



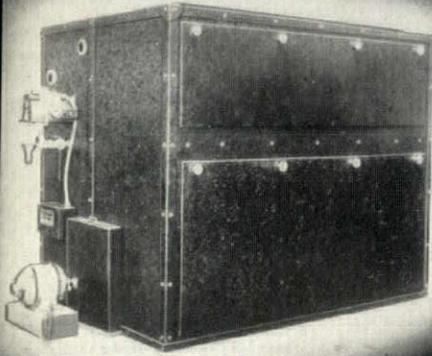
JUNE 1935 • HOUSING • THE INDIANA STATE LIBRARY • WOR RADIO STATION

AMERICAN ARCHITECT

HIGHLIGHTS OF THE EDITORIAL MONTH

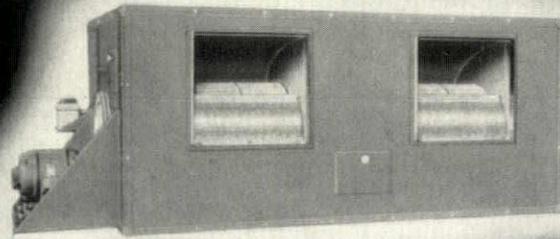
Unique among public buildings, and among the newest of the Middle West's official structures, is the INDIANA STATE LIBRARY AND HISTORICAL BUILDING. To its presentation we devote fourteen pages of this issue. Pierre and Wright were the architects and Scott Williams the muralist. From their work developed a result in which the decorative arts merge with architectural design to serve the most exacting requirements of both citizen and state. . . . Housing is still a question of the hour—and an editorial highlight of this month's issue. But theories of housing do not always reflect sound practice. Thus, Wells Bennett presents AN ANALYSIS OF HOUSING PRACTICE in which Foreign projects are compared with American ones. Plans, pictures, charts, text—all expose the fallacies of theoretical planning and bring the housing subject down to solid, architectural earth. . . . OLD NEW ORLEANS, the deep South's most romantic city, is the subject of this month's Special Section. . . . A NEW ARCHITECTURAL PROBLEM exists in the planning and construction of Radio Transmitting Stations. Dexter Purinton, of Voorhees, Gmelin and Walker, sets forth the essentials of latest approved practice in this field. His story is illustrated with pictures of the WOR transmitting station at Carteret, New Jersey, for which his firm were architects » » » »

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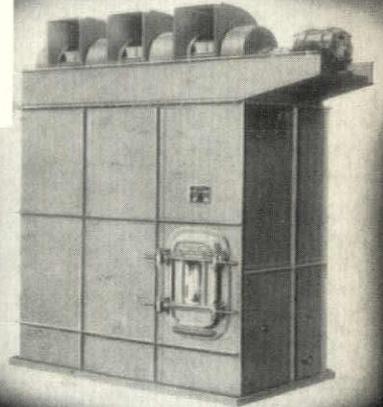


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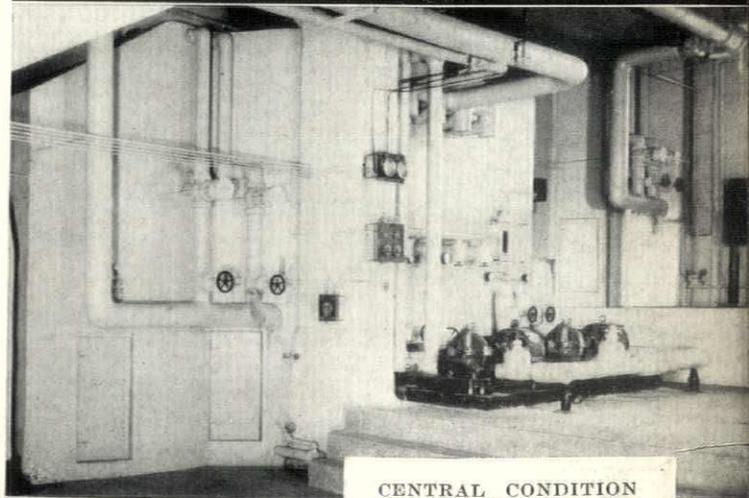
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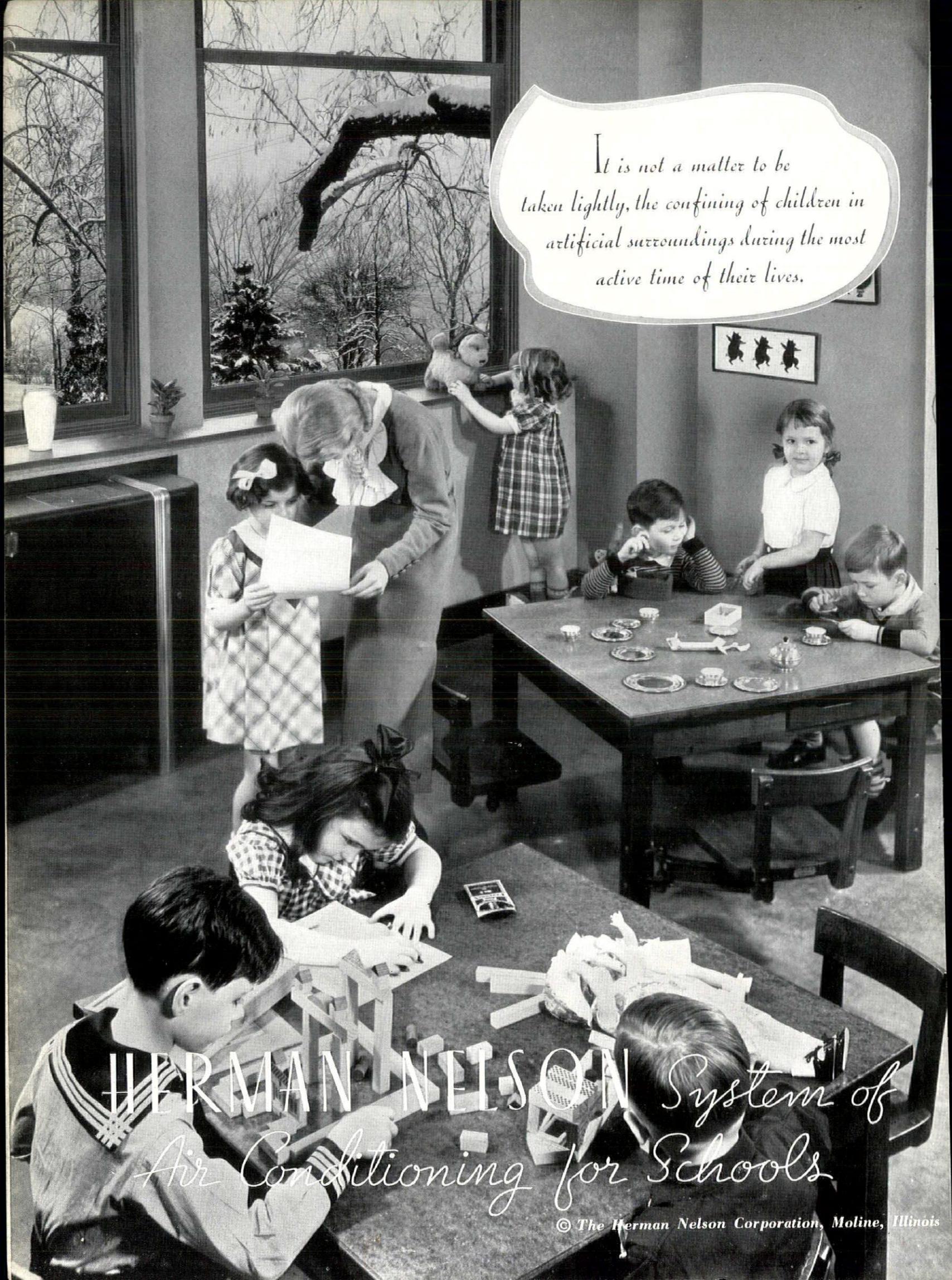


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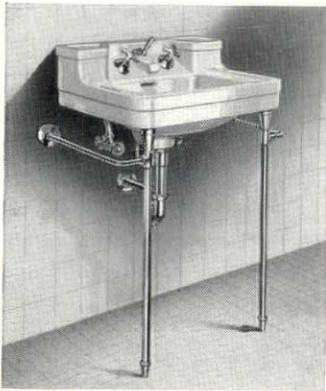
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THE LOW COST OF QUALITY



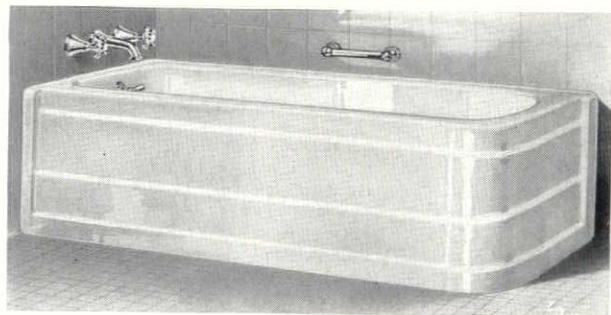
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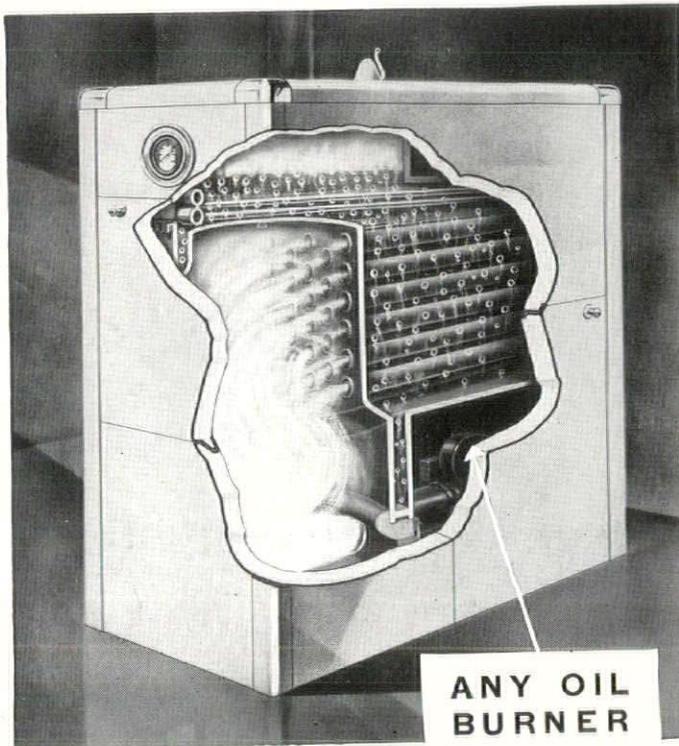
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American Architect, published monthly by International Publications, Inc., 572 Madison Avenue, New York, N. Y. \$3.00 per year. Canada, \$4.00; Foreign, \$5.00. Entered as second class matter April 5th, 1926, at the Post Office, at New York, N. Y., under the act of March 3rd, 1879. Issue 2634, dated June, 1935.

FOR JUNE 1935

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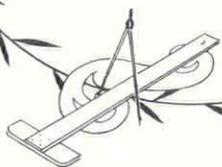
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Adapted from a mural in the Indiana State Library and Historical Building

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WORK for the Building Industry Means RELIEF of Unemployment

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

DETAILS of procedure by which the Administration will distribute the new Emergency Relief Appropriation of \$4,880,000,000 are about completed. Barring administrative expenses, every penny of this huge sum has been officially earmarked for "Work Relief." Thousands of applications for project allotments have already been received at Washington. And presently well-oiled disbursement machinery will begin to roll. . . .

WHAT IS "WORK RELIEF"? WHAT DOES IT MEAN TO THE ARCHITECT AND THE BUILDING INDUSTRY?

The theory of the term is one thing—its practical application is another. Briefly, the theory states that Federal funds, spent on such projects as Housing, Roads and Streets, Rural Rehabilitation, Rivers, Harbors and Soil Erosion and Public Works of States and Municipalities will stimulate capital goods industries. This will create demand for consumer goods, which, in turn, will raise the general level of business activity. **BUT VALIDITY OF ANY THEORY DEPENDS UPON THE SUCCESS OF ITS APPLICATION. AS APPLIED SO FAR IN THIS COUNTRY, THE WORK RELIEF THEORY HAS NOT PROVED PRACTICAL.**

Ample proof of this statement exists. Most striking is the fact that the \$3,300,000,000 fund for Public Works, appropriated nearly two years ago under the NIRA, did not solve the depression's problems. Bureaucratic red tape, expensive delays, friction among official personnel, endless and futile investigations—all these combined to render ineffective the expenditure of a sum nearly two-thirds as enormous as the present new appropriation.

Failure of the PWA program indicates that **A NEW METHOD OF APPLYING THE WORK RELIEF THEORY IS NECESSARY** if new spending plans are to prove an effective stimulus to business.

That method involves three things.

FIRST—Recognition that **PRIVATE BUILDING ACTIVITY IS THE LOGICAL MEANS OF PRODUCING AN IMMEDIATE IMPROVEMENT IN GENERAL BUSINESS.** Revival of private building means revival of one of the country's four basic industries. In 1929 building gave direct employment to 830,000 people and indirect work to millions more. And today, as then, about 85 per cent of every building dollar is distributed among labor.

SECOND—The largest possible **IMMEDIATE DISBURSEMENT OF FUNDS FOR PROJECTS ALREADY PLANNED AND NOW READY TO PROCEED.** Literally, billions of dollars' worth of needed construction would proceed at once if necessary capital were available. In the residential field alone, competent estimates have placed the shortage of houses at the million mark.

THIRD—An administrative policy emphasizing **UTILIZATION OF PRIVATE FIRMS AND ELIMINATION OF THE "DAY LABOR SYSTEM" ON ALL BUILDING PROJECTS.** Failure of

past relief programs can be attributed, in part, to undue emphasis on relief for unemployables. THIS COUNTRY DOES NOT NEED "MADE WORK." There is plenty of necessary building to be done. And if firms with the stamina to weather the depression thus far are given half a chance, they will absorb naturally a far greater number of unemployed than ever could be adequately cared for by any relief organization, however large.

As announced, present plans for apportionment of the Work Relief Fund indicate that the building industry will be directly concerned with about 27.6 per cent, or approximately \$1,346,000,000. Housing—presumably controlled by the PWA Housing Division—accounts for 9.2 per cent, or approximately \$450,000,000. Loans and Grants to States and Municipalities will involve 18.4 per cent of the entire fund. This latter percentage includes building projects other than the type of heavy construction contemplated under such headings as "Roads and Streets" or "Rivers, Harbors and Soil Erosion."

Thus, NEW FEDERAL FUNDS FOR BUILDING TOTAL SLIGHTLY MORE THAN ONE-THIRD OF THE PWA APPROPRIATION OF TWO YEARS AGO. If these are not spent promptly for projects that are necessary to business and are now ready to proceed, architects and others in the building industry can expect little immediate change in their present economic situations. SPEEDY EXPENDITURE AND THE EXCLUSIVE EMPLOYMENT OF PRIVATE FIRMS IS VITAL. Otherwise the appropriation will in no way accelerate the improvement already noticeable in private business affairs.

AMERICAN ARCHITECT believes this is all that architects can expect from administration of the Emergency Relief Appropriations as it applies to building. Certainly it is all that can be visioned from the standpoint of the present business situation. As concerns the future, wise expenditure of other allotments can develop at least one useful project that will be invaluable to Government and Private Enterprise alike.

Nearly one-quarter of the new appropriation has been earmarked for "Aid to White Collar Classes" (6.1 per cent) and "Miscellaneous and Emergency and Deficit Appropriations" (18.5 per cent). A GENEROUS PROPORTION OF THIS MONEY SHOULD BE USED TO CONTINUE AND EXPAND THE REAL PROPERTY INVENTORY, started in 63 cities by the now defunct Civil Works Administration. Basic, detailed information of the country's building needs can, and should, be obtained.

THIS ACTIVITY WOULD GIVE IMMEDIATE AND USEFUL WORK TO THOUSANDS OF PEOPLE. Logically, these would be capable experts from various parts of the building industry who have borne the brunt of idleness enforced by the depression. Under competent direction, a Real Property Inventory on a nation-wide scale would give to Government facts and figures invaluable as a basis for future projects involving conservation, development or works. To business executives in every line it would prove an essential guide to any program involving sales, production or expansion.

This type of project is not "work relief" in the ordinary sense. PRIMARILY IT IS NEEDED WORK. NO DECENT MAN WANTS MORE THAN THAT AS RELIEF FROM ENFORCED IDLENESS.

The substance of the foregoing paragraphs is new to these pages only as it refers to the new Work Relief Fund. Not quite two years ago similar paragraphs commented upon the \$3,300,000,000 spending program of the Public Works Administration. In "JOBS FOR MILLIONS THROUGH REVIVAL OF BUILDING" the importance of building activity as a factor of economic recovery was emphasized. Clearly implied was the fact that BUSINESS RECOVERY CAN COME ONLY THROUGH BUSINESS RE-EMPLOYMENT. Subsequent attempts at unemployment relief have not given just cause to change that statement. They have served only to prove that "REVIVAL OF PRIVATE BUILDING CONSTRUCTION IS A VITAL FACTOR IN THE GENERAL ECONOMIC RECOVERY OF THIS COUNTRY."

Perhaps Federal funds *can* revitalize private building construction. BUT ONLY TO THE EXTENT THAT THIS IS ACCOMPLISHED CAN ARCHITECTS—OR ANY ONE CONCERNED WITH BUILDING—EXPECT FROM FEDERAL WORK RELIEF IMMEDIATE IMPROVEMENT IN THEIR PROFESSIONAL ACTIVITIES.

A State's Memorial to History

BY SCOTT WILLIAMS, A.N.A.

"The Winning of the State," a mural by Scott Williams in the exhibition hall of Indiana's new State Library, furnished the subject for the cover design of this month's issue of *American Architect*



HEDRICH-BLESSING

THE INDIANA STATE LIBRARY AND HISTORICAL BUILDING

INDIANAPOLIS, INDIANA

PIERRE AND WRIGHT, ARCHITECTS

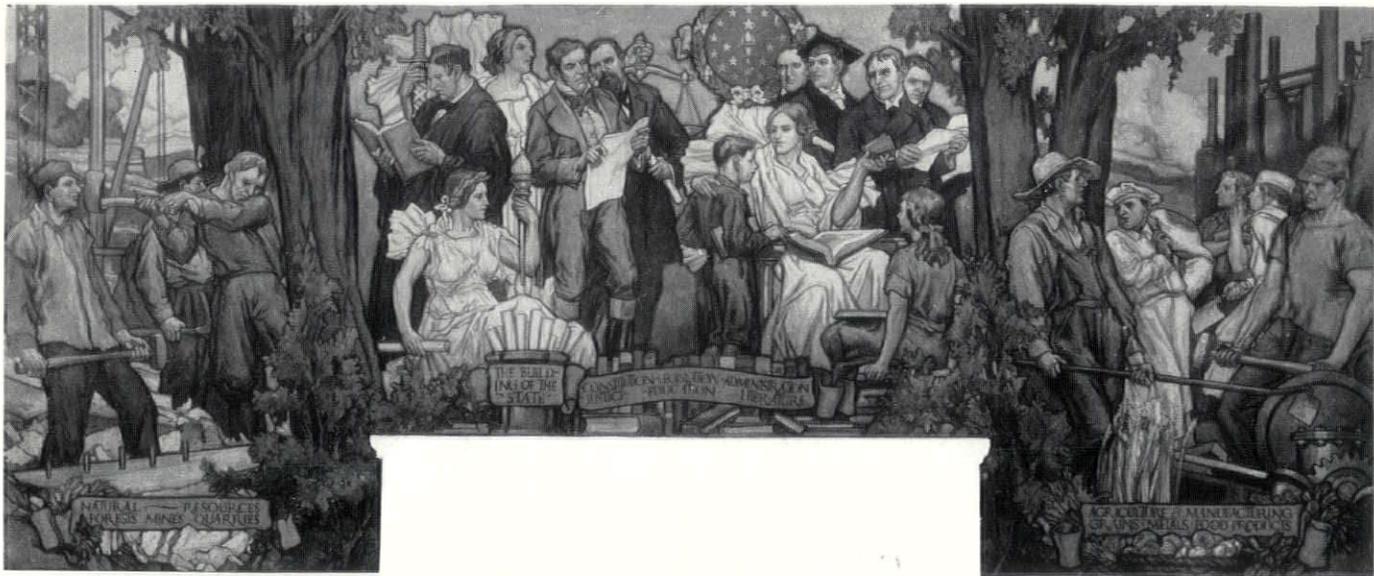
A SCHEME for any building is based, primarily, upon the idea of service. And service to the citizen—the real owner of any public structure—was the controlling factor in the planning and design of the Indiana State Library and Historical Building.

As its name implies, the building has a double function. It houses a state library; and in every modern detail it was planned for efficient use of the large, complicated organization that serves In-

diana's officialdom as well as her citizenry. But in the library are lodged priceless records of the state's history, and the building therefore is unique as an instrument by which are made available, to any prideful Hoosier, the intimate details of the commonwealth's official background.

The historical approach to the problem of design and mural decoration was, therefore, a logical one. It was the more appropriate since the contents of a library are, actually, a variously preserved record of





Above: "The Building of the State," one of two murals by Scott Williams in the exhibition room of Indiana's newest state building. On facing page: the central unit of five great windows on the west wall of the Great Hall. Designed to present an effect of boldness and to diffuse a strong light from an enclosed court, the window has a background of antique glass. Figures are in full color. Casements made unusually heavy leading essential. Other windows contain less brilliant inserts illustrating historical highlights in graphic art development. Scott Williams was the designer

the past. A building with such functions becomes, in effect, a tangible memorial to history. Architecturally this was expressed in classic simplicity of mass and detail, keyed to modern times by practical considerations of economy and utility for both citizen and state.

These practical influences were naturally paramount in developing the plan and placing reading and reference rooms—the private citizen's contact with the library organization—on the second floor. This made necessary the stimulation of a personal desire to mount a flight of steps by a forceful attraction of design. Therefore, the entrance lobby was kept low. From it the eye is drawn naturally up an inviting sweep of broad, easy stairs. The view is dominated from above by the vigorous color of stained glass windows directly in front of which is the circulation desk. The visitor's instant desire to mount the stairs is the compelling result of a nice co-ordination between practical planning and esthetics.

Co-ordination of this sort is evident throughout the building. Noteworthy from the planning standpoint is the manner in which offices, reading and reference rooms and spaces containing special collections are grouped about three sides of a core including the stack space—which can be expanded vertically if necessary—and the Great Hall.

Because it induces comfort and a sense of quietude,

a kind of domestic atmosphere was developed in the main reading room. Paneled in walnut veneer and exceptionally well-lighted, the room is strikingly in contrast to the formality and impressive scale of the Great Hall. The history reference room is similar. Both have ceilings of exposed concrete, decorated in all-over patterns of subdued color. At one end of each room is a mural. That in the reading room, "The Song of Labor," expresses the agrarian foundation of the Indiana Commonwealth. In the history room the mural depicts an Indian scene that suggests, in well-studied detail, the characteristic life of the state's earliest inhabitants.

In this state building murals and stained glass have no place apart from the architectural design of the interiors. Thus, the glass in the five huge windows of the Great Hall give needed interest and color to the space and adequately diffuse the glare reflected from the light court. In the exhibition room also, the high color of the two murals is an accent which is particularly desirable in this kind of public space.

Such harmony between architecture and decorative art was no accident. It was evolved from a collaborative desire to serve citizen and commonwealth by producing both beauty and efficient utility—the best of all memorials to the history of a great state.



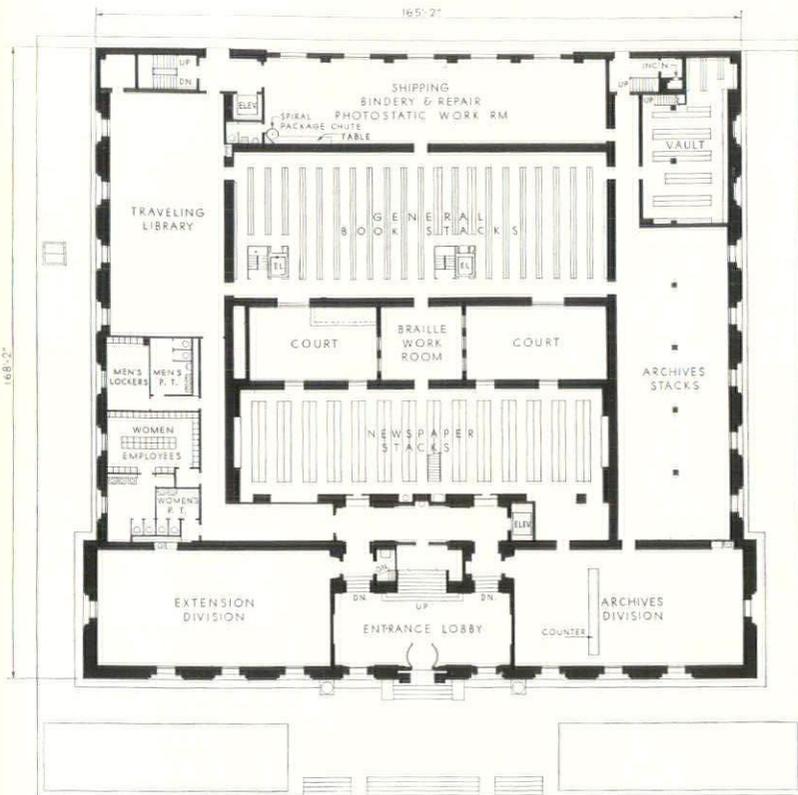
PIERRE AND WRIGHT, ARCHITECTS

THE INDIANA STATE LIBRARY AND HISTORICAL BUILDING
INDIANAPOLIS, INDIANA

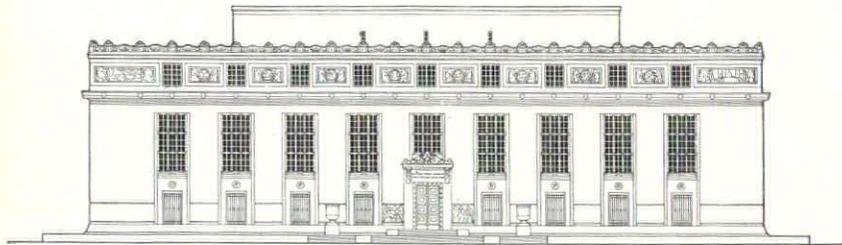
Photographs by Hedrich-Blessing

THE DESIGN of Indiana's new "memorial to history" was the result of an architectural competition held in 1931 under direction of Arthur Bohn, architect of Indianapolis. Then, as now, Louis J. Bailey was director of the state library. The successful architects, Pierre and Wright, met requirements that were unusual in relation to the ordinary type of library. Since 1825, when Indiana's state library was officially begun, its activities have expanded to include those of the state Historical Bureau and the Legislative Reference Bureau. More recently (1933) the library has become a part of the Department of Education. Thus, its director is charged with responsibilities that include the safekeeping of not only state and federal records, but also those of many local towns and counties; the custody of special historical collections; issuance of published materials, extension services; much reference work; and a loan service that is statewide. . . . Within the present building are all necessary administrative offices, reading and reference rooms, storage spaces and mechanical facilities for a large modern library organization. Service areas have been planned for expansion, if necessary, particularly as this refers to bookstack spaces. These latter are air conditioned; and the building contains fireproof vaults with a total capacity of 10,000 cubic feet for storage of irreplaceable records. . . . Indiana materials have been used wherever possible in the construction of the building. The exterior is limestone. On the interior much use has been made of Monte Cassina sandstone, a material of a variegated buff and light tan color, rarely used before as a wall facing. All the interior woodwork and much of the furniture is made from Indiana walnut; and the glazed blocks with which walls of bookstacks and service areas are faced are an Indiana product.

