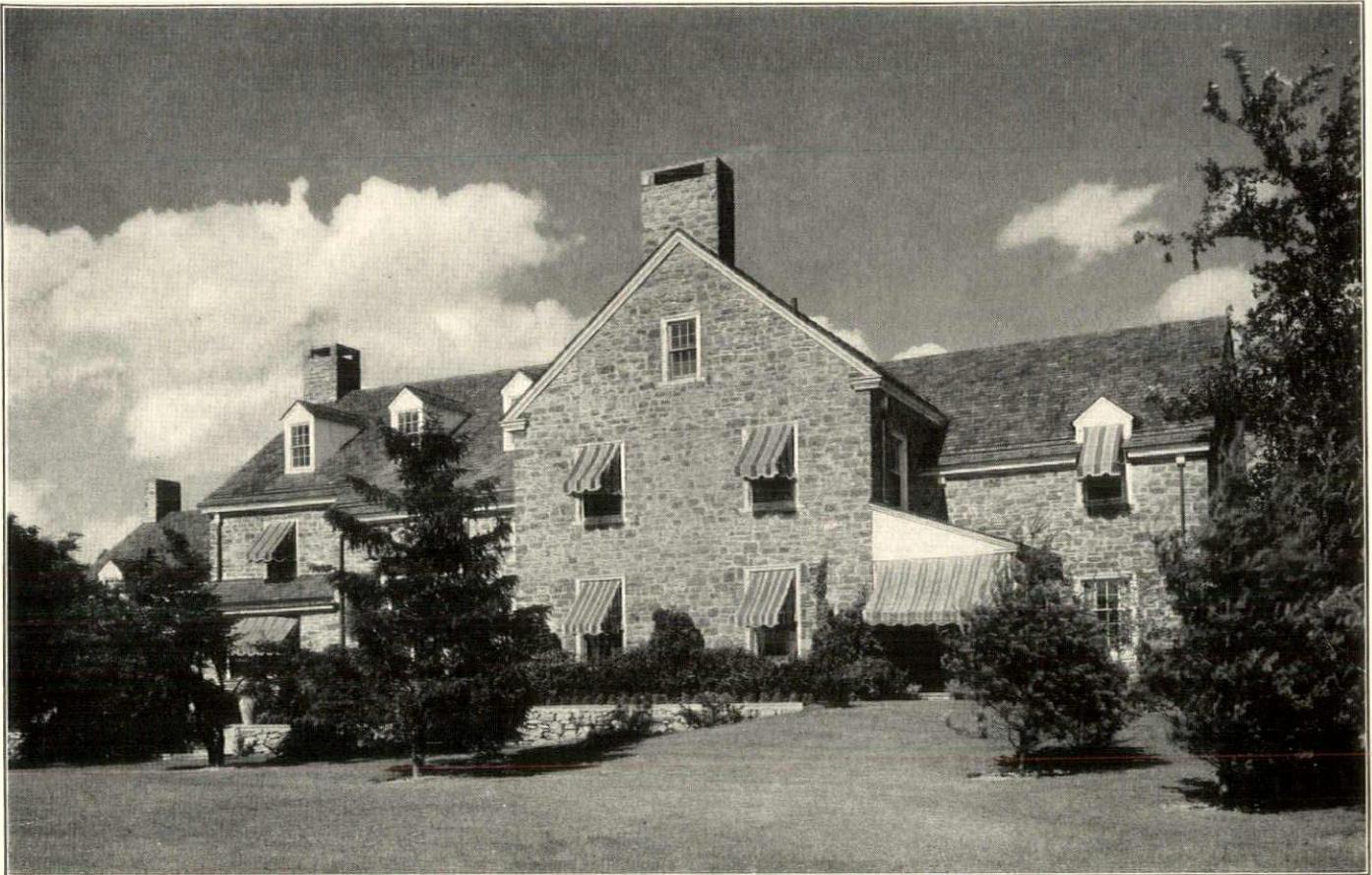
*Brick Cornices*

# ARCHITECTURE

JULY, 1935  
FIFTY CENTS

CHARLES SCRIBNER'S SONS

# THESE SECTIONS ELIMINATE MUCH OF THE COMPROMISE IN DESIGN



Bethlehem Light Sections were used in the floor of this residence in Bethlehem, Pa. Architects and Engineers, C. M. Lovelace and Otto Spillman; General Contractors, F. F. Speck Construction Company.

HIDDEN from the eye but imparting strength to the structure, Bethlehem Light Sections are the basis of the floor design in this substantial suburban home. Architects of better-grade houses are finding increasingly that the owner desires the stalwart and fire-safe qualities provided in the intelligent use of steel.

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These light sections, including beams, columns, joists and stanchions, supplement Bethlehem's line of heavier structural shapes and open the way for substantial economies. With them it is a far simpler matter to work out designs for floors to carry relatively lighter live loads. Beams of depth sufficient to meet requirements for rigidity can be spaced closely enough to keep the

floor-slab thickness within economical limits without using more steel than is needed to carry the load.

The same considerations frequently make Bethlehem Light Sections the logical ones for purlins, columns in upper stories where loads are lighter, struts between columns—in fact, for any location where rigidity and relatively close spacing of the structural members are desirable, and the loading does not call for the heavier sections.

Keep Bethlehem Light Sections in mind when working out the design of your next job. It's highly probable that they will enable you to realize substantial economies.

*Bethlehem District Offices are located at Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Kansas City, Milwaukee, New York, Philadelphia, Pittsburgh, San Antonio, St. Louis, St. Paul, Washington, Wilkes-Barre, York. Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Seattle, Los Angeles, Portland and Honolulu. Export Distributor: Bethlehem Steel Export Corporation, New York.*

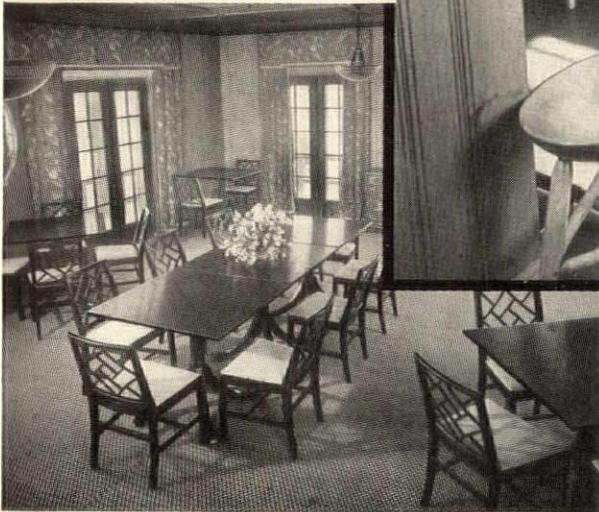


## BETHLEHEM STEEL COMPANY

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# As Architects See Us...

The Bar and the Dining Room of the Lawrence Beach Club, Lawrence, L. I. Architects: Henry Otis Chapman, Jr., and Harold W. Beder. Furnished by W. & J. Sloane.



Henry Otis Chapman, Jr., and Harold W. Beder planned the Lawrence Beach Club with the idea of combining comfort and beauty along with utility and resistance to weather conditions. In discussing the problems involved Mr. Chapman says:

**"We had to design a very simple interior and one which could withstand the salt air and dampness. In the bar we also had the problem of wet bathing suits. These problems were submitted to Sloane. They, in turn, worked out a most satisfactory solution. In the bar, Sloane linoleum was used not only to withstand the severe wear, but also for the effect. (The linoleum is blue with a white circle enclosing a red anchor. The dark blue and white curtains are very effective with the lacquer red ceiling, which harmonizes with the anchor in the center of the floor.) The heavy pine tables and chairs are most appropriate with the simple pine treatment of the walls. In the Dining Room, they chose to use a woven rug in grey and red. The different effect of each room, while keeping the same background, is a great credit to Sloane.**

**"The services of their Contract Department were most helpful, and they were willing to work with us in the most co-operative spirit. Sloane was able to render advice of a specialist in color, and another in furniture, with a result that the committee was well pleased."**

THE CONTRACT DEPARTMENT of W. & J. Sloane will welcome the opportunity to discuss furnishing and decorating for offices, hotels, clubs and institutions. The draperies, floor covering, panelling, office partitions and all types of furniture manufactured in our own factories will be of interest to you and your clients regardless of the size of layout.



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ON ITS SERVICE RECORD

**O'MEARA & HILLS**

G. E. QUICK, ASSOCIATE

**P**ROGRESS in building design and construction is often marked by the introduction of new materials. But new materials entail testing and proving, and leading architects and engineers seldom choose buildings such as those illustrated here as a "testing ground"—especially not for pipe.

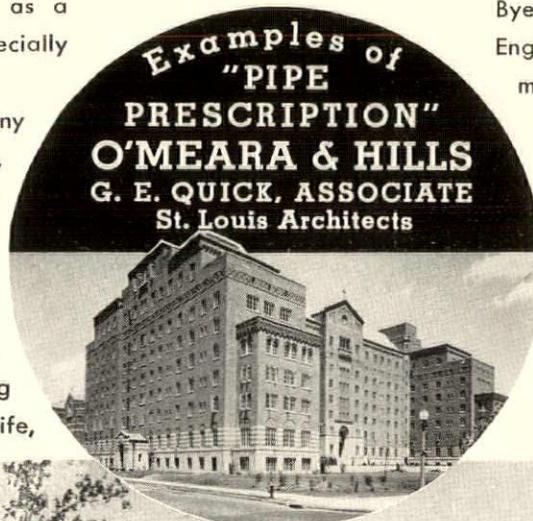
That's why, in so many outstanding buildings, wrought iron pipe is being specified. Wrought iron has inherited, through generations of architects and engineers, an outstanding reputation for long-life,

dependability and economy in corrosive service. Few materials used in building construction today offer such a background of authenticated service records.

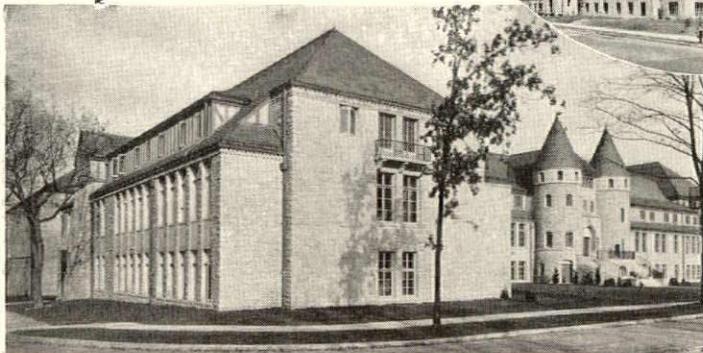
Illustrated here are examples of how O'Meara & Hills

have specified wrought iron on its service record. This engineering practice we call "Pipe Prescription."

Comparative service records, ASTM specifications, and other engineering data are available through any Byers Engineer or from our Engineering Service Department. A. M. Byers Company, Established 1864. Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston.



● DePaul Hospital, St. Louis. Genuine Wrought Iron specified for main supply, hot, cold, drinking water and fire lines; all waste lines, vents and drains; sprinkler system, gas and refrigeration piping; and for all heating supply and return lines.



● Genuine Wrought Iron was specified for hot and cold water and drinking water lines; also for heating supply and return lines in Villa Duchesne—Academy for Girls, St. Louis.



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# ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXXII, NO. 1

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WHEN CHANGING ADDRESSES, SUBSCRIBERS MUST GIVE FOUR WEEKS' ADVANCE NOTICE AND BOTH THEIR OLD AND NEW ADDRESSES

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# THE BULLETIN - BOARD

## PARIS PRIZE

THE twenty-eighth annual Paris Prize of the Society of Beaux-Arts architects has been awarded to P. M. Hefferman of Ames, Iowa, a Harvard graduate student.

The prize has a cash value of \$3,600, enabling the winner to study architecture for two and a half years at the École des Beaux-Arts in Paris.

Second place was given to Lester W. Smith of Brooklyn, a graduate of Princeton; third place to Thomas T. Russell of Philadelphia; and fourth place to Adrian Waldorf of Brooklyn.

The jury: Joseph H. Freedlander, Chester H. Aldrich, Archibald M. Brown, John W. Cross, Otto Eggers, Ely Jacques Kahn, William F. Lamb, William Van Alen, Ralph T. Walker, and Whitney Warren.

## AWARD OF THE BORING MEDAL

COLUMBIA UNIVERSITY announces the award of the Boring Medal for 1935 to Logan Stanley Chappell of Macon, Ga., second-year student in the Columbia School of Architecture.

Second place was won by Harry K. Wearne of Wharton, N. J.; third place, by Franklin B. Dailey of Mount Vernon, N. Y.

## FRANCIS J. PLYM FELLOWSHIP

THE Department of Architecture, University of Illinois, announces the award of the 1934-35 Francis J. Plym Fellowship to William V. Reed of Monticello, Ill. At present Mr. Reed is employed in the Housing Division in Washington, D. C.

## AN ARCHITECTURAL COMPETITION

IN connection with plans for the celebration of the 150th anniversary of the "Ordinance of 1787" and the establishment of the Northwest Territory, an architectural competition is to be held. It will provide a design for a memorial civic auditorium and city building for Marietta, Ohio, the cost to be in the neighborhood of \$250,000.

The competition will consist of a preliminary and final stage, each of thirty days' duration, the first stage opening July 1, and will be limited to members of the American Institute of Architects. Howard Dwight

Smith, of the Architectural School of Ohio State University at Columbus, is architectural adviser, and details of the competition may be secured by application to him.

## ARCHITECTURAL LEAGUE EXHIBITION

THE Architectural League of New York announces its Fiftieth Annual Exhibition, to be held in Grand Central Palace, New York City, from October 10 to October 19, inclusive.

The last day for the advance submission of photographs, in accordance with the plan in effect during recent years, is Thursday, August 1. These are sent to 115 East 40th Street. Exhibits will be received at Grand Central Palace, Friday, September 27, 9 A.M. to 5 P.M.

The award of medals will take place on Wednesday, October 9, at 9 P.M.

Further details and entry blanks for exhibits may be had by addressing The Architectural League of New York, 115 East 40th Street, New York City.

## HONORING ALBERTSON, WILSON AND RICHARDSON

FORMER employees, close friends and associates of A. H. Albertson, Joseph W. Wilson, and Paul Richardson gave the three a surprise banquet on May 18, celebrating the completion of their twenty-five years of architectural practice together.

Professor W. R. B. Willcox of the College of Architecture, University of Oregon, acted as toastmaster.

Mr. Albertson came to Seattle in 1907 as representative of Howells & Stokes, New York architects. Mr. Wilson joined him later in the same year, and was followed by Mr. Richardson on May 18, 1910, which date the dinner commemorated. The firm later became Howells & Albertson, then A. H. Albertson, and finally Albertson, Wilson & Richardson.

Perhaps the best-known buildings in the firm's long list of notable works are the Northern Life Tower and St. Joseph's Catholic Church, Seattle.

## HEATING AND VENTILATING

THE Fourth International Heating and Ventilating Exposition will be held in Chicago at the new International Amphitheatre, January 27 to 31, 1936. Since its incep-

tion in 1930, the exposition has been held every two years. The first showing was in Philadelphia, the second in Cleveland, and the third in New York City. The conduct of the exposition and all details of exhibit arrangement and leasing will be in charge of the International Exposition Company, Grand Central Palace, New York City, and will be under the direction of Charles F. Roth, manager, who was similarly responsible for the earlier expositions.

## ARCHITECTS' EMERGENCY COMMITTEE FOR NEW YORK

LUCIAN E. SMITH, New York architect, has been elected chairman of the Architects' Emergency Committee for the region of New York. Mr. Smith succeeds Julian Clarence Levi, one of the founders and chairman of the committee since 1930. Mr. Levi will continue as honorary chairman.

Mr. Smith, a member of the New York Chapter, A. I. A., was graduated from the Columbia University School of Architecture in 1901. He held the McKim Fellowship in Architecture from 1905 to 1908, studying at the American Academy in Rome and in Paris. He started independent practice in 1912 after being associated with Holabird & Roche, Chicago, and in New York with Donn Barber and Cass Gilbert.

The Architects' Emergency Committee has already expended about \$170,000 for the relief of unemployed architects and draftsmen.

## NATIONAL MORTGAGE ASSOCIATIONS

AMENDMENTS to the National Housing Act which have just become effective provide that the minimum capitalization of a national mortgage association may be lowered from the original amount of \$5,000,000 to \$2,000,000 under proper circumstances when the association is chartered in a district away from the larger financial centers.

Each national mortgage association is authorized under the amended Act to issue and have outstanding at any time notes, bonds, debentures, or other such obligations in an amount not to exceed twelve times the aggregate par value of its outstanding capital stock. The original legislation limited this to ten times the aggregate.

(Continued on page 12)



Architecture is no longer content to tread only the paths of historical precedent. It is insistent upon new solutions of old problems.

Among producers of building materials the temptation has been severe in recent years to suspend research activities, in order to escape the heavy expenses they entail.

In spite of economic pressure this organization has not permitted a moment's cessation of its aggressive, many-sided research program.

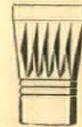
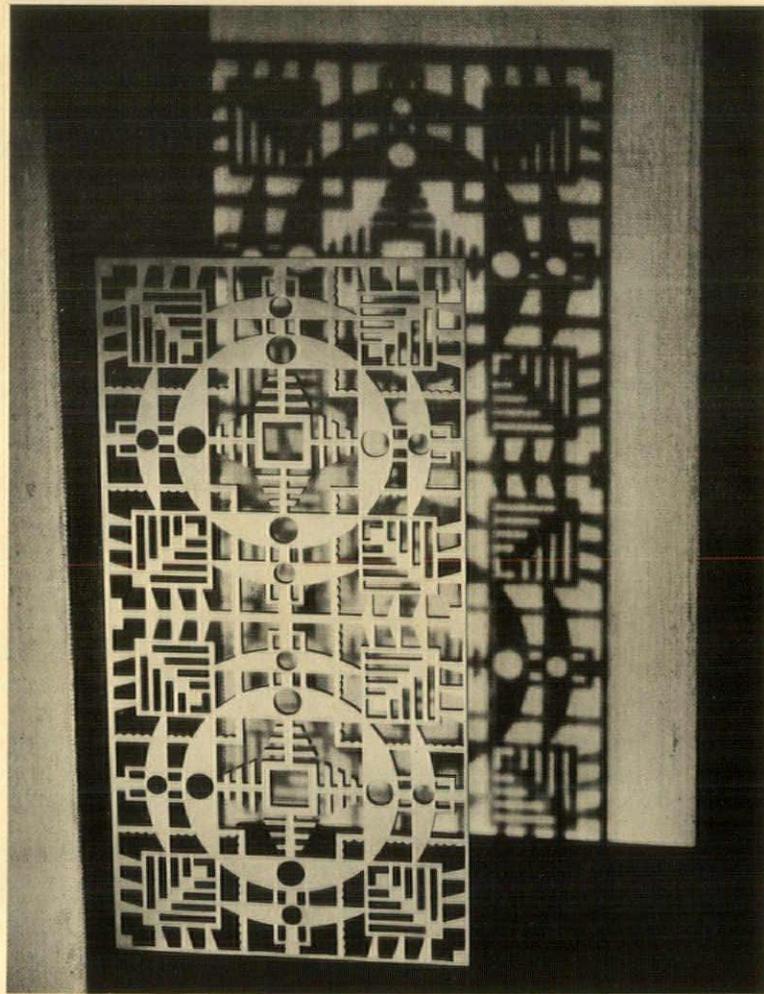
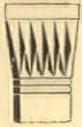
One reason for this policy is our desire to be ready to contribute to these new developments in architectural practice.

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# DESIGN

IN ART AND INDUSTRY

BY ELY JACQUES KAHN



- ❖ Should we stop teaching design and begin practising it?
- ❖ Have we discovered a better way to make designers than the master-and-apprentice system?
- ❖ Is there too much of the amateur in our art schools and not enough of the craftsman?

Why do we spend vast sums on our art schools and yet begrudge them adequate work shops and tools?

Is there something we may learn from other peoples, other lands, about how real designers are made?

*The answers to many such questions as these will be found within these covers*

*Price \$3.50*

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CHARLES SCRIBNER'S SONS, NEW YORK





*Jeanette Griffith*

« ARCHITECTURE »

JULY, 1935

*The monumental staircase comes back as an escalator—in the International Building, Rockefeller Center, New York City. Reinhard & Hofmeister; Corbett, Harrison & MacMurray; Hood & Fouilhoux, architects*

# ARCHITECTURE

❖ VOLUME LXXII

JULY, 1935

NUMBER 1 ❖



## *Rebuild America*

WE have two building jobs ahead of us. As citizens we will do our part to build a new and more truly democratic America. As architects we have similar work to do in a more material sense. In the world's history the great artists have always been men of vision. Leonardo and Michelangelo understood and worked in the larger world beyond the confines of their own workshops. They did not hark back to a civilization that was gone. They looked forward to a better one that was to be made, and they shared largely in the making of it. The architects of America, as men of vision, I am convinced are going to do the same.

These United States of ours have come to an important cross road in their history. Perhaps they face the most significant choice that has ever had to be made by a nation. For some of us the old road was a very comfortable one on which to travel. Are we trying to find our way back to it and travel forth once more in the hope that it will afford us all the old opportunities? Is there only this one way, backward? Must we wait for the old prosperity to come back to the select few so that we can serve them? Is that the only way in which we can hope to provide suitable environment for man's living, for his work, for his worship, for his recreation, for the affairs of his government?

There is another and a better road that leads out from this point, if only we have the sense to see it and the courage to take it. No matter how we stand, for or against the governmental procedure of the last few years, there is something stirring in our country which is immensely worth while. There is the intelligent tendency of the day toward a new and more vital democratic philosophy. It is not the first time in history that a broader social vision resulted from

a time of trouble than from eras of plenty. The frontier to be conquered is gone; out there the unknown wilds of lands and fortunes are no longer waiting to be conquered by rugged individualists. The mess after mess that the conquerors left behind them as they went out from frontier to frontier is right at our doors. The great era of expansion is over. The mess is to be cleared away. We have to do now a much more difficult and valuable task. We have to help bring order out of chaos; as we have said, both as citizens and as builders toward an ideal.

And this situation is particularly significant for the architect, for nowhere has the old procedure left its marks more patently than in the building of our cities, our towns, yes, even the structures in our wide-open spaces. A great part of all of this is obsolescent or worse. The new life, the fairer social order of things cannot be harbored in these old shells. Out of this time of trial will come for us a distinctly American way to provide a more just distribution of the proceeds of our joint efforts. There will come, too, the conviction that the old way of building was as wrong as the old way of making the fortunes that paid for it. Most of the products of that era are already obsolescent structures and unworthy to stay. A sense of order must be brought into the rebuilding process. I dare prophesy that the signs of the movement will be evident before long. The great question is: Will we stand for the old, petty, piecemeal, speculators' methods, leading again to uneconomic disorderly ugliness, or do we mean to work together, as social animals, for planned, large-scale, group operations, which alone can furnish an opportunity for creating a beauty in environment? Are we really going to rebuild America or just paint a false front over it?

ROBERT D. KOHN, F. A. I. A.

« ARCHITECTURE »  
JULY, 1935

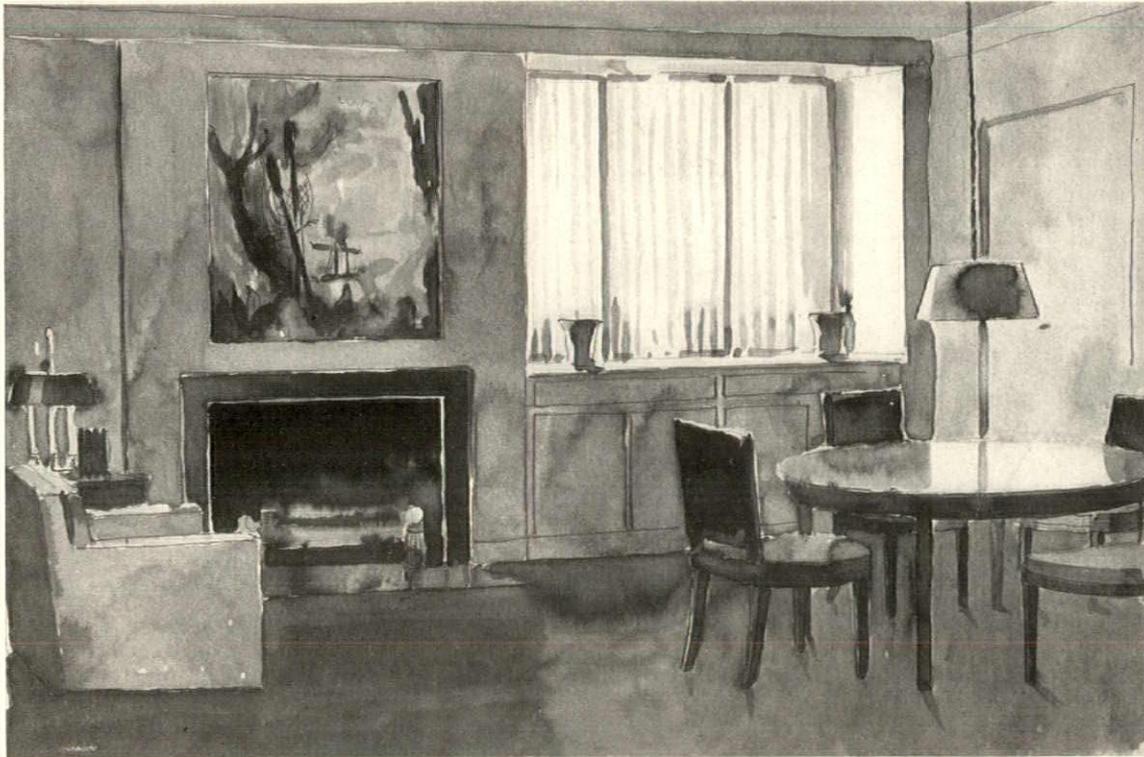
THE dining-room has for some time been showing signs of restlessness. Once again, after a long period of stability and assurance of an honored place on house plans, it is seen to be wavering. Shifting custom has been nudging it. Designers have been busying themselves more than commonly over it. Some have been pulling at it in

# What Is Happening

By C. John

WITH ILLUSTRATIONS

Following a widely expressed appreciation by architects of his article, "Why Not Design the Living-room to be Livable?" in the May issue, Mr. Marsman

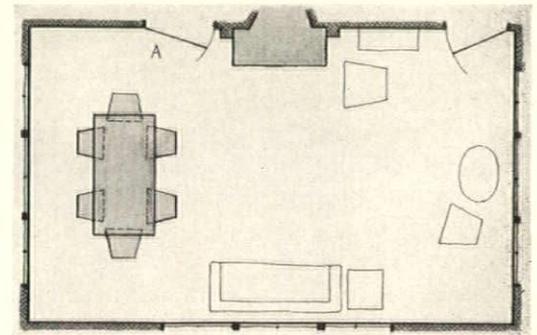


*When the dining space is in the living-room it should be so planned as not to usurp room essential to living-room comfort. The leaving of the dining table and chairs in the most important part of the room is certainly questionable*

*While the plan in the sketch below is supposed to be that of a living-room, it looks to be as much a plan of a dining-room. The placing of the door from the kitchen (A) to the chimney-piece might be without objection in a dining-room*

one direction, some in the other. Some are prophesying that the dining-room is on the way out; others that it will lapse into the state of anonymity that it used to enjoy many years ago; while others, less drastically, say that it will by all means retain its identity, holding its place in many houses, but in a perhaps less rigid capacity than heretofore, witnessing an expansion—a flowering—of more variable and pleasant domestic customs, in which it will find itself deserted often for the outdoor eating space or even for other seasonally attractive rooms indoors.

The dining-room, or rather, to speak more inclusively, the place arranged for eating, has of all places in the house been most sensitive to change-urging ideas. A mere list of names serves to evoke a moving-picture of its previous adventures: Great Hall, Grand Salle, Milord's cabinet, Suppling Parlour, Eating Room, Antichambre, Petit or Grand Salon, Salle à Manger



—Dining-room. It is a fragmentary list at that, but illustrative. In some of its conditions, as for example in the indeterminate form it assumed in early colonial houses, the eating space was incorporated with the common living-room and kitchen, and had no name. Nor could it have a generally understood name in the finer and gayer houses of France and Italy, where for a period dining seldom occurred in the same

# to the Dining-room?

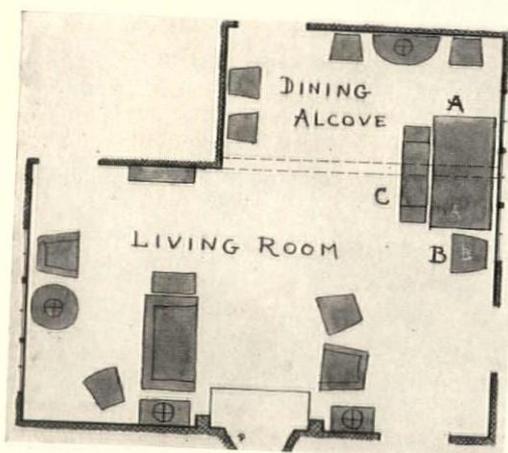
Marsman

BY THE AUTHOR

*moves on to the dining-room. The viewpoints of architect and interior decorator should be fundamentally similar, yet the results are not.*—EDITOR.

*Now that there is a tendency in dining-rooms to eliminate all but the necessary in furniture, the niche and other such architectural features are welcome helps in the decoration, both of the formal and informal room*

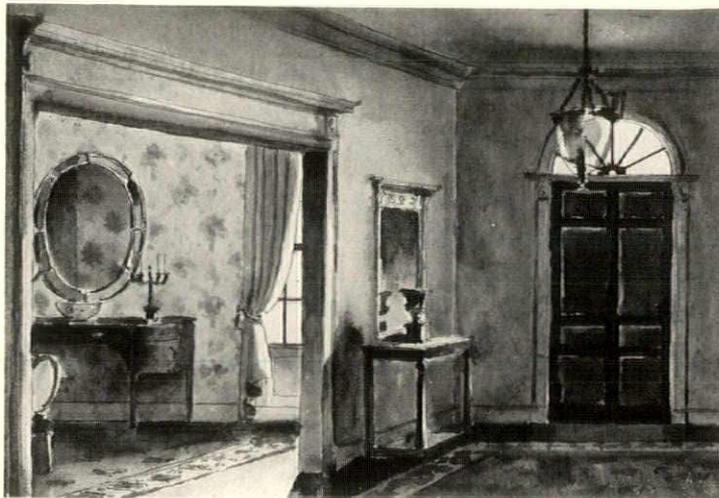
*In the sketch below, the dining table and chairs have not been left standing in the dining alcove of the living-room, but have been placed so that they harmonize with the living-room in general. The table (A) is placed against the windows. (C) is a bench, (B) an arm-chair, ready for use at the table, and other side chairs can be drawn up*



place twice in succession, flitting from anti-chambre to salon or out to the pavilion by the water, or to the terrace, or back into the small boudoir. But later, after once being pinned down and established on architects' plans, it became constant enough. And so it continued for many years, until recently.

The most interesting fact, and the most illuminating, about the current ideas is that they originated constructively, not in the great house as heretofore, but in the small one, and not in the large but in the small city apartment. Many a small-apartment dweller has known the necessity of doubling up in his living arrangements. If he, or she, has been the kind who wishes to

arrange his small apartment for the greatest possible degree of pleasant living, he has often preferred to occupy but one room, if it is a reasonably large one, rather than a combination of two or even three small stuffy rooms. (He has, incidentally, seldom got much of a break from the architect. The average contemporary one-room apartments—"one large room, kitchenette, bathroom, foyer, built-in bed, etc."—are so badly cut up with doors or otherwise made objectionable that he has had much better luck in finding at least a possible arrangement in some of the remodelled old houses. But perhaps his break is coming. A recent advertisement radiates cheer, thought the word "artistic" is daunting: "The architect imagined apartments so designed that everything a modern apartment should possess was there—spaciousness, sunshine, air, ample closets, bright kitchen, artistic fireplace, etc., etc.") But if the apartment dweller has occupied a single large room in



*The dining-room here is neither a private room nor an alcove. It can receive no satisfactory unified decorative treatment in the face of the large wall opening*

*The niche or recess for china is one of the most characteristic and delightful of dining-room features*

preference to small rooms, he has been impelled to budget his floor space. Some of the space necessarily has had to be put to double duty. That for eating, especially, being but temporarily in demand, can be made by the slight rearrangement of table and chairs, to revert to its normal living-room appearance. Furniture designers have not been uncognizant of this doubling-up necessity. And as a practice the disassembling of the dining group of furniture, the disassembling of it in a room normally used for living, has its good points. It is preferable, it seems to me, to certain expedients suggested on house plans where the dining space has been shifted into the living-room.

Such a shift, it appears, has been impending in many small houses for quite a while. In these houses the dining-room has been on the verge of moving back into the living-room through a large wall opening. Often it is to be found threatening to flow over through a similar opening into the entrance hall itself. This type of wall opening seems to have been perennialized in the nineteenth century in Eastlake's time, in the form originally of huge sliding doors and gaps lushly screened with portières. (It is unfair to blame Charles Eastlake for this and many other things of its kind, as has been done. He wrote, besides, some very good books.) The advantages of this long-favored device, shorn or not of its doors and portières, as a means of suggesting spaciousness and breadth to a series of rooms are outweighed by decided disadvantages, both practical and æsthetical. It is not in itself a beautiful feature nor an aid to the de-

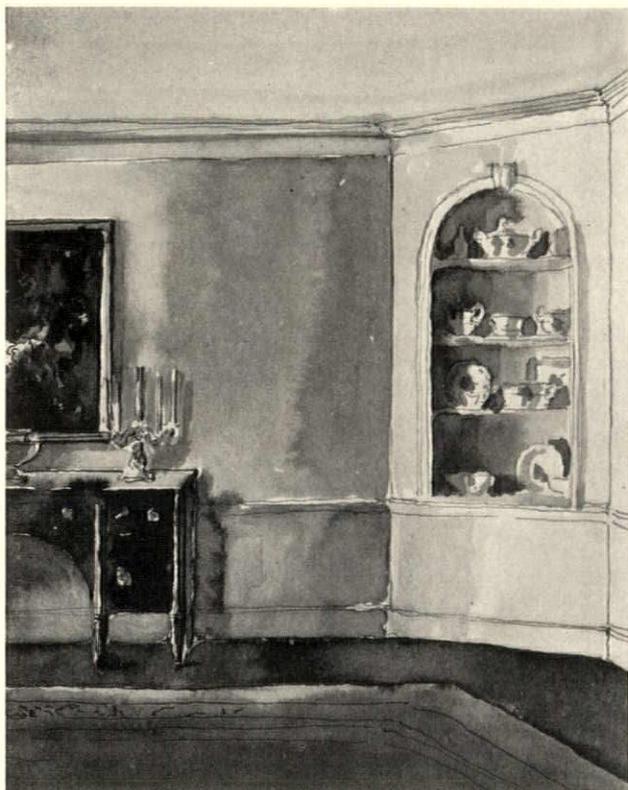
sign of any wall that it appears upon. It interferes with the full enjoyment of the room it dominates. Whenever the dining-room is enclosed within walls and is given an identity of its own, it seems logical to conclude that the walls are there to insure privacy for the room, and a quiet peaceful air suitable to the purpose of the room. And as the dining-room is dedicated to a very definite purpose, it should also,



it would seem, be entitled to receive an appropriate and distinctive decorative treatment. But the difficulty of giving it either privacy or a unified decorative treatment in the face of the old-fashioned large wall opening is obvious, although this has not been, and is not today, unfortunately, always recognized. The whole practical and decorative problem is altered, on the other hand, when the dining space is placed in some part of another room, for it is then no longer sufficient unto itself as a unit but is an adjunct, a detail, of another space.

It is said that the persistence of the dining-room as a unit in the smaller house is a matter of habit, and that contemporary living can do without it. This argument does not issue only from the camp of the arbitrary designers. It is voiced by intelligent people everywhere who have begun to realize that their ways of living are no longer those that made a separate dig-

nified room for dining requisite in the first place. There are many signs of change. To cite but one example: the leisurely, charmingly conversational, well-planned dinner party—it can be one of the most enjoyable of experiences—while not extinct nowadays, is certainly the exception rather than the rule among dinners. It is no longer, as Madame du Deffand in the eighteenth century said, “one of the four ends of man, and what the other three are I can never remember.” More typical of the present idea about dining, though of course not altogether representative in the midst of so much variety in contemporary habits, is the situation outlined in the following recently made statement: “The active lives the majority of people are leading



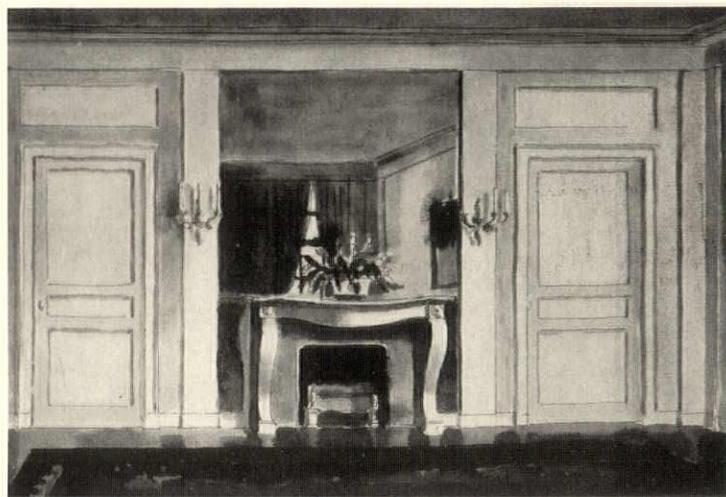
make them take even their pleasures rather strenuously. Conversation is no longer an art, and society hurries through its dinner to rush to the theatre or opera, to dance or play bridge. When one is satisfied one has finished. Three courses for lunch, and four for dinner, are adequate. In addition to the brevity of the meal itself, the food is usually far more simply cooked than it was twenty years ago, when one of the popular amusements was guessing what one was really eating, hidden under the rich sauces and quaintly shaped pastries, all served with an elaboration that was part of the day.”

The current inclination to clear out the unnecessary in houses, to open them up, to pour all their available spaces into one, to create a structure that has “flow” and ease, sets up a distinct problem as to how to deal practically and decoratively with the dining space and equipment when it is no longer contained within its own distinctive surroundings. Something more is called for by discriminating people (and they are worth considering, for they uphold the standards of good taste and make work interesting) than the placing by architects on living-room plans of symbols for table and chairs somewhere near the door from the kitchen. Some such heedless placing was suggested, and carried out as well, in a recently published plan that showed the door from the kitchen on an adjacent wall close to the living-room fireplace; the dining table and chairs in the completed room are left standing habitually in the one spot where one has every right to look for a great deal of living-room comfort, near the fireplace. In other houses the full regalia of the former dining-room—chairs, table, sideboard, and even the old china closet—have been moved into an open corner of the living-room!

