

Kitchens

Kitchens

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SEPTEMBER 1935 • MODERNIZED BUILDINGS • ARCHITECTURAL TEXTILES • TIME - SAVER STANDARDS

AMERICAN ARCHITECT

HIGHLIGHTS OF THE EDITORIAL MONTH

The once lowly alteration job has lately become a Great Event so far as the building industry is concerned. Architects have converted modernization work into a kind of art; and in this issue the PLATE SECTION presents some noteworthy examples, varying widely as to type and locality. . . . To Arthur C. Holden modernization is also a science—social and economic as well as structural—and in STABILIZED MODERNIZATION he expresses his conviction that group activity as opposed to individual effort is the only scientific solution to the manifold problems of rehabilitating urban properties. . . . TIME-SAVER STANDARDS, hailed in many quarters as the most useful and valuable of publishing innovations, were announced last month as a regular feature of American Architect. In this issue they include concise, clear data on kitchens and bathrooms, two spaces where modernization is usually most necessary. . . . Additional plates contain four unusual KITCHENS with plans and details. . . . TEXTILES as a class of architectural materials have received less editorial attention, perhaps, than is merited by their importance in interior design. Thus, to most architects, the article on CARPETS, fourth of the Materials in Design series, will prove interesting and, we hope, thoroughly useful.

*It is not a matter to be
taken lightly, the confining of children in
artificial surroundings during the most
active time of their lives.*

HERMAN NELSON
*System of
Air Conditioning for Schools*

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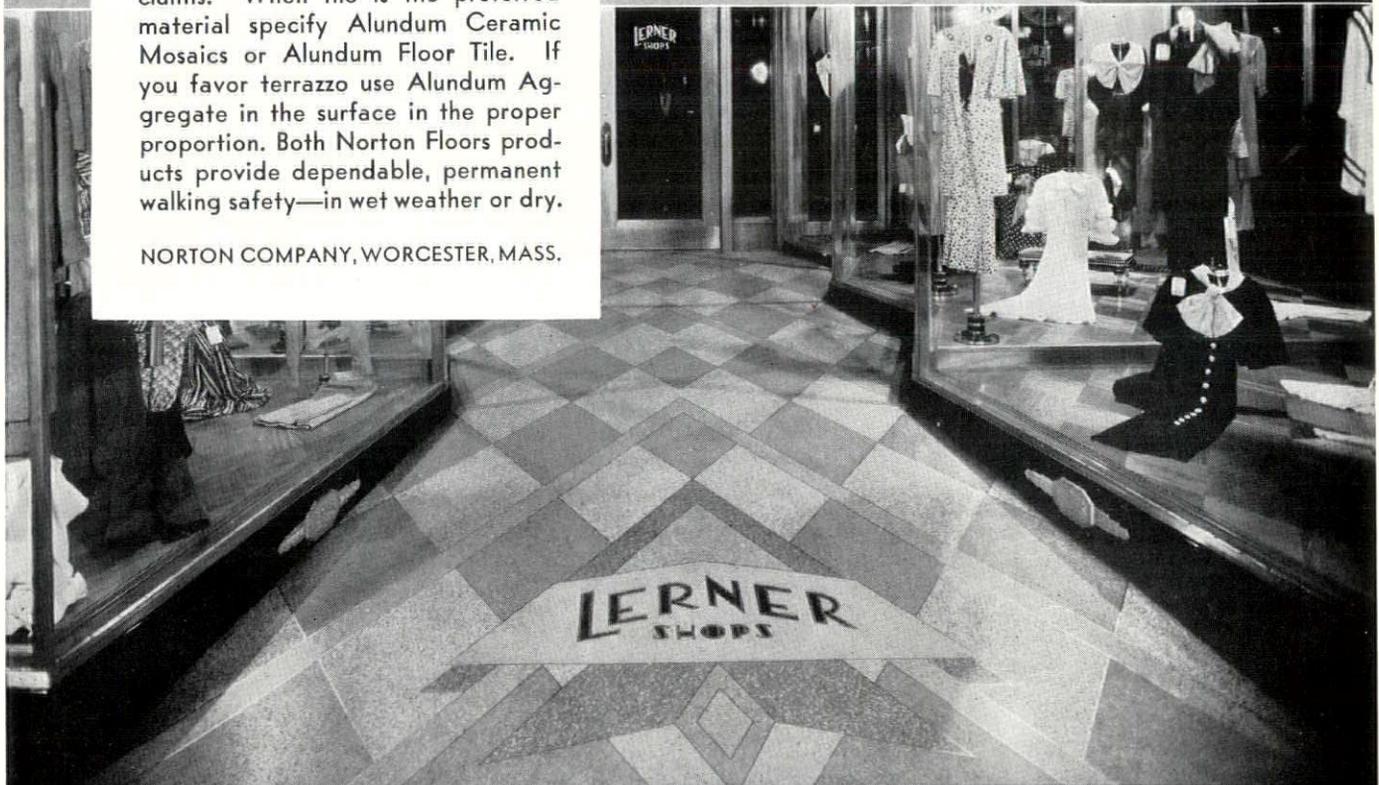


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PROTECT your clients against the expense and nuisance of damage claims for falls. A dependably non-slip vestibule that prevents slipping accidents is the surest way to avoid unjustified and unreasonable claims. When tile is the preferred material specify Alundum Ceramic Mosaics or Alundum Floor Tile. If you favor terrazzo use Alundum Aggregate in the surface in the proper proportion. Both Norton Floors products provide dependable, permanent walking safety—in wet weather or dry.

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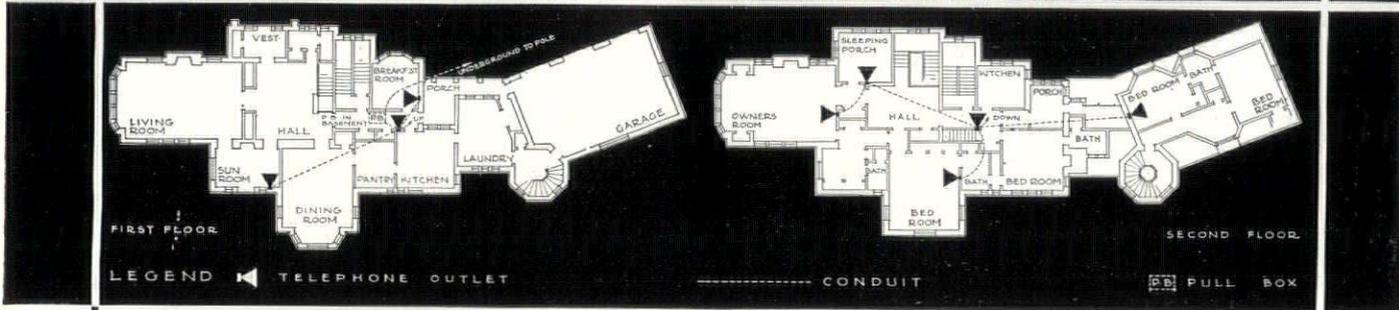
FIFTIETH
NORTON
YEAR
1885-1935

NORTON FLOORS

ALUNDUM TILES — TREADS — AGGREGATES



Built-in conduit and eight outlets provide for telephone convenience in the residence of Mrs. C. M. Kitselman, 2400 West Jackson Street, Muncie, Indiana. Fredrick Wallick, Architect, Indianapolis, Indiana.



TELEPHONE FACILITIES COST LEAST, GIVE MOST when they begin on your drawing board

THE most efficient, economical telephone arrangements for modern residences are born on the drawing table and grow up with the blue-prints. On paper, conduit can be easily run in walls and floors to prevent exposed wiring and protect against certain service interruptions. On paper, outlets can be located at strategic points upstairs and down to make possible a full, flexible telephone convenience.

Pre-planned telephone facilities add little to construction costs. But your client can have as few or as many telephones as he wants, when and where he wants them. He can move them as needs change with the years.

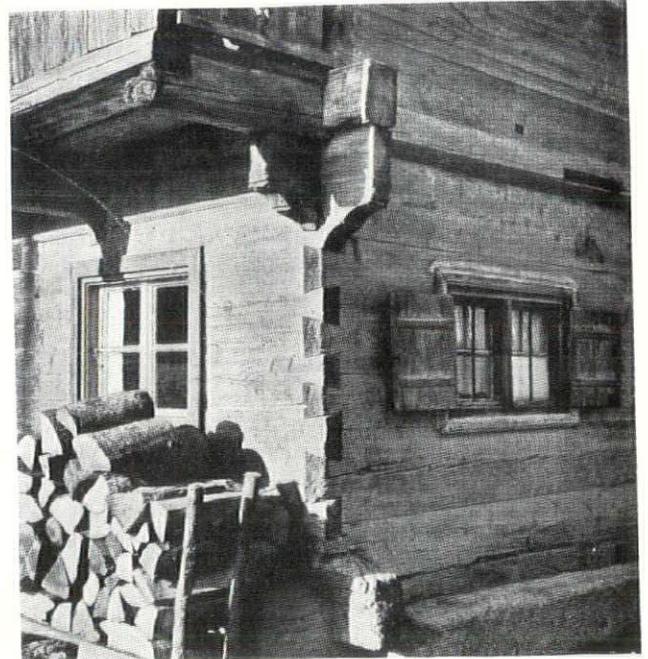
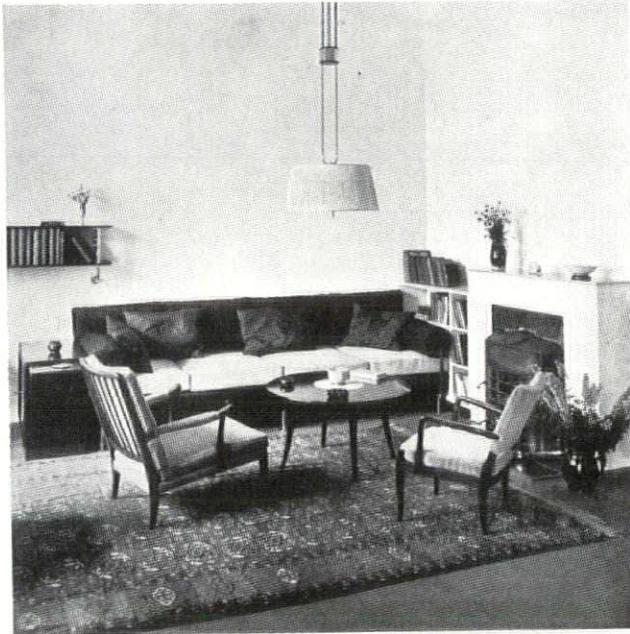
He and all his household will save steps, stairs and minutes . . . have more privacy for personal conversations . . . and be grateful to you for the lasting livability you've provided.

Incidentally, your local telephone company keeps trained telephone engineers always ready to work with you . . . on remodeling jobs or new construction . . . whether you're locating a second-floor outlet in a small house or planning an elaborate intercommunication system for a large estate. There is no charge, of course. Just call the Business Office and ask for "Architects' and Builders' Service."



For further information on Bell System telephone services and equipment, see Sweet's Catalogue

American Architect, published monthly by International Publications, Inc., 572 Madison Avenue, New York, N. Y. \$3.00 per year. Canada, \$4.00; Foreign, \$5.00. Entered as second class matter April 5th, 1926, at the Post Office, at New York, N. Y., under the act of March 3rd, 1879. Issue 2637, dated September, 1935.



WIENER MOBIL

By Erich Boltensern. Published by Julius Hoffmann, Stuttgart, Germany. Illustrated; page cover; 96 pages; size 9 x 11½; price RM 10.50.

BY treating in a comprehensive and effective manner, through the use of photographic illustrations, measured drawings and explanatory text; the author of this book has made a distinct contribution to the subject of furniture design with wood as the basic material.

While the great majority of the designs show the influence of tradition, there is a refreshing note of simplicity—a straight-forwardness of design which enhances their value for use in the modern house.

The photographic illustrations and measured drawings are so complete that any first class cabinet shop could easily reproduce any one of the pieces shown. Beside furniture details there are many interiors which should prove of interest to architects, decorators and the home owner.

BAUEN IN HOLZ

By Hans Stolper. Published by Julius Hoffmann, Stuttgart, Germany. Illustrated; 148 pages; size 9 x 11½; price RM 13.50.

WHILE much has been written on the subject of wood utilization as a construction material, it still remains a fertile field for exploitation. To those who read German, this work is a clear-cut exposition of the ramified uses of this ancient material, with

Above, left: interior shown in "Wiener Mobil". Right: detail from "Bauen In Holz". Below: from "Symbols for Designers"

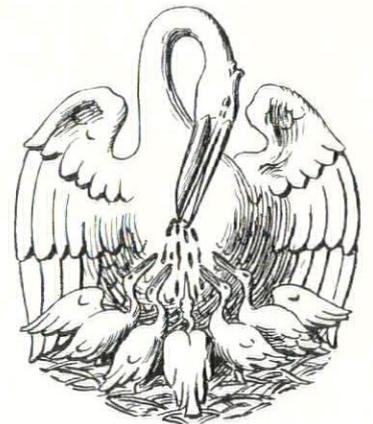
special reference to the engineering features commensurate with sound construction.

The value of the book is enhanced by the large number of photographic illustrations and measured details of construction. Subject matter is more or less limited to smaller structures, such as houses, recreational buildings, rural schools and churches; barns and bridges.

SYMBOLS FOR DESIGNERS

By Arnold Whittick. Published by Crosby Lockwood & Son, Ltd., Stationers' Hall Court, London, E.C.4. Illustrated; indexed; 168 pages; size 6¼ x 10; price 12/6d.

IN alphabetical order, this book describes various symbols with their practical application to modern work, giving to each its significance and history. The introductory chapter vividly portrays the meaning of symbolism; the type of symbols used in pictorial design; architectural symbolism; and symbols for the modern designer working in stone, marble, granite, metal and wood. While the text throughout deals comprehensively both with the origin and meaning of symbols and their practical application; the lasting value of this work to architects is found in the many carefully drawn and well selected illustrations. As a reference book it should



appeal to architects, sculptors, ecclesiastical designers and students of symbolism.

LUMBER GRADE - USE GUIDE

Published by National Lumber Manufacturers Association, Washington, D. C. Cover, loose leaf binder; 218 pages; 9½ x 11½; price \$1.50.

PRINTED in convenient loose-leaf form, this manual is a compilation of technical data, arranged in separate pamphlets, each dealing exclusively with the species of woods from a particular region, and presented in a standardized order throughout. A description of the characteristics of the species included in each group is followed by grade-use recommendations; a table of sizes and a brief description of the grades, which, in many cases, is (Continued on page 113)



**WHY ANOTHER
FAMOUS RESTAURANT USES
Armstrong's Linoleum
FOR ITS DANCE FLOORS**

This smart dance floor of Armstrong's Linoleum in cadet blue with orange stripes gives Child's Restaurant at 1501 Broadway, New York, an air of warmth and spaciousness. Armstrong's Architects' Service Bureau offers complete technical assistance in designing floors like this.

IN this Child's Restaurant, the dance floor is Armstrong's Linoleum—a daring modern design in blue and orange. And here's why Child's installed it:

First of all, Armstrong's Linoleum makes a good floor for dancing. It's smooth. It's resilient. It's comfortable underfoot. And because it can be laid in distinctive, made-to-order designs like this one, it "trade-marks" a restaurant . . . makes patrons remember it and come back.

Furthermore, an Armstrong's Linoleum Floor is easy and inexpensive to maintain. It never needs

sanding or refinishing. It doesn't buckle or warp. And an occasional washing with Armstrong's Floor Cleaner, and periodic use of Linogloss Wax, keep it smooth and beautiful for years. That's because the colors run clear through to the back, so that scuffing feet and scraping furniture cannot wear them off.

During rush hours, tables can be placed on an Armstrong's Linoleum dance floor without fear of

denting it or ruining its dancing surface. Spilled things wipe right up without leaving a stain or spot.

Point by point, Armstrong's Linoleum offers economies and advantages you cannot find in ordinary floors. For complete information, write now for your copy of "Public Floors of Enduring Beauty."

Armstrong Cork Products Co., Floor Division, 1201 State Street, Lancaster, Pa.



***Armstrong's* LINOLEUM FLOORS**

The Readers Have a Word to Say

• BUSINESS DOUBLED

Editor, AMERICAN ARCHITECT:

RELATIVE to architectural design as advertising medium and its competition with bill board and other forms of advertising, I believe the profession is missing one of its greatest opportunities. Recently we had an opportunity to display, against the opposition of the owners and everyone else, an idea that has since proved very successful.—*Pierre & Wright, Architects, Indianapolis, Ind.*

The following letter addressed to the architects is self explanatory. (Editor).
Pierre and Wright:

I fully agree with your ideas, often expressed in our many conferences, that proper architectural treatment is a principal factor in the development and success of the restaurant business.

We operated the Indianapolis Union Station Railway Restaurant for a number of years prior to 1932. In 1929, the business of feeding the traveling public was declining to a marked degree. Also the city business we had enjoyed seemed to be getting away, as the city developed to the north. Frankly, we needed an uptown location, so when the Building Managers, offered us the opportunity to take over the Traction Terminal Restaurant located in a building at one of Indianapolis' principal downtown corners, we gladly agreed.

The restaurant at that time had a total seating capacity of 80, was a typical lunchroom catering principally to traction and bus line patronage. We changed the style of the menu and the business gradually increased. However, labor and food costs were mounting and in the summer of 1934, we decided to change the entire aspect of our business. A careful analysis of existing conditions brought out the following detrimental facts:

1. The class of people passing our door was not generally the class of patronage we desired.
2. While we thought that food and service were the best in the city, few people knew of our uptown location or associated it with our established business at the Union Station.
3. The appearance of our restaurant did not appeal to the discriminating public.

Feeling that you as architects could most easily solve our problem, we presented it to you. I recall vividly your first impressions and preliminary suggestions. Frankly, I thought them too elaborate, in fact, everyone except yourselves, the architects, was skeptical of the proposed front. When you explained that to draw patronage not only from Indianapolis, but from the whole state of Indiana, an outstanding façade with character was necessary, I soon concurred with your ideas.

In October, 1934, we opened the Peasant Room, adjacent and connected with our older room. How successful this was, you well know. Overnight our volume was doubled. The very attractive front, depicting two peasants, drinking each other's health over a table, became the talk of Indiana. Our most recent addition of one hundred and twenty-five seats, together with complete transformation of the old restaurant, by you, has been most gratifying. We are now enjoying the largest volume of business in many years in mid-summer, a most unusual condition in the food business.

Suffice it to say, we now consider the Peasant Room front, as well as the two new fronts just completed, one of the principal advertisements we have. The value of good architecture as an advertising medium has no peer and this has certainly been demonstrated in this instance.—*I. W. Fendrick, Indianapolis.*

• ARCHITECTS' MARKET

Editor, AMERICAN ARCHITECT:

WE feel that the impetus given modernization as a result of the FHA program is certain to carry on long after the expiration of the Act. Figures released by FHA show that modernizing work being done with funds from sources other than modernization credit loans insured by Federal Housing Administration, is in the ratio of about six to one—tangible evidence that the plan is pointing the way—with a great volume of normal business stimulated as a result.

The dramatic success of home modernizing is evidence that industrial modernizing, under the new \$50,000 insured-loan limit, will be likewise greatly stimulated. *The statement made by*

B. J. Flynn, Director, FHA Industries Division, that "at least 400,000 retail establishments need modernization applied to exterior and interior" . . . appears to be a reasonable estimate. Our own experience, based on reports of our field men, shows a real pick-up and growing interest in modernization in all sections.

Here indeed is a field for the architect—a market that offers most unusual opportunities for re-designing homes and business properties; for planning new interior and exterior arrangements, for stores, apartment houses, offices and industrial plants. Furthermore, the growing appreciation that it is just as important to consult an architect when planning remodelling work as it is for new construction, brings the architect very much to the front in the entire FHA program.—*W. G. Kaiser, Portland Cement Association, Chicago.*

• ABSOLUTELY NECESSARY

Editor, AMERICAN ARCHITECT:

BELIEVE generally that we, as architects, are depending too much upon making a favorable impression upon the public as an inducement for employment. But just such a thing is absolutely necessary and I think that we have all remained in the background too much for our own good. What we need may not be advertising as it is usually understood, but public education along ethical lines.

What I think we have missed is the thought that there can be no employment for architects except in a few spots if everything surrounding what we produce is, and has been, beset by conditions and laws and customs which render our re-employment improbable, if not impossible. We have been in the habit of leaving these things to others. If properly organized groups of architects, not really acting as representatives of the profession, but as individual citizens, would interest themselves in these problems, we would then have a businesslike plan.

I am afraid that any movement that would have to have the endorsement of every architect in the country will fail to clarify itself somewhere along the line.—*D. A. Crone, Architect, Pittsburgh, Pa.*

LEAKPROOF forever



• OXWELDED PIPING •

THESE oxwelded coils of panel heating pipe will set directly in the plaster. Complete freedom from the slightest leak which might mar a beautiful room and from future maintenance of any sort have been assured by making the whole system jointless. By oxwelding, the lengths of pipe, as brought from the mill, have been put together in one continuous piece. Each weld is as strong or stronger than the pipe itself and as corrosion-resistant.

Leakproof piping systems for all services can be assembled rapidly from pipe of any size, any commercial metal, by oxwelding. Permanence is so positive that oxwelded piping has been installed in masonry walls fourteen feet thick. Modern skyscrapers, hospitals, and public and private buildings enclose mile upon mile of oxwelded piping.

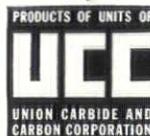
Specifications for Welded Piping

Linde engineers have prepared clear and concise technical data especially for the architect interested in designing and specifying jointless piping systems that will remain leakproof forever. Ask the Linde Office in your city for complete details or write to Department TPD, 30 East 42nd Street, New York, N. Y. The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation.

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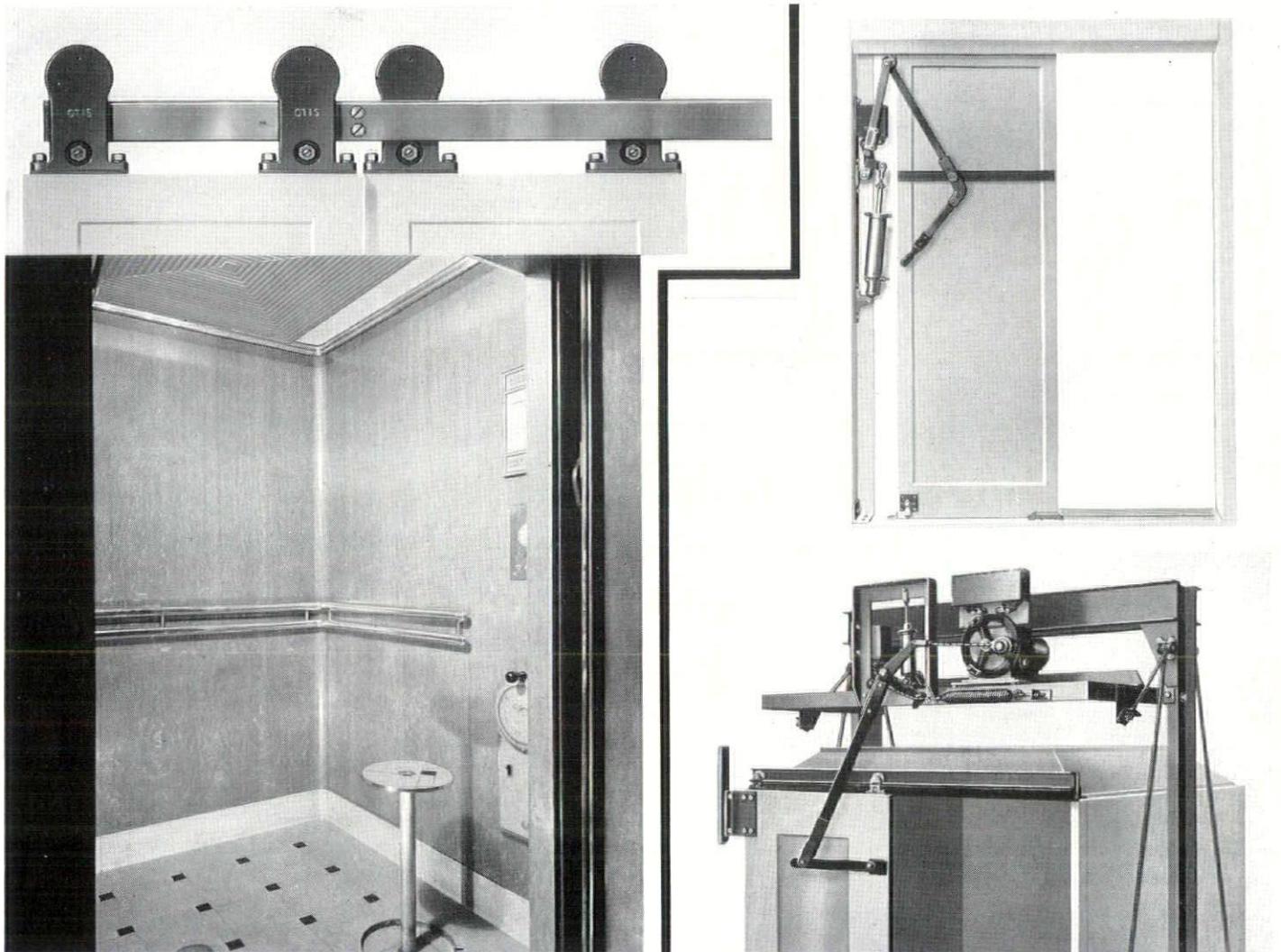
FROM



LINDE

UNION CARBIDE

Elevator cars, car doors, door hangers and door-operating devices by Otis



WHEN you buy an Otis Elevator, you buy one of the finest pieces of machinery that money can buy. Its quality is recognized everywhere.

In order to make sure that not only the elevator machinery but a complete elevator installation of Otis quality is available, Otis has manufactured cars, car doors, door hangers, and door-operating devices for a number of years. Into this apparatus goes the same quality of materials and workmanship as into the Otis Elevator itself.

In designing cars and car doors not only quality of workmanship but also styling and design are important. And Otis craftsmen have developed a wide variety of modern treatments. From these you may choose a design that harmonizes with the architectural treatment of your building. Or, if you wish,

you can have any special design executed. Cars are available in metal, wood and metal, or all wood.

We wish to mention also that we make a wide range of door hangers and that in designing these we have made every effort to minimize noise and turn out a product that will give lasting service. Safety and silent operation are two important features of Otis door-operating devices.

Your local Otis office will be glad to furnish complete details on any of the apparatus mentioned above. And may we suggest that you get an Otis proposal before buying any of this equipment for either an elevator installation or an elevator modernization project?

Otis Elevator Company

AMERICAN ARCHITECT

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An Open Door To Building

Modernization . . . an activity which has buoyed past hopes of building and now opens a three billion dollar opportunity for immediate work

PICK UP the Sunday real estate section of any metropolitan newspaper. One gains the instant impression that a building boom is at hand. Turn to the financial pages and a bullish tone is evident. Editorial pages hold the inference that the country can at last see a clearing light in the economic woods. And throughout the news pages are items indicating a generally quickened interest in the accumulated needs of too-long deferred construction.

This general impression of optimism—particularly as it refers to building activity—has been strengthened by a deluge of publicity that for more than a year has rolled from many an astute bureau. But behind the press-agentry lie conditions and probabilities that are a sounder guide to potentialities in building and to immediate opportunities in modernization activities. Important governmental agencies and business organizations have regarded modernization as a door that will eventually swing wide open to building recovery. Such an attitude implies a tremendous market for goods and services. How great is this market; and to what extent can architects expect participation in the economic opportunities offered?

A general answer to the first part of the question as it refers to houses has been recently compiled by the FHA. A nation wide survey—which took into account the distribution of population; the number, type and valuation of dwellings; and the purchasing power of the communities—uncovered a market for home modernization of at least a billion dollars. This figure may not indicate the total of the potential market, for it refers only to work that the FHA is authorized to insure through its \$200,000,000 fund on the basis of 20 per cent of losses.

Thus it is not possible to estimate completely the potentialities of residential modernization. Nor can much concrete information be obtained that might detail with any reasonable degree of accuracy, the breadth of the modernization field as applied to commercial structures. As every architect now knows, the FHA insures loans on two types of projects. For dwellings the loan limit for insurance is set at \$2,000. In the commercial field, loans up to \$50,000 are insurable. It seems reasonable to suppose that commercial ventures would entail at least twice the expenditure estimated for home modernization work. Thus a possible total of three billion dollars delineates the extent of the immediate



GALLOWAY

BUSINESS . . .

Two Billion Dollars has been set as the extent of needed modernization of commercial structures throughout the country



HEDRICH-BLESSING



GALLOWAY

modernization market and points to its importance as part of the building activity of the next twelve or eighteen months.

Aside from these figures and broad generalities, pointed inquiries to various official bureaus and trade organizations have elicited little concrete information. In spite of inventories, surveys and charts, detailed facts regarding the extent of the modernization field appear to be meager. Total figures are impressive, but they can mean almost anything the individual wishes.

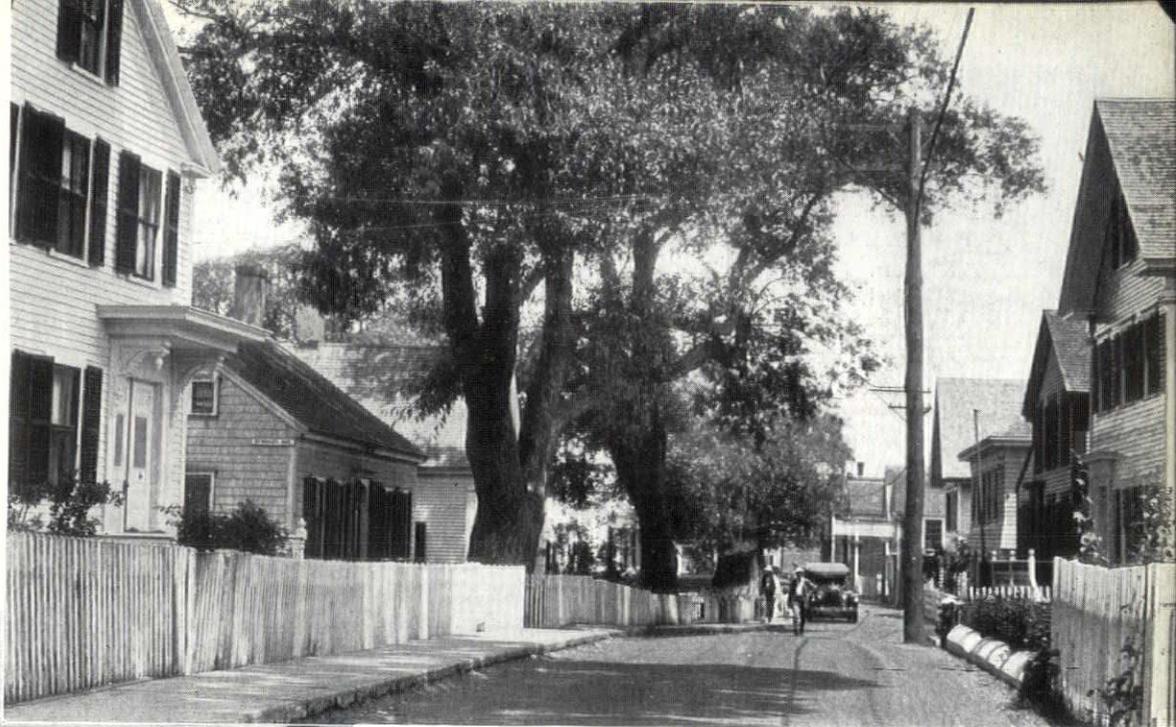
Boldly stated, the guess of the architect is as good as that of the statistician in this case. His personal participation in the great amount of modernization

work that unquestionably will be done depends largely upon the conditions—social and economic—of the town or city in which he lives. From real estate listings, Board of Trade information and talks with local bankers the architect can shrewdly assemble his own facts and figures. From them he will be able to establish a reasonably accurate forecast of local activity upon which can be based a quota of professional accomplishment.

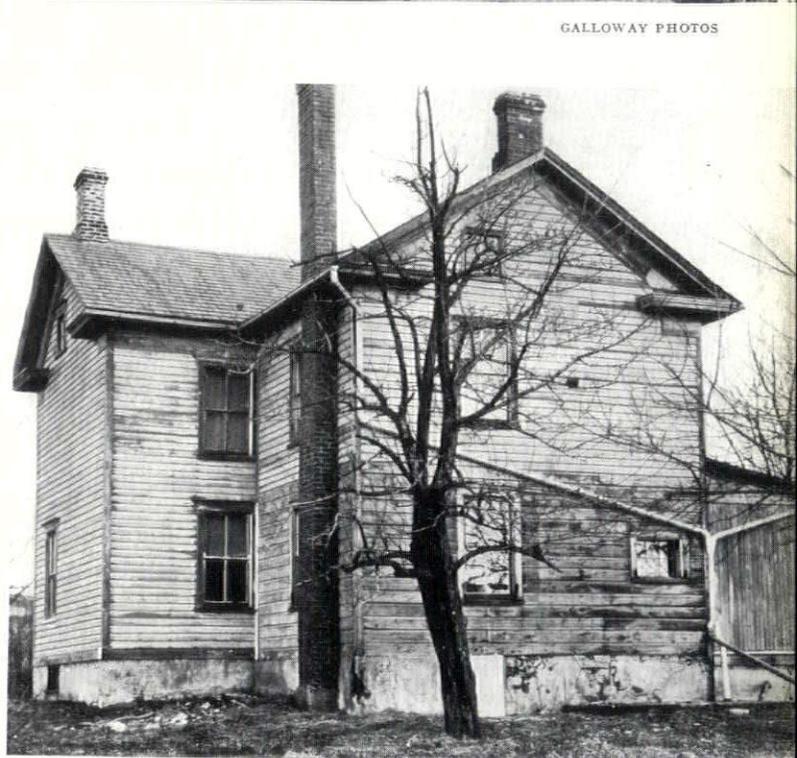
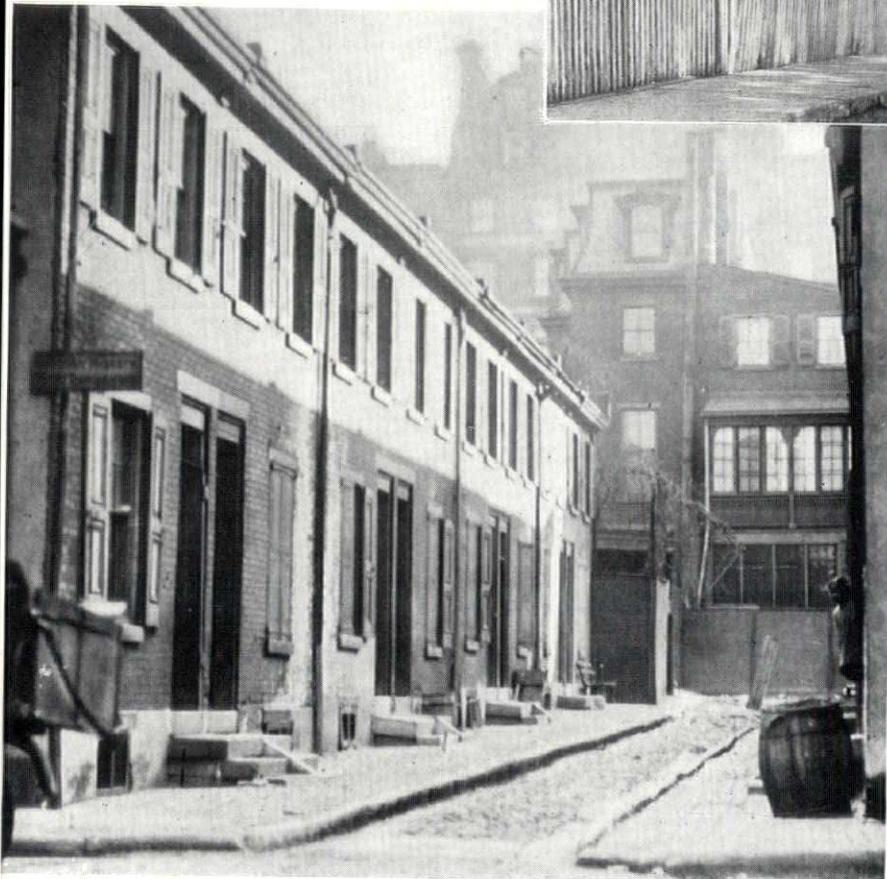
Highlighting local conditions, however, is the broad beam of past accomplishment on a national scale and the opinions of competent and realistic authorities. As to the first, figures from a late release of the Federal Housing Administration in-

AND HOME...

A Billion Dollars More will be spent in the remodeling and repair of nearly five million of our twenty-five million houses



GALLOWAY PHOTOS



dicating that more than 359,000 notes with a total valuation of over \$137,311,000 have been insured under the FHA Modernization credit plan. In addition, largely due to the FHA Better Housing Campaign, pledges for modernization work throughout the country have reached a figure close to the half-billion dollar mark. This last does not refer to actual expenditures, but indicates one known degree of definitely scheduled modernization work. And since most of it refers to the residential field, carried with it is no implication of the extent by which commercial modernization activity will swell the total of a conservatively estimated volume.