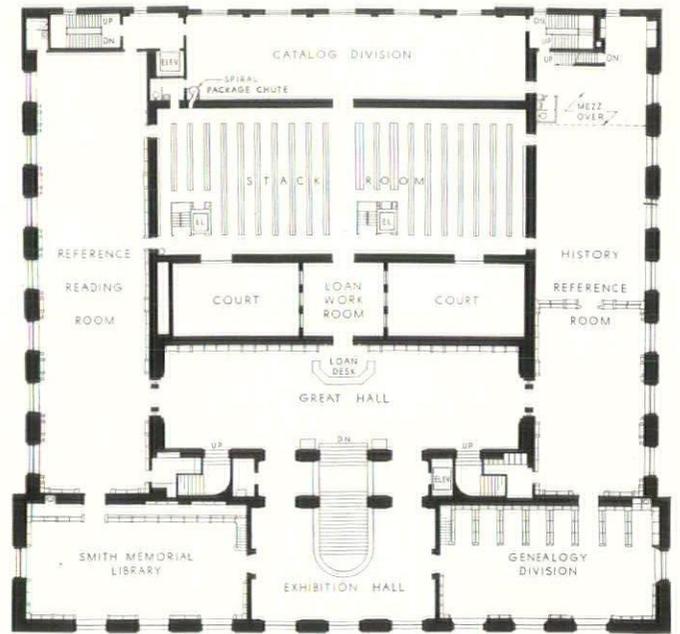




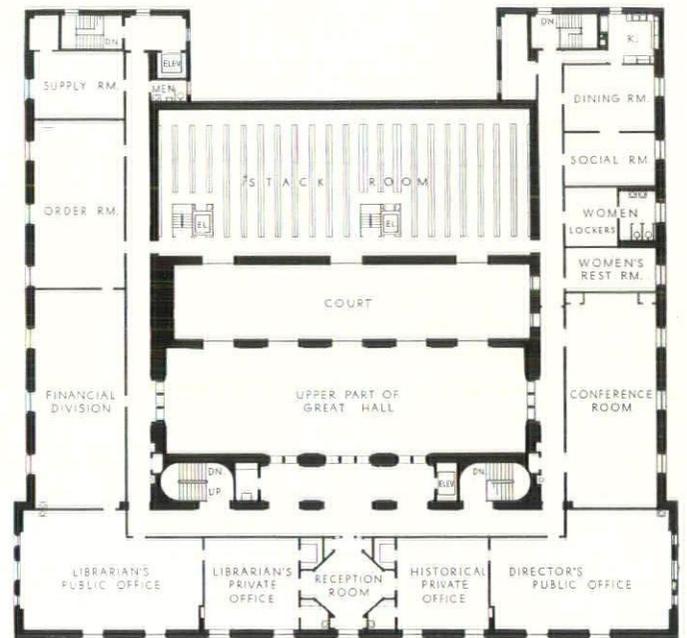
FIRST FLOOR



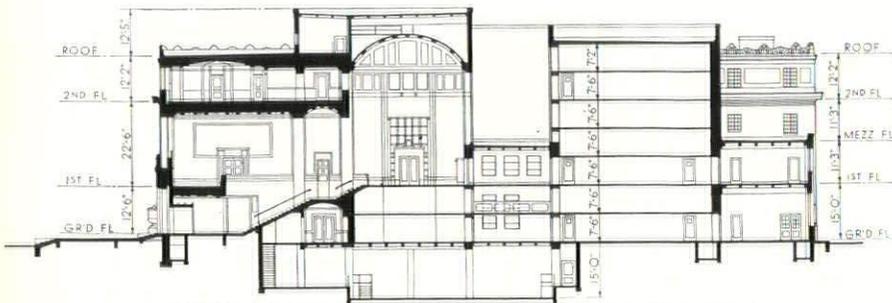
FRONT ELEVATION



SECOND FLOOR

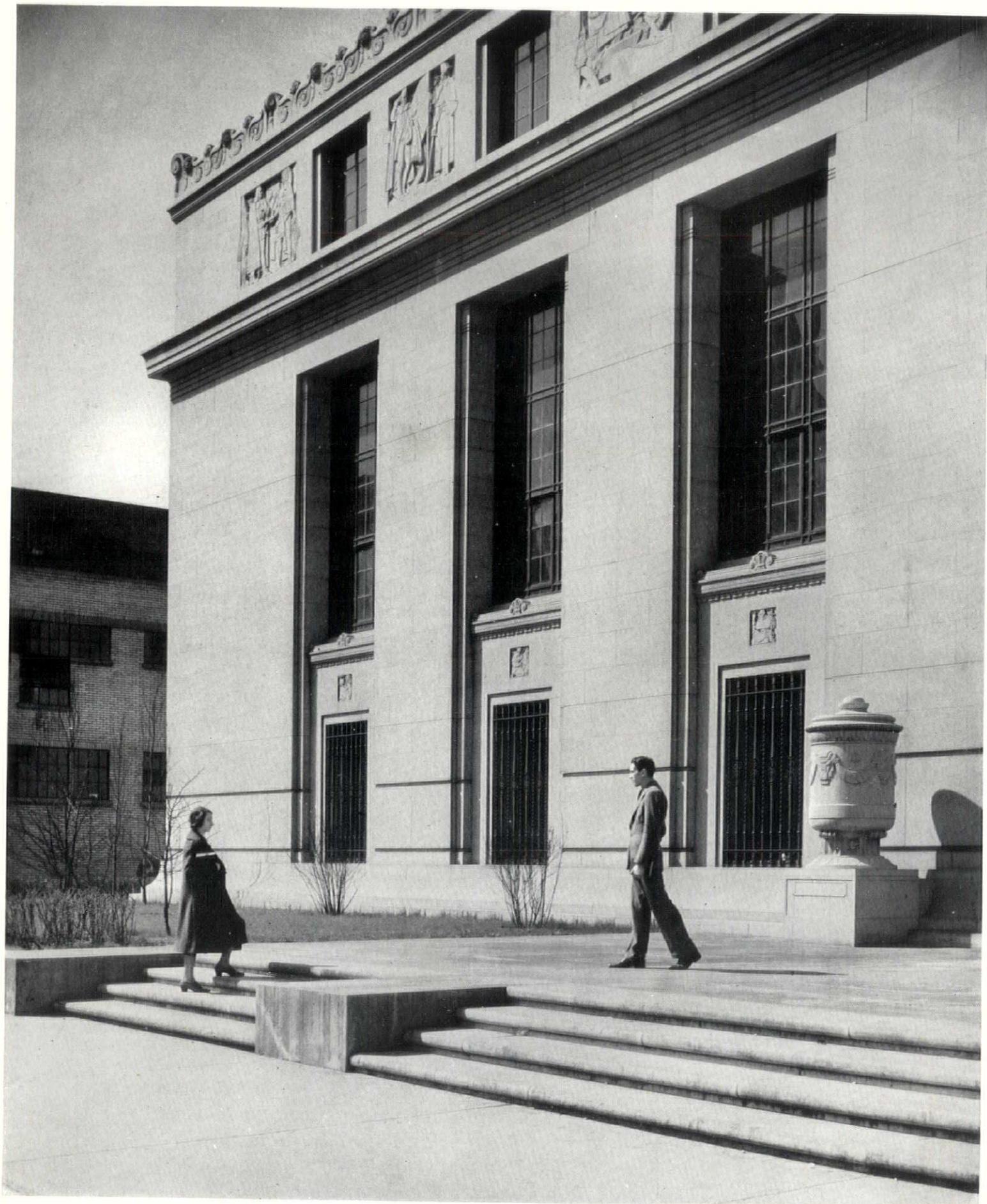


THIRD FLOOR



SECTION THROUGH GREAT HALL AND STACK ROOM

INDIANA STATE LIBRARY AND HISTORICAL BUILDING
 INDIANAPOLIS, INDIANA
 PIERRE AND WRIGHT, ARCHITECTS





The Great Hall, shown on the facing page, is the central means of co-ordinating historical and general reference rooms, the stack rooms and constant flow of library visitors. On this page, below, is the Entrance Lobby. Visitors gain access to the Great Hall by a broad and easy flight of steps dominated at the top by rich colors of the stained glass window over the loan desk. The Indiana State Library and Historical Building, Indianapolis, Indiana. Pierre and Wright, architects









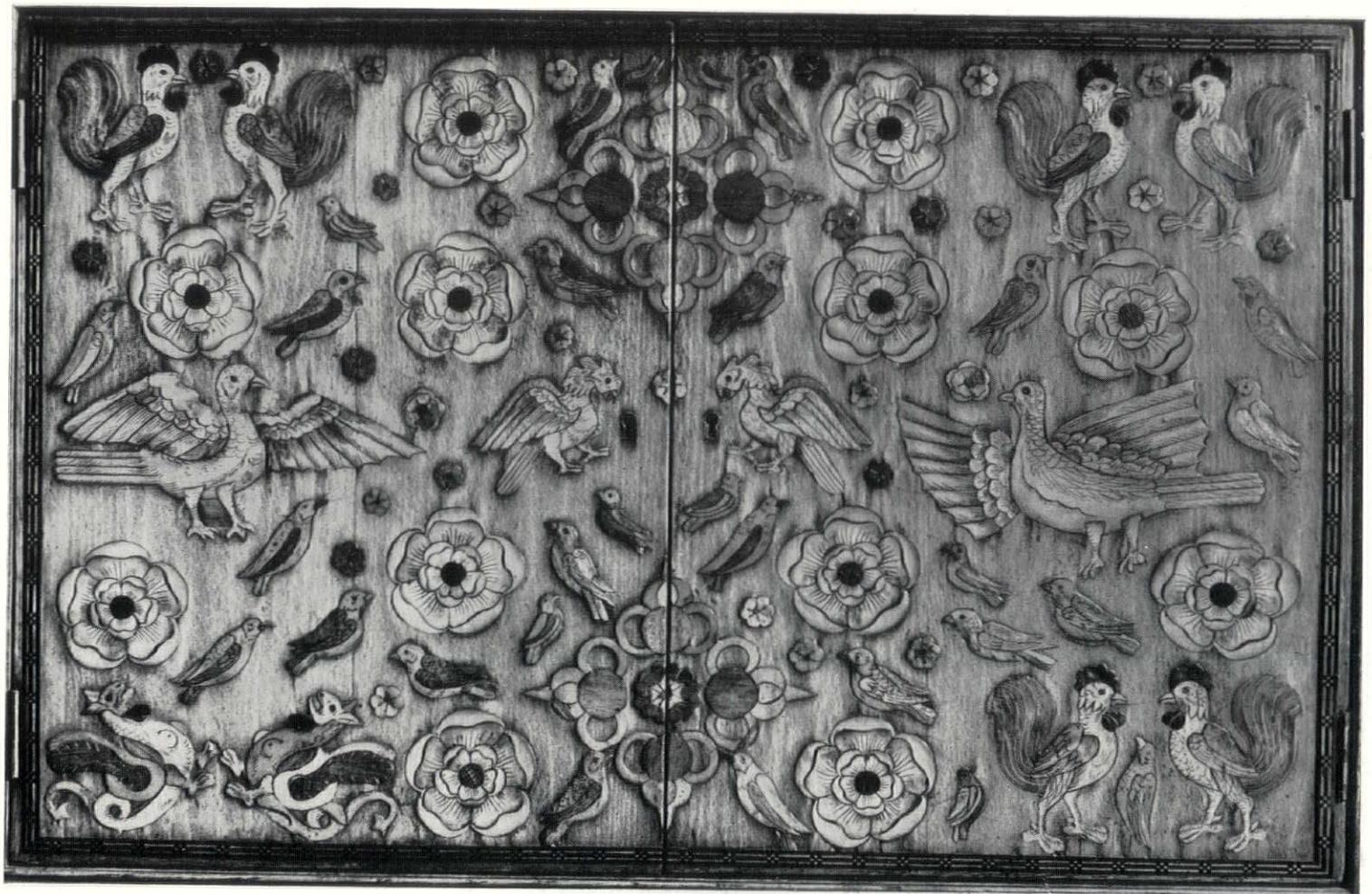


Reference Rooms are paneled in Indiana walnut, natural color. Floors of both the Main Reading Room, above, and the History Reference Room, on facing page, are surfaced with dark green rubber tile. Ceilings are exposed concrete, decorated with subdued color in an all-over pattern that includes characteristic marks of famous printers. Indiana State Library and Historical Building, Indianapolis, Indiana. Pierre and Wright, architects



The Smith Memorial Library occupies a special room for the collection of rare and valuable material relating to the History of the Old Northwest. This room is paneled in Indiana walnut of natural color. The ceiling is modeled plaster. Indiana State Library and Historical Building, Indianapolis, Indiana. Pierre and Wright, architects

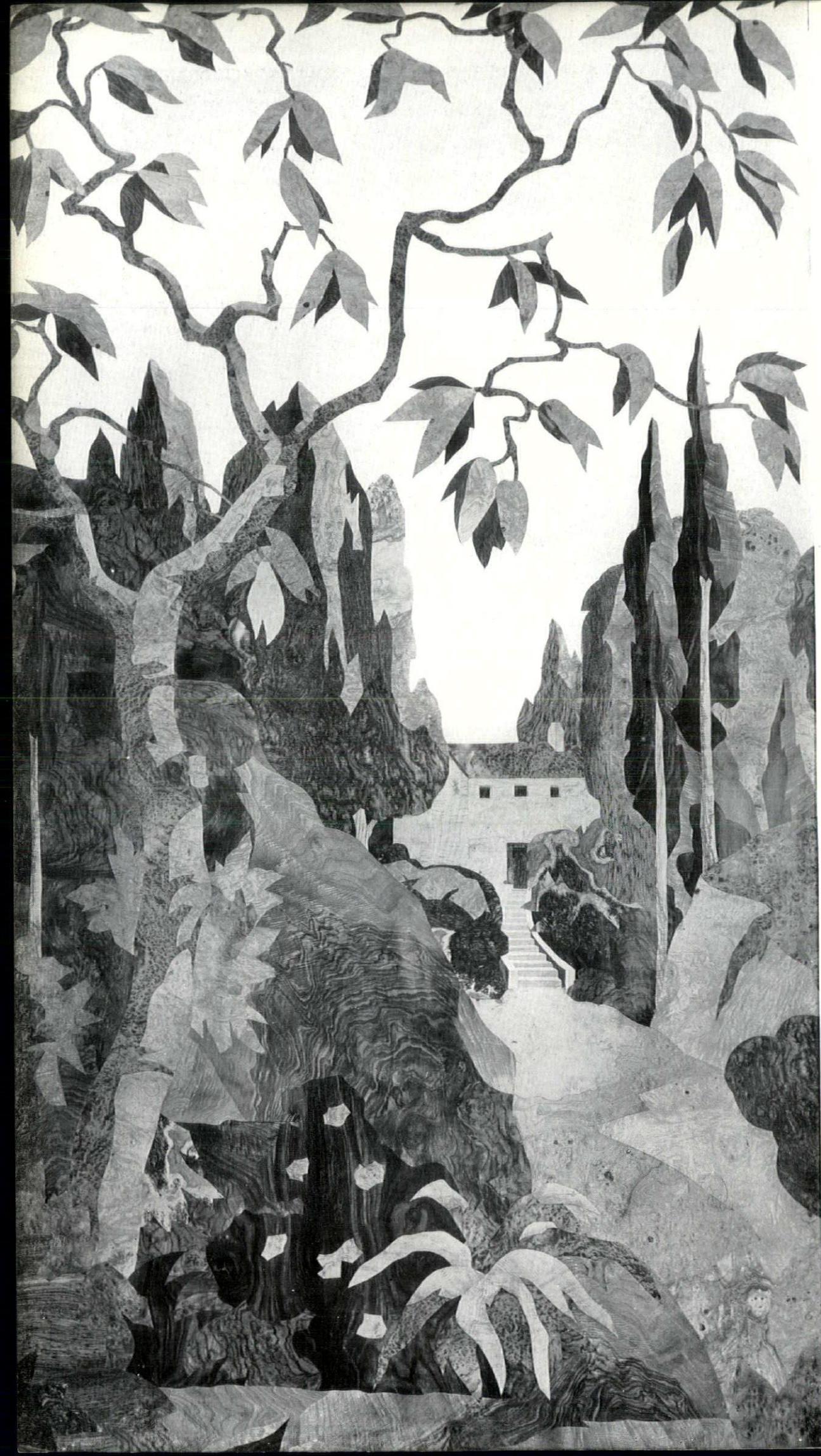




VAN ANDA

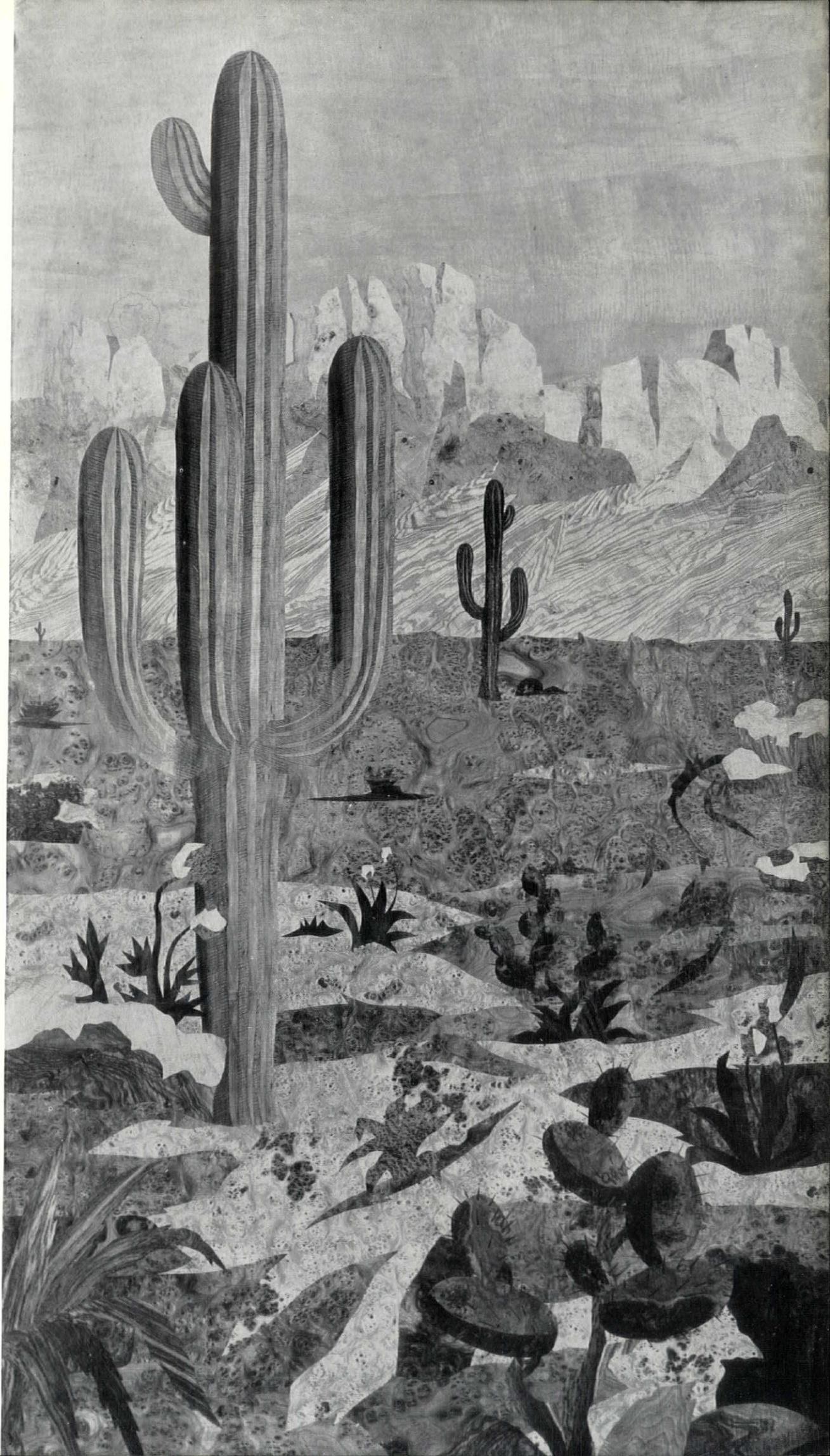
WOOD INLAYS...

AN OLD ART . . . but, in its comparatively new application to the field of architectural design, an arresting form of modern decorative technique. Ability at design and craftsmanship are as necessary as ever to produce beauty in wood inlays. But perfection of mechanical processes has made available a new and wider range of rare wood veneers, together with methods of bonding that are highly resistant to damaging effects of moisture and temperature changes. . . . On this and the following three pages are contemporary examples of inlay work. Above: a cabinet front on which against a smooth background, inlays are slightly raised, minutely carved and themselves inlaid with contrasting colored woods. The result, too rich in texture and pattern for harmony with most architectural design, reveals the striking possibilities that are inherent in the art. The Hayden Company, designers and craftsmen



Murals in wood veneer have a certain sharply-cut, architectural quality not present in the usual fresco or oil painting. In these two panels twenty-seven varieties of woods were used, grain being considered as important as the color. Each panel measures six by twelve feet. They

were originally executed by Miklos Gaspar for an exhibition of the General Motors Corporation and are now in the Roosevelt Industrial Science Museum in Chicago. Wood inlays such as these can easily be finished by sanding and lacquering by any generally competent painter

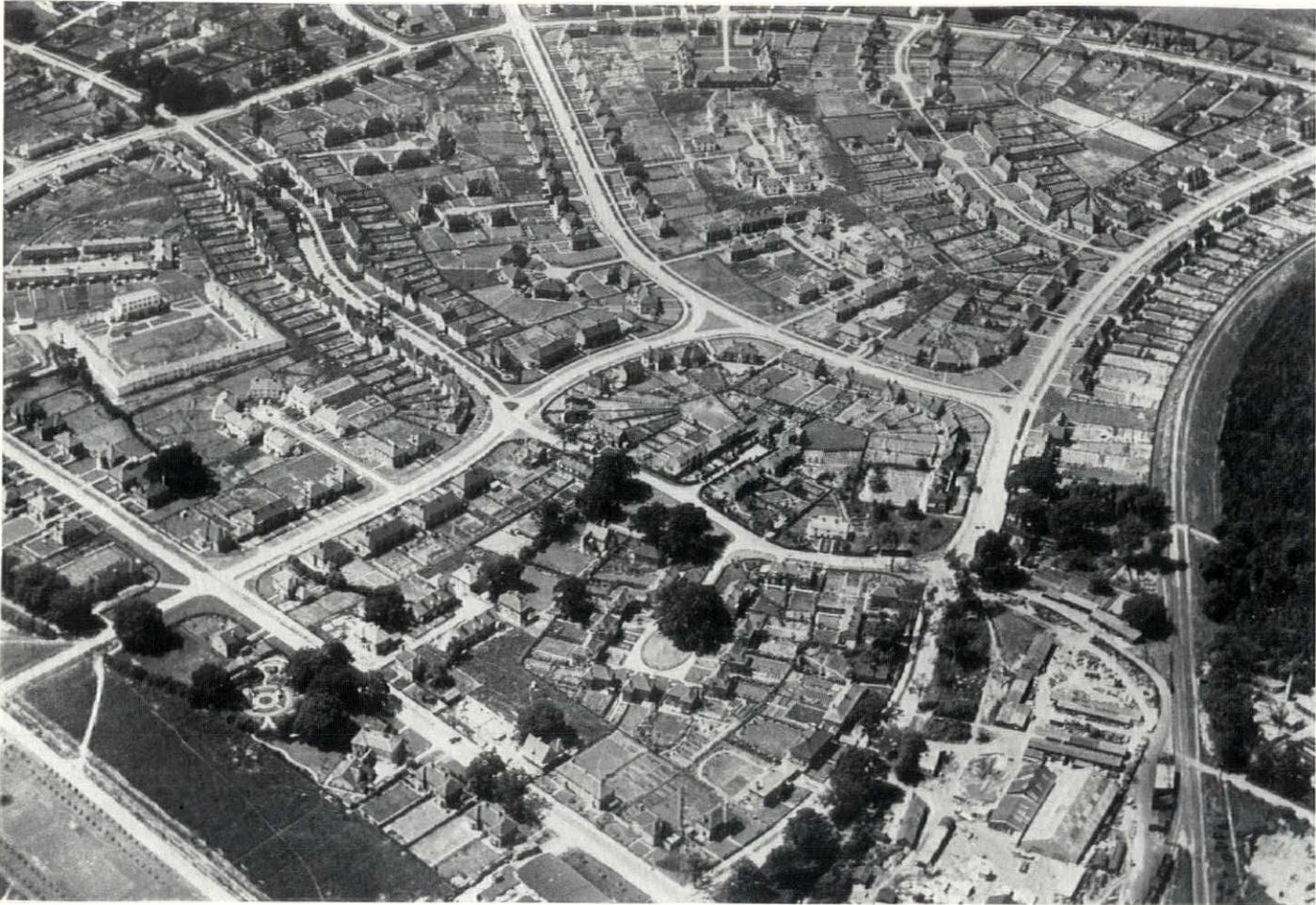




VAN ANDA

Decorative panel in flat veneering in an elevator cab at the Rockefeller Center Music Hall, New York. Reinhard & Hofmeister, Corbett, Harrison & MacMurray, Hood & Fouilhoux, Architects

HOUSING



...let's bring it down to earth!

HOUSING needs in the United States for years have been obscured by a pother of wishful thinking and fallacious premises. Recommendations of "experts" have ranged even to the statement that the housing problem can be solved only when, as and if the United States turns communistic. Obviously, nothing could be more absurd.

It is high time that the subject be brought down to earth. No one desires its sociological and economic aspects. But housing as a problem is largely born of varying human requirements. These must be met in terms of space, materials, equipment. All these cost money. All require the use of land. And, to become more than theory, the whole question of housing must be answered in earthly, practical terms, inextricably keyed to demonstrated standards of American family life.

Paragraphs of the following article outline one basis for this practical approach to housing. Here the problem is treated as one of space, in which room sizes and arrangements are the primary instruments for tenant service. Charts, plans and text report what has proved practical in many important projects here and abroad. Conclusions from other points of view become evident from a close study of the material presented.

Chief among these is the fact that foreign housing practices are mostly impractical for the United States. This is true because our national characteristics as well as our standards of living differ substantially from those of foreign peoples. Necessities with us are often luxuries to them. Thus, even the least of our new projects include hot and cold water lines; bathrooms, complete with tub and toilet; and generous closet space which even the apartment housewife demands.

Important also, is the graphic indication that even the best housing "standards" are not wholly applicable to every project. Planning principles developed by the PWA Housing Division (first reported in the February issue of *American Architect*) undoubtedly furnish an excellent basis, averaged between the ideal and the most generally practical. But plan-diagrams of projects illustrated here demonstrate that all housing problems are not the same. Particularly in low-rental developments, the designer meets with factors not common to every locality or group. Customs vary in different parts of this huge country. In general, however, Americans resist any attempt to regiment their manners of living, a fact that holds as true in regard to housing as to business. Thus, every housing project becomes a problem to be solved in the light of its own peculiar limitations and possibilities. Standards are valuable only insofar as they set limits below which no decency in living quarters can be achieved.

Studies presented herewith show also that "low-rental housing" is a relative term. Built on foreign soil, with foreign materials and labor, financed with foreign money and occupied by foreign people, almost any American housing project would, probably, show an appreciable reduction in rents-per-room. Undoubtedly living costs and building costs are higher in America. So also are wages. And it is a fallacy—mostly unexplained by the experts—to believe that housing adequate for American living can be built to rent for figures equivalent to those in Europe. Even with no amenities, a housing project costs money to build, equip, finance and maintain. This fact constitutes a line marking the difference between theory and practice. It has also proved to be a hard rock upon which many an expert's housing proposal has been wrecked.—
The Editors.

An Analysis of Housing Practice

BY WELLS BENNETT

Associate Professor of Architecture, University of Michigan

TOWARD the solution of any housing problem, the architect must work between limitations of gross area fixed by costs on one hand, and of minimum space requirements determined by health and sociological authorities on the other. Furthermore, these upper and lower limitations are not yet final. If housing is a public concern, with values which are largely social and economic, standards for American housing must remain somewhat unsettled until our economic future can be forecast more definitely than at present.

It is the purpose of this study to show a section of experience in planning dwelling units. All have been built or have been accepted by competent authorities. Plans have been chosen to suggest variety and are typical rather than extreme forms. Ten European examples were selected with twice that number from American practice. Plans of the latter include most of the important projects of executed work and some that are under construction or in

immediate prospect as part of present national housing activities. Since the merits of single dwelling, row house and apartment types are still being debated, examples of the three forms are shown. Kitchens except built-in strip units are counted as rooms. In several foreign plans, rooms listed as baths are toilets only, the tub being in the kitchen or outside the body of the apartment.

Repeatedly the American situation has been dramatized by the charge that we have done no cheap housing. It is true that our rents range higher than those abroad, but valid comparison can only be made in respect to the difference between wage and living scales. American types shown here are at least a point of departure from which economic necessities will direct the quality of future housing.

DWELLING SIZES

According to the projects shown, the average size of the American dwelling is 21'-5" x 28'-11", with

4.5 rooms as an average number. The foreign type averages 19'-0" x 28'-2½" in size with 4.3 rooms. A comparison of average gross areas shows that the average American dwelling is larger in proportion to the number of rooms than is the case abroad.

Living area percentages are a kind of measure of planning efficiency. In this respect our plans fail to make as good a showing as in gross area. We have not cut enough corners. Room closets, however, standard practice here, are not included in living areas. In foreign housing, except that in Holland, wardrobes are used, which, as pieces of furniture, remove space from the living areas given. The gross areas of halls and stairs indicate greater efficiency in American schemes in that less area is absorbed by circulation. But here, as in many statistics, averages may be misleading. In any plan pattern, space necessary for stairs remains practically constant. The hall requires almost as set an area. Therefore, the small dwellings suffer compared with a similar type with larger gross area.

The foreign group also presents several special types that lose in a statistical comparison which takes no note of their offsetting advantages. Thus, a municipal apartment in Vienna (10-F) is small. Its living area is likewise small in proportion to the area of hall and stairs. This dwelling, however, is only part of the family's living facilities under the conscious planning of a socialistic regime. Family privacy is insured by these individual apartments, but bathhouses, laundries, child care and recreation are community facilities. Frankfort-Plattenstrasse (6-F) and Ossulston (7-F) seem to give an undue percentage to halls and stairs. Their balcony circulation, however, is reputedly economical to build; also, it may have a secondary use as porch space.

Of the American types, Norris is in a class by itself. Halls and stairs are practically eliminated and thus the plan makes an exceptional showing in the low percentage of area absorbed by circulation. But the setting here is different from that of the usual

housing unit of whatever type. Located on a farm-garden site, the simple life planned for permits direct interconnection of rooms; and in the relatively mild climate of Tennessee the large porch is useful most of the year as additional circulation.

ROOM SIZES

Aside from general requirements, there appear certain distinctions in room planning between single family, row house and apartment units. Among the most obvious factors involved is the character of the group to be housed. Beyond the question of type, room arrangements become matters of orientation for light, air, interconnection and economy of construction. Both in unit and room planning there appear certain opportunities and limitations inherent in each of the three dwelling classifications.

In single-family houses, rooms are relatively large, both in proportion to gross area of dwelling and in proportion to rent. To secure such extras as fireplaces, porches, etc., careful project analysis and planning is evident. Also, the fullest use has been made of certain favorable conditions, as relatively cheap suburban land, construction costs that are lower than in most urban locations and the use of light, non-fireproof construction. Granted these conditions—and a good tenant market—single houses make a good showing.

Since wide variations exist in apartment types, general conclusions are not so readily drawn and certain comparisons seem irrational. Thus, small apartments may represent an advanced standard of living for tenants in an urban location involving high costs of land and construction. It is clear that apartment plans reflect not only special financing conditions, but also different social group requirements as faithfully as do single houses. Row houses prove to be the most uniform in plan and we find them likewise more consistent in efficiency and rent scales.

The range in room sizes is naturally considerable. Their limits, devised to meet the varying conditions



The newest approach to low-rental housing in this country is illustrated by this model of a project in Detroit, Michigan. Large areas, now slums, are to be rebuilt for use of the low-income groups. Included in most cases are various recreational facilities as parks, playgrounds, and community service centers

FOREIGN TYPE PLANS - General Data

Table 1-F

No.	Projects	Financing	Type	Rent Class p.r.p.m.	No. R'ms.	—Dimensions—		Gross Area Sq. Ft.	Per Cent of Gross Area in			Areas of Rooms in Square Feet			
						Width	Length		Living Space	Halls and Stairs	Living Rooms	Parlor or Dining Room	Kitchens	Baths	Bedroom in Order of Size
1	Germany Frankfort-Praunheim	Municipal	Row	\$3.75	5	16'5"	27'1"	888.76	66.9	11.8	144.18	84.59	82.43	33.03	85.46 165.04
2	Holland Rotterdam	Municipal	Row	1.35	5	14'2"	24'8"	698.37	64.8	14.1	193.43		39.42	8.49	51.74 79.86 79.86
3	England Welwyn	Lim. Div. Gov't. aid	Row	1.65	6	18'7"	25'3"	938.90	72.9	8.9	97.51	182.75	82.29	24.00	63.89 98.48 136.39
4	Switzerland Zurich	Coop.	Row	6.30	6	21'0"	29'8"	1200.36	70.2	12.6	300.00		101.33	34.39	73.72 86.79 122.95 132.70
5	Germany Berlin-Siemenstadt	Municipal	Ap't.	4.00	4	25'0"	31'10"	795.75	72.2	14.1	199.79		81.22	36.72	95.58 161.25
6	Germany Frankfort-Platenstrasse	Municipal	Ap't.	3.50	3	19'8"	21'8"	465.00	66.1	*23.2	177.67		32.46	36.00	60.93
7	England London-Ossulston	Municipal Gov't. aid	Ap't.	3.50	3	24'0"	24'8"	688.00	58.3	*26.5	172.25		96.50	¹ 11.25	121.75
8	England London, Simplified Type	Municipal Gov't. aid	Ap't.		4	14'0"	34'0"	629.06	70.9	12.3	161.34		29.00	² 41.32	102.00 112.50
9	France Paris, Maisons-Alfort	Local Authority, Gov't. aid	Ap't.	2.00	4	21'9"	28'8"	623.35	69.6	14.0	129.76		³ 57.99	22.82	109.37 114.49
10	Vienna	Municipal	Ap't.	1.00	3	15'3"	34'6"	724.54	58.4	19.3	172.25		126.86	¹ 12.39	112.58
Averages				3.00		19'0"	28'2 1/2"	765.21	67.0	15.6	174.81	133.67	90.47	26.04	103.20

*The corridor porch has been included in gross area and in circulation. The common stair has not been included.
¹Toilet only. Ossulston has tub in kitchen.
²Private toilet. Bath room shared by two apartments.
³Includes kitchen and adjacent laundry.