There are a great number of variations of plan possible in the merging of dining and living spaces. But in all of them, wherever there is no separating and dissociating wall, the dining space, whether it is labelled “dinette,” or “alcove,” or “buffet,” or simply “living-dining,” or is dubbed a “makeshift” (as has been done by one eminent protestant among architects), is admittedly the subordinate space. Even if it

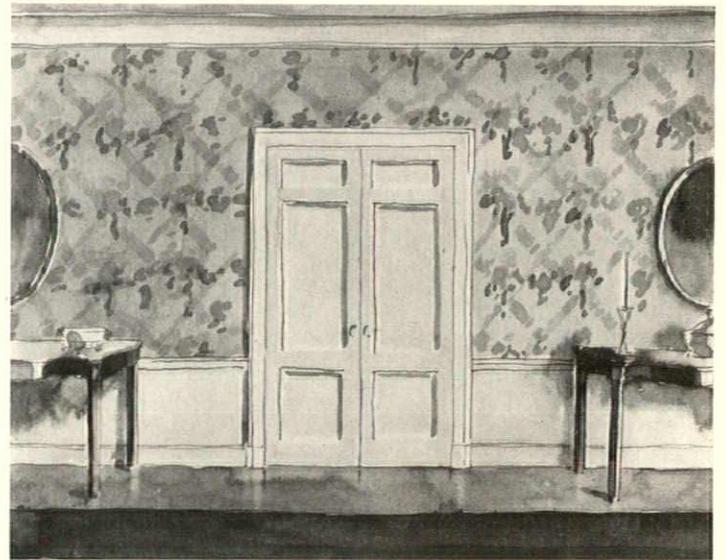
*Another use of an architectural feature for the display of really beautiful china*

*Doors close to the chimney-piece in the dining-room are not objectionable from the practical viewpoint as they are in the living-room*



can be hidden by screens or curtains "while the table is being set," a suggestion so often made, this space most of the time is still a part of the living-room, and designedly so. The selection and the distribution of the furniture in the dining part of the room should be considered then from two points of view, and the point of view of the living-room must dominate. The large dining table, be it square, oblong, round, octagonal, or oval, surrounded by chairs (it may be by the unimaginative and, let us hope transitory, metal tube chairs), when taken out of the dining-room where it is at home, is not an inviting or pleasantly decorative spectacle. A long psychological essay could be written, I suspect, on the depressing influence of such a constantly present spectacle in a living-room. A tip with regard to its disposition can be taken from the apartment-dweller. The table, if not too overwhelmingly large, instead of being left out in space, surrounded by chairs, looking more like a setting for a directors' room than anything else, can be shoved back against the wall and the chairs placed here and there away from the table when not in demand for dining. These chairs need not all be of the same design, or upholstered with the same material, and they can be varied—armchairs with side chairs. The effect should suggest "living-room" as much as possible. The table can perhaps be kept end-on against a wall, or a window, or built-in bookshelves, and a chair or two be left by it, extra chairs being drawn up for meals. Placing the

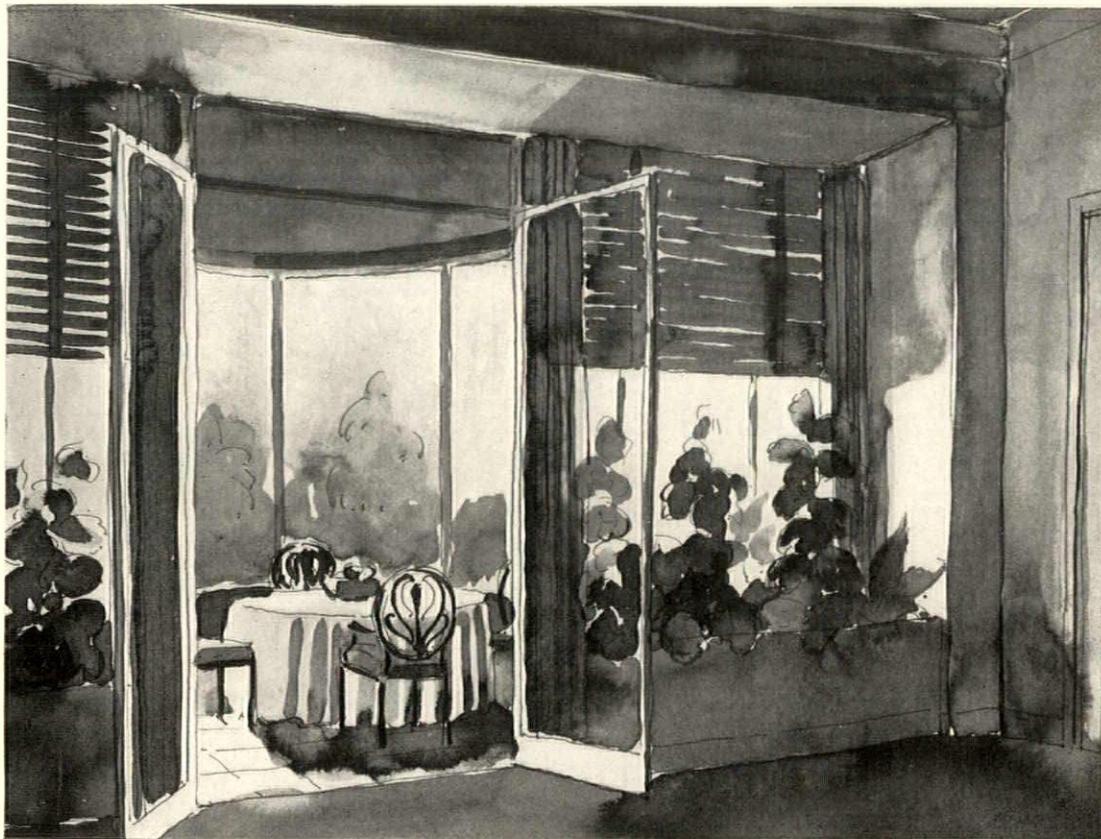
table in a secluded corner or in a bay window by some built-in seats seems a good idea. As to the other traditional accessories, the sideboard, china cabinet, "buffet," wooden urns on pedestals, and so on, most of them seem to have no place in the living-room. Such adaptable pieces, however, as the chest-of-drawers, the French or English style of commode, the cabinet of acceptable design, the console table, and the built-in and not too obviously "dining-room" feature, all have consistent possibilities. They are properly used in the living-room, and, while part of the "dining furniture," need not necessarily all be placed in the dining part of the



*The centrally placed door in a dining-room usually requires a balanced arrangement of furniture on either side of it. If for any reason this is impractical or undesirable, it is better that the door be placed if possible toward the end of the wall, so that a single piece or group of furniture can occupy the center*

*The summer dining-room can be placed on a terrace or deck, surrounded by wire screening, and covered with awning or a permanent roof. Furniture can be varied by the use of table and chairs in painted iron or in rattan*

« ARCHITECTURE »  
JULY, 1935



room. There is much variety possible here. The rigid conventional dining-room ideas having been broken up so far, they must unbend all the way. The problem of designing, furnishing, and decorating adequately the combination room is a strictly modern one, and can be solved delightfully, or ignored. And will be—both! For the most livable and generally pleasing results, it is more than ever to the purpose that, while planning combination rooms, the architect visualize the exigencies of furnishing and provide for them accordingly.

The other kind of dining space, the dining-room that is a separate unit, requires this pre-visualization of furniture placing no less. This idea is more forcibly true than ever, nowadays, when the superfluous in dining furniture is being

discarded and when what is left has to be placed to fine advantage in the room, not only so that it will function well but so it will make for the most pleasing decorative effect. Much of the old-fashioned furniture is in the discard, praises be! along with the dead game and fish and luscious fruit pictures of another day. Fine examples of antique furniture will be retained and used thankfully as long as they hold together. But the dining-room "set of furniture" is no longer in much demand, and is disappearing from the floors of the better furniture shops. Agreeably harmonizing pieces of furniture are assembled instead. A sideboard or commode—or their architecturally provided equivalent—a console table or two, possibly a serving-table near the kitchen door behind a screen, and table and chairs, seem to meet the average requirements. Cabinets of good design, or architectural wall recesses or niches can hold china if there is a fine collection that must be displayed.

## S

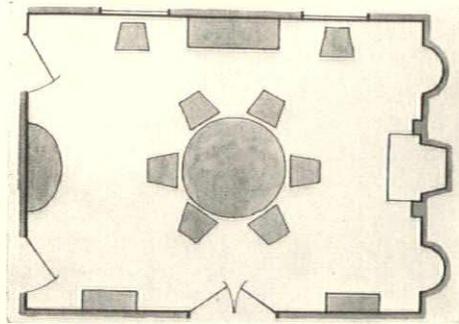
One of the most interesting of all rooms to design and arrange is the "formal" dining-room for the large house, apartment, or club. Of this type the most satisfactory rooms created recently, at least in my opinion, have been those that have drawn on the old, the traditional, for a measure of support in the design both of architecture and furniture, and on the contemporary for its realization. This drawing on the traditional might consist in no more than an observance of good proportions and a pleasing balance or rhythm of decorative features and furniture.



*While the practice of hiding a fine piece of furniture in a wall recess is not a good one, still the above sketch contains a suggestion for the possible treatment of a wall opening that has been filled in and backed with mirror. The sideboard could be a built-in one and treated as woodwork*

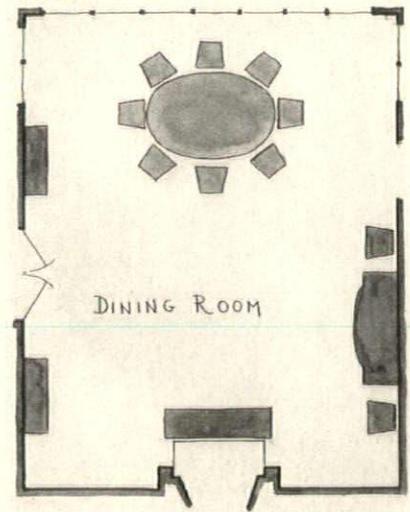
*The placing of tall wrought-iron candelabra at either end of a long table is but one of a number of decorative effects possible in the lighting of the dining-room*





*The small dining-room that has borrowed the carefully balanced plan of some of the fine old rooms, but has its whole decorative scheme realized in terms of "contemporary" simplicity and restraint, can be a very successful room*

*The conventional placing of dining table and chairs in the center of the dining-room can be varied in a room that possesses a large bay or expanse of windows, by setting this furniture near the windows*



Oval, round, and even octagonal plans have produced some very handsome rooms. An effective idea, and an up-to-the-minute one, for a strong central or repeated decorative fixture, is the setting of a cabinet or console table against a large, wall-high, slightly recessed mirror. The other appropriate furniture, because again reduced to essentials according to contemporary standards, must more than ever, in this kind of room, be studied for excellent placing. The size of the table and number of the chairs are naturally governed by the requirements. Such chairs as are not kept habitually around the table can be set to good decorative effect against wall spaces.



A decided help to the pleasurable quality of any dining-room, be it "formal" or not, is the fireplace. It is a luxury that every one cannot have. The placing of a door or doors adjacent to it is not objectionable in the dining-room, as it is so positively in the living-room. In fact, the symmetrical design of chimney-piece plus doors can be a beautiful one in the dining-room, and the presence of the doors on either side of the chimney eliminates the necessity of placing two more pieces of furniture against the wall. The same necessity of symmetrical balancing of furniture is avoided if the entrance door is not placed on center. For no placing of furniture on either side of a centrally placed chimney-piece or door in a dining-room is as satisfactory as the symmetrical one—a balancing even of identical pieces. And for this reason, if such an arrangement should be impractical, it is often better to place the door, if possible, near the end of the wall. Because of the small variety of furniture required in the dining-room, it is desirable, if the room is to have any decorative pretensions at all, that the furniture be placed to good effect. From this standpoint, there is no room in the house that can suffer more from the injudicious placing of doors or the presence of too many

doors. If several doors are required, the blind door can often be used to good purpose.

A thing that is stressed in designs of contemporary houses is exposure—as much exposure to sunlight and air as possible for every room—floods of sunlight as well as an intimate view of the fortunately adjacent landscape. That is all to the good. The dining-room receives its eastern exposure, to be wished for particularly when there exists in the house no separate room for breakfasting. Speaking merely from the standpoint of the decorative qualities of a room, however, there is no doubt that most rooms are at their best at night under artificial light. And it is very interesting to observe how little direct sunlight a room requires—still regarding the question from the decorative viewpoint—to be at its best in the daytime. There are rooms and rooms, of course, and sunlight is a very welcome thing in most of them. But shadow has charm as well. It is as potent a decorative agent in a room as it is on the exterior of a house. A judicious regulation of light by curtains or blinds in the beautifully appointed room is usually found best. The "health room"—all glass, all exposure—is another thing. It has turned its attention out-of-doors rather than in. Eating out-of-doors on the screened-in porch, deck, terrace, or loggia is being enjoyed more and more as people recognize the advantages of these outdoor rooms. And the inclusion on house plans of facilities for outdoor eating makes not only for more pleasant living, but also for a much appreciated change and rest from eating in the indoor dining-room or dining-nook or alcove.

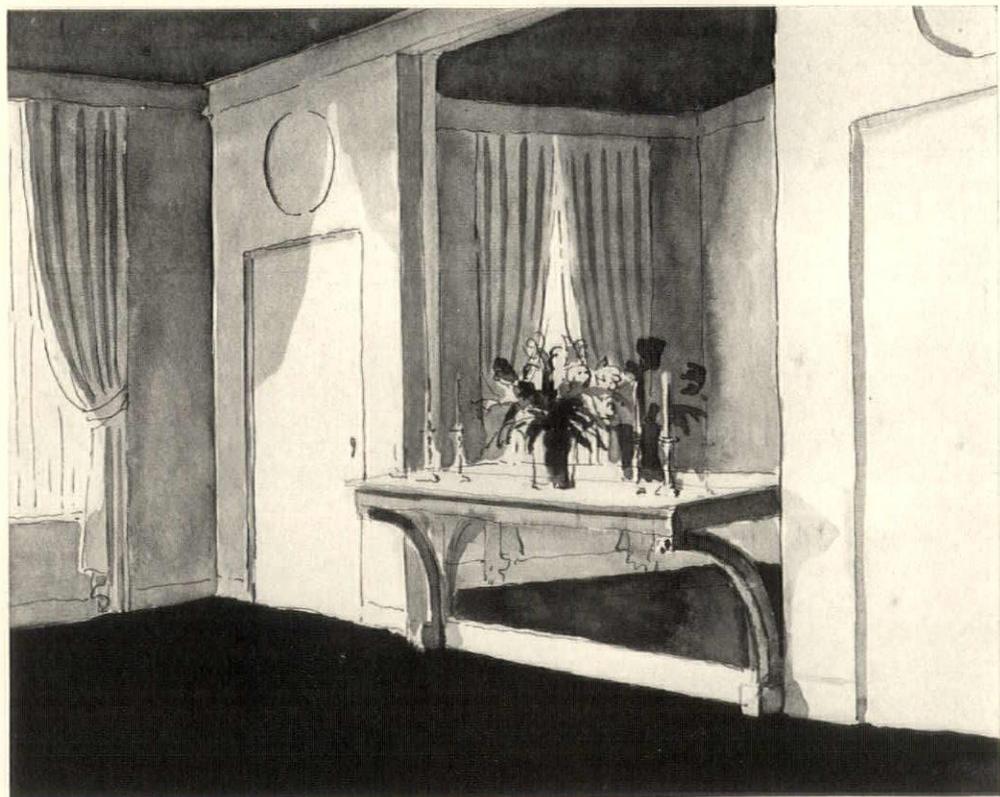
The artificial lighting of dining-rooms can often be a problem. The central electric fixture

gives an unrelenting glare to the whole room that irks many people. Wall lights are not always well placed. I know of a fine dining-room that had wall lights in all four corners, leaving the center of the room, about the table, in obscurity. Candles could be lighted on the table during meals, but for general purposes the wall lights were far from adequate, and had to be supplemented by others nearer the center of the room.

Candles for the table seem to be a universal favorite. Indeed some people still use them as the only source of light during a dinner, not only on the table but placed against the wall in mirrored appliqué, and on the mantel-shelf. The lighting of the dining-room, like that of the living-room, is governed a great deal by personal preference, and by such taste as is involved. The variety of these preferences and ideas, and their decorative possibilities, makes the subject of great interest: the chandelier, the lamp, the pedestal light throwing an indirect illumination up on the wall, the tall floor candelabrum, the concealed system of lighting of ceiling or wall recesses, the drop-light over the table, all have their adherents and their qualifications. One form of fixture, however, that must pass into limbo with the dead game pictures, the plate-rail and the golden-oak buffet, is the colored glass "dome." In general, nowadays,

a soft glow with adequate lighting of the table is preferred to brilliance and perfect clarity. The lighting of every room deserves careful study. The central fixture should be considered twice before used.

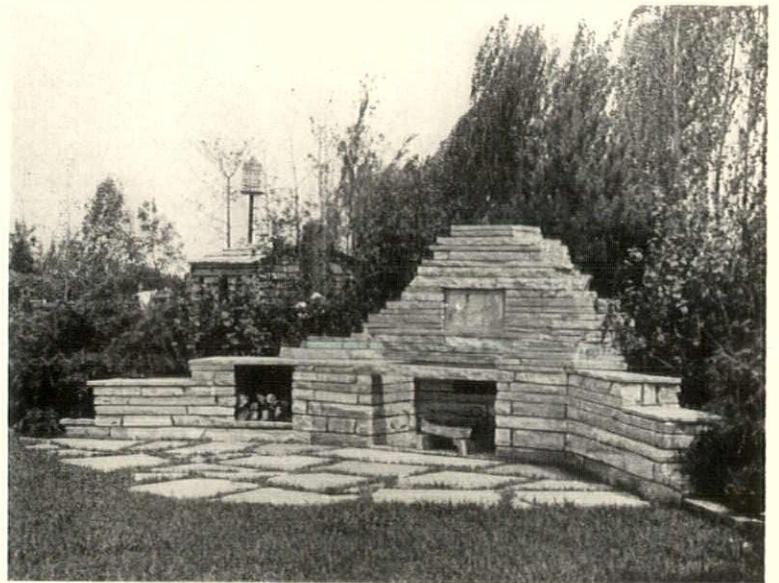
In conclusion, a word about the "atmosphere" of dining-rooms. I believe it is true that a certain sense of formality in the arrangement of design is not unpleasant in any dining-room. It is a hackneyed word—formality—and much out of favor. But a little bit of its quality mixed judiciously in the make-up of a room that one enters perhaps but two or three times a day, to relax pleasantly though not to lounge, to eat in and to enjoy, more than elsewhere perhaps, the interplay of good manners, is not out of place at all. It is present to a degree in dining-rooms through the mere regular patterning of the dining table and chairs. And it can be achieved further and very agreeably—is there any room that should be *more* agreeable, cheerful, even gay, than the room in which meals are taken?—by some of those special dining-room features, such as corner cupboards or built-in niches for fine china or glass, and possibly a floor of tile, composition, or marble. To add to the cheerful effect and to that something of formality, the appearance of a patterned or scenic wallpaper is just right in a dining-room, and the presence of plenty of flowers.



*The architecturally designed console table placed against a mirror, as in the accompanying sketch, can be a handsome feature in a dining-room*



*Fireplace in the patio of William L. Horton, Bel-Air, Calif. Gerard R. Colcord, architect*



*An outdoor fireplace built in connection with the Horticultural Exhibit at the Century of Progress Exposition, Chicago, 1933*

## Outdoor



*A fireplace built of granite on the estate of C. A. Griffith, Azusa, Calif. The trees of the grove are the native California sycamore. Charles Gibbs Adams, landscape architect*



*Fireplace on the estate of James Lee Loomis, Granby, Conn. The table in the foreground has a millstone top. Thomas H. Desmond & Associates, Inc., landscape architects*

## Fireplaces



*Fireplace in a corner of the patio of Ernest Klepetko, Huntington Palisades, Calif. W. P. Herbert, landscape architect*



*Fireplace in "Camellia Walk," the garden of Mrs. Caroline Adams, Pasadena, Calif. Charles Gibbs Adams, landscape architect*



# Federal Housing and the Architect



*By Miles L. Colean*

DIRECTOR OF THE TECHNICAL DIVISION, FEDERAL HOUSING ADMINISTRATION

THE architect may ask, with reason, what will be the effect, if any, of the housing activity of the Federal Government upon the physical aspect and arrangement of our dwelling structures. A fair answer is that the effect will vary directly with the interest shown in such activity, and the support given to it, by the architectural profession.

It must be borne in mind, that in only a comparatively small part of the total residential construction to be anticipated in the coming years can the Government exercise a direct control over the character of the buildings. The excellent demonstration projects to be erected by the Housing Division of the Public Works Administration cannot in any normal year constitute a major portion of new housing activity. Besides these, only the work of the Subsistence Homesteads Division and the reconditioning work of the Home Owners' Loan Corporation, neither of which should bulk large in construction statistics, are planned and conducted under direct governmental supervision. The really great volume of residential construction with which the Government can be associated involves only an indirect control, through the medium of mortgages insured under the National Housing Act.



Any control, such as that established by the Federal Housing Administration under this Act, will be most effective where it is not control at all, but rather an agreement between the public and the Government as to what good housing should be. Such an agreement, in view of the general lack of public knowledge of and enthusiasm for high standards, will require a great deal of educational work. To put it frankly, the Government recognizes the fact that such standards cannot be enforced until the public is ready to demand their enforcement. It relies for aid, therefore, upon the important groups who are cognizant of the need for improved standards; and among these groups the architectural profession has a prominent place.

Some explanation is required of the method of approach to the problem which has been adopted by the Federal Housing Administration. Essentially it is a realistic approach. It derives primarily from the careful survey of existing housing conditions which was made by the Real Property Inventory during the winter of 1933-34; then from the public attitude toward housing standards inferable from this survey; and finally from a thorough study of the intent of the National Housing Act itself. On the basis of such an approach, many compromises are made necessary, with what scientists and humanitarians might set up as ideal. Minimum requirements for the present must be all too low if standards are to be made effective and enforceable; but progress to a more nearly ideal condition of things can be made gradually.



Any program for dealing with a change in existing conditions must fully weigh the strength of the opposition to change which those same conditions may present. We have for instance in this country approximately 25,000,000 dwellings, representing an estimated mortgage debt of nearly \$20,000,000,000 and a probable valuation of \$70,000,000,000. This money, whether in mortgages or equities, represents for the most part the investment of the savings of millions of people. Obviously, it is a major part of the wealth of the country.

Wealth in real estate, while not permanent, is consumed very slowly. Existing dwellings are adapted to a certain rate of obsolescence, based upon a generally accepted opinion of what constitutes habitable housing. Anything which tends rapidly to increase the rate of obsolescence tends to create an unbalanced distribution of wealth. This is true always of individual wealth, and is true of the general fund of wealth when the means are not also provided for simultaneously producing more wealth.

It should be evident therefore that any arbitrary raising of housing standards which would increase the rate of obsolescence of the bulk of

existing structures, and which would consequently render difficult or impossible the maintenance of a sound financial status for such buildings, would affect adversely the liquidity of the real-estate market and depress values. And, although it is obvious that no obligation exists to preserve existing values in perpetuity, or to uphold a fictitious level of values, it is equally plain that violent disruptions of the value level must be avoided if we are to have an orderly and sustained development of land.



Far from tending to produce violent disruptions of a value level, the Housing Act was definitely designed to eliminate the unbalanced fluctuations which have been characteristic of former methods of real-estate development and finance, and to prevent the alternate periods of free and excessive borrowing and of overloaded and frozen debts which accompanied them. The Act substitutes for former practices a system of long-term, steadily amortized financing, which prevents the borrower from being subjected at any time to large payments, and which insures the lender against the loss of principal.

The importance of this simple change to the construction industry, and consequently to the architectural profession, is clear. In the first place, anything which eliminates the uncertainty in the availability of capital is helpful to orderly progress in building and land development. More important, however, from the architect's point of view, I believe, is the device which the Act creates for adjusting the rate of the retirement of a loan to the rate of physical deterioration and obsolescence of the property.

The present real-estate debt incumbrance has been too greatly a system of permanent debt. People borrowed on a straight mortgage basis for repeated short terms without intention of repayment, expecting confidently that in the end a rise of property values would more than take care of the matter. The result has been that the value of the property became involved with the debt structure. Every effort was made to peg the former at a point which would sustain the latter. Consequently, every move to improve standards, to reduce the cost of producing equivalent properties, and frequently even to produce an adequate number of buildings, was strongly resisted by borrower and lender alike.

The long-term amortized mortgage, after the pattern set forth in the National Housing Act, breaks this jam. It places the real-estate debt

on a basis that it is gradually liquidated, leaving the property debt free. Thus it is in a position where its removal from the market produces no financial vacuum, and consequently, where its continued utilization can be based solely upon its utility as determined by the standards accepted at the time. The old-fashioned mortgage, by the stagnation of debt, tends to produce a constant lowering of housing standards, and to balk such technological development as would endanger its claims. The new mortgage makes an improvement in standards over a period of years readily possible, without a disruption of the financial system.

As I have said previously, this raising of standards must be a gradual process. Adjustments must be made according to availability of existing structures, the ability of the construction industry (which includes the architectural group) to produce structures better than existing ones at lower cost, and in response to the demand of the public generally for better living conditions. The point is, however, that under the new system, no matter how slow they may appear to come, such adjustments can be made.

In view of the foregoing, the standards set up by the Federal Housing Administration and embodied in its Circulars Nos. 2 and 5 ("Property Standards" and "Subdivision Development") will be seen to constitute a step, but only a first step, in the direction of better housing conditions. In the matter of design and structure, they require at the present time no more than what the honest architect and the honest builder of average skill would of themselves produce. The highly competent practitioner will find them below his own standards; but he must remember that they are set up, not as a description of a model building but as minimum requirements for any house now existing or to be erected anywhere in the United States upon which an insured mortgage is desired.



The emphasis throughout is placed not so much upon structure and design as it is upon neighborhood and upon the relation of the dwelling to its land and its general environment. This may seem to architects an unbalanced treatment of the factors with which they are most concerned. It should be readily apparent, however, that such is not the case. The first essential to good housing is obviously a good neighborhood; and by a good neighborhood is meant one which is reasonably secure in its resi-

dential character, where the buildings which may be erected there and the uses to which they may be put are assured to be compatible with that character. Manifestly, it is a neighborhood where schools, parks, and means of transportation to work and to shopping centers are readily accessible.

The second essential is that the dwelling itself be so located that adequate light and air and privacy may be guaranteed to its occupants.

Emphasis on these factors means several things. It means on the one hand that the houses which the architect designs will be protected in their utilization against the intrusion of inharmonious and deleterious land uses. It means that neighborhood will be looked upon distinctly in relation to their residential characters as such, and that development will be directed to sound investment in good housing rather than to speculative building which looks forward to early removal for a more intensive use. It means also that in neighborhoods so dedicated, and on lots so laid out, dwellings will be less affected by obsolescence from the blight and deterioration which are the inevitable results of badly planned and unprotected neighborhoods. From this it follows that houses will not be rendered useless before their time, obsolescence may come to be calculable on a more scientific basis, and investment in property rendered more secure.



This emphasis should produce a further result. By improving at once the basic factors of good housing, and by assuring their maintenance, the improvement of the standards of the dwelling itself becomes more practical and more likely. Dwellings will be less apt to be allowed to deteriorate because the neighborhood is shifting. New equipment will be installed. Alterations will be made. And when the period of economic life and of reasonable habitability has been passed, there will be less likelihood of abandonment to uses which are socially unde-

sirable, and, I believe, more likelihood of replacement with up-to-date structures.

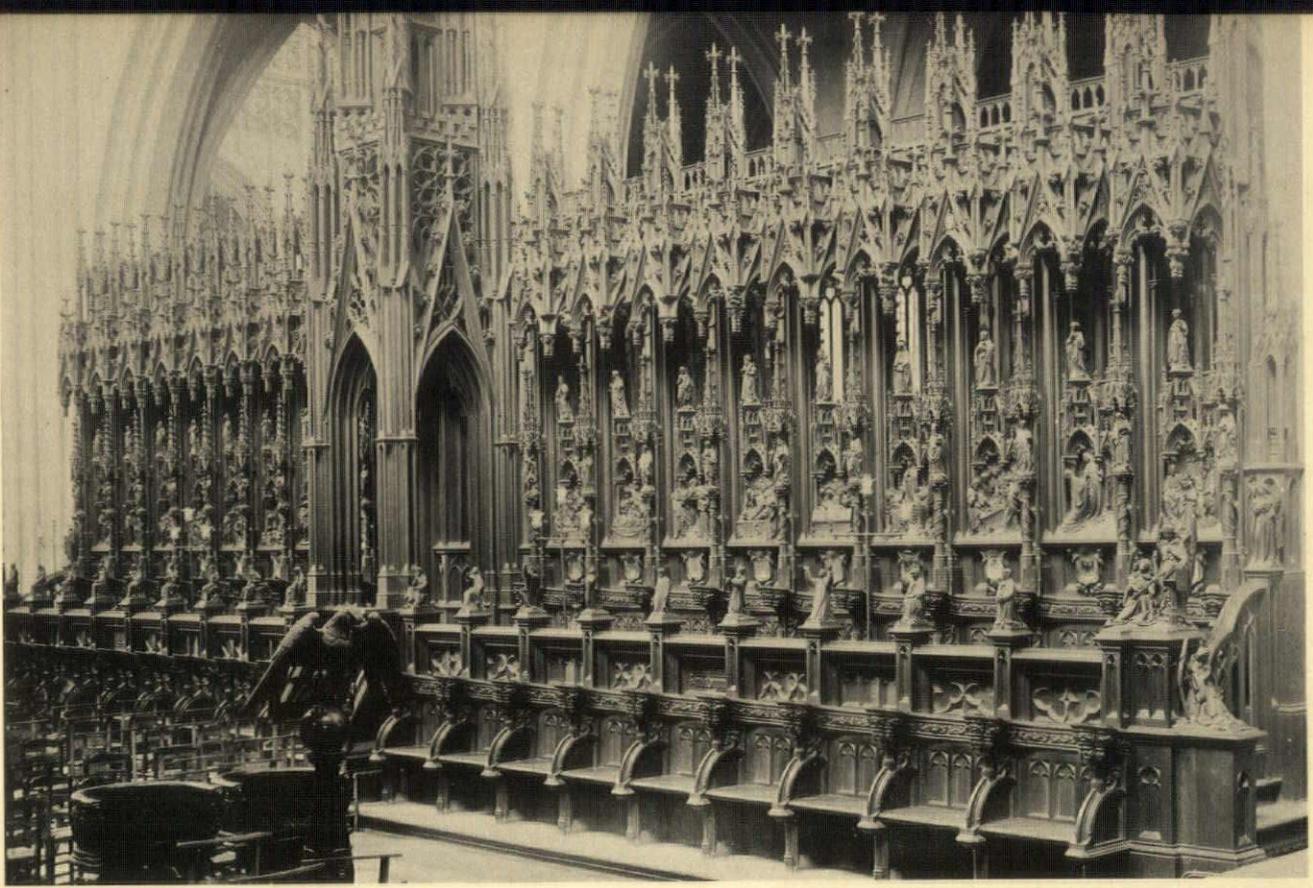
The broader results of these measures may be summarized as follows: We have for the first time a system of real-estate finance which may be synchronized with the obsolescence of real-estate improvements, and which, therefore, should with little violence to the financial structure permit the removal of obsolete structures from the market. With the incubus of a permanent real-estate debt removed, great possibilities are opened up for raising housing standards, for speeding up technological advance, and for meeting changes in the levels of construction costs with diminished hazard. With the stabilization of neighborhoods, and the narrowing of the factors of obsolescence more closely to those inherent in the structure itself, we should see a greater confidence, and a greater interest in real-estate investment and in development for investment purposes.



In these results the architect should be a beneficiary. He should feel the effect of a more stable real-estate market and a steadier flow of development. He may possibly even hope for an escape from the twin nightmares of the profession, feast and famine—more work than he can take advantage of and economically produce at one period, and not enough work at other times to supply him with tobacco money. He should also benefit from a situation in which experimentation may be given play and where technological improvements can be taken into consideration. He should anticipate with some pleasure a world in which the number of buildings to be produced will be adjusted more rationally to the public need for them, rather than a world in which the control of building lies in the dead hands of an unrealistic mortgage system.

These benefits to the architectural profession the National Housing Act has in its power to produce.



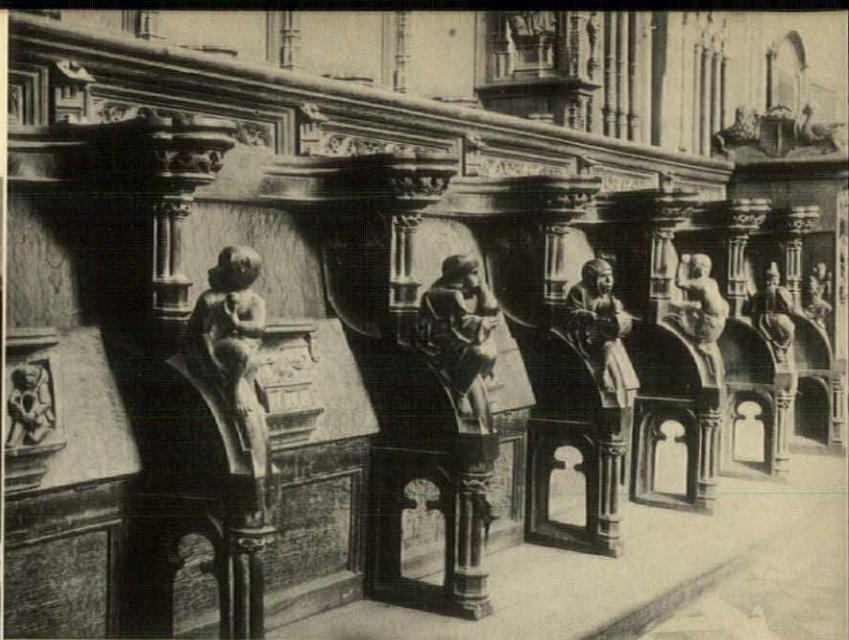


## Wood Carving of an Earlier Day



*At top of page, the  
choir stalls of Ant-  
werp Cathedral  
(1840-1883)*

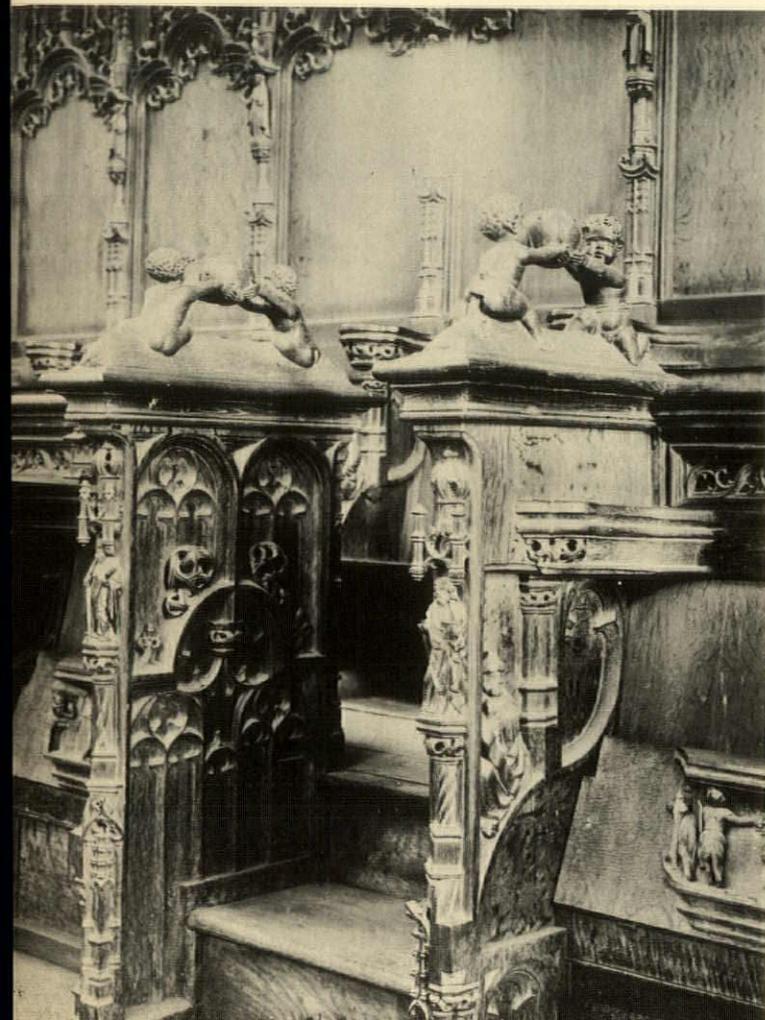
*Detail of a confes-  
sional, Antwerp  
Cathedral, the fig-  
ures carved at life  
size*



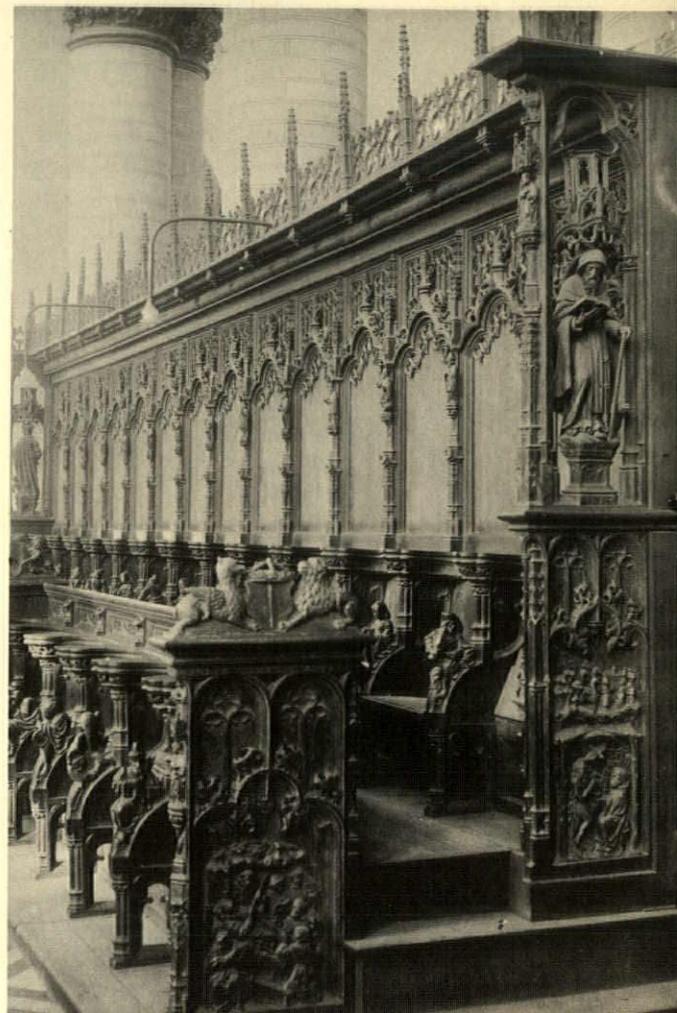
*Detail of the  
choir stalls,  
Hoogstraeten*



*Detail of the pulpit in the Church of St. Catherine, Hoogstraeten, near Antwerp. Erected 1524-1546*

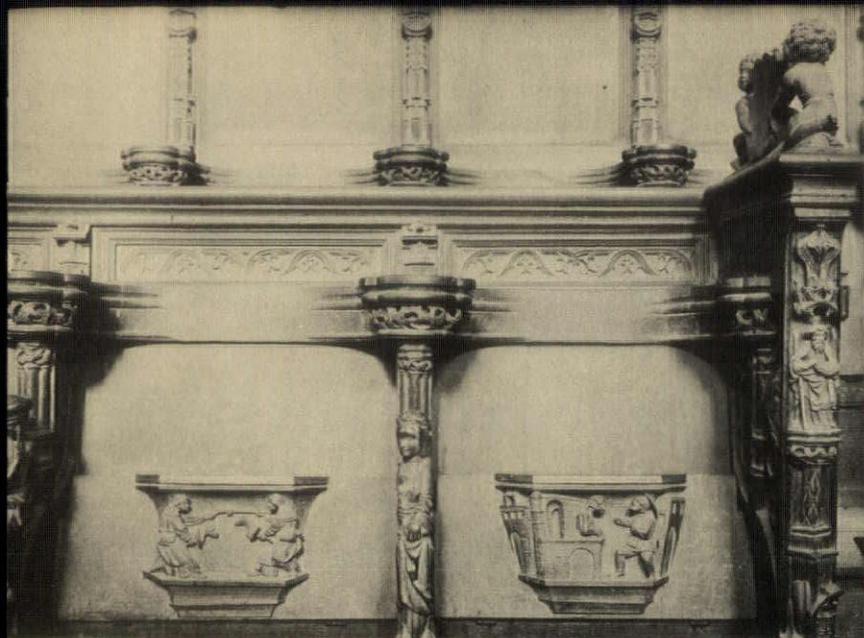


*Detail of the choir stall ends, Hoogstraeten*

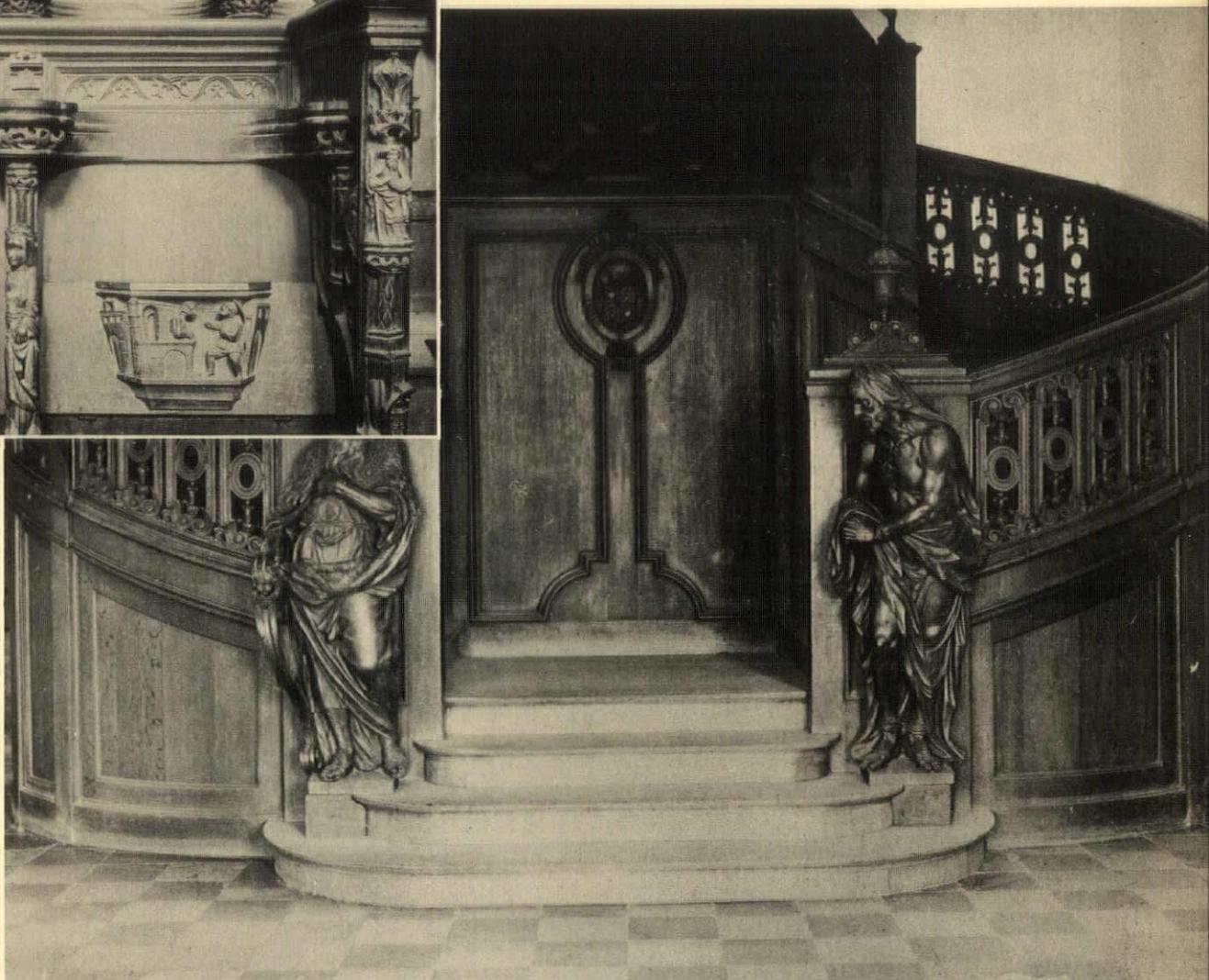


*A general view of the choir stalls, Hoogstraeten*

**ARCHITECTURE**  
JULY, 1935



*Detail of the  
choir stall seats,  
turned up,  
Hoogstraeten*

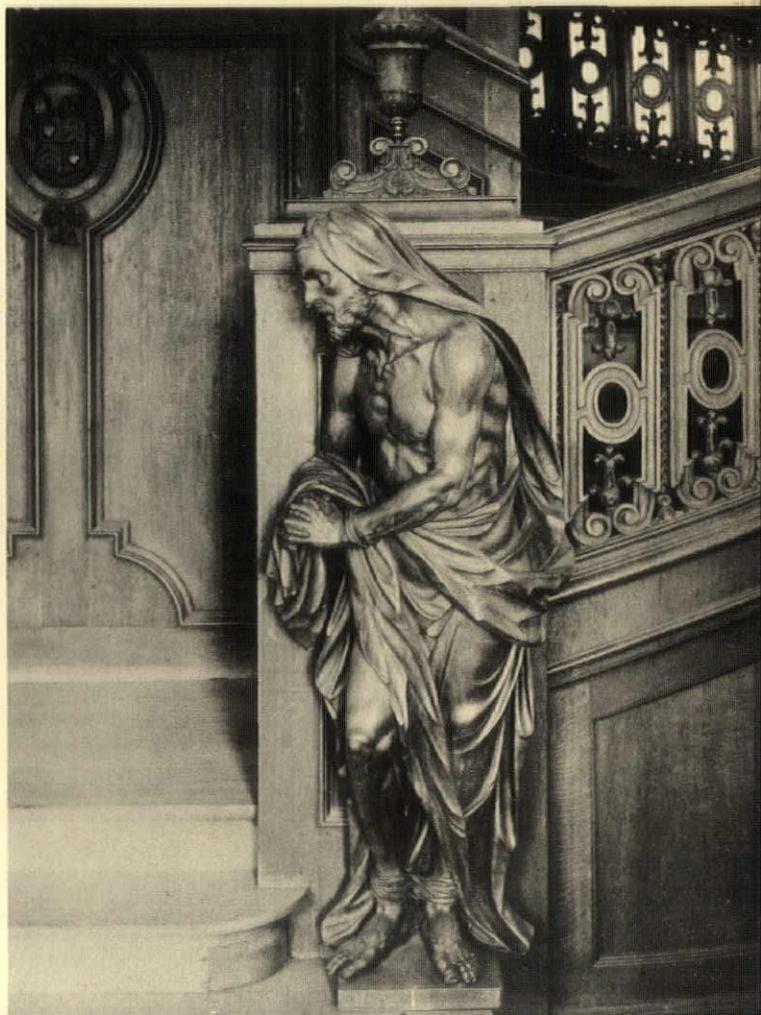


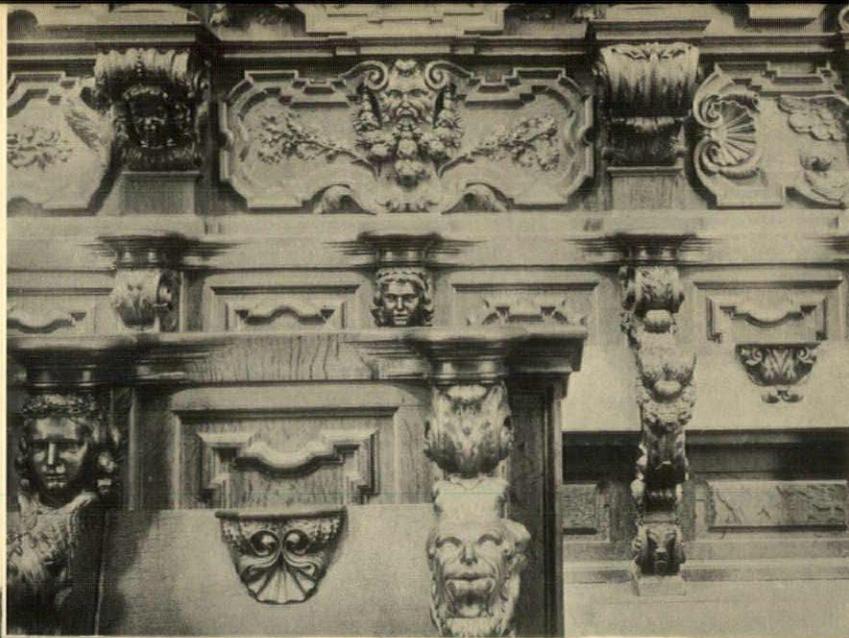
*Double stairway,  
Abbey, Tongerlo,  
near Lierre*