The extent of the modernization market in the

residential field has been estimated by Morton Bodfish of the U. S. Building and Loan League as involving an annual expenditure of \$200,000,000 to \$300,000,000 for the next several years "provided there is continual intelligent presentation of the case for refashioning the out-dated house." And the National Lumber Manufacturers Association estimates that about 5,000,000 of the nation's 25,000,000 houses "need and are worthy of extensive repairs, rebuilding and modernization."

The latter quotation can be regarded as having encouraging significance to architects. During the past year, expenditure in the field of residential remodeling as indicated by FHA figures has been

confined in large part to operations of repair and maintenance. The low limit of \$2,000 for a loan insurable by the FHA permitted no extensive alteration. The experience of the Reconditioning Division of the HOLC records the average loan as \$180 and indicates that more than 41 per cent of reconditioning expenditures in the residential field went for painting and papering.

AT present, according to Mr. Bodfish, private lending institutions are moving rapidly into a period where they can disburse billions of dollars yearly. And in the belief that "remodelling and modernization of homes has only just begun to be felt, associations are preparing to make a more substantial portion of their disbursements in this direction than was formerly characteristic." In this connection it is interesting to note that in 1932, a year of extreme credit drought, building and loan associations were making repair and modernization loans at the rate of \$5,000,000 per month.

But undoubtedly it is in the field of commercial work that architects will find most of their immediate modernization opportunities. Gleanings from various sources present, in general, an engaging picture. Census figures for 1933 record more than 1,500,000 retail stores, at least half of which urgently need modernization, according to a survey made by the FHA Industries Division. Department of Commerce figures for 1934 list a total of 11,690 office buildings 70 per cent of which are said to be antiquated in most respects. Nearly 30,000 hotels, more than 20,000 institutions of various kinds and 141,000 manufacturing institutions with a total building inventory unknown are also included in the 1933 Census of American Business. So far as is known, there exist no figures indicating what percentage of these totals are considered obsolete or how many require drastic modernization to render them satisfactorily efficient in terms of modern requirements of layout and equipment.

THE extent of this activity—a large part of which inevitably will involve the technical abilities of architects—has been estimated at a round \$2,000,000,000 by B. J. Flynn, Director of the FHA Industries Division. If this total were assumed, and if, further, it were assumed that a 6 per cent fee were available to some 10,000 offices for architectural ser-

VICES, each would receive as compensation a sum equivalent to an income of \$1,000 per month over a year's period.

Obviously, no such assumptions would be valid; and such a naive computation is justifiable only to prove the point that sober business will spend huge sums for operations in which the technical knowledge and experience of architects will be in most cases indispensable.

To what degree, then, can architects participate in the three billion dollar modernization market? The answer is: To any degree warranted by his professional abilities, technical ingenuity and business initiative. In other words, translation of the opportunities at hand as indicated by facts and figures into terms of professional commissions can be fruitfully made only by the individuals directly concerned.

Abundant evidence exists that architectural offices can carry on admirably in the modernization field. To large offices and small ones such work has proved lucrative enough to justify a definite type of organization to handle it.

EDITORIAL investigation has established the fact that a number of firms, who have been successful in the modernization field, have found it profitable to set up a separate department for handling all work of this type, thus eliminating interference with other projects in preparation. All clerical records, as well as, design, plan and supervision for each project are handled through this department. To what extent the average office can adopt such a method depends upon its size and personnel. The simplest method, which is now in use by one well-known firm, seems to be the appointment of a modernization project manager, whose duty it is to investigate each job and determine in advance the extent and type of work to be done. This information is then turned over to some individual in the office best fitted to handle that type of job. This man is made responsible for the entire project, including design, plan and supervision of all the construction.

The full co-operation of other members of the staff is available in case of difficulties. This system is being used to advantage to keep down overhead cost which is, of course, a major factor in handling modernization work on a profitable basis.



GOTTSCHO

View of approach
to house of Philip
Maguire, Shrub
Oak, New York

STEPS TOWARD MODERNIZATION

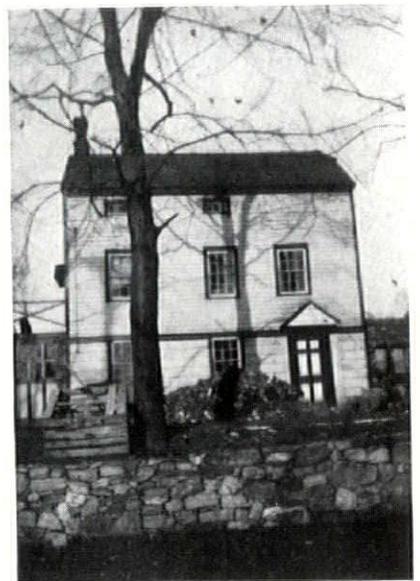
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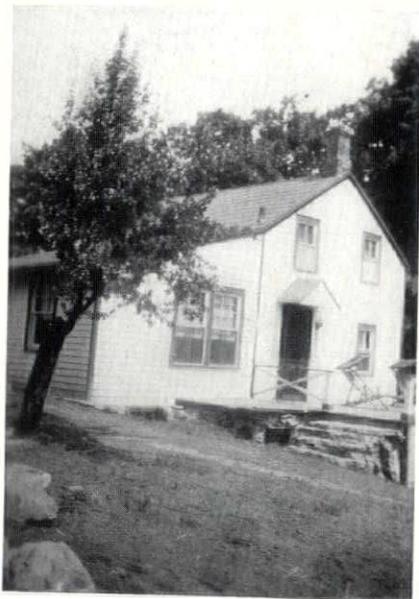
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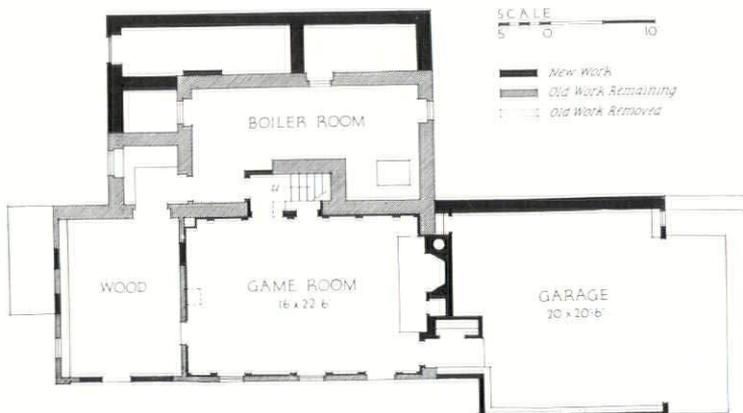
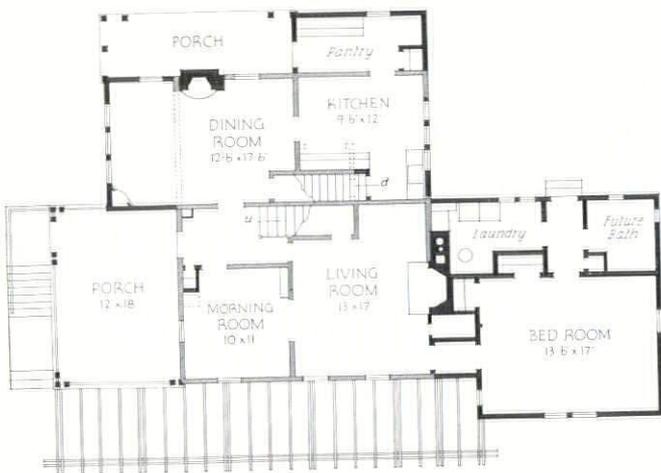
PHOTOS: GOTT

ELIZABETH COIT, ARCHITECT
HOUSE OF PHILIP MAGUIRE
SHRUB OAK, NEW YORK





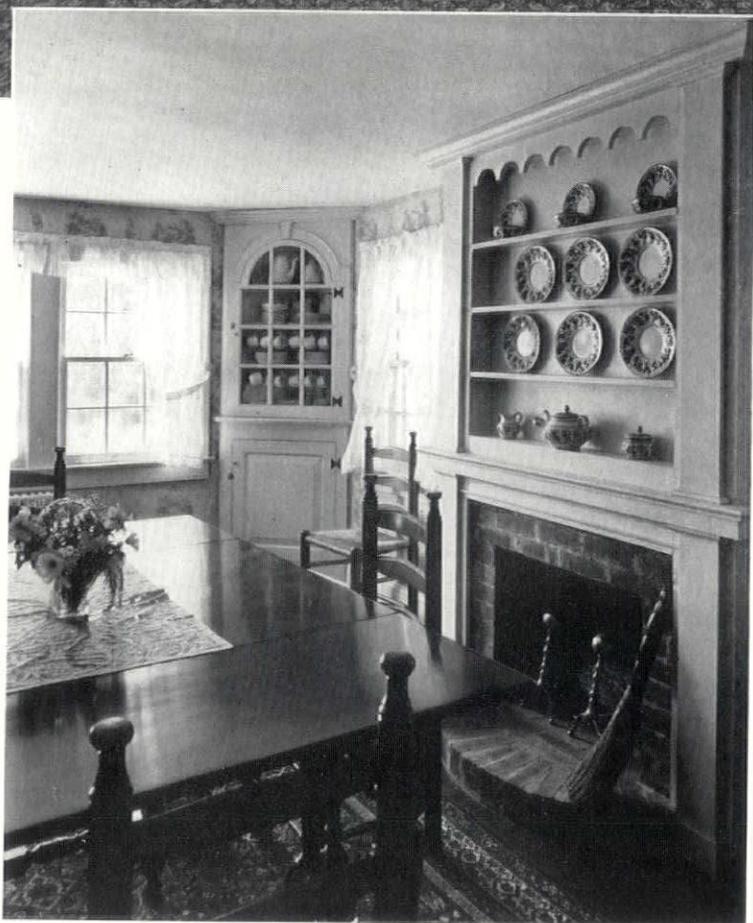
Remodelling at a cost of approximately \$7,000—exclusive of electrical fixtures and hardware—transformed this old farm dwelling into an attractive and comfortable home with all conveniences for modern living. Above, view from garden side. Left, same view before changes were made. On facing page, view from driveway. Below, house before remodelling. Clapboards to match original siding were used, painted white. Roof is 16-inch red cedar shingles unstained; shutters, bluish green



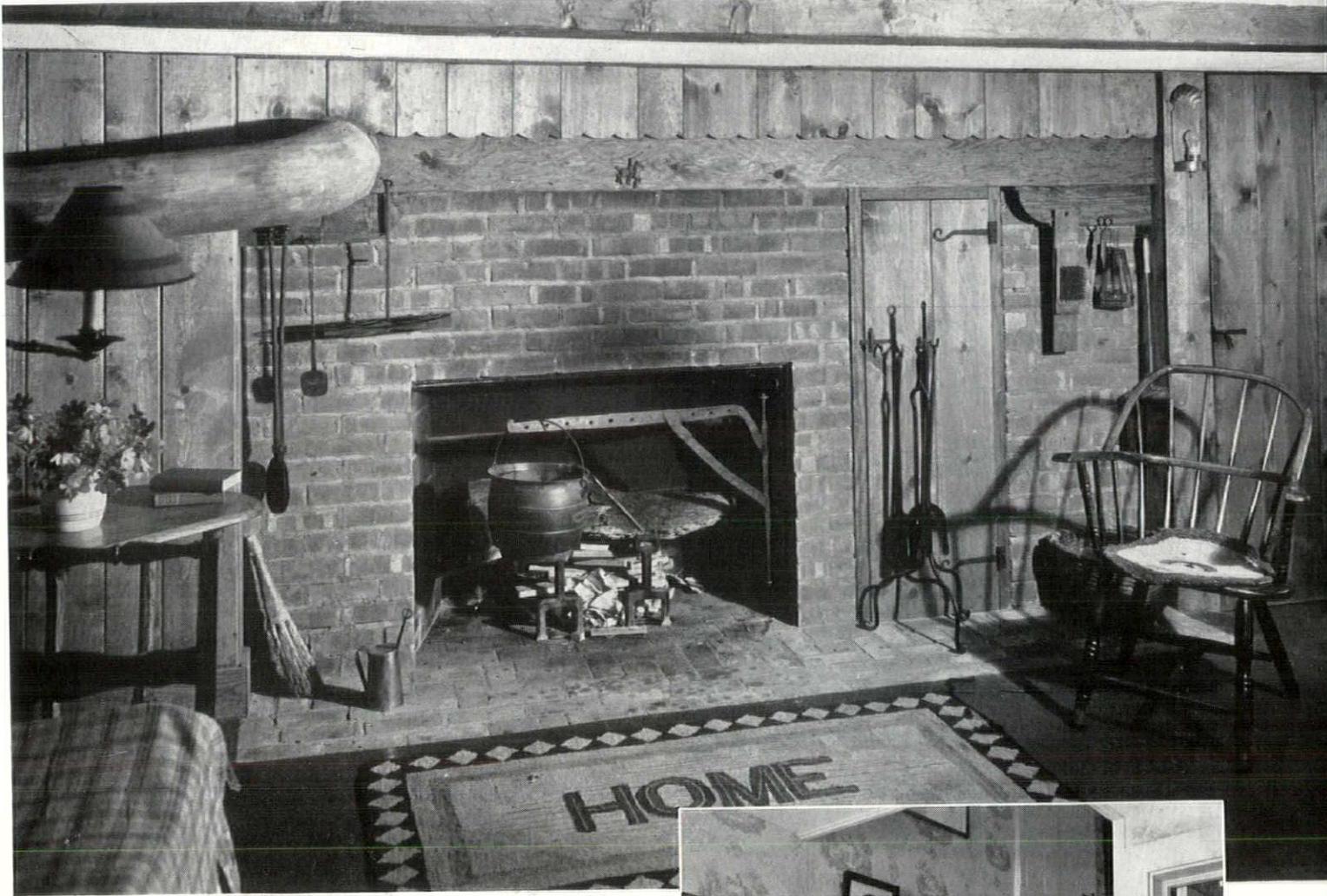
Above, view of kitchen side looking toward entrance to new bedroom over the garage. House of Philip Maguire, Shrub Oak, New York. Elizabeth Coit, architect



PHOTOS: GOTTSCHO



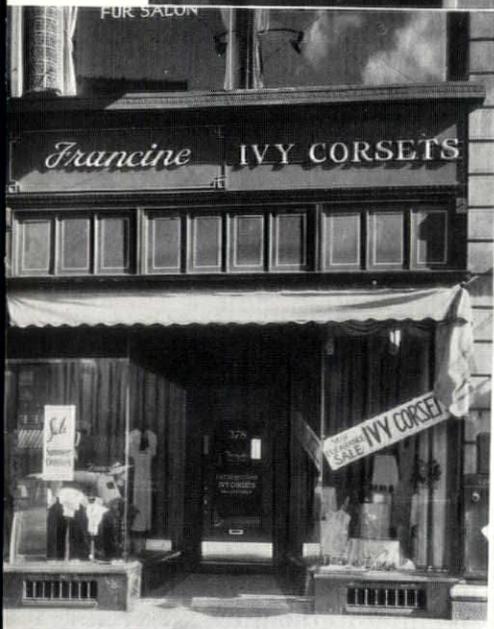
On this page is living room and detail in dining room. Walls are wall board covered with creamy-white wallpaper of early American design; ceilings are kalsomined. Floors are of wide antique boards in random widths



PHOTOS: GOTTSCHO



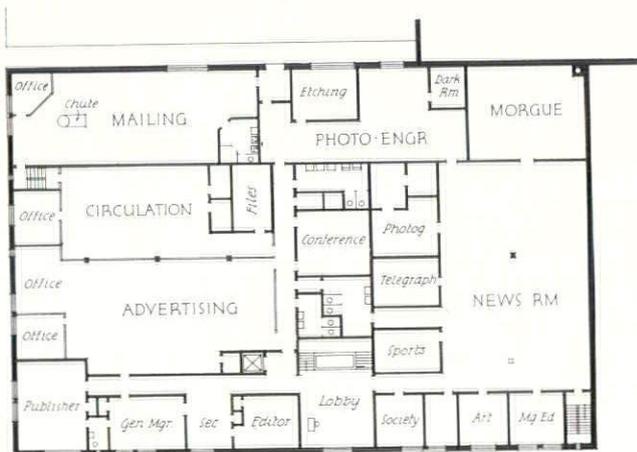
Above, game room in basement. Walls, knotty pine boards, antique finish; ceiling beams 8-in. x 10-in. fir, hand surfaced and kalsomined between. Right, detail of stairs in hall. House of Philip Maguire, Shrub Oak, New York. Elizabeth Coit, architect



HAROLD FIELD KELLOGG, ARCHITECT
 BARTLETT & SON COMPANY STORE, BOSTON, MASSACHUSETTS

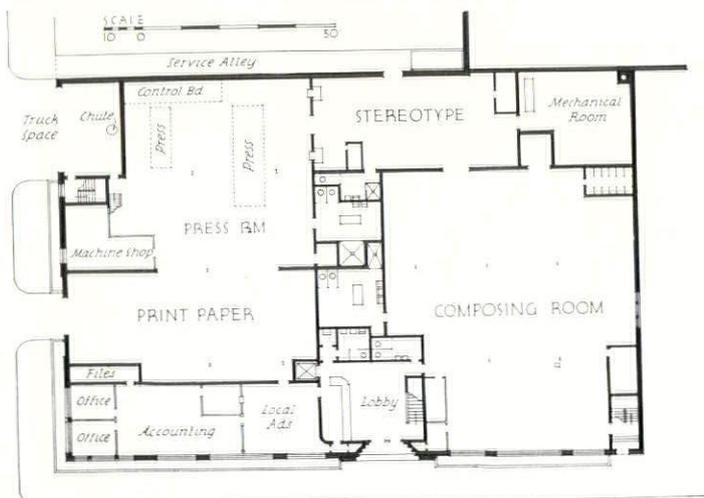
Storefront modernization from an old building similar to inset at left. Wall, slate, black Monson at base to light sea-green at top. Frames, stainless steel; trim, Belgian black marble; window, white translucent glass

PAUL J. WEBER



ADAMS AND HAMILTON, ARCHITECTS

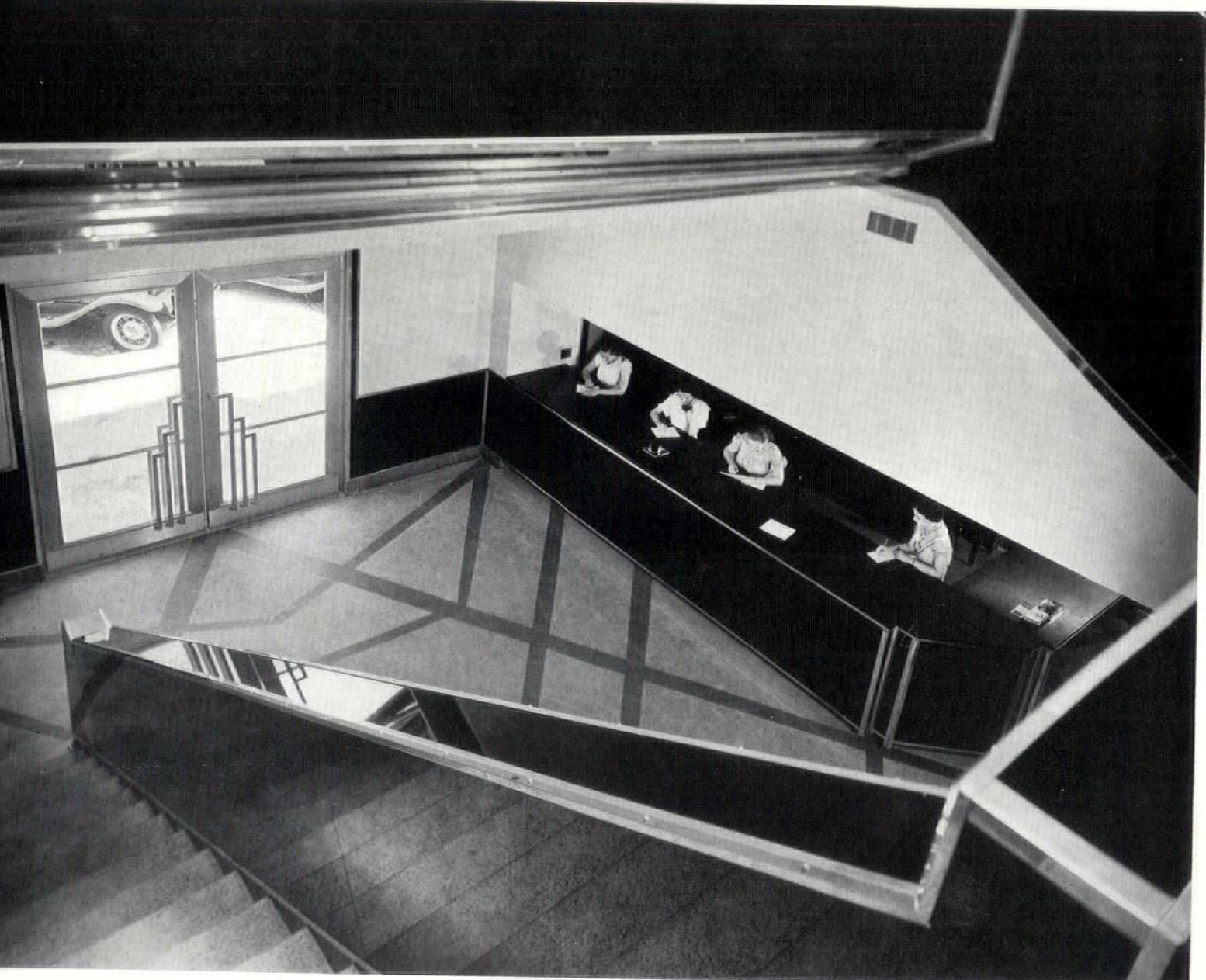
TRIBUNE BUILDING
TAMPA, FLORIDA

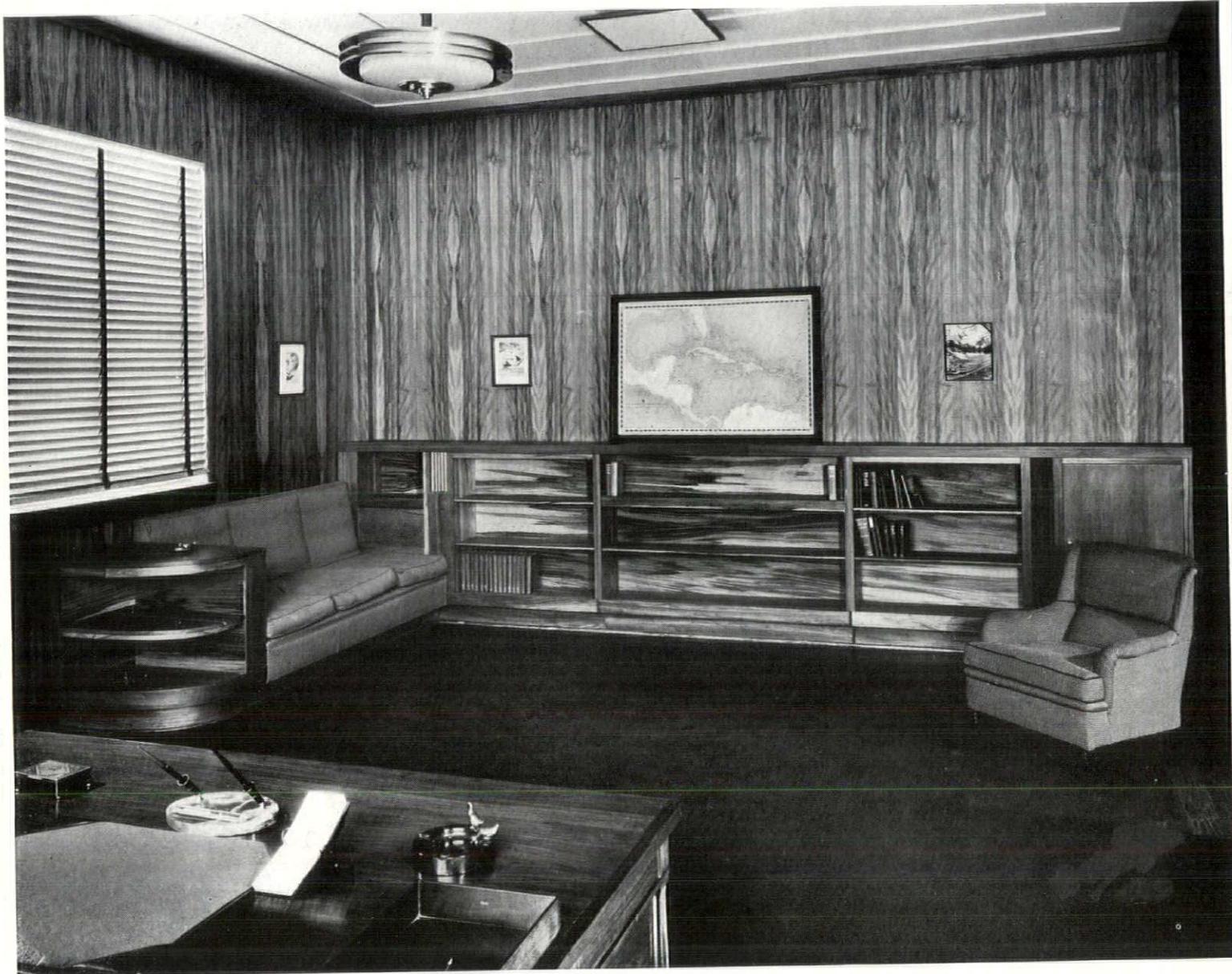


AMERICAN ARCHITECT



Exterior modernization of this building consisted in walling-in the open space formerly used for automobile parking; applying an overall coat of white stucco to brick walls; revamping the fenestration and designing an entrance framed with black glass and doors of extruded white metal. Below, detail in lobby





PHOTOS: BURGERT BROS.

Simplicity typical of modern newspaper plants characterizes interiors of the Tribune Building. The lobbies, detail on preceding page, depend for their interest on the use of black glass and metal, colored plaster surfaces and especially designed lighting fixtures. Above, view in the office of the publisher. Walls are surfaced with gumwood veneer. The cost of remodelling was approximately \$100,000. Adams & Hamilton, architects

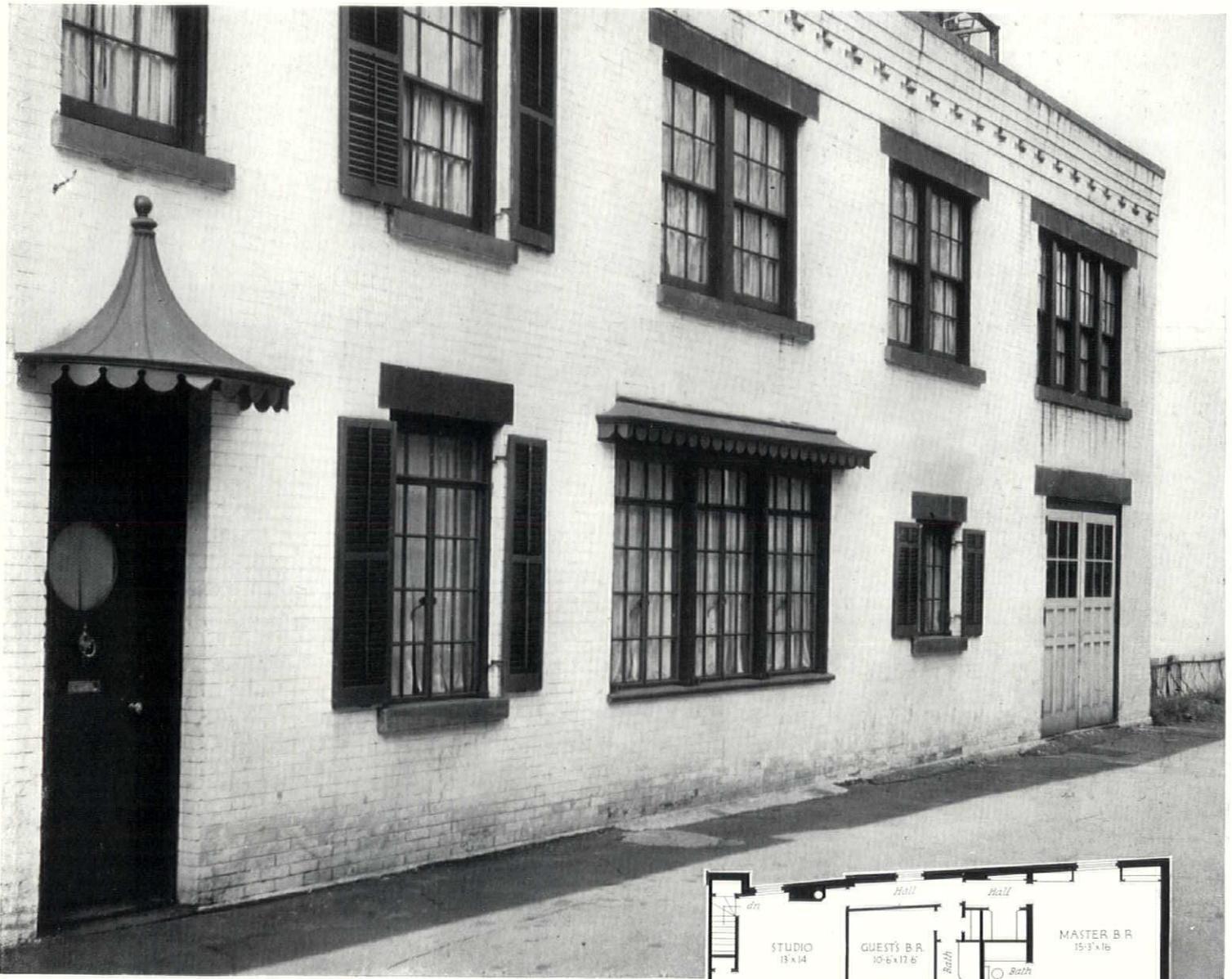
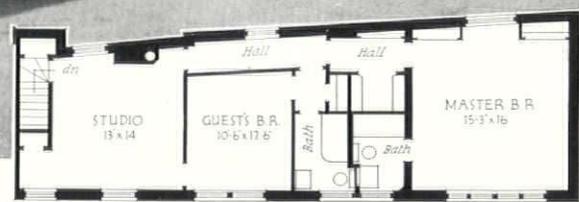


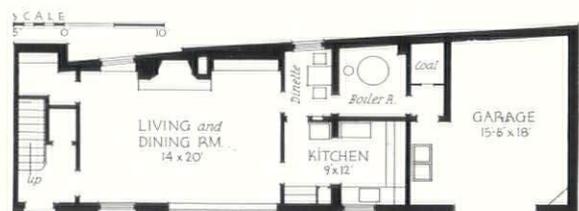
PHOTO: GOTTSCHO

HAROLD R. SLEEPER, ARCHITECT
 HOUSE OF A. DEXTER BEST
 BROOKLYN, NEW YORK

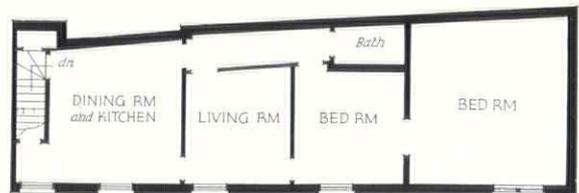
Remodelling at a cost of \$5,500—including the architect's fee—transformed a dilapidated garage into this modern apartment. Top right, plan after alteration. Below, arrangement before remodelling



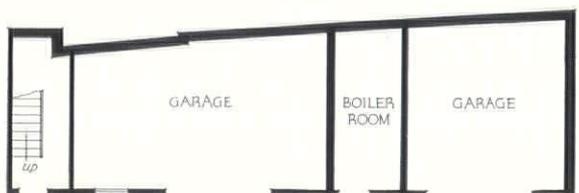
SECOND FLOOR



FIRST FLOOR



SECOND FLOOR



FIRST FLOOR

Right, view of façade before modernization. Below, detail in present lobby. On facing page, front after remodelling. Banner Theater, Chicago, Illinois. Mark D. Kalischer, architect

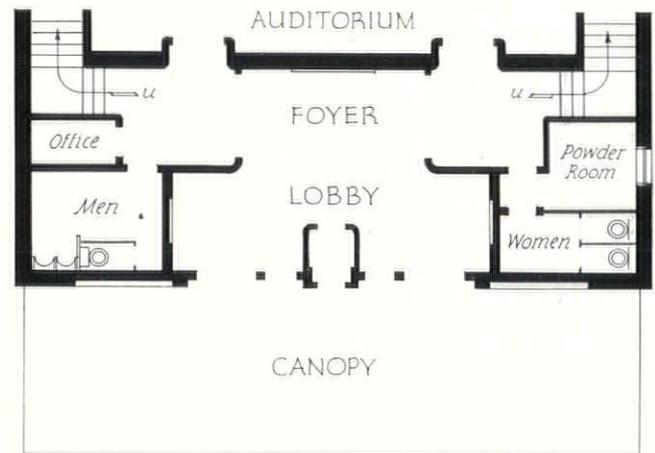




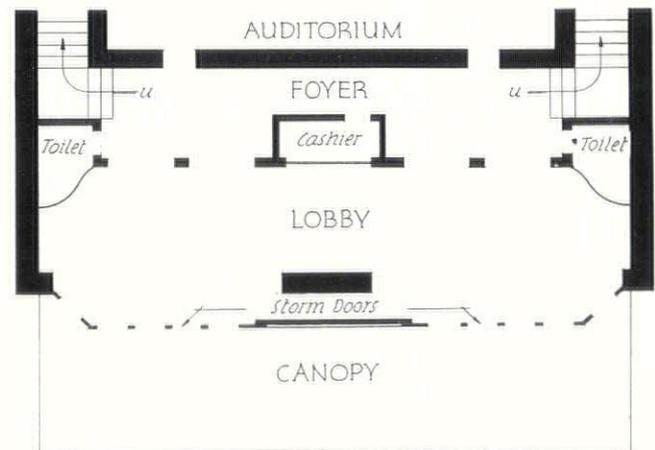
PHOTOS: HEDRICH-BLESSING STUDIO

MARK D. KALISCHER, ARCHITECT

BANNER THEATER
CHICAGO, ILLINOIS



After Remodelling



Before Remodelling

Changes made a "Screen Souvenir" of 1910 into a modern theater at a cost of \$20,000. The façade, illustrated above, is light gray structural glass with base course in black. Display case frames, stainless steel. Lobby, detail on facing page, is of plaster painted in chrome yellow, royal purple, orange and silver. Auditorium was re-seated, re-carpeted and re-decorated in shades of vermilions and siennas, contrasting with silver and cerulean blue. Indirect lighting was used throughout



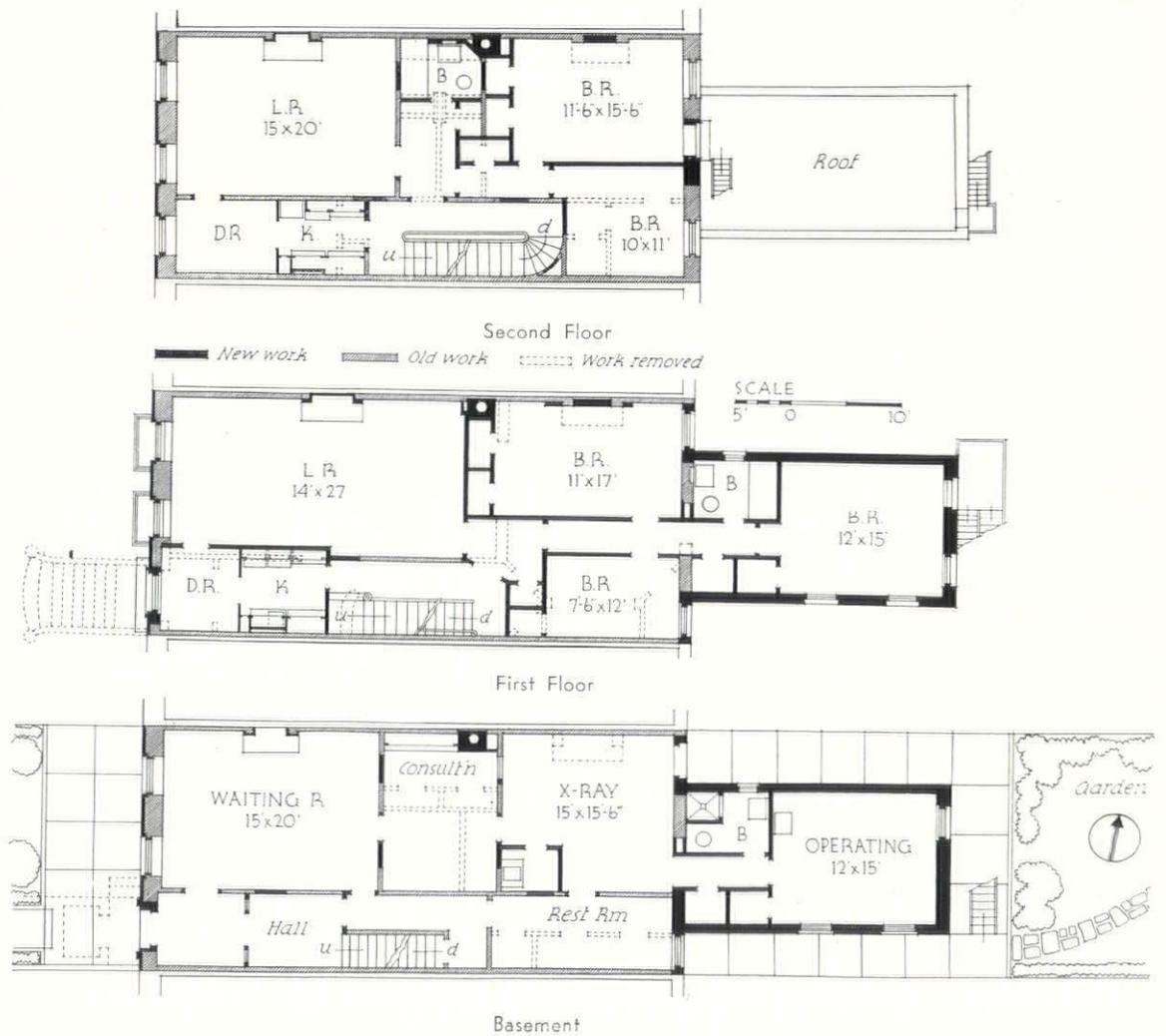
M. MILTON GLASS, ARCHITECT
 HOUSE ON BEDFORD AVENUE
 BROOKLYN, NEW YORK



Erected in 1880 as a private residence, the building as altered provides a physicians's suite in basement, his living quarters on first floor. Two top floors, each containing a four-room apartment, are rented. The original attic story was demolished and roof re-built. A new brick extension 24 ft. long, 14 ft. wide and two stories high was erected at the rear; existing stone entrance steps were removed; and main entrance changed from first floor to basement. Cost: \$14,000, including heating, lighting and plumbing fixtures. The upper apartments were rented before completion

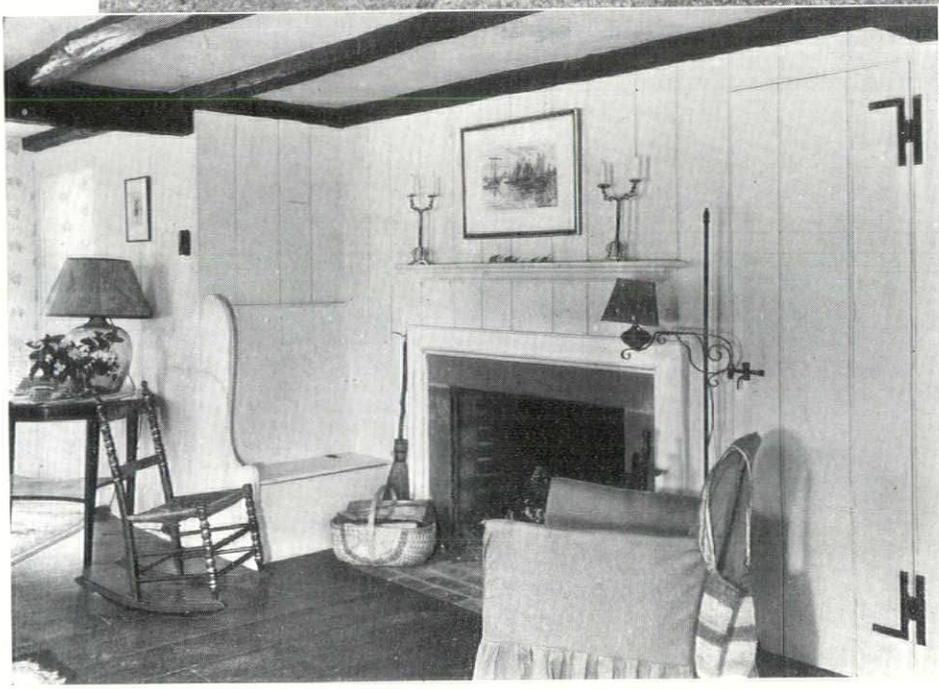


HOUSE ON BEDFORD AVENUE
 BROOKLYN, N. Y.
 M. MILTON GLASS, ARCHITECT





PHOTOS: GEORGE H. VAN AN



EVANS, MOORE & WOODBRIDGE, ARCHITECTS
 HOUSE OF EVELYN BROWN
 WILTON, CONNECTICUT

Stabilized Modernization

BY ARTHUR C. HOLDEN, A.I.A.