FOREIGN TYPE PLANS Table 2-F

No.	Project	Closets				Miscellaneous Amenities					Special Items			
		Coat	Bed Room	Linen	Storage	Entrance Vestibule	Kitchen Service	Direct Hall	Indirect	Through a Principal Room	Basement	Central Heat	Fireplace	Porch or Balcony
1	Praunheim					x								
2	Rotterdam		2			x								
3	Welwyn		1			x								
4	Zurich	1	4	1		x		x		x	x		x(4)	
5	Siemenstadt					x								x
6	Platenstrasse					x								x
7	Ossulston		1		1	x							x(2)	x
8	London Simplified Type					x								x
9	Maisons-Alfort	1				x				x	x			x
10	Vienna					x								x

AMERICAN TYPE PLANS Table 2-A

No.	Project	Closets				Miscellaneous Amenities					Special Items			
		Coat	Bed Room	Linen	Storage	Entrance Vestibule	Kitchen Service	Direct Hall	Indirect	Through a Principal Room	Basement	Central Heat	Fireplace	Porch or Balcony
1	Euclid		3	2										
2	Norris	1	1		1									
3	Radburn		4	1										
4	Chatham, P-11	1	2	1										
5	Chatham, P-14	1	3	1		x								
6	Detroit, RH-1	1	2											
7	Detroit, RH-3	1	3	1	1	x								
8	Euclid	1	2	1		x								
9	Marimont	2	1			x								
10	Sunnyside	1	3	1		x								
11	Bridgeport	1	3			x								
12	Grand Street	1	1	1		x								
13	Cleveland	1	1	1		x								
14	Cleveland		2	1										
15	Dunbar	1	1	1		x								
16	Hillside	1	2	1		x								
17	Knickerbocker Village	1	1	1		x								
18	Mich. Blvd.		2											
19	Prudential													
20	Phipps Gardens					x								

AMERICAN TYPE PLANS—General Data

Table I-A

No.	Project	Financing	Type	Rent Class p.r.p.m.	No. R'ns.	—Dimensions—		Gross Area Sq. Ft.	Per Cent of Gross Area in		Areas of Rooms in Square Feet				Bedrooms in Order of Size
						Width	Length		Living Space	Halls and Stairs	Living Rooms	Parlor or Dining Room	Kitchens	Baths	
1	Euclid, Ohio	PWA	Single	\$6.94	6	23'6"	23'6"	1104.50	69.7	11.2	198.51	117.28	81.22	50.22	99.00 107.24 117.38
2	Norris, Tenn.	TVA	Single	6.50	3	20'0"	40'6"	864.00	77.0	2.7	190.00		255.5	30.00	190.00
3	Radburn, N.J.	Lim. Div.	Single	10.00	6	20'0"	30'4"	1667.19	62.4	6.9	232.75	145.12	100.12	41.85	147.25 169.83 204.43
4	Pittsburgh, Pa. Chatham, P-11	Lim. Div.	Row	11.35	5	16'6"	26'6"	874.50	68.8	10.3	180.75	98.30	48.30	32.81	104.12 137.60
5	Pittsburgh, Pa. Chatham, P-14	Lim. Div.	Row	11.35	6	20'6"	28'8"	1175.06	71.8	9.5	210.85	144.76	77.01	39.87	83.76 141.61 146.86
6	Detroit, RH-1	PWA	Row	6.28	5	14'0"	24'8"	690.48	69.7	11.8	147.00	60.64	41.25	34.87	84.04 115.00
7	Detroit, RH-3	PWA	Row	6.28	6	18'0"	28'0"	1008.00	72.7	9.4	221.12	100.00	61.75	35.93	81.50 110.00 123.00
8	Euclid, Ohio	PWA	Double	7.50	5	17'6"	25'6"	1035.00	64.8	13.1	167.64	117.87	96.25	43.39	119.51 167.64
9	Mariemont, O.	Lim. Div.	Row	7.50	5	16'0"	27'6"	880.00	70.1	10.2	164.40	88.30	74.54	37.28	116.50 135.95
10	New York Sunnyside	Lim. Div.	Row	9.00	6	17'6"	28'4"	991.55	72.8	9.6	168.86	123.08	80.20	37.66	66.06 119.11 127.53
11	Bridgeport, Conn.	U. S. Hous. Corp.	Duplex	6.87	4	25'6"	28'0"	749.00	61.4	9.1			126.50	34.81	88.00 100.00 110.74
12	New York Grand Street	Coop.	Ap't.	12.22	4	31'4"	32'6"	1007.24	71.3	14.7	204.00		155.50	42.50	158.57 158.57
13	Cleveland	PWA	Ap't.	5.00	3	20'9"	26'0"	600.57	64.8	17.1	221.37		37.50	33.12	97.47
14	Cleveland	PWA	Ap't.	7.50	4	25'0"	27'0"	663.75	74.4	8.1	195.50		73.62	32.50	92.07 100.44
15	New York Dunbar	Lim. Div.	Ap't.	14.50	5	27'2"	27'2"	702.33	73.6	11.3	152.25	38.50	69.20	31.50	104.22 121.50
16	New York Hillside	RFC	Ap't.	11.00	4	27'0"	32'6"	877.50	72.6	11.3	204.72		80.63	36.82	132.64 182.31
17	New York Knickerbocker Village	RFC	Ap't.	12.50	3	22'6"	25'6"	599.93	74.1	8.5	194.00		94.50	33.30	122.78
18	Chicago Mich. Blvd.	Lim. Div.	Ap't.	13.30	4	26'3"	30'6"	712.04	74.8	10.1	164.18		90.35	44.67	116.09 117.62
19	Newark, N. J. Prudential	Lim. Div.	Ap't.	10.00	2	13'5"	31'9"	459.98	72.1	12.5	155.04		10.79	27.25	139.69
20	New York Phipps Gardens	Lim. Div.	Ap't.	16.80	4	25'7 1/2"	34'10"	892.34	68.8	13.6	179.64		88.99	42.84	134.52 168.63
Averages				9.61		21'5"	28'11 1/2"	877.74	70.8	10.55	186.97	103.38	88.68	39.65	125.26

of the sample projects, are given in terms of square foot areas in Table 3. Foreign dining room dimensions are not included because so few examples are shown. Bathrooms in foreign projects are omitted because several have no tub or have special provisions not to be compared with our standards. The averages quoted are those of all American or foreign plans. In the twenty American projects, the average area given to sleeping space is 259.18 square feet, or 29.4 per cent of the average gross area. The average for the foreign projects is slightly under this figure.

PLAN PATTERNS

Plans suggest the variety possible within the limitations of large scale housing. Predominant, however, are certain arrangements of rooms with regard to light and air, circulation and efficiency of use. Except in the case of individual house types, there are relatively few plan patterns. Patterns I and II stand as most widely accepted for the single house and for row construction. Essentially, they are variations of the side hall or center hall plan.

Apartment patterns introduce the common stair tower and show possible room arrangements about the stair landing, usually with two apartments to a floor. Vienna and many apartments in Knickerbocker Village offer only one exposure, but the usual practice demands two outer walls. Most low-cost housing buildings provide no common halls and elevators. In orientation and general convenience, Pattern V is particularly direct and economical. It is probably the best if one accepts the placing of the sleeping rooms. Pattern X is a corridor-balcony type that permits an extremely compact plan. The Newark plan show as Pattern XI has the perfect circulation possible with a central foyer.

INTERPRETATION

Beyond these figures and patterns lies a creative field in which the architect can adapt accepted principles to his particular problem and make his contribution to this specialized branch of planning. In the interpretation of these sample projects, there is somewhat more than meets the eye in statistics and graphs. The plans have been developed, not as efforts to be different, but to suit various conditions and requirements. It is interesting to see what some of these have been.

England and Holland have been pioneers in large-scale housing with long and rather orderly development. Their programs have been quite radical as regards economic theory and the use of public funds. But there is no outward evidence of disturbance; and sane practices are reflected in the physical aspect of most of their housing settlements. The garden cities near London, for example, reflect a national state of mind. Conventional brick construction, parlor, fireplaces—all bespeak the modest middle class home. The plan of Rotterdam, narrow to a degree, is distinctly a Dutch type which, in general,

has an effect of space economy. Public acceptance of these dwellings indicates the straitened standard of living to which the Dutch worker—long accustomed to crowded living quarters—must conform.

In contrast with these, the plan of the Vienna project implies a new manner of life for the low-income tenant in which the home is identified with a new social consciousness and regime. German family life has remained generally unchanged by political upheavals, although in some housing settlements, community laundries, nurseries and co-operative stores reflect the Socialistic tendency, as in Vienna. Unlike England, there have been many experiments in planning and construction in Germany. Urban families there are probably more accustomed to apartment life than we. But they insist on outdoor living, at least to the extent of a family balcony.

One of Germany's important experiments was with the continuous balcony apartment projects, of which Frankfort-Plattenstrasse is an example. The economies in stair towers are tempting to the housing architect, but the common corridor would meet a doubtful reception here. Since it is a lineal descendant of the tenement corridor or gallery, the idea is not so strange to the continental mind. Ossulston represents an English version of the corridor-balcony plan without the additional private family balcony.

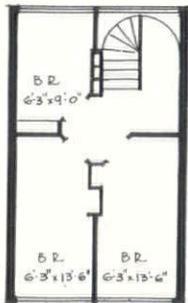
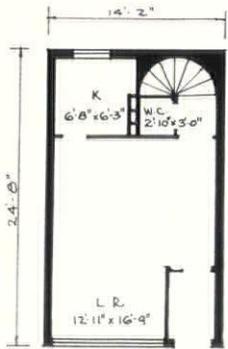
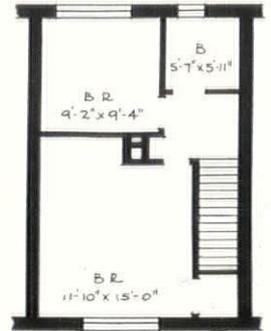
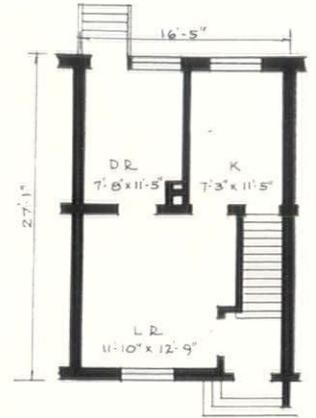
Faced with the urban slum clearance problem, English designers, like others, discovered that the low-cost apartment is difficult to plan and troublesome economically. In the London Simplified dwellings, they made a frank effort to develop housing which can be built to rent at rates within reach of the low-wage tenants who, displaced by slum clearance, could not afford quarters even in such subsidized schemes as Ossulston. From an American standpoint, the value of the results seems doubtful when the complications of hallways and the loss of privacy in the concentrated service section are considered.

An outstanding feature of French planning as represented by the Maisons-Alfort project is the kitchen-laundry-bath unit which reflects a national characteristic. The French family insists on privacy and has not taken kindly to the community laundry as part of better housing. There has, therefore, been developed a "water room" in which is placed a combination bath and laundry tub, and sometimes the kitchen sink. A screened *sechoir*, or clothes drying closet, usually adjoins the water room, although at Maisons-Alfort, one of the latest projects, the drying arrangement is in the laundry itself. The toilet is in an adjoining enclosed stall or compartment. The laundry-bath, like the clothes closet in Dutch planning, is accepted as a requirement in the vicinity of Paris.

Our own projects differ among themselves almost as much as foreign schemes in adaptation to the character of the tenant group for which the settlement is planned. We find again that particular

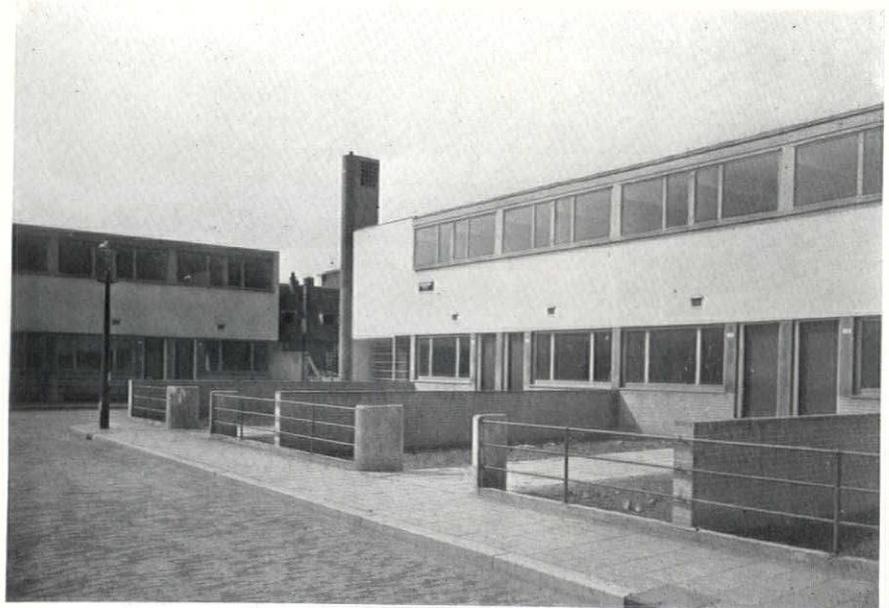
1·F FRANKFORT-PRAUNHEIM, Germany

Gross Area: 888.76 sq. ft. Rent: \$3.75 per room per month.



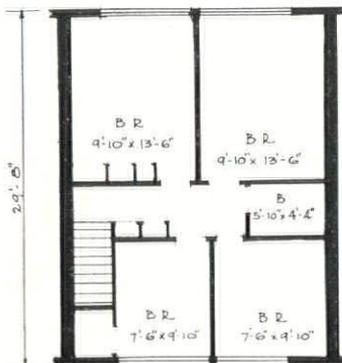
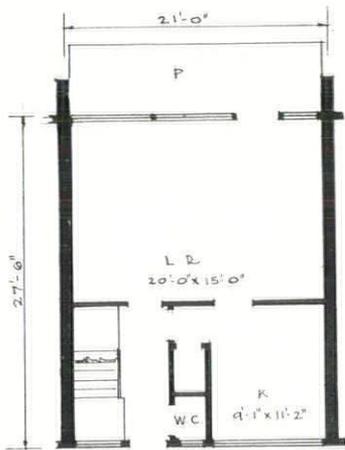
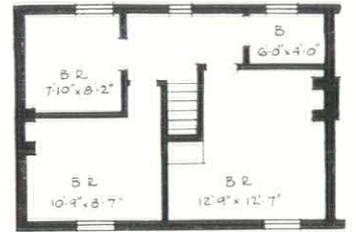
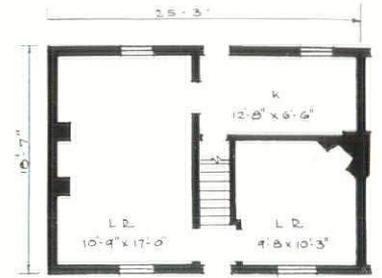
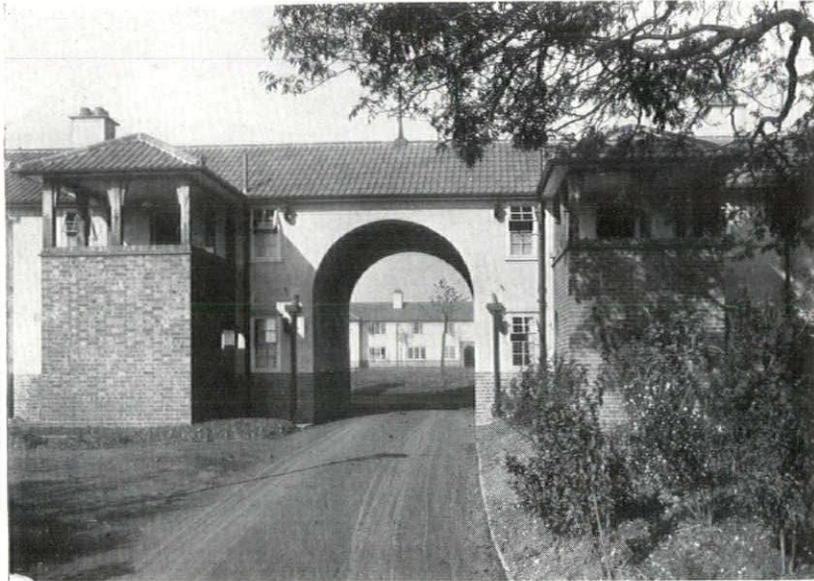
2·F ROTTERDAM, Holland

Gross Area: 698.37 sq. ft. Rent: \$1.35 per room per month



3·F WELWYN, England

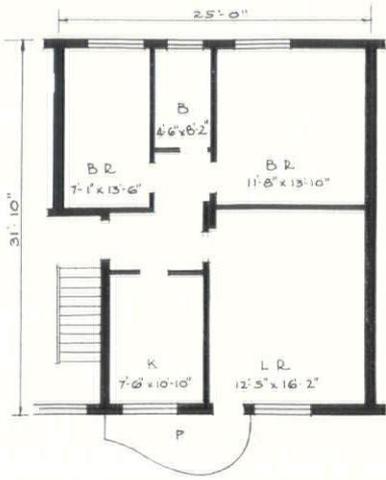
Gross Area: 938.9 sq. ft. Rent: \$1.65 per room per month



4·F ZURICH, Switzerland

Gross Area: 1200.36 sq. ft. Rent: \$6.30 per room per month





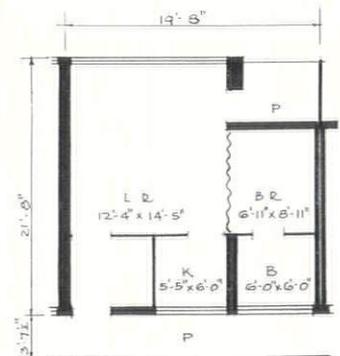
5·F BERLIN-SIEMENSTADT, Germany

Gross Area: 795.75 sq. ft. Rent: \$4.00 per room per month



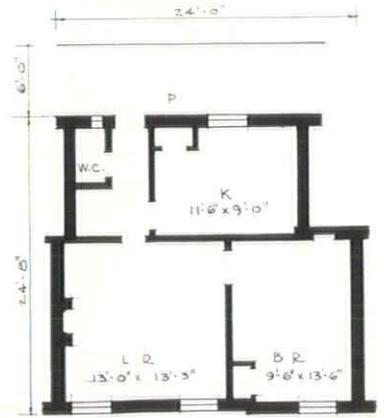
6·F FRANKFORT-PLATENSTRASSE, Germany

Gross Area: 465 sq. ft. Rent: \$3.50 per room per month



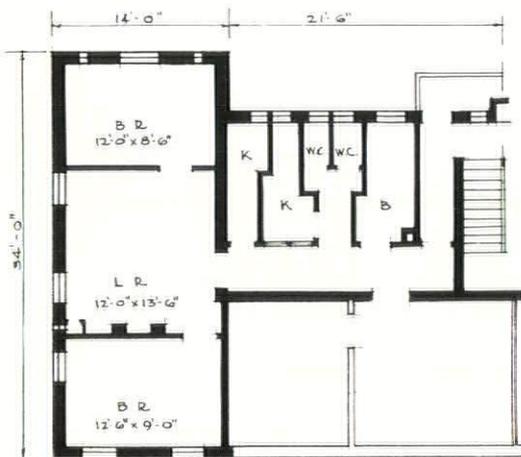
7·F LONDON-OSSULSTON, England

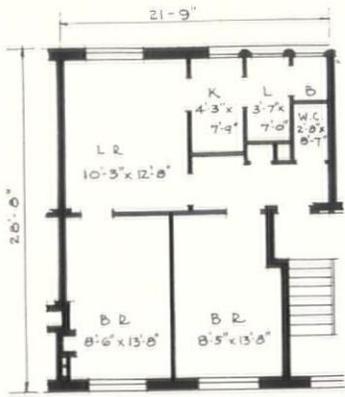
Gross Area: 688 sq. ft. Rent: \$3.50 per room per month



8·F LONDON SIMPLIFIED DWELLINGS, England

Gross Area: 629.06 sq. ft.





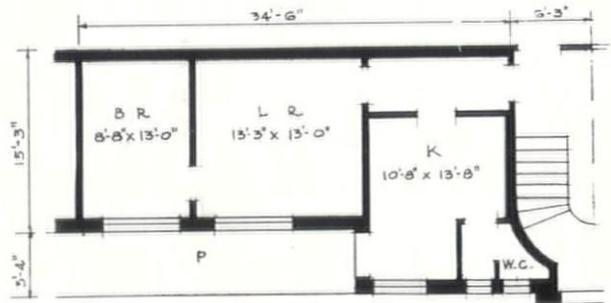
9·F MAISONS-ALFORT, Paris. France

Gross Area: 623.35 sq. ft. Rent: \$2.00 per room per month



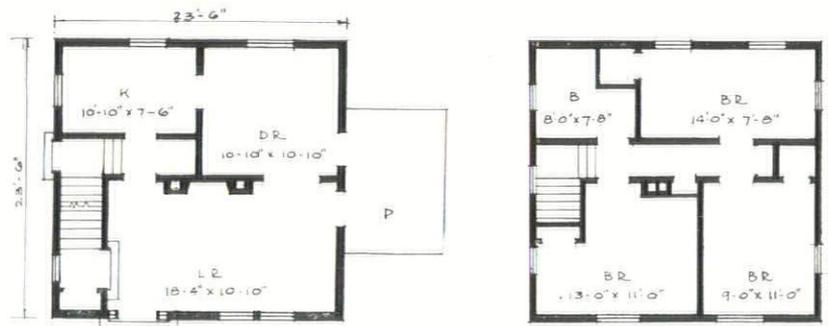
10·F VIENNA, Austria

Gross Area: 724.54 sq. ft. Rent: \$1.00 per room per month



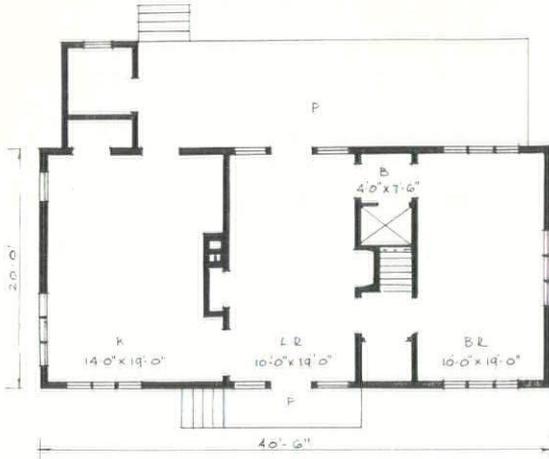
1·A EUCLID, Ohio

Gross Area: 1104.50 sq. ft. Rent: \$6.94 per room per month



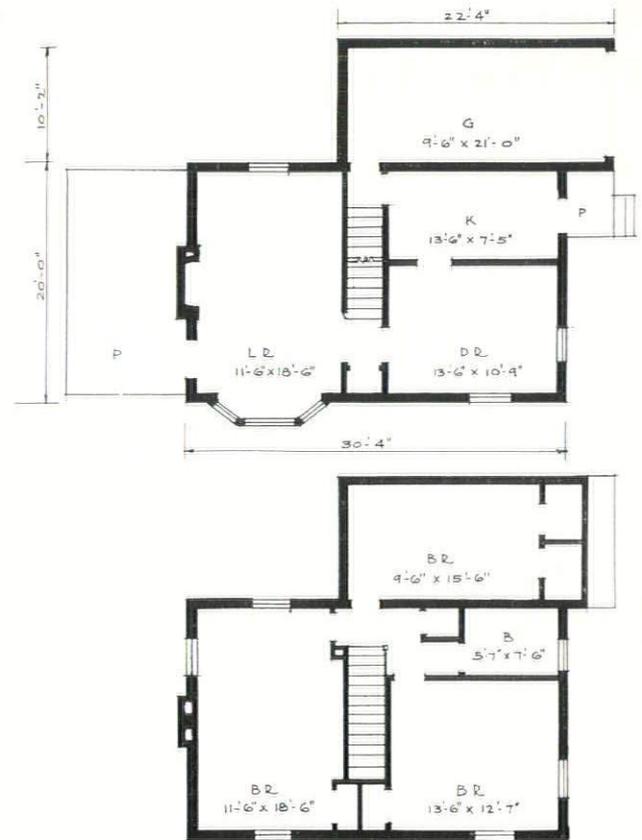
2·A NORRIS, Tennessee

Gross Area: 864 sq. ft. Rent: \$6.50 per room per month



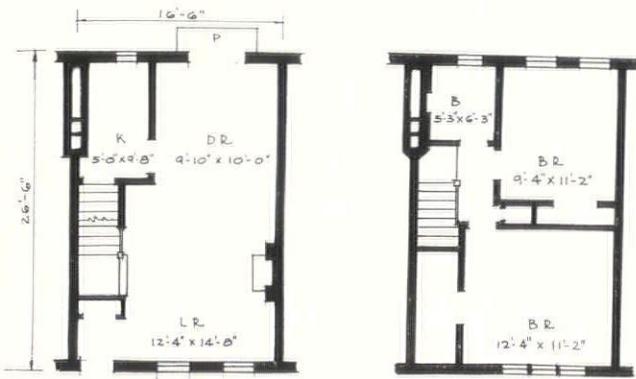
3·A RADBURN, New Jersey

Gross Area: 1667.19 sq. ft. Rent: \$10.00 per room per month.



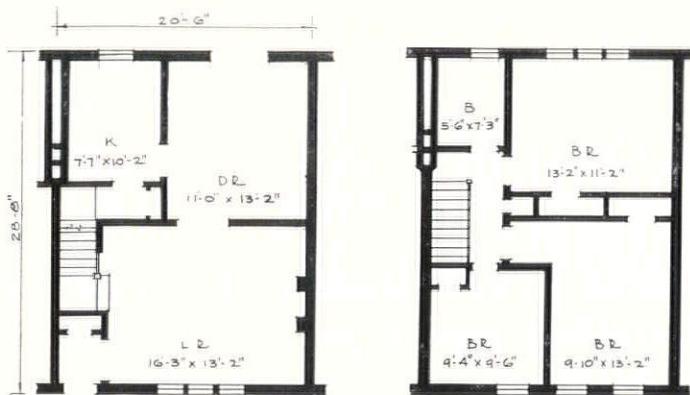
4·A CHATHAM, P-11, Pittsburgh, Pa.

Gross Area: 874.50 sq. ft. Rent: \$11.35 per room per month



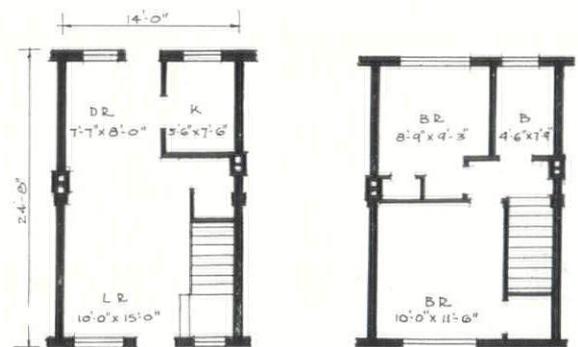
5·A CHATHAM, P-14, Pittsburgh, Pa.

Gross Area: 1175.06 sq. ft. Rent: \$11.35 per room per month



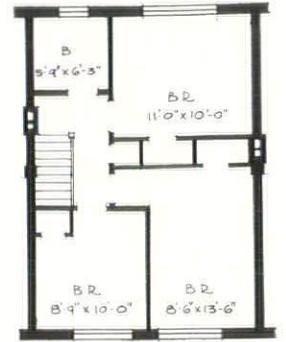
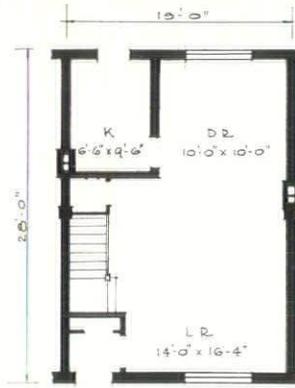
6·A DETROIT, RH-1, Michigan

Gross Area: 690.48 sq. ft. Rent: \$6.28 per room per month



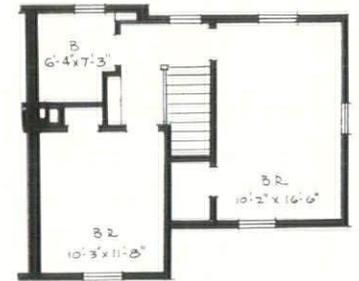
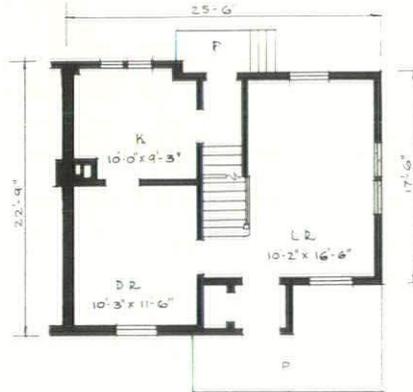
7·A DETROIT, RH-3, Michigan

Gross Area: 1008 sq. ft. Rent: \$6.28 per room per month



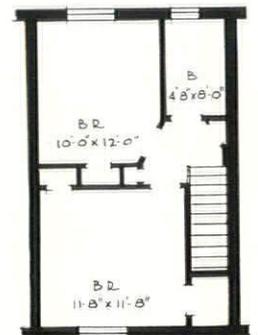
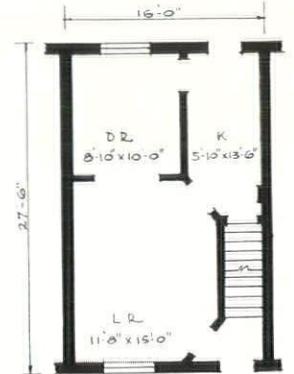
8·A EUCLID, Ohio

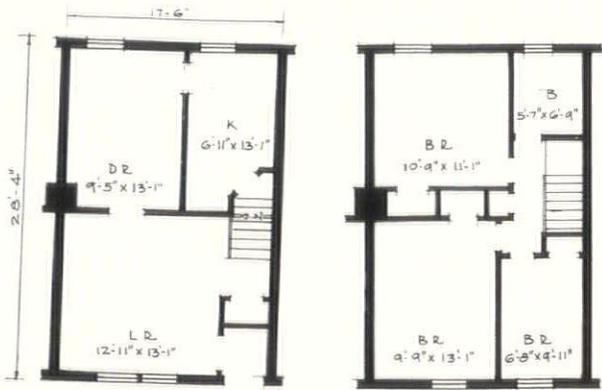
Gross Area: 1035 sq. ft. Rent: \$7.50 per room per month



9·A MARIEMONT, Ohio

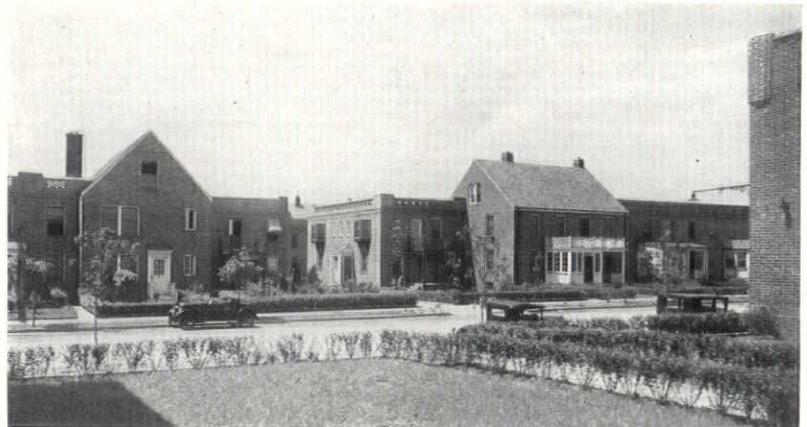
Gross Area: 880 sq. ft. Rent: \$7.50 per room per month.