*"Job," a com-  
panion figure to  
the "King David,"  
at the foot of the  
stairway in the  
Abbey, Tongerlo*

*"King David,"  
one of the figures  
at the foot of the  
stairway shown  
above, carved at  
life size*





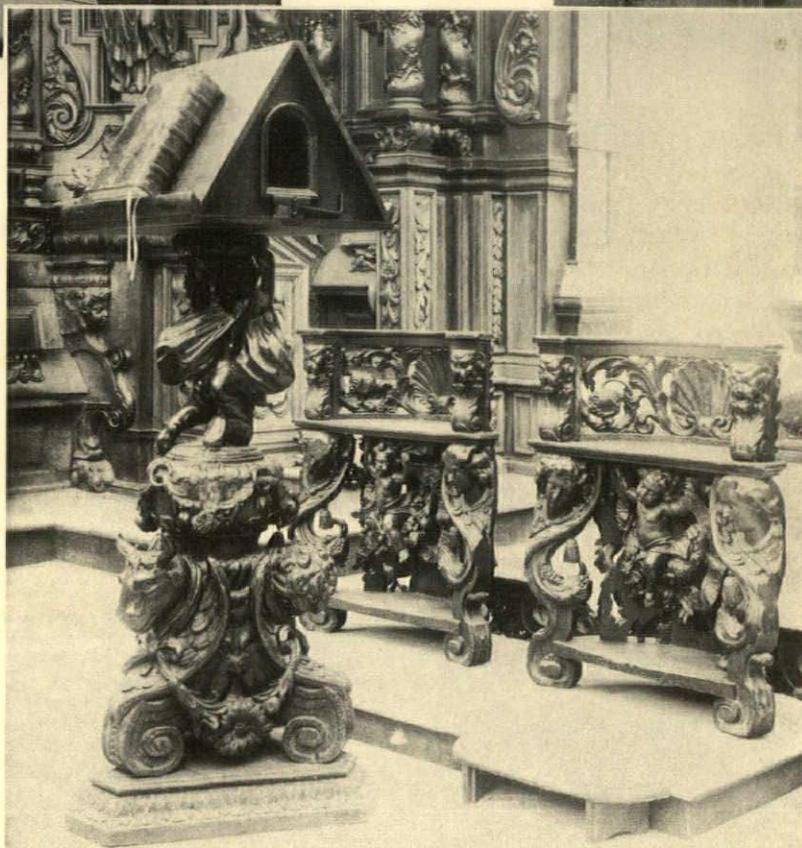
*A detail of the choir stalls in the Abbey, Grimbergen*



*Choir-stall detail in the Abbey, (1664-1672), Averbode, near Diest*



*Choir stalls in the Abbey, Averbode*



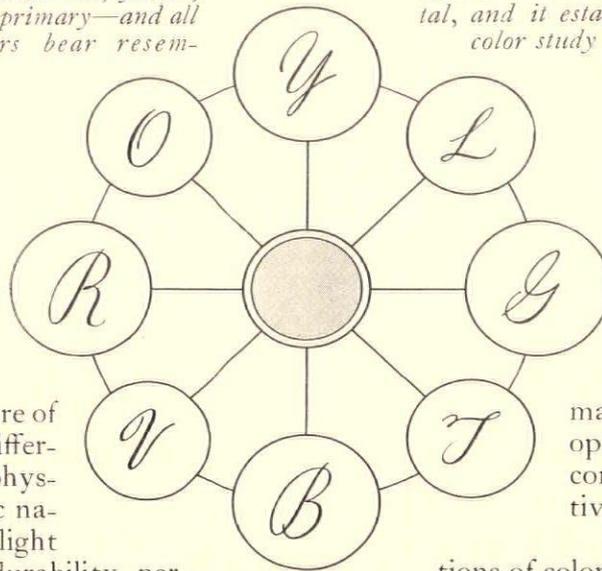
*Lectern and seats in the Abbey at Averbode*

# Why Fear Color?

By Faber Birren

*The eye distinguishes red, yellow, green and blue as primary—and all other pure colors bear resemblance to them.*

*This is fundamental, and it establishes a basis for color study in architecture*



**T**HE human nature of color is quite different from the physical or scientific nature of it. Efficiency in light and heat reflection, the durability, permanence and imperviousness of colored materials, are generally known and understood. These qualities can be analyzed and measured. The architect is on sure ground.

Yet the simple appeal of color, its visual and emotional attraction, have no precise formulas—notwithstanding patented systems, devices and theories. Color is like design. Its successful use requires talent, viewpoint and a sense of form. It serves its purpose in architecture when it pleases. It has little relationship to structure or function. It is an adornment, and as such has always been an elusive problem.

Color rarely if ever is made the basis of an architectural design. However, color is often the first merit or impression on which an edifice is judged by the public.

Architects perhaps know too little about the human nature of color. Yet despite all the intangibles of color harmony and appeal there are certain facts and universal principles which ought to be known. Primarily the architect should become aware of the fact that progress has been made here too, and that color as a sensation has been fixed to laws which are fairly sure and finite. Such knowledge has come, not from the physicist or the chemist, but rather from the psychologist. And the new facts, simple though they are, represent a modern contribution to color study that has solved

many elusive mysteries and opened up a wholly new and confident approach to effective beauty.

Consider these new foundations of color law. There are four unique and elemental pure colors: red, yellow, green, blue. All other hues bear resemblance to them. Orange looks like red and like yellow—but red and yellow do not look like orange. All conceivable forms of color are derivatives of pure hue, white, and black. Hue and white form tint; hue and black form shade; black and white form gray; hue, white, and black form tone. These seven forms are all-inclusive, and every color in existence classifies as one of them.

Color harmony cannot be arbitrarily studied with pure hues only. This is because each of the seven forms—pure hue, white, black, tint, shade, gray, tone—is visually as well as psychologically unique.

Pure red holds largest preference as a brilliant hue. Yet when tinted to pink it gives way to tints of blue, green and violet. Orange as a pure hue has few champions. Yet as a shade (brown) it tops the list among all shades. Color harmony should be studied from the standpoint of color form. If it is, the architect will have surer control over it.

Color beauty in the new light of psychology is quite easy to understand because it is wholly empirical and based on observation. Here is a simple check-list of facts, all of which make perfect sense because they are so evident. With them color harmony is put on a rational rather than a theoretic or dogmatic basis—an achieve-

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ment that has been the ambition of colorists for many decades.

1. If you want to gain a strong, primal attraction with color, use pure red, yellow, green or blue. Intermediate hues, such as orange and violet, will appear more refined and less instinctive in appeal.

2. If you want to use modified colors, think in terms of hue, white, and black. If you want contrast, use a tint with black (the tint contains the two primary elements, hue and white, not found in black). Further contrast will be found in shade and white or pure hue and gray (and again, in each pair, one of the forms contains the two primary elements lacking in the other).

3. If you want softer analogy, work with pure hue, tint, and white, or pure hue, shade, and black. Here your forms bear similar elements and therefore harmonize as sensations.

4. The most universal of all color forms is tone, which contains hue, white, and black. A toned color will accord with all other forms—purity, tint, shade, gray, black—because it has elements in common with them.

5. Warm hues make the best shades. Red, orange and yellow in turn form maroon, brown and olive when mixed with black. They are more appealing than black containing blue, green, or violet.

6. Cool hues generally make the best tints. Blue, green, and violet when mixed with white are more beautiful, as a general rule, than tints of red, orange or yellow.

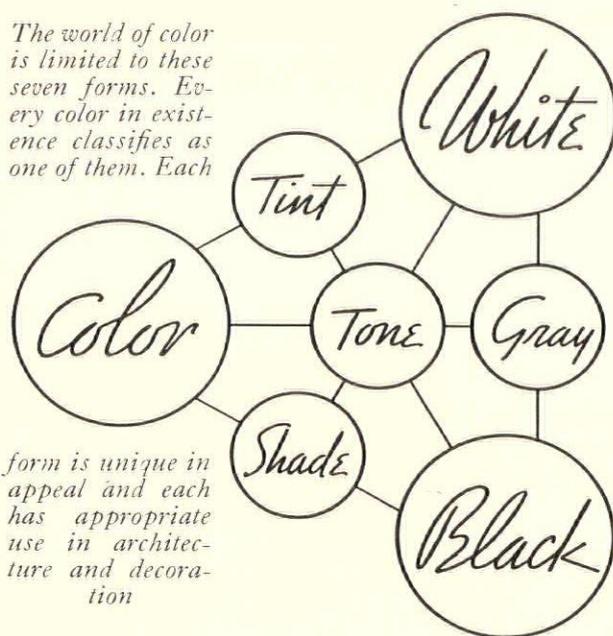
7. The form in which the color is to be used should guide choice. Remember that red makes a good pure hue and a weak tint. Orange makes a good shade but is not appealing in purity. Using two and three colors in combination is a simple task if forms are considered first and hues second. Color harmony should begin with a decision as to purity, tint, shade or tone. Then the most appealing colors in each form should be chosen. And finally, such colors can easily be adjusted to blend or contrast with each other.

8. Contrast with color generally relates itself to *vision*. Architectural exteriors, lobbies, corridors, can well use opposition of hue for lively, startling effects.

9. Analogy with color generally relates itself to *emotion*. Living-rooms, classrooms, auditoriums, places of longer occupancy, can well be treated with related hues, colors that bear resemblance. Here dominant effects of warmth or coolness, brightness or dimness, will have strong emotional influence—an effect that is sacrificed when too much contrast is involved. The warmth of red, for example, combined with the coolness of blue may startle the eye, but the emotion of one color will collide with the emotion of the other. An interior all in red, brown, buff, on the other hand, will have definite personality.

10. The "weight" of color has much influence. Deep tones seem to have stouter "structure" than pale or light tones. In exteriors too much heavy color over light color may injure the beauty of mass and form.

*The world of color is limited to these seven forms. Every color in existence classifies as one of them. Each*



*form is unique in appeal and each has appropriate use in architecture and decoration*



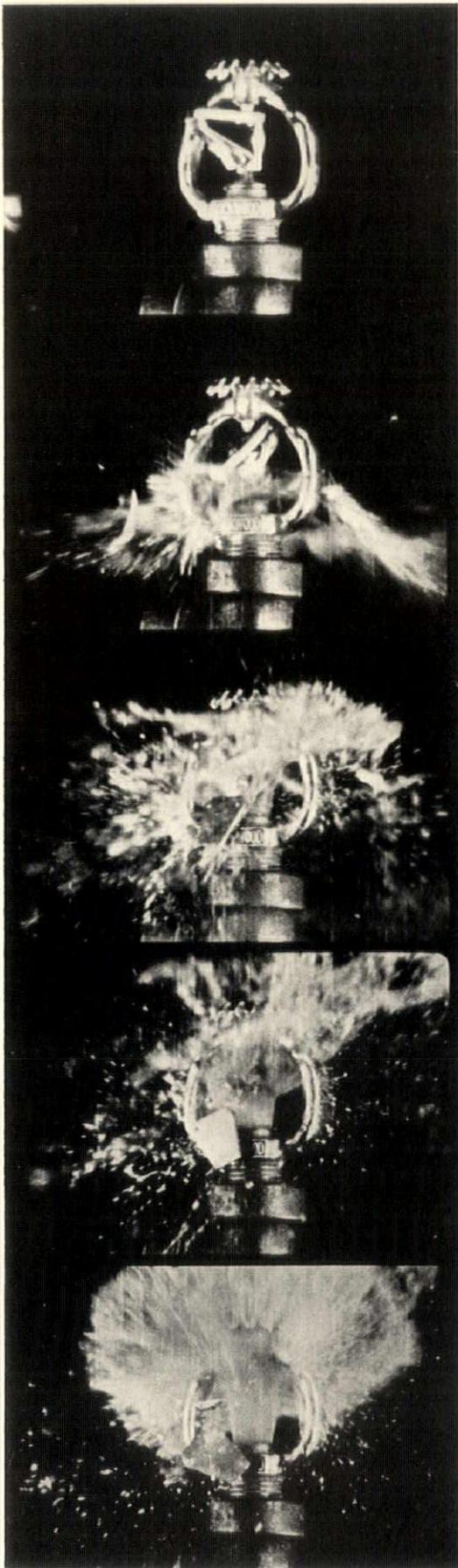
These ten suggestions quite adequately reveal the new science of color, an art that has gotten away from rule and regulation and divulged the character of sensation. Obviously, there is nothing fussy or punctilious about these ideas. They are founded on rational facts and they find application in intelligence and common sense rather than in color scales, gadgets, and the like.

Architecture needs a more direct approach to color. Modernism has led to an overabundance of garishness, a blunt splurge of hue lacking in both originality and beauty. A new art of color is needed to complement the present revolutionized era of design. The best place to find it—thanks to psychology—is in an analysis of sensation, and what the eyes and minds of human beings distinguish, like, and dislike.

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# When a Sprinkler Head Goes into Action



A HIGH-SPEED MOTION-PICTURE SEQUENCE OF WHAT HAPPENED IN THE TENTH OF A SECOND AFTER THE SOLDER STARTED TO MELT

*Illustrations copyright 1935 by  
Rockwood Sprinkler Co.*

*Solder beginning to melt  
because of fire conditions*

*Flat turning but no lower  
than in previous picture*

*"Strut" collapsing, allow-  
ing water to start*

*Heavier top or flat caused  
this piece to turn further*

*One piece of strut shown  
just as released*

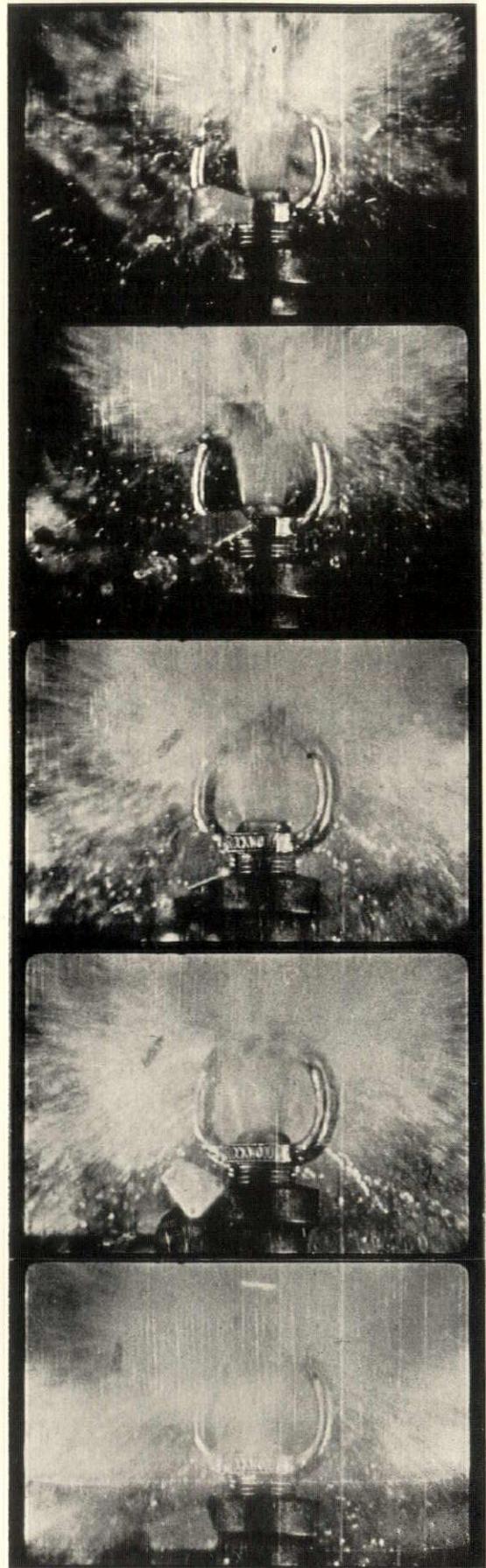
*One other of the four  
pieces of the strut can be  
seen at the left of the frame*

*The "flat" shown in above  
illustration dropped  
about one-eighth inch*

*Water increasing in volume*

*Water beginning to come  
in greater volume*

*Full discharge of water—  
in the time it has taken  
the flat piece to drop  
about one inch*



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## BOOK REVIEWS

**EARLY ARCHITECTS AND BUILDERS OF INDIANA.** By LEE BURNS. 37 pages, 6 by 9¼ inches. Illustrations from photographs. Pamphlet binding. Indianapolis, Ind.: 1935: Indiana Historical Society. 50 cents.

A brief account of a localized architectural development of which there is little information otherwise available. As in other early efforts in America, Mr. Burns points out the dependence of the early builders upon the handbooks of Asher Benjamin, Batty Langley, William Pain, and others.

**THE CHURCH ARCHITECTURE OF PROTESTANTISM.** By ANDREW LANDALE DRUMMOND. Foreword by GAIVUS GLENN ATKINS. 342 pages, 6 by 10 inches. Illustrations from photographs and drawings. Printed in Great Britain. Edinburgh: 1934: T. & T. Clark. \$6.50.

Dr. Drummond's task has been to summarize and bring together between two covers the records of an architecture that already possesses a considerable literature of its own. He, however, lays great stress on the marriage of architecture and Christianity, with comment upon how this union may be served or dis-served by the walls, furnishings, and accessories which shelter and embellish it.

**INVESTIGATION OF COMMERCIAL MASONRY CEMENTS.** By JESSE S. ROGERS and RAYMOND L. BLAINE. 39 pages, 6 by 9¼ inches. Illustrations from diagrams and charts. Research Paper RP 746. Pamphlet binding. Washington: 1934: U. S. Department of Commerce, National Bureau of Standards. 5 cents.

**GARDENS AND GARDENING.** The Studio Garden Annual, 1935. Edited by F. A. MERCER. 128 pages, 8 by 11¼ inches. Illustrations from photographs, some in color. Printed in Great Britain. New York: 1935: The Studio Publications, Inc. \$3.50, paper; \$4.50, cloth.

The Studio Year Book puts particular emphasis in its illustrations this year on American gardens, and these representatives need offer no apology to those of Austria, Canada, France, Germany, Italy, Spain, Sweden, and even Great Britain. Special contributions this year are on the subjects: chrysanthemums, the herbaceous border, the decorative value of ferns, and the spring garden.

**WOOD STRUCTURAL DESIGN DATA. Vol. I.** By R. G. KIMBELL, A. T. UPSON, and M. AHERN. 296 pages, 8½ by 10¾ inches. Spiral binding. Washington: 1934: National Lumber Manufacturers Association. \$1.

A compendium of factual and mathematical data, most of which is at present available, but in widely scattered sources. The volume treats, in logical continuity, of the fundamentals with which the architect and the engineer must be acquainted in order to use wood structurally in a safe and also in an economical manner.

**THE ARCHITECTURAL WORK OF SIR BANISTER FLETCHER.** By W. HANNEFORD-SMITH. 291 pages, 8¾ by 11½ inches. Illustrations from drawings, photographs and sketches. Printed in Great Britain. London: 1934: B. T. Batsford, Ltd. \$15.

It would be enough of a claim to enduring fame for a man to have written, as Sir Banister did, "A History of Architecture on the Comparative Method." The gifted teacher is rarely an active practitioner in the subject of his teaching, yet Sir Banister with his writing, teaching, and lecturing found time to carry on a rather extensive practice as an architect, a sympathetic record of which is found in this work.

**DECORATIVE ART.** The Studio Year Book. Edited by C. G. HOLME. 140 pages, 8 by 11¼ inches. Illustrations from photographs and drawings, some in color. Printed in Great Britain. New York: 1935: The Studio Publications, Inc. \$3.50 paper; \$4.50 cloth.

For those who would have on their shelves a progressive history, largely pictorial, of what our rooms look like from generation to generation, it would be difficult to secure a better history than these annual issues of the Studio Year Book. Naturally enough the present volume reflects the far swing of the pendulum toward what we consider modernism—a swing, incidentally, which seems to be already on its return.

**ENAMELS.** The Preparation, Application, and Properties of Vitreous Enamels. By ANDREW I. ANDREWS. 410 pages, 6 by 9 inches. Illustrations from diagrams, charts, photographs, and drawings. Champaign, Ill.: 1935: Twin City Printing Company. \$5.50.

Porcelain enamelling has become a branch of industry that has recently shown, and gives promise of showing, rapid development. The American Ceramic Society and Porcelain Enamel Institute commend this book as a comprehensive, scientific, and yet practical discussion of the subject to its uttermost chemical details. The architect who, in specifying porcelain-enamelled plumbing fixtures, believes that he is dealing with a simple product, will find a revelation in the intricacies of the processes involved.

**MICHELANGELO THE MAN.** By DONALD LORD FINLAYSON. 356 pages, 6¼ by 9¼ inches. Illustrations from photographs. New York: 1935: Thomas Y. Crowell Company. \$3.50.

The author, who is assistant professor of art at Cornell, feels that while the literature concerned with Michelangelo is voluminous, it is confined almost entirely to the artist's works. Vittoria Colonna, a contemporary, said: "Those who knew Michelangelo in his works alone, know only that of him which is least perfect." Mr. Finlayson has given us a particularly entertaining and apparently well-documented picture of the artist himself and his time.

WHEN a door is hung properly it will of course "stay put" when opened. This only means that the door has been properly hung and that the cut-outs for the hinges have been made accurately, as they should be. Where holes for lock spindles are made, they should be as small as possible, and locks should not weaken the mortise-and-tenon joint. The strike plates must be accurately placed so that there is the same amount of clearance above as below the bolt. A criterion of shrinkage in an old house is whether or not it has been necessary to change the strike plate.

Exterior doors are probably superior when made with a mortise-and-tenon joint, and it seems to be the consensus of opinion that a veneer on exterior doors should be  $\frac{1}{4}$ ". The edges of doors should be slightly bevelled, and woods which are stringy and have a tendency to tear when planed, should be avoided for finished doors, but can readily be used for rough work where this would not be easily noticed. Most commercial doors are machine-sanded for their finish. So unless belt- or hand-sanded finish is actually specified, machine work will be used. Exterior doors of  $2\frac{1}{4}$ " are recommended, not only for their appearance, but for their strength. Where exterior doors are glazed, the glass should always be back-puttied, as further protection against the weather.

Fire-proof wood doors are used in some cases, but it will probably be cheaper to use a substantial metal

## Better Practice

By *W. F. Bartels*

### DOORS AND WINDOWS

(Continued)

door finished to imitate wood. Metal doors have many features to recommend them to the architect and the client. They offer better protection against burglar and vandal, and, what is more important in apartment houses, they are a big safety factor in guarding against the spread of fires. After next year they will be required in practically all multiple dwellings in New York City. When the architect is specifying metal or kalamein doors, he should differentiate between those used for exterior work and those used for interior work. An investigation of metal doors over five years old will convince him that he must give careful consideration to the material, its gauge, and its manufacturer, so that his doors will not soon rust away.

Glazed iron doors which are provided with grills should have the latter so hinged that the glass may be easily cleaned. Partition doors which are cut off at the bottom, as well as regular counter doors, must be given careful attention so that the bottoms shall be perfectly smooth and not have a rough edge which may cut

one's leg if the door swings back too far. Due to the greater strength of the material, iron entrance doors can generally have narrow stiles and should not be made to look like wood doors. How often a metal door is so heavy that a frail woman can hardly open it! It will be difficult if not impossible for the architect to have the locks set on these stiles, and hence it is advisable to have a rail or other part made so that the lock, knob or handle may be so placed that one's hand will not be injured when opening the door.

Revolving doors may well be regarded as a specialty, and the architect would do well to consult the manufacturer of these doors rather than try to design them himself. All parts of these doors are carefully worked out. To show the extent to which the specialization in these doors extends, a case may be brought up where one architect desired to design the doors himself. In order to get the proper fit, the push bars were set so close to the glass that people's fingers were caught in them, resulting in bruised hands.

Garage doors which do not swing out, but fold or slide up overhead, are another specialty in doors and deserve considerable study by the architect. They are generally very easy to handle and can be opened after a snowfall without shoveling snow. The floor of the garage should be slightly higher than the apron if the apron is level, otherwise any heaving caused by frost in the ground will very likely prevent the doors from opening properly.

#### 1—GENERAL

DAMP-PROOFING and waterproofing are so intimately associated that to many they may mean the same thing. In the trade it is generally understood that waterproofing means a process used to keep *water* out, while dampproofing is to keep *moisture* out. They both are of the utmost importance and should receive the very careful consideration of the architect and contractor. Many houses and buildings worry along without adequate waterproofing or dampproofing, but in many cases faulty material or workmanship in either of these trades causes a severe loss to the owner. In all buildings great care should be taken so that when hurricane-wind velocity drives the rain against the

### DAMP-PROOFING, WATER-PROOFING, CALKING

building it will be met by sufficient resistance to keep it out.

Guarantees are too often accepted at their face value by the architect, who is prone to believe that they will protect him and the wall surface. However, this is not always the case. The guarantee may be thought to mean less work in architectural supervision, but it should not be depended upon in lieu of adequate and systematic inspection of the work. Very often the guarantee is made by the contractor with an evasion in mind. If a guarantee is accepted (it is not harmful to

take it as added protection), the following clause might well be inserted: "In the absence of any written protest filed with the architect and approved by him, there shall be no claim affecting the validity of this guarantee." Also, if a guarantee is given by the contractor it might be investigated as to whether or not this guarantee calls for the repairing of only the defective work, or if it includes the repairing of the damage resulting from the defective work.

It is always necessary to have it clearly understood just what work is to be done by the contractor and with what facilities he will be provided to execute it. Is he to furnish his own scaffolds, staging and other equipment? In case of pits, who is to keep the water pumped out while

the work is being done? Normally this latter is not a serious item, but on a large undertaking it may be a very expensive one.

## 2—DAMPPROOFING

Obviously dampproofing the interior of a building is done so that moisture may be prevented from penetrating into the interior, and to prevent damage to the plaster or other finish if the latter is applied directly to the exterior wall. It will, of course, be understood that dampproofing of this nature on the interior of a wall cannot hold out against pressure, but it should satisfactorily afford protection from any moisture under ordinary conditions being transmitted through from the exterior.

There are various methods of applying this dampproofing work, among these being spraying, brushing and trowelling. As a rule all of these use an asphalt base with a binder of fine asbestos fibre. Another method consists of first spraying a cementitious mixture upon the wall, followed by the spraying of an emulsion. In all of these methods the material should be carried around upon the ceiling for a border of at least 12" to 18" so that any moisture at the junction of the floor and wall above will not penetrate to the plaster below (Fig. 2A). No cutting or chasing of walls is to be allowed after the dampproofing is put on unless such places are re-dampproofed.

It is better to insist that the dampproofing be completed before the partitions are set, otherwise the film of protection is all too likely to have gaps. One of the requirements which the architect must look into very carefully, in case he is plastering directly on the wall, is that the plaster must bond completely with the dampproofing materials so that there will be no danger of the plaster peeling or falling off. Another vital requirement is that the damp-

proofing materials must have elasticity as well as durability.

Dampproofing is sometimes done from the outside after the building is completed. In most cases this is practically an admission of inferior work or decay. When the outside of a building is treated in this manner it is well to remember that if the brick or stone is fairly dense the trouble most likely lies in the joints of the masonry. It must be evident that a clear fluid cannot cover or close gaping holes, and that it is necessary to point such places up first. It is well to investigate whether or not the material to be used will change the color or texture of the exterior. If the color on the wall makes no difference, a material with a fibre in it may well be used. This probably would be more satisfactory than a clear liquid, because the fibre enables the material to span any small holes. However, such materials are obtainable only in the darker colors, and much precaution must be taken if they are to be painted over. For instance, they must first be covered with aluminum paint, after which the finish paint may be applied.

Were the best interior dampproofing job imaginable obtained on a building, it would all be for naught if a poor job of spandrel waterproofing were to accompany it. Water penetrating a masonry wall is stopped from penetrating to the interior by the dampproofing. Hence the water trickles down until it reaches the floor. At this point it would be likely to turn into the building unless it is prevented from doing so by a properly installed spandrel job. It is important that the inside flap of the spandrel waterproofing be turned up and be sealed against the waterproofing on the wall, so that the water may be forced to the outside (Fig. 2B). Spandrel waterproofing is also made necessary by the fact that the settlement between the masonry and the floor

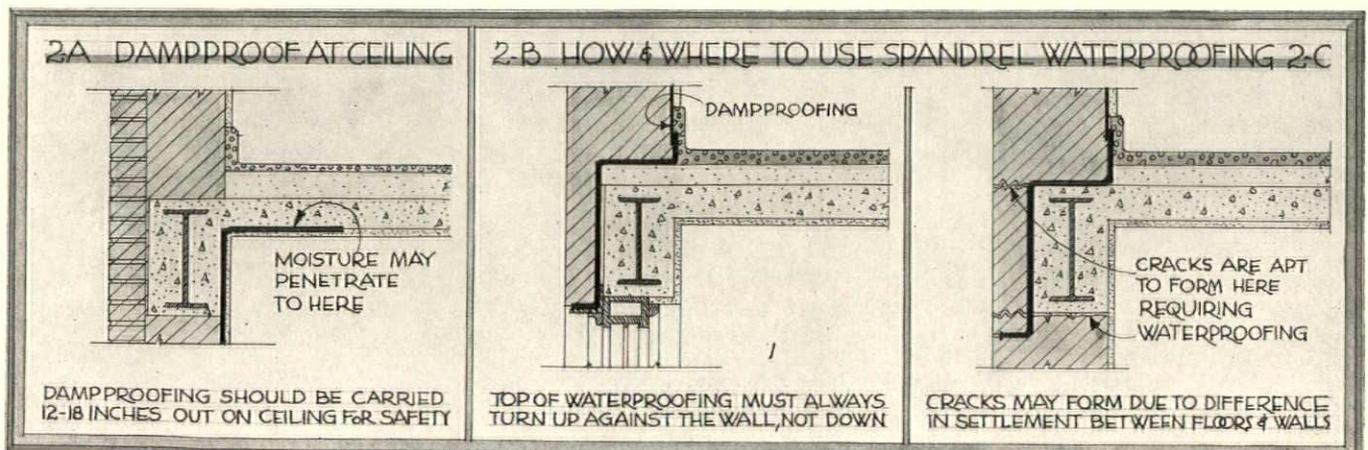
may be different in a steel or concrete structure (Fig. 2C).

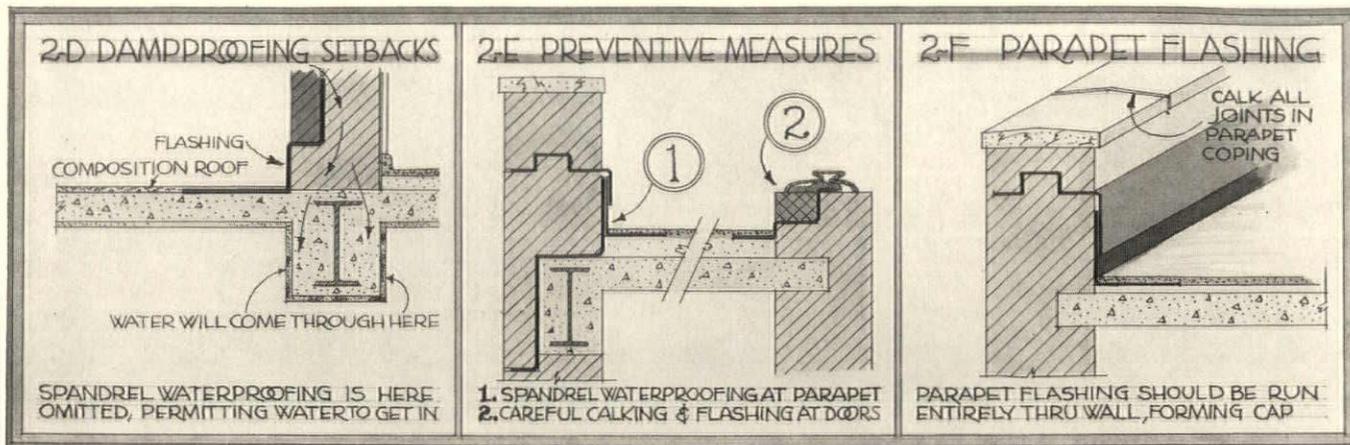
On a large building erected not so long ago in New York City, considerable difficulty was caused by water appearing on the ceiling of one of the rooms. This room was directly beneath a setback. Upon investigation it proved that the dampproofing had been carried down properly to the floor, and the flashing for the setback had been properly installed. But the one vital thing that had been forgotten was a proper means of conducting the water to the outside once it had reached the bottom of the wall (Fig. 2D). It is absolutely necessary that precautions of this type be taken to prevent water from reaching the ceiling of the floor below. Some of the preventive measures necessary to be taken in spandrel work are shown in (Fig. 2E).

Another source of difficulty in walls arises where beams and girders are used in connection with exterior bearing walls. They must be properly protected in order to keep out the moisture.

Parapet walls are another source of annoyance when not given the proper attention to prevent water from seeping down on the inside face. They are best treated by having the flashing extended clear through them, and having the latter serve as a cap flashing for the roof flashing (Fig. 2F). If the inside of the parapet is left bare and the parapet wall is not flashed, a severe storm in all likelihood will cause damage on the floor below. Where a rail or any other iron work is sunk into a parapet wall and must pierce the flashing, an adequately protected pitch-pocket must be provided wherever the flashing is punctured (Fig. 2G).

Soft metals can be used for spandrel waterproofing, but probably would be too expensive. Ordinary waterproofing felt is of such a nature that if it were torn or injured it





might be worse than no waterproofing at all. One of the best materials is a fabric which is in itself waterproof and offers decided resistance to the ordinary rough usage it might receive on a building under construction. All materials used must, of course, be properly flashed up around the columns, adequately turned up against the dampproofing at the back of the wall, and sufficiently overlapped and sealed so that no water may enter (Fig. 2H).

Another method of dampproofing is that of raking out the joints and then filling them with a material which is water-repellent. It would be too much to ask that this material last any length of time, because the space in the joint is not enough to provide ample body.

Bulkheads may well come under the list of items requiring waterproofing, because they are generally exposed to the most severe tests put to a building. They should be treated with the same care accorded any other part of a building that is exposed to water, as well as water pressure.

Skylights have the reputation of always causing trouble. This may be diminished by keeping them well up above the roof, and by pitching the roof so that water drains away quickly (Fig. 2I).

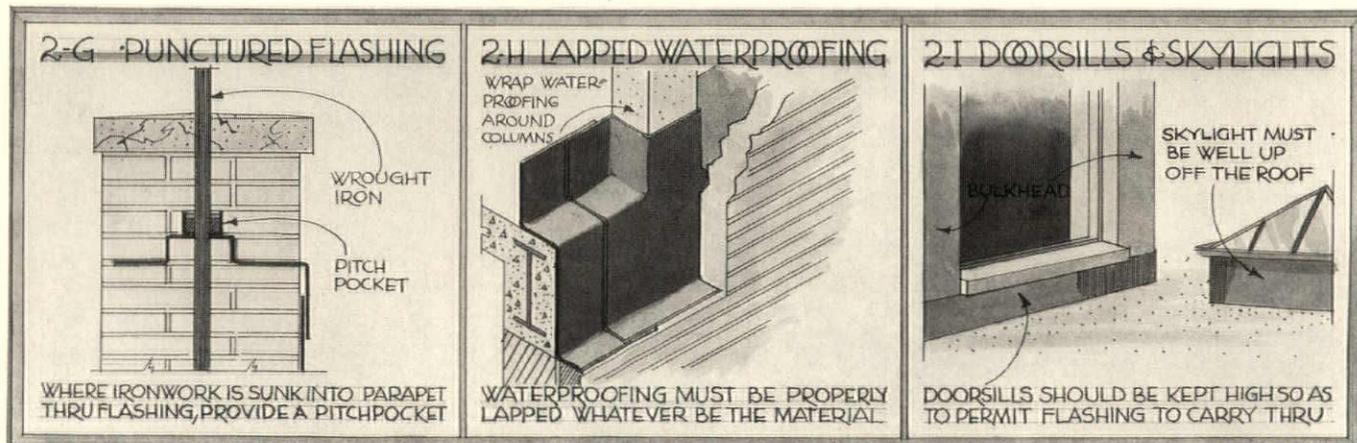
### 3—WATERPROOFING

In sandy soils where there is good drainage, it may be true that no less precaution may be needed in waterproofing basement walls. But it always must be borne in mind that water plays unpredictable tricks in all soils, and it is cheaper in the long run to take great pains with the cellar walls than to have them leak for unknown reasons after the building is completed.

Much has been said pro and con concerning the adding of waterproofing materials to concrete. It has been generally conceded that cracks developing in a concrete wall will nullify the use of any integral waterproofing. However, it might be added that when a crack is seen it is more easily remedied than when there is a leak and it is impossible to find its cause. It must be admitted that nothing can be added to a mixture that will make a wall perfectly waterproof if it is made from a poor mixture of concrete. A proper proportion of cement is always necessary, and all too often in this country we use a mixture that is too scant in cement to make a good and lasting job. It is only necessary to compare the 1-3-5 mixture that is looked upon with great favor in this country, to the 1-1½-2 used in other countries. A gravelly and gritty

mixture, poorly mixed, will not give a dense, tight wall, nor will a concrete wall be waterproof unless the concrete is properly puddled to eliminate all voids through which the water may work its way. Then again, in many cases the improper pouring of concrete prevents its being waterproof, such as when the concrete is allowed to be dumped in one pile and then raked over to the rest of the form. This means that where the concrete is dropped the large and major portion of the aggregate is concentrated, to the detriment of the wall.

In waterproofing it must be remembered that it will be very difficult to locate leaks exactly after the building has been completed. To waterproof foundations on the outside of the wall, the material may be applied directly to the wall. Sometimes this is impractical because of the fact that the wall may be adjoining rock, or sliding earth, or be of a depth that would prevent men working between the wall and the earth. In such cases a brick or terracotta wall is built up and the material applied to it (Fig. 3A). The waterproofing should either be run under the columns and bases, or around them and up to a height above the water level. The former method is probably more depend-

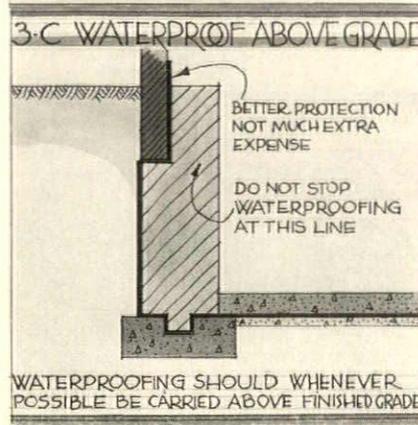
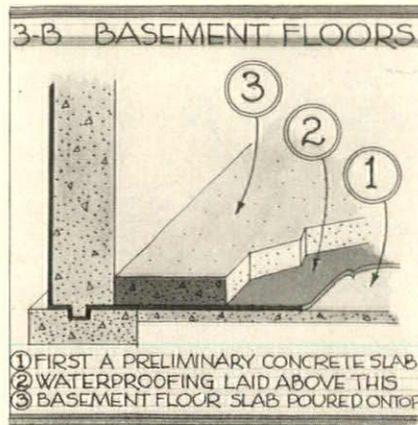
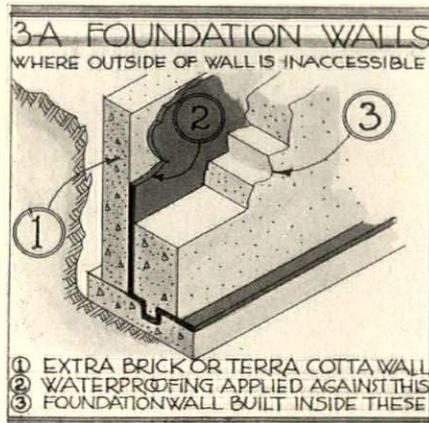


able, and it protects the steel work at the same time. In large buildings, where there is great weight upon the piers, it is better to keep the waterproofing of the piers and the walls separate from each other, so that any settling of the piers greater than that of the walls will not cause a crack in the waterproofing. Where there is a head of water present it must be remembered that the waterproofing absolutely will not carry or resist a load, and therefore the floor or wall must be designed to take care of this. All that the waterproofing can do is to keep the water from penetrating the wall or floor. Where the waterproofing fabric is used in the floor, it is better that a preliminary floor be laid, over which the waterproofing may be applied before the regular floor slab is superimposed (Fig. 3B).

