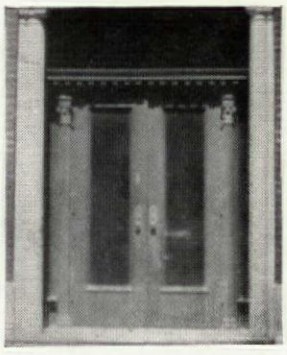
E S I G N

PENCIL POINTS

DECEMBER
1940

A Doorway



becomes an entrance of Charm and Distinction

BECAUSE OF BRONZE

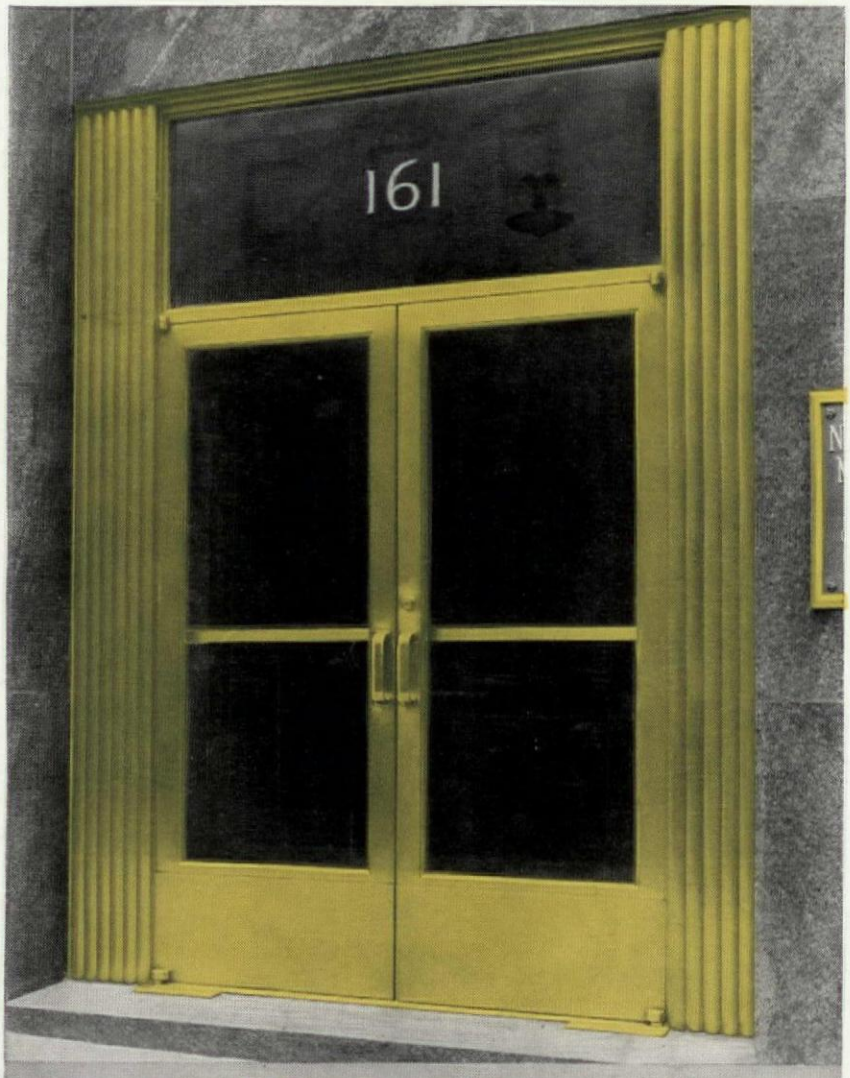
The pictures tell a convincing story for the appearance characteristics of Anaconda Architectural Bronze. But, they don't tell the whole story.

In addition to adding a distinctive note of beauty and charm to well-designed entrances, bronze provides the economy of durability and easy maintenance. As a matter of fact, only occasional cleaning is necessary to maintain its original lustre. Then, too, moderate cost and ready adaptability to original design are other practical reasons why this ageless metal is the choice of so many architects.

• • •

The American Brass Company is the leading supplier of architectural bronze, copper and nickel silver in all wrought forms for ornamental work of every description.

These photographs by courtesy of The A. J. Johannsen Agency of Northwestern Mutual Life Insurance Co. 4092



This building at 161 Remsen Street, Brooklyn, went untenanted for five years but was successfully leased soon after the entrance was modernized with Anaconda Architectural Bronze. Penn Brass & Bronze Works, Brooklyn, N.Y., fabricated and installed the metal work.

FOR ORNAMENTAL WORK

ANACONDA from mine to consumer

Anaconda Bronze

THE AMERICAN BRASS COMPANY, General Offices: Waterbury Connecticut

In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont. • Subsidiary of Anaconda Copper Mining Co.

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CORRECTED PROOF of an important page in the New SWEET'S CATALOG

A Manufacturer's Code of ~~Ethics~~ with Architects and Engineers

The advent and general use of the semi-prefabrication of parts of housing in the form of standard, completely engineered Packages is a forward step in the building industry.

As units covering heating, trim, wall surfaces, kitchens, et cetera, these packages represent many advantages. They invite a closer relationship between you and the manufacturer. As a means of developing this relationship on a strong, effective and equitable basis, we propose a Manufacturer's Code based on the following fundamentals:

1 The responsibility of contacting you and your office should be delegated to a *single* company representative.

2 To achieve good service, these contacts should be at regular intervals.

3 To increase efficiency in handling requests, a ~~service~~ should be established in principal cities.

4 To keep you posted, the manufacturer should assume the responsibility of distributing (in convenient forms for efficient use and filing) the latest data on new products, product changes and industry trends.

5 To maintain fair competition, all specifications submitted by any manufacturer should establish standards of quality and performance only.

6 To insure satisfactory field fabrications or installations of any product, close co-operation must exist between the architect, the manufacturer and the contractor from inception of a project to its completion.

★ WESTINGHOUSE INCORPORATES ALL THESE FUNDAMENTALS IN ITS CLEARING HOUSE SERVICE ★

Be sure to see the Westinghouse Sections in the 1941 Sweet's Catalog.

Westinghouse
CLEARING HOUSE SERVICE
FOR ARCHITECTS AND BUILDERS

DECEMBER 1940

Model of New York City's new Criminal Courts and Prison Building.
Harvey Wiley Corbett and Charles B. Meyers, Architects.

"The true Administration of Justice is the firmest pillar of good Government"

. . George Washington

RAPIDLY nearing completion, New York City's Criminal Courts and Prison Building (designed and constructed under the supervision of the Dept. of Public Works, Irving V. A. Huie, Commissioner) promises to be one of the city's most interesting and impressive structures. Designed to give the utmost in utility, its beauty is noteworthy in every detail.

Typical of the materials employed here are the 3,200 Aluminum windows in the Criminal Courts Building. There for a lifetime of service, they are unexcelled in appearance, provide a maximum of glass area, remarkably easy to open and close, permanently weather-tight.

And, in this and the adjoining Prison Building, Aluminum window subframes, mullions and louvres are used. 2,115 cast Aluminum spandrels grace the exterior. Aluminum handrails, stair treads and nosings, ornamental trim, lighting fixtures and many Aluminum doors dress up the interior.

ALUMINUM COMPANY OF AMERICA,

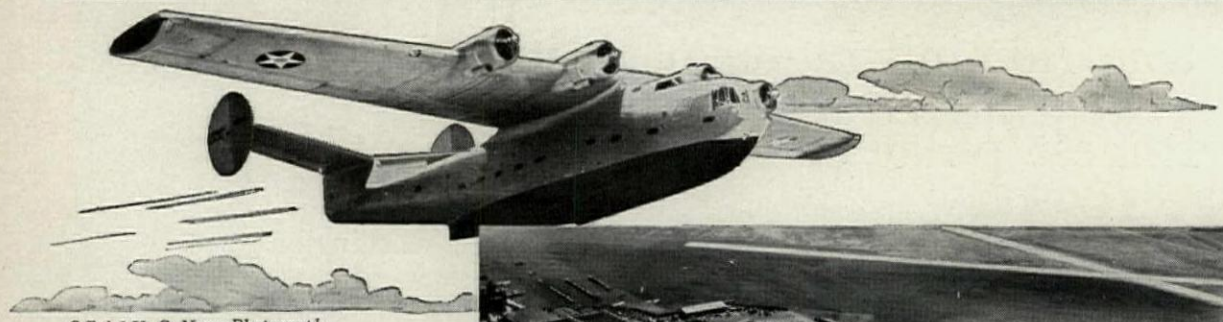
2198 Gulf Building, Pittsburgh, Pennsylvania.

Architect's drawing superimposed on street scen to show how finished building will actually appe

Showing how construction had progressed September 13, 1940.

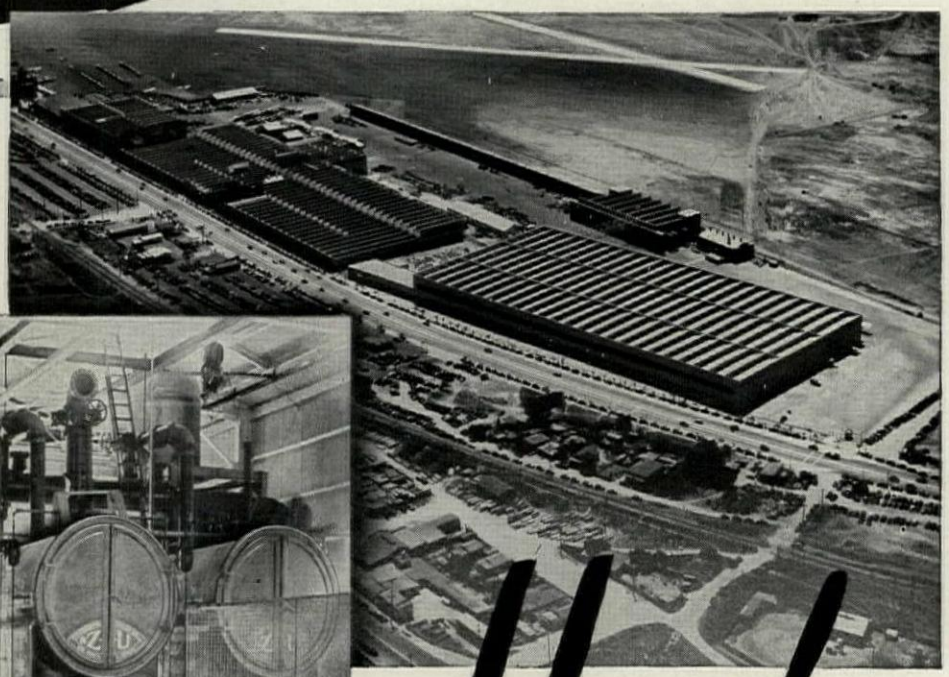
ALCOA ALUMINUM

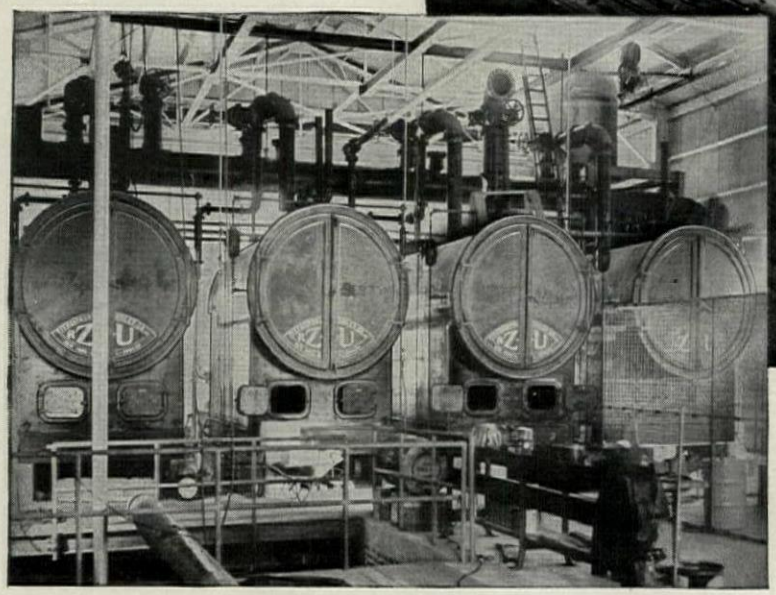
★ A FIRST LINE INDUSTRY EXPANDS FOR DEFENSE ★



Official U. S. Navy Photograph
Courtesy Consolidated Aircraft Corporation

Four of the thirteen 250 hp. Fitzgibbons R-Z-U Steel Boilers recently installed in the Consolidated Aircraft Corporation's expanded plant in San Diego, Calif. A. O. Reed & Co., Heating Contractor.





Heat by FITZGIBBONS STEEL BOILERS

FOR CONSOLIDATED AIRCRAFT CORPORATION

SAN DIEGO, CALIFORNIA

A Fitzgibbons Steel Boiler takes to the rails. On the way to Consolidated Aircraft Corporation in San Diego, California.

Again it's Fitzgibbons for a vitally important heating job! In keeping with the character of the whole plant and the importance of its product, this prominent airplane manufacturer selects thirteen of the famous Fitzgibbons R-Z-U Boilers for the ultimate in heating dependability and economy.

For important defense projects or industrial and commercial installations, architects and engineers specify Fitzgibbons Steel Boilers for assured heating—*assured economy, assured performance, assured comfort.*

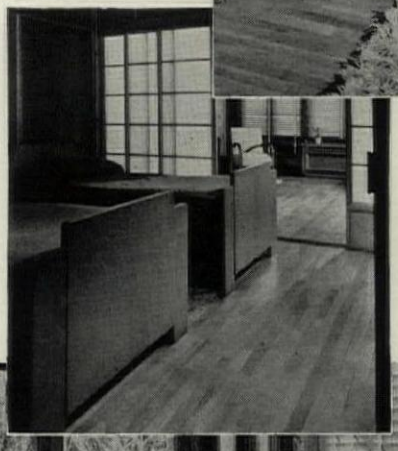
•

The Fitzgibbons R-Z-U Catalog has a wealth of information for architects and heating contractors. Write for your copy today.

Fitzgibbons Boiler Company, Inc.

General Offices: **101 Park Avenue, New York, N. Y.**

Works: **Oswego, N. Y.** *Offices in Principal Cities*



Maple Creates a New Vogue in Home Floors

Photos from modern home in Highland Park, Illinois. Paul Schweikher, Architect —Schweikher, Lamb & Elting, Chicago.

Today it is realized that floors which harmonize with furniture make a decided difference in home beauty

Maple is again in the spotlight for home floors. Not because of its almost eternal smoothness, its longer life, or its easier cleaning—but because architects and decorators have discovered that Maple holds the key to new beauty in modern homes.

The principle is simple: Modern furniture is fine-grained—so is Hard Maple. Combined, the two present a close harmony of furniture and flooring.

Hard Maple virtually becomes "part of the furniture," doesn't compete for attention, supplies a blending background that shows furniture at its best.

Home-owners, acquainted with this modern flooring contribution through national magazines, have been quick to appreciate its importance; so that today, Hard Maple is creating a new vogue in home floors.

When you specify Hard Maple flooring, you insure satisfaction not only with performance and permanence, but with the lifetime of extra beauty it adds to homes.

For Hard Maple at its best—specify **MFMA.**

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1785 McCormick Building, Chicago, Illinois
See our catalog data in Sweet's, sec. 11/78.

WRITE FOR THIS INTERESTING DEMONSTRATION FOLDER

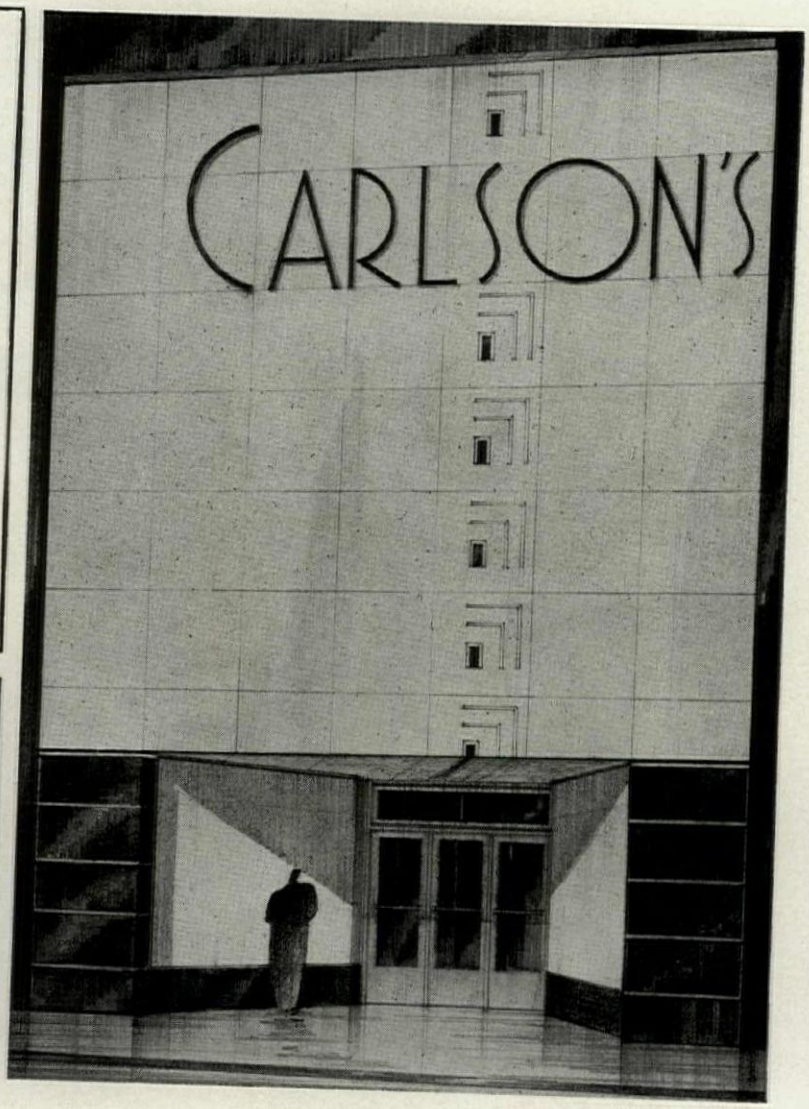
This is the folder for which hundreds of home-owners and building prospects have written. Entitled "A Glimpse of an Interesting Modern Home," it is a room-by-room demonstration of the unusual beauty which results when floors are in grain-harmony with furniture. It includes photographic reproductions of Hard Maple in a range of actual colors. Every architect should see it. For free copy, just write.

Floor *with* MFMA Maple

REG. U. S. PAT. OFF

(NORTHERN HARD)

...and thanks for suggesting PORCELAIN ENAMEL



"MR. CARLSON is mighty proud of his new store front. And I can't say I blame him, because it's a trim job—looks as good in finished form as it did on my rendering.

"He stopped me on the street yesterday, and thanked me for suggesting porcelain enamel . . . said he could see already that it's going to be a cinch to keep clean and attractive. Another thing that impressed him was the low cost of the whole job. No sir, it won't do me a bit of harm to have Carlson telling all his friends about his new store front."

. . .

That's how porcelain enamel makes satisfied clients—clients who may be influential in directing more architectural work to you. This new, colorful medium opens to you an enlarged field for architectural design. It is easy to keep clean. It is available in a wide variety of colors, finishes, and shapes. Its attractiveness never fades. It requires almost no maintenance. It is easily and speedily erected. It achieves architectural effects at low cost that were never before possible without the use of expensive materials.

When you specify porcelain enamel, specify the base metal, too—U·S·S VITRENAMEL. It's a special base metal, made and prepared for porcelain enameling, used by leading manufacturers of enamel products. That's the surest, safest way to put "Quality Materials" right in the specifications.

HAVE YOU RECEIVED YOUR DATA SHEETS?

To help you in drawing up specifications involving porcelain enamel, we have made available to you without cost, this 16-page set of Don Graf Data Sheets, which present in usable form the best current practice in applying architectural porcelain enamel. If you haven't already received these sheets, write today and we will rush you a set.

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh *Chicago*

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*

United States Steel Export Company, New York

UNITED STATES STEEL

ONLY A *Ground* AND *Polished* GLASS GIVES MIRROR-LIKE REFLECTIONS

THE accurate, mirror-like reflections provided by a quality structural glass are very important. They contribute vitally to the beauty and richness of the installation. They are largely responsible for the effect of spaciousness, elegance and modern smartness for which structural glass has become famous.

Yet no structural glass which is not mechanically ground and polished can provide these clear, perfect reflections. And that's why so many architects standardize on Carrara Structural Glass.

Every piece of Carrara produced, no matter what its color or thickness, is mechanically ground and polished.* That means all Carrara Glass is top quality. There is no second grade.

Further, Carrara is permanent. It is easy to clean. It offers a wide choice of attractive colors, of thicknesses and decorative treatments. It is structural glass at its best. Write today for our free booklet of information about it, entitled "Carrara, the Modern Structural Glass." Pittsburgh Plate Glass Co., 2196 Grant Building, Pittsburgh, Pa.

** The new Suede-finish Carrara is subjected to special treatment, after grinding and polishing, to soften its surface reflections.*

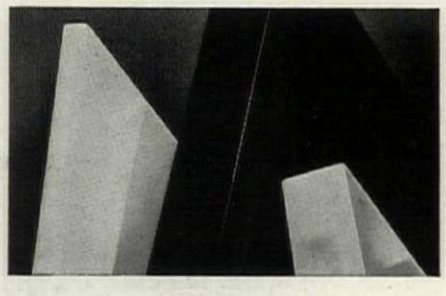
IT TAKES A QUALITY GLASS *like Carrara, with a ground and polished finish, to provide accurate, mirror-like reflections such as those shown in these locker-room partitions.*

"PITTSBURGH" stands for Quality Glass

CARRARA

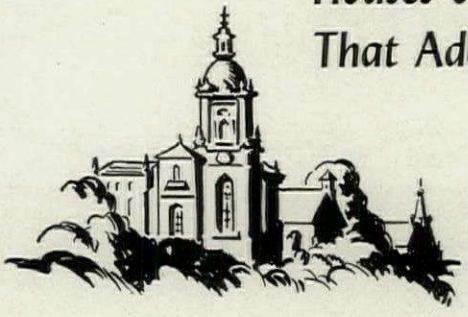
The modern Structural Glass

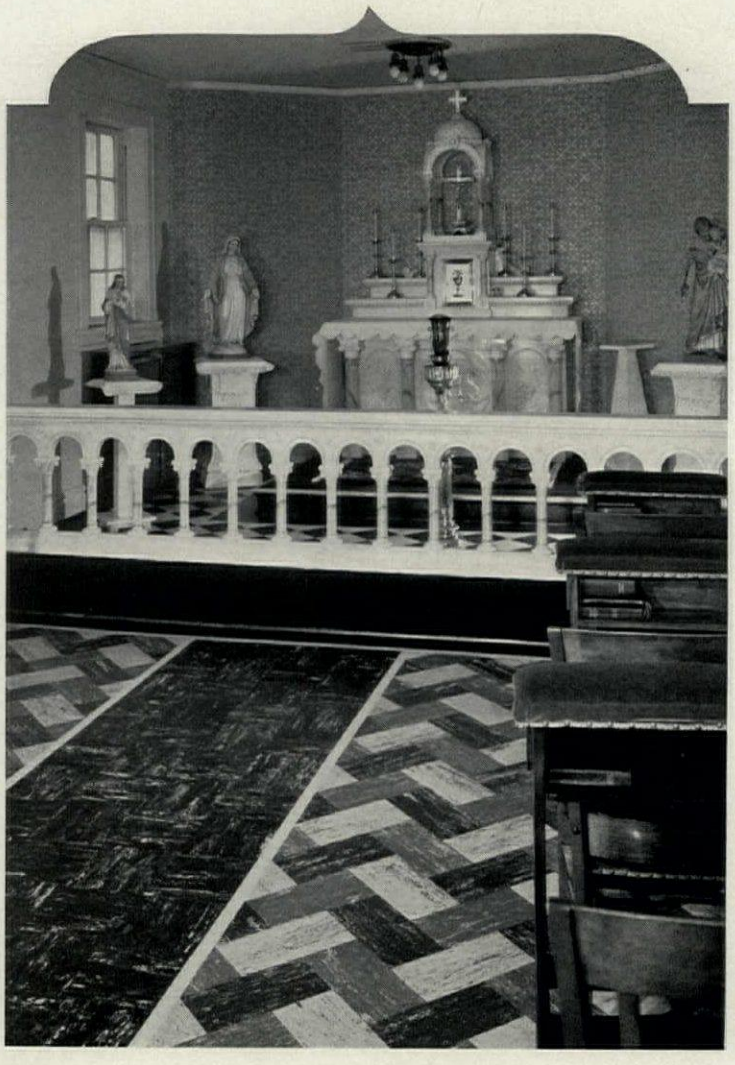
PITTSBURGH PLATE GLASS COMPANY



INSPIRING *Beauty*

Houses of Worship Need Attractive Floors That Add Quiet and Dignity to Church Interiors





CHURCH floors must provide, in addition to utility and economy, an ability to blend with the atmosphere of reverence so essential to church services • The sure-footed resilience of Tile-Tex, plus its extensive color range, make it a most desirable flooring for the different types of rooms found in church buildings • Tile-Tex will give attractive individuality to chapels, classrooms, and other areas where pattern and design are important. In the nave of the church, the subdued tones and decorative effects available in Tile-Tex make possible a floor that conforms ideally to the atmosphere of reverence which is necessary • Tile-Tex is quiet and comfortable to walk on so that unnecessary noise from foot traffic is eliminated. Its tough, durable composition makes it last for many more years than ordinary floorings. In addition, its closely-textured surface is easy to clean and keep clean • Surprisingly enough, Tile-Tex, with all these advantages, is not a premium-priced flooring. Actually, it is extremely low in first cost, and even lower in maintenance cost than other resilient floors.

OUR CONSTANT OBJECTIVE is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.

The TILE-TEX Company

101 Park Avenue, New York City Chicago Heights, Illinois

THE THRESHING FLOOR

DEFENSE PROGRAM COSTS RISING

Major defense projects of the magnitude now being developed for ordnance and other use (covering thousands of acres) are requiring millions of dollars for each project and the present estimated expenditure may be considerably increased beyond the estimates prepared to date—because of the increased requirements imposed and because of the inability (in the rush of defense emergency) to prepare sufficiently accurate estimates as a guide for appropriations. In the beginning of this program, civilians (mostly from the field of engineering) of considerable ability and experience were taken into the War Department to initiate this program of construction. But there is now increasing evidence that Army officers (probably from the Corps of Engineers) will supplant these civilians in positions of authority so that the program in the Army will become increasingly a military operation—comparable to the Navy program at the present time, under Naval officers.

HOUSING

The program of defense housing is continuing through the following agencies (a) the Public Buildings Administration; (b) the Navy (Bureau of Yards and Docks); and (c) the United States Housing Authority. All Army housing and a small part of the Navy housing will be done by the PBA through monies previously made available by Congress, as well as the $150,000,000 to be provided under the recently-passed Lanham Bill. Housing projects are in approximately 70 areas where defense activities are intensive and it is likely that only a small percentage of (permanent) defense housing will be developed with private capital.

As of November 1, approximately 5,000 housing units were under contract at twelve of the important Navy bases (through the Bureau of Yards and Docks, Navy).

The most acute housing shortage and the largest projects have been made necessary in Southern California because of extensive naval bases and the tremendous expansion of the aircraft industry. Army, Navy, and private industries have caused a housing shortage in approximately 60 other areas.

Through the USHA about 25 defense housing projects are being developed.

Through the Farm Security Administration considerable study is being devoted to problems of housing created by the acquisition of large units of land for major ordnance and other similar projects — necessitating the removal of many rural families on short notice. Unfortunately no government agency acted with sufficient promptness to give the necessary assistance to these families (who were thus "uprooted" and required to find their own housing).

Those interested in defense housing should request that their names be placed on the list to receive releases from the National Defense Advisory Committee. A list of localities in which housing may be undertaken appears in "Release PR 217, dated October 31, 1940."

The Defense Housing Coordinator's Office is *not responsible* for the methods adopted in planning and construction of defense housing. This is the function of the specific agencies referred to above. The Defense Housing Coordinator *has* the responsibility of determining, in conference with other agency officials, the locations, the amount and kind of housing required, and the dates to be set for starting and completing these.

HOUSING EMPLOYMENT

To the extent that the USHA may administer any part of the defense housing program, it is likely, as in the past, to be done through a decentralized procedure, with the employment of architects, engineers, and landscape architects in private practice who are qualified through experience in PWA and USHA housing. To date (November 18) there is a strong inclination to undertake this tremendous program through centralized planning agencies (PBA and Bureau of Yards and Docks). But it is the conclusion of spokesmen representing the professions of architecture, engineering, and landscape architecture that this complete planning program can be much more efficiently and appropriately accomplished through the decentralized methods favored by the USHA. This opinion apparently is not, to date, shared by those responsible for policies of planning and other required procedures in the *complete* development of defense housing.

It may be possible to produce quantities of standardized plans for houses on a number of projects—but it seems likely that a "bottle-neck" would occur in production, particularly in those steps relating to the work of the engineer, the town planner, or the landscape architect where each project and, indeed, each part of each project presents highly-specialized and detailed problems which cannot be solved by a general principle of standardization.

Experimentation in procedures is now being considered and it is hoped that with further experience and study of this problem (which is new to the PBA personnel) that the tendency will be toward decentralization of the planning and other procedures. But with the large personnel now available in PBA offices (Division of Supervising Architect) standard plans are being prepared rapidly for about 60 projects. Sites for 15 of these have already been selected, but the final procedure for employment of the technical planners has not been determined.

Only a few offices in private practice will receive employment in the Defense Program (unless housing is decentralized). But the extensive activities in defense housing cantonments, air fields, major ordnance, and other similar projects is drawing great numbers of men from the technical planning professions. Through the Advisory Committee in the Construction Division of the Quartermaster General's Office applications have been received to date from approximately 1,700 architects and engineers (as well as 3,800 contractors) and it is increasingly evident that with the limited number of defense projects, only a small proportion of these applicants can be employed.

The major employment will be for engineers, because it is already evident that there is a shortage of the

supply in a number of areas where major ordnance projects have been started. Topographic engineers are being used in large numbers, but their period of employment (generally through the architectural engineer) will be comparatively short.

On Government payrolls, employment is restricted almost entirely to the Civil Service roster. But a number of younger men who wish to render service in those fields for which their education and training have qualified them professionally find that their only opportunity is to *enlist* and be transferred eventually through the formalized method of classifying enlisted men and making use of their talents and training.

Some Government officials seem to feel that professional planners should give their services at a minimum compensation; although the Government has authorized expenditures on an extensive scale at normal prevailing prices for all other kinds of labor and materials required for the Defense Program. It is hard to see why an appeal to loyalty and patriotism—at the sacrifice of normal income required to support a family and business—should be concentrated on the professions more than in the commercial field!

CANTONMENTS

To date, approximately 30 large cantonments of the Army program are now under construction. These will house a minimum of 20,000 men each and some will house as many as 40,000. In the average cantonment there will be as many as 800 to 900 buildings, for which the standard plans have been developed by the War Department prior to the present emergency. And thus the problem becomes one for engineers and landscape architects and town planners. Fortunately there is an increasing attention to site planning problems. The present program calls for facilities for approximately 1,250,000 men, and if, as seems likely, the emergency increases there may be a considerable expansion in the cantonment program.

SELECTION OF MEN

Officials in the War Department are strongly discouraging any procedure through which any applicants endeavor to obtain work through paid agents or other representatives employed for this purpose. Although to date many applicants have actually

(Continued on page 12)

LARGER PROJECTS UNDER CONSTRUCTION DIVISION, QUARTERMASTER GENERAL'S OFFICE

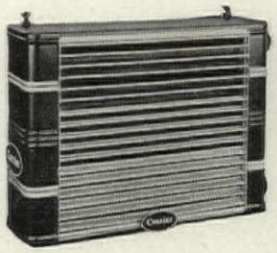
NOTE—For those interested in the major defense projects being constructed by the Army—including cantonments, air fields, ordnance, and similar projects—the attached list indicates the extent to which these have been authorized. Through the private offices identified with this program opportunities for employment on a reasonable salary basis should be increasing. A.D.T.

Name of Project	*Location*	*Estimated Cost*	*Architect-Engineer*
Camp Blanding	Near Green Cove Spring, Fla.	$10,061,570	*Solomon & Keis* Ft. Lauderdale, Fla.
Camp Bragg	Ft. Bragg, N. C.	4,312,600	*J. N. Pease & Co.* Charlotte, N. C.
Camp Livingston No. 6	Kisatchie, Nat. Forest, S.W. of Alexandria, La.	4,882,190	*Benham Engr. Corp.* Oklahoma City, Okla.
Camp Claiborne No. 18	Kisatchie, Nat. Forest, N.W. of Alexandria, La.	4,882,190	*E. T. Archer & Co.* Kansas City, Mo.
Camp Bowie	Brownwood, Texas	4,831,690	*Koch & Fowler* Dallas, Texas
Camp Edwards	Falmouth, Mass.	8,648,700	*Charles T. Main, Inc.* Boston, Mass.
Camp McClellan	Ft. McClellan, Ala.	3,702,935	*Wiedeman & Singleton* Atlanta, Ga.
Camp Robinson	North of Little Rock, Ark.	5,308,125	*Black & Veatch* Kansas City, Mo.
Camp Savannah	Hinesville, Georgia	2,839,495	*J. B. McCrary Engr. Corp.* Atlanta, Ga.
Camp Shelby	Near Hattiesburg, Miss.	10,834,490	*Lockwood Greene Engrs., Inc.*, New York City
Indiantown Gap	Lickdale, Pa.	6,211,000	*Gannet, Eastman & Fleming* Harrisburg, Pa.
Camp Meade	Ft. Meade, Md.	8,220,000	*J. E. Griener Co.* Baltimore, Md.
Camp San Luis Obispo	San Luis Obispo, Cal.	4,341,685	*Leeds, Hill, Barnard & Jewett*, Los Angeles
March Field A. A. Firing Center	Riverside, Calif.	2,514,665	*J. B. Lippincott & O. G. Bowen*, Los Angeles, Calif.
Camp Peay	Tullahoma, Tenn.	9,587,750	*Greely & Hansem* Chicago, Ill.
Camp Hulen	Palacios, Texas	1,906,750	*Freese & Nichols* Ft. Worth, Texas
Ft. Bliss	El Paso, Texas	3,412,815	*Wyatt C. Hedrick & Co.* Ft. Worth, Texas
Ft. Devens	Ayer, Mass.	9,000,000	*F. A. Barbour* Boston, Mass.
VII Corps Area Training Center	Leon, Iowa	9,400,000	*Alvord, Burdock & Howson* Chicago, Ill.
Ravenna Ordnance Plant	Ravenna, Ohio	11,940,000	*Wilbur Watson & Associates, Hunkin-Conkey Constr. Co.*, Cleveland, Ohio
Detroit Ordnance Plant	Detroit, Mich.	30,000,000	*Albert Kahn, Inc.*
Indiana Ordnance Plant	Charlestown, Ind.	24,600,000	*duPont*
Philadelphia Armor Plate Plant	Tacony, Philadelphia, Pa.	406,120	*Irving S. Townsley* Philadelphia, Pa.
Douglas Airplane Plant	Long Beach, Cal.	8,684,163	
Edgewood Arsenal	Edgewood, Md.	6,268,338	*Whitman, Requardt & Smith* Baltimore, Md.
Elmendorf Heating Plant	Wilmington, Ill.	1,600,000	*Bechtel, McCone, Parsons Corp.*, Los Angeles, Calif.
Frankford Arsenal	Philadelphia, Pa.	1,639,623	*Clarence E. Wunder* Philadelphia, Pa.
Radford Ordnance Plant	Radford, Va.	26,037,050	*Hercules Powder Co.* Wilmington, Del.
Philadelphia Q. M. Depot	Philadelphia, Pa.	7,058,500	*The Ballinger Co.* Philadelphia, Pa.
Picatinny Arsenal	Dover, New Jersey	1,064,166	*Francisco & Jacobus* New York
Savannah Airport	Savannah, Ga.	1,791,000	*Burge & Stevens* Atlanta, Ga.
Kankakee Ordnance Plant	Wilmington, Ill.	10,863,000	*Stone & Webster* New York

(Continued on page 12)

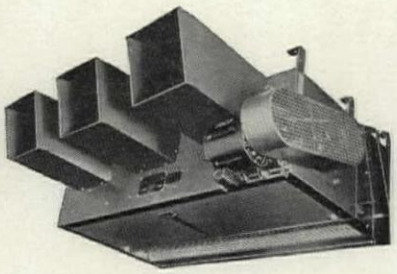
Here's the Answer to Your Heating Problems

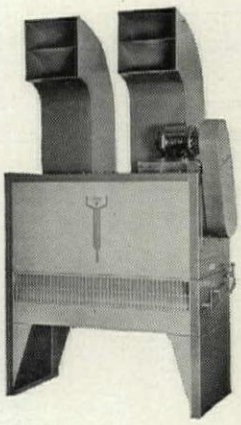
Carrier Unit Heating



For Small Spaces — 22 sizes — 24,000 BTU to 450,000 BTU.

Gas Fired—6 sizes —45,650 BTU to 166,000 BTU.





For Large Spaces — 20 sizes — 110,000 BTU to 900,000 BTU. Models for floor or ceiling installation.

Read these facts about CARRIER UNIT HEATING

★ ***Non-ferrous Steam and Water Coils***—all joints silver brazed, tested to 1,000 pounds hydrostatic pressure, guaranteed to 200 pounds working pressure. Exclusive U-Bend construction permits free expansion and contraction.

★ ***Balanced Fan Assemblies***—low operating speeds, sound-and-vibration-absorbing mountings.

★ ***Thermajust Control***—available on industrial centrifugal fan models, balances heat output against building requirements, reduces overheating of upper areas — thereby reducing fuel consumption to a minimum.

★ ***Smart Styling***—smaller models in smooth finish lacquer with aluminum trim—larger models in smooth finish two tone lacquer.

★ ***Variety of Sizes and Types***—4 types, ranging in capacity from 24,000 BTU to 900,000 BTU.

★ ***Variety of Styles***—Floor mounting, ceiling or wall suspension, Steam, Hot Water or Gas.

Cuts Costs . . . Gives Greater Comfort

COMPARED with ordinary methods of heating, Carrier Unit Heating cuts operating costs up to 25%—reduces maintenance costs as much as 25% — and frequently saves 50% or more on your original investment.

These facts alone make it worth while to investigate Carrier Unit Heating. And think of the *extra* features this method of heating provides:

Quick Heating—working space is heated in quick *minutes* instead of long *hours*.

Greater Comfort—heat is directed exactly where required.

Greater Convenience—temperature control can be fully automatic, requiring practically no attention whatever.

Carrier Unit Heaters are available in a wide variety of styles and sizes. You're sure of the proper type for any desired location—for most efficient performance —for greatest space-economy in your factory—year in and year out.

You'll find it well worth while to mail the coupon below, or to call your local Carrier representative for complete information on Carrier Unit Heating. Do it today and get the facts!

Call Air Conditioning by its *First Name* — Call CARRIER

CARRIER CORPORATION Desk 17L
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paid such agents or have considered the possible commissioning of such agents, there is actually slim chance of obtaining a job through this procedure. A. D. TAYLOR

November 18, 1940

We publish the following letter from ATLEE B. AYRES, *of San Antonio, in an effort to correct an erroneous impression that some readers may have drawn from the matter on page 641 of the October issue. Mr. Hamlin's point, so far as it concerned the Randolph Field Building which was built over a decade ago, had nothing to do with the functional solution of the problem presented by its requirements.*

October 31, 1940

Regarding the article on Airports by Mr. Hamlin in your current issue, we note that attention is called to a building at Randolph Field, which field is adjoining San Antonio. The picture shown is entitled "Randolph Field, Texas," also a mention in the article of this building, the inference being that this building is a terminal.

Mr. Hamlin might just as well have used a picture of our Smith Young Tower here in San Antonio, of which we were the architects, as to have used the picture of the Administration Building at Randolph Field, inasmuch as the article was intended to cover terminals or airports. He was endeavoring to hold up our building as being unsuitably designed. Now, as a matter of fact, this building was designed in strict accordance to laid down requirements of the U. S. Gov't and that was: primarily for administrative purposes which included spaces for the various departmental officers, post office, photographic department, etc., etc. Then too, there was a rear wing containing a large theater or auditorium.

The tower was not placed on our Administration Building to be used for control but to house a five-hundred-thousand-gallon water tank with which to supply the needs of the entire field. For Mr. Hamlin's further enlightenment, beg to state that the control towers are located where they should be, adjacent to the various landing fields and hangars which are quite a distance from our Administration Building. Randolph Field, as I am sure you know, is the largest and most complete in the United States.

Name of Project	*Location*	*Estimated Cost*	*Architect-Engineer*
Elwood Ordnance Plant	Wilmington, Ill.	$11,940,000	*Sanderson & Porter* New York
Small Arms Ammunition Plant	Kansas City, Mo.	11,201,000	
Shell Forg. & Machine Plant	Gadsden, Ala.		*Rust Engr. Co.* Pittsburgh, Pa.
St. Louis Small Arms Plant	St. Louis, Mo.	12,196,000	
Union Center Loading Plant	Union Center, Ind.	12,765,000	
Ft. Belvoir	Ft. Belvoir, Va.		*Slaughter, Saville & Blackburn, Inc.*, Richmond, Va.
Aberdeen Proving Grounds Cantonment Camp	Aberdeen, Md.		*Whitman, Requardt & Smith* Baltimore, Md.
Ft. Eustis	Ft. Eustis, Va.	6,500,000	*J. E. Sirrine & Co.* Greenville, S. C.
Galveston Replacement Center	Galveston, Texas		*Helland, Drought & Ayers* San Antonio, Texas
Camp Grant	Rockford, Ill.	4,252,210	*Holabird & Root* Chicago, Ill.
Fort Huachuca	Ft. Huachuca, Texas	1,264,600	*Headman, Ferguson & Carollo*, Phoenix, Ariz.
Ft. Knox	Ft. Knox, Ky.	2,979,595	*Havens & Emerson* Cleveland, Ohio
Camp Lee	Petersburg, Va.	8,475,906	*Wiley & Wilson* Richmond, Va.
Macon Replacement Center	Macon, Ga.	6,065,100	*Hentz, Adler & Shutze* with *Newcomb & Boyd* Atlanta, Ga.
Fort Monmouth	Red Bank, N. J.		*Parsons, Klapp, Brinkerhoff & Douglas*, New York
Nacimientor Replacement Center	San Miguel, Calif.		*Holmes & Narver* Los Angeles, Calif.
Permanent Tent Camp	Paso Robles, Calif.		*Leeds, Hill, Barnard & Jewett*, Los Angeles, Calif.
Pine Camp	Great Bend, N. Y.		*Wm. S. Lozier, Inc.* Rochester, N. Y.
Portland Air Corps Cantonments	Portland, Oregon	1,316,000	*Laurence Haiford & Allyn* Portland, Oregon
Fort Riley	Ft. Riley, Kansas		*Widmer Eng. Co.* St. Louis, Mo.
San Diego Replacement Center	San Diego, Calif.	2,585,100	*Myron Hunt & H. C. Chambers* Los Angeles, Calif.
Fort F. E. Warren	Cheyenne, Wyoming	2,215,500	*Royce J. Tipton* Denver, Colo.
Camp Walters	Camp Walters, Texas	5,466,000	*Rollins & Forrest* Dallas, Texas
Savannah Airport	Savannah, Georgia*		*Burge & Stevens* Atlanta, Ga.
Tallahassee Airport	Tallahassee, Fla.*		*Southern Engrs. & Architectural Co.* Jacksonville, Fla.
West Palm Beach Air Corps Cantonment	West Palm Beach, Fla.	1,511,000	*Solomon & Kies* Ft. Lauderdale, Fla.
Anniston Ordnance Depot	Calhoun County, Ala.*		*Converse & Polk, Inc.* Alabama
Baytown, Texas, Toluol Plant	Burlington, Iowa*		*Humble Oil & Refining Co.* Houston, Texas
Burlington Loading Plant	Burlington, Iowa	16,054,000	*Day & Zimmerman, Inc.* Philadelphia, Pa.
Ravenna Ammunition Storage Depot	Ravenna, Ohio	4,200,000	*The Jennings-Lawrence Co.* Columbus, Ohio
Umatilla Ordnance Depot	Morrow & Umatilla Counties, Oregon	9,200,000	*Stevens & Koon* Portland, Oregon
Weldon Springs TNT Plant	Weldon Springs, Mo.*		*Atlas Powder Co.* Wilmington, Del.
Fort Wingate Ordnance Depot	Ft. Wingate, N. Mex.	9,200,000	*T. H. Buell* Denver, Colo.

* Estimated expenditures not immediately available at time of compiling list.

Another Architect

speaks of OIL BURNING SYSTEMS FOR SCHOOLS

THOMAS STAPLETON, *New York Architect, noted for many fine buildings including those in Palmer Square at Princeton, expresses these ideas on Oil Burning Systems.*

"Efficiency in the modern classroom results from the right type of heating system just as truly as it results from good teaching facilities. My own experience and that of my engineers show that oil heating systems provide healthful living conditions for the pupils, are easy to operate, clean, quiet, and extremely economical. Reports from occupants and school officials bear out these views. In regard to the Petro Systems, I have found the equipment first rate and have been fully pleased with the service they have rendered."

Among the many comments similar to Mr. Stapleton's which Petro has been proud to deserve it is notable that the satisfaction expressed is with the System as a whole as well as the burner.

Experts concede that each Petro Industrial Oil Burner is an excellent precision mechanism; but its ultimate value—its permanent reduction of firing costs—is enhanced by the carefully co-ordinated details of its application and installation.

It is therefore pertinent to quote from a copyrighted report signed by a committee of representative Architects after an investigation of Petro's manufacturing and installation practices and records of performance: "In specifying oil burners the architects and engineers should carefully consider (1) that the original cost of oil burning equipment is only a fraction of the total amount that will be expended for fuel oil following its installation, (2) that the slightly higher cost of carefully engineered and skillfully manufactured equipment will be returned many times through lower operating costs; and (3) that such development work and manufacturing practice as this report has described can only be obtained in the products of an old, well established and financially strong manufacturer; and (4) most important of all, that architects and engineers will greatly profit by soliciting advice from the manufacturing headquarters of this company and taking advantage of an experience obtained over many years and the entire country-wide field of oil heating. **** In the opinion of this committee an architect or engineer could safely specify that a Petro oil burner was to be installed after a preliminary survey by an accredited representative of the company, in full confidence that when operated according to the instructions of the company, the installation would prove both efficient and economical." (Complete Copy of above-mentioned Report will be sent on request.)

CAPACITIES: to 100 gal. per hr.—336 boiler h.p.—47,000 sq. ft. steam E.D.R.

Petro Industrial Burners for Automatic operation with preheated No. 6 oil, or with No. 5 or lighter oils, are available in seven sizes, Models W-2½ to W-8 inclusive. Each burner is a self contained assembly of motor, fan, pump, rotary cup atomizer and interlocked air and oil adjustments.

In the use of preheated No. 6 oil, the Petro Thermal Viscosity System is an integral part of a Petro installation, insuring reliability of operation and fuel economy.

Semi Automatic and Manually controlled Model W Burners and "Mechanical" type units are also available to meet circumstances which do not require automatic operation.

To the Architect in domestic building, Petro offers a complete line of burners for use with existing heating plants and complete oil fired boilers and winter air conditioners.

Petro's Engineering Division will gladly answer questions. The Petro Industrial Equipment Catalog will be sent promptly on request.

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CRITICAL YOUTH WIELDS THE FLAIL

EDITOR'S NOTE—*What the Director of the School of Architecture, Princeton University, has to say about students "speaking up" should be of wide interest and will, we hope, stimulate further contributions to this section.*

PENCIL POINTS is offering to the students in the Architectural Schools of this country an invaluable opportunity for public discussion of their thoughts and problems. I trust that they will take advantage of it in increasing numbers, and that the articles they contribute will maintain the high standard already set.

Young men expecting to become architects are preparing for a profession which requires the most rigorous powers of analysis and synthesis. While the latter process is the ultimate goal of our endeavors, it must be founded on the former. Unless we explore the basic relationships of our problems, any solution will precede from false premises, and never be completely satisfactory.

The best training in clear analysis comes through practice in an orderly and logical organization. We learn by doing, and we can best test the soundness of our investigations by presenting them to others. I welcome such articles as *Mr. Gaddis* contributed to the September issue of this magazine, because of the value that its preparation must have been to him fully as much as for what it meant to others. He attempts the solution of a very big problem—one which has been at the back of every architect's mind since man began to build. Whether or not he solves it to your satisfaction, he has profited greatly by attempting to solve it to his own.

Your ideas, intuitions and convictions will gain, not suffer, by the effort to present them clearly. The analytical process should in no wise inhibit the creative one. I realize that architects are organizers of space rather than of words, and that to many of them it is natural to feel rather than to reason. Yet I am sure that even the most instinctive designer will profit by trying to explain plainly to others the "why" of what he is doing.

These are difficult times for our profession. Between the depressed building industry on the one hand, and Government agencies on the other, the private practitioner is hard put to find his proper role in the national economy. He must justify himself to society, or go under. He must come out of his ivory tower, analyze and confirm the reason for his professional existence, and put his case forcefully before the public.

There is no better training for this part of his future career than presenting his thoughts for public consideration in such a medium as PENCIL POINTS now offers. It invites you to think clearly and express logically the problems which confront you—not as an exercise in English composition or a battle of fine words—but as a part of your professional preparation. I would like to see the publication of at least one article become a normal experience in the education of every architect. It need not be revolutionary or even polemic. The field is so broad that each can develop his own special interest to the profit of all, and particularly of himself.

SHERLEY W. MORGAN

* * * * *

MODERN VERSUS MODERNISTIC

AMONG the members of the architectural profession, modern architecture is no longer a revolutionary thing. It has won respect, even among the most conservative, on the merits of its fundamental precepts. It has reminded the architect that simplicity, sound structure, and efficient planning are the essentials of good architectural design. These precepts will remain as a definite contribution whatever the trend in the future.

Modern architecture has yet, however, to win its battle for acceptance by the public. The average layman is still unconvinced. Especially in regard to the design of residences, he mistrusts a thing he believes is "tricky." Although he is unaware of the difference, the antipathy he feels is towards *modernistic* rather than *modern* architecture. I draw a very definite distinction between the two. The layman in America is, as yet, unable to do so. He has seen too much *modernistic* and almost no *modern*.

By *modernistic* I mean the "Buck Rogers" type of confection that results from the thoughtless application of crude and superficial decorative details in an effort to "modernize" a design that is fundamentally unmodern in conception. It is a lack of understanding of the true nature of modern architecture that produced the monstrosities of the "zig zag" lampshade era. We are surrounded constantly by evidences of this miscomprehension, by neon-encrusted theatre marquees, by pseudo-modern bank façades. Some of the worst offences have been committed in the field of industrial design. They are too familiar and numerous for mention.

The layman often refers to modern architecture as "streamlined" architecture. His inappropriate use of the word streamline is significant. It is an indication that his conception of modern architecture has been molded by contact with buildings and "gadgets" designed without an attempt to understand their real functions.

Modernistic design in architecture and furniture started to disappear with the raccoon coat. It has almost entirely gone, but its bad effects remain in the form of a hostile and suspicious public. Such prejudices will not, however, remain long with a public that has already begun to distinguish between the authentic modernity of an airliner, and the *modernistic* falsity of a chromium-laden taxicab.

ALLEN R. KRAMER
Cornell University

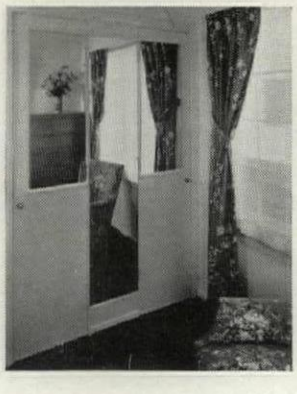
Glass KEYS THE DESIGN OF 1941 HOMES . . .

Glass gives this room "breathing space"—makes it light and cheerful. The wide windows make the room seem like part of the outdoors and the fireplace mirror adds still more to the feeling of roominess.

A brilliant panel of Satinol finished Reedex glass effectively screens this kitchen from the breakfast nook. Yet it lets light reach portions of the kitchen that would otherwise be dim.

•

Here's an arrangement of 3-panel plate glass mirrors that would delight any woman—and is modest in cost. The center panel between the closet doors is a full-length mirror. The partial-length mirrors on the doors afford ample angle views.



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When the little doors of this appealing breakfast bar or serving counter are closed they form a mirrored panel that brightens the dining room. Upper cabinet is protected with sliding panels of Louvrex decorative glass—lower cabinet with panels of polished plate glass.

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HERE, THERE, THIS & THAT

THE PERENNIAL TRAIL BLAZER

Bearing the marks of a hurried completion, an exhibition of the work of *Frank Lloyd Wright* opened on November 13 at the Museum of Modern Art. It will be a long time before a more extraordinary collection of drawings will be placed on view. Certainly no abstract painter could outdo, in interest, the pattern of the plans of the *Imperial Hotel* in Tokyo or of the *Miyanoshita Hotel* or of the dozens of perspective drawings of prairie houses to be seen here. It may seem unfair to make an exclusive emphasis on the graphic aspects of Wright's work: but this exhibition suggests that, in everything he does, visual pattern is primary and clients' needs secondary. Perhaps it is the vast model of "Broadacre City" spread on its low platform which gives that impression most forcefully. Here we have a modelled assumption that most social and architectural dislocations can be straightened out by giving each citizen one acre of land. It is embarrassing . . . how this grandiose scheme impresses the candid observer with its pettiness. However, it is an excellent abstract design.

The idea of giving an exhibitor the freedom to design and execute his own exhibit does not seem to have worked out so well in this case. Perhaps the genius of F.L.W. is so inexplicable that no number of explicit captions on the drawings will do him justice. It may be advisable under such conditions to put the captions up late (as is being done) or leave them out, or to write a political essay on the F.H.A. (such as was written on one of them). But the staff of the Museum of Modern Art includes many people who have had long experience in the organization of exhibitions. Their special skills include the writing of lucid and concise text, the arrangement of photographs and models in an intelligible sequence, and the design of backgrounds to suit the nature of the material presented. I suspect that, in their odd moments, some of them might have been capable of explaining the work of such a genius as F.L.W. more thoroughly than he has done. If he had given the museum administrators as much right in their particular province as he has so loudly claimed for himself in his, we might have a more understandable presentation. As it is, F.L.W. and members of the Taliesin fellowship made the entire show.

