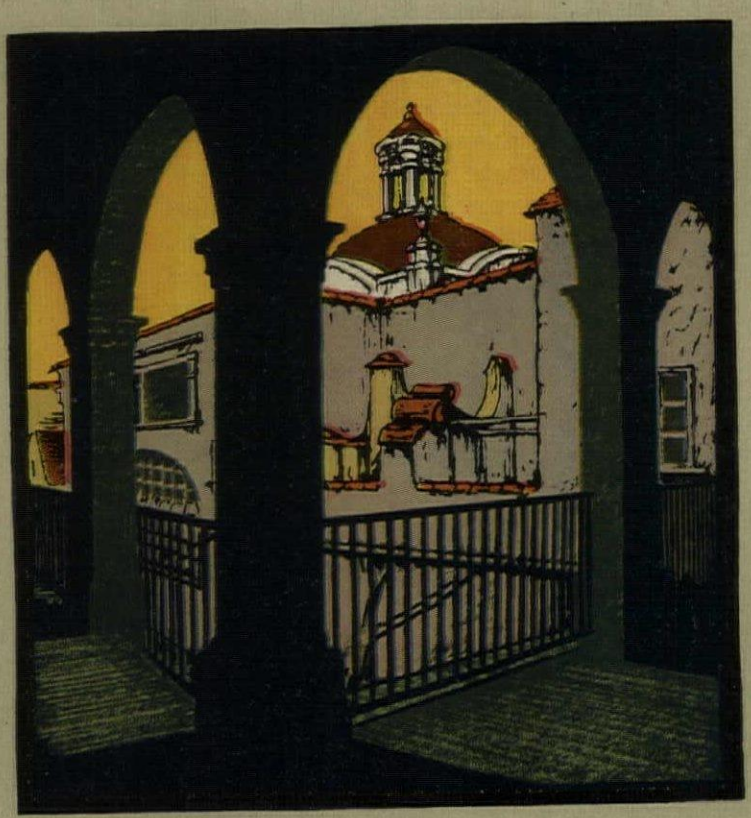
THE ARCHITECTURAL FORUM

IN TWO PARTS



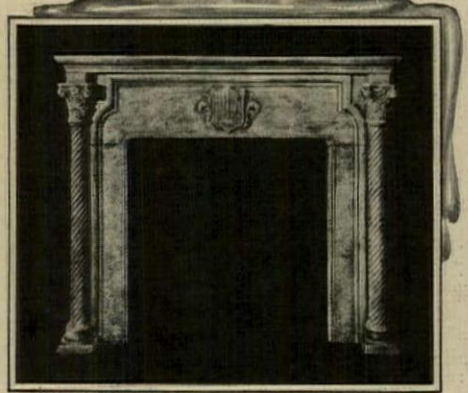
PART ONE
ARCHITECTURAL DESIGN

DECEMBER

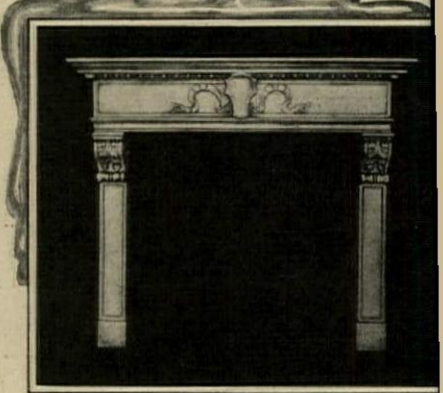
1928

HOSPITALS REFERENCE NUMBER
PRICE $3

Beauty that is *Poured!*

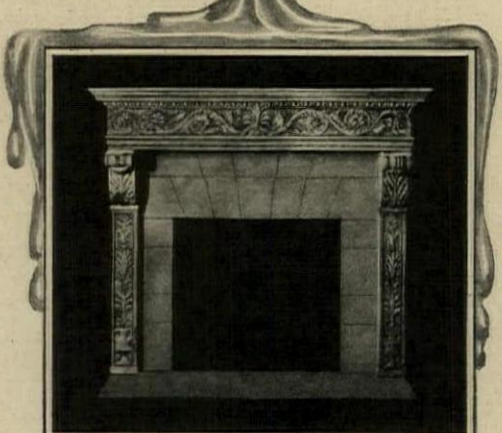


THE strength and beauty of Cretan Stone Mantels render the facts of their making process almost incredible. But it is true that Cretan Stone is synthetic; that before it assumes the form of a beautifully designed mantel it is actually *poured* into moulds. Yet the finished product possesses all the ruggedness and carved loveliness of natural Roman and Grecian stones. ¶ Cretan Stone offers the architect and builder unlimited possibilities in design, appearance and economy. Its lightness in weight is worth considering in connection with shipping and setting-up. ¶ Send for photographs of the variety of designs available, or let us estimate on Cretan Stone Mantels executed from your own detail.



CRETAN STONE

Poured Mantels



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318 N. MICHIGAN AVE. CHICAGO

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VOLUME XLIX THE ARCHITECTURAL FORUM Number 6

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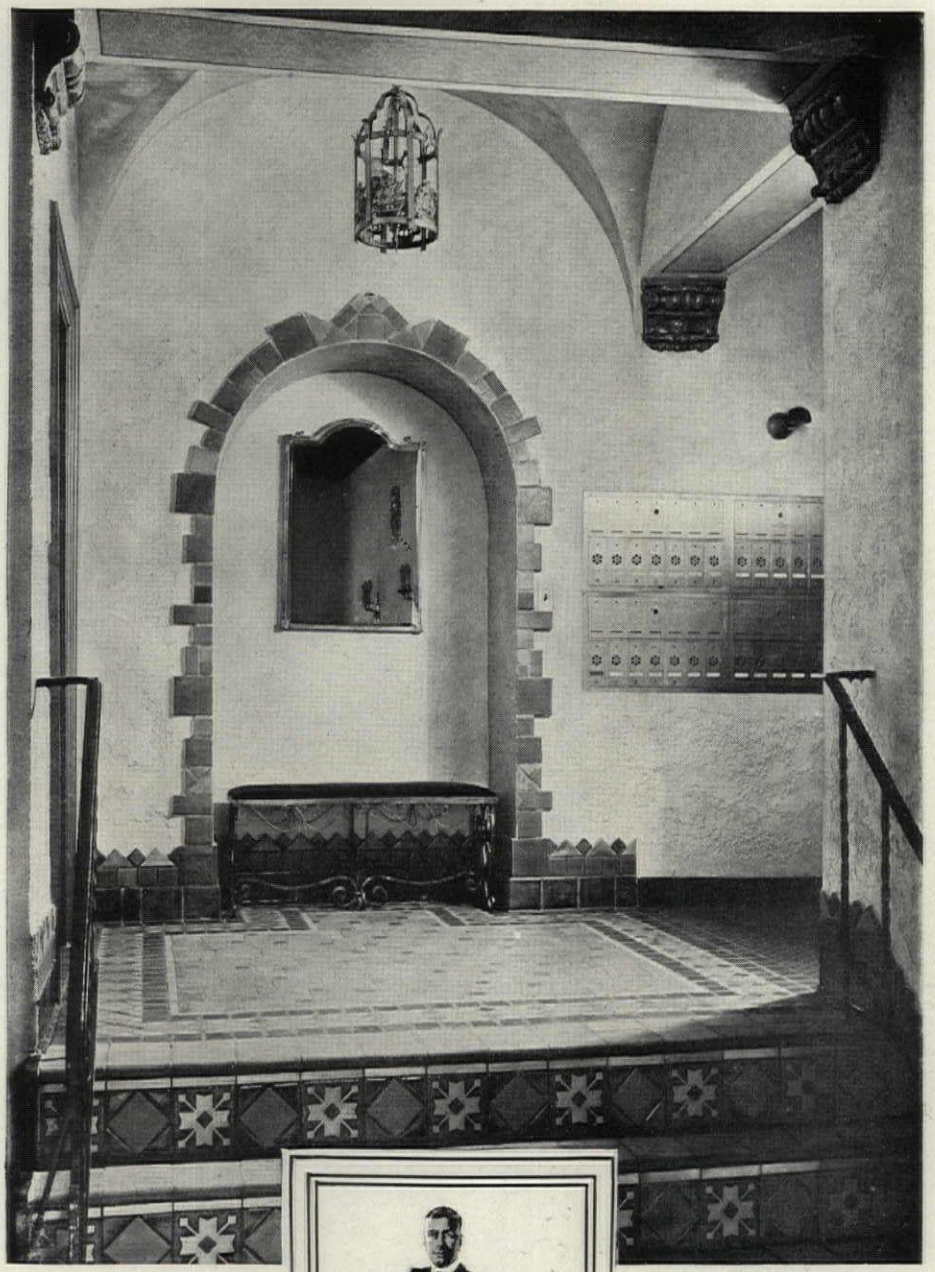
"Save the surface and you save all"—Red Wing

Use Pure Lead Paint!
It's the surest way to guarantee satisfaction.