10·A SUNNYSIDE, New York

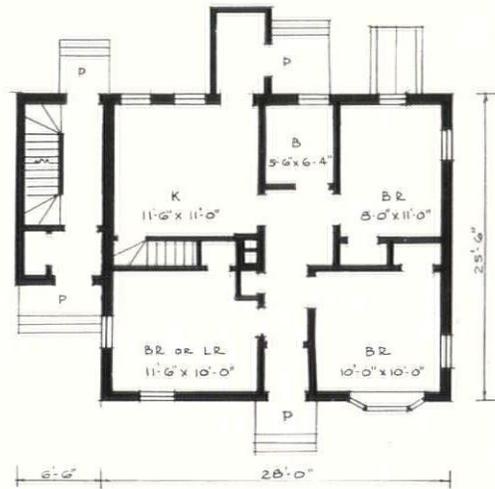
Gross Area: 991.55 sq. ft. Rent: \$9.00 per room per month



ANEMVA

11·A BRIDGEPORT, Connecticut

Gross Area: 749 sq. ft. Rent: \$6.87 per room per month

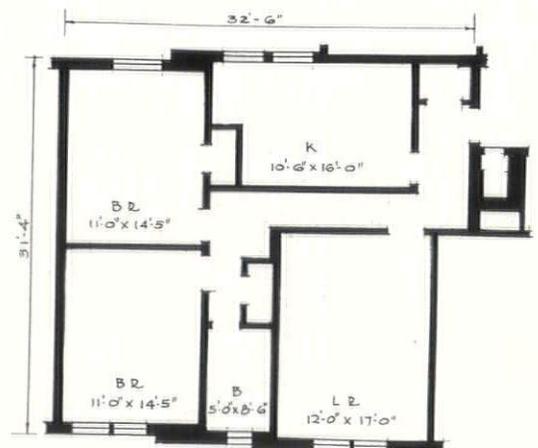


12·A GRAND STREET, New York

Gross Area: 1007.24 sq. ft. Rent: \$12.22 per room per month

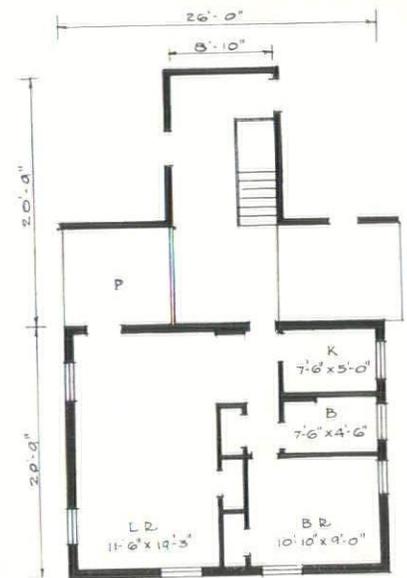


GOTTSCHO



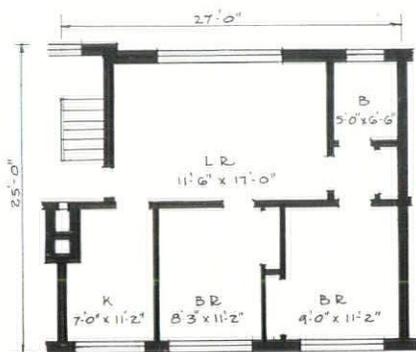
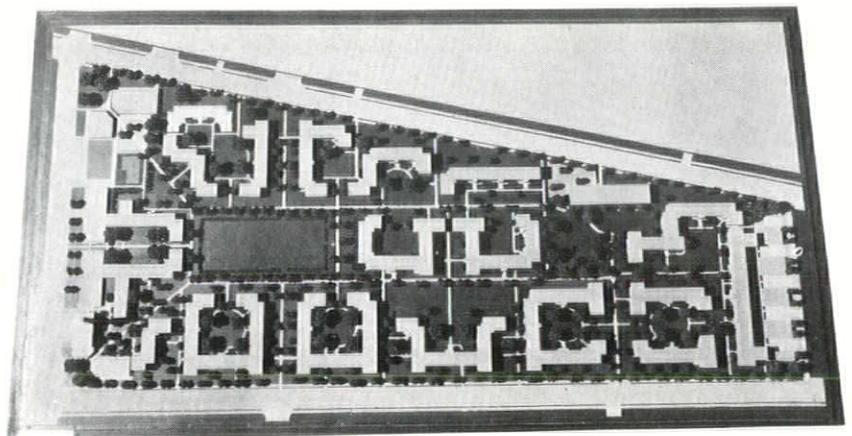
13·A CLEVELAND, Ohio

Gross Area: 600.57 sq. ft. Rent: \$5.00 per room per month



14·A CLEVELAND, Ohio

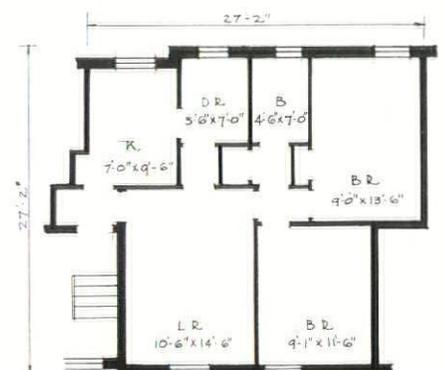
Gross Area: 663.75 sq. ft. Rent: \$7.50 per room per month



VAN ANDA

15·A DUNBAR, New York

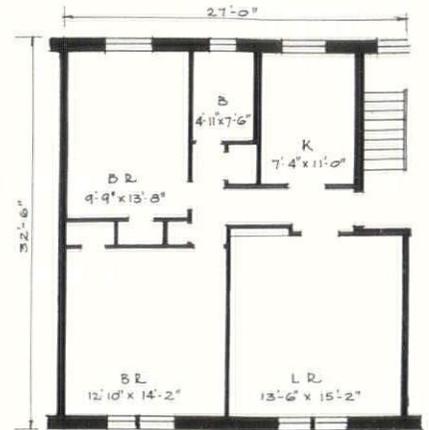
Gross Area: 702.33 sq. ft. Rent: \$14.50 per room per month





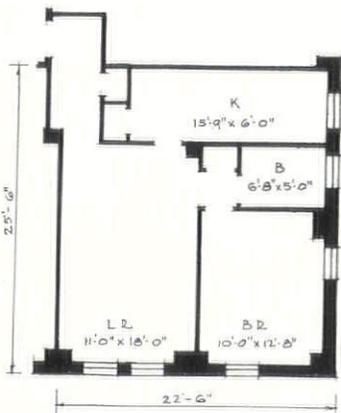
16·A HILLSIDE, New York

Gross Area: 877.50 sq. ft. Rent: \$11.00 per room per month



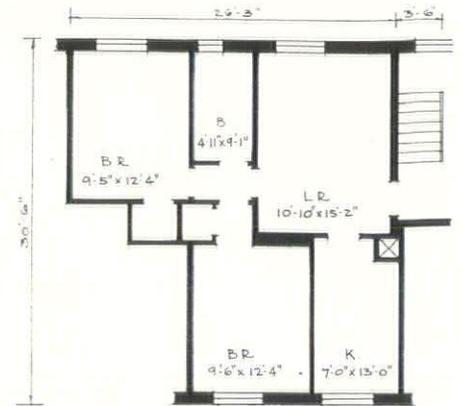
17·A KNICKERBOCKER VILLAGE, New York

Gross Area: 599.93 sq. ft. Rent: \$12.50 per room per month



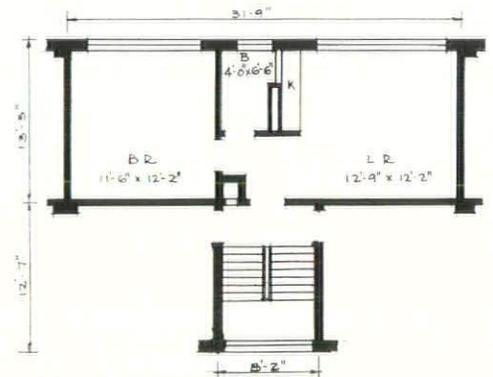
18·A MICHIGAN BOULEVARD, Chicago, Ill.

Gross Area: 712.04 sq. ft. Rent: \$13.30 per room per month



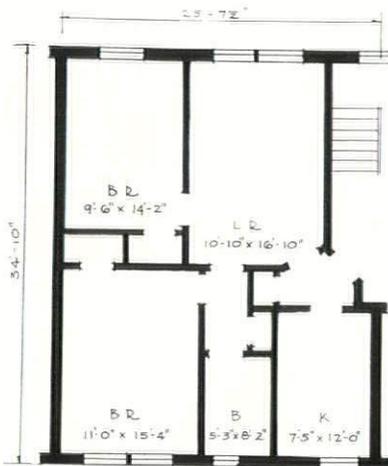
19·A PRUDENTIAL, Newark, N. J.

Gross Area: 459.98 sq. ft. Rent: \$10.00 per room per month

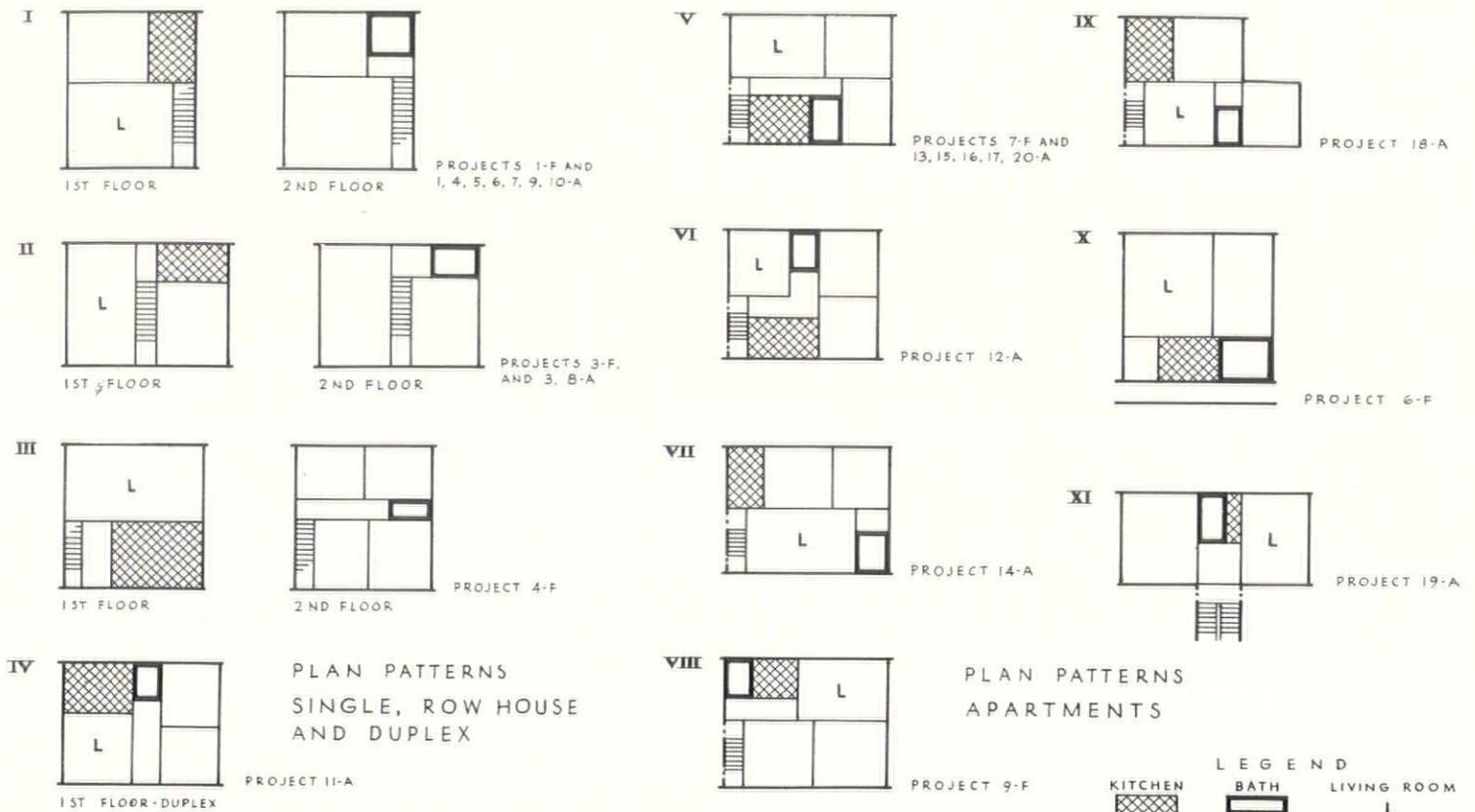


20·A PHIPPS GARDENS, New York

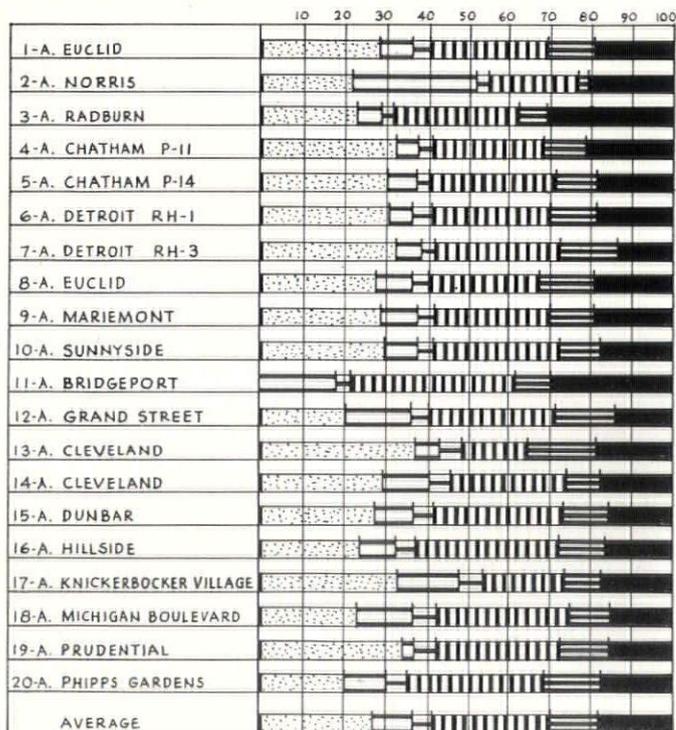
Gross Area: 892.34 sq. ft. Rent: \$16.80 per room per month



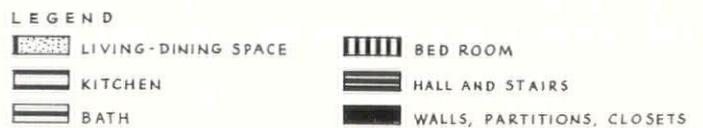
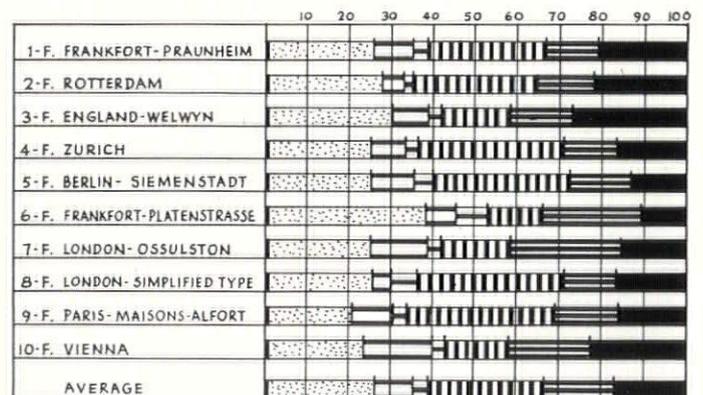
WURTS BROS.



AMERICAN PROJECTS
 PERCENTAGE DISTRIBUTION OF GROSS AREAS



FOREIGN PROJECTS
 PERCENTAGE DISTRIBUTION OF GROSS AREAS



Diagrams at top of page give a graphic comparison of typical plan patterns that occur most frequently among housing examples included in this study. Charts give a comparison, on a percentage basis, of space utilization in typical foreign and American projects. Note the wide variation which is common to both classes

TABLE 3. A SUMMARY COMPARISON OF ROOM SIZES

	Relative Size	Project	Dimensions	Area in Sq. Ft.
Living Rooms	American	Largest Radburn A-3	11' 6" x 18' 6"	232.75
		Smallest Detroit A-6	10' 0" x 15' 0"	147.00
		Average	11' 7" x 16' 3"	186.97
	Foreign	Largest Zurich F-4	15' 0" x 20' 0"	300.00
		Smallest Welwyn F-3	9' 8" x 10' 3"	97.51
		Average	12' 3" x 14' 3 1/2"	174.81
Dining Rooms	American	Largest Radburn A-3	10' 9" x 13' 6"	145.12
		Smallest Detroit A-6	7' 7" x 8' 0"	60.64
		Average	9' 4 1/2" x 10' 8 1/2"	103.38
Kitchens	American	Largest Norris A-2	14' 0" x 19' 0"	255.5
		Smallest Cleveland A-13	5' 0" x 7' 6"	37.50
		Average	7' 3" x 11' 6 1/2"	88.68
	Foreign	Largest Vienna F-10	10' 8" x 13' 8"	126.86
		Smallest Simpl. Type F-8	2' 6" x 10' 0"	29.00
		Average	7' 2 1/2" x 10' 10"	90.47
Baths	American	Largest Euclid A-1	7' 8" x 8' 0"	50.22
		Smallest Prudential A-19	4' 0" x 6' 6"	27.25
		Average	5' 2" x 7' 1"	39.65
Bed Rooms	American	Largest Radburn A-3	11' 6" x 18' 6"	204.43
		Smallest Sunnyside A-10	6' 8" x 9' 11"	66.06
		Average	9' 10 1/2" x 12' 8"	125.26
	Foreign	Largest Praunheim F-1	11' 10" x 15' 0"	165.04
		Smallest Platenstrasse F-6	6' 10" x 8' 11"	60.93
		Average	8' 8 1/2" x 12' 0 1/2"	103.20

A comparison of room sizes without regard to opposing classifications. Forcefully illustrated is the fact that little standardization exists in the space treatments of housing examples. Foreign and American, characterized as typical in this study. Wide variations in square foot areas emphasize the importance of locality, type of house and tenant requirements as influencing the adequate solution of any housing problem

requirements have prompted a great variety of plans.

Concerning the single houses, those of the Euclid development near Cleveland are conventionally planned for regulation lots for the modest suburbanites who will eventually own them. Radburn is a garden city for New York white collar workers and professional people. In both developments, houses are standard type wood frame construction. Norris, as a subsistence homestead scheme, promises to become an important type project of the current housing program. Construction is sound, but light and very simple.

Apartments have been—and will continue to be—planned to meet varying habits of living, even in examples having the same plan pattern. Bridgeport, a sample of War housing, had originally only the kitchen in addition to the bedrooms. Its scheme was planned for a group who had been accustomed to cooking, eating and living in one room, and which, had there been a living room, would have used it for additional sleeping space. The plan of Grand Street was agreeable to a group that uses the kitchen also as a dining room. Knickerbocker Village and the Prudential apartments have extremely small kitchens, because they were planned for people—mainly office workers—who use the kitchen only for service and desire, primarily, a large, all-purpose living room.

Introduced as indicative of American housing practice in the first years of the New Deal, the Cleveland (14-A), Detroit (6-A and 7-A), and Hillside (16-A) projects are sound and relatively conservative. They reflect a struggle with land and building costs, but there is little sign of adaptation to any specialized social group. McCornack's Cleveland plan (13-A) is striking and ingenious in an arrangement that accomplishes almost complete isolation of each apartment from others on the same floor. It was planned for low-wage negro families.

These schemes, the pioneer effort of America's first conscious housing program, are, undoubtedly, only the beginning of a long development. Their background makes it evident that housing design, including the planning of dwelling units, will be a continuing activity. Elements accepted in one program are only valuable as source material for others through a process of interpretation and adaptation to needs of a new client group. It is unlikely that any rigid standards for housing can be successfully set up in America. Climatic variations, the special needs of several racial groups and the wide range of employment classifications will defy regimentation. Finally, our whole standard of living will undergo changes for better or for worse as we are able to work them out. Such changes will dictate the architect's approach to housing.



ALL PHOTOGRAPHS OF NEW ORLEANS ARE BY ALEXANDER PIAGET

OLD NEW ORLEANS . . .

Famous for the exotic excellence of its cafes, for its close association with the deep south's romantic background and for the languorous charm of its ancient buildings is the Vieux Carré, the old French Quarter of one of the country's largest seaports. It lies close to the water near a great bend of the Mississippi and straggles a few blocks in three directions about a tiny open space called Jackson Square. In other days the square was called the Place D'Armes and echoed to the tramp of Bonaparte's Colonials. On one side sits the Cabildo, once a prison and also the seat of French authority, now a museum. On the other rises the Cathedral of St. Louis, shown in the background of the picture above. To New Orleans the Vieux Carré is what Greenwich Village and the Montmartre are to New York and Paris. Architecturally and historically the Quarter is rich. Its existence is a stable, mellowed bridge between the romance of our early history and the bustling progress of today's activity





THE CABILDO, most famous of Vieux Carré buildings, was built in 1794 during the latter days of Spanish domination. On the facing page is the main entrance; above, a portion of the patio. Legend has it that scars of the lower walls were caused by bullets that snuffed out lives of many political prisoners. Since this picture was made the wall has become smooth once more—resurfaced under the well-meaning auspices of PWA



GARDEN PATIOS, often hidden behind somber street facades, are a notable characteristic of the Vieux Carré. Usually enclosed by buildings, they are pleasantly private spots for retreat against the heat of Southern mid-days. Above, old slave quarters and patio behind the house of the Confederate General P. G. T. Beauregard, recently restored and now a memorial. On facing page is the patio of the Court of the Two Sisters, on Royal Street, now used as an open-air restaurant





Typical of many old houses in the French Quarter is that shown above. It is known in the Vieux Carré as "Madame John's Legacy." Left, an ancient business building on Royal Street, the home of the old Louisiana Bank that was established in 1804

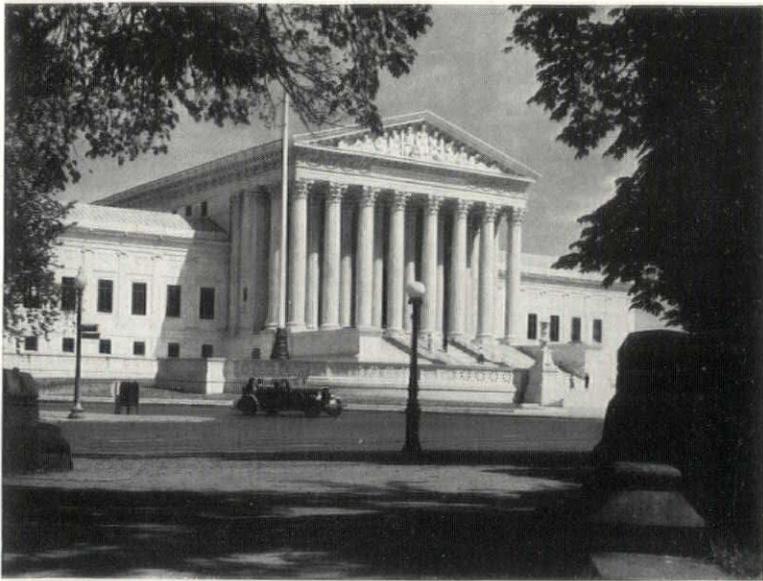


Above, another of Royal Street's business buildings. Used many years as a banking establishment, it now houses an antique shop. Right, the Old Absinthe House, built in 1750 and still in use, is famous as the legendary headquarters of Jean and Pierre Lafitte, the pirates





Ironwork balconies such as these are inseparably associated with the architecture of New Orleans' Vieux Carré. Grilles, gates, and trellises, all of iron, are a tangible acknowledgment of the French and Spanish influences—the dual heritage of the South's most famous city



CHARLES PHELPS CUSHING

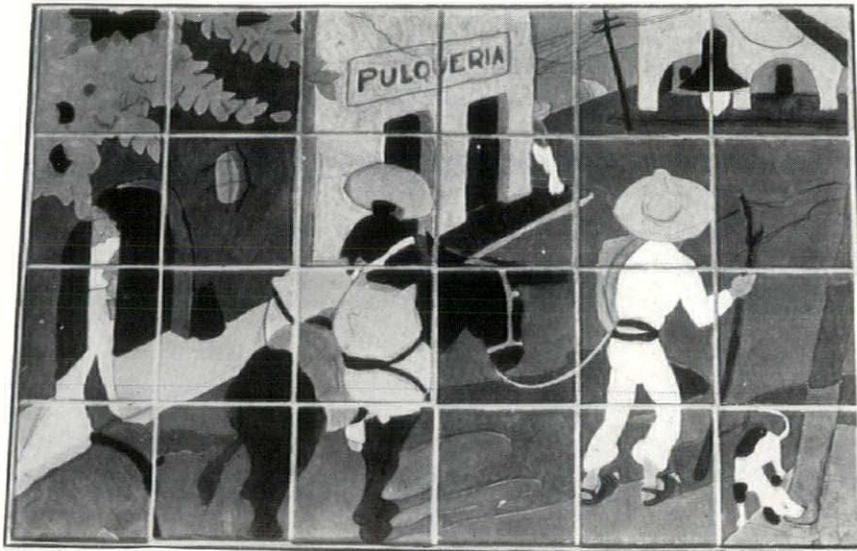
Left: the new building in Washington, D. C., for the United States Supreme Court—Cass Gilbert, architect—is virtually completed. Finishing touches are still needed on only a few minor interiors. Below: model for a new workers' club in Moscow, one of the most complete so far projected by architects engaged in rebuilding old cities in the U.S.S.R.



SOVPHOTO

Trends and Topics of the Times

- According to Morton Bodfish, Executive Vice President, United States Building and Loan League, a definite improvement in the mortgage financing situation has been made. The savings and building and loan associations have for several months been aggressively in the market for home construction loans. During the first three months of 1935 such loans constituted 16 per cent of all loans made, totalling an estimated amount of \$20,000,000. Building and loan associations expect to consummate one billion dollars worth of new loans during the present year and think that a large proportion of this will go into new construction.
- An acute scarcity of skilled labor is forecast by the Federal Committees on Apprentice Training. This opinion is based on the fact that with industrial production at a low ebb during the past five years, few new workers have been trained. They also cite: stopping of immigration from Europe; reduction in length of working day in industry; and the introduction of new machinery, processes, and methods.
- In Ferndale, Michigan, an old house has been moved to a new location and is being remodeled as a feature of the local better housing program. Options on the house are being sold for twenty-five cents. The house will be sold to the lucky option holder for \$1.00. Harvey R. Hoffmaster, Royal Oak, Michigan, is architect for the remodeling. The idea should attract public attention and stimulate interest in modernization.
- Ernst Kahn, formerly manager of the municipal housing development in Frankfurt, Germany, states in an article in the *Survey Graphic* that ten million new homes will be needed in the next ten years if living standards in the United States are not to be lowered. He describes the shortage as critical due to the small number of houses built in recent years, obsolescence of present buildings and the increase in population.
- Short-wave radio equipment has been installed in the Waldorf-Astoria Hotel, New York. The addition of this equipment to the previous radio equipment of the hotel gives it the largest all-wave receiving system in the world. Hotel guests can now be provided with broadcasts from foreign countries as well as America. The equipment embraces radio bands from 550 to 25,000 kilocycles. The short-wave equipment is designed on the most advanced principles of Western Electric radio and includes a unique antenna system specially designed by Bell Telephone Laboratories. The antenna system consists of three strands of wire strung between the hotel's two towers 660 feet above the street. The wires are of varying length and are arranged in an intricate pattern designed to pick best those of the short-wave lengths used in world-wide broadcasting.
- The Comptroller of the Treasury has ruled that financial institutions are not to classify mortgage loans made under the provisions of the National Housing Act as "slow, doubtful, or loss." The basis



A novel use of hand-made tile is shown in this picture of the bar in the Officers' Club at Randolph Field, San Antonio, Texas. Panels, made by the Mexican Arts and Crafts, depict drinking a la Mexico in characteristically brilliant color. Left, center: Le Corbusier's Swiss Hostel in Paris, France, said by "Astragal" of the London *Architects' Journal*, to be "by far the most intelligent and the completest work of modern architecture I know in the whole of Paris." Bottom of page: in this bizarre design of The Church of The Sacred Family at Barcelona, Spain, the Catalans pridefully express their architectural individuality and emphasize their native difference from other Spaniards



Trends and



ACME

for this decision is the fact that these loans are insured and guaranteed by the United States Government. National bank examiners have been instructed to this effect. It is expected that State Banking Departments will issue similar instructions in the near future.

- The Michigan Society of Architects at its twenty-first annual convention held in Detroit, March 15th went on record as favoring the appointment of a Commission to consider the advisability of formulating a Building Code for the State of Michigan. The Convention also passed resolutions protesting against the continuance of architectural bureaus in Washington; the offering of free architectural service, particularly in competition with others; and endorsed the Federal Government's subsistence homestead activity and supported the proposition to establish such projects in Michigan.

- Glass that can be twisted and bent and which resists breakage to a high degree will soon be realized



CHARLES PHELPS CUSHING

In Washington, D.C., this fountain has recently been completed on axis with the main entrance to the Capitol. Beneath it is built a subway garage that will house the cars of workers in the New Senate Office Building nearby.

Topics of the Times . . .

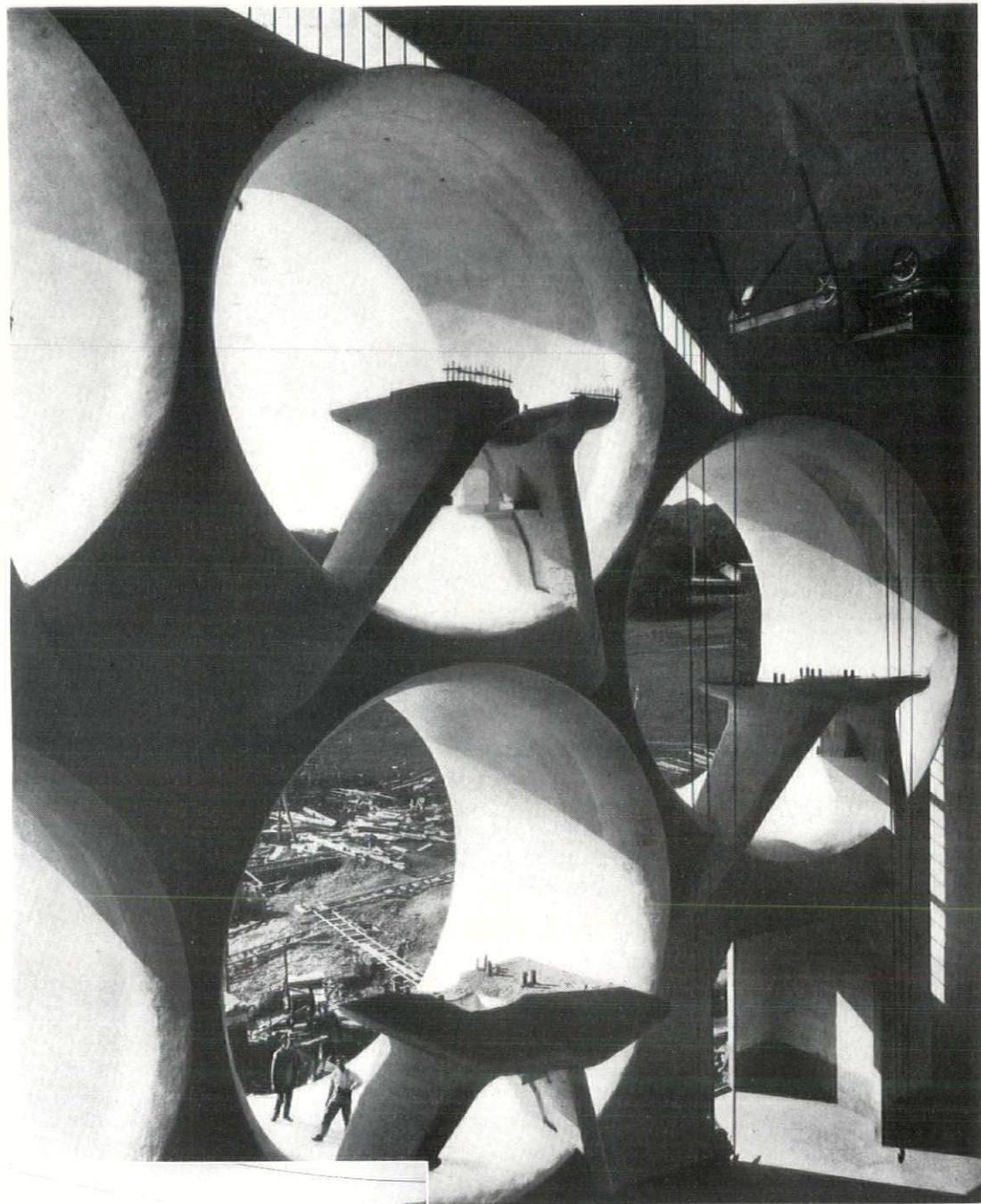
as a commercial product, it is said. The process consists of heating a sheet of plate glass until it is plastic and then suddenly cooling it with a blast of cold air. The strength of the glass is increased from four to six times that of ordinary glass. While breakable, it crumbles and does not cut or scratch like ordinary pieces of glass. The Libbey-Owens-Ford Glass Company, one of two companies licensed to use the process in the United States, is installing two of the English furnaces in its plant at Ottawa, Illinois.