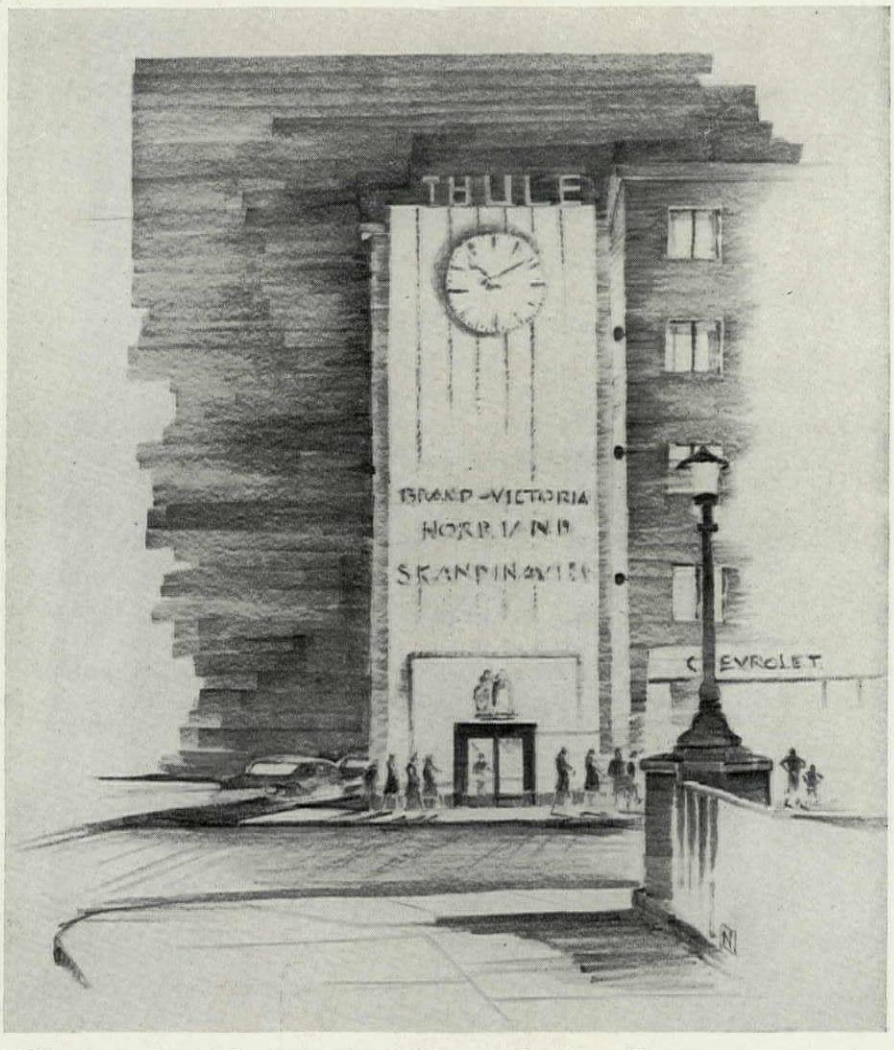
The exhibition will be open to the public through January 5. The Museum hours are 10 a. m. to 6 p. m. daily including Saturday; Sunday 12 noon to 6 p. m.; and Wednesday from 10 a. m. to 10 p. m. Admission is twenty-five cents. There are no longer any free days. ALAN MATHER

OUR CONTRIBUTORS

Charles F. Fuller, whose Science Building for The Choate School at Wallingford, Connecticut, is presented on pages 756 to 767 of this issue, has been a practicing architect in New York for 15 years. He has been concerned principally with the design of country houses—in association first with F. Nelson Brent, then with Adolph Dick, and currently with Edwin Forbes—but his work also has included apartment houses in the city, the Islip Town Hall, and the Harlem Houses.

His preparation for practice is described by Mr. Fuller as follows: "I grew up in Cornish, New Hampshire, where Charles A. Platt was a neighbor, and his eldest son William a great friend. Though Mr. Platt was never very communicative, his personality impressed all of us, and undoubtedly influenced us in choosing architecture for a career. He was always kind and helpful to me, as a

(Continued on page 19)



This dramatic sketch of an office building at Goteborg, Sweden, was made by Stephen Nolan of Brooklyn, New York. The original is about twice this size

FLOOR SHOW

IN THEATRE LOBBY

STARRING

Terrazzo

A new floor show stars in the lobby of the Senator Theatre, Baltimore. It gives a continuous performance that will go on and on for years and years. Yet—with all the scuffing and scraping it's bound to take—you can be sure it will stay just as fresh, just as inviting as you see it now. That's *Fine Terrazzo* made with Atlas White portland cement!

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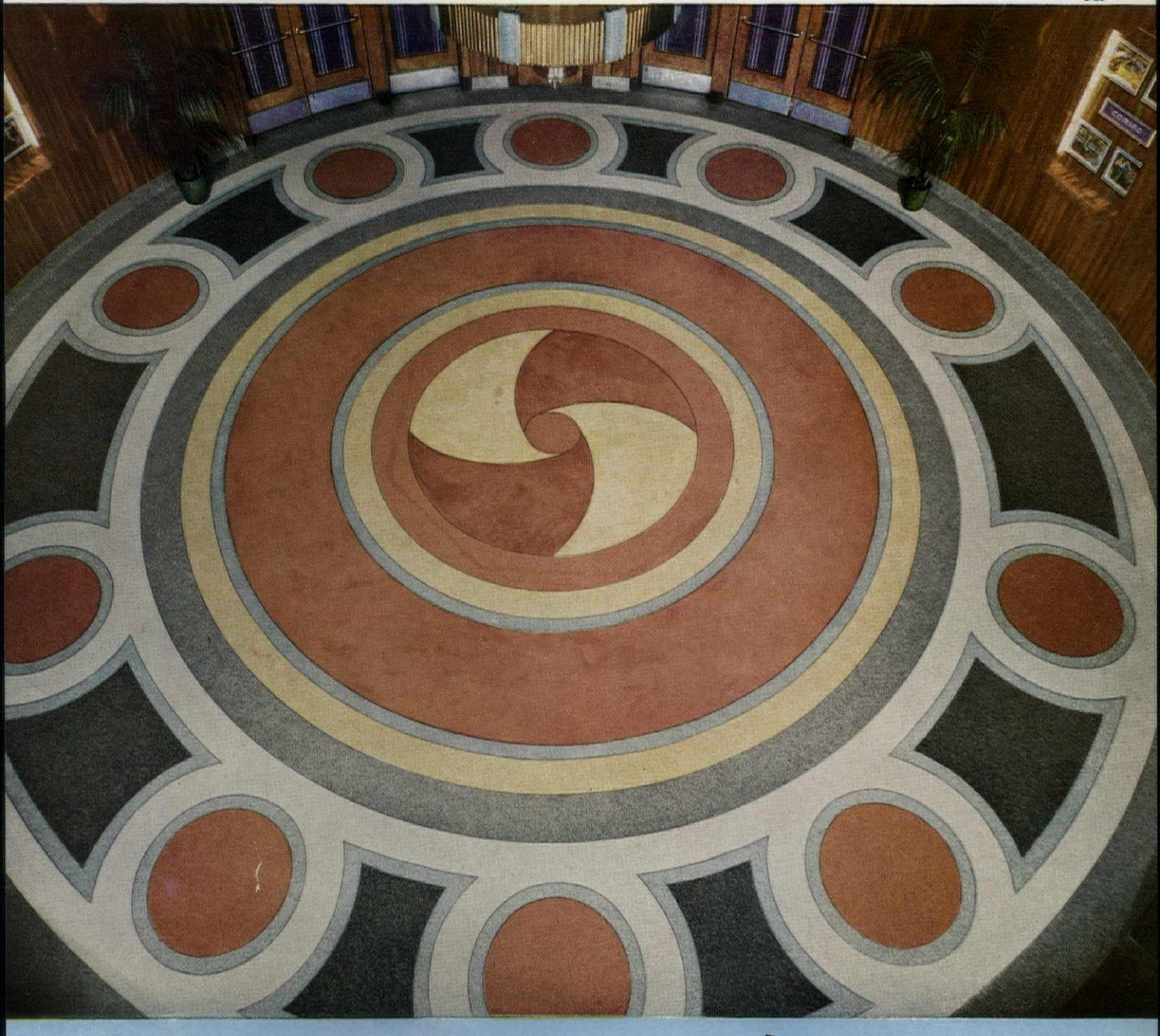
T-24



Fine Terrazzo stars in lobby of the Senator Theatre, altimore. Colors are supplied by combination of aggre-ates, color pigment, and Atlas White cement. Architect, ohn J. Zink; General Contractor, E. Eyring & Sons;

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(Continued from page 16)

student and after, until his death. I took an A.B. at Harvard and then went to Columbia for my architectural training, graduating in 1924. Harvey W. Corbett, Hirons, Wally Harrison and Edgar Williams were our critics in those four years '20-'24, and I owe them many debts, and still wonder at their patience and sympathy with the students.

"My office experience as draughtsman was chiefly in Mr. Platt's office and for much longer in Peabody, Wilson & Brown. I also had 18 months in Europe, working at Julian's Academy and such-like, but avoiding the etchers of the Beaux Arts. Germany and Spain had the greatest surprises in Europe—the former for her modern work which was then comparatively unknown or rather not published in the U. S. and Spain because it seemed wildly-romantic architecturally — the Alhambra and the Generalife gardens still seem in memory perfection of their kind—like St. Mark's and Chartres."

The technical article on page 783 of this issue, "Modern Low-Cost Elementary Classrooms," was written by *Ray L. Hamon*, Director of the Interstate School Building Service of the George Peabody College for Teachers, Nashville, Tennessee. He has been a professor of school administration there since 1930, teaching in the fields of school plant and school finance and also serving as consultant on educational construction.

Professor Hamon is Secretary, Treasurer, of the National Council on Schoolhouse Construction; a member of the Committee on School Plant Research of the American Council on Education; and a member of the joint committee now making a study of school equipment specifications for A.C.E. and I.S.B.S. He received his B.S. degree in 1922 from the University of Florida; his M.A. degree in 1925 from Peabody College; and his Ph.D. degree in 1930 from Teachers College, Columbia University, New York. He was formerly Supervising Principal of the Leesburg Schools and Assistant Superintendent of Dade County (Miami) Schools.

S.P.I. OFFICES

Permanent offices of the *Society of the Plastics Industry, Incorporated,* have been opened at 295 Madison Avenue, New York.

BOSTON NOTES

New construction at Camp Edwards, Cape Cod, and at Fort Devens (with drafting offices on location) accounts for the absence from Boston offices of several hundred architectural men, hired by contracting companies or engineering subs. Where frame buildings are being erected the roto shows them sagging under weight of carpenters in unprecedented numbers. Anyone with a pair of carpenters' pants, a hammer, and a banged left thumb must have been sure of a job; and some of the drafting boys wish they'd had the idea in time, especially at the payoff. The days are hard and long, and it's a harvest for the trades, but the grapevine telegraph from the cranberry bogs says the lads at the drafting tables are definitely not being spoiled. It is even rumored that the distressing ratio of pay to hours of work is concealed by a brusque personnel man who is instantly displeased when applicants ask about hours; clock-watchers not wanted, etc. Nice fellar, but it may be his forte and that's what a man should go in for.

Hereabouts all but very choosey draftsmen are employed, but many

(Continued on page 20)

(Continued from page 19)

architects are not and have less faith that they will be since the national election. We took politics very much to heart, wore buttons, and never forgive!

An independent State Association of Architects has been proposed by a committee headed by *John T. Whitmore*, and will shortly have been discussed in meeting. As I interpret the signs, those in favor believe it is the only device whereby a strong, efficient and truly statewide professional organization may be realized; no frills or pedigrees, but plenty of action.

Due to new sources of employment in outlying spots, the pellucid pools and chaste reaches of life among the architectural gentry are less easily observed, except at meetings. The Architectural League of Boston had such a set-to in October with *Edward J. Shields* as speaker, and a keg of beer. Master S. (title of MS conferred by MIT) gave the League one of its very best meetings; he was strong though the beer was weak. In part, the evening had to do with architectural superintendence, wherein Mr. Shields knows the ropes and all the knots, being a chief inspector on USHA-aided housing. In part, he was egged on to give the boys a fight talk about rosy realism in the oft-mentioned struggle for existence, on which he has ideas of proven worth. The unique aspect of this advice was its predication on individual effort rather than the usual, "Let's all get together, boys, and push."

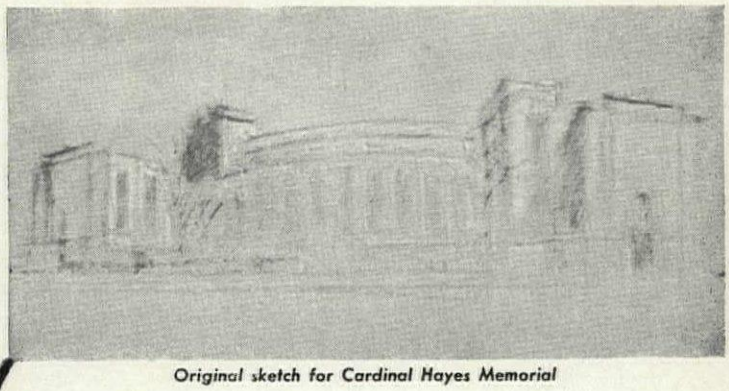
Bert Buffey allows as how the Club is rolling along with a busy atelier. There has been no recent foregathering, though we might hope for a general smoker, mayhaps with beer. *Abe Hyland*, recently back in town with *James H. Ritchie & Associates*, has been reminiscing about old Club luncheons which he and dozens of us used to enjoy before architects got the uptown urge and scattered the lunchees over too wide an area.

The Boston Society of Architects had the privilege of hearing *Albert Kahn* at its excellent November 12th meeting; *William Emerson* at the helm. No one asked *Mr. Kahn* what grade of pencil he used to achieve his enormous success, but we noted that he delivered the goods without having to lean on measured phrases or the broadish "a." These BSA dinners are the high spot of this Commonwealth's professio-social functions, and incidentally feature the greatest cocktail bargain outside your own pantry. One complete sample of the dosage for brain and belly should send anyone a'tracking down a membership blank.

Membership has been under consideration by the BSA as reported in its Bulletin, particularly "associate membership." My personal observation is that in looking beyond the complete professional for new customers the Society views students with much more interest than draftsmen. Inasmuch as the voting rights of associateship are limited there is no chance that a lot of Fellow-Travelers would get a shave and join up (or a facial if they are the intellectual type) in the guise of honest draftsmen, to vote one of their Comrades in as pres., and as there is less chance that a union-minded draftsman would cut his own throat by joining the BSA, it is difficult to see what scares some of the people all of the time. It couldn't be "status," with the world in its present predicament.

LEON KEACH

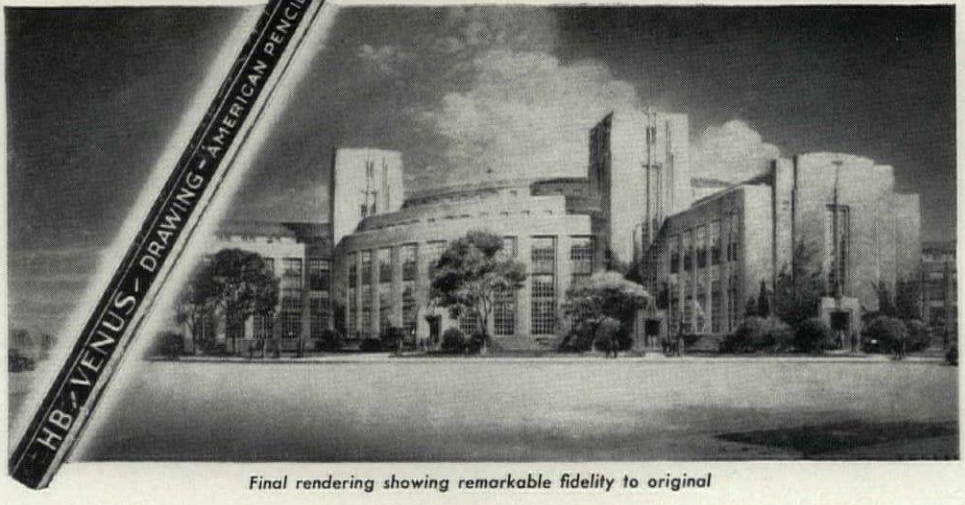
THIS, TOO *started with a pencil*



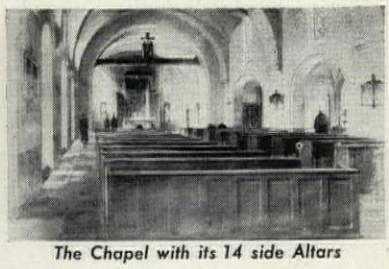
Original sketch for Cardinal Hayes Memorial

The CARDINAL HAYES MEMORIAL

designed by Eggers and Higgins



Final rendering showing remarkable fidelity to original



The Chapel with its 14 side Altars

Corner of Garden Entrance

Here is one of the outstanding buildings of the year—a complete High School, Faculty Residence Quarters, Chapels, a Cafeteria and Gymnasiums—all in one great building reared to the memory of Cardinal Hayes.

You can well imagine the intricacy of such a project—the sketches, renderings, blueprints—the long hours of many men spent with no tools but their skill plus paper and pencils. That's when pencils count. That's when Venus pencils stand out. Their careful gradation of 17 degrees gives the draftsman and architect the exact degree of hardness or softness for each job, from 6B to 9H, plus 3 special Venus Tracing degrees T1, T2, T3, for making direct blueprint reproductions (without ink tracing). It is this precision of gradation plus the smoothness and strength of lead provided by the exclusive *Colloidal Process, that have made Venus the most famous and largest selling professional pencil in the world. May we send you samples? Just say the word—and the degree. Address Dept. A.

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Motion pictures provided a new medium for testing the native ability of 433 young artists who took the final examination for the *Cooper Union* Day and Night Art Schools this term. They were asked to draw in 50 minutes the most vivid scene from the movie which had made the greatest impression on them during the past year.

FORTIETH YEAR

Arthur Eaton of the San Francisco Housing Authority was the guest speaker at the November meeting of the San Francisco Architectural Club, inaugurating the Fortieth Year of the organization. *Clyde F. Trudell* is President of the Club, which has its headquarters at 130 Kearny Street.

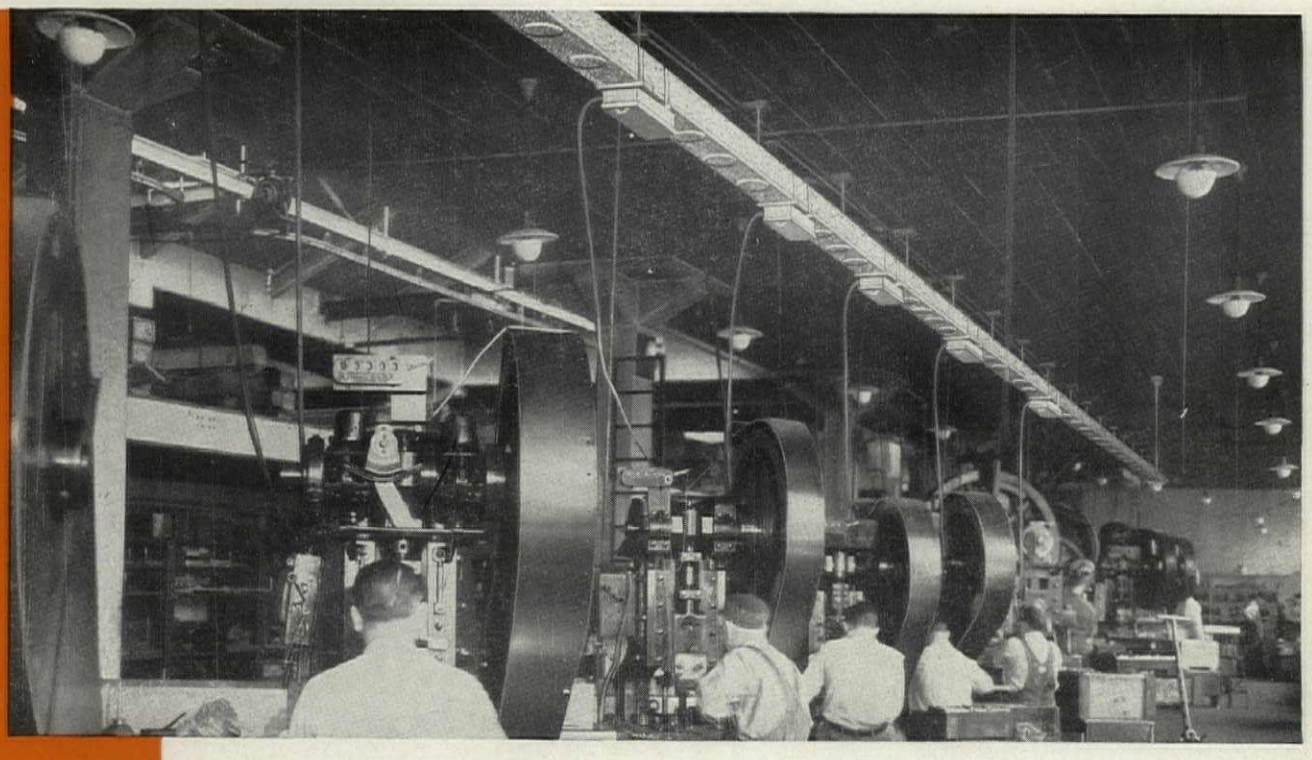
POTOMAC PATTER

This disfranchised community is in truth the orphan of the nation. And among its unprivileged citizens are its architects, whose lot in the plot becomes "the wheel within the wheel." Blessed with what is probably Washington's greatest building expansion program, local practitioners stand by to see the cream of the work go to outsiders. The recently-completed Lafayette Building, one of the largest office buildings erected in the United States since the depression, was designed by the office of *A. R. Clas*, of Chicago. The Statler Corporation is planning a $5,500,000 hostelry, and again Mr. Clas is the architect. Another multi-story office building now under construction bears the name of *William Lescaze*, of New York. The acme of all proposed projects is being fathered by *Frank Lloyd Wright*. His "Crystal City" will run into the tens of millions, and will offer Washington transients and those in status quo who are well-heeled, a hotel, theatre, shops, and athletic center second to none in the United States. The only local architect sitting in on this building feast is *Leon Chatelain, Jr.*, whose seven-story addition to the Central Union Mission Building will step into the $100,000 class.

This month's meeting of the Washington Chapter of the A.I.A. proved to be a distinctive affair. The 60 or so attending heard a most serious and timely discussion on "Defense Housing." The forum was led by *Miles L. Colean*, Director of the Twentieth Century Fund Housing Survey. Taking part in the discussion were *Earl Draper*, F.H.A.; *Bill Seaber*, U.S.H.A.; *William V. Reed*, Defense Commission; *N. Max Dunning*, Special Assistant to the Commissioner of the Public Buildings Administration; and *Dr. Michael Rosenauer*, Consultant with the U.S.H.A. (The good Doctor knows his defense housing — having apparently observed its operation under actual conditions.)

One point in the discussion which appeared to be striking is that defense housing for activities around vulnerable airplane landing fields is in all respects worthless. With regard to the problem of "Defense Housing for a Community," the solution offered by a group of Chapter associates led by *Lewis E. Stevens*, has been proclaimed a success. It is now in the hands of one of the Government agencies interested in Defense Housing. While it was on display for about a month in one of the foyers of the Commerce Building (under our very nose) we had not the opportunity to see it. Neither has it been presented to the Chapter in meetings. Therefore,

(Continued on page 24)



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for Industry

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(Continued from page 22)

we can say nothing about its merits, or vice versa, as yet.

The Municipal Architect's Office is again playing "put and take." Recently put on to rush through some local work, *George Sturtevant*, one of New York's abler men, was given the "take" sign the other day. You know, take your hat, coat, umbrella, and rubbers as you leave.

The Interior and Styling Branch of the United States Maritime Commission has suffered its first loss this season, when *Wesley Greer*, erstwhile stylist, architect, engineer and profiler deluxe resigned, to accept a position as Assistant Manager of Space Control, for the United States Steel Corporation. His three months' stay with the Maritimers seemed all too brief.

His beaming smile and infectious laugh
Cut Monday morning's gloom in half.
The boys and girls will miss your cheer,
But wish you luck and fortune, Greer.

A merry Christmas to you! RED

DEFENSE COURSES

Emergency courses to train engineers and technicians urgently needed in the nation's defense industries will be offered soon in a cooperative program sponsored by *Harvard University*, *Massachusetts Institute of Technology*, *Northeastern University*, and *Tufts College*.

The proposed program comprises full-time day courses, as well as evening courses of college grade for men who are employed. Organized to comply with the engineering defense training program of the United States Office of Education, this plan, which has been presented for formal approval, is part of a nation-wide project supported by the government for specialized training in fields essential to national defense.

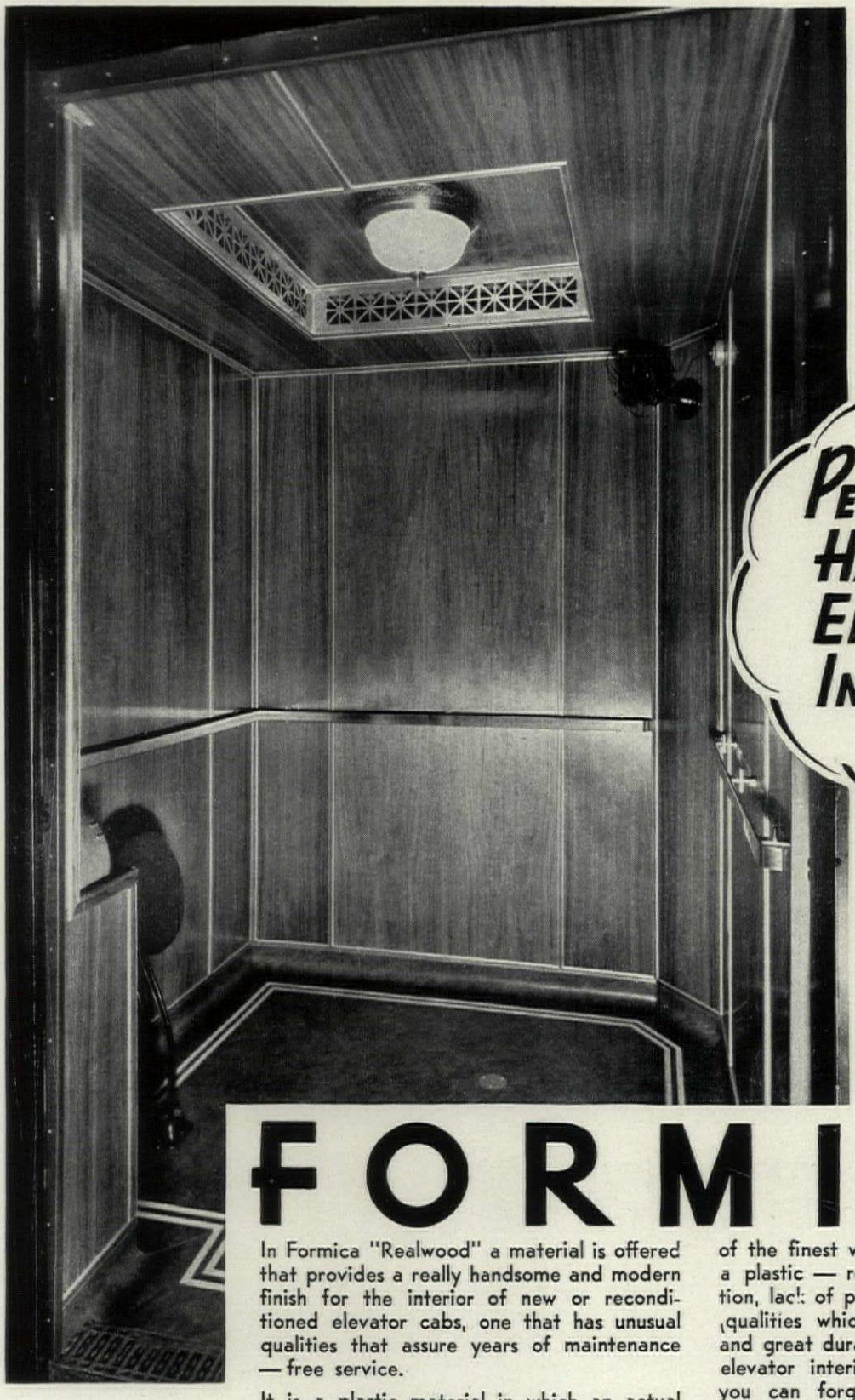
Application for detailed information on all courses to be given at the participating colleges in the Boston area should be made immediately and by mail only to the Engineering Defense Training Bureau, Room 7-102, Massachusetts Institute of Technology, Cambridge.

ALBERT G. BERGER

Albert G. Berger, New York architect and partner for 17 years in the firm of *Sugarman & Berger*, died November 9. His work included apartment houses, hotels, and office buildings in several cities — among them the Hotel New Yorker, One Fifth Avenue, The Roerich Museum, and the Navarre Garment Center Building, all in New York.

A native of Hungary, Mr. Berger graduated from the University of Budapest with architectural and engineering degrees and came to the United States in 1904. He started his career with *Schwartz & Gross*, whom he served as Chief Draftsman, and later worked with Starret & Van Vleck until he formed a partnership with *M. Henry Sugarman*. During his practice he designed and planned buildings costing more than $150,000,000 and made many contributions to the development of large scale planning and construction.

He also trained many of the younger men who started in his office and are today practicing architects in New York and other cities — acknowledging a debt of gratitude to Mr. Berger's patient assistance.



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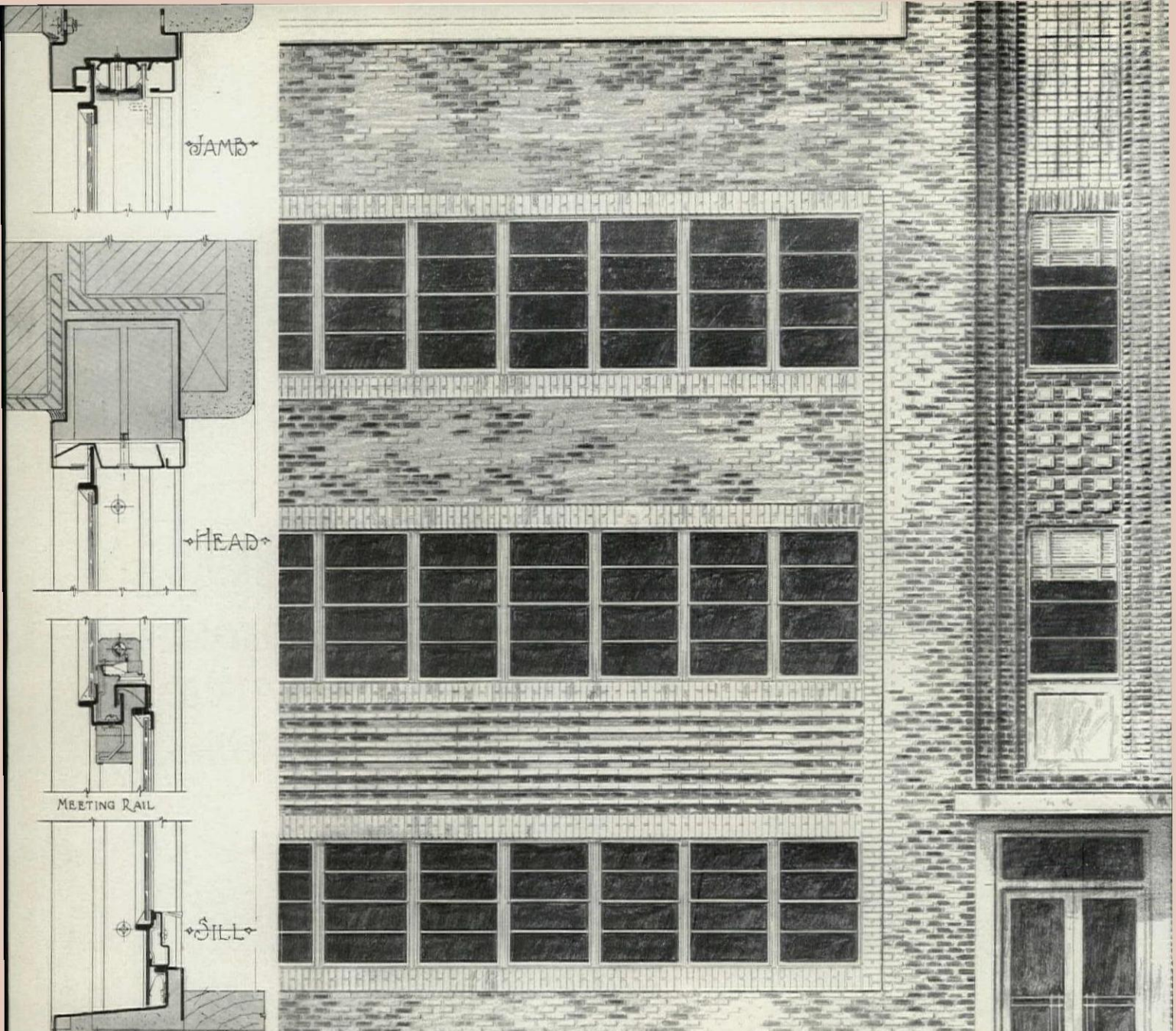
FORMICA FOR BUILDING PURPOSES



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Series 101 Windows offer great flexibility in choice of sizes, muntin arrangements, and window grouping. Size limits are generous. Windows may be furnished with hopper vents or transoms and in twin and triple unit types, built integral. Outside putty glazing is standard; interior stop glazing is available at extra cost. Outstanding features are:

Weathertight: 100% weatherstripping guarantees maximum weathertightness.

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Single, Twin or Triple Units: Series 101 windows are available in single, twin or triple units with continuous sill and head construction. Mullions for twin and triple units are unusually narrow. Long runs of single windows separated by narrow mullions are possible when required by the architectural design.

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VOLUME XXI NUMBER 12 DECEMBER, 1940

ARTICLES

PLATES

THE MONOGRAPH SERIES

VOLUME XXVI, NUMBER 6

THE THRESHING FLOOR

SELECTED DETAILS

DATA SHEETS PREPARED BY *DON GRAF*

HERE, THERE, THIS, AND THAT

COVER DESIGN AND TYPOGRAPHY BY *GUSTAV JENSEN*

PENCIL POINTS

KENNETH REID, EDITOR. CHARLES MAGRUDER, MANAGING EDITOR
DON GRAF, TECHNICAL EDITOR

THE MONOGRAPH SERIES
RUSSELL F. WHITEHEAD, EDITOR

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URGENT JOB FOR ARCHITECTS

AN EDITORIAL BY KENNETH REID

So far as immediate, direct participation in the preparedness program is concerned, only an unduly small part of the architectural profession in this country is yet employed. This includes those working on housing for industrial and military personnel, industrial buildings of various sorts, airport facilities, vocational training schools for needed types of skilled trades, hospitals, and all other structures obviously necessary. The federal departments concerned are working full blast, putting on the pressure, and are receiving, with few exceptions, full cooperation from all elements of the building industry. There are enough capable men in high places in both government and industry, who understand the seriousness of the situation and the need for speed, to warrant us in assuming that this part of the program will be carried through satisfactorily. If to the casual eye there appears to be confusion at this time, it may fairly be ascribed to the very vastness and complexity of the undertaking and to the fact that it is in its early stages. The apparent confusion, we believe, will soon vanish under the impact of American organizing skill.

But, as pointed out so ably by Serge Chermayeff in our November issue, there is a gigantic task facing us in the matter of Air Raid Precautions (or A.R.P. as it has long been referred to in England). This is a task in which architects are fitted to take an important part, collaborating, of course, with engineers, landscape architects, and such other technicans as are concerned. The easy assumption that air attack on our cities and industrial centers is too remote a possibility to bother about now is unsafe and unsound. There is no time to lose. The whole problem must be studied in the light of latest European experience and the possible emergency planned for NOW, if we are not to be caught unprepared. Anyone who regards this as hysteria should read the history of the past few years more carefully.

Already, we are glad to say, architects in a number of cities have recognized the need and have begun to organize an attack upon the problem. In Boston, for example, they have formed a Committee of Architects, Engineers, and Planners for Civilian Defense. This group has laid out a detailed program for study and action and has also succeeded in establishing official recognition of its activity in the form of representation on the Massachusetts Governor's Defense Committee. Cleveland, Philadelphia, and other cities, each in its own way, have undertaken similar work. Sooner or later, preferably sooner, the volunteer character of these efforts must be transformed by civic, state, and federal authorities, through proper appropriation of public funds, into a recognized form of activity in the public welfare. So far, this has not been done, to our knowledge of the moment. It is up to the architects to assume the responsibility for demonstrating public necessity for this vital work in which many of them will be engaged.

A news article in the New York Herald Tribune for December 2, 1940, should be of more than academic interest to architects in connection with defense needs. It is therefore reprinted here in part for the benefit of those who may have missed it, as follows:

The New York committee on Engineering Training for National Defense reported yesterday that the nation's rapidly expanding defense industries face an extreme shortage of engineers and other technical personnel unless emergency steps are taken immediately to train such men.

For example, twenty-one aircraft factories in the New York area alone will need 6,000 new engineers and from 12,000 to 18,000 technicians during the next year, the committee estimated, and other defense plants in the area need or soon will need 1,500 technicians.

"The disconcerting importance of the requirement is suggested by the fact that the nine colleges of this city area graduate each June only 1,200 engineers of all kinds, while the total for the nation is only 12,000," the committee said. "In other words, the aviation industry of this area alone could absorb at least half the entire normal yearly output of the graduate engineers in the whole country."

The field of the survey was New York City, Westchester County and Hudson, Essex, Passaic, Union, Bergen and Middlesex Counties in New Jersey. This area has 28,000 industrial plants employing about 850,000 workers.

Stating that the most serious shortage of men is in aircraft, the report added: "Since 1937 the number of wage earners in the aircraft industries of this region has been multiplied at least fifty times over. The managers of the aircraft and accessory industries interviewed expect further expansion so rapid and so great that the engineering colleges cannot make a mistake if they focus their attention immediately and almost entirely at first on the personnel needs of that one group of industries which within a year may be more than three times as great as they are today."

"Aside from the engineering field," the report went on, "the prevailing demand reported to us is for machine operators and other trained workmen. To satisfy this demand is not the function of the colleges; vocational schools and the industries can do much.

"At a somewhat higher level, even to the highest, there is an insistent demand for draftsmen. So frequently is this reported as to make it the most obvious immediate bottleneck."

The committee said that the full force of the national defense program had not yet been felt in the New York area, and concluded its report with a question:

"Where are there reservoirs of men to be trained for the places which must presently be filled in the defense industries?"

McLaughlin Air Service

ACADEMY OF AERONAUTICS AND NEW YORK'S MUNICIPAL AIRPORT

THE ACADEMY OF AERONAUTICS

AT LA GUARDIA FIELD, NEW YORK

The wish of the administrators of the Academy of Aeronautics at La Guardia Field to avoid rigid separation between theoretical and mechanical studies is apparent in the plan of their new building. While the majority of the lecture rooms are on the two floors of the administration portion, three are distributed in the workroom section in order to give them accessibility to the mechanical departments there. Metal and clear glass partitions around these and between the raised drafting room and workroom aid an impression of interrelationship between all departments.

The work space, unobstructed except for columns, 116 feet across at its widest point and almost 300 feet long, gives the administrator great latitude in the arrangement of departments. Such openness may seem essential here when it is considered that, with changes in aircraft, any mechanical operation may rise while another declines from year to year. By extending the roof of the administration section some distance over the work space, an area of 24-foot ceiling height suited to airplane assembly was obtained. A 25-foot wide by 20-foot high tubular steel hangar door allows for entry of small planes or fuselages of larger ones.

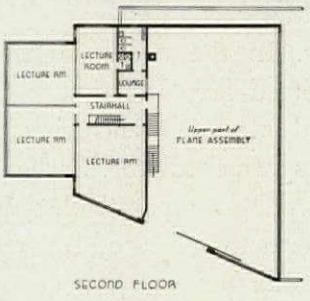
The steel frame of the building is welded. The roof system consists of a reinforced gypsum slab over insulating board, both being carried on sub-purlins welded to steel beams. To attain the horizontal emphasis in the elevations with uninterrupted expanse of window band, columns were set in from the exterior wall. The use of iron spot face brick for parapet, window head, and sill courses in contrast with the buff of the field gives an enhanced emphasis to horizontal lines. Lettering on the façades is stainless steel.

The heating system was planned to suit the differing needs of the lecture rooms and the work space, the latter being served by gas-fired unit heaters. In the two-story west wing, a one-pipe forced-circulation hot-water system was divided into two branch circuits, each supplied by its own circulator. Each circulator is controlled by a separate thermostat. Of the two zones thus formed by these circuits and their radiators, one was on the north, the other on the south side of this wing. This arrangement makes for sensitive adjustment to conditions of high heat absorption at the sun-exposed walls and of heat loss due to prevailing winds on the north and west walls of the building.

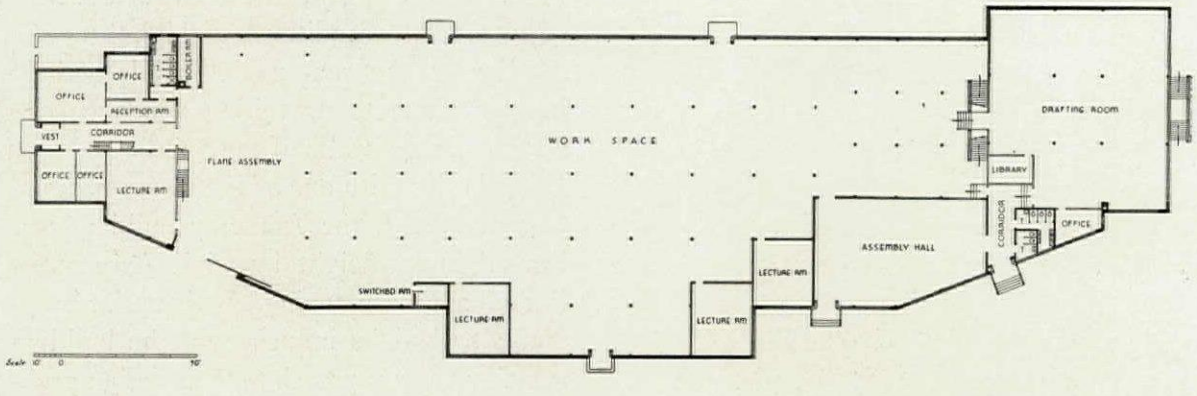
Being in line with one of the runways of La Guardia Field, the Academy building was limited in its height by Civil Aeronautics Bureau approach zoning. A triangular property also had its influence on the building mass. In their approach to their design problem, the architects aimed at conformity with the neighboring airport structures. The total cost of the building exclusive of ground was $175,000.

The Academy building was planned and built under the direction of the Department of Docks, City of New York, John McKenzie, Commissioner. Joseph A. Meehan is Chief Engineer, Joseph Halpern, Division Engineer of Design, and George E. Minton, Chief of Architects in the Department.

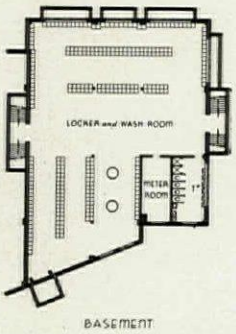
VIEW LOOKING EAST AT NEW ACADEMY OF AERONAUTICS, JUST COMPLETED ADJACENT TO THE LA GUARDIA AIRPORT. THE PLAN REQUIRES NO EXPLANATION BEYOND THAT GIVEN OVERLEAF EXCEPT TO CALL ATTENTION TO THE ACCESSIBILITY OF THE ASSEMBLY HALL, NEAR THE DRAFTING ROOM END, TO VISITORS ENTERING FROM THE PARKING SPACE PROVIDED OUTSIDE



SECOND FLOOR



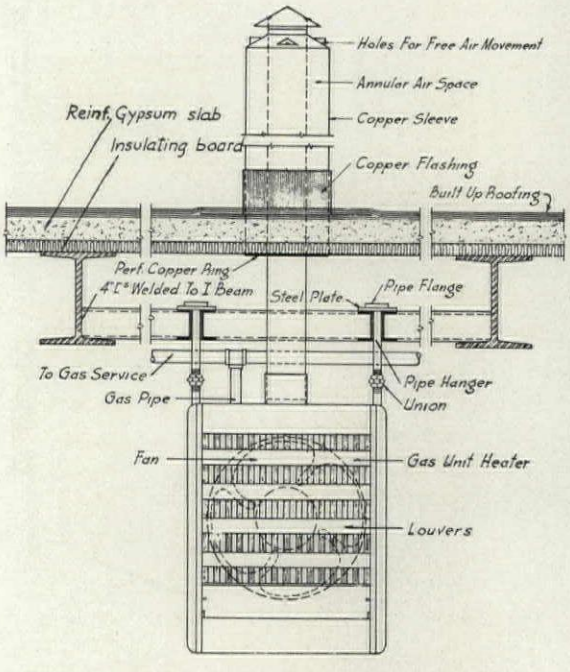
FIRST FLOOR

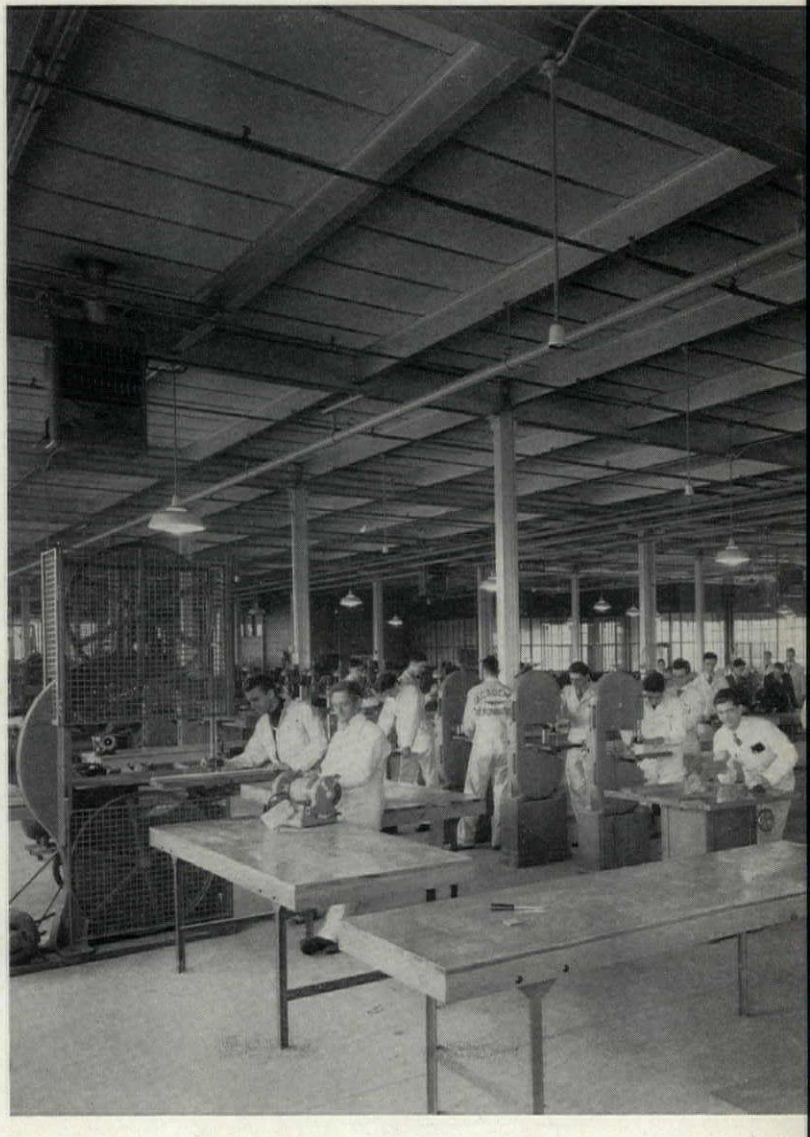


BASEMENT

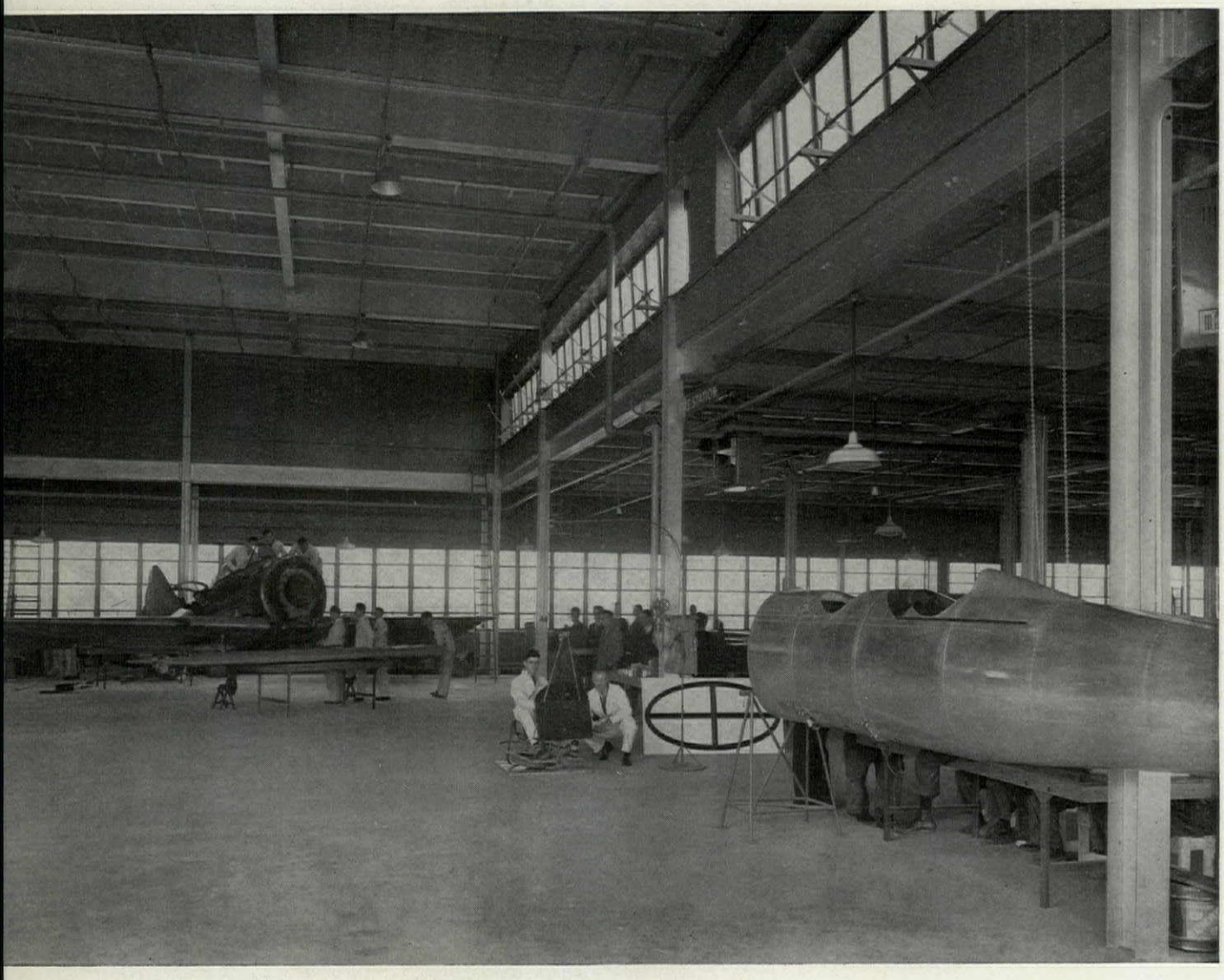
THE NEW BUILDING FOR THE ACADEMY OF AERONAUTICS

FROM THE EAST, THE BUILDING PRESENTS AN EXTENDED HORIZONTAL FACADE, ITS BUFF COLORED FACE BRICK RELIEVED ONLY BY THE IRON SPOT FACE BRICK COURSES AT PARAPET, WINDOW HEAD, AND SILL LEVELS. DETAIL DRAWING BELOW SHOWS METHOD OF SUPPORTING AND VENTING THE UNIT HEATERS WHICH MAY BE SEEN INSTALLED IN THE WORK SPACE, AS PHOTOGRAPHED AT THE RIGHT

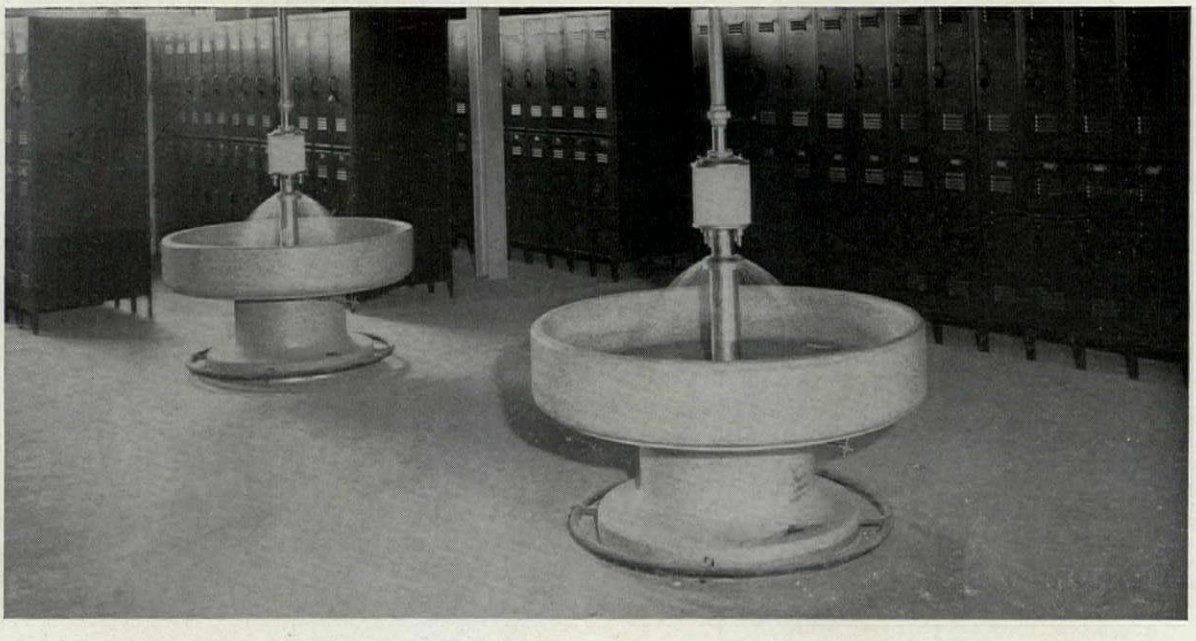




RECENTLY COMPLETED AT LA GUARDIA FIELD, NEW YORK



ABOVE IS A VIEW OF THE AIRPLANE ASSEMBLY SECTION OF THE WORK SPACE, WHILE BELOW IS SEEN A CORNER OF THE BASEMENT LOCKER ROOM FITTED WITH INDUSTRIAL TYPE WASH SINKS. THE BUILDING IS LEASED FROM THE CITY BY THE ACADEMY, WHOSE PRESIDENT IS THE FAMOUS CASEY JONES



ACADEMY OF AERONAUTICS AT NEW YORK'S MUNICIPAL AIRPORT

AIRCRAFT MECHANICS TRAINING SCHOOLS

BY ALAN MATHER

Some of the need for places to train aviation mechanics may be met by alteration and extension of existing vocational schools. After the war of 1914 to 1918 there was a gradual shift of emphasis away from metal trades to building trades, printing, and other courses of peaceful intent. Now with their orientation back again to the metal trades, the schools may be tempted to alter their existing space arrangements to the detriment of necessary peacetime courses. It is to be hoped that requirements will be met by additions and new buildings rather than by cramping alterations of old ones.

The difference in size between today's aircraft and the crates which fought the last war is a key feature which militates against the use of vocational schools in congested city districts. The Civil Aeronautics Board *Manual on Mechanic School Rating* calls for suitable space for the disassembly, inspection, assembly, and rigging of an aircraft. Now in meeting this requirement a school may be rich enough to truck airplane fuselages through city streets and to rent a garage for assembly work at a city's center, but if there are objections at those points, then the advantages of a hangar on the city outskirts may become apparent. One hangar may lead to another (particularly if pilot training is added to mechanic training), until the school has grown from its corner in a vocational school into a fully-equipped æronautics training center.

WORKSHOPS

Figures on areas required per student are likely to be deceptive. Although the Civil Aeronautics Board rules that there shall not be more than eight students working on a single unit at any time, the school administrator decides how closely units will be grouped. It is the administrator also who determines what will be reserved for aircraft assembly with its high space requirement and what for welding tables with their lower needs. And while 120 square feet per student as an average of all departments (engineering and workshop) is a desirable minimum, the architect may discover that his school administrator client, if sufficiently hard-boiled, is aiming at an 80-square foot-per-student average.