YOU DERIVE the greatest benefit from Keramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.

N the modern entrance hall shown above—so characteristic of Castilian design—Keramic Tiles have been used to complete an interior ch with Spanish treatments.

To complete the decorative schemes of your interiors, Keramic Tiles—real tiles—offer colors, patterns and textures in endless variety. Use more of this beautiful, enduring material. It comes to you hallowed by centuries of architectural usage.

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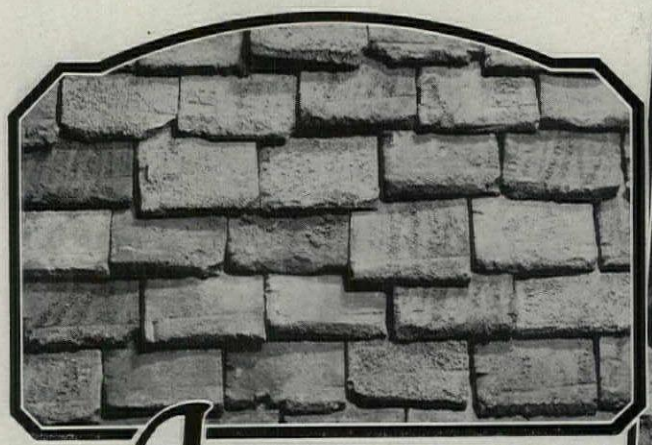

Age

Beautiful Age in the mellow color and hand-wrought texture of this

Tile Roof

RIGHT from the day they are made, HEINZ PLYMOUTH TILE have the rare warmth of color and the rich beauty in texture of tile that are centuries old.

It is this outstanding quality of beautiful age that has placed HEINZ PLYMOUTH TILE in a class by itself. No other tile has ever offered the architect so genuine an opportunity to achieve the fullest expression of Old English architecture.

Each PLYMOUTH TILE is moulded by hand into a faithful reproduction of the tiles which are to be found on the time-weathered roofs of Old England. Butts and edges are rough-cut and irregular. Surface textures are hand-washed and sanded. Countless varieties of delicate color tones are as softly blended as though washed by years of gentle rains. Shades of dusky purples, faint lilacs, rare old burgundy, browns, the moss greens, straw yellows and salmon reds are all present in a roof of these tile. Or, if it is preferred, any colors may be selected to carry out the particular tonal scheme which the architect feels to be best suited to the needs of his individual design.

So widely varied are the effects which it is possible to obtain with HEINZ PLYMOUTH TILE, that only by seeing a roof complete, can you appreciate the full extent of their inimitable aged beauty. We will be glad to arrange for you to see such a roof, or we will send full-sized samples for your personal inspection.

The photographs above show Heinz Plymouth Tile as used on the Pasadena Home of Kenyon L. Reynolds. David A. Ogilvie, Architect.

HEINZ
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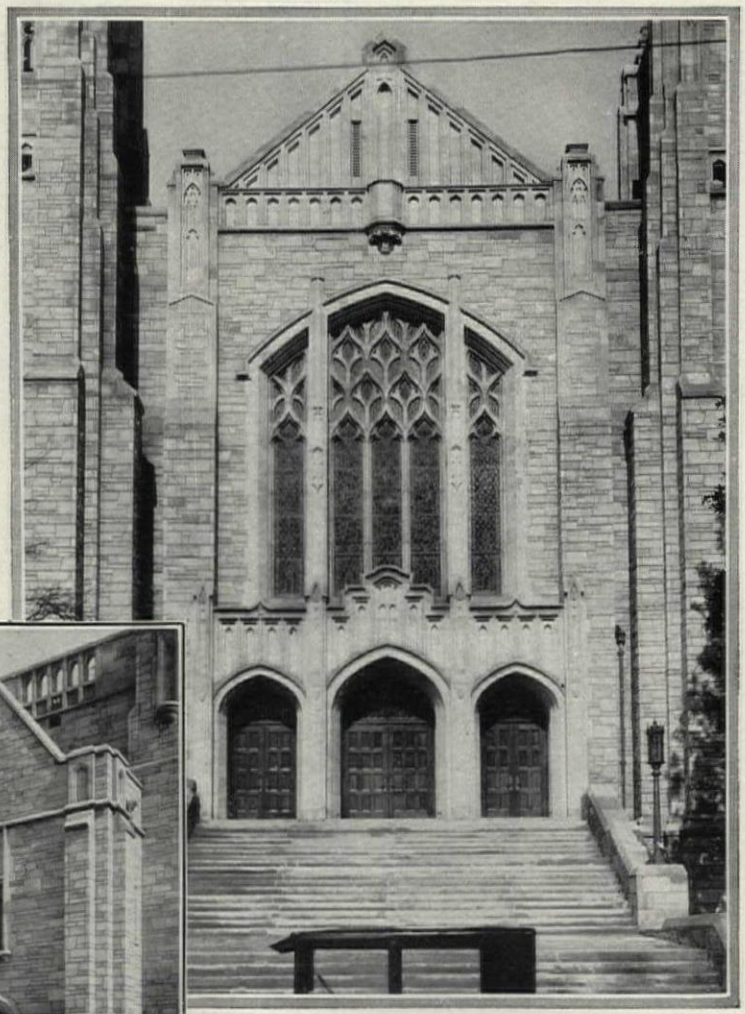
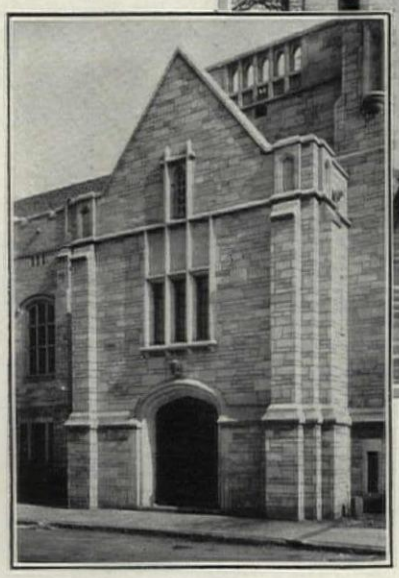
Random Ashlar Answers the *High-Cost Question*

ONE of the notable recent trends in church and school architecture is the increasing use of Indiana Limestone Random Ashlar. For Random Ashlar construction, Indiana Limestone is sawed into strips at the quarry and shipped direct to the building site. There these strips are broken and jointed to required lengths. The more expensive stone-cutting is reduced to a minimum. Stone-masons or bricklayers then lay up this stone in the wall. Cut-stone trim may sometimes be omitted entirely.

For the architect whose work is largely in medium-cost structures, the use of Indiana Limestone Random Ashlar offers an opportunity to secure the beautiful and practical effects of stone without entailing the higher cost of all cut-stone construction.

We will gladly send you detailed information about how architects are using Random Ashlar construction for residences, stores, apartments, schools, churches and all sorts of medium-cost buildings. Write Dept. 766, Service Bureau, Bedford, Indiana.





First M. E. Church, Charlotte, N. C. Spencer & Phillips, Architects. Built of Old Gothic Indiana Limestone Random Ashlar.

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AMERICA NEEDS MORE GARAGES IN HER CITIES

The vacant space in the larger picture is actually occupied by the
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You may consult us freely without cost or obligation.

An Apartment Development Is Incomplete Without It!

Without what? A GARAGE—for the motor car has too vital a place in modern American life to make high class apartment rental without adequate garaging facilities.

For practical reasons it should be a multi-floor garage building — and, for economic success, of d'Humy Motoramp Design. Using this patented combination of short ramps and staggered floor levels produces both the operating economy of ramps and floor space economy as great or greater than elevators.

Translated into terms of operating costs and garage income, the advantages of d'Humy Motoramps put a garage on an earning basis which makes such a building a very attractive investment.

