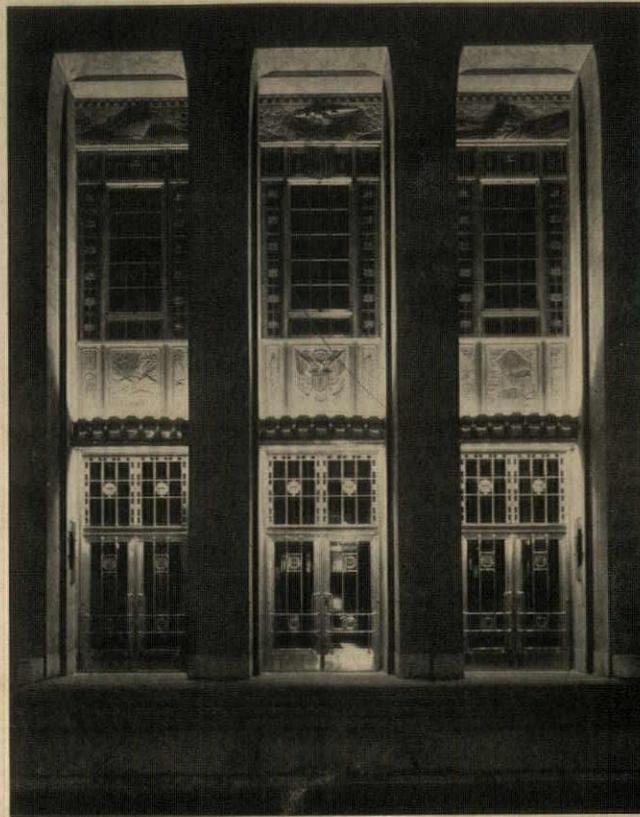


# ARCHITECTURE

MARCH, 1935



## Rebuilding New York's Apartments

CASE HISTORIES IN MODERNIZATION

THE CHARLOTTE (N. C.) COUNTRY CLUB—AYMAR EMBURY II

## Gate and Lodge, Acadia National Park

GROSVENOR ATTERBURY, JOHN TOMPKINS

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THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXXI, NO. 3

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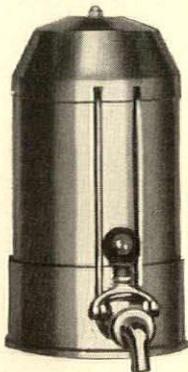
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● PERSIAN ROOM AND BAR, HOTEL PLAZA, NEW YORK. Joseph Urban Associates, Scott and Teegen, Architects; Brunswick built fixtures throughout. See the detailed description of this distinguished taproom in July Architectural Forum, Pages 45, 46, 47, and 48.

● JOSEPH URBAN ROOM, CONGRESS HOTEL, CHICAGO. Scott and Teegen, Architects; fixtures by Brunswick. Elliptical shaped bar, approximately 16' x 11'. Indirect lighting under bar counter top. Refer to May Architecture for character of Joseph Urban's works.



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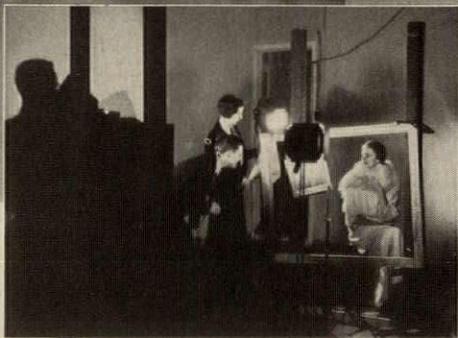
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## JOHN STEWARDSON MEMORIAL SCHOLARSHIP

A COMPETITION is announced for the John Stewardson Memorial Scholarship in architecture with a value of \$1000, the holder of which is to pursue the study of architecture in this country or abroad as determined by the Managing Committee and under its direction.

Only persons who shall have studied or practised architecture in the State of Pennsylvania for the period of at least one year immediately preceding the scholarship award are eligible to compete for the scholarship, and candidates must be not less than twenty-two or over thirty years of age on March 29, 1935. Also they must have completed four years of office experience and no college; three years' office experience with one year college; two years' office experience with two years' college; one year office experience with three years' college; four years of college and no office experience; the college being understood to be an approved school of architecture.

Candidates who have spent the usual or customary vacation period outside the State shall not be excluded, provided, however, that such vacation is taken after the applicant has actually commenced the study or practice of architecture in the State of Pennsylvania.

The competition will be restricted to seven competitors chosen by the Managing Committee.

Applicants are required to forward to the committee, not later than March 15, 1935, the information called for in the registration blank to be had upon application to the Secretary, Edmund R. Purves, The Architects Building, 17th and Sansom Streets, Philadelphia. Those whose applications show that they have had the necessary preparation and other qualifications to undertake the qualifying tests will be so notified by the committee on or before March 28, 1935, with full particulars as to a qualifying test and the competition itself.

## BETTER HOUSING EXPOSITION

THE Greater New York Better Housing, Home, and Building Modernization Exposition, to be held in New York City during the week of March 25, is being spon-



sored by the New York City Better Housing Committee and the Federal Housing Administration as a major activity of its Better Housing Program. It is planned to make this exposition not only an opportunity for the advantageous display of everything that enters into construction, but also a clearing house for advice and co-operation on and with every type of professional service that enters into it.

## BOSTON SOCIETY OF ARCHITECTS' PRIZES

W. W. BREWSTER, JR., of Boston, Harvard, 1929, now a first-year student at the School of Architecture at Harvard, has been awarded the Boston Society of Architects' prize. The prize is awarded annually, and is available to advanced students in Harvard, in Massachusetts Tech, and the Boston Architectural Club.

## AIR-CONDITIONING SCHOOL

THE General Electric Company has announced that it is sponsoring a training course for sales engineers from General Electric dealers' organizations throughout the country.

It was planned to enroll three hundred students in the school, which opened January 14 last. Among the instructors and guest speakers will be Owen D. Young, Dr. W. R. Whitney, R. C. Muir, Bruce Barton, W. R. Burrows, T. K. Quinn, Ward Canaday of the Federal Housing Administration, and many others. The course is being given at the General Electric Air Conditioning Institute, Schenectady.

## INTERNATIONAL HOUSING CONGRESS

THE International Housing Association, with headquarters at Frankford-on-Main, is holding an International Congress this year in Prague during the week of June 23 to 30. It will deal with questions of particular importance regarding housing, particularly on the topics of slum clearance, installations of small

dwellings, and measures to house the unemployed and short-time workers.

In connection with this congress there will be an international exhibition of plans covering slum clearance in twenty European and American cities. Housing experts, architects, and others who attend will find in a study tour an opportunity of seeing the progress of slum clearance in Prague, Brünn, Pressburg, and in the new industrial town of Zlin.

A detailed program can be had upon application to Henri Sellier, 32 Quai des Célestins, Paris, III, France.

## PRINCETON PRIZES IN ARCHITECTURE

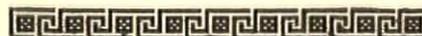
THE School of Architecture of Princeton University announced for the scholastic year 1935-1936 two competitive prizes, to permit men of unusual ability who desire to complete their professional training, to profit by the opportunities offered by the School of Architecture, the Department of Art and Archaeology, and the Graduate School of Princeton University.

The prize men will be exempt from charges for tuition, and will receive five hundred dollars (\$500) each, in quarterly payments during their term of residence. Although not enrolled as undergraduate or graduate students, the prize men will be eligible to reside in the Graduate College.

The awards will be made after a most careful consideration of the personal record of the candidates, followed by a competition in architectural design among the candidates who have been accepted.

Candidates for these prizes shall be unmarried male citizens, not less than twenty-one nor more than twenty-seven years of age on September 1, 1935, who have been employed as draftsmen in architects' offices for not less than three years, or who have otherwise demonstrated their experience and ability in architectural design. On or before April 15, 1935, candidates shall file with the Director of the School of Architecture formal applications and three letters of reference as to character, education, personal fitness, and artistic ability. Experience in design in Ateliers of the Beaux-Arts Society or of architectural schools will be considered in determining the candidates' eligibility. With these

(Continued on page 14)





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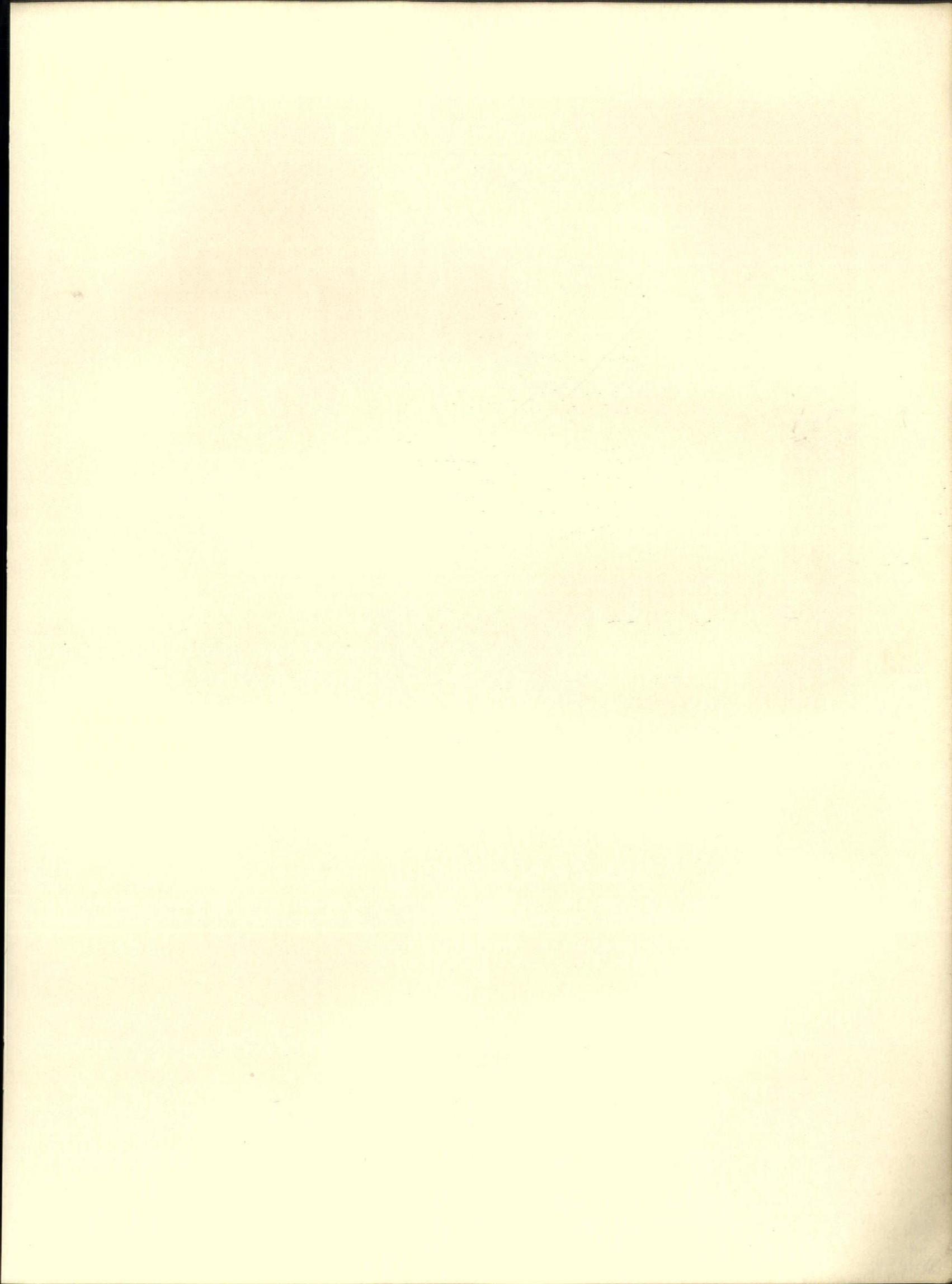
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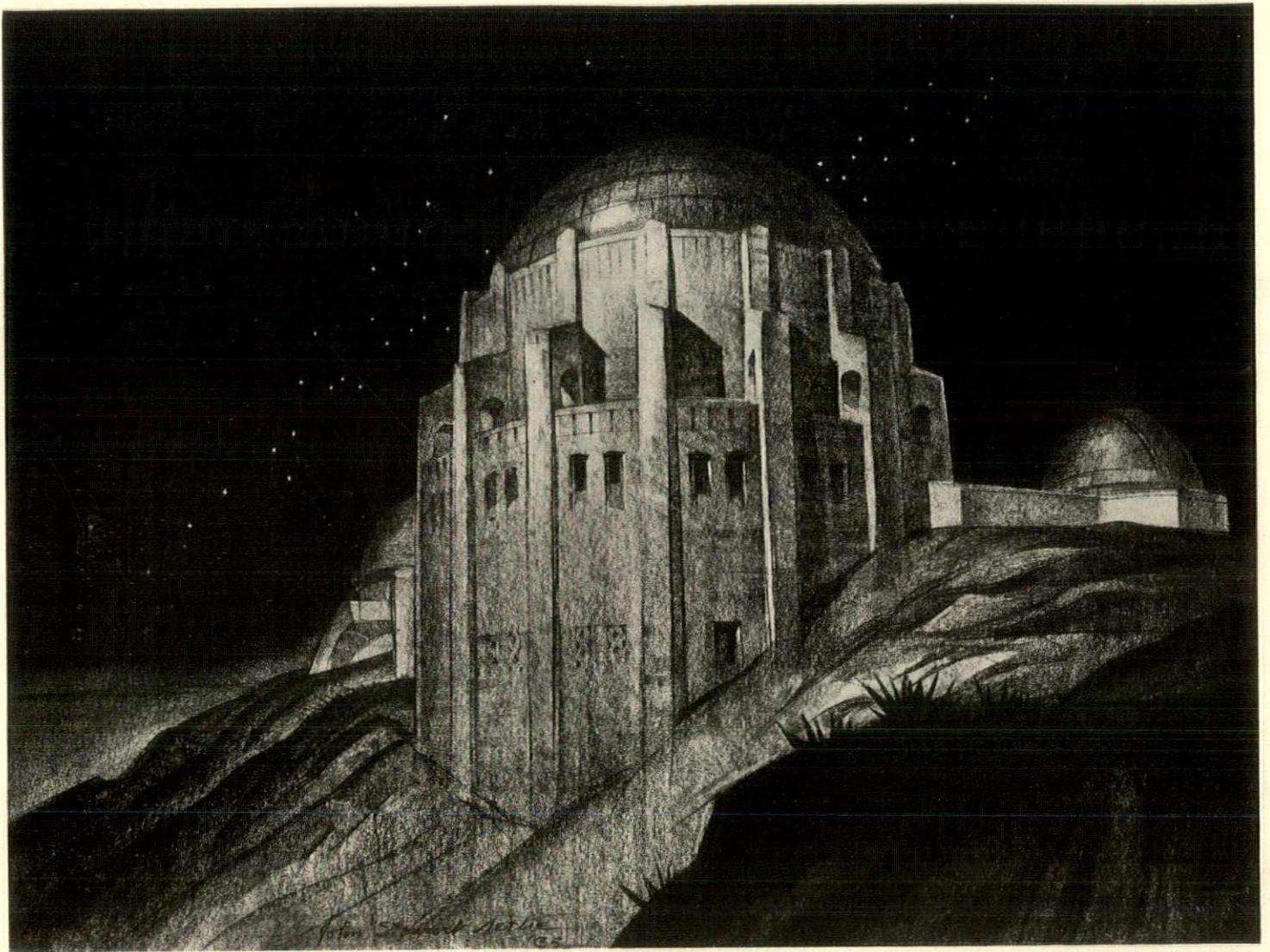
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*From the drawing by*  
JOHN STEWART DETLIE

« ARCHITECTURE »

MARCH, 1935

# ARCHITECTURE

❖ VOLUME LXXI

MARCH 1935

NUMBER 3 ❖

## Rebuilding New York's Apartments

THREE APPARENTLY HOPELESS REAL-ESTATE INVESTMENTS, TAKEN IN FORECLOSURE, REMODELLED, AND RESTORED TO EARNING POWER

*By Morgan Farrell*

WHILE government—national, state, and municipal—is earnestly seeking a way to stimulate building, among other normal activities, and deposits estimated at \$21,000,000,000 are available in the form of bank credits, it would be extraordinary if private initiative had been doing nothing at all to relieve the stagnation.

Obviously there is little in the present situation to encourage the speculative builder. Despite the fact that the nation's birthrate is presumably continuing to demand housing for 400,000 families a year, there are still plenty of vacancies in all classes of residential buildings. The same condition obtains in business buildings of all kinds.

The reason is, of course, that people have shortened up on living and business space, to economize. With the recurrence of normal conditions there will be an overwhelming demand for space, which will bring about one of our usual frantic periods of building. That seems to be the way we do things.

In the meantime, although one would not judge it from the newspaper accounts, there has been a real activity in modernization on a large scale, by financial institutions with rundown properties enough on their hands—and courage and judgment enough—to put them in a paying condition.

The method of procedure is this: A bank, let us say, takes over by foreclosure an elevator apartment house built in the days when six to ten room suites were the rule. At that time such suites rented for twenty dollars a room. Now they bring twelve at the most. The bank finds a responsible buyer, who believes that he can fill the building at twenty dollars a room by remodelling it into one to four room suites. The bank puts up dollar for dollar with him to cover

the cost of remodelling. Their contribution becomes a building loan mortgage and is later combined with the bank's original mortgage to form a new blanket first mortgage. The bank usually retains the architect to supervise the work of the contractor employed by the buyer, thus keeping the control of the operation in its own hands.

Now a close study of some of these apartment remodelling operations reveals some astounding results. After a thorough job of the kind the rent rolls are often doubled. Buildings which could not carry themselves before now net as much as 10 per cent. Through the courteous co-operation of the Emigrant Industrial Savings Bank of New York City we are enabled to set forth the financial set-up and full details of reconstruction of three typical apartments in New York City remodelled by the bank. They are:

(1) A typical lower East Side five-story tenement, at No. 131-133 Henry Street.

(2) A typical Bronx five-story apartment, at No. 849 Beck Street.

(3) A typical elevator apartment of the better grade at No. 509-515 Cathedral Parkway.

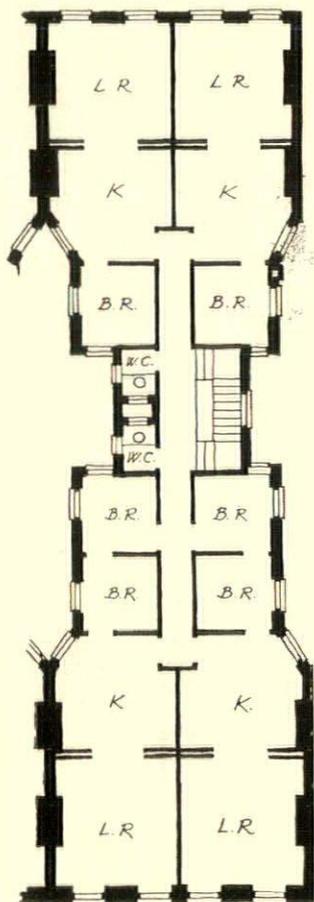
Naturally all these buildings were in the late stages of obsolescence, or it would not have been necessary to remodel them so extensively. Here are the details in each case.

### NO. 131-133 HENRY STREET

These were two old-law, dumbbell plan, five-story tenements built in 1893. They were being carried at \$40,000, the amount of the first mortgage. The cost of remodelling was \$40,000, making the total value \$80,000. Before alteration the buildings were totally vacant and the loss to the bank in interest, taxes, and insurance was approximately \$3000 a year. The present



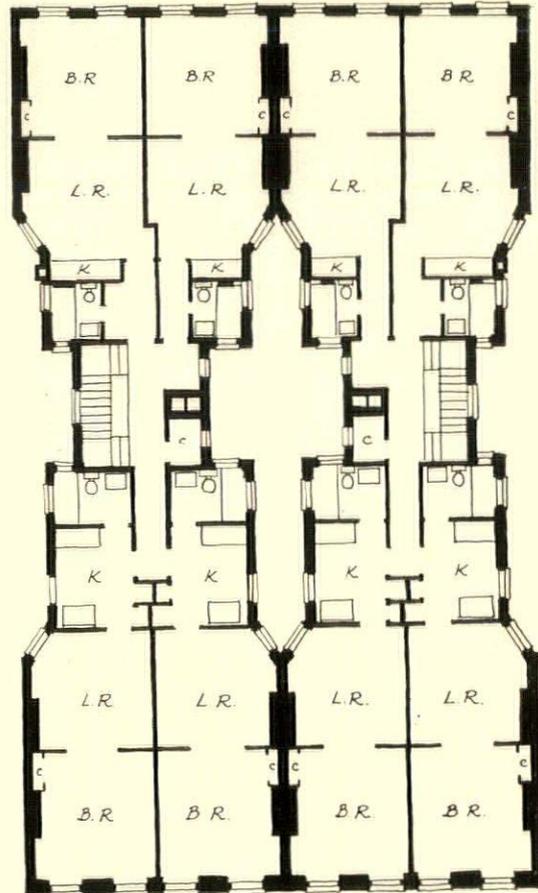
Before and after the modernization of Nos. 131-133 Henry Street—a typical lower East Side dumbbell-plan tenement. On the exterior little has been attempted beyond the new base



Here is a typical floor plan of one-half the pair, as built in 1893. Before modernization the two buildings, totally vacant, were being carried at \$40,000, the amount of the first mortgage, and the bank's loss in interest, taxes, and insurance was about \$3000 a year

Architect for the modernization, Frederick S. Keeler

The remodelling, as will be seen from the new plan, consisted chiefly of plumbing and heating, with a slight rearrangement of space to make the best of an essentially bad plan. After modernization the rent-rol jumped from zero to \$14,150, and a room rate of about \$12 compares favorably with the Housing Act's normal of \$12.50 as permitted for new buildings



annual rent-roll is \$14,150. There are 100 rooms as remodelled, so that the room rate is about \$12. Compare this with the allowed rate for new buildings, constructed under the New York State Housing Act, viz., \$12.50.

Each of the two tenements originally had stores in the basement and on the first floor. Each floor above the first was laid out for two four-room and two three-room apartments. In the kitchens were a range, sink, and two wash-tubs. Two water-closets in the hall served all four apartments. Of course there was no heat nor hot water.

In the new layout the stores were discarded entirely. The neighborhood is full of them, and the rentals are so low that it paid to devote the space on the first floor to apartments.

In converting the suites, the outside rooms, front and back, become bedrooms, followed by the living-room. The original boxlike inside bedrooms become, in the case of the front suites, the kitchen and bath; and of the rear, a cooking-alcove and bath.

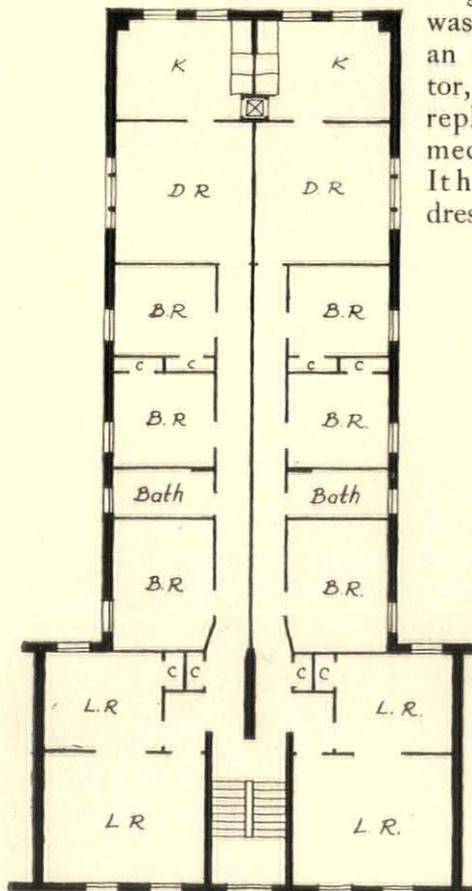
The bath is fully equipped with toilet, lavatory and built-in tub, with hot and cold water supply. It has a tile floor and Keene's cement wainscot. The kitchen is equipped with a gas range, a sink and washtub unit, and an ice refrigerator, later to be replaced with a mechanical one. It has a fairly large dresser and closet.

The building is equipped with an incinerator, the door to which is on the stair landing. A one-pipe, low-pressure, steam-heating system heats the apartments, which are fitted with cast-iron radiation. An oil-burning steel boiler furnishes the steam. It has a submerged copper coil for water heating.

The principal structural changes were superficial. The building has a stout frame and well-built walls, which needed no alteration. However, new oak floors were laid throughout and an entirely new electrical system installed in conduit. All windows are new; so are many of the doors. The plaster work was entirely replaced. New closets were built in the front and rear bedrooms as shown on the plans.

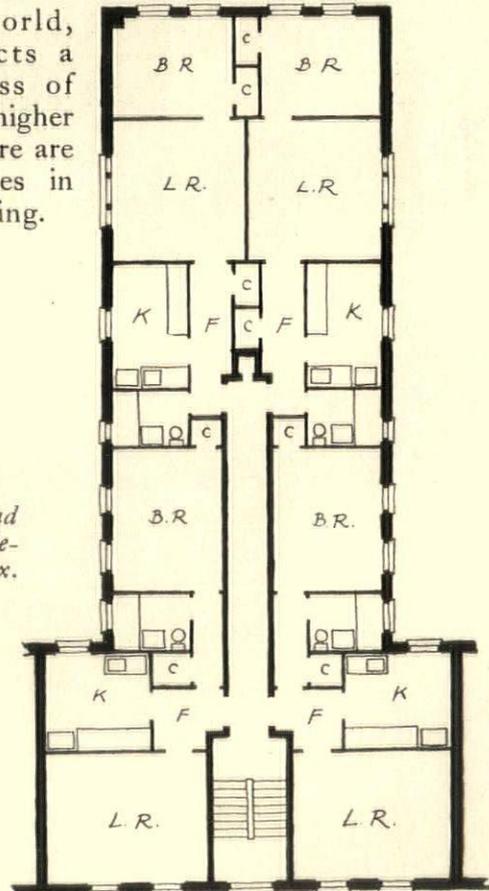
When the store fronts were taken out the walls were rebuilt, and the building front up to the second-story window-sills was stuccoed in buff. The rest of the front, including the fire-escapes, was painted to match.

Other minor changes were made as found necessary. The old roofing only required patching; the yard fence was replaced; the vestibule finished in mosaic; new front doors were supplied, and so on. The net result is a building which stands out in the neighborhood like a good deed in a naughty world, and attracts a better class of tenants at a higher rental. There are no vacancies in either building.



No. 849 BECK STREET

*The plans represent the "before and after" stages of a typical middle-class apartment house in the Bronx. Voorhees, Gmelin & Walker, architects for the bank, brought the property back to its original status as an investment house, its three-room suites bringing from \$33 to \$38 per month*



This is a five-story, medium-class apartment in the lower Bronx—about 149th Street. It is somewhat better built than the acres of five and six story apartments put up when the east branch of the original subway was being completed. It is an investment class of house but, since there were only two seven-room suites of the railroad type on a floor, its value as such was very low. In fact when the bank took it over the rent-roll was *nil*.

The building was sold under a remodelling agreement to a buyer for \$28,000. The cost of the alteration was close to \$27,000, of which the bank contributed \$15,000, so that the total value of the building as remodelled, with four three-room suites per floor, is \$55,000. The rooms bring from \$33 to \$38 per suite per month, so that the annual rent-roll is now a little over \$8000 a year.

It is not necessary to go into the detail of this operation, since the plans show that princi-

pal changes involved the rearrangement of partitions. By a decidedly ingenious re-utilization of the large front and rear rooms, there was little necessity for changing partitions in those sections of the house. A bedroom became a kitchen in the rear apartment, and a kitchen became a bedroom in the front one.

The arrangement of the central part of the floor, however, was completely changed, as will be seen by comparing the floor plans. A new public hall with brick walls replaced the two old private halls, and new kitchens and baths were created. An incinerator was also installed and the dumbwaiter omitted.

Striking features of the new plan are the generous room dimensions, the amount

of closet space, and the efficient layout of the kitchens.

The front elevation was modernized as far as it could be by new windows, a little ornamentation, and a thorough painting in light buff.



*Here, as in the Henry Street property, little has been attempted in the way of exterior improvement beyond a cleaning of the façade*



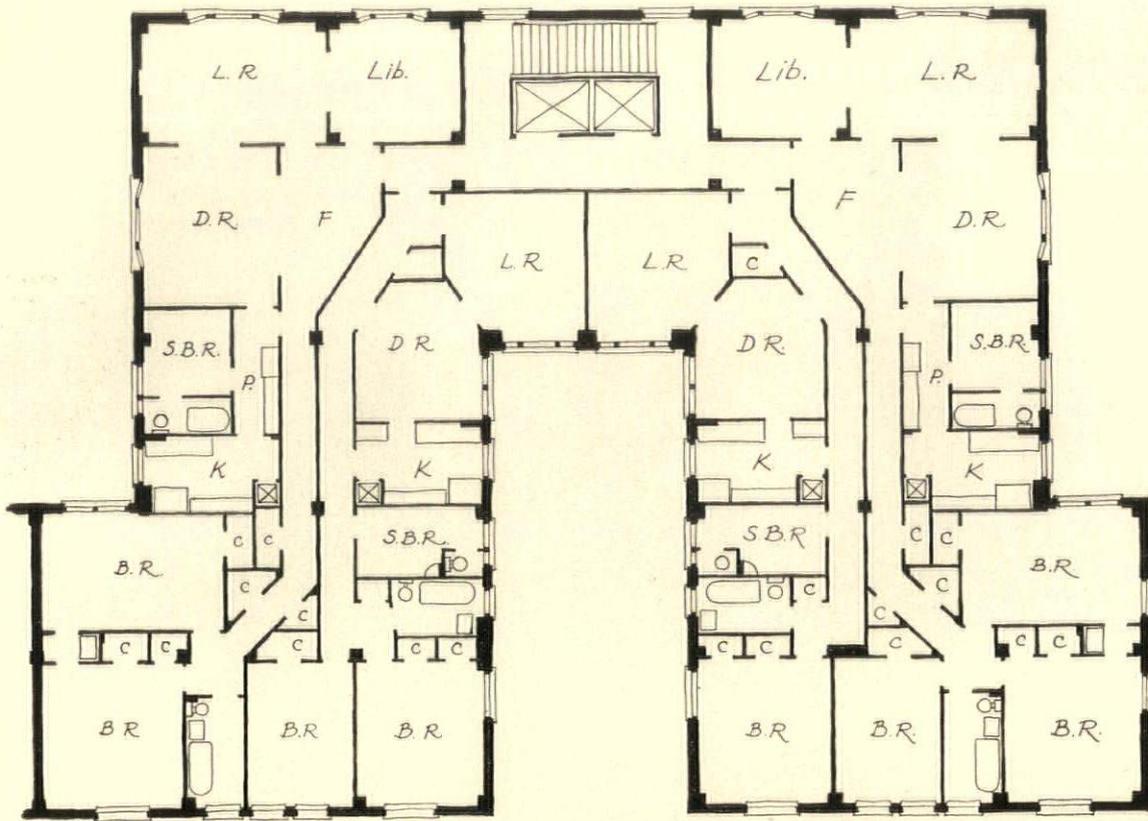
#### NO. 509 CATHEDRAL PARKWAY

This is a far more pretentious remodelling operation than either of the others. Moreover it represents a successful effort to cut up one of the more elaborate, twelve-story elevator apartments with seven, eight and nine room suites, once considered the last word, into suites of one to four rooms.

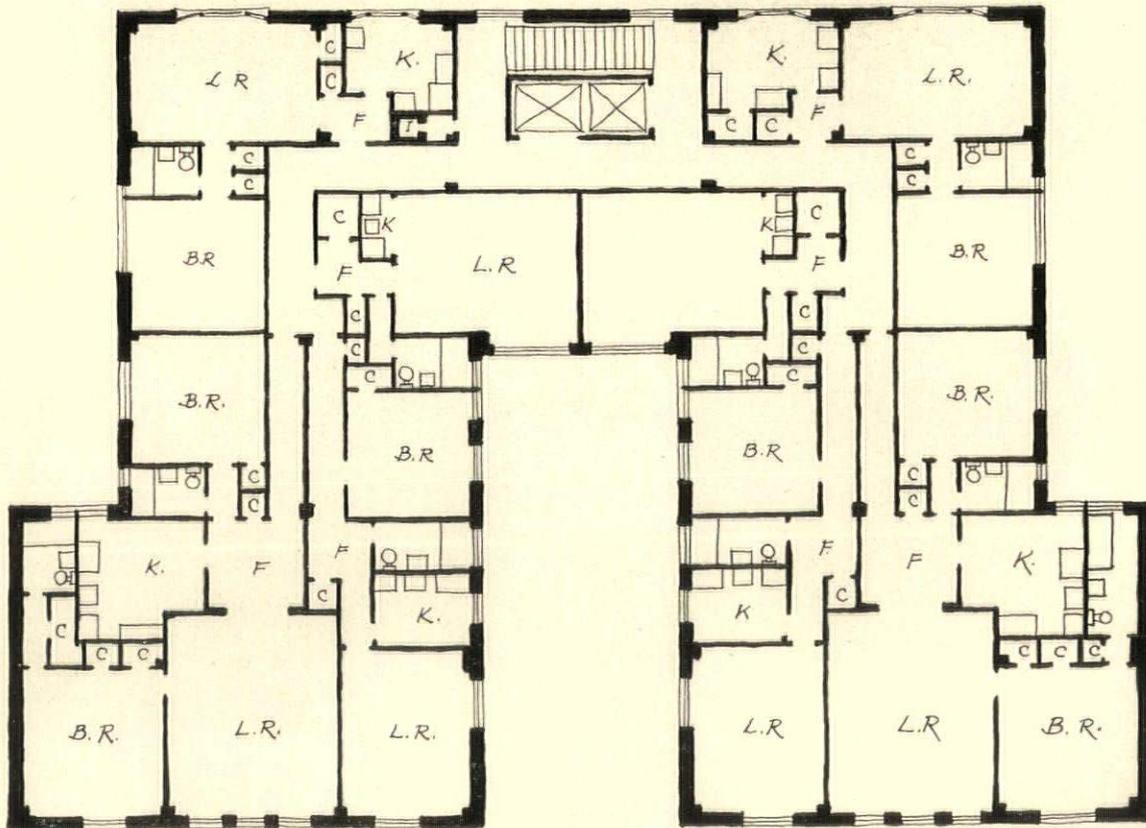
These apartments are the despair of remodellers. They are of fireproof construction, with strongly built partitions dividing the floor

space into rooms of far too generous proportions for present-day economics. Yet a comparison of the before-and-after plans of this building shows how successfully the division can be achieved with the least loss of space.