- The Housing Division of the Federal Emergency Administration expects to have a large volume of slum clearance housing under construction by August of this year. In Cleveland construction bids were recently opened for the Cedar-Central development which will provide homes for 654 families in the form of apartments of from two to five rooms. The site covers 18 acres and the development includes stores, recreational and other community facilities. This project has been allotted \$3,044,000 by PWA.

Bids have also been obtained for the demolition of existing buildings on the site of the West Side housing project in Cleveland. \$2,791,000 has been allotted by PWA for this project. Nineteen acres have been purchased direct from property owners in Nashville, Tennessee, for low-rent housing construction. This development will consist of one and two-story row houses and recreational facilities. It represents an allotment of \$990,000 in Federal funds. The architects of this operation are Richard R. Clark, Henry C. Hibbs, E. M. Tisdale, Francis B. Warfield and Emmons H. Woolwine. New York City is actively engaged in planning for a \$25,000,000 Public Work Administration slum clearance and low-rent housing program.

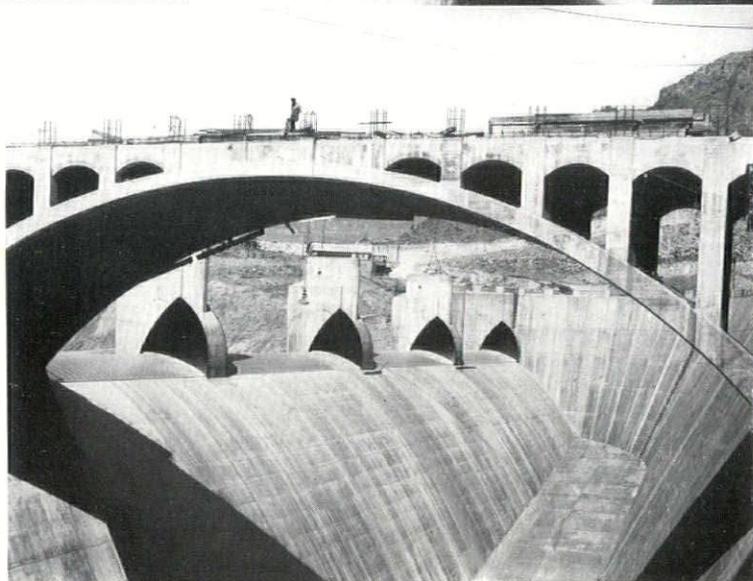
- On May 11, according to the Federal Housing Administration, pledges for modernization and repair obtained by canvassers reached \$392,767,416; an increase of \$10,680,170 over the previous week. On that date the total funds advanced under the modernization credit plan amounted to \$65,718,455.

Trends
and
Topics
of the
Times



SOBELMAN SYNDICATE

COURTESY, L'ARCHITECTE



CONCRETE . . .

Above: exhaust end of a huge wind-tunnel recently built entirely of reinforced concrete at Chalais-Meudon, France. In a 300-ft.-long air stream which attains a velocity of 100 m.p.h., full-sized airplanes can be tested in a 70-ft. chamber. Exhaust openings, above, are 28 ft. in diameter. There are six, each supporting a fan and a 1,000-hp. motor. Left: spillway at Boulder Dam, the power project in Colorado which was completed in record time. On facing page: concrete substructure of elevated approaches to New York's new Triborough Bridge for which cables are now being spun. Aymar Embury II supervised the design of the structure



CHARLES PHELPS CUSHING PHOTOS

- The Southern Pine Association has made a study of the proportionate costs of the various materials and services that enter into wood frame houses. Thirty-one houses in various sections of the country were analyzed. The houses varied in cost from \$2,500 to \$20,000. According to this study the cost items in percentages are: lumber, 8.21; flooring, including labor, 3.8; millwork, including glazing, 10.51; carpenter labor, 18.73; contractors' expense and profit, 10.36; plumbing, 8.73; excavating, foundations and sidewalks, 8.66; painting and paperhanging, 6.5; plastering, 5.14; heating, warm air, 5.12; brickwork, 3.7; wiring, 2.04; hardware, 2.2; tile, 2; roofing, 1.7; sheet metal, 1, and the lighting fixtures 1.6.

- Manufacturers of air conditioning equipment are optimistic as to the future of that industry. Recent reports indicate that they visualize millions of dollars to be spent in that field in the next few years. This applies to both new buildings and buildings being modernized. One development company on Long Island, N. Y., plans to erect eighty houses costing less than \$6,000 which will be equipped with year-round air conditioning. Other reports indicate a similar trend in the use of this equipment. This trend out modes Mark Twain's comment to the effect that everybody talks about the weather but no one does anything about it. *(Continued on page 94)*

Nearly 7,500 communities are carrying on better housing campaigns. Early in May modernization credits, home mortgages and low cost housing projects insured or committed under the provisions of the National Housing Act amounted to \$101,540,571. About one-third of this amount is for new construction. Formal approval of the insurance of a mortgage loan of \$5,500,000 on an \$8,000,000 project in the Borough of Brooklyn has been made. The loan is being made by the New York Life Insurance Company. The operation will consist of eight apartment buildings, six stories high; apartments ranging in size from two to six rooms with three and four room units predominating.

» » » Have YOU Answered

From all sections of the country
architects are saying "YES"

Each of the following letters is on file in American Architect's office. In deference to the confidence of individuals, names have been deleted here

• PHILADELPHIA, PA.

I N reference to your poll of opinion as to the two questions on "Better Business" for every architect, my answer is decidedly "Yes" to both.

• SAN ANTONIO, TEXAS

I WOULD be very glad to assist in any organization that was nationalized for the up-building and preservation of Architecture in the United States.

• LOS ANGELES, CAL.

I AM very much in favor of your Nationally Planned Public Relations Campaign. It is true that the great majority of the public have very little idea of the duties of an architect and much less of the amount of work involved in the preparation of a set of working drawings for a building. I have had many clients tell me this after having gone through a building operation. If the public in general could be made to realize this there would be much less trouble with the amount of the fee.

I want to answer both of your questions in the affirmative.

• BLYTHEVILLE, ARK.

M Y answer to both questions propounded on page 32 of the April issue of AMERICAN ARCHITECT is "Yes."

I would like to see a National Organization of Architects which would be representative of the entire profession. I believe such an organization could accomplish much. Surely there are, among leaders of the profession, a few men unselfish enough to lead in the formation of such an organization.

My very best wishes for the success of your idea which I think is a good one.

• CHICAGO, ILLINOIS

T HIS long delay in responding to your campaign for better business for architects is not due to my lack of interest. I am answering YES to both questions even if I have to miss some more lunches to comply with the second question.

I have felt the need of something along this line for a long time. The public is not educated as to the position of the architect, and I believe that we, or our ancestors, are a little to blame for this condition.

Here is a question that may be partly answered after some such campaign. "Why does a small home owner object so much to the architect's fee of six to ten per cent, but never argues with the contractor about his ten or more per cent?"

Here's to you in this campaign.

• CLIFFSIDE PARK, N. J.

○ UR answer is Yes emphatically to your question and request on page 32 April AMERICAN ARCHITECT.

• TACOMA, WASHINGTON

Y ES surely, I'll co-operate with other architects in sponsoring a Nationally Planned Public Relations Campaign, and will support it financially as you suggest.

• PAWTUCKET, R. I.

I N reply to your request for an answer to the two questions stated on page 32 of the April issue please record me as YES.

• UPPER DARBY, PA.

I N the article on publicity for architects in the April issue you ask two questions and request that architects give you their answers. Here are my answers to both: No. 1. Yes. No. 2. Yes.

If there is any way at all that I can

do my part in helping to put such a campaign across, I will be glad of the opportunity to do so. AMERICAN ARCHITECT is to be congratulated for taking the initiative in this matter. It's about time that someone did.

• COLUMBUS, OHIO

I AM much interested in the Publicity Program and will be glad to support it.

• GENEVA, NEW YORK

I T should not be hard for any of the many practicing architects to answer your question "Yes." I am happy to endorse your stand relative to bringing before the general public the whys and wherefores of the service of architects. I have felt for some time that the real reason for the profession's slipping is because it sits by without putting up any arguments.

There are real reasons why it should be done through some particular source so that it will reach out in every direction and be taken for all it is worth. I know of no better way than through the efforts of AMERICAN ARCHITECT which was in existence long before I began to practice. I have seen it grow better and better with each issue.

Answering again "Yes" to both the questions in your poll of opinion among the architects, and wishing you the greatest of success in your efforts, I am,

• WICHITA, KANSAS

I JUST received the April number of the AMERICAN ARCHITECT and desire to register my vote as YES in the matter of the national plan of public relationship campaign for the entire profession.

I will agree to co-operate with all of the other architects in sponsoring such a campaign, and, if necessary, will act locally under directions to further it. I will also be happy to contribute to the

(Continued on page 88)

These Two Questions? . . .

- 1 . . . Will you co-operate with all other architects in sponsoring a **NATIONALLY PLANNED PUBLIC RELATIONS CAMPAIGN** and, if necessary, act locally under direction to further it?

- 2 . . . If a program for such a campaign were properly **FORMULATED UNDER DIRECTION OF ACCEPTABLE TRUSTEES**, would you help support it for a year by contributing a maximum of twenty-five cents a week?

TO DEVELOP BETTER BUSINESS FOR EVERY ARCHITECT IN THE COUNTRY, the professional sponsorship of a **NATIONALLY PLANNED PUBLIC RELATIONS CAMPAIGN** was suggested in an editorial that appeared in the February issue of American Architect. Its title was, "**NATIONALLY PLANNED PUBLICITY—THE KEY TO BETTER BUSINESS.**"

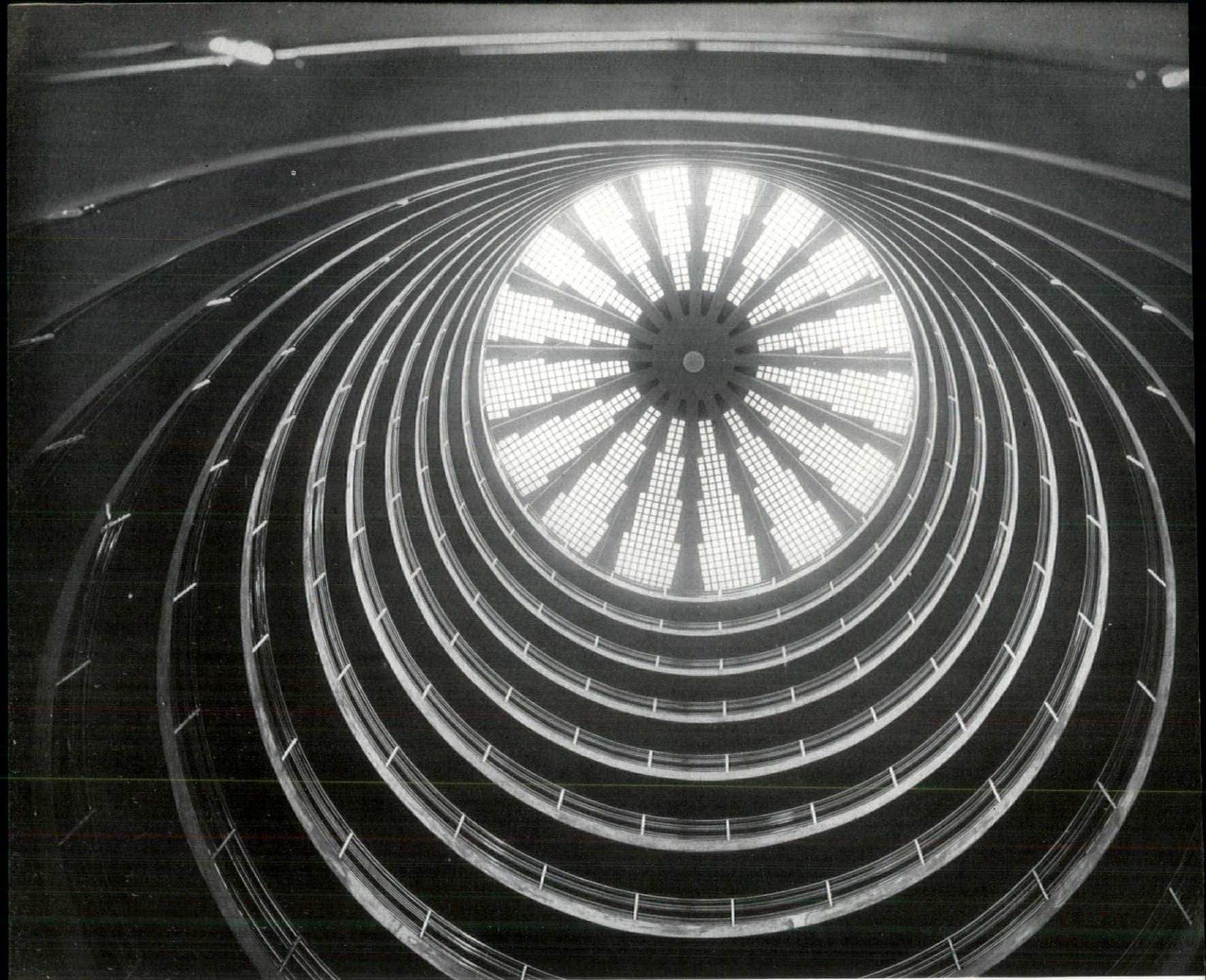
TO TEST professional opinion of the idea, architects were asked to answer "YES" or "NO" to the questions above. These appeared on page 32 of the April issue. Preceding them was an article outlining a method of conducting an architectural Public Relations Program. In addition, a letter was sent by American Architect to heads of all architectural organizations, asking that a poll of opinion be made among members.

ANSWERS HAVE BEEN "YES" IN OVERWHELMING PROPORTION FROM ALL SECTIONS OF THE COUNTRY.

IMPORTANCE OF THE IDEA IS GENERALLY RECOGNIZED. But it cannot be put into operation until the backing of EVERY ARCHITECT—REGARDLESS OF PROFESSIONAL AFFILIATION—is obtained. A majority of affirmative answers will indicate the profession's willingness to develop better business through a program of public education. This can create a **PUBLIC DEMAND FOR ARCHITECTURAL SERVICES** on every type of building.

YOUR ANSWER WILL INVOLVE NO OBLIGATION OF ANY SORT. American Architect desires only your opinion as an aid in focusing attention upon one of the **MOST IMPORTANT OF ALL PROFESSIONAL QUESTIONS**. If the interests of the profession crystallize in forming a committee of trustees, American Architect is ready to co-operate further to the end that architects may formulate a **PUBLIC RELATIONS PROGRAM UNDER EXPERT DIRECTION OF A PROFESSIONAL PUBLICIST**.

IF YOU REALIZE THE VITAL, IMMEDIATE NECESSITY of educating the public to a better understanding of your professional services, **WRITE IMMEDIATELY TO THE EDITOR** of American Architect your answers to these two questions.



A FIFTEEN-STORY HOTEL WITHOUT STAIRS

A continuous ramp spiralling about an open well replaces the usual flights of stairs in this remarkable structure in the Italian Alps. The fifteen-story tower has a circular plan which includes about 235 small but compact bedrooms, arranged somewhat like a ship's cabins. The central ramp-well is top-lighted by a prismatic glass skylight. At the bottom indirect illumination comes from a huge metal bowl. In addition to the ramp two elevators serve the tower floors. Public rooms occupy the two first floor wings



WIDE WORLD PHOTOS



V. BONADE-BOTTINO, ARCHITECT

THE DUCA D'AOSTA HOTEL

SESTRIERES, ITALY

A s i t L o o k s

REAL ENCOURAGEMENT

FOR the first time in several years building trends and reports sound a sincere note of optimism. Building permit figures from 215 cities indicate for the month of April an increase of 76.3 per cent in 1935 over those of a year ago. The estimated value, according to Dun & Bradstreet, Inc., for April was over fifty-one million dollars, an increase of 14.6 per cent over March. This is in contrast to the normal seasonal gain of 6.5 per cent. All sections of the country registered gains ranging from 39.0 to 166.7 per cent, except the west central area where a loss of 1.9 per cent is shown. The first four months of 1935 show a gain of 59.2 per cent over the corresponding period of 1934. Real estate reports indicate a stiffening and upward swing in rents and a definite downward trend in vacancies. Mortgage financing is rapidly becoming easier. Funds are available and the tendency is to "loosen up." With no unforeseen occurrence to change the present picture, 1935 building volume should be better than had been hoped for. The building industry can face immediate prospects for improvement with greater confidence than at any time in recent years.

THROUGH LOCAL ARCHITECTS

DEMONSTRATION houses based upon plans submitted in the General Electric Company Architectural Competition are to be built in various communities throughout the United States. The company has developed a plan of co-operation with builders through which they can obtain plans and specifications of these houses for \$25. Very wisely, however, the General Electric Company intends to insist upon employment by the builder of a local architect to supervise the construction. To this end the company has announced that plans will be made available only through architects. Under such proper guidance the results should be all that could be hoped for. With each house that is built there exists an opportunity for some architect to capitalize his connection with the project.

THE MODERN SCHOOL

THE King's Gold Medal was recently presented to Mr. W. M. Dudok of Holland. In making the presentation Sir Giles Gilbert Scott, President of the Royal Institute of British Architects, said in part, "The greatest contribution of the modern school to architectural development seems to me to be its healthy reaction to simplicity and its elimina-

tion of meaningless 'twiddly-bits.' I attach greater value to this quality of simplicity than to the much talked of use of modern materials, which usually means using old materials in a new way and for purposes for which they are not suited." The words of Sir Giles went to the heart of the modern school. They outline a sound approach to design in which materials can still be used as they should be and for purposes for which they are most fitted.

LEGAL TOOTH-SHARPENING

ON a basis of needed protection to public health and safety architects in Oregon have succeeded in having the State Legislature strengthen the registration law for the practice of architecture. Without the aid of lobbyists, amendments to an existing law were secured with practically no opposition. As a result the status of the Oregon State Board of Architect Examiners is materially improved. While the law exempts single family houses and farm buildings and their appurtenances, and other buildings of limited size from the provisions of the law, it does include a definition which is worth noting. The practice of architecture is defined as doing any one or any combination of planning, designing or supervision of the erection, enlargement or alteration of any building not exempted. The only persons exempted are contractors and their superintendents and foremen working under the direction of a registered architect or registered professional engineer. The Oregon architects apparently had little difficulty in putting sharper teeth into their law. It shows what can be done by trying and in being prepared with convincing arguments.

GROUP MODERNIZATION

GROUP modernization of entire city blocks is a sound idea advocated by several architects. Not all obsolete housing and business areas need to be torn out by the roots. In many instances it would be neither economical nor practical. In such cases better values would be created more economically by the modernization of entire blocks than by piecemeal alterations. The suggestion requires capable direction and the co-operation of owners. It is susceptible of different procedures to meet varying conditions. The idea can be applied to any city. It might well be made a part of the recently enacted national work-relief program. The opportunity exists. It could be made the means of stimulating a large volume of building activity.

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

FOR ADVERTISING AGENCIES

THE Chairman of the Federal Home Loan Bank Board, Mr. John Fahey, in an address before the American National Advertising Convention called attention to the fact that too few advertisers are grasping the opportunity to reach home owners in a constructive way. He said, "I do not think I am making any dangerously radical suggestion in recommending that the home be included in more advertisements, and that some of the larger advertising agencies might even find it worth while to retain, as a consultant for their art departments, one or two practical, experienced architects, even if their major function would be to show bottled salad dressing or canned pineapples in home settings more modern, and more likely to invite the interest of the average reader, than some of the antiquated backgrounds that leave so little to our imagination, and do so little to stimulate our appetites." An architect can be useful in many different ways in an advertising agency office. With an increased volume of business many agencies might well give consideration to Mr. Fahey's suggestion.

VALUE PLUS

ONE never knows of all the ends to which an architectural magazine is put. Unusual uses therefore become news, to the editors at least. Not long ago a newspaper advertisement listing a house for sale read in part: "... Quaint remodeled farmhouse; most picturesque section Western Connecticut; pictured in January issue of AMERICAN ARCHITECT; 4 bedrooms. . . ." If AMERICAN ARCHITECT can help sell improved real estate as well as help architects to do a better job, it has an unsuspected plus value.

BUILDING CODES

FOR a long time it has been known that obsolete building codes block building construction progress and contribute to the high cost of building construction. This has been a subject of much discussion. But so far practically nothing has been done about it. The Building Code Committee of the Department of Commerce, which has been disbanded, prepared much useful data on the subject. While this assisted in the better development of many codes, there remains much to be done to place the fundamentals of most codes on an acceptable standard. The American Standards Association Building Code Correlating Committee has been organized to carry

on the work formerly done by the Department of Commerce. All that any committee of this kind can do is to offer a reasonable solution of the problems presented. Actual correction of the codes must remain in the hands of local interested parties. It is an activity in which architects can afford to be leaders.

WHY CALL IT "MODERN"?

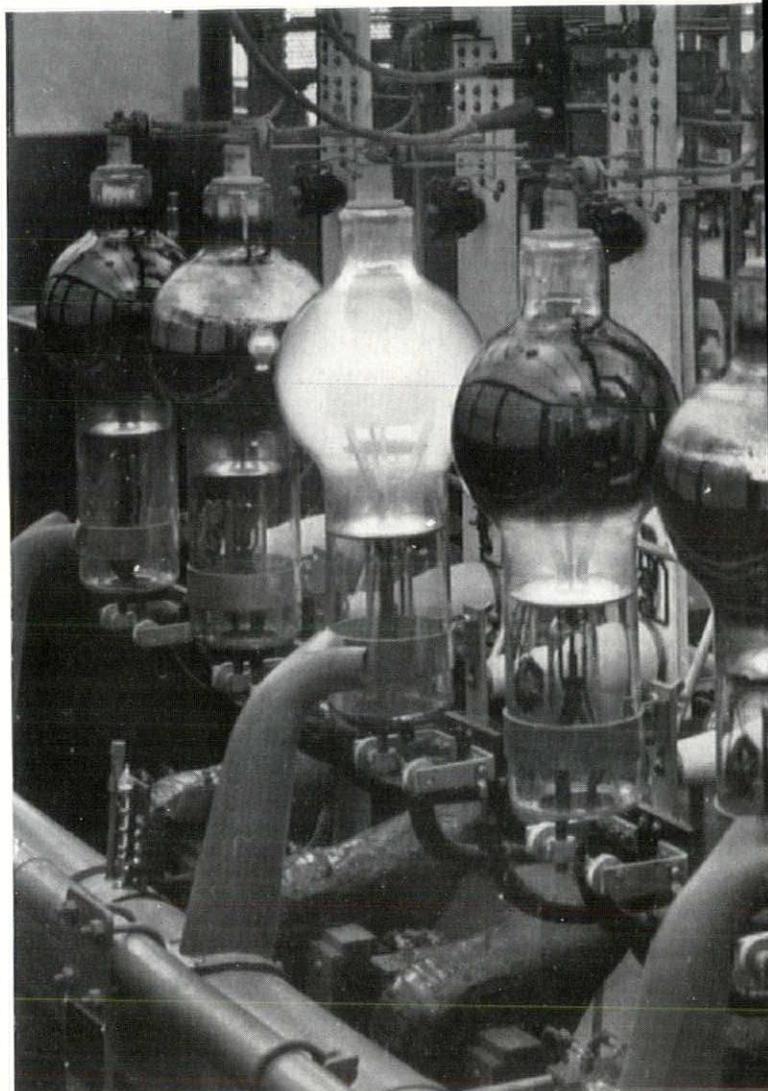
JAMES FERGUSSON wrote a book called "A History of the Modern Styles of Architecture." The first edition was published in 1862. And in 1935 one still hears about the "Modern Style." The word "modern" means "of today." Fergusson used the word just as accurately in 1862 as it is now used. Every architectural style was modern at the time it was developed. Every building is modern at the time it is built. Its "style" has nothing to do with timeliness. Many modern buildings are traditional in appearance. Others have little or no resemblance to precedent. The Greeks were not interested in developing a style; medieval builders were not conscious that they were developing a new style. But sometime someone thought it necessary to classify architecture, probably to make it easy for the student to remember. No better term was thought of than the word "style." Probably little can be done about straightening this out in the mind of the public. But architects can contribute to the movement by ceasing to talk about the "modern style." Why not call it "Early Twentieth Century"—if it must have a name?

ARGUMENTS FOR NEW BUSINESS

FROM modernization propaganda issued by the Federal Housing Administration comes the statement that nearly two-thirds of the retail stores in the United States are in need of modernization. A billion dollars could be spent on some 967,000 outmoded buildings among the one and a half million stores now in operation. The article states: "The first impression of a store is given by the exterior. A consulting architect will tell the merchant how to change his old front into a modern, well designed one that will attract business. . . . Business fronts and interiors that show every minute of their two or three score years have no sales appeal. Rather they frighten away most customers . . . for people seem to have the notion that the merchandise in a store is in more or less the same condition as the store itself." Here are arguments architects may use in seeking new business.

BY DEXTER PURINTON

Associate, Voorhees, Gmelin, & Walker



RADIO . . .

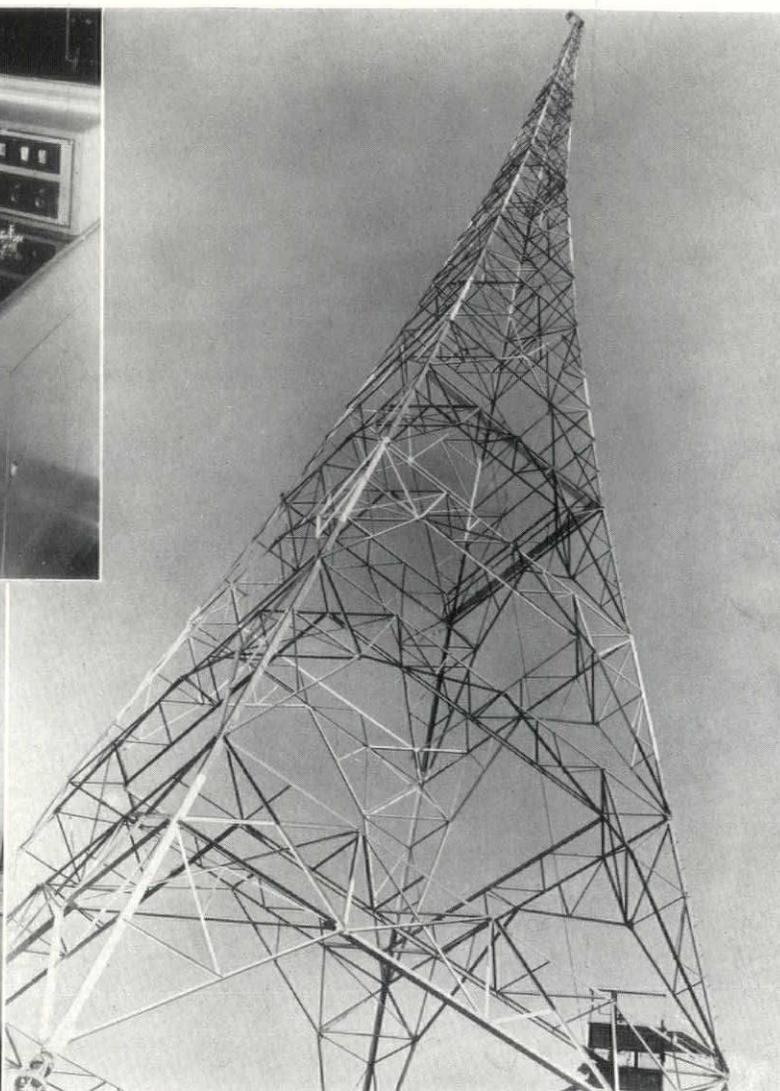
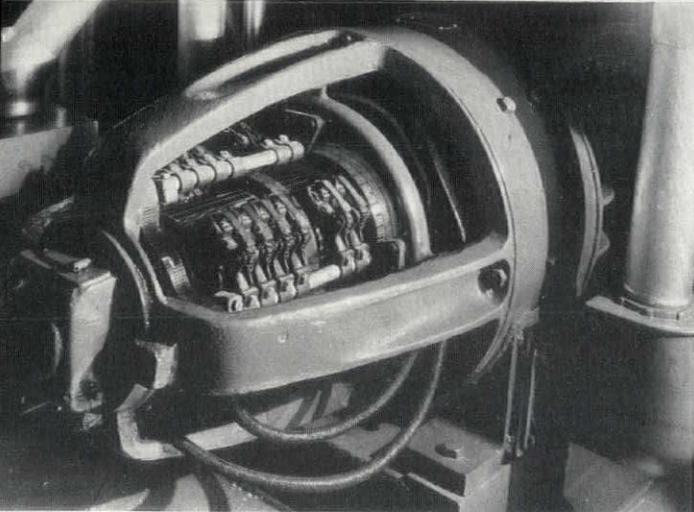
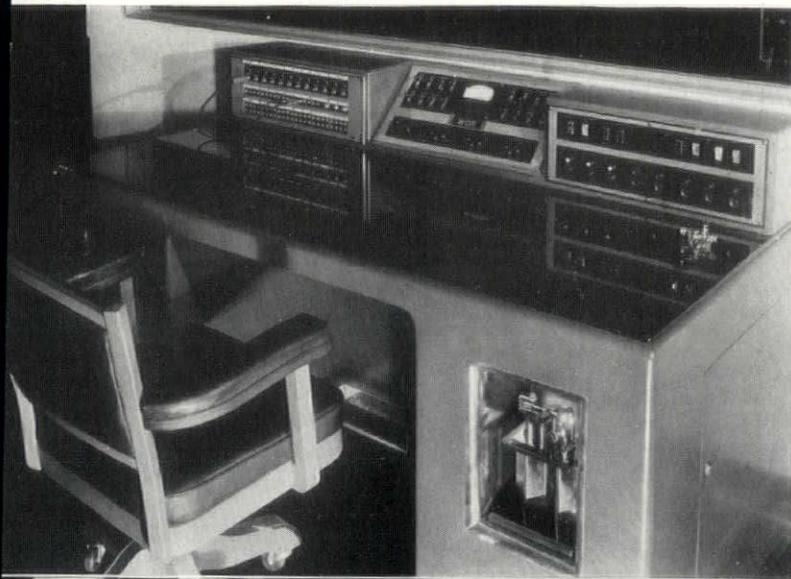
a New Architectural Problem

If you knew radio twenty years ago, you fiddled with the wire and galena stone of a "crystal set." Today, Hitler and the King of England can talk to you from the corner of your living room. Slapstick comedy has turned vocal in the same cabinet as grand opera; television—already successful as an experiment—is just around the corner with all the paraphernalia of the metropolitan stage.