When waterproofing fabric is laid in cold weather it should be well rolled and brushed into the hot tar immediately upon its being laid. Otherwise the tar will cool before it has a chance to adhere to the material. The ends of the roll or pieces should, of course, be lapped at least 8". The side lap will depend upon the number of plies it is intended to be used.

It might be well to mention here the prominence played by saturated fabrics in work of this type. They are not so susceptible to tearing and have more elasticity than the felt types of waterproofing. Watch the melting point of the pitch used in this work, because it would not be advisable to use a low-melting-point pitch which might be subjected to too much heat. Where the waterproofing is used for the foundation walls of a house or other building, it is better to see that it is carried up above grade rather than be limited to the water line. The small additional expense involved is more than compensated for by the security afforded (Fig. 3C).

It must be remembered that waterproofing applied to the interior



of a wall depends for its success upon its perfect adherence to the wall. It is readily seen that if exterior water pressure were present it would soon overcome this adherence. Therefore it would seem to be better, whenever possible, that the waterproofing be applied to the outside of the wall below grade both for better appearance and for greater efficiency.

Where sidewalks are laid over vault space, great care must be taken to connect the waterproofing to the outside wall of the vault, as well as to the dampproofing of the building. The wall of the building in such cases may well be regarded as setback, the treatment of which was described previously under "Damp-proofing" (Fig. 3D).

Bathroom floors are too often subject to dry rot if not properly waterproofed. The beams in the bathroom floor are difficult to replace. Trouble may easily be avoided by the proper installation of a waterproof fabric underneath the tile or other material. Lead pans underneath showers are generally called for, and should in all cases be installed. They should be properly flashed to the drain, and, in order to give an added guarantee, should be

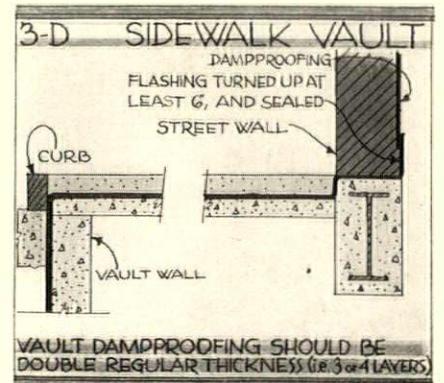
folded at the corners rather than cut and soldered. Where a shower-room is used frequently, many architects feel that they should protect the sides as well as the floor—a very wise precaution indeed. It may be done by means of sheet lead properly installed. Because leakage takes place through cracks and joints, if the entire enclosure cannot be protected by sheet lead, then it is well to have the corners and other vulnerable spots taken care of.

Roofing must be flashed up under sills so that there will be no danger of the water entering at this point. But it is well to have sills of doors opening out on to roofs of such a height that they are above the low point of the roof flashing, so that there will be no danger of water flowing in over the saddles. The latter should be set in a mastic compound to make doubly sure there is no leak (Fig. 2E).

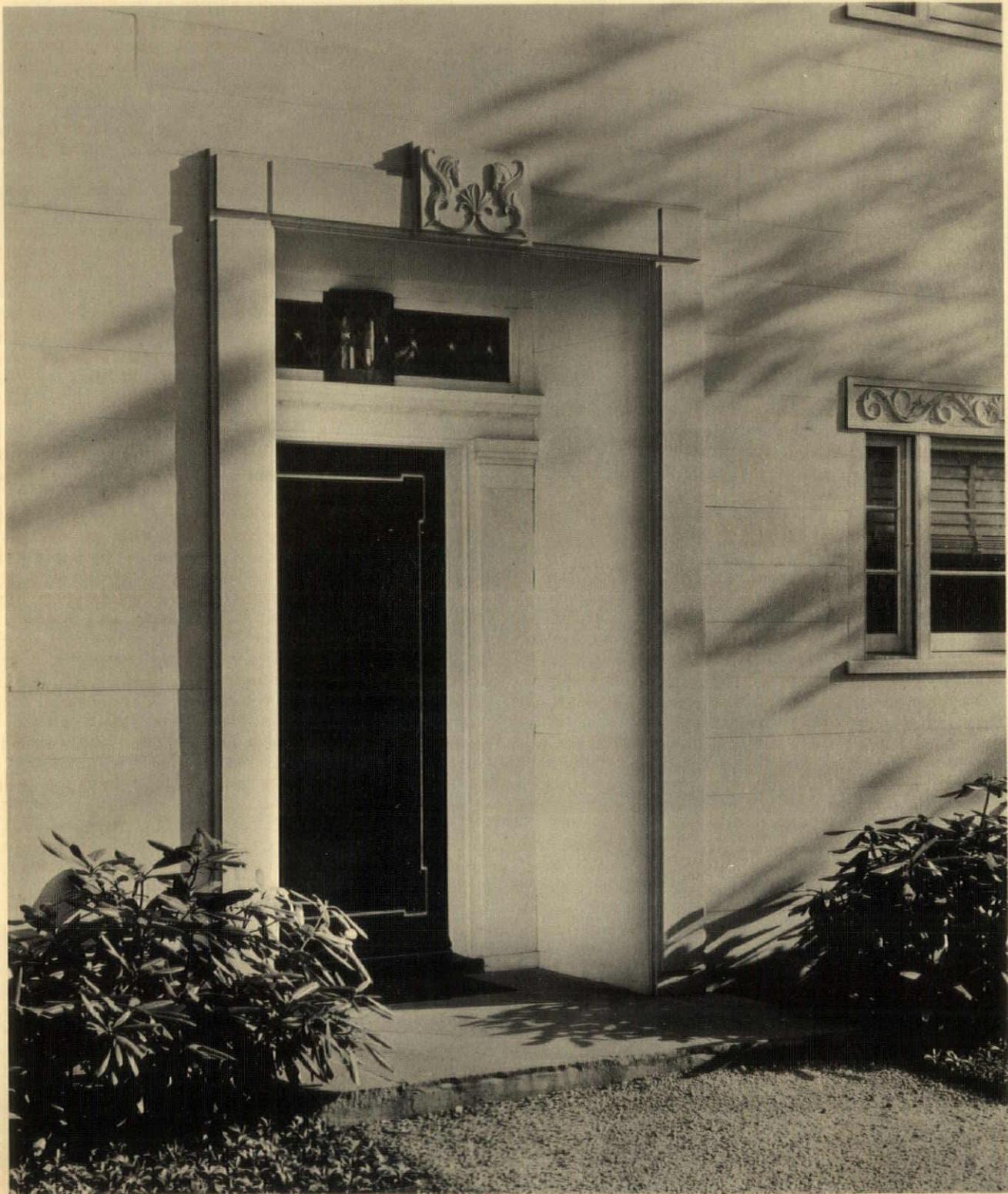
#### 4—CALKING

Calking is not a subject to be lightly dismissed, but is an absolute necessity for the welfare of the building. All doors and windows, including the sills as well as the heads, should be properly calked. The sills should be set in a bed of mastic when different materials adjoin, such as iron and masonry; the joint should be properly pointed up with a calking compound that will completely seal the opening against the weather. Coping stones should also have their joints calked. It is well also to rake out and fill the terra-cotta joints with calking. Not the least of the evils of omitting calking is the leakage around the frames, causing them to swell up, particularly if the back of the wooden window-frame is not protected by one or more coats of paint.

"Permanently elastic" is the misnomer often given to calking by over-zealous sponsors. But it is possible to obtain calking compounds that, when installed under direct supervision of the manufacturers, will last a considerable length of time under all conditions of weather.



# FAVORITE FEATURES

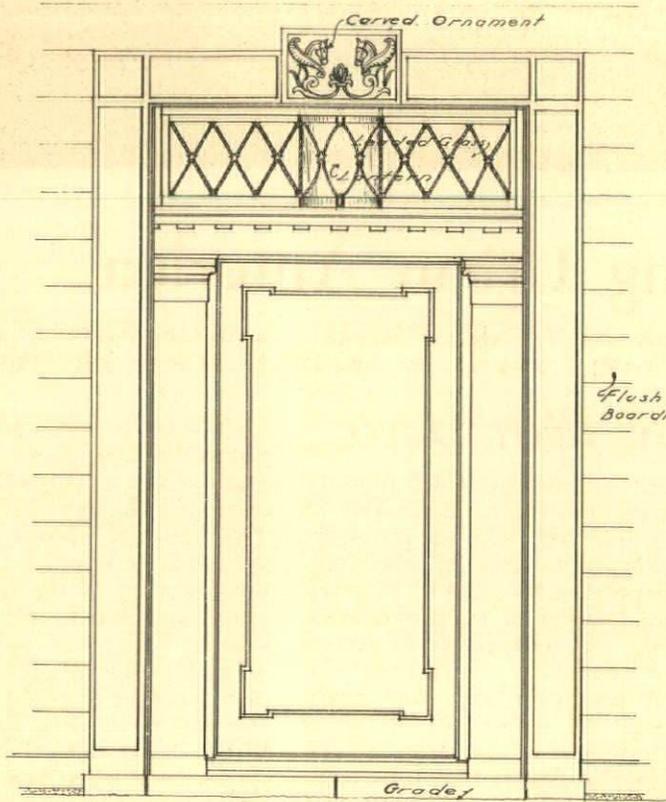


Many of the architect's creations fail to measure up to his expectations. Here is one of a series, however, that satisfy, in a measure, the designers themselves  
*(Scale details overleaf)*

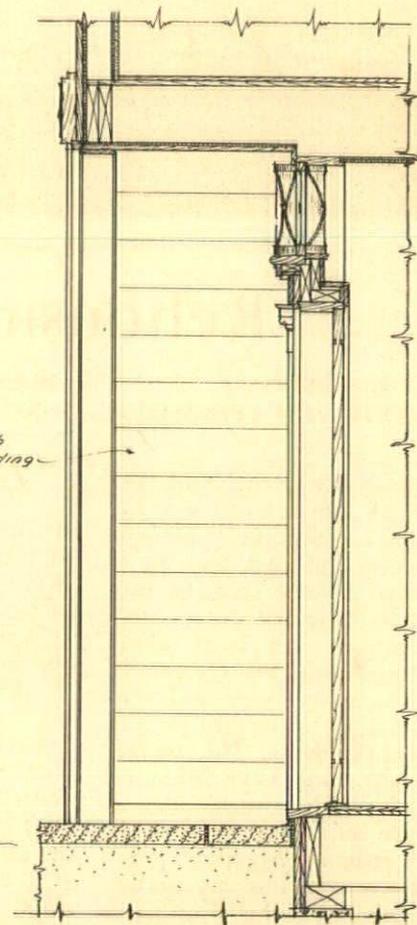
Entrance doorway,  
House at Locust Valley, N. Y.

HARVEY STEVENSON & EASTMAN STUDDS  
ARCHITECTS

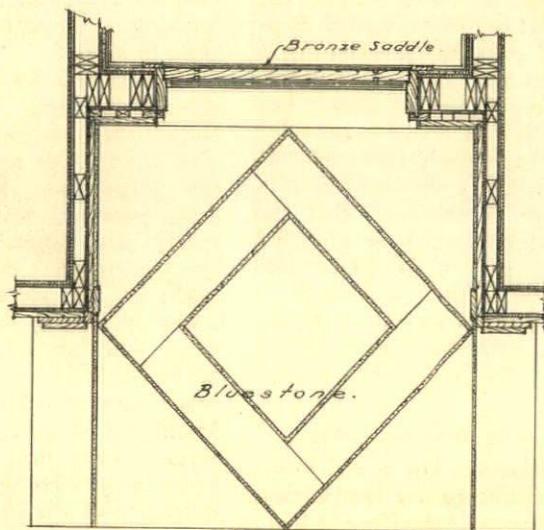
« ARCHITECTURE »  
JULY, 1935



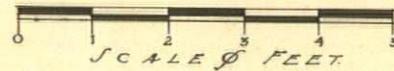
ELEVATION



SECTION



PLAN



HARVEY STEVENSON & EASTMAN STUDDS.  
ARCHITECTS.  
101 PARK AVENUE, N.Y.C.

Entrance doorway,  
House at Locust Valley, N. Y.

Harvey Stevenson & Eastman Studs  
Architects

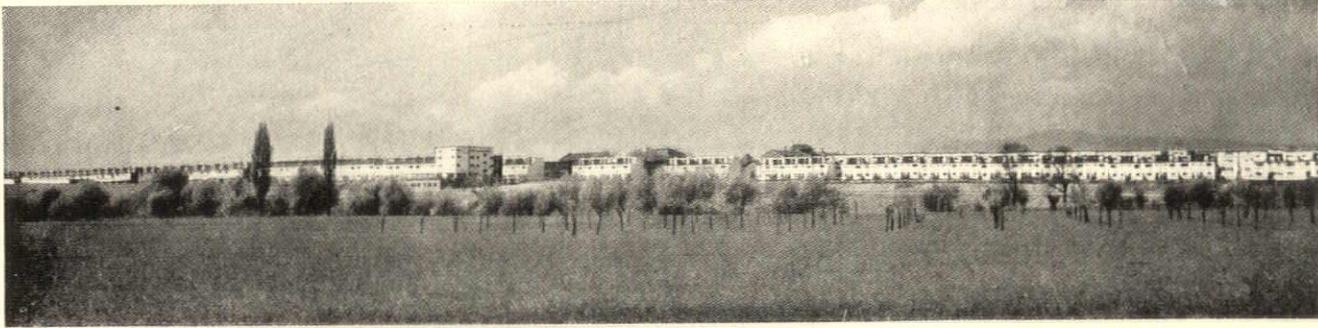


Fig. 126. The view of Praunheim project, Frankfurt a. M., of which Ernst May was the directing architect

## Rehousing Urban America

THE TITLE OF A NEW BOOK BY HENRY WRIGHT, A BOOK WHICH THIS REVIEWER CONSIDERS A NOTABLE EVENT IN ARCHITECTURAL PROGRESS\*

*By Albert Mayer*

THE appearance of this book is of enormous significance: a study of the creative evolution of housing architecture in the past and up to now, followed by the creative projection of a living architecture into a changing future. Its facts apply definitely to housing, but its searching methods, its analyses and syntheses, are equally important for any architectural problems. No one but Henry Wright could have delivered such a book, for his experience is country-wide and he is steeped in the body of ordinary American practice; moreover, he has an understanding grasp of the European housing evolution, and he has the originality of mind to project his subject into the future. His historical study isn't just comfortably descriptive, as such things usually are; it penetrates the past just as his creative mind penetrates the future.

Wright, through his summer schools and the Housing Study Guild, has fructified the minds of many young architects—most of whom are now prominently identified with housing in Washington and elsewhere. This book enables his fruitful influence to affect architects all over the country. His book is in the best sense technical, the very soul of technique. One may and does disagree with his brief incursions into general economics, but that doesn't invalidate the main technical purposes of the book. A complete and rigorous understanding of

its substance and spirit will produce architects and engineers capable of dealing creatively with the problems of technique involved in rehousing. It is important for all of us to grasp the implications of his provocative thinking, but undesirable to accept his or anyone's conclusions—he himself says over and over again that they are tentative. His great contribution is a searching attack that bites so deeply that its results are genuinely creative. For method it is indispensable, it clears out one's dusty brain passages. I have now read it three times, with paper and pencil next to me to work things out. And I will read it at least once a year for the rest of my planning life so as to assure a constant freshening, a constant reminder that most habitual mental equipment is stale. For alert people it is a set of razor-edge tools which immensely facilitate the creative architect's job and free him for the larger syntheses. But the present tendency must be guarded against—the use of Wright's and others' tools, which are only a splendid means, as an end in themselves, as a substitute for creative thinking and designing. There is no substitute.

The book is in three sections:

Part I. Housing: The Focal Point in Rehabilitating Our Cities.

Part II. Study of the Recent Evolution and Development of Housing Techniques.

Part III. A Forecast of Planning Advancement.

Part I outlines the growth (or decay) of our cities. As the facts and

factors are so well known, they will not be discussed here. The diagrammatic rings of growth and decay epitomize the story very graphically. The habitual narrow deep lot, responsible for so much of the physical unsuitability of the housing of our cities, and which still is the stupid standard for our subdivisions, is magnificently attacked. One wonders whether it could not be made compulsory reading for all realtors. With equal effectiveness Wright shows once more how wasteful are the standard gridiron patterns of the streets of our cities, which devote as much space to them in residential areas as in concentrated business areas. He restates cogently the case for attacking the problem of rehousing in blighted districts rather than in slums.

Part II is a discerning analysis of recent housing history. Wright shows the continuity and progressive advance of development in the few large-scale American housing achievements, which, due to their rarity, are generally considered as less interrelated instances than they really are. He shows the slow change away from the narrow-deep structure, whether house, flat or tenement, with its minimum of light and maximum of waste space, into the H-shaped structure with somewhat larger courts, first 50 feet wide, then often larger. He shows the combined influence of the deep, narrow building and the large hotel, bringing relatively large apartment houses with corridors; the step forward by Andrew Thomas, who eliminated long halls by adding stairways and planned with more open courts; coming down to the simple perim-

\* REHOUSING URBAN AMERICA. By HENRY WRIGHT. Foreword by LEWIS MUMFORD. 196 pages, 8½ by 11½ inches. Illustrations from plans and photographs. New York: 1935: Columbia University Press. \$7.50.

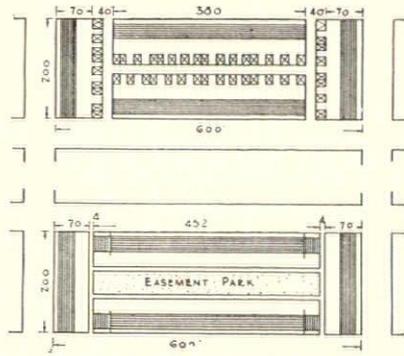


Fig. 26. At left, a view through the middle portion of a block developed in the customary manner utilizing the rear yards and garages on an alley. Contrast with this (at right) the center yard court of a Sunnyside block, in which the distance of houses from rear to rear is the same as in the alley scheme. Garages are assembled elsewhere in groups

eter planning at Sunnyside, two rooms deep, with greater simplicity and openness and the resultant economies of first cost and maintenance. There are two threads which are carried through—the group or row house, and the apartment. But their progress is roughly parallel, and in Sunnyside the two living types are successfully combined, a reminder against the present tendency of doctrinaire adoption of one type alone in any one development. Finally we reach Radburn where, due to its being on virgin soil, the planning was on a very large scale, free from the adventitious limitation to the size of city blocks, free for rational planning of safe and conveniently located parks and playgrounds, and of motor highways isolated from pedestrian traffic and placed so that a minimum of noise reaches the houses.

Wright actually had a part in most of these evolutionary steps, and his brief histories are illuminating, indicating the legal, architectural and social problems involved in these progressively larger and bolder undertakings; and, in the case of Sunnyside, showing the interesting evolution in the solution of these problems within the same project. The first-rate achievement of the hillside housing in Chatham Village in Pittsburgh was in great measure due to the previously accumulated experience of Stein and Wright. These facts indicate the importance of publishing full case histories of all such projects, past and future, so that progress may be rational and continuous. Of course, all this intelligent development was restricted to a comparatively few moderate rental developments. It would have been interesting to show how, during the same period, in the planning of expensive apartments and of sub-

divisions generally, built by speculative or investment builders, there was a dreary stagnation without perceptible advance in any large sense, except for the inclusion of more and more adjuncts of equipment—oil burners, refrigerators, etc. A major mystery is why none of the good sense of these few projects filtered into the vastly greater operations of the ordinary builders. A still greater mystery is why even now, with the evidence of breakdown all around us, banks and insurance companies are again lending money for construction of the same old apartment houses on 100-foot or 150-foot plots, with the same old excessive coverage, the same old vulnerability to outside influences due to their small size, and on the same old inferior subdivisions. The few remaining open plots are being filled with the same potential structural junk, instead of the movable junk that's there now.

The case for group and row housing and for large-scale apartment housing, as against the detached house and the small apartment house, is so strong that it is hard to understand why they haven't begun to replace them generally.

The use of incinerators, automatic refrigerators, centralized heating for large areas, permit an intelligent rearrangement and elimination of now unnecessary streets. These are the creative uses of new inventions, as contrasted with their customary use simply as gadgets. Wright develops these points effectively, and the points here as elsewhere in the book are vividly illustrated.

The last chapter of Part II is devoted to a discussion of the evolution of German housing since the War, which reached a splendid pinnacle in the Praunheim and Römerstadt developments in Frankfurt, part of "a

program which introduces large open expanses to form barriers between different parts of the community, creating a large amount of open space for recreation, gardening and general amenity." To my mind, these are the boldest, most effective, most impressive, most beautiful achievements in housing anywhere at any time. (I should, however, add the qualification that I have not seen any of the Russian housing.) Their conception and execution are on a magnificent scale, a landmark in city planning and housing. What a contrast with our present method of hacking a few blocks here and a few blocks there out of a slum! We all hope that slums will go, but if we take our *first steps* there, we set a standard of planning based on the hampering influences of existing patterns and ownerships and prices. We should *first* go where we can plan relatively freely, *then* reflect such free planning back to the slums.

Another and related point arises from a comparison of Römerstadt and Praunheim with American examples. We all fear the "regimentation" of German housing, so we go in for breaks and groupings to lend "interest." But how can we call it regimentation?—the long sweeping vistas of Romerstadt, gradually unfolding and gradually changing as we follow the rhythm of the long curves and the straight stretches. If we must use words to identify essentially architectural concepts, let us drop the contrast of "regimentation" and "interest," and substitute the more justified characterizations of continuing serenity as against conscious interruption.

Stimulating as are Parts I and II, and important as they are as groundwork for Part III, it is Part III that is Wright's great contribution to a living theory of design.

One must first assume that the architect, having in his capacity as an informed citizen done his utmost to urge on those in charge, proper concepts such as low density, ample open spaces and recreational facilities, freedom from noise and traffic, sunlight and cross ventilation—in short, the amenities generally—is finally entrusted with a project with certain determined conditions. To state this problem and the architect's subsequent problem, I cannot do better than to connect up various quotations from the book.

"The advancement in each of these classes of dwelling (group row houses and apartment houses) has been shown to derive mainly from the release from the restrictions of the narrow lot, and the organization of a considerable area in an interrelated manner. . . . In Part III we shall turn our attention to certain recent advancement in this same technique. We shall try to understand the basis of evolution of their plan forms, to secure results directly related to family needs, also their application to an orderly and complete community organization. . . . Our purpose is to elucidate the complete and connected process of planning, and to consider new departures in planning which will, however, require extensive study and refinement before they can be safely applied. . . . To confine a given number of persons within a relatively small space and to adjust it to their constant use throughout the year, not only must every portion of the plan be thoroughly adequate for its purpose, but also every attention be given to suitability of exposure, pleasantness of outlook. . . . Architects are handicapped in this field because they are mainly familiar with problems in the high rental field, so that often their personal position in society bars them from an appreciation of the mode of life and requirements of quite a different income range. These needs cannot be learned merely from statistics or even from an examination of their present living conditions, since opportunities for the development of an appropriate way of life have been restricted by the use of congested and badly arranged quarters. . . . In planning, the designer must study individual plan arrangement and efficiency, bearing in mind that all his plan types should generally be part of a single genus standardization in construc-

tion, mechanical parts, stair locations, etc.\* . . . Until the choice of the most favorable relationship has been made as to different plan positions within the project as a whole, it is unessential for him to work out interior details of each plan if by experience he knows the amount of building length and depth necessary to insure satisfactory results."

Wright then goes through the actual process of planning a row house development and an apartment-house development, step by step, from the start, giving specific consideration to each of the factors just mentioned, through the necessary series of site-planning and interior-planning approximations, to typical solutions. As in the whole book, there is an admirable series of photographs and plans which are more than illustrations; they are part of the substance of the book, and illuminate each point.

In connection with this planning, he develops a chapter, "Aids to Plan Study," which might less modestly be called the essence of planning. I quote him again: "The designer is frequently handicapped by a tendency to start with a preconceived idea and to develop one phase of his problem by means of drawing-board adjustment rather than to reason by premise and deduction. This is less likely to lead to improvement of planning technique or the discovery of new plans than is the formulation of methods of procedure which permit him to try out a number of variations before becoming absorbed in the perfection of a single type." In Figs. 150-154 he takes the essential elements of a plan—stair, bath, kitchen and approximate known frontages of other rooms, and puts them together in various ways. Having determined advantages and economical shapes (aided by studies of first cost and maintenance) these

\* These are quotations taken from pp. 99-102 and p. 114, paraphrased so as to be properly connected here.

are tested out in site plans, for good unit plans may not necessarily yield the best site plans, or community organization. The detailed plan is then restudied to a point where it is finally checked for its economy and suitability, for its adaptability to various family sizes, and for its space-quality, furnishability, outlook and orientation, privacy within and without the apartment.

An example of such intelligent evolutionary study is shown in Fig. 166. Fig. 166B shows the original plan. The advantages of Wright's further developments are obvious. This whole process indicates the importance of the analytic method in creative design. The first step is born of the conception of more apartments per stair than the simple link plan affords, but retaining cross-ventilation. Every successive step in evolution and improvement is the result of close analysis, both in this immediate case and from previous analyses of cost and planning relationships. By changing the direction of the stair, and the distance of overlap of the two legs of the Z, a variety of arrangements and improvements is obtainable. Further, the B and C in which the left and the right half of the plans are a half story apart, lend themselves, as Wright shows, to particularly advantageous basement and roof solutions.

The chapter on planning as affected by new construction methods, especially the development of structures where exterior walls and partitions are not used for support and partitions are readily movable, culminates in a suggestive demonstration of flexibility of interior space, and its convertibility into apartments of various sizes and qualities as may be required during the physical life of a building, which as we all know now far exceeds its usable life. The point made by Wright is that if the basic elements of site planning, outlook, orientation, open spaces,

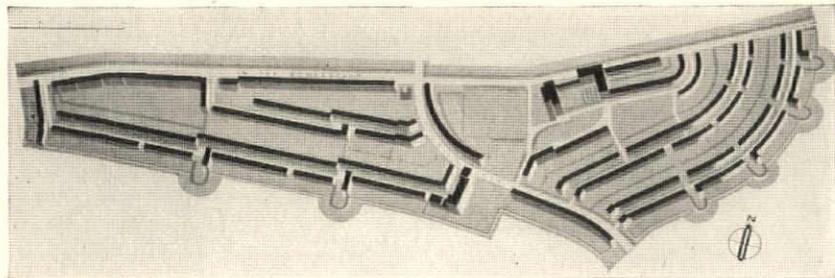


Fig. 128. Plan of the Römerstadt project, Frankfurt a. M., built in 1928

« ARCHITECTURE »

JULY, 1935

are permanently sound, then the new movable elements permit adjustment of the apartments themselves to the changing family sizes and requirements which may come.

The chapter on analytic and cost studies is important, particularly in three respects: it shows the importance of considering comparative operating costs as well as the more usually considered first costs; it indicates rapid methods of cost comparisons which are nevertheless sufficiently close for the architect's use in arriving at plan types; and, finally, as no plan can have every economy, it indicates the comparative importance of various items that generally differ in different plans. In this connection it will be seen that the importance of different cost items will change with prefabrication or other changes in construction methods. For instance, the coupling of baths and kitchens back to back, which is now a minor economy in comparison with others, will become of major importance when prefabricated units are used.

The chapter on the living quality of three-dimensional space as against two-dimensional lines on plans, together with the related questions of outlook, orientation, sunlight penetration and prevailing breezes, initiates a set of considerations that are too little considered currently. Here, as at other points, Wright adumbrates the problems and gives opinions without making any claim at finality, and emphasizes the need of further study.

It is seen that the design of housing and of communities is on such a scale and involves so wide a range of factors, experience and talents, that a project requires the collaboration of minds variously trained, and beyond that it requires collaboration in the sense of full exchange of information and experience as between the agencies and practitioners in the field. Such collaboration, and such analytic methods as outlined, need not for a moment dim the spontaneity and the fire of creative design. If rightly used they should supply a firm grounding to assure that creative design will have a vital relation to the life of the day and to the desirable life of the future.

In such a discussion as this, in such a book as Wright's, in actual design, one must deal in great measure with abstractions—with I-plans, with T-plans, with population densities, with plan efficiencies, with

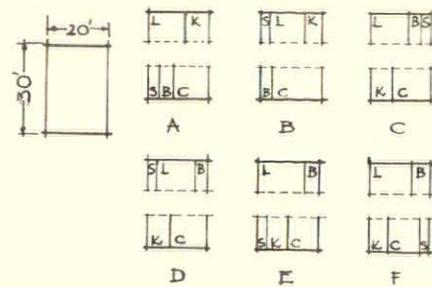


Fig. 150. Illustrating a study method to determine various room combinations within a given building length

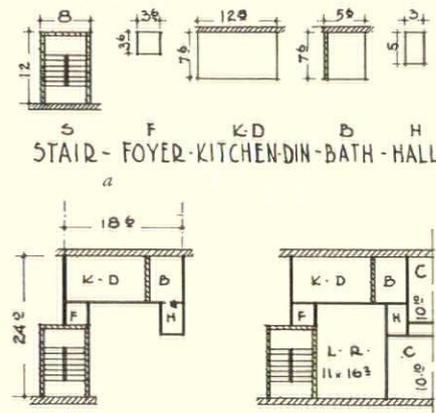


Fig. 151. Illustrating an analytical method of building up a plan type from minimum basic service length

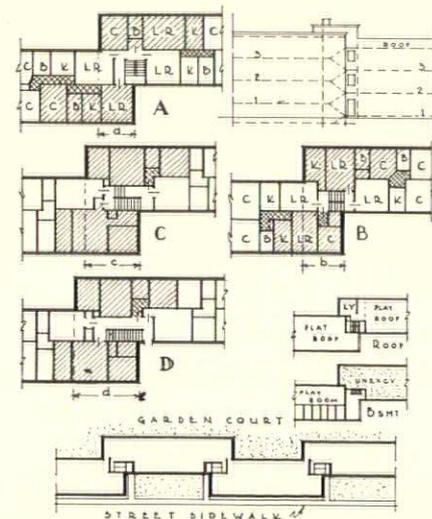


Fig. 166. Evolution of a Z-shaped apartment plan devised by the Housing Study Guild to secure four apartments per floor off a single stair, without hallways

percentages of space for recreation. They are crystallized summaries of experience. But they are valid only as they become mobile, fluid in the hands of sensitive designers, and only as these designers are con-

stantly conscious that they are designing for people, only as they are responsive to the habits and needs and aspirations of people, only as they will dedicate their imagination to exalt the bodies and spirits of people. Without this leavening, crystallized experience becomes mere formula. We are not designing in order to achieve I-plans or T-plans, or a certain percentage of open space—not any of these as ends in themselves. Only as we apply these in particular cases with the delicate adjustments that fit them for specific human beings as such, can we call ourselves architects. This is the spirit of Wright's book and of his work. Let us see to it that it is this living substance that we get out of it.

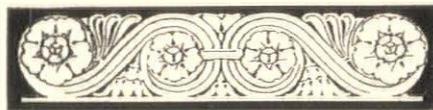
One or two miscellaneous things remain to be said: 1. The book lacks a bibliography or summary of references. 2. Wright uses the word "rehabilitation" throughout the book in its broad sense, and not in the newly technical sense of alteration or renovation in contrast to new construction. 3. I think it requires a note of explanation that in this review of a book on housing there is no discussion of the important underlying social and economic problems. The reason is that the book does not address itself to these—at least in anything like as exhaustive a fashion as in the case of the technical problems. Wright's purpose — and achievement—is to develop a technique capable of carrying out, in architectural terms, policies whose main outlines will be determined in another arena—the architects having previously, in their capacity as alert and informed citizens, played as large a part as possible in shaping those policies.

The price of the book is unfortunately high. Here is a case where one of the foundations, those legendary good angels, should step in and subsidize the book so that it can be put within easy reach of all who need it. But whether they do or not, every architect should have access to it. And while this possible foundation is at it, I suggest it arrange to subsidize Henry Wright as Housing Thinker-at-Large. Heaven knows the subject requires some one to think about it with all his time, and all his mind, rather than to sandwich it in between the jobs that permit him to support himself. And there is no better candidate than Henry Wright.

*Tuesday, April 30.*—Spent an interesting afternoon with Aymar Embury, going over the architectural studies for the Tri-Borough Bridge and for the mid-town vehicular tunnel under the Hudson. One comes away with a feeling of having had the cells of his mind expanded as though by a glove stretcher. The architects and engineers concerned with these two tremendous projects have had to think in a scale widely differing from the one with which the architect ordinarily deals. Naturally, the progress of the study shows a constant march towards simplification. The further one goes with these drawings, the more dropping off of excrescences, elaborations, and every tendency of fussiness. Incidentally, since Embury was trained as an engineer before he became an architect, there has been in this work a particularly close and harmonious association of those contributing towards the structural and the architectural factors of the whole. The two have never been separated—as has so often unfortunately been the case. Engineer and architect have here marched forward to an achievement, hand in hand.

*Friday, May 3.*—A committee of the Institute has been working for many months in the development of a standard filing system for architectural plates and articles. W. H. Tusler of Minneapolis, has served as chairman, and his committee has produced what seems to be a well-balanced scheme that meets the first essential—adaptability to a wide variety of needs both in subject matter and in quantity. I am wondering, however, whether now that the Institute has devised an official filing system for plates, we may discover that filing habits have changed. Certainly there must be considerable likelihood of an architect looking over his accumulation of collected plates, from time to time, and deciding that 90 per cent of them are mere impedimenta. Now that we have this admirable system of filing, possibly the architect will file nothing more, but keep, instead, unbroken sheets of his architectural journals, properly indexed.

*Tuesday, May 7.*—Miss Katherine Cole motored A. F. Brinckerhoff, Charles N. Lowrie, and myself up to Hillside Houses this morning in a soaking rain to study the landscape problem facing Mrs. Marjorie Sewell Cautley. It is a curious thing, when one comes to think of it, that while we speak glibly of low-cost housing, we never speak of low-cost landscaping. Just as in housing, there are certain fundamentals in solidity of construction, planning for light and air—elements that are not susceptible of cost reduction—so it is in landscaping these projects. It would be absurd to decide that a few ailanthus trees and some gravel would be suitable accompaniment of low-cost housing. Good landscape belongs with the essentials,



## The Editor's Diary

and cannot be cheapened. One can use deciduous material instead of evergreens, but soil and lawns and planting technique cannot be skimped.

*Thursday, May 9.*—Harrie Lindeberg and a good many others are perturbed over the fact that *The New York Times*, in reviewing the recent General Electric Small House Competition, made the complacent statement that the designs show a definite trend toward the flat-roofed type of house. As Lindeberg says: "Every architect in the world knows that the architect's age-old enemy is water—whether it's rain or melting snow. We're somehow expected to keep the water outside the house—and every practical architect knows that there is no such thing yet evolved as an inexpensive flat roof that will not leak. Flat roofs are not intelligent, realistic house design, and most of us who are directly responsible to the people who are to live in the house prefer to build roofs that will shed rather than collect water. Call this a prejudice, if you will, but grant us our reasons, at least, for this cherished architectural whimsy. We don't want leaking roofs and can't see constant repairs, inside and out, as any sensible part of a low-cost house. . . . Thus is confusion spread in the land, and the impression given that something is happening in house design which isn't happening at all."

*Friday, May 10.*—Julian Levi invited a number of us to his office this afternoon to meet Jacques Greber, who had brought over from Paris with him some of the preliminary drawings of the Exposition of 1937. It is to be built along the Seine, centering at the Eiffel Tower and the Trocadero. Four or five bridges tie the two sides together, these bridges possibly to be equipped with moving sidewalks on which one can be transported across the river but without too much lingering over the view. Best of all, the scheme has a plan—a backbone, an obvious framework, of which one would be aware in any part of the grounds.

*Wednesday, May 15.*—The Federal Housing Administration has published a little booklet which tells the layman

"How You Can Build, Buy, or Refinance Your Home." It is in the form of questions and answers, and seems to have covered almost any question that could come up. These booklets, I imagine, may be had without charge from the Federal Housing Administration, in case an architect would like to send one with a letter to an interested prospect.

*Saturday, May 18.*—The architectural clinic idea seems to be spreading. Some members of the Baltimore Chapter have formed the Architectural Service Corporation of Maryland. The members make, in their leisure time, plans for houses costing less than \$7,500, which they file with the corporation. A prospective owner calls at the office of the corporation, selects a design if he finds one to suit him, and is put in touch with the architect who made it. The architect visits the site, adjusts the basement levels to fit it suitably—or he may refuse permission for the design on this particular site. The architect secures bids, prepares contracts, and supervises construction. None but minor changes are permitted in these stock plans, these to be paid for on a time basis. The fee is considerably less than the normal—just how low we are not told. The corporation is supported by a membership fee and also by a service fee paid each time a job goes through the organization.

*Monday, May 20.*—Lunched with H. VanBuren Magonigle, Hubert Ripley, and Russell Whitehead. As an indication of the lengths to which architects are going in their extremity, the talk was almost entirely of an herb garden which I am making, and for which Sir Hubert had many and appetizing suggestions, both as to what herbs should be included, and what to do with them after they had grown to maturity.

*Thursday, May 23.*—It has been some years since the grand staircase faded out of the main lobby of the office building. The last one of these that occurs to me is the grand staircase in the Metropolitan Life Insurance Building on Madison Square, New York City. Soon after that, staircases wandered off into a back hall, possibly even to a stair-tower, giving way to the bank of elevators. In office buildings of recent years, the last thing one would expect to see upon entering an office building is a staircase.

And yet the newest tall building of all, the International Building in Rockefeller Center, has a grand staircase immediately facing the main entrance—but it is a moving staircase. An escalator moves up, and beside it one moves down. Flanking this pair, two others lead to the basement, and the elevator bank is relegated to the rear.

(Continued on page 36)



*W. L. Plack of Philadelphia, retired, who has attended many conventions*



*Harry F. Cunningham of Washington, D. C., with Russell F. Whitehead in the background*



*Richard Philipp, one of our Milwaukee hosts*

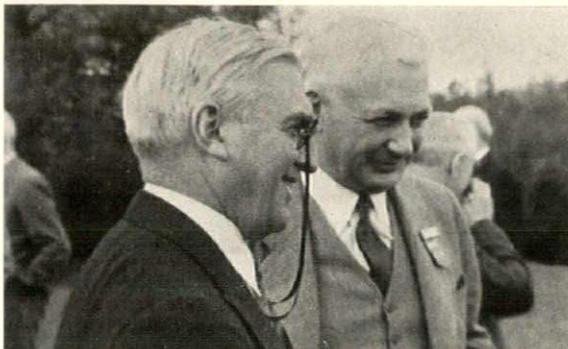


*William Stanley Parker of Boston*

*Below, F. P. Byington of New York, of the Producers' Council*



*Frank J. Baldwin of Washington, D. C., ex-secretary of the A. I. A., with Frederick Bigger of Pittsburgh*



*The new president, Stephen F. Voorhees of New York, with Alvin E. Harley of Detroit*



*David J. Witmer of Los Angeles and Charles F. Cellarius of Cincinnati*

*Below, George S. Koyl of Philadelphia, with Hobart Upjohn, newly elected president of the New York Chapter*



*Charles D. Maginnis, of Boston, preferred art galleries*

## Faces at the A. I. A. Convention



*Ralph T. Walker, outgoing president of the New York Chapter*



*Alexander E. Eschweiler, Sr., dean of the Milwaukee architects*

*Below, J. André Fouilhoux of New York, partner of the late Raymond M. Hood*





*H. W. Buemming, another of our Milwaukee hosts*



*Ex-Governor Walter J. Kohler at his garden party surrounded by an attentive group of architects*



*Louis LaBeaume of St. Louis, elected first vice president*

# Caught by the Editor's Camera



*The newly elected second vice president, F. P. Sullivan of Washington, D. C.*



*Hubert G. Ripley of Boston and Frederick W. Garber of Cincinnati*



*M. H. Furbringer of Memphis*



*Past-President Irving K. Pond of Chicago*



*Ely Jacques Kahn of New York and Frank Brotz, general manager of the Kohler plant*



*Alexander C. Guth, another of our Milwaukee hosts*

*Below, the outgoing president, Ernest J. Russell of St. Louis, with Raymond J. Ashton of Salt Lake City*



*George C. Nimmons of Chicago, talking with Charles C. Zantinger of Philadelphia and Charles D. Maginnis*

*Below, William Jones Smith of Childs & Smith, Chicago*



*Below, the executive secretary of the A. I. A., Edward C. Kemper*



(Continued from page 33)

*Sunday, May 26.*—The Producers' Council had invited members of the architectural press to share their special car en route from New York to Milwaukee, the scene of the Sixty-seventh Annual Convention of The American Institute of Architects. As it turned out, there seemed to be two or three of the architectural press to one Producer.

*Monday, May 27.*—Having picked up a few more Producers and another member or two of the architectural press in Chicago, we arrived in Milwaukee to find the Hotel Schroeder humming with a dazzling array of A. I. A. badges—orange ribbons for the delegates, blue for alternates and other members, white for affiliates, green for members of the Producers' Council, and red for guests and press. Depression or no depression, the convention seems fully up to its usual size. Almost all of the familiar faces one sees year after year are here, with a large sprinkling of new ones.