The sales price was about \$360,000, in addition to which the bank contributed \$100,000 for the remodelling operation. This sum was, of course, added to the amount of the mortgage, making the total investment \$460,000.



Here is one of the better elevator apartments on the upper West Side, its suites of seven, eight, and nine rooms once in great demand. Its modernization necessitated practically the entire rebuilding of the interior, with the typical floor divided as below. Voorhees, Gmelin & Walker were the architects



Before the alteration the rent-roll of this building, an excellent one of its type, located on one of the very good apartment streets in the Columbia University neighborhood, was \$33,000. As there were some 300 rooms, this gives the absurd rental of little more than \$9 a room. Obviously they could get no more. Two suites on each floor, for example, included the following rooms: library, parlor, a foyer as big as a room, dining-room, servant's room and bath, pantry, kitchen, two large chambers, and a bath. This was considered an eight-room apartment. It failed to bring more than \$100 a month.

The plan shows the changes made. It is unnecessary to go into the specifications except to say that the changes were carried out in the same high-grade materials and equipment originally put into the building. The subdivision by new partitions and the installation of new baths and kitchens called for a really extensive alteration.

At the end of it the building had on each floor the following apartments: two of one and one-half rooms; four of three rooms, and two of four rooms. The rent-roll is now \$70,000 a year, or, since there are now some 270 rooms, \$21.75 a room.

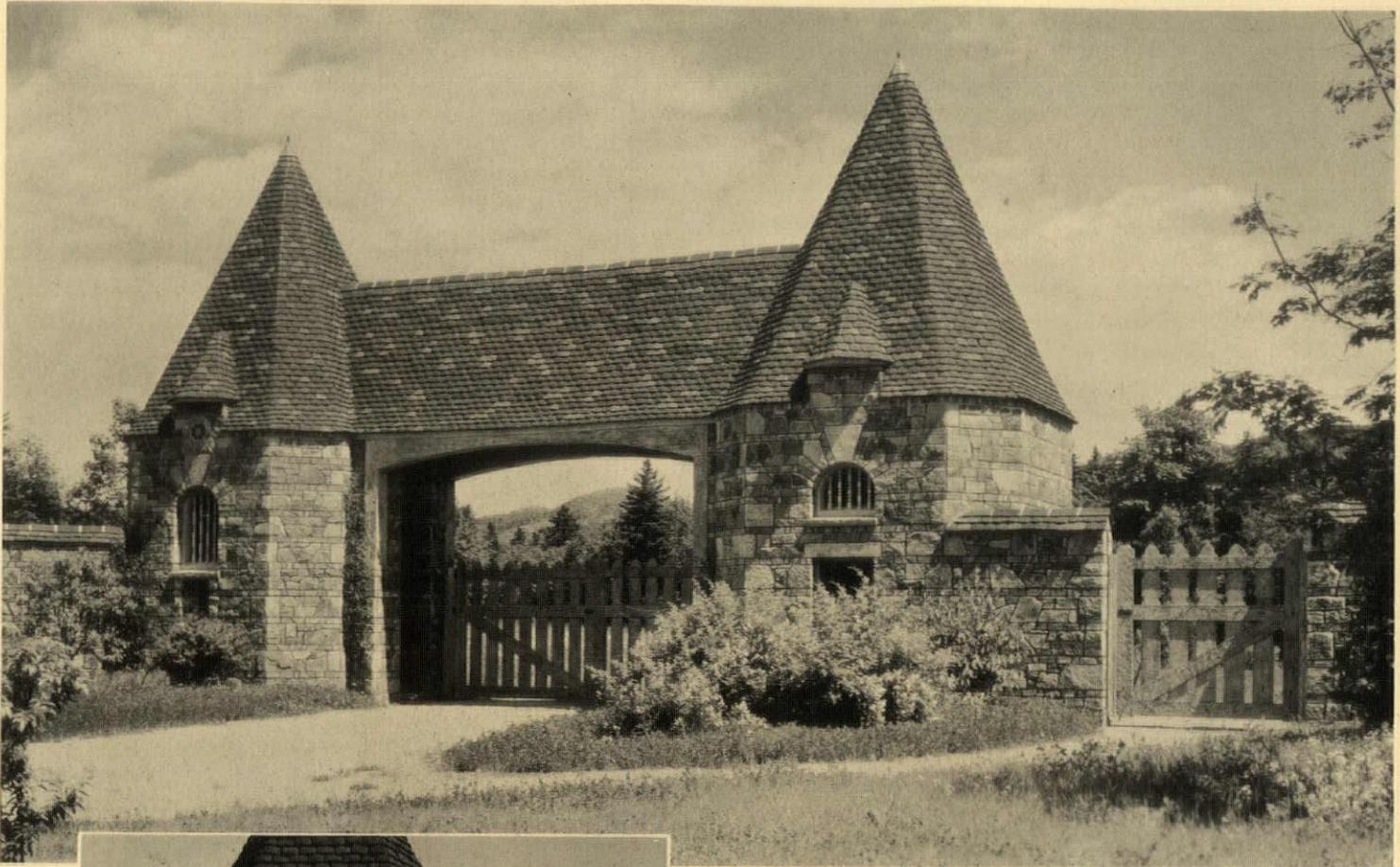
The Emigrant Industrial Savings Bank has remodelled a number of other apartment buildings with equal success in filling them at a rental comparable with the best in the neighborhood.

Obviously, one reason why the reconstructed buildings pay is that the remodeling is done so thoroughly that the apartments are to all intents new buildings. Tenants are attracted accordingly.

Singularly enough this applies with equal force to tenements as well as to high-grade apartments. There is food for thought in this, and a vast potential in work for the architect who has not closed his eyes to all that is not new building, and is possessed of some imagination.



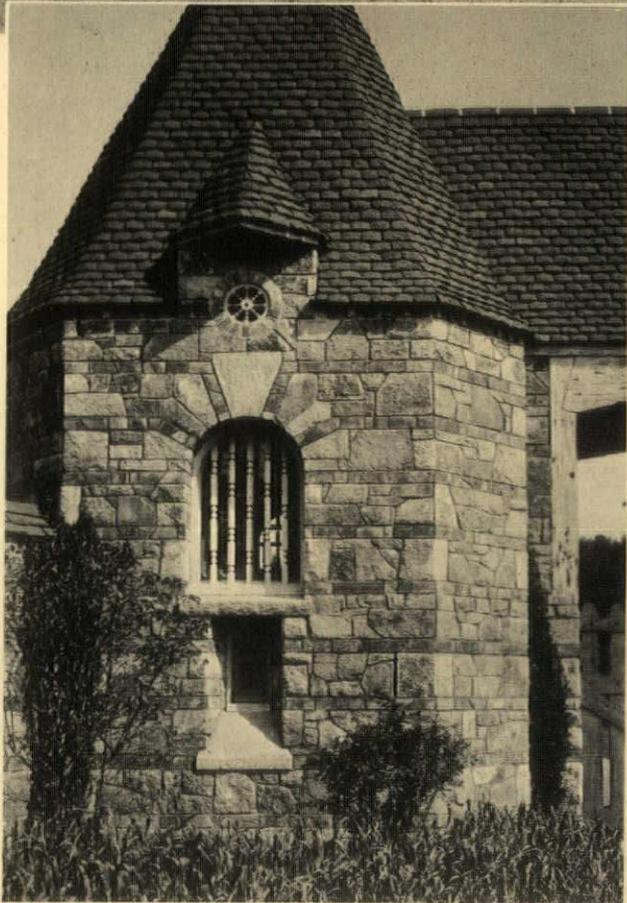
*Before modernization the room rate was little more than \$9 per room per month—all that they would bring. In reducing the number of rooms from 300 to 270, and giving the public more nearly what it wants, the rate has now become \$21.75*



Charles E. Knell

*Mr. John D. Rockefeller has provided this entrance to Acadia National Park, together with bridle paths and motor roads leading to the most beautiful spots in a country which abounds in ocean and inland views, small and large bodies of water, and a background of the distant high mountains of Maine.*

*Mount Desert Island was originally settled by the French, and its earliest development carried on by le Sieur de Mont. Champlain landed there on one of his earliest expeditions while the country was still in the possession of the French*



Brown

GROSVENOR ATTERBURY, ARCHITECT  
JOHN TOMPKINS, ASSOCIATED

## Lodge and Gate

Brown Mountain Entrance  
Acadia National Park  
Mount Desert, Me.

« ARCHITECTURE »  
MARCH, 1935



Charles E. Knell

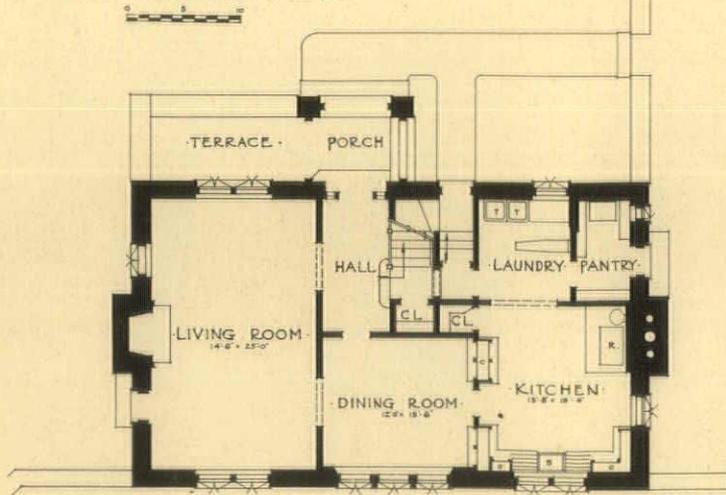


Charles E. Knell

The gate at left and the Lodge

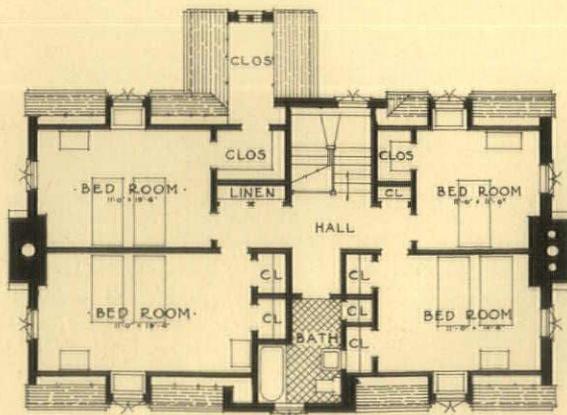
On the opposite page, a detail of the Lodge, from the southeast corner

FIRST FLOOR PLAN



First and second floor plans of the Lodge—differing very slightly in its accommodations from those of the average small house

SECOND FLOOR PLAN





Charles E. Knell

*The stone found on the island is for the most part granite, and it breaks up into awkward pieces without stratification. Mr. Atterbury combined the practical necessities of the case with the French traditions of the island, and used horizontal courses of brick every fifteen inches in the stone work. For the half-timber work pecky cypress was used, burned and treated to a weathered gray. Gutters and leaders are of lead; roof of a French shingle tile rather crudely moulded, in browns, reds, and black. The brick filling in the half-timber work is a soft-colored irregular one of considerable variety in color*

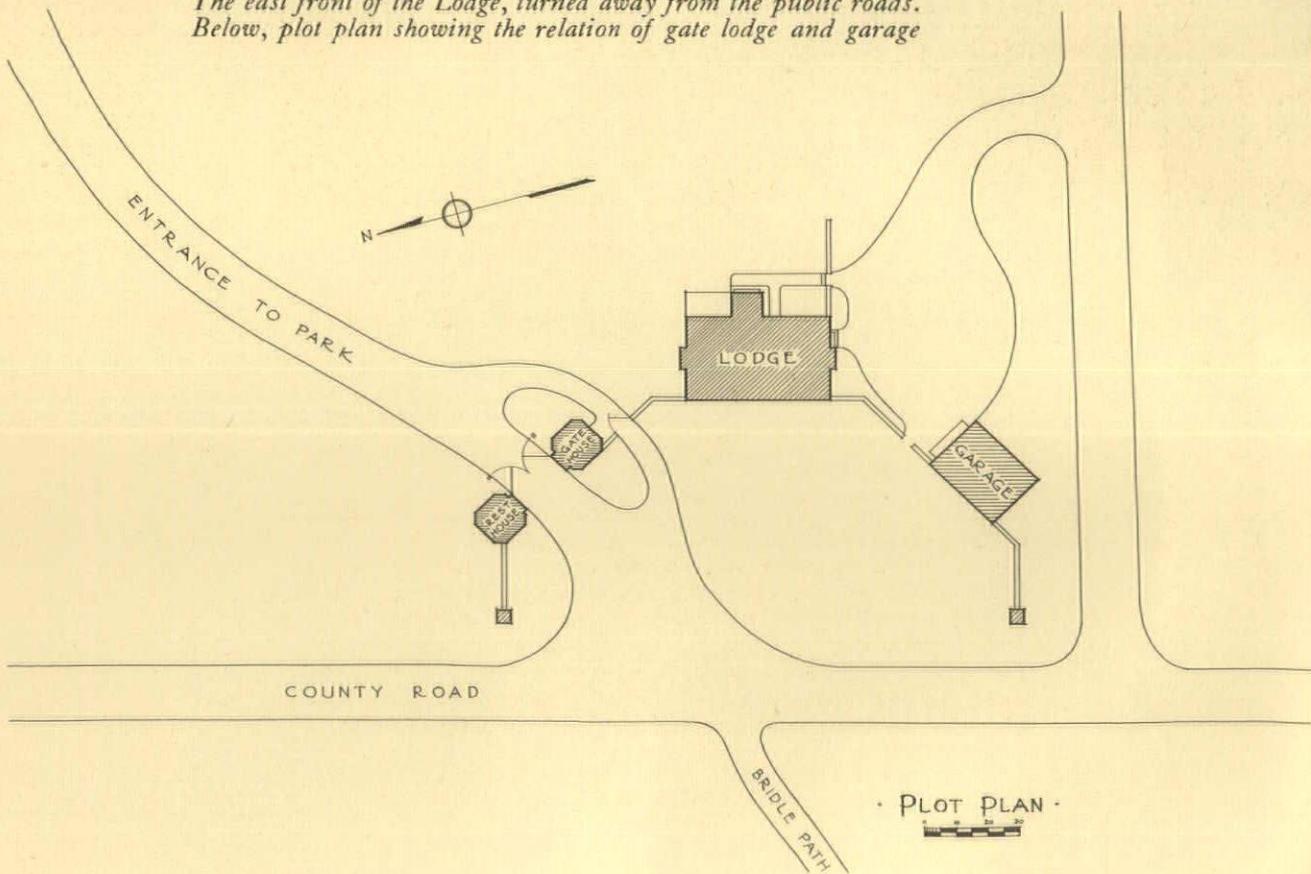
« ARCHITECTURE »

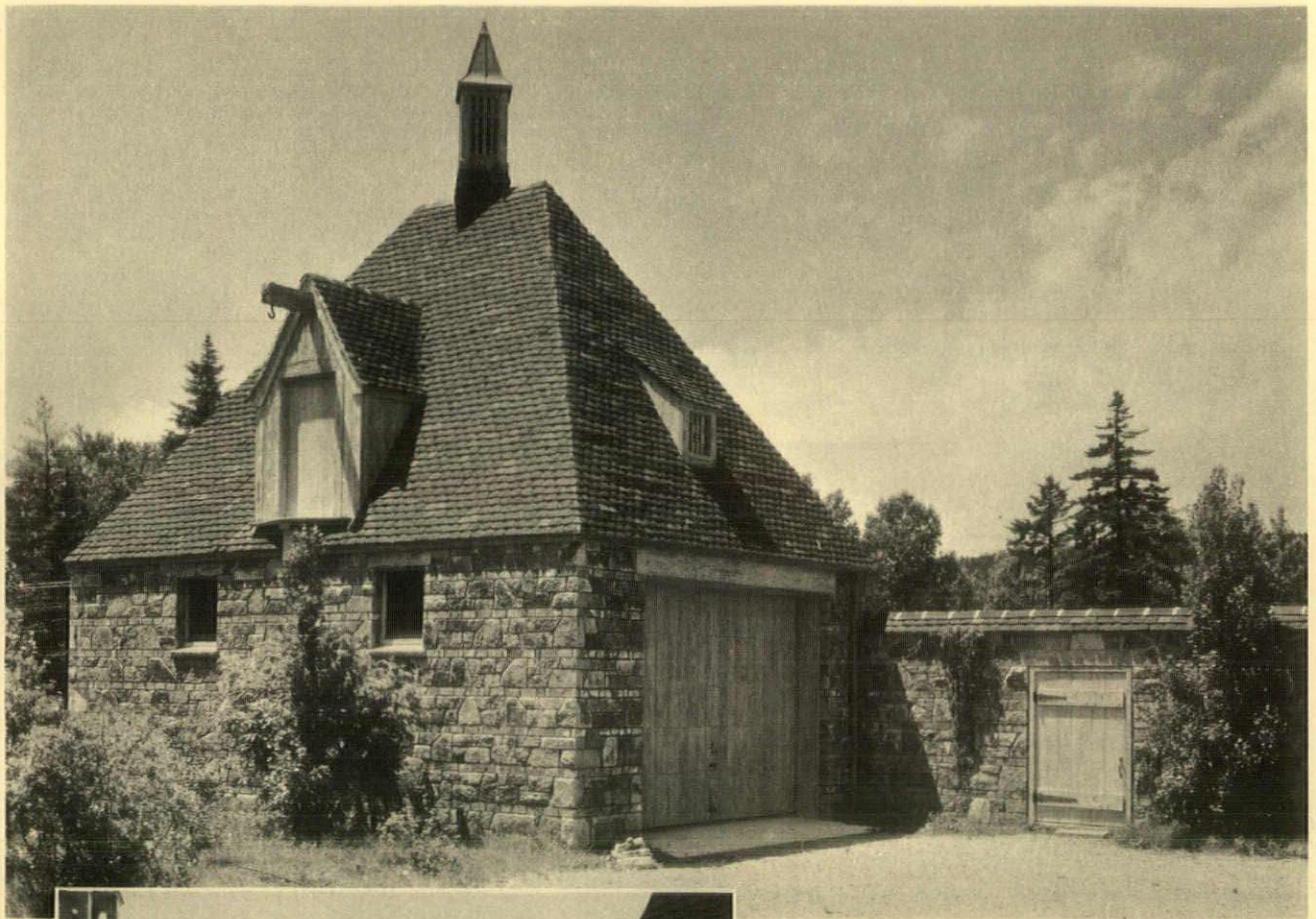
MARCH, 1935



The east front of the Lodge, turned away from the public roads.  
 Below, plot plan showing the relation of gate lodge and garage

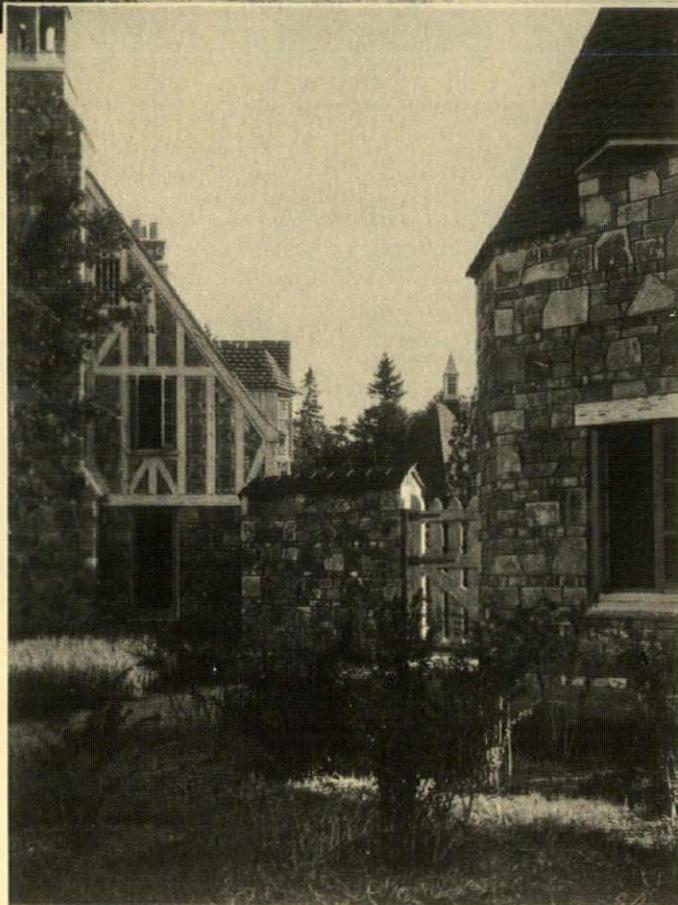
Charles E. Knell





Charles E. Knell

*The garage and its adjacent wall, in which the area of stone work is large enough to give some idea of what this would have been if laid in the unbroken granite conglomerate*



*Detail of the gate house in the foreground, with the north end of the Lodge just beyond*



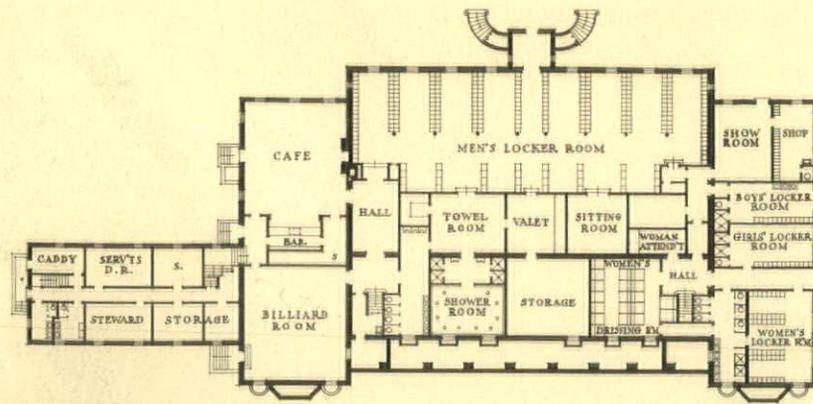
Photographs by  
Robert W. Tebbs

*Exterior walls are of brick painted white. The balustrades, quoins, columns, and other trim are of cast stone. A Virginia blue slate covers the roof. The upper terrace shown in this photograph has a terrazzo floor which is waxed when the weather permits dancing outside*

AYMAR EMBURY II, ARCHITECT

## The Charlotte Country Club, Charlotte, N.C.

« ARCHITECTURE »  
MARCH, 1935



*Plan of the basement, with all of the usual and some rather unusual appurtenances of the typical country-club basement*

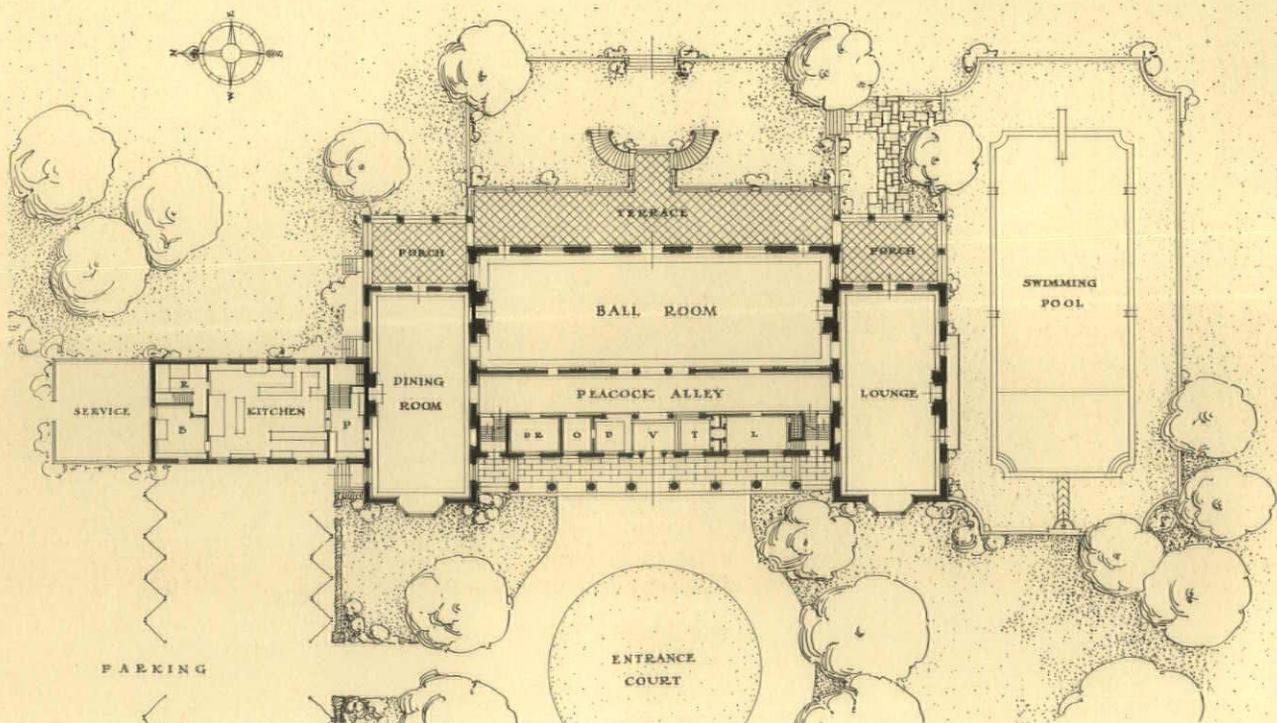
*The entrance front, which faces a circular turnaround for automobiles. The two gabled ends mark the dining-room and lounge*





*Another view of the entrance front. The length of the main portion of the building, terminated by dining-room and lounge, represents the great ballroom, in front of which, paralleling the porch, are the cloak rooms, offices, and the like*

*To gain some idea of the scale of this simple plan one must realize that the ballroom is one hundred feet long. The swimming-pool is an important feature of the club which is not shown in the photographs*





*Doorway from the lounge looking into "Peacock Alley." In the lounge the walls are of pine which has been covered with a coat of thin white paint, immediately wiped off, and thereafter waxed*

« ARCHITECTURE »

MARCH, 1935



*The lounge. In the setting of pine walls  
the English chintz furnishes the accenting  
notes of color in scarlet and bright green.  
The carpet also is green*

« ARCHITECTURE »  
MARCH, 1935



*The ballroom. Woodwork and walls are white, picked out in gold, the floor of dark blue. It is interesting to see how this great room, needed primarily as a ballroom, has been made to serve as a club lounge by the expedient of grouped furniture on several rug areas. All told, there are seats for sixty in this room as it appears. The murals, representing the seasons, were painted by Mrs. Farrand Goldsborough, and their background color of deep rose is repeated in the hangings*

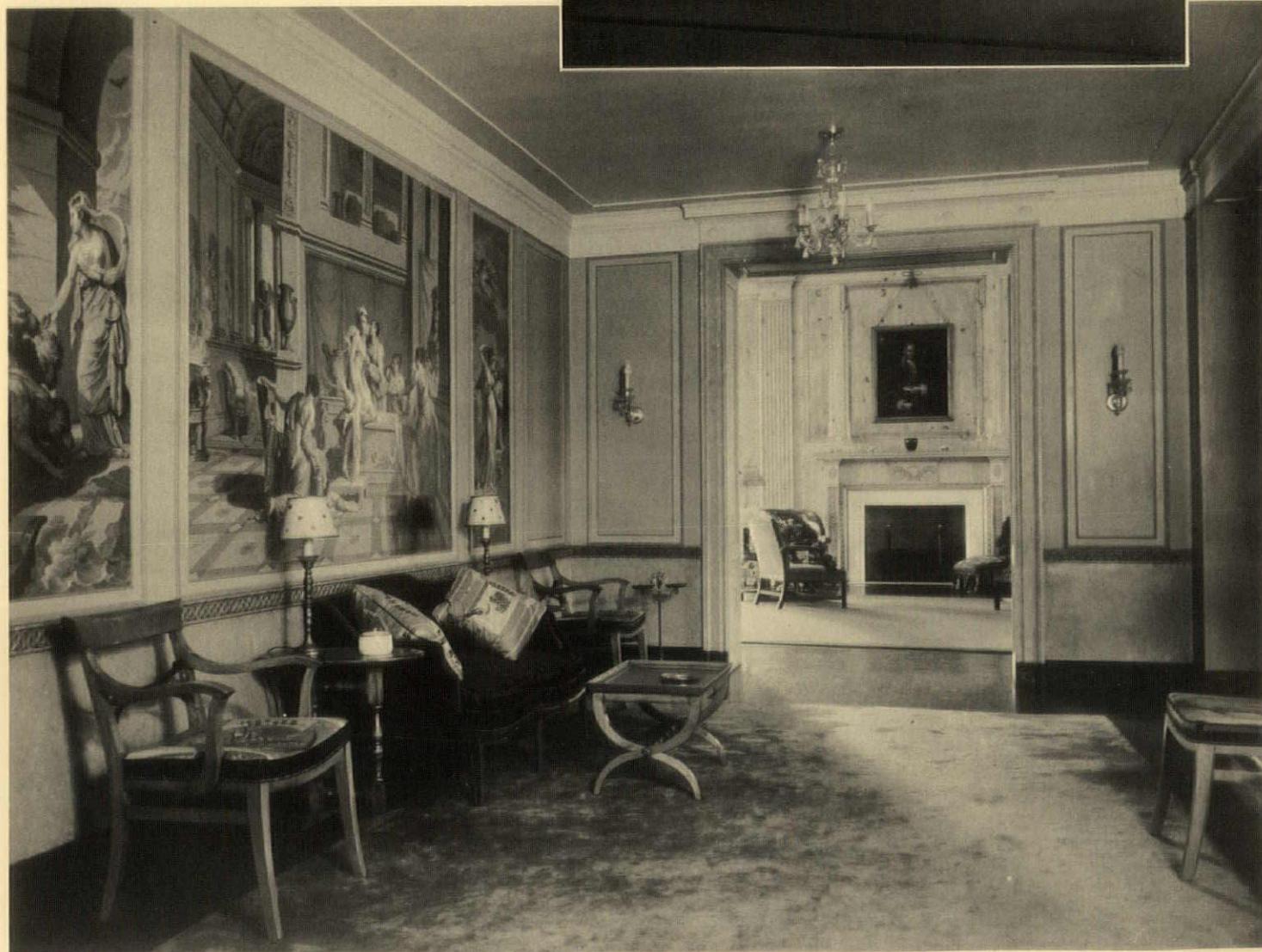
« ARCHITECTURE »

MARCH, 1935

*The window end  
of the lounge*



*The end of "Peacock Alley,"  
leading to the lounge. The  
panels are the last of one of  
David's old French wall pa-  
pers, "Cupid and Psyche,"  
set upon a wall of putty color*





*Chimney-breast in the dining-room. Mr. Embury has created a Wedgwood room here, with walls of lavender blue against which the white of woodwork and plaster ornament counts as strikingly as a color*

« ARCHITECTURE »  
MARCH, 1935

# Why Is the Small House Small?

*By Harrison Gill*

ALMOST ALWAYS BECAUSE OF THE BUDGET, AN UNCEASING INGENUITY AND RESOURCEFULNESS, NOT SO MUCH IN PLAN AS IN MATERIALS, ARE NECESSARY IF THE ARCHITECT IS TO JUSTIFY HIS PROFESSIONAL SERVICE IN THIS BRANCH OF PRACTICE

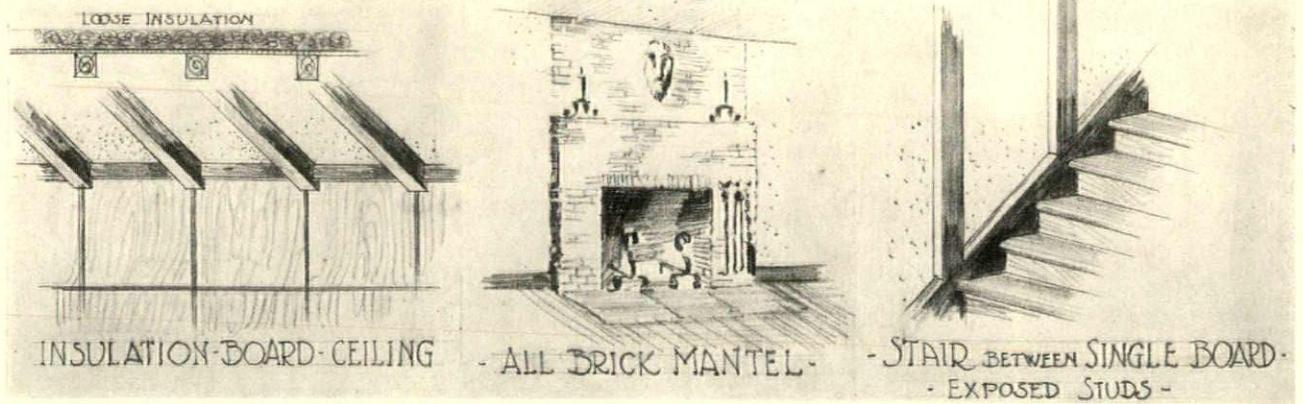
 SMALL house is small, usually, because there is not enough money available to make it larger. There is almost no other reason for making it small. Nearly every client wants as large a house as he can afford. Cost, however, is not merely a function of size; materials and workmanship are equally important factors. The savings which result from a small plan may be lost in the specifications. It is at this point that the architect and the speculative builder are most apt to disagree. And it is in the selection of materials and the standards of workmanship that the owner has most at stake.

The home builder often feels that he must choose between the extravagant specification of an architect experienced in the luxury type of residential work, and the shoddy material and workmanship which he may acquire from a speculative builder. So few houses under \$10,000 have been built by architects that usually we are not equipped to render a really adequate service. The general public is already convinced that an architect can give them a better planned house, of finer appearance and more perfect workmanship and materials, than if they build without his services. The reason architects have been retained on less than 30 per cent of the residential building of this country is not a question of culture but of cost. It is not very difficult to develop a plan which is more economical in the use of space than a plan which a builder might furnish. We can squeeze room sizes, eliminate superfluous circulation, and carefully articulate the units, but when the documents go out for bids the price is often away out of reach, and our \$5000 budget fails to cover the \$8000 bid.