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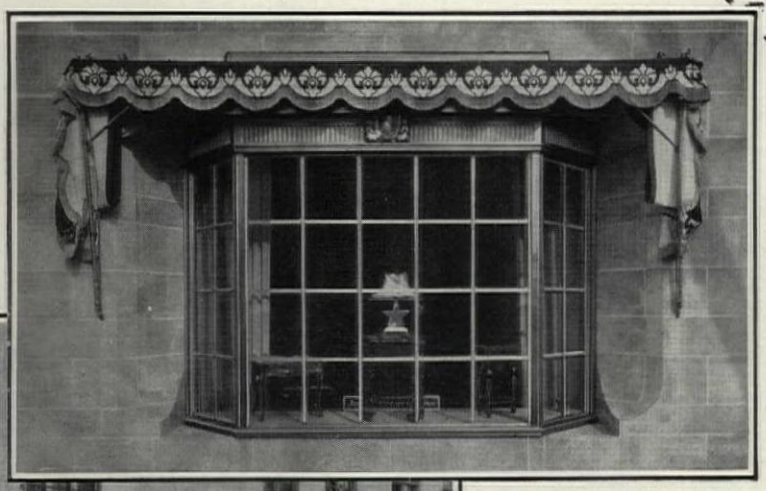

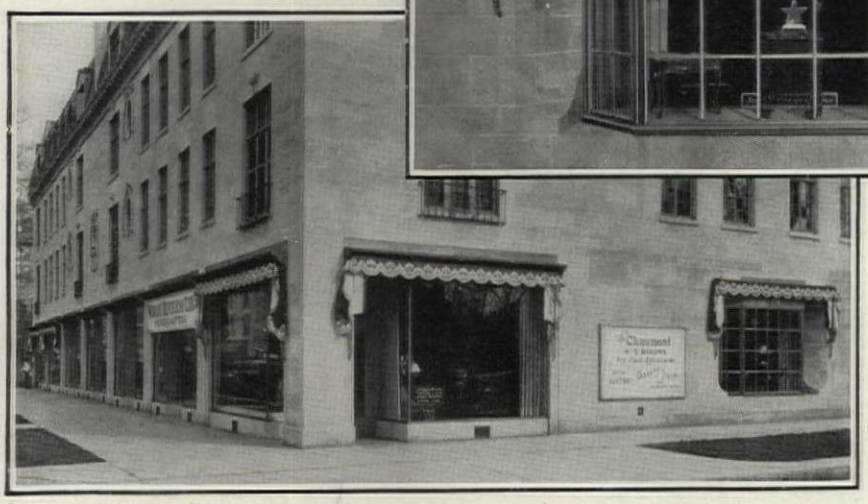

Store Front Bronze

These pictures again tell the story of what can be readily accomplished with our standard sections of Extruded and Cast Bronze, ready for immediate delivery.

All the store fronts in this building were fabricated from our standard shapes. The entablature assembly of the small bay window consists of an Extruded Architrave and cornice with a cast bronze frieze and cartouche.

The assemblies on the main store front were accomplished with Extruded Bronze throughout, with cast bronze end brackets for the awning transom.

Our details, consisting of nine sheets, should be in your files.

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A HOUSE DIVIDED AGAINST ITSELF

WILL STAND

PERMANENT, Banner Lime Soundprooft walls and ceilings actually *divide* a house. Those annoying, distracting, irritating sounds—so easily heard through flimsy or improperly built walls—are kept within bounds. Whether it be the peace of a family, the contentment of apartment house tenants or the comfort of hospital patients which is at stake, the building of substantial walls and ceilings is well worth while. There's lasting satisfaction in a Soundprooft wall: four-inch air chamber, hemmed in by Banner Lime plaster, three coats deep. Build Substantially.

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***SOUNDPROOFT WALLS**

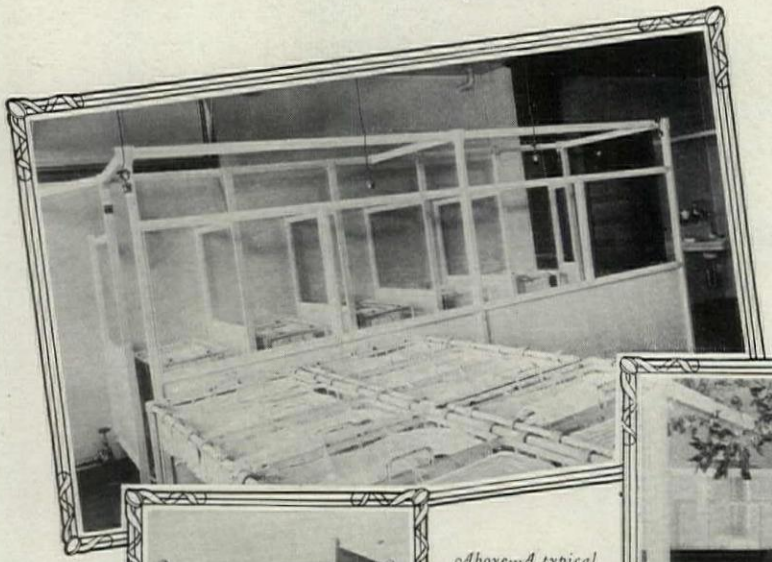
**For permanent, economical, sound-deadening wall and ceiling construction, plaster with three coats of Banner Lime over four-inch air space.*

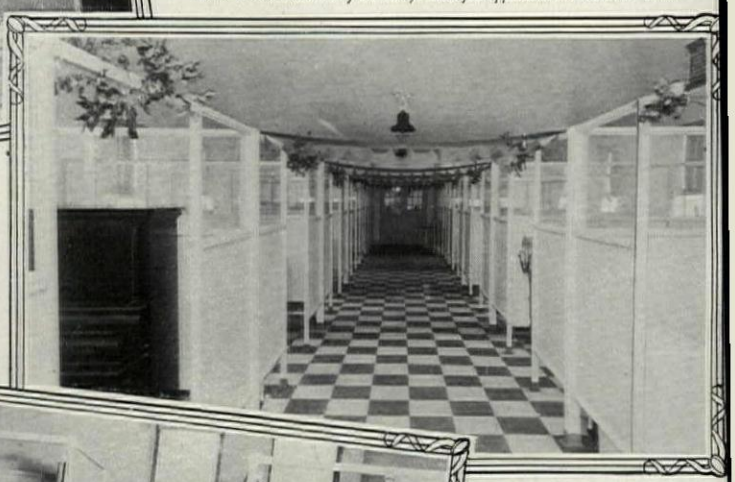
How Modern Hospitals Are Using

WEISTEEL

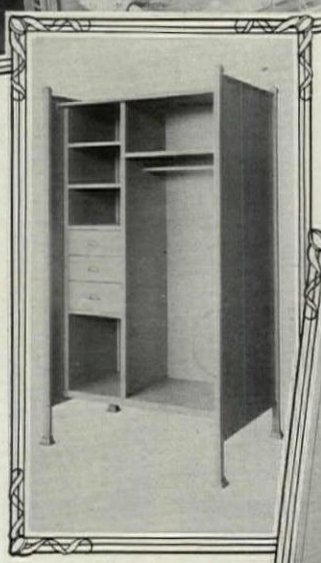
Giving patients privacy with economy while giving the hospital the advantages of open wards, WEISTEEL cubicles fill an essential need in the equipment of American hospitals. The illustrations on this page show a few of the many possible applications.

Below is illustrated one of the many successful applications in children's wards.

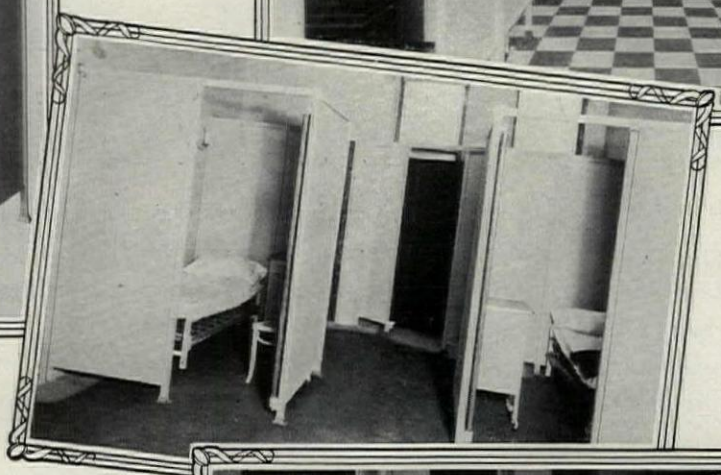




Above—A typical infant isolation unit.