*Tuesday, May 28.*—Mayor Daniel W. Hoan welcomed the convention to Milwaukee, giving us, incidentally, a vivid impression of a mayor who has a highly developed social sense and is following that lead in the conduct of his city. With the address of the president, Ernest J. Russell, an interesting paper on "The Beginnings of the Institute" by Frank C. Baldwin, a brief but stirring appreciation of the late Thomas R. Kimball by William L. Steele of Omaha, and the masterly organization and detail of Edwin Bergstrom's report as treasurer, the morning session ended.

The voice of Washington was heard in the afternoon session: Louis A. Simon, speaking for the Supervising Architect's Office; Bertholf M. Pettit, for the PWA; Miles L. Colean of the FHA; and Pierre Blouke of the reconditioning activities of HOLC. Francis P. Sullivan, chairman of the A. I. A. Committee on Public Works, read a masterly report upon the necessity for the closest co-operation with the federal authorities in Washington, rather than any suggestion of mere job seeking on the part of the profession.

In the evening, Charles D. Maginnis presided over a meeting on the subject of architectural education, which meeting, I am sorry to say, a number of us, having dined too lengthily, missed.

*Wednesday, May 29.*—After a short morning session devoted largely to approval of decisions previously reached by the Board of Directors, the convention piled into large buses and drove ninety miles to the village of Kohler for the outstanding pleasurable event of the convention. After the drive directly north along the lake front, we passed through Sheboygan, and were served luncheon in the Recreation Hall of Kohler Village some three miles beyond. After luncheon we inspected the various

processes by which clay products, enamelled iron ware, and brass become plumbing fixtures. The village of Kohler, with its Waelderhaus, its community club, band, scout troupes, musical clubs, and its many other indications of an intensive organization, impressed many of us particularly by the neatness and beauty of its planting. A question as to how the lawns and planting were achieved and maintained brought the answer that it was entirely a matter of individual responsibility. This responsibility has been so highly developed that a resident would no more think of allowing his grass to remain uncut, his planting to become straggly, than he would of hanging out wash in the front yard. It just is not done.

It seemed rather more than ordinary hospitality to entertain the one hundred fifty to one hundred seventy-five visitors at luncheon and during the afternoon, but when former Governor Walter L. Kohler and Mrs. Kohler entertained us all at supper in their home at Riverbend, we gained a new idea of Wisconsin hospitality.

*Thursday, May 30.*—The convention sessions which lasted throughout the day and far into the night, broken only by a luncheon with the Producers' Council at which former Governor Kohler spoke, proved to be a prolonged and tiresome attempt to take the constitution and by-laws apart and tinker with the gears. I doubt very much whether, after the experience of this day, there will be within the generation another such useless waste of time and energy in an A. I. A. convention.

In the last few moments of the 1934 convention a resolution, unconsidered and undebated, was passed directing the Board to prepare the necessary changes in the organization to provide for the unification of the entire architectural profession within the A. I. A. We brought it upon ourselves, therefore—this deluge of amendments—and having caused the Board untold labor and thought by a casual last-moment gesture of the 1934 convention, we found the result quite unpalatable. By the time the long day had dragged to its close, there was very little left of unification, very little left of attempts to hasten and promote the unification idea. We shall go along pretty much as we were. One thing is sure: if there were two or more such days in our A. I. A. conventions for two or three years running, I imagine that delegates would have to be forcibly compelled to attend. It was a good deal like the man who has acquired a new automobile. Over the week-end, instead of going for a ride, he takes the machine apart nut by nut, and puts it together again.

*Friday, May 31.*—This morning proved to be one of the most productive sessions of the convention. Business was dispatched with celerity. To my great

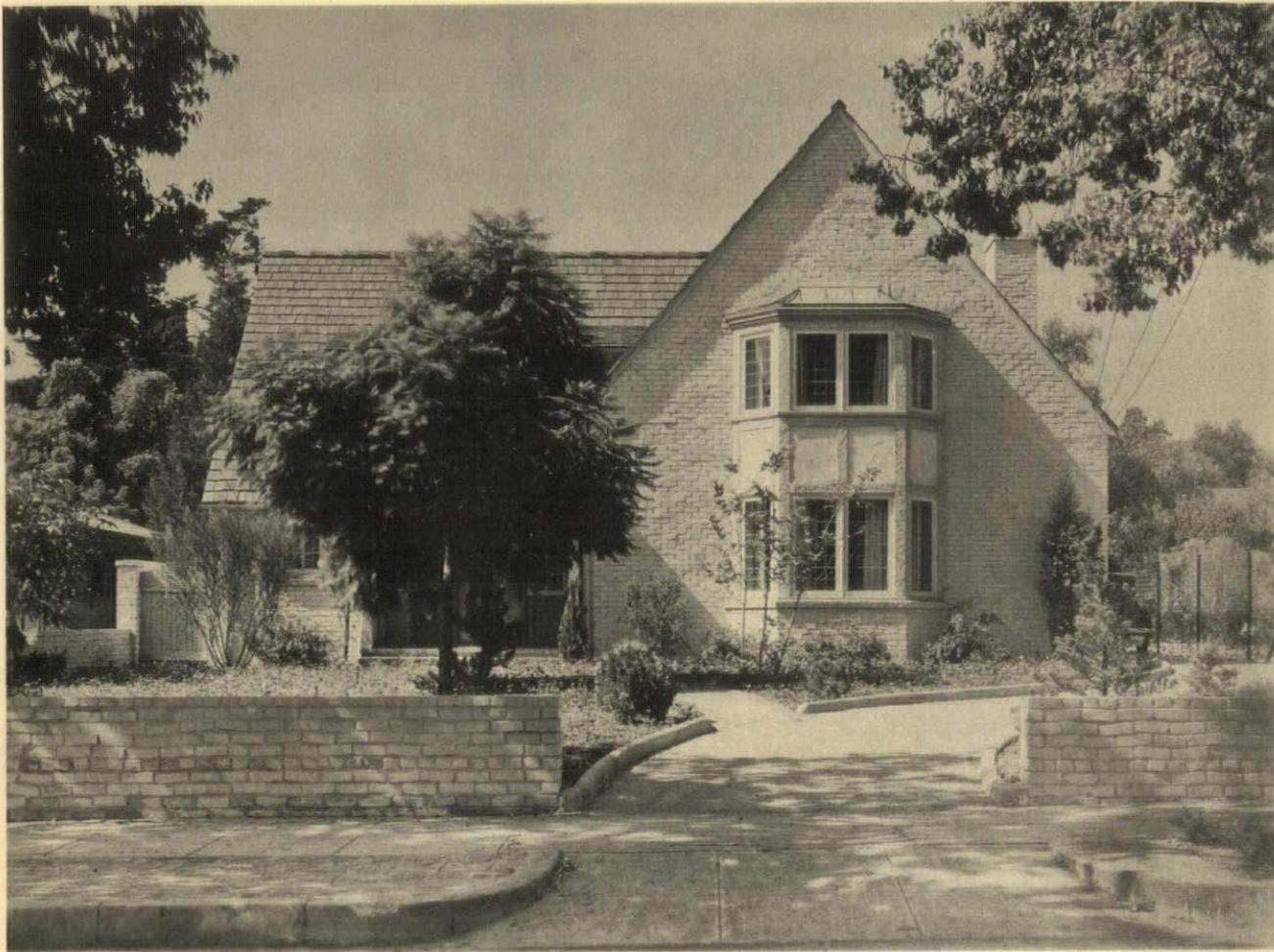
joy, the subject of small-house practice was not allowed to pass unnoticed, as I had feared it might be, but was discussed in detail and with enthusiasm. Experiments are in process throughout the country, leading to a better knowledge, we trust, of how to serve the "lower 85 per cent" of the population. These experiments—in Baltimore, Buffalo, Detroit, and many other places—should bring new knowledge of a workable procedure—knowledge which, in accordance with the sentiment of the meeting, must be passed along to the whole membership as quickly as it is acquired.

The announcement of the elections merely confirmed what had seemed to me to be the sentiment of the delegates. This convention was marked by an utter lack of electioneering or whispered politics. Both of the candidates for president had the admiration, respect, and enthusiastic loyalty of all. There was most assuredly not, as had been carelessly prophesied, a break between those desiring an "executive president" and those desiring an "art president." There was, however, in evidence a growing realization of the fact that the office of president of the A. I. A. has become one that brings a particularly heavy burden. Around the luncheon table or in other leisure moments one heard occasionally the suggestion that the presidency should be divided into two offices, in some form, so that with one we could recognize and express our admiration for our elder statesmen; in the other office we could station a younger man who expects hard work and would be fully able to shoulder the immense amount of administrative detail.

The last afternoon of the convention was given over to golf matches, inspections of Milwaukee's famous breweries, and her less famous, but perhaps most interesting, museums of art and their exhibitions.

Tonight, with Robert D. Kohn presiding, the final convention dinner was held at the University Club. Glenn Frank, president of the University of Wisconsin, read a scholarly address on the present state of the nation and the choice of paths ahead of us. Governor Philip F. LaFollette having been unable at the last moment to attend, the toastmaster had our inimitable Louis LaBeaume pinch-hit for him, and his speech will go down in the history of A. I. A. banquets as a gem of impromptu wit garnished with some wisdom.

There seems to be a custom—growing year by year—holding that the final dinner does not constitute the end of the convention, but rather gives way to a prolonged and increasingly enthusiastic series of farewell gatherings in public and private rooms. Certainly no recent convention outdid the Milwaukee one in this respect, so that when, in the small hours of the morning, the final farewell in a long series of farewells had been made, one was glad that he had come to Milwaukee, and sorry to be going.



HOUSE AND STUDIO OF MISS MARGARET COLEMAN  
PASADENA, CALIF.

*Elmer Grey*  
ARCHITECT

*Photographs by Hiller Studio*

"I like the Margaret Coleman house best among my small houses because it serves an individual purpose, that of a combined home and music studio; and because the owner joined so wholeheartedly with me in trying to make of it an individual house."  
ELMER GREY

*In view of the fact that the architectural profession will unquestionably devote more of its energies during the next few years at least to the design of the small house, we have asked one hundred architects to send us, each, the best small house that he has designed. These will be published from time to time during the coming months, and should prove a source of information and inspiration in this field.—Editor*

ONE HUNDRED SMALL HOUSES

« ARCHITECTURE »

JULY, 1935



*The oak timbering of the studio has been given a color about like that of driftwood. Floors are of heavy oak plank in random widths*

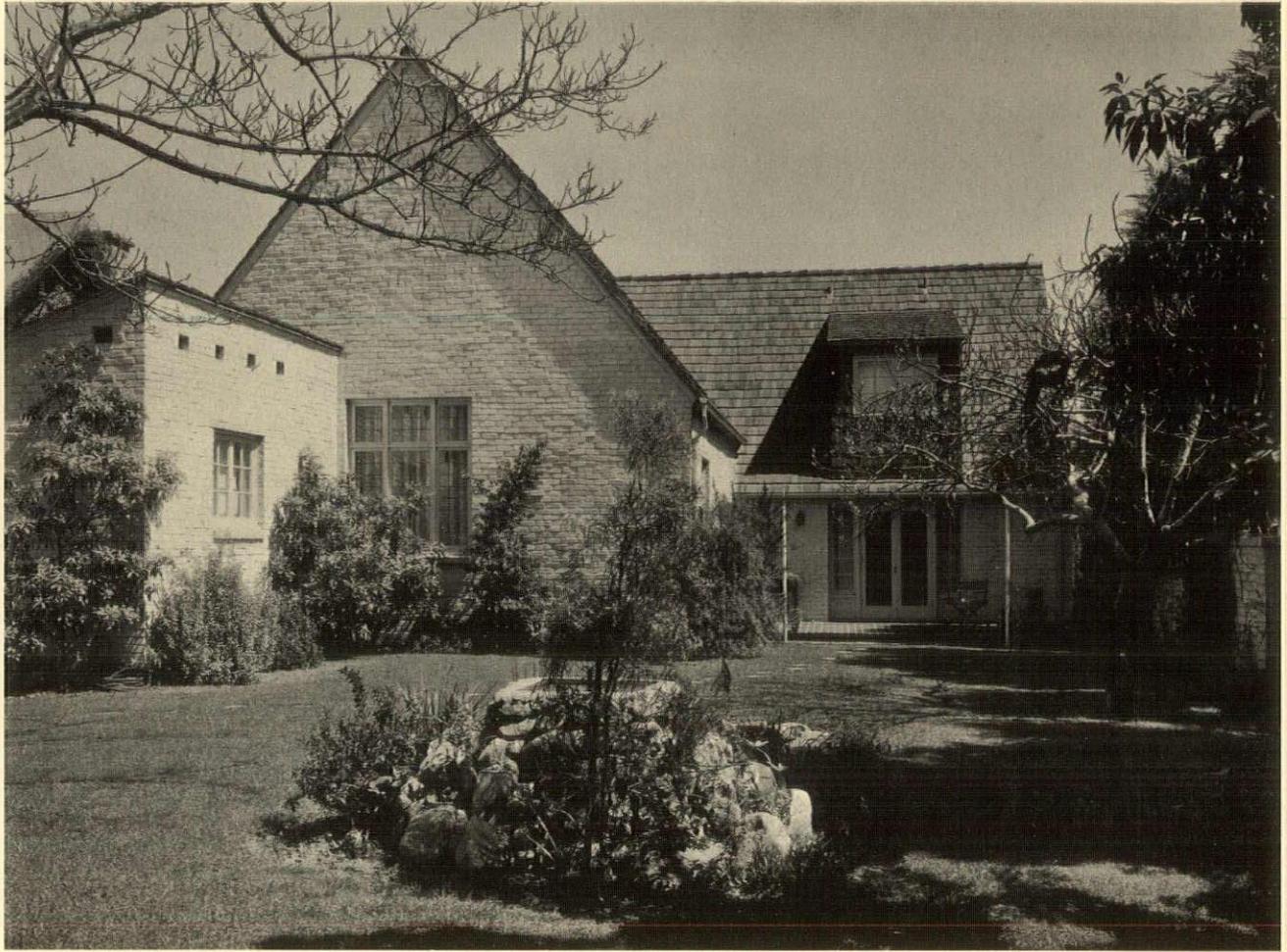
« ARCHITECTURE »

JULY, 1935

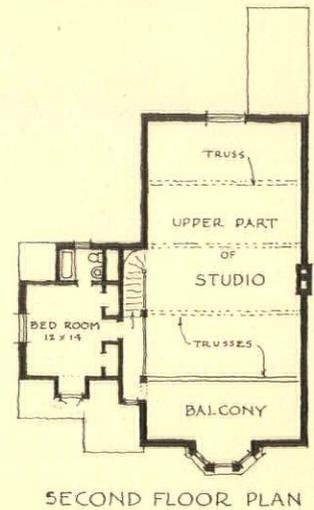
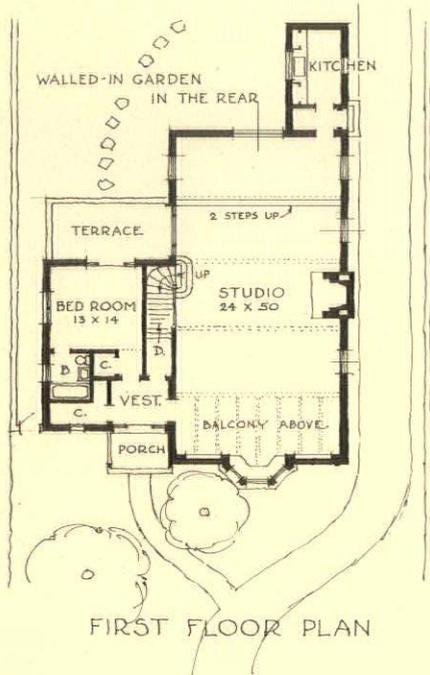


*An acoustical plaster was used for the walls, with which a large amount of mineral wool was incorporated. The color, too, a dull straw, was mixed with the plaster*

« ARCHITECTURE »  
JULY, 1935

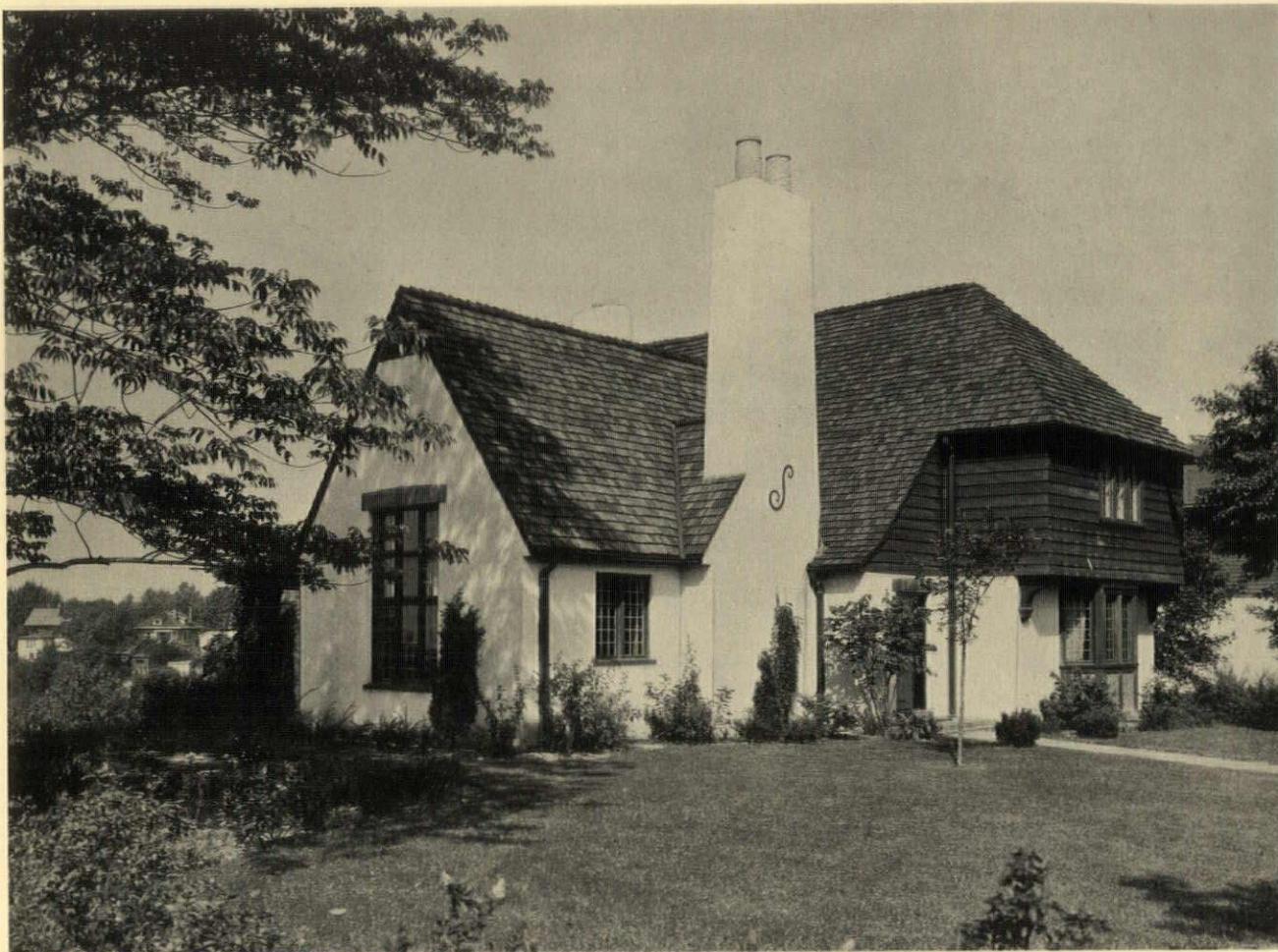


*The brick walls were laid without a level or plumb line, which gives them a texture that is clearly revealed in this picture by the almost overhead sun. The color is a very light buff—a cement paint. For the roof, heavy split shingles are used*



*As the plans indicate, everything has been subordinated to the two-story studio. The kitchen is tiny, located off the raised end of the main floor*

« ARCHITECTURE »  
JULY, 1935



*Outside woodwork is cypress, finished with a dark brown creosote stain. Roof is of hand-split shingles. The stucco is a light buff*

HOUSE OF CHALMERS HADLEY  
CINCINNATI, OHIO

*Charles F. Cellarius*

ARCHITECT

*Photographs by Charles H. Longley*

"It has always seemed to me that the architect must solve two problems: first, to satisfy his client; and second, to achieve a result so practical and beautiful as to meet his own professional ideals."

CHARLES F. CELLARIUS

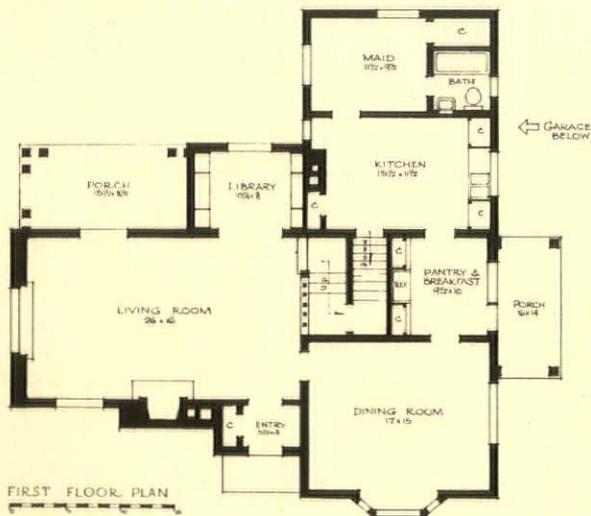
ONE HUNDRED SMALL HOUSES

« ARCHITECTURE »

JULY, 1935



The feature of the interior is a two-story living-room with its adjoining book alcove, both of which are faced with vertical chestnut boards, burned with a torch and waxed. Floors are of plank in random widths, showing the wooden pegs. It has been scraped across the grain, and finished in a rich brown. The tiles for the fireplace facing are a dull reddish brown. Between the ceiling beams the plaster is of a cream tone, slightly antiqued

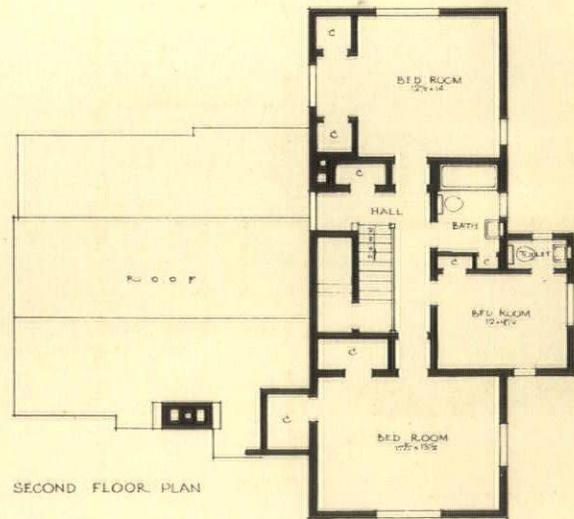


The general arrangement of the plan was dictated by the fact that there was a beautiful view in one direction toward the rear. An interesting detail is the combination of pantry and breakfast room opening out upon the end porch. The land slopes down on this side of the house sufficiently to bring the basement garage at grade under the kitchen and maid's room

« ARCHITECTURE »  
JULY, 1935



*The dining-room has the same oak plank floor as the living-room, scraped across the grain and finished dark brown. Here the plaster has a texture slightly rougher than a float finish. The trim here, as throughout the first floor, is of oak with a dark brown stain*



*The height of the living-room takes away a considerable portion of the second-floor area. Nevertheless, there is room for three bedrooms, a bath, and a plentiful supply of closets*



*The house as seen from the garden side presents the living-room wing and its large window of grouped casements as a dominant element*

« ARCHITECTURE »

JULY, 1935

NUMBER 105 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS  
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

# ARCHITECTURE'S PORTFOLIO OF BRICK CORNICES

*Subjects of previous portfolios are listed below  
at left and right of page*

❖ 1926  
DORMER WINDOWS  
SHUTTERS AND BLINDS

❖ 1927  
ENGLISH PANELLING  
GEORGIAN STAIRWAYS  
STONE MASONRY TEXTURES  
ENGLISH CHIMNEYS  
FANLIGHTS AND OVERDOORS  
TEXTURES OF BRICKWORK  
IRON RAILINGS  
DOOR HARDWARE  
PALLADIAN MOTIVES  
GABLE ENDS  
COLONIAL TOP-RAILINGS  
CIRCULAR AND OVAL WINDOWS

❖ 1928  
BUILT-IN BOOKCASES  
CHIMNEY TOPS  
DOOR HOODS  
BAY WINDOWS  
CUPOLAS  
GARDEN GATES  
STAIR ENDS  
BALCONIES  
GARDEN WALLS  
ARCADES  
PLASTER CEILINGS  
CORNICES OF WOOD

❖ 1929  
DOORWAY LIGHTING  
ENGLISH FIREPLACES  
GATE-POST TOPS  
GARDEN STEPS  
RAIN LEADER HEADS  
GARDEN POOLS  
QUOINS  
INTERIOR PAVING  
BELT COURSES  
KEYSTONES  
AIDS TO FENESTRATION  
BALUSTRADES

❖ 1930  
SPANDRELS  
CHANCEL FURNITURE  
BUSINESS BUILDING ENTRANCES  
GARDEN SHELTERS  
ELEVATOR DOORS  
ENTRANCE PORCHES  
PATIOS  
TREILLAGE  
FLAGPOLE HOLDERS  
CASEMENT WINDOWS  
FENCES OF WOOD  
GOTHIC DOORWAYS



*Below are the subjects of  
forthcoming Portfolios*

Signs  
AUGUST

Chimney Offsets  
SEPTEMBER

Window Heads  
(EXTERIOR, ARCHED)  
OCTOBER

Unusual Brickwork  
NOVEMBER

Shutters and Blinds  
DECEMBER

Fireplaces, Mediterranean Types  
JANUARY

*Photographs showing interesting  
examples under any of these head-  
ings will be welcomed by the Edi-  
tor, though it should be noted that  
these respective issues are made up  
about six weeks in advance of  
publication date.*

1931 ❖  
BANKING-ROOM CHECK DESKS  
SECOND-STORY PORCHES  
TOWER CLOCKS  
ALTARS  
GARAGE DOORS  
MAIL-CHUTE BOXES  
WEATHER-VANES  
BANK ENTRANCES  
URNS  
WINDOW GRILLES  
CHINA CUPBOARDS  
PARAPETS  
1932 ❖  
RADIATOR ENCLOSURES  
INTERIOR CLOCKS  
OUTSIDE STAIRWAYS  
LEADED GLASS MEDALLIONS  
EXTERIOR DOORS OF WOOD  
METAL FENCES  
HANGING SIGNS  
WOOD CEILINGS  
MARQUISES  
WALL SHEATHING  
FRENCH STONEWORK  
OVER-MANTEL TREATMENTS

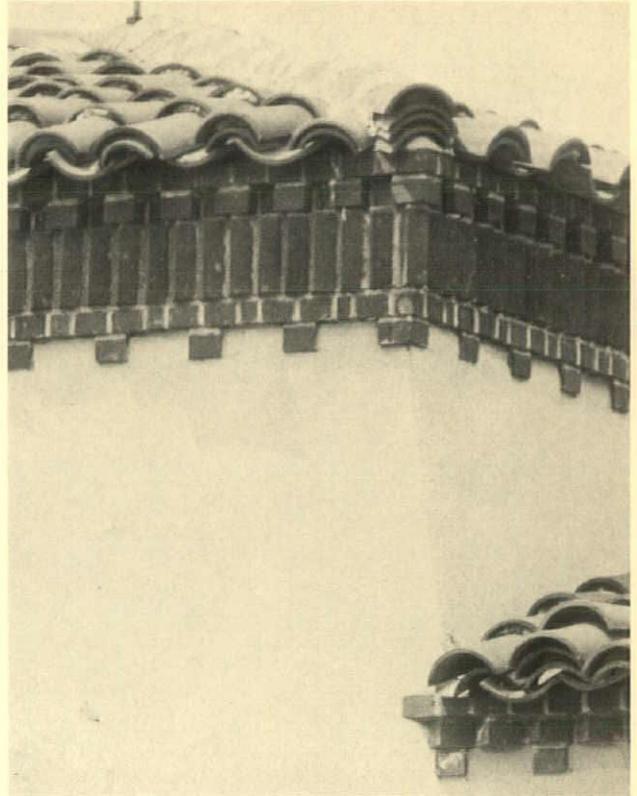
1933 ❖  
BANK SCREENS  
INTERIOR DOORS  
METAL STAIR RAILINGS  
VERANDAS  
THE EAGLE IN SCULPTURE  
EAVES RETURNS ON MASONRY  
GABLES  
EXTERIOR LETTERING  
ENTRANCE DRIVEWAYS  
CORBELS  
PEW ENDS  
GOTHIC NICHEs  
CURTAIN TREATMENT AT  
WINDOWS

1934 ❖  
EXTERIOR PLASTERWORK  
CHURCH DOORS  
FOUNTAINS  
MODERN ORNAMENT  
RUSTICATION  
ORGAN CASES  
GARDEN FURNITURE  
WINDOW HEADS, EXTERIOR  
SPIRES  
BUSINESS BUILDING LOBBIES  
ROOF TRUSSES  
MODERN LIGHTING FIXTURES

1935 ❖  
CIRCULAR WINDOWS,  
GOTHIC AND ROMANESQUE  
TILE ROOFS  
MOLDED BRICK  
DORMER WINDOWS  
ENTRANCE SEATS  
OVERDOORS, INTERIOR



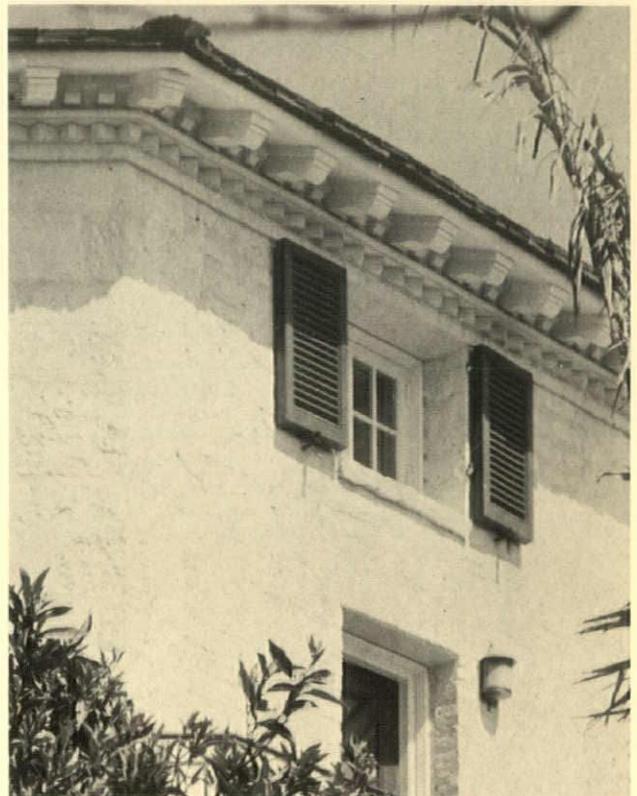
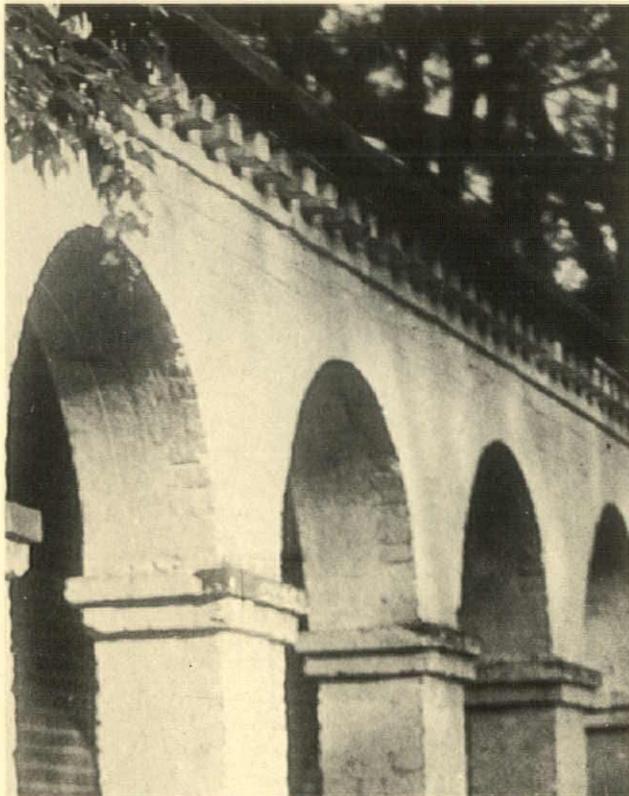
*Norwalk, Conn.  
Frank J. Forster*

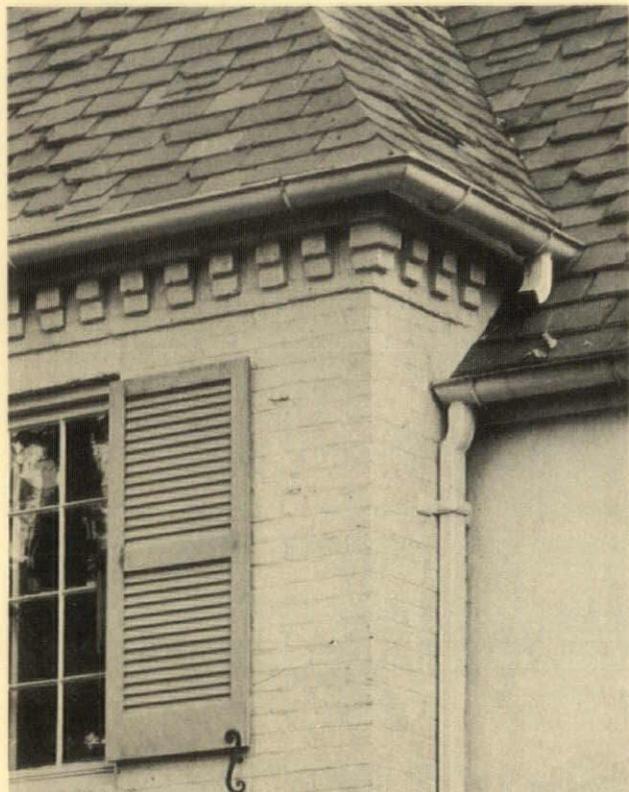


*Hollywood, Calif.  
Carl Jules Weyl*

*Charlottesville, Va.  
Thomas Jefferson*

*Montecito, Calif.  
The Office of Reginald D. Johnson*





*Summit, N. J.  
Clark & Arms*

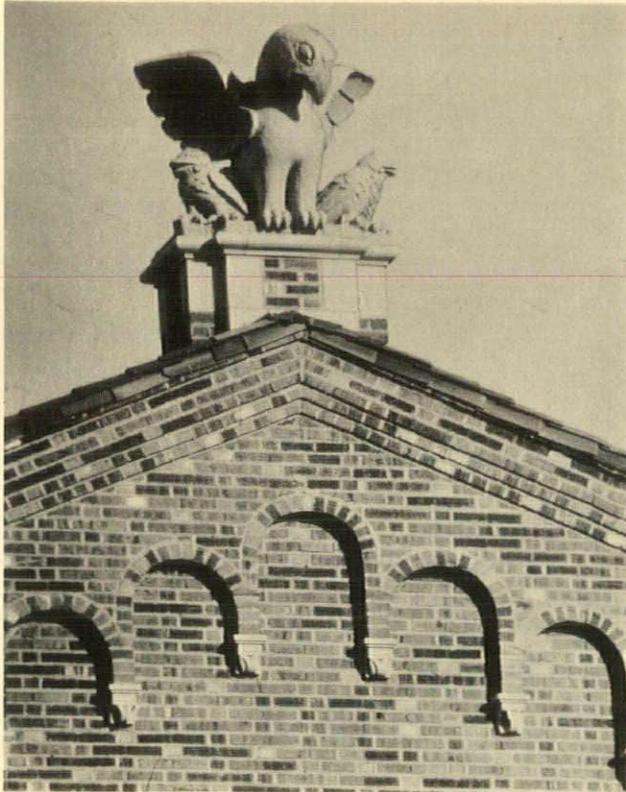


*Portland, Ore.  
Herman Brookman*

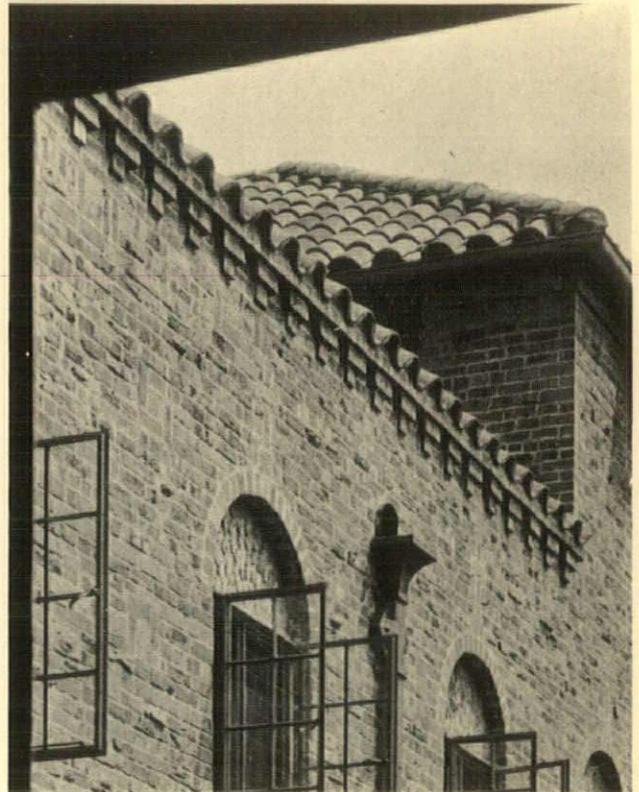
*Bronxville, N. Y.  
Perry M. Duncan ; C. Cabell Garrett*

*Darien, Conn.  
Wesley S. Bessell*





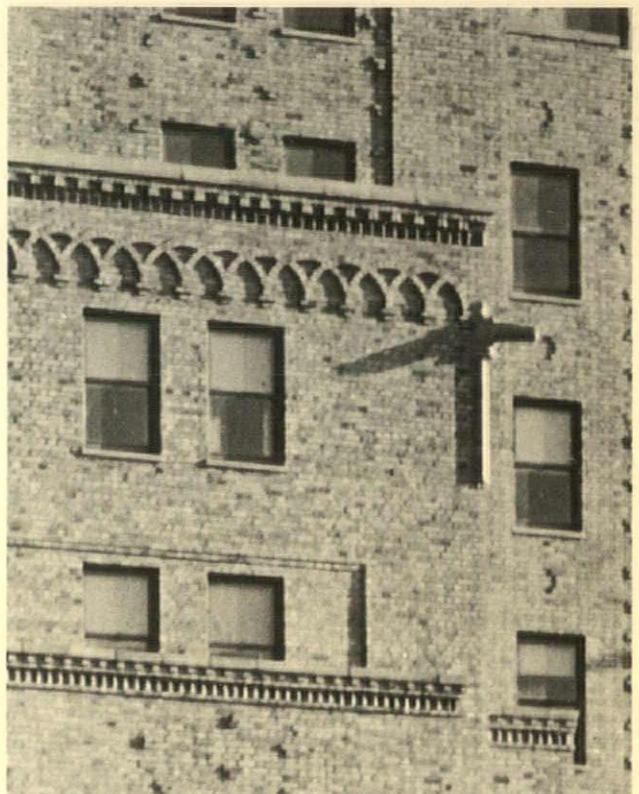
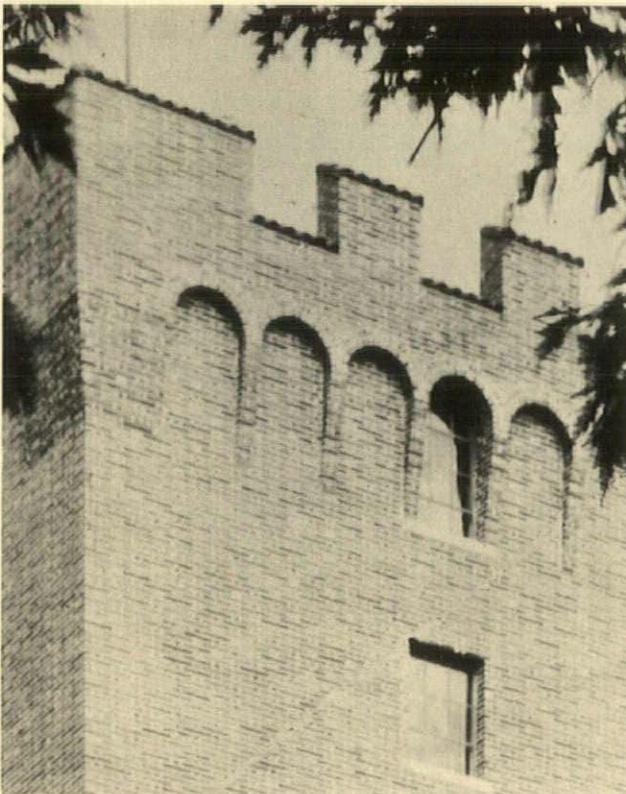
*Denver, Colo.  
W. E. & A. A. Fisher*