While on the subject of school administrators as clients, it may be well to advise the architect that many of these hail from the aircraft industry. There, as in the automobile industry, the concept of the ideal building is one room of vast area having a minimum of columns. "Flexibility" is a key word to which they and the industrialists seem to cling with steely-eyed inflexibility. But although it allows straight line production or expansion of one department and reduction of another without the necessity of saying "Pardon my shoving" to a partition, one big room may not quite satisfy the requirements of educational work. Even when using a loud speaker, an instructor has difficulty enough making himself heard above the din of machinery in his own division without having to compete with others. Some areas require mechanical ventilation, others don't. Wall space, unnecessary in a factory, is at a premium for posting of large blueprints or

the hanging of parts, such as propellers for demonstration, in a school.

It is true that airplane factories sometimes offer ideas for imitation in aircraft mechanic schools. The plan of the Northrop plant shown here, with its grouping of shops around a central hangar and the segregation of its administration and engineering sections, is one which suggests a satisfactory parti for a school. But the imitation should be pursued with caution.

Stock Room and Tool Room

As in the East New York Vocational High School shown here, each workshop should have its own tool room. This may have pass gate and counter, wire mesh partition, metal shelving and bins.

Sheet Metal Workshop

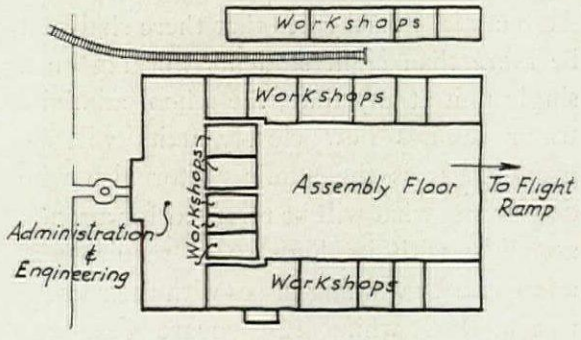
Heavy machinery here, such as drop hammer and hydraulic presses, require special foundation or supports. Compressed air outlets in riveting section. Gas or electric furnaces of heat treatment section should be in a separate room. Quenching tanks. Large store room.

Welding Shop

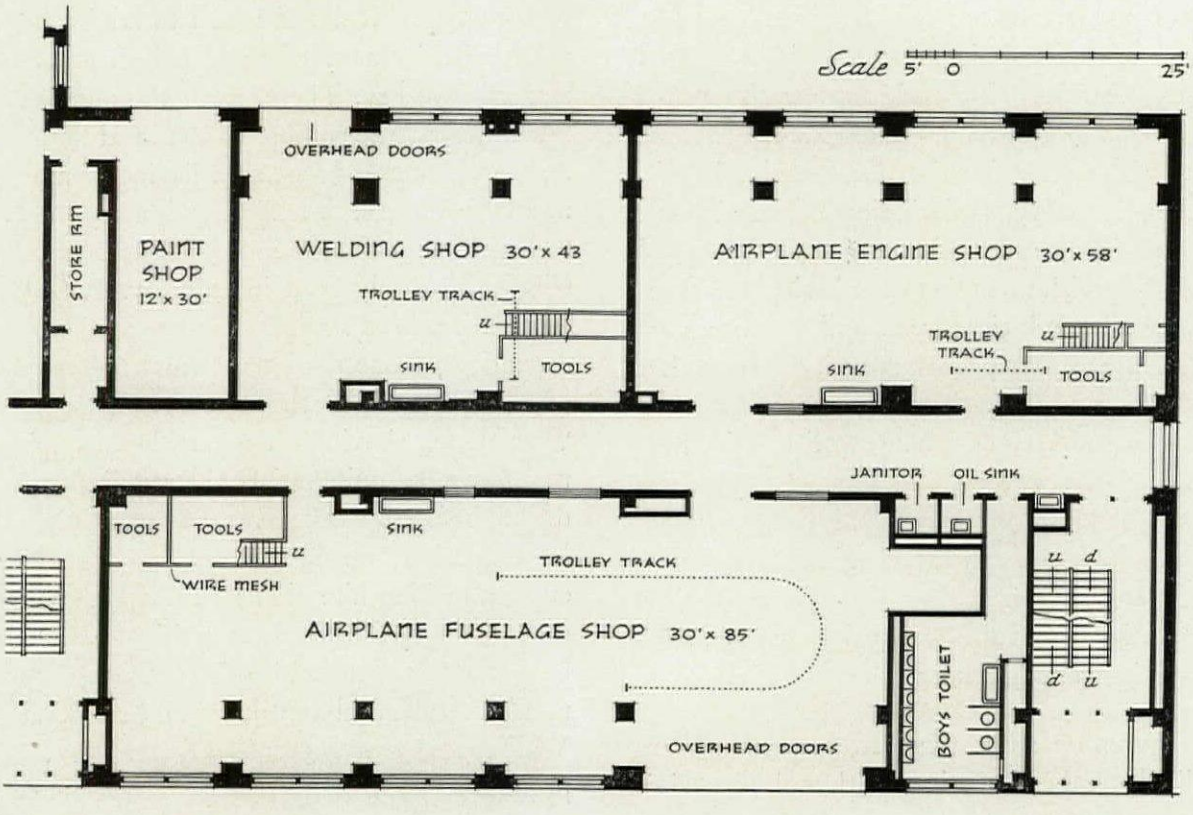
For oxy-acetylene welding in small shops it is sufficient to have an oxygen tank and an acetylene tank alongside each student's bench. In large ones, however, it may be preferable to pipe the acetylene from a generator in a separate room or building. Oxygen from a battery of tanks in another room may also be piped to outlets at suitable locations in the shop. See National Board of Fire Underwriters regulations for generator rooms, tank storage, and piping. Eye protection requires that electric arc welding be done in booths. Dwarf partitions and stall doors with small viewing windows are suitable for these.

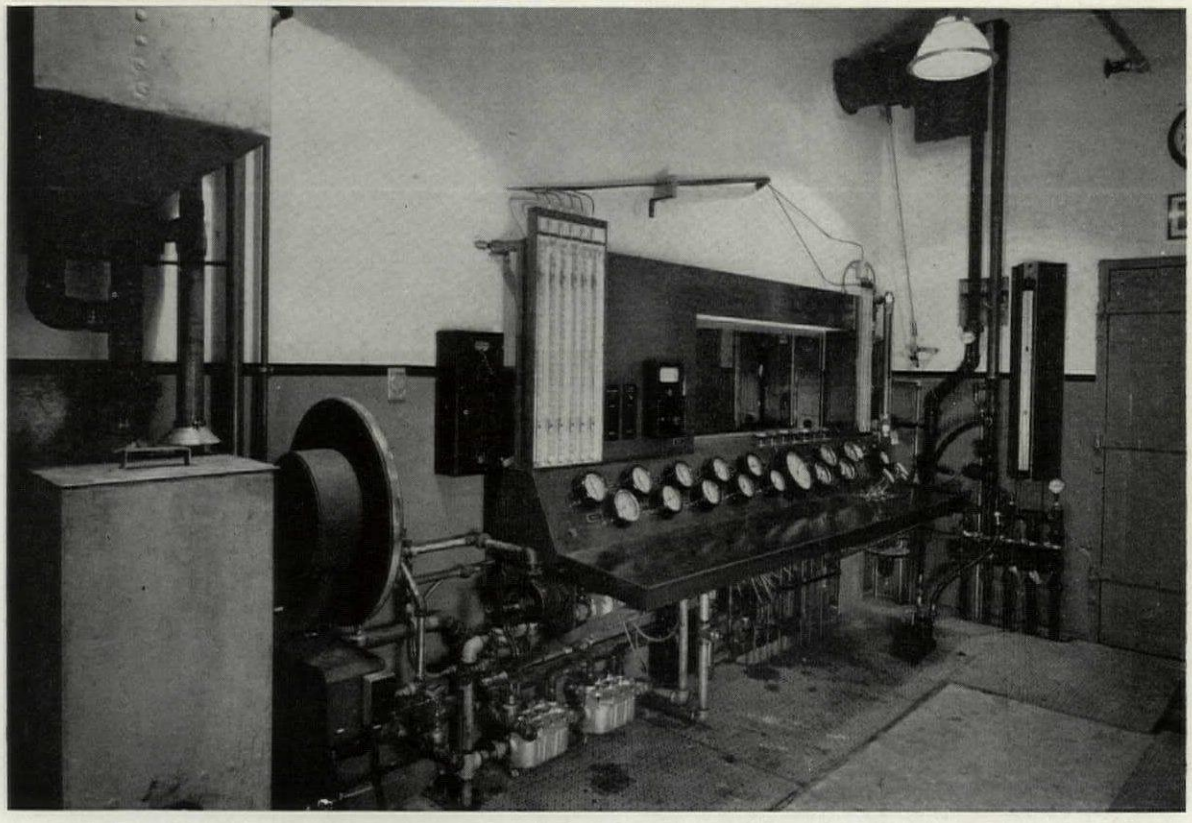
Airplane Assembly Shop

Large, clear floor space required. Ceiling height of 25 feet will allow clearance for



ABOVE APPEARS, DIAGRAMMATICALLY EXPRESSED, THE ARRANGEMENT OF THE FACTORY OF NORTHROP AIRCRAFT INCORPORATED AT HAWTHORNE, CALIFORNIA, SUGGESTIVE FOR A SCHOOL PLAN *PARTI*. BELOW IS A PLAN OF THE AIRCRAFT WORKSHOPS IN THE EAST NEW YORK VOCATIONAL HIGH SCHOOL. ERIC KEBBON IS THE ARCHITECT





ENGINE TEST CELL CONTROL ROOM AT FACTORY OF WRIGHT AERONAUTICAL CORPORATION AT PATERSON, NEW JERSEY, A SET-UP THAT COULD BE USED IN A MECHANICS' TRAINING SCHOOL

chain hoist and overhead trolley over largest airplane likely to be used. Minimum door width, 80 feet. Ring bolts in floor for anchorage of airplane tail.

Engine Testing Shop

N.B.F.U. requires that engine testing be done in rooms or compartments separated from work areas by masonry walls not less than 8 inches in thickness. Engines to be supported on structural steel frames or held in place by wire cables anchored at floor and ceiling. Draft from propeller being a back draft, outlet for this and exhaust fumes may be through door or window openings ranged immediately behind the engines. It is customary to arrange test engines in a battery with control chamber having viewing windows between each. Presence of exhaust gases makes mechanical ventilation of control booths desirable. Overhead trolley and chain hoist at each test chamber. Provide compressed air or electric supply for cleaning, sandblasting, plating, Magnaflux and X-ray testing of propellers as required.

Woodworking Shop

Jigs and mock-ups or full-size models of airplanes are made here.

Doping Shop

"Dope" which consists of cellulose nitrate or cellulose acetate dissolved in a volatile flammable solvent is applied to airplane fabric. Because of its fire hazards the National Board of Fire Underwriters in its "*Recommended Good Practice Requirements for Construction and Protection of Airplane Hangars*" (section 16) calls for separate detached building or room protected by fire walls. The N.B.F.U. recommendation for heating, lighting, and ventilation should be followed.

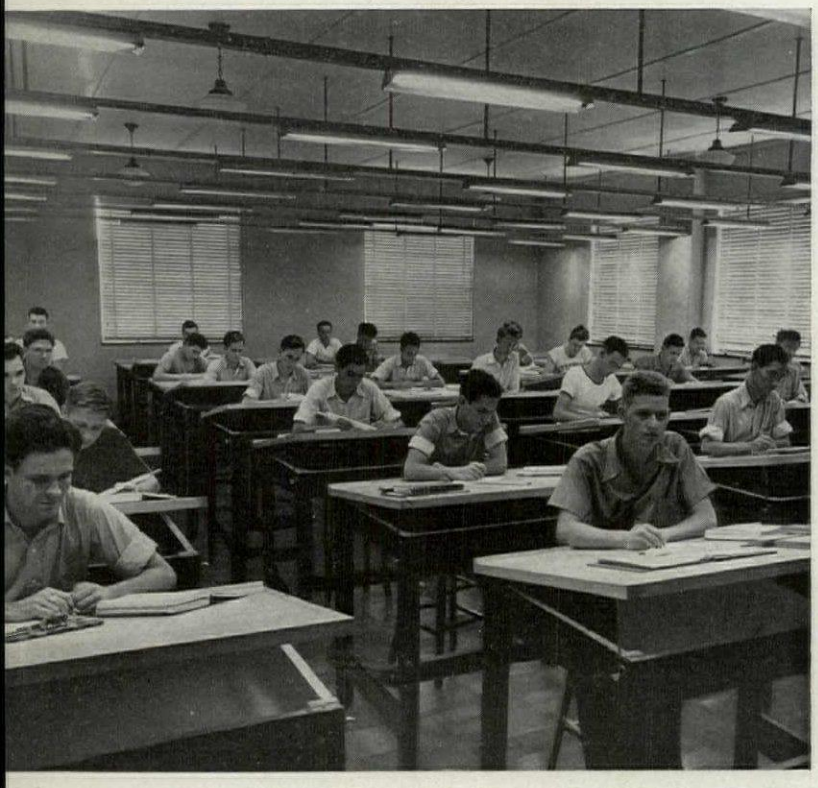
In a vocational school this room may be combined with the paint shop.

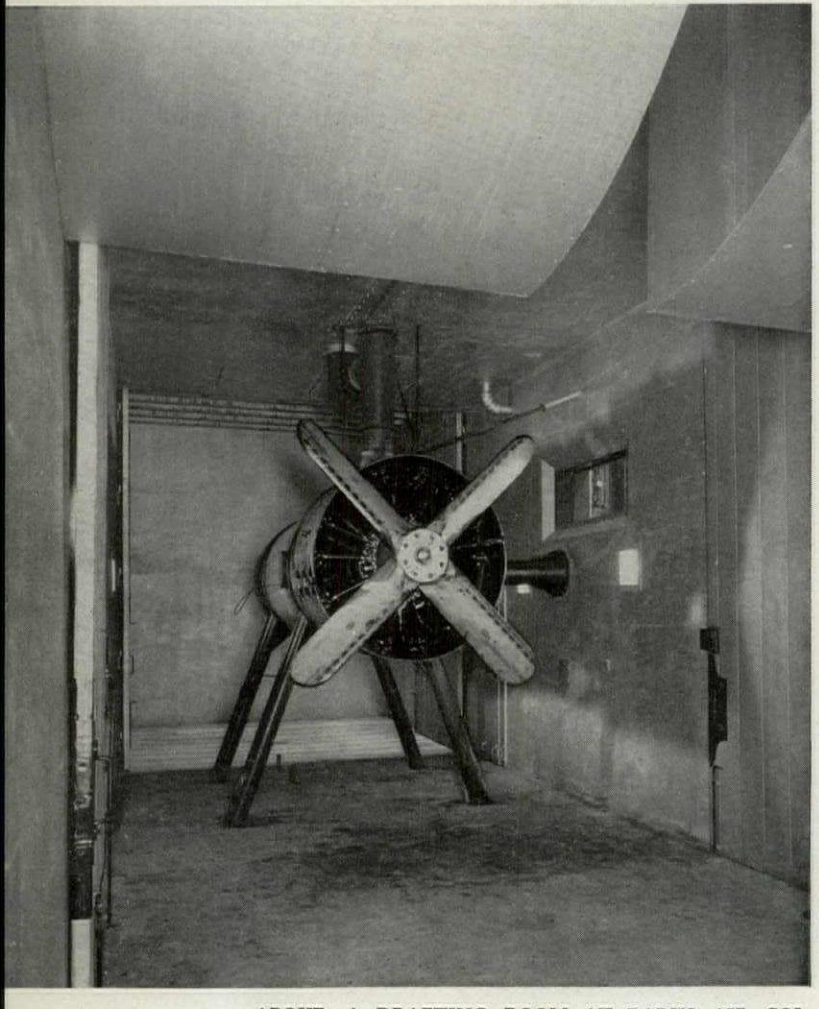
Instrument Room

This is essentially a laboratory and should contain tachometer test stands, vacuum pumps, dead weight tester, Wheatstone Bridges, jeweler's lathe, etc. Provide electric, compressed air and vacuum outlets. Fluorescent lighting is particularly desirable here.

Lecture Room

One lecture room should be so located that heavy equipment can be wheeled into it





ABOVE, A DRAFTING ROOM AT PARKS AIR COLLEGE, EAST ST. LOUIS, ILLINOIS. BELOW, AN ENGINE TEST CELL AT THE WRIGHT AERONAUTICAL CORPORATION FACTORY IN PATERSON, N. J.

from the workshops for demonstration. Such a room with fixed seats might serve for general assembly or examinations.

Space for Instructor

Allot space for instructor's desk, filing cabinets, blueprint rack, in each workshop.

ENGINEERING, ADMINISTRATION

Drafting Room

North light desirable. Fluorescent lighting.

Library

This is essential but frequently forgotten.

Offices

General office. In private schools it is customary to have an office for "counselors" engaged in school promotion work, student guidance and placement. Public schools should have similar facilities. Faculty conference room. Men's and women's toilets.

Time Clocks

Allow space for time clock and card racks near building entry. In large schools, separate time clocks for engineering and mechanical departments are installed.

MECHANICAL AND ELECTRICAL

Plumbing and Water Supply

Showers and industrial-type wash fountains near locker room. Separate showers for teaching staff. Lavatory and drinking fountain in each workshop. Floor drains in workshops. Sprinklers as required by N.B.F.U. or local codes.

Heating and Ventilation

Unit heaters may be used in workshops with the exception of doping shop, acetylene generator shop where sparking of motor or deposit of vapor of inflammable chemical on heated pipes is hazardous.

Electric Lighting and Power

General direct lighting in workshops should be supplemented by local lighting at lathes and drill presses.

Machine shop, all stationary power equipment, and arc welding require 220 Volt, 3 phase A.C. Provide 110 Volt, single phase A.C. for portable tools and lighting circuits.

Compressed Air

Compressed air is needed for dope and paint spraying; for cleaning of parts in engine shop and for riveting.

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AERONAUTIC SCHOOLS

Machinery and Equipment

• *"Airplane Factories."* *Aviation*, Vol. 38, Dec. 1939. Some of the largest production plants are described in this special issue. List of manufacturers of production tools.

• *"Modern Machinery for the Production of Aircraft and Engines."* *Aero Digest*, Vol. 34, Jan. 1939, pages 95 to 144. Directory of the sources of supply.

U. S. Regulations

• CIVIL AERONAUTICS BOARD. *Civil Air Regulations, Part 53: Mechanic School Rating.* (Civil Aeronautics Board, 1940, 4 pages. For sale by the Superintendent of Documents, Washington, D. C., 5 cents.) General information on curriculum, facilities, equipment, and material which shall be provided by a civilian aviation school in order to be eligible for C. A. B. rating and certification.

• CIVIL AERONAUTICS BOARD. *Manual 53: Mechanic School Rating.* (Civil Aeronautics Board, 1940, 15 pages.) Detailed information supplementing that in Civil Air Regulations, Part 53.

Fire Protection

• NATIONAL BOARD OF FIRE UNDERWRITERS. Copies of the regulations listed below can be secured by addressing the National Board of Fire Underwriters, 85 John Street, New York, N. Y., 222 West Adams Street, Chicago, or Merchants Exchange Building, San Francisco.

• N. B. F. U. *Construction and Protection of Airplane Hangars.* 1930. Regulations affecting engine testing, doping, sprinklers.

• N. B. F. U. *Blower and Exhaust Systems for Dust, Stock, and Vapor Removal.* 1937. Regulations affecting ventilation of doping room.

• N. B. F. U. *Paint Spraying and Spray Booths.* 1937. Regulations which may affect doping shop or engine testing shop.

• N. B. F. U. *Installation and Operation of Gas Systems for Welding and Cutting.* Regulations which affect planning of acetylene generator room and oxygen tank storage room.

VOCATIONAL SCHOOLS

• *American School and University.* (American School Publishing Corporation, 470 Fourth Ave., New York, N. Y.) A yearbook devoted to the design, construction, equipment, utilization and maintenance of educational buildings and grounds. Contains articles by experts in the school planning field and manufacturers' advertisements. Some articles in this are listed below.

• *"Vocational Schools."* *Architectural Record*, Vol. 87, April 1940, pages 87 to 114. Plans. General consideration of requirements. Data on equipment.

• WILLIS A. WHITEHEAD. *"Planning and Equipping Industrial Arts Laboratories."* *American School and University*, 1939, pages 508 to 518. A very complete checklist of considerations drawn up by members of the Laboratory Planning Classes at Ohio State University. Four plan examples.

• ILLUMINATING ENGINEERING SOCIETY. *American Recommended Practice of School Lighting.* (Illuminating Engineering Society, 51 Madison Ave., New York City, 1938, 60 pages, 25 cents.) Recommendations of a committee sponsored by the I. E. S. and The American Institute of Architects.

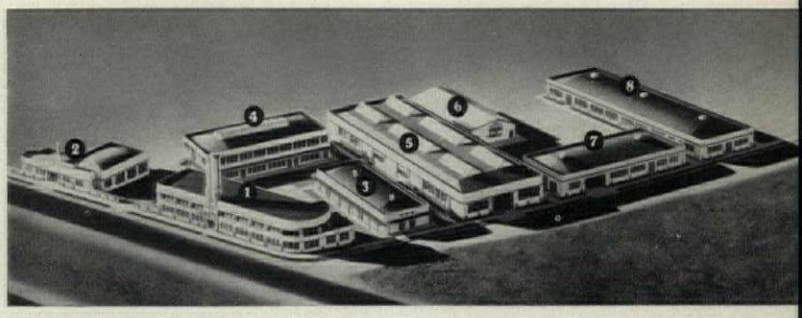
• GILES MARTIN. *"The Importance of Proper Selection of Equipment for Vocational School Shops."* *American School and University*, 1938 Edition, pages 566 to 573. Detailed list of equipment required in carpentry, plumbing, bricklaying, house painting, machine, and welding shops.

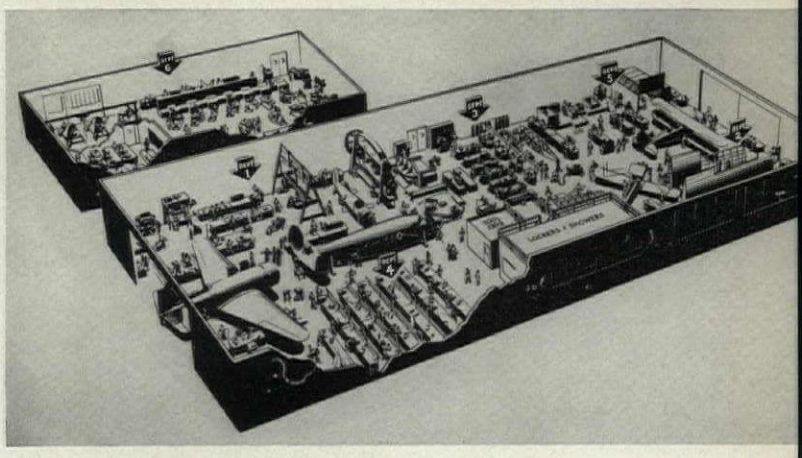
• IRVING S. NOALL. *"Program and Equipment for Industrial Education in a Progressive School."* *American School and University*, 1937 Edition, pages 485 to 489. Plan of Essex County Vocational School in New Jersey. General discussion of layouts suited to changing demands of industry.

• F. J. JEFFREY. *"The Physical Plant for a Modern Program of Vocational Education."* *American School and University*, 1936 Edition, pages 413 to 418. Description of the large building of the Hadley Vocational School in St. Louis.

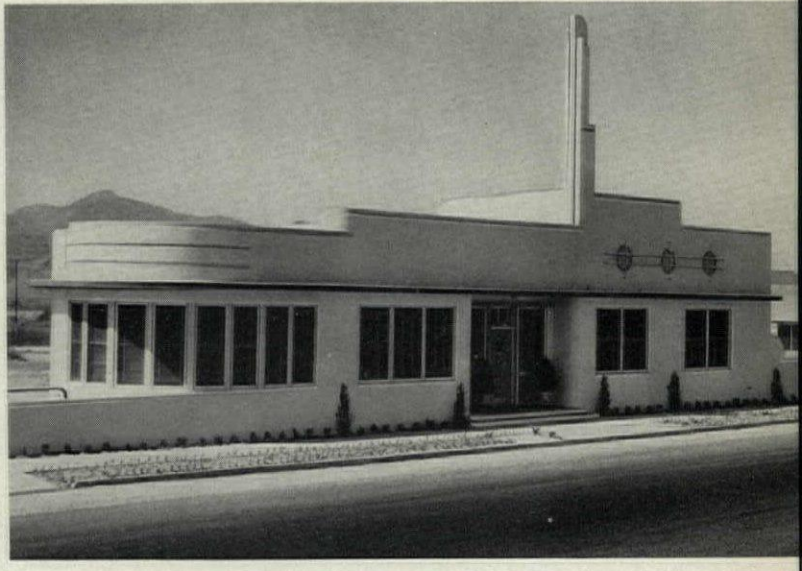
• WILLIAM L. HUNTER. *"Shop Planning Principles."* *American School and University*, 1935 Edition, page 349. List of general recommendations formulated by a conference of industrial arts teachers.

• ROBERT O. BEEBE. *"Planning the Vocational School Plant for Future as Well as Present Needs."* *American School and University*, 1935 Edition, pages 350 to 353. Cites examples of changed industrial demands and makes suggestions for planning.

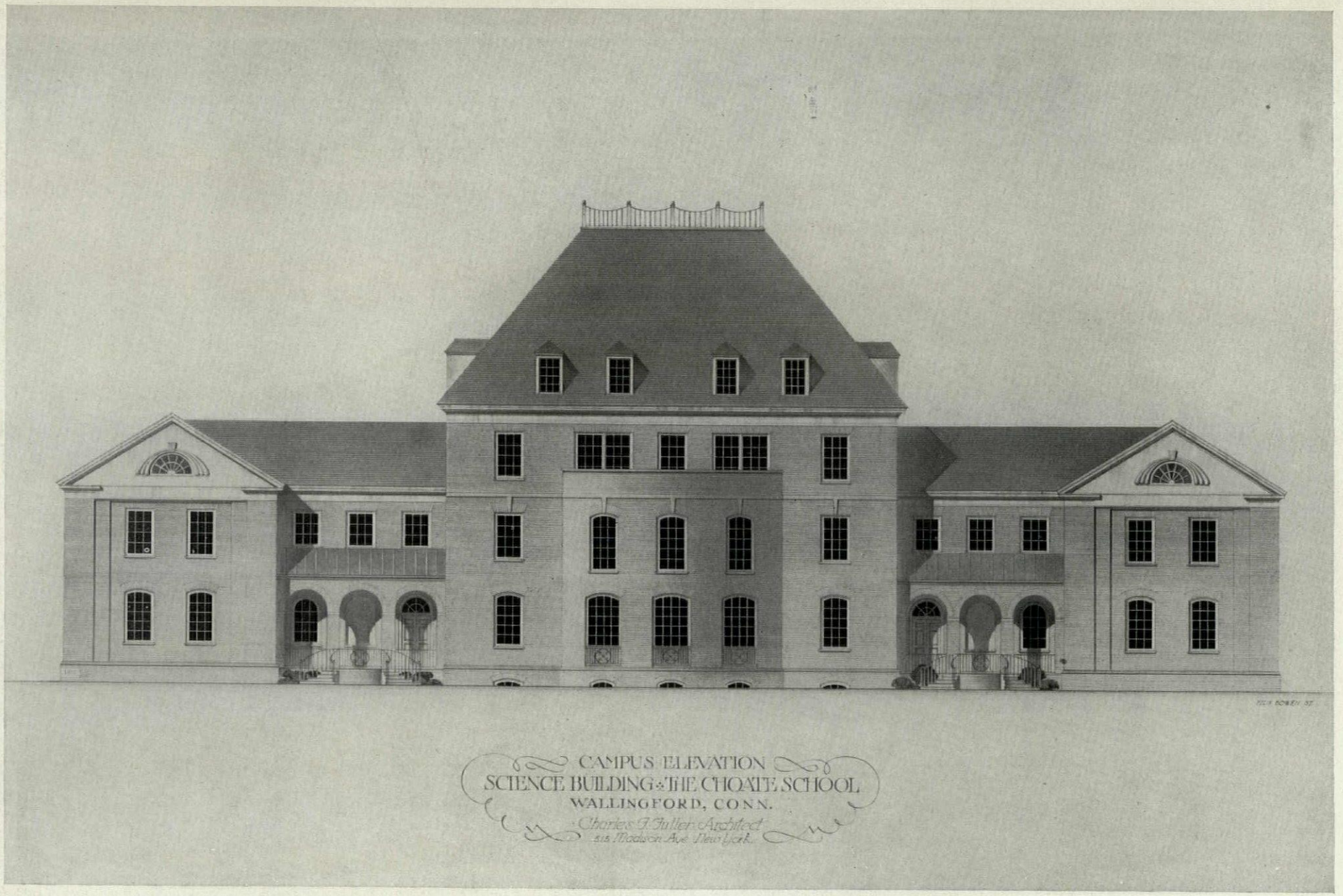




AERO INDUSTRIES TECHNICAL INSTITUTE, LOS ANGELES. 1. ADMINISTRATION, 2. LABORATORY, 3. DRAFTING, 4. AERO ENGINEERING, 5. AIRPLANE CONSTRUCTION SHOP, 6. MACHINE SHOP, 7. EXPERIMENTAL DEPT., 8. ENGINE OVERHAUL. INNARDS OF BUILDINGS 5 AND 6 ARE SHOWN IN DIAGRAM TO CONTAIN DEPARTMENTS AS FOLLOWS: 1. SHEET METAL FORMING AND FOUNDRY, 2. SUB-ASSEMBLY AND INSTALLATION, 3. WELDING AND STEEL FITTINGS, 4. SHEET METAL FABRICATION, 5. ASSEMBLY AND RIGGING, 6. MACHINE SHOP. A. I. T. PHOTO



AN EXTERIOR CLOSE-UP OF THE BUILDING FOR ENGINEERING, CHEMICAL, AND PHYSICS LABORATORIES, AERO INDUSTRIES TECHNICAL INSTITUTE, LOS ANGELES. MARKED "2" AT TOP OF PAGE



FELIX BOWEN MADE THIS DRAWING OF THE SCIENCE BUILDING DESIGNED BY FULLER & FORBES, NEW YORK, FOR THE CHOATE SCHOOL

SCIENCE BUILDING FOR THE CHOATE SCHOOL

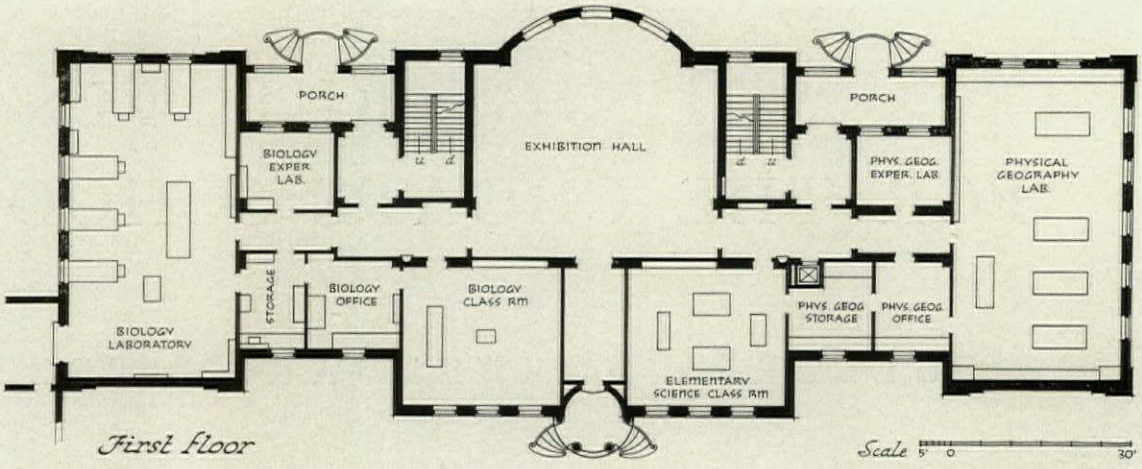
FULLER & FORBES, ARCHITECTS

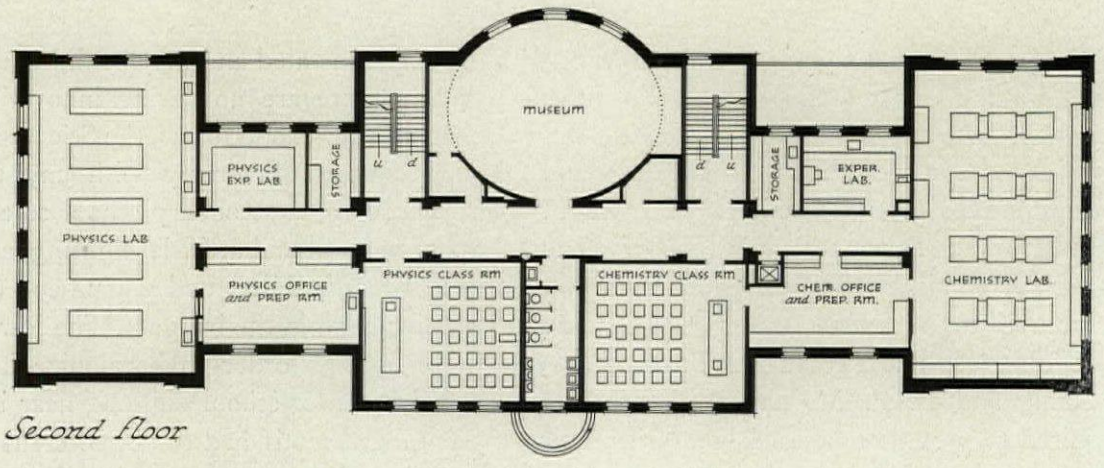
The problem of designing a Science Building for the Choate School at Wallingford, Connecticut, was simple in its essentials but presented some challenging difficulties and compromises to the Architects, Charles F. Fuller, and Edwin M. Forbes, of New York. Commissioned to design an important addition to a campus that possessed fine buildings by Ralph Adams Cram, Louis Coffin, and E. P. Mellon, they were required to provide modern laboratories, museum space, and class rooms for the teaching of five allied scientific subjects in a structure that would enhance, rather than disturb, the architectural values of the campus.

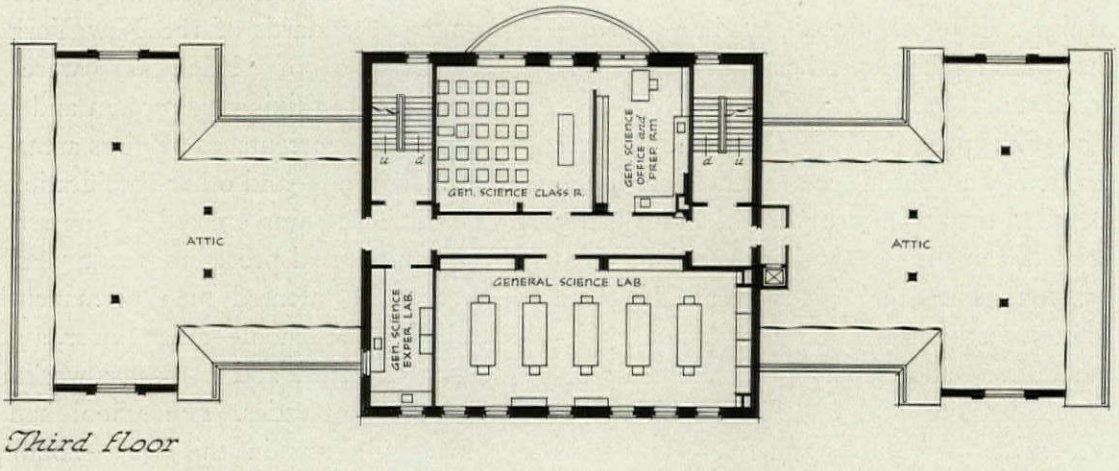
The first program for the building was drafted by a Committee of the Masters, who included many features which, while badly needed, ran the costs well above the appropriation. The final plans were therefore limited to the needs of the Science Department first—adding any other elements allowed by the budget. The requirements were: five laboratories and five class rooms to accommodate 24 boys each; adjoining rooms for the Masters, with preparation rooms, supply rooms, and five small laboratories for independent research; two exhibition rooms for permanent and loaned displays; necessary locker rooms, lavatories, etc.; if possible, a studio and class room for the Art Department. It may be noted on the plans overpage that space for the Art Department was found on the fourth floor and that there is ample room for the camera club and other groups to be accommodated in the attics of the wings or in the basement which is fully excavated and may be finished later. While there are no daring innovations in materials, or exotic forms, the Science Building compares favorably with any similar structure for a secondary school as regards space, natural and artificial lighting, acoustic qualities, durabilty, and equipment (which was included in the budget). The low wings were used in order to harmonize in scale with a smaller school building near by, yet the central motif had to be powerful as the building dominates one side of the large campus. Standards of the New York State Department of Education were used throughout in fixing class room and laboratory sizes—percentages of glass areas—artificial lighting—and other specifications.

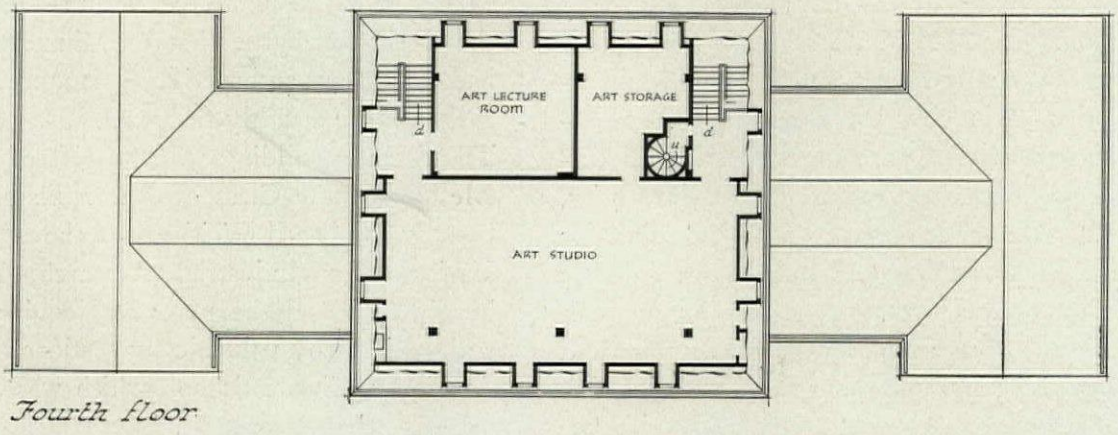
The building was erected by the school itself, an unusual procedure made possible by a corps of talented men permanently attached to the school—an engineer, a general superintendent, and a master workman in each of the trades. The school had done other buildings in this way—notably the Chapel and the new Gymnasium—and all the Architects agree that they have never had their plans and specifications more carefully and thoroughly followed.

The Science Building was the gift of Paul Mellon, of the Class of 1925. Thanks to him, Dr. Edward Weidlein of the Mellon Institute for Industrial Research, Pittsburgh, reviewed the plans and equipment, and made many valuable suggestions to the Architects. Choate School, which was small in 1910 when George St. John took it over, now has an enrollment of nearly 500.

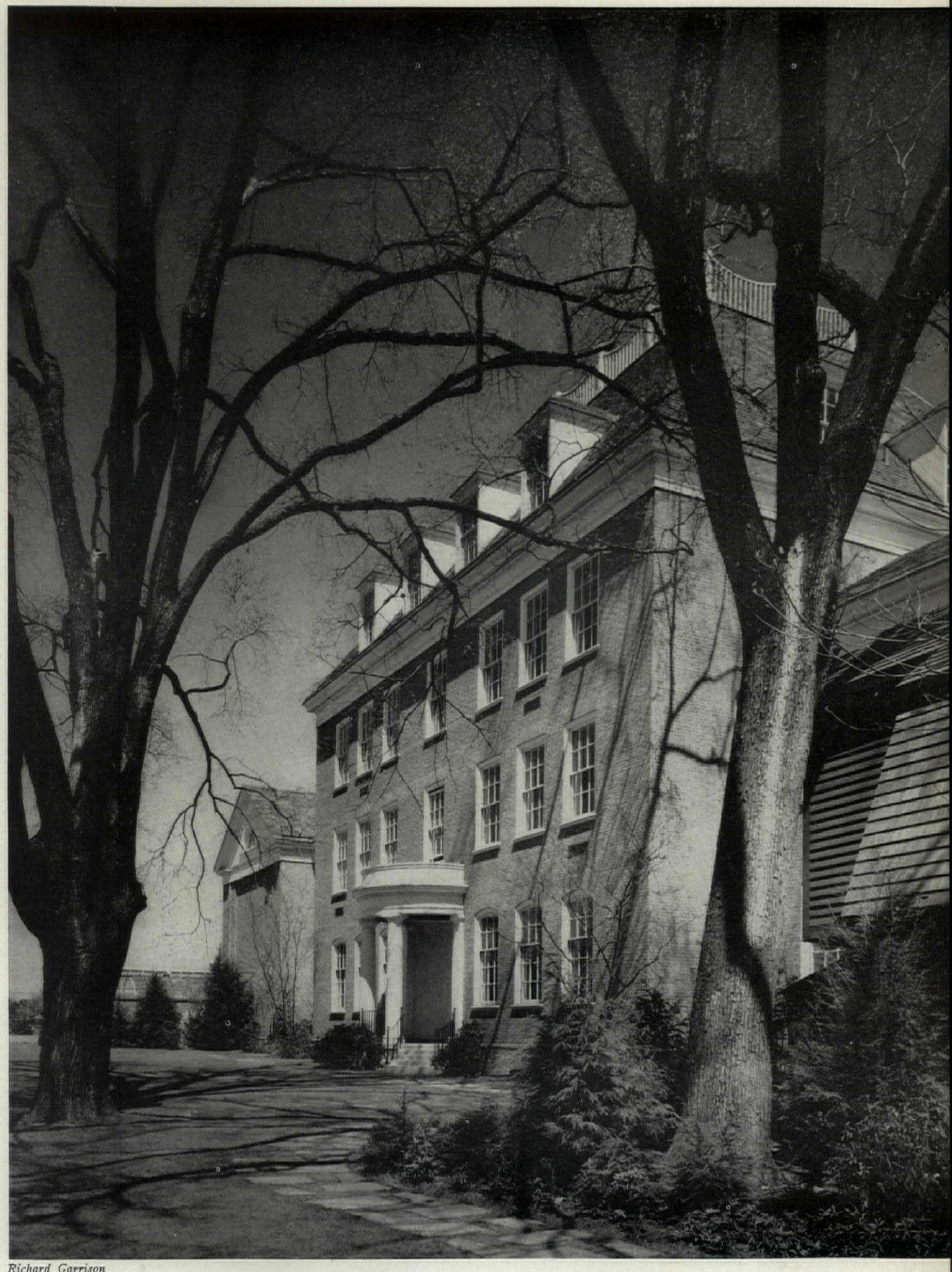






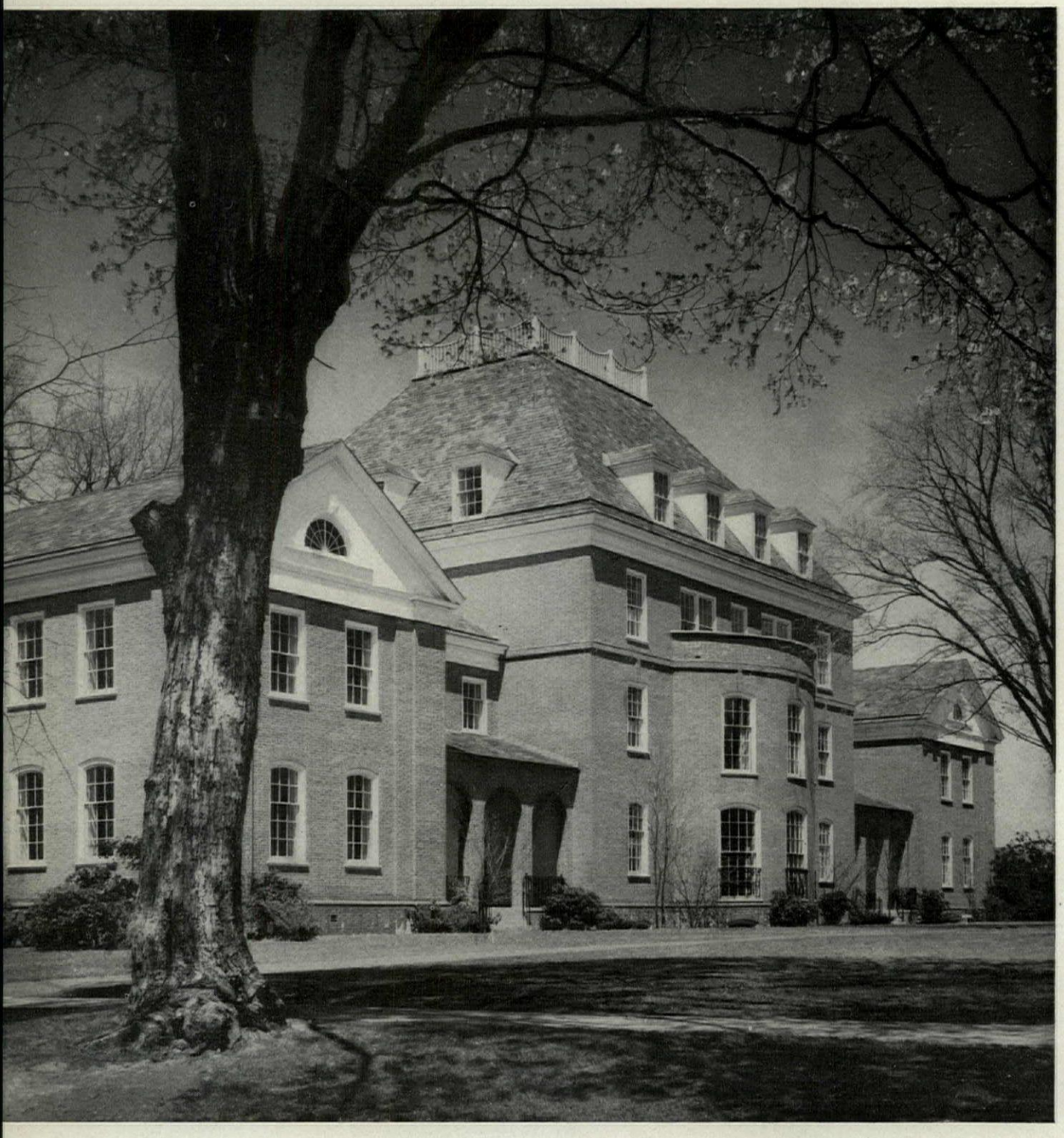


SCIENCE BUILDING FOR CHOATE SCHOOL, WALLINGFORD, CONN.



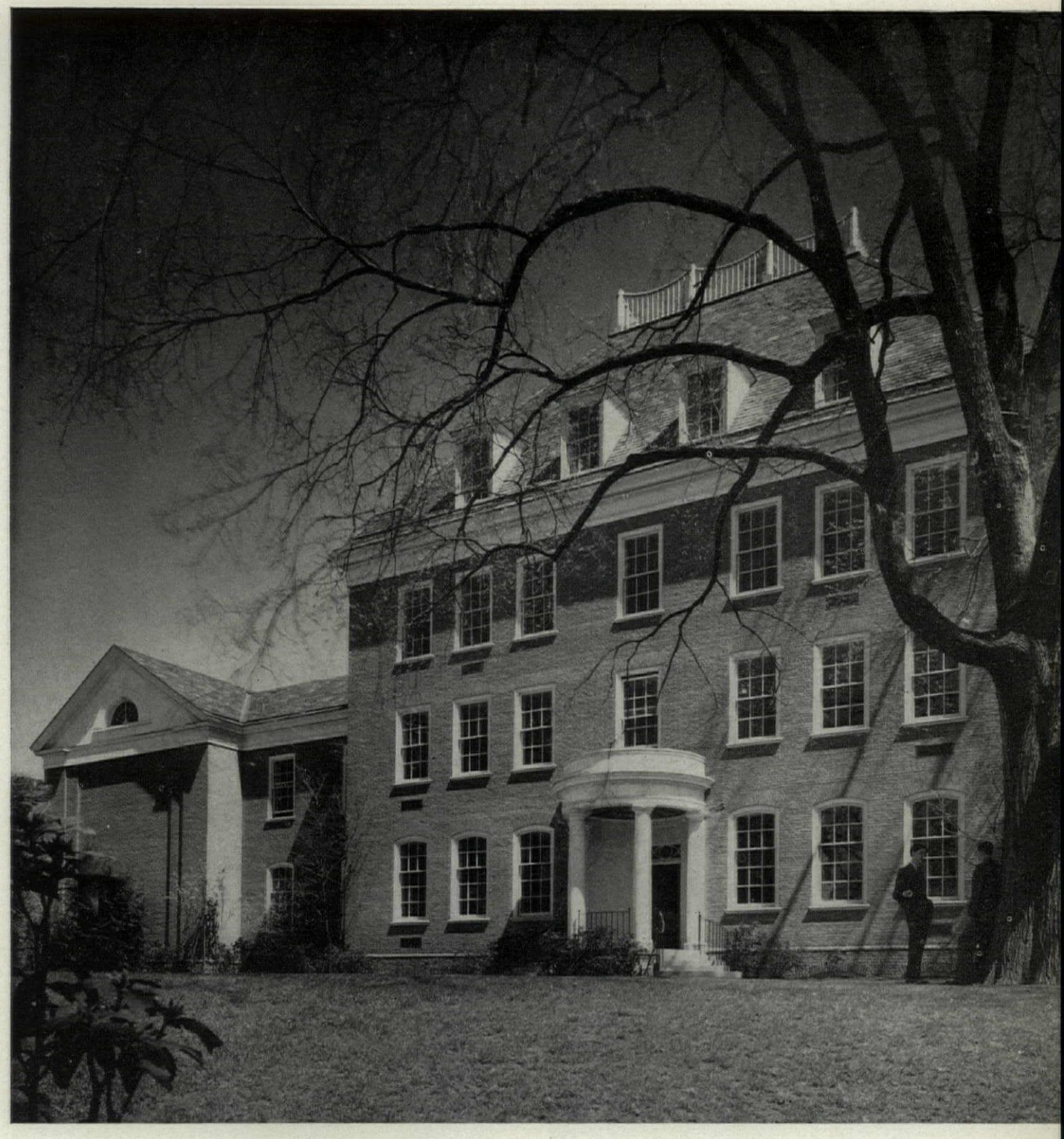
Richard Garrison

DESIGNED BY FULLER & FORBES, ARCHITECTS, OF NEW YORK



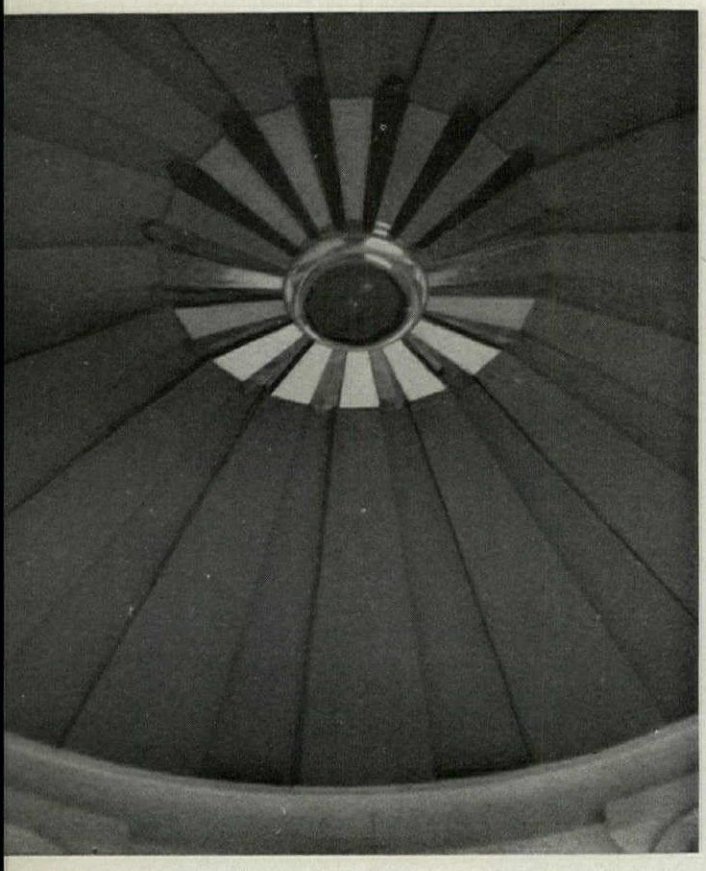
THE FACADE SHOWN HERE IS SEEN FROM THE CAMPUS QUADRANGLE AND THE TWO RECESSED ENTRANCE PORCHES ARE IMPORTANT BECAUSE THEY WERE DESIGNED FOR STUDENT USE. THE SCHOOL BOYS THUS FIND READY ACCESS TO THE BUILDING FROM THE "INTERIOR CIRCULATION" OF THE CAMPUS. THE ARCHITECT RECALLS THAT THE DECISION TO ADOPT A HIGH CENTRAL MASS FLANKED BY LOW WINGS WAS GOVERNED BY THE FACT THAT A SMALLER BUILDING TO THE NORTH WOULD HAVE SEEMED OUT OF SCALE IF A UNIFORM, 3-STORY BUILDING HAD BEEN LOCATED HERE. PHOTOGRAPHS BY GARRISON

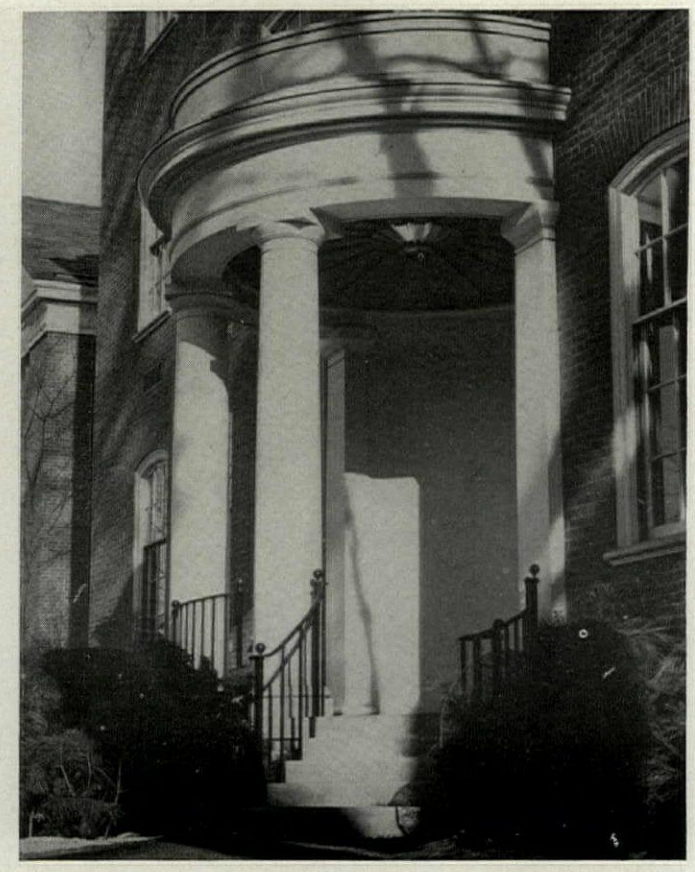
SCIENCE BUILDING FOR CHOATE SCHOOL, WALLINGFORD, CONN.