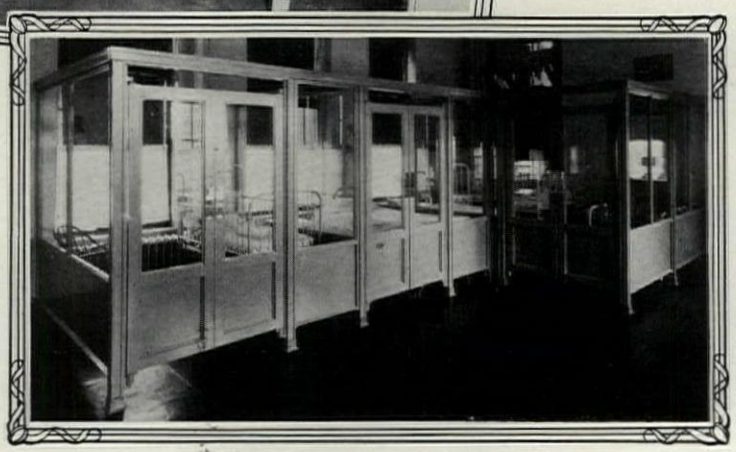
This specially designed wardrobe unit can be combined with Weisteel dressing compartments for an effective solution of a problem found in most tuberculosis institutions.



At left—All-steel cubicles are adaptable to recuperation or treatment rooms.

We have prepared a booklet explaining the uses and benefits of cubicles, which we shall be glad to send to any architect, together with any specific details or information which may be required. *Sweet's Architectural Catalog*, 23rd Edition, pages 2630-2640 inclusive, contains full information about WEISTEEL products.

HENRY WEIS MANUFACTURING CO., INC.
Elkhart, Ind.



This installation provides effective isolation, yet under complete supervision and without cutting off light.

TOILET and DRESSING ROOM COMPARTMENTS ~ HOSPITAL CUBICLES ~ SHOWER STALLS

MODERN FLOORS IN MODERN ARCHITECTURE*

Modern *in feeling...* Modern *in effect...*

Modern, too, these floors, in convenience and utility

An Armstrong's Linoleum Floor, permanently cemented over builders' deadening felt. It is Handmade Marble Inlaid No. 79 with double border of tan and black. This floor has the new Accolac finish.

MODERN, yes . . . but intensely practical, say many leading architects in discussing the new linoleum floors. Naturally, *all* decorative features, whether modern or not, must be practical as well as effective in design. But Armstrong's Linoleum Floors combine both these qualities in an ideal manner—they are not only modern in effect, but modern in feeling, too. Thus they contribute to even the more daringly modern interiors a binding influence which ties together the entire decorative ensemble.

For example, consider Armstrong's Handmade Marble Inlaid designs. They express in their geometric patterns the very spirit of the modern vogue, yet bring to rooms the impressiveness of age-old marble. In many differently sized squares, in varied color-effects, this type of linoleum floor offers surprising decorative possibilities.

And the modern virtues of quiet and comfort, too, these floors bring to rooms! For the resilient cork in Armstrong's Linoleum absorbs sound and cushions footsteps. In addition, consider the facts that these floors are cleaned with just the sweep of a dust-mop or a damp cloth. The Accolac process, used on Armstrong's Inlaid Linoleum prevents dirt and grit from grinding into the floor itself and protects its lustrous appearance. Armstrong Cork Company, Linoleum Division, Lancaster, Penna.

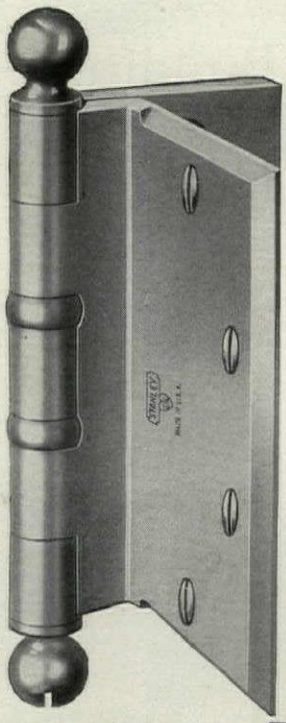
Armstrong's Linoleum Floors for every room in the house

**This is No. 3 of a series of color plates illustrating "Modern Floors in Modern Architecture." The complete set of six will be sent to any architect upon request.*

Look for the CIRCLE A *trademark on the burlap back*

PLAIN · · INLAID · · EMBOSSED · · JASPÉ · · ARABESQ · · PRINTED

4 considerations in selecting Butts for Kalamein Doors



Stanley Half-Surfac Template Ball-Bear ing Butt No. BB163

1 *Half-Surface and Full-Surface Butts.* The "filler" of a Kalamein door rarely provides sufficient anchorage for the wood screws of a full-mortise butt. The bolts and grommet nuts with which half-surface and full-surface butts are applied fasten through the door, as is shown in the illustration at the right, and will not loosen or pull out.

2 *Ball-Bearing Butts.* Kalamein doors as a rule are subjected to high-frequency service. To avoid sagging or binding of doors, ball-bearing butts should always be used.

3 *Wrought-Steel Butts.* Butts made of wrought steel are recommended as the best type to withstand the extreme conditions to which the doors and butts may be subjected in case of fire.

4 *Template Butts.* Since the majority of jambs for use with Kalamein doors are made of pressed steel, the screw-holes for the butts are drilled at the factory. It is therefore essential that the butts be made to template to guarantee their proper application at the building.

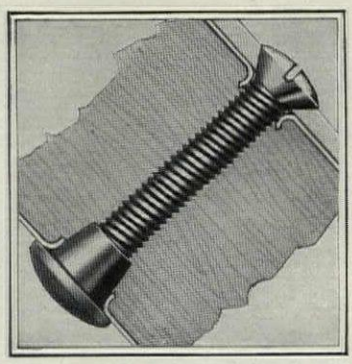
The surface leaves of Stanley Ball-Bearing Half-Surface and Full-Surface Butts are beveled to present a neat appearance when applied. When desired these butts can be furnished for painting. When so furnished, the inner edges of the leaves are milled back so that the paint will not be scraped off the barrel of the butt when the door is operated.

Kalamein doors with Kalamein or Pressed Steel jambs require HALF-Surface Butts.

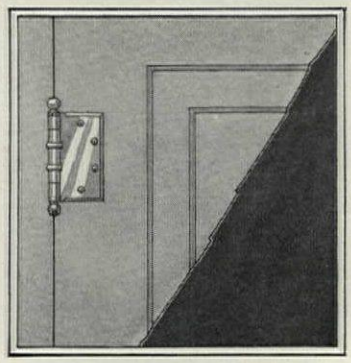
Kalamein doors with Channel Iron jambs require FULL-Surface Butts.

The Stanley Architects' Manual explains fully the proper equipment for all usual and unusual door conditions. It gives standard specifications for applying butts to Kalamein doors. Let us send you a copy.

THE STANLEY WORKS · NEW BRITAIN, CONN.



Half-surface and full-surface butts are attached with bolts and grommet nuts which fasten through the door.



Half-surface and full-surface butts are easily applied and present a neat finished appearance.

STANLEY S.W.

STANLEY BALL-BEARING BUTTS

RUSSWIN advertisements are appearing in colors and in black and white throughout the year in these magazines.

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HARDWARE RETAILER

RUSSWIN advertisements continually emphasize the lasting satisfaction of better building. Outstanding structures in different parts of the country are featured with attention called to the vision, design and workmanship that made them possible.

Advertising of this nature is instrumental in bringing about a greater appreciation for the quality, economy and trouble-free service of Russwin distinctive hardware.