During recent years many architects, engineers, manufacturers' research workers, and even individuals who have had no experience or direct contact with building, have all been working on the problem of materials and methods of construction for small houses. From this galaxy of ideas a few new materials have been placed on the market, and some of the older products have been adapted to use in small

homes. As soon as such an item becomes available—sometimes before it actually goes into production—architects are bombarded with sales literature, sales engineers and ordinary salesmen. Whenever some such new material or article seems to offer valuable possibilities, I always ask the cost. This seems to create the impression that I have stepped out of my rôle, that architects should not be really interested in cost, but only in quality. This concern over quality regardless of cost is a beautiful ideal which the small-house client never shares. But the manufacturer's representative of whom I have asked the question usually has one of two stock answers ready. It is either, "We cannot quote prices; you must get that from a builder"; or it is, "Why, it only costs 10 (or 20 or 30) per cent more than the old material or system you have been using, but look at . . . etc., etc." To the second answer I try to explain that most people do not build small houses merely because they like them small; quite the contrary, most clients want a larger house than their budget will permit. The chief reason houses are small is to keep down the cost, and unless the product can do that it will not be used very much.

When selecting materials which are going to affect appearance as well as those which are only recorded in the specification, one way to start is from the minimum standards which have been set up in reputable architects' offices for residential work. If against this we set up the minimum standards of the worst type of jerry-builder and the most flimsy type of beach cottage, we shall have the two extremes. If, then, we take each item of construction and equipment and ask whether the difference between the two standards is because of appearance, custom, permanence, or some other consideration, we shall be in a better position to judge what is adaptable to small-house work. We shall find, perhaps to our surprise, that the cheap speculative builder is not always wrong. Some of the grades and types of materials he uses may be quite adequate and even charming if skillfully handled. For instance, the cheapest grade of



red-oak flooring is short in length, has great variations in graining, and is not always 100 per cent red oak; it is very much cheaper than the finest quartered white oak. There is no question of advantages in life or upkeep; the cheaper floor will give more than the service which will be required of it. Its final appearance depends on the care with which the stains are selected, and I, at least, have found these floors charming. In one case even the scraping and sanding were omitted, and the owner, who happens to be a musician of some reputation, seems to feel that the floors are one of the most satisfactory features in his \$3000 summer cottage.

Architects' plastering specifications are often so written that it is possible to condemn whole rooms because the surfaces are not geometrically perfect planes. This type of workmanship adds enormously to the cost of plastering, but adds nothing to the permanence and usefulness of the walls. Whether it adds to the appearance is a question of opinion. Certainly such stringent specifications are out of place in small-house work, and it is in such items that the average owner is perfectly justified in contending that architects are apt to make his home needlessly expensive.

Insistence that certain items be made in the mill or shop rather than on the job is another easy way to increase the cost of a house. The whole question of shop work against field work is so involved, leading into the discussion of all types of prefabrication, that it would be too lengthy to enter into here. During certain periods the man in the shop receives a lower hourly rate than the man on the job; he can use certain power tools which cannot be transported; his work, however, carries a far greater overhead for management and return on investment. The net result is often a much higher cost to the owner. Similar work done at the job, however, may not be quite as faultless. Items of this type

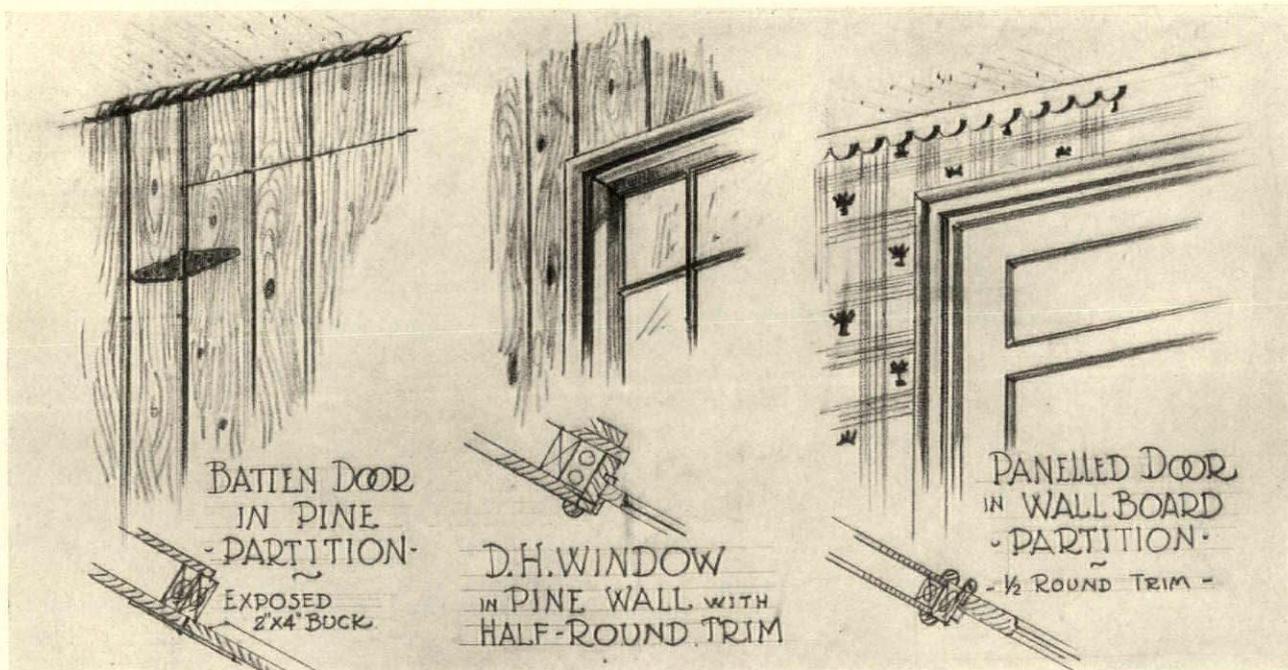
require careful thought and analysis. Some of the factors are: relative labor rates, skill of available outside mechanics, and the exact nature of the work affected. For example, it is often possible to build an acceptable stair at the job with a saving up to 50 per cent over some mill-built stairs. In one recent house it was found more economical to build the ducts for a circulating hot-air system on the job rather than take detail measurements and make the layouts for building them in the shop. A small, portable, hand-power break was the chief tool used to bend the sheet metal. It is not always possible to foresee just what items should be made on the job and what at the mill or shop. A flexible specification which sets up minimum standards is useful in reducing costs if it leaves such decisions to the bidder, who knows just what skilled workers and tools are at his command. The most economical method will vary with the time, location, and the contractors.

Instead of comparing specification standards, we may approach the problem of cost in another way. There is a basic minimum of construction required to enclose any given amount of space. Beyond that it is a question of interior finish and equipment. For instance, recent records show that a garage of frame construction with sheathed and shingled walls, adequate exterior trim and painting, masonry foundations and concrete floor, hardware, electric wiring, and architect's fees came to ten cents a cubic foot. There was no plaster or wall board on the interior. To make this into a house (it was 20 feet square) we have to add plumbing, heating, partitions, interior wall and ceiling finish and trim. These would probably bring the cubic-foot cost to about thirty cents. In other words, the foundation, exterior walls and roof would represent only about one-third of the total cost. It is in the other two-thirds that we can find the greatest opportunity for saving.

It is not an easy matter to discover the most economical materials and methods. Taking alternate bids still remains one of the best means of testing conclusions, in spite of all that can be said against the practice and even though the NRA codes discourage it. General and sub-contractors have a wealth of information which friendly relations will disclose. On the rare occasions when a manufacturer's representative is willing to quote a unit price, it has proven unsafe to base any calculations on such figures without a careful check. Three recent examples come to mind. In one case a semi-experimental type of insulation had been recommended as a saving. Actual bids, based on a minimum factor of heat transmission, showed the system to be more expensive than a more conservative type. Not long ago prices were taken in one office on the use of a floor-covering material which should have meant a saving on the basis of preliminary information. Actual bids ran 30 per cent higher than the figure given by the company. Then there was the kitchen range which the owner wanted, but which ran too high on the basis of the price given the architect by the manufacturer. The same range was installed by the local plumber for about 20 per cent less than the price quoted the architect. Such experiences are confusing and at time discouraging; they certainly tend to increase the difficulties of the architect who wishes to exert any influence in small-house work.

From time to time the inventive architect will think of some use for a material which the

manufacturers have never suggested. Ideas of this sort, in which economy takes precedence over mere novelty, may be of great help. Recently a lumber dealer came into my office to tell me that the man to whom we were about to award a contract had omitted most of the interior trim from the list he gave them to figure. I knew the dealer very well, so accepted his call in the friendly spirit which he intended. He had not seen the drawings himself, the contractor having taken off his own list, so that when I showed the material man the details and methods of trimming, he admitted that the list was apparently correct and also remarked that some other strange quantities, for which his office had not been able to imagine any use, were now clear to him. Incidentally, he also stated before leaving that he had not been prompted to come to my office originally because the list was unusual, but because the price his firm had quoted for mill work was small in comparison with the price for rough lumber. The explanation I had given him was very simple: most of the rooms were lined on the side walls with tongue-and-grooved boards, which could be brought right up to the window frames, using only a one-inch half round to cover the joint. Interior doors were seven-eighths-inch batten type, without frames or casings, using the structural two-by-four and four-by-four bucks exposed—a common practice in some Colonial houses and universal in mediæval work. The base had shrunk to a quarter-round on the wood partitions, so that, taking it all together, there was practically no



interior mill work. An iron spiral stair, bought second-hand by the owner, had eliminated all of the wood which might have gone into this item.

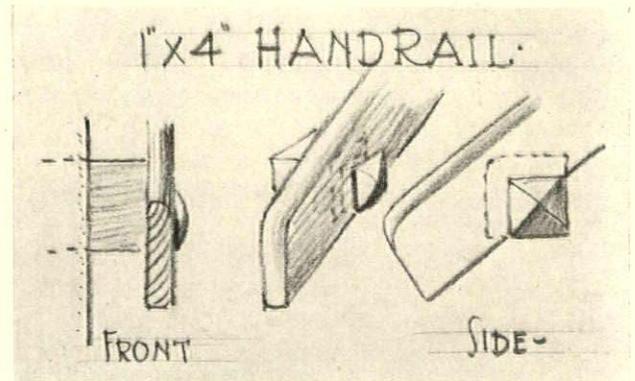
Each architect who works in the small-house field will discover many things for himself. It is impossible to draw any general conclusions which apply to all parts of the country. It is significant, however, that the Federal departments which have been developing designs for homestead building seem to have settled on frame construction, with wood-shingle roofs and clapboard or wood-shingle side walls, as the most economical. The only exceptions to this rule, I believe, are the occasional use of various types of concrete blocks and, for Arizona, adobe. These conclusions coincide with information gathered from other sources for small houses outside of restricted fire zones.

The problem of insulating small houses is one deserving careful thought. One architect, after analyzing the records of several heating engineers and checking the costs of various methods, believes that four inches of hand-packed rock wool over the ceilings which are under all unheated attic spaces, is the most economical, when weighing original cost against maintenance cost. That copper pipe with some of the new solder joints is the most satisfactory material for water lines inside the house is the contention of another architect, but our attention is called to the fact that it is not permitted under all codes, and also that the master plumbers seem to be trying to discourage its use. Another item upon which thought can be profitably spent is finish hardware. If it is believed desirable to make any saving here, we shall not find a solution in imitating the jerry-builder. More ingenuity is required. There was an owner who bought cheap stamped-steel strap hinges, and with a cold-chisel and hammer made them into quite acceptable cupboard butterfly hinges. Some of the five-and-ten-cent stores carry a line of turned wooden pulls for drawers and small doors which it is difficult to secure from other sources.

There is an architect who has done many low-cost, small houses, who finished all interior woodwork with oils, stains, and waxes, stating that it not only saves in the original cost of application, but also in maintenance. Another claims that the current tendency toward base plugs rather than wall and ceiling electric fixtures should be carried to the extreme in small houses. Of course, this does not really mean a final saving to the resident of the house, who will have to buy more floor and table lamps to make up for the lack of fixed illumination. The use of

wall boards and plywood panels will probably be developed further than they have been. At least one house has been built by an architect in which a single thickness of plywood was used to partition certain areas. When this can be done the saving is great, but alternate bids have shown that in some cases plaster is as inexpensive as the large prefabricated sheets, when the fully finished wall is considered. It probably depends upon the size of the job.

Many other items come to mind on which ingenuity has been at work, such as the kitchen ex-



haust grille made of a row of dowel rods; the hand rail—adapted from a Colonial precedent but with modern feeling—made of a one-by-four set vertically on wooden brackets for the enclosed stair; a sheet of tin nailed under the joists to form a return cold-air duct in the floor construction; placing a wall board ceiling in a one-story house on top of the ceiling joists instead of on the bottom, thus saving the cost of covering the joists and adding to the apparent height of the room when using low studding. One might go on, but the examples are not universal in application and the most successful jobs are those in which the architect has found some happy and inexpensive solution for a particular problem.

The architect who is not willing to experiment, the architect who will not cut his specification below the most exacting standards, and the architect who feels that he can learn nothing from the contractor and skilled mechanic, had better forget about small houses and exert his efforts in some other direction. I firmly believe that in the past the accusation that architects make small houses unnecessarily expensive is well founded, and unless we can remove the cause of this contention by sincere research we shall never be able to capture any great part of small-house building.



Harold Haliday Costain

*The terrace side of the house overlooks a private pool*

VERNA COOK SALOMONSKY, ARCHITECT  
H. COBBETT WILLIAMS, A.I.D., INTERIOR DECORATOR

## House of C. G. Novotny, Scarsdale, N. Y.

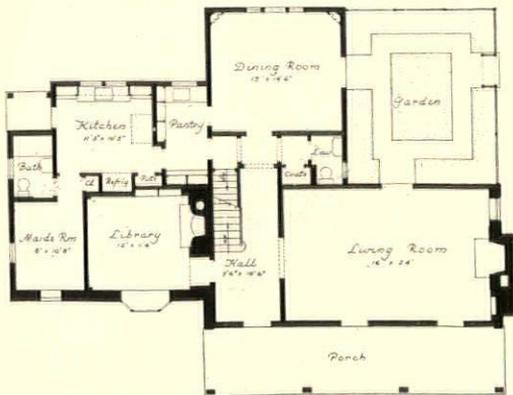
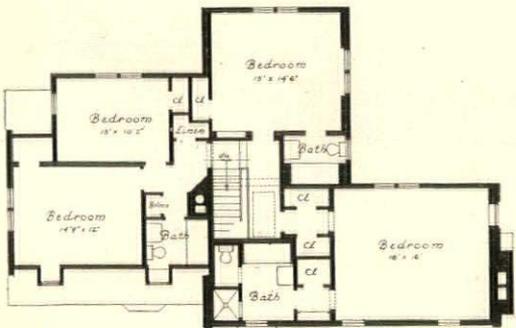
« ARCHITECTURE »  
MARCH, 1935



The stair hall as seen through the living-room arch, giving a glimpse of the library beyond. The treads of the stairs, the handrail and newels, are of maple, contrasting with a soft aquamarine blue of the walls and woodwork. The hanging lantern is painted bright yellow

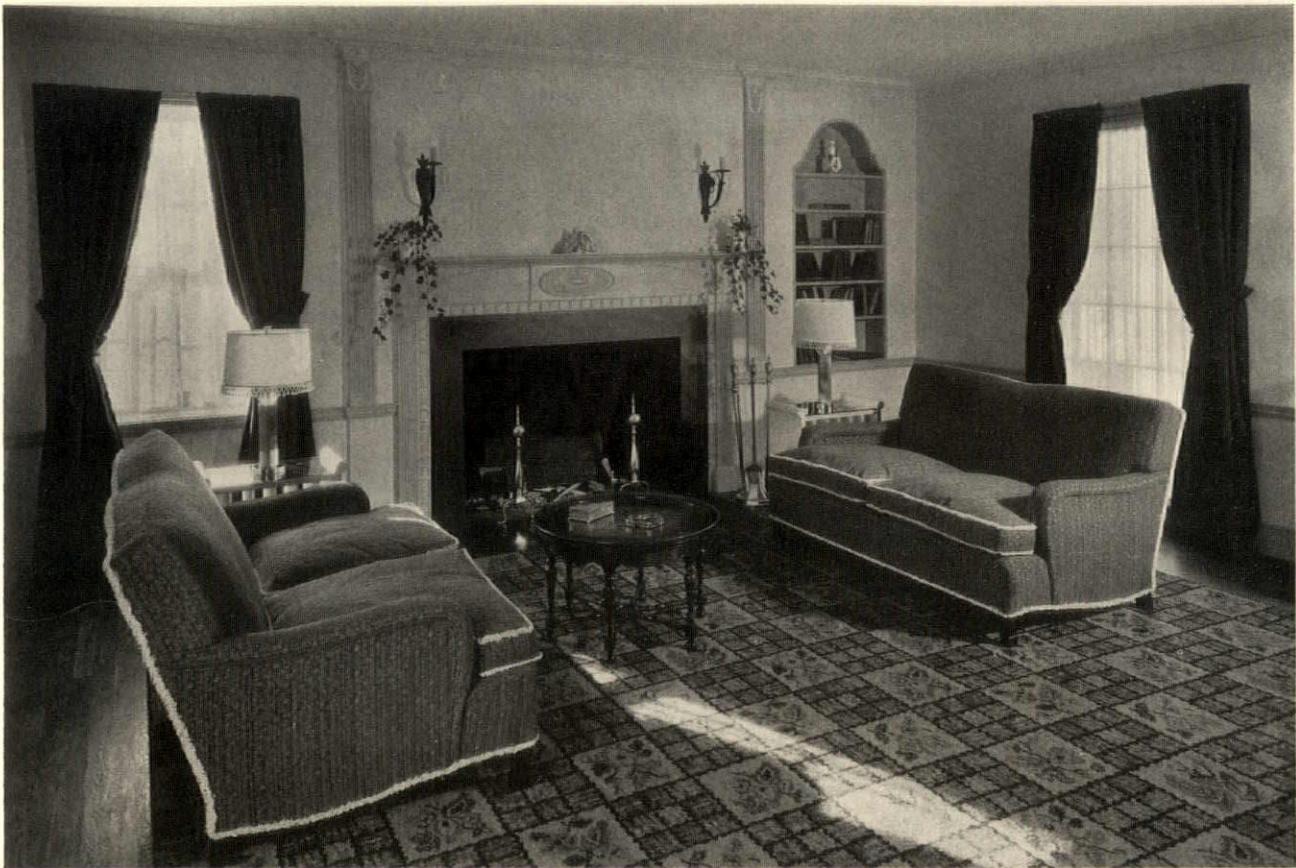
Photographs by  
Richard Averill Smith

Fieldstone, smooth siding, stucco, and shingles have been combined in the exterior walls. Black slate covers the roof. Under the porch a white smooth-textured stucco is used to define more clearly with sharp shadows the grace of the rectangular columns and the flat elliptical arches. The deep wood frieze of the stone wing is decorated with a pattern of auger holes



« ARCHITECTURE »  
MARCH, 1935





Photographs by  
Richard Averill Smith

*Walls and woodwork in the living-room are a soft aquamarine blue. A hooked carpet has a beige background with pattern in old rose and blues. The seats are in blue with white silk moss fringe.*

*The library has mellow maple woodwork, with map murals by Philip Hornthal*



« ARCHITECTURE »

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Photographs by Richard Averill Smith

*Printed linen curtains of beige ground with cherry, green, and apricot floral pattern, harmonize with an American wall paper and the apricot background of the corner cupboards*

*In the master's bedroom there is a wall paper of white ground with gold motifs; the festooned curtains are greenish gold; the carpet of jade green chenille*



« ARCHITECTURE »

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## 1—GRANITE

FOR a stone of ruggedness, strength and beauty the architect does well to weigh carefully the potentialities of granite. There may be certain varieties of this stone that will suit his purpose better than others. He may wish to apply certain tests to see if it is all that he hopes, for instance, as regards color. The latter may vary so greatly with different finishes that a knowledge of varieties is necessary to secure a color match; when one is polished and the other is rough the differences are surprising.

The architect should protect himself when specifying granite by ascertaining the latent defects which may be in the type he is specifying. These will include knots, streaks, and other markings which, while not really "defects" in the usual sense, may be contrary to what he visualized when specifying the granite. One architect specified his granite to be clear of all markings, such as spots, streaks, etc., not knowing that these were basic characteristics of the type he specified. When his superintendent rejected the granite because of this, the architect was called to the job and, after discovering the nature of the type he specified, accepted the stone delivered, not because it conformed in any manner to the specification, but because these markings gave "an interesting effect to the work"!

In selecting finishes there is one thing certain, and that is that a polished surface will be easier to clean than a rough or tooled surface. In localities where there is considerable soot and dust the architect should think twice before deciding on a rough surface. And here it might be stated that one of the reasons stone men do not like to see their work sand-blasted is that in this process there are too many minute holes formed in the cleaning which lower resistance to weathering and thus encourage deterioration. It seems likely that the action of sand-blasting in wearing down a surface is quite different from cutting with a chisel or saw, in that the surface is pock-marked with minute holes which hold dirt and moisture. However, polished granite is much more expensive than the other finishes.

There is one precaution among others which it may be wise to bring to the contractor's special attention—the loading of stone on the sidewalk bridge. Too often a load is put

# Better Practice

By *W. F. Bartels*

## GRANITE, STONE, MARBLE AND SLATE

on this temporary structure which is far in excess of any that it can safely carry.

The cutting and carting will of course be included in the contract, with all the cutting that is possible being done at the shop to keep down the cost.

Assuming the base course of a building to be of granite, it is well to make sure that a good foundation has been provided, because of all things this is most necessary to a successful stone job. The first course of stone should be at least three inches below the level of the finished sidewalk, with a joint left between it and the sidewalk. This joint should be calked on completion with an elastic calking compound, which will permit a slight movement to take place without harm either to the stone or sidewalk (Fig. 1A). The granite should of course be anchored—preferably to the steel work if it is a steel structure.

In rubble stonework the architect should call for the proper bonding of the work by means of an occasional course running through the thickness of the wall. In fact, most building codes call for the use of these stones throughout the work, and specify in many instances the frequency of their use. When field stone is used for veneering poured concrete, it is highly desirable that the stone and ties be in the form before the concrete is poured. Then the puddled cement will be able to flow around the stone and hold it more firmly than by any means subsequently introduced (Fig. 1B).

While veneer work of stone for frame dwellings is not overly desirable, it may be reasonably satisfactory if certain precautions are observed. Among these will be to see that the stone veneer is started from a good foundation and not from one just a foot or two under the ground level. The sheathing must be covered with a heavy waterproof paper. Adequate anchors must be provided, and, finally, adequate lin-

tels to carry the stone over window and door openings.

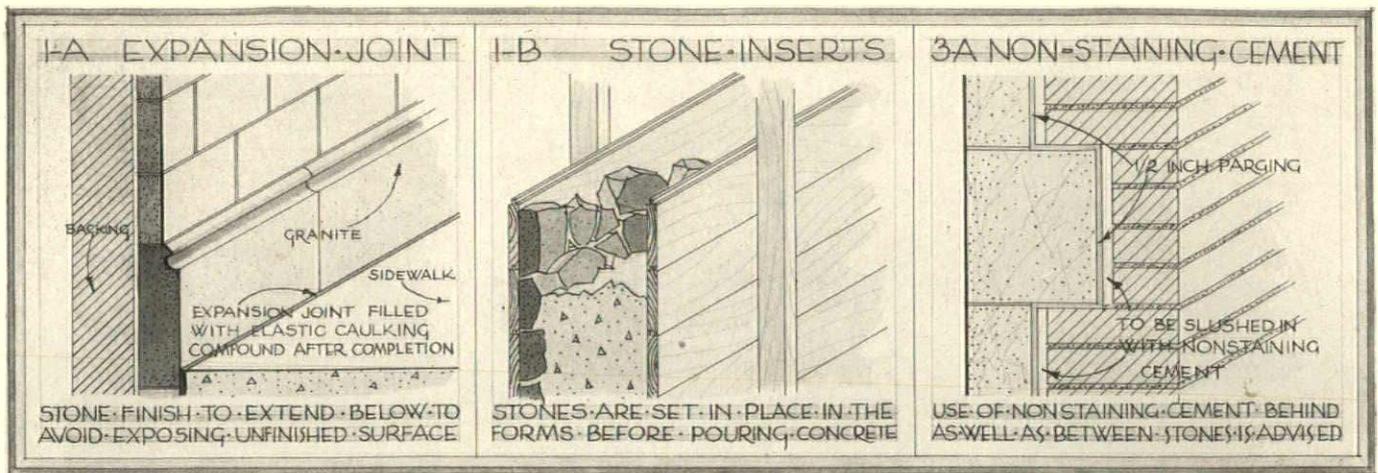
## 2—STONE

The kind of stone specified by the architect will in a measure depend upon the requirements he has laid down, as well as the physical characteristics, such as being impervious to stain and resistant to weathering. It is important that the architect call for samples to be submitted which will show the range of color as well as the surfaces, *in the finish that is to be used*. Too often disappointment is experienced in stonework because the surface irregularities for a single type look different under various finishes.

The architect should eliminate as much field cutting as possible. This is always more expensive than shop work, as well as causing delays and thus adding indirect expense. Carting is another item which the stone contractor must do himself or have done under his direction. Then there is no possibility of his shifting the blame for broken or chipped pieces.

## 3—PROTECTION

The contractor's attention should be called particularly to the protection of the stonework. First will come such items as preventing the sidewalk bridge or other structure from coming in contact with the stone. Ornamental sills and other projecting features of work must be protected by proper boarding. The boards or lumber used for this protection, and in the crating of the stone, must be selected with a view of eliminating all those woods having a deleterious effect upon the stone, such as oak, walnut, or chestnut. Then too, any paper that comes in contact with the stone must be such that will not stain the stone. The work under construction must be protected from mortar droppings, as well as from any water that may come down from concrete or other work going on above. This water would in all probability stain the stone in an undesirable manner. Another source of stain is from capillary attraction, such as would occur where a piece of stone sets directly upon the concrete without any coating to prevent the staining elements from spreading upwards through it. This can be prevented by painting the bottom of the stone. Painting the sides, however, is not desirable, one reason being that it



prevents a good bond from being obtained.

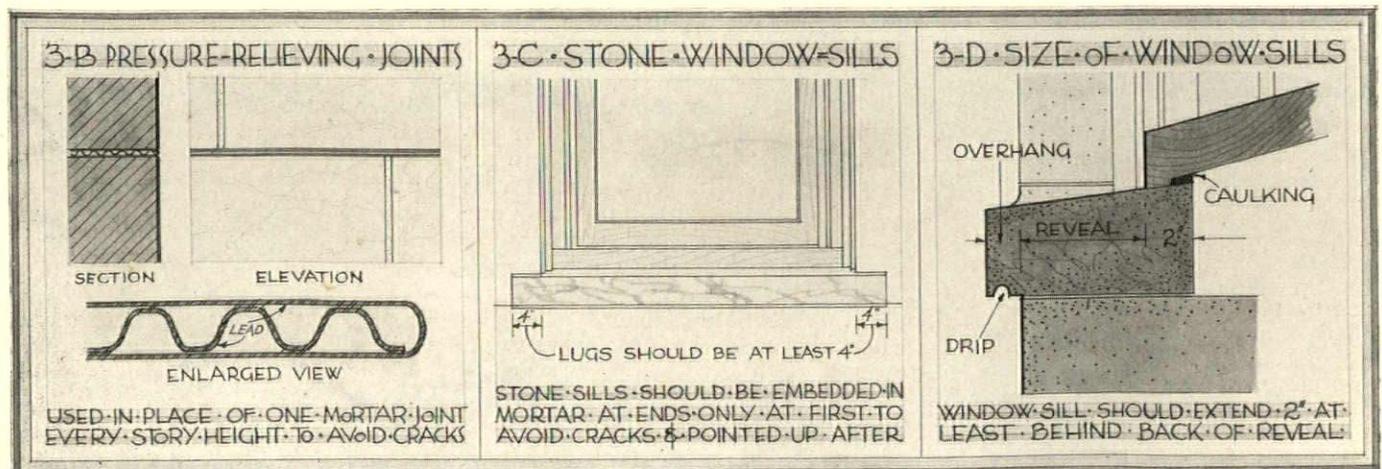
At this point it might be well to bring up the subject of the mortar and cement which, used in connection with stonework, is likely to stain. The cement should be a non-staining one. So too, the ingredients making up the mortar must be free from staining elements. This applies to both the sand and the water. Any salts which might cause efflorescence must be excluded. Some architects call for the parging or coating of the stone with a non-staining mortar. Then to keep expenses down they allow an ordinary mortar to be used for the backing-up work. If this inconsistent practice is analyzed it will be seen that it is short-sighted. The difficulty in keeping two batches of mortar separated, the use of possibly two mixers, and the use of two mortar tubs, not to mention the confusion of the men handling the material, will cost far more than the small additional amount that the non-staining mortar will cost. However, the contractor is apt to use only one kind of mortar, and that the cheaper of the two, although he may keep another on hand for show. Therefore it would seem far better to use non-staining mortar in the brick-

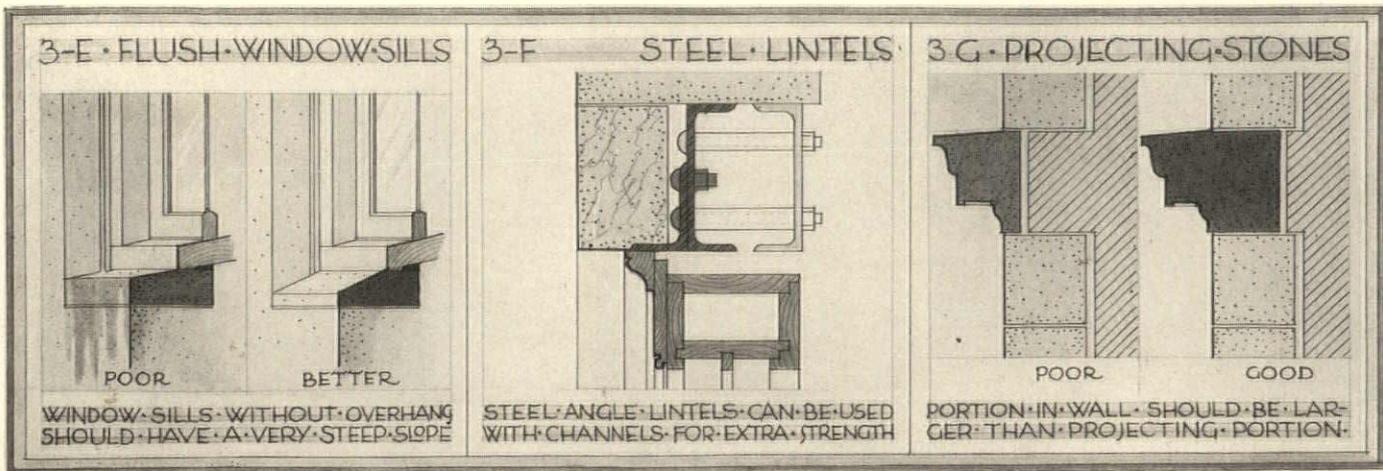
work, and, by having it slushed in between the bricks and the stone, there will be an additional safeguard against staining (Fig. 3A). Of course, no retempering of mortar should be allowed. It is advisable also to check over the kind of cement used, both as to its quality and its setting time. One contractor, who was engaged in setting a stone wall of the first story of a building, took several days to go up one story. The weather was cold but not below freezing. At the end of the third day he noticed that the wall had a slight bulge. He investigated everything, but the real cause was that the cement had not set. Upon finally discovering it, he had to take the entire wall down.

Too often in the past, stonework was disfigured by spalls and chips occurring after the work was completed. This has been largely eliminated by using pressure-relieving joints of a soft metal such as lead (Fig. 3B). Stone contractors are now anxious to use these because it prevents any criticism of their work. One architect, still skeptical as to their value, asked a prominent contractor who had erected hundreds of buildings, if these joints were all that they were claimed to be, and if they really did prevent chipping and

spalling. The contractor replied: "I can only say that where we have used them our stonework has been free from trouble and where we have not there have been numerous complaints."

The size of the stone units will depend upon several factors: for the surface area, principally upon the desired design; the thickness should be such that the stone units may be readily bonded in the brick wall (generally this is 4", with the bonding stone 8"). Sills should preferably be 8" wider than the opening beneath which they are to go. When set they should be embedded in mortar only at the ends so that any possible settling will not cause them to crack or split (Fig. 3C). The width of the sill should be at least 2" more than the amount of the drip or overhang plus the reveal (Fig. 3D). This is to make sure that there is adequate space under the sill for pointing and calking. The modern vogue in building has given us a façade that would brook no overhanging sill with drip (Fig. 3E). This is unfortunate, because there consequently is always a smudgy, dirty area below the windows where the dirt washes down upon the stonework. If there can be no drip provided, then the sill should be as steep as





possible and the sash practically flush with the stone, so that the sill is almost non-existent. The use of a narrow sill has a practical disadvantage, however, in that it affords a poor and insufficient foothold for the window-cleaners, with the result that these men cannot make the same speed they can on buildings which have wide sills.

Lintels are another item that should be given serious thought by the architect. Too often an interesting surface is marred by cracked lintels. The stone lintel is supported by a steel lintel which is capable of considerable deflection, while the stone it supports can be deflected only slightly or it will crack. Obviously, unless the steel lintel is sufficiently heavy and rigid, or in some manner stiffened, it will sag and allow the stone to carry the load, causing it to crack (Fig. 3F).

Where there are projecting stone units in a wall the portion embedded in the wall should be greater than the overhang. This will insure a firmer wall, will make the setting easier, and reduce the likelihood of the projection being knocked off if it is hit while the mortar is still green (Fig. 3G).

Where stonework is used as veneer for concrete, or where it passes a

concrete-encased column or other concrete work, the stone should be detailed so as to allow at least an inch clearance. No part of the stone should touch the concrete, and room must be allowed in case this concrete bulges slightly (Fig. 3H). Where a parapet wall has an exterior of stone the interior should not be of soft brick. If not of stone then it should be covered with a high flashing, so that the weather will not get into the brickwork and so down through the wall. The coping of a wall is a very important item and must be made waterproof. After the joints are raked out they should be calked with an elastic calking compound so that no water will go down through the wall. One architect had a very novel and satisfactory scheme which he used as a protection against the weather. This consisted of a U-shaped piece of hard zinc which he caused to be laid under the joint and embedded in the mortar at right angles to the coping. In the middle of this piece of zinc he specified a wire to be laid. When the mortar had set he called for the wire to be withdrawn, thus leaving a weep hole and passage for the water to run along to the outside of the wall (Fig. 3I).