"GIVE me where I may stand," said Archimedes, "and I will move the world."

He might have added that he needed a firm foundation upon which to rest his mighty lever. For both are necessary to any such accomplishment—a point of vantage and a fulcrum through which a forceful pressure acts.

Architects today have at least the first of these two essentials. Their technical position is secure; and if they had a firm basis on which to rest the lever of their professional competence they could easily lift blighted and profitless sections of our cities. But the lever of professional competence depends for its effectiveness upon the art with which it is applied.

THE PROBLEM

THE ordinary American city has grown almost without design. It has some beautiful spots, some vicious plague spots. But, in general, it is a hodgepodge with tawdry business streets and rows of nondescript houses. Most of it was built without thought of the standard of life that may be possible in the motor age that is just dawning upon us.

Whole sections in such a city cry aloud for modernization. What is the approach? Shall the architect seek out the best disposed property owner, and suggest that he put money into his house to make it more desirable? Shall the architect show him a pretty sketch to indicate the better attractions, the improved facilities, and the correct taste? Shall he even prepare figures explaining that if all is rented at the expected figure both interest and amortization payments on the new capital can be met and perhaps a profit shown besides? Many such approaches have been made; and many have been successful. These are the individual cases that have offered the brightest hopes. The worst plague spots in our cities remain untouched.

The belief that individual modernization projects should be superseded by group activity is based upon

a rapidly mounting store of technical evidence. Partly this has been derived from observing the effect of the automobile and other forms of rapid transit upon the economic and social components of American cities. Partly also it has been amassed through factual surveys—of which the Real Property Inventory is typical—which reveal the location and extent of districts which, even though centrally located, have become subject to blight, depreciation, congestion and obsolescence. Areas with such characteristics exist to greater or less extent in every city in the country. Their rehabilitation—physically and socially—has become a real and serious problem of urban life. And to architects this implies a new approach to the job of modernization.

Owners of blighted urban properties—and indeed the cities themselves—face a new problem. What they seek is stabilization of earning power. Properties are economically interdependent. Owners need working agreements, one with another, which will recognize this interdependence and permit more economical operation. Outgo can be cut down. Net income can be increased. Sound business methods which have long been followed by industrialists should be adapted so that owners and investors in real estate and the public all will benefit. Herein lies the firm basis upon which the professional competence of architects may be applied to move whole communities out of the doldrums and make them economically self-dependent entities—assets to the cities of which they are an important organic part.

ARCHITECT'S VISION IS ESSENTIAL

THE architect has the vision to see what is wrong with any out-moded group of properties. He should also be the one to suggest the remedy.

For example, in a small town of 10,000 inhabitants, he can see the need for rebuilding the shopping section where automobile congestion in the main street is exceedingly great. There may be several blocks of stores, possibly all of them well rented.

Above them may be a badly planned story, used, perhaps, for living quarters although noisy and lacking in modern conveniences. At the rear of the shopping block will be out-moded houses with lots partially used for storage. The condition of these rear houses is depreciated by the proximity of business properties. This depreciated belt, in turn, exerts a depressing effect upon properties on adjoining streets. Around the small nucleus of prosperous properties will generally be found a fringe of others in depreciated use which, though held at high prices, are incapable of earning their charges.

Possibilities of improvement are at once apparent to the architect who sees the condition of the district. At a glance he recognizes the fact that conflicting rivalries due to small lot ownership are choking development and thus preventing the best use of the property. He makes a set of attractive drawings indicating a widened street, faced with a newer and better type of building. The sketches are published, perhaps, in the local paper with a caption describing "an architect's dream for a modernized Main Street." But to the architect the scheme is not impractical. Nor need it appear to be so to others if its technical sponsor—the architect—has the resourcefulness to demonstrate its logic and thus turn dream into practical reality.

A GROUP OF OWNERS AS A POTENTIAL CLIENTELE

It is easy to paint a picture of possible accomplishment. It is always difficult, however, to initiate a new method of approach. How is the architect who has grasped the larger concept of group planning to put it into practice?

First of all, let it be remembered that he is dealing with a number of people—a group, not an individual. To each must be explained a plan for the financial and physical reorganization of the area involved. He must weld the group into an entity sufficiently conscious of the common interests involved to accomplish results from his advice as it refers to group interests. There are obstacles to overcome. Not the least of these concerns the architect's compensation for his efforts. Another touches upon the natural resistance to change that has proved to be a death grip for so many other worth while efforts of similar sorts.

These obstacles may be conquered after it has been shown that in planning for the group, the architect is actually planning in a better, more constructive fashion for each individual involved. And while doing so he is rehabilitating the blight and eliminating the unstable conditions that have been the results of the former sporadic modernization efforts of unco-operative people—client and architect alike. Thus, the architect has an opportunity to disprove the contention of many Americans that their cities need "a dictator" who can fruitfully unscramble chaos, congestion and waste!

'AN ORDINARY AMERICAN CITY'

Tawdry business streets and a hodgepodge of nondescript houses are economic and social liabilities that cry aloud for modernization. But attention to individual problems of rebuilding and repair is proving less and less effective as a means of rehabilitating blight and eliminating unstable conditions of ownership and land usage that have developed urban plague spots and wiped profits off the books. Group modernization projects can lift whole communities out of the doldrums. It is one effective method of making frazzled districts into economically self-dependent entities, assets instead of liabilities to the city of which they are a part. In such activity the architect is the technical director. He must formulate the re-planning and reconstruction of the entire area and co-ordinate innumerable details that are involved. This work is outside the field of routine professional activity. But by that same token it should ultimately prove a fertile opportunity to develop a responsible and productive clientele—a satisfied group of owners. . .

TECHNIQUE OF DEVELOPMENT

SUCCESSFUL completion of any scheme for group modernization will depend largely upon the careful co-ordination of many details. Strictly speaking, the problem is not so much one of "modernization" as it is one of "reorganization" for it involves planning for individuals and the group as a whole upon an economic and social as well as a physical basis. Briefly, the architect must formulate the replanning and reconstruction of the area as a unified entity. The idea, with its implications for an extension of ordinary architectural service, is relatively new.

Because of this fact, instances of its successful execution cannot well be cited. But much has recently been accomplished in New York City in establishing a working method applicable to group projects in any section of the country. Studies of the Land Utilization Committee show that the activity involved is divided into three broad classifications. Each is somewhat independent so far as the type of work is concerned, yet all are so closely



FAIRCHILD

related to the ultimate practicality and success of the project that the relative importance of each is nearly the same in degree. In order of their natural sequence, the classifications are:

1. Complete factual survey of the whole area.

Upon adequate knowledge of existing conditions rests subsequent work of reorganization and replanning. Data should include extent and types of occupancy and ownership; the entire financial situation as it involves interests of various individuals or institutions; and the physical condition of every structure. Necessary also is a survey of the immediate districts adjacent to the project, since reorganization of the interests of one group may conceivably affect, or be affected by, the comparative conditions of others.

2. Plan for economic reorganization. Upon established facts—economic, social and structural—can be based a scheme by which individual interests may be welded into group interests. This part of the program entails the most careful sort of analysis and the subsequent development of an economic en-

tity of control to which are ceded proprietary rights of individuals in return for an equivalent participation in group ownership and profitable participation.

Such work on some projects may prove simple when original owners are few and where the lines of common interest are sharply defined. In areas of physical congestion and complicated ownership conditions it will prove difficult in the extreme. In any case the architect—either in himself or in others—requires a knowledge of appraisal and mortgage practices and a more than average ability at negotiation. A new set of contractual relationships must be effected—fair to all and of such a nature that each will contribute to the workability of the group modernization scheme.

3. A program for progressive physical rebuilding.

Normally this will develop hand in hand with any plan of economic reorganization. But its execution must be delayed until at least a working majority of individual owners have subscribed to the plan for group control. Then the architect's problem is to modernize, rebuild or both so that housing or other

needs are met without loss of any type of tenancy advantageous to the district.

Essentially it is based upon progressive removal of inhabitants from one part of the area to another section which has already been improved to receive them. This decanting process is repeated in as logical a sequence as the project permits until individual interests have been met and the entire area improved under the plan for its economic group control and its physical modernization.

The value of accurate research in the development of any group modernization program can hardly be over-estimated. Without knowledge of existing conditions, the architect can hardly hope to arrive at any practical scheme for an economic reorganization. Without economic reorganization the "architect's dream for modernizing Main Street" can never reach fulfillment.

Already perfected is a method for assembling the necessary data. The Real Property Inventories, organized to give work to unemployed technical men, were instituted in many cities a little more than a year ago. The architect concerned with group modernization will find them incomplete for his purpose. But the way by which the information was collected, codified and later presented in graphic form indicates a research tool that can profitably be applied to any local project. In many instances the Inventories were supplemented by intensive surveys of depreciated areas. Investigation of these and a study of the data included may disclose much of value. The remainder can be assembled through the organized activity of research canvassers.

FINANCES FOR ADVANCED PLANNING

THE foregoing outline of the group modernization idea pictures the architect as an organizer, a director of advanced planning activities. It is a proper role, for which he is well adapted by technical training and experience. But in assuming it he goes outside the bounds of routine professional effort. He must find some means of financial support for himself and for those who will be working under his direction. Where and how can it be made available to him?

A decisive answer to this could well be made by the Federal Government. There is now being made a vast effort to develop low-rent housing and to stimulate the general improvement of towns and cities throughout the country. Notably in this connection, official attention has been focused on the blighted areas of those towns and cities. So far, however, there has been no official recognition that removal of such plague spots involves advanced planning—just such planning as was undertaken by a group of engineers before actual construction was considered for the Panama Canal. If such recognition were forthcoming, it would be a simple matter to set up—out of monies already allocated for housing and slum clearance—a revolving fund for advance planning of group modernization projects.

Out of such a fund, retainer fees could be appropriated to secure the best consulting brains and adequate staffs of technical assistants. Upon completion of research and plans for economic and physical reorganization, appropriations for actual construction could be made. Expenses for advanced planning studies could then be refunded out of these appropriations.

This procedure is such a logical development of any adequate official policy of urban improvement that it—or something very similar—appears to be inevitable. At the present writing, at least two important Federal agencies have both the necessary funds and the power to use them thus. The plan is not likely to get the immediate attention that it merits, however, unless it receives a stronger and more general advocacy than it has yet been accorded.

At the same time, the wise architect will look to sources of private capital in support of group modernization activities. Provided he has something concrete to offer, he can expect sympathetic assistance from institutional groups of mortgage lenders. But lenders in some states are not certain how far to go in expending money for research and advance planning, even though the activity may be desirable as a needed protection for the investment of trust funds. Many state legislators—in common with Federal agencies—have not yet understood the necessity of this activity; and in several states a legal recognition must be gained before lending institutions can reasonably be expected to give adequate financial support to advance planning work.

But there is an immediate opportunity of which architects should be able to take advantage. This lies in the large amount of private capital which has accumulated and is seeking investment. The private promoter is familiar with the difficulties of property assembly. He has known that he could only buy in places where the pressure of demand kept rental prices up. Hence, assembly of property except for use by the higher income groups has not been possible. The theory was therefore advanced that to serve lower income groups the government must step in and, by condemnation and subsidy, accomplish what would be otherwise impossible.

Private business has thus been challenged to find an alternative. Group enterprise is indicated as the sound and logical answer. It remains to work out the terms on which it can take place and to dispose of such obstacles, both real and fanciful, as may seem to impede the way. Basic factors involved are: (1) New improvement funds are needed, which (2) must be applied in such a way as to recognize the integrity of present investments. (3) Present investors must not expect return of their principal at once, but should be assured reasonable benefits of increased net income due to economies of group operation. (4) Private capital can safely underwrite a revolving improvement fund with low initial yield, provided amortization is rapid and provided it can be assured a profit from stock participation.



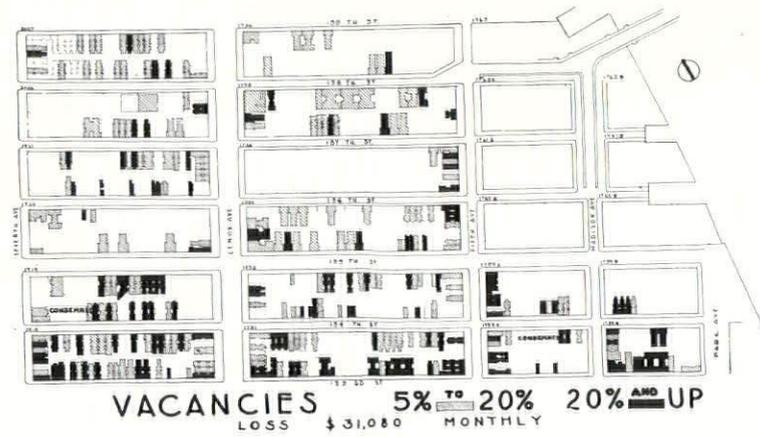
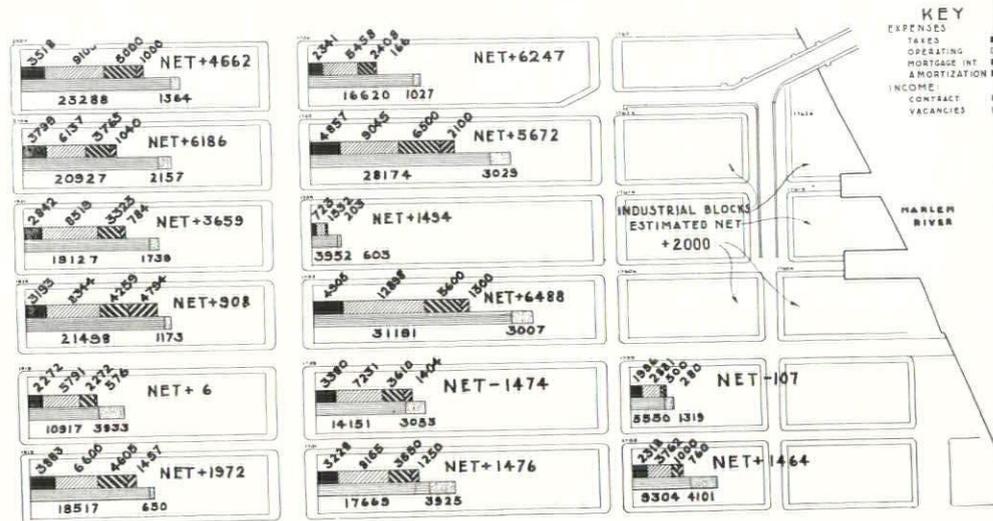
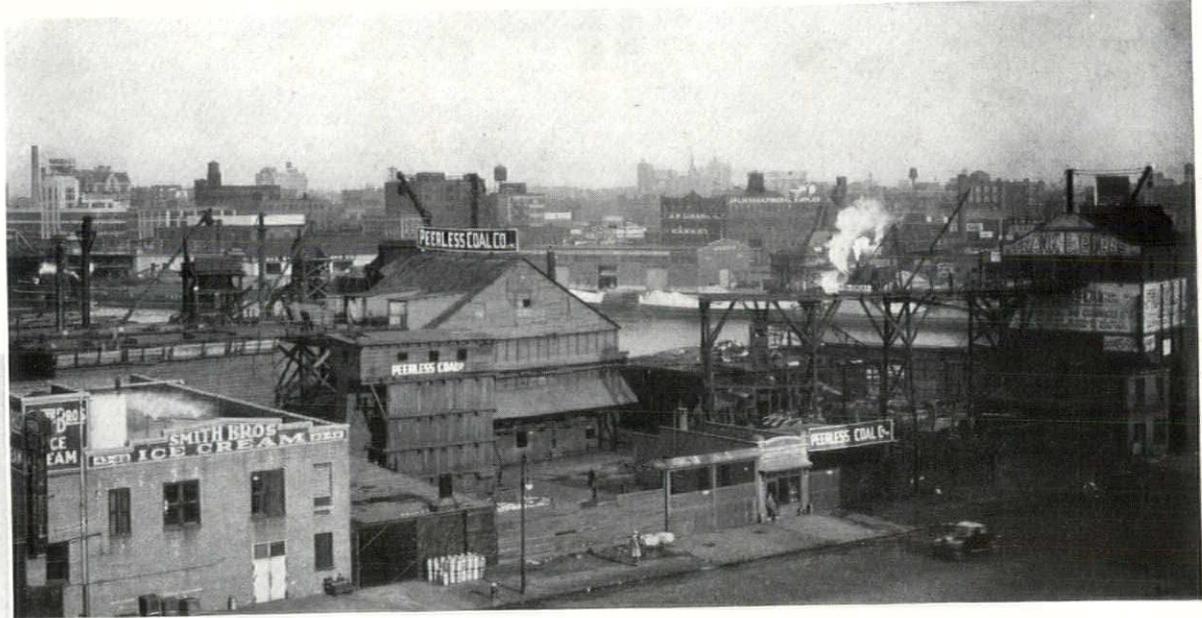
Sketch of proposed reorganization of District 8-D
in a congested area in New York City's Harlem



Organized Planning for Slum Clearance and Reconstruction

IN NEW YORK, aided by studies of the Land Utilization Committee, property owners in two localities are being formed into operating corporations for the economic reorganization and progressive reconstruction of their holdings. One group represents a large slum area in Harlem, New York's Negro section. The other is confined to a single congested block in the ill-famed Lower East Side. Outlines and illustrations of the two projects show the wide practical adaptability of the group idea for Stabilized Modernization discussed by Arthur C. Holden in the foregoing pages

Economic loss and unhealthful congestion are the main characteristics of the present neighborhood, the first illustrated by charts below. Slum conditions are evident in the pictures



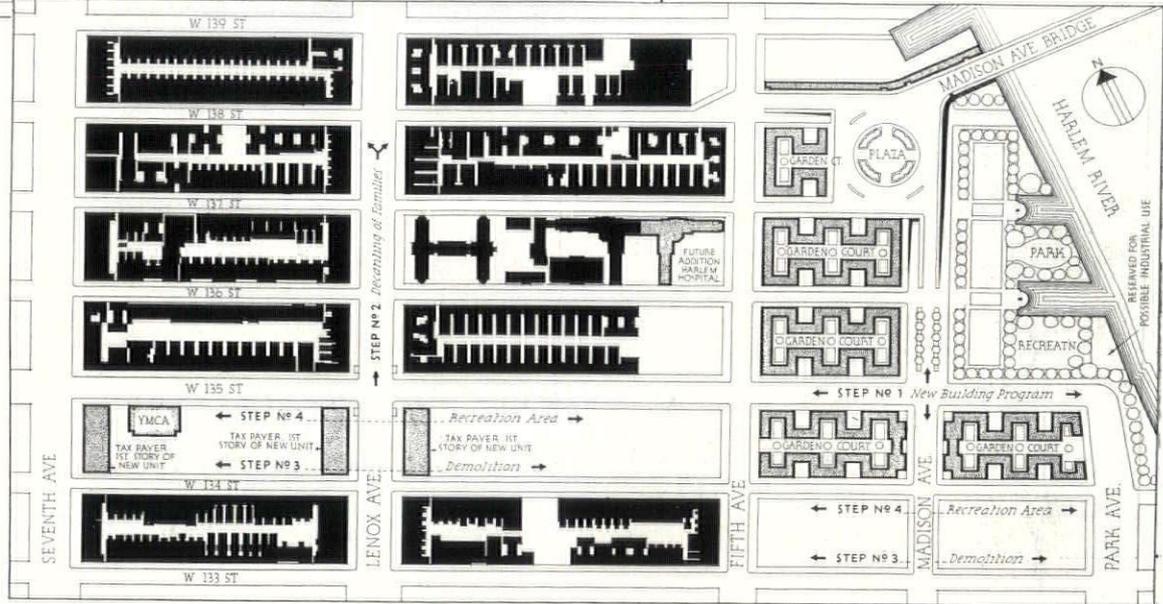
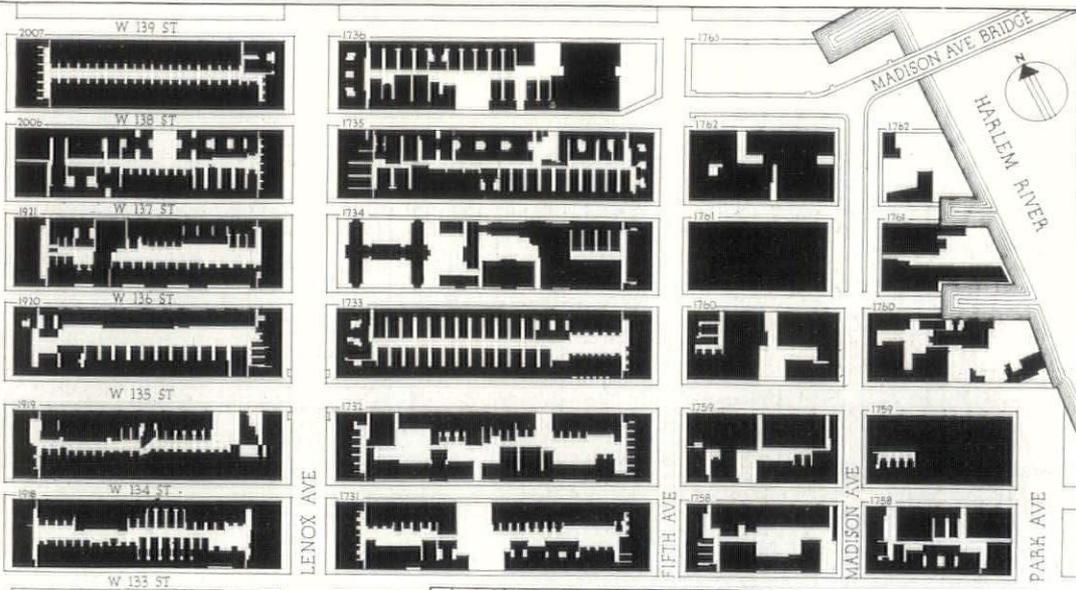
District 8-D

THIS AREA contains one block on the northwest with a density of over 700 persons to the acre. In the southwest corner are two blocks with a large proportion of condemned and vacant buildings. On the east lies a depreciated industrial area largely in one ownership netting a low yield to an estate. In the center is located a municipal hospital in the process of expansion. South of the hospital is a block of new law tenements which are adaptable to alteration. North of the hospital are several modern tenements planned for wide frontages and renting at from \$10.00 to as high as \$20.00 per room per month. At the northeast corner of the district the Madison Avenue Bridge over the Harlem River delivers traffic seeking an outlet to the west and south. There is need for street improvements and for the provision of public recreation space for densely populated Harlem.

A wide variation in earnings exists. The most profitable block nets \$6,488 monthly out of a gross \$31,191; the least profitable loses \$1,474 on a gross of \$14,151. Exclusive of industrial blocks, titles to the properties are vested in 608 individual owners; and each month there is available for distribution on net earnings over financing of \$38,653, or an average per owner of \$63.57 per month.

BEFORE AND AFTER

Plan left, District before reorganization. Below, plans for rehabilitation. Step 1: New Building program, utilizing industrial areas for new housing. Step 2: Decanting from poor to better quarters. Step 3: Demolition of useless buildings. Step 4: Development of recreation spaces. Step 5: Repetition of cycle, Steps 1 to 4



ECONOMIC SURVEY

On chart opposite is the monthly income and outgo by blocks. Excluding industrial blocks, monthly figures total:

Contract Income	\$240,885
Taxes	43,255
Operating	95,471
Net before Fin.	102,159
Mort. Int.	46,595
Amortiz.	16,911
Net for Equities	38,654

Distribution of this total among 608 owners allows an average monthly income of only \$63.57

Harlem, New York

As a united group it should be possible at once to increase net by reducing outgo. The first operation is a "decanting" of tenants. So far as possible equivalent temporary quarters will be assigned to every desirable tenant. Those who give up favorable business locations will be offered first options after reconstruction.

Instead of losing income, a usual result of eviction, the average net income is actually increased, because vacated buildings can be demolished with a resultant saving of both taxes and upkeep.

By decanting, large areas of vacant land can be cleared. But before the rebuilding program is begun land required for public use must be set aside. Space for traffic division is essential at the end of the bridgehead and the needed park can most advantageously be placed at the waterfront. Widened streets and space for hospital expansion are needed. The assessed value of land for these public uses amounts to \$1,346,650. Ordinarily, this sum would have been dissipated through payment of proportionate shares to equity owners and mortgagees involved. With the whole district one entity, however, the entire sum goes to the treasury of the district in which every constituent owner has an interest. The condemnation award may thus become a nest egg for

starting the first new housing enterprise. Under existing conditions a Federal grant might be applied to acquire needed public properties with the proviso that all of the award to private owners should be pooled and applied to a replacement housing program.

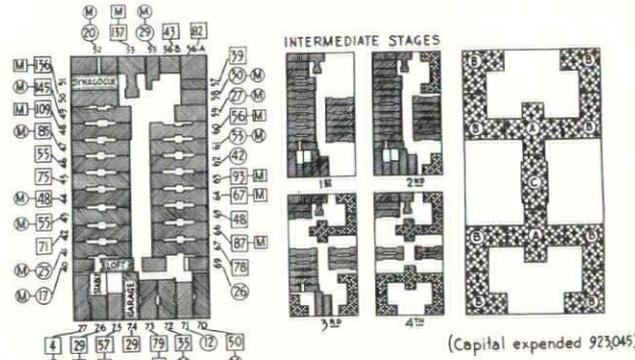
The district corporation should be free to work out the best possible arrangements, including execution of public improvements whenever it is advantageous to make public and private work a single project. The whole program should be established by contract between city and corporation based upon completed plans, and, of course, subject to supervisory inspection. In the Harlem area it should be most practicable to commence construction of housing upon the industrial blocks, now in one ownership. The upper level plaza should be a part of this project. The park might well be separate. To balance these, the decanting process should make possible the clearance of the two southerly blocks (1919 and 1732) which are in the worst condition. Here in turn can take place the next step in reconstruction by the replacement process. Again decanting will be necessary. Tenants able to pay the best rents move into newer buildings. Those from buildings to be demolished are shifted into buildings which are at least one grade better.

BLOCK REORGANIZATION AND NEW CONSTRUCTION • 6 STORY UNITS • (ELEVATOR) • \$12.50/RM.
 TAXES ON 80% OF CONSTRUCTION COST.

OLD BLDGS.
 ← 475 APTS - 1764 RMS.
 OCCUP. 77%
 Coverage 74%

DEFICIT
 448
 INT. & AMORT. 1880
 OPERATION 3,358
 TAXES 929
 ← VACANCIES
 GROSS INCOME ← 5,720

KEY
 7 PROFIT BEFORE FINANCING
 7 DEFICIT BEFORE FINANCING
 7 MTGE INTEREST EARNED
 8 MTGE INT NOT EARNED



BEFORE

AFTER

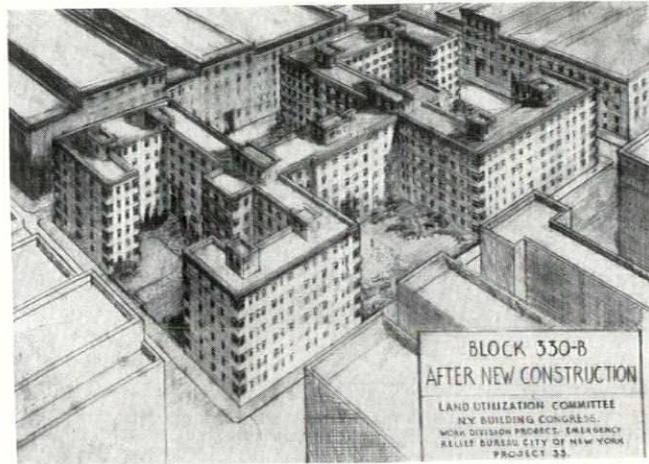
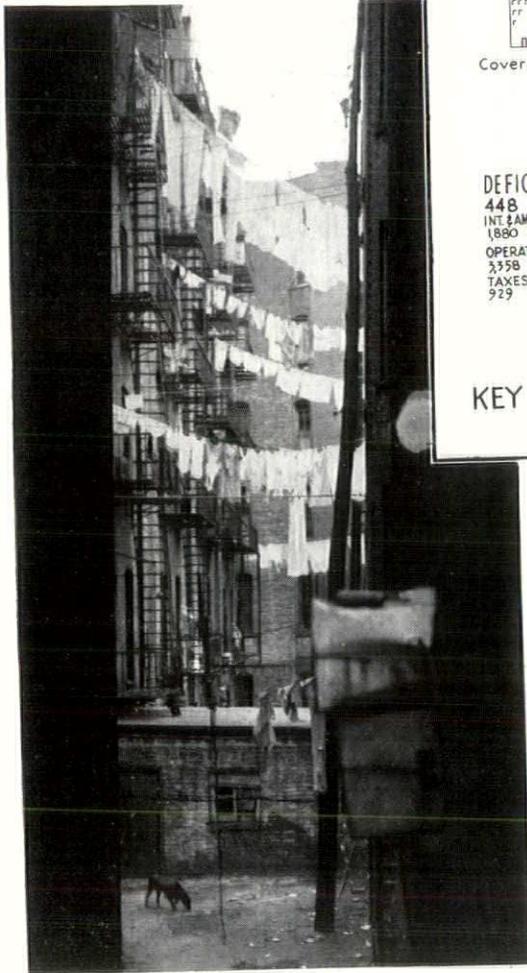
Note: All figures on Monthly Basis

ALTERNATE PROPOSALS →

NEW BLDGS.
 ← 318 APTS - 1014 RMS.
 OCCUP. 95%
 Coverage 47%

NET RETURN
 3,248
 ← VACANCIES
 INT. & AMORT. 3,670
 GROSS INCOME ← 14,095
 OPERATING 3,174
 TAXES 2,009

RENT/RM	TAX	NET RETURN
11.98	LAND ONLY	1,983
11.00	ALL PRESENT TAXES	1,447
11.25	ALL PRESENT TAXES	1,217
11.50	80% OF CONSTR COST	1,597



A graphic illustration showing the process of construction which transformed the scene at far left into this modern housing development.

Block 330-B . . . New York

TWO BLOCKS in New York's Lower East Side have been carried to the point where committees have been elected to represent owners and mortgagees. In one, 75 per cent of the owners have already signified in writing their desire to join in a group enterprise for the replanning and rebuilding of the block. Their committee has caused a certificate of incorporation to be drawn and by-laws to be drafted. Each owner is to be given cumulative preferred stock which will pay him the equivalent of his present net income and common stock representing the ratio which the value of his property bears to the whole. The owners are ready to request from their mortgagees, consent to the plan for reconstruction. Extension agreements will be executed amending the mortgages and the stock will be placed in escrow as additional collateral when requested. Hope for

both owners and mortgagees lies in the improvement of net income. By no other means can depreciated capital values be restored. It is, therefore, important to get rid of uneconomical buildings whose high maintenance costs have been a drain upon earning power. An outstanding advantage of the group plan is the opportunity to concentrate vacancies and demolish unfit structures. Reconstruction is to proceed progressively according to the group plan. Wholesale reconstruction would merely cut off all income and increase carrying costs out of proportion to ability to pay. Present vacancies are great enough to permit the immediate clearing of approximately one-quarter of the block. The diagram reveals the successive steps toward complete reconstruction and the economic status of the block corporation at the inception and completion.