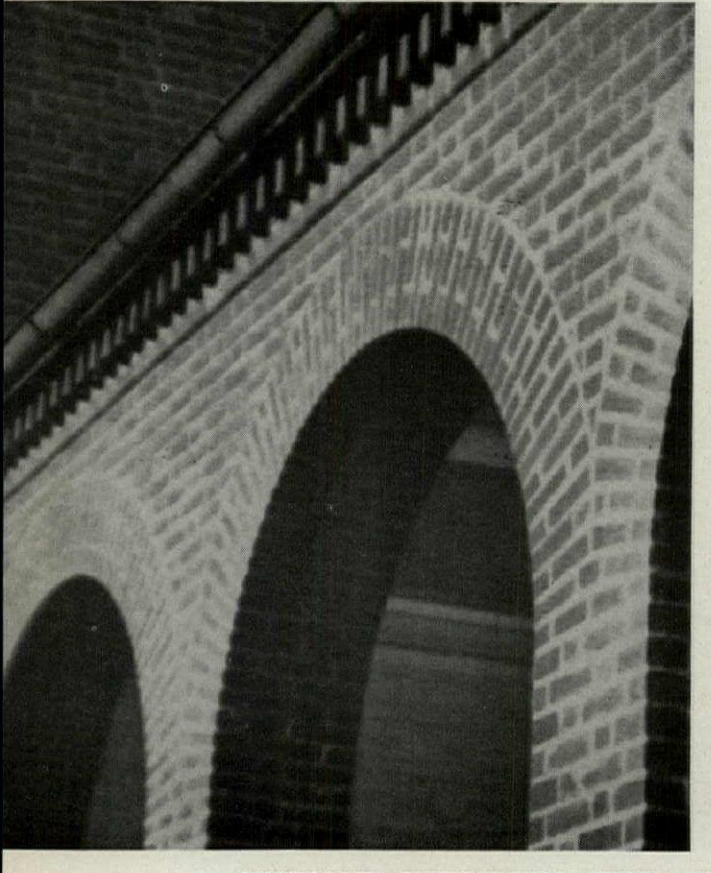
THE MOST ELEGANT FEATURE OF THIS MORE FORMAL FACADE OF THE SCIENCE BUILDING IS THE CIRCULAR ENTRANCE PORCH WHICH OPENS ON THE SEVERELY PLAIN FOYER OF THE LARGE EXHIBITION HALL (SEE PLAN ON PAGE 758). THE FENESTRATION RECEIVED PARTICULAR ATTENTION BECAUSE THE ARCHITECTS WERE DETERMINED TO OBSERVE PLANNING STANDARDS FOR EDUCATIONAL BUILDINGS AND AT THE SAME TIME TO PROVIDE A LARGE BUILDING WITHOUT DEPARTING FROM THE CONSIDERED SCALE OF THE EARLIER STRUCTURES AROUND THE CAMPUS, THE WORK OF SEVERAL FAMED ARCHITECTS

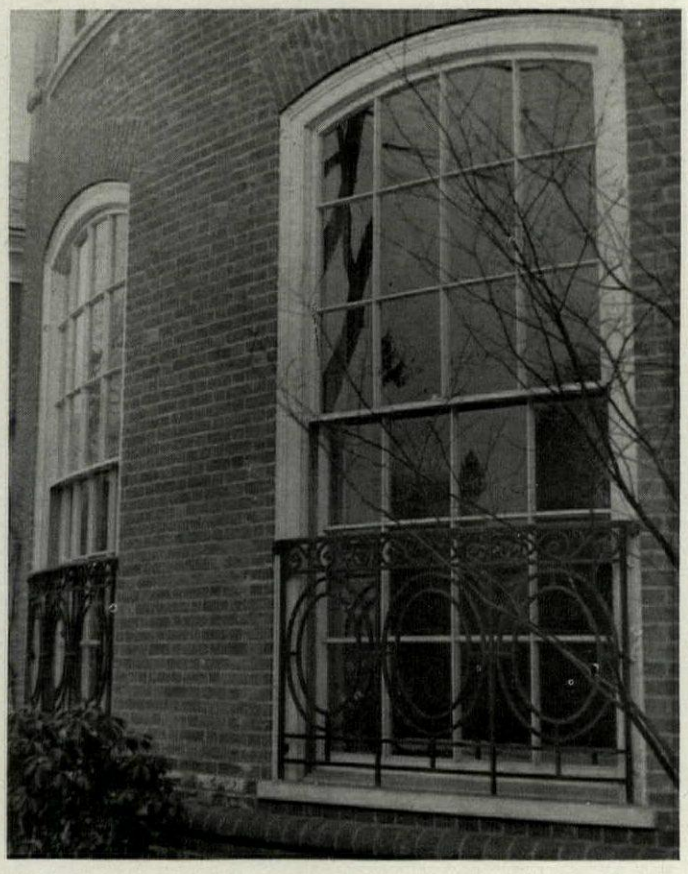
DESIGNED BY FULLER & FORBES, ARCHITECTS, OF NEW YORK



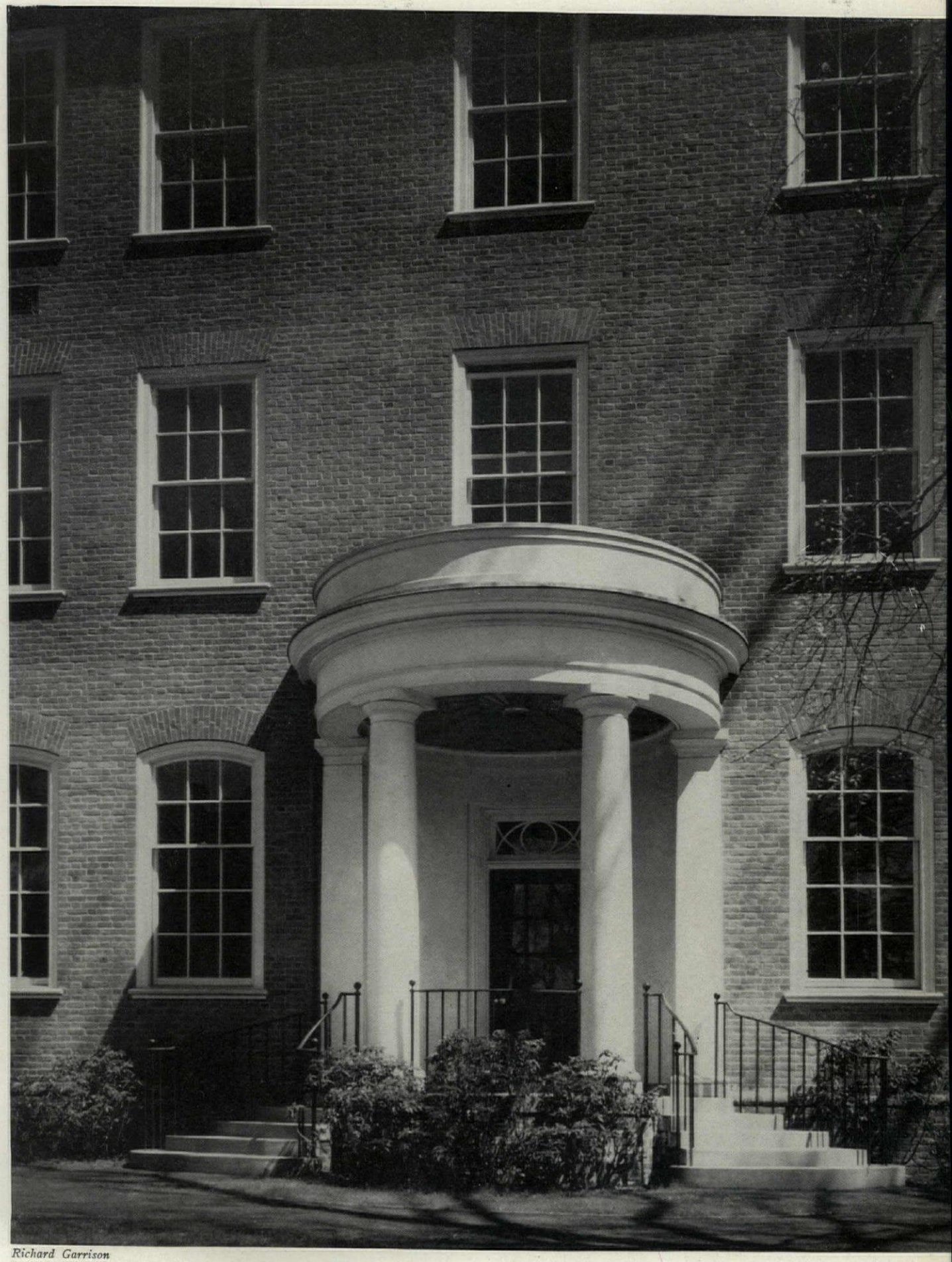


PICTURES ON THIS PAGE WERE MADE BY BOYS OF THE SCHOOL IN A COMPETITION THAT FOCUSED THEIR ATTENTION ON ARCHITECTURAL DETAILS. THE STUDIES OF THE PORTICO AND ITS LIGHTING FIXTURE (ABOVE) AND OF AN ARCADE ON THE EAST FACADE (LEFT—BELOW) ARE BY W. SEWELL AND H. SLANE. THE PHOTOGRAPH (RIGHT—BELOW) OF THE EXHIBITION HALL WINDOWS WAS MADE BY JACK LEE





SCIENCE BUILDING FOR CHOATE SCHOOL, WALLINGFORD, CONN.



Richard Garrison

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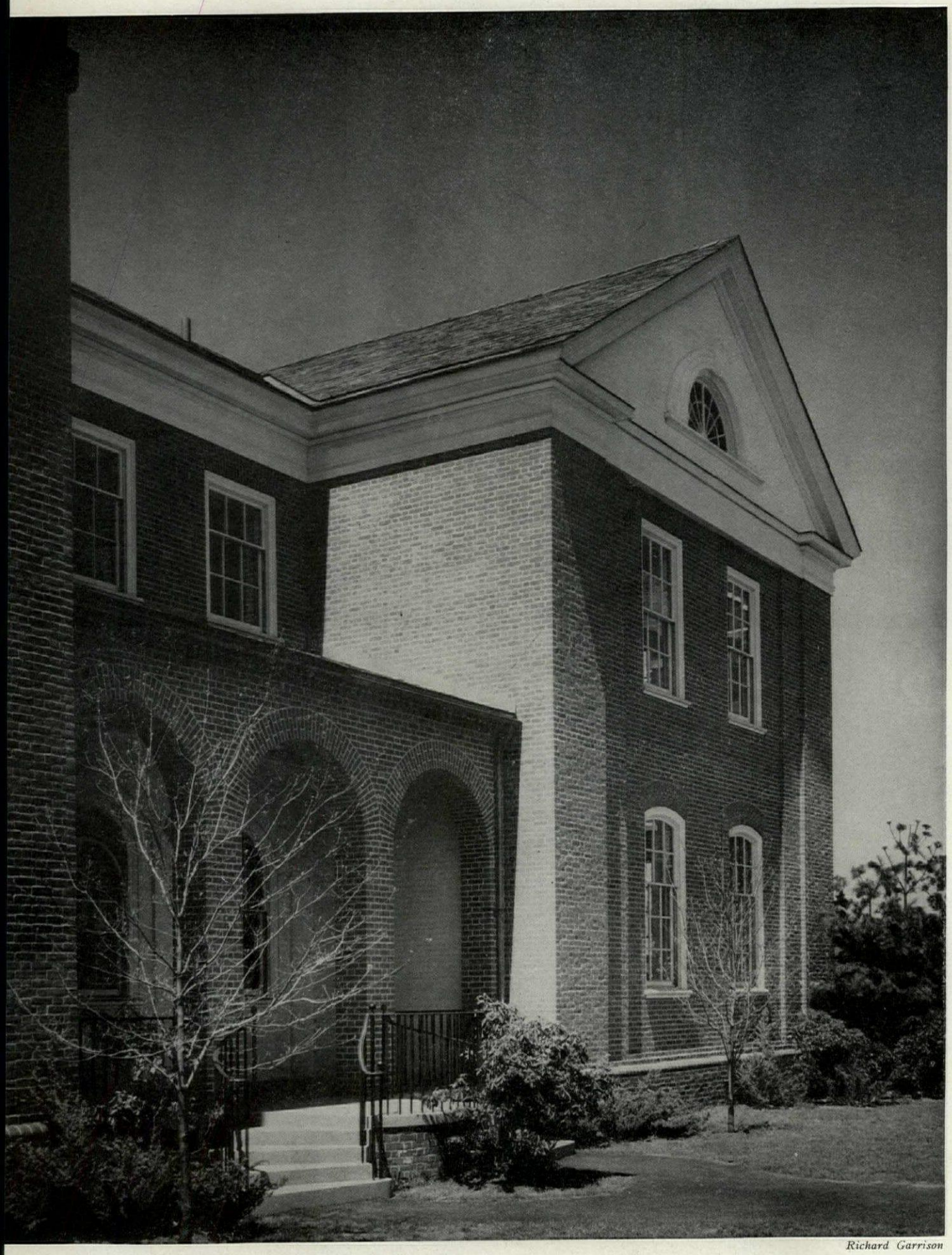
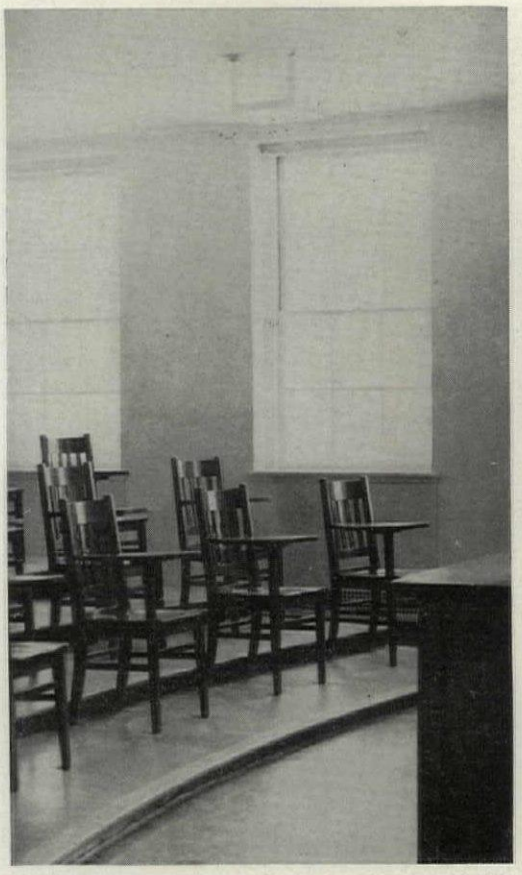
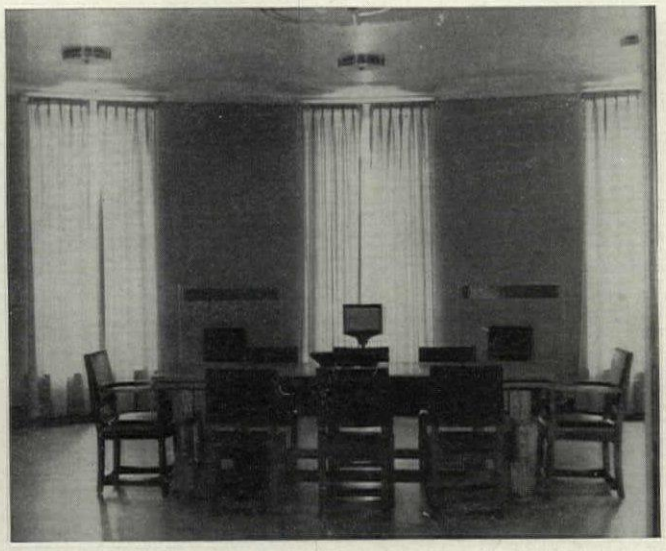


Richard Garrison

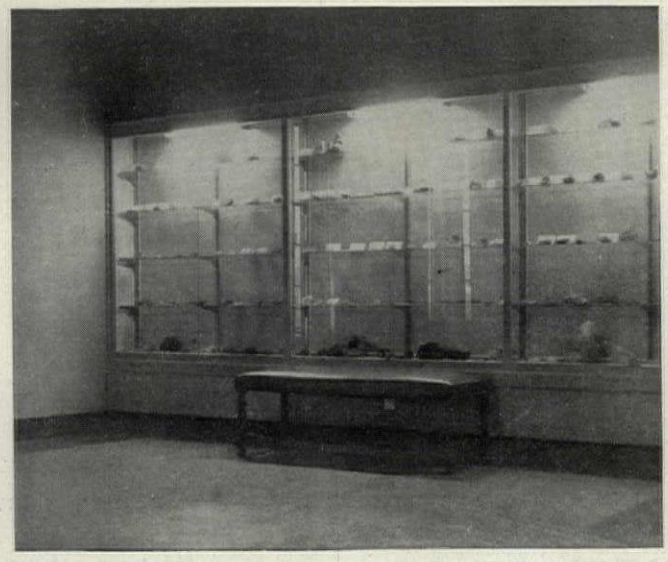
SCIENCE BUILDING FOR CHOATE SCHOOL, WALLINGFORD, CONN.



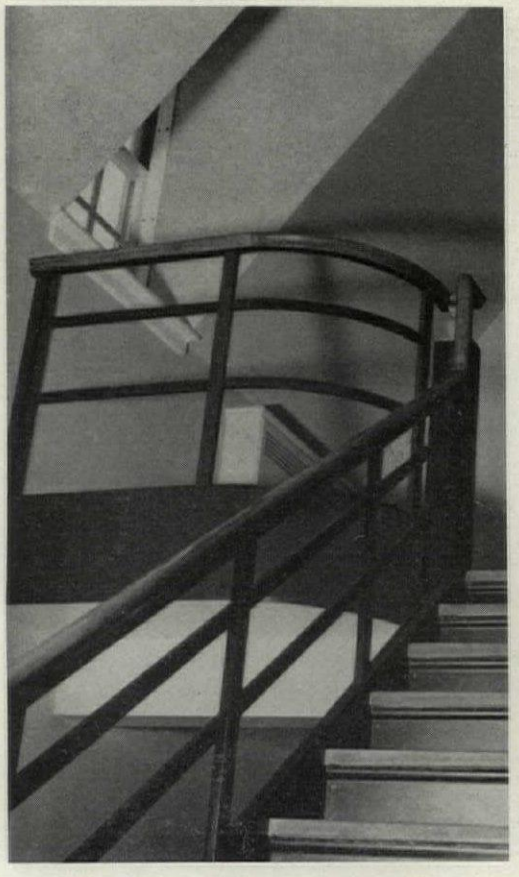
I. F. STURTEVANT MADE THE CLASSROOM STUDY (ABOVE) AND THE STAIR RAIL STUDY (BELOW) WAS JOINTLY SUBMITTED BY WAYNE TRIMBLE AND ALFREDO BEHRENS



STURTEVANT ALSO ENTERED THE PICTURES OF THE EXHIBITION HALL (ABOVE) AND THE MUSEUM DISPLAY CASE (BELOW) IN THE STUDENT PHOTOGRAPHIC COMPETITION



THE CORRIDOR PHOTO (BELOW) IS ALSO BY JACK LEE. NOTE LIGHT BORROWED FROM ADJACENT CLASSROOMS

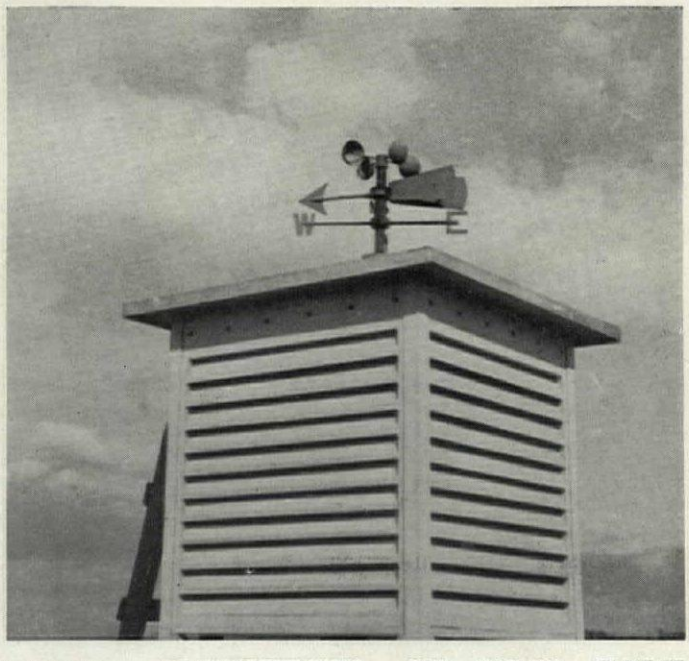


DESIGNED BY FULLER & FORBES, ARCHITECTS, OF NEW YORK

TWO MORE OF RICHARD GARRISON'S PHOTOGRAPHS OF THE SCIENCE BUILDING ARE SHOWN HERE AND ACROSS-PAGE. ADDITIONAL EXAMPLES OF THE SCHOOL BOYS' PICTURES OF THE BUILDING ARE SHOWN BELOW. JOHN S. KAUFMAN MADE THE TWO IMMEDIATELY BELOW, OF THE GREEN HOUSE AT THE END OF THE NORTH WING. THIS ADJOINS THE BIOLOGY LABORATORY AND IS USED FOR EXPERIMENTS

SCIENCE BUILDING FOR CHOATE SCHOOL, WALLINGFORD, CONN.

THE CHOATE SCHOOL SCIENCE CURRICULUM INCLUDES METEOROLOGICAL STUDIES, HENCE THE LOUVERED STRUCTURE ON THE "CAPTAIN'S WALK" ATOP THE SCIENCE BUILDING IS OF MORE THAN USUAL IMPORTANCE AS IT HOUSES SOME OF THE SCIENTIFIC DEVICES CONNECTED WITH INSTRUMENTS IN THE LABORATORIES ON FLOORS BELOW. NOTE DETAIL PHOTOGRAPH (BELOW) MADE BY T. JEBB AND T. TYLER



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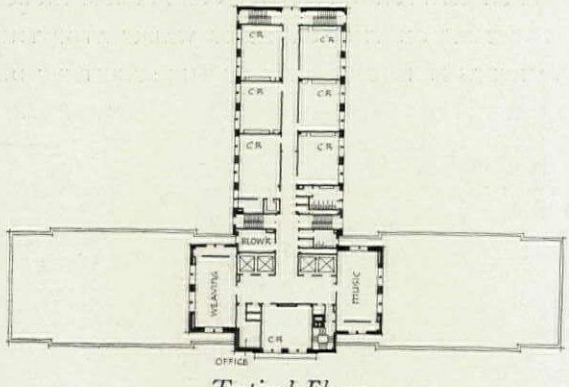
RECENT DEVELOPMENTS IN SCHOOL DESIGN

BY TALBOT F. HAMLIN

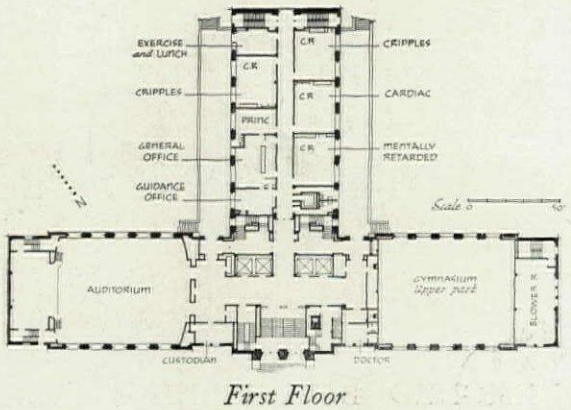
In March of last year, the article *Schools Are for Children* covered the general problem of the school program and the particular difficulties which face the school architect in the United States. Since that time many more schools have been completed, and it seems worth while to return to the subject again, so important is it. It is important to the architect, because the school field is now one in which an enormous amount of work is going on, and a field that bids fair to increase rather than diminish within the next few years. Of its importance to the children and the young people of America it is unnecessary to speak; but the effect of schools is on a much wider circle than the pupils who use them, for the influence of a good school widens out through parents and teachers to affect largely the whole quality of the community. Moreover, sufficient schools have been built, since architecture freed itself from the trammels of outworn and obsolete plans and conventional style design, to allow the development of standards of excellence. It is no longer enough that a school be modern; we can now see in actually completed buildings that there is good, indifferent, or bad in the novel as there is in the outmoded. We can begin to appreciate the æsthetic qualities inherent in the problem as it is seen by advanced architects today, and to discriminate between the good and the bad, the better and the best.

We are still faced in America with the old dilemma of the overlarge school. We are still faced with the problem of designing schools which would be, we know, better if they were half the size, and of trying to force into their huge dimensions some feeling of humanity and individuality. The examples seem to show that within the limits of common sense it is almost always the smaller schools which are the better schools, and that when great size is necessary those are the best which are most carefully articulated and divided into logical parts, each one of which is small enough for human treatment and comprehension.

It is this quality, I think, which more than any other accounts for the success of the Joan of Arc Junior High School on 93rd Street in New York City. Its plan scheme of



Typical Floor



First Floor

JOAN OF ARC JUNIOR HIGH SCHOOL—BY ERIC KEBBON, NEW YORK

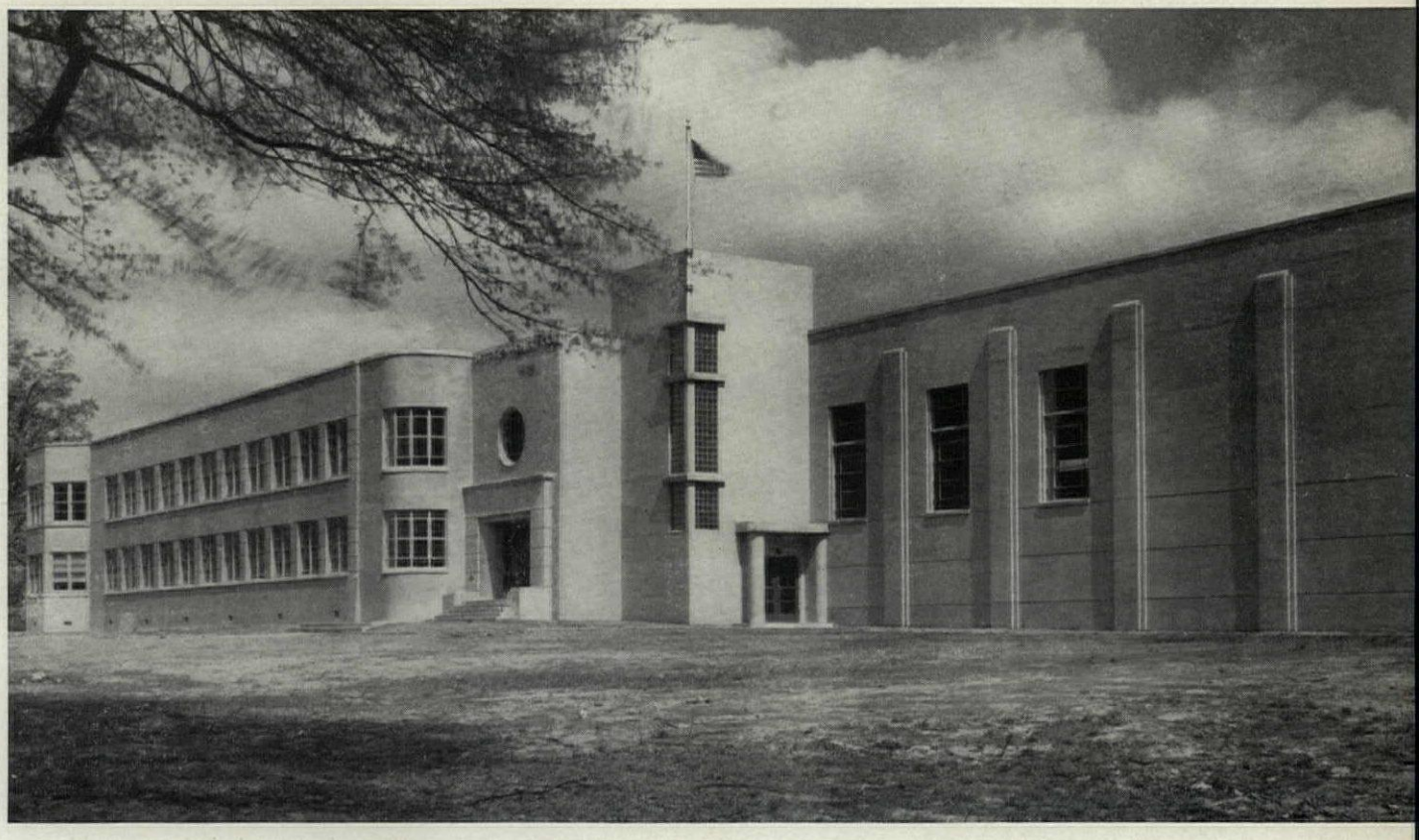
THE MANY STORIES OF JOAN OF ARC JUNIOR HIGH SCHOOL, DESIGNED BY ERIC KEBBON, ARCHITECT AND SUPERINTENDENT OF NEW YORK SCHOOL BUILDINGS, PERMIT MORE PLAY AREA, SUN, AND AIR

THE "SKYSCRAPER SCHOOL" IS OFFICIALLY KNOWN AS P.S. 118. PHOTOGRAPHS ARE BY KENNETH REID

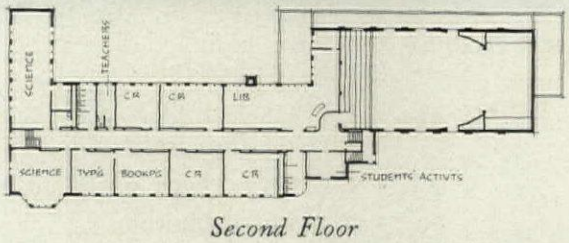
many stories allows the dimensions of each story to be kept small, and the way the auditorium and gymnasium are placed in separate wings across the north end of the playgrounds not only furnishes protection to these open areas but also gives to the whole scheme an understandable, pleasantly logical character which is uncommon in the usual great factory-type metropolitan schools. Furthermore, the material is light, clear, and winning in color; the whole building seems to take its place, to respond agreeably to changes in sky and lighting. It has already created a new tone, a new sense of openness and sun and pleasant form, in its neighborhood. Together with the new apartment house by Horace Ginsbern just completed on the west end of the block, with its nice simple horizontal treatment and light rosy tan brick which harmonizes beautifully with the school color, a new kind of city view has been established. It is, as one might say, a little piece of new New York.

Of the details of the school itself one may say that the vertical treatment so reminiscent of commercial structures, while less obvious in the actual building than in the preliminary sketches, is nevertheless perhaps not the perfect expression of a school building, and that the windows of the high classroom section seem more those of individual offices than of large and airy classrooms. One may also question the overmonumentality of the northern entrance, which has almost the courthouse or city hall character; but, none the less, the whole, in its general composition, in its color and simplicity, is such an imaginative and for New York such a radical advance on the typical city school of comparable size that one welcomes it with the hope that it will not remain an isolated experiment, but will become only the first step in a whole series of schools equally logical in plan, with details and a controlling æsthetic more and more consistent with school character and school purpose.

The Sheffield, Alabama, High School, by Howard Griffith, shows the advantage of large lot area for a problem of somewhat similar scope. Its plan allows the breaking up of the masses into two-story elements of



THE HIGH SCHOOL AT SHEFFIELD, ALABAMA, WAS DESIGNED BY HOWARD A. GRIFFITH, JR., ARCHITECT OF SHEFFIELD. PHOTOS HERE AND OVERPAGE BY ROBERT W. TEBBS, NEW YORK AND DETROIT



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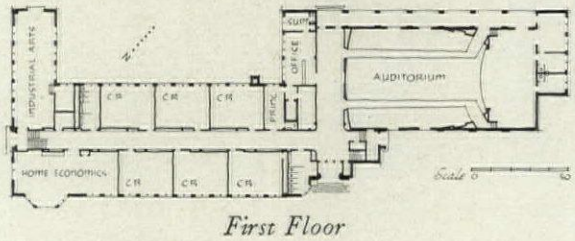
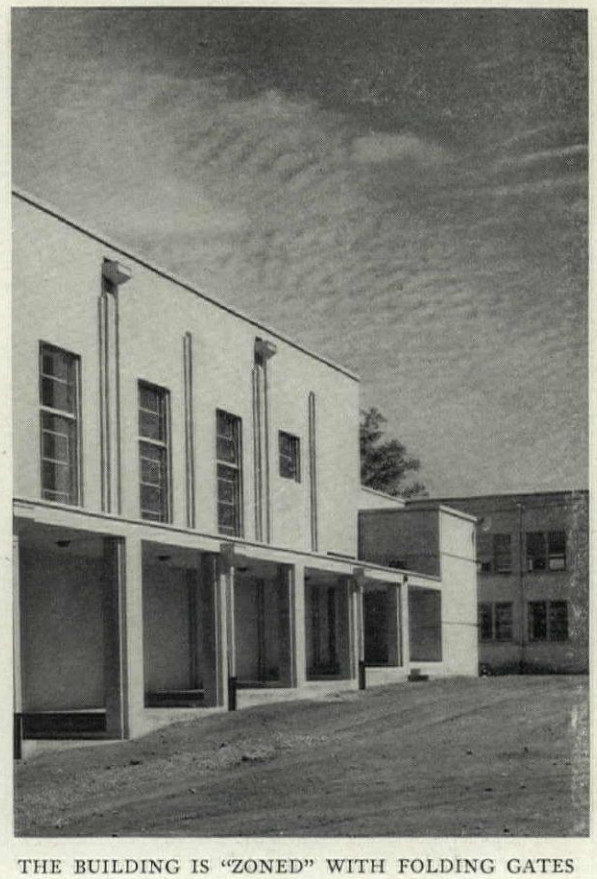
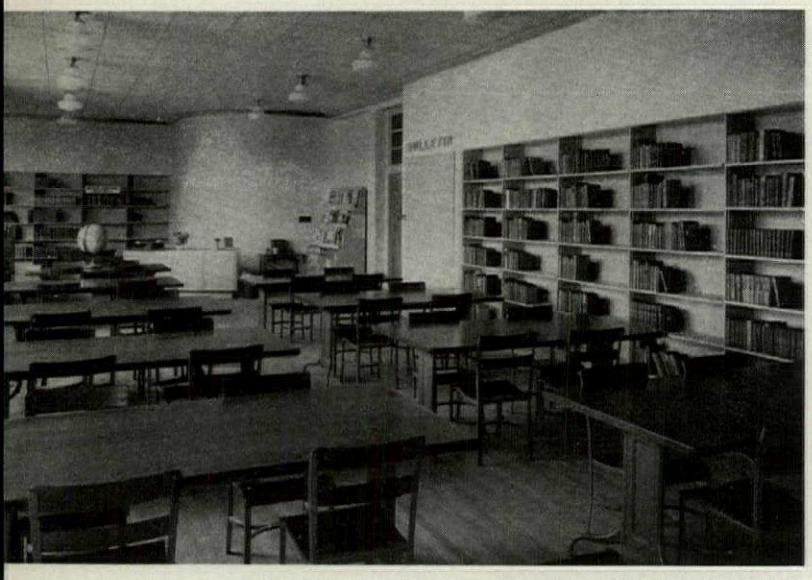


First Floor

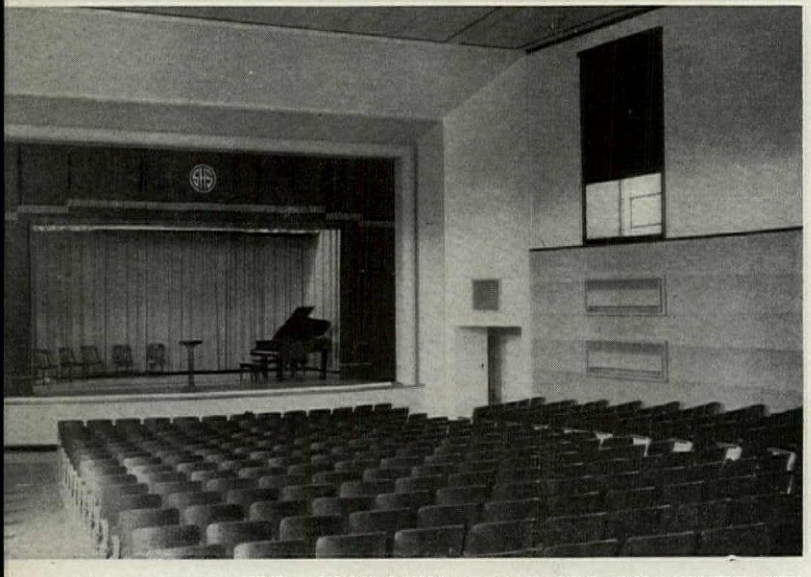
excellent simplicity; at the same time the arrangement of the auditorium permits its use as a community hall with the least possible disruption of ordinary school purposes, and allows an easy shutting off of the rest of the school when the hall is to be used for evening occasions. Excellent too is the placing of the crafts shop, with outside doors for direct delivery of materials, and of the L-shaped library on the second floor, with its curved corner so naturally used and its librarian's desk so centrally located. This plan permits a large library to be kept personal in feeling and human in scale, and gives as well a certain sense of variety.



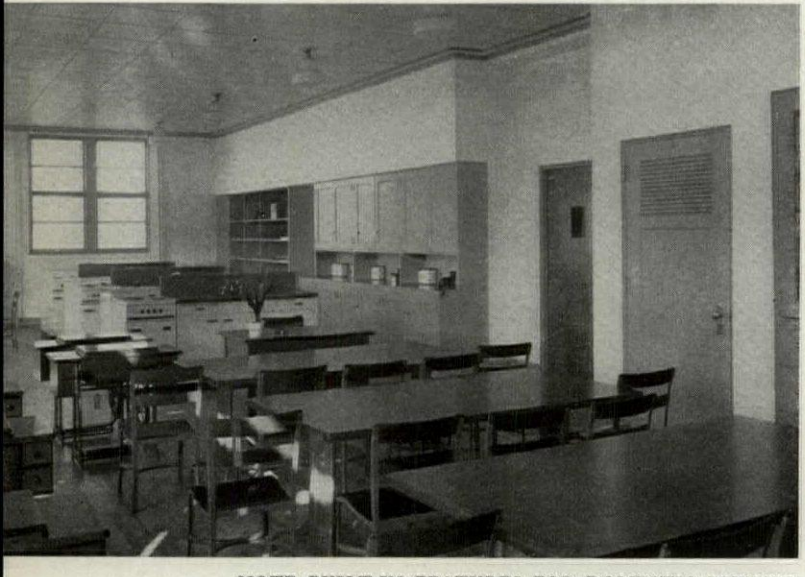
THE BUILDING IS "ZONED" WITH FOLDING GATES IN THE CORRIDORS, AFFORDING READY CONTROL



THE SECOND-FLOOR LIBRARY IS HUMAN IN SCALE



THE AUDITORIUM ALSO IS FOR COMMUNITY USE



NOTE BUILT-IN FEATURES FOR DOMESTIC SCIENCE

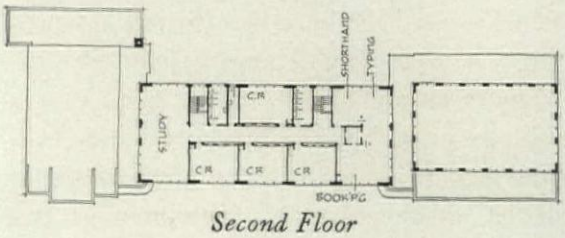
SHEFFIELD, ALA., HIGH SCHOOL

The exterior treatment in concrete is an interesting study. The general composition is varied but consistent, and the handling of the classroom wings has that quality of beauty which results from good proportion applied simply to simple forms. The main entrances and the great stair tower which acts as a center of interest are less sure. The general scheme of the corner stair window, with the horizontal bands tying into the wall and the flagpole which tops it, is excellent in conception, but in detail, like so much American concrete work, it seems hesitant and unsure. The flexibility of cast concrete is so great and the possibilities which it suggests so various that as yet few American architects have worked out the perfect expressions for it. Again and again, concrete is used with unnecessarily heavy, blocky, awkward masses—unnecessary and, I believe, no true expression of the material. This fault is especially marked in much school work in Southern California; yet it is in schools, one would think, that unassuming delicacy and unpretentious elegance were required above all else. Here the stair window treatment partakes a little of this almost universal fault; and, while it has none of that gargantuan heaviness which curses much concrete detail, it nevertheless has not yet achieved the true elegance of a real simplicity. And what is true of this stair window is even more true of the two exterior doors so close to it. The use of projecting panels, like rusticated stone work, in concrete, can be only an arbitrary mannerism, a reminiscence of an old material, and not too well adapted to the new. Nor is it clear to me why two doors so close together should be so totally different in treatment, the one with rusticated border, the other with great columnar jambs. Yet the general conception of this corner is so interesting and arises so naturally from the excellent plan on which the school is built that, despite these infelicities, the general appearance commands interest.

This same combination of excellent design in the simpler portions and a too effortful striving for what may be deemed necessary monumental effect, in auditorium entrances and the like, runs through a great deal of

contemporary school work. Perhaps it may not be the architect's choice which makes things that way; perhaps Boards or Building Committees demand some kind of ornamental treatment, which they can recognize, to give them the feeling that they have their money's worth. Whatever the reason, it is nearly always true that the classroom wings of most contemporary schools built in a contemporary manner are more straightforward, more pleasing, and to me more beautiful than their overelaborated entrances.

Two Tennessee high schools of R. H. Hunt Co., Tyner and Red Bank, are characteristic. The plans of both are alike: a central classroom block, with a gymnasium at one end and an auditorium at the other, forming definite, easily distinguishable separate wings. These are connected to the main building by one-story vestibules, so that they and the main building alike receive light on four sides. And these through vestibules at either end of the building constitute an excellent solution of the problem of ample exit and afford such a connection to the schoolroom part of the building as will allow the gymnasium and auditorium to be used, when necessary, as entirely separate units. Gymnasium and auditorium both are obviously designed for community as well as school use, being much larger than the size of the schools themselves would normally require. The material is brick; and in Tyner especially the whole central portion, with its ample classroom windows, its simple hori-



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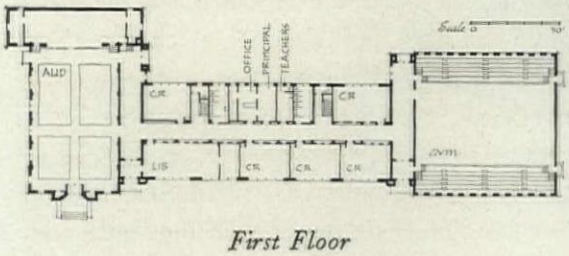

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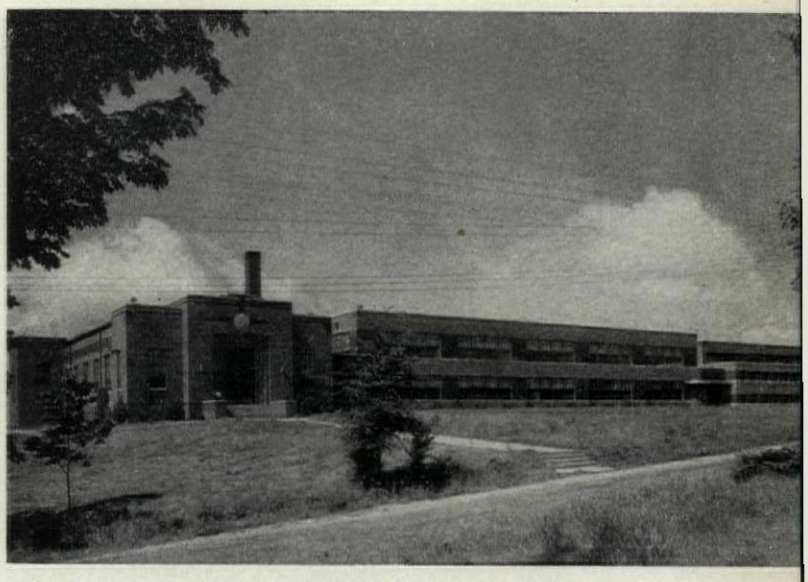
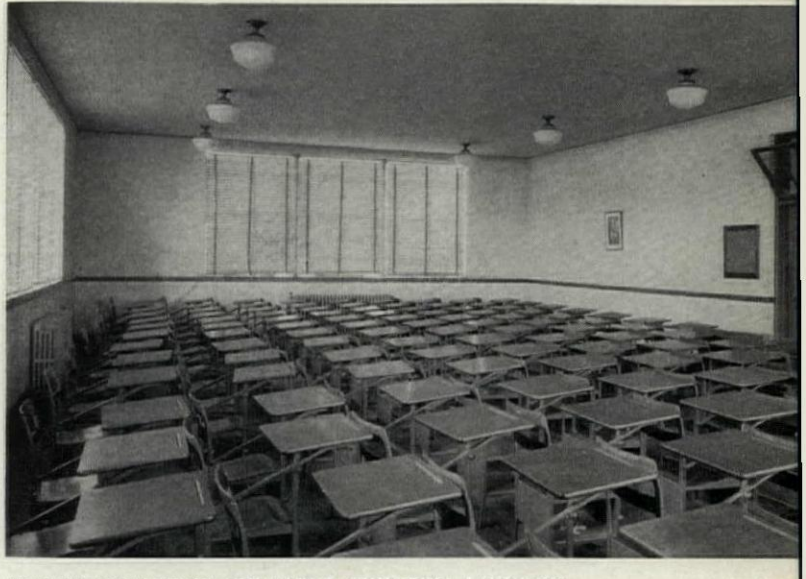


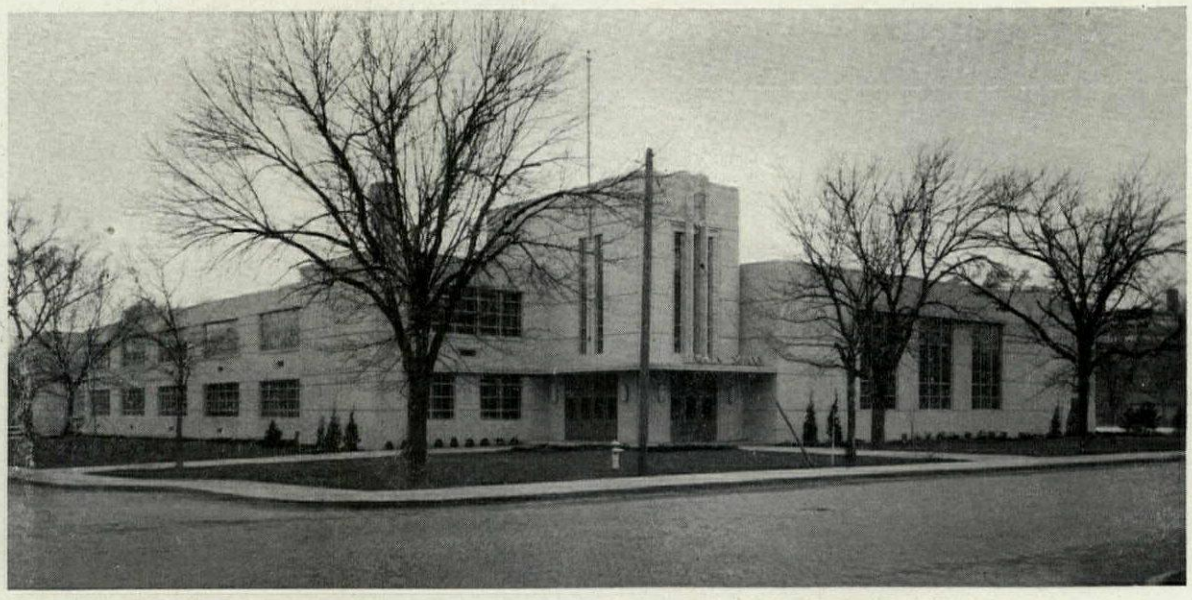
TYNER HIGH SCHOOL, HAMILTON COUNTY, TENN.



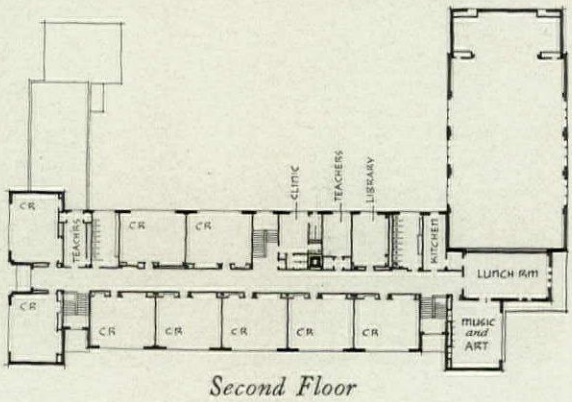
THE STUDY ROOMS ARE LARGE AND WELL-LIGHTED

GYMNASIUM ENTRANCE OF THE RED BANK SCHOOL

TWO HIGH SCHOOLS BY R. H. HUNT COMPANY, OF CHATTANOOGA



THE LINCOLN SCHOOL, INDEPENDENCE, KANSAS, IS REPRESENTATIVE OF THE WORK OF THE THOMAS W. WILLIAMSON CO., ARCHITECTS, OF TOPEKA, KANSAS. THE IMAGINATIVE TREATMENT OF THE LOBBY (SEE PLAN BELOW) DISTINGUISHES THIS SCHOOL. PHOTO BY SCOTT STUDIO, INDEPENDENCE



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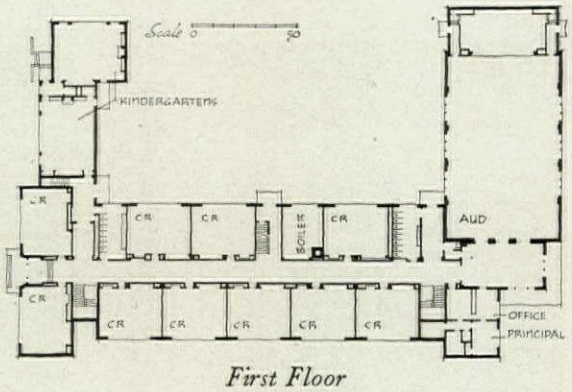
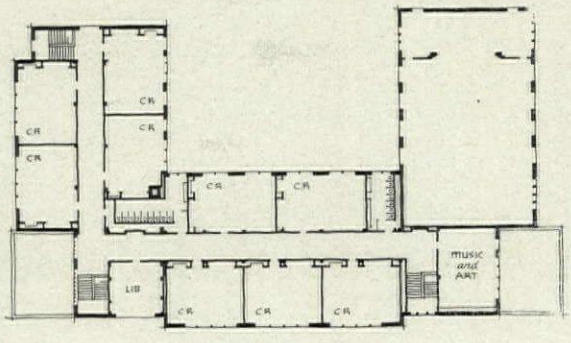


First Floor

zontal treatment, is pleasing in the extreme and the entrances to the end vestibules beautifully handled with simple projecting slabs. It is all so harmoniously direct, so ingratiating and human, that the stone decoration with its enormous scale, over the main entrance to the auditorium proper, comes as a distinct shock and seems an unnecessary and obtrusive artificial splurge. The interiors of these schools have the same straightforward, pleasant character the exterior of the main portion possesses; but here again the problem of scale enters in. The large study room, which occupies one entire end of the second floor, is untrammeled enough, and its light metal furniture an agreeable contrast to the overheavy, drab school desks which are unfortunately traditional. Yet the room is manifestly too large for its height, and there is a definite sense of uneasiness in the proportions gained by such large superficial dimensions and such limited ceiling height.

The Washington and Lincoln Schools in Independence, Kansas, by Thomas Williamson & Co., owe their particular attractiveness to the great simplicity of their general treatment, the pleasant clear light color of the exteriors, and the beautiful plans which distinguish them both. The Lincoln School, with its ample lobby leading both to the auditorium and to the secretary's and principal's offices, is perhaps the more carefully studied of the two. But both handle their necessarily large size in such a way as to remain human and delicate in scale; both would look well in residential districts and not seem, as schools so frequently do, to tyrannize over or overpower by sheer mass the houses where live the children who come to them. There is something unusually winning in the Washington School exterior, with its simple lettering and its quiet hori-

THE WILLIAMSON CO. ALSO DESIGNED THE WASHINGTON SCHOOL, INDEPENDENCE, KANSAS, SHOWN HERE. IT SHARES WITH THE LINCOLN SCHOOL ACROSS-PAGE THE CHARACTERISTICS OF SIMPLICITY AND PLEASING EXTERIOR TREATMENT—AND PERHAPS IS OF THE BEST WESTERN WORK TODAY



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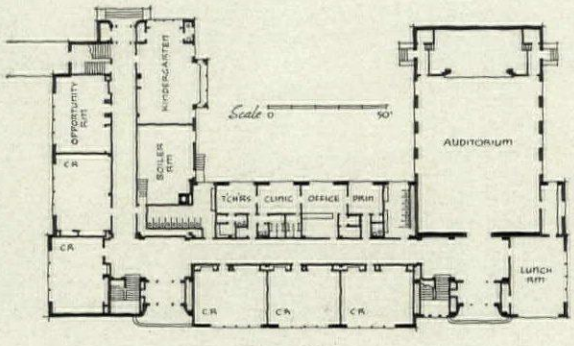
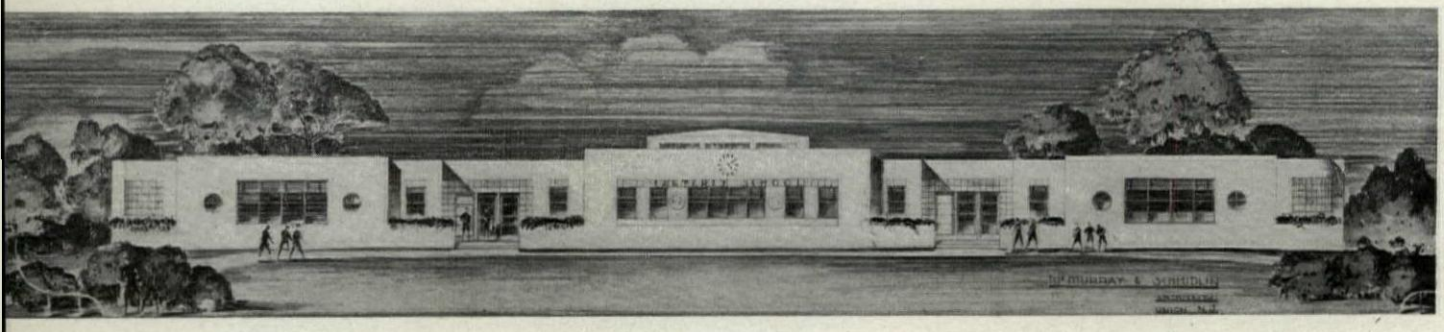


First Floor

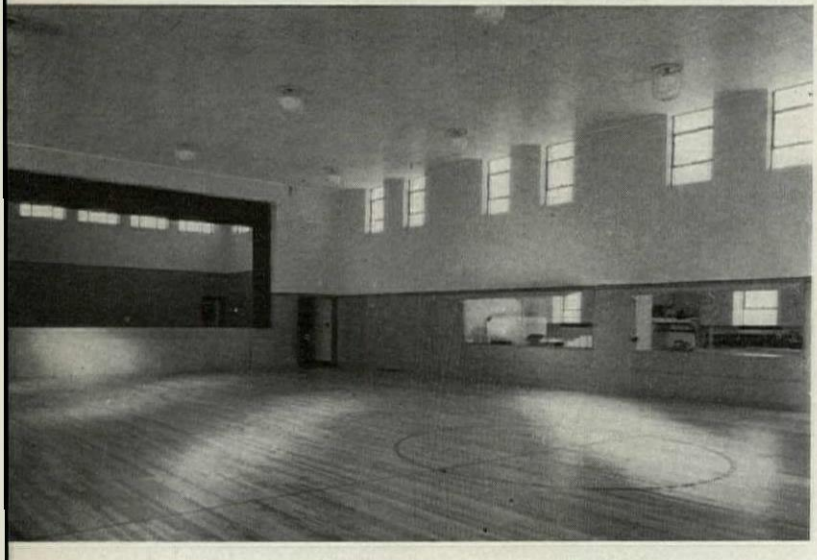
zontal treatment. To me it seems even more attractive than the Lincoln School with its apparently unnecessary corner tower treatment, where conventional methods of so-called "modern" design have affected the appearance. Nevertheless, both are schools in which something of the true school character has been incarnated—schools which are encouraging signs of the growing beauty and simplicity of the Western work.