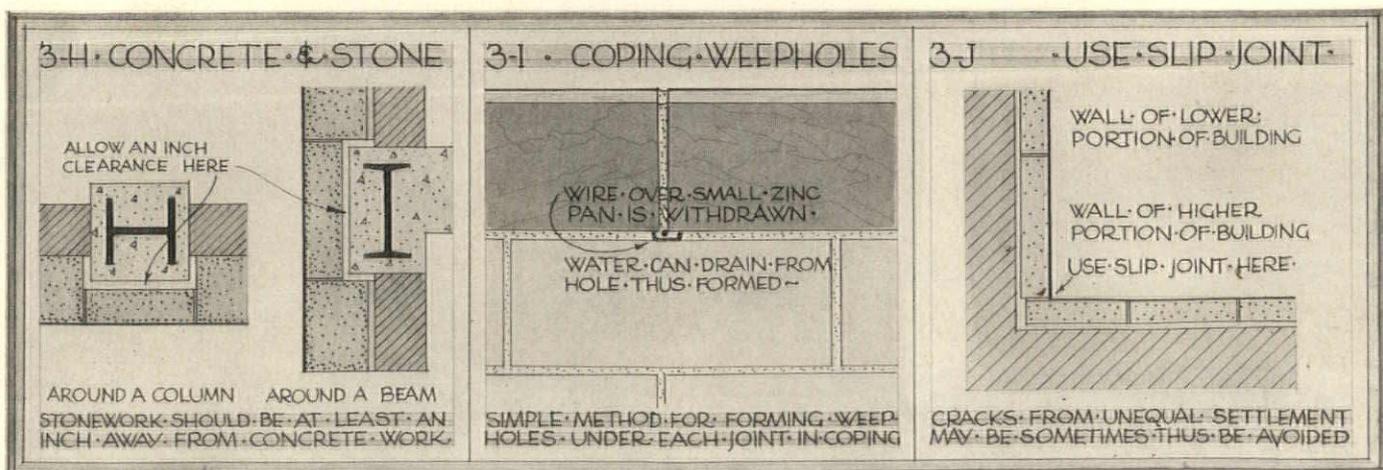
Where there is one portion of the

building of a greater height than another, the possibility of using a slip joint should be considered, as the weight of the stone may cause a greater settlement under the taller part than under the lower part, thus causing a crack to appear (Fig. 3J).

In specifying the setting of the stone it is better to have the stone mason furnish his own centres, if this is at all possible, so that there will be no misunderstanding of just what he wants. Then too, he will have a far better conception of what is needed than will most carpenters.

Most building codes call for stone to be laid in its natural bed, *i.e.*, the direction of the strata in the building must be the same as it was formed in nature. However, with some stones this makes no difference, as the grain is practically the same in all directions.

The architect should put the full responsibility for rapid setting up to the contractor, as a bulged wall or one that is out of line is often caused by the joints being squeezed by too quick an addition of the load. Wooden wedges may be used, but if they are they should be of soft wood and thoroughly wet before being used. A better plan is to call for lead buttons to be used. From a design standpoint, and a constructional



one too, joints should be *flush* and nothing but *flush*. Doing "trick" scoring will ruin the appearance of the best stone. And this applies to rubble stone as well.

No patching of stones should be allowed without the architect's specific consent in every case. It might be mentioned that the best time to see where these patches have been inserted is directly after a rainstorm, when the stones are wet and all irregularities show up with unusual clearness.

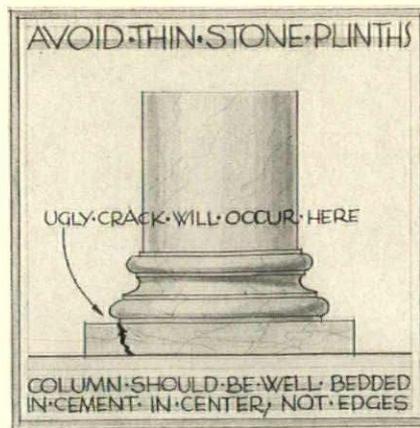
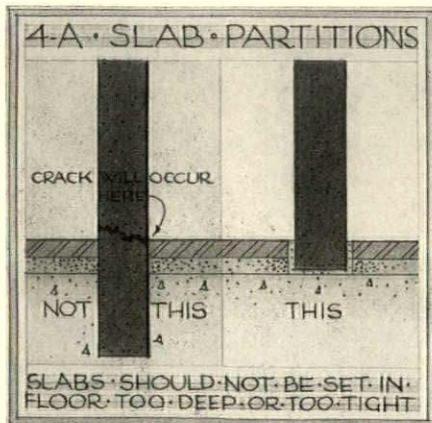
Anchors should be called for, both in size and the number to each stone. The anchors themselves should be galvanized. This costs very little more than anchors which are dipped or painted, and the small difference in cost is well worth while in the satisfaction of a job well done.

When the wall is washed down and pointed up, all wooden wedges must be removed. At this time the voids which were left under the sills should be well pointed up so that they will permit no water to enter here (Fig. 3C).

#### 4—MARBLE

For wainscoting, the appearance and coloring of marble is of prime importance. If the marble is to be used for flooring, then the architect will wish to know its resistance to abrasion. Where it is to be used for wall surfaces, the architect should specify the amount of waxing to be allowed. It is often highly desirable to call for liners (supporting pieces put on the back of the marble) which are added to prevent the slabs from breaking or cracking.

Besides being careful to include *all* the work in the marble contractor's specification, the architect should be sure to call for sufficient anchorage of the marble slabs. This is important. The holes are generally drilled on the job by hand, and a 10-gauge brass wire is used to fasten them in place. The wall or blocks must not be too close to the marble slabs, and



only enough plaster of Paris is required on the back of the marble to hold the slabs securely in place. In order that there may be no cracking, it is important to put no strain on the marble; hence the architect must guard against this in his details. Most architects wish the marble to be set with small joints, not exceeding one-sixteenth of an inch in width.

Where marble slabs are used in shower rooms, it is essential that they be properly supported at the top, preferably by metal rails of some description. Then too, the slabs must not be sunk into the floor too deeply, and a little space to move should be permitted so that in case of any expansion they will not snap at the base (Fig. 4A). While the marble itself will shed water, the joints are often not impervious, and it is a wise precaution to put a lead lining in back of the marble as well as under the floor in order that the finished job may be waterproof.

Plinth blocks and saddles are often anchored to keep them in place. Besides this, the saddles should be thick enough ( $1\frac{3}{8}$ " at least) so that they will not crack upon a slight settling or shrinking of the floor. Where a piece of marble is used as a border for a tile floor, as it may be in some cases, and adjoins a stair, the piece should extend back far enough so that it will not work loose from the constant pressure on the front edge. Unfortunately this type of construction is often used in a building of frame construction, and the marble has less foundation to rest upon and more chances of becoming loose by the settling of the building than in other types of construction. Where marble saddles or other pieces of marble are provided with anti-slip fillers, great care should be taken to protect the owner against the

possibility of these pieces chipping or otherwise becoming unfit for use. It must be borne in mind that any heat treatment used in connection with marble is very likely to have a deleterious effect upon it. When the architect is specifying the laying of marble floors he should call for each piece to be buttered with a cream of white cement before being laid.

#### 5—SLATE

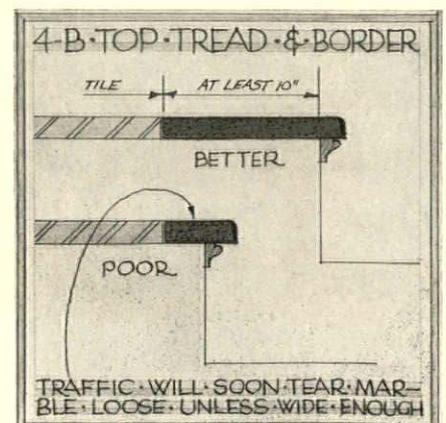
When the architect is specifying slate he should call for either clear or ribbon stock, and demand that it be free from defective veins. Generally the ribbon stock should be used.

There is also slate now produced with an applied finish which may be had in imitation of almost any marble or stone. As yet this has not been sufficiently widely used over a period of time for an authenticated record of its success to be available.

Slate forms an ideal yet inexpensive material for window sills where these may be subjected to extreme changes of temperature and exposure, such as in sun porches, conservatories, kitchens, etc. Then too, slate may be used for slip-sills in exterior work and is a great improvement over brick sills in that there are no joints to allow weather to seep through.

In elevator buildings with comparatively light traffic on the stairs, slate makes an ideal tread. The standard thickness is  $1\frac{1}{4}$ ", but where heavy traffic may be encountered it is more desirable to use treads 2" in thickness. Where slate treads are used care should be taken to see that adequate supports are provided.

Where slate is used for toilet partitions, chemical sinks, and other specialized uses, it should be remembered that this material is breakable if unsupported, and adequate provision should be made to see that it is firmly and properly held.



◀ ARCHITECTURE ▶

MARCH, 1935



*Base course, a light pink granite; superstructure of Harvest Hill sandstone—a rich golden buff with darker veinings. Ashlar courses were graduated from deep buff with pronounced markings at base, to light buff with pale markings at top*

## Post Office, Springfield, Ohio

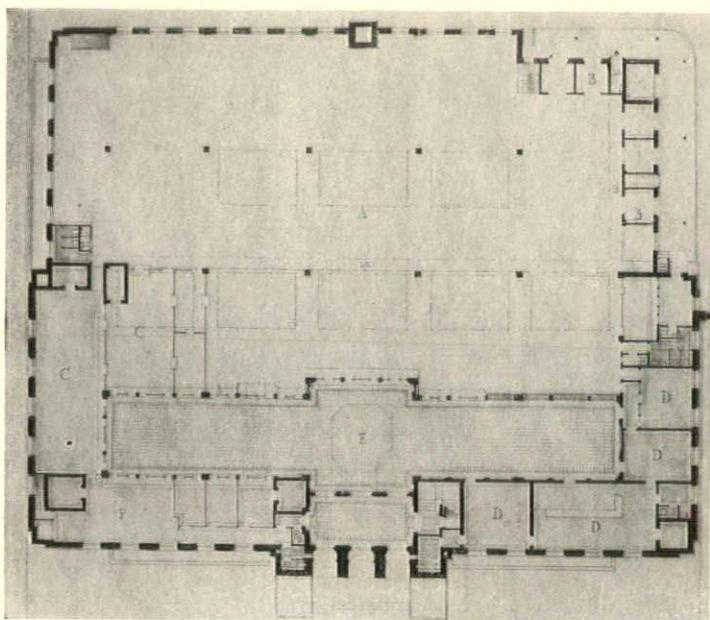
W. K. SHILLING, ARCHITECT

*Photographs by Weber & Harrison, Inc.*

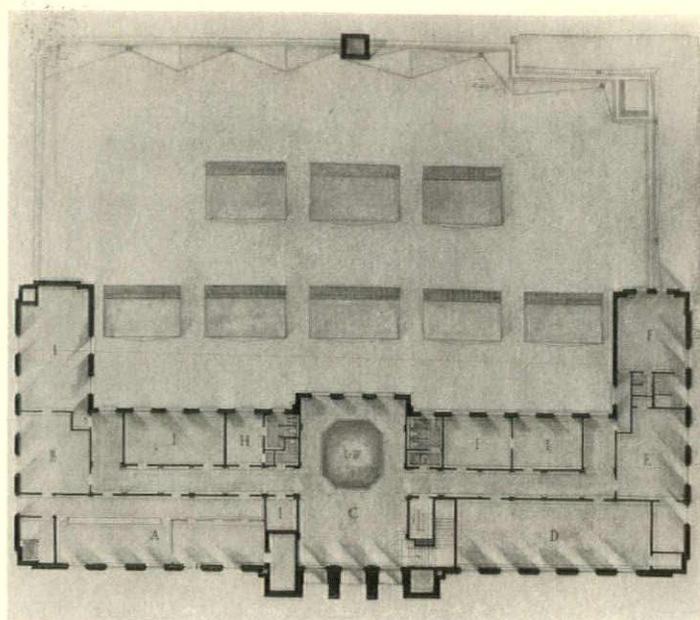
*Preliminary drawing of the front elevation*



◀ ARCHITECTURE ▶  
MARCH, 1935



*Plan of the first floor. A—work room; B—mailing vestibule; C—money order, registry, etc.; D—postmaster, assistant, and superintendent; E—lobby; F—railway mail and cashier*



*Plan of the second floor. A—internal revenue; B—internal revenue agents; C—stair hall; D—civil service; E—navy; F—inspector; G—men; H—women; I—unassigned*

*The lighting standards flanking the main entrance are of granite with the light sources in the top behind the shields of satin-finish aluminum*



*Principal corners were reduced by entasis to provide a base for the sculpture. All exterior angles are slightly rounded, increasing the radius toward the top*





*Looking across the front. Note the highlights on the vertical edges,  
resulting from the rounding of these angles*

« ARCHITECTURE »  
MARCH, 1935



*A daylight view of the main entrance, with which one may compare the night view on the opposite page. The eagles were modelled by A. Mazzolini, sculptor*

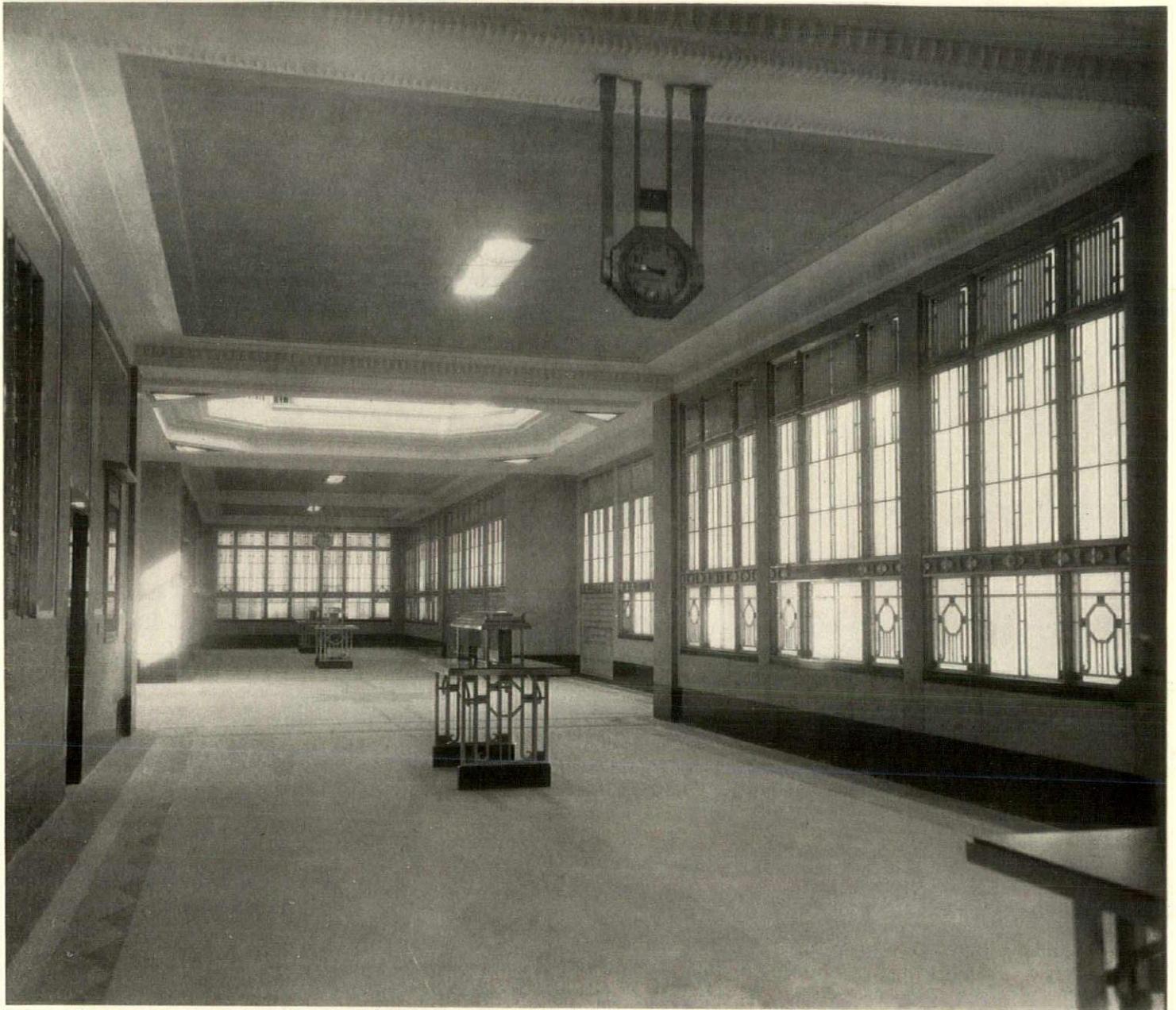
« ARCHITECTURE »  
MARCH, 1935



*Main entrance at night. Windows, doors, and other exterior metal features are of satin-finished aluminum. Spandrels and other cast work have a dust-blast background with ornament high-lighted*

« ARCHITECTURE »

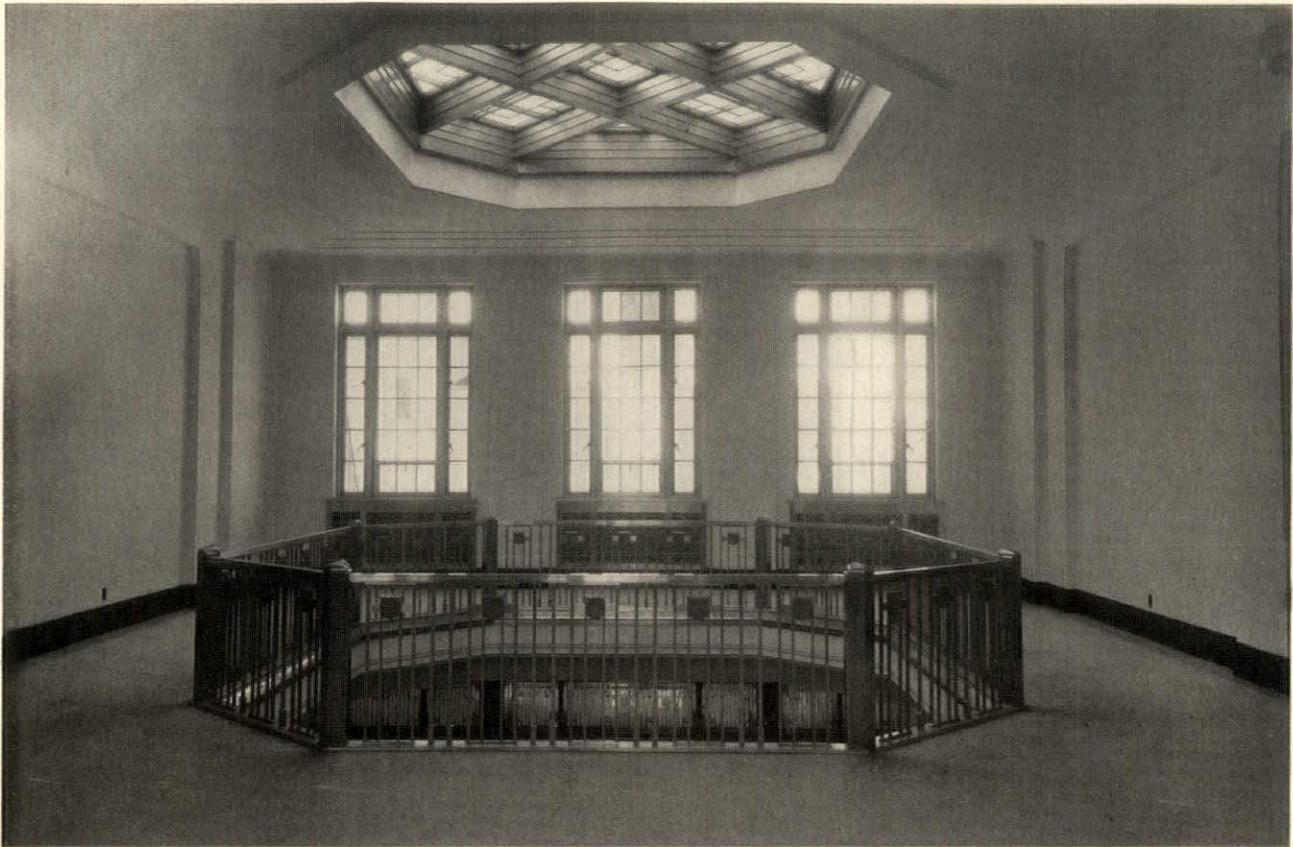
MARCH, 1935



*The lobby. This and the vestibule have walls faced with Pink Mansota marble in honed finish; a body color of deep pink with parallel veinings of ivory. The marble was cut to show these veinings running vertically. Base, counter shelf, and door trim are in Westfield Green marble. Floors are terrazzo, with black-and-white marble borders. Terrazzo field is white, with borders, central feature, and directional paths formed of red-and-blue marble chips. Interior metal work is of aluminum with background of cast work in a dust-blast finish and the raised ornament polished; all other portions are satin-finished. Main ceiling panels are of acoustical plaster, tinted a light ivory*

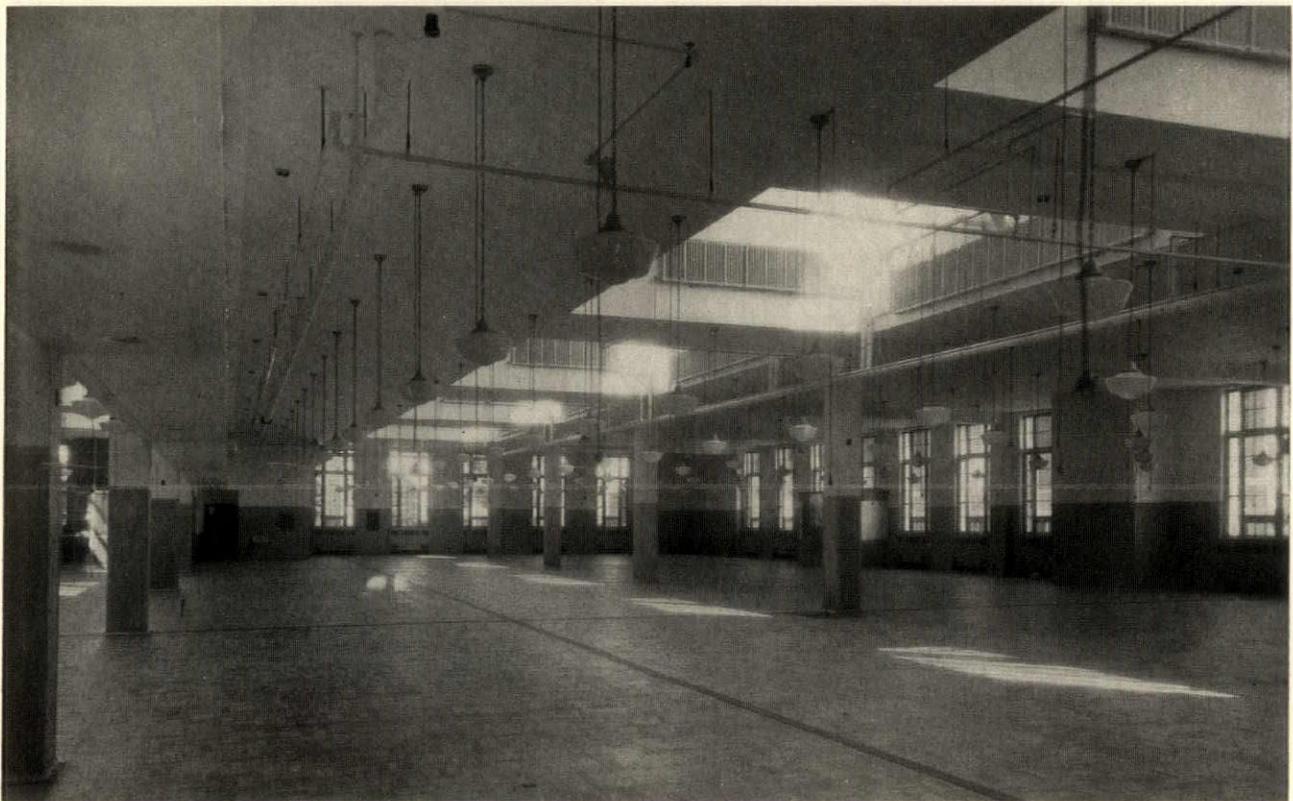
« ARCHITECTURE »

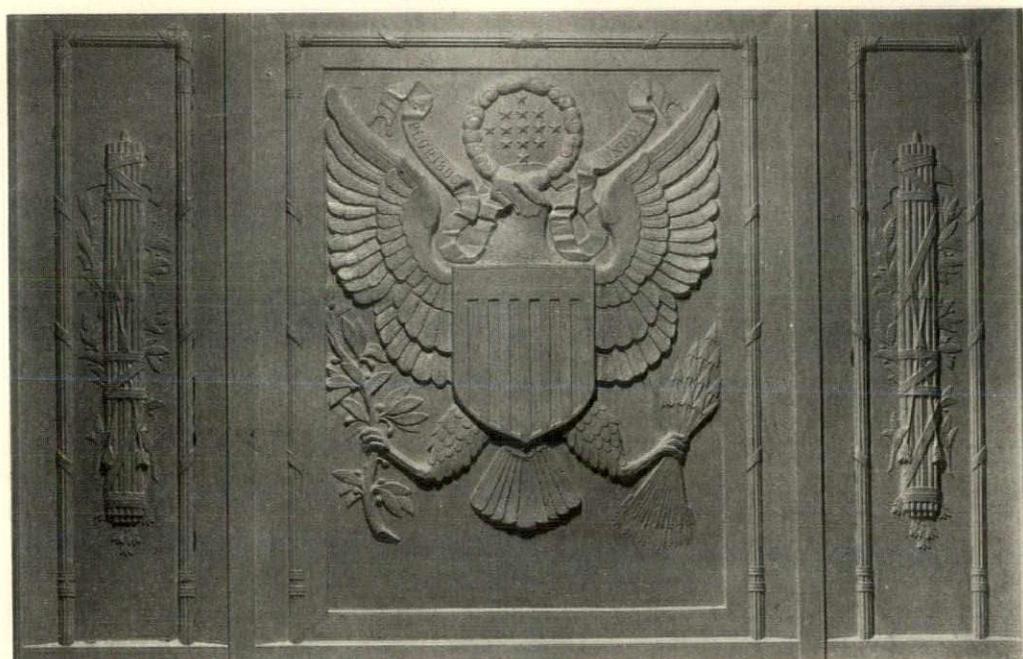
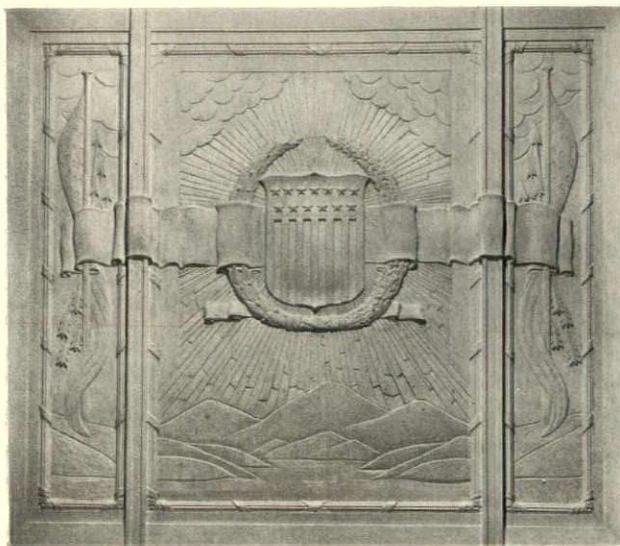
MARCH, 1935



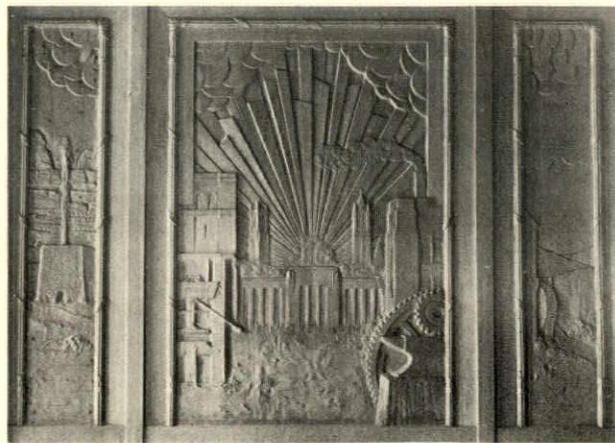
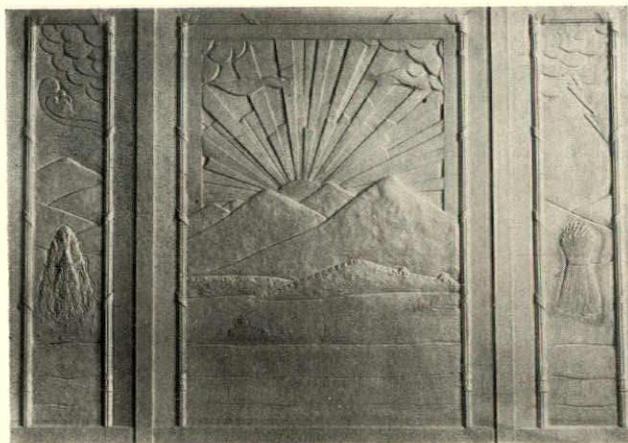
*The lobby on the second floor, showing the light well*

*The work room, which occupies a large part of the first floor, and which, as is customary in post-office work, makes no architectural pretensions*





*Models for spandrels : at top, window spandrels ; centre, for over middle door of main entrance ; below, main entrance spandrels, that at left representing the State of Ohio, that at right representing the city*





# The Architectural Observer



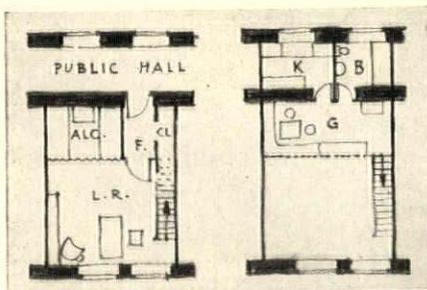
**POLHEMUS & COFFIN** have combined the advantages of a permanent shelter with the color accent of the awning, in the treatment on this gable wing in a house at



Woodmere, Long Island. The roof of the hood is of copper with standing seams, the spaces between these seams being painted alternately dark blue and China yellow. The copper valance, which is backed up with thin wood, is also painted.

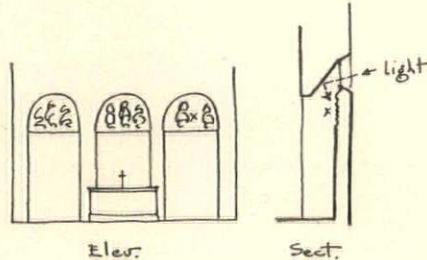


**AN** ingenious scheme for practically doubling the floor area of an old high-ceilinged apartment



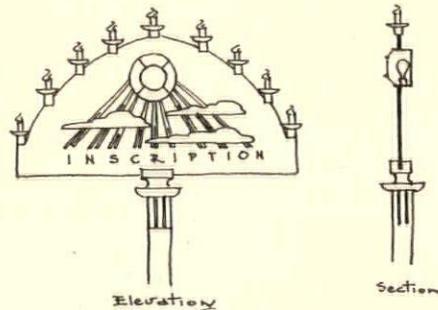
building is that devised by E. Vastner and F. Waage, architects of Vienna, as published in *Profil*. The plans make clear the introduction of a mid-story gallery, extending only partly over the original apartment but also over the adjoining public corridor. Obviously the scheme depends for its success upon the fact that the corridor runs along an outside wall, permitting of light and air through windows at the back of the gallery.

**IN** the Engelbreckt church, Stockholm, L. I. Wahlman, architect, achieved an effective lighting in the three low-relief sculptured panels in



the reredos. The source of light, as the diagram shows, is invisible from inside the church.

In the same church there is an unusual candelabrum in sheet iron.



The sun's rays are of sheet iron, gilded and fastened to the main plate. Clouds are of black iron put on over the rays. The sun itself is opal glass with a light behind it.

**DID** you know that outside of the ordered and delightful town of Bath, England, there is this bridge—a most unusual combination of thoroughfare and classic shelter? One of our correspondents, who has just been giving himself the pleasure of measuring it in detail, has been tremendously impressed with its structural sincerity and its purposeful repose.



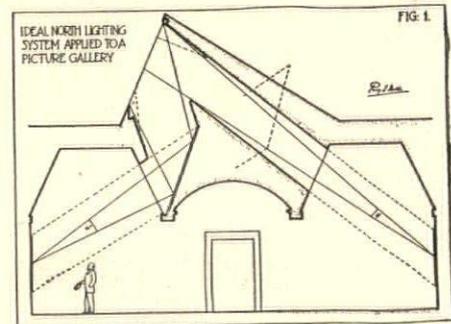
**THE** troublesome problem of circulation between the main structure of a house and an offset lower wing has been solved by R. C. Hunter & Brother, architects, in this



house at Hackensack, N. J., in the somewhat unusual form indicated by the photograph.



**THE** natural lighting of galleries, museums, studios, etc., presents a problem which has been solved most ingeniously by Percy E. Nobbs, F. R. I. B. A., the general principles



of which are made clear by the section herewith. The opening in the roof is turned to the north, and is divided so that half the light strikes one wall, the other half being reflected by a mirrored surface to strike the other wall. Since it is frequently desirable to show gallery subjects with less light than the maximum available, a scheme of shuttering the roof opening is provided.

## BOOK REVIEWS

**COLOUR IN EVERYDAY ROOMS.** With Remarks on Sundry Aspects of Decoration. By BASIL IONIDES. 115 pages, 7¼ by 9¾ inches. Illustrations from photographs. Printed in Great Britain. New York: 1934: Charles Scribner's Sons. \$3.75.

There are many books on color these days, most of them perhaps dealing with abstract theories as to its use. Mr. Ionides, on the other hand, gets down to cases, and tells how his experience as an interior decorator prompts him to use color. The book is full of practical suggestions, tersely expressed, such as "pale colours cannot be seen without light . . . brilliant colour is never gaudy in a dark room."

**BOECKH'S MANUAL OF APPRAISALS.** By E. H. BOECKH. 271 pages, 5½ by 8½ inches. Illustrations from photographs. Indianapolis: 1934: The Rough Notes Company, Inc. \$5.