Russell & Erwin Manufacturing Company

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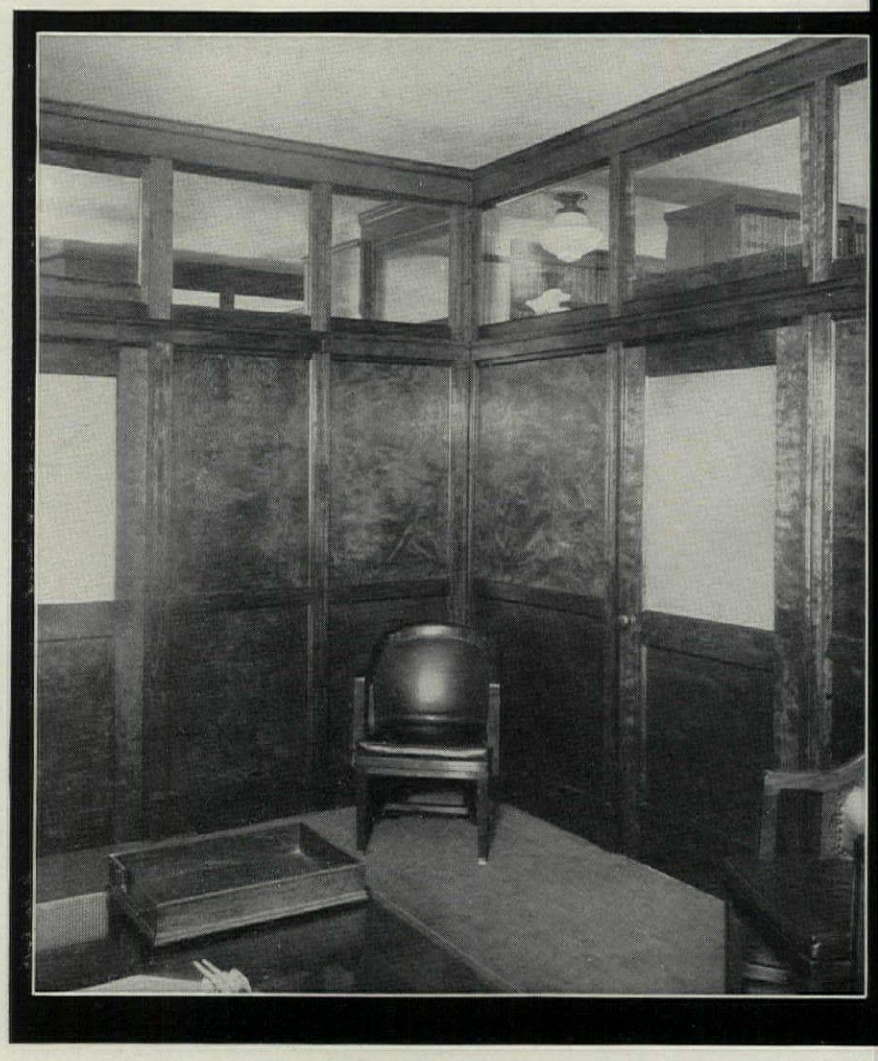
"More Than Pleasing" Tenants and Owners in this New Two Million Dollar Building



AFTER careful study, Circle A Partitions were chosen for the entire Cincinnati Chamber of Commerce Building.

And—very important—as more walls and railings are needed, "Circle A" is still the choice.

Reasons are several.

Circle A Partitions of walnut, mahogany, birch and other woods provide atmosphere and dignity.

Circle A walls cannot "clang," when doors are slammed.

Circle A Partitions provide flexibility of layout. Tenants can be suited almost overnight. Muss, fuss and expensive alteration costs are absent.

Circle A Partitions save pounds and *pounds* per square foot, over plaster, tile or gypsum walls.

Circle A office walls can be finished in lacquer—practically scratch and chip-proof—in colors to match any office color scheme.

These are reasons why Circle A Partitions are "more than pleasing" customers and users.

Mr. L. J. Henkel, Building Manager

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Read what* Mr. Henkel *writ

"After a careful study of the meri and demerits of the numerous ste and wood partitions on the marke we decided upon your Circle A lin to be used exclusively throughout th building.

"Since then we have used many thou sand feet of Circle A partitions, rai ings, etc. and are thoroughly satisfie with our selection.

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"Perhaps Circle A Partitions hav contributed to the phenomenal succes which we have experienced in th building which is now more than 82% occupied less than five months fro the day the building was opened."

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CIRCLE A PARTITIONS

BOOK DEPARTMENT

THE AMERICAN HOSPITAL OF THE TWENTIETH CENTURY

Reviewed by WALTER GRANT THOMAS

THE profession will welcome Edward F. Stevens' new and greatly enlarged edition of his book on spitals. The subject is one which calls for expert vice, and those who have found themselves confronted th this very special problem have found, all too often their sorrow, how difficult is to get any exact infor- ation. The problem is so ghly specialized, and infor- ation of the right construc- e sort seems to be so lacking, at this revised edition is ubly welcome. The Ameri- n hospital, with its close in- rlocking with the life of the mmunity, is no longer the ing it was in the past. Few the younger generation should they become famous) ill have log cabins to point to birthplaces. Hospitals may on begin the formation of a ster of those educators, esidents, etc. who have con- escended to greet this world om their thresholds! To go the hospital was a most dis- ieting affair within the mem- y of most of us. The spital is now infinite in vari- y, and complete in the service numerous types it renders its particular community. One is reminded, on glanc- g through Mr. Stevens' book, the vast strides that the medical profession has made, nd of the tremendous aids that are now available to the hysician in furthering his efforts to cure. In fact, at mes these would seem to be an embarrassment of ches; there is a fear that the mechanics of these vast stitutions we have created may be and are sweeping way that personal contact between patient and doctor hich is so necessary in the treatment of many ills. The apid strides made in the treatment of special ailments nd the development and perfection of special equip- ent, with the sales organizations that go hand in hand ith them, make the problem of selecting, placing and perating of equipment a matter of unusual difficulty. hospital may at first flash seem to be a very simple ffair,—take a hotel and back up a few operating rooms it, and there you are. That would be found to be a ery poor solution of the problem; for one thing, it is ot complicated enough,—not that a well planned hos- ital isn't simple and direct when well studied, but a hos- ital is much more than floors of private rooms with a few attachments. Its organization is most complex, and in its daily routine it must function smoothly; the problem of food service, the quiet and efficient handling of supplies, and the location and selection of proper equipment, make the planning of a hospital a problem far from one susceptible of standardization by the profession.

Study of a Multi-story Hospital
Charles Butler and Stevens & Lee, Architects

The architect who has to design a hospital will find a new and unusual problem on his hands,—he will find a new type of client to serve. He is working in a highly specialized field, and he will shortly realize, unless he has gone through the mill, how little he knows about hospitals. To such a man, Mr. Stevens' book will be found most useful. The factors controlling the problem are the usual factors of available funds, available land, plus type and size of community to be served, etc. If it is to be a hospital for special treatment, what services must it include? These and other multi-varied requirements so change the problem that an easy solution is out of the question. The architect will want information as to construction, as to the best type of floor, wall, trim, window and hardware. He will be swamped with appliances and equipment *ad nauseam*. It is important that he should know everything. He will be expected to advise on matters of equipment, mechanical and installation. He will become the final arbiter between divergent medical opinions. His experience will indicate that, though architects may be difficult to get along with, there are members of other professions equally difficult to convince! To all such Mr. Stevens' book will bring sustenance and material aid. We recommend it most heartily to architects.

Mr. Stevens takes up the modern hospital in a very logical way, and his chapters, beginning with the general considerations, take up the administration department, the ward unit in the general hospitals, the various other departments, from the surgical to the psychopathic, tuberculosis, research and so forth. There are also chapters devoted to the various kinds of hospitals,—such as the small hospital and the medical school hospital,—and then he takes up in considerable detail the service portions of the building, such as the kitchen and laundry,

and the mechanical plant considerations, such as heatin ventilating and plumbing. One chapter is devoted details and finish, another to equipment, and finally chapter is devoted to the considerations of remodelin for a hospital. The text is profusely illustrated wi cuts of recent hospitals by various architects throughou the United States. The illustrations of plan arrang ments are profuse and exceedingly instructive, since aft all, the architect's greatest efforts will be to obtain prop plan arrangements. There are many illustrations an diagrams of the equipment for hospitals that shou prove of great value to those engaged in the practic working out of the multitude of problems of construc tion and equipment. To the hospital architect, the prob lem seems to be just one detail after another as the plan progress beyond the first stages. The work in its forme edition has come to be regarded as the authoritative guid to hospital architecture, and this revised edition make it again available to architects, more valuable than ever

THE AMERICAN HOSPITAL OF THE TWENTIETH CEN TURY. By Edward F. Stevens. Third Edition. 549 pp 7 x 10 ins. Price $15. F. W. Dodge Corporation, New York

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LOUIS XIV. By Louis Bertrand. Translated by Cleveland B Chase. 366 pp., 6 x 9 ins. Price $5. Longmans, Green & Co 55 Fifth Avenue, New York.