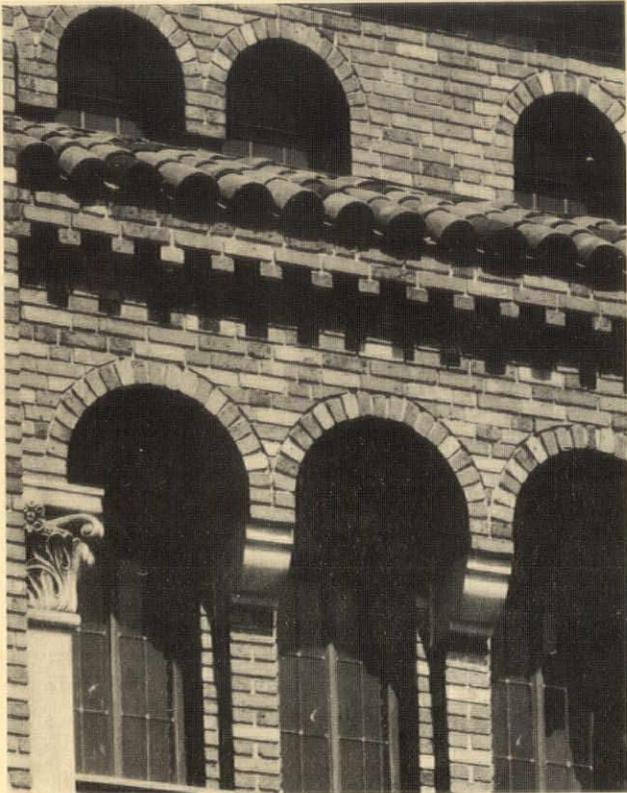


*Union City, N. J.  
Frederick G. Frost*

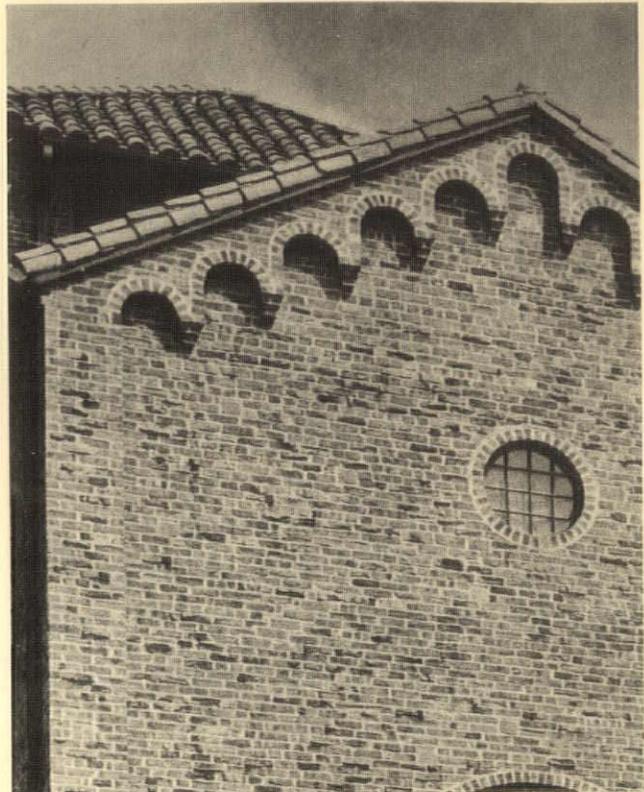
*Denver, Colo.  
W. E. & A. A. Fisher*

*New York City  
Murgatroyd & Ogden*





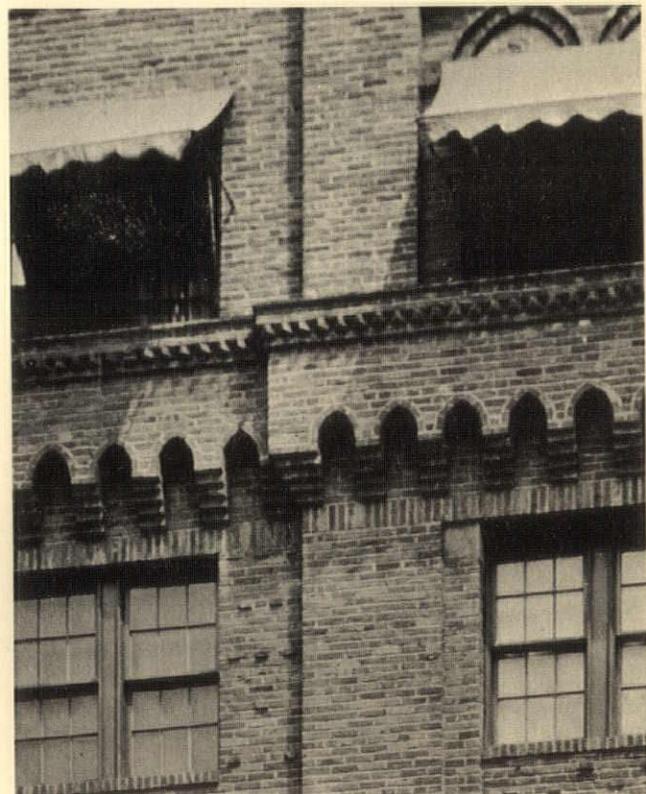
*New York City  
Kerr Rainsford; Taylor, Holmes & Converse*

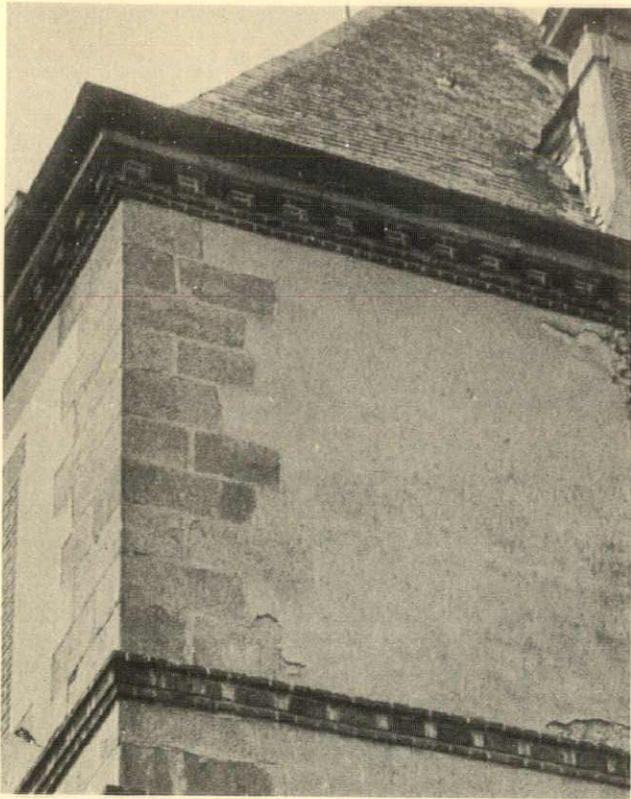


*Union City, N. J.  
Frederick G. Frost*

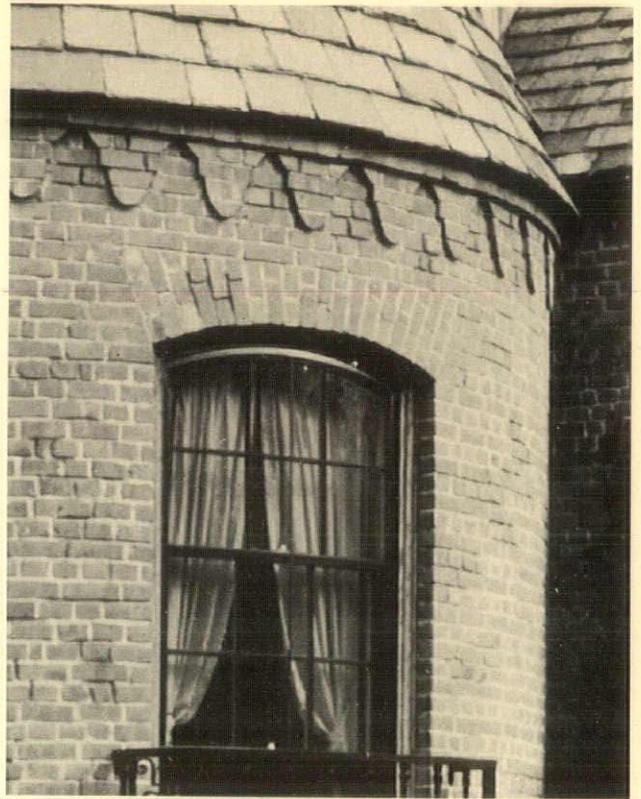
*New York City  
York & Sawyer*

*New York City  
Treanor & Fatio*





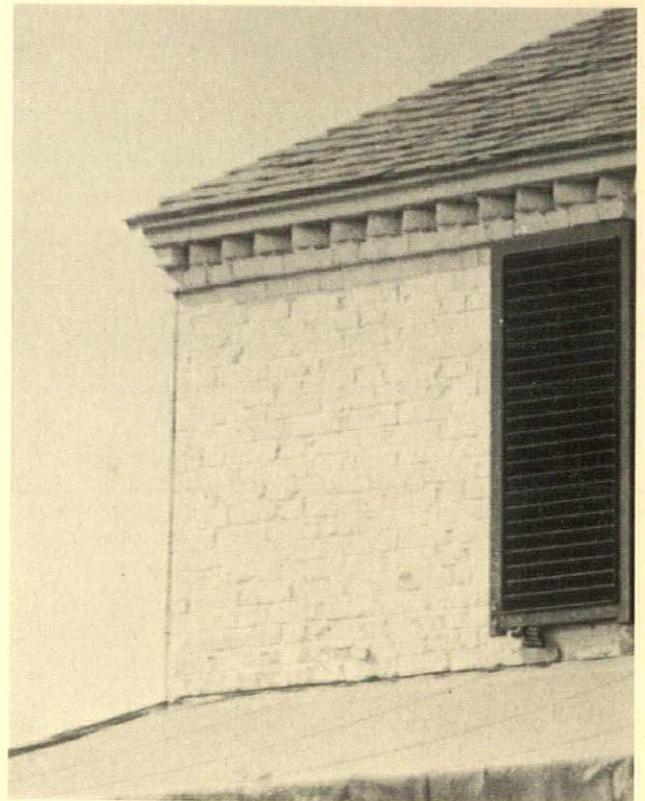
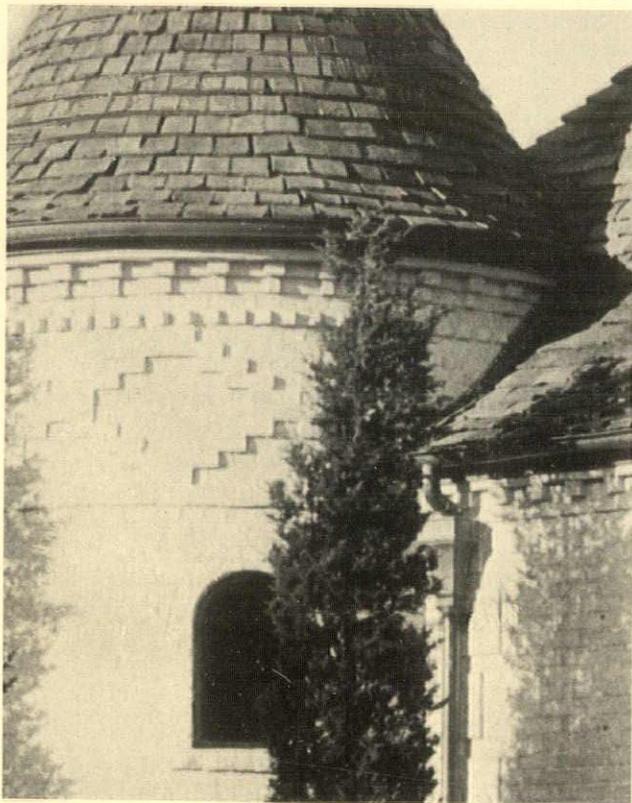
*Fontainebleau*

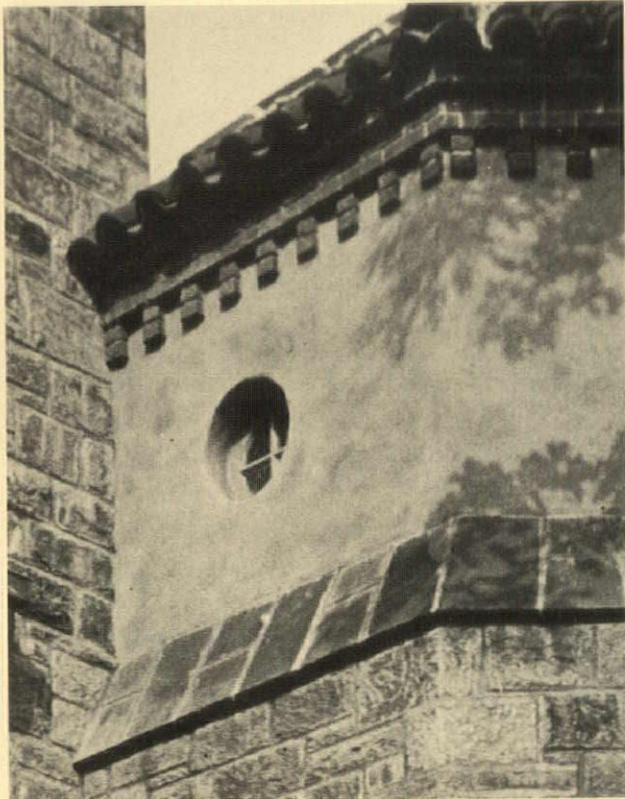


*Bernardsville, N. J.  
Godwin, Thompson & Patterson*

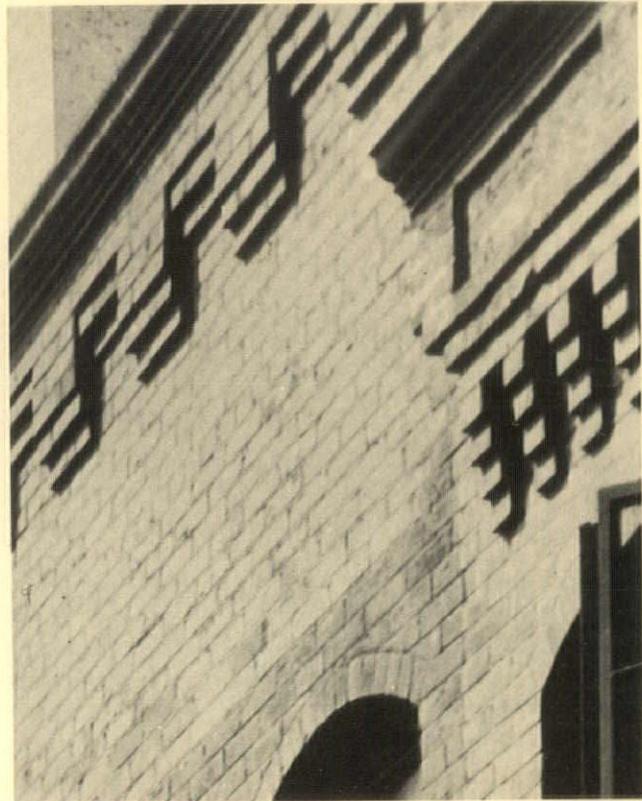
*Brookville, N. Y.  
Bradley Delehanty*

*Hempstead, N. Y.  
Godwin, Thompson & Patterson*





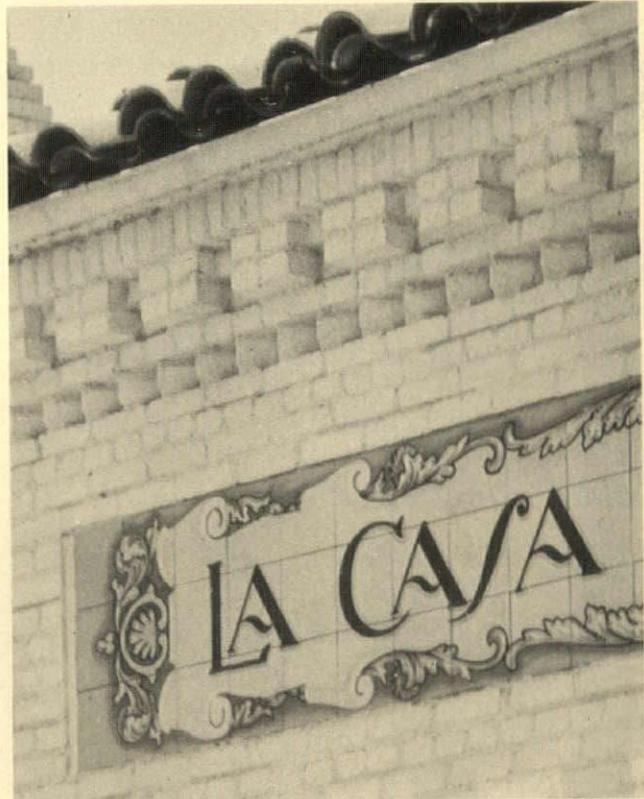
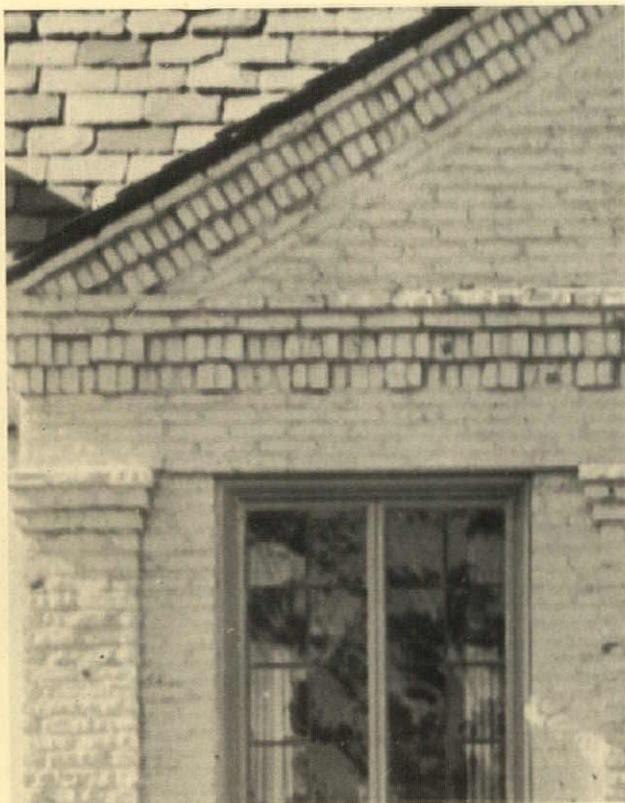
*Darien, Conn.  
Wesley S. Bessell*

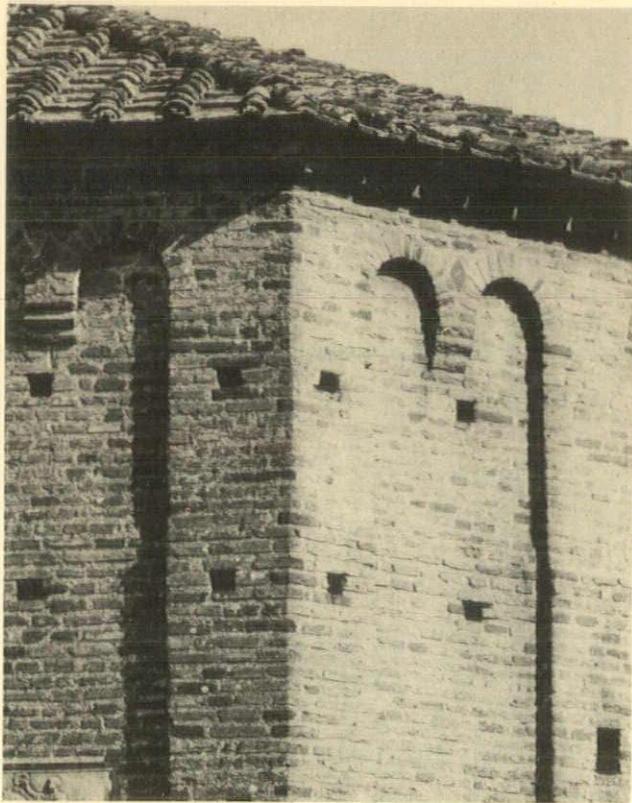


*An old stable  
New York City*

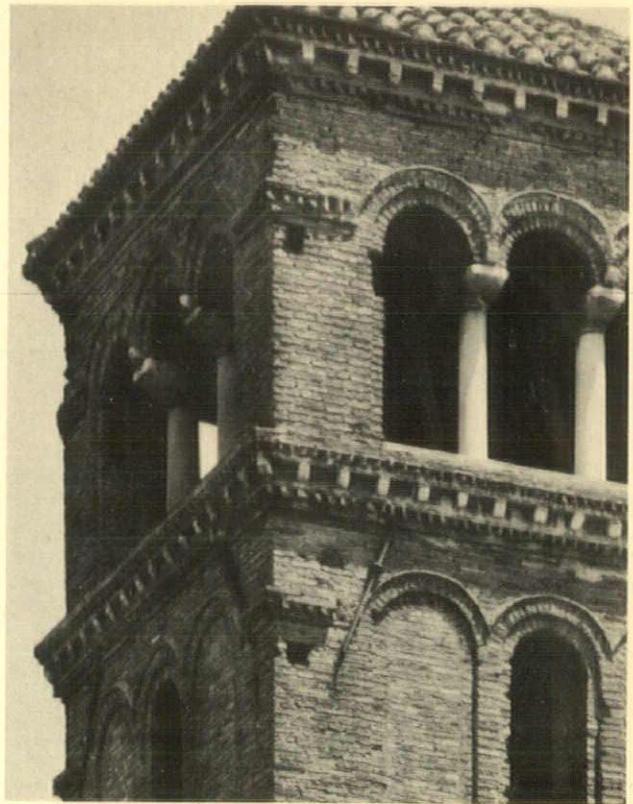
*New Rochelle, N. Y.  
Julius Gregory*

*Southern California  
Marshall P. Wilkinson*



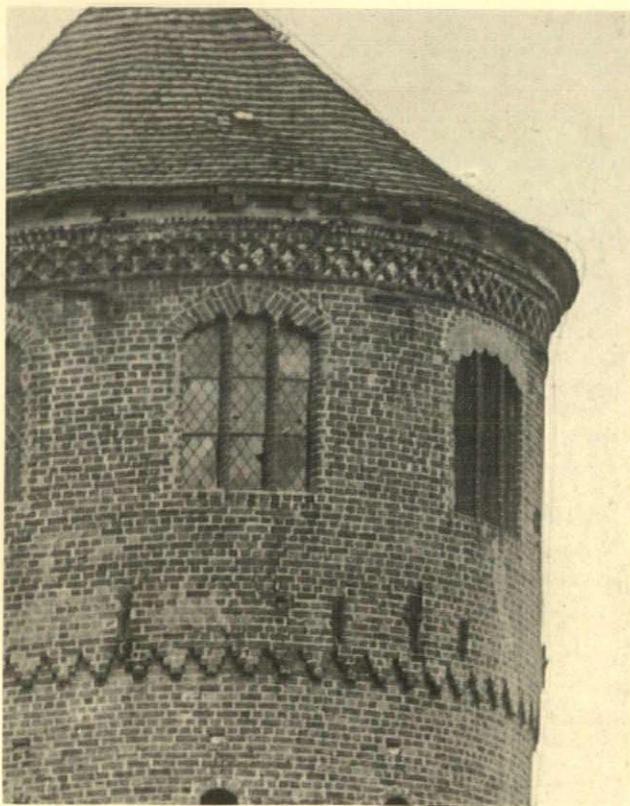


*Baptistry (sixth century)  
Ravenna, Italy*

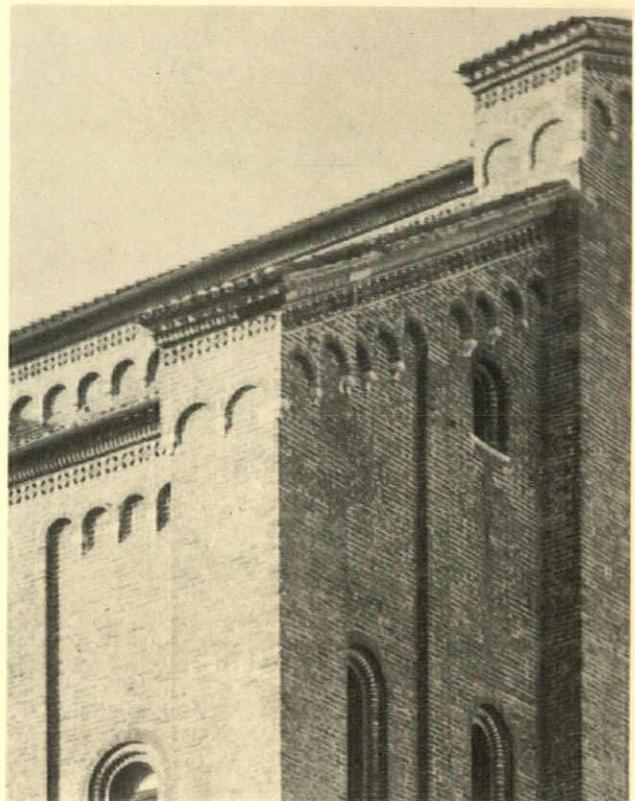


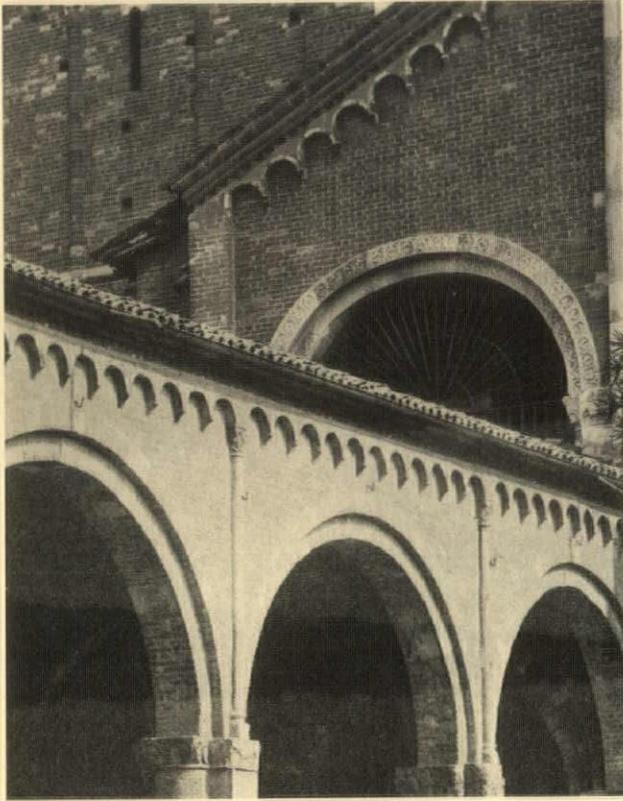
*Church of San Giorgio (seventh century)  
Rome, Italy*

*The Old Castle  
Neustadt, Germany*

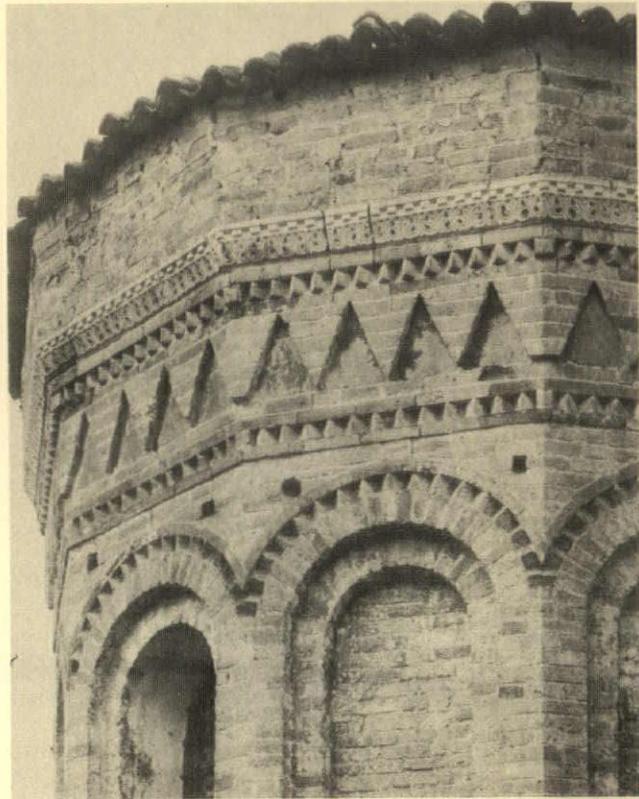


*Church of San Niccolo (1310)  
Treviso, Italy*





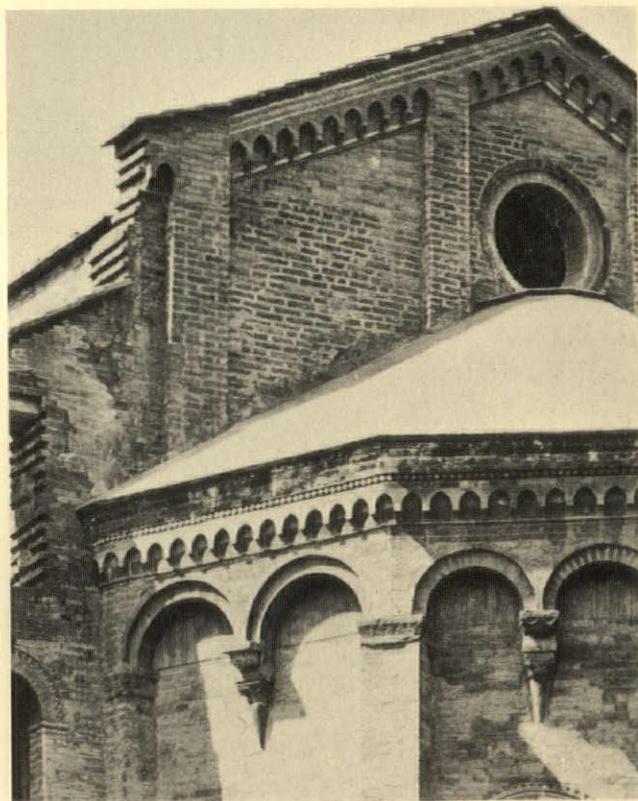
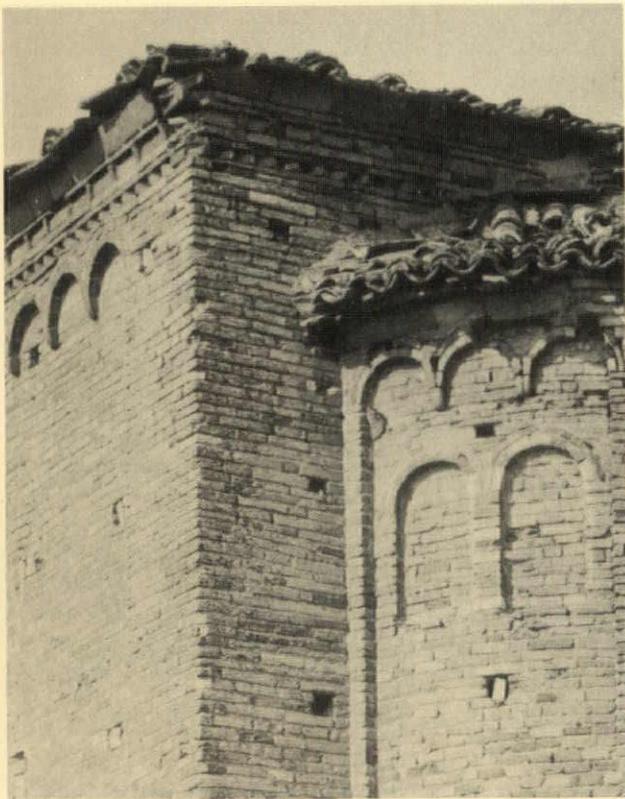
*Basilica of San Ambrogio (eighth and ninth centuries)  
Milan*

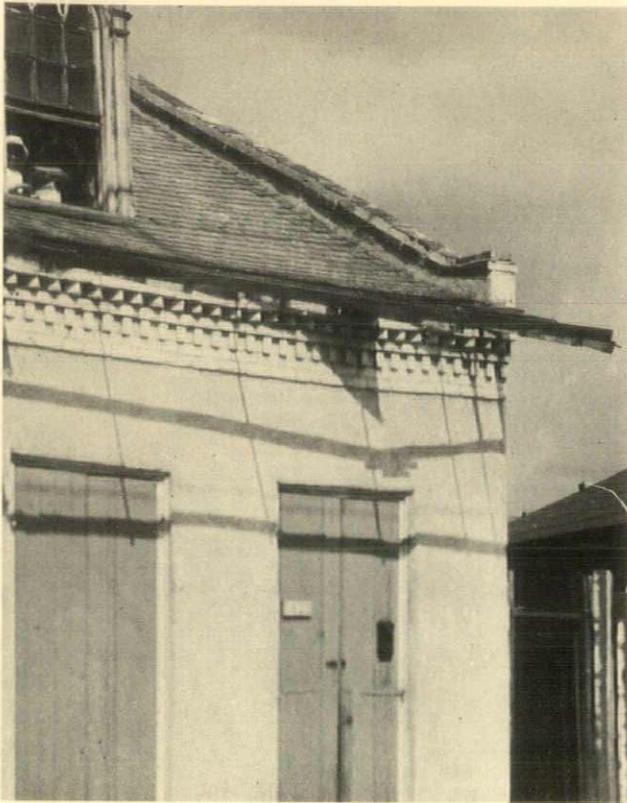


*Church of San Fosca  
Venice, Italy*

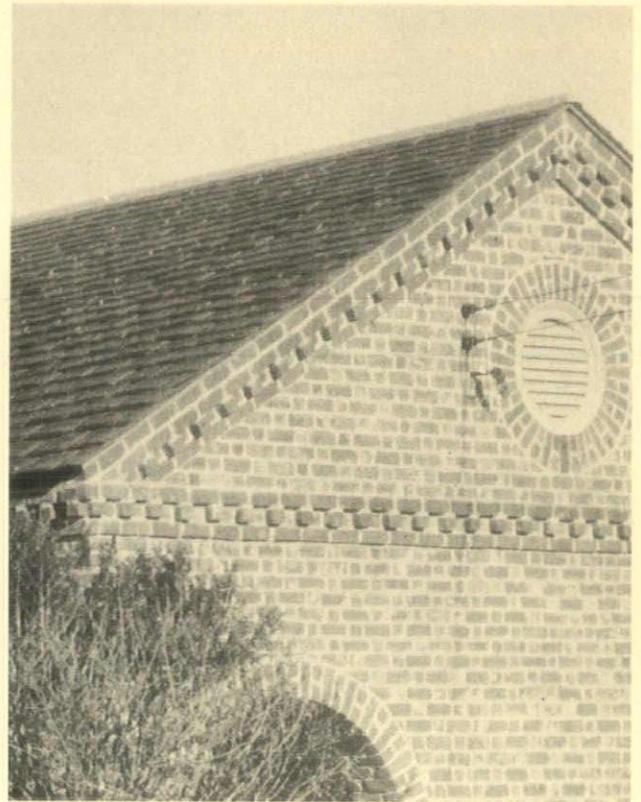
*Church of San Claudio (thirteenth century)  
Macerata, Italy*

*Church of San Martino (thirteenth century)  
Palaia, Italy*





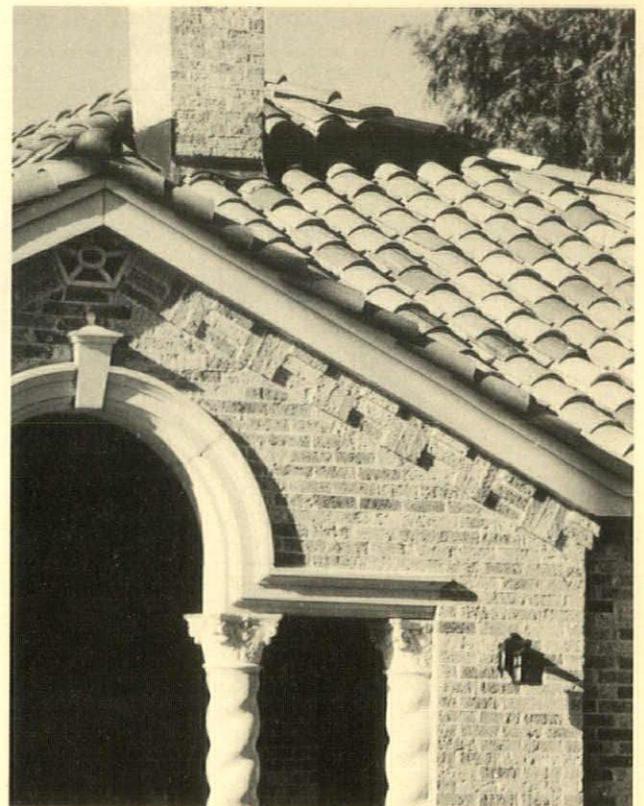
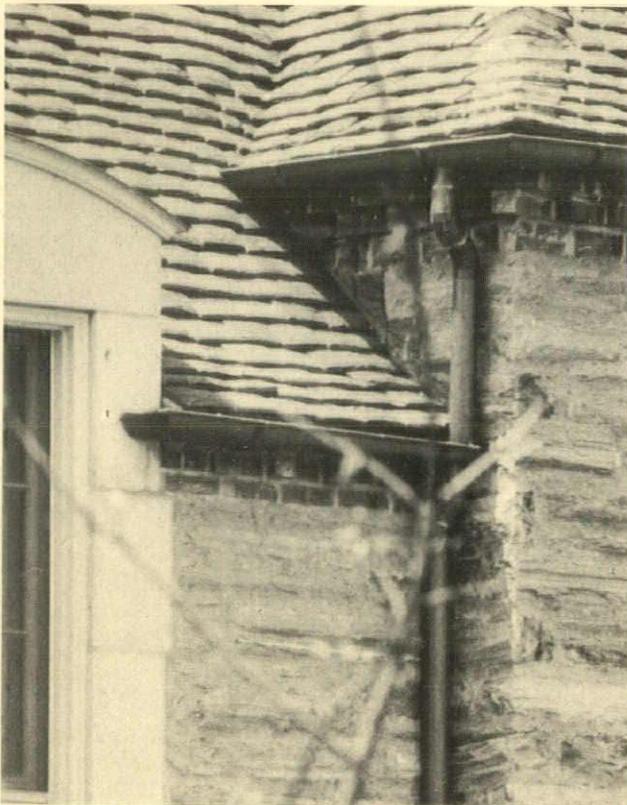
*Old New Orleans*

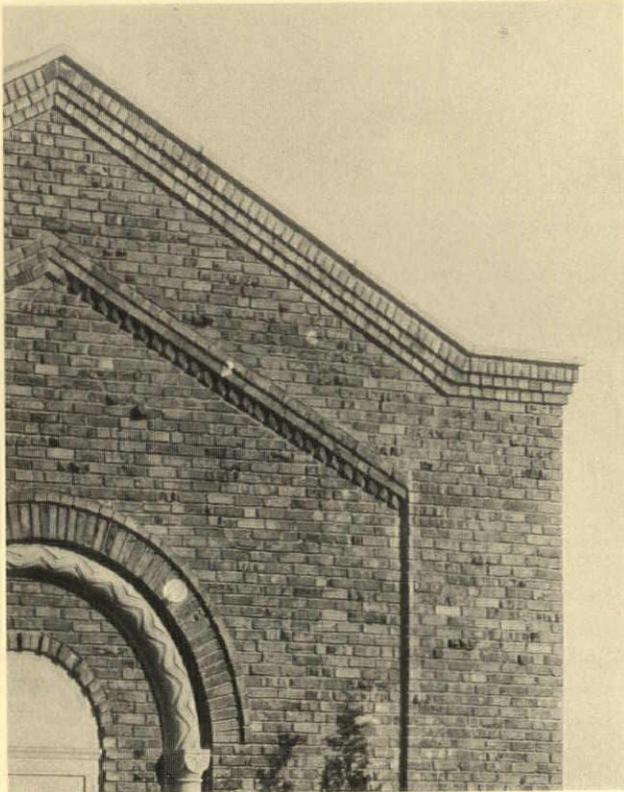


*Williamsburg, Va.  
W. Duncan Lee*

*Philadelphia, Pa.  
Edmund B. Gilchrist*

*San Antonio, Tex.  
Harvey P. Smith*





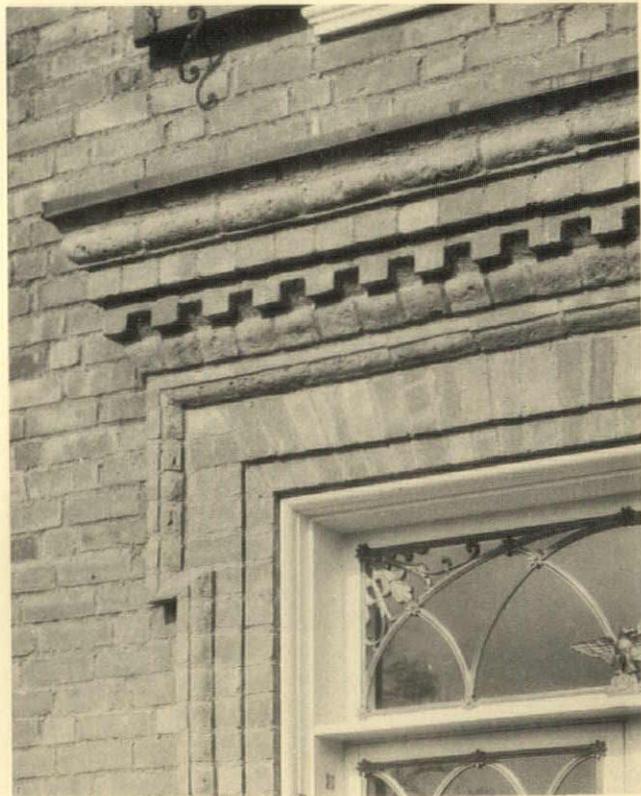
*Teaneck, N. J.  
Hacker & Hacker*

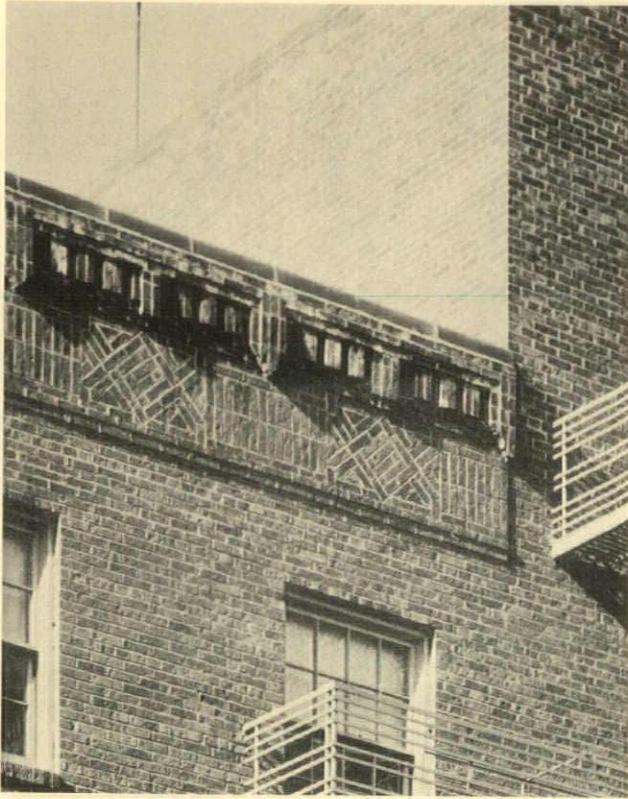


*Los Angeles, Calif.  
Roland E. Coate*

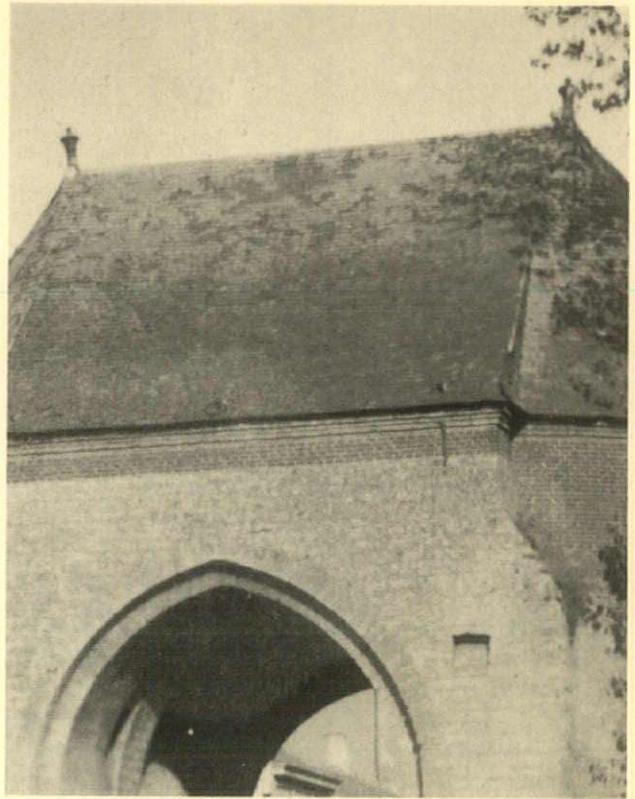
*Pittsburgh, Pa.  
Ingham & Boyd; Clarence S. Stein and Henry Wright*