There have been numerous books dealing with the intricate problem of estimating building quantities and costs. Here is perhaps the most elaborate attempt ever made to codify the appraisal of buildings as to reproduction costs. The system provides for an adjustment factor for each locality, based upon a few local prices and wage figures which are translated into the above factor by Major Boeckh's organization. The book includes a set of working sheets for a comprehensive set of field notes.

**CONSTRUCTION MATERIALS INDEX.** Compiled and classified by E. L. NORBERG. 191 pages, 8¼ by 11 inches. Pamphlet binding. San Francisco: 1934: Construction Materials Research Company, 329 Minna Street. \$10.

The result of an effort by various organizations of architects and producers in California to compile a comprehensive source of information. Here the architect may find the makers of various materials, and also an index of literature—in periodical or book form—concerning many phases of architectural work.

**RAMESES TO ROCKEFELLER.** The Story of Architecture. By CHARLES HARRIS WHITAKER. 360 pages, 6 by 9¼ inches. Illustrations from photographs and drawings. New York: 1934: Random House. \$3.50.

A history of man's efforts to build, written for the layman, through which runs unbroken a strong thread—the author's contention that man has always been exploited in his building by empire makers, by priests, by entrepreneurs. From the days when man built to satisfy a king's desire to make safe his own welfare in the hereafter, through the Greek temples, the Roman empire building, the cathedral building, and up to the present time, man has never been allowed to build for his own purposes and to make the world a better place in which to live. Incidentally, Mr. Whitaker regards the coming of the architect as the beginning of the end so far as the craftsman builder was concerned.

**A STUDY OF THE PROPERTIES OF MORTARS AND BRICKS AND THEIR RELATION TO BOND.** By L. A. PALMER and D. A. PARSONS. 36 pages, 6 by 9 inches. Illustrations from graphs. Research Paper RP683. Pamphlet binding. Washington: 1934: Bureau of Standards, U. S. Department of Commerce. 5 cents.

**SING, OLD HOUSE.** Hallmarks of True Restoration. By MARION NICHOLL RAWSON. 414 pages, 6¼ by 9¼ inches. Illustrations from drawings. New York: 1934: E. P. Dutton & Company. \$5.

Here is an able, well-written exposition of the true romanticist. Mrs. Rawson has no patience with any one who modernizes a really fine old house—she prefers candles to electricity, an old well to a modern water supply, and all the other things that would take us from 1934 back to 1700.

**LIGHTING CALCULATIONS.** By H. H. HIGBIE. 503 pages, 6 by 9 inches. Illustrations from diagrams and photographs. New York: 1934: John Wiley & Sons, Inc. \$5.

The author is professor of electrical engineering, University of Michigan, and a past president of the Illuminating Engineering Society. The book is largely educational, but perhaps even in larger measure a source book of lighting data. With our increasing knowledge of the theory of light and its use, the actual measurement and quantitative provision for light has followed far more slowly. With the book are transparent protractors and scales for the accurate estimate of quantities.

**INFLUENCE OF NEIGHBORING STRUCTURES ON THE WIND PRESSURE ON TALL BUILDINGS.** By C. L. HARRIS. 38 pages, 6 by 9 inches. Illustrations from diagrams and photographs of a model. Bulletin No. 43. Pamphlet binding. State College, Pa.: 1934: Pennsylvania State College Engineering Experimental Station. 50 cents.

Results of an investigation with a scale model of the Empire State Building in a wind tunnel at the Bureau of Standards.

**ALBERT DESIGN CHARTS.** Prepared by ODD ALBERT. Separate sheets, 8¾ by 11 inches. East Orange, N. J.: 1934: Opla Company, P. O. Box 66. \$2.40 for set of 24 charts.

A series of ingenious aids in the design of concrete beams, columns, slabs, and the like. These graphic expressions present the theories, formulas, and computations involved in reinforced concrete design.

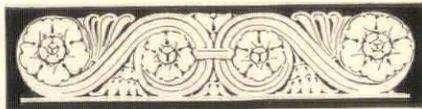
**CONDENSATION OF MOISTURE IN FLUES.** By WILLIAM R. MORGAN. 22 pages, 6 by 9 inches. Illustrations from graphs. Circular No. 22. Pamphlet binding. Urbana, Ill.: 1934: University of Illinois. 30 cents.

*Wednesday, January 2.*—Statisticians have discovered a lot of things in the last few years—one of them, for example, being that we have no business to pay more than 25 per cent of our annual income for rent. Mr. Robert Whitten, who has done a lot of work for the School of City Planning of Harvard University, revises this to say that in the case of rented homes, not more than 20 per cent is a fair portion of our income for this purpose. And in the case of families with lower or medium incomes, 18 to 20 per cent is normal. So far there is nothing startling about that. But he goes on to say that in the case of owned homes, the annual payments are usually larger for two reasons: first, a part of the payment represents amortization; and second, that most people willingly lessen their other expenditures in order to own a home.

*Thursday, January 3.*—Carroll B. Merritt, the magazine's business manager, has recently returned from a survey of general business conditions between here and the Pacific Coast. He found a marked contrast in sentiment between the cities of the West and those of the Eastern seaboard, and ventures the opinion that the Eastern business man has his eyes too closely focused on Wall Street. In one Western city, taxes for 1934 were already 94 per cent paid; in another, on the edge of the drought belt, 1934 taxes were already 84.7 per cent paid; in another, savings bank deposits had gone up \$2,000,000 in five months; in several cities the dearth of houses renting from \$50 to \$75 per month is now seriously felt, with every indication that we are on the verge of tremendous activity in the construction of moderate priced detached homes.

*Friday, January 4.*—Arthur Holden, who has for some years spent much time and thought on the combined problems of architecture and rehabilitation, thinks that there may be a better road to recovery than that leading through public works in scattered housing projects. This road that beckons encouragingly to him is the combination of private interests through group co-operation for group replanning and group rebuilding of existing property. He would bring together the owners of a New York City block, have them pool their interests, tear down the hopelessly obsolescent buildings, and rehabilitate the others. To make possible this putting of a city block in order, Holden feels that the Government could well afford to loan money, with a speeded-up amortization, at 2 per cent.

*Saturday, January 5.*—Up to the Metropolitan Museum to see the Thirtieth Exhibition of Contemporary American Industrial Art. A number of architects and craftsmen collaborated in producing it. As usual in these exhibi-



## The Editor's Diary

tions of late years, the craftsmanship stands out in relief. There are beautiful fabrics, glass, silver, pottery, yet the architectural setting impresses one as merely clever, rather than satisfying.

The story is told, an apocryphal one I am afraid, in which William Lescaze comes over to Archie Brown, working on the adjoining unit and says: "I have a lally column left over. I have used all the basic elements—the round corner, polished metal, the horizontal emphasis, the stark wall space, but have no place for my column. Perhaps you could use it on your porch." To which Brown, always eager to please, consents, hanging it to the cheesecloth ceiling to form a more or less structural element in his modern porch.

*Monday, January 7.*—V. G. Iden, of the A. I. S. C., says that over 1,100,000 tons of structural steel were fabricated and shipped during 1934. This is approximately 20 per cent above the amount fabricated and shipped during 1933. The depression did not show its full force in steel as early as it did in many other industries. The volume for 1930 held up very well with the average during the previous five years. Then in 1931 the volume dropped off one-third; it declined another third in 1932; in 1933 it reached its low of 25 per cent of normal. Not until the past few months has any appreciable upturn been noted.

*Wednesday, January 9.*—The conviction which has been very gradually taking its place in the minds of many of the younger architects hereabouts, seems to be gaining strength—a conviction that the principle of competition offers perhaps the only way out of our impasse.

*Thursday, January 10.*—I attend housing meetings these days with many misgivings, the chief among them being that I am going to hear over again the same old thing. However, both Henry Wright and Dwight L. Hoopingarner brought some new thoughts to a meeting of the Welfare Council this afternoon. Mr. Wright told us something of his experiences in travelling about the country with the three experts from abroad, and particularly recommending to our atten-

tion the preliminary report of the National Association of Housing Officials in Baltimore, which report sums up the experience and best judgment of the visiting experts.

Mr. Hoopingarner, who is associate director of housing in PWA, brought out a particularly striking point and one that is none too encouraging:

"In metropolitan areas where land values are relatively high, local taxes normally reach from \$0.90 to \$1.50 per room per month; operating costs figure from \$2.40 to \$3 per room per month; interest and amortization range from \$3.50 to \$4.50 per room per month. That means that we have a total of from \$6.70 up to around \$9 per room per month for the barest necessities in the financial schedules in order to maintain solvency—unless something very radically different is done or you have a complete governmental subsidy."

What seems discouraging is that with these fixed charges, even a considerable saving in the costs of the building cannot bring down materially the rental cost per room per month.

*Saturday, January 12.*—Jay Downer has been working at one job for about twenty-two years. In that time, with his associates, he has created the Westchester County Park system, with its Bronx River Parkway—one of the finest pieces of public landscaped highway in the United States, if not in the world. Mr. Downer thinks that it is time for him to take a vacation, and is motoring to Florida.

*Monday, January 14.*—The Princeton Architectural Society was good enough to invite me to the annual dinner tonight, when H. Van Buren Magonigle, Sherley Morgan, Jean Labatu, and Professor Charles R. Morey had come over from Princeton, with some of the undergraduates, to meet the Princeton architects practising in or about New York. Mr. Magonigle stressed the need for ideals, and for a far more nearly single purpose of the architect as a professional man—not a business man, not a "go getter," not a financier, but an architect. Henry Wright, who was also a guest, made the point that the time has come when the architect's function must be different—not the satisfying of a wealthy client, if there are any more such, but rather a new type of architectural service in which we may work more nearly for the community as a whole. Stephen F. Voorhees reconciled and blended the two rather widely differing points of view, pointing out the fact that with all of our new attributes of greater social solidarity, there is, and will be, ample opportunity for the architect as an individualist.

*Wednesday, January 16.*—The Government has taken its present course in the distribution of architectural work

for two major reasons: First, the avoidance of political pressure for preference; second, the need for haste in getting the public works under construction. Suppose now that the profession were to go to the Government with this proposal:

Adopt the one irreproachable means of allocating the design of public buildings—a means free from political pressure and favoritism; a means which stimulates the public's interest in its buildings; a means which is not new, but which has proven its worth in our national Capitol, many of our state houses, our cathedrals, etc.—Competition.

Decentralize the architectural agencies of the Government, just as its legal and financial agencies are decentralized—into, say, twelve districts corresponding to the Federal Reserve districts. Advantages: time saving; better understanding of local needs, methods and personnel; avoiding the increasing difficulties of putting all public building through the bottle-neck of Washington.

Select for each regional division a Director, appointed by the Supervising Architect from a list of names offered by the largest architectural organization in his region, appointment being for two or three years, with necessity for reappointment or replacement periodically on the same basis.

Make each Regional Director responsible for the allocation of Government work, with the provision that the principle of competition shall govern wherever possible. On small work, where the Regional Director finds individual competitions impracticable, there is the possibility of holding competitions for the selection of architects in groups—offering a typical problem rather than a special one, and selecting thereby the needed number for the small works in hand.

In all competitive choices the Regional Director should have the power and duty of providing for an assurance of ability to execute as well as to design, the untried winner of a competition being made to associate himself with experienced men in the execution of the work.

Where even the group competition and a typical problem seem impracticable, the Regional Director shall select an architect from a list of those who have qualified (through a competitive test or by presentation of professional credentials), selecting a name either in rotation or because of special qualifications, *with public announcement of the fact.*

The Regional Director's office would act just as the Supervising Architect's office at present, in taking care of maintenance and other minor problems connected with Government buildings. It would provide the architects with whom it deals with the standards and other guides resulting from the Government's collected experience. It would act as the client's liaison officer between the Governmental department for which the building is designed and the architect, as

well as with the general and sub-contractors.

Supervision of the work is best done, as now, through especially qualified engineers and inspectors, on whom the full responsibility for supervision rests; with, however, the provision that the designing architect is retained on an advisory basis, his contract providing that he must spend a specified minimum time at the job, making his recommendations as to interpretation of the drawings and as to changes that seem advisable, to the Regional Director's office instead of to the contractor.

There are probably plenty of minor faults inherent in the above as a program, but it seems to provide a better and fairer procedure and a permanent arrangement to replace the present process, which all admit is for an emergency only.



*Thursday, January 17.*—Mr. B. Charney Vladeck told the architects at the League, some time ago, what he thought of them, and although, when we printed the speech, some of our readers took umbrage at his remarks, those who heard his views liked them so well that they got him to come back again today and tell them, more forcibly and more in detail, what is wrong with the profession. And once more I am going to seize the opportunity of printing these remarks in the thought that what an intelligent layman thinks of us, it is good for our souls to hear.

*Friday, January 18.*—Administrator James A. Moffett has appointed a Housing Advisory Council of the Federal Housing Administration; the membership consists of twenty-five men, and the architectural representation includes Frederick L. Ackerman, Sullivan W. Jones, and Stephen F. Voorhees. Other members of the Council represent construction, materials, labor, city planning, and finance.

*Monday, January 21.*—Austria is apparently architect-conscious, for she has issued a set of charity stamps commemorating her famous architects. The only inference that makes us uneasy in this is the word "charity."

*Wednesday, January 23.*—The Producers' Council Club started a splendid thing when it inaugurated its series of luncheon meetings, designed to bring to producers and architects a wider and more detailed knowledge of available materials. Today Harold R. Berlin, head of the acoustical department of the Johns-Manville Corporation and president of the Acoustical Materials Association, told us a lot of interesting things

about noise—how it is produced, transmitted, reflected, absorbed, received by the ear, and passed on to the brain. A particularly interesting phase of the demonstration, which included a lot of apparatus, motion pictures, and the like, consisted of models in which beams of light were made to represent lines of sound waves, and in which the slight change of a ceiling or wall profile produced visible changes in echo concentrations in certain points of the interior. No longer is the achievement of satisfactory acoustics in an interior a matter of rules-of-thumb experimentation. The basic principles are clearly understood and their effects easily demonstrable.

*Thursday, January 24.*—A large group of men came to the League today by reason of an interesting prospect suggested by speaker and title: Norman Thomas on "Experts Without Clients." Mr. Thomas's belief is that the day of the gold (or gilt) era in American building has gone and will never return—that is the era in which architects served, as in most previous epochs, the wealthy patrons. The future seems to hold plenty of opportunity, but it is one, in Mr. Thomas's opinion, by which the expert will serve more generally through real large-scale planning rather than through wealthy patrons of the arts. He seized the opportunity of pointing out a fact that most of us now realize, namely, that real estate, as we know the term, and home building are inimical; that a large part of the reason why a people has not built for itself better homes, is the indefensible practice of allowing increasing land values—a true product of the community—to be exploited for private profit. Of course, incidentally, the land owner at the moment is bearing the heaviest burden of all, for with his advanced increments of value have marched assessments and taxes at an even faster pace.

*Saturday, January 26.*—I was telling Eric Gugler today at luncheon my impression that the architects may have lost something of the standing they should now have with the public through too great insistence on the æsthetic side of their service. I have a feeling that the layman would be far more impressed by a service which assures to him a well-planned, economical building, soundly built and easy to maintain, than he would be by a service which promises him beauty alone. Nevertheless, Gugler says that there are those in the profession—among the members most revered—who believe just the opposite: That the architect would stand much higher in the estimation of his fellows if he were known more definitely as a creator of beauty in buildings, particularly in these days when beauty is beginning to have a tangible value in commercial circles. Well, it's an interesting subject for debate.

NUMBER 101 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS  
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

# ARCHITECTURE'S PORTFOLIO OF MOLDED BRICK

*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

❖ 1930  
CASEMENT WINDOWS  
FENCES OF WOOD  
GOTHIC DOORWAYS



*Below are the subjects of  
forthcoming Portfolios*

Dormer Windows

APRIL

Entrance Seats

MAY

Overdoors, Interior

JUNE

Brick Cornices

JULY

Signs

AUGUST

Chimney Offsets

SEPTEMBER

*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.*

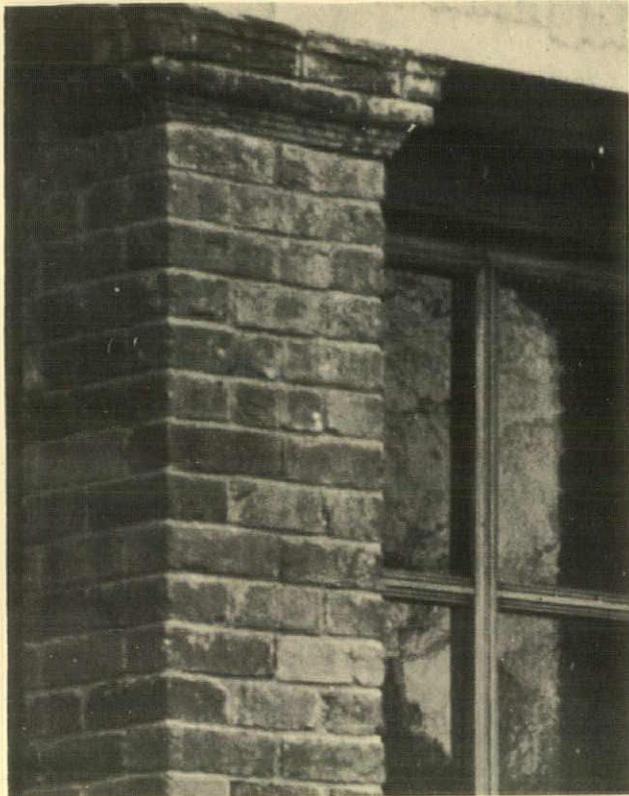
1931 ❖  
BANKING-ROOM CHECK DESKS  
SECOND-STORY PORCHES  
TOWER CLOCKS  
ALTARS  
GARAGE DOORS  
MAIL-CHUTE BOXES  
WEATHER-VANES  
BANK ENTRANCES  
URNS  
WINDOW GRILLES  
CHINA CUPBOARDS  
PARAPETS

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



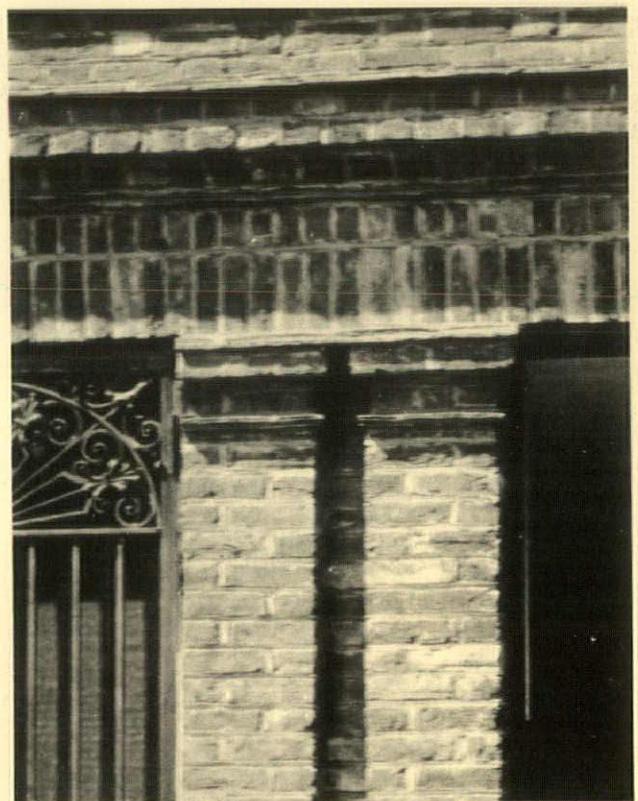
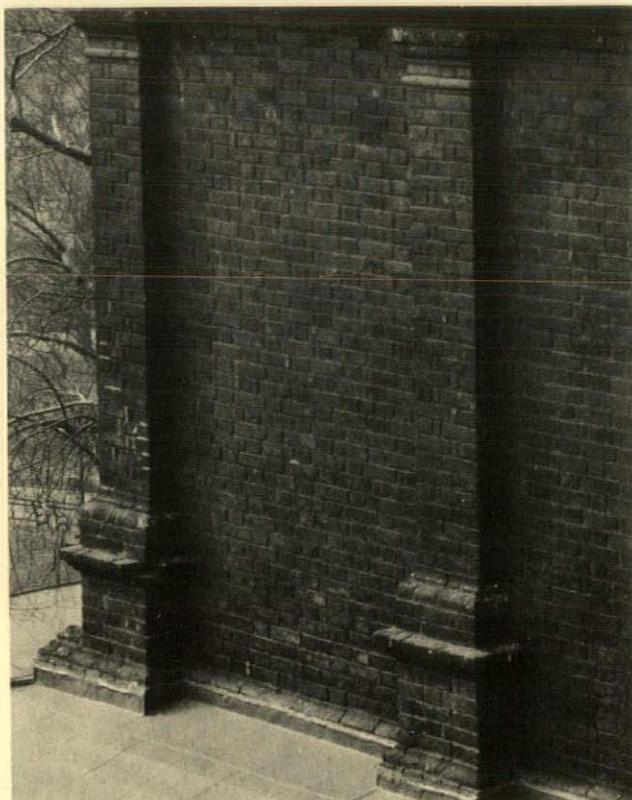
*Darien, Conn.  
Wesley Sherwood Bessell*



*Saffron Walden,  
England*

*Tower, Independence Hall,  
Philadelphia*

*Mount Row, London*





*Yale University, New Haven, Conn.  
Delano & Aldrich*

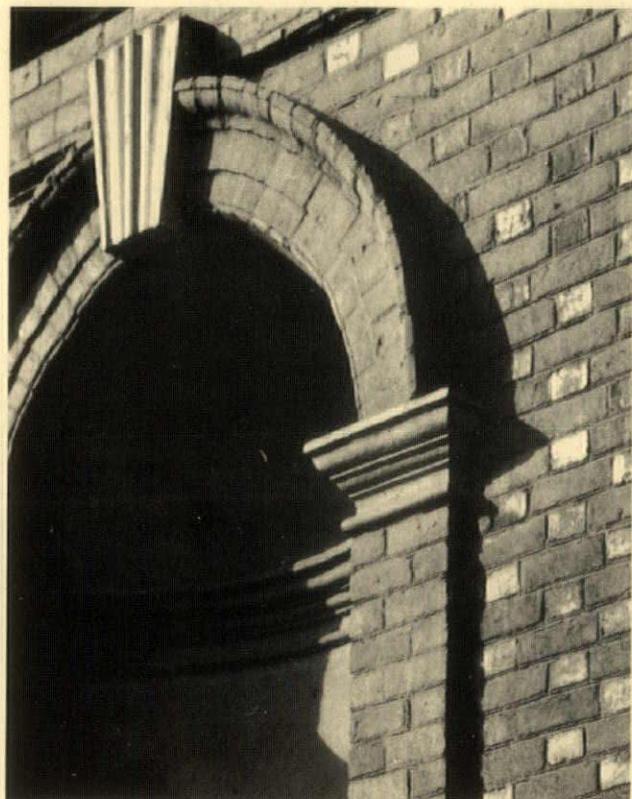
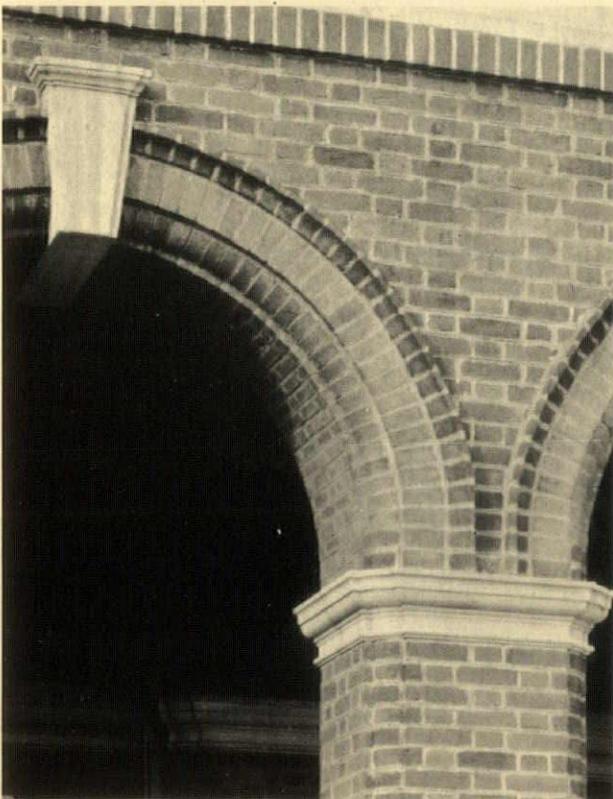


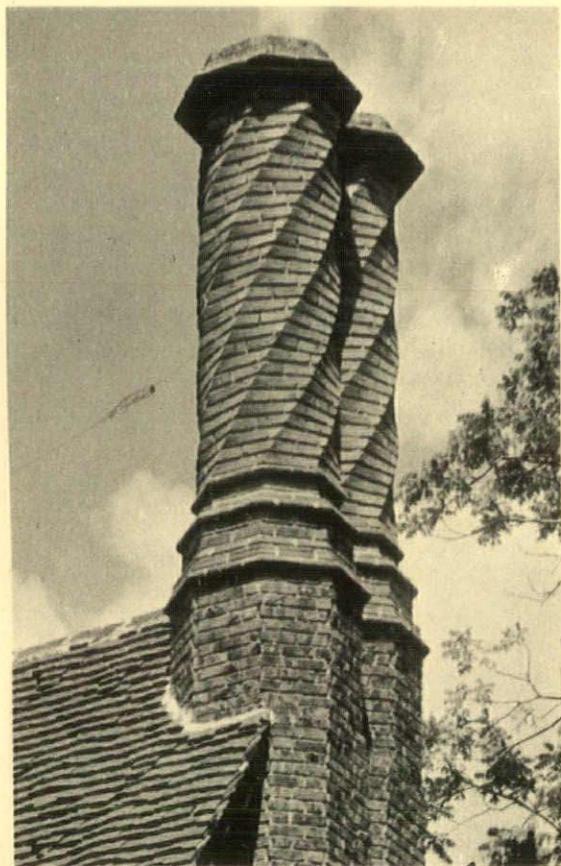
*This Chapel  
Erected and Dedicated to the Glory of GOD  
A.D. - 1931.  
The Gift of Paul Block, Esq.*

*Hotchkiss School, Lakeville, Conn.  
Delano & Aldrich*

*Wilmington, Del.  
E. William Martin*

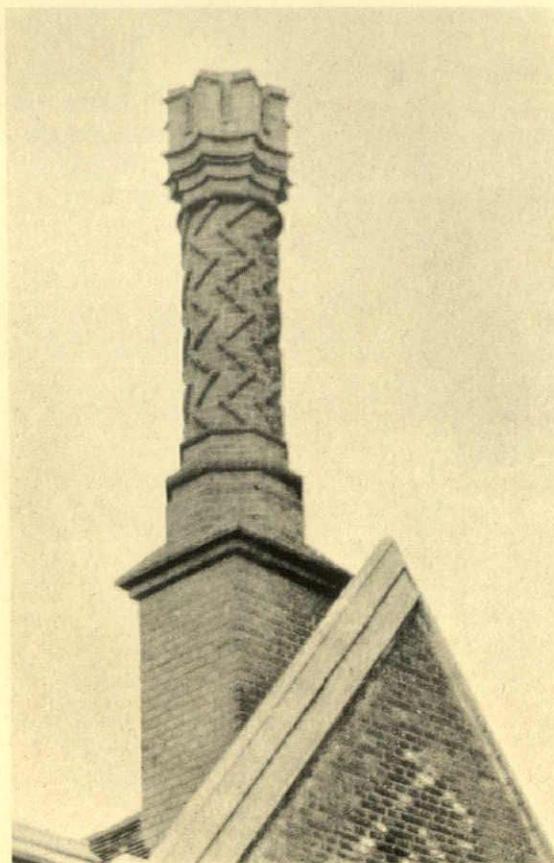
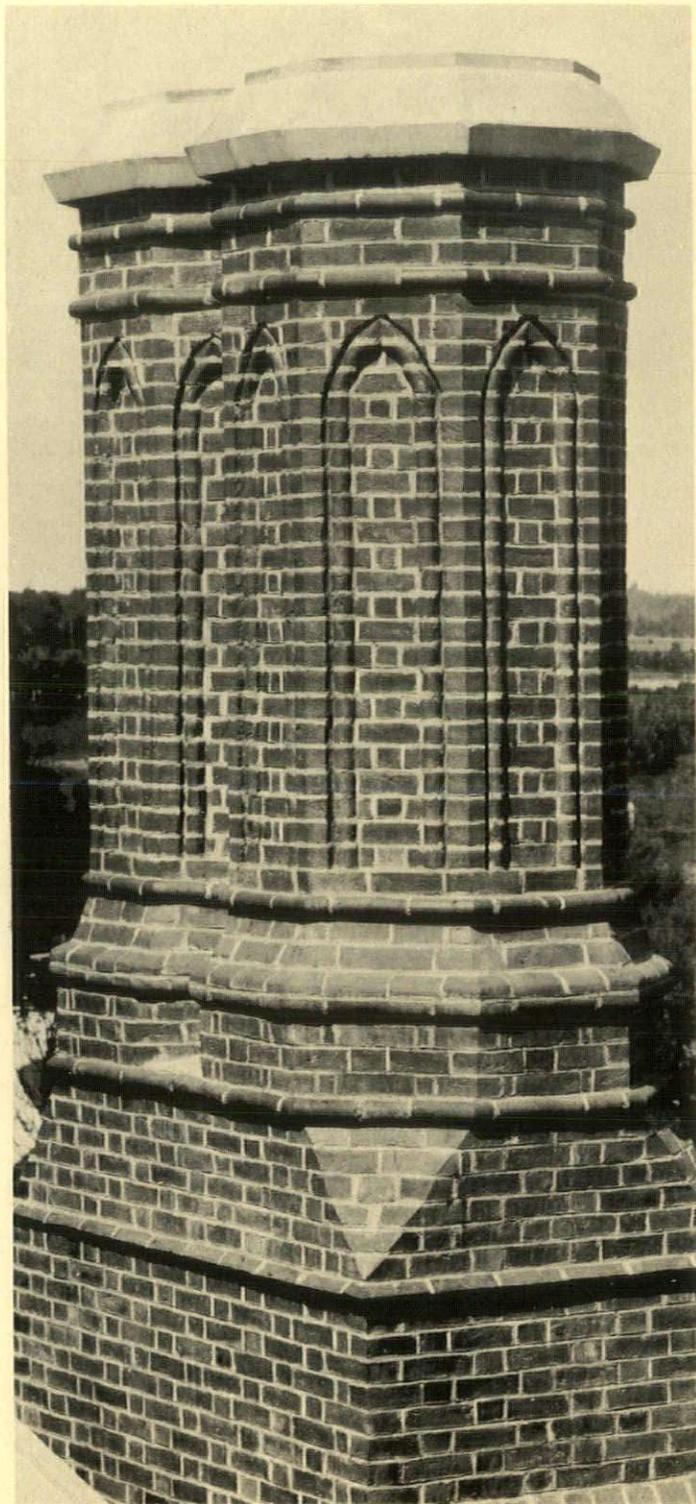
*Old Christ Church,  
Philadelphia, Pa.*





*Cincinnati, Ohio  
Dwight James Baum*

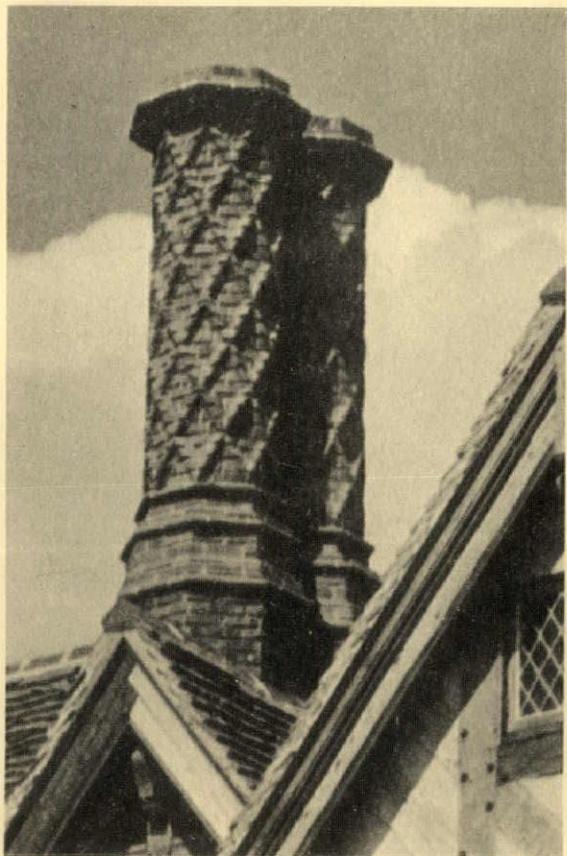
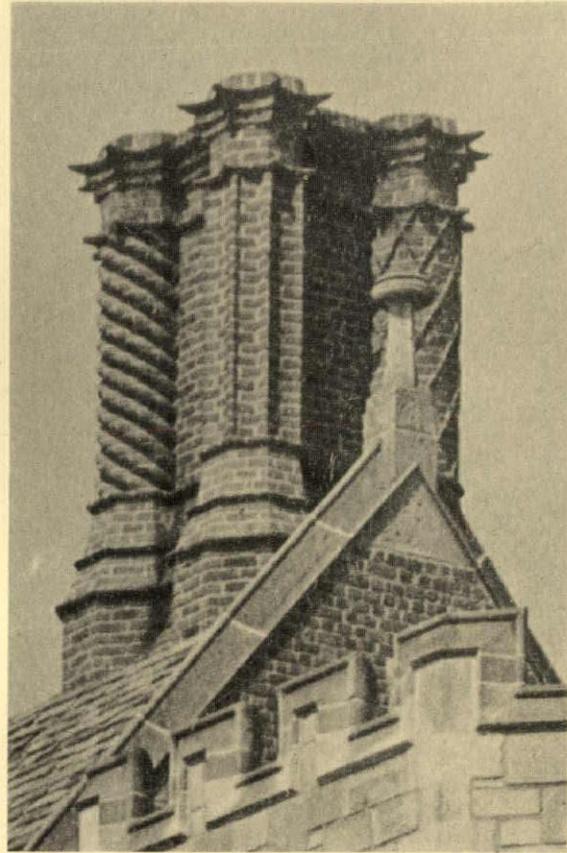
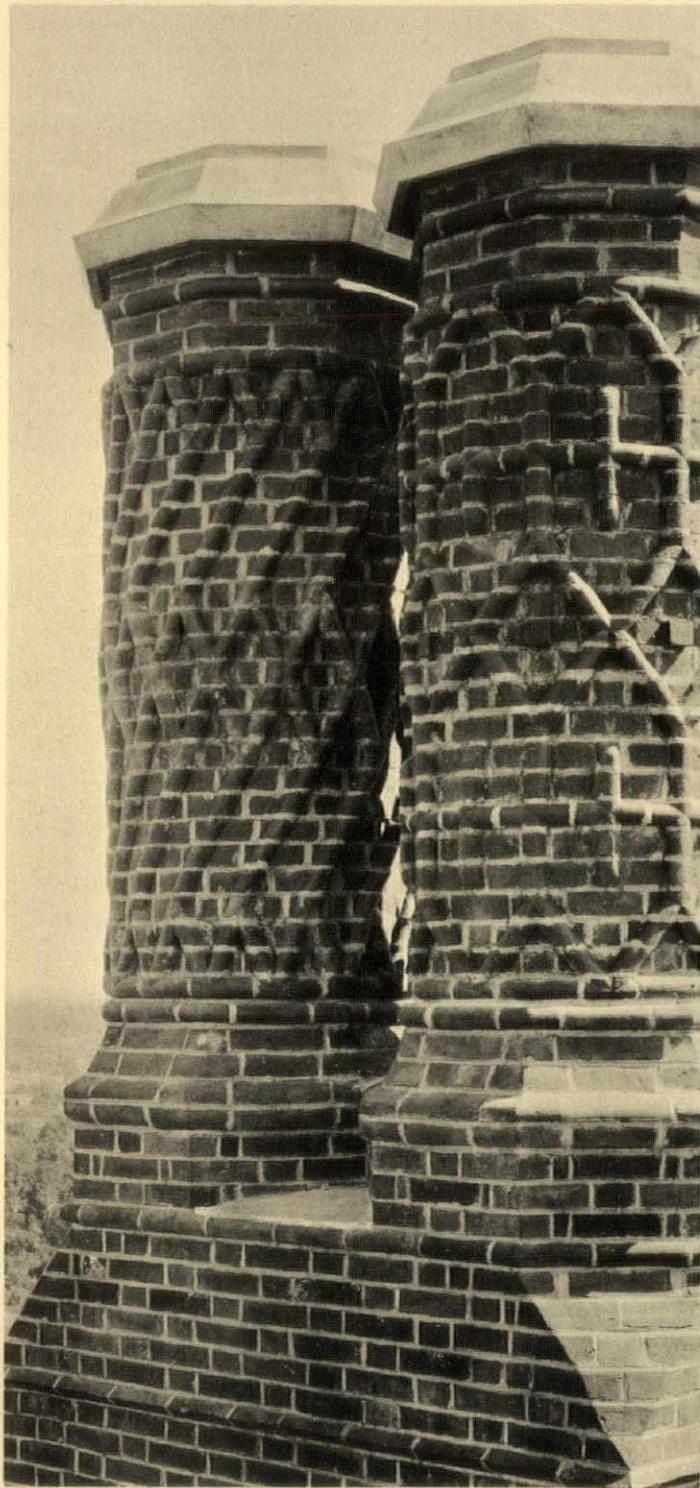
*Greenwich, Conn.  
William B. Tubby*