THE beginning of the greatness of present-day France may be said to have been made during the reign of Louis XIV. He mounted the French throne in his youth, and the 72 years of his long reign saw France firmly welded into unity, and with unity thus secured there came attention to the useful arts,—the arts of peace —which placed France in the foremost rank among the nations of Europe, a position which, notwithstanding all subsequent mishaps and upheavals, France still holds.

Architecturally, the reign of Louis XIV was literally without parallel. "He re-made France in his own image. With his engineers and architects, he laid out public squares, planted the trees and flowers along the walks and esplanades, built a Hotel de Ville and a National Theater in the smallest provincial capital, and had water conduits installed in the streets, built monumental fountains everywhere, laid out roads, constructed fortresses, dredged harbors. The national museums are still filled with the work of his painters, his sculptors, his decorators. He went still further. He fashioned the souls, the feelings, the minds of his countrymen. Our souls are still both heroic and gentle, as were those of the men of his day, as was his own. There is the same social quality in our attitude toward life. We need to share our sensations, to be sorrowful or elated in common. We have also the same need to think clearly, methodically, rationally, that was characteristic of the great prose writers of his age. Our democratic conceptions of life come from him,—that conception of a social order open to all men of ability, in which personal merit takes precedence over birth. Our rules of social procedure are those that he and his courtiers established. In the best sense of the word, France remains the *salon* which he wished it to be, modeled after the example he set at Versailles. In this biography Louis Bertrand, distinguished novelist, brilliant historian and member of the French Academy, has revolutionized both the popular and the historical conceptions of Louis XIV. Louis emerges

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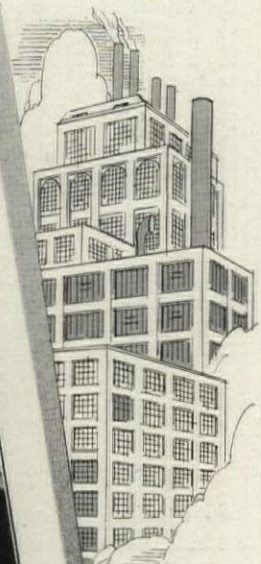

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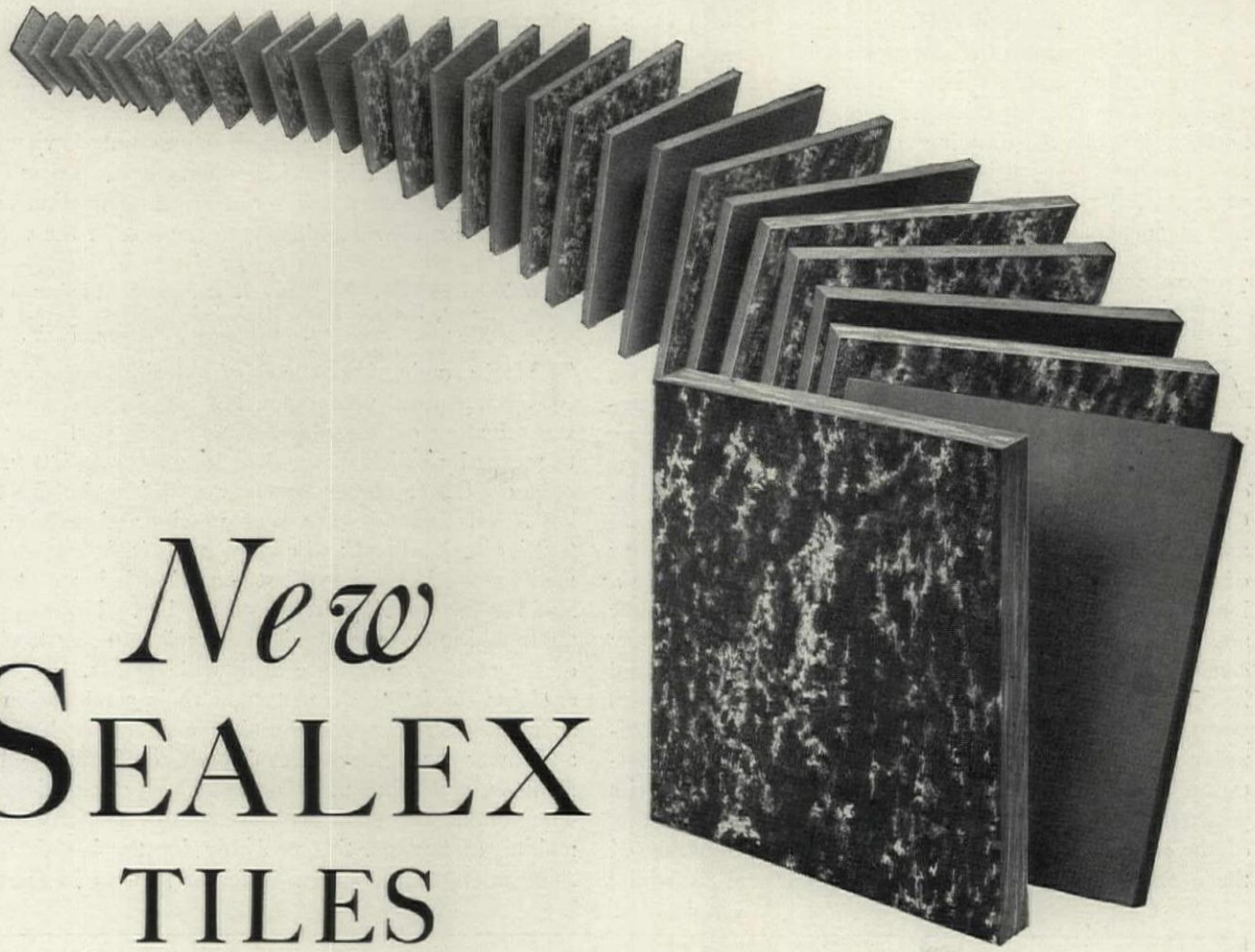
from the book not as a voluptuous despot, but as the creator of modern French civilization. The conception of him as a ruler who outdid and out-influenced Napoleon is startling, but so real and convincing that other portrayals of the Grand Monarch pale by comparison. Having prepared his material with the scrupulous care that the world has come to expect of French historians, Mr. Bertrand has written with the spontaneity of a novelist. Casting aside transitional historical methods, he reconstructs for us the king's personal life as if Louis were a contemporary character, picturing the gradual growth of a shy, bashful, timid boy hungering for affection into the kindly but inflexible despot who for more than half a century made all Europe tremble."

Even the works of history and biography which are most fascinating when read in their original text, frequently lose much when they are translated into English. A successful translator might be said to be, like a poet, "born and not made." Too much therefore could scarcely be said of the translation from the French which Mr. Chase has made. He has made a work most charmingly written into a work which when presented in an English dress possesses all the spontaneity and freshness which it possessed when it was presented in its original form.

AMERICAN COMMERCIAL BUILDINGS OF TODAY. By R. W. Sexton, 309 pp., 9½ x 12½ ins. Price $18 Net. Architectural Book Publishing Co., Inc., New York.

THIS volume is a survey of contemporary business buildings, stores and banks. It contains about 15 pages of text, including the foreword of pertinent comment by Ralph T. Walker, and 295 large pages of reproductions of plans, renderings and photographs from as widely separated subjects as the modernistic Chanin Tower in New York to the ultra-conservative Pacific Gas and Electric Building in San Francisco. The brevity of doctrine and the great variety of illustrations make the volume a convenient reference source where he who runs through it may read his own theories of the trend of architecture. He can see in American commercial building of today the dawn of an illumined tomorrow, where a national art shall rise resplendent, or where, if he be that kind of a reader, he can detect the itch for "something different" which drives the architect to forsake the standards which have satisfied for centuries our mingled race and to plunge into expression of Mayan or basaltic origin. In the chapter entitled "Skyscrapers" is to be found what the well dressed perspective is now wearing, —which make the Gothic seem to be almost child's play. In the chapter on "Private Business Buildings" the gamut of style is run from Egyptian through Spanish to the later Mail Order. The two last collections, those of Stores and of Banks are vividly contrasted; the first are gay, audacious and ephemeral; the second solid and, being traditional, express permanency.