The architects of the Carteret School for Boys, in West Orange, N. J., McMurray & Schmidlin, were faced with an entirely different problem from that confronting the usual school architect. Carteret School is a private school with limited enrollment covering the entire course from nursery school and kindergarten through college preparatory. It is coeducational in the nursery and kindergarten only. The Carteret School possessed a site which, so far as building was concerned, could be considered unlimited. The building naturally required a great number of parts — kindergarten, grade classrooms, high school classrooms, gymnasium, library, arts and crafts room, and so forth. Yet each of these units was small in size, the classes being limited to fifteen each. Since the lot was large, it was decided to make the school a one-story building, and the problem was one of adjusting these multitudinous small parts into a single coherent scheme.

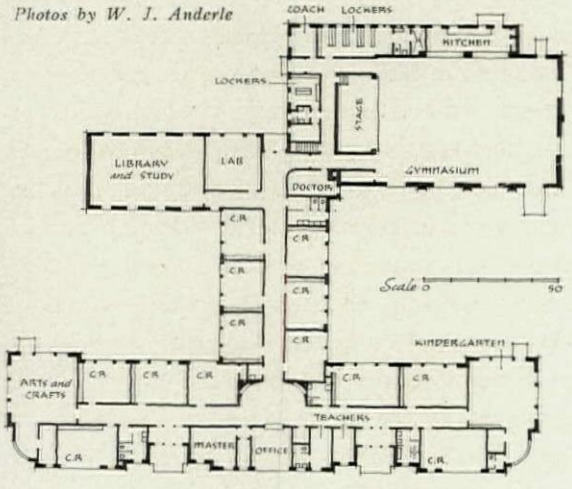
The plan necessarily is somewhat unwieldy, though simple in basic scheme, the front wing being devoted to the offices and the younger grades, and a wing at right angles containing the larger classrooms and leading back to the gymnasium — auditorium — lunchroom. Separate entrances to this unit allow the outdoors to become as much a part of the exercise program as the gymnasium itself, and due to limitations in cost one



THE CARTERET SCHOOL IN WEST ORANGE, NEW JERSEY, WAS DESIGNED BY McMURRAY AND SCHMIDLIN, ARCHITECTS, OF UNION, NEW JERSEY, WHOSE DRAWING OF THE BUILDING IS SHOWN ABOVE. THE DESIGN OF THE SCHOOL REFLECTS THE UNUSUAL FREEDOM ALLOWED THE ARCHITECTS BY GEORGE DOUGLAS HOFE AND THE CARTERET SCHOOL BOARD, OF WHICH HE IS THE PRESIDENT. MR. HOFE HAD VISUALIZED A SCHOOL ESPECIALLY FITTED TO THE PUPILS' NEEDS AND CHARGED THE DESIGNERS WITH THE OBLIGATION OF CONSIDERING ALL THE PSYCHOLOGICAL AS WELL AS THE VARIOUS PHYSICAL REQUIREMENTS

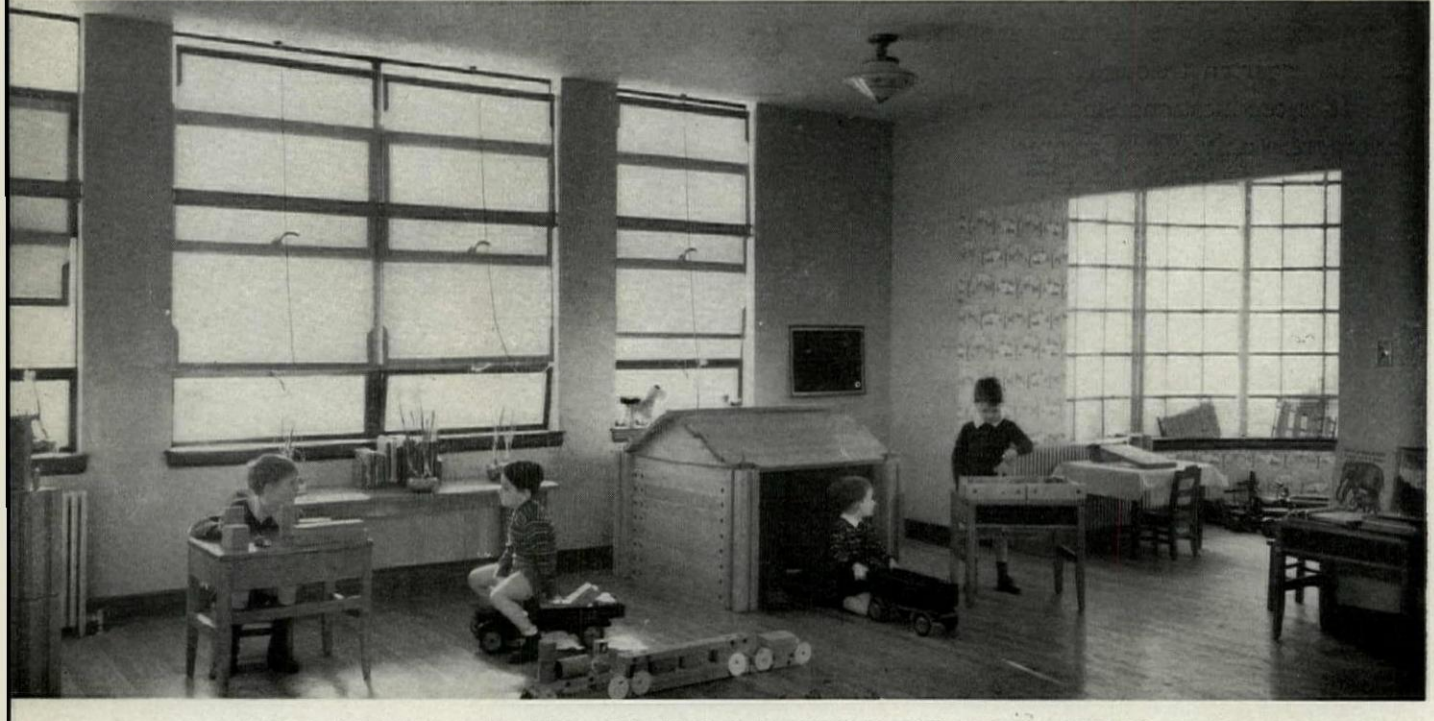


Photos by W. J. Anderle



Plan of School

THE GYMNASIUM IS ALSO THE CAFETERIA AND AUDITORIUM. FURNITURE IS STORED UNDER STAGE

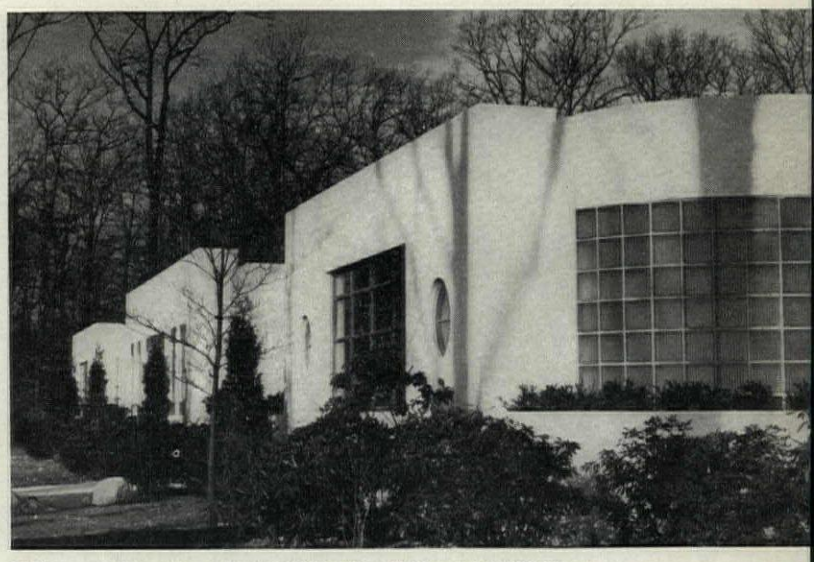


THE COORDINATION OF MIND AND BODY IS TAUGHT IN THE LIGHT, CHEERFUL KINDERGARTEN ROOM

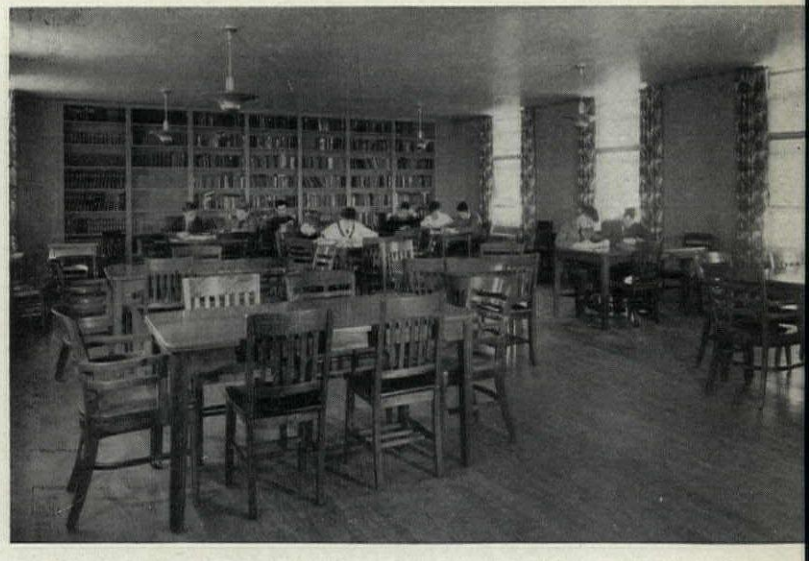
large room was made to serve the triple purpose of auditorium, lunchroom, and exercise center, with a stage which could also serve as a music studio. Given the complexity of the general scheme, the plan as worked out is logical enough. Especially interesting is the intersection of the cross-corridor in front (which leads to the lower grade classrooms) with the corridor leading back to the high school. This intersection is made into a large central space called a trophy room, higher than any of the corridors which lead from it, with a main office and information desk and cases around for school memorabilia. It acts thus as a sort of spiritual center for the school, tying together excellently the younger and the older classes.

The whole building has been designed with great care and the most thoughtful study of all details. The scale of the classrooms has been cut down both in height and size far below the usual public school standards, because the classes are so small, and each classroom has been differentiated from the others by a characteristic color scheme. Trim is reduced to a minimum everywhere. Especially pleasant is the large library room, which serves also as an informal study hall. It is wainscoted with wood veneer from floor to ceiling and furnished with bright patterned draperies, the whole effort being to give it the atmosphere of a gracious, dignified, but informal lounge, rather than the usual mechanized and impersonal school library. All through, this effort to cut down size and scale, to give personal character, has controlled the design. And this effort, perhaps carried in some places further than was desirable, has resulted in making the whole a rather diffuse composition. The entrance front is broken up by projections, at the ends and in the center, into several pavilions each one of which, good in itself, somehow seems but artificially related to the rest; and even the plan lacks something of that pure integration into a single unit—every part of which helps every other part—that is the characteristic of all great architecture even when it is delicate in scale and personal.

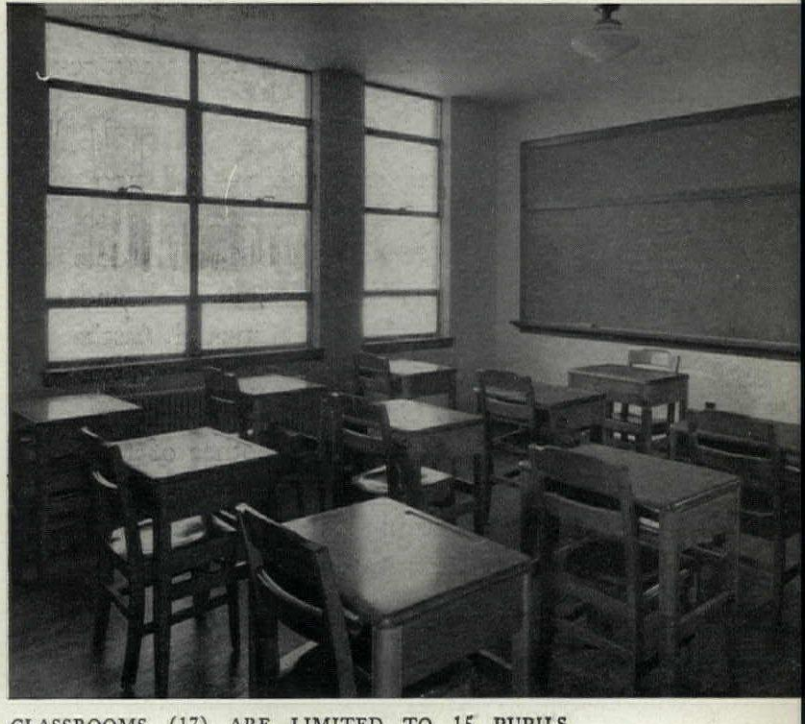
It thus seems that here again the great difficulty in school design is also the school's



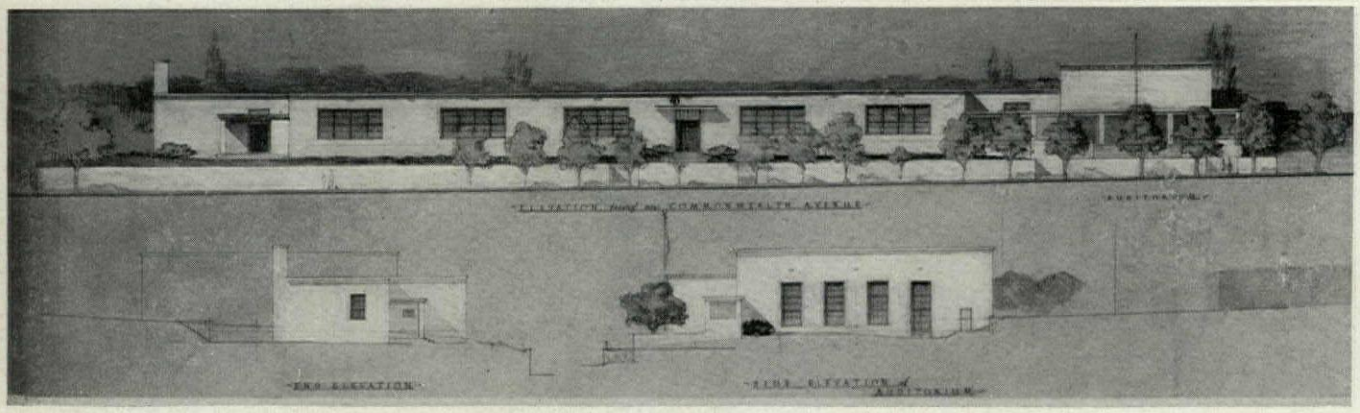
THE SCALE IS APPROPRIATE FOR CHILDREN

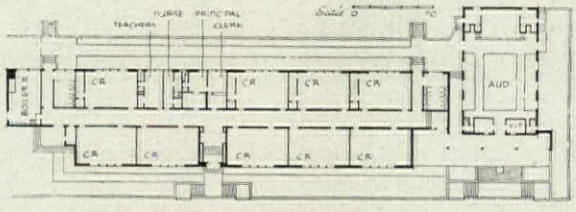


THE LIBRARY AND STUDY HALL ARE COMBINED

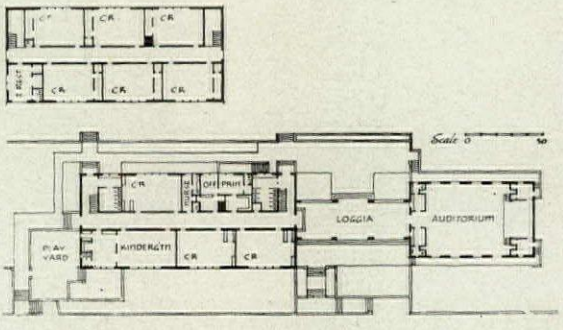


CLASSROOMS (17) ARE LIMITED TO 15 PUPILS





THE COMMONWEALTH AVENUE SCHOOL, LOS ANGELES, DESIGNED BY WINCHTON L. RISLEY OF THAT CITY, IS ALMOST AUSTERE IN ITS RESTRAINED CHARACTER. THERE IS NO APPLIED ORNAMENT BUT THE PROPORTIONS LEND ELEGANCE



ALTERNATE PLAN FOR COMMONWEALTH SCHOOL

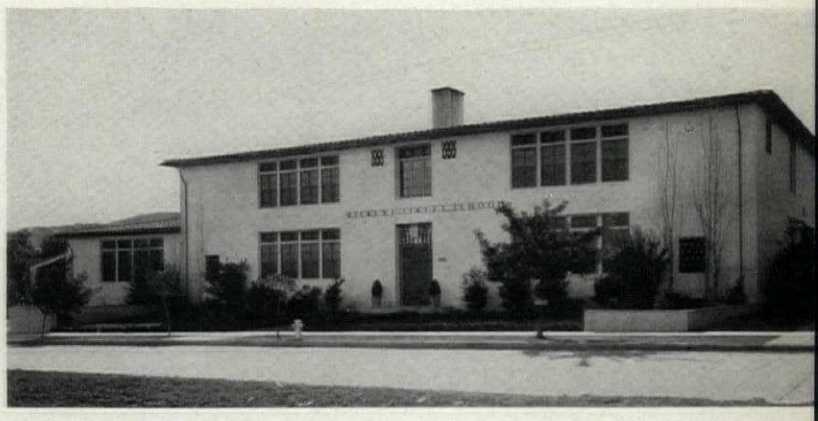
great æsthetic opportunity—the opportunity of achieving a suitable character that shall be at once personal without being domestic, civic without being monumental, and gracious without being sentimental. A school is, in a way, a child's and a young person's second home. Our education has progressively taken over one after another of the functions that originally were entirely home functions; and this development seems on the increase rather than on the decrease. To me it furnishes a great insight into the quality the best schools must have to express the spirit of American education. If the schools are forced to do the things that in earlier days were done at home, they must, it seems to me, little by little absorb something of the quality of the ample homes of an earlier day; they must have a quality of unobtrusive gentility, of an elegance that comes from balance and proportion and not from ornament; they must have the gracious welcoming quality of a good home, if they are satisfactorily to perform their growing new functions.

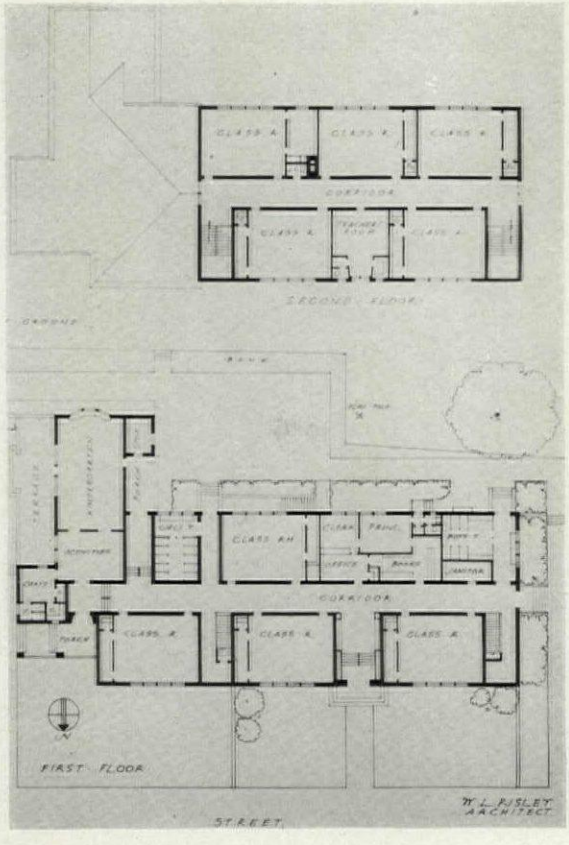
This I have said before in my previous article, in different words, but the new schools seem to bring up this problem with a new emphasis—new schools both public and private, both big and little. To be sure, most of our new schools function as community centers, besides being schools for children; yet even here something of the same idealism must, I believe, prevail. The true community center is not a fearsome, monumental, impersonal pile, but a building or room to which people will come naturally, informally, with a happy and personal feeling of being at home. There is no need, then, it would seem, for those attempts at monumental entrances which so often give the lie to the candid beauty of quiet classroom windows.

As an example of this quality of unobtrusive and restrained character, Winchton Risley's Dickens Street School, Los Angeles, like his design for Commonwealth Avenue School, is outstanding. There is in these two designs a simplicity almost puritan, a restraint almost austere; they are stripped of every particle of applied ornament; there is in them an almost wilfully perverse desire to be retiring, to be the opposite of obtrusive. But there is in them also a certain graceful ele-

gance which results from the subtle handling of simple proportion. Designed for Southern California, they have no need of such tremendous window areas as more cloudy sections require, and the utmost advantage has been taken of the increased wall surface that results. Particularly in the project for the Commonwealth Avenue School, there seems a quality of achievement, a perfect unity and harmony between the quiet walls and the open porch that fronts the auditorium, which is æsthetically as well as practically most successful. Schools should be in residential areas, they should be as close as possible to the homes of the children they educate; and surely any consideration of civic harmony, of the beauty of the city as a whole which must come from the relation of buildings rather than alone from individual structures, ought, I feel, to affect deeply both the scale and the character of school design. And of these schools of Risley's this seems preeminently true.

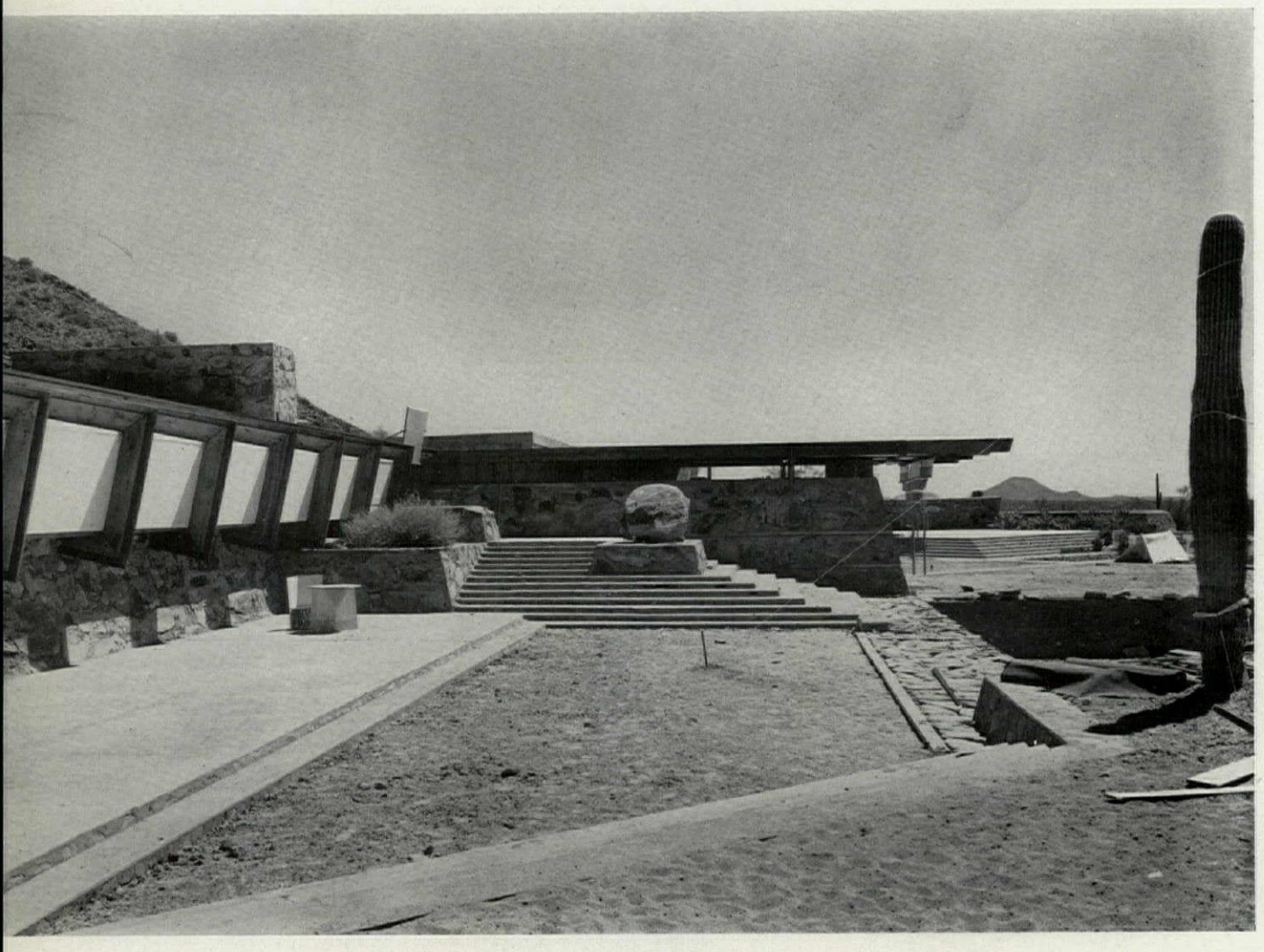
It is a good sign that this trend in school design is increasing, especially in the West. The great lesson of reticence, understatement, and simplicity is gradually being learned. The problem of the great school in the large city may be a long time clarifying, but school after school in the smaller centers west of the Mississippi is more and more the quiet, homelike, attractive, personal building that I believe it should be, and still without sacrifice of light or air or any of the functional requirements of school design. Two examples from Colorado indicate this development. One is the high school at Gunnison, with its lovely horizontality, its attractive geometrical shapes, its simple entrances and continuous windows, which give it a sense almost of gaiety as well as of welcome. The other is an addition to an existing high school at Estes Park, where the architect has had the daring (in this case I think completely vindicated) of designing the new portion in much the same vein as that shown at Gunnison, with the same results of attractive, refined, unostentatious charm. Where the photograph shows a bit of the old building, with its false arches and its applied stylisms, one can, I feel, appreciate better





RISLEY ALSO DESIGNED THE DICKENS STREET SCHOOL, TEN YEARS AGO. THE FREEDOM OF CIRCULATION AND THE SIMPLICITY OF THE EXTERIOR SEEM CHARACTERISTIC. THIS SCHOOL RECEIVED AN A.I.A. HONOR AWARD WHEN BUILT, IN 1939

ADDITION TO ESTES PARK, COLORADO, SCHOOL



THIS VIEW OF FRANK LLOYD WRIGHT'S "TALIESIN WEST," LOCATED IN THE DESERT 50 MILES FROM PHOENIX, ARIZONA, IS FROM THE FRONT TERRACE LOOKING TOWARD THE WORK ROOM (SEE 3 ON PLAN ACROSS-PAGE). THE HINGED FLAPS BETWEEN THE TRUSSES ARE EASILY ADJUSTED TO CONTROL LIGHT AND AIR. "TALIESIN IN THE DESERT" HAS BEEN BUILT SINCE 1938 BY THIRTY OF WRIGHT'S APPRENTICES

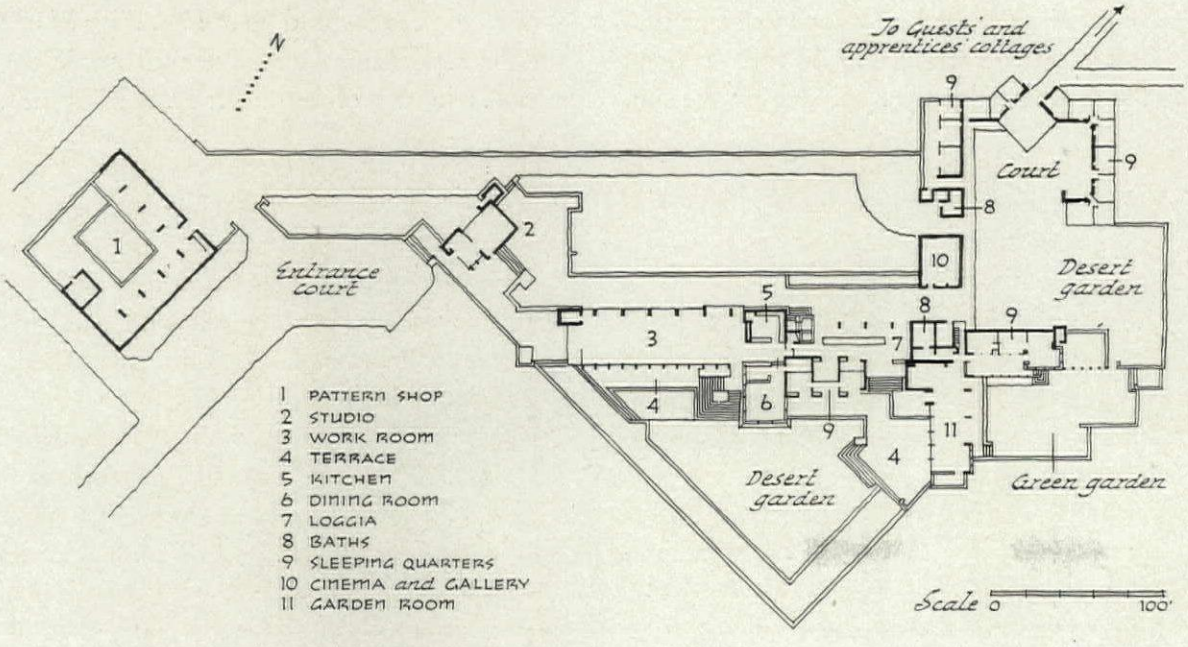
than through any words the advance in beauty and appropriateness which the new school has made.

* * * *

Recent buildings for higher education that have any controlling artistic or architectural interest are few. One hears of work going on at places like Black Mountain College, where an interesting structure designed by Lawrence Kocher is now rising. One can see that even in this field, so long cursed by obsolete ideals and the worst kind of applied stylism, the new forms are nevertheless gradually coming into use. The buildings of Suomi College at Hancock, Mich., by Eliel Saarinen and Robert F. Swanson, Associate, have the advantage of not being controlled or affected by existing campus conditions, and here one finds a most gracious and simple group of twin buildings flanking an open axis which leads up to a terrace and outdoor shelter behind. These are small buildings, only one I believe already completed, but they have the unusual grace of not trying to appear larger than they are. They have a modesty, uncommon in college structures, which, combined with good proportion and appropriate detail, gives them a real distinction.

With such a building as Frank Lloyd Wright's Taliesin West one enters, of course, an entirely different field. One needs, as it were, entirely to revise all his critical prejudices, to come to it with a new innocence, as of a child's; for this is the work of a great creative artist to whom ordinary helps,

THE NORTH SIDE OF THE WORK ROOM IS SEEN HERE FROM THE CORNER OF WRIGHT'S STUDIO. THE MONUMENTAL REDWOOD BEAMS OF THE TRELLIS CROSS THE LONG TERRACE CONNECTING THE BUILDINGS OF THE PRINCIPAL GROUP. THE BUILDINGS ARE OF VOLCANIC DESERT STONE RUBBLE AND CEMENT. FLOORS THROUGHOUT ARE OF CEMENT, AND STRETCHED CANVAS HAS BEEN USED AS ARCHITECTURAL MATERIAL



TALIESIN WEST, PARADISE VALLEY, ARIZONA — BY F. L. WRIGHT

ordinary simplifications, have no meaning. Taliesin West, or Taliesin in the Desert, is the winter home of Wright's architectural fellowship, on a desert site fifty miles from Phoenix. What to build in such a location, with such gorgeous color and texture around, such a magnificence of rolling country and cliff and colored rock and cactus, so that the thing built should not seem an intrusion but should become a part of the desert itself—this is a puzzle to frighten even the most imaginative. In hardly any other of the Wright work, it seems to me, has Wright's genius as a plastic, three-dimensional designer, as an interpreter of the face of the earth in human terms, been so strikingly and successfully expressed. He has avoided verticals and, except as steps and floors and railings, horizontals. He has made a symphony of inclined lines and slanting planes, building bold trusses of comparatively rough wood on basements and foundations and terraces of stone and concrete work almost unbelievable in the perfection of its texture, as an accompaniment to the landscape. The handling of concrete and cement and stone to make these slanting planes, over which colors and lights play almost as they play over the surfaces of the desert itself, is a *tour de force* of architectural supervision as well as of artistic conception. Between the wooden trusses for walls and ceilings there are, everywhere, hinged flaps or hinged louvers of wallboard or wooden slat or textile, so that the whole can be thrown open to the breeze and yet protected from the sun, and so that the light within the working spaces is diffused and pleasant, with the glare cut out. Around this individual and extraordinarily unconventional building, the desert plants are grown — cactuses chosen for their interesting shape—and here and there at important points great stones are placed purely for their decorative and sculptural value. They seem so right in their locations that one wonders how so few Westerners before Wright have had the imagination to seize upon the decorative values of natural rocks as elements in a composition.

There are details in the whole which any one of us might question, and will question. There are here and there touches of overstudy, overworking, over-ornamentation perhaps. The entire design is as far from the sterile, retiring schools of which I have been speaking, and which I like so much, as day is from night; yet I do not think the success of Taliesin West proves my original preference for the most simple and the most modest schools wrong. It is rather that, in speaking of Taliesin West, one is speaking of an almost totally different category of work; one is forced to think of it primarily for its plastic value, for its sculptural composition, as Mr. Frederick Kiesler has pointed out to me. It enhances the desert; but any such display of bravura within the quiet confines of the residential areas of a town would be as marked an intrusion, a composition as wholly out of place, as would be the building of one of the representative square and simple city schools in the center of the desert spaces.

FRANK LLOYD WRIGHT'S STUDY AT TALIESIN WEST, IN ARIZONA

MODERN LOW-COST ELEMENTARY CLASSROOMS

BY RAY L. HAMON

While educational philosophers and curriculum builders continue to conjure with such words as progressive, conservative, pupil activity, and traditional, the school administrator and the school architect face the practical problem of actually building schoolhouses. There is such variation of opinion that it is hardly possible to find enough points of agreement on which to establish "standards" for a classroom. One can find classrooms of recent construction as conservative as the typical room of the past generation, and there are schools so "Progressive" that their proponents brag that they have no classrooms at all. We do not have to accept universal specifications for a classroom. In a democratic order, each community may decide for itself whether there will be twenty or fifty pupils per group, fifteen or thirty square feet of floor area per pupil, bare walls or adequate built-in facilities; provided, of course, that the community's ideas and budget are not too far out of balance. Fortunately, some states and local governments have established controls which throw certain safeguards around the children as to proper light, sanitation, and fire protection. This tends to prevent the ultravisionaries from going too far afield.

This discussion is not so much concerned with the occasional and exceptional building, planned by super-imaginative educators and architects with blank checks signed by John Taxpayer, but it is directed toward the average public school situation where practical plants must be built to house all the children of all the people. It is concerned with urban centers where fire-resistive, modern school buildings are demanded at a cost of $200 to $250 per pupil, and rural consolidated districts where one-story, non-fireproof schoolhouses must be erected with modern conveniences and accessory facilities at a cost of $100 to $150 per pupil.

It is assumed that a community wishes to keep in step with normal progress and adopt much of the modern procedure in education, both as to content and method; that school-plant research and practice have established certain minimum standards for the safety, health, and comfort of the occupants of a school building; and that mass education on a limited budget necessitates some regard for economy of building construction, operation, and maintenance.

CLASSROOM SIZE

The generally accepted size of the elementary group is thirty pupils in theory and forty in practice. The minimum accepted floor area is eighteen square feet per pupil, but most educators would prefer twenty-five square feet in non-departmental schools where most of the activities are carried on in the homeroom. If we plan elementary classrooms approximately twenty-three by thirty-two feet for forty pupils, we will have met the minimum standards and will have provided rather adequate space for a modern program when enrollments have dropped to thirty pupils per room. If, however, we expect to continue elementary groups of forty, we should provide forty feet or more of room length. It is becoming general practice

to build first and second grade rooms at least forty feet long, even if this amount of space is not available for the other classrooms.

WORKROOMS

All agree that elementary pupils should have some work shop facilities for handicraft activities, but there is considerable difference of opinion as to the best way of providing these facilities. In the platoon and departmental organizations, the solution seems to be special rooms equipped as work shops. This plan is sometimes used in non-departmental schools, either with or without special handicraft teachers.

The connecting workroom between two classrooms seems to be popular in some schools. Thus, two teachers have the joint use of a space the width of a classroom by about twenty feet long, provided with a sink, a counter work bench, built-in cabinets, and shelves. One objection to this plan is that two groups must share the workroom. To divide the workroom into two ten-foot spaces would reduce each space to an area not much more than a good sized supply closet. A satisfactory solution would be to provide each classroom with a twenty-three by twenty foot workroom, but at this point the architect and administrator should cube the building and consult the budget before their imaginations get out of hand.

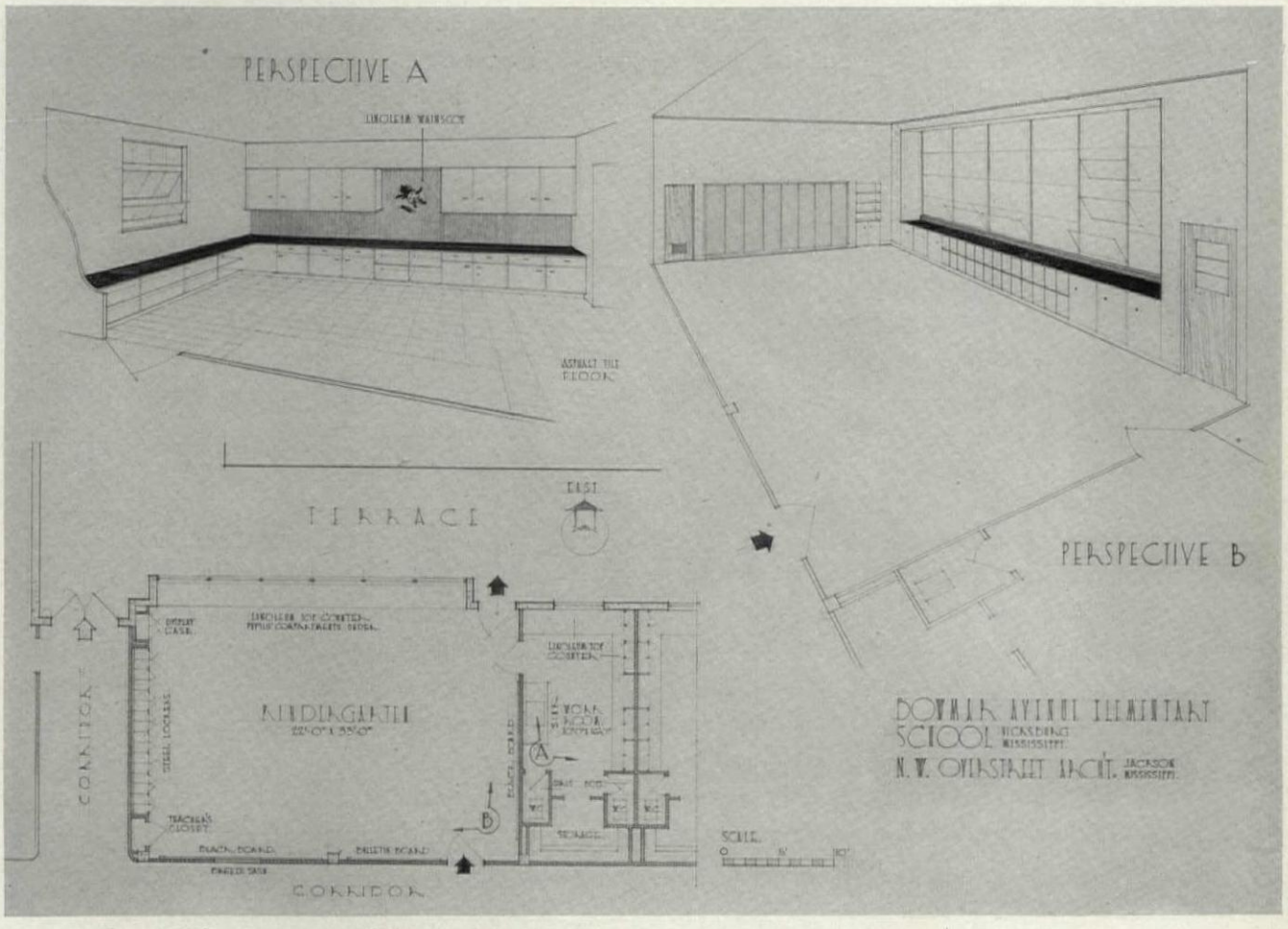
Many teachers feel that if they are entitled to only forty feet of classroom length, including work space, they would prefer to have it all in one large room with the proper built-in facilities, rather than to have a thirty-foot classroom with a separate ten-foot workroom, or a thirty-foot classroom and the joint use of a twenty-foot workroom with another teacher. The assumptions controlling this discussion would seem to hold us to a classroom unit of about forty feet in length, including workroom space, with some additional space for storage closets. Under these circumstances, the writer believes it will be more flexible and economical to include all of the forty-foot length in one room and build in the necessary work counters and cabinets. There is something to be said, however, for a work space where the handicraft shop noise can be shut off from the quieter activity centers.

WORK COUNTERS

The modern classroom uses all the available wall space for built-in features, and then often has to supplement this by connecting supply closets. In the typical elementary classroom, the left side is occupied by a battery of windows and the front end by a blackboard, leaving the right and rear walls for built-in equipment. If the classroom does not have access to a separate workshop, it is desirable that a work cabinet or bench be incorporated in the wall. The work counter could be placed along the right or rear wall, but to do so would reduce seriously the wall space available for bulletin boards, shelving, and lockerobes. Since the work counter is relatively low, it may be placed under the windows, thereby releasing wall space for facilities requiring a greater height. A counter from eighteen to twenty-four inches deep can absorb the heating units and also provide a great deal of valuable storage space for materials. The counter top should be substantial and have a durable finish suitable for hammering, painting, and modeling. At least one sink should be incorporated in the counter top or provided elsewhere in the room. The space below the counter may be devoted to drawers, cabinets with doors, open shelves, or individual open "pigeon holes." If individual pupil compartments are provided below the work counter to supplement the desk or table book compartments, it is suggested that these spaces be at least nine inches wide by eighteen inches deep, with the height depending upon available space. It is also desirable to provide a toe space in the counter base so that pupils may stand closer when working on the counter.

GENERAL SUPPLIES

It is necessary that every classroom have some provision for storing large poster paper and mounted maps and charts. This provision is often overlooked or omitted because it is not easy to plan. Probably the best provision for poster storage is large drawers or shelves in a connecting supply room or under



WORK COUNTER IN KINDERGARTEN OF BOWMAR AVENUE ELEMENTARY SCHOOL AT VICKSBURG, MISSISSIPPI, GIVES MAXIMUM USE OF CLASSROOM WALL SPACE. LARGER SUPPLIES ARE STORED IN AN ADJOINING WORKROOM. N. W. OVERSTREET IS THE ARCHITECT. RAY L. HAMON, EDUCATIONAL CONSULTANT

the work counter. Vertical pockets below the chalk tray will accommodate poster paper and mounted charts, but these materials will keep better if stored horizontally.

Considerable space is required for handicraft supplies, the larger materials, and tools for construction work. There is not sufficient space to build adequate cabinets around the classroom walls for all of these materials. It is necessary that the modern classroom have a connecting storage closet for storing the larger and rougher supplies, unfinished projects, and tools. Fairly adequate storage may be provided by allowing a five-foot space between the ends of the classrooms and cutting it into a five by eleven foot closet for each room. This closet should be provided with shelves of different depths and spacings for the various materials and tools.

There should be at least one three-foot section of open, built-in, adjustable book shelves in every elementary classroom. When the loose furniture is arranged for the different activity centers, the reading center should be near the built-in bookcases.

TEACHER'S STORAGE

Every classroom should make some provision for private, locked storage for the teacher's cloaks, private books and papers, test materials, and supplies to which pupils are not to have ready access. Such facilities may be provided by a private closet or by cabinets or lockers either in the classroom or in the connecting storage room.

STORAGE OF WRAPS

The problem of children's wrap storage has long confronted teachers and architects. Although numerous methods have been developed, there is still no completely satisfactory solution to the problem of cloak storage. The cloakroom has been, and still is, the most common type of provision for pupils'

wraps in the small inexpensive frame schoolhouses. There has been an unnecessary amount of space devoted to cloakrooms. Where cloakrooms have two doors and extend the full width of the classroom, it would be advisable, in most cases, to erect a partition across the cloakroom, making at least a third of it into a supply room. The long narrow cloakroom is not a satisfactory area for storage of wraps and putting on galoshes, snow suits, and raincoats. It would be desirable to provide for each classroom a connecting wrap storage and dressing room with sufficient floor area for the children to put on their wraps; but this space would have a very low utilization and could not be justified where there are definite budget limitations.

Where the platoon or departmental type of organization is used, it is almost necessary that cloak hanging facilities be made accessible from the corridor, either in recessed corridor lockers or locker alcoves opening off the corridor. In the homeroom type of organization it is usually considered advisable to provide the cloak hanging facilities in connection with the classroom. This can be done by providing open hanging compartments, wood or steel lockers with doors, folding or sliding door wardrobes, or steel lockerobes with doors operated by either individual or gang control. The steel lockerobe has increased in popularity during the most recent school building programs. Lockerobes may be free standing, but a much neater and more satisfactory installation may be had by recessing them in the right or end wall of the classroom. This type of facility requires a recess about sixteen inches deep, and approximately twenty-two inches of horizontal wall space is required for a four-pupil unit. Bookcases, storage cabinets, and the teacher's locker may be incorporated in the same assembly with the battery of lockerobes. In buildings provided with mechanical ventilation, air exhausts may be provided from the classroom through the lockerobes.

CORRIDOR WALLS

Since portions of the corridor walls must be at least twelve inches thick in order to provide structural columns and only four inches is required for non-bearing tile walls, there is eight inches of depth available for built-in facilities without increasing the cubage of the building. Additional storage space can be provided as economically by increasing the corridor wall thickness as by increasing the length of the building. Bearing columns may be set flush with the classroom wall; thus the thicker wall does not require a wider classroom span. In cases where corridor lockers are used and built-in cabinets or bookcases are required on the classroom side, a good plan is to allow about three feet between the finished walls of corridors and classrooms. This space will absorb structural columns, ventilation ducts, pipes, and conduits, as well as the necessary built-in features. Another advantage in this type of corridor wall is that it permits the door to be hinged flush with the classroom wall and swing in the direction of exit without interferring with corridor traffic.

BLACKBOARDS AND TACKBOARDS

An observer has only to visit modern programs in old schoolrooms in order to be convinced that the blackboard has, to some extent, been replaced by other teaching devices. A generation ago all available classroom wall area was covered with blackboards. Unless some of these blackboards have been removed, the teachers probably will have papers tacked or pasted over a large part of the blackboard area. Today, it is generally considered that a blackboard across the front wall of the average elementary classroom is sufficient. Although the amount of blackboard has decreased, more emphasis should be placed on its quality. There are many types of blackboard materials on the market, and some schools have even made their own. Since the modern classroom has only seventy or eighty square feet of blackboard, it does not seem wise to install poor blackboards which are short lived and almost certain to result in eye strain.

It is customary to install a twelve to eighteen-inch strip of tackboard over blackboards. These tack strips have their value and occupy wall space which could not be

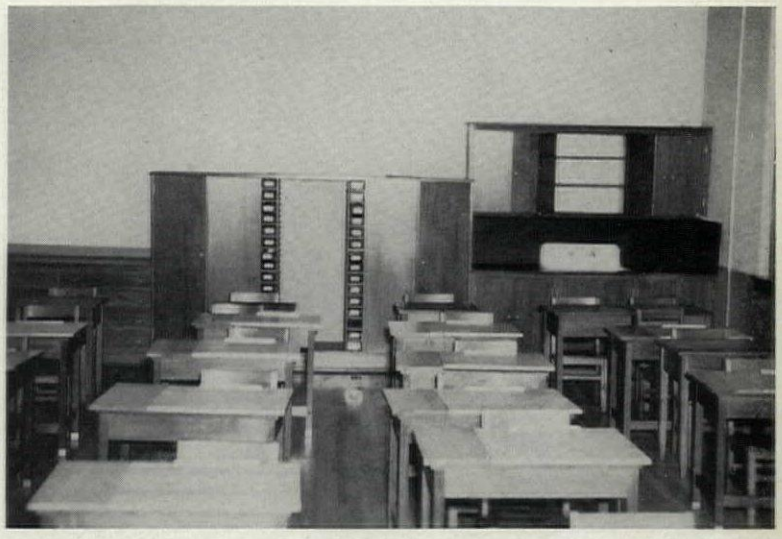
utilized otherwise. The tack strip over the blackboard, however, should not be considered a substitute for a bulletin board. The typical classroom should have from eight to thirty linear feet of bulletin board of the same width and set at the same height as the blackboards. The best bulletin board installation is cork mounted on plywood, although the cork-carpet type of bulletin board is quite satisfactory. If extreme economies are necessary, there are certain types of fiber boards which make satisfactory substitutes.

ACOUSTICAL TREATMENT

Fire-resistive buildings and the pupil-activity type of classroom procedure have created a serious acoustical problem in the schoolroom. Non-sound-absorbent classroom surfaces become almost intolerable when a group of pupils are moving furniture and using construction tools. Satisfactory acoustical results may be obtained by applying moderately sound-absorbent materials on the ceiling. If the acoustical treatment is applied to the slab as the finished ceiling material, the cost is very little more than plaster.

ELECTRICAL SERVICE

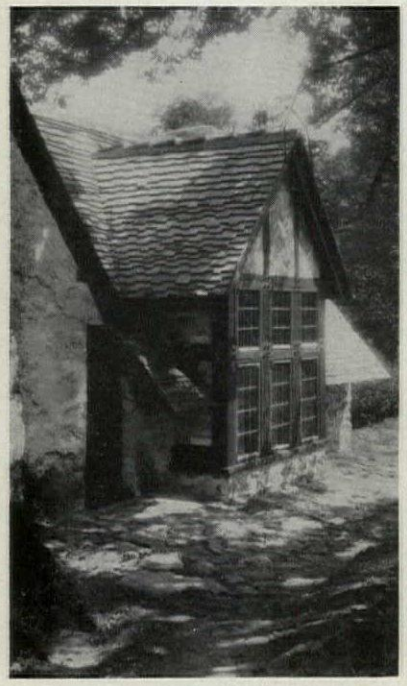
Every classroom should be provided with a radio and public address loud speaker with central office connections. At least one convenient wall receptacle should be provided in every classroom for an audio-visual projector. Every classroom should be adequately wired and provided with proper fixtures for the necessary amount of artificial illumination. It is advisable to arrange the circuits so that the lights on the dark side of the room may be turned on independently to supplement the natural light from the windows. The amount of light necessary and the type and number of fixtures required to produce the desired effect present problems which have been discussed extensively, but still remain unsolved. For a practical solution at a reasonable cost, it has been found quite satisfactory to install a ceiling-mounted, enclosed, 300-watt direct fixture for 100 square feet of classroom area.