No less amazing than its reception has been the development of radio transmission. Comparatively few years have passed since more was needed than a current amplifier, a key and spark gap and a few wires stretched overhead as broadcasting antenna. Radio transmission today is among the most com-

plicated of the scientific magics. And the architect concerned with the development of a radio station deals with a mechanistic art the manifestations of which in many cases cannot be explained satisfactorily even by the experts themselves. Thus, from the standpoint of the building itself, the architect faces not so much the problem of housing complicated machinery as that of providing a kind of insulated shelter in which a dangerously powerful force can safely be bent to the service of an engineering technique which is expanding with rapidity.

By that same token, an architect has much to offer the radio engineer. Throughout the land there are more than 700 radio transmitting stations. Some



BOURKE-WHITE COURTESY, BAMBERGER BROADCASTING SERVICE

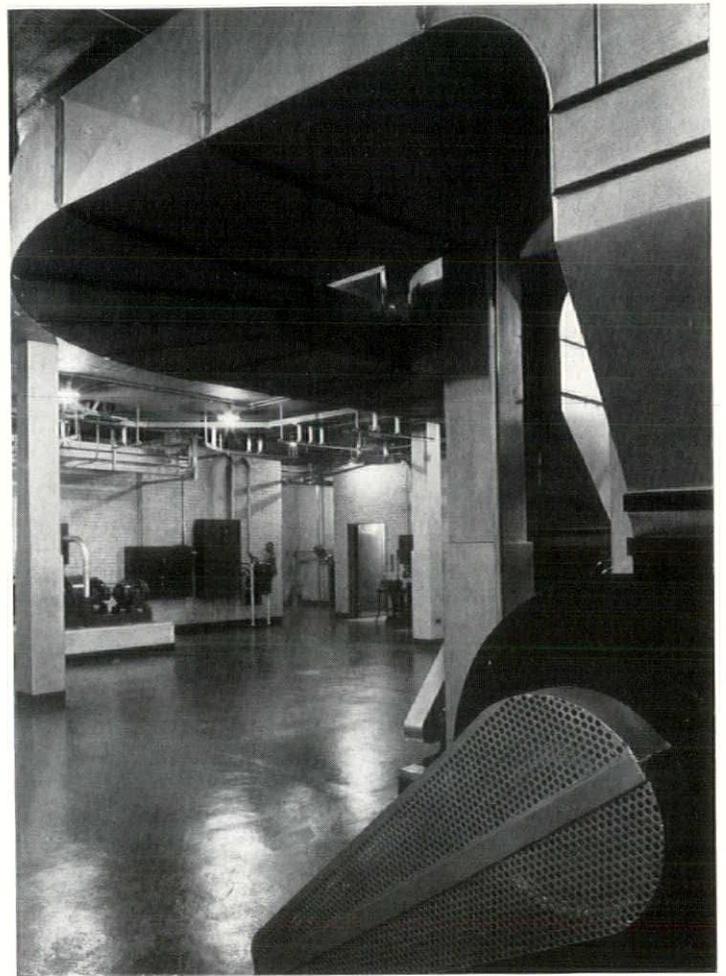
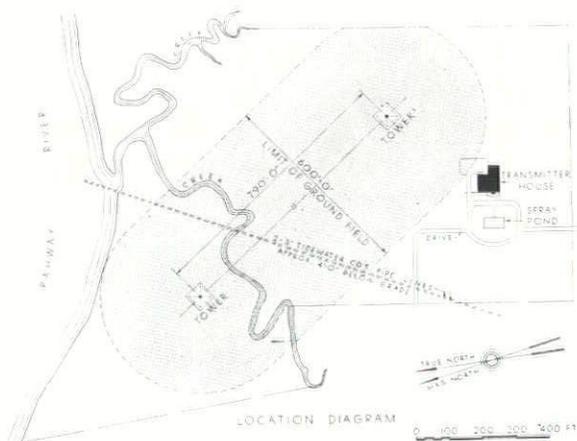
of them are already old as the radio world counts age. The average age of a radio transmitter appears to be less than eight years. It is reasonable to expect, therefore, that new demands and imminent scientific advances will make necessary the erection of some 250 transmitting stations within the next three years, exclusive of the possible modernization of many others made necessary by replacement of obsolete equipment.

This statement does not include any reference to spaces which will be used exclusively as broadcasting studios. Strictly speaking, radio transmission involves studio apparatus and transmitting apparatus. And although installation of the former requires specialized knowledge, it is the development of buildings to house the latter which calls particularly for architectural knowledge and the ability to co-ordinate unusual requirements of plan, construction and equipment installation. To the architect, in step with advances in his own field, this spells opportunity of a very real sort.

AN APPROACH TO A NEW PROBLEM

ARCHITECTURALLY, the problem of a radio transmitter station is complicated today by the need of a special technique for its solution which has arisen only within the last few years. But new as it is, the desirability of certain general practices has already become evident, though no set rules of plan or construction can be formulated to fit all conditions.

In the main these deal with method of isolating radio-frequency current. To many an architect this type of electrical energy is unknown. Its characteristics are fundamentally different from those of the ordinary electrical current. To plan successfully a radio transmitting station it must be constantly remembered that radio-frequency current is air-borne and passes readily through matter. It is most easily conducted, not in the body of a material, but along its surface and if not properly grounded, will collect upon a surface until it jumps viciously across



space to the nearest point of contact. Electrical current shocks. But radio-frequency burns, often so deeply that death results even though only a slight shock is present. Moreover, its energy is so all-pervading, that the slightest spark in a radio transmitting station is sufficient to wreak havoc with the quality of a broadcast and will more than likely do some damage to the sensitive transmitting instruments.

Evidently, then, development of a transmitting station is an architectural problem in which the smallest details become all-important. Within the structure every piece of metal, however insignificant, must be bonded and a continuous connection made so that induced radio current can be grounded and thus made harmless.

The interior of a transmitting station must be completely enclosed with some sort of metallic shield for radio waves can easily pass through unprotected walls to interfere with receiving sets, telephone lines and electric lighting systems of the surrounding country. And the necessity for maintaining a scrupulously clean interior is a factor of utmost importance in planning for and in specifying materials. Radio-frequency ionizes dust particles; and if ab-

solute cleanliness is not maintained within the station, dirt streamers will form near bus bars so quickly that sparking may result and render useless the transmitting apparatus.

THUS, in planning a building in which radio-frequency will be used, the architect deals necessarily with new notions of what is essential in regard to structure and equipment. Since dust must be excluded, and since transmitter tubes generate a great amount of heat, the ideal transmitter station would be entirely windowless and completely air-conditioned.

Because the technique of radio transmission is so rapidly expanding, some provision must be made for the possibilities of future enlargement. A 50kw station of today may, in a few years, become a 500kw station to broadcast radio power, television, air beacon, and international intelligence in addition to the usual domestic programs. All these involve problems that can be solved only by radio engineers. But to the extent that the proper structure has been provided to house them, the architect can make a valuable contribution to advance the time of ultimate new developments.



GOTTSCHO PHOTOS

Left, control room of WOR, Carteret, N. J. Windows in partitions of studio-office in the background are of one-quarter inch plate glass. On facing page, pump room in basement of WOR and location diagram showing position of transmitter house in relation to roads and ground field. Important in plot-planning are the facts that tall trees must be kept away from both transmitter house and towers and that location of the house must be outside the ground field. This ground field, varying in extent with the capacity of the station, is a four-foot gridiron of copper wires laid with a deep plow and connected to a permanent ground. Water is the best ground and inland stations are grounded in artesian wells

PLANNING, CONSTRUCTION AND EQUIPMENT

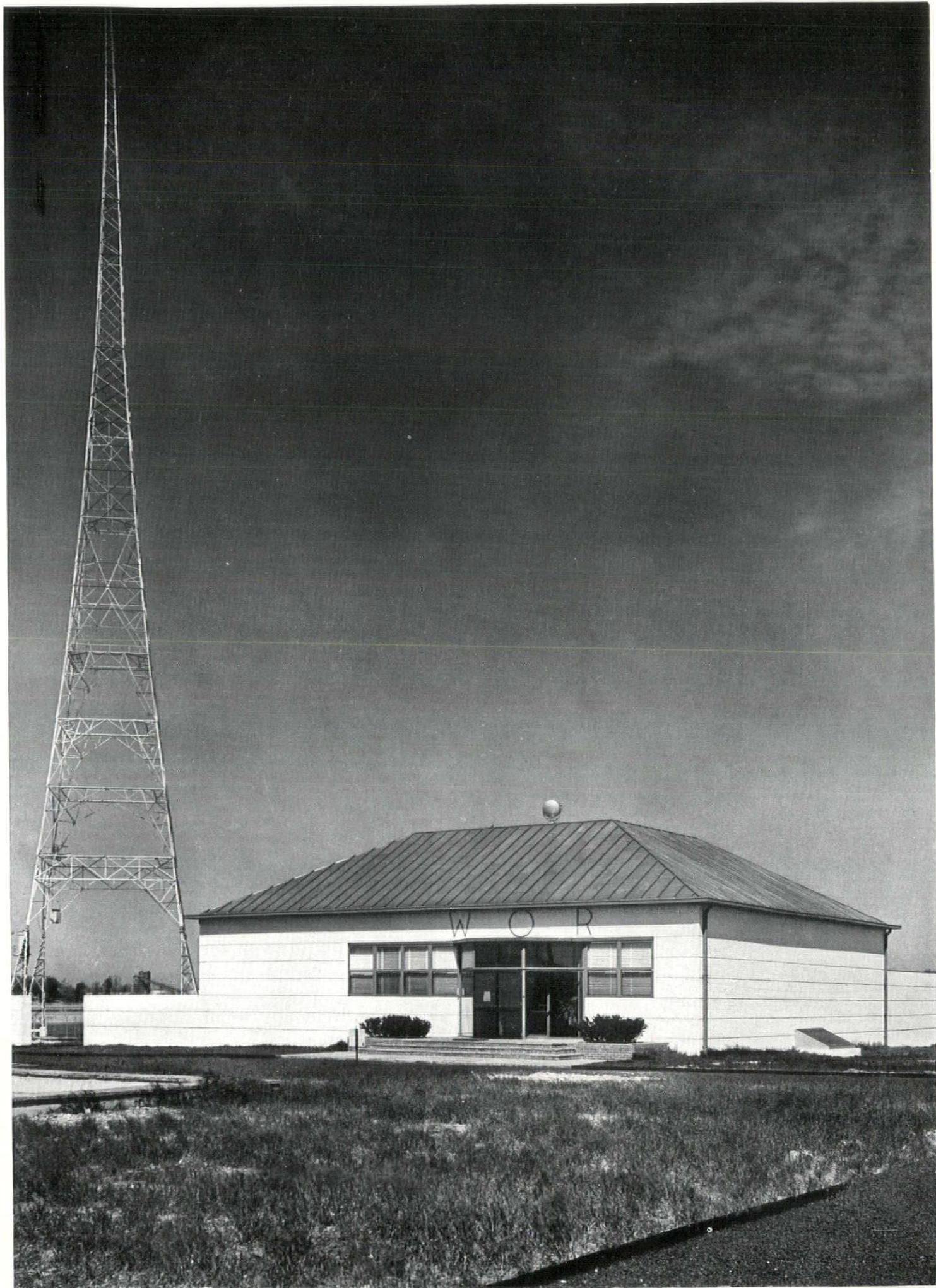
NO rules for planning that will fit all problems can be stated. As in other types of buildings, requirements vary as they concern public spaces, provision for expansion and the possible inclusion of living quarters for radio engineers. Size also will be dependent upon these things. But mandatory are certain planning fundamentals as applied to transmitting equipment. And from the provision of these spring most other essentials that relate to distribution of space, details of construction and the installation of equipment.

As concerns space, equipment alone for a 5kw station will occupy about 12,000 cu. ft. and that for a 50kw transmitter, about 40,000. These figures are net. That is, they specify interior space between walls, floor and ceiling. It is not practical to think of equipment space in terms of square foot areas. Units for radio transmission are best arranged to minimize lengths of all bus and cable connections. Thus, the extent of area depends upon the type of equipment, the location of outside power lines and the relative placing of corridors, control rooms, public spaces, etc. In a 5kw station, all equipment can be placed

on a single floor, but in 50kw and any larger one it is often more generally economical to utilize two or even three levels for this purpose.

Important as an influence of planning is the fact that all transmitting equipment must be isolated by space—the best and cheapest insurance against radio-frequency sparks and inductance. Surrounding the units, and from two to four feet away from them, should be a ¼ inch plate glass partition set—with small lights to eliminate surface potentials—in a thoroughly grounded metal frame.

Sixty thousand cubic feet is almost a minimum size for a 50k station. This will include sufficient space for radio and building equipment, storage and locker rooms, a kitchen and the usual toilet spaces, a transmitter and control rooms, a limited area for short-wave and television equipment, a small public lobby, a studio-office. These last two rooms are almost essential to any transmitting station. Broadcasts are frequently held in the transmitting station itself. Most large broadcasting studios are located in cities and not in or near a country town as is usually the case with a transmitting station. Naturally, the sizes of these spaces will vary with the importance of the station. But a guide to the newest





GOTTSCHO PHOTOS

Above, studio office toward entry. . . . On facing page, the transmitter room, core of the plan for any radio transmitting station. The floor is heavy linoleum. Instrument panels and lower walls, aluminum, brushed finish. Ceiling is asbestos board, perforated, and backed with rock wool. Indirect lighting is essential for instrument reading. Fixture here is a six-foot disc of brushed-finish aluminum



good practice is given in the plan of WOR at Carteret, New Jersey, drawings and pictures of which accompany these paragraphs.

Between a transmitting station and a small telephone central building there exists a marked similarity in that each building must be planned to house a special type of delicate, manufactured equipment, all of which must be exactly located in definite relation to its relative functions. In a radio station particularly, interior obstructions are undesirable since radio potentials may be developed in spite of the most careful grounding. Thus, in WOR, there exist no columns except those in exterior walls that support two roof trusses. Partitions are non-bearing, most of them being glass and metal to screen equipment and still allow for public inspection.

To facilitate location of equipment, two reference lines have been used by WOR. Bench marks on the floor and walls permit absolute accuracy in measurement and have proved most helpful in planning for replacement of radio units.

As concerns construction, the simplest and most economical consistent with durability is to be preferred, although nearly any type of structure is practical if it includes a metallic screen to isolate radio-frequency. In WOR the basement—not always an essential part of a station and built here to fulfill special requirements—is of reinforced concrete. The site was low and wet and concrete was the most practical material, in spite of the difficulty of cross-connecting each reinforcing rod for grounding.

Walls are of solid brickwork, eight inches thick on the exterior, laid without metal ties of any sort and with copper strip ground connections to every piece of flashing. Separated from them by a four-inch air space is an interior partition of paper-backed metal lath with a mesh just coarse enough to key a three-quarter inch, hard finished plaster surfacing. This lath constitutes the necessary radio-frequency shield, for though it is perforated, the holes are only three-eighths of an inch, just small enough to resist passage of the current. Metal lath, hung from the roof trusses, is also used in the ceiling, a ribbed copper roof serving as an additional exterior shield against passage of the radio waves.

On the floor, a grid of $3 \times 1/64$ inch copper strips brazed into a single mesh, is laid over the concrete slab and then covered with ozite and linoleum. It is linked, of course, to the main ground connection and serves as a convenient means of grounding in case of revisions or additions to interior layout.

Some sort of acoustical treatment is necessary in the studios and in the transmitter and control rooms of any radio station. In WOR ceilings of these spaces are surfaced with perforated asbestos board, backed with a four-inch thickness of rock wool. These and other ceiling and wall surfaces are painted. But all paint must have a non-metallic base—such as lithopone—for the tiniest flake of any sort of metallic film might cause expensive damage to transmitting mechanisms.

ESSENTIALS OF EQUIPMENT

In a radio transmitting station of average size, heating is less of a problem than is ventilation or cooling. Since cleanliness is so necessary, windows, doors and roof monitors are impractical as a means of ventilation. And the great heat generated from the transmitter tubes must be dissipated in some way. Complicating all these is the additional fact that a low relative humidity is desirable since moist air adds to the ever-present difficulty of isolating radio-frequency. A simple, ingenious method of solving this combination of problems is illustrated in the equipment of WOR.

The ideal of complete air conditioning has not yet been installed. Ventilation is effected by fans which blow air, filtered through paper at the basement intake, through ducts with ceiling outlets. This system is linked with a hot water system for winter heating. During hot weather the radiators are filled with cold water circulated from a spray pond and thus a kind of coolness is achieved. Though the air is fresh at all times, it is not refrigerated in the usual sense, nor is it treated so far as relative humidities are concerned.

Spray pond water is circulated through a heat inter-changer to cool an independent circuit of distilled water used to cool transmitter tubes. It is hot distilled water—about 80° F.—that heats the copper-fin radiators from a by-pass in the re-circulating system. Two sets of shut-offs on this and the spray pond line make it possible to link the two systems with the same set of radiators in connection with the year round ventilating system.

One other means of heating the building is employed only in event of rare emergencies. Behind each copper-fin radiator is a small electric heater of 35kw capacity. These can be used to heat the ventilating air if desired. But the method described in more detail has proved to be satisfactory in all respects as well as economical.

As moisture is to be avoided inside a transmitter station, so also are iron pipes or any kind of ferrous equipment. Except in the case of properly grounded structural steel, objects of a ferrous nature are particularly dangerous, since a radio-frequency potential is most easily built up in them and disastrous sparking will be the inevitable result. For this reason, plumbing pipes must be kept outside of the building. And if two sets of plumbing lines are necessary—as is the case in WOR where the toilets and kitchen are on one side of the building and the pump room on the other—connections to services should run on the outside rather than on the inside of the walls.

In some cases—to water-cool amplifiers, for example—it is necessary to run water lines inside. In WOR these are rubber hose lines, supported from the ceiling in wooden troughs constructed with dowel connections that eliminate any metallic contact with ceiling hangers.

The Legal Side of Architecture

BY CLINTON H. BLAKE

Blake and Voorhees, Counsellors-at-Law

Unit Price Schedule Protects Client by Measuring Contractor's Claims for Extras

THE defendant, as general contractor, entered into a written agreement with the plaintiffs, as its sub-contractors. The contract, among others, contained the following provision: "The sum to be paid by Contractor to Sub-Contractor for the work shall be Four Hundred Thirty-two Thousand and No/100 dollars (\$432,000.00), subject to additions and deductions as herein provided, which sum is herein referred to as the Price." It provided also that the contractor should have the right to direct that any changes which he deemed expedient be made in the work as it proceeded, without regard to whether these changes increased the work or diminished the work. However, no such changes should be made "except upon written order of contractor signed by an executive officer, stating the additional time allowed, if any, and the amount to be added or deducted from the Price." An additional provision stated that "Unit prices, if any are named in this contract, shall be used in determining the value of such changes."

The contract further provided that "In case the parties hereto disagree in relation to any clause in this contract, the question shall be referred to a Board of Arbitration consisting of three disinterested parties, one nominated by Contractor, one by Sub-contractor, these two to select a third"; and also that "In case of disagreement as to the adjustment of the Price or of the time of completion, Sub-contractor shall proceed with the work and the determination of such amount or time shall be referred to arbitration as herein provided." Further provision was made that "All clauses of this Contract shall apply to any changes, omissions, or extra work in like manner and to the same extent as to the work contracted for, and no changes, omissions, or extra work shall annul or invalidate this contract."

While work was under way, the contractor ordered the sub-contractors to make about fifty changes, which greatly increased the cost of the work. The contractor and the sub-contractors were not able to agree that the prices given in the orders for these

changes were fair. The sub-contractors, however, proceeded with the work, leaving the matter of their additional compensation to be determined by a subsequent arbitration. When the work had been completed, arbitrators were duly appointed and made an award in favor of the sub-contractors for \$234,702.12 with interest.

AS PART OF CONTRACT, PRICE SCHEDULES ARE NOT SUBJECT TO ADJUSTMENT

IN submitting the case to the arbitrators, the sub-contractors proceeded on the assumption that they were entitled to recover on the legal doctrine of quantum meruit, which means for the reasonable value of the work done and materials furnished by them, which in this case would represent their actual cost, plus a fair percentage for profit. They urged that the arbitrators should hold that the contract, as changed, could not be carried out under its original unit price and other provisions and asked the arbitrators to give them their cost of the entire work, including the extras plus a ten per cent. profit and interest on defaulted payments. The defendant—the contractor—on the other hand, took the position that, while the plaintiffs were entitled to be paid for the extra work, the allowance to them therefor should be based upon the unit price schedule which was a part of the contract.

A majority of the arbitrators concurred in the view taken by the sub-contractors and found, as one of them expressed it, that the changes called for were such "that they were beyond the intent of the change clause and, in fact, defeated the intent of the lump sum provision," and that "It would be unfair, utterly without justice, if not fraudulent, to use the shell of an emasculated lump-sum contract under the guise of a Change Clause to have the petitioner (the sub-contractor) do work which in no sense he had intended to do, had not bid for and might be unfitted for or unorganized to do."

The Appellate Division of the New York Supreme Court affirmed the order of the Trial Court and the matter finally came before the Court of Appeals (Matter of Stange v. Thompson-Starrett Co., 261 N. Y. 37), which reversed the judgment and sustained the contractor's contention that the arbitrators should in their decision give due effect to the unit price schedule. The Court, among other things, said:

"The contract does in fact contain a provision

naming unit prices. The schedule therein given is preceded by the following clause: 'It is hereby understood and agreed that should any changes be made in the work as herein contemplated, the "Price" mentioned in Article III shall be increased or decreased, as the case may be, by the amount of work added or omitted, multiplied by the following unit prices.' Then follow twenty-eight items, describing work to be done or materials to be furnished, and the agreed sum per unit to be paid therefor. Thus excavating by steam shovel is priced at \$0.95 per cubic yard place measurement; hand excavating, for general purposes, is priced at \$2.25 per cubic yard; for piers, pits and trenches at \$2.45; for underpinning at \$3.25. These prices are to prevail whether the additional excavation is done at a high or a low level, whether the material excavated is sand, hard pan or rock. All concrete work is to be done for named prices 'per cubic yard, in place,' various types of work commanding greater or less prices. Thus concrete 'in place,' whether laid in the wet or in the dry, no matter what difficulties might attend the laying, is to be paid for at a set and invariable figure, named for a particular type of work.

"It was evidently the concept of the parties that all subcontracting work, whether done in precise accord with the work originally specified and planned, or whether done in accord with altered plans, increasing or diminishing the work, should constitute an integral part of the subject-matter of the express contract, to be governed by its terms, and to be paid for at contract prices. . ."

"If the contract is to be regarded as abandoned, and a recovery to be had upon a quantum meruit, no 'adjustment' of the contract 'Price' can be involved, for to allow such a recovery would be, not to modify the price, but to scrap it utterly. Self-evidently, if a contract does not apply to control a price, it does not apply to compel an arbitration of the price. The respondents would, therefore, appear to be in this inescapable dilemma: If the award made by the arbitrators is a recovery, based solely upon the reasonable value of the work done, regardless of the price, they had no authority to make it, since only contract disagreements were arbitrable. On the other hand, if the award is intended as a recovery based upon liability under the contract, it may not stand, since it involves a repudiation of every contract term, in relation to the adjustment of the price. . ."

ARBITRATORS CANNOT SCRAP CONTRACT

"THE action of the arbitrators speaks even louder than the words used by them or the petitioners. Concededly, they made the award of \$234,702.12 by no other method than the following. They found that the petitioning sub-contractor had expended for the entire work done the sum of \$911,784.28; that the total payments made to it by the contractor aggregated \$677,082.16. Deducting the latter from

the former leaves \$234,702.12, and for that sum the award was made. . ."

"Concededly, no effort was made and no decision given, to determine increased cost, over contract price, as an independent item. The only proof given related to the actual expenditures of the sub-contractors paid out in producing the entire work called for by the contract, as altered by the contractor in the exercise of its contract privilege.

"In employing the figure produced by this proof as the sole basis of the recovery, the arbitrators arrived at a result which is clearly unwarranted. Their repudiation of the contract did not involve alone the contract terms providing for the use of unit prices to determine the cost of changes made; it involved a complete 'scrapping' of the contract price. Thus, every advantage which the contractor may have secured to itself by the express contract has been swept away. . ."

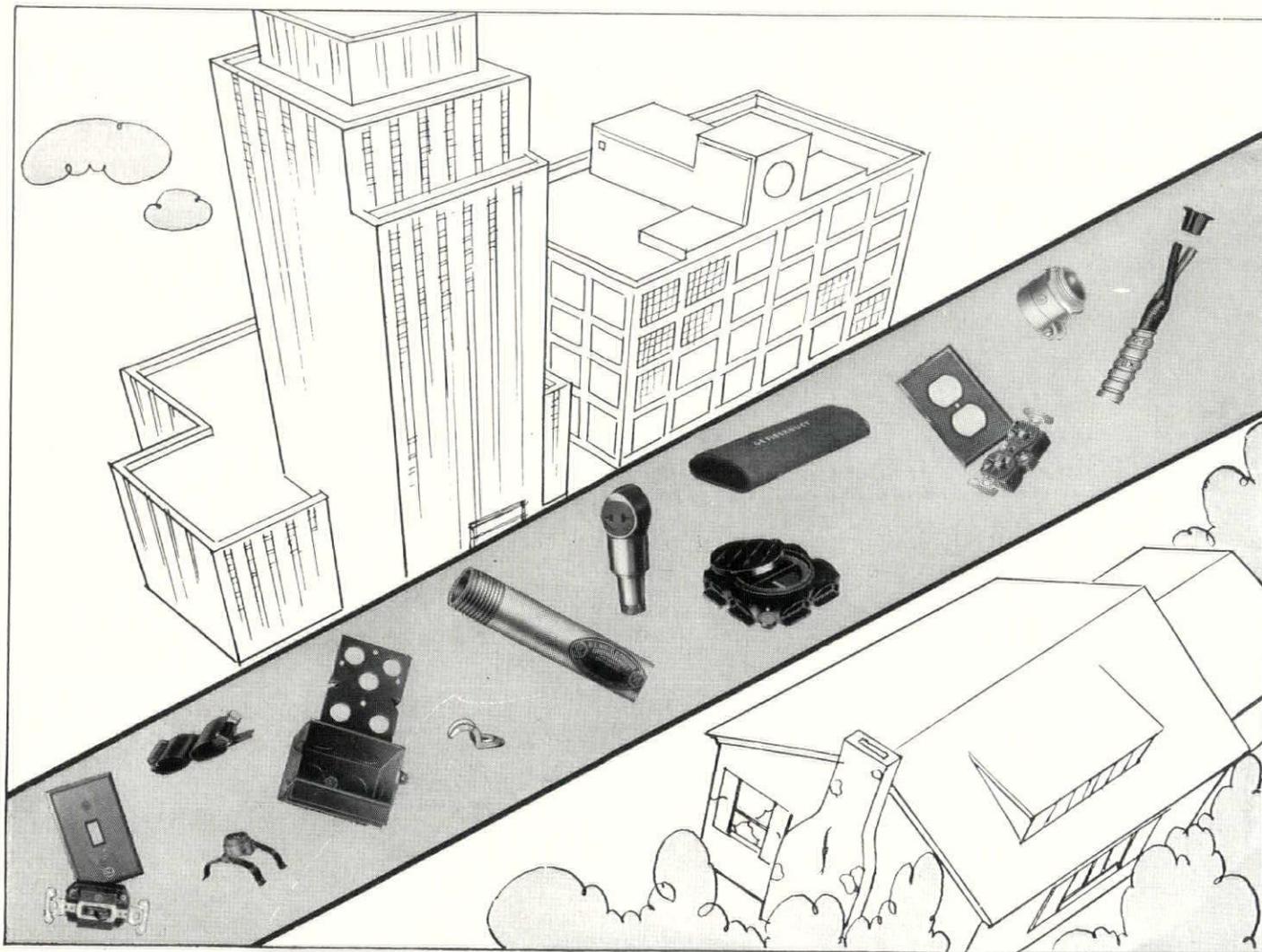
"Indeed, it conclusively appears that the contract has in all respects been wholly disregarded; that had there been no express contract between the parties, but merely a performance of the work by sub-contractors at the request of contractor, under an implied promise by the latter to pay the reasonable value of the work, the result would have been the same. It is obvious that there was here no arbitration of a disagreement 'in relation to any clause in this contract'; that there was none as to any disagreement 'as to the adjustment of the Price'; that the arbitrators have not made any 'adjustment of the Price' but have ignored it utterly. We find here no authorization of an abandonment of unit prices prescribed for use in every case of an alteration; no sanction for the total repudiation of the contract price rather than its adjustment."

CONTRACTORS MUST ADHERE TO PRICE SCHEDULES

It will be seen that the gist of the foregoing decision is that where, as the Court determined was the case here, the parties intend that all of the work, including the changes, shall be done as a part of and under the written contract and be governed by its terms and paid for at the prices which it specifies, the unit price schedule specified in the contract can not be disregarded and a recovery can not be had on the ground of the reasonable value of the extra services rendered rather than upon the basis of the specified unit prices.

The Court clearly points out, also, that, where a contract provides for arbitration, one of the parties to it can not claim it has been abandoned and is no longer operative and, in the same breath, claim the right to arbitration because that remedy is made available to him by the terms of the contract. The decision is an excellent example of how effectively an architect can protect his client by insisting upon, and including in the contract, a proper schedule of unit prices and making these the yard-stick in measuring claims for extras.

GIVE YOUR BUILDINGS A GOOD START ELECTRICALLY



The inadequately wired building is obsolete before it leaves your drawing board. Homes, factories, office buildings may be of the most modern design, soundest construction and most convenient arrangement; yet with an inadequate wiring system, they are electrically unsafe, inconvenient, costly to maintain.

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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

RUSTLESS METAL DOORS

661 . . . Kawneer Rustless Metal Doors, for commercial and public buildings as well as for use in connection with Kawneer store fronts for shops and stores of all kinds, are presented in an 8-page catalog issued by The Kawneer Company, Niles, Mich. Data include standard types, sizes and prices, hardware locations and specifications, and typical detail drawings. Filing size; A. I. A. File 16-E-1.

CHASE BRASS AND COPPER PRODUCTS

662 . . . "What to do about Remodeling," a book of helpful information on remodeling, repairs and replacements with Chase brass and copper products, has been published by Chase Brass & Copper Co., Inc., Waterbury, Conn. The products illustrated and described include roofing materials, screen cloth, pipe and tubing, lighting fixtures, plumbing fixtures, radiators, floor dividing strips, and water heaters.