*Bedford Village, N. Y.  
Godwin, Thompson & Patterson*





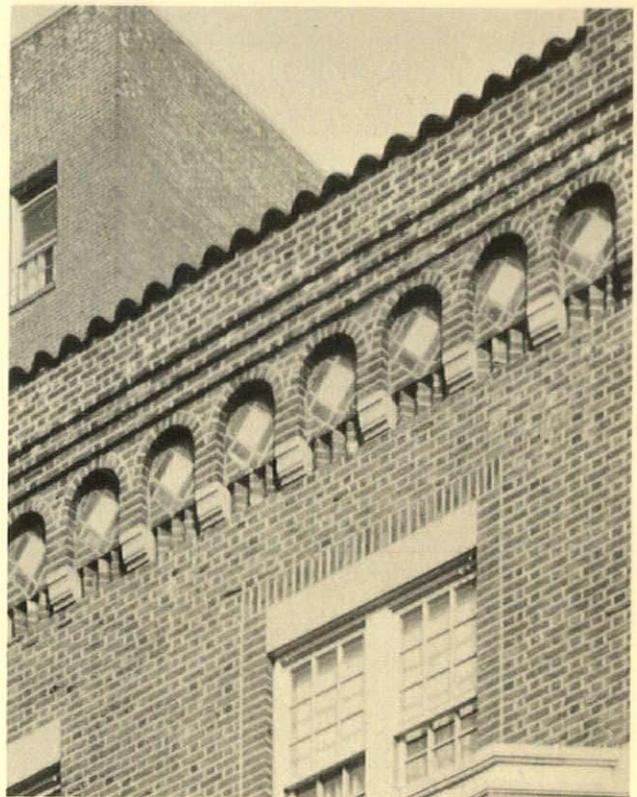
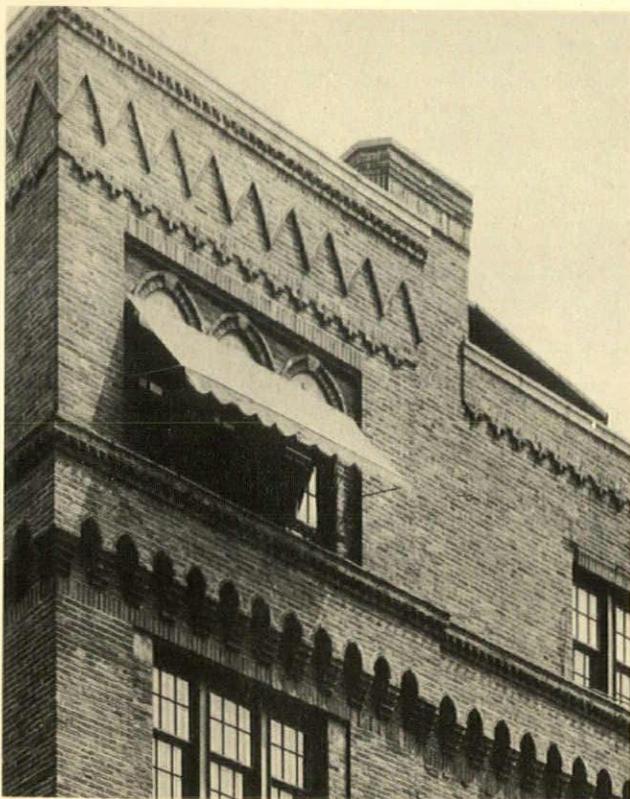
*Sunnyside, N. Y.  
Clarence S. Stein*

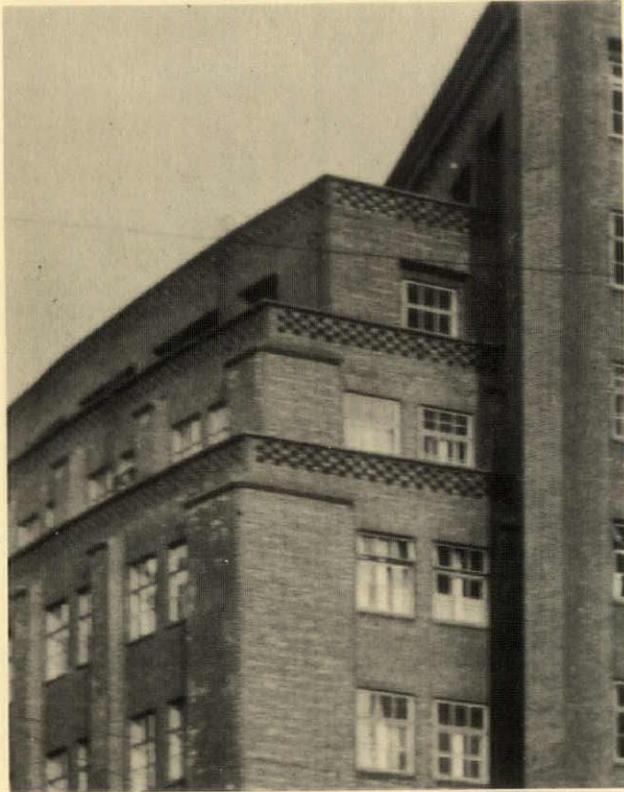


*Old Town Gate near Antwerp*

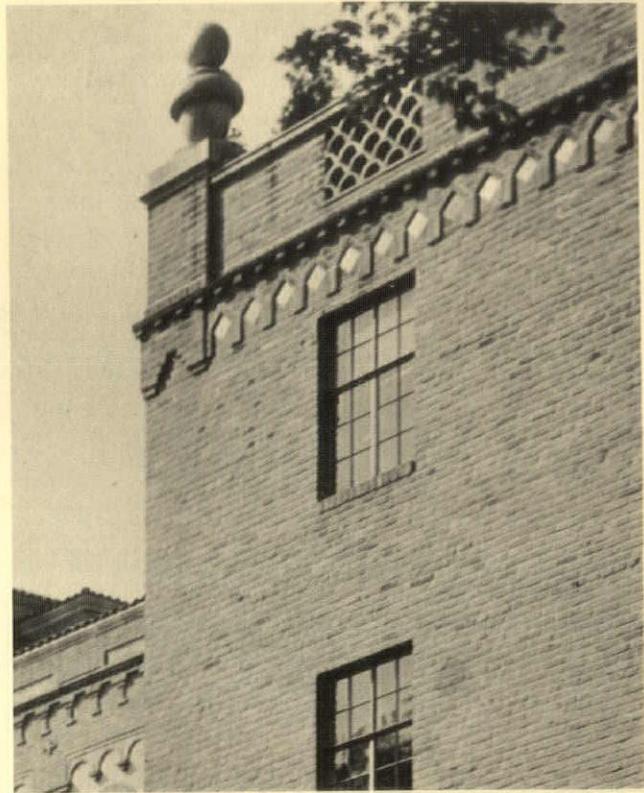
*New York City  
Trenor & Fatio*

*New York City  
M. Levy*





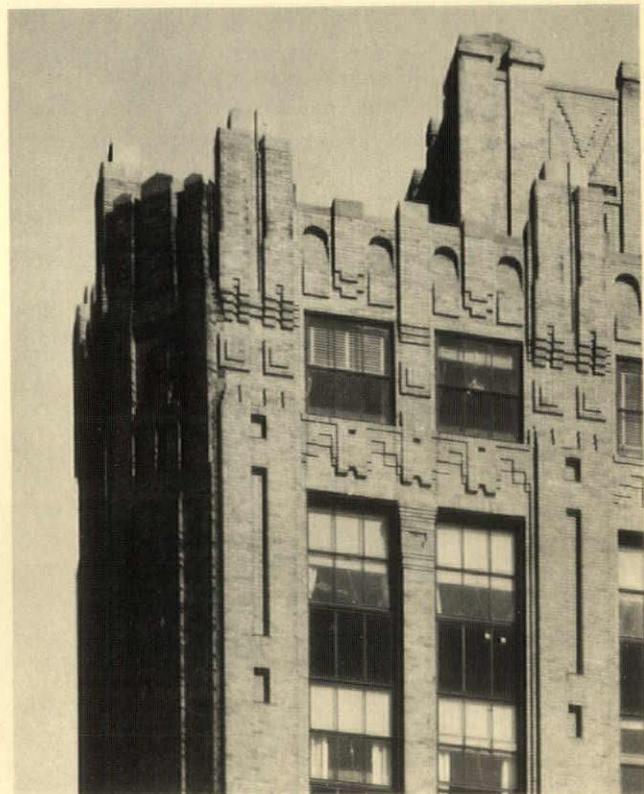
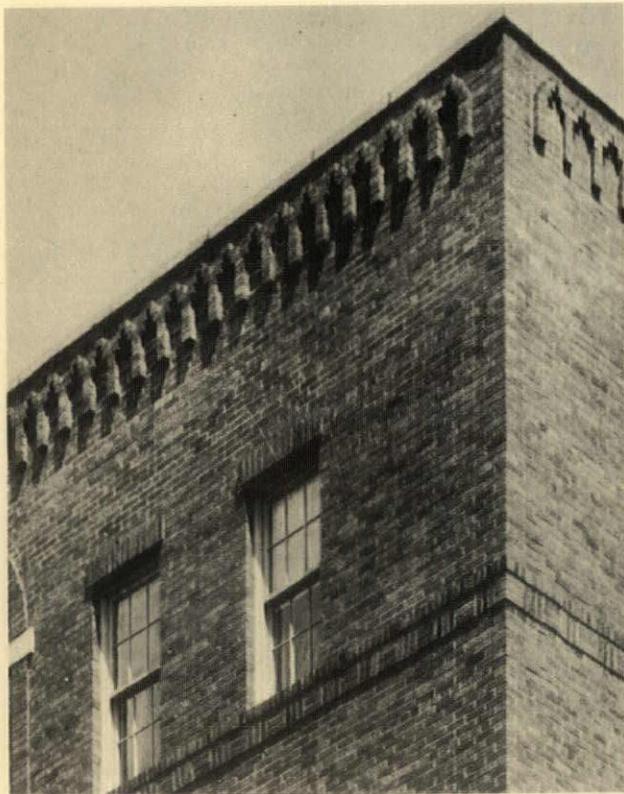
*Hamburg, Germany  
O. Gerson*

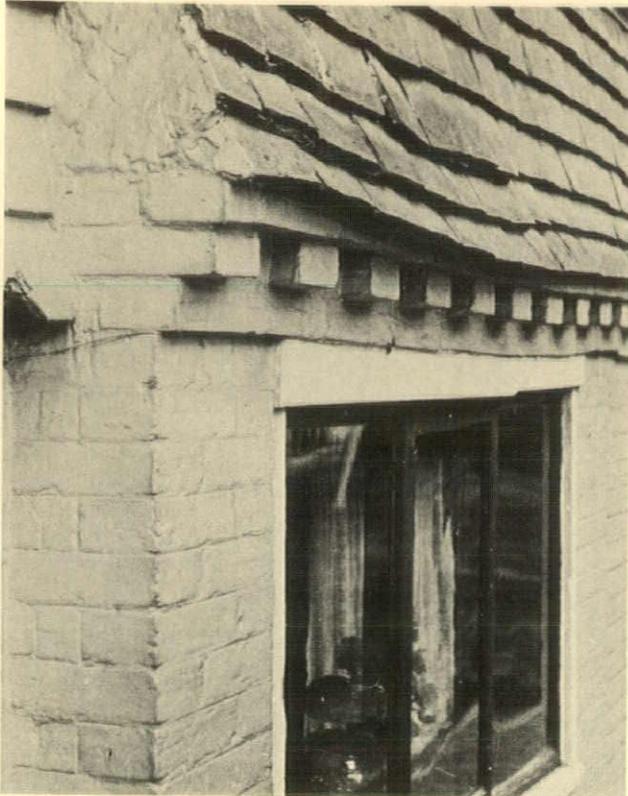


*Great Neck, N. Y.  
LeRoy P. Ward*

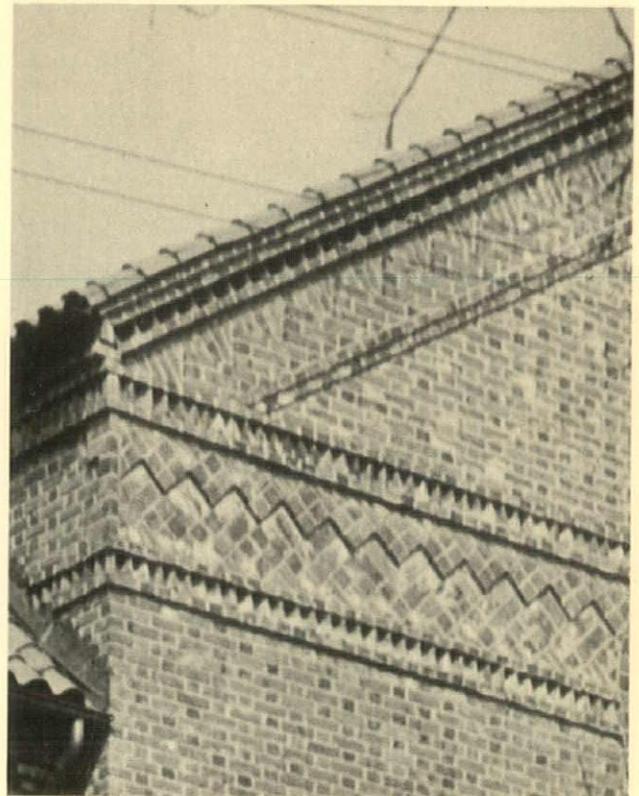
*New York City*

*New York City  
Cross & Cross*





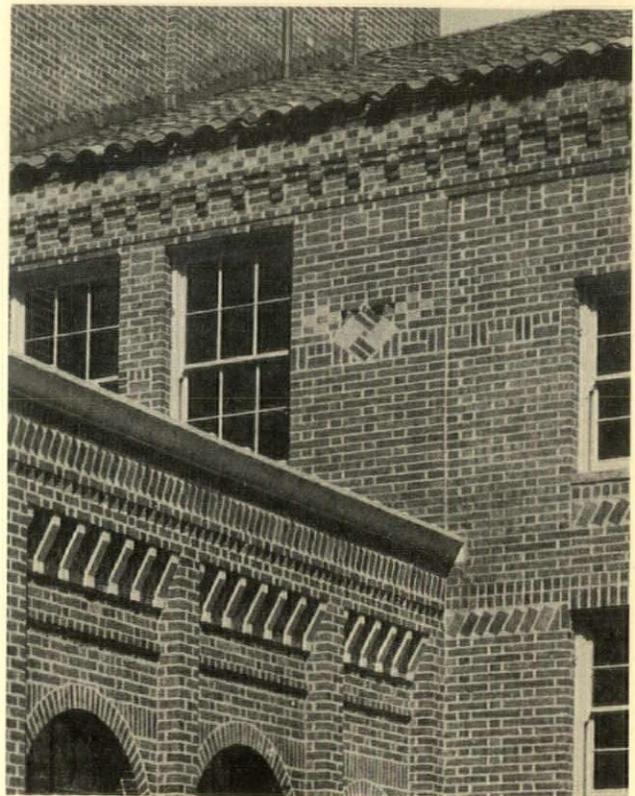
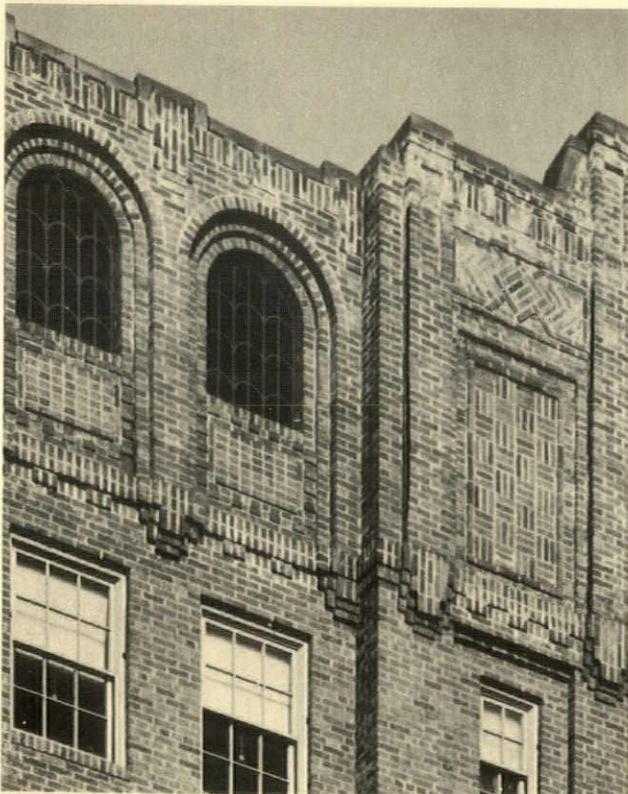
*Cuckfield, England*

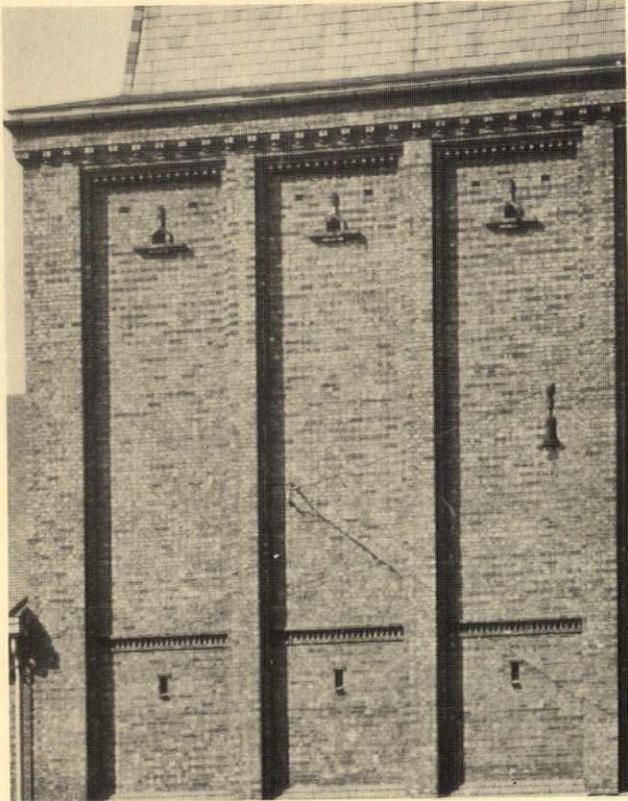


*Newark, N. J.  
Electus D. Litchfield; Pliny Rogers*

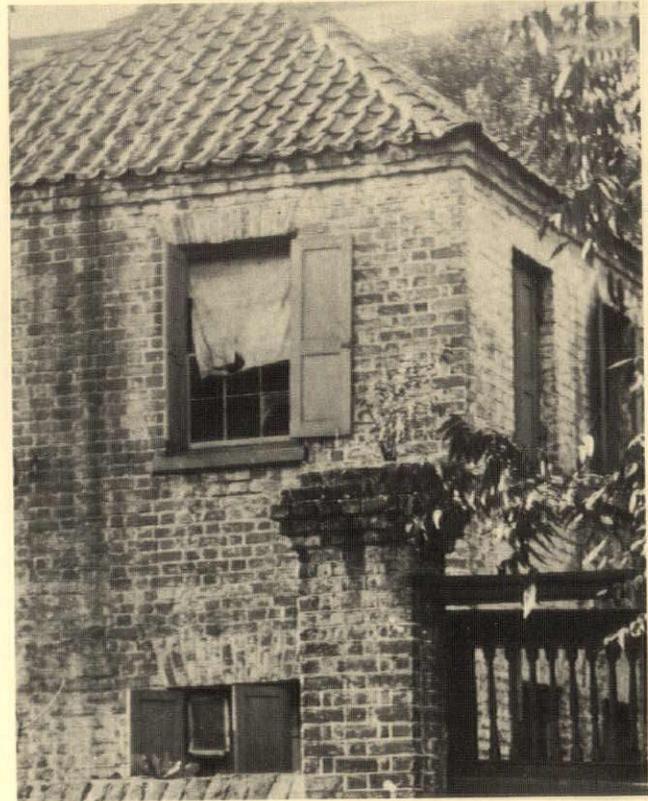
*Sunnyside, N. Y.  
Clarence S. Stein*

*Denver, Colo.  
W. E. & A. A. Fisher*





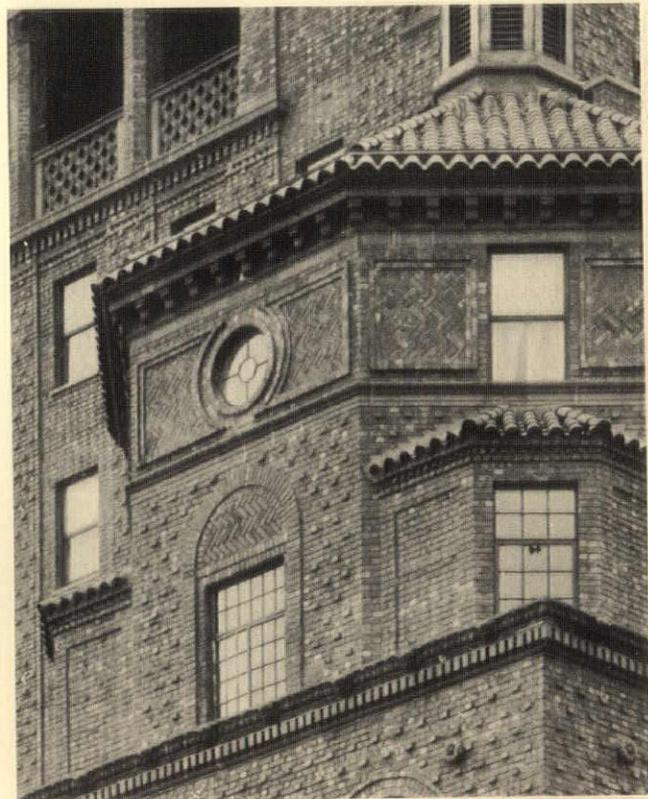
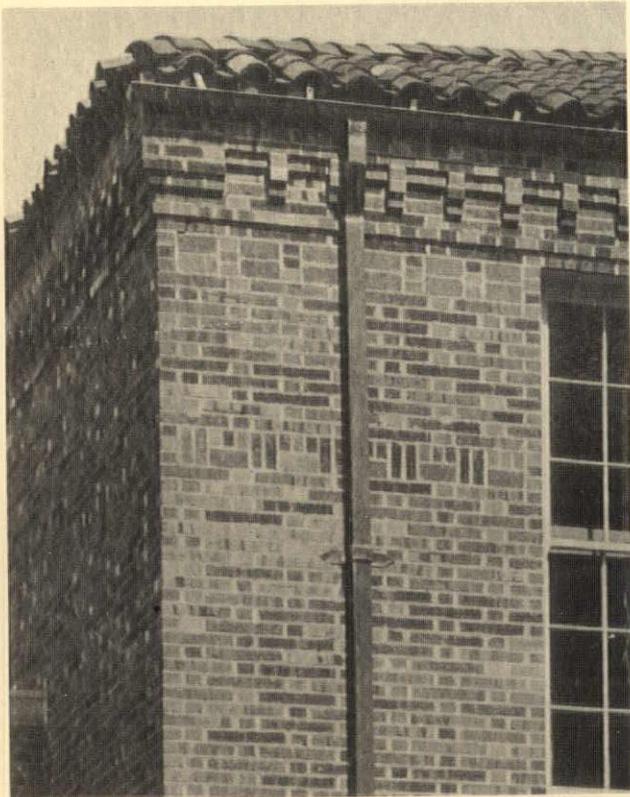
*Oslo, Norway  
Lars Backer*

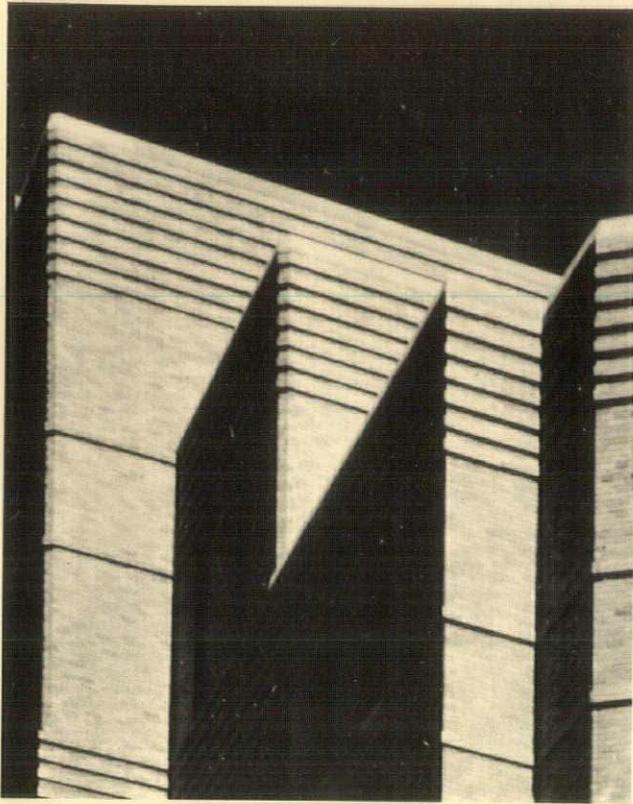


*Old Charleston, S. C.*

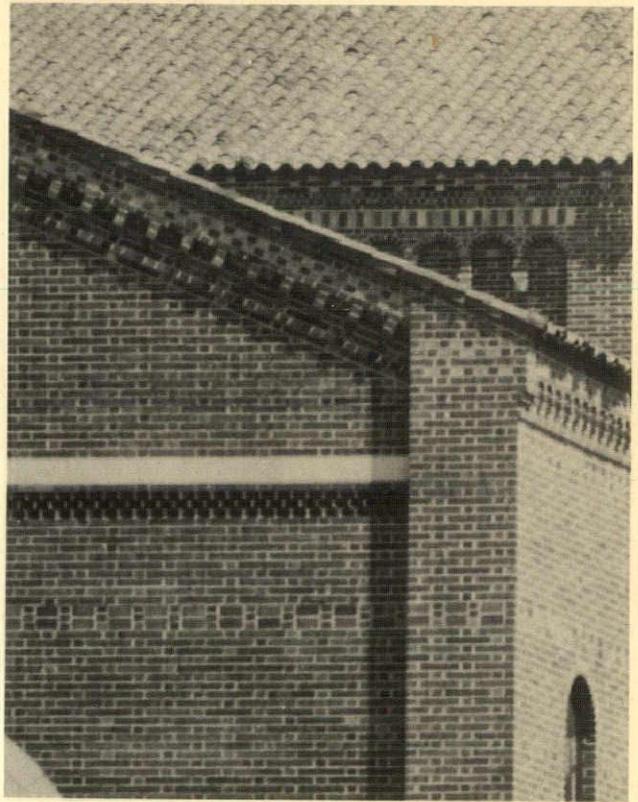
*Denver, Colo.  
W. E. & A. A. Fisher*

*New York City  
Murgatroyd & Ogden*





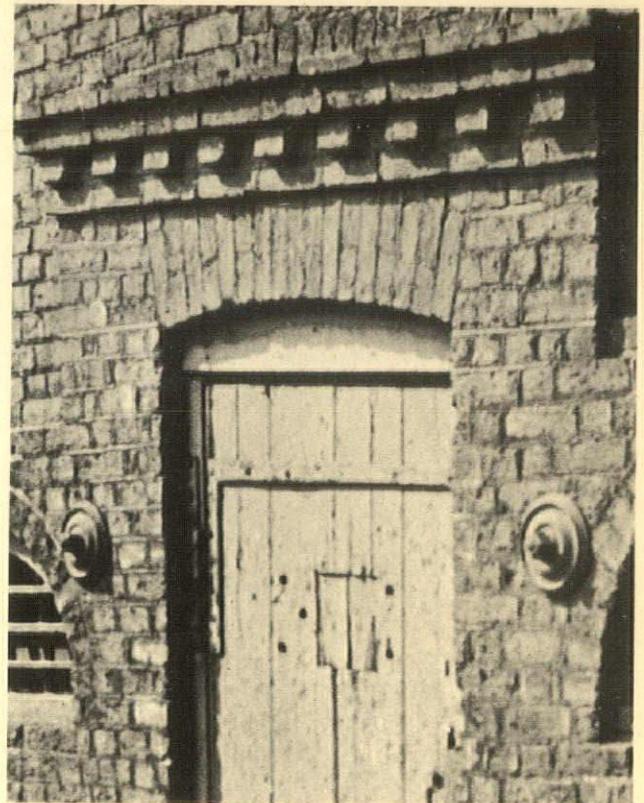
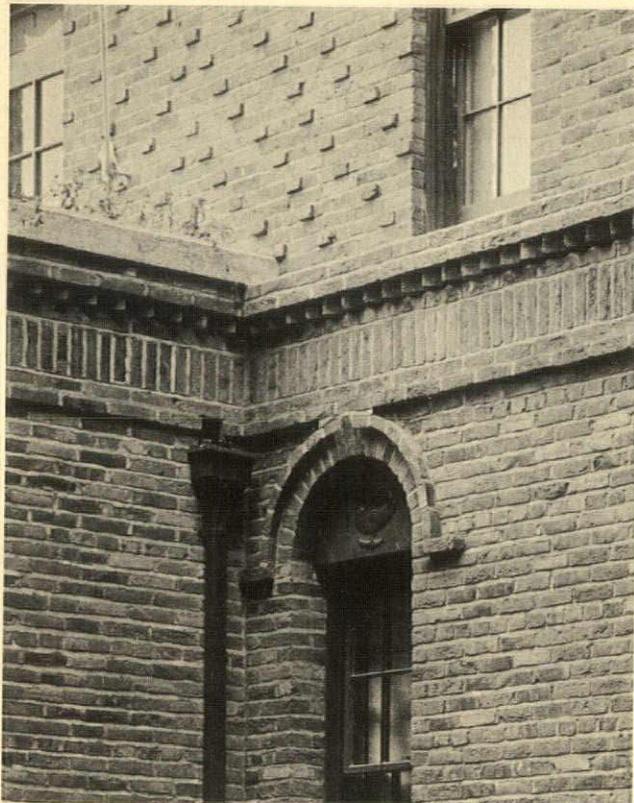
*New York City  
James Gamble Rogers*



*Denver, Colo.  
W. E. & A. A. Fisher*

*New York City  
Treanor & Fatio*

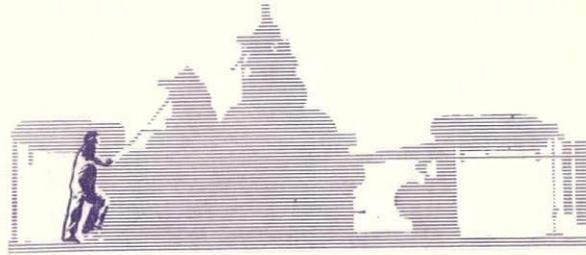
*Hampstead, England*



# Building Products' News

Are you thoroughly familiar with the Revised Regulations Covering Federal Housing Administration Loans up to \$50,000.00? ARCHITECTURE will be glad to send you a copy. You will find it very helpful

USE prepaid card in lower corner so ARCHITECTURE can keep you up to date on new products. Fill in file numbers of the items desired and we will see that your request is complied with.



TO keep its readers posted on the latest news, ARCHITECTURE includes on this page every month a selected list of data and literature describing the varied news of building products.

## CORRUGATED WIRE GLASS

G. 55. Cross-sections, sizes and installation specifications, together with photographs of typical installations, have been gathered into a complete catalog of corrugated wire-glass skylights by the Pennsylvania Wire Glass Company, Philadelphia. They state that CWG Skylights have no bars to rust or corrode; no supplementary frames are used; are practically self-cleaning and, owing to the corrugations, are many times stronger than any flat glass of equal thickness. The catalog is available to any interested party, along with information regarding the company's engineering service department for consultation regarding skylighting and kindred problems.

## SLENDERIZED RADIATORS

G. 56. The Burnham Boiler Corporation's Slenderized Radiators look to be about half the size of regular ones, in the descriptive folder sent us recently, but the makers say that they provide just as much heat because of the smaller water ways and freer circulation of air around them. This makes all their surfaces heating-active, and they certainly are more attractive than the old types which they are designed to replace.

## NEW CONTINUOUS HOT MILL

G. 57. The Youngstown Sheet & Tube Company have issued a booklet which will prove of great interest to all members of the architectural and engineering professions. It is the story of their new hot strip continuous mill which represents one of the largest durable goods projects undertaken in the United States in the past year. Pictures show various steps in manufacture from the raw "slabs" to the strips being put through the six finishing stands.

## GLOBE DRI-LAP 5V CRIMP ROOFING

G. 58. Is the newest development in galvanized roofing. This defeats the action of capillary attraction by the introduction of an exclusive air-lock bead to eliminate any chance of leakage at the laps. The folder issued by the Globe Iron Roofing & Corrugating Co., Cincinnati, illustrates exactly how this is accomplished and also describes some other exclusive advantages incorporated in this product, such as the nail seat, the self-aligning features and the snug-fit edge.

## CAPITOL ROCK WOOL

G. 59. The Insulation Division of the Standard Lime & Stone Company, Baltimore, have prepared a file of this highly insulative material, its chemical analysis, the Bureau of Standards report on its thermal conductivity, letters from users and cross-sections showing methods of application. It also contains prices. This file is known as 37B&D and will be an important acquisition for your library of insulating materials.

## FOR YOUR ROOF

G. 60. Specify Genasco, says the Barber Asphalt Company, of Philadelphia, in their new catalog. The manufacturers present Genasco Roofs for every type of building, commercial,

industrial and public, residential and farm, and offer convincing proof that long, trouble-free life is the outstanding characteristic of Genasco Roofs, as they are waterproofed with Trinidad Lake Asphalt Cement. Forty-eight pages of illustrations present these roofs in varied forms.

## AN ALL-METAL CIRCULAR TELEPHONE BOOTH

G. 61. Is presented by the Sherron Metallic Corporation, 1201 Flushing Avenue, Brooklyn, meeting the needs of architects for a booth which can be installed anywhere in single or multiple units. It is sound-insulated, fireproof, wear-proof, practically indestructible and may be obtained in your own choice of designs and appliqué finishes, permitting of harmonization with any decorative scheme. Other new features in telephone-booth construction are the sliding door, the specially designed automatic light, the centrifugal type fan conce led in the ceiling which changes the air in the booth once every minute after the door is closed, and the adjustable telephone instrument and metal seat. A large photograph of the booth, backed by a full description, including dimensions, will be sent you, along with full-price information.

## STAINLESS PAINT

G. 62. Is the latest Felton-Sibley development. According to the company, master painters, builders and architects proclaim their stainless paint to be the greatest development in the paint industry in twenty-one years, the reasons being that it will not stain during its entire life; it gives greater coverage; it goes on more easily; it will not crack; the colors are highly permanent; it lasts longer. Felton-Sibley & Co., Inc., of Philadelphia, can supply you with all the details.

## Q-BORD

G. 63. Primarily a remodelling and decorating product, Q-Bord answers the present-day need for modernizing those rooms where an economical, yet attractive, interior transformation is necessary. Q-Bord reduces labor, construction time and cost as it can be worked with regular wood-working tools and is easy to apply. The Agasote Millboard Company, of Trenton, will be glad to send you their booklet on Q-Bord and its attractive remodelling uses.

## BERLOY STEEL-FRAME HOUSES

G. 64. This new house, developed by the Berger Mfg. Co., of Canton, Ohio, a subsidiary of Republic Steel, differs from what is popularly known as a "steel house" in that only the pre-fabricated frame is of steel. The exterior may be finished with any building material now in use, permitting wide variety in appearance. They state that steel is used only where steel should be used from an economic and safety viewpoint. The houses have been exhaustively studied and investigated by Federal Housing architects and engineers and the type of construction is eligible for FHA loans in any locality. It is important for you to thoroughly investigate these fire-proof, air-conditioned, steel-construction houses and the makers will supply you with illustra-

tions, descriptions and full information, upon request.

## THE HARBORDATA SHEET NO. 3

G. 65. Presents the general story of Harbord Super Plywood, a new product of the Harbor Plywood Corp., Hoquiam, Wash. It includes physical characteristics, describes the Nevin Process, durability, workability, uses, tests and photographs.

## ELECTRO-COATED COPPER PAPER

G. 66. Is now used as a wall covering and is manufactured by Bert C. Miller, Inc., of New York City. At the Industrial Arts Exhibit, Radio City, the American Brass Company had a most attractive exhibit of the most common uses for copper and brass in the home, public buildings, etc., and one of the most amazing and interesting developments was the copper-coated wall paper, of a warm, deep red, very durable, and washable. Decorators will find in this material an opportunity to create effects most unusual and a product which is easily designed. Bert C. Miller, Inc., will gladly send detailed information about this new product.

## FAB-RIK-O-NA

G. 67. In the No. 400 Series provides a substantial canvas covering for ceiling and side wall and requires no further treatment after hanging. It is finished in plain, soft tones which preserve the texture value of cloth and is washable and sunfast. All the advantages of a painted, canvased wall or ceiling are secured without the expense, time and trouble involved in the application of paint. H. B. Wiggin's Sons Co., Bloomfield, N. J., will send you their sample book upon request.

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**COMFORT COOLER**

G. 68. The most important feature of the new small Comfort Cooler, which has been added to the numerous air-conditioning products of the Trane Line, is its extremely low cost, being only \$70, making it available for small stores, offices, and apartments. Another feature of the new Cooler is the ease with which it may be installed. Full information will be supplied by the Trane Company of La Crosse, Wis.

**ZONOLITE**

G. 69. Is a logical solution to heat insulation problems in new or old buildings. It is a mineral product, absolutely fireproof, and will not rot, decay or deteriorate in any way. Being a dielectric, it will prevent fires from faulty electric wiring. Its thermal conductivity is .28. A folder has been prepared by the Zonolite Corp., Fisher Building, Detroit, which describes this material, gives installation information and specifications.

**"OVER-THE-TOP"**

G. 70. A new catalog of garage doors and door equipment has been issued by the Frantz Manufacturing Company of Sterling, Ill. In it is presented the new overhead garage door which can be lifted with the slightest effort and continues rising automatically until it is stopped by its own brake. There are no tracks on the side jambs, and no cables, weights, pulleys, chains or other parts to get out of order, and each installation is made permanently weather-tight by steel weather strips. Clearance specifications and installation photographs are contained in the catalog.

**THE BABBIN**

G. 71. Thermostatic mixing valve distributed by the Evry-Use Products Co., Inc., 258 Canal Street, New York City, automatically regulates the delivery from copper coils or tubes submerged in the boiler of hot water for domestic or manufacturing uses at any desired evenly controlled temperature. It is of sturdy, all-bronze construction, has only one moving part, with no sleeves or valves to stick and nothing to rust or get out of order. The Babbin will deliver hot water at any desired temperature ranging from 140 to 190 degrees. Temperature adjustments are readily and quickly made. Babbin valves are ready in three sizes, 1, 1½ and 2 inches.

**MUELLER TILE**

G. 72. Faience, Rusta, Mosaics and Flemish Tiles, for exteriors and interiors, are pre-

sented by the Mueller Mosaic Company, Trenton, N. J., in a twenty-page booklet of actual installations. Details, sizes, and various designs are also included to make a very complete reference file on the subject.

**ICE AND FROST**

G. 73. Bulletin No. 504-A, to be published by the Frick Co., Waynesboro, Pa., has been sent us in proof form and will be ready for distribution by the first of July. It will be a complete air-conditioning manual with descriptions and pictures of the units best used in connection with various installation problems. The bulletin is being printed in two colors and is fully illustrated.

**DUPLEX SEATING EQUIPMENT**

G. 74. The Waukegan Foundry Company, Duplex Products Division, have announced a new line of stools, tall and short, which fold up under the ledge of the bar or counter when not in use; chairs which disappear under the table; booth stools which fold against the wall of the booth. These are of all-metal construction and beautifully upholstered and are fastened to the floor or table base, thus being stationary at all times. This new seating equipment seems to be the answer to the problem of many tables and chairs with enough room to move around in crowded restaurants and cocktail rooms.

**AIR-CONDITIONING GRILLES AND REGISTERS**

G. 75. Tuttle & Bailey, Inc., New Britain, Conn., have just issued a new catalog, No. 40, which includes a full line of registers, grilles, volume-control dampers and other devices especially designed for use with air-conditioning systems. Among the notable new products shown in this catalog are the "Flexair" grilles and "Ducturns." The "Flexair" is adjustable at the job to provide a wide range of air deflection. "Ducturns" is a well-engineered device for use in ducts to turn high-velocity air around right-angle elbows.