KITCHENS

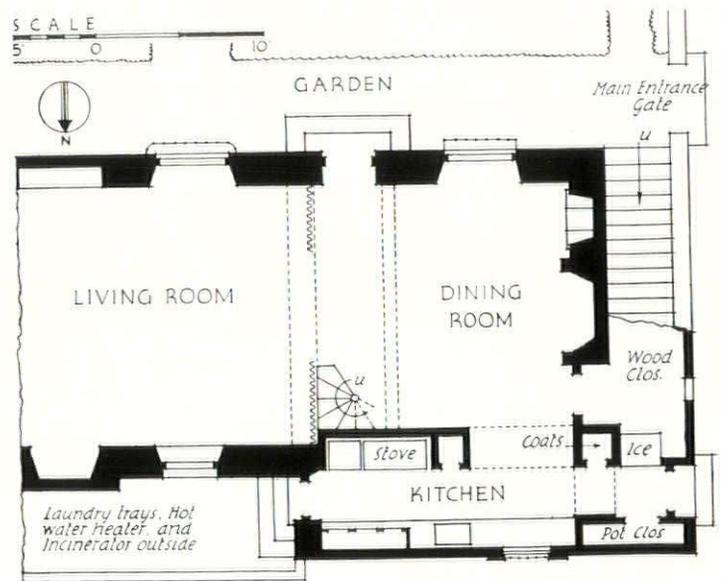
FOR SEPTEMBER 1935

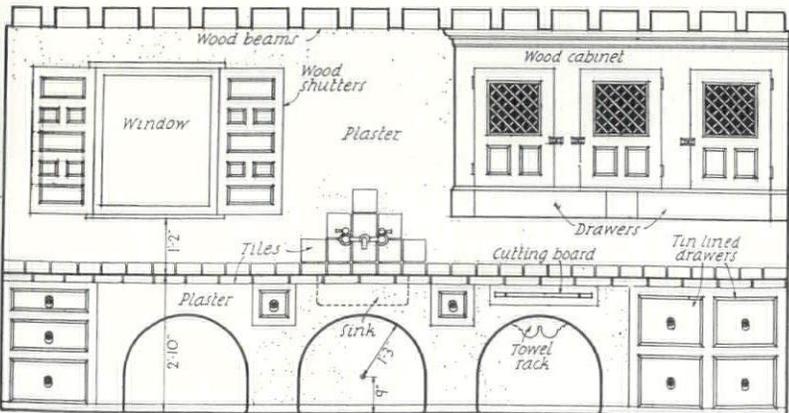


PHOTOS: JESSIE TARFOX BEALS

LUTAH MARIA RIGGS, ARCHITECT
HOUSE AT SANTA BARBARA, CALIFORNIA

A modernization possibility is suggested in this plan, although it is not an example of remodeling. The relation of the small, compact kitchen to the dining room and outside entrances indicates that a similar idea for an addition to an existing house might be used without materially changing the other rooms





Details of kitchen. The floor is red Angulo tile; walls, white plaster; ceiling beams and wood-work painted white; shutters are emerald green; drainboard, blue and white Mexican Puebla tile. On facing page is view in dining room. In general, the same materials and color scheme has been used. Lulah Maria Riggs, architect



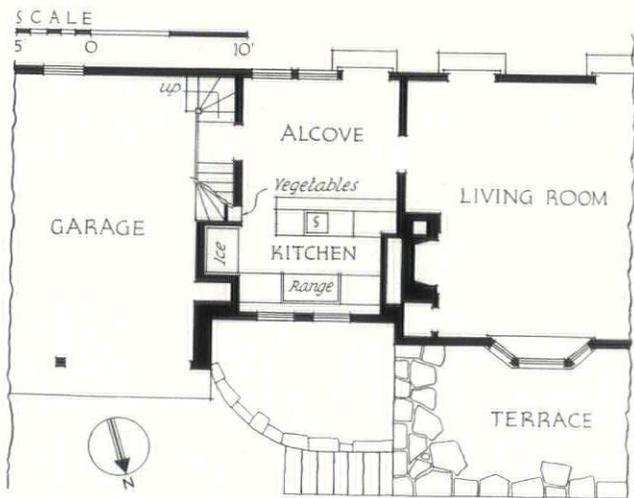
PHOTOS: HOYT CATLIN

Dining alcove in the Hoyt Catlin house, New Canaan, Conn., Harrison Gill, architect. Although apparently a separate room, the dining space is actually a part of the unusually well-planned kitchen

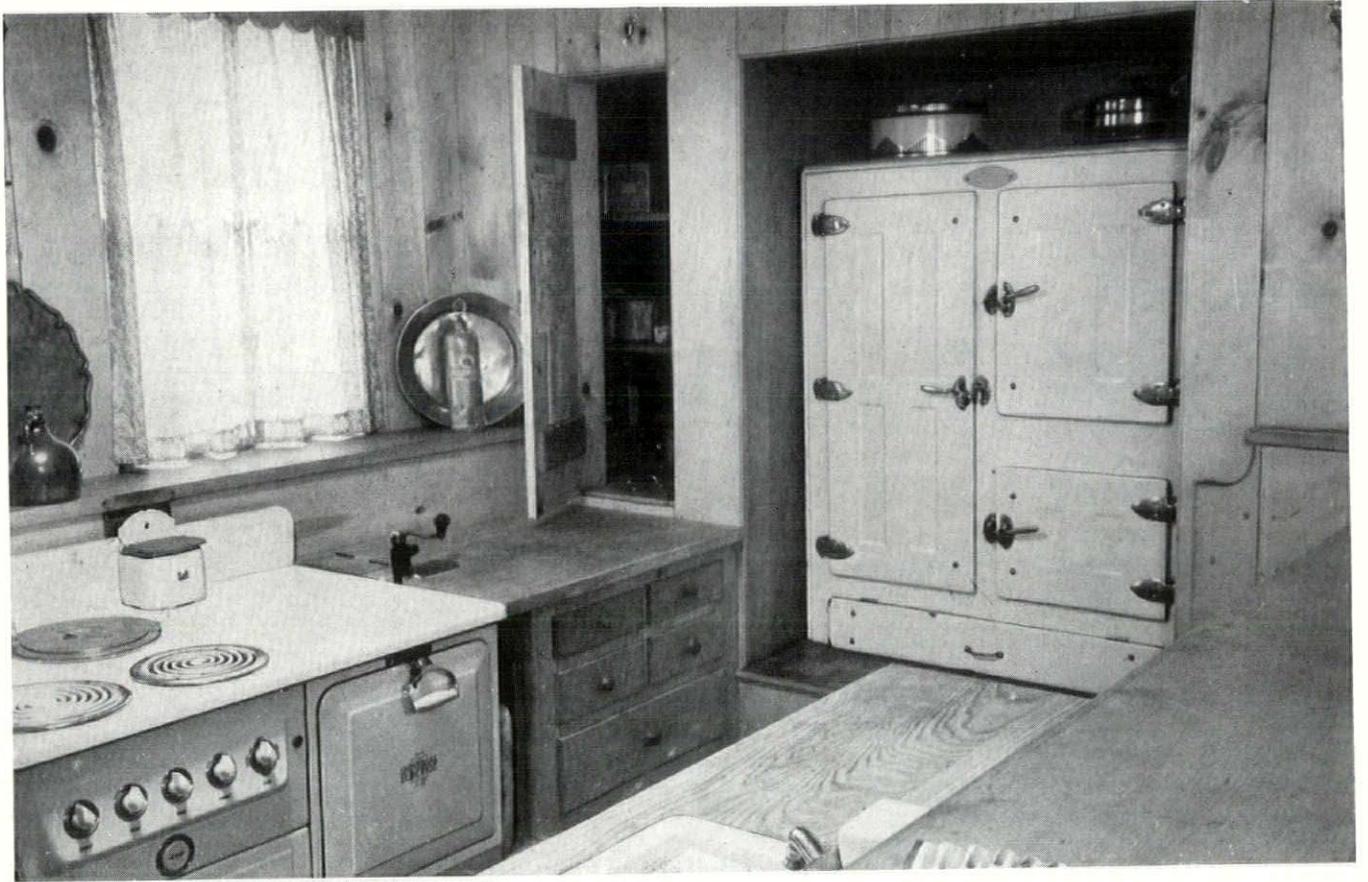


HARRISON GILL, ARCHITECT

HOUSE OF HOYT CATLIN, NEW CANAAN, CONNECTICUT



Remodelling an unused room into a kitchen and dining alcove can easily be accomplished by developing the plan along lines similar to these. A bar 48 inches high and 12 inches wide with a swing gate divides the kitchen from dining space. At back of bar are sink, drainboard and utensil cabinets hidden from view of diners. China cupboards under bar on dining side. Wall surface is knotty pine boards stained a natural finish and the ceiling is plaster



In the Hoyt Catlin kitchen are 32 square feet of working top, within two steps of the center of the room. Working surfaces are 36 inches high from floor and 22 inches deep, front and back

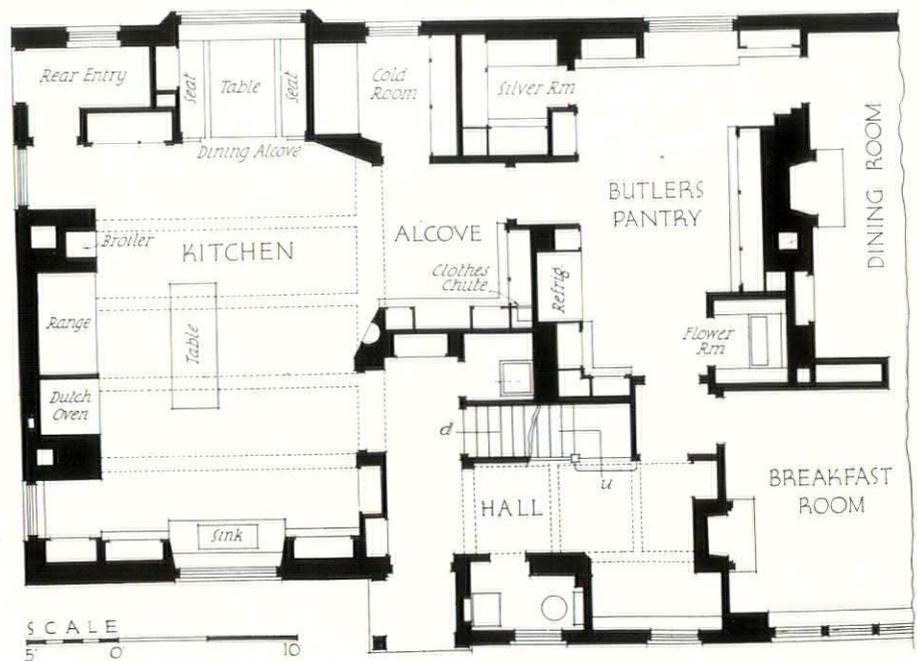


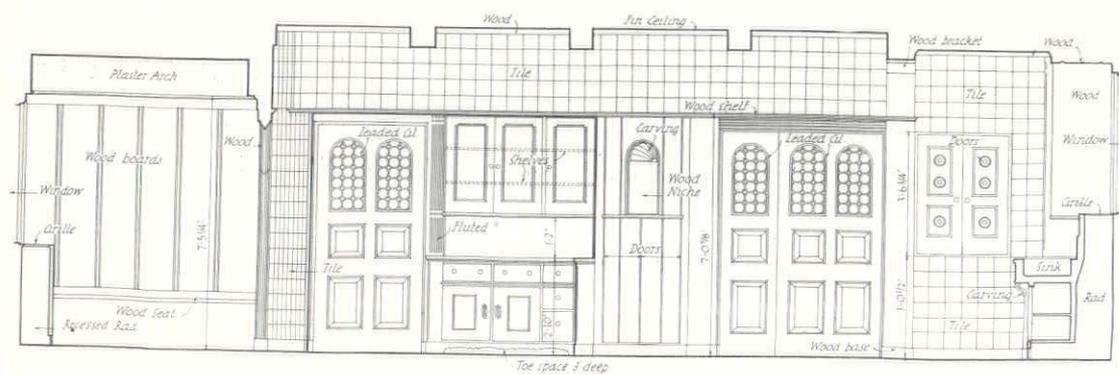
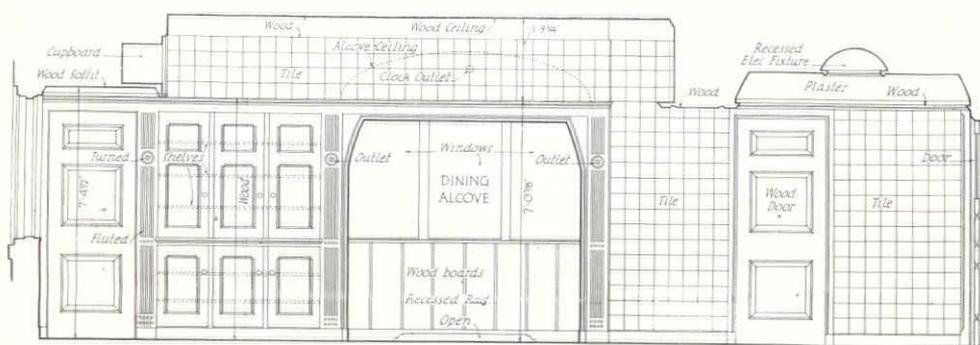
NORTH AND SHELGREN, ARCHITECTS
HOUSE AT BRADFORD, PENNSYLVANIA

Modernizing for specific requirements of a large family that entertains many guests is illustrated in the design and plan of this kitchen. William H. Prentice Co., Inc., decorators and P. C. Quintard, kitchen plan consultant

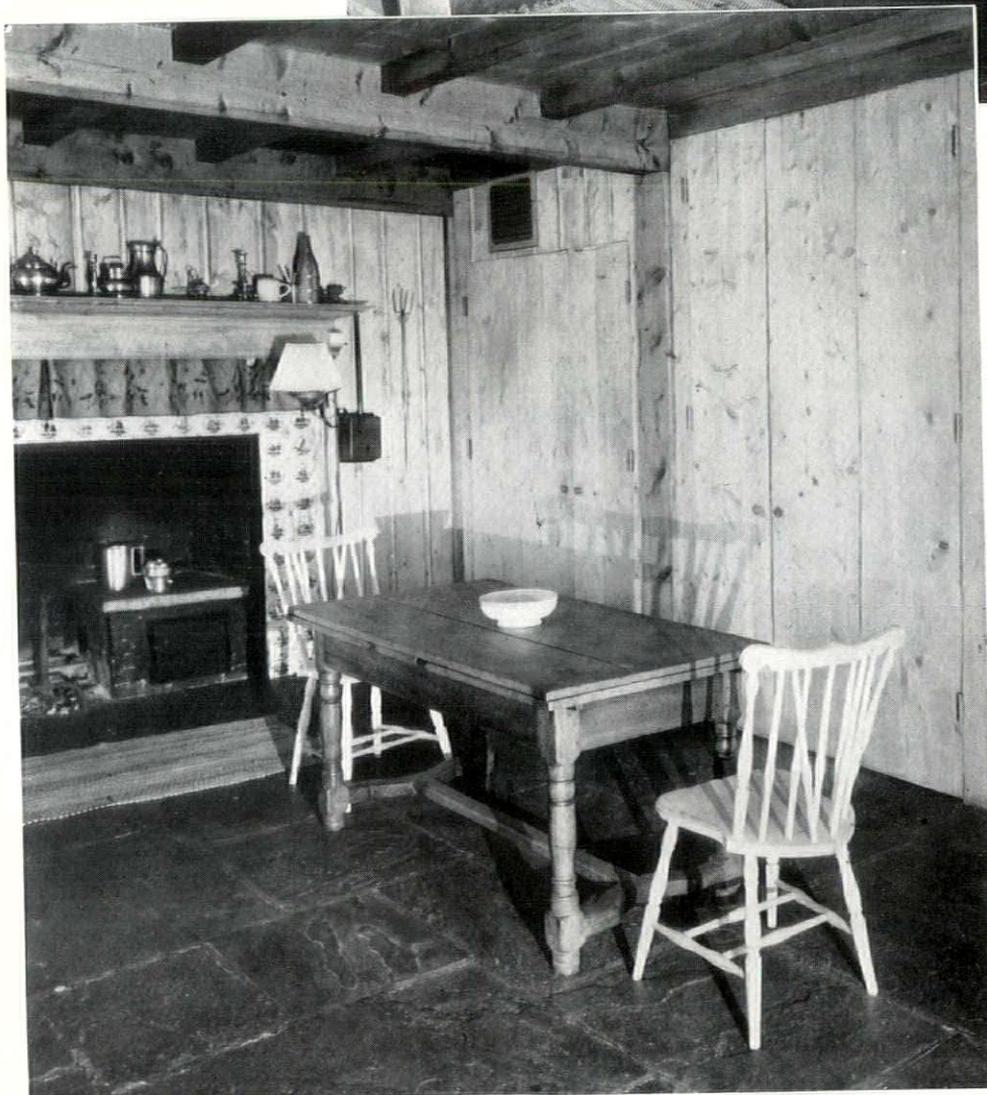


The plan solves the problem of combining elaborate service features with dining facilities for occasional guests. The design is patterned after the traditional type of Dutch kitchen. Materials chosen to create this atmosphere are: floors, oak plank, oiled; walls, Dutch tile; woodwork, white oak stained; beams and ceiling of oak boards; windows, stained glass with medallions depicting Dutch scenes. Pantry and cold room floor, rubber tile; walls, plaster; woodwork, stained poplar. Electric fan ventilation throughout

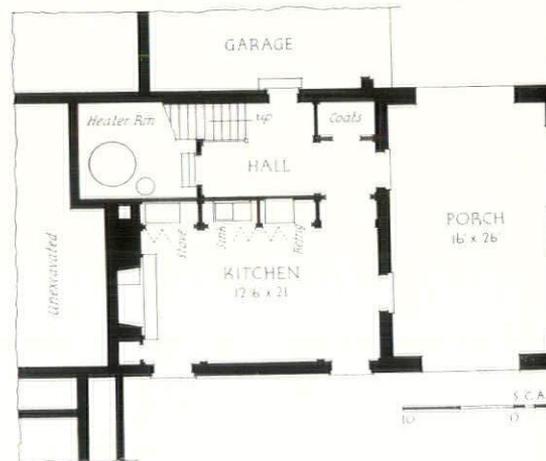




House at Bradford, Pennsylvania,
 North and Shelgren, Architects;
 William H. Prentice Company,
 Inc., Decorators and P. C.
 Quintard, Kitchen Consultant



PHOTOS: JESSIE TAREOX BEALS



WALCOTT & WORK, ARCHITECTS
HOUSE OF W. P. SIDLEY, BARRINGTON, ILL.

A modernization solution to problem of combined kitchen and living room conveniences. Walls and ceiling, Canadian spruce; ceiling beams, pine; floor bluestone, waxed; fire-place faced with lavender old Dutch tile

The Legal Side of Architecture

BY CLINTON H. BLAKE

Blake and Voorhees, Counsellors-at-Law

Proof of Substantial Performance Makes Contract Price Recoverable

THE doctrine of substantial performance was adopted to do away with the obvious injustice of allowing one party to a contract to refuse to make payment for services rendered by the other party because, in some relatively unimportant details, the contract had not been exactly complied with. If a contractor on a \$100,000 job omitted to install some hardware or failed to keep to the exact letter of the contract in other unimportant particulars, the courts in effect said that they would do justice by allowing him to recover the amount of the contract price, less a proper allowance for the defective or uncompleted work. This was on the theory that the contract had in all substantial particulars been completed and that the payment of the contract price might not, therefore, be withheld because of some technical noncompliance with respect to which the owner could quite easily be compensated. This represented a relaxation in the case of building contracts of the ordinary legal rule that a party to a contract cannot recover under it unless he proves that he has fully performed all of his obligations.

BURDEN OF PROOF RESTS ON CONTRACTOR

THE Court of Appeals of New York in a recent case again recognized this doctrine. It has refused, however, to apply it where the allowance for omissions and defects rests merely on conjecture.

In the case in question (*Nieman-Irving & Co. v. Lazenby*) the plaintiff, a contractor, agreed to perform work and furnish materials for the reconstruction of a residence for the defendant in accordance with the architects' plans. The work was to be done on a cost-plus-10% basis. The architects directed certain additions and changes to be made. The owner claimed that he had not authorized some of the work done and that in any event plaintiff had not properly performed the contract. The judge who tried the case made a finding that the cost to the plaintiff of the labor and materials was the exact amount which the plaintiff claimed, but deducted

from this the sum of \$2,500. The only explanation made by the Trial Court of this deduction was the statement by the judge that:

"Believing the defendant to be entitled to a reduction in the amount charged, in order that defective work may be repaired, that allowance may be made for work not ordered and for extras done without his knowledge and against his desire, an allowance of \$2,500 is made to defendant."

There was nothing to show how this allowance was arrived at or how it should be apportioned. The Court of Appeals, in reversing the judgment, held that:

"The plaintiff's recovery is not based upon any finding of complete performance. The rule that recovery under a contract can be had only upon proof of performance has been relaxed in actions upon building contracts. It has not been abrogated. Though there be defects or omissions in the complete performance of the contractor's stipulated obligation, there may be a recovery upon proof of substantial performance where the omissions and defects are trivial and innocent and can be atoned for by the allowance of the resultant change. (*Jacobs & Youngs v. Kent*, 230 N. Y. 239; *Spence v. Ham*, 163 N. Y. 220.) The contract price is the stipulated reward for a stipulated benefit.

"A contractor is not entitled to compensation from an owner even for improvements which benefit the owner unless that is the benefit for which an owner agreed to pay. There may be adjustment where the contractor shows that the variance is unimportant and innocent and can be remedied or atoned for. There can be no adjustment based upon the conjecture of judge or jury that a payment to the contractor of a sum substantially less than the stipulated price for stipulated work will be fair compensation for an accession of value to the real property, though not through performance of the stipulated work. (*Steel Storage & Elevator Constr. Co. v. Stock*, 225 N. Y. 173.) There must be both proof and finding of the nature of the omissions and defects; cost of making such omissions and defects good, and the findings must establish that the defects and omissions are in truth unsubstantial. (*Spence v. Ham*, supra.) Both proof and findings are wanting here, and judgment must, therefore, be reversed."

The architects for the work were brought into the litigation and their right to their fee was an addi-

tional issue. In considering this, the court reiterated the rule which we have recently discussed, that an architect who does not exercise proper skill and diligence is not entitled to compensation. It went further than this, however, and in effect applied the doctrine of substantial performance to the architectural services as well as to the services of the contractor. In this connection the court said:

DOCTRINE APPLIES TO ARCHITECTURAL SERVICE

"WHAT we have said as to the claim of the contractor applies with even greater force to the claim of the architects. Their compensation was promised for the exercise of skill and diligence. If they failed to exercise that they are entitled to no compensation. If in the performance of their work they did exercise skill and diligence but through an oversight or lapse caused some damage to the owner, then the damages may be offset against the recovery."

The foregoing opinion seems entirely reasonable and proper. The doctrine of substantial performance, having been developed as an exception to the general rule for the purpose of preventing an injustice, should not be so applied as to work an injustice. To apply it in a case where there are admittedly defects and omissions, but proof of their extent and character is lacking, would put a premium upon shoddy work and to a substantial degree nullify the primary purpose of the contract. Inasmuch as the substantial performance exception to the general rule of full performance has been applied to building contracts, it necessarily should logically be applied to all phases of those contracts. The activities of the architect are definitely a part of the building operation and in many cases are specifically referred to in the building contract. The standard form of the American Institute, for example, makes definite reference to the Architect and to the plans and specifications and ties them in with the other phases of the work. It is proper, therefore, that the architect as well as the contractor should receive the benefit of the substantial performance rule.

COST OF DEFECTS MUST BE PROVED

IN another recent decision by the New York Appellate Court (*Blanchard v. The City of Saratoga Springs*, 241 App. Div. 193), the court pointed out the necessity of proving, not only that defects or omissions are unsubstantial, but also the cost of remedying them. In that case the referee who tried the case found that the trench system which the contractors had installed was defective, but refused to allow the owner any credit, on the ground that it had failed to prove the cost of remedying the defect. In reversing the case, the court pointed out that the burden of showing complete or substantial performance was not upon the owner but upon the contractor and said in this connection:

"He who relies upon substantial as contrasted with complete performance must prove the expense of supplying the omission or he fails in his proof. He cannot recover for full performance when a part of the contract is still unperformed. Unsubstantial defects may be cured, but at the expense of the contractor, not the owner. The contractor cannot recover the entire contract price when defects or omissions appear, for he must show not only that they were unsubstantial and unintentional but also the amount needed to make them good, so that it can be deducted from the contract price and recovery had for the balance only. (*Spence v. Ham*, 163 N. Y. 220.)"

A contractor or architect, therefore, seeking to recover on the basis of substantial performance, must realize that he is being given the benefit of an exception to a general rule and that he must fulfill all of the necessary proof requirements. Because the performance is substantial but not complete the owner is entitled to a credit for the cost of remedying the omissions. It is incumbent on the one making the claim to show what the cost of doing this will be, so that the court will be able, if it finds that the work has been substantially completed, to give proper credit to the owner and award judgment only for the balance of the contract price.





HOUSES OF THE OLD SOUTH

VIRGINIA, rich in historical lore and steeped in romance, has contributed one of the most fascinating chapters in American architectural history. Tall white pillars, wide doors with fanlights, long shutter-bordered windows, and in the background a cluster of little low buildings called "the quarters"—these instinctively bring to mind the characteristic architecture of the Old South. But more than great mansions dot the banks of the James River. Many modest exteriors conceal large rooms with fine panelled walls of pine or walnut, with built-in cupboards, bookshelves and the inevitable fireplace. These houses, now falling to ruin, are a distinct contribution to precedent for contemporary design. It remained for Frances Benjamin Johnston, working under a grant from the Carnegie Foundation of New York, to make a photographic record of these old dwellings. How well she has succeeded in capturing the spirit and details of her subject is vividly portrayed in this group of illustrations



ABINGDON GLEBE HOUSE, Gloucester County, above, with its steep gables, sturdy chimneys and picturesque massing betrays its early English ancestry, while symmetry of plan and the hipped roofs on the small wings are reminiscent of the Renaissance. Sweet Hall, King William County, facing page above, is a 17th Century house; a splendid example of the period. The house was built by William Claibourne. Below, Fairfield Farm, Princess Anne County, near Kempsville, built 1660

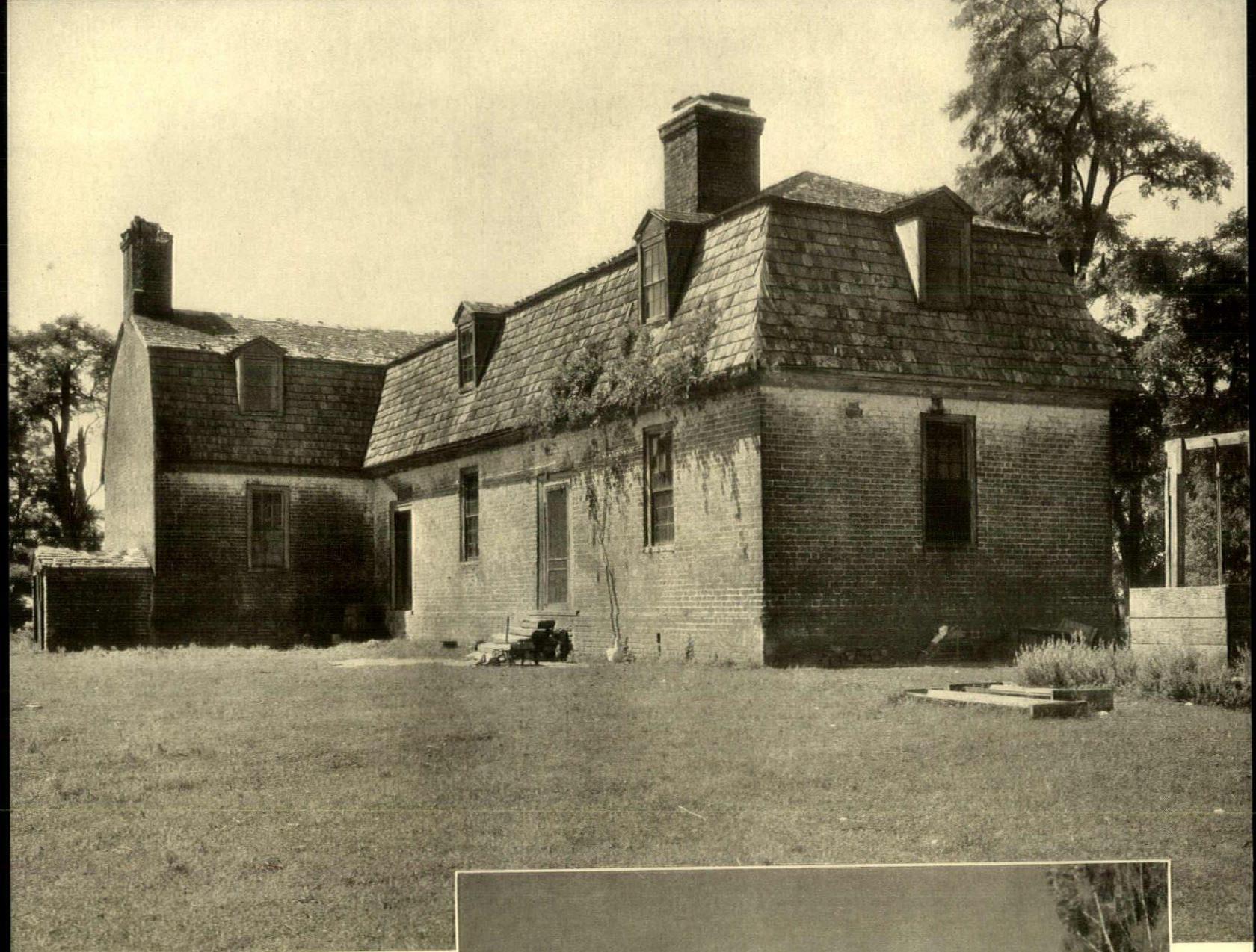




SWANWICK MANOR, New Castle County, Delaware. In this house, built in 1825, elements of traditional style are strikingly similar to many details characteristic of contemporary design







Wilton, On-the-Plankatank, Middlesex County, shown above, is an unusual style of brick house dated 1740. Right, is the Kitchen Quarters of Brems Recess, Fluvanna County, built in the early 1800's as a hunting lodge by General John Hartwell Cocke



Above, the Kitchen Quarters and Smoke House of Kendall Grove, an 18th Century mansion, Northampton County. Left, view of the South gable, The Mansion, Bowling Green, Caroline County. Built in 1680. An example of early Tide Water houses



This interesting view of the brick gable end of the James Monroe Law Offices at Fredericksburg, Spottsylvania County, shows the building as it stood before restoration

Schemes for Improvement

SO MUCH has been written about various types of plans that any suggestion which involves advanced planning for civic improvements is likely to meet with skeptical opposition. But not all plans imply an attempt to overthrow society as it is constituted at present. Some of them suggest practical methods of solving current problems which would strengthen the advantages of our current social and economic organization while eliminating some of its more obvious inefficiencies.

Elements of one such scheme are embodied in the article "Stabilized Modernization," by Arthur C. Holden, published elsewhere in this issue. To insure a program of general civic improvement, Mr. Holden suggests that advance planning is a necessity. He advocates using part of the monies already allocated for slum clearance and housing as a revolving fund to finance the work of advance planning groups. Thus could be secured the best brains and adequate staffs of technical assistants to study and develop plans for economic and physical reorganization prior to appropriations for actual construction.

The whole idea has much to recommend it. The basic necessity for slum clearance, property improvement and low-rent housing is apparent in most cities. Experience has proved that not all projects have equal justification, socially or economically. Proof of that justification and demonstration of a project's value from every point of interest are matters that can best be developed by means of practical research. And a program of advance planning for economic and physical reorganization can furnish graphic and convincing proof to financial and real estate interests of the essential soundness of a thoroughly studied technical solution. In too many recent efforts at slum clearance and housing we have declared an emergency, torn down, re-built and trusted to our proverbial good luck for good results beyond the expediency of the moment.

It is true that planning boards exist in most cities of any size. But it is equally true that these boards accord very little recognition to the technical problems of land use and urban improvement that come within the province of the architectural profession. Solution to such problems involve construction, which, in turn, implies an intimate concern with social and economic advantages. By serving the best interests of the various business factors involved an advance planning program would inevitably produce lasting and general benefits to the community as a whole.

THE OUTLOOK

ON many fronts there are indications that America is slowly but surely arising from the depths of despair, consistent demands of business for an adjournment of Congress have been answered. The President's message of a "Breathing Spell for Business" has eased the frazzled nerves of industry and for the seventh consecutive month, building, the real barometer of progress, has shown a decided increase over the same period a year ago—an increase of 52.7 per cent., according to Dun & Bradstreet, is encouraging at least, when we consider that this figure is almost equal to the permits issued for the entire year of 1933.

Residential building leads the field. A fairly accurate estimate places this type of construction at approximately \$400,000,000 for the year . . . so far as the architectural profession is concerned the current building picture is not quite so glowing as it might seem for it must be remembered that residential building in the \$3,000 to \$8,000 class does not offer the architect much opportunity; however, the profession can take heart in the fact that history repeats itself, that a residential swing upward is always followed by a general rise in heavy construction.

A SYSTEM THAT WORKS

TRACKING Down Modernization might well be the title of a loose leaf record book in the office of a prominent firm of New York architects, for between its covers are listed a hundred or more buildings within the class of "modernization patients," a record of vital importance to the architects and to their client, one of the largest banks in the country. Every property on which the bank holds a mortgage is included. A system of key numbers designates individual projects, giving location and address with comprehensive data concerning those projects under construction, in the planning stage and to be given future consideration. This service has enabled their client to dispose of many mortgage holdings to their advantage.

THE PRIMARY FUNCTION

AN approach to the practical side of architecture emphasizing the primary function of the architect, that of creating a design for a building which can be built within a set appropriation, is at last to become a major factor in architectural education. At the Massachusetts Institute of Technology the students in the school of architecture will select and

purchase a suitable site and design and plan a moderate sized house, select a building contractor and supervise every step of construction. Studies of interior color schemes and landscape treatment of the grounds will complete the project. When the house is finished it will be sold and the money used for financing a similar dwelling for the next year's class. Through the actual design, planning and supervision of construction the student will receive a practical knowledge hitherto sadly lacking in the scheme of architectural education.

FIGURE COSTS FIRST

WHEN an industrialist on Long Island, N. Y. employed an architect, he listed his requirements and stated that the building should not cost over \$200,000. The low bid was approximately \$360,000. The architect then partially re-designed the building and after taking many alternates, reduced the low figure to \$320,000. What happened then is a sad story . . . the architect was paid off and dismissed. The two low bidders were invited to re-design the building and submit new bids—results: \$235,000 and \$216,000. This work was awarded to the lower of the two bidders for \$218,000 with a number of alternates. It is interesting to note that the contractor who received the award had employed an architect for re-designing the building. When the average architect learns to figure construction cost, like the average industrial executive figures plant production cost—then will architectural services be fully appreciated.

A CASE OF RED-TO-BLACK

EVERY DAY brings to light some important modernization project which has turned loss into profit for the owner. A recent example is that of the Fifth-third Bank in Cincinnati, which stood vacant for three years with a resultant loss of \$160,000 in revenue. The deep recess in front, the granite columns, plus the high vaulted banking room 160 feet in depth made it impossible to find a tenant. Plans for the remodelling were drawn by Samuel Hannaford & Sons, and the completed structure made available two modern retail stores of two stories each. Leases have already been signed at a rental of \$60,000 per year. The total cost of the work was \$100,000 and the rental received will give the owner a six per cent return on his investment in the property. In every city, town and community throughout the country, modernization cries aloud for architectural attention. Investors need a

t o t h e E d i t o r s

fair return on their money. Proper combination of the two should bring many excellent commissions to architects.

QUESTION MARK

A BOSTON department store has launched a "Home Development Plan" under which it will build, furnish, exhibit and later offer for sale seven model homes. An architectural contest for designs has been held, calling for houses ranging in price from \$5,000 to \$20,000. On the other side of the continent, a retail store in Los Angeles, has set up a good-will builder in the form of a "Home Advisory Bureau," with full information offered on all phases of home planning; real estate, designing, building and decorating . . . interested customers are referred to reliable architects. In Kalamazoo, Michigan, one of the leading banks is sponsoring in its quarters an Advisory Service by local architects on the design, plan and equipment of small homes . . . and so come similar reports from every section of the country. Architects are receiving a lot of free publicity these days. The question is: What are architects doing to acquaint the public with the value of architectural service?

COLOR BLIND?

ONE well known architect—whose name we do not propose to disclose—is color blind. He has not only been successful as an architect, but also successful in keeping his minor handicap well concealed. The fact became known to his associates one day several years ago when he made a crayon sketch, the colors in which were more or less reversed. One of the draftsmen thoughtfully made him a special set of color crayons indicating on the end of the pencils the names of the colors. There are few handicaps that ingenuity will not overcome.

TO THE LADIES

THE recent survey, by Women Investors in America, Inc., reveals that women are beneficiaries of 80 per cent of the sixty-five million life insurance policies, aggregating more than \$100,000,000 . . . have 65 per cent of savings accounts, to the amount of \$14,242,800,000 . . . hold 48 per cent of the stock of all railroad corporations . . . 44 per cent of public utility securities and titles to 40 per cent of all real estate. From these facts it seems that the market for architectural service now and in the future rests largely in the hands of women.

POINTING THE WAY

WHILE it may be true that prefabricated housing has not proved as financially remunerative as its exponents desired, they have at least been successful in introducing some sound and practical ideas which the architectural profession can study to advantage in meeting the problem of the low-cost, single-dwelling housing shortage in every section of the country.

Basements are being eliminated; waterproofing and drainage are no longer a necessity; excavating cost is reduced to a minimum; proper insulation reduces fuel cost; wallboard, plywood, gypsum and other synthetic materials are proving their worth; windows and frames pre-built come complete with weather-stripping, screens and storm sash all fitted to be set in the wall; heating units; furnace, oil burner, water heater and thermostatic controls delivered as a unit on the job with one guarantee.

Prefabrication is clearly influencing design; more windows . . . corner windows for light and air; compact room arrangement, terraces, simple lines and solid colors. Proper architectural supervision, elimination of speculative builders, better construction organizations and open minds to the practical, economical and sound investment features of prefabrication points the way to a natural solution of the low-cost housing problem for the masses.