SLOANE-BLABON LINOLEUM

663 . . . W. & J Sloane Selling Agents, Inc., New York, have issued a 12-page catalog which contains detailed specifications for laying Sloane-Blabon linoleum floors, together with tables of widths, gauges and weights, and types available. Eleven patterns are illustrated in full color. Filing size; A. I. A. file 23-J.

SEDGWICK RESIDENCE ELEVATORS

664 . . . Sedgwick Machine Works, New York, has issued a six-page filing-sized broadside which discusses the benefits of a residence elevator to those who cannot climb stairs safely, and illustrates and describes several types, including the Electric Residential Elevator, the Automatic Electric Stair-Travelor, and the Hand Operated Individual Elevator.

ELECTRIC RANGE AND WATER HEATER WIRING

665 . . . The subject of wiring for electric ranges is presented in a new 32-page filing-sized manual issued by General Electric Company, Bridgeport, Conn. The entire circuit, from the service drop cable to the range, is divided into its natural parts in this manual. Each of

these parts is described, and the various materials, fittings and devices applying to such parts of the circuit are shown in their logical sequence. A discussion of electric water heater wiring is also included.

ZINC DUST PAINTS

666 . . . A sixteen-page semi-technical manual has been issued by New Jersey Zinc Company, New York, which discusses the advantages, characteristics and physical properties of Zinc Dust Paint for use as a primer or finishing coat for iron, steel and galvanized surfaces.

AIR CONDITIONING GRILLES AND REGISTERS

667 . . . Tuttle & Bailey, Inc., New Britain, Conn., have issued Catalog 40 which gives complete information on its line of registers, grilles, volume control dampers and other devices especially designed for use with air conditioning systems. Installation details, dimensions, standard sizes, prices, air capacities, specifications, and technical data on air conditioning grilles are included. Filing size; A. I. A. File 30-E.

ELECTROL OIL FURNACES

668 . . . The construction details and operating features of Electrol Automatic Oil Furnaces are described in an 8-page broadside issued by Electrol, Inc., Clifton, N. J. Illustrations show the two types available, cross-sectional views and mechanical details. Complete specifications are given.

FLOODLIGHTS

669 . . . Crouse-Hinds Company, Syracuse, New York, has issued Catalog 314, a loose-leaf portfolio containing illustrations, descriptions, prices and other informative data on its line of floodlights, searchlights, pit and tunnel lights, and accessories. Sections are devoted to lighting design data for athletic fields, swimming pools, bowling alleys, and other indoor sports. A number of suggested installation details are also included. Holders of these portfolios receive new loose-leaf catalogs as issued.

GALVANIZED SHEET METAL

670 . . . Suggestions for galvanized sheet metal specifications are given in a 8-page booklet issued by The American Rolling Mill Company, Middletown, Ohio. Recommendations include specifications for metal roofing, gutters, conductor pipe, elbows and devices, valleys, hips and ridges, flashings and skylights. The importance of galvanized iron as a roofing material is briefly discussed. Filing size; A. I. A. File 12-C-3.

S-N HEATING PRODUCTS

671 . . . A loose-leaf portfolio just released by Scott-Newcomb, Inc., St. Louis, Mo., contains specifications and technical data on the various types of S-N heating and air conditioning products for oil or gas burning. These include the S-N Oil Furnace, the S-N Air Conditioner and a group of oil and gas burners. A discussion of the advantages of automatic heating is also included.

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New York City

June, 1935

Please have the following catalogs reviewed in this issue sent to me.
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• I also desire further information about the new products described in this month's "New Materials and Equipment." . . . (See pages immediately following this insert.)
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HEIL OIL BURNING EQUIPMENT

The Heil Company, Milwaukee, Wis., has recently issued three new catalogs:

672 . . . "The Heil Combustion Furnace Unit" Bulletin 200-B. Illustrates and describes the functions of this unit for warm air heating systems and explains its adaptability to air conditioning. Filing size; 6 pages.

673 . . . "The Heil Combustion Residence Heating Boiler," Bulletin 175E. A boiler-burner unit for steam, vapor and hot water heating service. Contains brief descriptive text, illustrations and dimensional data. Filing size; six pages; A. I. A. File 30-C-14.

674 . . . "The Heil Combustion Oil Burner," Bulletin 125-H. A four-page folder giving essential facts about No. 1 Heil Combustion Oil Burner. Filing size; A. I. A. File 30-G-1.

HORIZONTAL RETURN TUBULAR BOILERS

675 . . . Combustion Engineering Co., Inc., New York, has issued an eight-page catalog covering general specifications for its line of horizontal return tubular boilers. Both riveted and fusion welded construction for the shells is described and illustrated, together with various details of the boilers, grates, breechings, etc. General information on setting is also included.

DORAN SAFE-T-SHOWR

676 . . . A six-page broadside just received from Doran Company, Seattle, Washington, illustrates and describes the Doran Safe-T-Showr, a thermostatic water mixing valve for the shower bath. Prices, dimensions and capacities are given. Filing size; A. I. A. File 29-H-31.

AERO CONVECTOR

677 . . . The Aero Convector for use with either steam, vapor or hot water heating systems, is pictorially and descriptively presented in a new 24-page

spiral bound catalog issued by National Radiator Corp., Johnstown, Pa. Its features, advantages and characteristics are fully explained. Pictures of typical commercial, institutional and residential buildings which have used these convectors are shown.

REGISTERS AND GRILLES

Two new catalogs have been issued by Independent Register & Mfg. Co., Cleveland, Ohio:

678 . . . Catalog No. 035FA. A revised edition of its catalog on adjustable registers and grilles for forced air and conditioned air systems. Data include sizes, prices and tables of cfm ratings based on register velocities of 200 to 800 fpm. Filing size; A. I. A. File 30-E.

679 . . . Catalog No. 35-G. Illustrates and describes registers, ventilators and grilles for systems other than forced air and conditioned air. Sizes and prices for each unit are given.

G-E AIR CONDITIONING

680 . . . General Electric Company, New York, has issued a 44-page reprint from Sweet's Catalog which contains complete factual information on its air conditioning systems and equipment, including the oil furnace, gas furnace, condensing units, room coolers, central plant conditioning systems, and air circulators. Specifications, applications, dimensions, ratings, construction details, and other necessary information are given for each type of unit.

TRANE FANS

681 . . . Trane fans for heating, ventilating, drying and air conditioning are illustrated and described in a new 24-page booklet issued by The Trane Company, La Crosse, Wis. Complete engineering data, including capacities, roughing-in dimensions, standard arrangements, recommended applications, and rating tables and charts, are included. Filing size; A. I. A. File 30-D-1.

HOWELL FURNITURE

The following catalogs have been published by The Howell Co., Geneva, Ill.

682 . . . "Modern Chromsteel Furniture" catalogs the complete line of Chromsteel furniture for modern interiors. Several color reproductions show typical interiors using this type of furniture.

683 . . . Howell metal furniture with baked enamel finishes for gardens, lawns, porches, and other summer uses, is illustrated and described in a new 32-page catalog—"Modern Summer Furniture." A color chart shows a selection of fabric colors available for backs, seats, cushions of chairs, lounges and other items in the line.

COLD STORAGE PRODUCTS

684 . . . Jamison Cold Storage Door Company, Hagerstown, Md., has issued a broadside which pictures and describes many recent improvements in Jamison cold storage products, including cold storage doors, windows, vestibules, refrigerator fronts, ice chutes and other units used in every line employing refrigeration.

CHENEY SHOWER PANS

685 . . . Specifications and description of Cheney shower pans are contained in a four-page catalog issued by The Cheney Company, Winchester, Mass. Also included is a brief discussion of Cheney vertical ribbed siding used for the inside wall of parapets, side walls of monitors, penthouses, etc. Filing size; A. I. A. File 29-H-3.

TORIDHEET OIL BURNERS

686 . . . A twenty-four page consumer booklet has been issued by Cleveland Steel Products Corporation, Cleveland, which discusses the advantages, convenience and economy of heating a home by oil burning equipment. Essential data about Toridheet Oil Burners are given.

WEATHERBEST STAINED SHINGLES

687 . . . The use of Weatherbest Stained Shingles for modernizing old houses is pictorially shown by a series of before-and-after pictures of representative projects in a 28-page brochure issued by Weatherbest Corporation, North Tonawanda, New York.

ILG VENTILATING SYSTEM

688 . . . The functions of the Ilgatic cooling and ventilating system, which employs a fan installed in the attic space in an end wall, are explained and illustrated in a new catalog issued by Ilg Electric Ventilating Co., Chicago. Many typical installations are shown.

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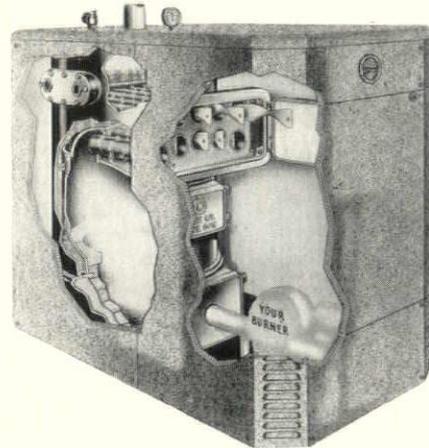
New York, N. Y.

AMERICAN ARCHITECT

New Materials and Equipment

Auxiliary Relay

457M A small, low-priced auxiliary relay for use on a-c or d-c circuits and suitable for switchboard or panel mounting is announced by Westinghouse Electric & Mfg. Company, East Pittsburgh, Pa. The type SK auxiliary relay for switchboard mounting has a moulded cover or moulded cover with glass front; the front connected panel mounted relay uses no cover. Both types have two independent contact circuits which may be easily adjusted for circuit-closing or circuit-opening service.



G-E Conduit Products

458M Three improvements have been announced in the line of conduit products manufactured by General Electric Company, Bridgeport, Conn. All G-E couplings, including small sizes, are now beveled at both ends; threads on G-E "white" conduit are now hot-dipped, galvanized and Glyptal-coated; thread protectors are now placed on all sizes of G-E conduit to prevent damage.



Friez Humidistats

459M A new line of humidistats for the automatic control of relative humidity in all classes of comfort and industrial air conditioning applications has been introduced by Julien P. Friez & Sons, Inc., Baltimore, Md. These instruments have specially prepared multiple human hair elements, and are available with or without dual magnetic snap action and with many contact arrangements whereby all types of electrical control are easily achieved. Setting is by bakelite knob and rotating dial. A range of from 10 to 100 per cent R.H. is provided.

Kewanee Residence Boiler

460M Kewanee Boiler Corporation, Kewanee, Ill. has added the Regal Jacket Round "R" Boiler for gun type oil burners to its line of residence heating units. A feature of this boiler is its two-pass tubes with spinner blades. After the radiant heat of combustion has been absorbed by direct heating surfaces in the firebox, the hot gases are forced forward through the lower set of tubes and then back through the upper bank of tubes before reaching the chimney. These tubes are made of copper alloy steel to resist corrosion. A removable hot water heating coil is installed in each boiler. Round and square jackets are also available for this heating unit.

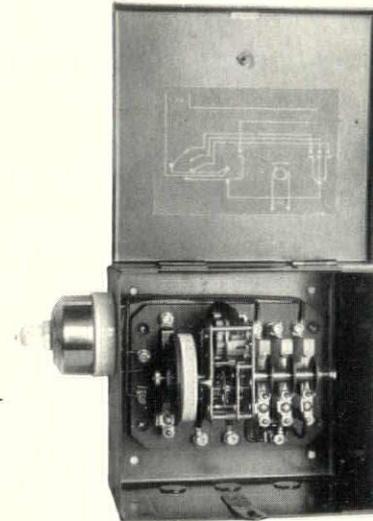
New Double Strength Steel

461M A new high tensile steel product, known as Republic Double Strength Steel, has been introduced by Republic Steel Corp., Youngstown, Ohio. The new steel is a copper-nickel-molybdenum ferrous alloy with yield point and tensile strength sufficiently high to permit the use of 30 to 40 per cent lighter sections. It is made in two carbon ranges and is available in the usual commercial forms. It can be arc, gas or spot welded without loss of ductility at or adjacent to the weld.

Insulite HardBoard Products

462M A new line of four hardboard products in a wide range of finishes and thicknesses suitable for modernization as well as new construction has been announced by The Insulite Company, Minneapolis,

Minn. These products are: Insulite HardBoard and Insulite Tempered HardBoard, both available in five thicknesses from 1/10" to 5/16" and in panel lengths from 2'4" to 4'12"; Insulite DualBoard, made in 1/4" thickness, and Insulite PanelTile in thicknesses of 1/8" and 3/16".



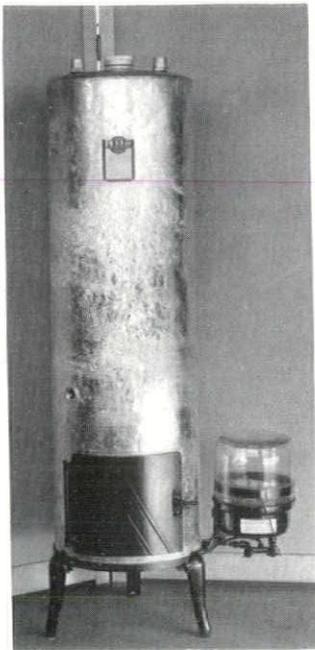
Oil Burner Control

463M A special relay device for timing oil burner operation has been developed by Struthers Dunn, Inc., Philadelphia, Pa. It consists of a synchronous motor driving four cams, three of which provide for different off and on periods of the burner and the fourth for a night off period. A four-position snap switch is mounted on the side of the timer—three positions for selecting one of the operating cams and the fourth for providing continuous operation. When connected, the timing motor runs continuously and operates the cam selected, thus providing the off and on operating periods desired. This device is used in conjunction with a boiler limit control. It is said to be particularly adapted to apartment house installations.

Furnace and Boiler Lining

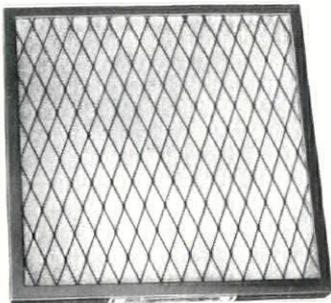
464M The Fireline Stove & Furnace Lining Co., 1801 Kingsbury Street, Chicago, announces a new plastic refractory material for lining firepots of domestic stoves, ranges, furnaces and boilers. It is claimed that the new product will give industrial efficiency to home heating plants,

will raise the combustion temperature, reduce soot, smoke and ashes and increase the heat capacity of any domestic unit burning solid fuel.



Hilo Water Heater and Tank

465M A kerosene burning combined water heater and tank has been introduced by Bastian-Morley Co., La Porte, Indiana. In operation the heat liberated by the burner is distributed over the entire tank bottom by means of a flame spreader. The hot gases then rise through a central flue equipped with a heat deflector baffle. This causes the entire flue way to be used as a heating surface. The heater is equipped with a glass container which holds five quarts of kerosene. Two valves below this container control the supply of fuel, one governing the supply to both main burner and pilots, the other to the main burner only.



Dustop Filters

466M The Industrial Markets Division of Owens-Illinois Glass Co., Toledo, Ohio, announces a new and improved "Dustop" replacement-type air filter which is said to have

an increased life span between replacements. The new filter is made up of a series of coarse and fine mats of glass fibers. The fibers in these mats are laid down by machine and are bonded to each other to form a semi-rigid mat. The dust-catching adhesive has great dirt-holding capacity and a surface tension four times that of engine oil, thereby eliminating the possibility of oil vapor entering into the air stream. Melting point of the adhesive is 540F and is effective 23F below zero.

Commercial Condensing Unit

467M A new line of open type commercial condensing units, available in three suction-pressure ranges, is announced by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. The units are divided into low, standard and high-suction-pressure classifications. The low suction pressure range unit extends from 31 degrees below zero to 5 degrees above zero. The standard suction pressure range is from 13.5 degrees below zero to 20 degrees above zero, while the high suction pressure range is from 10.5 degrees to 40 degrees.

Well-Water Cooling System

468M A new development in home cooling, which uses well water as a cooling medium instead of a chemical refrigerant, is announced by Crane Company, Chicago. This simple, inexpensive method requires a minimum of equipment—a deep well, a water pump, a cooling coil and fan, a filter, thermostat and means of circulating the cool air through the building. It is possible with this system to maintain an inside temperature 15° lower than outside temperatures, and an average humidity of 50 to 60%. If a residence is heated by a hot air furnace, this is easily adapted to circulating cool air through the home. If heated in other ways, floor or wall registers are used.

Boyle Velometer

469M An instantaneous direct reading air velocity meter for use in heating and air conditioning work as well as for determining air movements in industrial-plant and similar equipment, has been developed by Illinois Testing Laboratories, Inc., Chicago. It is housed in a black bakelite case and comes in either the shutter type or tube type. The air enters through a port or jet and tube (depending on type) and leaves through a port on the right side of the meter. This air passing through the meter actuates a movement comprising a

vane, control springs, pointer and magnetic damping system. No mathematical calculations or stop watches are necessary.

Portable Public Address System

470M A new portable public address and sound reinforcement system for moderate sized public places, compactly self-contained in a carrying case and weighing only 28½ lbs., has been introduced by RCA Manufacturing Co., Camden, N. J. The unit may be connected to the ordinary 110-volt, 50-60 cycle house current. The loud-speaker, which is imbedded in the cover, may be separated from the carrying case and hung within a 25-foot radius of the speaker table.

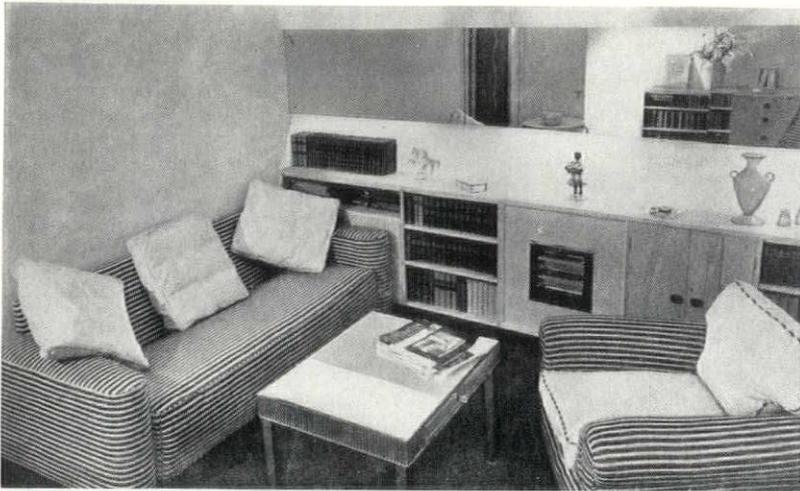
Cold Storage Insulation

471M The Celotex Company, Chicago, has recently introduced a factory-sealed cold storage insulation designated as Celotex Vapor-proofed Low Temperature Insulation. The new insulation is said effectively to eliminate the danger of water vapor collecting in voids commonly found in all insulations if not sealed out. The blocks are made in three sizes, standard 18"x36" and half sizes, 18"x18", and 9"x36". Thicknesses include 1", 1½", 2", 3" and 4".



Frigidaire Air Conditioners

472M The air conditioning division of Frigidaire Corporation, Dayton, Ohio, has developed two new self-contained air conditioning units designed for individual installations in homes, offices, hotel rooms, retail shops, etc. The units are available in burl walnut shells and are equipped with thermostatic controls and with air filters for outside ventilation. One unit, the SC-40, has approximately ⅓ of a ton refrigeration capacity and the SC-80 has about ⅔ of a ton.



DECORATIVE ART, 1935

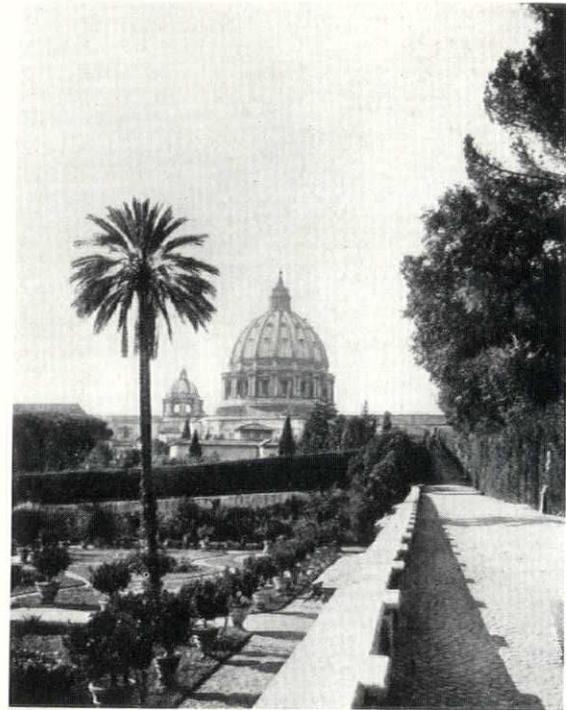
Edited by C. G. Holme. Published by The Studio Publications, Inc., New York, N. Y. Illustrated; indexed; 140 pages; size 8 $\frac{1}{4}$ x 11 $\frac{1}{2}$; price—paper-bound, \$3.50; cloth-bound, \$4.50.

THE thirtieth annual issue of the Studio Year Book presents a photographic survey of the world's progress in home-planning and decoration during the past year. The work of representative architects and designers in all parts of America and Europe is here set forth in a manner which the reader will find both interesting and stimulating.

As a means of bringing order and form to so comprehensive a subject, the Editor has divided the contents of the book into nine sections, dealing specifically with the exterior, the various rooms, and some details of decoration and space and labor-saving devices. This arrangement, in addition to giving continuity to the book, also establishes some interesting parallels in the direct comparison of work of architects and designers of many countries.

Six interiors which are reproduced in color, supplement the other illustrations, all of which are of uniformly high quality.

Many architects will doubtless find that this review of the best in contemporary design has real inspirational value. In its survey of the past year's achievements, it may serve the designer as something of a spring-board into the work of the coming year.



Above: interior from "Decorative Art, 1935"; Right: the dome of St. Peter's, an illustration from "Michelangelo, The Man"

MICHELANGELO, THE MAN

By Donald Lord Finlayson. Published by Thomas Y. Crowell Co., New York, N. Y. Illustrated; indexed; 368 pages; size 6 $\frac{1}{2}$ x 9 $\frac{3}{4}$; price \$3.50.

AS architect, sculptor and painter, Michelangelo Buonarotti was admittedly the last great artist of the Renaissance and one of the most interesting figures of all time. In this volume, which seeks to discover the living human personality through a study of the man and his environment, the reader will find not only a picture of the great artist, but an authentic and spirited record of life in Renaissance Italy. The great names of that day—Medici, Strozzi, Cellini, Vittoria, Colonna and the Popes of Rome—live again in these pages. The events surrounding the creation of such famous works as the paintings of the Sistine Chapel and the dome of St. Peter's are brought out in a manner which will doubtless prove illuminating to any student of the art of that period.

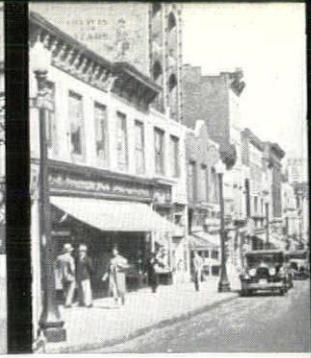
The author, who is Assistant Professor of Art at Cornell University, received his master's degree at Brown University, continued his studies at Harvard and spent a year as Proctor Fellow at Princeton. He brings to his work the point of view of both schol-

ar and traveller, having spent much time gathering material in Europe. Architects who enjoy projecting themselves into the colorful problems of another day and discovering the manner of their solution, should find much in this book to interest them.

THE ANATOMY OF LETTERING

By Warren Chappell. Published by Loring & Mussey, New York, N. Y. Illustrated; 79 pages; size 6 $\frac{1}{2}$ x 8 $\frac{1}{4}$; price \$2.00.

SOMETHING different in books on lettering comes to hand with this little volume by Mr. Chappell. Instead of giving the reader a copy-book, with models to work from, he offers expert advice and instructions on the art of calligraphy. Beginning with a chapter on the tools of lettering and proceeding through a brief illustrated discussion of Roman Capitals and lower case, the cursive forms, block-letter, black-letter, and numerals, the author confines himself to a study of fundamental anatomy. His purpose, well expressed in the foreword of the book, is "to take from lettering some of its drudgery and make of it instead a creative experience." The last thirty pages of the book are devoted to alphabets illustrative of the text.



MODERNIZE MAIN STREET

Competition



Sponsored by

LIBBEY • OWENS • FORD GLASS COMPANY

Conducted by

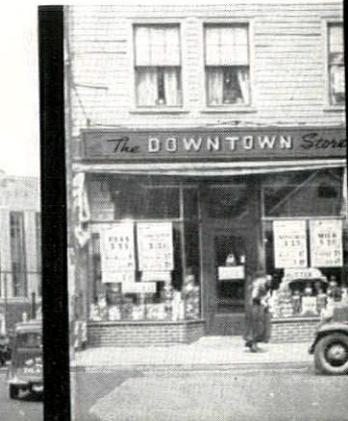
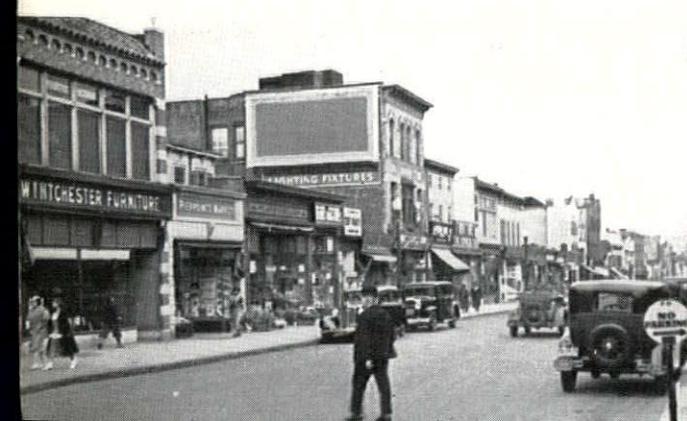
THE ARCHITECTURAL RECORD

KENNETH K. STOWELL, A. I. A., *Professional Advisor*



● The Food Store, the Drug Store, the Apparel Shop and the Automotive Sales-and-Service Station—the “Main Street” of every city, town, village and community has at least these four business establishments. Better merchandising demands the modernization of

thousands of them and better financing terms make it possible. The modern store should attract the public, display goods to their best advantage, provide such convenience and comfort for customers that purchasing is a pleasure. The shop front with its plate-





\$11,000 in Cash Prizes

52 PRIZES — \$11,000 TOTAL

4 FIRST PRIZES (one in each classification)—\$1,000 each—\$4,000

4 SECOND PRIZES (one in each classification)—\$750 each—\$3,000

4 THIRD PRIZES (one in each classification)—\$500 each—\$2,000

In addition, there will be awarded 40 Honorable Mentions of \$50 each. These Honorable Mentions will be awarded for meritorious

designs, the number of awards in each class depending on the number of worthy designs in each class as determined by the Jury.

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



glass show-windows establishes the character of the store and invites the passerby to stop and shop. The interior fulfills the promise of the front, serving as the setting for the display of merchandise, providing the urge to purchase.

On the architects, draftsmen and designers of the country rests the responsibility for the effectiveness of these modernizations both economically and aesthetically. To them, therefore, the Libbey-Owens-Ford Glass Company addresses this Competition.

The Program for the Competition will be distributed June 15, 1935 and will state in detail the requirements. The Competition is in reality four simultaneous competitions, each calling for the modernization of a particular type of shop or store—(1) A Food Store; (2) A Drug Store; (3) An Apparel Shop; (4) An Automotive Sales-and-Service Station. A photograph of each shop, and all necessary data, will be

published in the Program. First, Second and Third Prizes are offered for the best solutions of the modernization problem for each type of store. Each competitor may submit as many designs as he wishes in any or all classes, each design being eligible for a prize. All designs will be submitted and judged anonymously.

The Competition will begin June 15, 1935 and will close at 5 P. M. August 12, 1935. The Jury will meet August 26 and the judgment will continue until the final decisions are reached and awards made. The Jury will consist of seven members;—five architects and two experts in merchandising.

The entry blank is for your convenience. Upon receipt of the blank, a copy of the program, the printed title to be pasted on each design, and all necessary data and instructions will be sent to the entrant.

USE THIS ENTRY BLANK

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

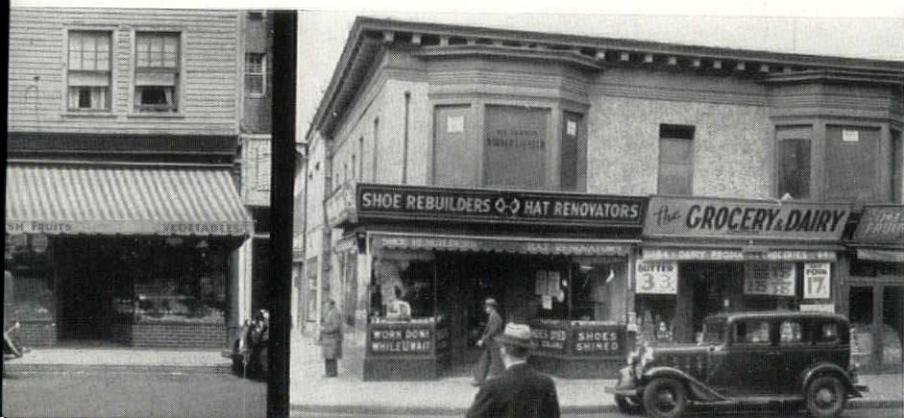
Gentlemen: I desire to enter the "Modernize Main Street" Competition sponsored by the Libbey-Owens-Ford Glass Company. Please send me the Program of the Competition, the title-paster and all necessary data and information.

Name _____ (Print)

Profession or occupation _____

Street _____

City _____ State _____



The Readers Have a Word to Say

(Continued from page 62)
cost as suggested in the article on Page 32 of the last magazine.

This campaign, if it matures, should be of especial benefit to the architects in this section of the country, for we have long felt the need of such an organization, and believe that it is much more needed here than in the East.

I venture that not more than 5 per cent of the homes and buildings costing less than \$15,000 are planned or designed by architects, and while the architect is probably more or less to blame for having neglected this field; at the same time the situation should not exist, for we feel that regardless of the size or cost of a project, it is still worth the services and should have the thought and attention that only the trained architect can give it.

If there is any service that I can render in connection with this, preparatory to organizing such a campaign, please feel free to call on me.

• NEW YORK, N. Y.

Editor, AMERICAN ARCHITECT:

READ with interest the article of Harry A. Bruno in the April issue. Complying with your request for an answer, I would say—"Yes" as every architect should. Unfortunately, my observation of architects makes me think that there is something fundamentally wrong in their mental makeup which prevents them from taking any intelligent constructive measures in self-defense such as lawyers and doctors have taken with the result of so firmly establishing themselves. I wonder if the curse of the architect is not the fact that he dreams of past achievements under different civilizations and economic conditions, and fools himself—like children playing pirate—into perpetuating by all means, esthetics of the past which might be considered to a certain degree as demonetized currency. The successful ones do not feel any need of aggressive co-operative effort, and the younger, less successful feel more or less demoralized.