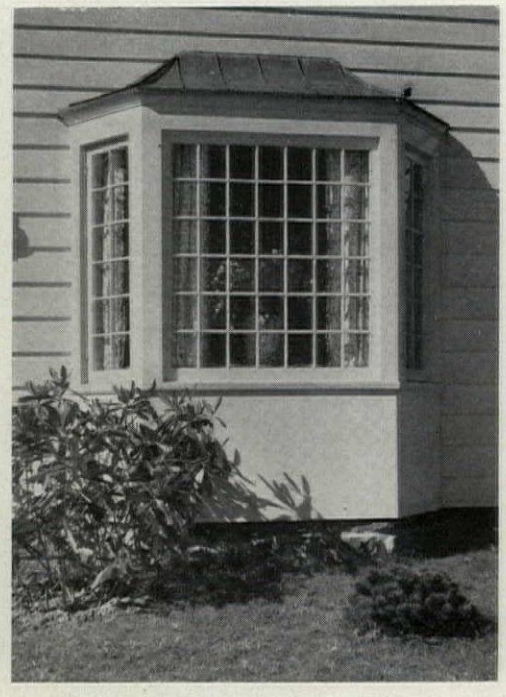


PHOTOS SHOWN ON THIS PAGE ARE OF HOWARD ELEMENTARY SCHOOL AT NASHVILLE, TENNESSEE

PUPILS' LOCKEROBES, TACK STRIP, TEACHER'S PRIVATE LOCKER. BULLETIN BOARD SHOWN HERE

PUPILS' LOCKEROBES, TACK STRIP, AND BOOKCASE. HART, FREELAND & ROBERTS, ARCHITECTS, AND RAY L. HAMON, THE EDUCATIONAL CONSULTANT

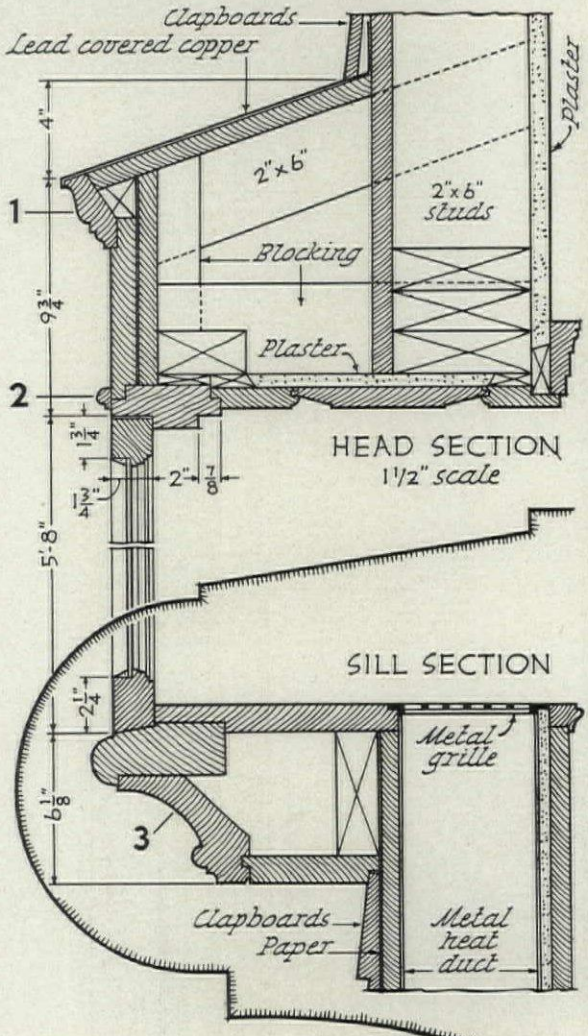




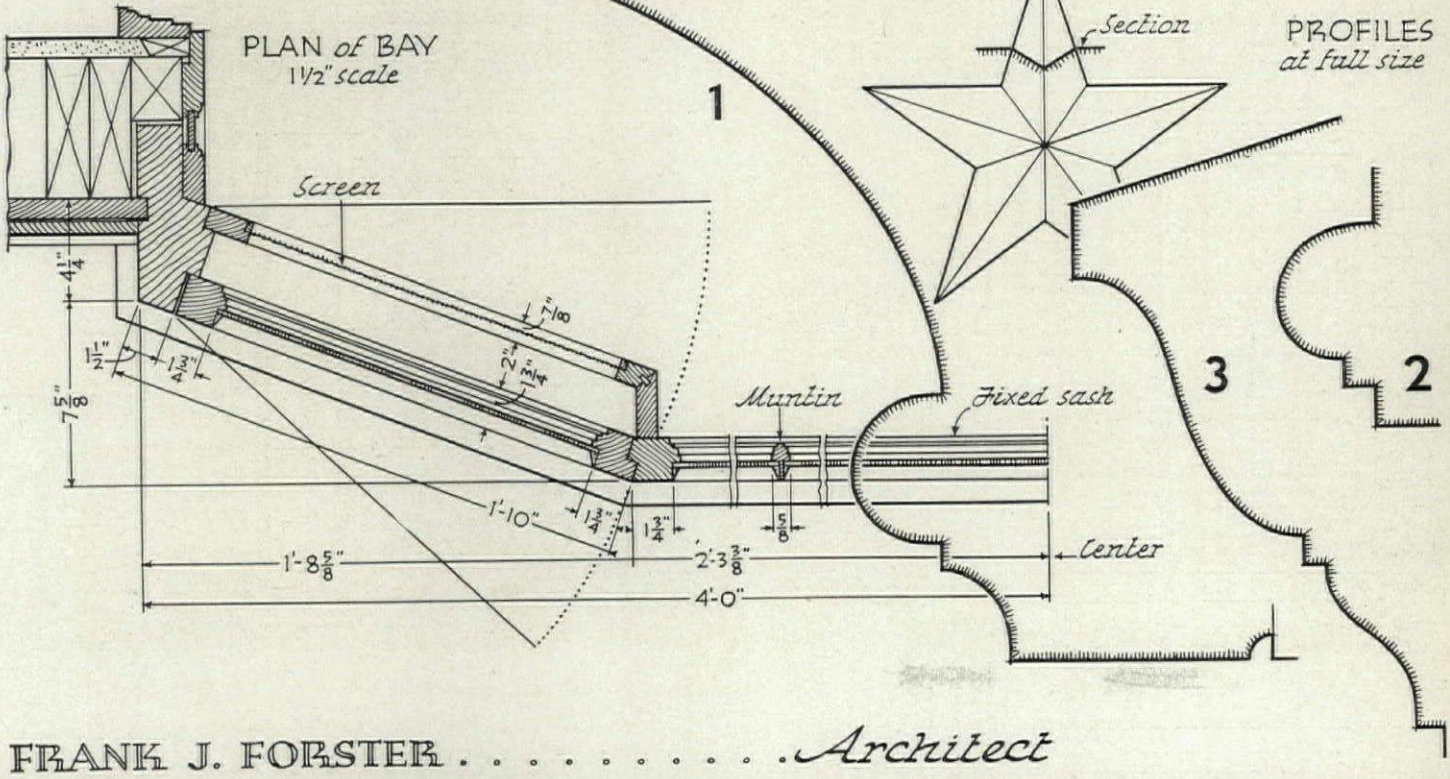
THE ARCHITECTS WHO DESIGNED THESE BAY WINDOWS WERE (LEFT) H. P. STAATS, (CENTER) CAMPBELL & LACAVA, (RIGHT) PERRY M. DUNCAN. PHOTOGRAPHS ARE BY GEORGE VAN ANDA OF NEW YORK

THE BAY WINDOW AT THE LEFT, DESIGNED BY BURTON BUGBEE, AND THE EXAMPLE AT THE RIGHT, DESIGNED BY ALLAN MCDOWELL, ARE TWO LARGER EXAMPLES IN THIS SET OF PHOTOS BY VAN ANDA

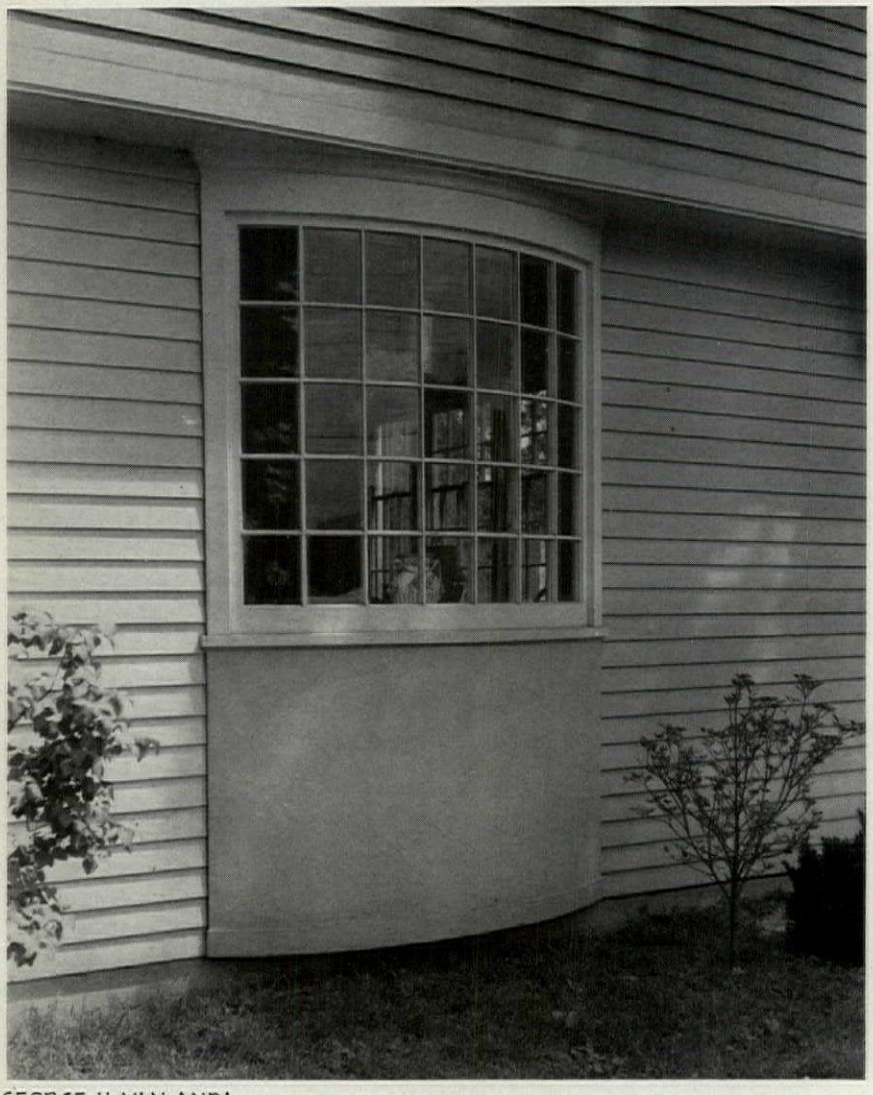
SOME BAY WINDOWS LOCATED IN NEW YORK AND CONNECTICUT



GEORGE H. VAN ANDA



FRANK J. FORSTER . . . . . Architect



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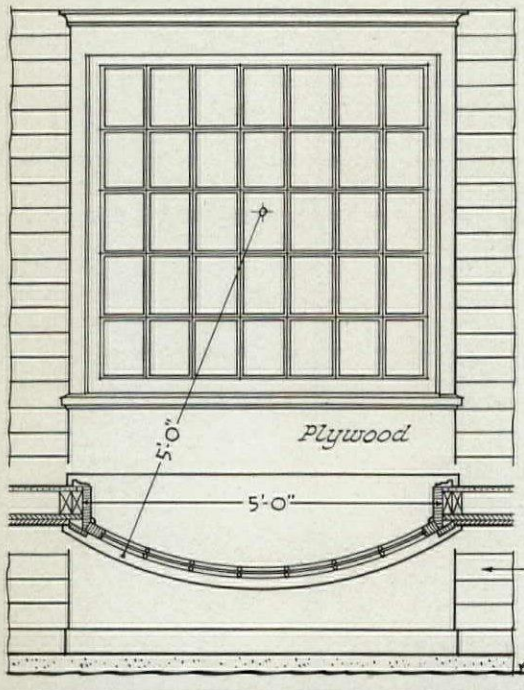
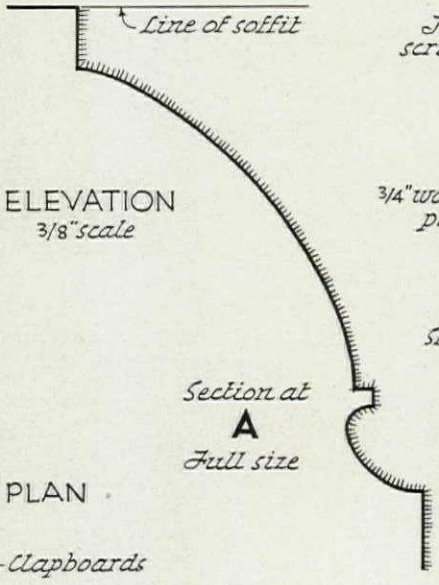
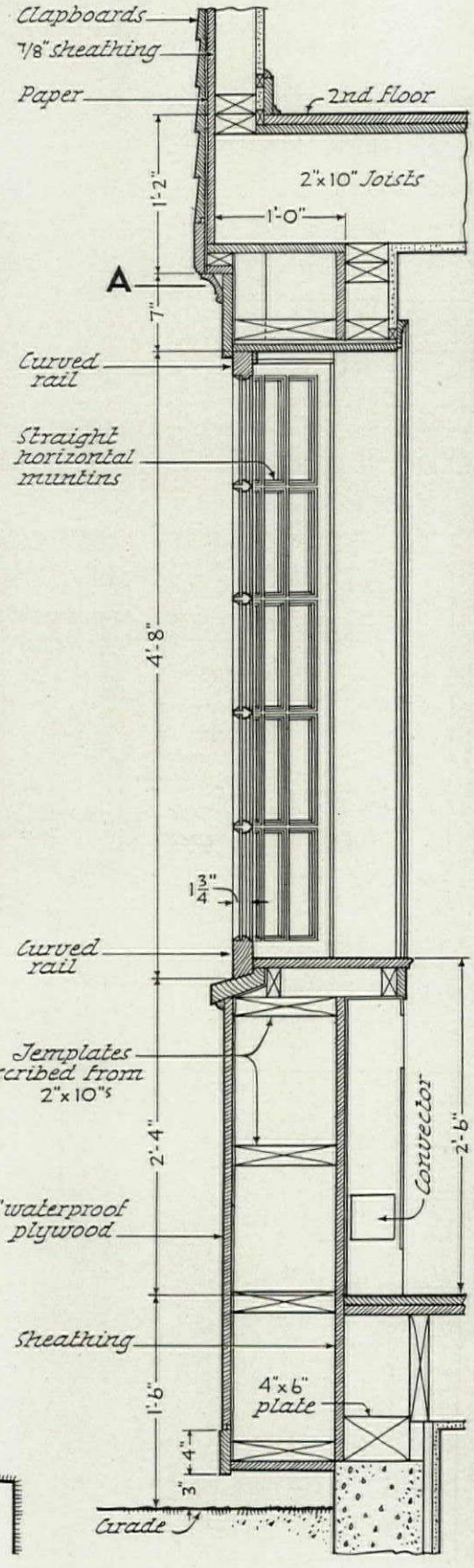
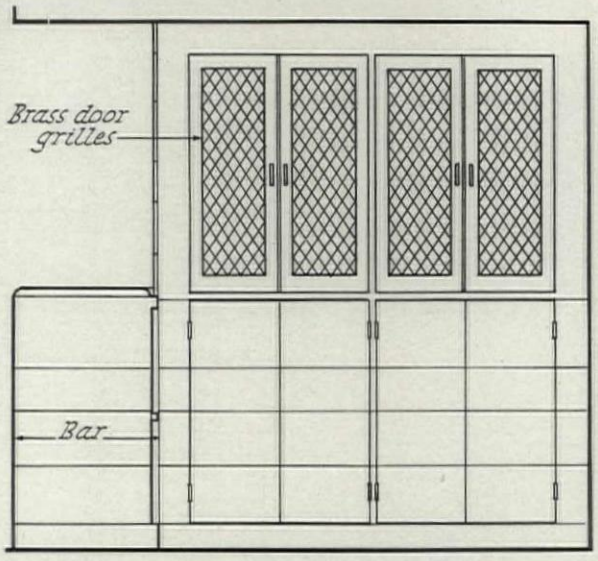




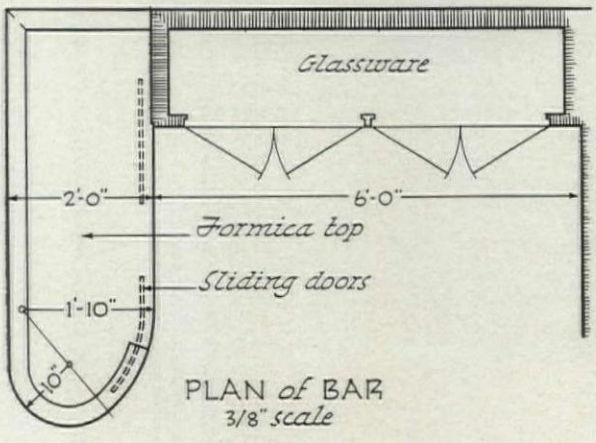
SECTION *through* BAY
3/4" scale



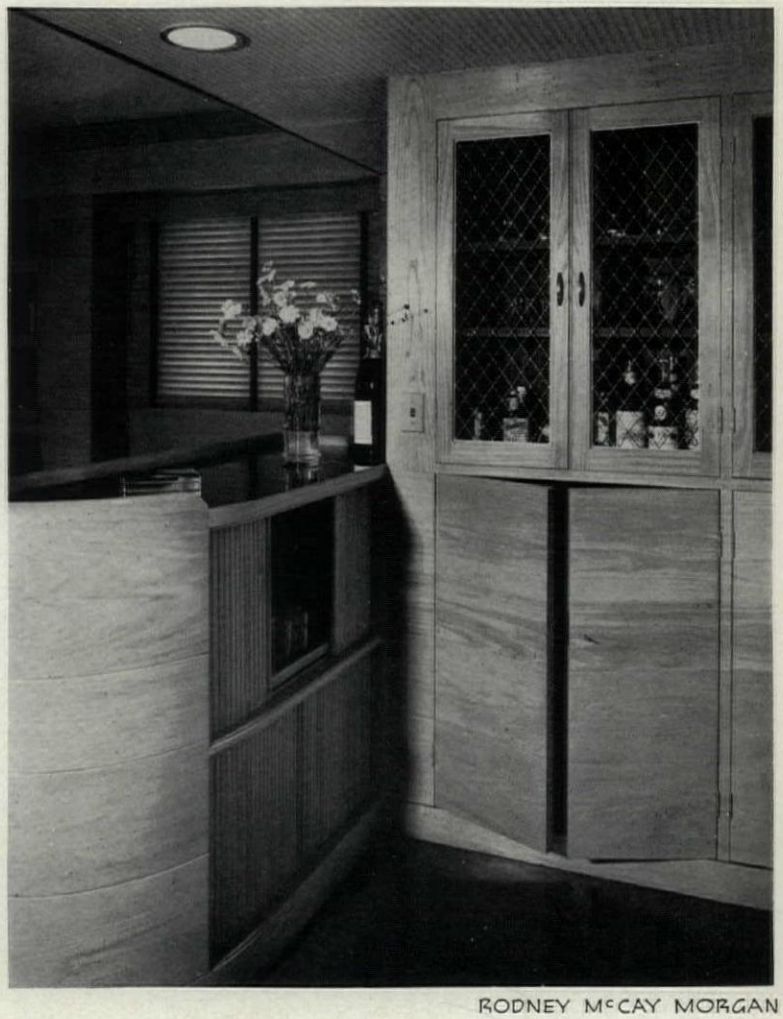
WILLIS N. MILLS . . . . *Architect*



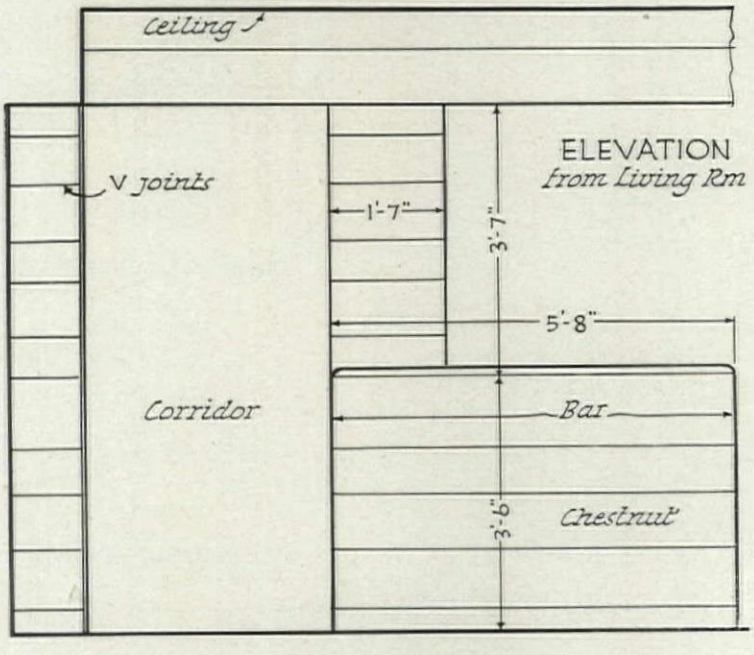
ELEVATION 3/8" scale

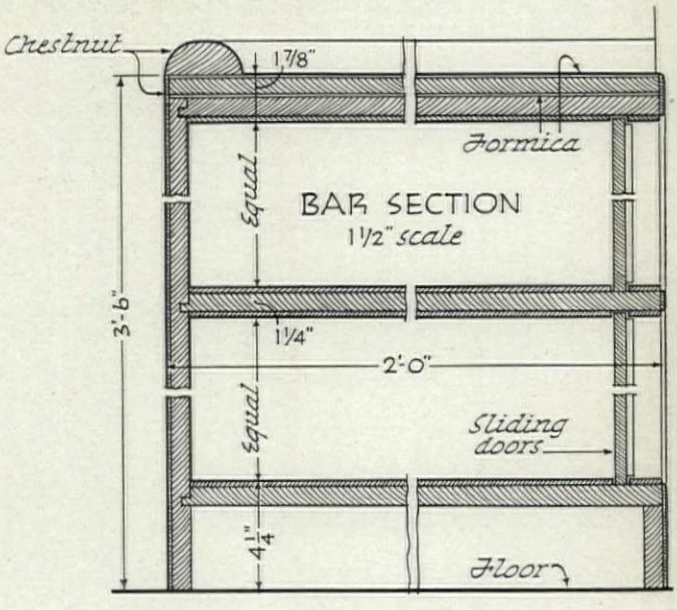


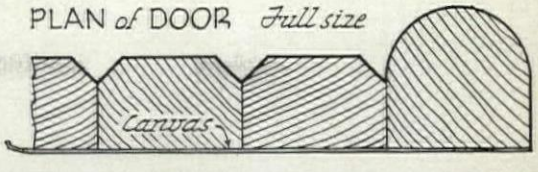
PLAN of BAR
3/8" scale



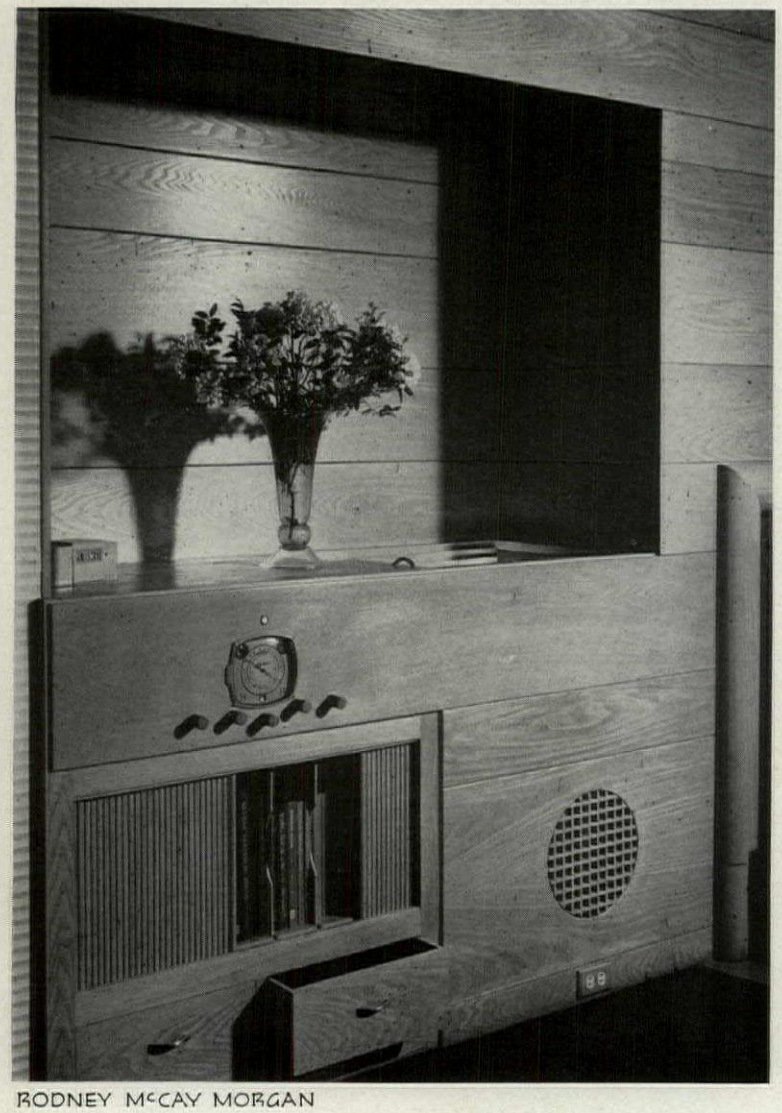
RODNEY McCAY MORGAN



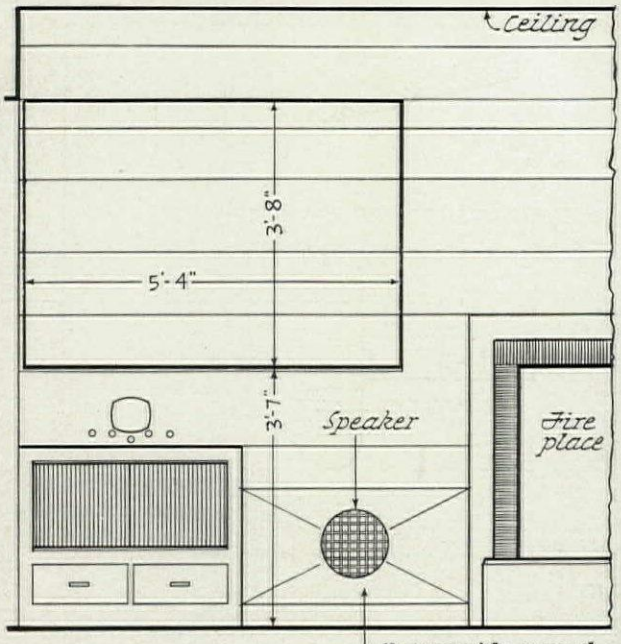




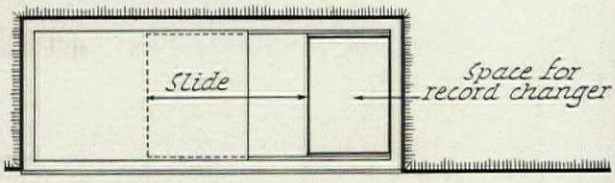
A. MUSGRAVE HYDE . . . *Architect*



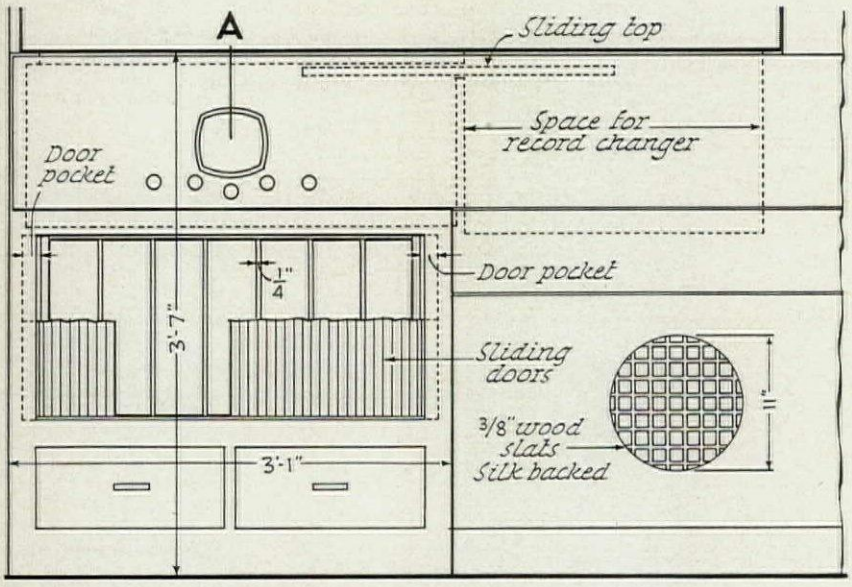
RODNEY McCAY MORGAN

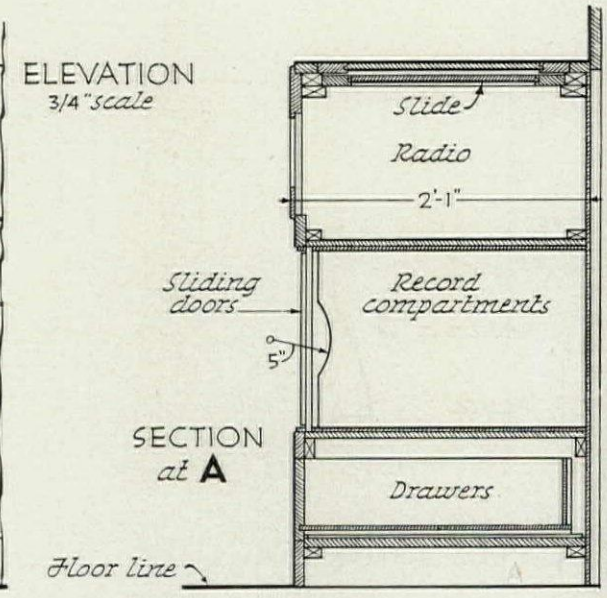


ELEVATION
3/8" scale

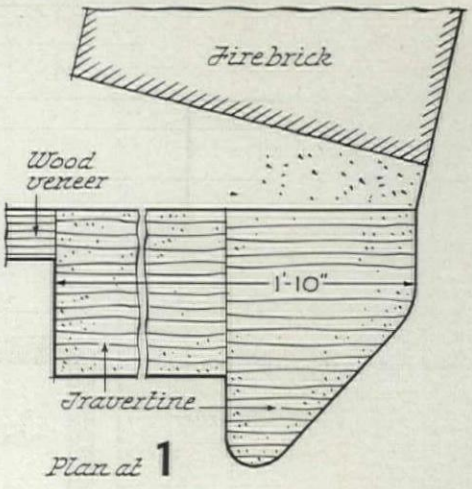


PLAN

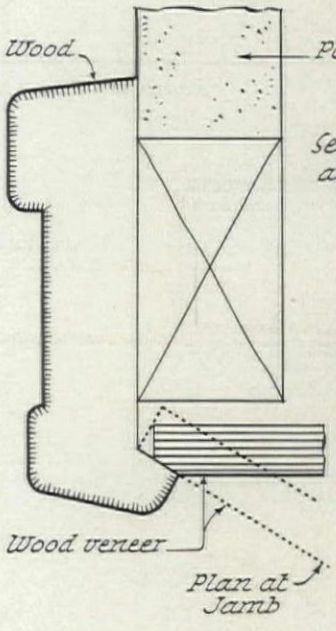




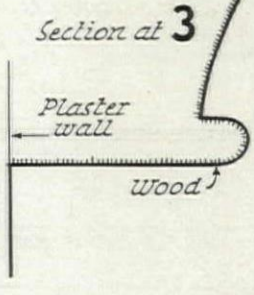
A. MUSGRAVE HYDE . . . *Architect*

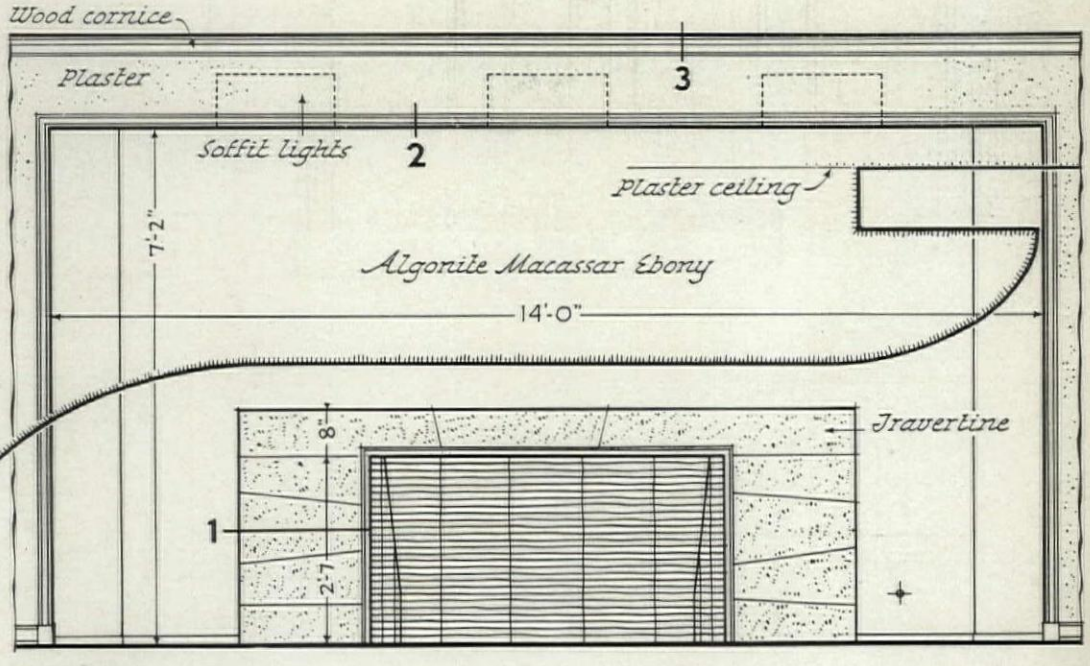


JULIUS SHULMAN

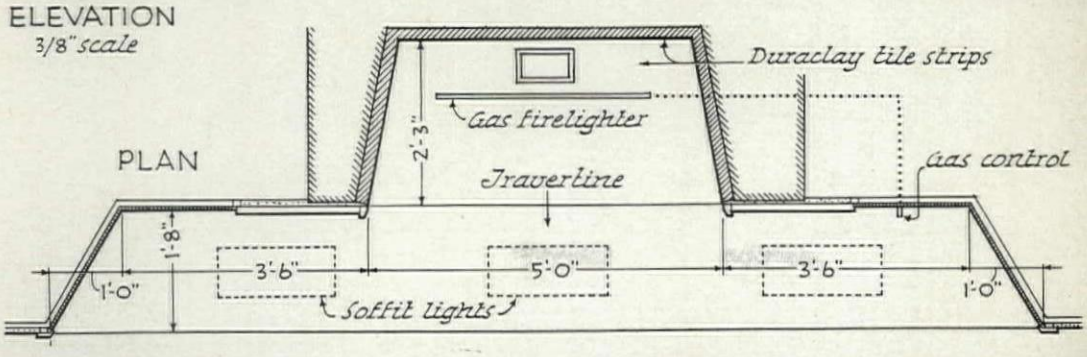


SECTIONS at FULL SIZE

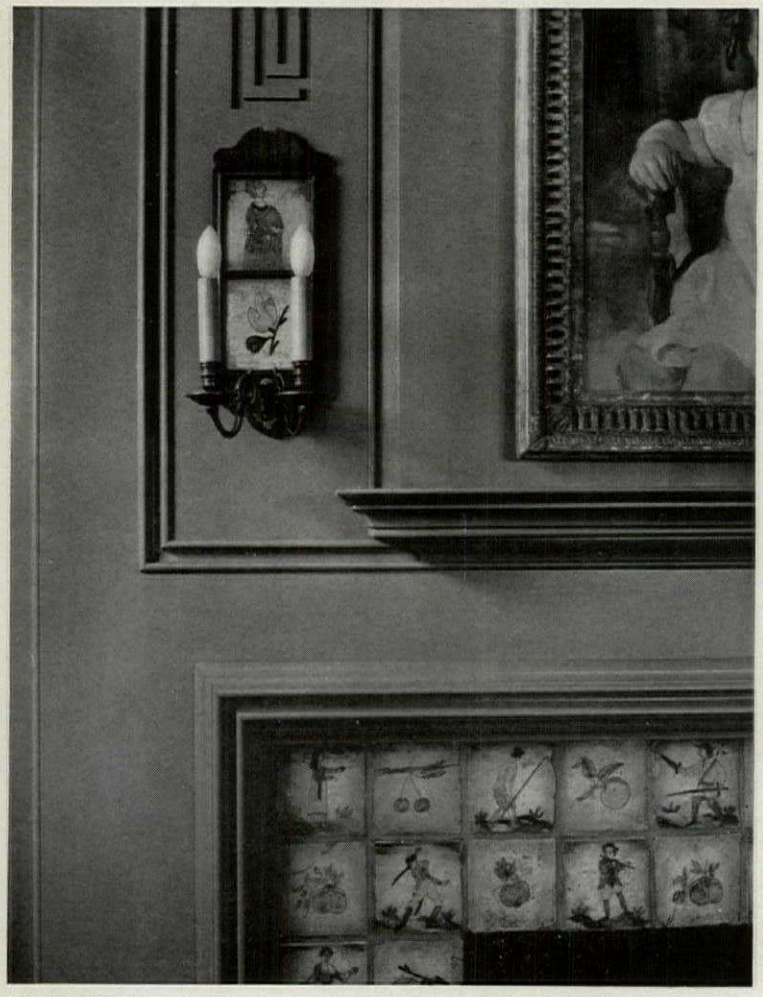




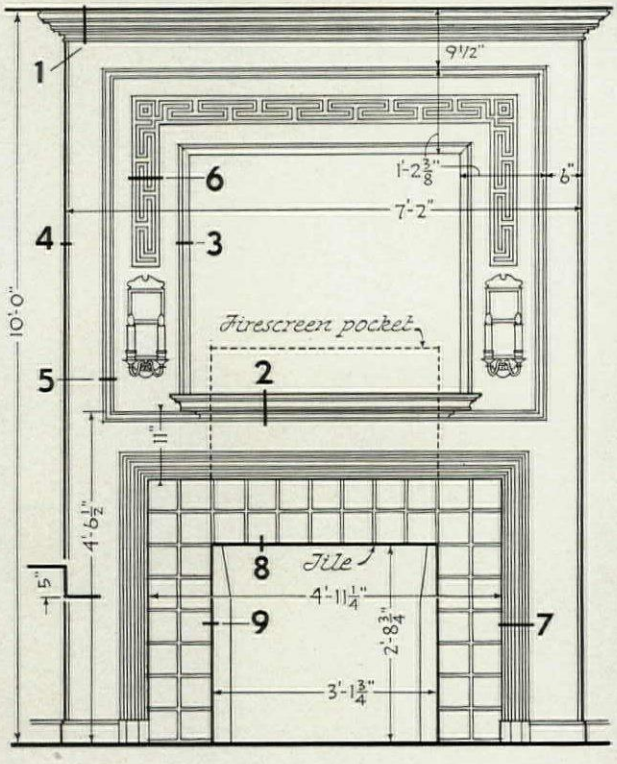
ELEVATION
3/8" scale



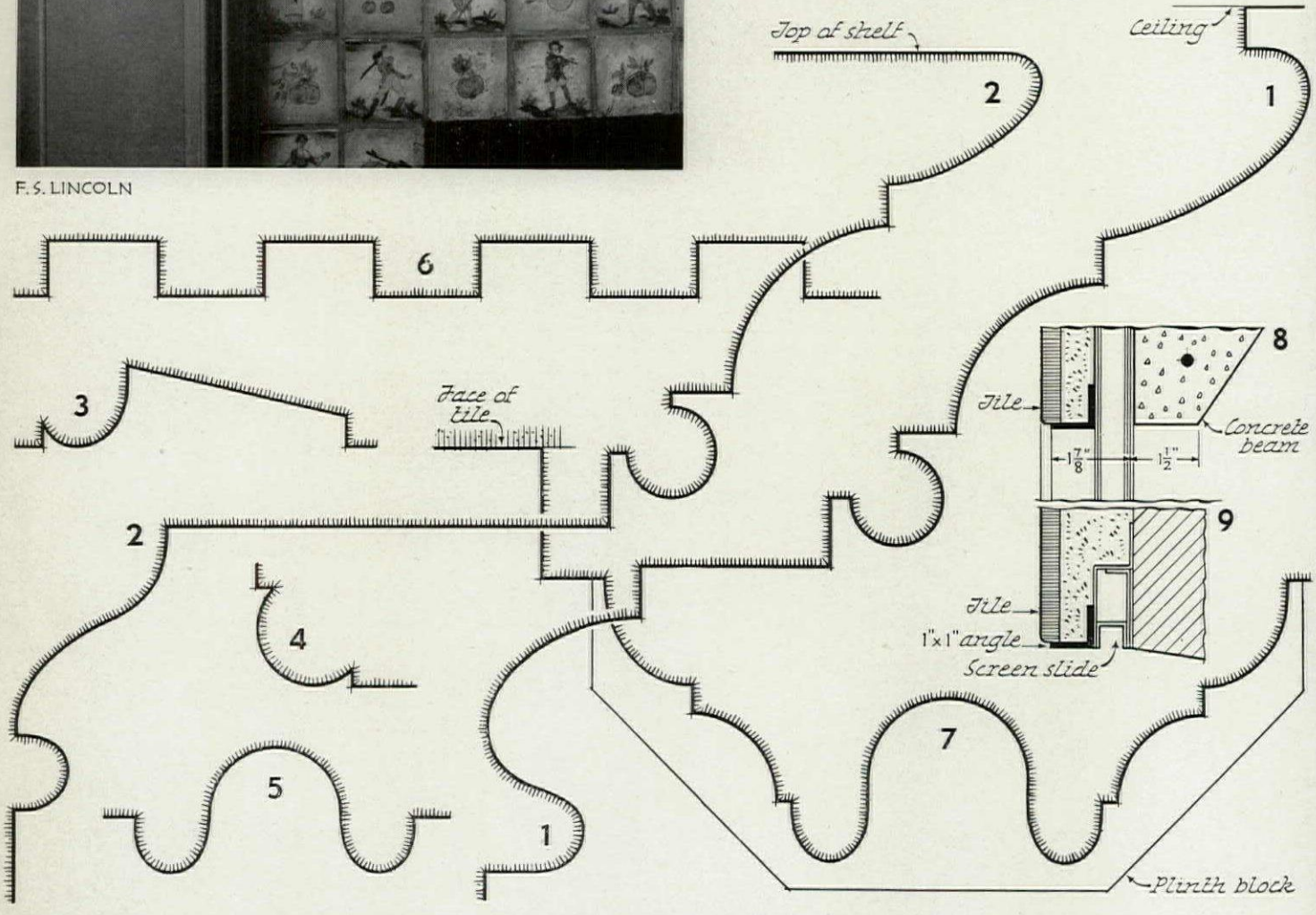
PAUL LASZLO
Designer



F. S. LINCOLN



ELEVATION 3/8" scale



ERNEST A. GRUNSFELD, Jr. . . *Architect* WALLACE F. YERKES . . . ASSOCIATE

THE MONOGRAPH SERIES

Records of Early American Architecture

RUSSELL F. WHITEHEAD, A. I. A., *Editor*
FRANK CHOUTEAU BROWN, F. A. I. A., *Associate Editor*

Volume XXVI • Number 6

See Measured Drawing, Page 180

EARLY PINE CORNER CUPBOARD
from ESSEX COUNTY, *Now in*
the ANTIQUARIAN HOUSE *at*
CONCORD, MASSACHUSETTS

EARLY PINE CIRCULAR-TOP OPEN CORNER CUPBOARD
HARTWELL FARMHOUSE, LINCOLN, MASSACHUSETTS

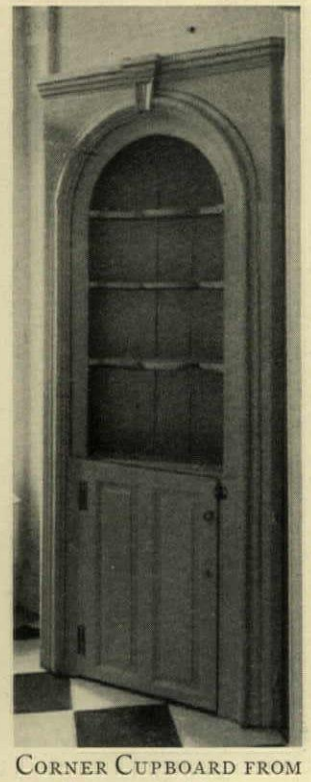
[178]

SOME EXAMPLES *of* CORNER CUPBOARDS
GENERALLY *of* EARLY DESIGN *and* CONSTRUCTION

Photographs by Arthur C. Haskell

AFTER the Kitchen Dresser, or Wall Cupboard, so useful and necessary an adjunct to the early habitation in the Colonies that it seems almost to have been an initial fitment of every early dwelling,—the Corner Cupboard seems to have been next in demand by early housewives. And as the former was always located against the wall nearest the Kitchen fireplace, the latter was usually so placed as to fill up an internal angle in the least used corner of the Dining Room. The former was an actual necessity to keep at hand the cooking utensils needed in the kitchen, and the latter was almost equally necessary to at once protect and display the few family heirlooms of pewter or china, of which the housewife was most proud. The early Colonial "Corner Cupboard" was, indeed, the direct family ancestor of the ugly Victorian corner "Whatnot" of more recent memory!

Farther south it seems often to have been known as the "*Beau fait*," or "Buffet"; but along the northern coast it usually took a less pretentious name and form;—and, while retaining the fine proportions and outlines of its southern counterpart, it was generally made of more modest materials, and was better adapted to taking its place as an almost integral part of the walls of the Dining room. Where the finish was natural pine, so also we find the Corner Cupboard beautifully fitted into this atmospheric background; or, if the walls of the room were painted and paneled—or even plastered—we continue to find that one or another varied treatment of the well-known arched-top motive is appropriate, and even unobtrusively decorative—in a quiet New England way!—in some unused but conveniently visible corner of the daily family habitat.



CORNER CUPBOARD FROM SUDBURY, MASS.
(*See Drawing, Page 191*)

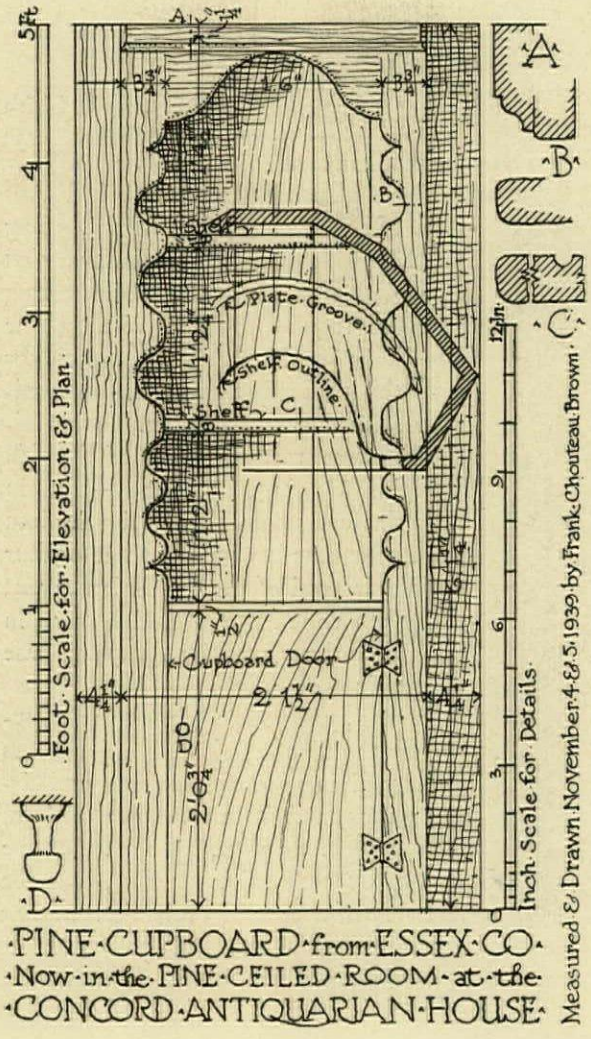
Usually, in its simpler forms, the upper part of the cabinet was left open, with an arched, elliptical or segmental outline at the top; and the lower portion—up to about the height of the window sills or the room dado—had its shelves protected by paneled doors. Usually, the cupboard extended to the full height of the room,—fitting up against the ceiling, or into the beams or room cornice, in much the same way as did the early fireplace with overmantel treatment. But there were also simple corner treatments, with glazed or paneled doors shutting off the upper shelves from view, although by far the more customary and favorite design was to have the upper shelves protected by a glazed door or doors, with arched or segmental top, thus permitting objects placed upon the upper shelves easily to be seen at all times.

These glazed doors and arched tops were often enframed by a surrounding panel mould; or by side pilasters, tied into an entablature at the top; or fitting into the regular room cornice, whose mouldings would break out around or over the projecting pilasters or architraves flanking the opening. These pilasters were rather rarely of the full Georgian classic proportions,—but, in New England, were usually simpler and more attenuated, with but three or four flutings instead of the regulation seven, and often ended at top and bottom in other than the conventional cap and base of Classic precedent.

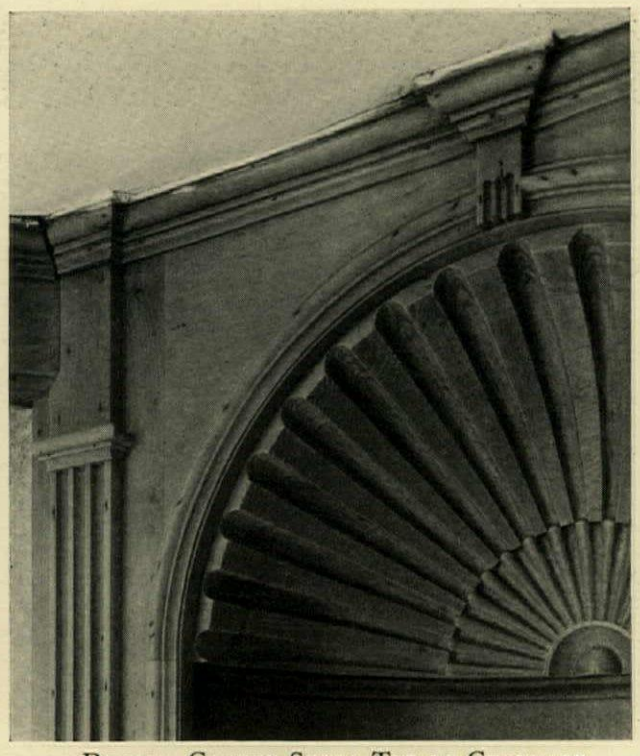
In plan, the problem of fitting shelving for the display of small objects was met by giving the cupboard a semi-circular back, and fitting the shelf outlines in the upper or more open part of the cupboard, to this circular plan, with the addition of a central projection at that point where the shelving was deepest. Sometimes—in the more elaborate examples—this circular top arch was filled

with a semi-domed treatment,—sometimes carried out in plaster, but more often in wood,—when the under part of this semi-dome was sometimes carved more or less skillfully into a conventional shell. The example shown from the Wiggin-Miller House (pages 180, 181, 185 and 186) is unusual in that, despite its successful expression of the shell-motive, it has been executed in the simplest possible way, by moulding rather than actual carving the built-up wooden back of the cupboard.

This typical semi-circular plan and design of the corner cupboard, once fully developed, was found adaptable to locations other than the inner corner of a room. It could be used recessed within a flat paneled wall, sometimes covered with a "blind paneled door," that was itself almost a unit of the wall paneling. Some very elaborate examples have been designed to meet this sort of a location,—as might be illustrated by referring to the wall cupboard in the well known "House of Seven Gables" at Salem (the Monograph, Vol. XXIII, No. 2, Pages 23, 24).



PINE CUPBOARD from ESSEX CO.
Now in the PINE CEILED ROOM at the
CONCORD ANTIQUARIAN HOUSE

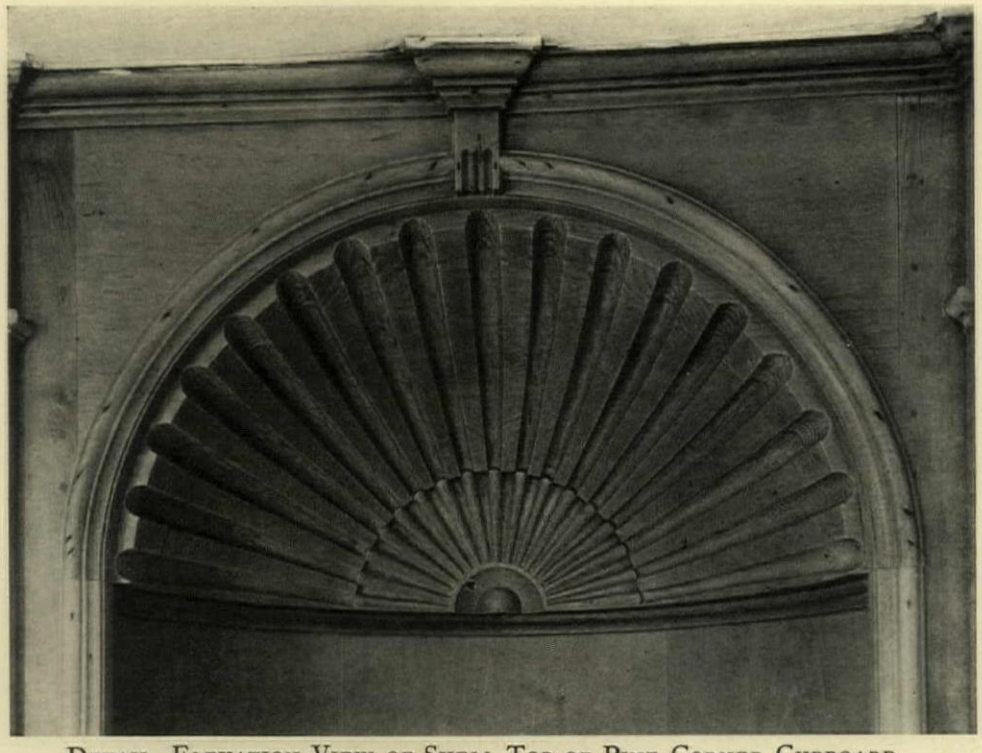


DETAIL, CARVED SHELL TOP OF CUPBOARD
WIGGIN-MILLER HOUSE, STRATHAM, N. H.

The two cupboards shown on page 184 represent a type where perhaps some local carpenter was attempting to suggest the appearance of the shell-topped cupboard, by introducing this scalloped effect around the inner edge of the semi-circular outlined top of the upper recess. This is more probably the case with the left-hand example. That upon the right of the page developing a sophistication and skill of design, that quite transcend any suggestion of shallow imitation.

The two straight-top types on page 182 are of less usual design. In the case of that shown at the right, it is probable that the low ceiling of the room forced both the width and omission of even the elliptical arched top,—and, while this is not the case with the other example, here, too, the unusual width of the design,—as well as the use of paneled doors to enclose the upper shelving, indicates definite reticence and individuality on the part of its builders.

Most of the examples shown here are early types, some—as in the George Blanchard House (Pages 185, 186)—being original to the structure. In many cases these early examples can be identified by the use of a "bolection" moulding around the arched top or along the sides of the opening. In other cases, what was originally a very simple and primitive design, has been later supplemented by pilasters or other extensions, until it has become more pretentious,—and its actual age and integrity somewhat obscured in the process.



DETAIL, ELEVATION VIEW OF SHELL TOP OF PINE CORNER CUPBOARD
WIGGIN-MILLER HOUSE, STRATHAM, NEW HAMPSHIRE

where it now shows of less height than the ceiling of the room where it is located. To the writer's knowledge, just half of the cupboards here illustrated came from other houses than those in which they are now located. But their removal often has been the cause of their preservation down to the present day,—and—in nearly every case—they are still being preserved in a location near the site of their origin,—and often by descendants of the very families to whom they originally belonged!

FRANK CHOUTEAU BROWN, F.A.I.A.

The example on page 177, for instance, speaks eloquently of its early date, and yet sometimes the primitive simplicity of such a design has been evolved, under similar conditions of remoteness from larger cities, at a much later period.

It should be remembered that, because of the decorative and appcaling character of the corner cupboard, it has very often been separated from its original place of building. A family sells an old homestead, but reserves a mantel or two, as well as their old Corner Cupboard. As a rule, the earliest Cupboards were built for houses with low ceilings; and consequently, when a Cupboard is of somewhat lesser height than the room of which it is now a part,—one may suspect it to have been originally built for another house than that in which it is now placed. Of course, that must always be the case when they are preserved in some Museum or Historical Society,—although that fact will also the more generally guarantee the authenticity of their local origin. In so many instances has the corner cupboard been transposed from its original to another location, that it is unreliable to expect its date to be the same as that of the house in which it may now be placed.

That this is not always the case, is proved by the Cupboard in the Norton House at Annisquam (pages 189 and 190), which was found by the present owners built into one of the upstairs room corners, and removed by them—for greater usefulness—to the lower story,—

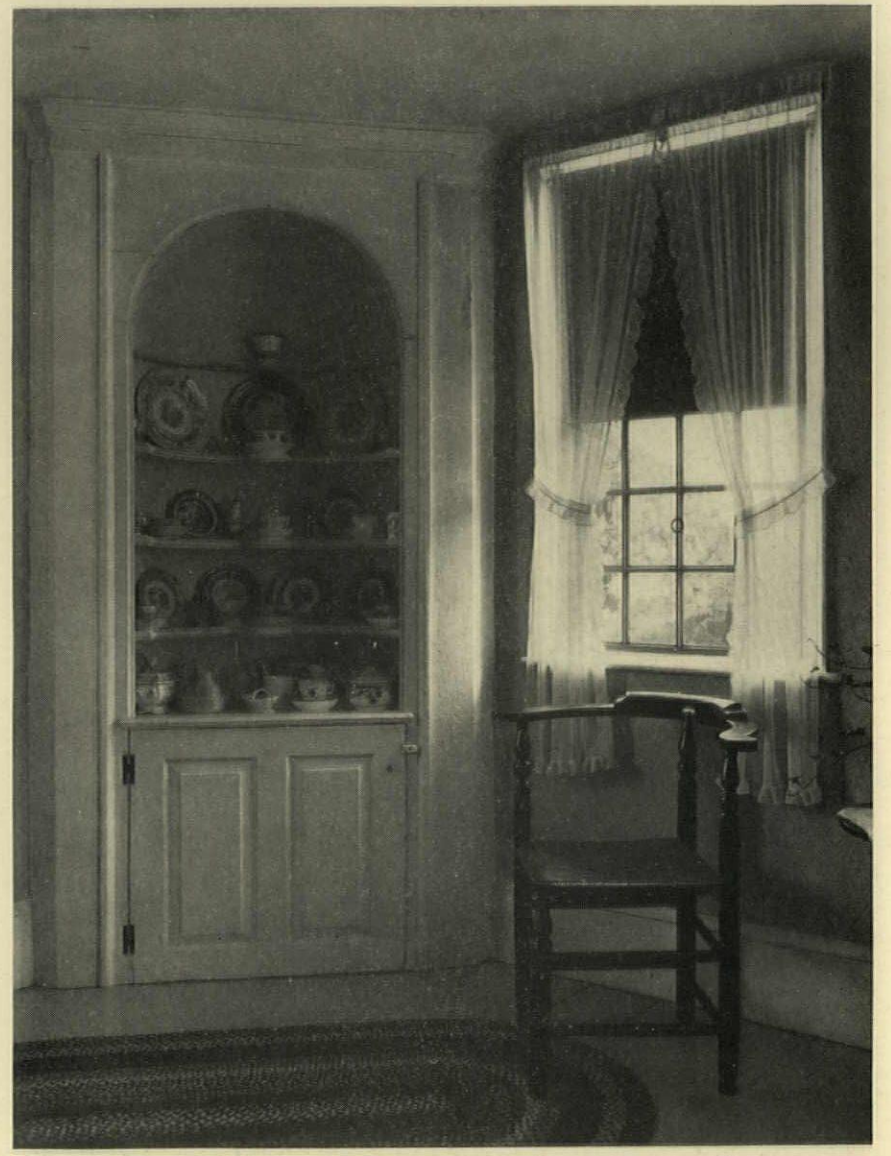
Frances and Mary Allen

CORNER CUPBOARD IN OLD MANSE
DEERFIELD, MASSACHUSETTS

STRAIGHT-TOP CORNER CUPBOARD, WITH PANELED DOORS
COL. ALEXANDER FIELD HOUSE, LONGMEADOW, MASS.