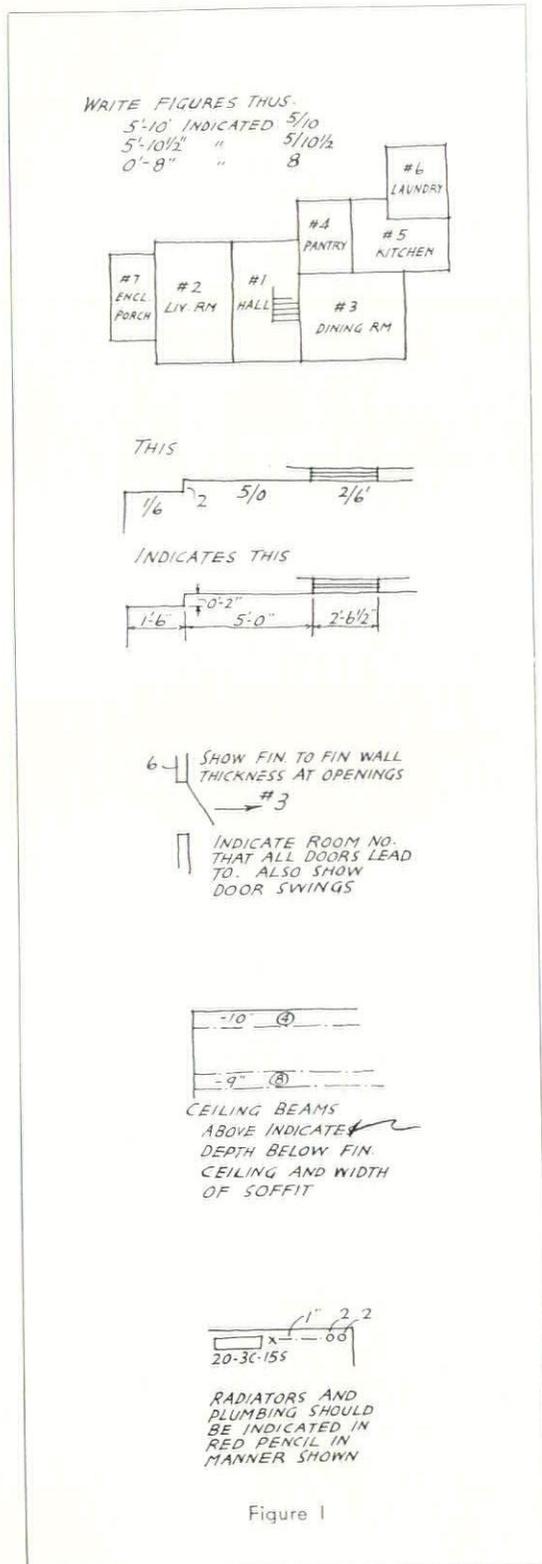
FIRE! FIRE!

AN industrial plant in Binghamton, N. Y., caught fire; the outbreak was discovered at 2:30 P.M. on a working day when the place was full of employes. At 2:35 P.M. the building was such an inferno that the arriving firemen could not get on that side of the street—and 35 people had already been cremated, most of them on the fire escapes. In a scant twenty minutes the factory was so completely gutted that the front wall collapsed.

Human life is a precious thing and architects in their design of buildings are morally, if not otherwise, obligated to protect it. How many people know that a fire starting on the first floor sends to floors above an advance guard of withering heat which mounts with lightning-like rapidity from 300, to 700, to 1000 degrees. Fire underwriters say that even hardwood will ignite at about 400 degrees when its entire surface is bathed in air of that temperature. A few extra dollars invested in fire-resisting materials and adequate planning for fire protection would save millions of invested capital, to say nothing of human lives.

Measuring for Alterations

BY JOSEPH W. MOLITOR



THE following method of preparing preliminary plans for an alteration is adapted for one man without a helper, and saves considerable time over the usual method. It is designed to put data in such form that any draftsman can develop the work at any time, even if it is postponed for a long period.

The equipment is simple, 8½ x 11 notebook paper (with standard data that can be typed or put on with some form of duplicator), a piece of 1/8" preswood 9½ x 13, two five-foot folding rules, a fifty-foot steel tape, an old jack knife and several pencils are all that is needed for any job.

First make a small key plan, as shown in Figure 1. This plan need not show any details, but should indicate the names of the rooms with a reference number for each. Now on a sheet of notebook paper, Figure 2, on which standard data have previously been typed—make a plan of one of the rooms. By placing only one room on a sheet, all data about that particular room will be in one place and the chance of overlooking something will be considerably lessened.

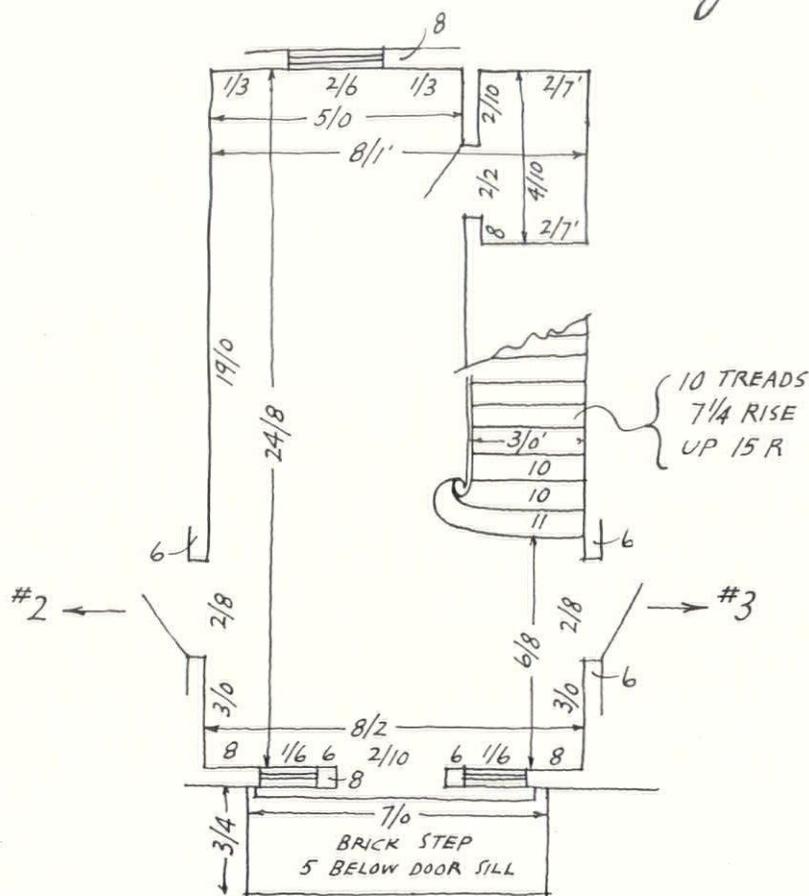
In noting dimensions speed is gained and confusion avoided by using the following system of notation: For example, 0' and 7" is written simply 7; 5'-9" is written 5/9; fractions taken to the nearest half inch have proved accurate enough for any job, so 4'-8½" is written 4/8—a short line next the inch figure indicating the fraction. To prevent errors check short figures with overall figures before leaving the job.

Interiors offer no problems that are not readily solved. It is useful, however, to note in red pencil any figures referring to mechanical details such as radiators, light outlets, etc. in order to avoid confusion with structural figures.

If any exterior elevations are required, the quickest and most efficient way is to photograph them. Cut strips of black cardboard to exactly three by twelve inches. Fasten one of these scales to the trim of one of the ground floor windows; and another at the highest point, such as a dormer. If the building is three or more stories high, one of the cardboards should be placed at the second floor.

Take the photograph as a straight elevation; do not take a corner view or perspective. When the

Sheet # 1
 Room Hall
 Job Jones #714



Floor to window sill 2/4 Sill to head 5/0 Head to Ceil. 8
 Floor to ceiling 8/0 Finished floor to floor 9/1
 Floor Pine 2" boards Radiators None in this room
 Width of door trim 4 Window trim 4 Base 10 (in Bad Shape)
 Height of doors 6/10 (Ent. door 7/0)

Each room should be drawn on separate sheet (Figure 2 this page) and given the same number as on original key plan (Figure 1 on facing page)

Figure 2

photographs are enlarged to 8" x 10", measurements accurate to within three inches can be secured by using a pair of dividers and the scales provided by the cardboard strips. Due to the perspective of the picture the dimensions between floor levels will be found slightly smaller at the top than at the ground floor. For this reason it is necessary to set dividers and take the measurement of each floor separately instead of taking the entire measurement with one scale from first floor mark to roof line. These

measurements with the floor and window heights taken inside will give all the data that will be necessary.

It is always well for the person who is taking the measurements to be familiar with the extent of the alterations, as much time will be saved by omitting such data as have no bearing on the contemplated work, and a little more time spent on that portion of the building on which alterations are to be made will be found advantageous.



PHOTO: TRIANGLE SERVICE

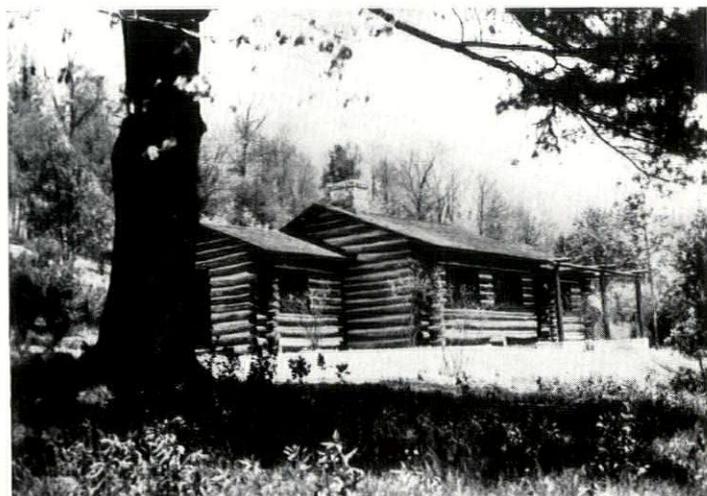


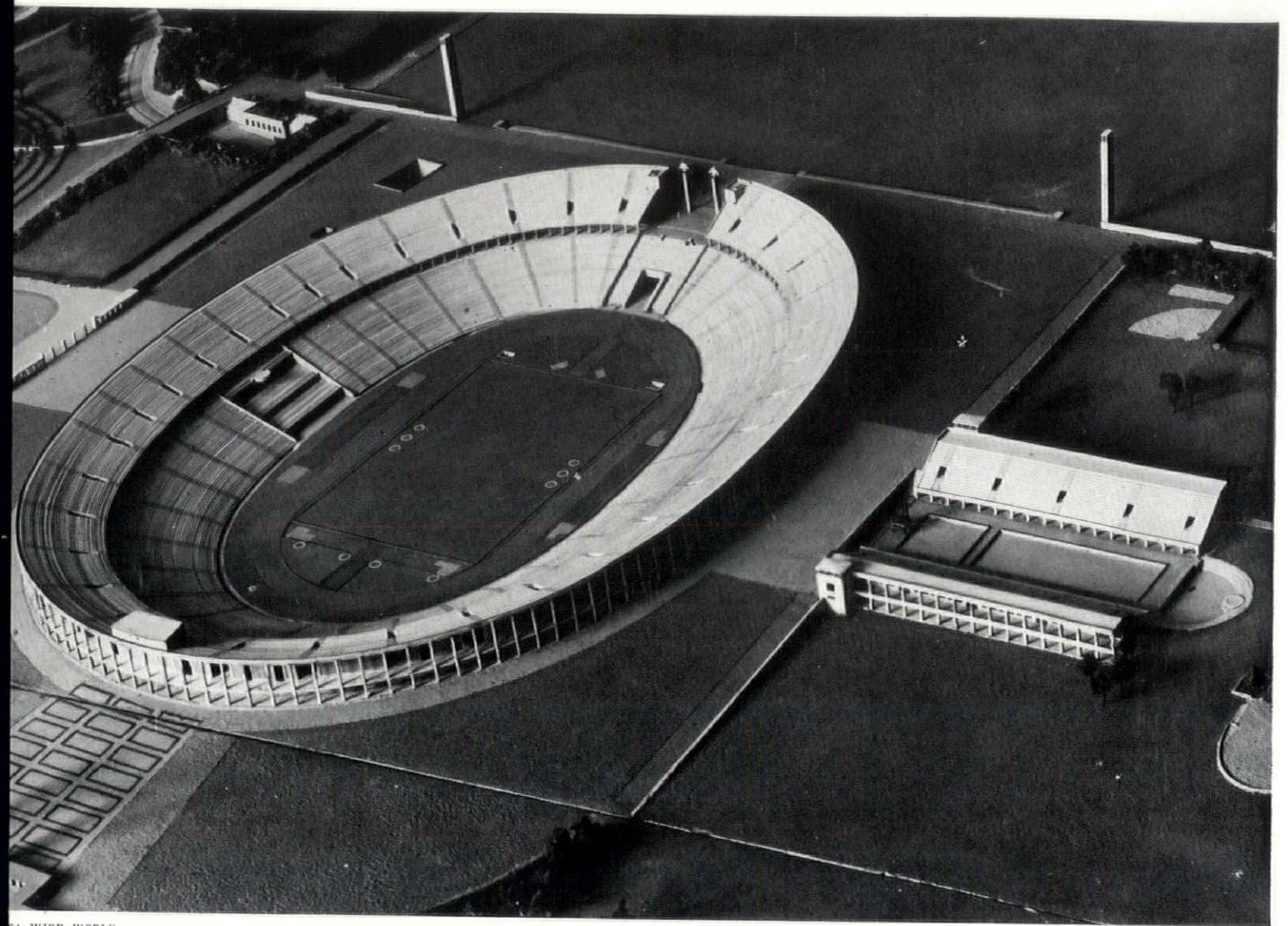
PHOTO: UNDERWOOD & UNDERWOOD

Above: Cocktail lounge, aluminum painted ceiling with dur-alumin strips, Grand Central Air Terminal, Glendale, Calif., Joe Plunkett, architect. **Top left:** "Arkansas Woman," wood carving by "Andy," Hollywood, California. **Left center:** First, General Electric, "New American" home, Marblehead, Mass., result of recent competition. Royal Barry Wills, architect. **Bottom left:** Log cabin, Cook Forest State Park, Pennsylvania, built by CCC boys. **Facing page:** Model of "Deutsches Stadium," Berlin, for Olympic games; seating 100,000; the swimming stadium adjoining seats 12,000

Trends and

LOW-COST HOUSING . . . The first completed low-cost housing project appears to have failed to meet its market, according to a report by Simon Breines "The Philadelphia Experiment in Low Cost Housing," appearing in the *Real Estate Record*. After setting its objective as furnishing low-cost housing for hosiery workers, although making no attempt to limit occupancy to union members, Mr. Breines finds that only a minority of hosiery workers are actually housed there, largely because the price per room jumped from the intended \$8.50 per month to \$10.50 per month, not including garage or the cost of a refrigerator.

The report states that the PWA furnished \$1,039,000 of the \$1,153,607 cost. In January, 100 apartments were occupied of which only 40 are



S: WIDE WORLD

Topics of the Times . . .

tenanted by hosiery workers. The average worker makes \$30 per week, and prior to the erection of the new housing, was paying \$42 per month for a six room cottage and garage, including an estimated service cost for coal, etc., of \$12.50. At \$8.50 per room the new five room apartments were to rent at \$42.50, but instead Mr. Breines declares they cost \$52.50, to which must be added \$5 per month for garage space and \$5 per month for two years to purchase refrigeration, a total cost of \$62.50. Two room apartments, however, can be had for \$27 to \$30.

DOES MODERNIZATION PAY? . . . Expert opinion seems to think so. In New York City alone, the Emigrant Industrial Saving Bank, according to

Lloyd A. Smith in "American Builder," has sold during the past two years approximately nine hundred buildings, taken under foreclosure, which have been improved to a profitable condition. The bank's architects draw many plans for modernization even before a prospective buyer appears. Restoration is deemed an essential part of the investment. When a building fails to return a fair profit on the investment it should either be demolished or modernized to an income basis.

• Future residential buildings, so states Meyer Fridstein in a recent issue of "The Economist," must carry rentals not over \$35 to \$40 a month for family units in order to pay interest and return the capital in thirty-five years. The average family



PHOTOS: WIDE WORLD



HOLLAND BUILDS WITH GLASS . . .

The "Oepluchten" school in Amsterdam through the use of modern construction materials, reinforced concrete and glass has solved the problem of proper light and air, although situated in the midst of a congested area. Note the open decks on each floor providing for student recreation on rainy days. This idea also takes into consideration the easy movement of students in and out of the building. A roof deck for open air classes is an interesting feature



PHOTO: COPYRIGHT, HAMILTON M. WRIGHT



NEW ARCHITECTURE IN OLD WORLD

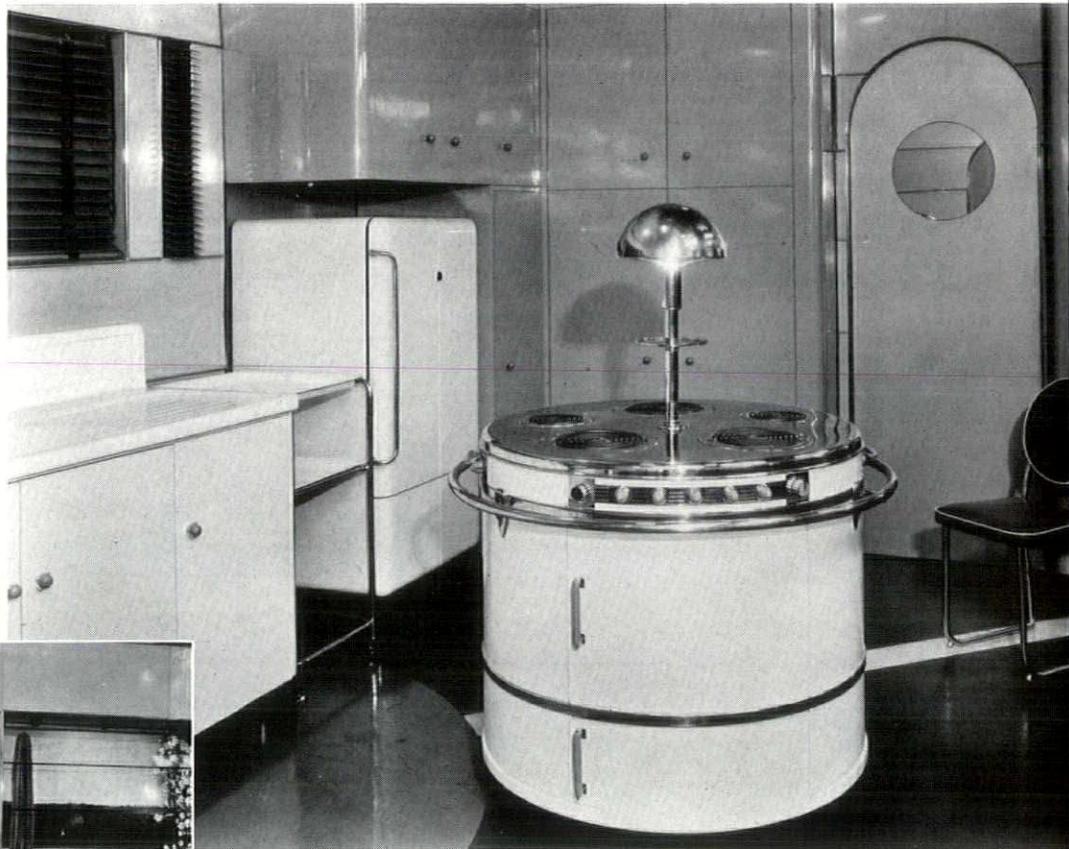
Above: type of apartment house being erected in Cairo and along the Mediterranean shore. **Top left:** Czecho Slovakia finds modern architecture in the Prague Electric Company Building. **Bottom left:** The central building of the Official Social Assurance, Prague's' number one skyscraper

income must be estimated at \$30 to \$40 a week. Skilled labor must be available at a dollar an hour, common at sixty to sixty-five cents. Common brick must not sell over \$7 to \$8 a thousand and lumber over \$35 a thousand board feet. Taxes take fully 12 per cent of gross income, 10 to 12 per cent more going for fuel. Janitor and service may take \$3.50 a month for each apartment. Ruling cost of construction must drop 50 per cent before housing of this kind can be expected. To revive construction on a recovery scale, a definite relationship must exist between gross rental income and unit prices of items involved in the new structures.

- The total amount of private funds definitely allocated for the purchase of home mortgages under the FHA insurance plan has reached \$404,389,515,

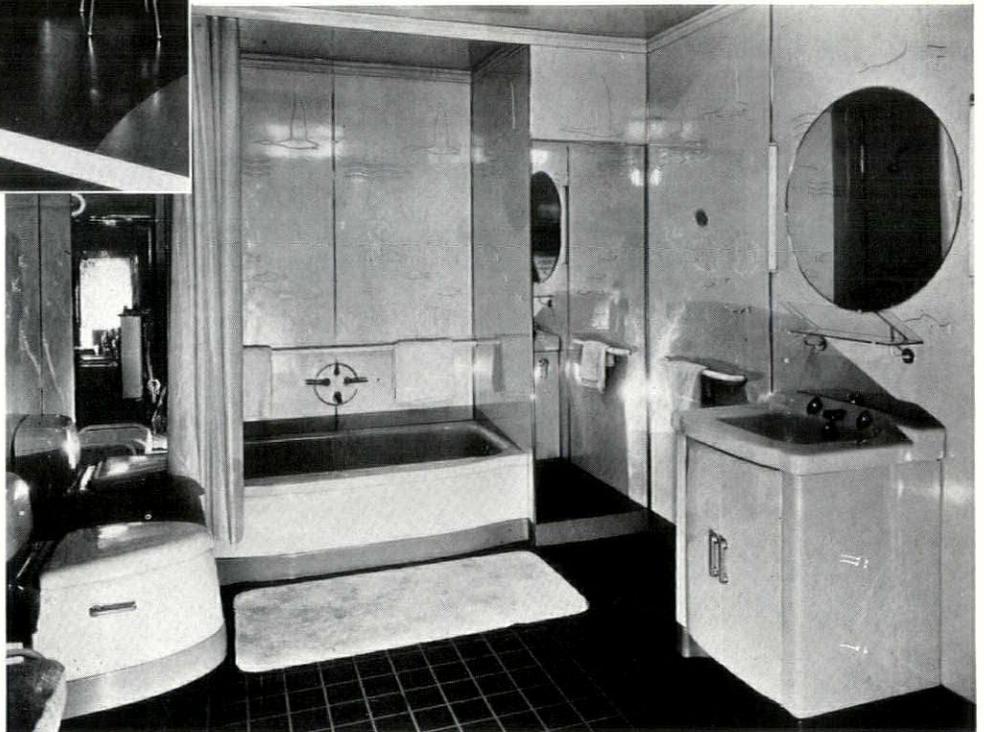
as of July, according to Stewart McDonald, Acting Administrator. Eighty-four insurance companies with assets of more than \$4,487,000,000 have been approved under Title 2 of the National Housing Act as mortgagees authorized to purchase insured mortgages and make insured loans direct to home owners. The allocation of \$361,852,019 was reported by only 1,842 of more than 5,800 approved mortgagees, which is taken as an indication that this sum is less than one-third the actual amount now available for insured mortgage investment.

- Thirty national organizations and a number of independent experts have developed a graphical "dictionary" of drawings. The work has been adopted by the American Standards Association and will be used as the guide in thousands of drafting

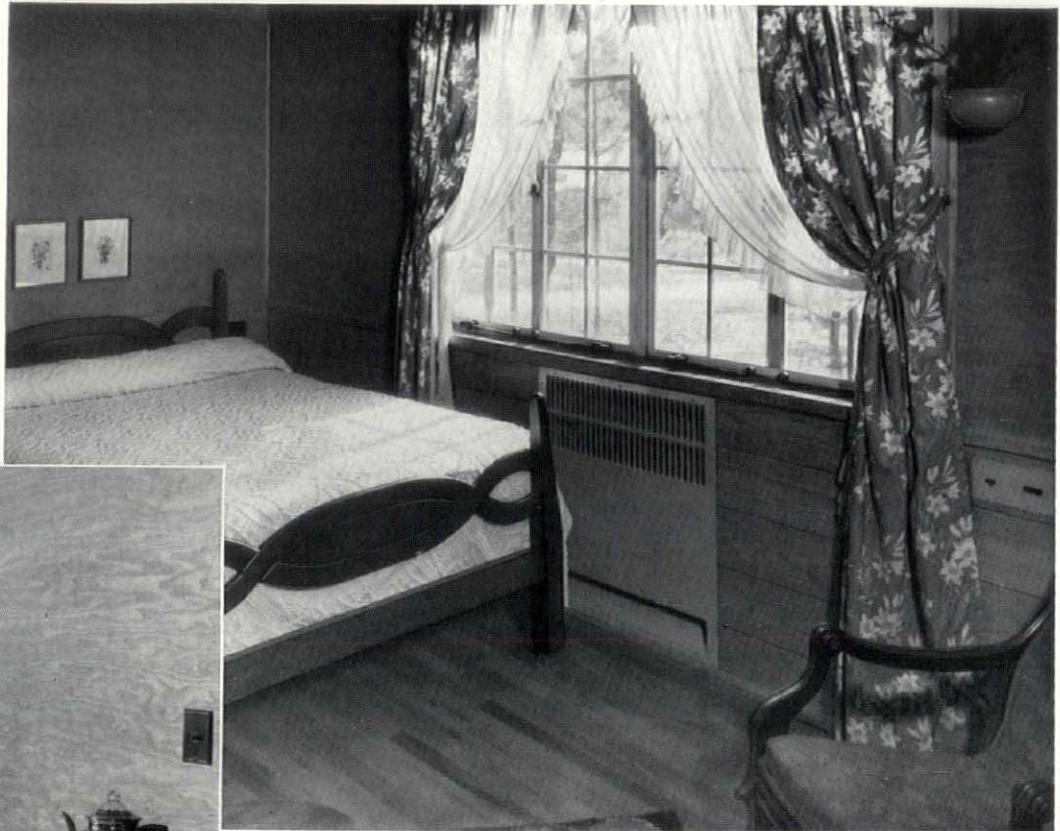


Metal and color . . . new design conceptions for kitchens and bathrooms shown at recent Master Plumbers' show in Chicago, by Briggs Manufacturing Company, Detroit. **Above:** Round Electric stove on casters permits cooking from any angle. **Left:** Open dinette, all steel construction. **Below:** Bathroom with streamlined fixtures: walls and ceiling drawn metal, stainless steel strips. Units are enamelled in various color combinations

PHOTOS: JESSIE TARBOX BEALS



Plywood and electricity . . . features of the low-priced houses being erected by TVA at Norris, Tennessee. **Right:** typical bedroom with plywood walls above wainscot and electric radiator under the window. **Below:** detail in all-electric kitchen; dinette at end of room



PHOTOS: GALLOWAY



rooms throughout the country. According to Dean Franklin DeR. Furman, Stevens Institute of Technology, a lack of uniformity in symbols has made the drawings of one company most unintelligible to other concerns which were obliged to use them. This new standard seeks to eliminate confusion.

- A new type of rubber putty, developed by the B. F. Goodrich Company and known as "Plastikon" is said to be highly resistant to moisture, corrosive chemicals and fumes. Similar in appearance and consistency to ordinary painters' putty, it may be

applied with a knife in the same manner. It adheres equally well to steel or wood surfaces and, because it contains little oil, requires no mixing. The product is especially recommended for prevention of air leakage in air conditioned buildings.

- Chemical clashes between paints are the subject of recent investigations by Forest Products Laboratory chemists, who hold these hidden conflicts accountable for many failures of exterior repaint jobs.

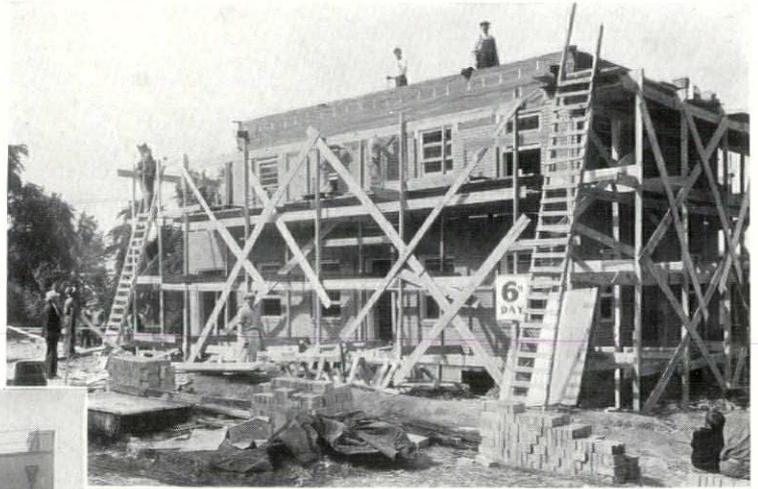
Premature cracking and scaling are the most common manifestations of paint antipathies, which are apparently mutual in paints of different pigmentations. For example, a white or tinted paint cannot be applied over brown, green, or deep red without risk of early damage. It is considered inadvisable to change the color scheme of any building radically without taking possible "paint disagreements" into consideration. Do not use white paint over any full-color paint. Paints of varying kinds and proportions of solid constant content should not be mixed. Paints containing varnish when covered with paints lacking varnish will cause trouble.

- In a recent address before the Art Institute of Chicago, Dr. Gustav Pauli, veteran European museum director and former director of the Hamburg Kunsthalle discussed present-day art museums and the museum of the future.

Dr. Pauli asked that in the design of new museums, experiences with old buildings be taken into consideration, using them partly as models, but

BUILT IN TEN DAYS . . .

A demonstration home erected under title No. 2 of the Federal Housing Administration, at Freedom, Pennsylvania. George E. Trent, architect. **Right:** Progress of construction on 6th day; five days between plaster coats was allowed. **Below:** Dedication ceremonies upon completion. The work, including the lot, represents an outlay of approximately \$7,200. . . .



also as warning. He pleaded for smaller museums, "museums with unified contents and with an architecture and decoration that corresponds to the contents, without imitating the exhibit. It is not necessary to build chapels for the altarpieces of former centuries, Dutch living rooms for Rembrandt or Jan van Goven, or halls of Venetian palaces for Titian or Tintoretto. In our museums of the future we need not disavow the architecture of our time; but at any rate we should strive to produce a harmony between the objects of the collection and their architectural frame."

- For the prime purpose of co-operating in the encouragement of house-building of all worthy types, the General Electric Company has organized a separate company known as Houses, Incorporated. It will be the purpose of Houses, Inc., states President Gerard Swope, to co-operate with others in the development of houses of any type which seem worthy and promising; to conduct research work; and to assist in the management and financing of such enterprises. The new organization will not itself engage in the construction or sale of houses. "Only by such experimentation and effort in the construction of small homes can their quality and conveniences be improved and their cost diminished

so as to bring them within reach of the greatest number of people," said Mr. Swope.

- There is a strong preference among savings and loan association officials for houses designed by architects as opposed to houses designed and erected by builders with no architectural plan or supervision service, states Gardner W. Taylor, president of the First Federal Savings and Loan Association of New York, in a recent issue of the *New York Times*.

- During the past ten months 527 Better Housing expositions, exhibits and building shows have grown out of the program inaugurated by the Federal Housing Administration, according to a recent report from FHA headquarters. During the same period, exhibitions of educational value to the public have been held in 43 leading trade centers, which ranged from huge expositions housed in large auditoriums to small individual booths, with an estimated attendance of 2,500,000.

- Ezra Cresson, entomologist at Philadelphia's Academy of Science, testifies that termites are becoming more numerous all the time. Over \$40,000,000 worth of damage to existing buildings are credited to termites annually in the United States. As natural breeding places are destroyed through clearing of forest, they spread in search of food to building sites in towns and cities. In view of this rapid migration, it more and more becomes necessary, that building codes provide for the protection of buildings against termite infestation.

- Since costly mistakes may result from workers' unfamiliarity in handling and laying new materials, it is pointed out that their correct application is often more important than the selection of the material itself. In this connection Harold Hawkins writes in the current issue of *The Residential Appraisers Review*, that "education will be necessary, and it is

(Continued on page 106)

American Architect "Materials
in Design" Series, Number 5.
Part I, "Carpets," is published
in this issue: Part II, "Wall
Fabrics and Draperies" will
appear in the November issue



T E X T I L E S . . .

TEXTILES...

PART I, CARPETS

BY CARL T. SIGMAN AND WILLIAM J. WARD, JR.

ALMOST from the time when man was able to weave more textiles than he needed for his protection against the elements, fabrics have constituted a part of architectural decoration. It was a natural desire of the primitive weaver to hang the products of his loom on the walls and at the windows of his rude home, to drape them over his furniture and to lay them before his hearth.

Through the years, the laborious and slow processes of spinning and weaving have gradually given way to great machines for the preparation of yarns, and highly mechanized power looms for the weaving of textiles. Once the simplest decorative fabric was a proud possession. Today infinitely finer and more diversified fabrics are a commonplace in every home. This progress, however, has been largely mechanical. Quite properly, the textile designer like the architect still gains inspiration from the past, but both today have new materials and highly perfected machinery to produce effects, difficult or impossible in other days.

In the uses of these new materials and machinery, the architect and artisan are working for a common end. They are mutually dependent and each must think increasingly in terms of the other's functions. Graceful and well executed interiors today demand beautifully woven and harmoniously colored draperies, carpets and upholstery to consummate the decorative scheme.

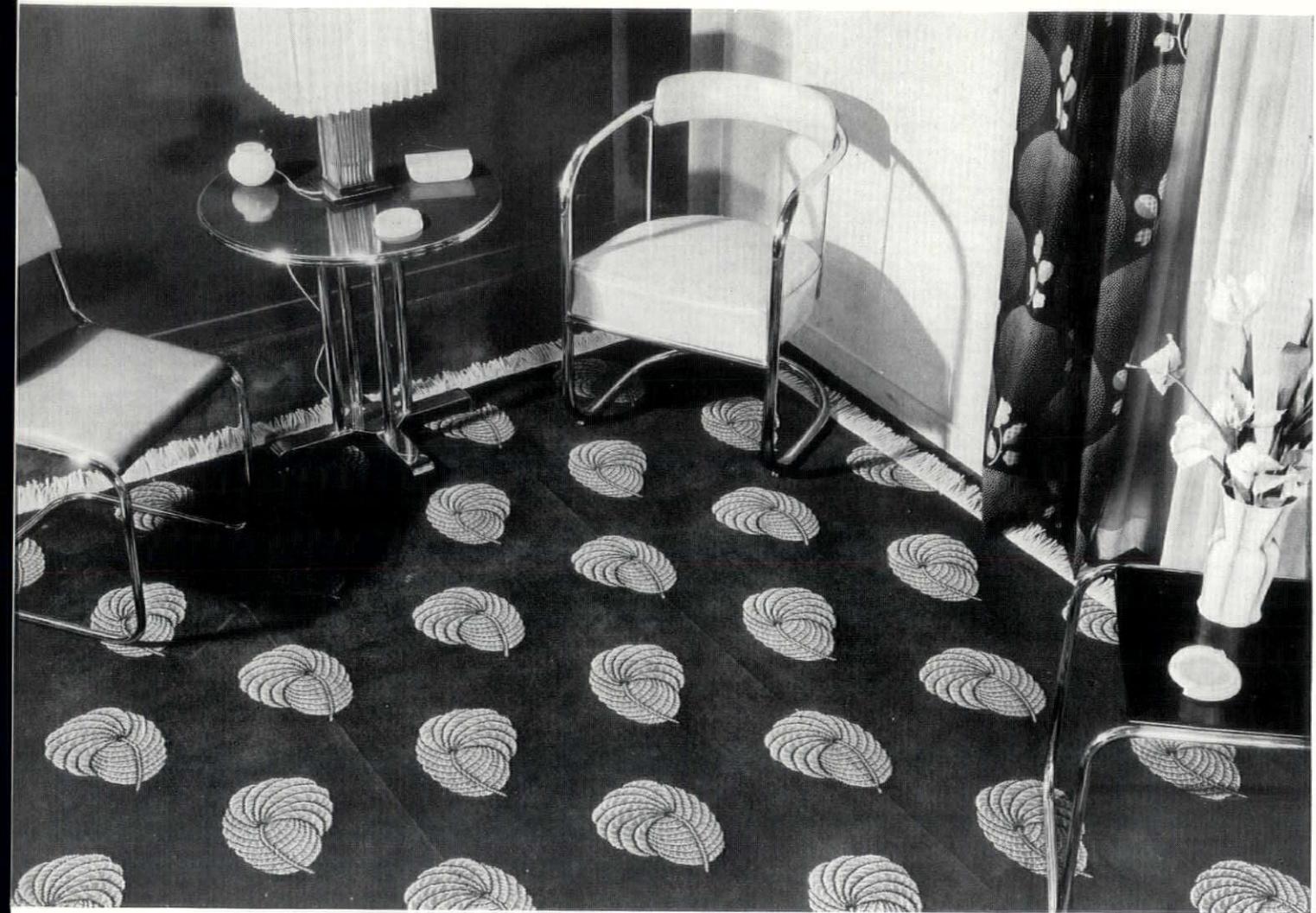
Carpets are considered somewhat in the order of their cost. The architect's problems of design are usually less concerned with rugs than with standard floor coverings. This discussion, therefore, will be limited to American-made carpetings. Much of these data apply as well to rugs that are woven of the same fibers and on the same looms.

CHENILLE

STARTING our classification at the top—from the standpoint of price, quality and design, the Chenilles are the aristocrats of carpets. Produced in seamless pieces of any length and up to 30 ft. in width, they can be woven to fit round, oval or very irregularly shaped rooms. They are the only type that can be woven in special designs and colors to carry out a decorative or architectural conception. Chenille is not stocked in regular patterns. Roll goods for cut orders come only in plain shades.