Mr. Sexton has already published two similar volumes on contemporary design in the United States, the first a monograph on apartment houses, the second on theaters. To the office manager, overwhelmed with the ever-accumulating flux of architectural periodicals which, to remain serviceable, must be dismembered and filed according to subject, or else bound and carefully indexed, this clearly printed collection of nearly 500 plates offers



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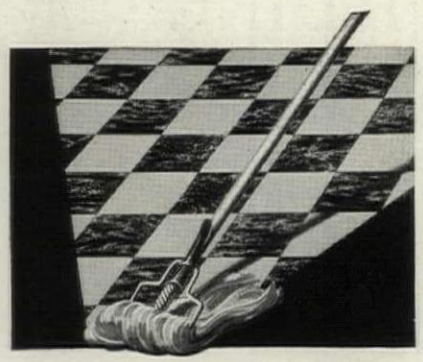

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a compact and classified reference. To the designer of skyscrapers, to whom the latest news is the basic source of information, and to the practitioners of the cult of radicalism to whom the one-time standard reference books and measured drawings of the world's monuments are septic, this garnering of the latest crops will prove profitable. To the dreamer, the first hundred pages picture a portent dark and terrific against the dusk!

THE GROWTH OF THE ENGLISH HOUSE. By Alfred Gotch. Second Edition, Revised and Enlarged. 214 pp., 5/2 x 8½ ins. Price $4.50. Charles Scribner's Sons, New York.

AS every student of architecture knows, the English home has been the product of centuries of evolution or development, and the study of these successive periods as they are now studied in retrospect or review constitutes in and of itself an absorbing subject. Mr. Gotch, whose name and achievements are known to all architects and architectural students, has been the author of many works upon a subject of which he has made a long and careful study. This particular work which now appears in a new and revised edition "has now definitely established itself as a standard work on its subject and has been in constant demand for a period of some 20 years. It is, in fact, one of the most readable and authoritative ever issued on the development of English domestic architecture, tracing as it does in a single volume its progress and growth from early feudal times to the dawn of the nineteenth century, which saw the termination of the Renaissance tradition. It is a graphic and absorbing narrative of which the illustrations, some 240 in all, fo a unique pictorial record. They include general exter views, interiors, features and details, doorways, windo metalwork, decoration, gardens, plans, etc., and are tak from the finest photographs, drawings and old views. A vantage has been taken of the demand for a new editi to add or substitute a number of fresh illustrations, and make various useful additions to the text of the volum

HOW TO LETTER. By Maxwell L. Heller. Chairman of Department, Seward Park High School, New York. 64 5½ x 8½ ins. Price $1. Bridgman, Pelham, N. Y.

THE growing importance of lettering, not only in t architectural profession, but also in advertising a several more or less allied fields, lends particular val to means by which the student may learn to letter. N only does Mr. Heller *tell* how to letter, but he *sho* how. His examples are clear, precise and definite. H text is simple, direct and convincing. This book was cr ated for the beginning art student, but it is also a stim lant for the working artist and teacher. Unless one h attempted to do lettering, it is difficult to understand so of the matters which are dealt with by Mr. Heller. H explains the letter elements and their combinations; t spacing of letters; Gothic and Roman letters, both upp and lower case; the correct drawing of figures and pri symbols, and other more or less closely related matter The volume also deals with the use of the brush and th making of layouts, this probably for the benefit of stu dents interested in several different forms of advertising

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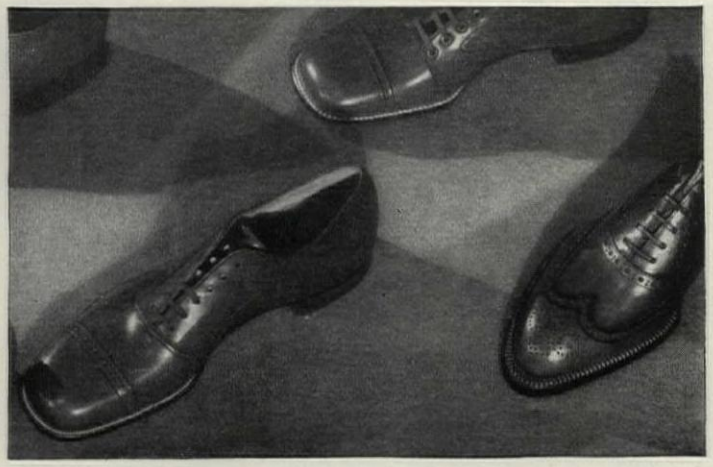

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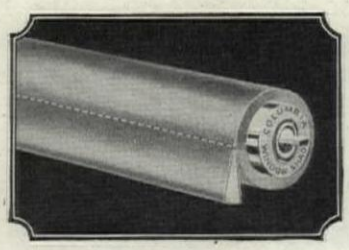

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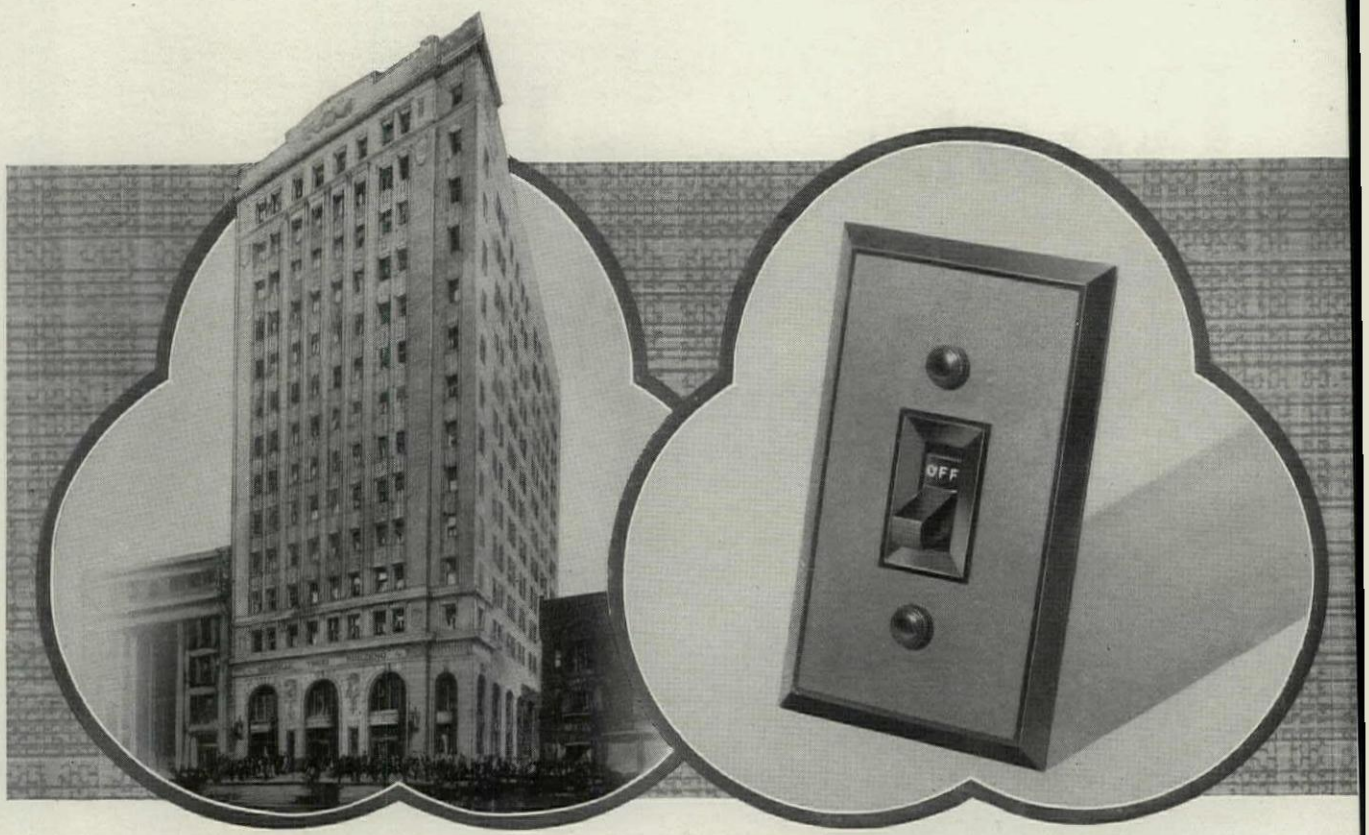

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THE EDITOR'S FORUM

AN ADDRESS BY THE PRINCE OF WALES TO THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

IN thanking you sincerely for the kind way you have received this toast, and for your hospitality to me tonight, I should like to allude to one or two of the many functions of the Royal Institute of British Architects and of its service to the nation.