*Hampton Court,  
Middlesex, England*

*Cincinnati, Ohio  
Dwight James Baum*

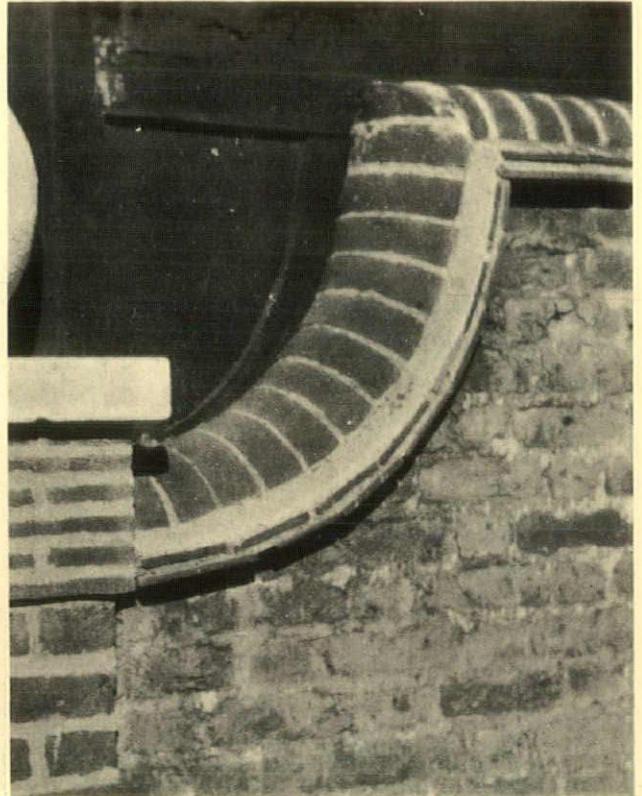
*Greenwich, Conn.  
William B. Tubby*



*Cincinnati, Ohio  
Dwight James Baum*



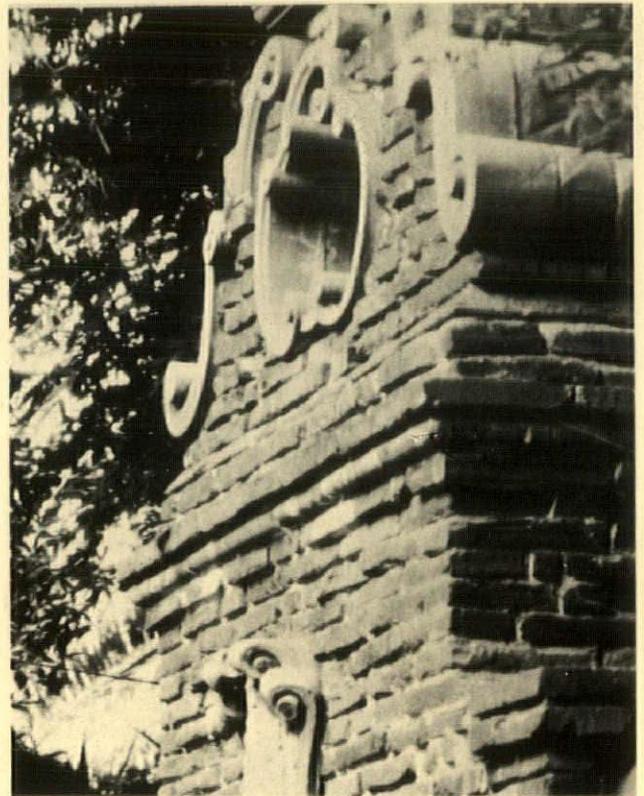
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Wesley Sherwood Bessell*

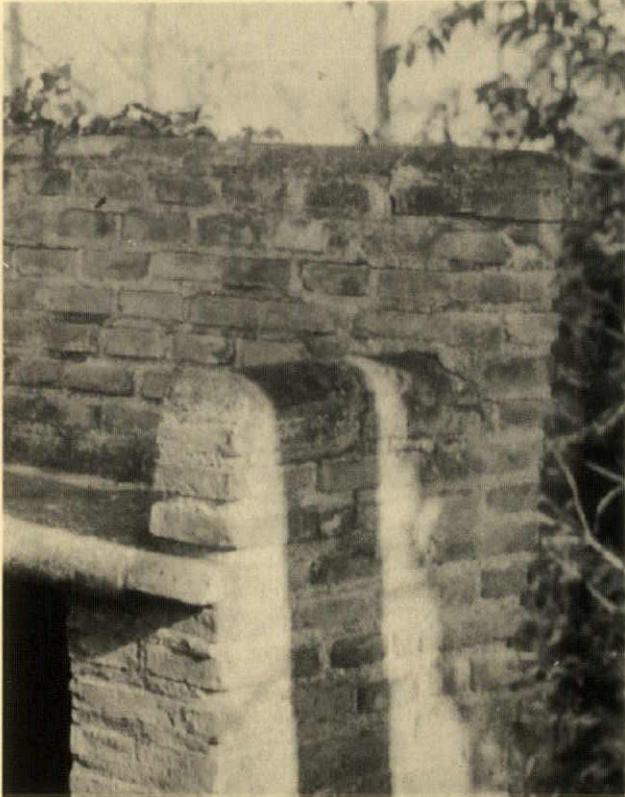


*Chelsea Park Gardens,  
London*

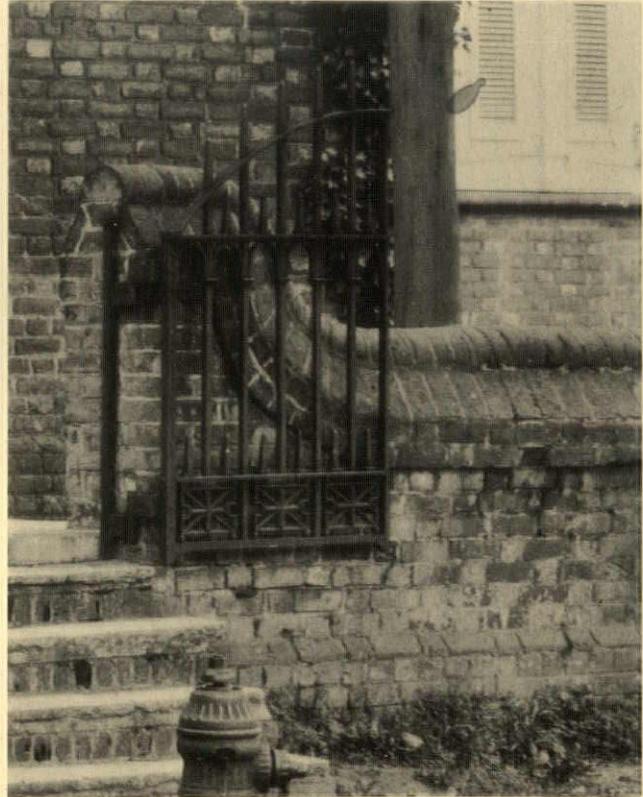
*Clifton Hampton,  
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*Riverside, Calif.  
G. Stanley Wilson*





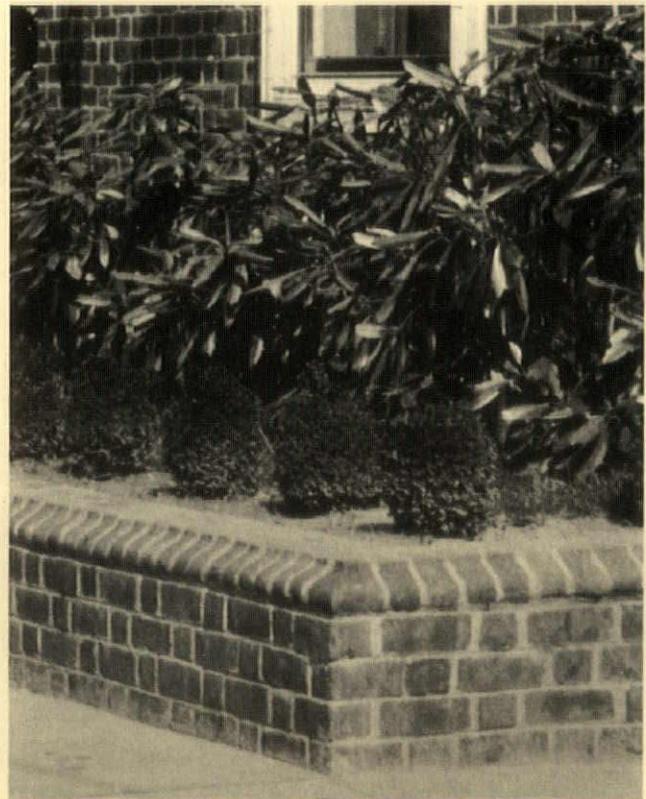
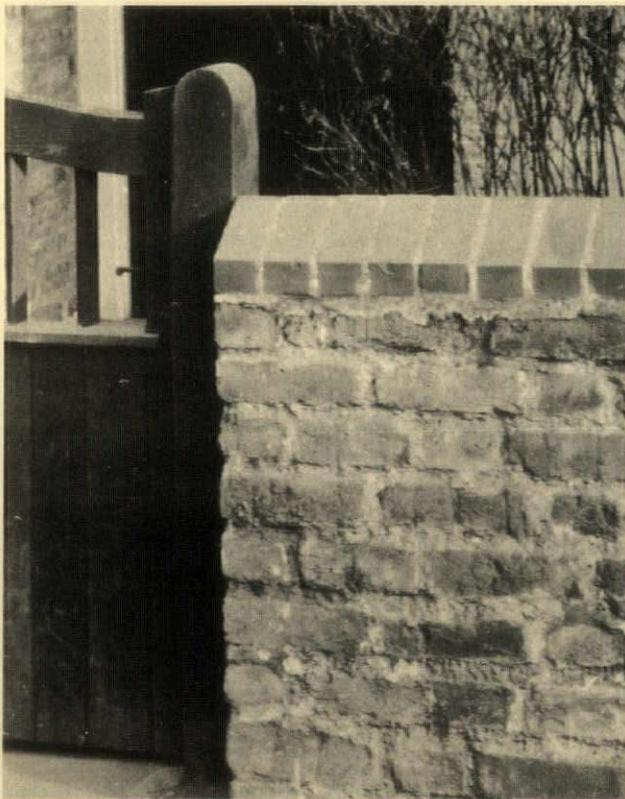
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Granada, Spain*

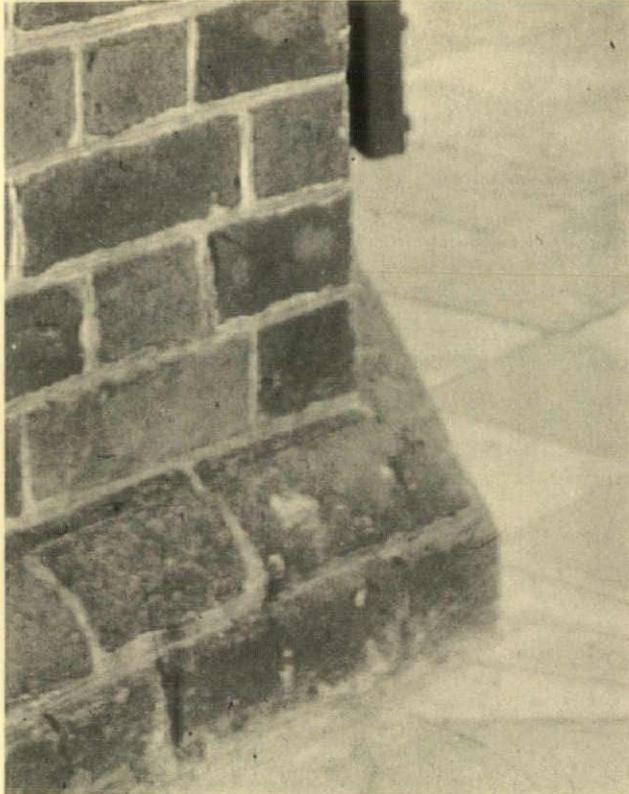


*Bruton Church,  
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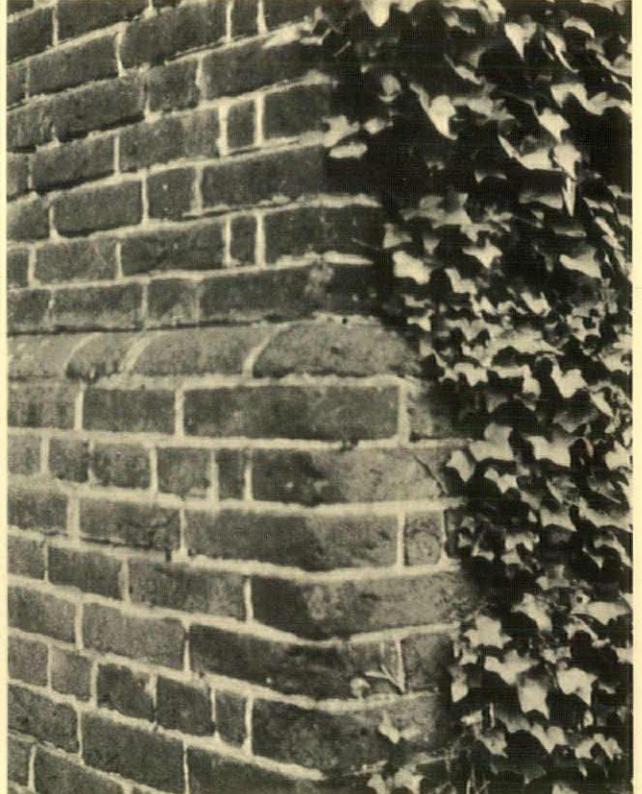
*Chelsea Park Gardens,  
London*

*Philadelphia, Pa.  
Davis, Dunlap & Barney*





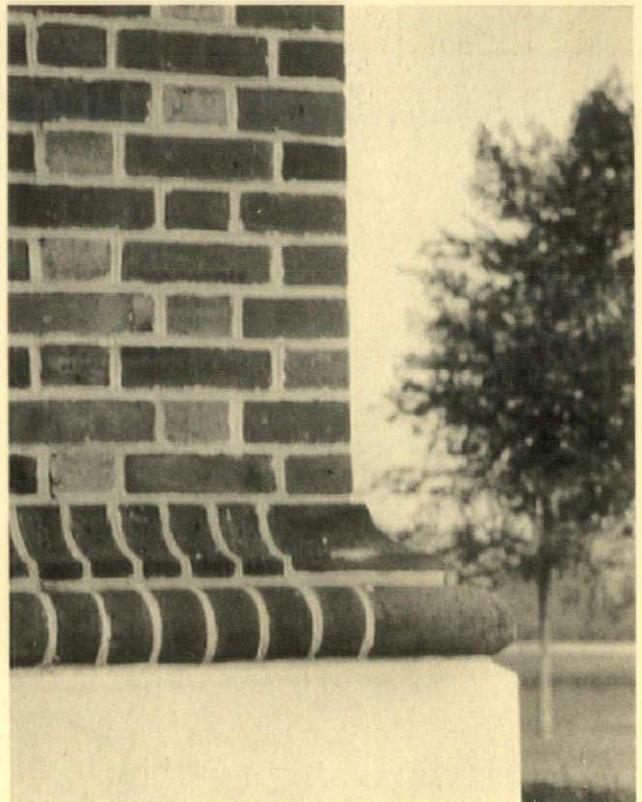
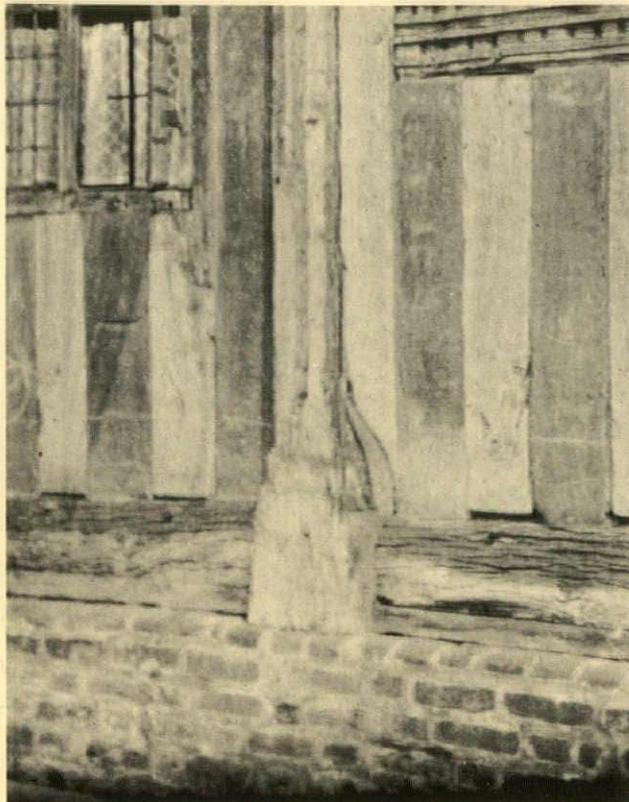
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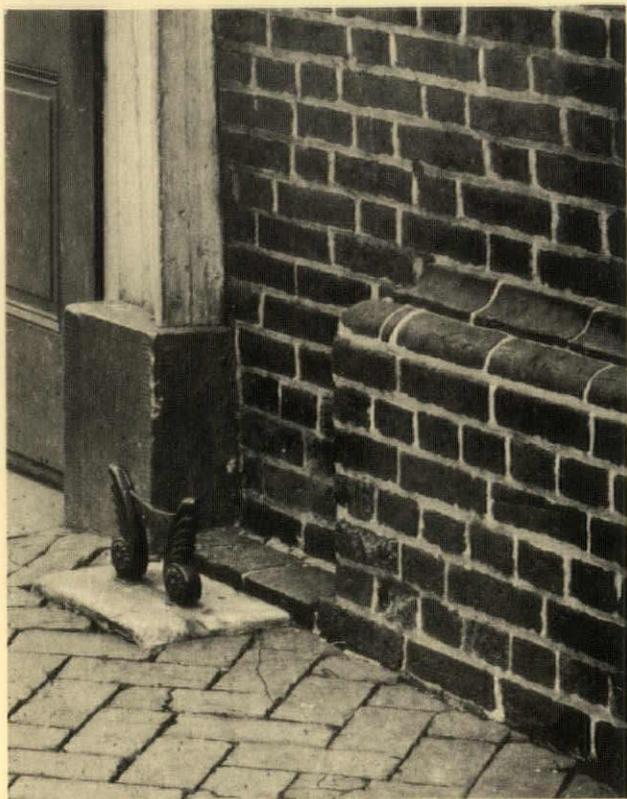


*Old church,  
Swedesboro, N. J.*

*Wool Hall,  
Lavenham, England*

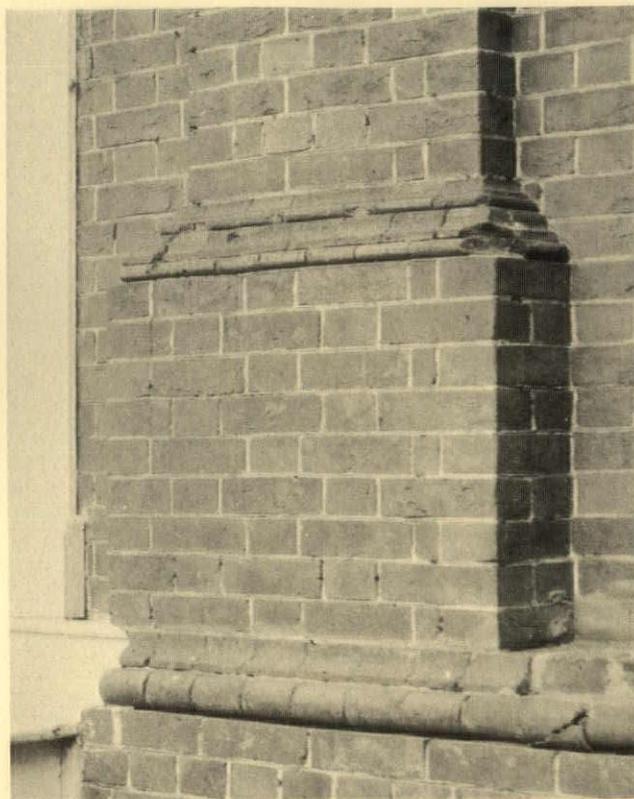
*Johns Hopkins University, Baltimore, Md.  
Carrère & Hastings*





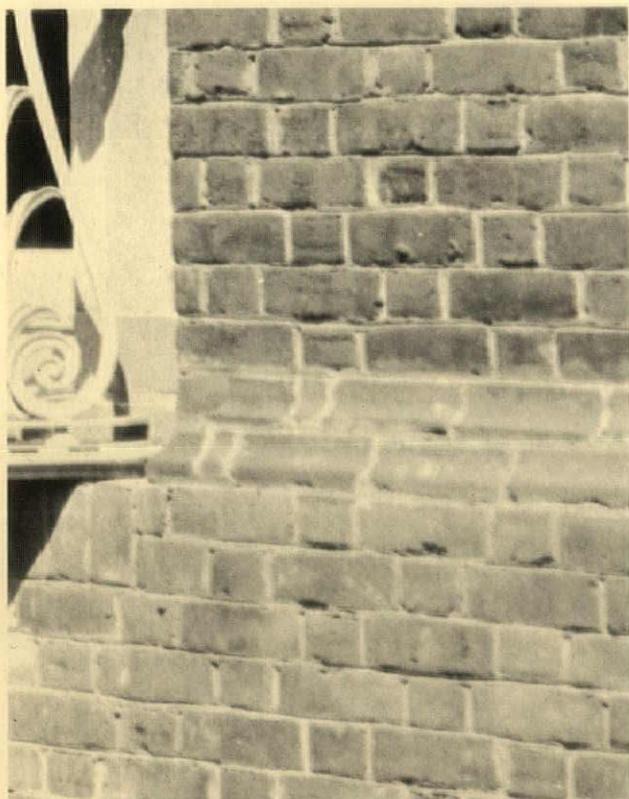
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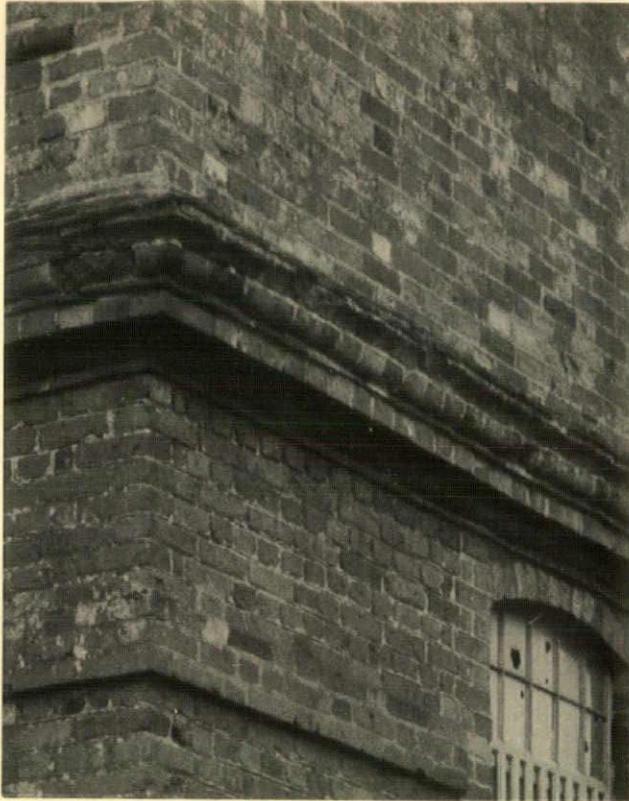
*First Church of Christ Scientist, Ardmore, Pa.  
Davis, Dunlap & Barney*



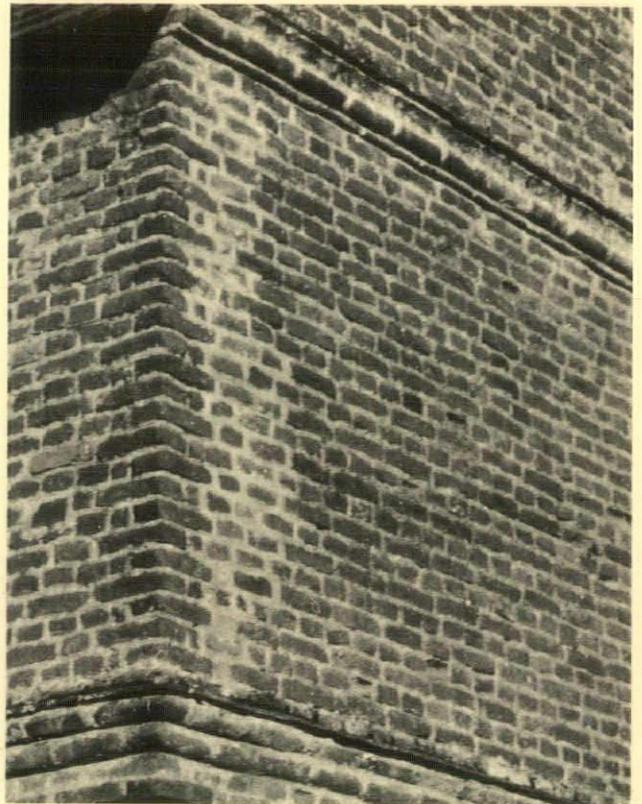
*Harwood House,  
Annapolis, Md.*

*Bedford Hills, N. Y.  
Benjamin W. Morris*





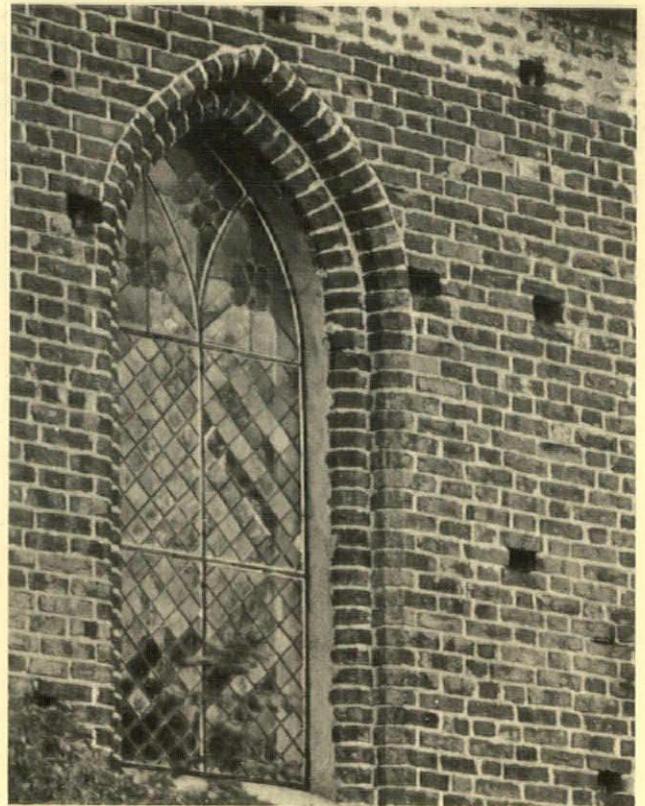
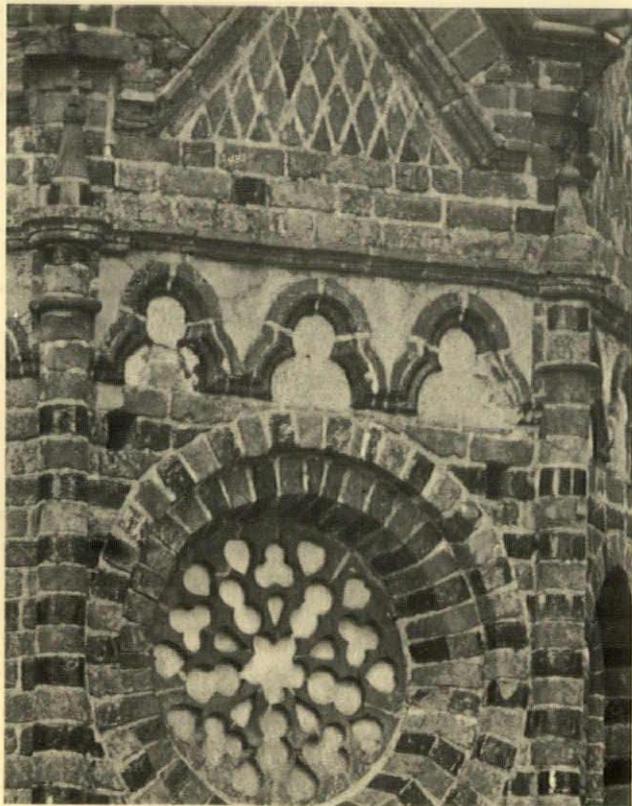
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Inigo Jones*