An important characteristic of this weave is its durability. The pile depth may be as much as a full inch, making it soft, quiet and resilient under foot. For this reason it is much in demand as a floor covering in galleries, theater foyers and similar public rooms. The largest ever made (46 ft. x 70 ft. with but one center seam) is in the Nebraska State Capitol. Although expensive, Chenille compares favorably in price with continental hand-tufted carpets, and can only be considered a luxury when restricted budgets have to be met or special designs are not required.

Unlike other carpeting, Chenille is woven on two looms. On the first or weft, the weaver sends a shuttle of woolen or worsted surface yarn colored to follow the design, across and back. This continues until a weft blanket is woven. The lengthwise threads are widely spaced, twice as far apart as the desired depth of the pile. Revolving circular knives cut the woolen blanket in the middle of these spaces, making a long double fringe. The loose woolen ends are pinched with steam to form a "V" with the cotton warp yarns resulting in furry strands that resemble caterpillars, hence the name "Chenille" meaning "caterpillar" in French.



RICHARD AVERILL SMITH

COURTESY: BIGELOW-SANFORD CO.

Typical bedroom showing use of Wilton in figured design.
Background in brown with figures and fringe in beige

These strips of woolen or worsted surface yarn are tied in the proper sequence of colors, and when combed by hand into the weft position on the second loom, are woven upon a heavy woolen back. The pattern is developed as each weft row carries its contribution when the Chenille fur is bound into the finished fabric.

WILTON

NEXT after chenille as regards weaving quality and price, we place Wilton. The name, characteristically, comes from the town in which the carpet was first made—Wilton, England.

The type of yarn used in the surface weaving is what distinguishes the two general types of this carpet. The worsted variety offers the greater possibilities of delicacy in design and texture whereas the woolen is more luxurious with a greater softness and depth of pile. In either, well-covered pattern effects minimizing the appearance of wear, make it a highly satisfactory carpet for public places. Woolen Wiltons are recommended for lobbies and

corridors. Worsted Wiltons for bedrooms, dining rooms and the like. In the higher grades, Wilton represents a dependable, long-time investment.

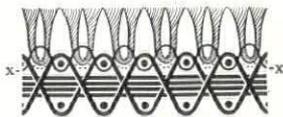
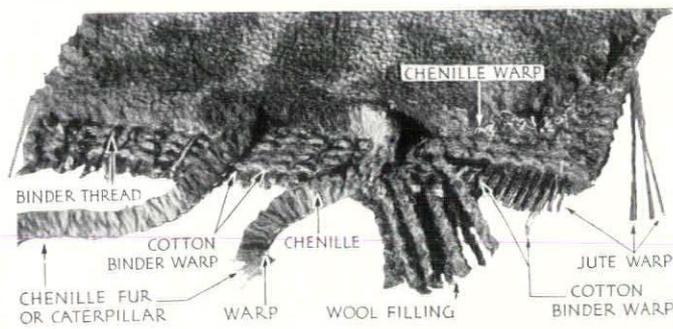
Among the better woolen Wiltons is the "loom tufted" which has a $\frac{5}{8}$ " pile, and the "Saxony" type made of three-ply yarn with a pile fully $\frac{3}{8}$ " deep.

All Wilton carpets are woven on the Jacquard loom, probably the most important invention in textile manufacture. Three to six "frames" holding spools of colored surface yarn to form the pattern are attached to the back of the loom. Since it will accommodate only five or six different yarns, color schemes are more restricted than in other weaves, although twelve to thirty colors are common with the five or six-frame construction.

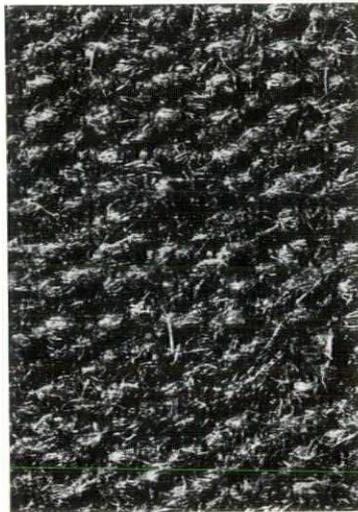
The Jacquard loom has many cards in which are punched holes in much the same manner as music rolls. These holes indicate a pattern previously worked out on cross-section paper with a square for each tuft of color. As many as 11,000 $2\frac{5}{8}$ " x 19" cards may be required for one 9' x 12' rug.

The yarns are fed through the loom in parallel,

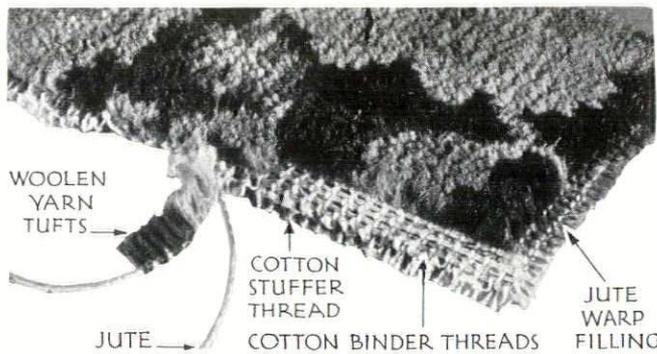
CARPET CONSTRUCTION



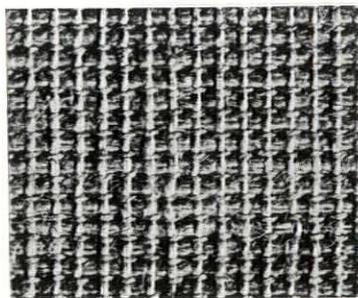
Cross section of Chenille showing how the Chenille fur is woven into the heavy wool back. The quality and strength of catcher thread "X" is of vital importance. To right of each cross section diagram in this group of illustrations are typical backs of carpets. In case of Wilton and Axminster, the number of rows per inch indicate quality. High grades have 11 and inexpensive ones may have as low as 5 rows



CHENILLE



Cross section of Axminster showing how the loom does the work of thousands of Oriental fingers. When the chain is drawn tight the tuft becomes, to all intents and purposes, a knot



AXMINSTER

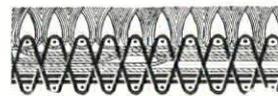
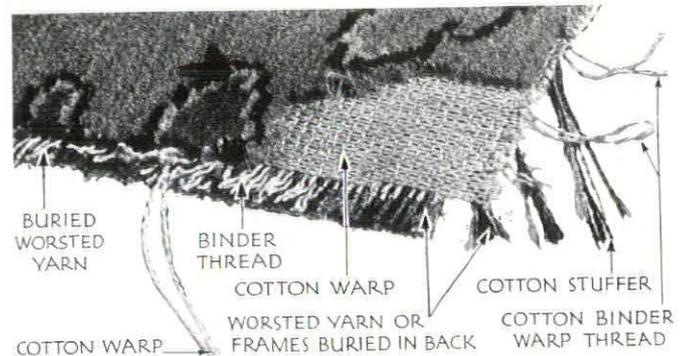
being raised and dropped by a series of wires and cords, as required by the card for each tuft of the design. Any colors not to be raised are buried in the back. Each tuft of yarn as it is raised is looped over a flat wire, the depth of the wire regulating the depth of the pile. As the wire is pulled out of the loops forming the pile (which is securely fastened by the cotton weft of the loom) a blade on the end of the wire cuts the loops and makes the tufted velvety appearance of the weave. These wires for fine carpets may vary from as many as thirteen to the inch to as few as six or seven. The heavier the yarns used, the fewer the number of wires per inch. These may be easily counted on the back.

It is always necessary to have two weft "shots" of cotton yarn to form the weave. For the sake of holding down the pile more securely in the better weaves, an extra shot is put in the surface between the rows of worsted or woolen tufts, producing what is known as a "three-shot" weave. This is readily seen by folding back the carpet.

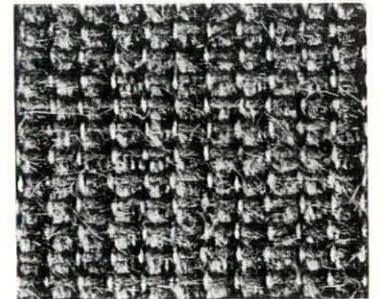
The determining factors of quality in a Wilton are the pitch, the number of frames in weaving, the wires per inch, the character of the yarn, the depth of pile and the construction—either two or three shot.

Yarn not brought to the surface by the loom in the weaving is buried in the back. This is an important factor in the life of the carpet, rendering it more resilient and durable.

As Wilton carpets contain no sizing and very little jute, they are particularly adapted for use in damp regions where those materials would be subject to mildew attack.



Cross section of Wilton. There is a colored yarn for every tuft in every pile. The yarns are brought to the surface through holes punched in the Jacquard card giving strength, weight and depth to the fabric



WILTON

BRUSSELS

NOT long ago Brussels carpet—so-called because it was first woven in the Belgian capital—was an extremely popular type in this country. Today it has been superseded by the more luxurious pile carpets. The method of weaving on Jacquard looms is identical to the Wilton process except that the pile remains uncut. Brussels is still used frequently for ball rooms where carpet must be rolled up repeatedly and pile crush avoided.

AXMINSTER

NEXT are the Axminster carpets deriving their name from the English city that brought them into being. The number of yards of this carpeting woven in America exceeds all other types, and in relation to the cost, it represents as regards appearance, durability, and depth of pile, generally speaking, the greatest carpet value. Since Axminsters range in quality from the finest weaves down to the low priced grades, the name cannot in itself be taken as a criterion of value.

In determining quality, three things should be examined: the character of the yarn, the depth of the pile, and—as in the case of the Wilton carpets—the number of rows per inch on the back of the carpet. A high grade carpet may have eleven rows per inch, an inexpensive grade as low as five.

Unlike Wiltons the better Axminsters are woven in a wide variety of patterns and colors to harmonize with interior architecture and decoration. They are particularly suited to the less extravagant kind of

interior modernization and may be used wherever luxuriously soft carpet (with a silencing effect) is desirable, as in libraries. The better grades are often used for public rooms subject to heavy traffic.

A cut-pile carpet, Axminster is easily distinguished from any other weave by the stiff jute back construction which prevents its being rolled crosswise of the fabric. Structurally it bears the closest resemblance of any to a hand-knotted carpet. In this case, the tufts of wool are inserted mechanically in rows and bound down in the weft instead of being knotted. Each tuft forms part of the surface design and none of the surplus yarn is buried in the back as it is in the Wilton weave.

VELVET

VELVET carpeting, though less ruggedly constructed, so resembles Wilton in appearance, with its tightly woven pile, that they are frequently compared.

Whether plain or figured, velvets come in an extremely wide range of colors and shading. A low elastic pile, tight weave and moderate price make them adaptable for homes, theaters, hotels or wherever fast traffic is heavy. Since all the yarn used in weaving appears on the surface, velvets are not only the cheapest of the weaves, but embody a high quality of yarn to withstand this direct exposure to wear. Sized jute yarn is used in the fabric for weight and strength as a stuffer. Generally it is stained on the back.

Velvet carpeting is woven over wires on the ends of which are sharp knives which cut the pile when

DEFINITIONS OF CARPETING TERMS

AUBUSSON . . . Fine hand-woven tapestry or carpet originally made in the ancient French village of Aubusson

AXMINSTER . . . A coarse, thick weave. Yarn threaded through fingers, caught and bound by warp-and-weft motion; yarn then cut to form pile tufts

BRUSSELS . . . A weave similar to Wilton, except that loops instead of tufts form the nap

CHENILLE . . . French word meaning "caterpillar." A furry ribbon is used as weft, the fur protruding between the warp threads forming the surface nap

FRAMES . . . Trays holding spools from which yarn is fed into Wilton looms.

GROUND COLOR . . . The prevailing color against which other colors create the motif or design

JACQUARD . . . A pattern-making mechanism consisting of a cardboard roll in which are punched holes indicating the colors of the tufts

JUTE . . . Fibrous skin taken from stalk of plant grown in India is shredded and spun into strong and durable yarn

LATEX . . . A substance derived from a liquid found in the inner bark of the rubber tree. Used on patent-back carpets

PILE . . . Upstanding fibers or tufts of worsted or woolen yarn that form the wearing surface of rugs or carpets

PITCH . . . Number of warp threads per inch measured crosswise of the loom. Good Wilton rugs, for example, are 256 pitch.

QUARTER . . . Unit of loom width, 9 inches, or $\frac{1}{4}$ of a yard. The standard carpet width is $\frac{3}{4}$, or 3 times 9 equals 27 inches. Yard wide carpet is known as $\frac{4}{4}$; 9 feet wide as $\frac{12}{4}$; 15 feet wide as $\frac{20}{4}$, etc.

REPEAT . . . Distance from beginning to end of the same figure in the pattern, measuring lengthwise of the fabric.

SELVAGE . . . Edge of a woven fabric, so formed as to prevent raveling.

TAPESTRY . . . A loom surface fabric resembling Brussels using only one layer of worsted yarn, on which all of the colors have been dyed, according to design, before being placed in the loom

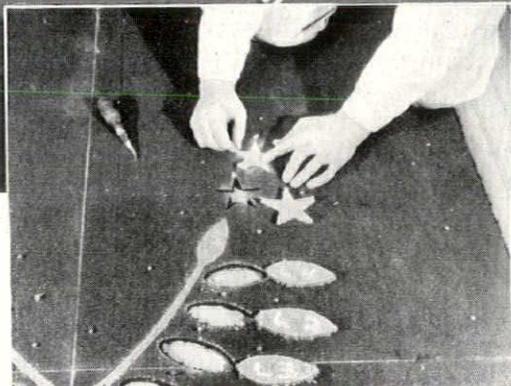
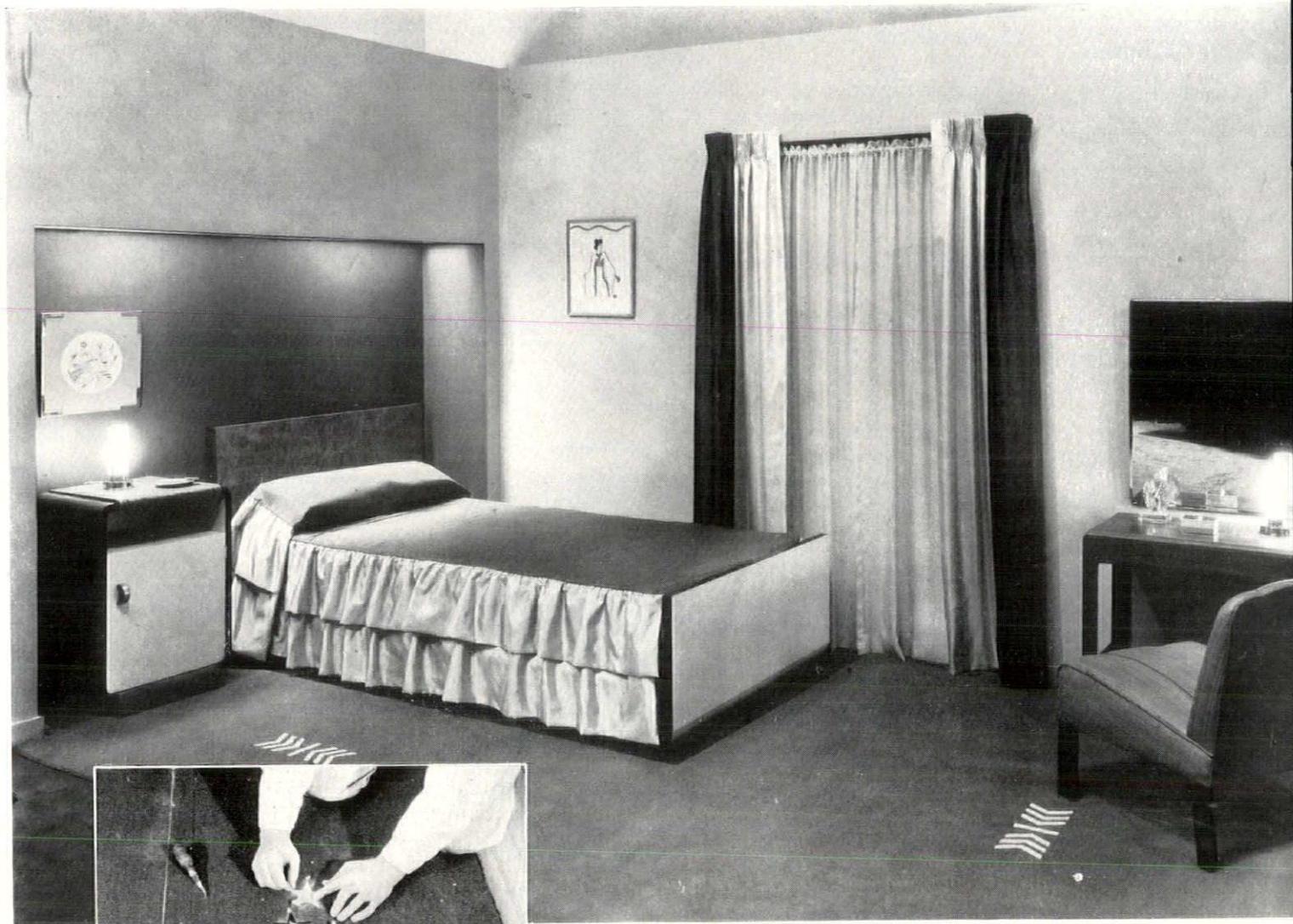
TOP COLORS . . . Colors forming the design, as distinguished from the ground color

VELVET . . . A pile fabric forming its soft compact surface by a second warp woven into the loops and then cut or left as woven

WARP . . . Threads which run the length of the cloth and are first set up in the loom

WEFT . . . Threads which run from one selvage of the cloth to the other. Also woof or filling

WILTON . . . Fabric woven on a Jacquard loom with either a worsted or woolen yarn surface



INTERNATIONAL COMMERCIAL

BERNARD HERTZIG

COURTESY: BIGELOW-SANT

Patented-back broadloom used in bedroom with inserted figures in white on a turquoise background. Illustration at left shows method of cut-out and insertion of figures in design

withdrawn. Again the closeness of the weave, the depth of the pile and, above all, the quality of the yarn are the indications of quality.

TAPESTRY

THE foregoing details apply equally to velvet and tapestry carpetings except that the latter is woven over bladeless wires and the pile left uncut. The resultant looped nap has unusual wear value and is effective for large installations where attractive designs are desired and economy is a consideration.

BROADLOOMS

SINCE the old standard carpeting was 27 inches wide, any seamless carpet woven more than a yard wide is termed a broadloom. Available widths

are usually in multiples of three feet—that is 6 ft., 9 ft., 12 ft., 15 ft., up to the maximum of 18 ft. Chenille alone is woven up to a width of 30 ft. Broadloom, either plain or figured, comes in nearly every weave described thus far. Today, because of the revived interest in overall carpeting they deserve the careful consideration of architects. During the depression a vogue for broadlooms has revitalized the carpet business.

Overall broadlooms create a feeling of spaciousness and lend themselves particularly to the contemporary style. In monotone they set off orientals as effectively as a hardwood floor. And in modernization work, poor floors are a problem architects have to face. Overall carpeting may constitute an economical and pleasing solution.



RICHARD A. SMITH

COURTESY: BIGELOW-SANFORD CO.

Overall carpeting of Hookloom-broadloom in Cocktail Bar, Savoy-Plaza Hotel, New York City. Walter M. Ballard, Decorator



IRVING BROWNING

Jacquard Wilton carpet in Foyer, Central Theater, Rockefeller Center, New York; designed by Eugene Schoen & Sons

FOLLOW THROUGH . . .

Build beautiful houses (America needs more of them) BUT don't feel your job is done until you've advised your client on the right sort of floor covering. Alexander Smith Broadloom IS the right sort of floor covering . . . smart, rich, beautifully made, long wearing, in gorgeous colors. In five qualities—to suit the most luxurious and the simplest tastes. Just as "nearly right" won't do in building a house . . . so, too, "nearly right" won't do in the kind and color of carpet that goes into that house. Complete information on these carpets may be had from W. & J. Sloane Selling Agents, Inc., 577 Fifth Avenue, New York.



SPECIFY

Alexander Smith Broadloom Carpets

BY NAME

ANNOUNCEMENTS

• The Eighth Annual Small House Competition, being conducted by House Beautiful magazine, will close on October 15th. Architects who wish to enter photographs should submit their material at once. Only pictures of houses actually completed will be accepted. There are three classes and any architect or architectural designer may submit as many houses as he wishes in each class. The first class includes new houses of eight rooms and under; the second class new houses of nine to twelve rooms; the third class is for remodelled houses of not more than twelve rooms. These houses must have been recently built or remodelled and not published in a national magazine (architectural magazine excepted).

Two prizes of \$500 and \$300 are offered in the first two classes; and one prize of \$300 in the third class. In addition several houses will be selected for publication, for which an honorarium of \$50 will be paid.

The competition will be judged immediately after the closing date by a jury consisting of Arthur H. Samuels, Editor of House Beautiful; Ethel B. Power, who is conducting the competition, and three members of the American Institute of Architects. Fifty of the best houses will be selected to form a Traveling Exhibition. Further details of the competition may be obtained by addressing Miss Ethel B. Power, House Beautiful, 572 Madison Avenue, New York City.

• Announcement is made of the removal of the George Pearse Ennis School of Art from 681 Fifth Avenue to 628 West 24th Street, in the old Chelsea section of New York City. An atmosphere of old world character is offered, suggesting the studio schools of London or Paris. Huge ceiling-high studio windows cover the north side, flooding the spacious room with light. The studio was formerly a stained glass and decorative art shop and the equipment used will be retained, offering an unusual opportunity in practical application of design. The Fall term opens September 23rd.

• Two important problems on housing are to be dealt with in courses by Werner Hegemann and Ernest Kahn, beginning with the Fall term, October 3rd, at the New School of Social Research, in New York City—City Planning, or Problems of Human Settlement, and Management in Low Cost Housing.

The course will begin with an historical survey which includes Versailles, Washington and the Tennessee Valley and proceeds to a consideration of fundamentals in housing: population; land values, government, transportation, including port areas, business, residential and recreation districts; building heights and densities; replanning of old cities; esthetic problems and civic art; and finally, physical planning as the key to social planning. Fifteen lectures will be given.

The second half of the course, consisting of ten lectures, will be devoted to specific operations such as rent collecting, accounting and figuring profits,

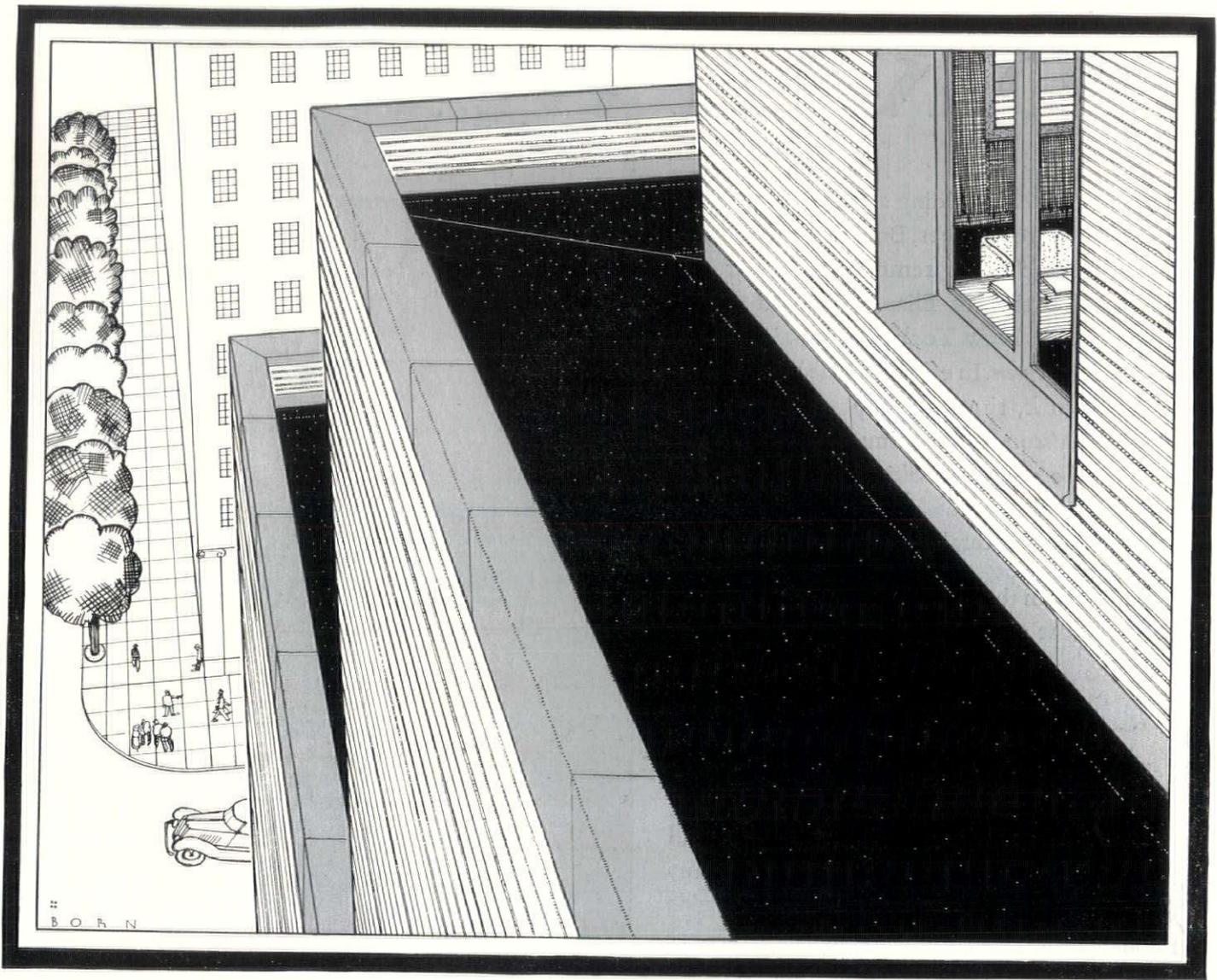
the repair problem, the management of co-operatives and the interchanging of experiences in housing settlements.

• New York University, School of Architecture, announces a course on Community Planning designed to meet the needs of architects, engineers and others concerned with problems of city and regional planning and the method of developing planning schemes consistent with modern community needs. Consideration will be given to climatic and geographical influences, distribution of population, potential natural and other resources, the national trend in the distribution of urban centers in their relation to regional factors, as well as, the relation of the national program of public works to future development of regional and urban planning. The economic resources available will be considered from the point of view of taxation, budgets and legislation. The course will afford students opportunities for becoming familiar with methods of research; techniques involved in the preparation of plans, legislation reports, etc., under the direction of Dr. Carol Aronovici, assisted by well known practical city planners in the United States. An exhibition of plans prepared for various cities and regions in this country and Europe will be on display. The course will open on September 24th.

• The Housing Division of PWA announces allotments totaling \$283,000,000. Recent changes authorized by the Administrator in the financial terms for construction of low-rent housing increase the total grant to each project from 30 to 45 per cent; set the amortization period at 60 years; and call for a three per cent interest rate. There is to be no amortization of land and only a 3 per cent interest rate on 55 per cent of the land cost. Other capital charges have been adjusted in the interest of lowered rents. Options have been accepted on a voluntary basis for a twenty-four acre site to house Cincinnati's \$7,000,000 low-rent housing project. Preliminary plans provide 1,278 living units in three and four-story apartment buildings. The city of Cincinnati has appropriated \$1,000,000 for extensive park and playground space in connection with this project. Architectural work is being handled by a group of Cincinnati architects under the chairmanship of Frederick W. Garber.

• A continuous exhibition of Current Architecture in the galleries of the Architects' Samples Corporation, 101 Park Avenue, New York City, was opened to the public on September 3rd. The exhibit is sponsored by the Bureau of Architectural Relations, under the direction of R. W. Sexton and will be completely changed every two weeks. Sketches of proposed buildings, those under construction and photographs and plans of buildings recently completed in the metropolitan area are being shown.

• The Illinois Society of Architects announce the removal of their offices, as of August 1st, to Room 2104—134 North LaSalle Street, Chicago.



T H E C O P I N G . . .

The inherent characteristics of Alcoa Aluminum point the way to eliminate maintenance on copings. The metal itself defies the corrosive attack of the atmosphere and its burden of smoke and fume. The manner of construction forever eliminates the cost of pointing ★ Requirements of individual design may be attained either in castings or extruded shapes that are light in weight ★ The amazing versatility of this metal gives the designer full scope at a cost that is entirely comparable with that of the more traditional materials. Aluminum Company of America, 1895 Gulf Building, Pittsburgh, Pennsylvania.

A L C O A A L U M I N U M



REG. U. S. PAT. OFF.

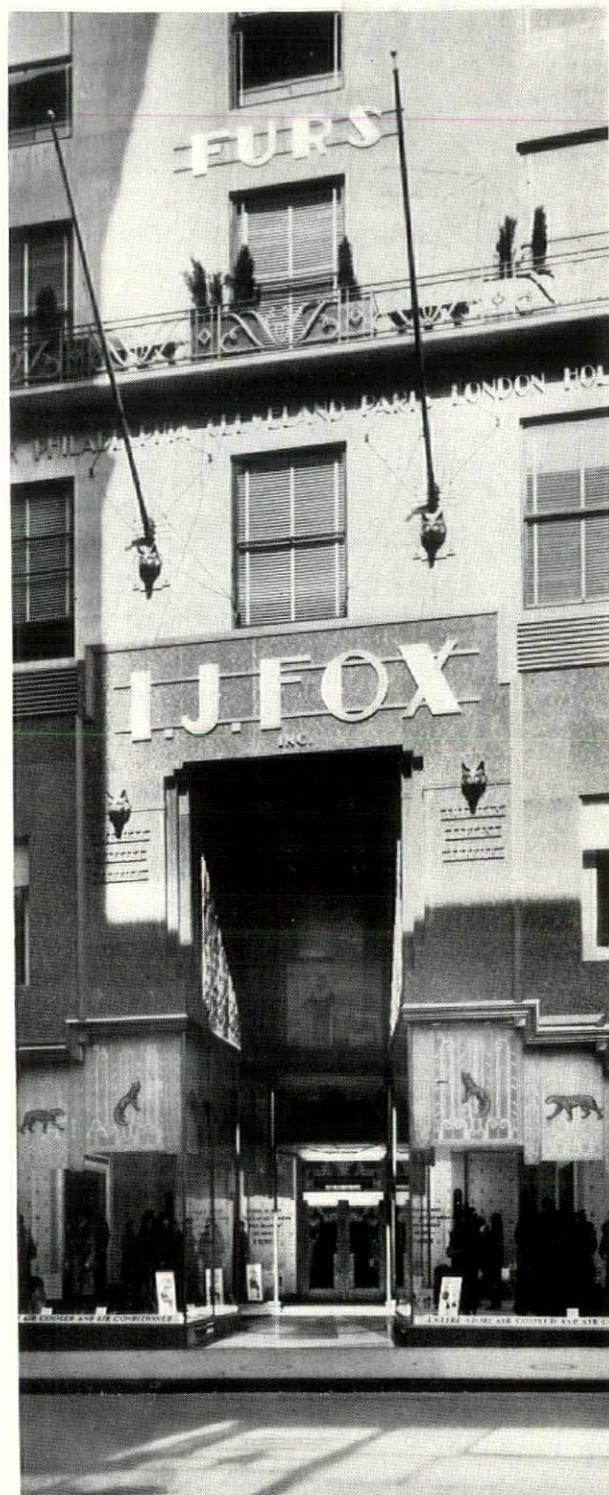
BRONZE

THIS building at 407-411 Washington Street, Boston, was recently completely remodeled under the direction of Elias Rothschild & Co., Inc., New York City, *Designers and Engineers*. In executing the bronze metal work, the W. T. Ryan Iron Works, Boston, effected important savings in die costs by making extensive use of *stock* extruded shapes in Anaconda Architectural Bronze.

From the standpoints of lower original cost and of metal work that is always up to date, Anaconda Extruded Bronze in standard shapes offers almost endless possibilities for the faithful execution of even the most original designs. Thousands of extruded shapes may be had in Architectural Bronze and Nickel Silver, while Copper and various Copper alloys are available in a wide range of standard *drawn* shapes. These various metals offer interesting possibilities wherever contrast or close color harmony is desired.

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ANACONDA EXTRUDED SHAPES

NEW CATALOGS . . .

Readers of AMERICAN ARCHITECT may secure without cost any or all of the manufacturers' catalogs described on this and the following page by mailing the prepaid post card printed below after writing the numbers of the catalogs wanted. Distribution of catalogs to draftsmen and students is optional with the manufacturers

SPEAKMAN SHOWERS AND FIXTURES

742. . . . Speakman Company, Wilmington, Delaware, has issued catalog K-1 which illustrates and describes in detail various types of Speakman showers and fixtures especially adapted for use in schools, institutions, industrial plants and similar installations. The booklet contains specifications and many blueprint drawings showing plan and sectional views with measurements, together with data on shower piping, flush valve and valve construction, and tables showing rate of water discharge of shower heads and other fixtures.

J-M ASPHALT TILE FLOORING

743. . . . Colorful combinations of asphalt tile flooring in modern rooms and buildings are shown in a new portfolio published by Johns-Manville, New York. It contains ten color sheets, each showing from two to six samples of J-M Asphalt Tile Flooring in actual color. As insets in each of the color sheets are pictures of typical uses of this flooring. The portfolio also contains a 6-page brochure showing a score or so of existing installations of both J-M Asphalt Tile and J-M Heavy Duty Asphalt Tile Flooring in various types of projects.

CARRIER HEAT DIFFUSING UNITS

744. . . . Carrier Engineering Corporation, Newark, N. J., has issued an illustrated 24-page filing-sized catalog pertaining to its Heat Diffusing Units for industrial applications. All essential data are given, including construction details, dimensions, tables of basic ratings and Btu constants, pipe sizes, recommended piping connections, erection instructions, typical specifications and miscellaneous charts and diagrams.

FOLDER-WAY PARTITIONS

745. . . . The complete line of electrically operated, crank operated and manually operated FoldeR-Way Partitions manufactured by Richards-Wilcox Mfg. Co., Aurora, Ill., is presented in Catalog A-63, an illustrated 56-page manual. Specifications and standard details are given for each type. The last several pages of the book are devoted to school wardrobes and contain specifications and details of several types. Filing size; A. I. A. File 19-E-61.

GYPSTEEL PLANK

746. . . . Factual information about Gypsteel Plank and its uses is contained in a 24-page catalog recently issued by Structural Gypsum Division, American Cyanamid & Chemical Corp., New York. This booklet is conveniently thumb-indexed and tells how this product is made and used, describes the various types and the advantages of each, and gives specifications and details. A section is devoted to other types of structural floor, roof and ceiling slabs manufactured by this company. Filing size; A. I. A. File 10.

HILL COLD STORAGE DOORS

747. . . . The new 24-page refrigerator door catalog published by C. V. Hill & Co., Inc., Trenton, N. J., describes its line of standard pine front doors, oak front doors, freezer doors, dutch doors, porcelain doors, windows and frames, doors with windows, reach-in doors and complete refrigerator fronts, all in a wide range of sizes. The booklet also includes detailed specifications, tables of sizes, blueprints, and installation instructions. Filing size; A. I. A. File 32-C-1.

FORMICA TABLE TOPS AND COUNTERS

748. . . . An eight-page broadside issued by Formica Insulation Co., Cincinnati, Ohio, illustrates a number of hotel restaurants, bars and other public places which have used Formica table tops and counters, and describes the inherent qualities of this material.

IRON FIREMAN AUTOMATIC COAL BURNER

Iron Fireman Mfg. Company, Cleveland, offers two new catalogs:

749. . . . Catalog H38. Illustrates and describes various types of Iron Fireman automatic coal burners for commercial heating plants. Filing size; 16 pages.

750. . . . Catalog A38. Pertains to Iron Fireman automatic coal burners for residential applications. Discusses the advantages of this type of firing, and illustrates and describes several models. Filing size; 16 pages.

WELDED PIPING

751. . . . A new 24-page booklet, "The Facts About Welded Piping" has been published by Air Reduction Sales Company, New York. In its pages the features and advantages of the Airco-welding process for piping installations are described and profusely illustrated with scenes of typical heating and power piping installations. Specifications for the welding of various types of pipe are also included.

ART METAL KITCHENS

752. . . . Illustrated with pictures of typical kitchens using Art Metal kitchen equipment, the new 20-page catalog issued by the Art Metal Construction Company, Jamestown, N. Y., gives helpful suggestions for planning the modern kitchen and describes the features of Art Metal equipment. Standard sizes of cabinets and specification data are included.

NO POSTAGE REQUIRED ON THIS CARD

AMERICAN ARCHITECT, New York

September, 1935

Please have the following catalogs reviewed in this issue sent to me.
Numbers

• I also desire further information about the new products described in this month's "New Materials and Equipment." . . . (See pages immediately following this insert.)
Numbers

• I would like to have catalogs and information concerning the following products advertised in this issue. (Write page number or name.)
.....