STRAIGHT-TOP WALL CUPBOARD, WITHOUT UPPER DOORS
McCREERY HOUSE, CORNWALL, NEW YORK

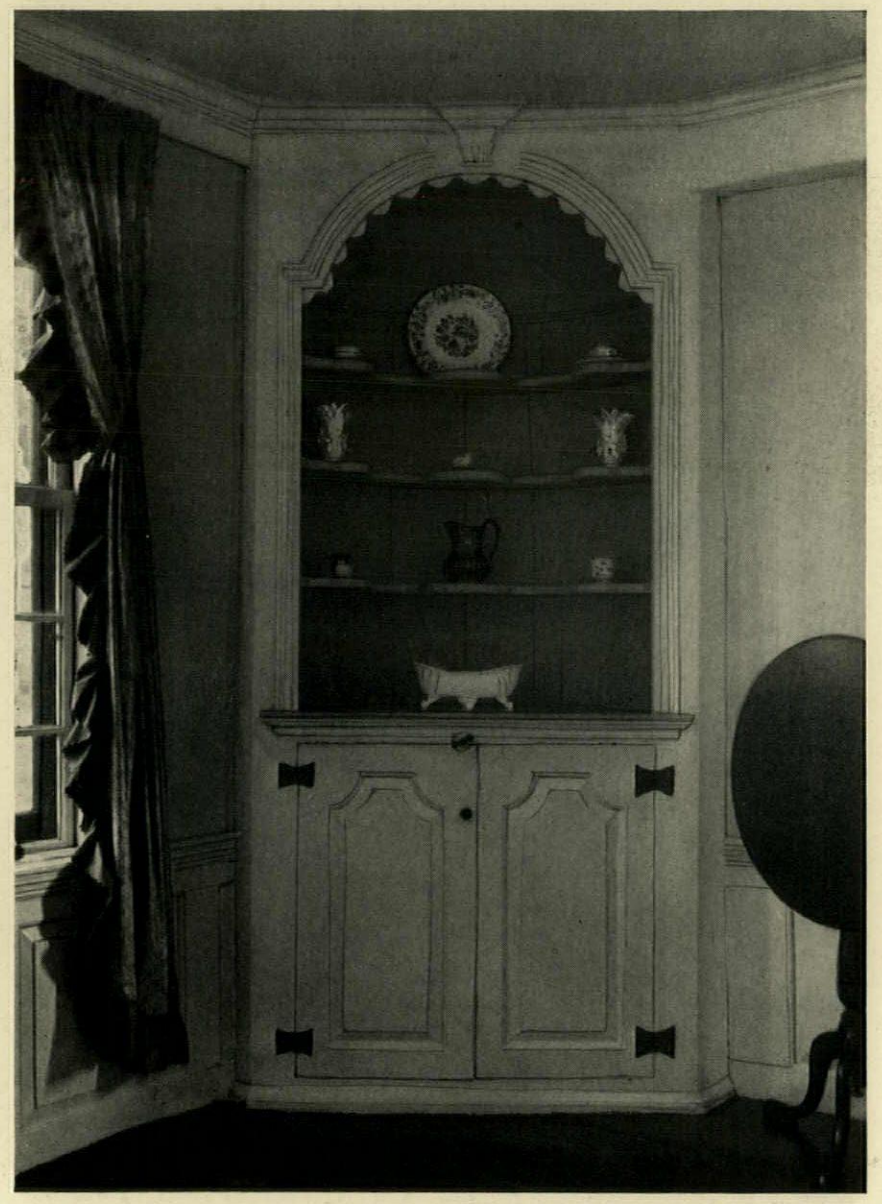
RECESSED WALL CUPBOARD, WITH OPEN ARCHED TOP
TIMOTHY WOOD HOUSE, HALIFAX, MASSACHUSETTS



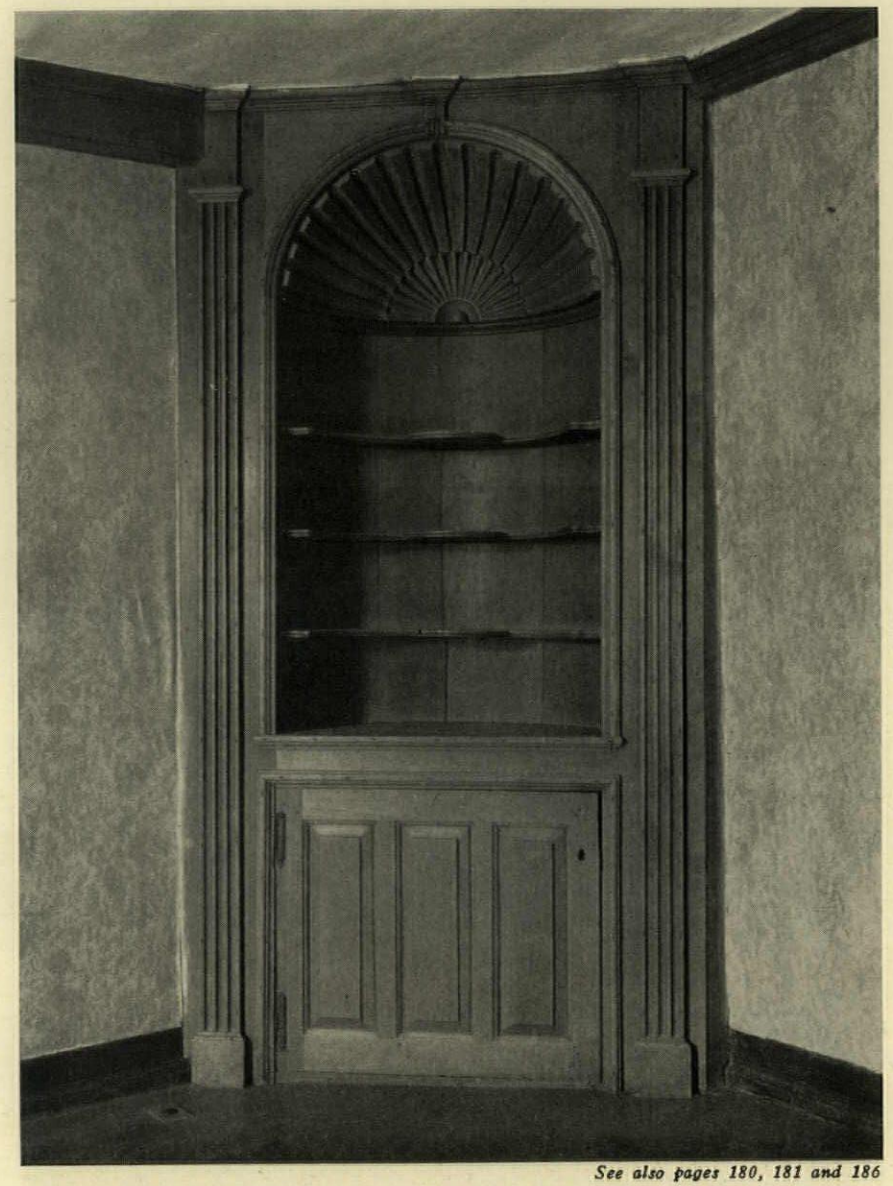
EARLY CORNER CUPBOARD, WITH OPEN ARCHED TOP
JABEZ WILDER HOUSE, HINGHAM, MASSACHUSETTS

Courtesy Historic American Buildings Survey

OPEN CORNER CUPBOARD, WITH SCALLOPED SEMI-CIRCULAR TOP
DANIEL GOULD HOUSE, BOXFORD, MASSACHUSETTS

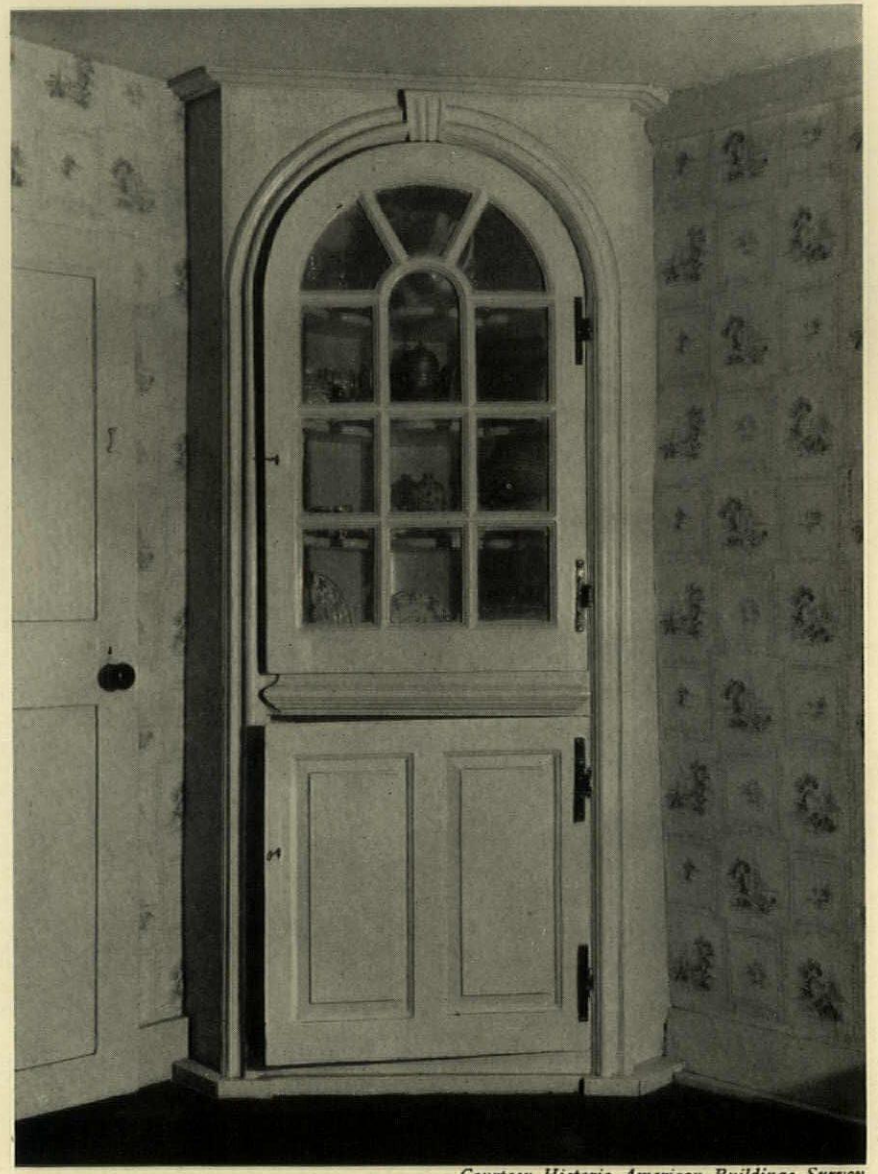


OPEN CORNER CUPBOARD, WITH SCALLOPED SEMI-CIRCULAR TOP
DANIELS HOUSE, SOMERS, CONNECTICUT



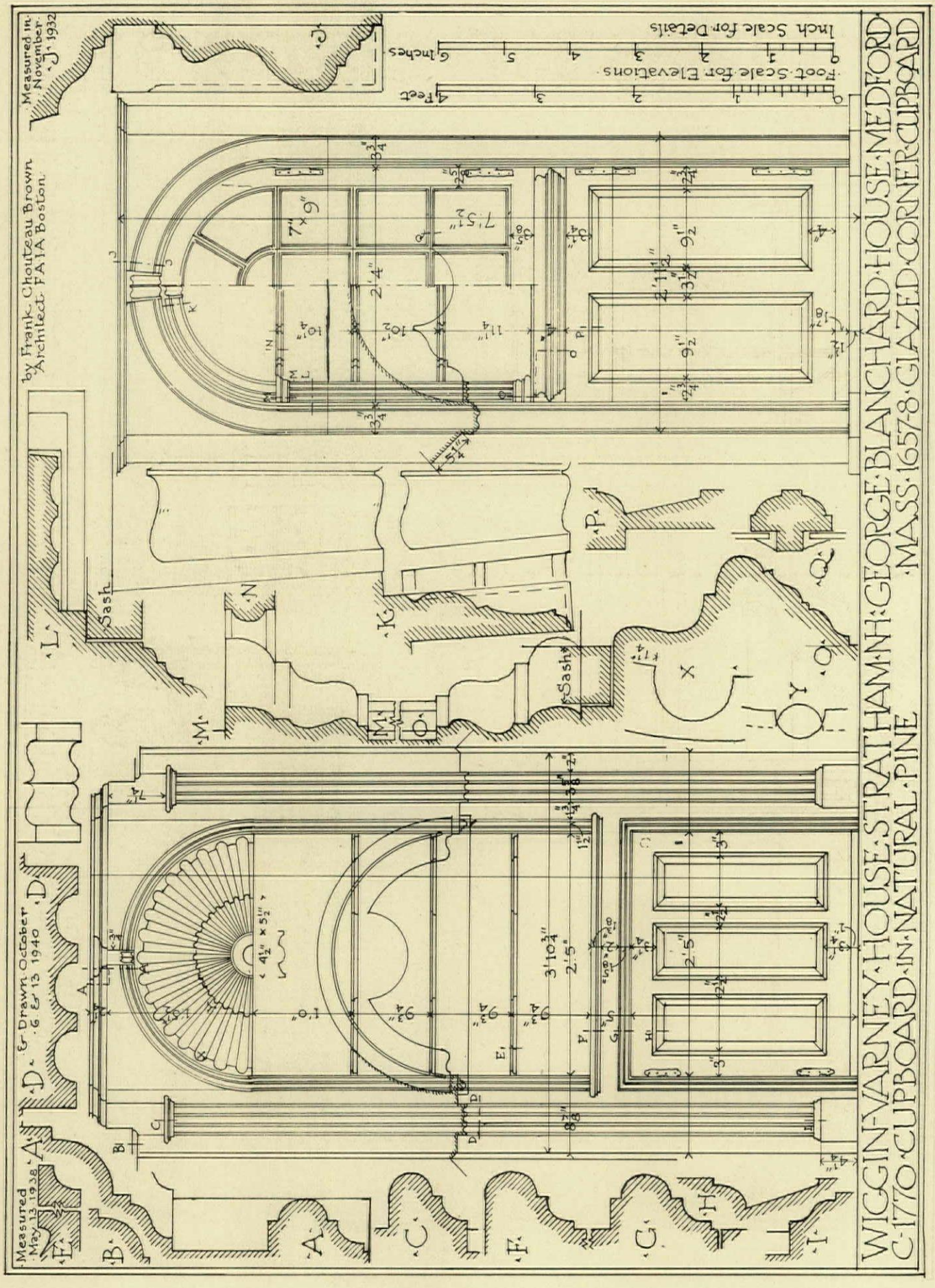
See also pages 180, 181 and 186

PINE OPEN CORNER CUPBOARD, WITH SHELL TOP
WIGGIN-MILLER HOUSE, STRATHAM, NEW HAMPSHIRE



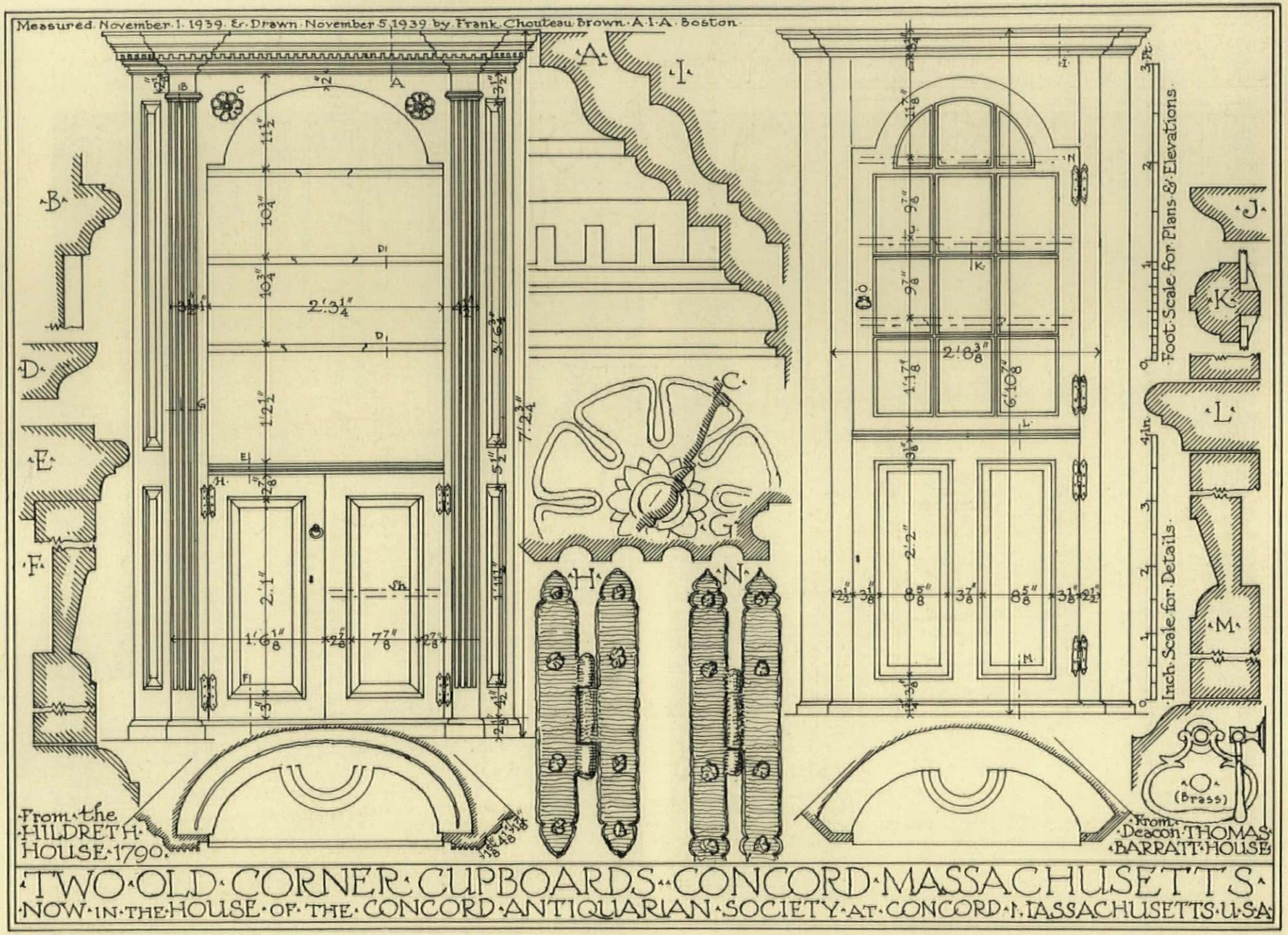
Courtesy Historic American Buildings Survey

EARLY CORNER CUPBOARD, WITH GLAZED SEMI-CIRCULAR-TOP DOOR
GEORGE BLANCHARD HOUSE, MEDFORD, MASSACHUSETTS


WIGGIN-VARNEY-HOUSE-STRATHAM-N-H-GEORGE-BLANCHARD-HOUSE-MEDFORD
C-1770-CUPBOARD-IN-NATURAL-PINE
MASS-1657-8-GLAZED-CORNER-CUPBOARD
Measured in November 1932 by Frank Chouteau Brown Architect FAIA Boston
Measured May 13 1938 & Drawn October 6 & 13 1940
Foot Scale for Elevations
Inch Scale for Details
Sash
Sash

[186]

[187]


Measured November 1. 1939. & Drawn November 5 1939 by Frank Chouteau Brown. A.I.A. Boston.
A
B
C
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L
M
N
Foot Scale for Plans & Elevations
Inch Scale for Details
(Brass)
From the HILDRETH HOUSE 1790.
From Deacon THOMAS BARRATT HOUSE
TWO OLD CORNER CUPBOARDS CONCORD MASSACHUSETTS
NOW IN THE HOUSE OF THE CONCORD ANTIQUARIAN SOCIETY AT CONCORD MASSACHUSETTS U.S.A.

Now in Concord Antiquarian House

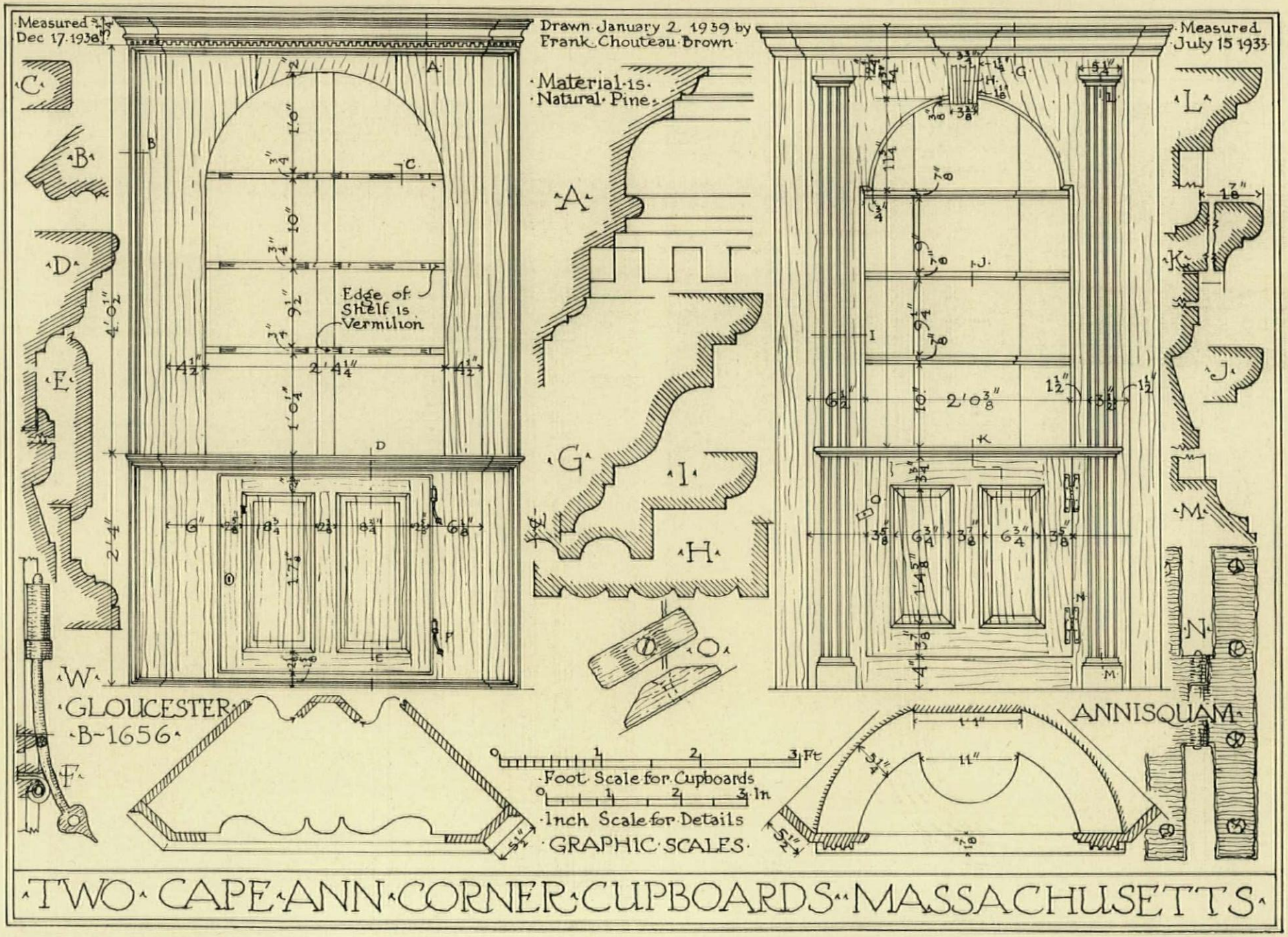
OPEN CORNER CUPBOARD, WITH SEGMENT-ARCHED TOP
From HILDRETH HOUSE, CONCORD, MASSACHUSETTS

Now in Concord Antiquarian House

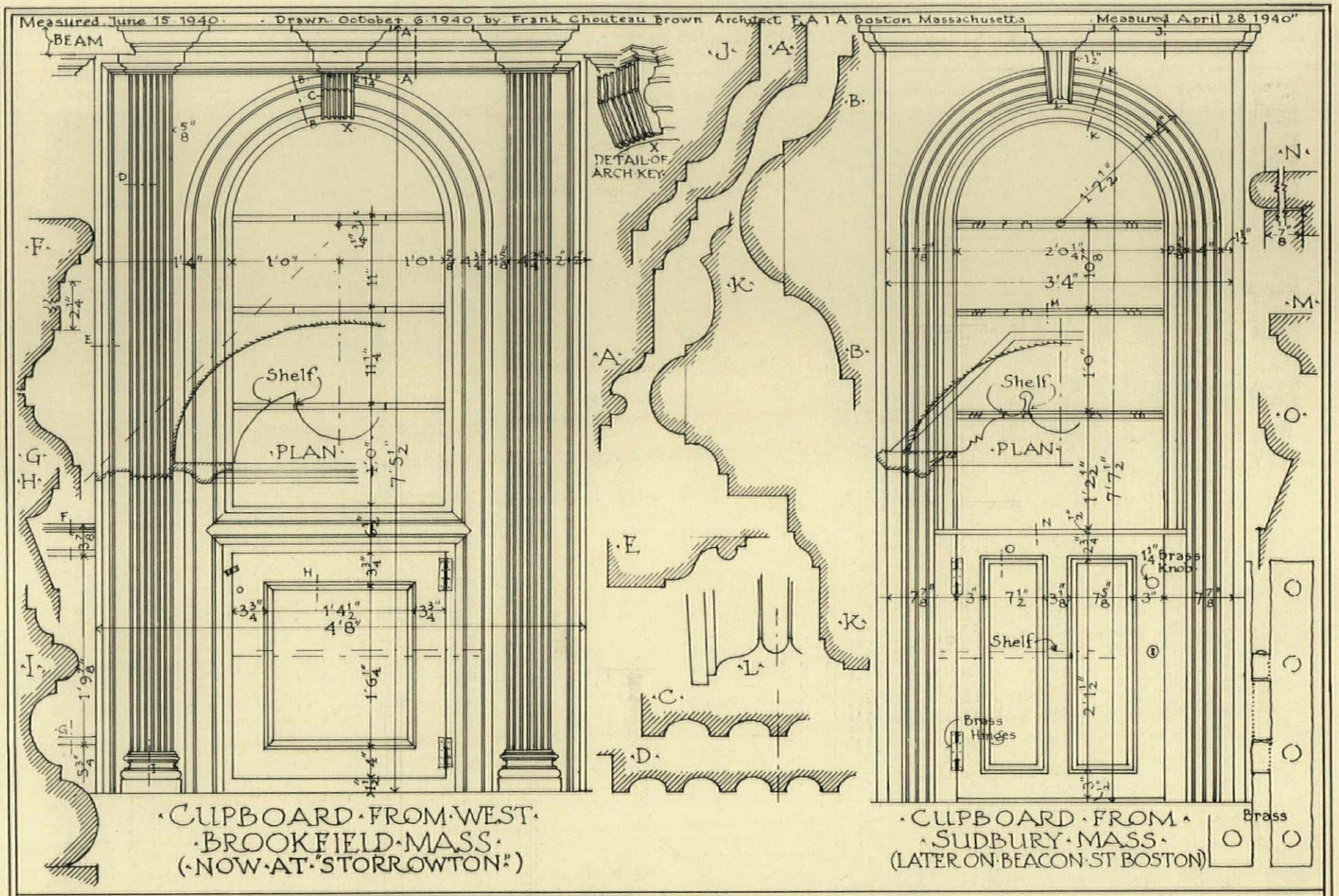
CORNER CUPBOARD, WITH CIRCLE TOP GLAZED DOOR
From DEACON THOMAS BARRATT HOUSE, CONCORD, MASS.

PINE CORNER CUPBOARD, WITH OPEN SEMI-CIRCULAR TOP
WILLIAM HASKELL HOUSE, WEST GLOUCESTER, MASS.

PINE CORNER CUPBOARD, WITH OPEN SEMI-CIRCULAR TOP
NORTON HOUSE, ANNISQUAM, MASSACHUSETTS



TWO CAPE ANN CORNER CUPBOARDS MASSACHUSETTS



TWO OLD MASSACHUSETTS CORNER CUPBOARDS

OPEN CORNER CUPBOARD, NOW IN GILBERT HOUSE, "STORROWTON," MASSACHUSETTS

OPEN CORNER CUPBOARD, NOW IN PHILLIPS HOUSE, "STORROWTON," MASSACHUSETTS

TWO MASSACHUSETTS EXAMPLES OF OPEN, ARCHED-TOP, CORNER CUPBOARDS

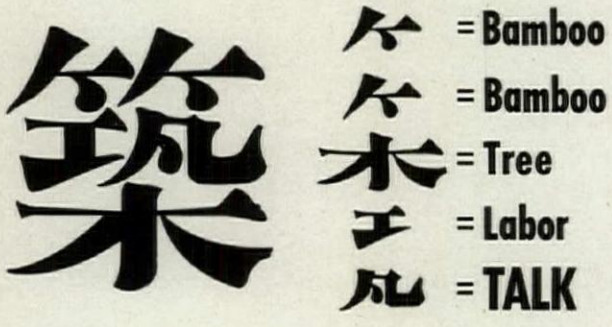
PENCIL POINTS DATA SHEETS

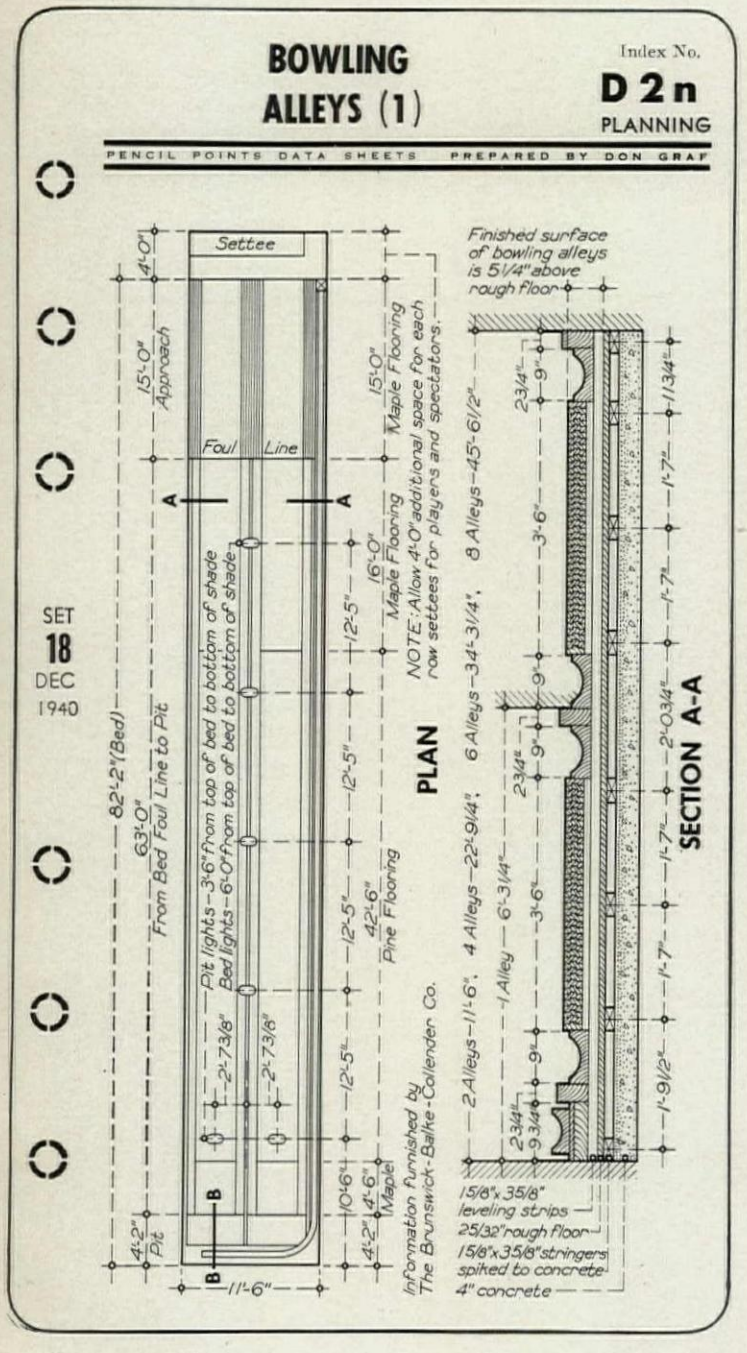
Prepared by DON GRAF, B.S., M.Arch.

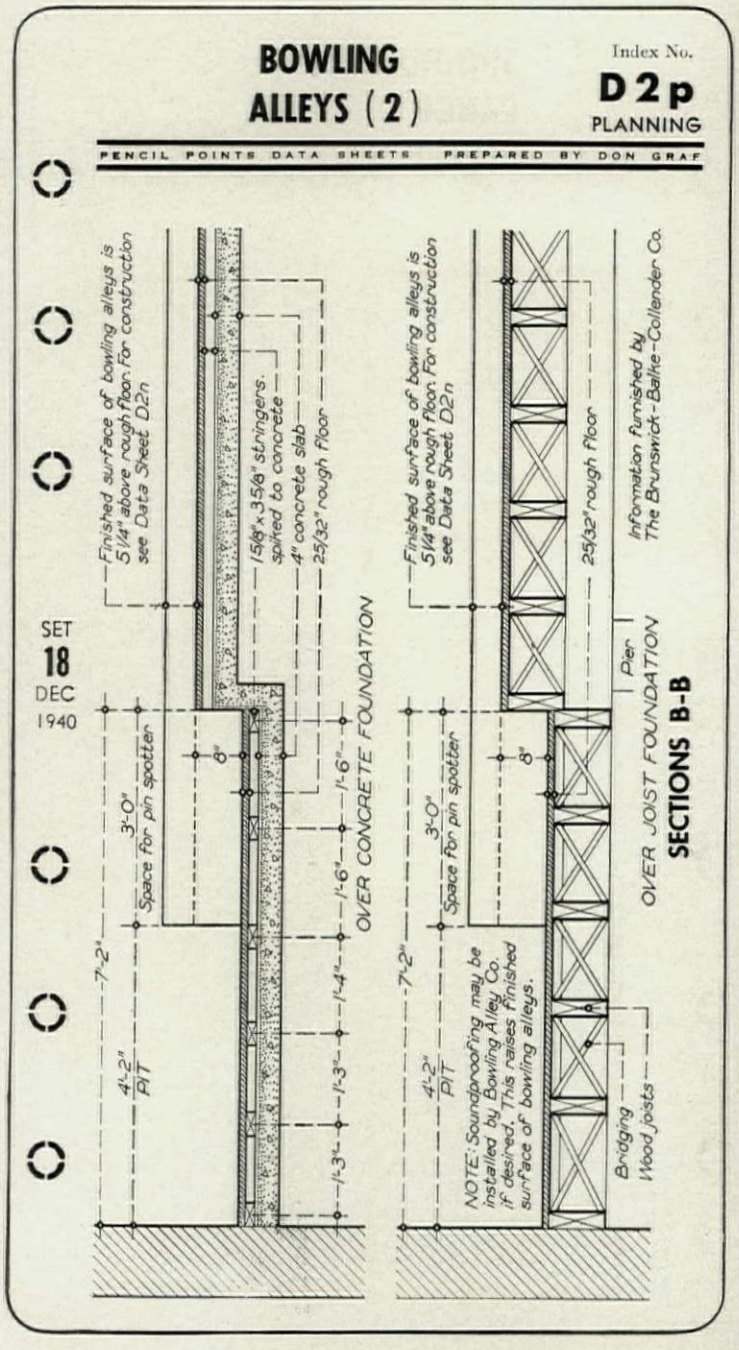
THE DISREGARD OF THE OBVIOUS

Henry Ford once said that *weight* was the greatest enemy of human progress. The idea of buying a ton and a half of machinery to carry a 150-pound woman to the corner grocery is only one example of how sheer weight wastes materials and labor. In the building industry we all know the constant search that is going on to produce materials having less weight. But there is another waste which we think is equally serious.

The illustration shows the Chinese symbol for "building." Like many of the Chinese characters, it is a hieroglyph—or picture writing. The upper part of the character is formed by two symbols for bamboo—a material much used for scaffolding and other purposes. The lower part of the character represents a tree and connotes lumber. On the left is a figure which looks like an English letter H on its side, indicating labor. The remarkable perception of the Oriental, however, is indicated in the remaining symbol which stands for TALK! Anybody who has ever been connected with







the building business will realize the superfluous abundance of this ingredient in any construction operation!

There are about 2,000 building material manufacturers in these United States. Suppose each of them prints only 8 pages a year on an average, which they mail to each architectural office. That is a total of 16,000 printed pages which each architect and his drafting force should read if they are to know what the material market affords, and how to use these products. Now the architectural office has, let us say, 250 working days a year. Divide 16,000 by 250, and we find that all you have to do to keep up with the times is to go through 64 printed pages each working day. Talk!

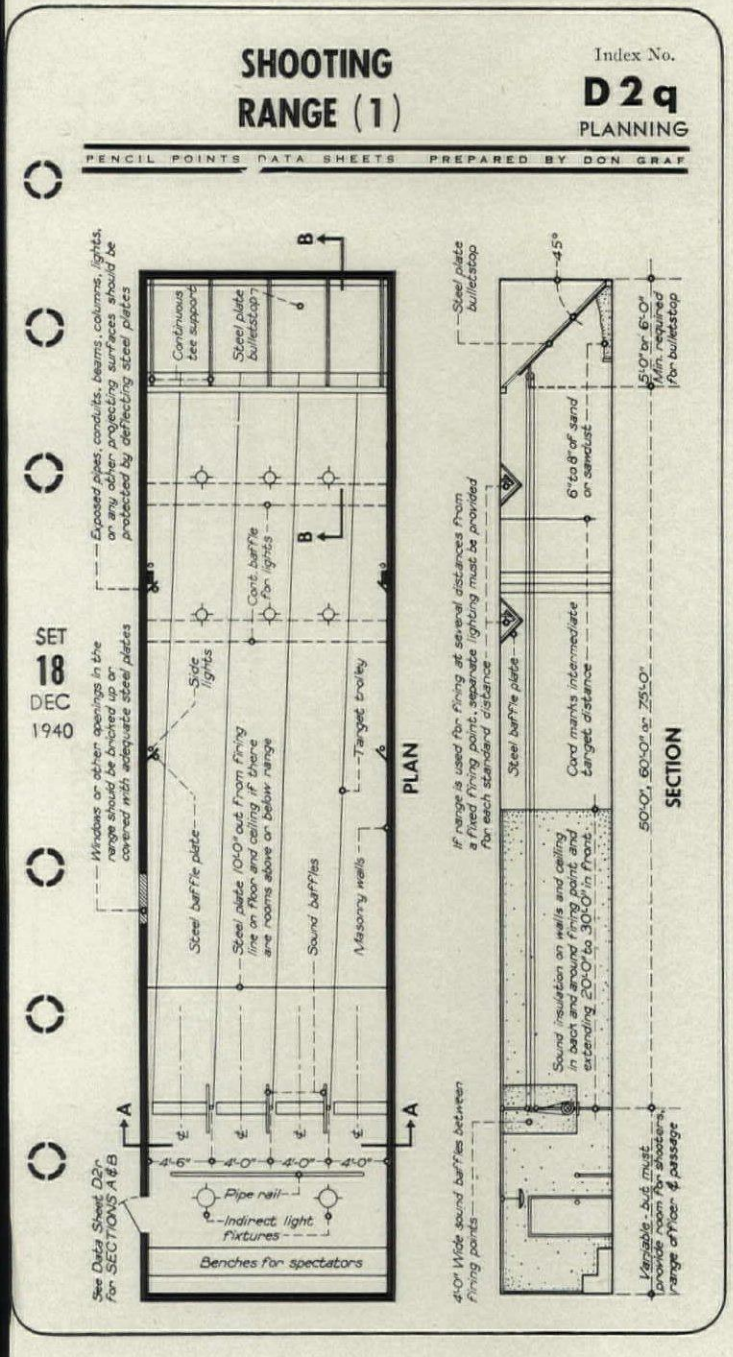
Now, maybe 8 pages average for each manufacturer seems to be too much. Actually a survey was made in 1928 and it was found that this figure was approximately correct.

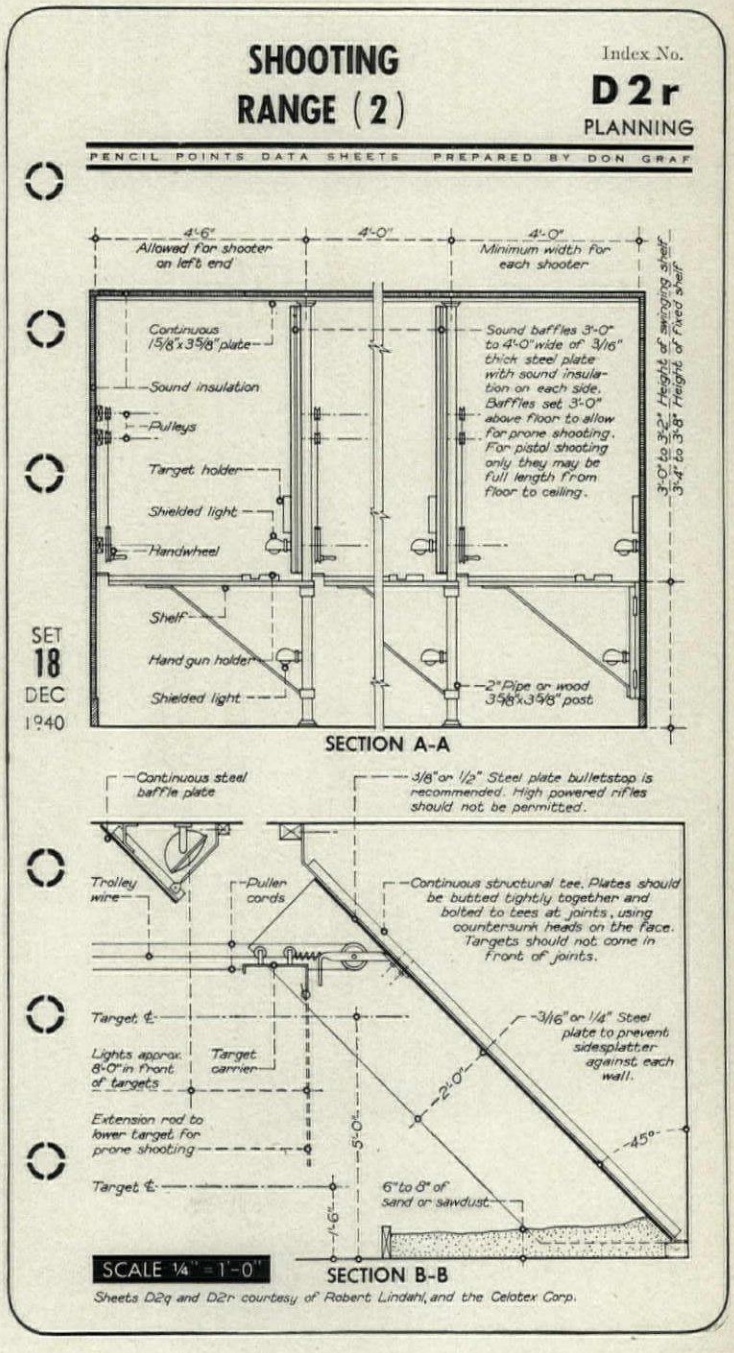
One manufacturer who makes a building product has over 500 printed pages describing his equipment. Another manufacturer has a catalog containing 17,868 words of text. Basing the reading time on 180 words a minute, it would take an architect one hour and 40 minutes just to read this one catalog.

Any one who has ever attended a chapter meeting of the local professional architectural organization will realize that the architects not only take punishment in the form of conversational prolixity—but they can also dish it out.

Building codes are a serious source of waste. No human documents have ever reached the height of

(Continued on page 814)

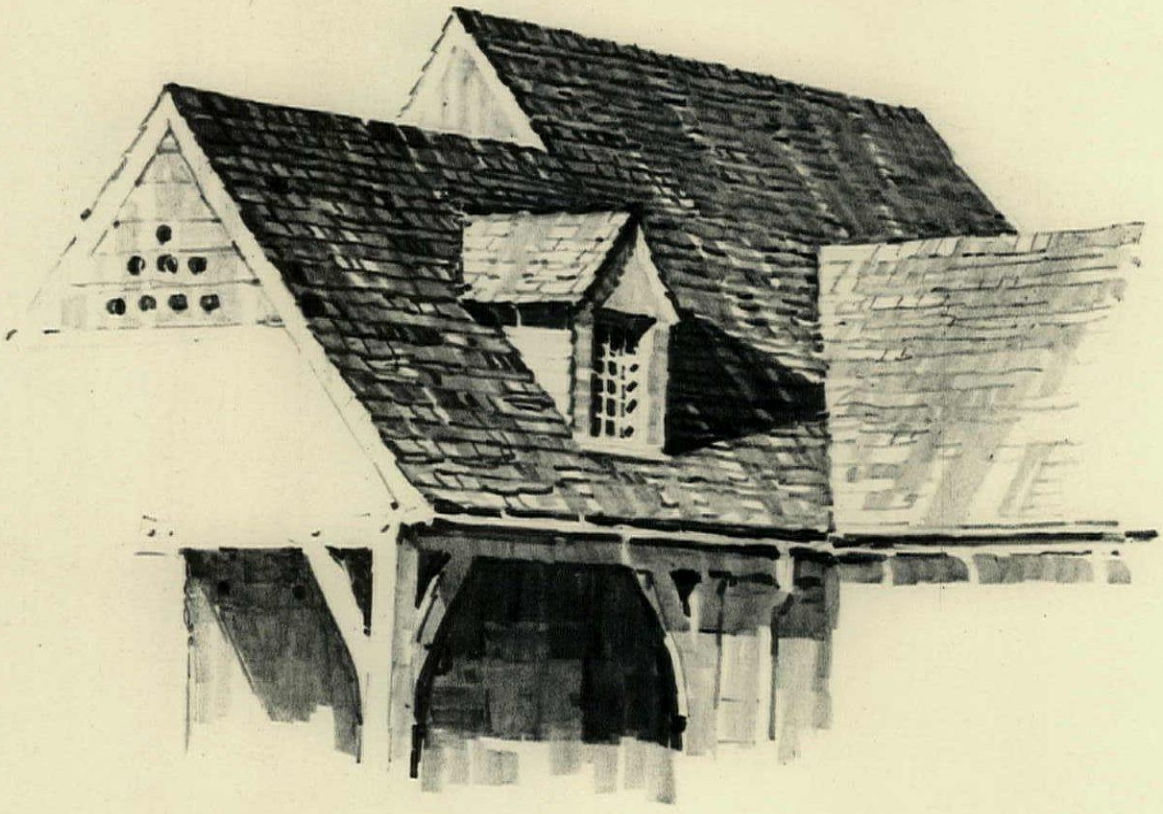




verbosity and unintelligibility attained by any legal document. We submit in evidence the following from the "Safety Code for Elevators":

"Provision shall be made to render the car operative, independent of the position of the hoistway doors, in case of fire, panic, or other emergency, by means of an emergency release conforming to Rule 123, except that elevators which can be started from a landing shall not be provided with an emergency release unless equipped with car switch for dual operation, in which case an emergency release shall be installed but shall be so arranged that when the elevator is operated without an operator in the car the emergency release shall be inoperative."

SHRINE AT TREGASTEL, BRITTANY



LESSON 9—THE INDICATION OF ROOF TEXTURES

PENCIL BROADSIDES—9

BY THEODORE KAUTZKY

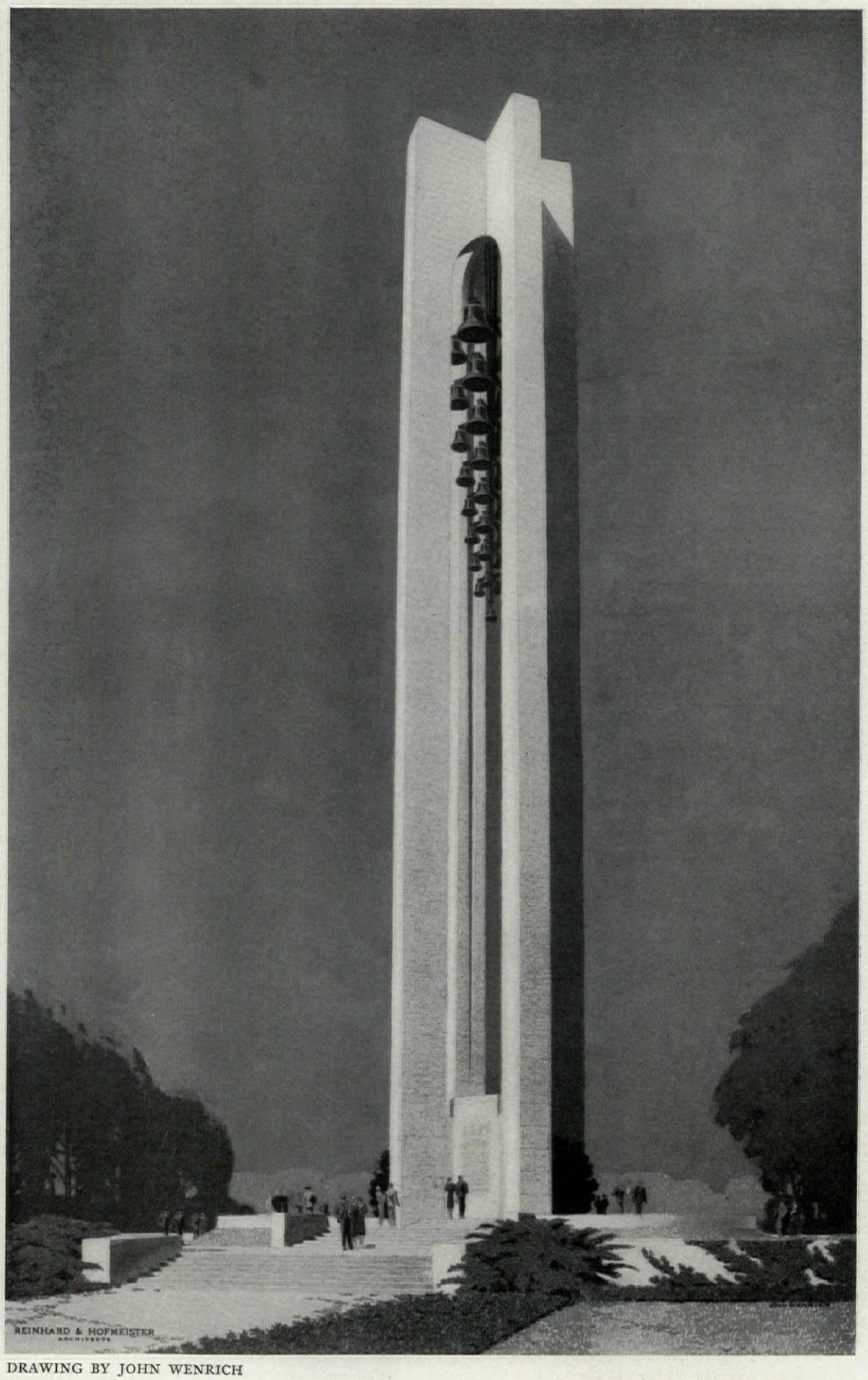
Having learned something about drawing trees, upon which we have been concentrating for the last four lessons, let us turn again to the problem of indicating the textures of architectural materials. For this lesson I have chosen as examples two different types of roof—one old and weatherbeaten and the other new but pleasantly irregular of surface.

Recall that in Lesson 4 we decided that the shingled roof required three principal directions of pencil strokes—parallel to the grain of the wood, parallel to the shingle courses, and parallel to the direction of light. The same general rule may be applied here. The difference between the rough and the smooth texture is achieved by the greater or less degree of irregularity of the individual strokes, not by their general directions. The irregularity of the strokes is to be found in their departure from both straightness and uniformity of tone.

The quality of any texture can be best rendered by one who comprehends how that texture came into being. This means knowing not only how the individual units are put together and supported to form, for example, a roof, but also the characteristics of these units—shingles, shakes, tiles, slates or whatnot—and, most important, the things that happen to such surfaces by the action of nature over a period of time.

Rain, falling upon a sloping roof and running down its length, streaks it with dirt washed from the sky or previously deposited by the wind. Melting snow does likewise. Alternate wetting and drying, heat and cold, affect soft materials like wood while leaving harder substances like slate or terra cotta essentially unchanged in form. Shingles and shakes become furrowed as the softer part of their grain is eroded away and also tend to curl up at the edges instead of lying permanently flat. Sagging between rafters tends to develop with age in wood construction, producing a more or less perceptible waviness across a roof that has yielded again and again to snow loads and wind pressure. Wind-blown seeds and spores find lodging in the crevices of a roughly textured roof and some of them develop into mosses and lichens if conditions are favorable. Shingles or slates become loosened in old roofs and slip out of place or even blow completely away. All of these things and many more enter into the development of a roof texture. Understanding them, you will be better able to draw convincingly. Imagination, the ability to see beyond the obvious, to penetrate with your mind below the surface of things, is necessary if you are to be an artist. But we digress, perhaps!

The examples shown here illustrate many of the things I have dwelt on during all the preceding lessons. Must I really point them out to you? The cleanly-defined broad strokes with few dominant directions; the gradation of tones; the contrasts of light against dark, dark against light; the avoidance of monotony; the sparkling little flecks of white paper showing through; the carefully considered silhouette: you can surely see them. And what I can do, you can do—if you will only *work*, and THINK!



DRAWING BY JOHN WENRICH

DEEDS MEMORIAL, DAYTON, OHIO — REINHARD & HOFMEISTER

SERVICE DEPARTMENTS

THE MART. In this department we will print, free of charge, notices from readers (dealers excepted) having for sale or desiring to purchase books, drawing instruments, and other property pertaining directly to the profession or business in which most of us are engaged. Only those items will be listed for sale which we can no longer supply from our own stock. Such notices will be inserted in one issue only, but there is no limit to the number of different notices pertaining to different things which any subscriber may insert.

PERSONAL NOTICES. Announcements concerning the opening of new offices for the practice of architecture, changes in architectural firms, changes of address and items of personal interest will be printed free of charge.

FREE EMPLOYMENT SERVICE. In this department we shall continue to print, free of charge, notices from architects or others requiring designers, draftsmen, specification writers, or superintendents, as well as from those seeking similar positions.

SPECIAL NOTICE TO ARCHITECTS LOCATED OUTSIDE OF THE UNITED STATES: Should you be interested in any building material or equipment manufactured in America, we will gladly procure and send, without charge, any information you may desire.

Notices submitted for publication in these Service Departments must reach us before the twelfth of each month if they are to be inserted in the next issue. Address all communications to 330 West 42nd Street, New York.

THE MART

WANTED: A copy of *Architec-tonics, The Tales of Tom Thumtack, Architect*, published by William T. Comstock Company, 1914. State price and condition of book. Communicate with Miss Flagg, care of PENCIL POINTS.

We will pay 35c per copy, plus postage, for copies of the May and June, 1940, issues of PENCIL POINTS. Must be in good condition. Subscription Department, care of PENCIL POINTS.

Solomon Berzin, c/o Dept. of Public Works, Room 632, 125 Worth Street, New York, would like to obtain the following copies of PENCIL POINTS, which contain Freese's articles on "The Geometry of Architectural Drafting": August through December, 1929; January through May, July, September and November, 1930; January, February, April, July, August, November, 1931; May, August and December, 1932.

Jordan R. Kilbrick, 288 Columbia Road, Dorchester, Mass., would like to obtain a copy of the December, 1939, issue of PENCIL POINTS, in good condition. He will either pay cash or offer October or November, 1938, issues in exchange. He would also like to obtain a second-hand copy of *Architectural Graphic Standards*.