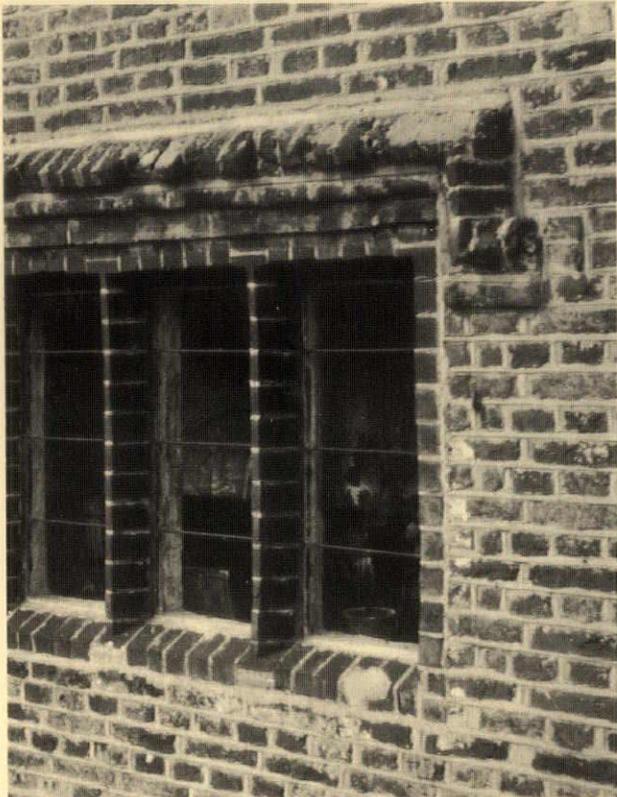


*Old Basing, England*

*Doberan,  
Northern Germany*

*Village church,  
Horst, Germany*





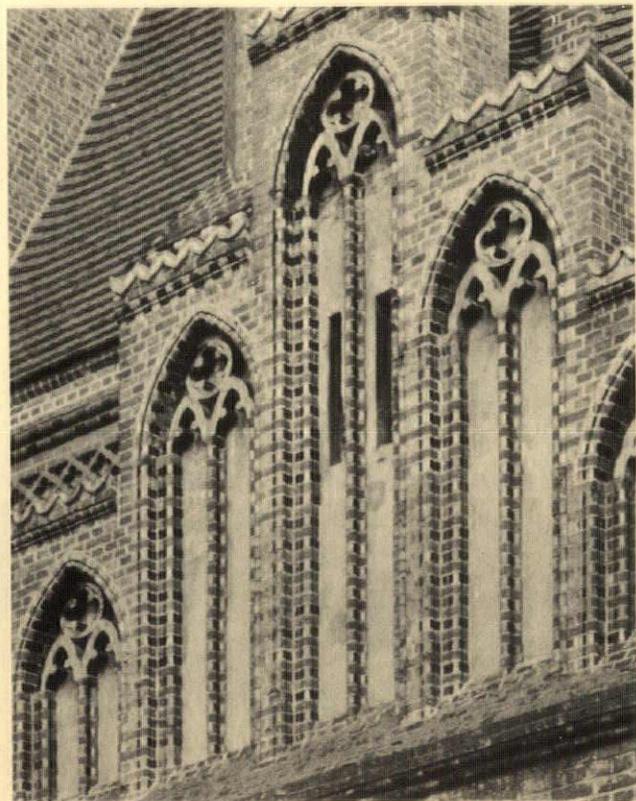
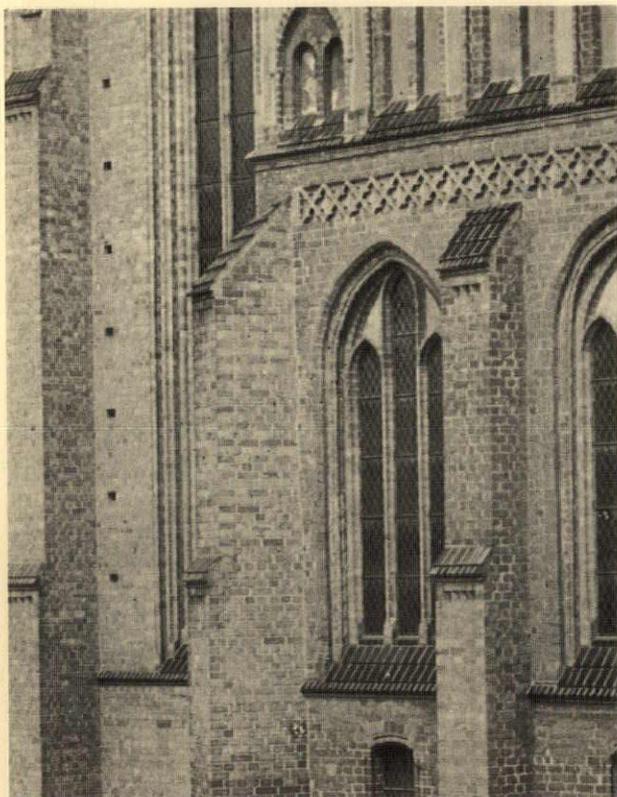
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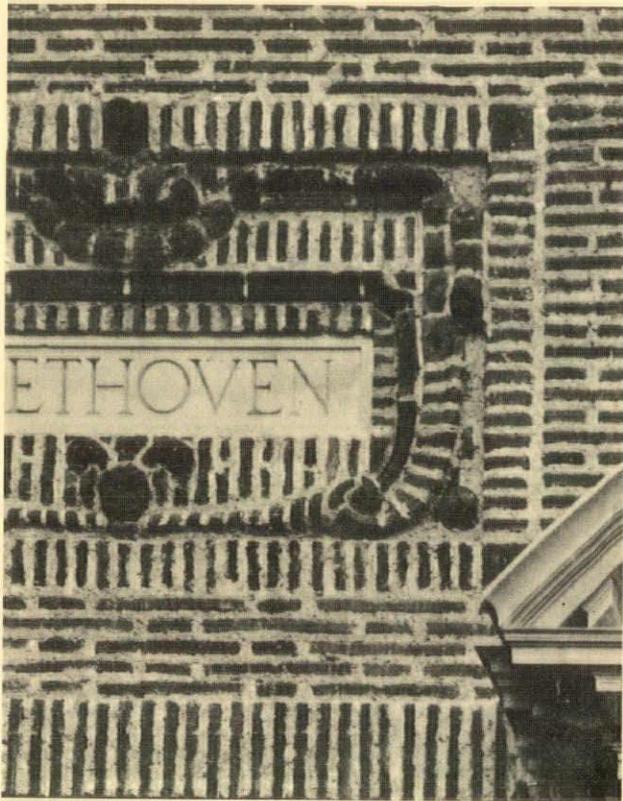


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Middlesex, England*

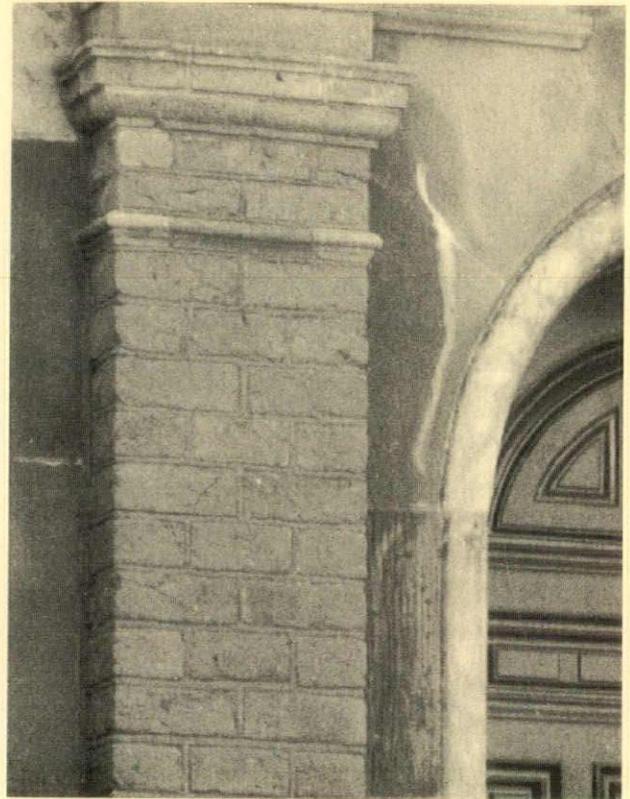
*Pfarrkirche,  
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*Pfarrkirche,  
Greifenberg, Germany*





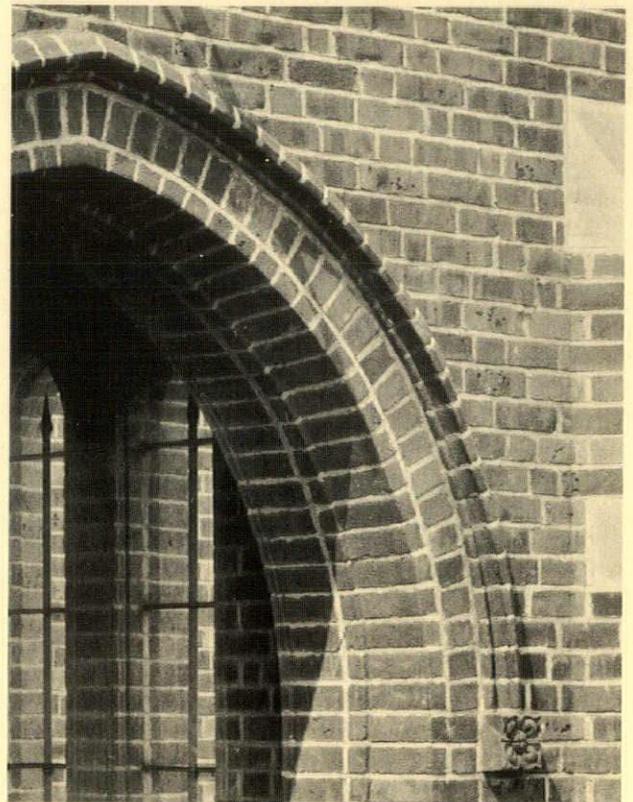
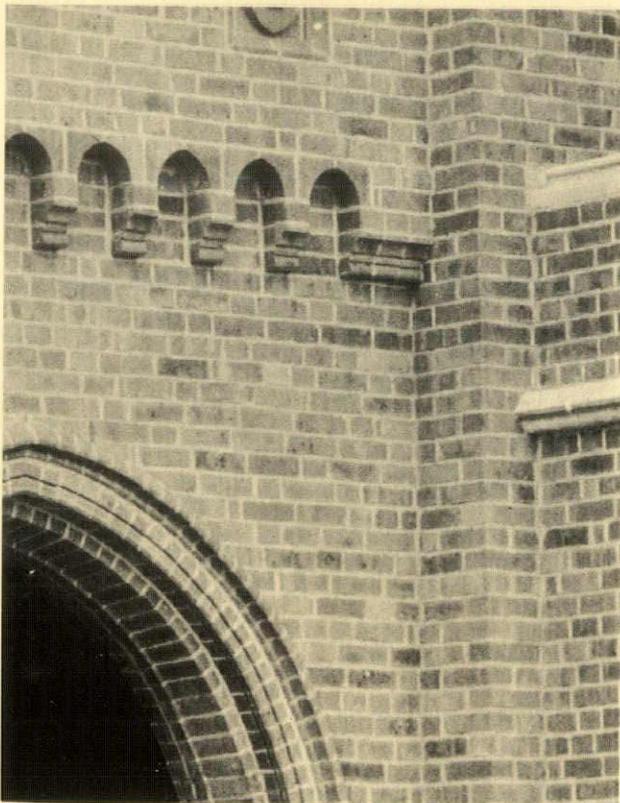
*Russell Sage Music Hall, Northfield, Mass.  
Delano & Aldrich*



*Darien, Conn.  
Wesley Sherwood Bessell*

*Central High School, Brockport, N. Y.  
Dryer & Dryer*

*Central High School, Brockport, N. Y.  
Dryer & Dryer*





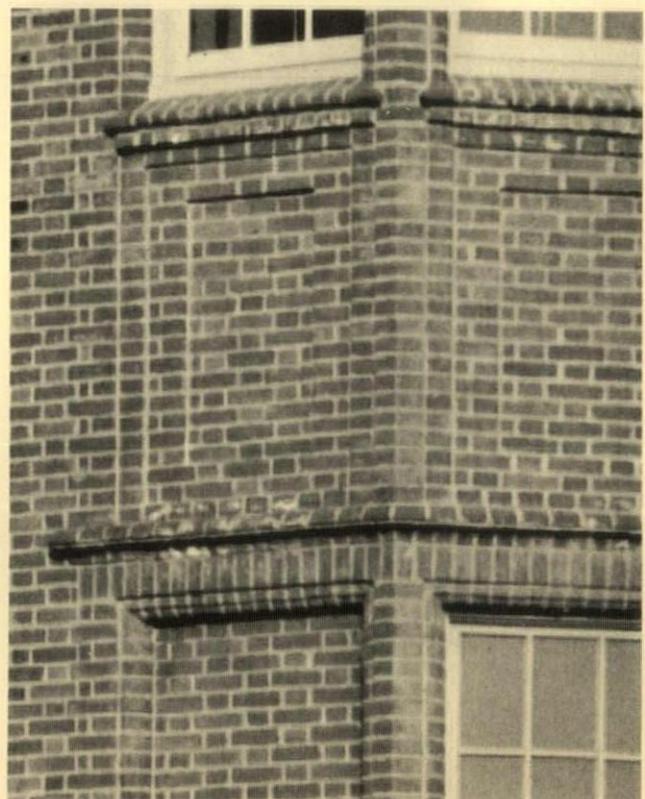
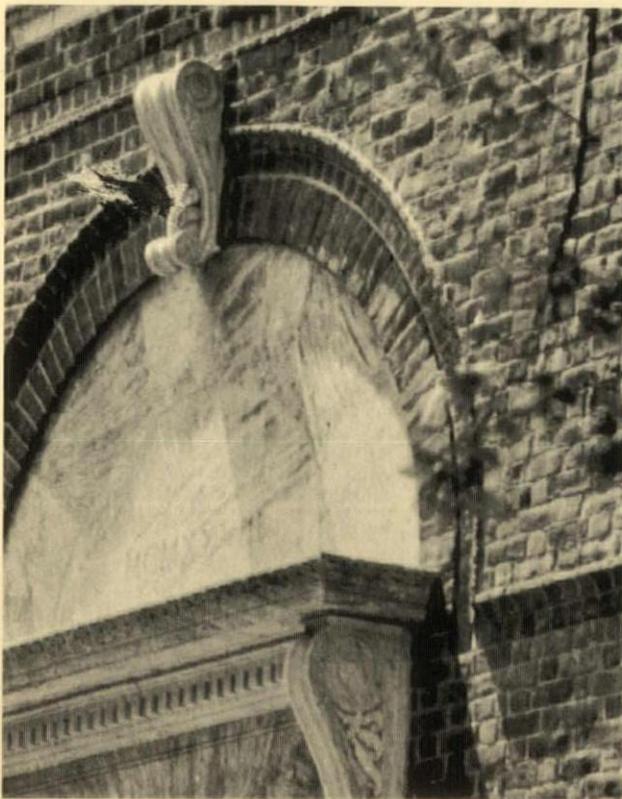
*Bedford Village, N. Y.  
Godwin, Thompson & Patterson*

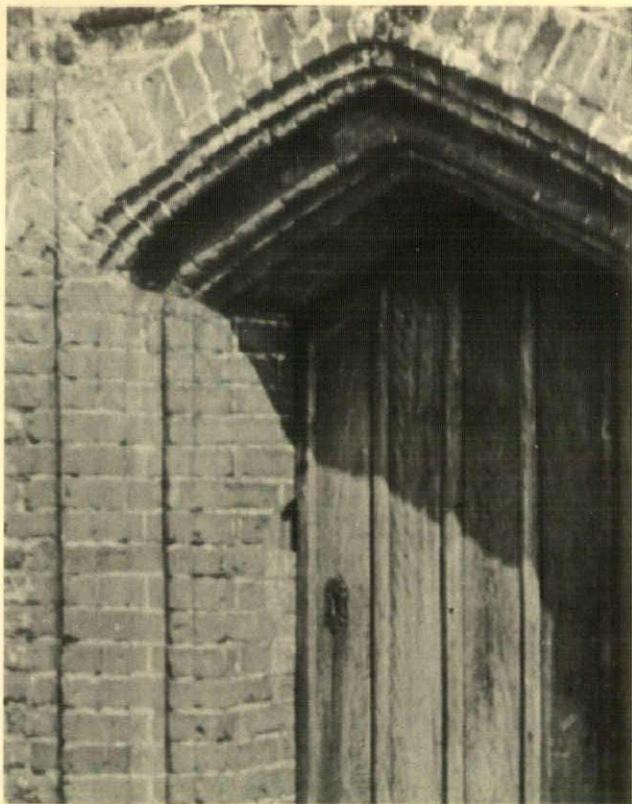
*First Church of Christ Scientist, Ardmore, Pa.  
Davis, Dunlap & Barney*



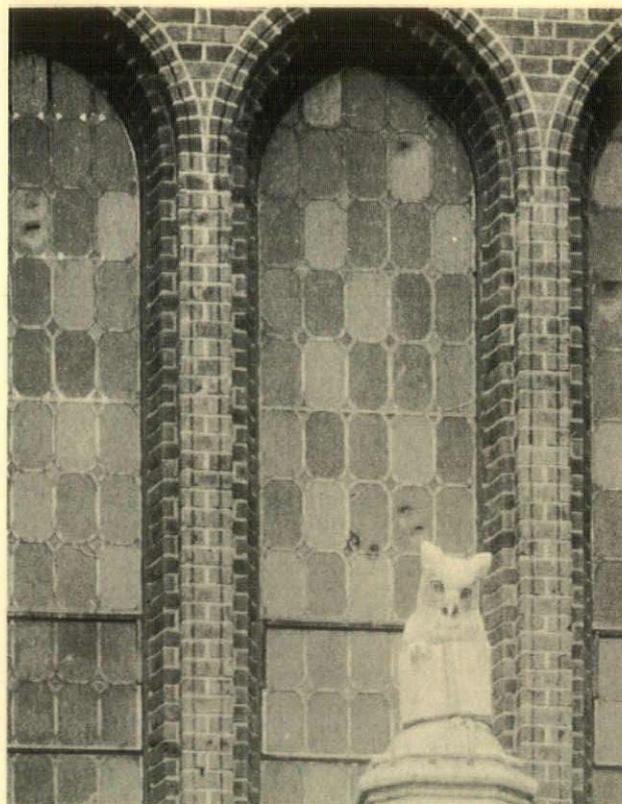
*American Red Cross Building, New York City  
Delano & Aldrich*

*Wilmington, Del.  
E. William Martin*





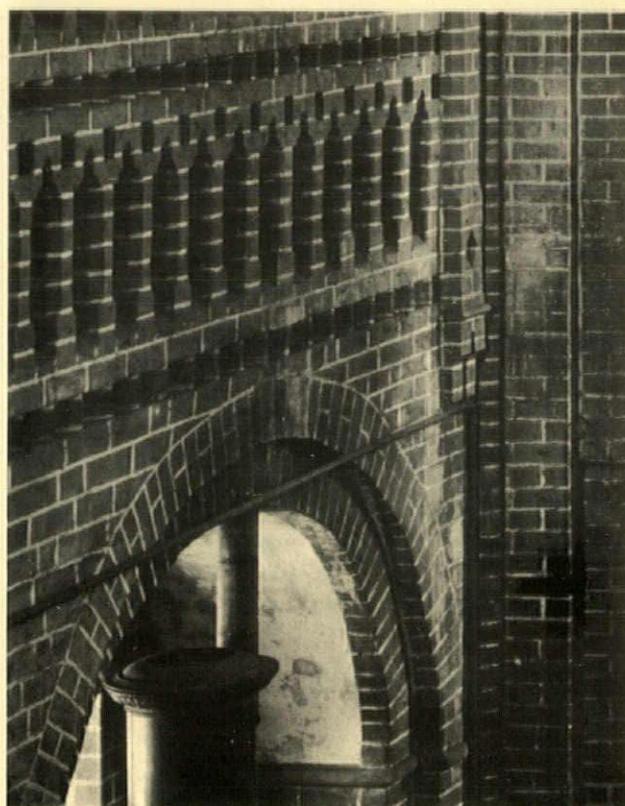
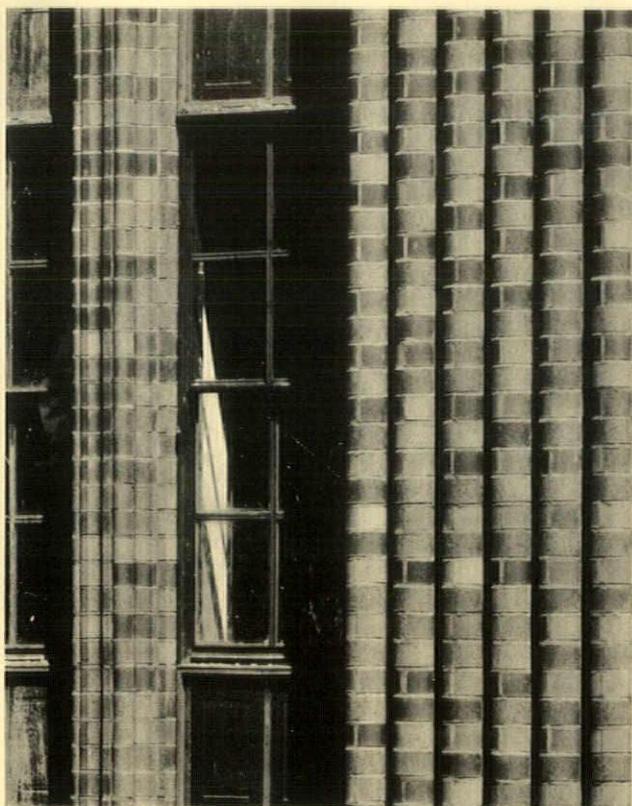
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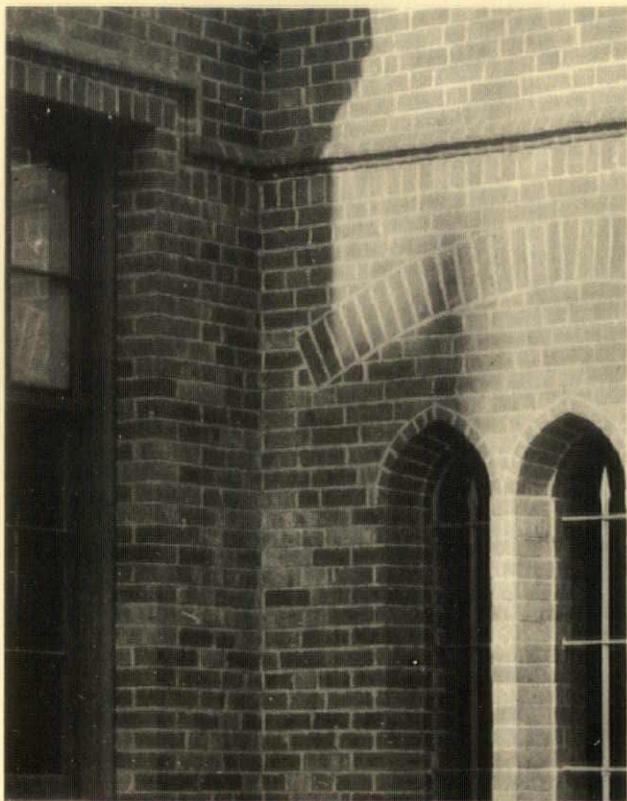


*Central High School, Brockport, N. Y.  
Dryer & Dryer*

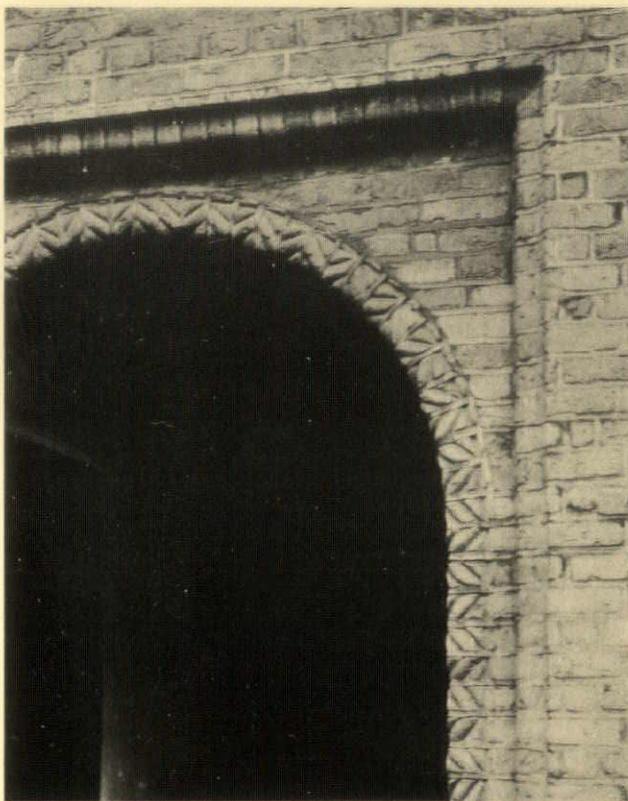
*Brooklyn, N. Y.  
Starrett & Van Vleck*

*Interior, the Monastery,  
Neukloster, Germany*





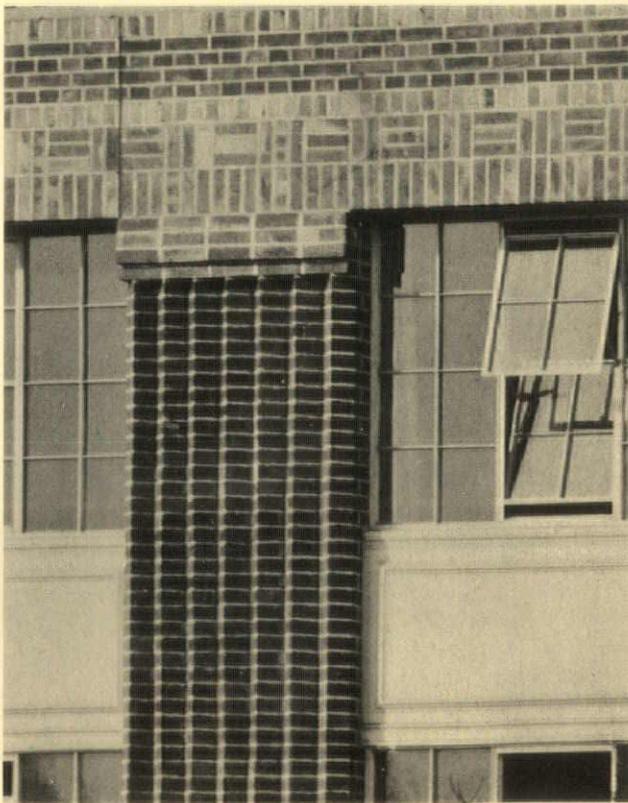
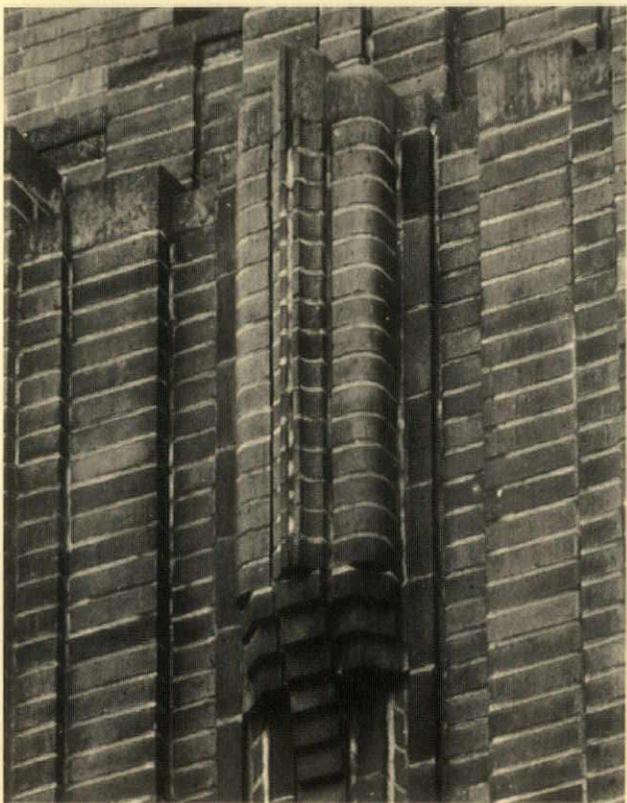
*Central High School, Brockport, N. Y.  
Dryer & Dryer*

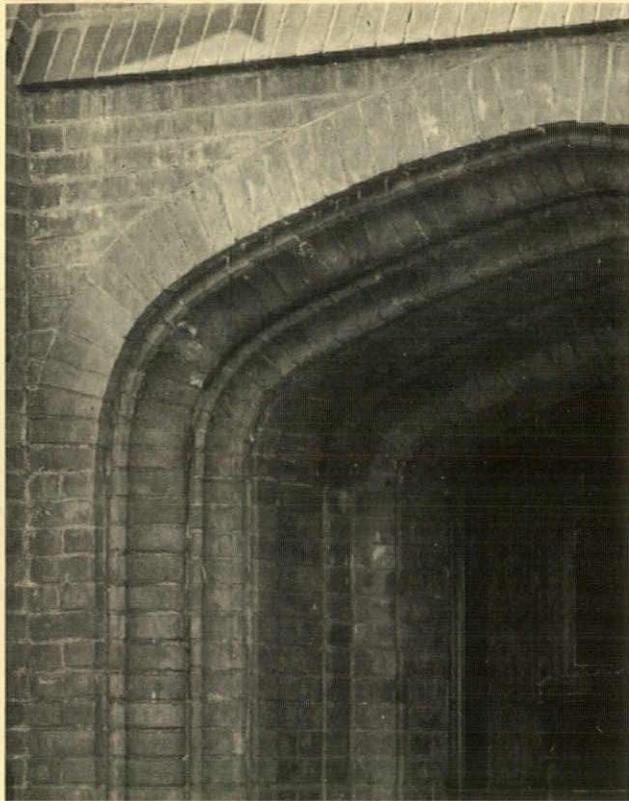


*Guildford,  
England*

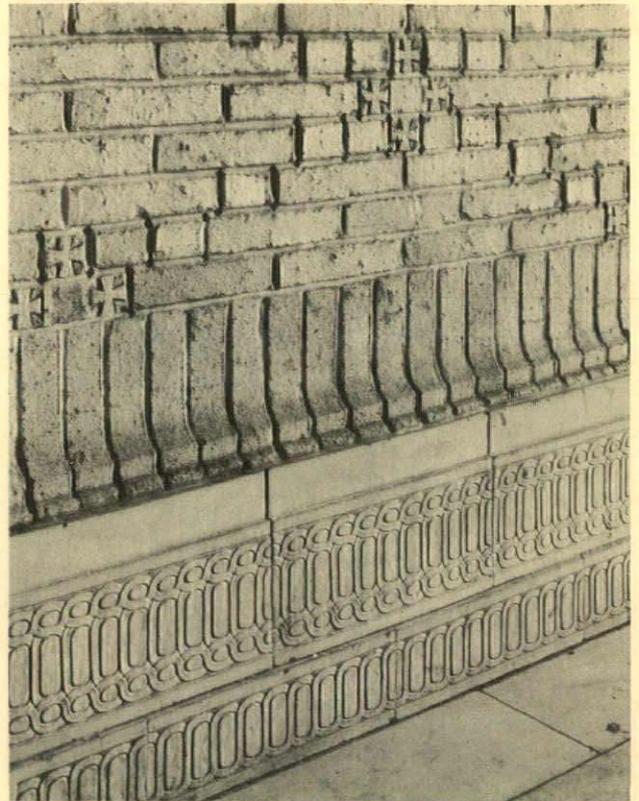
*New York City  
Voorhees, Gmelin & Walker*

*Leicester,  
England*





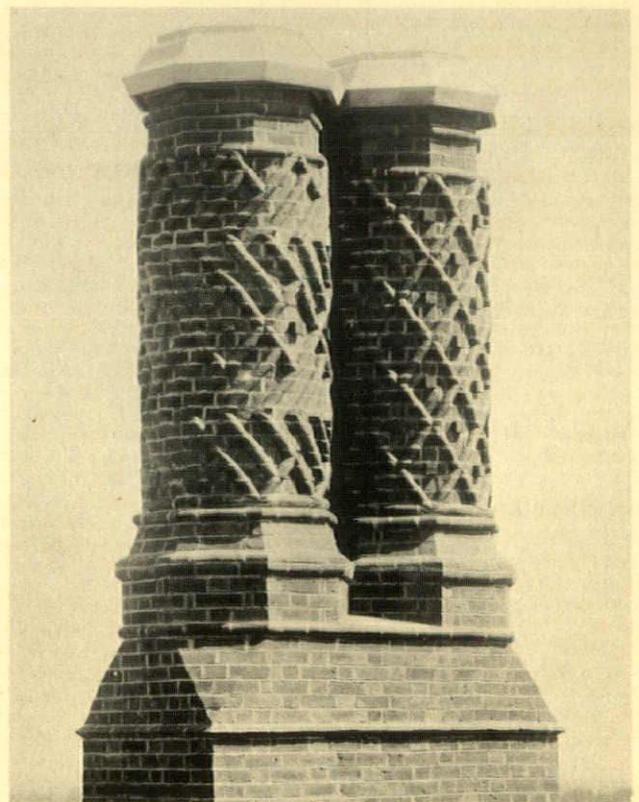
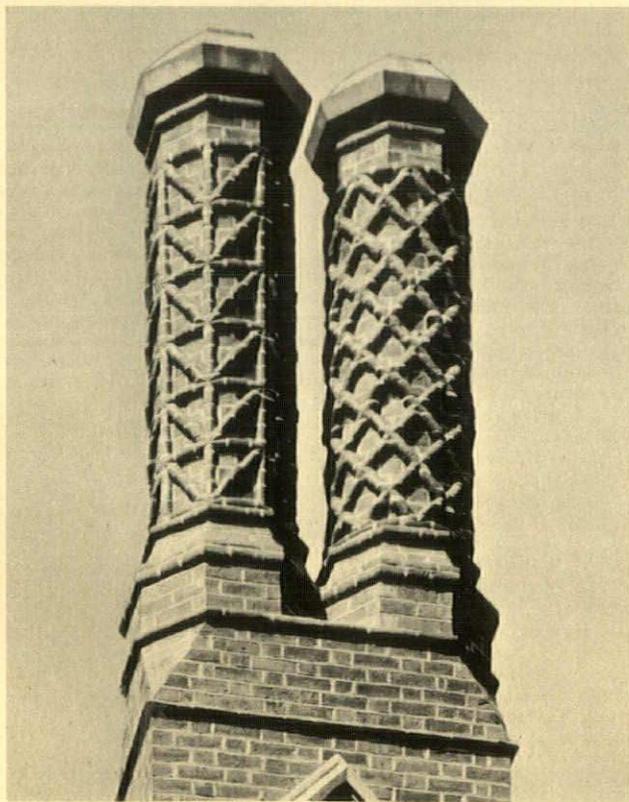
*Yale University, New Haven, Conn.  
Delano & Aldrich*



*Madison Square Presbyterian Church (destroyed),  
New York City  
McKim, Mead & White*

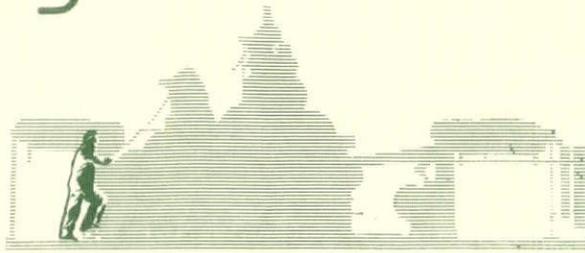
*Greenwich, Conn.  
William B. Tubby*

*Greenwich, Conn.  
William B. Tubby*



# Building Products' News

USE this prepaid mailing card so ARCHITECTURE can keep you right up to date on new products. Fill in the 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.

## BUDGETED HOME MODERNIZATION

F. 447. The Weyerhaeuser Sales Company has issued one of the most handsome books coming to our attention. The purpose of this book is to visualize the physical results of remodeling and modernizing in such a way as to stimulate interest in, and sales of, modernization projects. In it are presented the answers to two questions every prospect asks: "What will it look like?" and "About how much will it cost?" The book is profusely illustrated, showing different types of homes and giving suggestions for their improvement and modernization, with approximate costs.

## HEATING BY CONVECTION

F. 448. The Utica Radiator Corporation announces the perfection of a new, cast-iron Convector designed for installation within enclosures and to heat effectively by convection. The design is based on sound engineering principles and good foundry practice. It is simple in construction, entirely durable, and extraordinarily efficient. In designing the Utica Convector, consideration was given to the disadvantages found in various earlier types of convection units. It has the same operating characteristics as a direct radiator and both can, therefore, be used on the same system with balanced results. Dimensions and rating tables are available upon request.