The idea of a weekly or monthly contribution such as you outlined, plus a tax on jobs in the office to further a campaign of enlightenment and mutual defense, is an excellent one. However, this I do not consider enough as you will find architects with even good standing

often chiseling, cutting rates and doing, when face to face with clients, all sorts of things which they would most emphatically condemn when at a meeting of any professional organization. The worst action a professional body can take against one of its members found guilty of unethical practices, is to exclude him from membership. To that person this is a very mild punishment as his client is generally ignorant of the body's existence and the consequences to that architect will not be as severe as disbarment for a lawyer. If the Institute had advertised itself properly—which its leaders do not want to do—exclusion from membership would be a serious punishment. Any code designed to bring architects to observance of their ethics, must have in it some very sharp teeth. Not only minimum prices should be fixed so as to take away the incentive of the owner for shopping, but also the abuse of giving Real Estate operators free sketches should be stopped. An architect should not consent to file plans for a builder for a fee. An architect filing plans should also have the supervision of the job. Should he work as an employee for an organization doing its own architectural work, the cost of his services to the company should be the same as if they were employing an independent architect.

Finally, let me present another idea. To some it may seem a little daring, but I think it deserves consideration. The first clause in our specification should be that the contractor shall employ union labor. Why can we not come to an understanding with the unions so that they in turn help us by seeing that no work on jobs is done unless from plans bearing the seal of an architect who complies with the regulations of an approved code.

• PHILADELPHIA, PA.

PLEASE be advised that my partner and I are heartily in favor of such a campaign under the direction of a professional publicist and acceptable trustees, and that we pledge our support for a maximum of 25 cents a week.

• NIAGARA FALLS, N. Y.

THE article written by Mr. Harry Bruno entitled "Organize First" was considered at a meeting of the Associated Architects.

We are in complete accord with the suggestions contained in the article, and I was directed to inform you, that this organization passed a resolution to cooperate with all architects in sponsoring a Nationally Planned Public Relation Campaign, and we agree to give our financial support to the extent of twenty-five cents per week.

• SMALL HOUSE PLANS

Editor, AMERICAN ARCHITECT:

THE May issue of AMERICAN ARCHITECT demonstrates that architects can design small homes and do it exceedingly well and successfully.

After the architectural profession by a large majority elected to discard the A.I.A. endorsement of a small house stock plan bureau or clinic, which in the opinion of many failed in its purpose, we read on page 63 of the organization of more "clinics" which are bound to fail and eventually be used to drive bargain prices or fees with the individual architects and bring the profession into entanglements that will not be to the best interests of the small home owner.—Harry Lucht, Architect, Cliffside Park, N. J.

• FIGHTING THE BATTLE OF ARCHITECTS

Editor, AMERICAN ARCHITECT:

DESIRE to obtain 100 copies of the booklet "When You Build" which has been prepared and sponsored by AMERICAN ARCHITECT. Please send me a statement as to the cost of these booklets.

I am of the opinion that we are at the beginning of a very active period of home building and I desire to be in a position to get my share of this work. Tangible evidence of this activity shows in the fact that I have received commissions to prepare plans for four homes since the first of the year, which work came into the office entirely unsolicited. Such a thing has not happened at any time during the past three years and I am of the opinion that it is just a forerunner of tremendous activity in home building.

I shall be glad to receive any other information which AMERICAN ARCHITECT may have to offer in the matter of bringing the value of architectural services to the attention of prospective clients. I feel very sure that the architect.
(Continued on page 90)

ONE PAINT GIVES OUTSTANDING SERVICE IN DRAMATIC PAINT TEST

MAIL COUPON for complete story of how Indiana Community solved its paint problems

● Now every architect can put an end to paint failures.

The much-argued question of what paint gives longest service has been answered—by a sensational 5-year paint test recently completed on 100 homes in a northern Indiana community.

Three leading kinds of paint were tested. Two of them cracked and peeled badly in less than 2 years. But under identical conditions, the third paint—Eagle Pure White Lead—gave remarkable service for 5 years!

Mail coupon today for the complete interesting story, illustrated with actual photographs taken in the Indiana Community.

And save yourself the grief of premature paint failures by specifying Eagle Pure White Lead for all exterior work. Eagle Pure White Lead doesn't crack or peel. It is made by the Old Dutch process—and wears down by slow, even chalking.

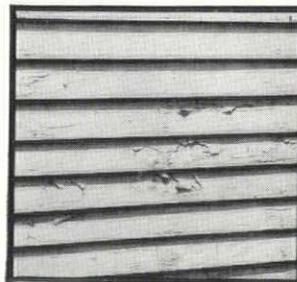
Boost the Better Housing Program in your community



Community of 100 homes where Paint Test was made. Town was divided into 3 sections. Each section was painted with a leading kind of paint. Two paints failed quickly. But Eagle Pure White Lead gave outstanding service under adverse conditions for 5 years.



Inspection of house painted with Eagle Pure White Lead in impartial paint test. This paint gave excellent service. House was not repainted for 5 years. Other paints tested had to be retouched in less than 2 years.



Typical paint failure in Indiana Community Paint Test. This paint cracked and peeled badly in less than 2 years.

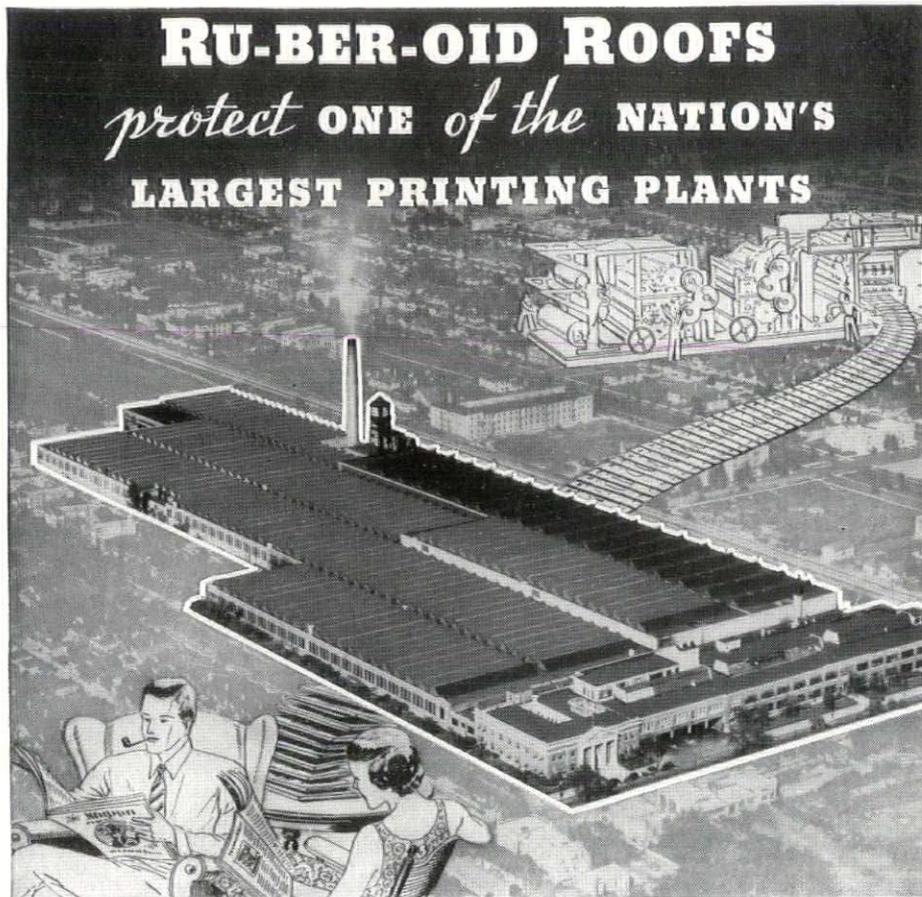
Eagle pure
**WHITE
LEAD**



White lead lasts!

The Eagle-Picher Lead Company, Dept. AA6, Cincinnati, Ohio.
Please send me a copy of the picture-folder that tells the complete story of the Indiana Community Paint Test.

Name _____
Address _____
City _____ State _____



Chicago Aerial Survey

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LARGEST PRINTING PLANTS

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BALTIMORE CHICAGO ERIE MILLIS MOBILE NEW YORK

(Continued from page 88)

fects all over the country feel very kindly toward AMERICAN ARCHITECT particularly and also the other magazines for the part which they are playing in fighting the battle of the architects.—Fred L. Swartz, Fresno, California.

• **TIGHT SHEATHING**

Editor, AMERICAN ARCHITECT:

IN your reference data No. 16, February, 1935, I think there is one serious mistake.

Consult Table 2 and you will find "tight sheathing" recommended for roof deck use under wood shingles. . . . I have never known of wood shingles laid on tight wood decks to last ten years, while on open sheathing (approximately 1 to 1½ inch space between boards) shingles have lasted upwards of fifty years. . . . Shingles soak up water, a portion of which is conveyed to the roof boards. With a space between boards the air circulates (wood shingles are porous) and dries out the boards and shingles. This does not occur with tight sheathing and dry rot sets in.—Clarence L. Cowles, Cowles & Mutscheller, Saginaw, Michigan.

The Director of Technical Service obtained from the Forest Products Laboratory and the Red Cedar Shingle Bureau, expert advice as follows: Use of tight sheathing or nailing strips varies in different sections of the country; there is little evidence that open sheathing is best or materially extends the life of correctly laid wood shingles. Method of laying or other conditions may easily affect life of shingles more than the type of under deck. Other factors than a possible slight difference in life should govern choice of tight sheathing or spaced shingle lath; better insulation resulting from tight sheathing is one such factor in its favor.—Eds.

• **"WHEN YOU BUILD"**

Editor, AMERICAN ARCHITECT:

YOU could not have made a finer contribution to the cause of good architecture, and the welfare of the architect, than you have done in issuing the little pamphlet "When You Build."

Your message carried in the popular magazines is one of the best possible ways to educate the public as to what the architect is.—William Orr Ludlow, F.A.I.A., New York City.

• If you change your address, please report the change direct to American Architect five weeks before the change is to take effect, send in 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.



"Before" and "After" photographs illustrating the article "Remodeling Indoors and Out"
by Allan McDowell in June GOOD HOUSEKEEPING.



Two Million Homes are Learning about the Architect

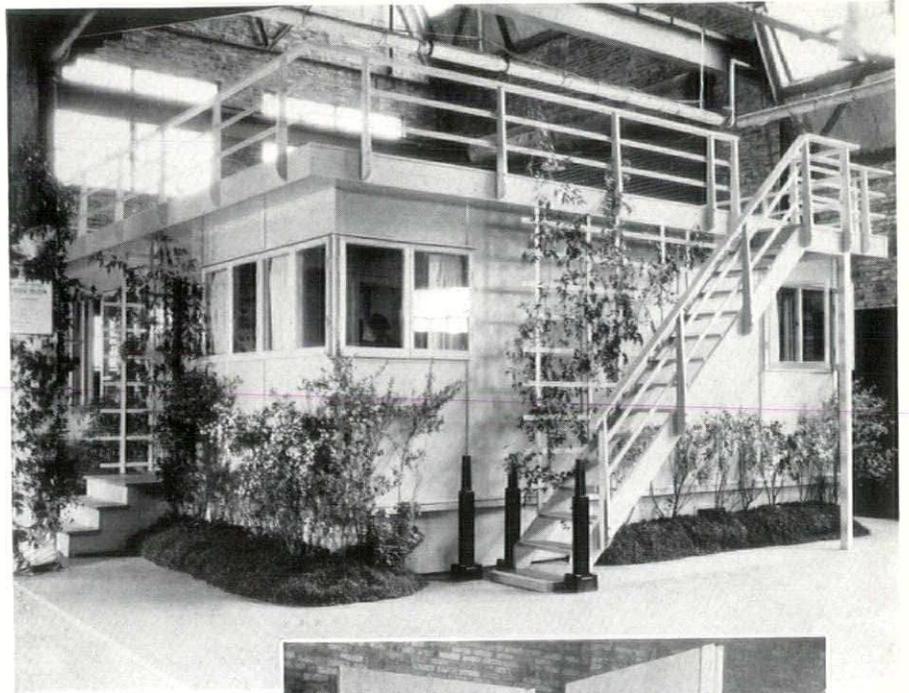
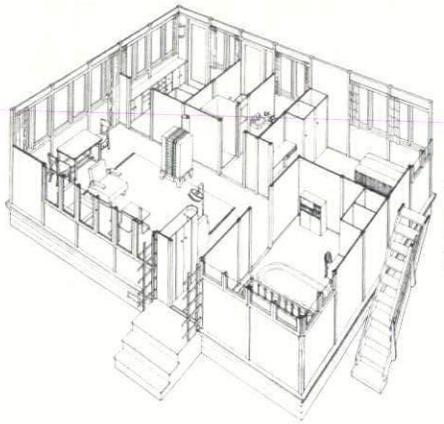
No magazine of large circulation is doing more than Good Housekeeping to increase popular appreciation of the architect and his services. Every issue of Good Housekeeping presents to its 2,000,000 readers articles dealing with building, remodeling or landscaping, each one a graphic demonstration of what can be accomplished with the help of an architect.

Good Housekeeping

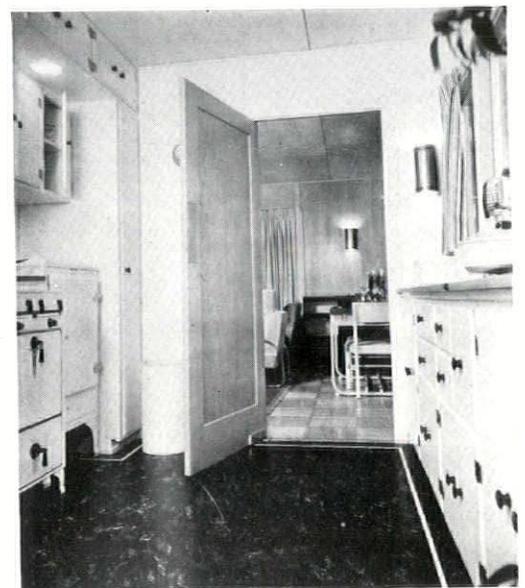
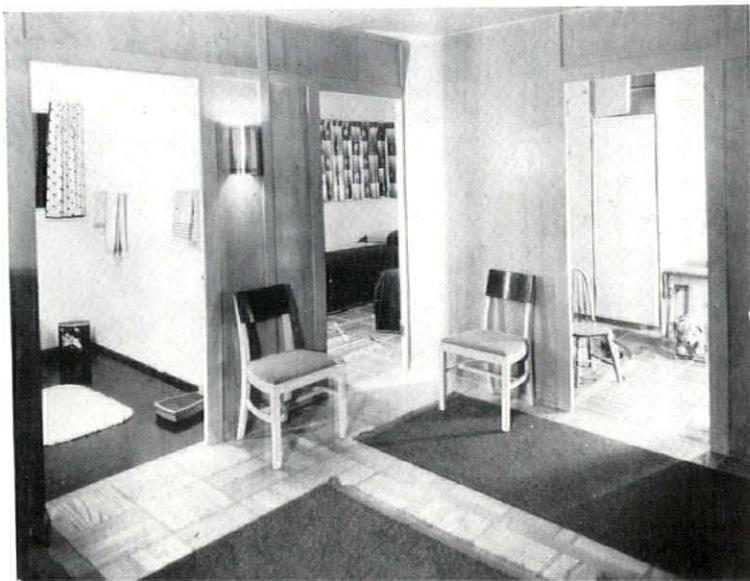
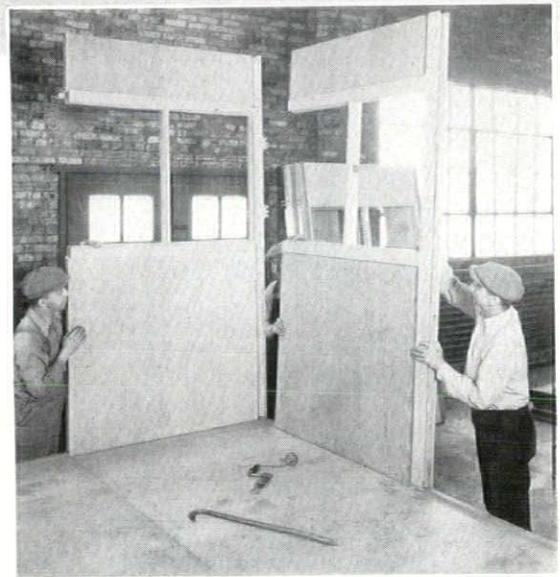
Everywoman's Magazine

25¢ a copy; \$2.50 per year

Scientists Produce a Prefabricated House



AT the Forest Products Laboratory, maintained at Madison, Wisconsin, by the U. S. Department of Agriculture in co-operation with the University of Wisconsin, scientists have a small house for prefabrication entirely in wood. The structural principle employed is the "stressed covering" now a universal practice in aircraft design. Factory-made units are panels, made by gluing plywood to both sides of studs and joists. Between the plywood coverings is a layer of blanket-type insulation. Standard wall units are 4 x 8 ft., 2 in. thick. Floor panels are also 4 ft. wide. Spans were kept at 13 ft. 6 in. to permit use of 5 $\frac{3}{8}$ in. joists. In this experimental house, sash are hung outside the plane of walls to overcome waterproofing problems. Exposed plywood surfaces are protected by an undercoating of aluminum followed by two coats of lead-and-oil paint. The house measures 21 x 29 ft. Included are two bedrooms, bath, kitchen and living room



ANNOUNCEMENTS

• The annual exhibition of the Architectural League of New York, usually held in the Spring, this year will be held in October according to present plans. It will be held in the Grand Central Palace and in collaboration with the American Institute of Interior Decorators. Information relative to exhibits can be obtained from Edgar I. Williams, Chairman, Exhibition Committee. The Architectural League, 115 East 40th Street, New York, N. Y.

• A "Home Development Architectural Competition" is being conducted by The Jordan March Company department store of Boston. Any architect, engineer, draftsman, student, builder, or designer in New England is eligible to compete. The competition is for four classes of houses ranging in cost from \$5,000 to \$20,000. A total of \$4,200 in prizes will be awarded. The company will build seven houses selected from the prize winners. The competition will close on June 30, 1935, at 5 P.M.

• A summer course in arts and crafts abroad is being sponsored by the Rhode Island School of Design. The Trans-Pacific travel school will visit art schools, libraries, museums and studios in Japan. A period of study will be made in Kyoto, Japan, under Japanese professors, artists and craftsmen. Details of the course can be obtained by addressing Dana P. Vaughan, 11 Waterman Street, Providence.

• Graduate courses in city planning leading to the degree of master in city planning have been added to the curriculum of the school of architecture of the Massachusetts Institute of Technology. A five year course in city planning leading to the degree of bachelor of architecture was established three years ago. The new course will offer advanced work and opportunities for research, under the direction of Professor Frederick J. Adams.

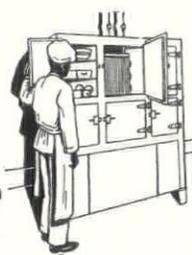
• American Society for Testing Materials will hold its thirty-eighth annual meeting in Detroit, June 24-28, 1935. Meetings will be held in the Book-Cadillac Hotel. In addition to papers and committee reports on various materials used in building construction of interest to architects, the evening meeting on June 26 should prove informative. That meeting will consider the relationship of materials to the "House of Today and Tomorrow." Stewart McDonald, Assistant Administrator, FHA, will discuss the Federal Housing problem and J. E. Burchard, Vice president, Bemis Industries, Inc., will speak on the role of materials in modern housing.

• "Modernize Main Street" is the subject of a competition sponsored by the Libbey-Owens-Ford Glass Company. The problem is the designing of a new or modernization plan for existing buildings of four types typical of Main Street in every city and town. Programs will be ready for distribution June 15, 1935. The competition will close August 12,

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Architectural Work



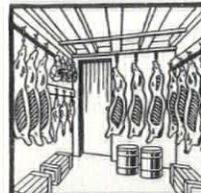
Retailing



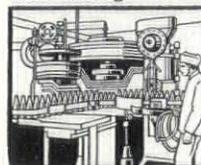
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Time was when "ice machines" were used only for brewery work, ice making, and cold storage. Today, Refrigeration will serve your clients in a dozen profitable ways, performing any of the following jobs:

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1935. A total of \$11,000 in prizes will be awarded. First prizes in four divisions will be \$1,000 each; second prizes \$750; third prizes \$500; and 40 honorable mentions, each receiving \$50. The professional advisor is Kenneth K. Stowell. The Architectural Record is conducting the competition.

Trends and Topics

(Continued from page 61)

• A. R. Clas, formerly an associate of Holabird and Root, Chicago architects and more lately Assistant Director of the PWA Housing Division, has been elevated to the position of Director of the Housing Division. Colonel Horatio B. Hackett, former Director of PWA Housing, has also been promoted. He has been appointed an aide to Harold F. Ickes, Secretary of the Interior and Public Works Administrator. Col. Hackett will occupy the position in the PWA originally held by Col. Waite.



ACME

Air Cooling and Conditioning

Warning! Medicine Man sees hot winds ahead. A hot dusty summer in the offing. This is the forecast for 1935 of the Medicine Man of the Winnebago Tribe at Wisconsin Dells. Are you prepared for such an eventuality? Will 1935 be a repetition of 1934?

WITENMEIER, a name associated with Refrigeration in all its phases and applications for over 35 years, offers complete Air Conditioning & Refrigerating Systems for industrial purposes and bodily comfort, either in central or unit systems from 1/4 ton capacity up.

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Let us make a survey of your requirements and give you our unbiased opinion of the system best suited for your purpose. There is no obligation. Wittenmeier, with Air Cooling and Conditioning Experience that dates back to 1908, can offer helpful suggestions, Architects, Engineers, Contractors and others should avail themselves of this service.

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• Many producers of quality building materials and equipment appreciate the importance of architectural service both to the public and themselves. Some of them have publicly acknowledged the fact in their advertising. An example is that of the Otis Elevator Company whose advertisement in Fortune Magazine read "Consult Your Architect. Call him in at least once a year to discuss ways and means of keeping your building attractive to tenants." Incidentally, architects should find it worth while to occasionally visit buildings which they have designed and offer owners suggestions on needed alterations or maintenance problems. Maintaining an active interest in past jobs and letting the owner know about it does not require much time and often results in new work.

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

• C. M. Snyder will direct a service for architects, consulting engineers and home builders which has been established by the General Electric Company at Nela Park, Cleveland. Mr. Snyder is a graduate of the School of Architecture, Syracuse University. The new service is organized as a part of the GE Institute for the purpose of assisting in the proper installation and arrangement of electrical equipment and appliances used in houses.

• Jerome Raphael, a student at Massachusetts Institute of Technology, was awarded the first prize in the seventh annual bridge design competition held by the American Institute of Steel Construction. The second prize was awarded to Alexander Matthews, student of the Yale School of Engineering. Honorable mentions were given the designs submitted by David Hiatt, New York University, and Fred A. Thompson, Jr., Iowa State College.

• The Chicago Architectural Club has elected the following officers: President, Ralph Gross; vice president, Evald Young; secretary, Thomas Mulig; treasurer, John McPherson. The Directors of the club are: Charles Koncevic, Henry Breson, William Thomsen, Lee Berbiers, George Richer, Albert J. De Long.

• George Tibbits Licht, New Rochelle, N. Y., has received the Prix de Rome in architecture according to an announcement by the American Academy in Rome. Other awards were: in landscape architecture, James MacKenzie Lister, Boston, Ohio; in painting, Robert Berkley Green, Pittsburgh; and in sculpture, Gifford MacG. Proctor, Wilton, Conn.

• Harlow Hudson, graduate of the school of Architecture and Allied Arts, University of Oregon, and a graduate student at Massachusetts Institute of Technology, has been awarded the Ion Lewis Travel-



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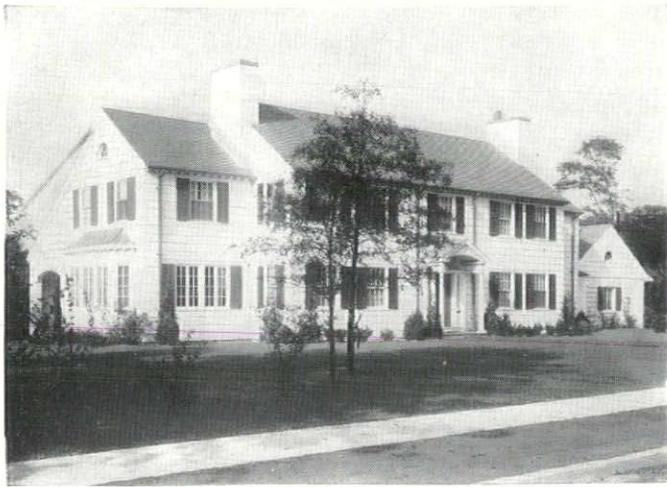
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ing Scholarship for 1935. He will visit Denmark, Sweden, Norway, Germany, England and France.

- Coolidge, Shepley, Bulfinch and Abbott, architects, Boston, were awarded the Harleston Parker Gold Medal for the design of Lowell House, Harvard College, Cambridge, Mass.

- Haralson & Nelson, architects, Fort Smith, Arkansas, have dissolved partnership. The firm will complete work under contract. J. J. Haralson will continue the practice of architecture with Ralph O. Mott under the firm name of Haralson & Mott with

offices at 229 Merchants Bank Building. E. Chester Nelson will continue the practice of architecture with offices at 427 Merchants Bank Building.

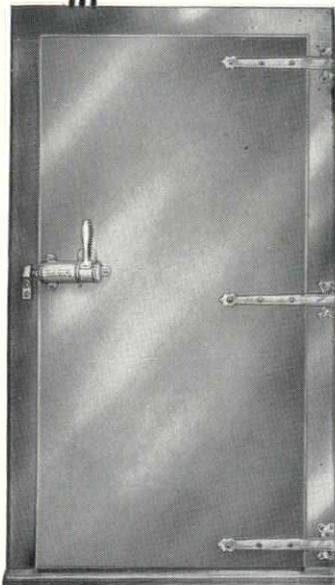
- John F. Gowen, formerly secretary of the Copper & Brass Research Association, has been appointed executive secretary of the Producers' Council, Inc.

- Frank J. Forster, architect, is now located at 19 East 47th Street, New York, N. Y.

- Harry M. Clawson, architect, has moved from 40 East 49th Street to 139 East 53rd Street, New York.

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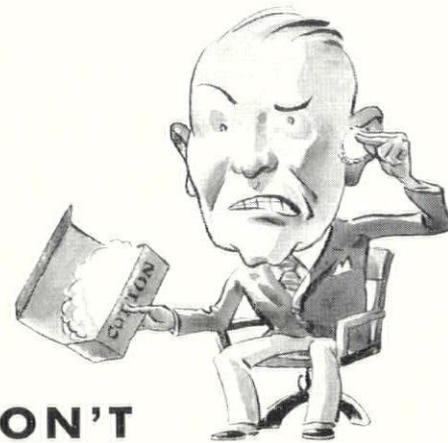
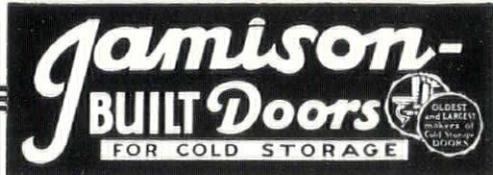


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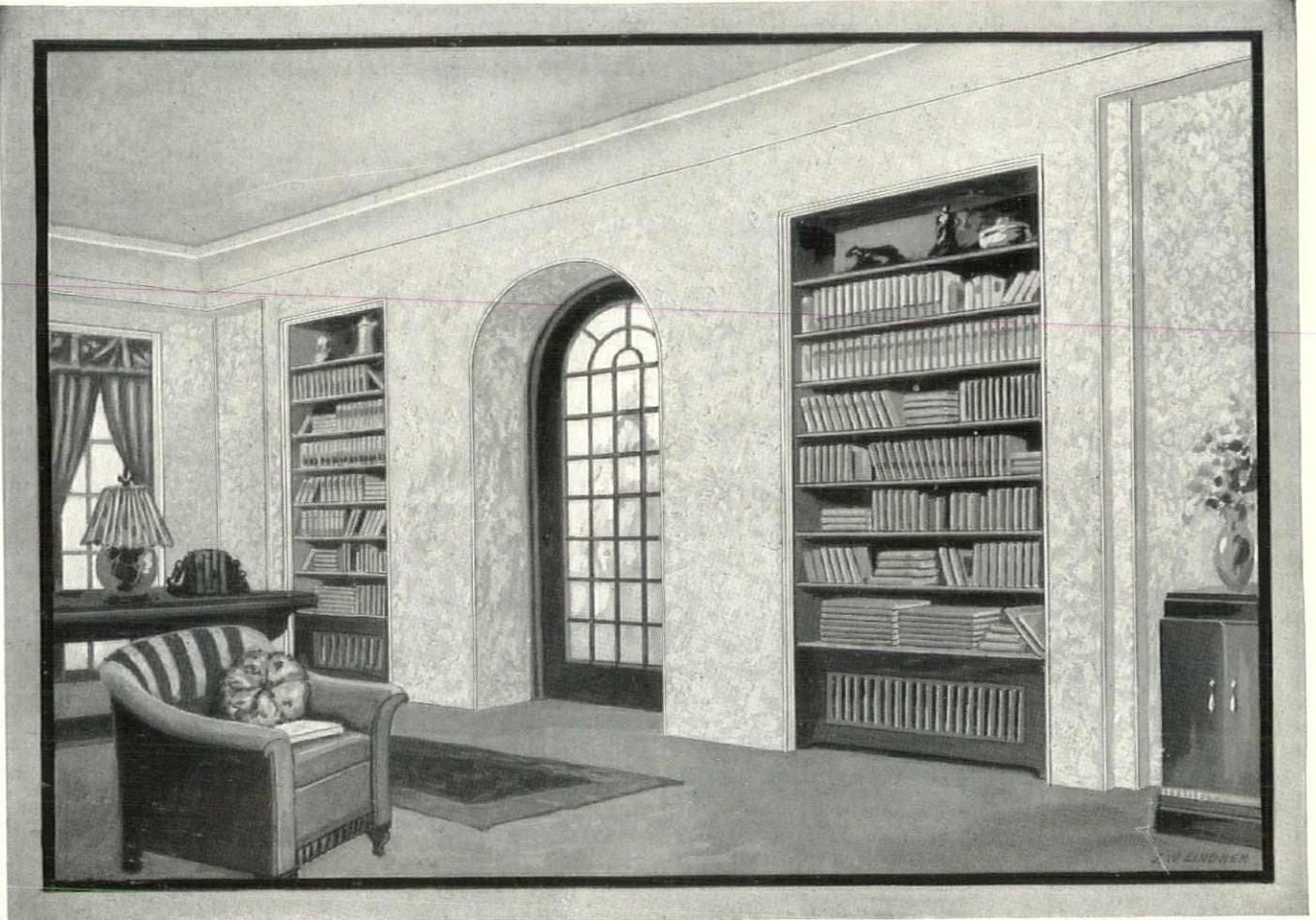
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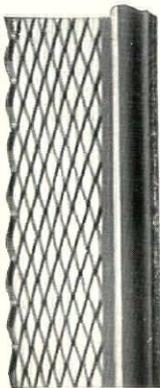


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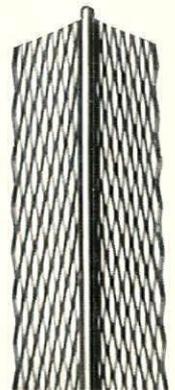
The deep book recesses were framed with a narrow metal casing of O.G. pattern (Milcor Expansion Casing No. 6) which, finished with the wall, produces an effective new style of interior that is having a remarkable acceptance among owners and builders of better class homes.

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