Check here for FREE sample copy of "WHEN YOU BUILD" booklet. See page 110.

Name

Firm name

Address

City

Occupation

These NEW Catalogs may be obtained through AMERICAN ARCHITECT

SONNEBORN PRODUCTS

753. . . . A group of folders are available from L. Sonneborn Sons, Inc., New York, which give essential data on various Sonneborn products, including a cement filler and dustproofer, Hydrocide colorless waterproofing, mineral colors, Cemcoat stucco, brick and cement coating, and other products.

INCOR 24-HOUR CEMENT

754. . . . A simple, non-technical discussion of good concrete fundamentals is presented in a 12-page brochure issued by International Cement Corp., New York. Suggestions for proportioning, mixing, placing and curing, and helpful hints on forms and form-making are given in this interesting discussion.

FANS, BLOWERS, COOLING UNITS

755. . . . "Buffalo" fans, blowers and cooling units for air conditioning are illustrated and described in a new 24-page booklet (Bulletin No. 2968) issued by Buffalo Forge Company, Buffalo, N. Y. Application data, ratings, dimensions, specifications and other pertinent data are included. Filing size; A. I. A. File 30-D-1.

THE TRU-TONE CARPET BOOK

756. . . . The story of Broadloom Carpet—where, when and how to use it, and how to buy it—is interestingly told in a handsome consumer book published by Alexander Smith & Sons Carpet Co., New York. The range of colors in which Tru-Tone Carpets are available is shown in full color, and scattered throughout the book are illustrations of various rooms, also in full color, suggesting the decorative adaptability of these carpets.

YORK REFRIGERATING EQUIPMENT

757. . . . A set of six bulletins on York air conditioning and refrigerating equipment has been issued by York Ice Machinery Corp., York, Pa. Two types of equipment are described: (1) 10, 15, 20

and 25 horsepower freon condensing units for commercial refrigeration and air conditioning; (2) horizontal type air conditioners for year 'round air conditioning of restaurants, hotels, retail stores, office buildings, etc.

GAMEWELL DUALARM SYSTEM

758. . . . The Gamewell Company, Newton, Mass., has issued a four-page catalog which describes the advantages and features of the Dualarm—a fire alarm system especially designed for schools and other buildings having a large number of inmates or occupants. Complete specifications are included. Filing size; A. I. A. File 31-i-31.

MINWAX BRICK AND CEMENT COATING

759. . . . A small folder has been issued by Minwax Company, Inc., New York, which briefly gives the essential facts about Minwax Brick and Cement coating for waterproofing and decorating brick, concrete or stucco. Color swatches show the ten standard colors and a few of the more popular inter-mixtures.

GYPSUM BOARD

760. . . . A well illustrated 12-page catalog has been issued by Gypsum Association, Chicago, which gives authoritative information on the qualities of gypsum board and lath. The booklet discusses the fire-resistance of gypsum, its use in buildings at the Century of Progress Exposition, its behavior in actual fire, and method of application and decoration. A section of the catalog is devoted to the new type of gypsum insulating board, using aluminum foil.

MOTORS FOR CENTRIFUGALS

761. . . . The Louis Allis Co., Milwaukee, Wis., has recently published a bulletin (No. 601) dealing with the special characteristics of electric motors for centrifugals and containing other important information.

ACCESSORIES COMPANY PRODUCTS

Three new catalogs have been issued by The Accessories Co., Inc., New York:

762. . . . A four-page folder illustrating and describing Grip-Seal, the new bath hanger that grips the rim of the tub, locks it in place, and distributes evenly the weight between floor and walls. Filing size; A. I. A. File 29-i.

763. . . . An eight-page broadside illustrating and describing the Arcode combination bath and shower unit.

764. . . . The Arcode 7-in-1 Lavatory Unit is described in an eight-page broadside. This unit consists of medicine cabinet, shaving light, towel hamper, towel bar, utility shelf, supply cabinet and vitreous china lavatory. Filing size; A. I. A. File 29-i.

REYNOLDS METALLATION

Two booklets have been issued by Reynolds Metals Co., Inc., New York:

765. . . . A 12-page reprint containing AMERICAN ARCHITECT Reference Data No. 11 (May 1934) "Thermal Insulation of Buildings" and the four-page advertisement giving facts about Reynolds Metallation which appeared in the same issue. Filing size; A. I. A. File 37.

766. . . . Descriptive and application data on Reynolds Metallation, a bright metal insulation; Reynolds Ecod Fabric, an insulating plaster and stucco base, and Reynolds wall coverings are contained in a twelve-page filing-sized catalog.

GREENHOUSES

767. . . . "Greenhouses Attain Architectural Style," an article published recently in *House & Garden*, has been reprinted in booklet form by Lord & Burnham Co., Irvington, N. Y. It tells the story of the adaptability of the modern greenhouse to any architectural style.

SISALKRAFT BUILDING PAPER

768. . . . The Sisalkraft Company, Chicago, has issued a new filing-sized catalog which discusses the advantages and uses of Sisalkraft Building Paper. It tells how this material is used in wall construction, in floors and roofs, for curing and protecting concrete, for temporary protection, and for a variety of other purposes. Actual samples of Sisalkraft accompany each catalog.

MOHAWK CARPETS AND RUGS

769. . . . While primarily designed for the consumer, the new 32-page booklet, "33 New Ideas for Charming Homes," issued by Mohawk Carpet Mills, Inc., New York, has much of interest to the architect. It offers suggestions for formal and informal arrangements in various period styles, and is illustrated with typical examples, some in full color. Suggestions for the care of rugs or carpets are also included.

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AMERICAN ARCHITECT

New Materials and Equipment

Crossley Air Circulators

498M Three types of portable air circulating units have been introduced by the Crossley Air Conditioning Corp., Cleveland. The Models A and B (for wall or table) tend to revitalize the air and purify it by means of ionization, dissipating cooking odors, tobacco smoke and other objectionable indoor odors. Model C, floor type, circulates 900 cubic feet of air per minute, filters the air by means of a steel wool filter, and has the Corozone Ionizer embodied in it for purifying, revitalizing and deodorizing the air. The cooling effect of this model depends upon definite air circulation, but can be equipped with expansion or cooling coils for cooling and dehumidifying. No plumbing connections are necessary unless cooling coils are employed; the units are plugged into any AC light socket.



Crossley Air Circulators: left, Model B for desk or table; right, Model C, floor type; lower right, Model A for wall or table

Electric Clock Systems

499M A new line of electric time clock systems for schools, hospitals, banks and public buildings has been introduced by the Holtzer-Cabot Electric Company, Boston, Mass. A simplified method of automatic hourly correction of all clocks on a system, which eliminates the necessity of wearing contacts in secondary clocks, features this new line.

tion with dishwasher-sink ensembles. It grinds and pulpifies all waste foods, which are flushed by water and carried away as part of the sewage stream. The unit is simple to operate. Directly beneath the sink is a projecting handle by which the hopper of the grinder is closed and the motor started. When not in use the hopper inlet is covered by a perforated cap, leaving the sink bottom flush and in condition for use. The unit weighs about 75 lbs., is driven by a 1/4 h.p. motor, and may be connected to the ordinary 110-volt house circuit.

Esswood Flexible Veneer

501M Driver-Harris Company, Harrison, N. J. has introduced Esswood, a flexible natural wood veneer which is applied to walls, metal or other surfaces like wall-paper. It is not mounted on paper or fabric. It is claimed for this new veneer that it will not warp, blister or turn up at the corners; that it will not crack or splinter; and that it is unaffected by the expansion or contraction of metal due to temperature changes. Graded logs used in the production of Esswood are sliced into veneers 1/80" to 1/100" thick, and then chemically treated. Esswood is obtainable in lengths 8, 10 and 12 feet, and in widths 8 to 14 inches depending upon the size of the log from which the veneers are cut. Standardized veneers include: mahogany, oak, walnut, oriental wood, lacewood, prima vera, avodire, tigerwood and zebra-wood.



Waste Food Grinder

500M A new electrical device which grinds waste foods and thereby eliminates the garbage can has been announced by the specialty appliance department of General Electric Company, Nela Park, Cleveland. The device is installed beneath the kitchen sink and can be attached to existing sinks or obtained in conjunc-



Vibration Isolation Platforms

502M A means of eliminating or reducing rumblings and other noises induced by vibrating machinery has been devised by Johns-Manville, New York through the use of vibration isolation platforms. The platforms are made of two or more tiers of stringers, placed at right angles, and supported and separated from each other by vibration-absorbing "chairs." These "chairs" are U-shaped pieces of metal and felt which fit the stringers. A platform top is secured to the upper tier of stringers and the machine fastened to it. A loose rock wool fill occupies the space between the floor and the top of the platform and is held in place by an apron or skirting. The presence of heavy felt in the "chairs" lends the necessary resiliency to the vibration isolation platforms.

Three-Light Mazda Bulb

503M The Westinghouse Lamp Company, Bloomfield, N. J., announces a new bulb that gives 50, 100 or 150 watts of illumination with the table models of certified portable lamps. Using this new three-light mazda bulb, decorative portables may also serve as a source of reading light at the turn of a switch. Constructed with a PS-25 bulb of inside-frosted

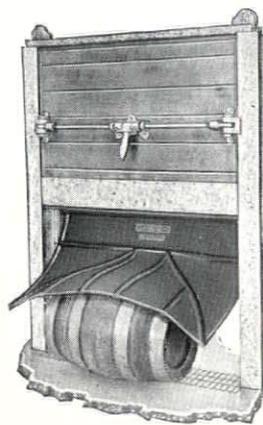
glass, the new lamp has a mogul screw base which is necessary to provide three-way lighting. Maximum overall length is 6 13/16 inches; light center length is 5 inches. It is available in 110, 115 or 120 volts and produces 525, 1420 and 1950 lumens at the three respective wattages.



Air Conditioning Low-Sides

504M A new line of Lipman air conditioning "low-sides" for use in central system installations has been introduced by General Refrigeration Sales Co., Beloit, Wis. Each low-side consists of an evaporator, a thermostatic expansion valve, liquid line sight glass, liquid line filter and a heat interchanger. The expansion valve and the sight glass are already connected to the evaporator. The filter and heat interchanger are included as separate items. An important feature is the heat interchanger. This device in connection with an air conditioning evaporator, it is claimed, increases the capacity of the refrigerating system when freon is used as the refrigerant. These low-sides are arranged for freon only and are made in three sizes to balance the 5 h.p., the 7½ h.p. and the 10 h.p. freon machines.

Keg-Passing Door



505M

A vertical sliding keg-passing door for breweries and other plants where kegs are passed has been introduced by the Jamison Cold Storage

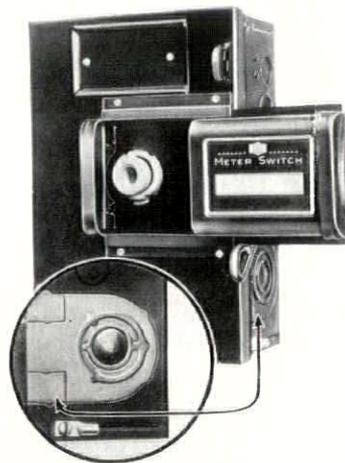
Door Company, Hagerstown, Md. The door has an all-steel frame which, it is claimed, eliminates warping from dampness and consequent sticking of door; a lightweight flexible composition curtain forming the vestibule which does away with damage to kegs and door caused by shock and abrasion; and a new design concentric fastener actuated by a simple operat-

ing lever which, when raised, releases the clamp and allows the insulated vertical sliding door to be raised and lowered at will.



Illumination Analyzer

506M A self-contained illumination analyzer that measures electrical input and lighting output is announced by Westinghouse Electric & Mfg. Company, East Pittsburgh, Pa. It consists of a light meter and combination voltmeter-ammeter with suitable cable extensions, switches and plugs in a compact case. With this device the watts input to the lighting circuit can be measured by taking a reading of current and voltage. The light output can be measured with the Photox cell foot-candle meter supplied with the unit. The instrument is particularly suited to analyzing volt and current consumed in addition to foot-candle intensities and light distribution. The indicating instruments are equipped with knife-edged pointers and fine line scale divisions.



Meter Entrance Switches

507M New design features have been incorporated in the meter service switches manufactured by Cutler-Hammer, Inc., Milwaukee, Wis. All switches are now provided

with a "twist-out" for wiring trough. This twist-out has two small rectangular pieces on the outer edge, which can be removed by a twist of the pliers, after which the entire twist-out is removed. A change has been made in the cover which encloses the branch circuit fuses. The entire fuse cover is smaller and slides back, making the fuses more readily accessible and giving a neater appearance. The enclosing case is also slightly smaller.

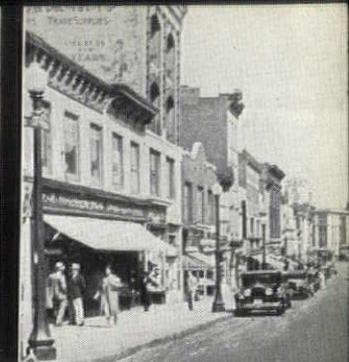


Folding Chairs and Stools

508M A new line of folding chairs and stools for restaurants, barrooms, soda fountains, and commercial establishments, has been introduced by Waukegan Foundry Co., North Chicago, Ill. The bar and counter units are fastened stationary to the floor and fold within 4" overhang of counter top. Table chairs or stools fold under the table so that they do not project outside of the edge of the table top. The booth types fold against back wall or partition. This equipment can be had in either aluminum or steel and cast metal construction. Stools can be furnished with polished metal, upholstered or wood seats.

Poretherm Cellular Concrete

509M A new light-weight cellular concrete, called Poretherm, having high heat and sound insulating qualities, has been introduced by Porete Mfg. Company, North Arlington, N. J. It is made of Portland cement with or without an addition of mineralized wood fiber and is permeated uniformly with millions of small separate air bubbles. It can be made in precast shapes, in the form of slabs and blocks of various sizes, but its principal use is for pouring in the field. It is said to be permanent, fireproof and uncompressible under ordinary loads, and is made in two weights, 19 lbs. and 32 lbs. per cu. ft.



THIS REPRESENTATIVE JURY

MELVIN T. COPELAND, Professor of Marketing, Harvard University, Cambridge, Mass.

J. ANDRE FOUILHOX, A.I.A., of Hood and Fouilhoux, Architects, New York, N. Y.

ALBERT KAHN, F.A.I.A., Architect, Detroit, Michigan.

WILLIAM LESCAZE, A.I.A., Architect, New York, N. Y.

JOHN W. ROOT, A.I.A., of Holabird and Root, Architects, Chicago, Ill.

F. R. WALKER, A.I.A., of Walker and Weeks, Architects, Cleveland, Ohio.

KENNETH C. WELCH, A.I.A., Expert in Store Planning and Equipment, Grand Rapids, Michigan.

is judging the **HUNDREDS OF DESIGNS** submitted in the
MODERNIZE MAIN STREET

Competition

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and conducted by The Architectural Record, with Kenneth K. Stowell, A. I. A., as professional adviser.

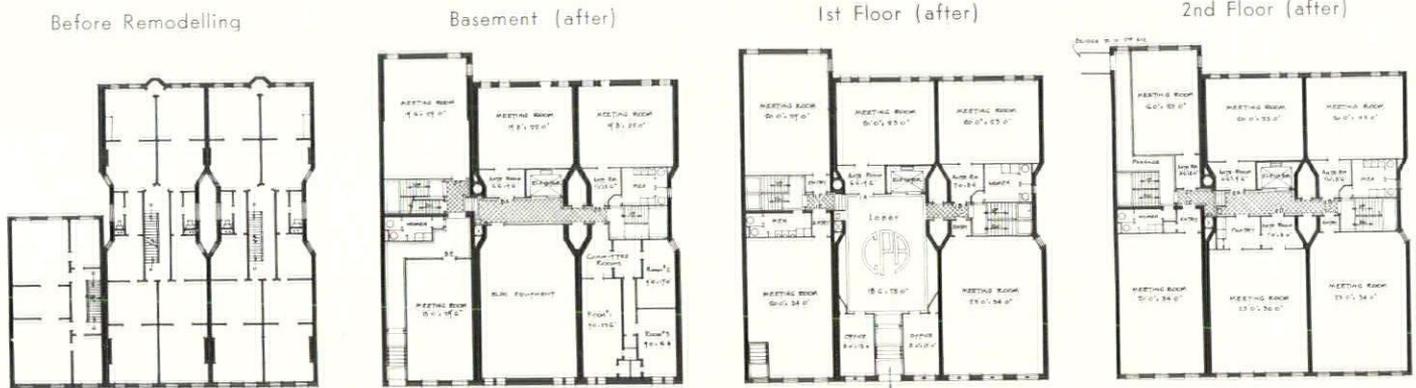
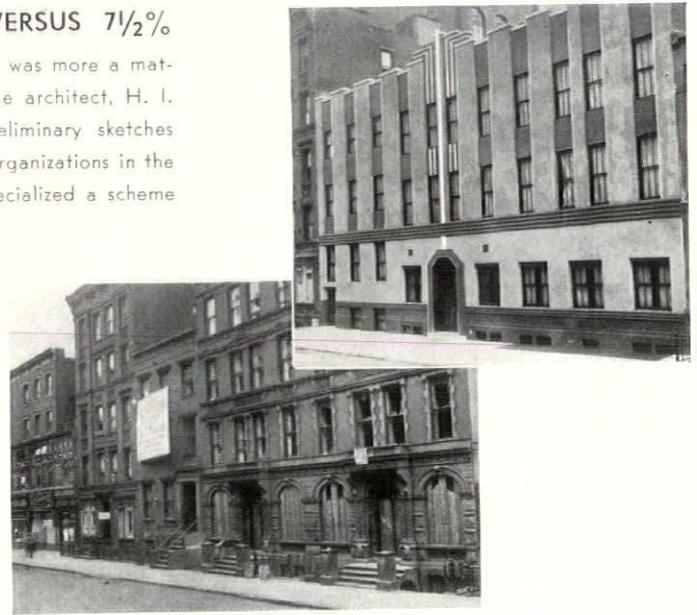
● We take this opportunity to thank the entire architectural profession for the helpful interest that has been shown in this competition as evidenced by the many drawings submitted, and to extend our appreciation to all competitors for the thought and effort they have expended in

what we sincerely believe is a worthwhile and constructive endeavor to visualize for the retail merchant the possibilities and advantages of intelligent modernization. The October issue of this magazine will announce the competition awards. Libbey-Owens-Ford Glass Company, Toledo.



PERSUADING THE MORTGAGEE . . . 63% RETURN VERSUS 7½%

Conversion of three New York tenement houses, illustration bottom right, was more a matter of deciding a business policy than one of architectural planning. The architect, H. I. Feldman, submitted to the Central Savings Bank, the mortgagee, preliminary sketches of a plan to convert the building into meeting rooms for use of various organizations in the neighborhood. The plan was rejected on the ground that it was too specialized a scheme for a conservative mortgagee. The bank insisted on converting the building into apartments. The architect then submitted a scheme for an apartment building which, according to the best estimates obtainable would have netted only 7½% return on an \$80,000 expenditure. Mr. Feldman held out for the meeting room plan and as a result his client obtained a 63% return on a \$55,000 investment. Although this alteration was completed on May 1, 1935, over two hundred organizations have signed leases and many inquiries indicate that by late Fall the building will be leased to capacity. Applications for afternoon use are being received, a source of income not contemplated in the original financial set-up. The building as completed is shown at the top



Trends and Topics of the Times *(Continued from page 76)*

often difficult to instruct men who have been set in their ways for some time." Many new synthetic materials require careful and appropriate backings or bases if they are to endure. A celebrated modern house in Cambridge, England comes to mind. Although not yet six years old, its decorations, wall surfacings and fixtures, all of which were innovations that brought fame to the architect, have deteriorated to a degree necessitating complete renewal. This misfortune could have been avoided by the use of proper methods when applying the materials in the first place.

- A recent cost analysis, issued by the HOLC, for remodelling the average American home shows that: 40.92 per cent goes for painting and papering; 22.11 for roofing; 15.36 for carpentry work; 4.91 for masonry; 4.51 for heating; 4.12 for plumbing; 2.86 goes for plastering and 2.22 per cent for sheet metal work. It is estimated that the remodelling work has engaged more than 125,000 and has provided about 8,000,000 "working days." Approximately 75 per cent for each dollar spent for reconditioning goes for labor.

- The Department of Justice has filed condemna-

tion proceedings against a 36 acre tract of land at Indianapolis for a \$6,000,000 housing project, despite the recent court decision against federal condemnation of property for such purposes.

- Designed for "an age of simplification," the \$4,000 house which won first prize in the recent competition, New York Chapter, A. I. A. is being studied by architects, builders, and material and equipment manufacturers as an example of low-cost, economical planning adapted to all parts of the country and the financial capacity of a majority of the population. Criticism of this type of house has arisen due to the absence of cellar and attic. "The cellar was mostly necessary for heating apparatus and fuel storage," says, J. Andre Fouilhoux, the architect, in defense of his plan, "With new heating apparatus and gas or liquid fuel it appears that the additional cost of a cellar for the sake of tradition, is hardly justified. The attic was used for storage which a family of small means would have very little chance of using." It appears that in their present development prefabricated houses do not offer any economy in construction, Mr. Fouilhoux adds. "This situation is probably due to several factors: wrong approach to the problem in many

REPAINTED ONLY ONCE IN 14 YEARS

Eagle Sublimed Blue Lead sets remarkable record as rust-inhibitive paint on Pittsburgh's Bloomfield Bridge (Allegheny County, Pa.)

● The Bloomfield Bridge, built in 1913. Steel given priming coat of Eagle Sublimed Blue Lead at the mill, and two more coats after structure was completed. This long-wearing paint gave good service for 14 years! On the basis of this remarkable performance, Eagle Sublimed Blue Lead is now extensively used by the Department of Highway Bridges and Tunnels on the steel maintenance of 350 bridges in Allegheny County.

A More Enduring Rust-Inhibitive Paint

Here's why more and more engineers every year are recommending Eagle Sublimed Blue Lead as the most efficient rust-inhibitive paint for all metal surfaces:

1 Being pure lead, it is more enduring—gripping metal surfaces tenaciously. Does not chip or peel.

2 Being of extremely fine particles, it stays in suspension. Doesn't harden in container or clog the spraying nozzle. Equally satisfactory for brushing, spraying or dipping.

3 Chemically stops corrosion because of great basicity.

4 Brushes easily, flowing out like enamel. Painters like it.

5 Offers greatest economy. Lower in first cost than other high grade metal paints. Greater coverage—600 to 800 square feet per gallon. Saves 40 to 50% in material cost. Long lasting.

● You can buy Sublimed Blue Lead in paste form (pure lead ground in pure linseed oil) under the Eagle label—or in ready mixed form from reputable manufacturers. Send for descriptive booklet and free sample.

EAGLE RED LEAD

Rapid-drying qualities make it ideal for rush jobs.

MAIL COUPON FOR FREE SAMPLE

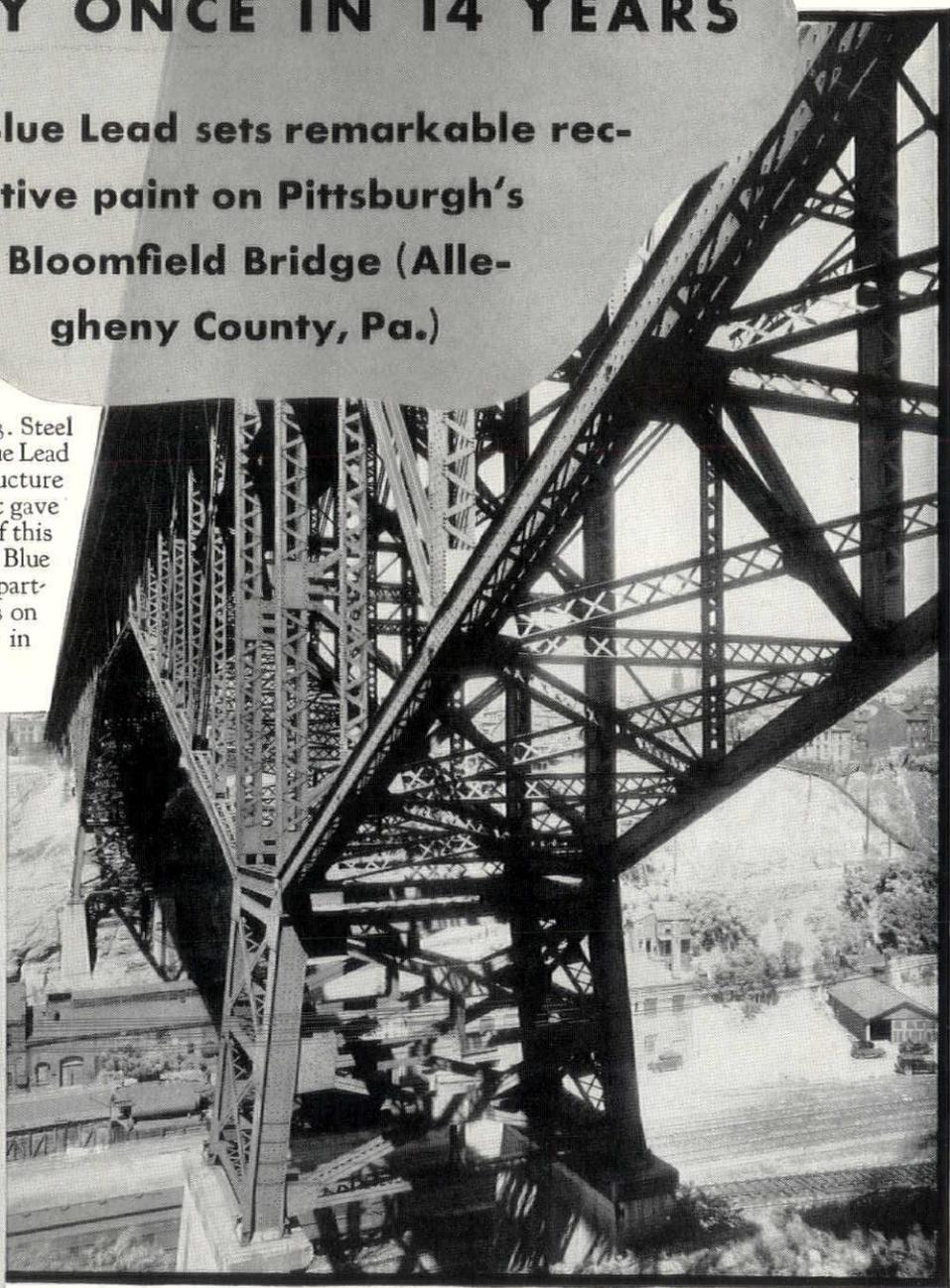
The Eagle-Picher Lead Company, Dept. AA9 Cincinnati, O.

Please send me free sample of Sublimed Blue Lead—also descriptive booklet on this more efficient rust-inhibitive paint.

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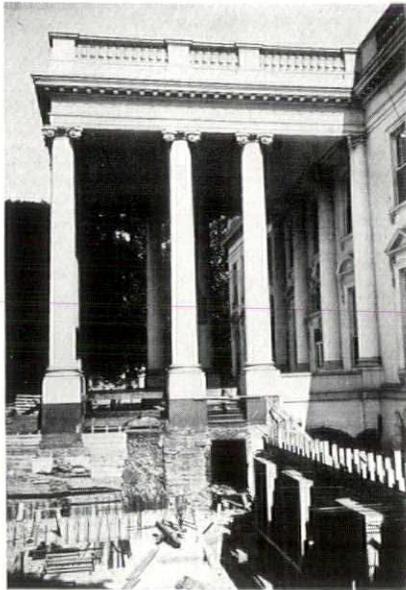
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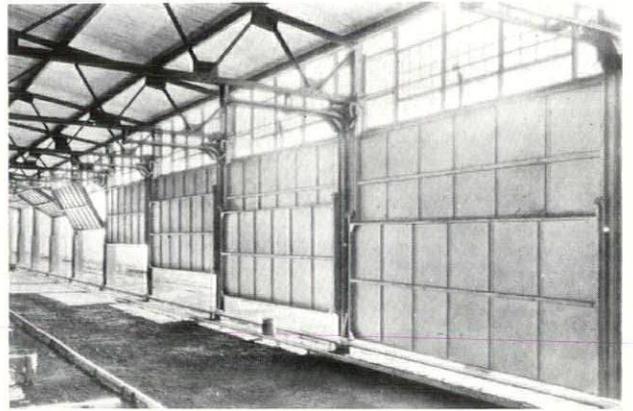
EAGLE *Sublimed* BLUE LEAD

BASIC SULPHATE OF LEAD, BLUE



HARRIS & EWING

Kinnear doors for "Normandie" dock, New York, three-quarters of a mile long, balanced for one-man operation.



Left: New steward's quarters, wine cellar, silver vault, wood shop at White House

Further information may be had by addressing the Chicago Wallpaper Association, Chicago, Illinois.

cases and insufficient demand at the present time to justify quantity production which in turn would lower cost. The fundamental factors in economy are the same whether we are dealing with prefabricated units or old methods of construction."

- Buffalo Small House Bureau, operated under the auspices of the Buffalo Chapter, A. I. A., has issued a Circular of Information regarding the plan of operation and scope of architectural service offered by the Bureau. The Circular is a thoughtfully prepared comprehensive analysis of the perplexing problems encountered by the small home builder who wants architectural service, and of the architect who would like to render such a service at a small margin of profit. Architects and architectural organizations interested in this plan of operation may obtain copies of the Circular by writing the Buffalo Small House Service Bureau, 1 Niagara Square, Buffalo, N. Y.
- An electrically controlled steam water heater, utilizing a new system of heat transfer and method of control has been developed by the engineering laboratory of General Electric Company. The operation of the device is unique, state its sponsors, in that no steam-regulating valve is necessary. The heat from the steam is released to the water by means of an hermetically sealed heat-transfer system which uses water vapor as the heat-carrying medium, thus the release of heat from the steam rather than the steam flow itself is regulated.
- A recent address before the Illinois Society of Architects, by Harry Freund, brings to light an interesting new acoustic wallpaper treatment. It consists of corrugated or honeycombed paper board from 5/16ths to 1 1/4 inches in thickness. This board comes in sheets 24 by 32 inches and is treated chemically to be fire-resistant. Any design wallpaper may be selected and before it is applied to the board, the paper is run through a perforating machine to make effective the honeycomb below for acoustic purposes.
- Metals and other materials, styled in the modern manner for both technical and consumer products, will be featured in a joint exhibition by a group of world-famous industrial designers opening in the International Building, Rockefeller Center, New York City, on September 16th. The exhibit will consist of electroplates of a wide variety of metals; colored and chemical finishes for aluminum, silver and gold; lacquers and lacquer enamels, showing each step in the metal finish process. There will also be an exhibition of "Modern Plastics" in a variety of moulded and cast synthetics as supplied by leading manufacturers.
- In a thirteen story apartment house in Chicago, containing 22 suites, built 23 years ago modernization was undertaken at a cost of \$100,000. Upon completion the occupancy was increased by 22 and the rental rate advanced by 25 per cent. The architect obviously proved his worth.
- The resignation of James A. Moffett, Federal Housing Administrator, has been announced by President Roosevelt. In his letter of resignation Mr. Moffett informed the President that, despite necessary delays in getting the Housing program under way, the FHA was now insuring construction and repair loans at the rate of \$60,000,000 a day and that while the Housing Administration had insured only \$126,000,000 of loans, \$700,000,000 or more of modernization and repair work had been done during the past year.
- The Libbey-Owens-Ford Glass Company, announce the establishment of a new department to be known as "New Uses in Design." The personnel of this department will specialize in creating and developing new uses for flat glass in its rapidly increasing field of application in the building industry. Kenneth C. May, who has had years of experience in the glass industry, and Harold M. Alexander, a Cornell graduate in architecture, are in charge of the department. They will co-operate with architects, interior decorators and others who are interested in glass design and its application in modern architecture. (Continued on page 114)



**THIS IS THE
ROUND-CORNER ERA**

**"... clean,
gleaming white"**

✦ Not so long ago, the editor of a leading women's magazine declared a new declaration of independence aimed at a long-suffered and unnecessary household evil—the square corner, that dirt-collecting, hard-to-clean spot in cupboards, stair cases, and at the baseboard. Much progress has been made in establishing the round corner principle. Today Crane Co. presents the housekeeper with round corners in another place where they are badly needed—the laundry tub.

The new Crane Porcelain (all clay) Laundry Tub, its glistening white, hard, glasslike surface impervious to strong alkalis, dyes, and acids, has well-rounded

corners, inside and out, which make it as easy to clean as a dinner plate. Its all-clay composition eliminates all danger of rust. One-piece construction, in both single and double styles, is a further aid in cleanliness. Supporting frame is angle iron, but porcelain or painted cast iron legs are also available. The supply fixture is a new Crane development, precisely made, durable, and located above tub rim to prevent back siphonage.

At a price only slightly higher than cement tubs, the new Crane Porcelain Laundry Tub brings cleanliness and fine appearance to the laundry far in excess of the slight additional cost.

CRANE PLUMBING AND HEATING MATERIALS

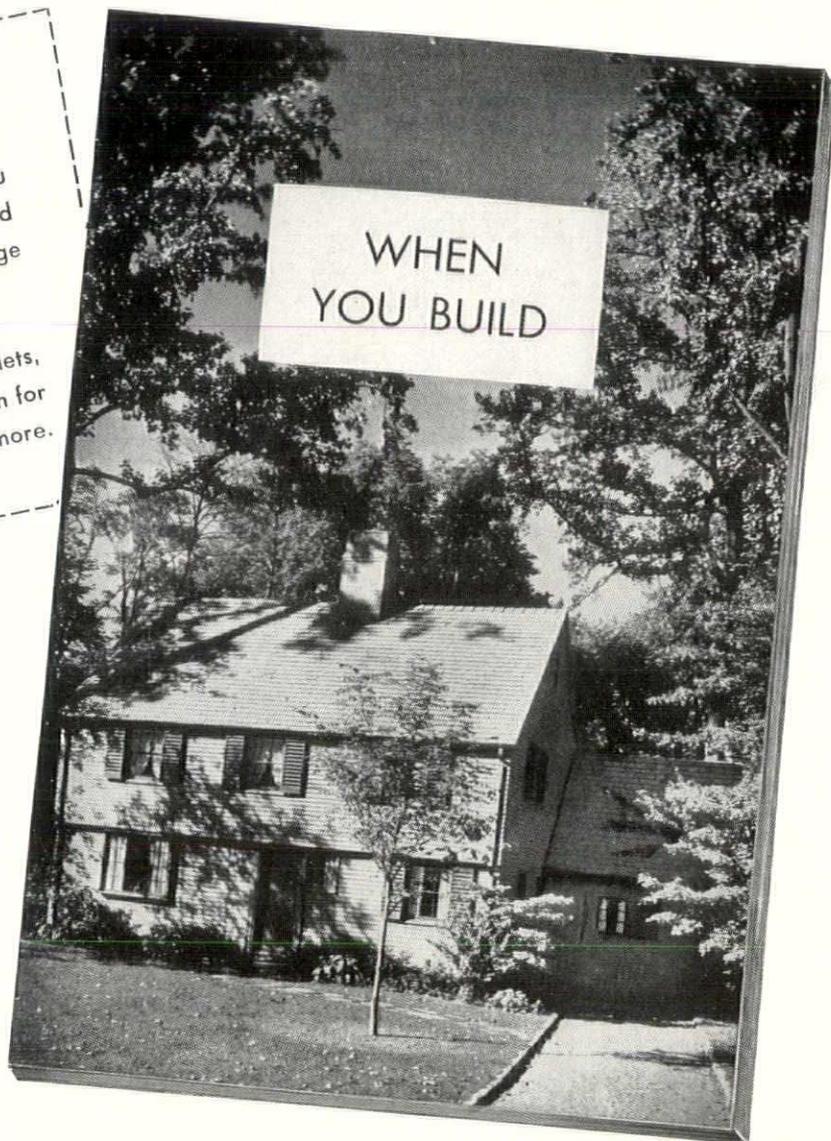
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Around this booklet AMERICAN ARCHITECT, working in conjunction with TOWN & COUNTRY and HOUSE BEAUTIFUL, has conducted one of the most effective publicity campaigns ever carried on to help architects.

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Over 35,000 of our "WHEN YOU BUILD" booklets have either been distributed direct to potential home builders, or placed in the hands of prospects by architects or local "Better Housing Campaigns."

To secure your FREE copy of this business-getting booklet, use the post card opposite page 100; or, if you have seen it, order a supply for your own use.

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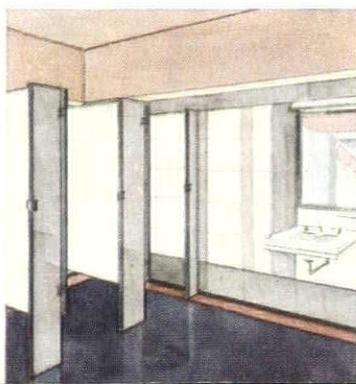
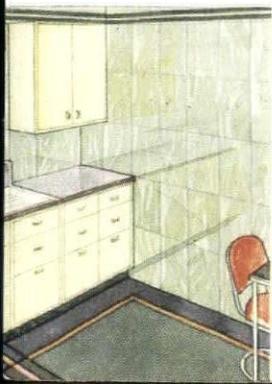
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BOOKS

(Continued from page 4)

illustrated. Dealt with are 22 individual kinds of soft woods, 33 hardwoods, and 26 different types of buildings, bridges, etc.