## THERM-O-TILE

F. 449. A new underground steam conduit system named "Therm-O-Tile," having several important structural and economic advantages, has recently been developed, put through thorough practical tests, patented, and placed on the market by H. W. Porter & Co., Inc., of Newark, N. J. Weaknesses of older types of conduits have been eliminated, work of installation has been materially simplified, and the manufacturers say it is not only more practical and durable, but also more efficient. One outstanding advantage possessed by this conduit is that it can be made perfectly leakproof. The company will gladly furnish complete detailed information.

## A COMPLETE BLACKBOARD CATALOG

F. 450. The Weber Costello Company, of Chicago Heights, have just issued a catalog in which is incorporated all information of vital interest to the architect on blackboard problems, particularly their installation. They have included details on types of blackboard, architect's drawings and specifications, and a handy file holder containing two pockets with architect's samples. Copies will be sent to those requesting them.

## SWIMMING-POOL PROBLEMS

F. 451. The Wallace & Tiernan Company, manufacturers of chlorine and ammonia control apparatus, have sent us eight folders describing installations of their equipment in pools, municipal, private, hotel, apartment house, school, club, and commercially operated. To help you solve your swimming-pool problems we will see that copies of these helpful booklets are sent you.

## HIGH-PRESSURE CARTRIDGE CALKING GUN

F. 452. The Pecora High Pressure Cartridge Gun is a revolutionary innovation in the art of applying plastic materials so advanced in design, construction, application, and performance that it sets up an entirely new standard of comparison. It consists of a strong, rugged frame embodying the operating mechanism, and a cartridge loaded with calking compound, which functions as a gun barrel. Complete description will be found in a folder issued by the Pecora Paint Company.

## HEATILATOR FIREPLACES

F. 453. Really circulate *heat*, according to the makers, but *not* smoke. In these fireplaces you have all the advantages of an ordinary open fire without the disadvantages. The double-walled firebox of the Heatilator is really a heating chamber which surrounds the fire at the sides and back. Cold air is drawn into this chamber at floor level, or from below the floor if you wish, and here it is heated by contact with the chamber walls and returned to the room by natural circulation. A book of designs, installations, specifications, and capacity ratings is available upon request. This also contains instructions for installing the unit, and pictures of fireplace accessories made by the same firm, the Heatilator Company, of Syracuse.

## FLOATING CEILING AND WALL CONSTRUCTION

F. 454. The Red Top Metal Lath Resilient System is an important development in metal-lath plastering construction. By the use of spring clips it provides a practical method for resiliently attaching and furring metal lath in virtually all types of work. The resilient attachment provides a cushioning effect for the plaster finish which results in such important advantages as: 1. Insulation against transmission of sound from one room to another; 2. Maximum protection against cracks; 3. Elimination of lath or joist streaks and discoloration from treated lumber, etc. The United States Gypsum Company, of Chicago, will be glad to send you their comprehensive folder on this system, with diagrams, construction data, table of spacing, and erection specifications.

## METAL CRAFTSMANSHIP

F. 455. Kenneth Lynch, Inc., of Long Island City, sent us a folder containing pictures of their exquisite Ecclesiastical Art in Handwrought Metal. This company maintains a service department to assist the architect in metal craftsmanship for every purpose and will be glad to send you information.

## NEW MOTOR BULLETINS

F. 456. The Louis Allis Co., of Milwaukee, have just issued three new bulletins describing various motors of their manufacture. They are Nos. 507, describing their line of direct-current motors; 510, describing their totally enclosed, fan-cooled motors; and 514, concerning single-phase capacity motors. These are complete with engineering and other important data.

## PORTABLE DANCE FLOORS

F. 457. At a surprisingly low cost the Wood-Mosaic Company, of Louisville, makes possible the transformation of small dining-rooms and parlors into cocktail-dansant, dinner-dance and night-club settings by the use of their Portable Hardwood Floors, which can be laid anywhere—right over carpets—and allowed to remain for an hour, an evening, a week, or longer. These floors are so designed that you can buy the largest coverage required and divide into smaller areas as occasions require.

## CORINCO CORK TILE

F. 458. The Cork Insulation Company, of New York, announce a new product, Corinco Cork Tile, available in a wide range of standard and special sizes in light, medium, and dark brown, with varying shades and in two thicknesses. They also announce a coved angle and wall base as well as a special, heavy density Corinco Cork Tile Nosing for stairways. All installations will be made by their own skilled workmen, and samples, specifications, and estimates covering flooring requirements, from a single room to an entire building, will be gladly furnished.

## NEW COLOR HARMONY

F. 459. A guide to proper color effects for exterior and interior painting of homes, with decorative plans for every room, has been issued by the E. I. Du Pont de Nemours & Co., Inc., of Wilmington. This is a 24-page booklet with three color schemes each for popular types of houses of moderate cost and decorative effects in line with the modern trend for each room.

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**OIL-HEATING MANUAL**

F. 460. The Gilbert & Barker Mfg. Co., of Springfield, Mass., have issued a manual of oil burners, automatic oil-heat units for steam and hot water, and their automatic conditioned warm-air system. In its preparation they were guided by the advice and suggestions of many architects and engineers who were consulted with a view to learning what specific information was desired in a manual of this sort. It contains performance data charts, cross-sections, dimensions, installation diagrams, etc. This will be a very valuable addition to your heating files.

**WHILE WE ARE ON THE SUBJECT**

F. 461. Of automatic heating, we are reminded of the Oil Burning Boiler catalog sent us by the Burnham Boiler Corporation, of Irvington, N. Y. This is a complete booklet on the unit, with specifications and diagrams, showing operation of the boiler and the Taco Water Heater, which is built into the top of the boiler, the point of highest efficiency.

**KEEP AIR MOVING**

F. 462. Propellair Fans are constructed on advanced principles of aero-dynamics. As their name implies, they are of the airplane propeller type and propel the air for both ventilating and exhausting purposes. A special type of construction exclusive with Propellair models applies "stream-lining" to air-flow, thus increasing the air delivery capacity of the fans with minimum power requirements. The wide variety of styles and sizes makes the service of a Propellair Fan available wherever controlled movement of air is required. A folder describing this will be sent you.

**HERE'S AN IDEA**

F. 463. That will cut over-all switching costs. Buy your switchgear completely assembled, ready to use. When you order shipped-assembled switchgear you reduce your installation and maintenance costs; you conserve valuable floor space through the greater compactness of these units; you get better protection; and you may reduce future expense, for this equipment can be moved as a unit. General Electric, Schenectady, have folders containing detailed information about metal-enclosed switchgear.

**BETHLEHEM LIGHT SECTIONS**

F. 464. The Bethlehem Steel Company's new catalog on their light steel sections contains

many examples, illustrations, etc., of places where the sections have been used economically and efficiently. This also contains charts of properties and weights.

**PLYWOODS BONDED WITH BAKELITE**

F. 465. Resinoids are now being introduced and the bonds of these plywoods are far superior to those provided by ordinary adhesives used heretofore. These new plywoods stand up extremely well under standard government mold tests, and tests of alternate immersion in water and drying. In shear tests, both wet and dry, results show very high wood failure. The Bakelite Corporation will supply full information concerning this.

**"ATTRACTION-ZONE" REFLECTORS**

F. 466. Engineers of Curtis Lighting, Inc., Chicago, have developed two new X-ray Reflectors—the "Master" and the "Monarch." They give concentrated light on the important "attraction zone" of show windows, at the same time furnishing sufficient general light for the rest of the window. These reflectors provide from 35 to 50 per cent more "punch" in the light where it is needed, using the same 150 and 200 watt bulbs as regular show-window reflectors.

**ENDURO 18-8**

F. 467. We have a new edition of the subject booklet containing latest authentic data on the various members of the Enduro 18-8 family of stainless steels. An important feature of this 16-page, illustrated booklet is a table showing the degree of corrosion resistance exerted by Enduro Stainless Steel, Types 18-8, S and AA in the presence of several hundred individual chemicals, solutions, and other reagents. This booklet, No. 125-A, is presented by the Republic Steel Company.

**METAL INSULATION**

F. 468. In stopping the flow of heat from a house, Alfol employs an entirely new insulation principle. It reflects the heat like a mirror reflects light. Ninety-five per cent of the radiated heat which tends to flow through Alfol insulated walls, ceilings, and roofs is reflected back into the house, where it is needed. Conversely, in hot summer weather Alfol reflects the sun's heat away from the house. Complete details and diagrams are to be found in the Alfol Insulation Company's new booklet called "Stop Burning Your Dollars!"

**TREADS**

F. 469. Wooster Products, Inc., of Wooster, Ohio, have just issued a new Tread Portfolio containing eight plates of detailed, cross-section drawings of their complete line of Safety Treads, Door Saddles, Elevator Sills, Thresholds, Nosing, and Edgings. On each plate is grouped profiles of related products together with valuable dimensional data regarding standard sizes, methods of installation, etc.

**WATER PIPE SIZES**

F. 470. Is the title of a comprehensive booklet on Water-Pipe Sizes for plumbing fixtures, branches, risers, and mains compiled by Walter S. Timmis, Past President of the American Society of Heating and Ventilating Engineers, and presented by the Bridgeport Brass Company. The tables and data on Water-Pipe Sizes have been favorably received by architects and engineers and, in order to make the booklet still more useful and complete, data on Bridgeport Copper Water Tube have been included in addition to the information on Bridgeport Plumrite Brass and Copper Pipe.

**REMOTE CONTROL EQUIPMENT**

F. 471. "Diamond H" Remote-Control Switches fulfill a three-fold purpose: 1. They simplify control. 2. They provide control at various points from a distance without making it necessary to bring the service wires to those points. 3. They effect a direct saving in the first cost of installation and a saving in current consumption. Bulletin No. 10-A, of the Hart Manufacturing Co., Hartford, Conn., describes various types and their uses and contains diagrams, prices, and dimensions.

**FOR PANELLING**

F. 472. The U. S. Gypsum Co. make Flexwood, a fine cabinet wood cut thin and mounted on cloth for direct wall application. It is pliable and easy to handle and may be hung on walls in a manner similar to that in which ordinary wall-paper is hung. The company have descriptive folders which they will be glad to send you.

**ADVERTISERS' LITERATURE**

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ARCHITECTURE

Scribner Bldg., New York

Please see to it that our office is supplied with the manufacturers' literature as indicated by the following numbers.....

March, 1935

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# CARPET COUNSEL

*by*

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## A SERVICE TUNED TO ARCHITECTS' NEEDS

When you're planning a new building or modernizing an old one, dozens of floor-covering questions are sure to crop up. Many leading architects have found an easy way to get the right answers... They simply call on Bigelow.

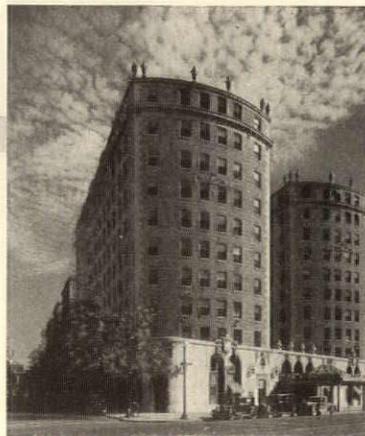
Our men know carpeting problems from A to Z. They will take care of every detail for you... estimating, budgeting, selecting the right grades, styling, weaving and supervising installation. All or any part of this *complete* service is yours to call upon.

The name Bigelow has stood for *quality* for over 100 years... and the largest rug and carpet mills in the world assure prompt delivery. Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York, N. Y.

BRANCH OFFICES AND SHOWROOMS IN 25 CITIES



There's always a carpeting problem in big hotels like the Mayflower in Washington —where Bigelow has served as Carpet Counsel for 10 years.



Hotel carpets lead a hard life. We're rather proud that more than 90% of the country's leading hotels have long been regular customers of the Bigelow Weavers.

## SMYSER-ROYER CO. CAST IRON VERANDAS



Smyser-Royer Company cast iron veranda, design No. 69, as used for the residence of John A. Victor, Palm Beach, Florida. Wyeth and King, Architects.

Prices on stock designs furnished upon request.

### SMYSER-ROYER COMPANY

Main Office and Works, York, Pa.  
Philadelphia Office, 1700 Walnut St.

## A HEALTH-SAFE PEDESTAL



● As modern as tomorrow's architecture is this smart-appearing pedestal fountain No. 2615, a new Halsey Taylor creation. Note the new No. 1728 IMPROVED MOUND-BUILDING PROJECTOR, which together with practical automatic stream control provides the paramount degree of health-safety so vital in this type of fixture! Write for our newest catalog!

The Halsey W. Taylor Co.  
Warren, O.

SPECIFY

*Halsey Taylor*  
DRINKING FOUNTAINS

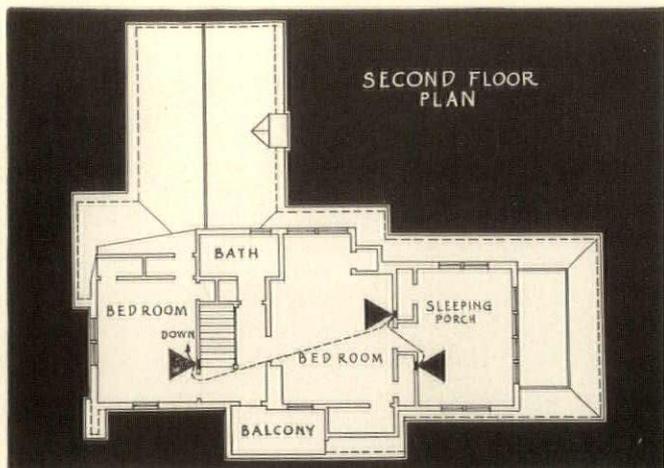
### CLEAR AS A RED LIGHT ✓

Here's a checking pencil in a new color - a color that stands out on blue prints as nothing else can - Brick Red. Like all Mephisto Chalk Checking Pencils, it doesn't fade, smudge or smear, yet it is easily erased. Of thin, fine-quality lead, it has the property that has endeared all products of the Koh-I-Noor factory to architects and draftsmen - it doesn't break easily.

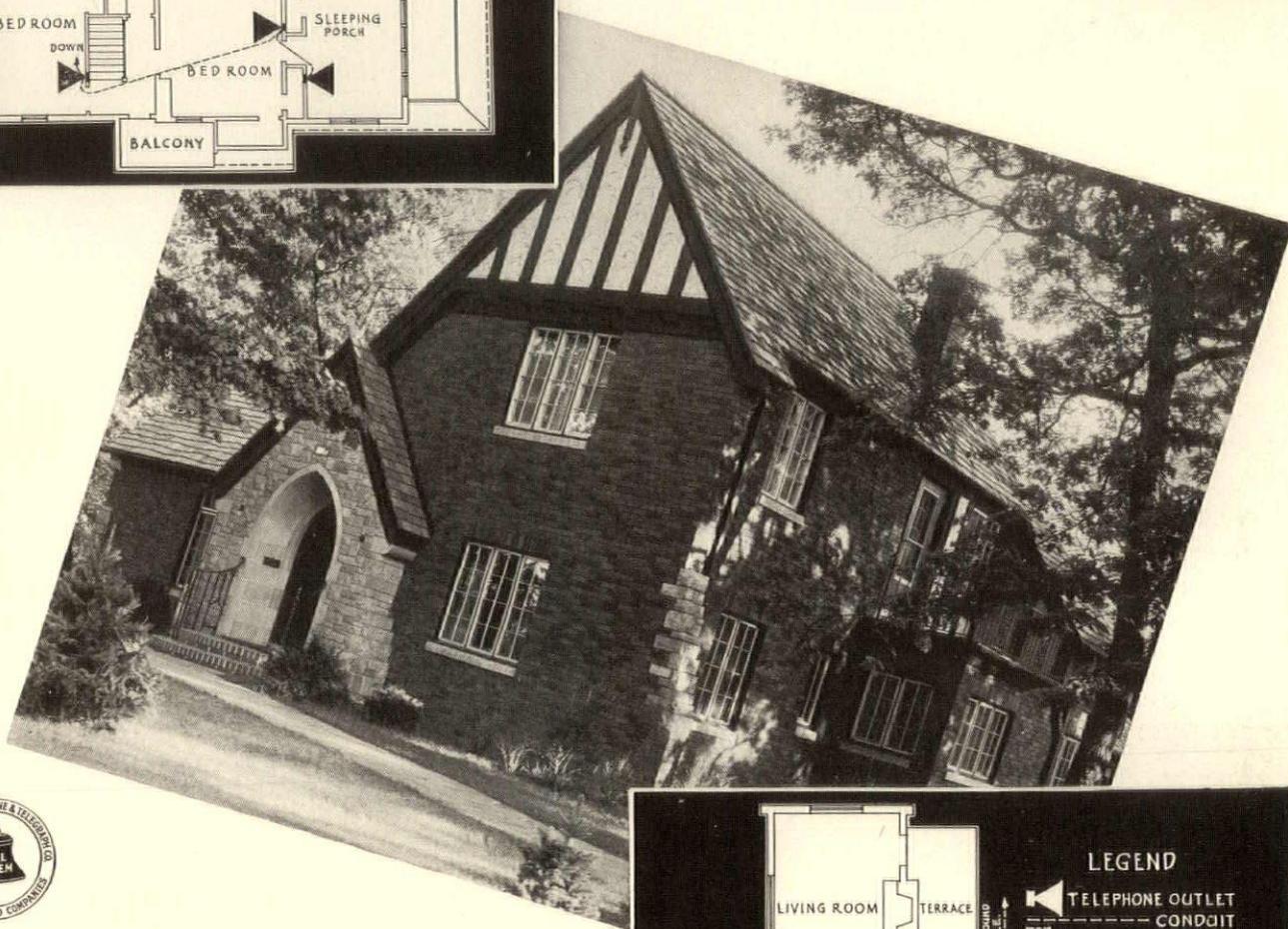
Introduced only recently, Mephisto Brick Red Chalk Pencils immediately met with great success. If you haven't tried it yet, do so at once. You will find your blue print checking problem satisfactorily solved now and forever. Demand Mephisto Brick Red #1350.

Many other Koh-I-Noor quality products are described in our booklet, "The Right Pencil In The Right Place." A copy is yours for the asking.

Koh-I-Noor Pencil Company, Inc., 373 Fourth Ave., N.Y.

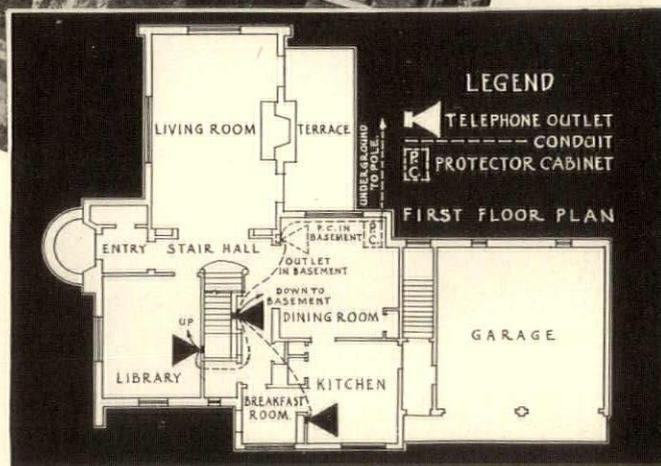


Well-planned, built-in telephone arrangements help make this  
**A MODEL HOME**



The architect of this model home comments: "Certain features must be incorporated in the home of today for the fullest comfort and convenience of the owner. Proper telephone provision is one of them. Too often it is neglected on the excuse, 'We can always get the telephone in.' While this is true, it cannot be done as easily and neatly as when properly planned for.

"Since it is so easy and inexpensive to provide adequate telephone arrangements at the time of building, I believe it should be carefully considered — telephone service brought in like electric service in the least conspicuous way — and telephone outlets located where they may be needed for the present and the future."



Built-in conduit and seven outlets, including one in the basement, provide for telephone convenience in the residence of Mr. Carl Mussetter, 1116 Chautauqua Parkway, Des Moines, Iowa. This was the 1933 model home sponsored by the "Des Moines Register & Tribune." Carl V. Johnson, Architect, Des Moines.

Because of increased activity in home modernization and new home construction, there should be many projects in which the installation of telephone conduit will make grateful clients. Just call your telephone company Business Office for full details.

# THE BULLETIN - BOARD *Continued*

(Continued from page 6)

credentials must also be presented recommendations from the architectural firms for which the candidates have worked. Application blanks may be obtained by addressing the Director of the School of Architecture, Princeton University, Princeton, N. J.

The twenty-five candidates whose credentials are most satisfactory will be notified that they have been admitted to the competition in design and a competition program will be issued to them on the date specified. The competition will be held from 9 A.M. May 20 to 9 A.M. June 1, 1935, inclusive.

The competition drawings must be done in any institution or office approved by the Director of the School of Architecture. Each candidate should state in his application where he prefers to work on the competition.

The jury will consist of two representatives of the staff of the School of Architecture, Princeton University, namely, Professors Sherley W. Morgan and Jean Labatut, or alternates appointed by them, and three prominent practising architects who will be invited to serve. The jury will meet on or about June 13, 1935, and the final awards will be announced immediately thereafter by the Director of the School.

## LOW PLUMBING COSTS

A SURVEY just completed by the Plumbing and Heating Industries Bureau at the request of the Federal Housing Administration shows that staple plumbing fixtures are selling today at less than at any time in the last twenty years. Prices for boilers and radiators are approximately half of what they were in 1926. The relative prices for a five-foot, corner, built-in bathtub varied as follows, the index number of 100 being set for 1926: 1914, 97.1; 1920, 112.1; 1926, 100; 1928, 85; 1932, 61.9; 1933, 65; 1934, 55.1.

*JULIAN PEABODY,*  
1881-1935

**JULIAN PEABODY**, a member of the firm of Peabody, Wilson & Brown, architects of New York, with Mrs. Peabody, went down on the *Mohawk* in the marine disaster of January 24.

Mr. Peabody was born in New York City, March 29, 1881. After graduating from Groton School and

Harvard, he studied for four years at the Ecole in Paris under Henri Deglane. In 1921 he formed a partnership with Albert Wilson and Archibald M. Brown, and the firm has designed many types of buildings, including libraries, banks, schools, and large country houses. His first executed work of importance was the Town Hall at Huntington, Long Island, won by him and Albert Wilson in competition shortly before the firm was organized.

Mr. Peabody was known in a more limited circle also for his watercolors, a collection of which, with his architectural work, is to be shown in a memorial exhibition to be held later this year. He was a member of the American Institute of Architects.

*FREDERICK P. DINKELBERG,*  
1862-1935

**FREDERICK PHILIP DINKELBERG**, architect, died in Chicago on February 10. Mr. Dinkelberg was born in Lancaster, Pa., son of an Italian countess and a contractor.

He was a graduate of the Pennsylvania Academy of Fine Arts, and had practised architecture since 1888. In 1892 he went to Chicago, and was associated with D. H. Burnham, working upon the buildings for the Columbian Exposition. Unquestionably, however, the work by which he is best known is the so-called Flatiron Building in New York City, one of New York's earliest skyscrapers, designed by D. H. Burnham & Company in 1903 with Mr. Dinkelberg actively in charge of this work.

He was a member of the American Institute of Architects and the Art Institute of Chicago.

*NORMAN G. NIMS,*  
1867-1935

**NORMAN G. NIMS**, architect of New York City, died at his home in Yonkers, January 20.

Mr. Nims began his architectural training at the Massachusetts Institute of Technology, and for some years was with McKim, Mead &

White. Later he was a member of the York & Sawyer organization, in which capacity he worked upon the Department of Commerce Building in Washington, the Salmon Towers, and the Transportation Building in New York City, among others. He was a member of the American Institute of Architects.

*LUDWIG W. EISINGER,*  
1874-1935

**LUDWIG W. EISINGER**, architect, died February 5, at his home in Mount Vernon, N. Y., after an illness of several months.

Mr. Eisinger was born in Vienna, and received his early education there and in France, coming shortly afterwards to this country.

Mr. Eisinger was formerly associated with the firm of Henry C. Pelton, Allen & Collens, who designed the Riverside Church. Mr. Eisinger worked on this project, and also the church and gardens of Mr. John D. Rockefeller's estate at Pocantico Hills. He was a member of the American Institute of Architects.

*T. CECIL HUGHES,*  
1868-1935

**T. CECIL HUGHES**, architect of Newark, died January 26, at his home in Maplewood, N. J., following a long illness.

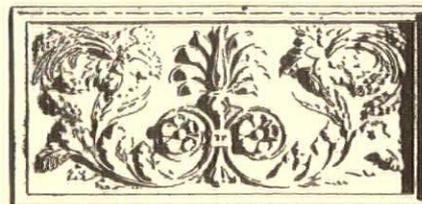
Mr. Hughes was born in Manchester, England, and came to this country as a young man. Among the building projects he supervised was the Blessed Sacrament Roman Catholic Church in Newark.

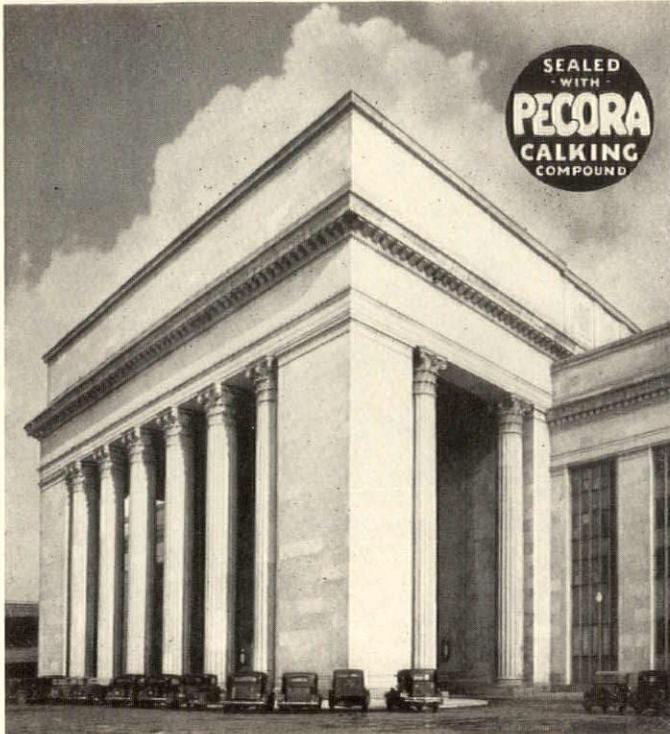
## PERSONAL

The architectural firm of Jones, Furbringer & Jones having been dissolved, M. H. Furbringer, architect, announces that he will continue the practice of architecture with offices in the Porter Building, Memphis, Tenn.

It has been announced that the firm name of Dunn & Copper has been changed to Munroe Walker Copper, Jr., with offices in the Hanna Building, Cleveland, Ohio.

Announcement has been made that John Calvin Stevens and John Howard Stevens, architects, have moved their offices to the suite they formerly occupied in the Oxford Building, 187 Middle Street, Portland, Me.





Graham, Anderson, Probst & White, Architects  
United Engineers & Constructors, Phila., Genl. Contrs.

## WEST PHILA. STATION PENNSYLVANIA RAILROAD PECORA CALKING COMPOUND USED

**A**LMOST every important building project completed during the past few years has included Pecora Calking Compound. The Empire State Building, City Bank Farmers' Trust Co., The Cincinnati Union Terminal, Insurance Co. of North America (New York), the Benjamin Franklin Memorial—to mention a few—are sealed weather-tight with Pecora Calking Compound. More than 200 Federal Buildings, including the enormous I. C. C.-Labor Building, Washington, are Pecora-protected.

Pecora Calking Compound is the most dependable material that can be used for calking window and door frames, wood, metal and masonry joints. Properly applied, it will not dry out, crack or chip. Leading architects, builders and owners know this and will permit of no substitution. Why take chances? Specify Pecora and insist upon its use.

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



(Patent Applied for)

## Pecora Paint Company

Inc.

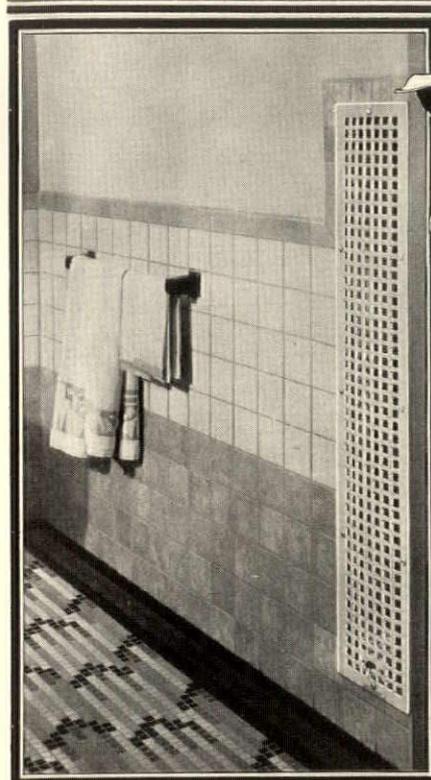
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PHILADELPHIA

Established 1862 by Smith Bowen

Also Makers of  
**SASH PUTTIES  
MORTAR STAINS  
SUCTION MASTIC  
for Structural Glass**

# Thermador

EVERHOT  
ELECTRIC ROOM HEATERS  
ELECTRIC WATER HEATERS



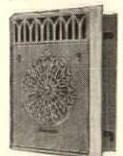
★  
What  
you  
don't  
see  
in the

## BLUE-PRINT!

**T**HERE'S more to designing bathroom heaters than shows in the blue-print. That's why the new Thermador Radiant Electric Bathroom Heater is "Seven Leagues" ahead. It interprets the modern trend in bathroom heating, as well as allowing greater latitude where small space is a factor. 9 inches wide, 48 inches tall. Gives you quick, radiant heat from head to heels. Easy to install. Standard Colors: White, Ivory or Nile Green. Special colors slightly extra. Listed as standard by the National Board of Fire Underwriters. Equipped with switch.

Cat. Number	Watts	Volts	Price Complete
LR 161	1650	115	\$23.50
LR 162	1650	230	\$24.50
LR 202	2000	230	\$26.50

Grille Size 9" x 48" x 1/4" Shipping weight (heater) 10 lbs.  
Wall Box 7" x 46" x 4" Shipping weight (wall box) 11 1/4 lbs.



Master Duty  
Wall Insert  
Type W

### COMPLETE HEATING EQUIPMENT!

We are the originators of Fan-Type Electric Heaters. A complete line of Electric Room Heaters in both portable and wall types, manual or automatic control. Master Duty Wall Insert Type W shown above, at right. Thermador-Everhot Electric Water Heaters have been the standard for Quality and Performance for nearly 20 years. Type FW-30 illustrated at the right.

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*who want to do Big Things*  
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**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.

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*Designed in the Business  
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*Main Building and Shop  
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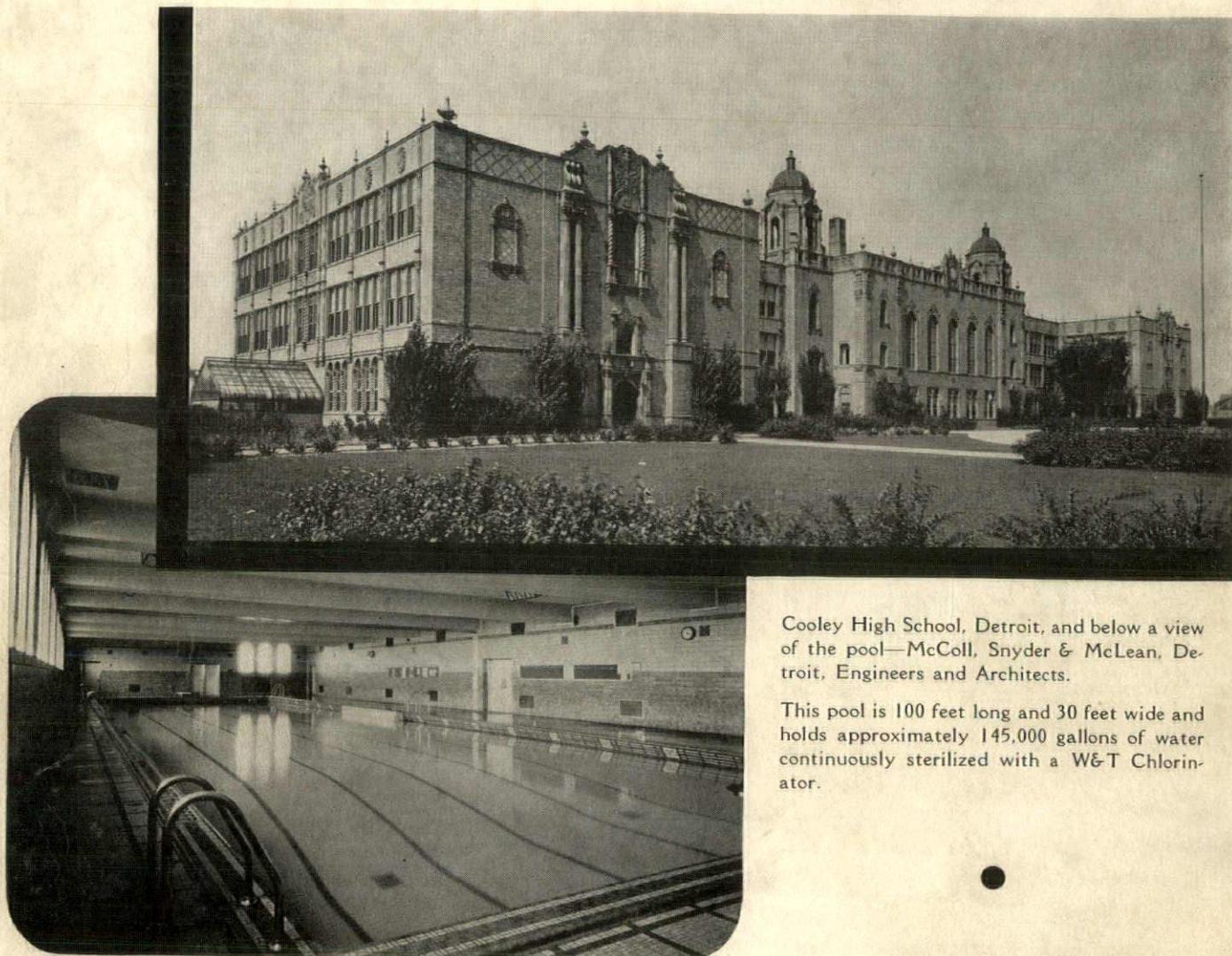
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This pool is 100 feet long and 30 feet wide and holds approximately 145,000 gallons of water continuously sterilized with a W&T Chlorinator.

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