**ZOURI STORE FRONTS**

G. 76. Catalog No. 22, issued by Zouri, Niles, Mich., includes typical Zouri store fronts, illustrations and details of Zouri rolled sash, bars,

awning and transom bars, recessed awning bars, entrance doors, hinged and pivoted windows, grilles and thresholds, ventilators, showcase doors, bulkheads, cast enrichments, brake and rolled mouldings, and shower-stall doors.

**HOME VENTILATING UNITS**

G. 77. By the Buffalo Forge Co., are presented in a new folder. The manufacturers say the installation of these units in homes insures against cooking odors, steam and smoke, and, as they are made to fit walls of varying thickness, are easily adjusted. A description, with sizes, is included of the new Glass-Panel BREEZO Fan which can be installed in a few minutes in the upper part of a window casing.

**ELECTRICAL MEASURING AND PROTECTIVE APPARATUS**

G. 78. The Roller-Smith Company, 233 Broadway, New York, announces two new publications. The first is Catalog No. 48 covering A.C. and D.C.; panel and switchboard type; 3½", 4", 7½" and 9" round pattern and rectangular, horizontal, edgewise and illuminated dial ammeters, milli-ammeters, voltmeters, milli-voltmeters, pyrometers, single and poly-phase wattmeters, frequency meters, power factor meters and accessories.

**GRANITEX AND SEALOBOND**

G. 79. Sealobond is the new method of preparing old wall and ceiling areas to receive new plaster surfacing and Granitex is the modern plaster for all types of lath and masonry bases. The Lath and Plaster Institute, 305 East 47th Street, New York City, has prepared descriptive material which describes these new products and will send you full information upon request.

**INDIRECT LIGHTING LUMINAIRES**

G. 80. This handbook, by Curtis Lighting, Inc., introduces modern, distinctively styled Luminaires which provide controlled indirect lighting. Architects, designers and engineers will find herein valuable suggestions and information on planning indirect lighting from Ceiling Luminaires, Wall Brackets, Pedestals, and Built-in or Recessed equipment.

ARE YOU THOROUGHLY FAMILIAR WITH REVISED REGULATIONS COVERING F. H. A. LOANS UP TO \$50,000.00? DO YOU WISH A COPY ?

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*Bigelow Carpet in the Persian Room, Plaza Hotel, New York. Architects; Joseph Urban Associates.*



# CARPET COUNSEL

by the Bigelow Weavers

*... as viewed by Mr. Irvin L. Scott*



In the Persian Room at the Plaza Hotel, Joseph Urban Associates created one of New York's most beautiful cocktail rooms. To harmonize with the unusual decorative scheme, special carpeting was required—and Bigelow was called in as Carpet Counsel.

Referring to this project, Mr. Irvin L. Scott of Joseph Urban Associates says:

"Bigelow made up at least a dozen samples of carpets for the Persian Room until we got the pattern and color exactly right. It was splendid service and cooperation in giving us what we

wanted. The carpet was specially designed and, though a rush job, it came through on time."

Our ability to render such service comes from long experience. Leading architects all over the country have found us helpful in solving the multitude of carpeting problems that call for highly specialized knowledge.

We should welcome a chance to discuss any carpeting question with you at any time. And you can count on Bigelow quality to satisfy your clients.

Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York.

# THE BULLETIN - BOARD *Continued*

(Continued from page 6)

These associations, it will be recalled, are intended to serve a re-discounting purpose in the mortgage field, somewhat analogous to that of the Federal Reserve Banks in the financial field.

## BEAUTIFUL BRIDGES

THE seventh annual bridge competition held under the auspices of the American Institute of Steel Construction has been decided, with the following results:

In Class A (bridges costing \$1,000,000 and over), Bourne Bridge over the Cape Cod Canal, at Bourne, Mass., designed by Fay, Spofford & Thorndike, engineers; fabricated by the American Bridge Co.; a Federal Works project.

In Class B (\$250,000 to \$1,000,000), no award this year.

In Class C (costing less than \$250,000), Douglas County Bridge No. 667, near Omaha, Neb., designed by Guy Dorsey, assistant county surveyor of Douglas County, Neb.; fabricated by the Omaha Steel Works.

The jury: Dean Frederick Skene, School of Technology, College of the City of New York; Dean E. R. Bossange, College of Fine Arts, New

York University; Professor George E. Beggs, Department of Civil Engineering, Princeton University; Paul P. Cret, architect; F. E. Schmitt, editor of *Engineering News-Record*.

## NEW YORK UNIVERSITY'S SCHOOL OF ARCHITECTURE

THE Council of New York University recently voted to raise the status of the Department of Architecture to that of an independent school, with the same standing in the University as the professional schools of Medicine, Law, and Liberal Arts. The accomplishments and the prestige attained by the department in the estimation of the council fully justifies giving it this added dignity and importance. Professor Bossange, who for six years has been dean of the College of Fine Arts and who organized the department, will be dean of the new School of Architecture and Allied Arts.

## PERSONAL

The W. W. Beach Company, architects, have closed their office in Chicago, Ill., and opened offices at 3707 West Cambridge Street, Seattle, Wash.

Edward L. Bunts, architect, announces the removal of his offices to the First National Bank Building, Colorado Springs, Colo.

The firm name of E. Leander Higgins, architect, has been changed to E. Leander Higgins & Ambrose Stevens Higgins, architects, and the new address is 514 Congress Street, Portland, Maine.

Whitehouse, Stanton & Church, architects, of Portland, Ore., announce the dissolution of their partnership. Glenn Stanton has opened his own office at 528 Railway Exchange Building, where he will continue the practice of architecture. Morris H. Whitehouse and Walter E. Church will continue to practise architecture at 619 Railway Exchange Building under the firm name of Whitehouse & Church.

Norman Bel Geddes, industrial and stage designer, and George Howe, architect, recently of Howe & Lescaze, have formed a partnership to practise under the name of Norman Bel Geddes, George Howe & Company, Inc., with offices at 128 East 37th Street, New York City, in the quarters formerly occupied by Norman Bel Geddes.

## A Picture of the Building Industry

### NEW BUILDING PERMITS

THE building industry in the United States, as measured by the value of permits issued in May, was only slightly less active than in April. In fact, the estimated cost of contemplated building operations in May, which includes new work, alterations, additions and repairs, was the highest, with the exception of April, since November, 1931.

The total value of permits taken out in May for the 215 cities regularly reporting to Dun & Bradstreet, Inc., was \$49,322,110, compared with \$51,717,570 in April. This was a decrease of 4.6 per cent, whereas the usual change for the period is a decline of about 6.5 per cent. Comparison with May, 1934, however, when permits totalled \$43,825,268, shows a rise of 12.5 per cent. Although not as high as the gains reported in recently preceding months, this marks the fifth consecutive monthly increase over the corresponding period of last year.

### INSURED MORTGAGES

UNDER Titles II and III of the National Housing Act, insured mortgage applications amounting to \$55,182,009 had been received by May 25. Thirty-three per cent of this was for new construction. Moreover, commitments issued to mortgagees to insure mortgages when executed, totaled \$24,834,731, of which about the same proportion was for new construction.

### MODERNIZATION CREDIT GROWS

INCREASE of business in remodelling and rehabilitation under the stimulus of the National Housing Act is shown in the following figures:

Week Ended	Credits	Amount
February 23.....	3,160	\$1,358,829
March 30.....	5,220	2,118,439
April 27.....	7,353	2,968,882
May 25.....	8,718	3,496,004

Incidentally, it should be noted that this Act provided for the insur-

ance by the Federal Housing Administration of certain loans by private institutions up to January 1, 1935. An amendment to the Act now extends this time limit three months.

While the credit provisions terminate on April 1, 1936, the funds advanced prior to that date continue as loans until the due date of the notes, which may be for as long as five years.

THE long-expected expansion of Title I of the National Housing Act, by which the money limit of loans was advanced from \$2,000 to \$50,000, came about on May 28, when the President approved an amendment to the National Housing Act.

Under the amended Act, the regulations governing modernization credit for improvement of individual homes, farm properties, churches, clubs, public buildings and similar properties remain substantially the

(Continued on page 16)

# Pre-planned telephone convenience pays dividends to owner and architect

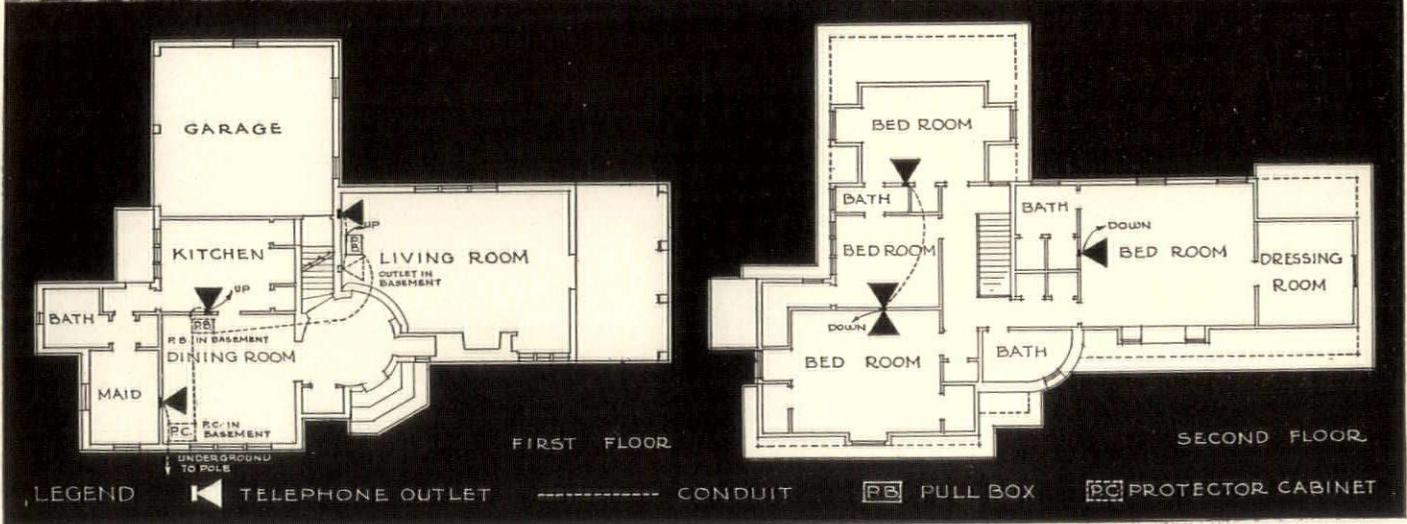
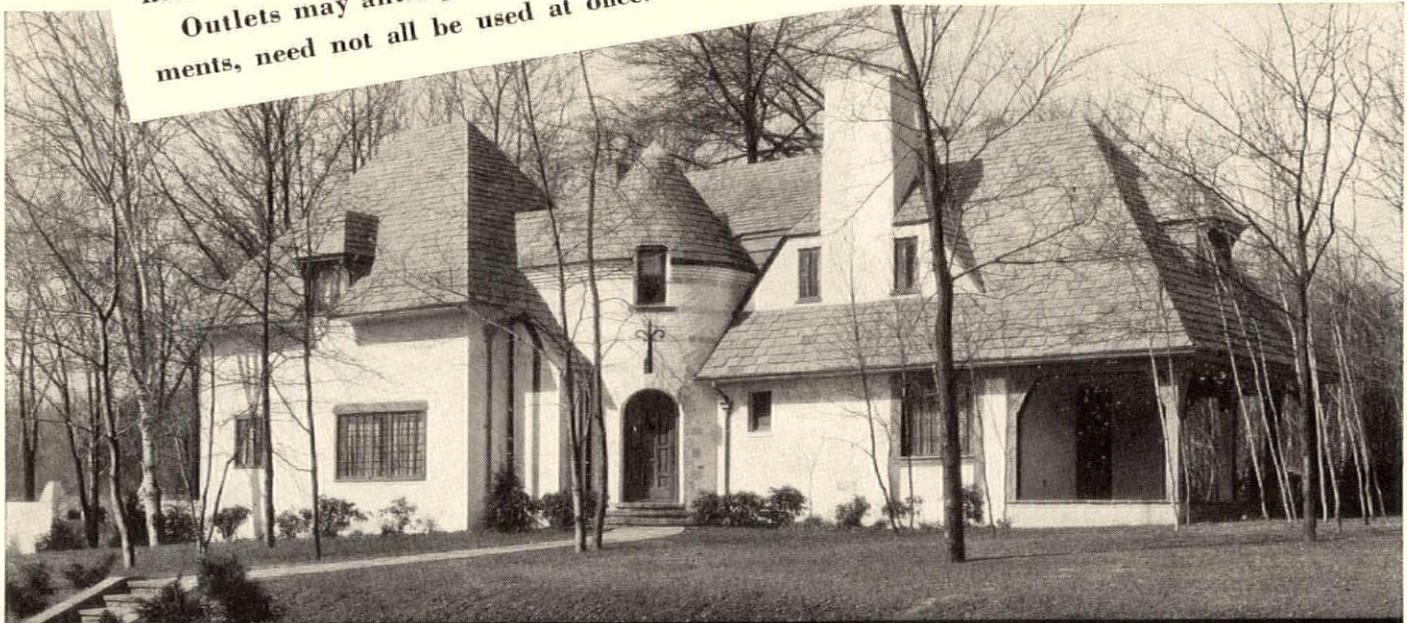
MODERN telephone convenience involves a very modest first investment. And its dividends keep coming back for years.

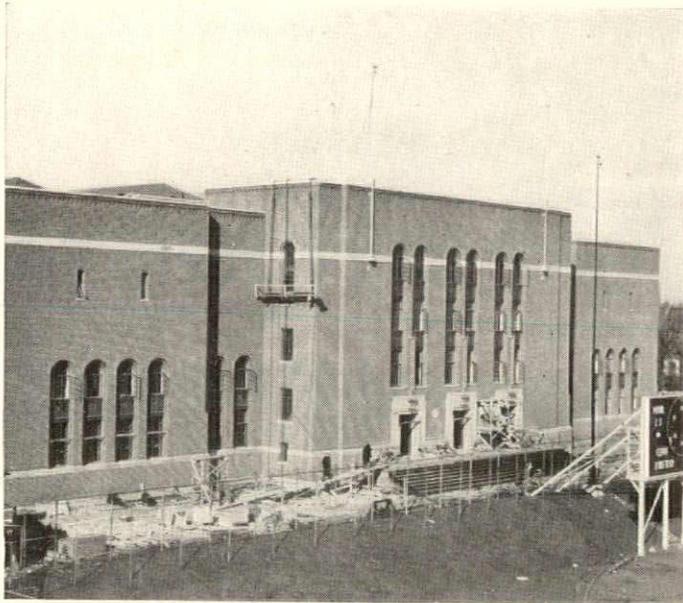
Outlets plotted at strategic points in the blueprints — conduit included in walls and floors during construction — make possible the neatest installation of telephones to save time and steps for family and servants, provide privacy for personal conversations. Every day, every night, they increase the household's respect for your careful planning. Outlets may anticipate future requirements, need not all be used at once. But

they're there, ready. Instruments can easily be moved — without exposing wiring — and with assurance of conduit-protection against certain service interruptions.

The local telephone company is always glad to work with you in developing efficient, economical conduit layouts for new or remodeling projects. No charge, of course. Just call the Business Office and ask for "Architects' and Builders' Service."

Eight outlets, connected by built-in conduit, provide for telephone convenience in the residence of Mr. Harold W. Cheel, 15 Hollis Drive, Hohokus, N. J.  
H. E. Mather, Architect, Ridgewood, N. J.





C. H. Johnston, Archt. Paul Steenberg Const. Co., Genl. Contrs., St. Paul  
Hauenstein & Burmeister, Calking Contractors, St. Paul

## This New University of Minnesota Building Sealed Weather-tight with



The new Indoor Sports Building of the University of Minnesota is a recent addition to the long list of Pecora-protected structures throughout the country.

It is gratifying to know that so many architects today will not permit calking to be omitted from specifications, nor will they permit the substitution of materials that cannot possibly approach the quality standards of Pecora.

For old structures as well as new, and a prime essential in air conditioned buildings, no material is so dependable, so permanent, so sponsored by years of satisfactory performance, as Pecora — for it will not dry out, crack or chip when properly applied.

For further details see Sweet's Catalogue or write direct to us



This New Type, High-Pressure Cartridge Calking Gun (patent applied for) is a great Time and Material Saver. Pecora Calking Compound is packed in Non-Refillable Cartridges of approximately One Quart capacity.

## Pecora Paint Company Inc.

Fourth St. & Glenwood Ave.

PHILADELPHIA

Established 1862 by Smith Bowen

Also Makers of  
SASH PUTTIES  
MORTAR STAINS

SUCTION MASTIC  
for Structural Glass

# POWERS



## Safety Water Mixing Valves

**For Shower Baths**—Powers mixers prevent scalding caused by failure of cold water supply, or by pressure changes due to use of nearby showers, faucets or flush valves. They keep the temperature of the shower where the bather wants it without any "shots" of cold or scalding hot water.

**Group and Gang Showers**—Powers mixing valves are also used for the control of water temperatures of showers in groups of from 2 to 20 showers. They may be used to establish a maximum temperature in the hot water supply so as to protect the entire group from danger of scalding or to place the entire group of showers under the control of an attendant.

**Zone Showers**—Where compulsory bathing is required before entering swimming pools, lane showers are divided into four zones, each controlled by a Powers valve. First zone is maintained at 105° F.; second at 90° F.; third at 75° F.; and fourth at 60° F. Because of its efficiency and its hygienic and sanitary advantages, this type of shower is rapidly increasing in popularity.

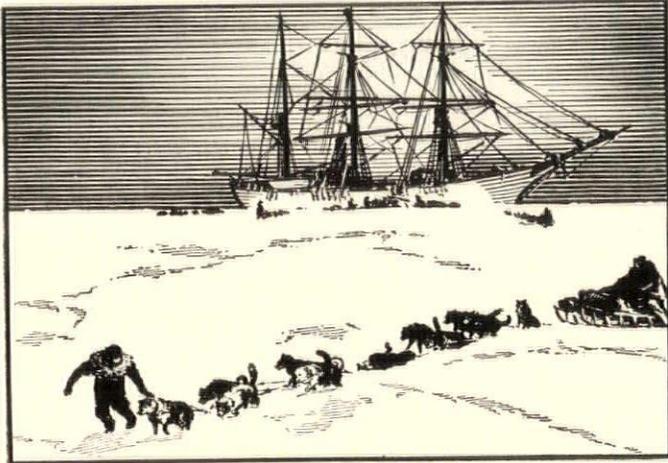
**Hospital Hydrotherapy**—In infant baths, continuous flowing baths, control tables, douche baths, arm and leg baths, colonic irrigation apparatus, photographic baths, and hot water line control, Powers mixing valves are indispensable because of their safety features.

Write for bulletins: The Powers Regulator Co., 2720 Greenview Ave., Chicago or 231 E. 46th St., New York. Offices in 43 Cities—See your phone directory.

*Quick Service*  
whenever required  
by competent engineers in 43 cities

# KOH-I-NOOR

*Again triumphs at the Pole!*



We congratulate Admiral Richard E. Byrd upon the successful culmination of his latest South Pole Expedition.

Surmounting unlooked-for obstacles, perils and discouragements, he and his entire crew of brave men are safely home.

Koh-I-Noor pencils, of course, played an important role in his latest venture as they have in other expeditions of note. His records, maps and drawings will be preserved for posterity, the Admiral being just as careful in his choice of lead pencils as he was in the matter of food, clothing or other equipment.

It is a matter of record that Koh-I-Noor pencils have accompanied every important expedition in the past decade, literally to the ends of the earth. It is also a matter of record that notes made under the trying and extreme conditions of the Poles, remain legible. Andree, the noted Norwegian explorer, used a Koh-I-Noor. It was found 33 years after his death, buried with his diary under Arctic snows and ice, the writing still plain and legible.

Whether it be in an air-conditioned office, in the Arctic's cold or the Equator's heat, Koh-I-Noor serves and serves well. Koh-I-Noor Pencil Company, Inc., 373 Fourth Avenue, New York, N. Y.

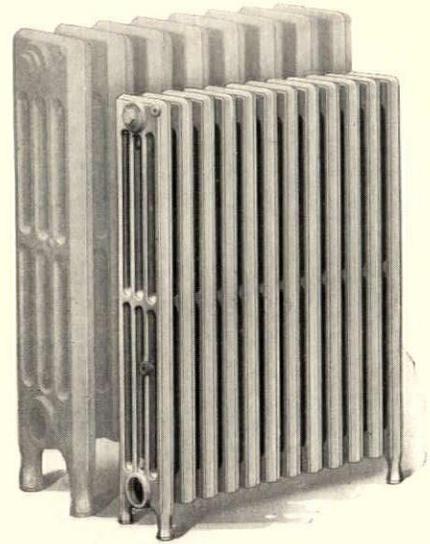
**KOH-I-NOOR**  
*The Perfect Pencil*



**a new cast iron**

*Radiator that is*

**40% smaller  
per foot of  
radiation**



This new Slenderized Burnham takes up 40% less space than the old cast iron. The 3-tube is  $3\frac{3}{4}$ " wide; 4-tube  $4\frac{7}{8}$ "; 5-tube  $5\frac{1}{8}$ ".

**T**AKES up 40% less space in the room. Gives just as much heat. Just as much and more quickly because it has practically 100% actual radiating surface, around which the air has the freest possible circulation.

So narrow are these Burnham Slenderized Radiators that they can be recessed between the studding under windows, and not extend into the room. When so placed, no grilles are needed. The radiator is so good-looking, it acts as its own grille. The design is clean-cut and entirely free from ornamentation, except for a fine beading. Radiators set up off the floor an extra inch, making cleaning under them easier.

Bear in mind that in spite of their many advantages, they cost you no more than other cast iron radiators. Glad to send you measurements, ratings and full particulars.

**Burnham Boiler Corporation**  
**IRVINGTON, NEW YORK**

*Representatives in All Principal Cities of the United States and Canada*

# THE BULLETIN-BOARD *Continued*

(Continued from page 12)

same—with a maximum limit of \$2,000. The new \$50,000 maximum applies to a special class of modernization credit to be extended for additions, alterations, repairs and improvement for "real property improved by or to be converted into apartment or multiple-family houses, hotels, office, business or other commercial buildings, hospitals, orphanages, colleges, schools, or manufacturing or industrial plants."

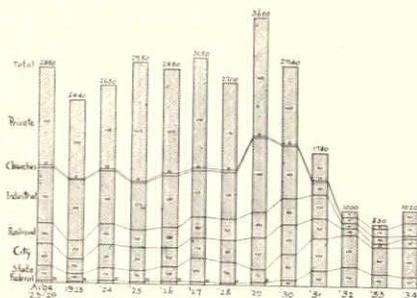
The money comes, as before, from private lending institutions, and the determination of the credit risk involved is left largely to the discretion of the institution advancing the funds. Details of the procedure and requirements may be had from any private lending institution.

## STEEL PRODUCTION

THE American Institute of Steel Construction announces that March bookings and shipments of fabricated structural steel picked up markedly, but the recovery was not sufficient to offset the losses sustained during January and February. The announcement is based on reports received by the Institute from shops representing 79 per cent

of the total industry. Average bookings for the first quarter this year totalled approximately 10 per cent less than average monthly bookings last year, although the bookings of March this year alone were 20 per cent larger than the monthly average of last year.

WHAT has been happening to steel construction during the years 1923 to 1934, inclusive, is shown graphically in the accompanying chart. While the low point of



production was reached in 1933, the low point of unit price came during the years 1932 and 1933. "Private work," as recorded in these charts, includes apartment houses, office buildings, and similar buildings of a commercial or residential nature.

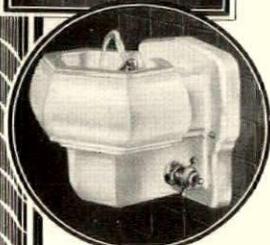
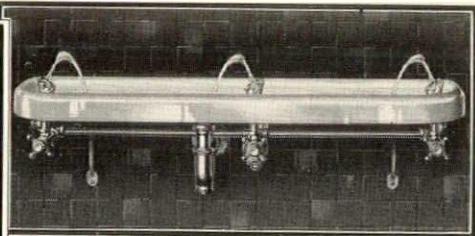
## RESIDENTIAL BUILDING

NOT since the closing months of 1931, according to F. W. Dodge Corporation reports, have residential building contracts reached the total recorded in April, 1935—\$42,280,800. This is a gain of ten million dollars over the preceding month, and brings the total for the first four months of this year thirty-three million dollars over the same period last year. Private construction, as distinguished from public work, made in April the best showing in more than three years.

## WISCONSIN ENCOURAGES BUILDING

A BILL recently signed by Governor Philip LaFollette of Wisconsin provides that properties modernized and repaired during the next three years will be exempt from increases in tax assessment. In addition, the bill provides that all homes built within the next three years shall be exempt from taxation for a three-year period. Since only the lot will be subject to taxation, property-owners will be encouraged to improve their properties.

CHOOSE ANY STYLE - BUT  
CHOOSE A HALSEY TAYLOR



• You may require a simple wall fountain, or a three-part battery type, or a modern pedestal . . . but no matter which style you choose, be sure to specify Halsey Taylor. Only in Halsey Taylor Drinking Fountains will you get the superior advantages of patented two-stream projector (which keeps drinking stream uniformly safe to drink from) and the practical automatic stream control (which provides uniform drinking mound regardless of pressure variations). Have you our latest catalog?

**The Halsey W. Taylor Co.**

Warren, Ohio

SPECIFY

*Halsey Taylor*  
DRINKING FOUNTAINS

## The Smaller House of Today

By GORDON ALLEN, F. R. I. B. A.

Author of "The Cheap Cottage and Small House"

SIXTY-FOUR photographs; 153 line drawings of exteriors, interiors, plans, perspectives, details, construction diagrams, drainage and heating systems, accessories, 2 plates in color. 179 pages, 6 by 9 inches.  
\$3.75

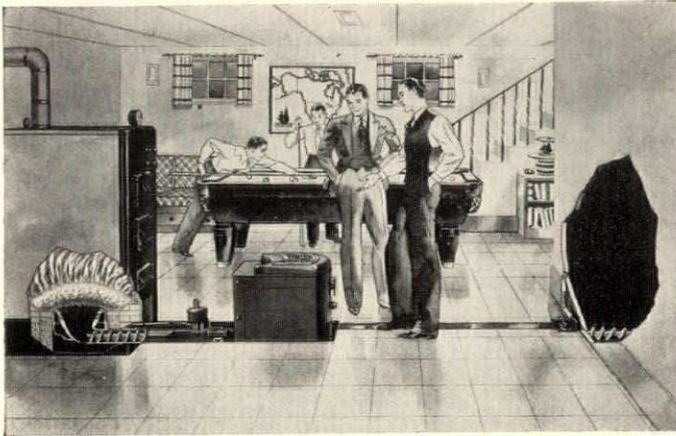
A review of the most recent types of English house as designed by distinguished architects of the present day.

CHARLES SCRIBNER'S SONS

597 FIFTH AVENUE, NEW YORK

ARCHITECTURE and ARCHITECTURAL BOOKS

# AUTOMATIC COAL FIRING



Cut-away illustration of Ring-Drive Iron Fireman which feeds direct from bin to fire. Bin and Bunker feed models, as well as Hopper models, available in all sizes.

## The HEATING of TODAY and TOMORROW

THERE is now a definite swing to coal firing. But it is not a swing *back* to the old kind of coal firing—it is a swing *forward* to the new type of automatic self-regulating coal firing pioneered and developed by Iron Fireman.

Comparative fuel cost figures shown here explain why Iron Fireman fired coal is the preferred fuel. These figures represent the average costs for these 6 fuels in 40 of America's larger cities. They show that Iron Fireman costs 29.8% less than hand-fired coal; 46% less than crude oil; 65% less than diesel oil; 80% less than gas at industrial rates, and 85% less than gas at domestic rates. These figures are general averages but they square with actual fuel cost savings which Iron Fireman installations have achieved in thousands of cases, and it is easy to obtain actual comparative fuel cost figures for any locality—any Iron Fireman sales office will help you compile them. Get these figures and estimate how much your client's savings will amount to during the life of his building. The total saving is astonishing!

There are other points of superiority in Iron Fireman heating, however, which are fully as important as the remarkable economy. Combustion is so nearly perfect that there is no smoke. Temperature is automatically regulated. Only a minimum of labor is required. The boiler room can be kept just as clean as with any other fuel—the stack and outdoor even cleaner. Installations can be made to feed direct from the coal bunkers. You will want all the new data on Iron Fireman automatic coal firing.

*\* Comparative Fuel Costs*

Type of Fuel	Cost per 100,000 b.t.u.	Iron Fireman Saving
Iron Fireman Coal.....	0165c	
Hand-Fired Coal.....	0235c	29.8%
Crude Oil (Industrial)...	0307c	46 %
Diesel Oil (Domestic)...	0480c	65 %
Industrial Gas.....	0905c	80 %
Domestic Gas.....	1178c	85 %

\*Figures are average cost in 40 leading American cities for amount of fuel required to furnish one Therm (100,000 British thermal units).

# IRON FIREMAN



The machine that made coal an automatic fuel  
 Don Graf Data Sheets and other descriptive literature covering Iron Fireman models will be furnished on request. Address Iron Fireman at 3051 W. 106th St. Cleveland, Ohio.  
 IRON FIREMAN MANUFACTURING COMPANY, Cleveland, Ohio; Portland, Oregon; Toronto, Canada.

## To the PROFESSIONAL MAN

Who is  
 Going on  
 40



## and Hasn't Yet Had a Break

**B**ATTLING Levinsky was once matched to fight in the Garden. Soon after the gong it was apparent that something was wrong with him. He was slow. His footwork was bad. During rounds he discovered that his shoes were twisted. He had the wrong shoe on the right foot. Quickly the trainer made the switch and the Battler promptly nailed his man.

### "Castell" is the Right Tool

The reason you haven't yet had a "break" may be due to something equally small — perhaps you do not use the right tool. In your craft the famous A. W. Faber "Castell" is the right tool. With it your native ability gets full expression. Because it is so amazingly smooth and easy to work with, it inspires you to do your best work. It gives distinction to every sketch, improves every drawing, rendering or elevation. The 18 degrees of hardness give you subtle gradations of tone you never before obtained from a drawing pencil.

Yes, "Castell" costs a little more. But its marked superiority can not be measured by a few pennies. Let "Castell" help you do better work and the "breaks" will come as a matter of course.



### "CASTELL" PARARED

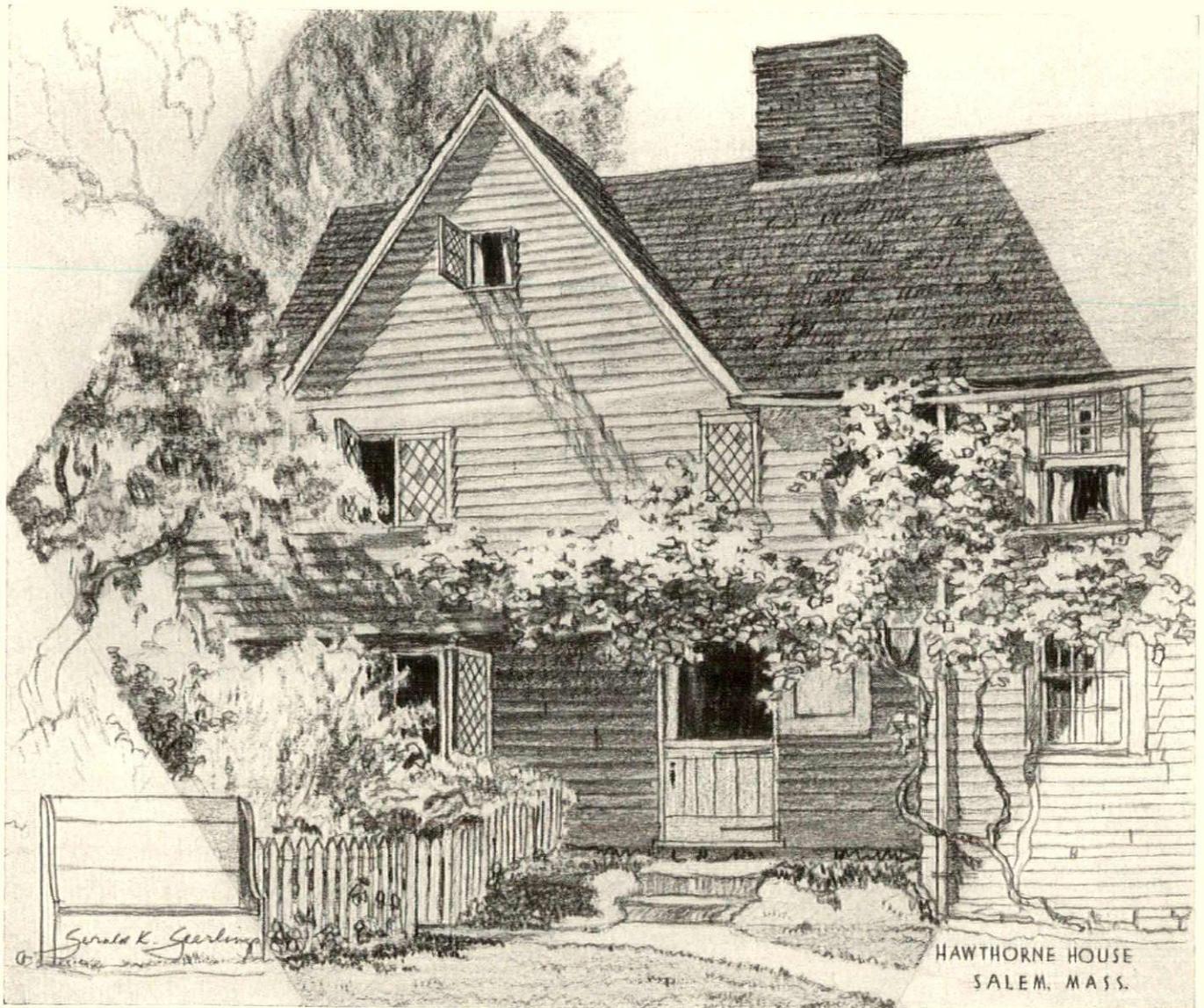
No eraser gives you greater efficiency in your daily drawing board work. Oblong, with a double bevel, made of the choicest rubber and refined by many processes—to give you an eraser that does its job thoroughly and quickly. Specify the A. W. Faber "Castell" Parared.

# Castell

DRAWING PENCILS

Made in Bavaria in 18 Degrees

A. W. FABER, NEWARK, N. J.



## IRRESISTIBLE FAMILIARITY

“There is something familiar about the Hawthorne House at Salem, Mass., adjoining the one of Seven Gables fame. Even though it be one’s first visit, the weathered siding, the leaded casements, the overhang with its ‘drops,’ the hospitable grape vine and apple tree, create the illusion that they are old acquaintances. It is a difficult subject to resist drawing—if the temptation gets out of control, it is good luck to have a Microtomic Van Dyke Pencil handy, for it too has a ‘familiar feel,’ even though it be on first acquaintance. The weathered siding and all the foliage can easily and quickly be rendered with the flat side of the lead, defined a bit here and there with the point. Using the lead in this manner automatically keeps the point sharp for delineating the muntins, shingles, vine leaves and fence. The original drawing was done exactly this size on smooth illustration board, entirely with a B Microtomic Van Dyke Pencil. The corners were purposely left for you to complete—do so with a Microtomic and improve the drawing, as well as increase your appreciation of this high quality instrument.”—GERALD K. GEERLINGS.

◆

FREE SAMPLES of any two degrees of the Microtomic Van Dyke Pencil are yours for the asking. Write to the Eberhard Faber Pencil Co., 37 Greenpoint Avenue, Brooklyn, N. Y. Made by the New Eberhard Faber Chemical Process, in 18 consistently accurate degrees—7B softest to 9H hardest. To use a Microtomic is to realize it is a high quality instrument.

◆

MICROTOMIC VAN DYKE  
EBERHARD FABER

When renderings lack a sense of solidity it is usually because the walls seem built of paper. One means of overcoming this defect is to assume there is raking sunlight (which will elongate shadows), and to add texture, instead of leaving large areas of white paper. Also, the thoughtful use of shade and shadow will give necessary depth to foliage.



# LEST YOU FORGET

★ ★ ★ ★ ★

## "MODERNIZE MAIN STREET" Competition

Sponsored by  
**LIBBEY • OWENS • FORD  
GLASS COMPANY**

**\$11,000** in Cash Prizes

**52 PRIZES—\$11,000 TOTAL**

**4 FIRST PRIZES—(one in each classification)—\$1,000 each—\$4,000**  
**4 SECOND PRIZES—(one in each classification)—\$750 each—\$3,000**  
**4 THIRD PRIZES—(one in each classification)—\$500 each—\$2,000**

In addition, there will be 40 Honorable Mentions of \$50 each. These will be awarded for meritorious designs, the number of awards in each class depending on the number of worthy designs in each class as determined by the Jury.

(Competition closes 5 P. M. August 12, 1935)

● On June 15, the Program for the "Modernize Main Street" Competition was distributed to architects throughout the country. This Competition, sponsored by the Libbey-Owens-Ford Glass Company and conducted by the Architectural Record, with Kenneth K. Stowell, A. I. A., as Professional Advisor, is in reality four simultaneous competitions, each calling for the modernization of a particular type of shop or store—(1) A Food Store; (2) A Drug Store; (3) An

Apparel Shop; (4) An Automotive Sales and Service Station. A photograph of each shop to be modernized, together with all necessary data, is published in the Program. If you have mislaid your copy of the Program or if, for any reason, you failed to receive one, the entry blank below will bring you the Program, the printed title to be pasted on each design and all necessary data and instructions. The competition closes August 12; the Jury meets August 26, 1935.



## USE THIS ENTRY BLANK

KENNETH K. STOWELL, A. I. A., Professional Advisor,  
"Modernize Main Street" Competition  
The Architectural Record, 119 West 40th Street, New York, N. Y.

Gentlemen: I desire to enter the "Modernize Main Street" Competition sponsored by the Libbey-Owens-Ford Glass Company. Please send me the Program of the Competition, the title-paster and all necessary data and information.

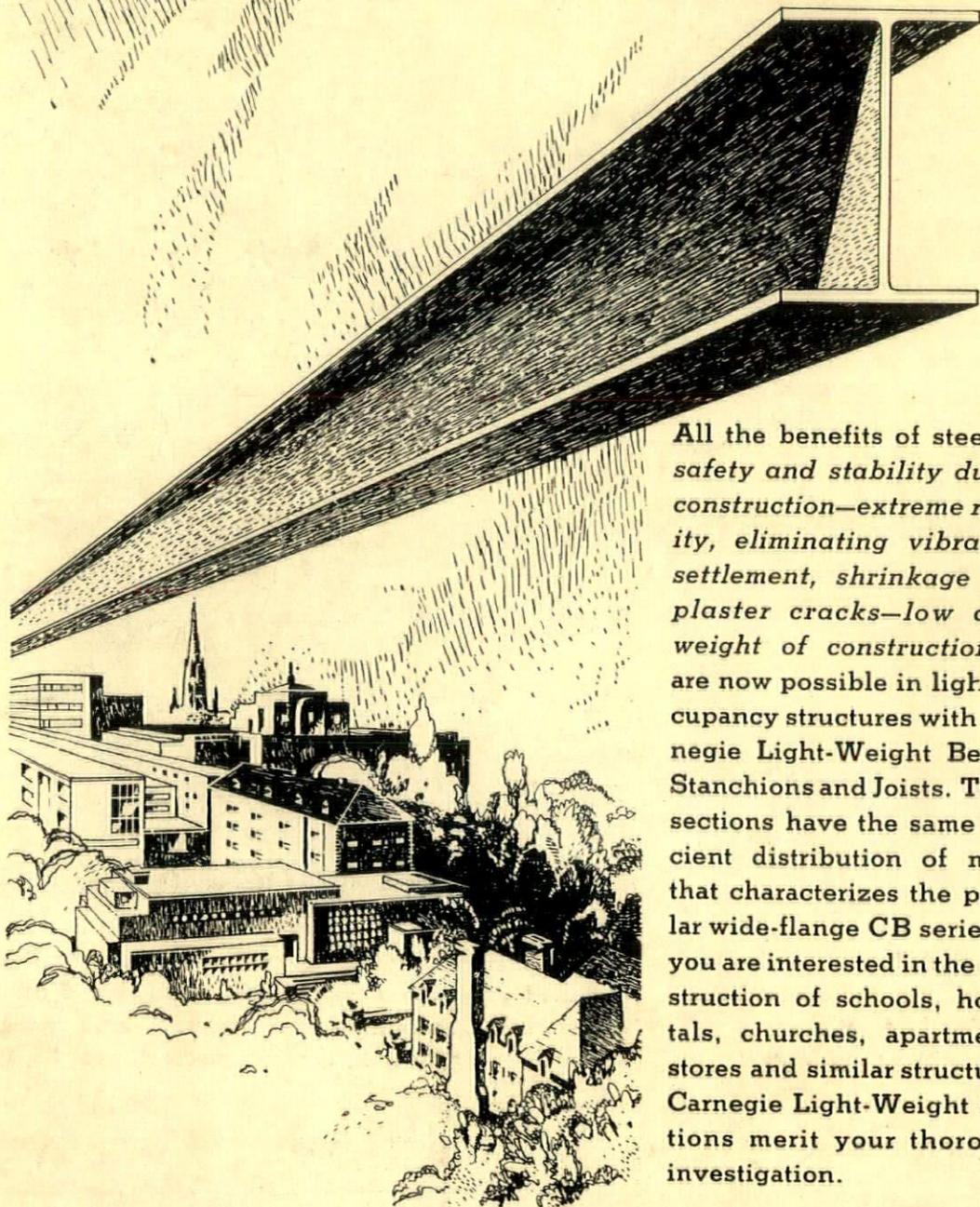
Name \_\_\_\_\_ (Print)

Profession or occupation \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

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All the benefits of steel . . . *safety and stability during construction—extreme rigidity, eliminating vibration, settlement, shrinkage and plaster cracks—low dead weight of construction . . .* are now possible in light occupancy structures with Carnegie Light-Weight Beams, Stanchions and Joists. These sections have the same efficient distribution of metal that characterizes the popular wide-flange CB series. If you are interested in the construction of schools, hospitals, churches, apartments, stores and similar structures, Carnegie Light-Weight Sections merit your thorough investigation.



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