Meyer J. Sturm, 708 Church Street, Evanston, Ill., has for sale the following books: *The Georgian Period*, measured drawings of the Colonial period in New England, in 12 portfolios; *Reference Plates*, a file from architectural publications, over 15,000 plates, classified fully and indexed, metal filing cabinet with 5 drawers included. He also has the following rare prints: One 18x23 *Acropolis at Athens;* 18x23 *East View Temple of Erectheum;* 11x17 *Exterior of Certosa at Pavia*, remarkable steel engraving in complete detail; 11x16 *Geo Batta Piranesi*, perfect, and very rare.

MUST SELL: Due to the death of an architect, his family has the following for sale: Drawing table 61" x 43", with drawer, newly overhauled; architect's level, tripod, target, miscellaneous T-squares and triangles, etc. Please address: Pencil Pointer, 4258 W. 21st Place, Chicago, Ill., phone LAWndale 7232.

Office of Louis A. Brown, Jr., National Bank Building,

(Continued on page 34, Advertising Section)

TO GIVE CLIENTS A NEW "HIGH" IN FLOOR-COVERING SERVICE . . .

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IN completing the floors at the Cedarcrest Sanitarium of the Connecticut State Hospital at Newington, Conn., the architect's floor-covering selection was Nairn Battleship Linoleum. A wise choice! For this attractive, durable linoleum affords a degree of permanency, footease and quietizing properties not available in other floor materials.

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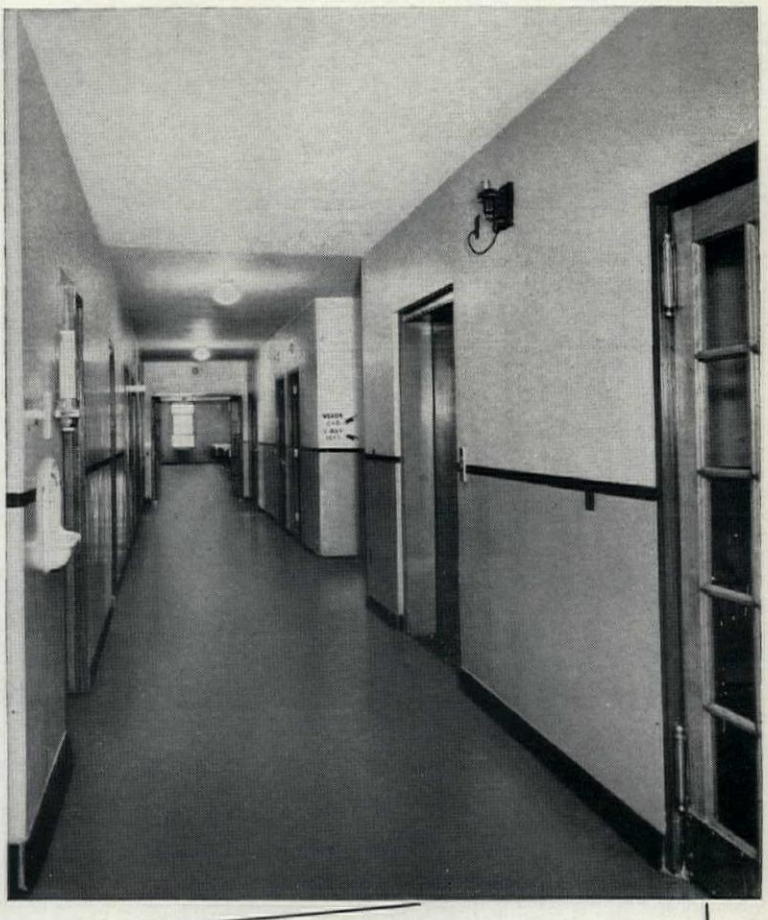

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Floors and Walls

(Continued from page 32, Advertising Section)

Charlottesville, Va., has the following magazines for sale: *Architectural Record*—May, June, 1934; January, June, July, August, September, November, December, 1939; January and February, 1940. PENCIL POINTS—January, April, September, October, November, 1936; January, February, May, December, 1937; March, May through October, 1939. October, 1938, of *Architectural Forum*. March, 1936, of *American Architect*. *House Beautiful*—January, February, March, May, June, 1937; September, November, December, 1938; Summer Number, September, October, 1939; January, 1940.

Frank Schmitt, 812 N. E. 15th Street, Oklahoma City, Okla., has the following copies of PENCIL POINTS for sale: March, June, July, August, December, 1922; February, April through December, 1923; January through April, 1930; February through July, October, November, December, 1934; 1924, 1925, 1926, 1927, 1928, 1931, 1932, 1933, 1935, 1937, 1938, complete. All are in new condition.

Jack H. Landes, 2934 N. Kilbourn Avenue, Chicago, Ill., has the following books for sale: *The Specification Record*, The American Specification Institute; *Living Architecture*, A. Waltersdorf; *American Architect Specification Manual*, 1928; *Applied Mechanics*, Alfred Poorman; *Concrete Designers Manual*, McGraw-Hill; *Graphical Analysis*, Wolf; *The Civil Engineer Pocket Book*, Trautwine; Kidder's *Architect's and Building Pocket Book*; Kidder's *Building Construction and Superintendence*, 3 volumes. All in excellent condition.

PERSONALS

LUCIAN MINOR DENT and A. L. AYDELOTT, *Architects*, have become associated for the practice of architecture, with offices at 801-802 First National Bank Building, Memphis, Tenn.

PRESTON J. BRADSHAW, *Architect*, has moved his office to 3670 West Pine Boulevard, St. Louis, Mo.

G. ADOLPH JOHNSON, *Architect*, has moved his offices from 22 Elm Street to the Slater Building, 390 Main Street, Worcester, Mass.

STRUCTON, *Building Service*, have moved their offices from 1847 Virginia Road to 308 North Kings Road, Los Angeles, Calif.

JAMES BLAUVELT & ASSOCIATES, New York, announce that Rebecca Leggett Baker has joined their organization. Mrs. Baker's past decorating career includes such work as the main dining room and lounge of the Gotham Hotel, and the Beekman Towers, both in New York, and the Rochester Hotel in Rochester, N. Y.

HOWARD MUESSE, *Architect*, has moved his office from Davenport, Iowa, to 205 Robinson Building, Rock Island, Ill.

HUBERT M. GARRIOTT and JOHN W. BECKER, *Architects*, 1204 Times Star Building, Cincinnati, Ohio, announce the association of Henry A. Bettman as partner. The new firm will be known as Garriott, Becker and Bettman.

THOMAS E. GREACEN II, *Architect*, has closed his office at 51 East 42nd Street, New York, and discontinued his architectural practice until further notice. He may be reached at 1135 Sixteenth St., N. W., Washington, D. C.

FRANCIS R. MacLEAY, *Consulting Engineer*, has become chief engineer for Corbetta Construction Company, Inc. The consulting office of Mr. MacLeay will be continued by his former associates under the name of MacLeay Associates, and will be headed by Chester Cronquist, at 415 Lexington Avenue, New York.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

RAMBUSCH DECORATED GLASS BLOCKS. — A.I.A. File No. 10-F. Folder describing the new Rambusch Block de Cor, a new treatment applied to standard glass blocks, whereby fusible colored glass powders are spread on the bricks and fired at a high temperature, the design adhering in a manner similar to terra cotta glazes. A variety of designs are illustrated including several designs for ecclesiastical use. 4 pp. 8½ x 11. Rambusch Decorating Co., 2 W. 45th St., New York, N. Y.

TRUSCON INTERMEDIATE AND HEAVY STEEL CASEMENTS. — A.I.A. File No. 16-e-1. Useful reference manual for architects covering the Truscon line of intermediate and heavy steel casements for residences and monumental buildings. Included are full size sections, specifications, Bonderizing and hardware data, standard types and sizes, installation details, glazing recommendations, etc. 36 pp. 8½ x 11. Truscon Steel Co., Youngstown, O.

HOLOPHANE BULLETIN SERVICE.—Issue No. 3 of a monthly bulletin service, designed to provide authoritative information for architects on specific lighting topics, presents a study of the lighting details of the department store of The G. Fox & Co., Hartford, Conn. 4 pp. 8½ x 11. Holophane Co., 342 Madison Ave., New York, N. Y.

RUSTLESS STAINLESS STEEL. — Attractive brochure issued to commemorate the completion of a plant enlargement program inaugurated in 1935, illustrates and describes in detail each step in the production of stainless steel bars and wires. 20 pp. 8½ x 11. Rustless Iron & Steel Corp., Baltimore, Md.

DUTCH BOY QUARTERLY.—Issue No. 3, Volume 18, of a series of quarterly publications presenting practical and technical discussions of paint materials, lead and related products, describes the interior redecorating of a large apartment hotel, controlled drying of red-lead paint and the painting of wood shingles used as siding. National Lead Co., 111 Broadway, New York, N. Y.

1294 WAYS.—Illustrated publication describing the latest developments in the air conditioning, refrigeration and heating fields. It cites the newest improvements in home, office, store and factory weathermaking and briefly outlines the 1294 ways Carrier equipment aids industry, business and the home. Photographs of equipment range from inexpensive window ventilators to large centrifugal machines and from oil burners to frosted food cabinets. Carrier Corporation, Syracuse, N. Y. *Published by the same firm, "Carrier Water Heater — Type 60-B." Folder with descriptive and specification data covering a new automatic water heater for domestic hot water storage. 8½ x 11. "Carrier Evaporative Condensers." Set of bulletins giving detailed descriptions of three types of evaporative condensers for condensing refrigerant gases by evaporation. Specifications, dimensions, etc. 8½ x 11.*

TOILET ROOM REQUIREMENTS. —Catalog No. 78 for 1941 offers a guide chart to aid in selecting the proper type of Sanymetal toilet partition in the proper finish and material for specific types of installations. It presents five types of toilet partitions in wider range of finishes, colors and materials. New ideas in toilet room environments are presented in striking color combinations showing how the extra dimension of color can be employed in designing colorful attractive toilet rooms. Included is description of Sanymetal's three types of finishes also toilet room, shower stall and shower cabinet installation layouts with descriptive text. Sanymetal Products Co., Inc., 1705 Urbana Road, Cleveland, O.

HOLLISTON STURDI-DUC WINDOW SHADES. — A.I.A. File No. 35-p-5. Architect's filing folder containing complete descriptive and specification data covering a line of window shades especially suitable for schools, hospitals, public buildings, gymnasiums, auditoriums and laboratories. Set of samples of shade cloth in five different colors is attached to folder. 8½ x 11. The Holliston Mills, Inc., Norwood, Mass.

(Continued on page 39)

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HUNDREDS of school and hospital maintenance staffs are tossing bouquets to architects who have specified long-lasting Armstrong's Asphalt Tile floors. And don't think the boards aren't happy.

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FOOTSTEPS DON'T RESOUND *on the resilient floor of Armstrong's Asphalt Tile in this auditorium of the Chaffey Junior College, Ontario, Cal. Five rich colorings, tan marble, old rose marble, travertine marble, Pompeian red, and black keep this area from looking cold and institution-like. Architects: Allison & Allison; flooring contractor: Seaside Industries (Los Angeles).*

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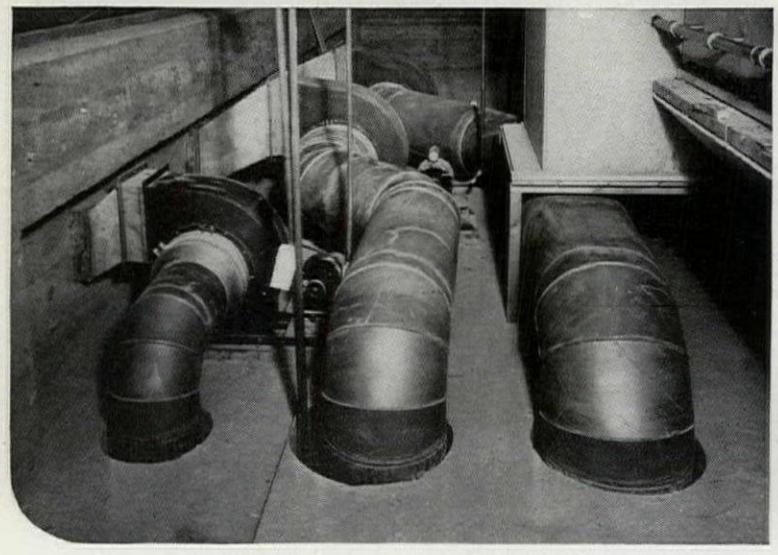

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 36)

PERSPECTIVE WINDOWS.—A.I.A. File No. 16a.—Bulletin describing the outstanding features of a new type of double sash window without muntins or mullions for homes, public buildings, factories, office buildings, etc. 8 pp. 8½ x 11. Perspective Windows, Inc., 646 N. Michigan Ave., Chicago, Ill.

DRAFTING ROOM STANDARDS FOR STEEL STAIRS. — A.I.A. File No. 14-d. Looseleaf handbook designed to assist the architectural profession with details and specifications for plain steel stair construction, including various items of ornamental work and safety treads thereon. The data presented is based upon actual production practices followed by steel stair manufacturers and is a composite selection of the best ideas of the architectural profession. 8½ x 11. National Association of Ornamental Metal Manufacturers, 209 Cedar Ave., Takoma Park, Washington, D. C.

TACO HEATERS FOR HOT WATER SUPPLY. — Catalog A-99 describes and illustrates the complete line of Taco water heaters of both the storage and tankless types. Included are rated capacities and dimensions, typical installations, general installation details, etc. 16 pp. 8½ x 11. Taco Heaters, Inc., 342 Madison Ave., New York, N. Y.

Published by the same firm, "Taco Specialties for Warm Water Heating." Catalog B-99 illustrates a full line of Taco warm water heating specialties. In addition to information on the Taco-One Venturi system, gives for the first time, in simple table form, complete information on how to size the average two-pipe forced circulating warm water job. Design tables, illustration and piping convection details. 12 pp. 8½ x 11.

NEW ILG UNIT HEATER.—Bulletin illustrating and describing the outstanding features of a new streamstyled unit heater. 8 pp. 8½ x 11. Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, Ill.

NEW FEATURE OF NESBITT SERIES W SURFACE.—Folder giving detailed description of a new feature of Nesbitt series W surface that permits the drainage of water from all the tubes and so prevents dangerous and costly freeze-ups. Application diagrams. 4 pp. 8½ x 11. John J. Nesbitt, Inc., Holmesburg, Philadelphia, Pa.

NEW DOWAGIAC ARROW GAS-FIRED WINTER AIR CONDITIONER.—Folder announcing and describing a new gas-fired winter air conditioner in a neat compact unit. Specifications. 4 pp. 8½ x 11. Dowagiac Steel Furnace Co., Dowagiac, Mich.

WELDING, BRAZING AND SOFT SOLDERING OF MONEL, NICKEL AND INCONEL.—Bulletin T-2 presents instructions on all joining processes applicable to Monel, K Monel, nickel, Z Nickel, Inconel and Monel-, nickel- and Inconel-clad steel—soft soldering; silver brazing; oxy-acetylene and electric arc welding; unionmelt, bronze, carbon arc, plastic and resistance welding and furnace brazing; jigs, clamps, welding wires, fluxes, overlaying, hard surfacing, welded linings, cleaning, heat treatment, grinding and finishing. 30 pp. 8½ x 11. The International Nickel Co., 67 Wall St., New York, N. Y.

Published by the same firm, "Engineering Properties of Monel." Bulletin T-5 gives detailed information on composition, mechanical properties, and physical constants of Monel. It describes working properties, including methods of hot and cold working, annealing, machining, welding, brazing, soldering, and pickling, also outlines corrosion resistance and types of corrosion. Describes available mill products and castings. 12 pp. 8½ x 11.

SITKA SPRUCE. — New reference manual describing the properties and uses of various grades of Sitka spruce. Technical data is included. Profusely illustrated. 36 pp. 8½ x 11. West Coast Lumbermen's Assn., 364 Stuart Bldg., Seattle, Wash.

Published by the same organization, "Wood Sheathing." Folder discussing the advantages of sheathing boards of Douglas fir and West Coast hemlock.

STEEL MAKES THE HOME.—Attractive brochure traces briefly the progress of housing in the past. It shows some of the advantages of the use of steel in home construction, and reviews the progress brought about by the increased use of steel in heating and cooking appliances, bathtubs and other household equipment. 32 pp. 8½ x 11. American Iron and Steel Institute, 350 Fifth Ave., New York, N. Y.

(Continued on page 40)

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 39)

HOFFMAN INSTITUTIONAL LAUNDRY EQUIPMENT.—Folder illustrating and describing a line of equipment for hospital and institutional laundries. 4 pp. 8½ x 11. U. S. Hoffman Machinery Corp., 105 Fourth Ave., New York, N. Y.

MAINTENANCE PAINTING HANDBOOK.—Handy, pocket-sized book, representing the results and findings of many years of study and research. Thousands of maintenance painting problems which the American-Marietta Co. has successfully solved have been analyzed, classified, condensed, cross-indexed, and the solution presented in this new book. Descriptions of 42 specialized paint products, together with suggestions for their application, are also presented. 120 pp. Industrial Paint Clinic, Division of American-Marietta Co., 43 East Ohio St., Chicago, Ill.

MANUAL OF DIERKS STANDARDIZED INTERIOR TRIM.—New manual for architects covering Dierks standardized Trimpak, a line of packaged door and window trim. Included are designs of series of popular window frames, Colonial, streamline and standard mouldings, etc. 16 pp. 7 x 10½. Dierks Lumber & Coal Co., Dierks Bldg., Kansas City, Mo.

Published by the same firm, "Dierks Lumber Products."—A. I. A. File No. 19a. Useful spiral-bound reference book for architects contains the literature of the Dierks Lumber & Coal Co., and supplementary comment in regard to the lumber products described in this literature. 20 pp. 8½ x 11.

MACOLITE.—Folder illustrating and briefly describing a new, low-cost prefinished wall board suitable for the walls and ceilings of bathrooms and kitchens, also for commercial installations. Included is color chart. Marsh Wall Products, Inc., Dover, Ohio.

O'BRIEN'S PEN-CHROME WOOD FINISHES.—Folder with color chart, descriptive and application data covering a new line of wood finishes for woodwork, floors, furniture, cabinets, plywood panelling, etc. O'Brien Varnish Co., South Bend, Ind.

BRICK CAVITY WALLS.—Technical Bulletin No. 14 presents design and building code data on the subject of brick cavity walls. 12 pp. 8½ x 11. Brick Mfrs. Assn. of New York, Inc., 2721 Grand Central Terminal, New York, N. Y.

(Continued on page 41)

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 40)

MODERN METHODS OF HANDLING ASHES AND OTHER MATERIALS. — Folder illustrating and describing a line of telescoping ash hoists and sidewalk lifts. 4 pp. 8½ x 11. Robert Gillespie Co., Ware, Mass.

MANUFACTURERS' DATA WANTED

PRESTON J. BRADSHAW, *Architect,* 3670 West Pine Boulevard, St. Louis, Mo.

HAROLD D. VERNAM, *Architect,* 1717 East 18th Street, Brooklyn, N. Y. (All data on materials and equipment for use in moderately expensive suburban houses.)

WILLIAM A. STOWE, *Architect,* 379 Linwood Ave., Columbus, O.

KEITH HINCHCLIFF, *Architect,* University of Arkansas, Dept. of Agri.-Engineering, Fayetteville, Ark. (A.I.A. data on all phases of residence construction.)

HARRY J. HARMAN, *Architect,* 3842 Central Ave., Western Springs, Ill.

EMERSON C. SCHOLER, *Architect,* 701 West Indiana, Urbana, Ill. (Data for complete A.I.A. file.)

ERIC LANGLANDS, *Chief of Design,* Diraplane Mfg. Corp., 927 15th Street, N. W., Washington, D. C. (Data for A.I.A. file and samples of materials that apply to aircraft design and construction, airport planning and industrial design.)

L. R. HOILMAN, *Construction Superintendent,* 117 Carolina Avenue, Roanoke, Va. (Data concerning organ lofts, as to sizes, heights, etc., and information on metal baptistries.)

THOMAS E. STANFIELD, *Draftsman,* 4610 Vista Street, Philadelphia, Pa. (Data and samples for complete A.I.A. file.)

ROBERT A. SCHOENBERNER, *Draftsman,* 3969 Larchwood Place, Riverside, Calif.

JORDAN R. KILBRICK, *Draftsman,* 288 Columbia Road, Dorchester, Mass.

A. L. MARTIN, *Student,* 4011 West 160th Street, Cleveland, Ohio. (Data for complete A.I.A. file, and samples.)

ARTHUR STEPHENS, *Student,* 2121 Thurman Avenue, Los Angeles.

STERLING M. MYERS, *Student,* 410 High Street, Wadsworth, Ohio. (Data for complete A.I.A. file.)

JACK WONDAAL, *Student,* 260 West 106th Street, Chicago, Ill. (Data for complete A.I.A. file.)

KEITH H. BRADBURY, *Student,* 1725 B. Street, Pullman, Wash. (Data for complete A.I.A. file.)

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COMPETITION ANNOUNCEMENTS AND RESULTS

LANGLEY AWARD, 1941

The A.I.A. has announced that proposals of candidates for Edward Langley Scholarships for 1941 will be received from January 1 to March 1 and will be announced about June 1. The annual awards may be made to residents of the United States or Canada and architects in either country may propose any other architect or architectural draftsman residing in the same country. Architectural school faculties also may submit proposals. All proposals should be submitted on forms obtainable from the A.I.A., 1741 New York Ave., Washington.

DREAM KITCHEN

A competition known as "McCall's Dream Room Contest" has been announced by the *McCall Corporation* to focus attention on kitchen planning. One hundred and thirteen prizes totaling $1,250 are offered for the planning and decoration of a Dream Kitchen.

The contest opened October 1 and entry blanks with full instructions may be secured by sending a three-cent stamp to the Modern Homemaker, McCall's Magazine, Dayton, Ohio. The contest closes Dec. 31.

FRESCO MURALS

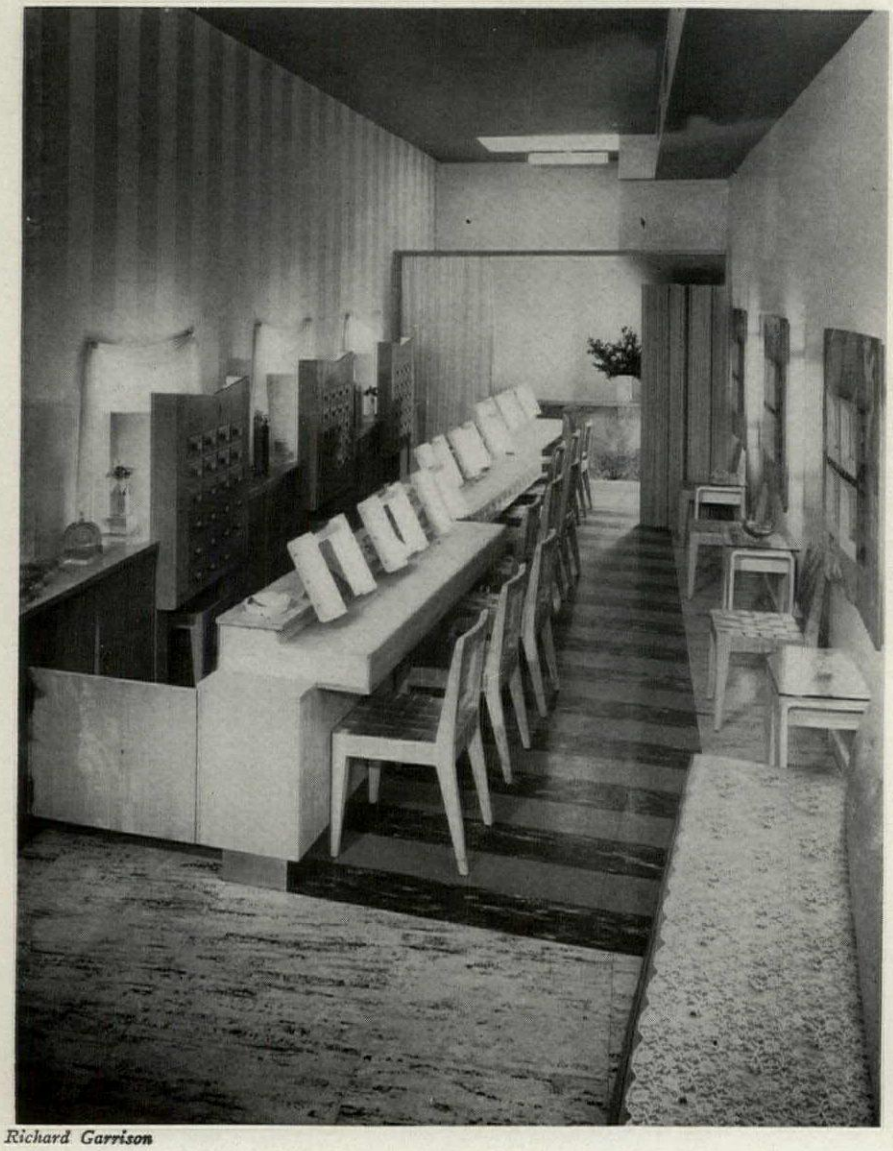
The jury reviewing the work of 375 entrants in the national open competition to select muralists for the new Social Security Building in Washington has submitted its report to Edward Bruce, Chief of the Section of Fine Arts of the PBA, recommending that the fresco murals for the main corridor be executed by *Ben Shahn* of Hightstown, New Jersey. The theme of Mr. Shahn's mural is "The Meaning of Social Security." The designs will now be submitted to the Commissioner of Fine Arts for comment and advice.

The jury of painters — *Edward Biberman, Kindred McLeary, Franklin Watkins,* and *Marguerite Zorach* —further recommended that, due to the quality of sketches submitted in the corridor competition, *Philip Guston* should be invited to redesign and submit sketches for decoration of the auditorium of the Social Security Building; and that *Seymour Fogel* should be invited to redesign and submit sketches for the decoration of the Independence Avenue Lobby.

FIFTH PLASTICS COMPETITION

Prizes awarded in the Fifth Annual Modern Plastics Competition sponsored by Modern Plastics Magazine included four in the "architecture group." The examples cited were Tourneur Make-up Salon on Park Avenue, New York; fluorescent laminated sheets in Farragut Theatre, Brooklyn; Jewelite door knobs, by Keystone Brass & Rubber Company; and translucent plastic plaques, by W. L. Stensgaard & Associates, Chicago, Illinois. One thousand entries in the competition are on display in Room 306, Chanin Building, New York, until December 15.

The Judges were *Harvey Wiley Corbett,* Architect; *Morris B. Sanders,* Architect and Design Engineer; *Harold Van Doren,* Industrial Designer and Author; *William A. Kimbel,* President of A.I.D. and A. Kimbel & Son; *Alfred Auerbach,* Editor of Retailing; and *A. N. Swigert,* of Chrysler Corporation.



Richard Garrison

The first award in the "architecture group" of the Fifth Annual Modern Plastics Competition sponsored by Modern Plastics Magazine went to the Tourneur Make-up Salon on Park Avenue, New York (left), designed by Morris Sanders, New York Architect. The lace and satin lounge just inside the entrance (foreground) is protected by a sheet of transparent Vinylite which also was used for the webbing on the chairs to cover the make-up bar accessories. The same plastic in another form was used to line the draws containing cosmetics and the floor covering also is a Vinyl-derived material. Plexiglas shields the luminine bulbs lighting the make-up mirrors; the same material protects the matted prints on the wall

CERTIFIED HOUSES

Eleven small houses in the New York Metropolitan area have been selected by jurors representing eleven chapters of the A.I.A. in New York, New Jersey and Connecticut to receive "Certificates of Merit."

The Jury of Award met on October 30 to judge the material (photographs and blueprints) submitted on invitation of the chapters through *Herbert Lippmann*, Chairman of the Sub-Committee for the Award of the Certificates of Merit—as announced in the June issue of PENCIL POINTS.

The purposes of the Award of Certificates of Merit for small house design are: to establish a "yardstick of excellence" among low-cost individual houses designed by Registered Architects; to "spotlight" the Architect in this field, in order to increase his authority and opportunities; to provide another effective means of cooperation among architectural societies; to appeal to pride of ownership of the Certified houses and thus to encourage finer communities.

The Certificates were awarded as follows: the home of R. Lincoln Hedlander, Greenwich, Connecticut, designed by *Coggins & Hedlander*, Greenwich (Special Mention); the home of Mr. and Mrs. Saul Neivert, Elizabeth, New Jersey, designed by *Harry Maslow*, Elizabeth; the homes of Thomas F. McManus, and Irving Feldman at Mamaroneck, designed by *Charles F. Mink*, Larchmont; the home of D. Horvath, Yonkers, designed by *R. G. Belcher*, New York; the home of George Laubendorfer, Harmon-on-Hudson, designed by *Evans, Moore & Woodbridge*, New York; the home of Nicholas LaGrutta, Valley Stream, Long Island, designed by *Ralph M. Carger*, Forest Hills; two houses for Economy Planners, Incorporated, at Norwalk, Connecticut, and Briarcliff Manor, New York, designed by *Evans, Moore & Woodbridge;* the home of Leslie McNeil, New Dorp, Staten Island, designed by *Wesley S. Bessell*, New York; the home of Lillian A. Heidelberger, Seaford Manor, Long Island, designed by *Richard J. Heidelberger*, Seaford Manor.

MARYLAND EXHIBIT

The first statewide exhibition of architectural work in Maryland, now on display at the Baltimore Municipal Museum, includes 276 photographs entered by 29 architects. The exhibit was sponsored by the Maryland Society of Architects of which *Lucien E. D. Gaudreau* is President.

Eight awards of merit in the statewide exhibition, 12 Regional awards and 15 honorable mentions were given by the exhibition jury composed of *William Dewey Foster* of Washington; *Edmund R. Purves* of Philadelphia; and *Reah DeB. Robinson* of Wilmington, Delaware. Visitors to the exhibition also were invited to express their opinion of the various buildings on ballots suggesting classifications similar to those adopted by the jury. The architects receiving State awards were: *Douglas Gordon Braik* (two); *Samuel & Victorine Homsey; Laurence Hall Fowler* & *Henry Powell Hopkins* (two); and *A. J. Klinkhart*. The entries by these architects were cited as the best work in the State of Maryland.

A.I.A. CONVENTION

The 1941 Convention of the A.I.A. will be held May 18-24 in the Yosemite Valley, California, it has been announced officially in the September issue of *The Octagon*. All members of the profession and those allied with it are invited to join A.I.A. members at the Convention.

AT LARGE IN THE LIBRARY

THE APPROACH TO PLANTING AND THE SELECTION OF PLANT MATERIAL, *A Monograph prepared by the USHA. Copies may be obtained by writing to the office of A. C. Shire, Technical Director for the Administrator, Federal Works Agency, United States Housing Authority, Washington, D. C.*

As one who has for two years been very directly concerned with the site planning and planting of rural housing projects and camps on the West Coast, the reviewer can underline with approval most of the things said in this publication. Landscape architects all over the country have recognized in the housing program an economic opportunity, but many have failed to recognize also the esthetic stimulant which the profession has sorely needed ever since the influence of Olmstead became codified in a neat set of rules. While neither economy nor luxury are really essential to the production of good design forms, economy in this day seems to be the only agency strong enough to force the sluffing off of all the ponderous dogmatic excess baggage with which precedent-fearing designers — backed by a reactionary educational system— insist on burdening themselves.

The monograph deals with the selection of plants—please, not plant materials—in relation to specific land use organization in housing projects.

"Thanks! I just wanted a pretty picture for Junior."

It treads safe functional ground, avoids dangerous esthetic controversies, and succeeds very well as far as it goes. The only criticism that might be made is that it does not go far enough, for the selection of plants in relation to specific land use cannot be divorced from the whole question of ultimate complete visual form. In addition to providing such simple practical things as shade, screening, and color, the planting completes the three-dimensional organization of the site space which is begun by the architectural and engineering design. Finally, the planting completes the entire three-dimensional form conceived in the original site plan, and makes it homogeneous and comprehensible. That, of course, is thinking of the housing project as an entity as complete as a painting, and this may be a big swallow for some minds.

To object to discussion of form on the basis of practicality, or to think that practical decisions alone can settle

problems of form, especially in landscape design, is short-sighted and misleading. This is proved by the dull and often more costly results produced by practical builders and nurserymen when they are given building and planting projects to plan. Esthetic theory and functional practice go hand in hand, and their divorce is always obvious in the final product. The only regrettable fact is that so many architects and landscape architects, when given the design of housing projects, are so intimidated by practical noises that they fail to give their jobs any esthetic gumption whatsoever. Or perhaps they are unable to conceive of esthetic gumption which is not costly.

In the case of landscape design this failure to produce esthetic integrity is probably very largely due to a fundamental theoretic deficiency which is emphasized by the monograph. It says that landscape architects are estate-minded, and still think of themselves as architectural decorators rather than designers and planners of land and its attendant space for use. This is all too true—the landscape profession persists in endeavoring to shut out the clamor of this horrid 20th century with 18th century fluffs and ruffles.

The bulletin also brings out quite clearly, if unconsciously, the fact that the writer himself has not yet overcome the fatal dogma called formal versus informal. This is the root of all unprogressive reactionary evil in the landscape profession. Whereas the fundamental problem of landscape design has always been the integration of natural and man-made forms and materials into a complete entity, this basic dogma of the landscape profession renders impossible the real solution of the principal problem.

So, a final message to landscape architects—get this monograph, read it, but don't stop there. It will take more than practicality, or economic enterprise, to get the profession out of the mental sloth in which it has wallowed since Olmstead laced Central Park so neatly with bridle paths for the proletariat. GARRETT ECKBO

ARCHITECTURE AS A CAREER *($1.00 a copy, 8 pages 8½" x 11"—The Institute for Research).*

ART AS A CAREER *($1.00 a copy, 8 pages 8½" x 11"—The Institute for Research, Chicago, Ill.).*

The Institute for Research has published two comprehensive monographs for the purpose of aiding those artistically inclined to prepare for the professions of art and architecture.

ARTIFICIAL LIGHT AND ITS APPLICATION *($1.25, 296 pages illustrated, 8½" x 11", spiral binding —Lamp Division, Westinghouse Electric & Manufacturing Company, 150 Broadway, New York).*

The Westinghouse Editorial Service say that this book is presented "in terms interesting alike to lighting engineers, students and laymen." The omission of any mention of architects, however, should not discourage you from obtaining a copy of this excellent book. For general background information on the principles involved in artificial lighting, this publication would be hard to beat. It is written in a simple, clear and comprehensive manner and contains over 400 photographs, sketches, line drawings, pictorial tables and graphs.

An unusual feature of this publication is that individual chapters may be purchased at 7c each. The scope of the book is shown by the index:

Light Sources
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Photometry
Light and Vision
Color
Light Control and Equipment
Interior Lighting Design
Industrial Lighting
School Lighting
Commercial and Public Buildings
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Floodlighting
Recreational and Sports Lighting
Architectural Lighting
Electrical Advertising
Street and Highway Lighting
Light in the Theater
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The book is bound in heavy cardboard. Personally we do not like the spiral binding because, in spite of popular superstition to the contrary, the pages do not turn readily. D. G.

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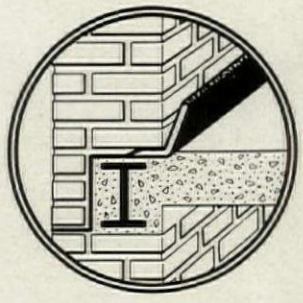
NEW PRODUCTS

FABRIC FLASHING FOR HOUSING PROJECTS

The Wasco Flashing Co., 86 Broadway, Cambridge, Mass., has recently introduced a new product known as Rigid Fabric Flashing, which was designed especially for use in housing projects.

This new flashing consists mainly of full-seal fabric, but 6 inches of its width —the 6 inches that form the vital turn-up on the inside of the wall—consist of a core of 2-ounce copper bonded on both sides to asphalt-saturated fabric by means of a ductile mastic.



According to the manufacturer Rigid Fabric Flashing cannot crack or tear, and is stiff enough to stay in place when the bend is made. Its copper core is said to form a permanent water dam at the point where water-seepage will concentrate most.

NEW OZALID FAST-PRINTING WHITEPRINT MACHINE

The Model F, a fast-printing whiteprint machine in the medium price class, has recently been put on the market by the Ozalid Corporation, Johnson City, N. Y.

Featuring a newly developed high pressure mercury vapor tube, which uses 40 watts per inch and provides uniform distribution of light over the entire printing area, this machine will print up to 56 inches per minute. The Model F tube is guaranteed for 1000 hours but has an expected life of 1500 to 2500 hours.

The original and sensitized materials are brought into exposure by carrier belts which hold them against a 4¼" diameter pyrex glass cylinder. This cylinder is suspended at each end on three ball bearing rollers and is revolved around the stationary high pressure mercury vapor tube by contact with the carrier belts.

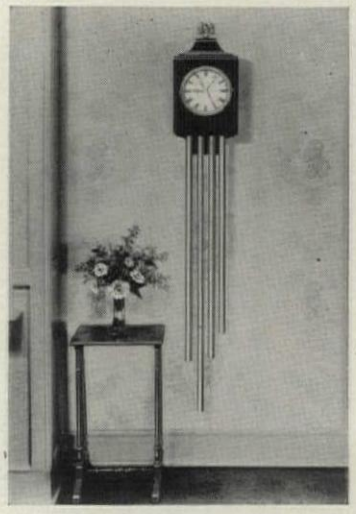
The glass cylinder, tracing and sensitized material revolve at the same rate of speed and and thus there is no slippage to cause distorted prints. The operator selects the desired printing speed with a hand control knob conveniently located on the front of the machine. An adjustable light shade allows the operator to vary exposure within certain limits without changing the printing speed. Thus prints are handled efficiently with a smooth flow of work maintained despite variations in transparency of tracings.

Mechanically controlled ammonia vapors develop the exposed prints in the developer section of this machine. A rubber belt carries the print over the perforated top of the developing tank and at the same time acts as a seal keeping the ammonia vapors within the tank. A print return chute delivers the finished print to the front of the machine dry and ready for immediate use.

NEW EDWARDS CLOCK-CHIME

Edwards and Company, Inc., Norwalk, Conn., manufacturers of electric signaling devices, is offering a new clock-chime, which combines in one unit a thoroughly dependable wall clock and a pleasant chime for front and rear door signals.

When a caller presses the front door push, the eight-note Westminster melody is sounded on the resonant chime tubes. The rear door signal is a pleasant two-note melody—two entirely different calls so there is never any confusion.



The clock itself is all-electric, automatic and self-starting. It strikes the hours and half hours on the deepest sound tube just like a grandfather's clock.

The unit consists of a genuine mahogany case, with lustrous brushed brass tubes and appointments. The overall size is 69 in. high, 10¾ in. wide and 6 in. deep. The complete device, chime and clock, operates on low voltage from a transformer furnished in the package. It is installed as easily as any ordinary door chime in either new or existing residences.

IMPROVED ASPHALT TILE

The Philip Carey Mfg. Co., Lockland, Cincinnati, O., has developed an improved asphalt tile which is said to have a smoother and more attractive surface and to possess specific advantages for use both as an industrial flooring and for protection of roof areas which are used for recreational or other purposes.

This new product, which is marketed under the trade name of Elastite asphalt tile, is a compound of asphalt and mineral filler, reinforced with asbestos fibres, densely compressed and die cut to size. It is now approved by the Underwriters' Laboratories for Class A built-up roofing, when applied in accordance with their instructions, on slopes up to and including 1″ to the horizontal foot.

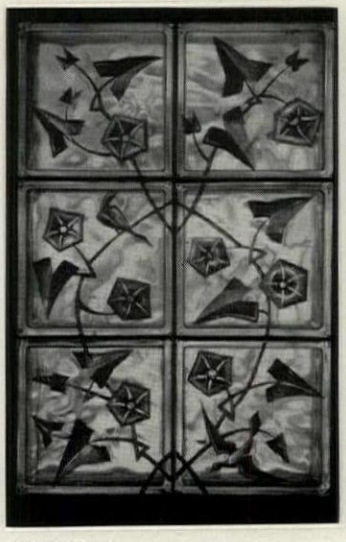
Carey Elastite asphalt tile is manufactured in standard black and standard red, in ½″ thickness, and in sizes 12″ x 12″ and 12″ x 24″. This product is said to be extremely dense, tough, highly resistant to compressive loads, dustless and quiet under wheel traffic. While relatively hard, it is not rigid or unyielding, thereby contributing to workers' efficiency. It may be applied to any properly prepared sub-base and is ready for use as soon as laid.

Elastite asphalt tile is recommended for general use as flooring for factories, warehouses, loading platforms, schools, stores, restaurants, offices, etc., where suitable sub-base exists and where loading, temperature and chemical conditions fall within proper limits.

RAMBUSCH BLOCK DE COR

Glass blocks are a development of this generation and few will question the statement that they have definitely justified their usefulness as an addition to the science of building. They have created for themselves characteristic forms and types of construction. They serve effectively as exterior walls and interior partitions. They differ from former and other walls in that they transmit light. This difference is vital for light compels attention. A luminous wall obviously raises a whole new set of problems, for the presence or absence of light, as well as the intensity thereof, is of primary importance to humanity.

The glass wall, with its exterior and interior aspects, has naturally given rise to the desire to add artificial light, as well as color. As yet, the use of colored light in this connection has accomplished little of esthetic value. It is a positive or additive system, but some negative or color-filtering processes have been attempted. The interior of the blocks has been sprayed with color, and blocks have been made of colored glass. These latter



Patent Pending *Photos by F. S. Lincoln*

have involved comparatively large areas of color almost defying pleasant decorative effects.

Still, it is known, that for seven centuries stained glass windows have ornamented cathedrals and palaces. The craft of the stained glass worker is one of the very few handicrafts still practiced. This craft possesses some techniques which, with modification, lend themselves to use in the treatment of glass block. They are the use of tones from black to light gray and glass enamels. The latter are powdered glass in all conceivable colors which are fired on to glass at their fusing temperature. These enamels were developed by the glass workers of the early Renaissance but largely abandoned because of their tendency to scale off when subjected to temperature changes and applied to the thin sheets of glass. The heavier glass as well as the voids in glass block make glass enamels secure. Further; colored glass is probably the only non-fading color known to man. There is also the technique of producing rich, golden colors by the use of a silver stain.

The problem of synthesizing these two; namely, glass block and the techniques of the stained glass worker, has involved a laboratory procedure and still leaves an artistic challenge to the architect and designer or mural painter. The laboratory work has been accomplished; the design and application problems remain.

Block de Cor is a system of light subtraction and control. Application of color necessarily accomplishes its effect by filtering out all except the desired color. Modification of light intensities is one of the needs of the raw glass. Its use can be greatly increased when high intensities, color and opacity are controlled. These possibilities give the designer a full palette and permit of the execution of any conceivable design limited only by the pattern and scale of the block itself. The joints need not be a handicap and will often be found to contribute by their very scale. At distances of thirty to forty feet they seem largely to disappear owing to the optical phenomenon known as irradiation, whereby light in a surface will appear to consume a dark line. Murals can be rendered as well as patterns. Artists have always recognized the fact that each medium deserves study and a particular type of design, and will readily acknowledge that a decoration on glass will require especial consideration.

The technique is one of firing colors and shades into glass much as they are fired on tile or terra cotta. The result is just as permanent and durable as ceramic work. The treatment is applied to the roomside of the block. Daylight thus produces a perfect rendering. When seen from the exterior, with light within, the decoration is less distinct but, in some respects, more interesting. The most unique effect is obtained within the room at night. Under this condition, glass is normally black and dismal but Block de Cor, by virtue of its partial opacity, acquires the appearance of a regular mural or painted decoration. Thus, the integrity of the walls of the room may be preserved at night without impairing the room's daylight possibilities.

The possibilities of this new craft are almost limitless, for here in a modern building material we have structure and color as well as decoration and pattern. These potentialities await only the creative talents of the architects and artists who, alone, can plan for and design these decorations in color and light.

The accompanying illustrations show several designs of decorated glass blocks which have received the Rambusch Block de Cor treatment, a recent development of the Rambusch Decorating Co., 2 West 45th St., New York, N. Y.

NEW ADHESIVE FOR INSTALLING ARMSTRONG'S LINOWALL

The Floor Division of the Armstrong Cork Co., Lancaster, Pa., announces the development of a new adhesive for use in the installation of Armstrong's Linowall.

It is of the type popularly known as the casein-latex, or rubber cement, but the basic formula differs from that of the ordinary cements offered under this general classification.

The new adhesive will be marketed under the trade name of Armstrong's Linowall Cement, S-127. It is light in color which is a definite advantage in hiding seams, especially with very light colored patterns.

The new Armstrong product has a spreading capacity of approximately 150 to 175 sq. ft. per gallon. It spreads easily and no rolling is necessary. Although the adhesive is much more water repellent than the old paste previously supplied for the installation of Linowall, it is definitely not waterproof. Armstrong's No. 210 rustproof cement is recommended in conjunction with this new adhesive for waterproofing seams and edges where excessive moisture is encountered.

Sizing is usually not necessary with the new product. However, with old or new plaster walls that are chalky, dusty, or porous, it is necessary to apply Armstrong's Wall Size to lay the surface of the plaster before applying Linowall.

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EDITOR'S NOTE

For the convenience of those referring to the Index, section headings have been inserted. All material published in PENCIL POINTS *in 1940 is listed and cross-indexed; by the title or subject under ARTICLES, CONTRIBUTIONS (across-page) and by the name of the author, designer, etc., under CONTRIBUTORS (page viii). Also, those seeking a specific subject may find helpful the listing of BOOK REVIEWS (page vii); COMPETITIONS (page vii); DATA SHEETS (page xi); DETAILS, SELECTED (page xii); MONOGRAPH SERIES (page xii); OBITUARIES (page xii); PLATES (page xii); and THRESHING FLOOR (page xiv)*

PENCIL POINTS

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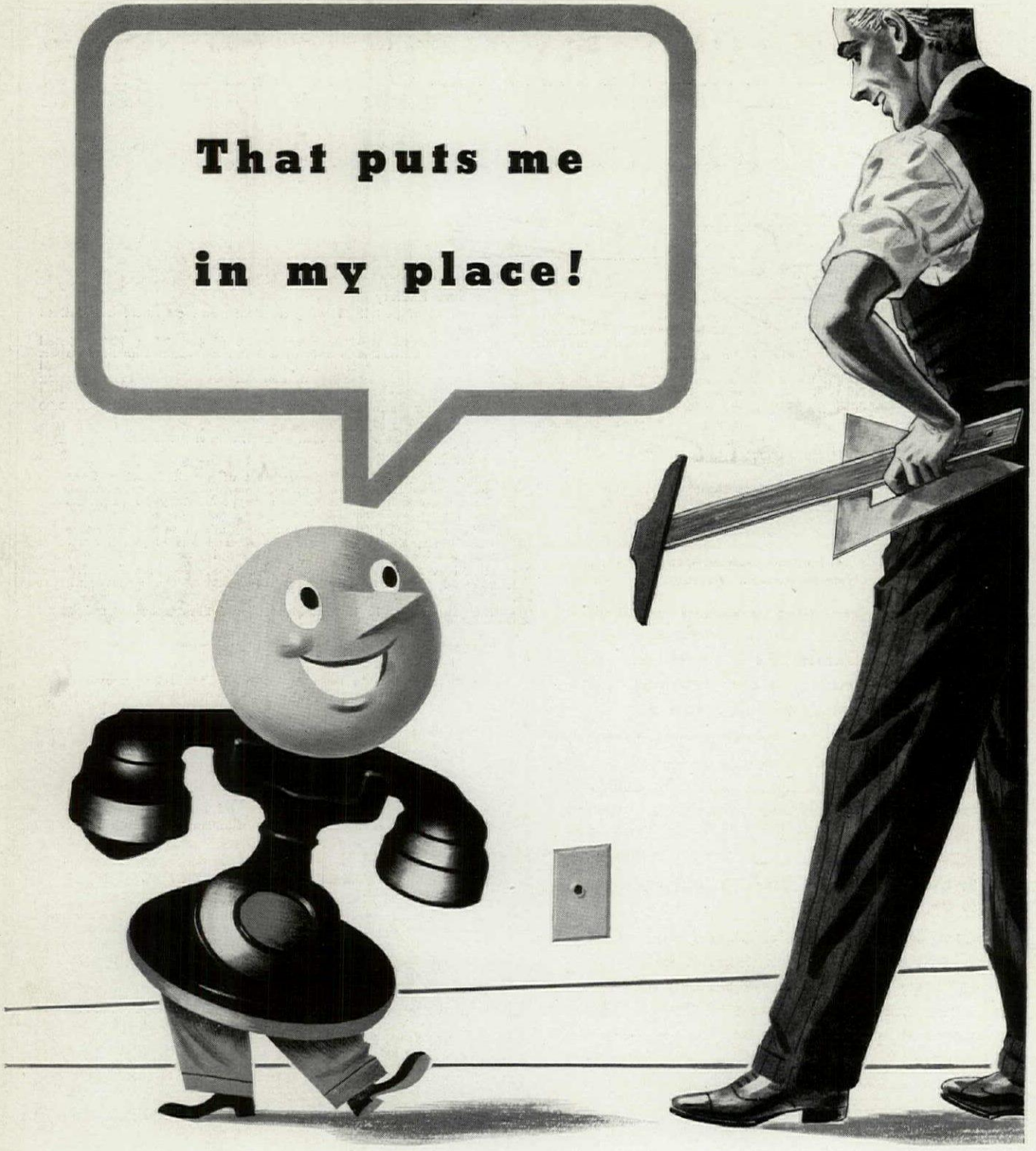


WHEN you include telephone outlets in your plans, you make the telephone system an integral part of the home. This is an advantage both to you and to your clients.

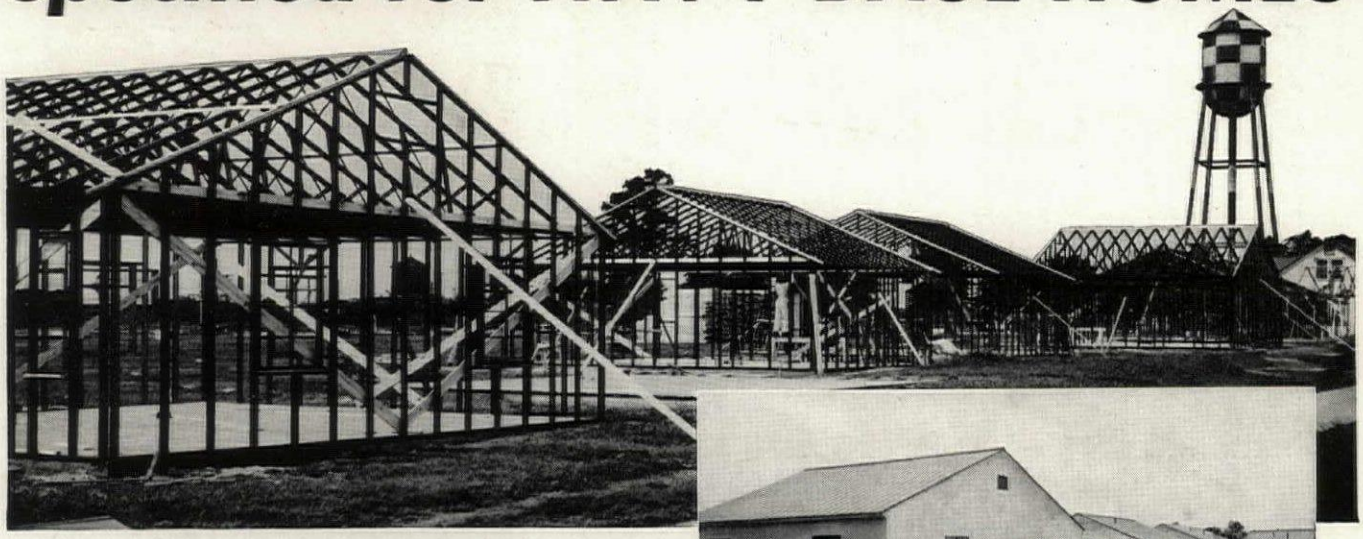
Telephone outlets, connected to inexpensive pipe, conduit, or other built-in facilities installed in the walls at the time the home is constructed, reflect good workmanship and careful planning and thus are strong sales aids.

Modern buyers appreciate evidence of care and consideration for the appearance of their new homes. And by affording a clear path through concrete, insulation, fire-stops and around duct-work you insure against exposed wiring that might seriously mar the beauty of the walls and woodwork you design.

Every home, regardless of size, should have one telephone outlet on each floor and additional outlets in logical places for extension telephones.

Your telephone company offers its co-operation in planning efficient telephone arrangements. Just call the nearest Bell Telephone Business Office and ask for "Architects' and Builders' Service."

STRAN-STEEL FRAMES *specified for* NAVY BASE HOMES



Sixteen men working sixty minutes quickly completed the steelwork of each home. Stran-Steel "chassis" is designed for fast erection and rigidity.

Sound construction is clearly indicated in these views of the new five-room homes. Gunite exterior has just been applied.

The first fifty low-cost houses to be built for the Navy Department under the National Defense Program have Stran-Steel frames! They are homes being erected for Navy married enlisted personnel at the Naval Operating Base at Norfolk, Virginia.

Speed of construction and the fundamental durability of steel were some of the reasons for the Navy's choice of Stran-Steel as the framing material. The exclusive Stran-Steel nailing groove permitted the application of all the collateral materials direct to the steel studs and roof rafters. Insulation board and gunite exteriors are other modern features found in these well-built, smartly-styled buildings.

Stran-Steel has consistently demonstrated its superiority as an efficient, low-cost building material in many types of construction. Stran-Steel members are formed from high-grade copper-bearing steel. Studs and joists are formed from two pieces welded together—the space between becoming the nailing groove that permits rapid erection of collateral materials with ordinary hammer-and-nails methods. Wherever speed, permanence and low cost are important considerations in any building program, Stran-Steel provides the most efficient answer. Write for additional information and descriptive literature on Stran-Steel today.

COMPLETE STEEL FRAME IN SIXTY MINUTES

A crew of sixteen men erected the entire steel framework of each five-room Navy home in one hour. This building speed is made possible by the efficient, simple design and easy handling of Stran-Steel members. Roof trusses and window panels were assembled by welding—studs were attached to plates by regular screws. Insulation boards were *nailed* to the Stran-Steel studs by means of the nailing groove. Stran-Steel was shipped to the job site in exact lengths, further increasing the erection speed of the Stran-Steel frame.

For specific technical data and advice, a complete engineering and architectural department is at your service.

STRAN STEEL

607 SHELBY STREET, DETROIT, MICHIGAN

DIVISION OF GREAT LAKES STEEL CORPORATION

UNIT OF NATIONAL STEEL CORPORATION

Printing of PENCIL POINTS by the Gillespie Bros., Inc., Stamford, Conn., U. S. A.

Kawneer RESILIENCY holds show window glass safely!

STORE FRONT ARCHITECTS and merchants alike agree that the most important function of store front construction is to hold plate glass securely and safely.

FULLY RESILIENT Kawneer Store Front Sash, based on principles established by Kawneer in 1905, practically eliminates chances of glass breakage. Patented Kawneer construction holds glass securely, with an almost human grip that cushions shocks and vibration, prevents localized pressure or rigidity. The complete Kawneer line includes rustless metal sash, bars, awning bars, mouldings, entrance doors, sign letters. Facing panels are available in aluminum or porcelain enamel (27 colors).

Store front designers will find a wide range of possibilities in Kawneer construction. Write for latest data. THE KAWNEER COMPANY, NILES, MICHIGAN.

Left, Albert C. Martin, Arch.—Samuel A. Marx, Assoc. Above, I. M. Cohen, Arch.

ALUMINUM, BRONZE AND OTHER NON-FERROUS METAL—

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STORE FRONTS • DOORS • WINDOWS • ARCHITECTURAL METAL WORK