The manual makes no attempt to influence the choice of any kind of woods and as a ready-reference guide in the selection of recommended grade-use lumber it should be of unusual value to architects.

SUSPENSION BRIDGES OF SHORT SPAN

By F. H. Frankland. Published by the American Institute of Steel Construction, New York City. Cloth cover; illustrated; 128 pages; size 6 1/4 x 9 1/4.

A GROWING tendency toward collaborative effort on the part of architects and engineers in the design of bridges has quickened the esthetic value of these structures to such an extent that it seems reasonable to expect a further extension of such collaboration in the development of all bridge work.

For this reason, *Suspension Bridges of Short Span*, offers an intelligent solution to the many problems that might come up between architect and engineer. Here the basic theory of suspension bridge design is offered so that approximate design for any particular crossing may be readily prepared for the purpose of quick economic comparison with other possibly suitable types. The discussion is limited to main span bridges of approximately 700 or 800 feet.

The book is divided into eight parts: 1. Suitability—economics of layout, types and esthetics. 2. Design—dead and live loads. 3. Floor systems—stiffening girders and trusses—wind bracing. 4. Cable and suspenders. 5. Towers, saddles and bases. 6. Multiple-span suspension bridges. 7. Piers, abutments and anchorages. 8. Erection methods.

EARLY ARCHITECTS AND BUILDERS OF INDIANA

By Lee Burns. Published by the Indiana Historical Society, Indianapolis, Ind. Paper bound booklet; 212 pages; size 6 x 9 1/4; price \$0.50.

AS the name implies, this is a treatise reviewing the historical background and accomplishments of the early architects and builders in the state of Indiana, beginning with the first half of the Nineteenth Century and ending with the Civil War—a period which produced many noteworthy examples in every section of the country. Included are eleven small illustrations.

Those concerned with the history of early American architecture should find this modest booklet of interest.

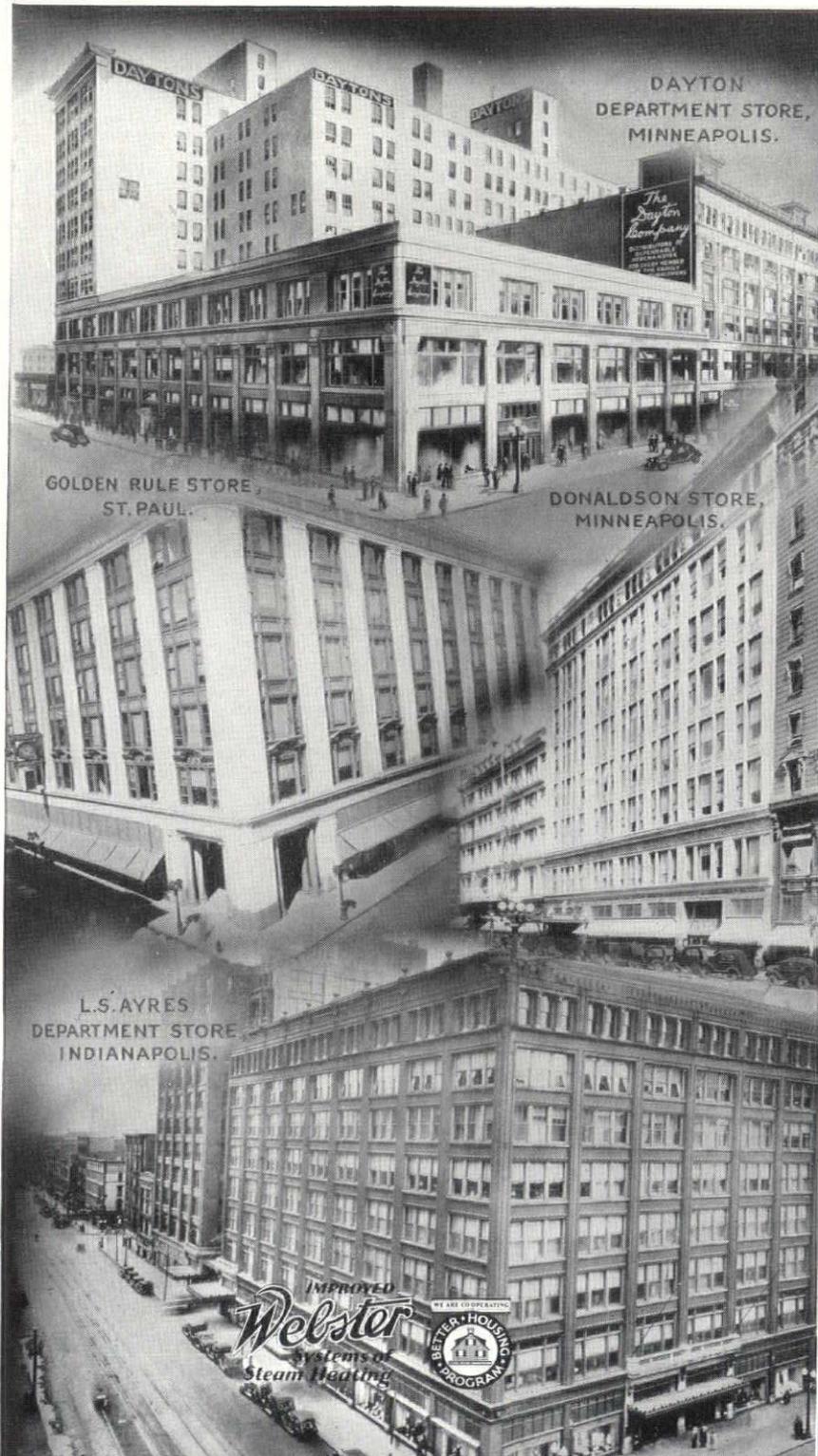
HOUSING PROBLEMS AND POSSIBILITIES IN THE UNITED STATES

By Frank Watson. Published by Harper & Bros., New York City. Paper cover; spiral binding; size 5 1/2 x 7; price \$1.25.

A GENERAL discussion of the housing problem in the United States and its relation to the Government's recovery program is comprehensively set forth in this booklet. Special attention is given the home mortgage situation; the respective

merits and shortcomings of the banks, the insurance companies, the building and loan associations, in this field. The text is supplemented with statistical tables and graphs which further clarify the major contentions of the author.

Why isn't the housing problem solved? What are the needs of American housing? How can the home mortgage problem be solved? How can real estate taxes be reduced? These are some of the urgent questions here included. Mr. Watson was counsel for the Reconstruction Finance Corporation. This work is the result of studies incident to his administrative labor.



DEPARTMENT STORE IMPROVES HEATING BY MODERNIZATION

Daytons, Minneapolis, Uses Webster Moderator System To Control Temperatures

HEATING PROBLEM SOLVED

Modernization Equally As Effective in Scores of Similar Buildings

REMOVES OLD COMPLAINTS

Minneapolis, Minn.—The Dayton Department Store—one of the largest retail stores in the entire northwest is securing remarkably improved heating service as the result of a Webster Heating Modernization Program carried out in the fall of 1931.

For four years, through some of the coldest winters in Minnesota history, the Webster Moderator System has given the Dayton Store complete "Control-by-the-Weather."

Modernization of the Dayton Company buildings, which consisted in changing the mixed vacuum and gravity system to full vacuum operation, was completed without interrupting store operations.

The buildings vary from three to ten stories in height and have a total floor space of 800,000 square feet. Installation of the Webster Moderator System was made by the Beiden-Porter Company, Minneapolis heating contractors.

Frequently, under the old system, certain portions of the store were underheated while others were too hot.

Since the application of modern central heating control to the Dayton Company buildings, temperature readings taken from a central location four times daily indicate that all store zones are perfectly heated even during the severest weather. Following is the record of a typical day, indicating how various departments are kept at the temperatures desired:

Temp. Record, Nov. 6, 1933

Floor Dept.	10 am.	11 am.	12 m.	1 pm.
Base. Suits	68	69	70	70
Base. Hardware	74	74	75	75
Main. Gloves	67	68	69	69
Main. Dress Gds.	75	75	76	76
2nd. Infant	65	65	69	70
2nd. China	72	73	74	74
3rd. Dresses	68	69	70	70
4th. Victrolas	67	67	68	68
5th. Rugs	66	67	67	68
6th. Furniture	65	65	65	66
7th. Buyers' Off.	75	76	76	76
Outside	34	35	35	33

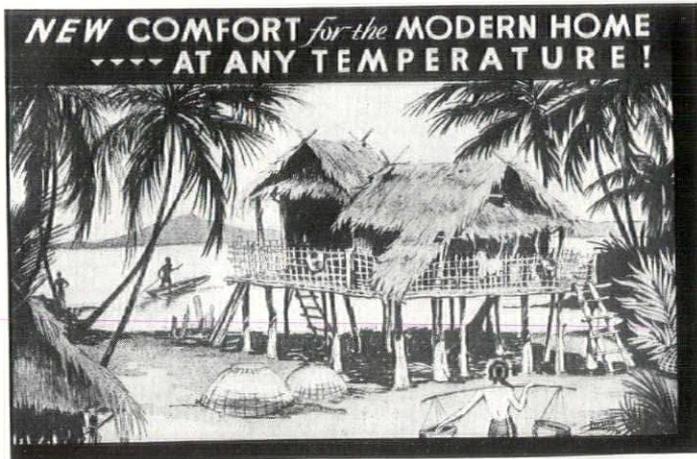
In a department store, well-balanced heating keeps merchandise in first-class condition and is a source of satisfaction to employees and customers.

Webster Heating Modernization has been equally effective in scores of other department store installations, among them the Donaldson Store, also in Minneapolis, with the Hine Line Company acting as modernization heating contractors; the Golden Rule Store in St. Paul, where the Frank Eha Heating Company made the installation; and the L. S. Ayres Department Store, in Indianapolis, with Hayes Brothers making the installation.

If you are interested in (1) improved heating service and (2) lower heating cost in your building, address

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ZONE**



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NAME

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FIRM

Trends and Topics of the Times

(Continued from page 108)

- Tenants will occupy in mid-September the first Federal slum clearance and low-rent housing projects on PWA's national housing program. This is the dormitory section of the \$2,875,000 Techwood development at Atlanta, which has been built for the Georgia School of Technology adjoining the campus, designed by Burge & Stevens, Atlanta architects. Living quarters are provided for 309 students. One-third of the rooms will be double, accommodating two students, and rent for \$8 per month per student. The remainder of the space is divided into suites, with study room between two double rooms. The rental will be \$10 per student. The entire Techwood project is a park-like development covering ten square blocks, with eleven groups of buildings for white occupancy.

- Air-Acoustic Sheets, a new product designed to reduce or eliminate the noise transmitted through ducts in air-conditioning and ventilating systems, are announced by Johns-Manville Corporation. These sheets are sound-absorbing material in rigid block form made of rock wool and suitable binder for primary use as duct lining. It is said they will not smoulder or support combustion and are recommended for all installations where merely "fire-resisting materials would contribute to the fire hazard. The National Board of Fire Underwriters, it is understood, have long been interested in this phase of duct lining problems as a means of reducing fire hazards.

- Radiator heat conditioning to provide air conditioning for the average home made its initial appearance on August 1st, at a national preview arranged by the American Radiator Company, at Chicago. Constructed for use in the \$3,000 to \$8,000 home, the new conditioner is priced at a little more than half the cost of the average electric refrigerator. It cleans the air, humidifies and circulates with provisions for ventilation. Provision is also made for the installation of refrigerating coils to cool and dehumidify if this feature is desired. The unit may be hung from the basement ceiling and hooked into a radiator heating supply line, with an outlet through the floor above and a return register at one distant point in the house, eliminating the necessity of installing elaborate ducts. A practical feature of this unit is that the heat supply may be increased or decreased as desired without changing the circulating air flow.

- In Norway, it is said, they build their wooden houses outwards from the inside. The framing is put up first, then lined with 2 3/4 inch or 3 inch tongued and grooved boards. After that comes the bituminous felt or paper and finally the weatherboarding. It must be shocking to see people living inside a house before it has its outside coat.

PERSONALS

• If you change your address, please report the change direct to American Architect five weeks before the change is to take effect, sending both old and new addresses. The Post Office will not forward copies to your new address unless extra postage is provided by you. Our request is made to save you this expense and to assure the receipt of your American Architect

• Joseph D. Murphy, Kansas City, Missouri, has been appointed Acting Associate Professor of Design in the School of Architecture, Washington University. While a student at M. I. T. he won the Fontainebleau Scholarship, the Fellowship for European travel, and the Paris Prize. While in Paris he was four times Medallist in the Concours of the Ecole des Beaux-Arts, and collaborated with Professor Jacques Carlu in a competition for the rehabilitation of the Avenue de la Grande Armee. In 1932 he returned to Kansas City where he was engaged to design the Civic Auditorium, the House of Detention, the interior designs for the Court House. He has recently been appointed as architectural advisor on a committee of Kansas City business men sponsoring the rehabilitation of the down town section. Mr. Murphy, was associated with Bennett, Parsons & Frost, Chicago architects on the early plans for the World's Fair, and recently with Keene & Simpson, Kansas City.

• William B. Ittner, Inc., architects and engineers formerly of 408 Board of Education Bldg., St. Louis, Mo., announce the removal of their offices to 911 Locust Street, St. Louis.

• E. H. Faile, architect, whose former office was located at Bridgeport, Connecticut, has moved to New York City and opened an office at 608 Fifth Avenue.

• Hillger & Beardsley with offices at Auburn, N. Y. will hereafter be known as Wallace P. Beardsley, architect, due to the recent death of Mr. Hillger.

• John J. Trich, architect, has opened an office at 248 Forest Avenue, Lyndhurst, N. J. He was formerly located in Rutherford, N. J.

• Homer D. Rice, architect, announces the removal of his office from 6367 Colgate Avenue, Los Angeles, California to 3425 Oak Glen Drive.

• T. O. Menees, architect, formerly located at Joliet, Illinois has recently opened an office at 7222 Harvard Avenue, Chicago.

• Niles F. Resch, architect, has moved his office from Independence, Missouri to 306 Dwight Building, Kansas City.

• Staab & Richardson, architects, announce the opening of an office at 600 Bloomfield Avenue, Bloomfield, N. J., and request information on building materials and manufacturer's publication.

• Joseph J. Kucera, architect, with offices at 573 Lapaz Drive, Pasadena, California, announces the removal of his office to 1250 S. Los Robles Avenue.

• N. S. Spencer & Son, architects, formerly located at 2330 Calumet Avenue, are now in Room 617, 180 North Michigan Avenue, Chicago.

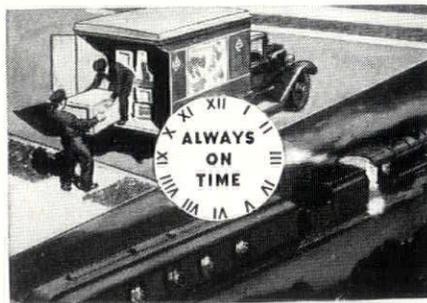
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DEATHS

• Harold Van Buren Magonigle, nationally known architect, painter and sculptor, died at his Summer home at Bain Harbor, Vermont on August 29th. He was 67 years old. Mr. Magonigle's career as an architect was an unending series of successful competitions. There was hardly a field of draftsmanship and design in which he did not excel. His greatest accomplishment was his monumental work. As a designer in this field he achieved a leading position among modern architects. His Maine and Fireman's monuments in New York, McKinley monument in Canton, Ohio; Schenley Fountain in Pittsburgh, Peace Memorial in Kansas City, and his winning design for the Robert Fulton Memorial Watergate in New York were distinct achievements. As a boy he received his first architectural training in the office of Vaux & Bradford, and later in the offices of Charles C. Haight; McKim, Mead & White and Rotch & Tilden. He won the Gold Medal of the Architectural League of New York in 1889 and the Rotch Traveling Scholarship in 1894. After returning from two years study in Europe he was associated with Evarts Tracy in the firm of Tracy & Magonigle. He later headed the office of Schiek & Ditmars for two years. For the last twenty years he practiced alone. He designed the seal of the American Institute of Architects, whose fellow and past president he was. The New York chapter bestowed upon him its medal of honor

in 1930. Mr. Magonigle was widely known for his literary talents having been the author of "The Renaissance," "The Nature, Practice and History of Art," "Architectural Rendering in Wash" and co-author of "Significance of the Fine Arts." At the time of his death he was working on a "History of the Architectural League of New York." He held an honorary degree of Doctor of Architecture from the University of Nebraska, and was a trustee of the American Federation of Arts; a member of Beaux Arts, the Architectural League of New York and a former president of the Alumni Association of the American Academy in Rome, besides many other art and literary organizations. American architecture has lost one of its most outstanding members.

• Henry C. Pelton, widely known New York architect, died on August 28th. He was graduated from the Columbia School of Mines in 1889. In association with members of his company he designed many noteworthy buildings. Among those that are better known are, Riverside Church, built for John D. Rockefeller Jr. at a cost of \$4,000,000 in New York City; Park Avenue Methodist Episcopal Church, the Human Welfare group of the Yale Medical School and the New Haven Hospital. Mr. Pelton was elected a trustee of Columbia University in 1931 for a six year term, and later he became head of the committee to make changes in the construction of the Columbia dormitories, Hartley and Jay Halls. Mr. Pelton died of pneumonia.

• Charles Richardson Platt, engineer who designed the first electric elevator in 1888, died at his home in Montclair, N. J. on September 4th in his 76th year. It was while he was with the Whittier Machine Co. of Boston that he built and installed the first electric elevator in the old Tremont House, Boston. Three years later, while with the late Frank J. Sprague, he designed and installed an electric elevator in the Grand Hotel, New York City.

• Paul C. Hunter, architect, died at his summer home in Keansburg, N. J. in August, at the age of 73. During the World War, Mr. Hunter, served in France for over two years, with the rank of Major, in the Quartermaster Corps. He designed several cantonments for the A. E. F. and supervised construction work for the army of occupation on the Rhine.

• George Kramer Thompson, retired architect, who was a pioneer in the use of caissons in foundation construction, died at his home in Piermont, N. Y., on August 2nd. A native of Dubuque, Iowa, Mr. Thompson received his professional training in the New York office of Frederick C. Withers. For years he was a member of the firm of Kimball & Thompson. From 1917 to 1932, he was head of the architectural metal department of the National Lead Company. He was a former governor of the New York Athletic Club and a Mason.

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- Eliminates warping and door sticking.
- Speeds keg-passing — noiseless.
- Eliminates damage to kegs.
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- Is ideal for use between wash and racking rooms, racking or storage rooms and loading platforms.

Get supplement to Bulletin 112-A.

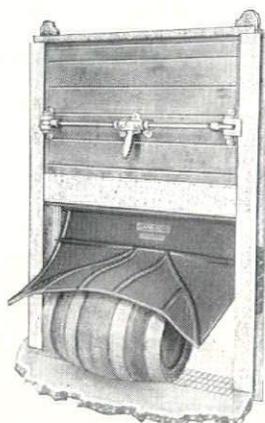
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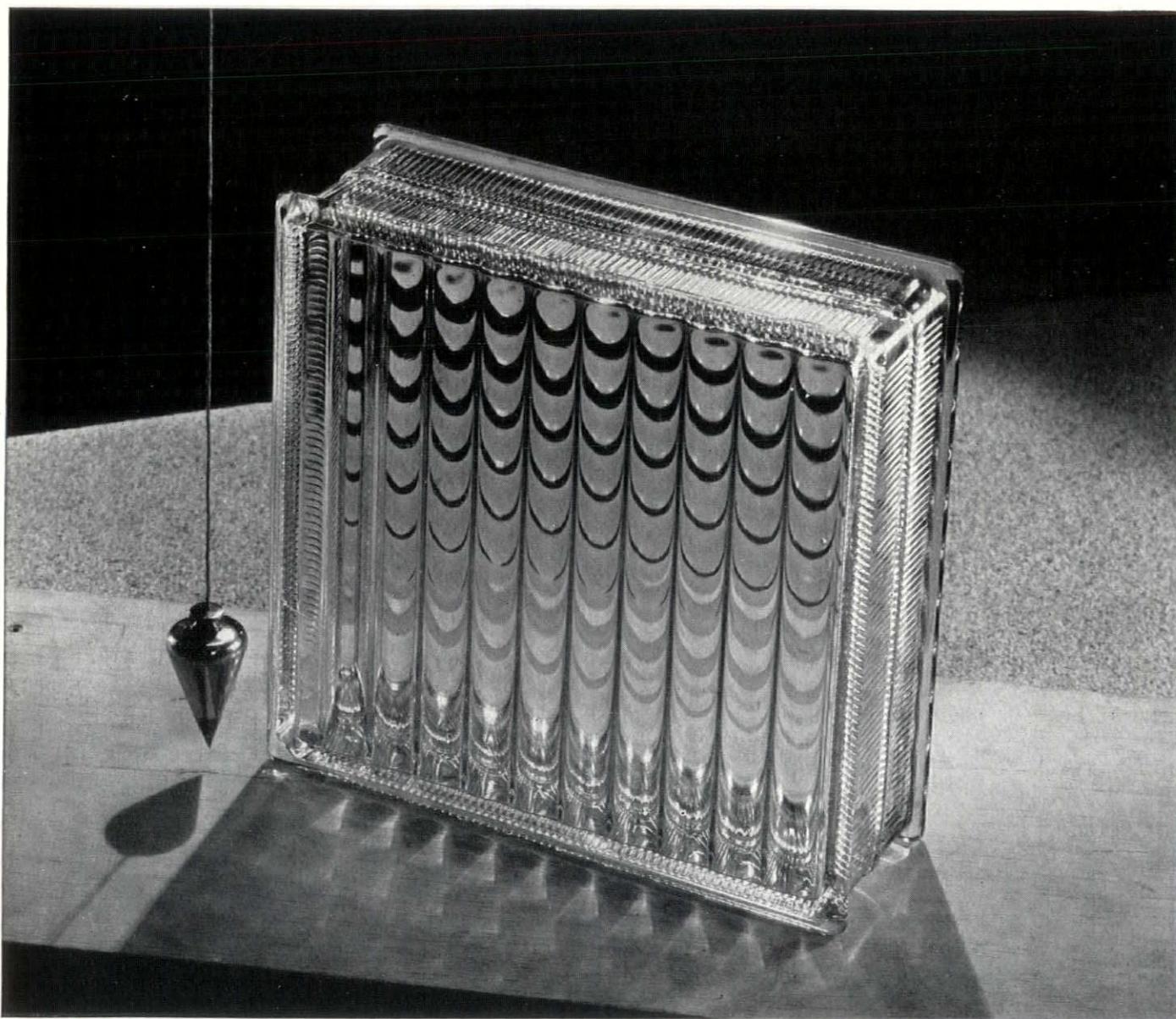
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- Scientifically designed fluting on inside faces of unit provides ever-changing decorative effect—high diffusion of light—obscures images—produces no lens effect—made of Pyrex Brand heat-resisting glass with a coefficient of expansion second only to natural quartz—partial vacuum—size 11¾" x 11¾" x 4".



CORNING GLASS WORKS

Architectural Division, Corning, N. Y. • 748 Fifth Avenue, New York

Provide for Genuine



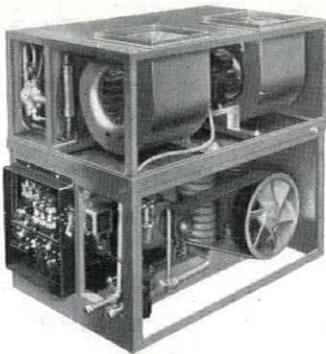
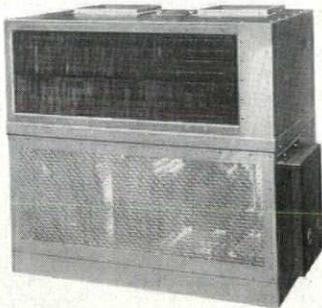
In Your Remodeling Plans



The practical way to reduce room temperature and humidity is with genuine LIPMAN Air Conditioning. It has proved its efficiency, reliability and economy in hundreds of railway coaches as well as commercial and domestic installations throughout the country. The LIPMAN automatically supplies the desired amount of cooled air at the proper rate of circulation necessary to keep a room,

house or building comfortably cool during the hottest day—at a cost that's practical for the owner.

Complete and compact, LIPMAN duct or unit type systems can be quickly installed in the basement or storeroom, without expensive alterations. Carefully tested, at the factory, LIPMAN systems come all ready for the local heating and ventilating dealer to connect up to water and electric lines. Supplies welcome summertime comfort for a surprisingly small cost.



Built by a company that pioneered the commercial automatic refrigeration and air conditioning fields, LIPMAN systems are thoroughly practical, for the average installation. There is a LIPMAN Air Conditioning or Refrigerating unit of a size and type that will meet the particular needs of any business, institution, or home exactly. You may recommend LIPMAN with complete confidence that it will prove satisfactory in every respect.



Send for Architect's Data

Without obligation we will send you complete information about LIPMAN Air Conditioning Systems, together with plans for typical installations and charts for estimating requirements.

GENERAL REFRIGERATION SALES COMPANY
Dept. A-9 - - Beloit, Wisconsin, U. S. A.

Please send me Architect's data sheets and booklets covering LIPMAN Air Conditioning Systems.

Name.....

Address.....

City..... State.....

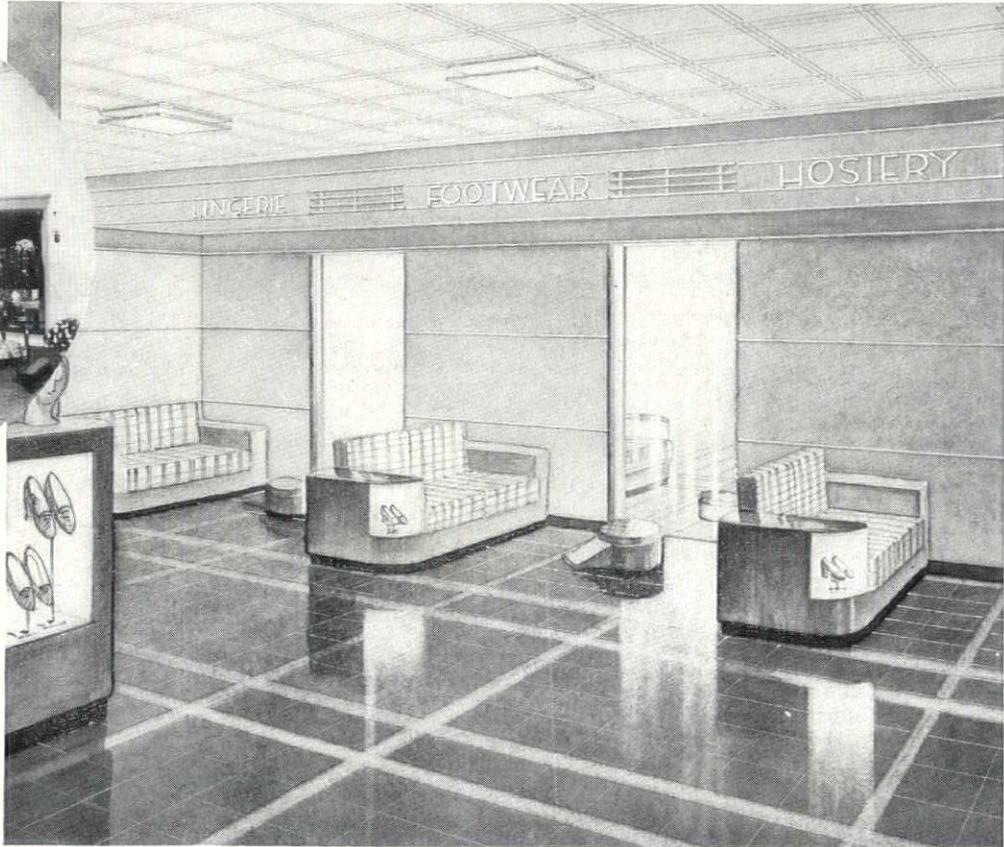
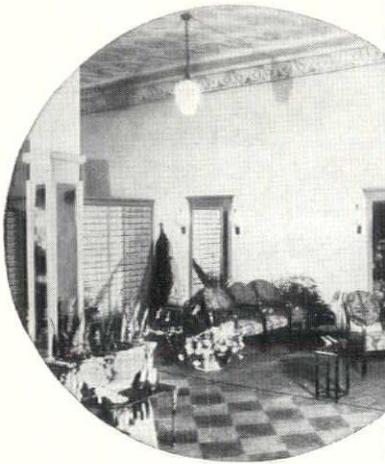
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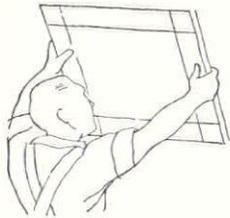
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Johns-Manville modernizes a Main Street Shop

AS IT WAS AS IT WILL BE



And here are the materials whose low cost enabled the owner to modernize . . .



CEILING

J-M Decorative Ceiling Tile

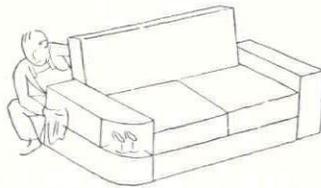
... Design C-3, natural light cream color. J-M Decorative Insulating Board is available in three pleasing Ceiling Tile patterns. Applied quickly, easily, over old ceilings at approximately half the cost of replastering.



WALLS

J-M Asbestos Flexboard

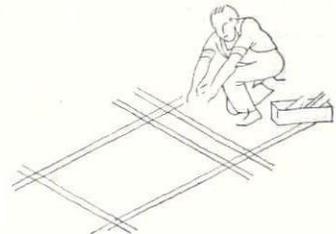
... in buff, with two narrow strips of green. Flexboard is asbestos, but it works like wood. Its attractive colors go all the way through. It is permanent, durable, fireproof. And installed cost is as little as 30 to 35 cents per sq. ft.



SEATS AND DISPLAY CASES

J-M Hard Board

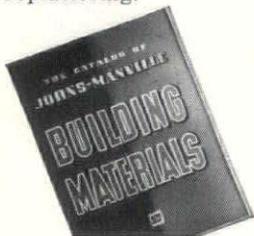
... in a rich shade of brown. Hard Board is available in four attractive styles, and in various pleasing tones of brown. It can be used in natural colors, or varnished to duplicate the appearance of the most expensive woods.



FLOOR

J-M Asphalt Tile Flooring

... in mahogany with buff stripe. J-M Asphalt Tile Flooring is resilient; comfortable to walk on. Extremely durable, it thrives on heavy store traffic. It is easily kept clean. It is resistant to burns. In fact, virtually abuse-proof.

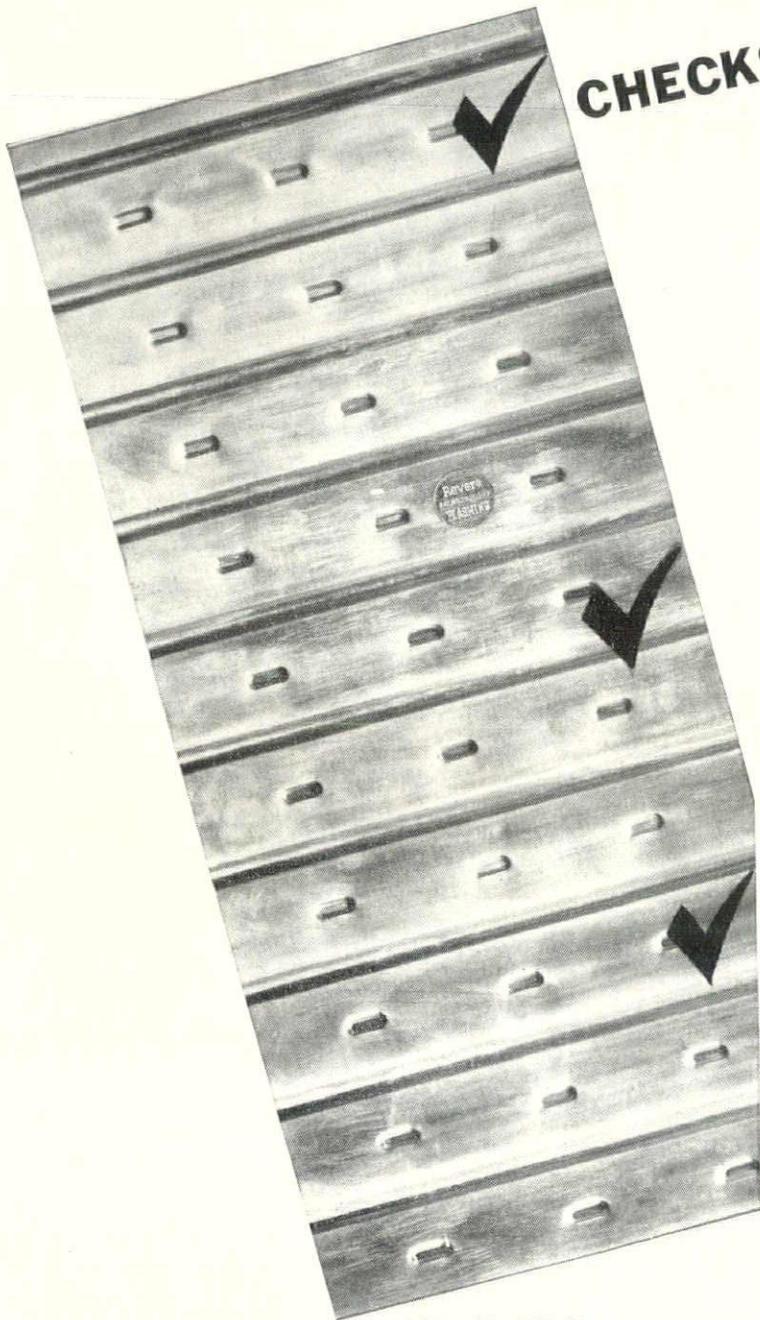


THE Main Street owner wants to modernize . . . but so often he thinks he can't afford it . . . a mistaken idea, as you can prove to him in five minutes . . . the low cost of J-M materials, their economy of application, make modernization possible to almost *any* shop owner . . . let us tell you the full story . . . write for our new catalog . . . and details of our deferred payment plan for store owners (Government rates). Johns-Manville, 22 E. 40th St., New York City.



REVERE Thru-Wall Flashing*

CHECKS THREE WAYS



*Patent No. 1,928,589

STRENGTH This new flashing of Revere Copper (soft temper) or non-staining Revere Leadtex (lead-coated sheet copper) is much stronger than plain sheet metal flashing. The design is simple but effective: parallel ribs are rolled at 3-inch intervals along the full width of the flashing, and embossings are rolled between each rib. Because the ribs are rolled rather than stamped, they are of equal thickness with the rest of the flashing and the metal retains its original softness. Because they extend the full width of the flashing, they provide a stiffened counter-flashing face that hugs the wall tightly.

EFFICIENCY The parallel ribs permit a water-tight interlocking joint with 2-inch overlap to form continuous flashing without the use of solder. The ribs also allow water to drain off quickly. These ribs and embossings make an unusually tight bond between mortar and flashings, prevent all lateral movement of the wall, and allow for expansion and contraction.

ECONOMY Revere Thru-Wall Flashing is considerably less expensive than the customary patented flashing. Due to its interlocking feature which makes a water-tight joint without the use of solder, it can be installed for less than plain sheet metal flashing with soldered joints.

Another advantage of this flashing is its availability through the country-wide organization of Revere Distributors. The well-known Cheney Flashing is also available at Revere Distributors, and is reduced in price. These two flashings answer your requirements for every type of construction. If you would like specification details, address our Executive Offices.

Revere Copper *and* Brass

INCORPORATED

Founded by Paul Revere 1801



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TEXTILE FIBERS ARE CLASSIFIED AS:

1 ANIMAL
2 VEGETABLE
3 MINERAL

ANGORA GOAT
MOHAI
CASHMERE GOAT
MERINO SHEEP
PERUVIAN SHEEP
LLAMAS
CAMELS

WOOL
FIBER 1" TO 10" LONG
RAY
CARTWRIGHT
WHITNEY
ROBERTS
MERCER
WILKINSON
ACROSS
BEVAN
FIBRES ANY LENGTH

1 2 3
COTTON
RAYON

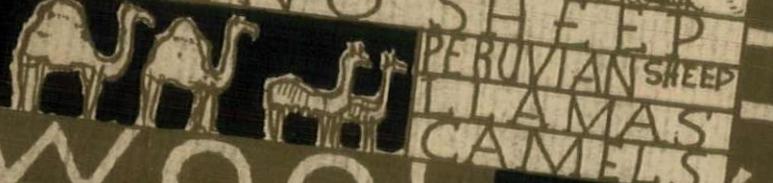
400-1300 YARDS LONG
SILK IS THE STRONGEST FIBER

SILK
TUSSAH MUGA
ERI

FLAX HEMP JUTE
UP TO 9 FT LONG UP TO 14 FT LONG
OFTEN MIXED WITH FLAX OR COTTON
BUT IT ROTTS IN MOISTURE

2ND STRONGEST FIBER
PERMANENT

ASBESTOS



FOUNDED 1876

MERICAN ARCHITECT