The two paramount objects of this Institute are to look after, first of all, architecture; and secondly, but by no means least, architects. These functions, I consider, are of great importance to the whole of our community. We none of us can escape from architecture, whether it be good, or whether it be bad. We are surrounded by architecture; we are affected by it every day of our lives. If our architects are dull and uninspired, we are condemned to live in ugly, ill-constructed buildings; we are compelled to go about our daily businesses in drab and ill-planned cities, towns and villages. But if our architects can give us surroundings that are both good to look at and good to dwell in, the difference in our general well being and our outlook on life is wonderful. But fostering architecture is not merely a matter of acting, so to speak, as a watch dog over existing buildings which should be preserved, or over plans of proposed buildings which should never be erected,—though both those are important functions of the Institute. No, it demands also a very watchful eye on the interests of the architect himself. To do their best work for the nation and for the empire, your members must have their material interests considered and safeguarded, and above all they must be provided with opportunities. Ask the layman this question: "What is the first essential for an architect's work?" The layman will probably answer: "Bricks and mortar, and a piece of ground to put them on." If you were to ask even an Honorary Fellow,—and how lucky that I should have achieved this great position by acclamation and not by examination,—if you were to ask me, an Honorary Fellow, what the right answer is, I should say: "Clients." The architect differs from other creative artists in this great point; he cannot begin to create until the community gives him his chance. The painter can paint a picture,—it may be a very bad picture, but he still has the hope that some silly fool will come and buy it. The musician can start playing, on the chance of collecting an audience. But the poor architect cannot go out and build a town hall or a hospital, or even a cottage, without a definite commission to do so. He cannot even start building a pig sty or a reptile house or a monkey house, unless someone has a pig, or a reptile, or a monkey to put into it. The work of the architect is not the production of drawings, but the erection of buildings. And if this country wants beautiful houses, it must employ the best architectural designers. If it wants noble public buildings, it must give the collective genius of this great profession a free opportunity to compete for them,—otherwise it cannot exist.

Mr. President, you have been kind enough to say a word about the architectural policy pursued on the Duchy of Cornwall estates, but I can assure you that this policy has not been followed solely for the good of the general public; it is also a sound business proposition. We have always found that in the erection of cottages or blocks of flats, the cheaper method is by getting architects to design them rather than by adopting stock patterns. The architect is more economical and obtains his effects by trusting to good proportions rather than to unnecessary ornament. On the Duchy of Cornwell estates we have always found that a well designed and simple building invariably gives greater pleasure to those who live in it and,—still more important,—creates pride in the home. I would warn anybody who contemplates the erection of a building, however great or however small, of the fallacy that it is good policy to economize on the architect's fees. Speaking as a landlord, I can assure him that it is not.

The conclusion of an after-dinner speech is always a difficult matter; perhaps that is why so many speakers take such a long time in arriving at it. But the conclusion of my speech tonight is a very easy and pleasant matter. I have been allotted the privilege of presenting to Professor Ostberg the Royal Gold Medal for Architecture. The presentation of this medal is the highest honor that this country can bestow on any architect, and though the roll of those who have won it contains names which are famous all the world over, I doubt if there has ever before been more complete agreement on the choice of any recipient. By common consent, Professor Ostberg's masterpiece, the new town hall in Stockholm, is one of the greatest buildings ever produced by human genius, and I know full well that I am speaking on behalf of all British architects when I say we are very proud that our Gold Medal should be in his hands.

A CORRECTION.

AN article entitled "Structural Features of Some Modern American Churches" in the November issue of THE ARCHITECTURAL FORUM included, among other illustrations, two views of the "Riverside Church," New York. The credit lines accompanying the illustrations of this church, on pages 736 and 737, should read: "Henry C. Pelton and Allen & Collens, Associated Architects," instead of as printed.

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PART TWO—ARCHITECTURAL ENGINEERING AND BUSINESS

PARKER MORSE HOOPER, A.I.A., Editor
KENNETH K. STOWELL, A.I.A., Associate Editor

Contributing Editors:
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THE MEDICAL CENTER, NEW YORK

JAMES GAMBLE ROGERS, ARCHITECT

FROM A PHOTOGRAPH BY SIGURD FISCHER

The Architectural Forum

THE
ARCHITECTURAL
FORUM

VOLUME XLIX NUMBER SIX

DECEMBER 1928

THE MEDICAL CENTER, NEW YORK

JAMES GAMBLE ROGERS, ARCHITECT

BY

C. CHARLES BURLINGAME, M.D.

EXECUTIVE OFFICER OF THE JOINT ADMINISTRATIVE BOARD OF THE MEDICAL CENTER

A GLANCE at the Medical Center as it stands today,—a towering group of skyscrapers, probably unprecedented in mass as applied to the needs of one medical undertaking,—gives to the discerning observer an immediate sense of the complexity of the problem involved in its design and construction. And if that observer happens to be aware that here in this group of buildings there are to be housed 12 units,—with common interests, but widely diversified in equipment and functions, all of which must be coördinated for a joint end,—he may be further impressed with the comprehensiveness of the task which confronted the organizers and architects of the Medical Center. That in spite of complexity of function, a decided unity of effect has been achieved in the group, from the architect's standpoint, is paralleled, from the physician's angle, by an intelligent unifying of all the branches of medicine,—in the three phases of treatment, teaching and research,—accomplished by the coöperative effort of the 12 units. As indicative of the stress and difficulty of the situation for both the Joint Administrative Board of the Medical Center and the architects, it should be kept in mind that while originally the coöperating units were only two,—the Presbyterian Hospital and the College of Physicians and Surgeons,—by the time the first of the new buildings was ready for occupancy, early in 1928, this number had been increased to 11, and is now 12, by the addition of the Vanderbilt Clinic; the Sloane Hospital for Women; the Squier Urological Clinic; the Presbyterian Hospital School for Nursing; the Stephen V. Harkness Pavilion for Private Patients; the School of Dental and Oral Surgery, and the De Lamar Institute of Public Health, both of Columbia University; the Babies' Hospital of the City of New York; the Neurological Institute of New York; and the New York State Psychiatric Institute and Hospital. With plans of organization thus continually in a state of flux and with policies of coöperation between the various units repeatedly under discussion, the architects had the responsibility of crystallizing and re-crystallizing ideas and designs to meet the changing situations.

In September, 1921 the Joint Administrative Board undertook an extensive survey not only of medical, dental, nursing, and other allied schools, together with the various types of hospitals and research laboratories as they exist in this country and Europe, but also of the study of the best current medical opinion and practice in general, and of what would be the requirements if these practices were ideally correlated by institutions. As tangible evidence of the investigation, several hundred plans with data were assembled from the principal centers of medical science. At the same time, as the various units entered into their agreements with the Medical Center, their histories, needs, future aspirations, and financial situations were studied in themselves, and as they affected one another. This period of preliminary study by the staff of the Joint Administrative Board lasted for two and a half years. Specifically, the mechanism of operation in regard to the actual plans of the greater portion of the Center was this: The data were classified by institutions, by departments and sub-divisions of departments; each room was named, numbered, its function, personnel, equipment and relationship to other rooms described or estimated as far as possible, the whole finally making up a building program of several volumes. In the meantime, as fast as this material was assembled it was turned over to the architects, who with this advice produced a set of sketch plans which they presented to representatives of the particular unit involved, for the usual criticism of detail. The plans as eventually evolved included space allotments for future buildings as well as for the expansion of the present structures. In January, 1925 the ground was formally broken, and the excavations were begun.

The general layout of the buildings, as determined by certain fundamental needs of the coöperating units, may be of interest. First there was the necessity of juxtaposition and coördination of related services for the College of Physicians and Surgeons and its main teaching field, the Presbyterian Hospital, which in turn uses the laboratories of the College for service to both patients and to nurses training. These joint requirements were met by connecting the 22-story Presbyterian Hospital building (which also houses the Sloane Hospital for Women and the Squier Urological Clinic) by a stem or axis building

Photos. Sigurd Fischer

THE MEDICAL CENTER, NEW YORK

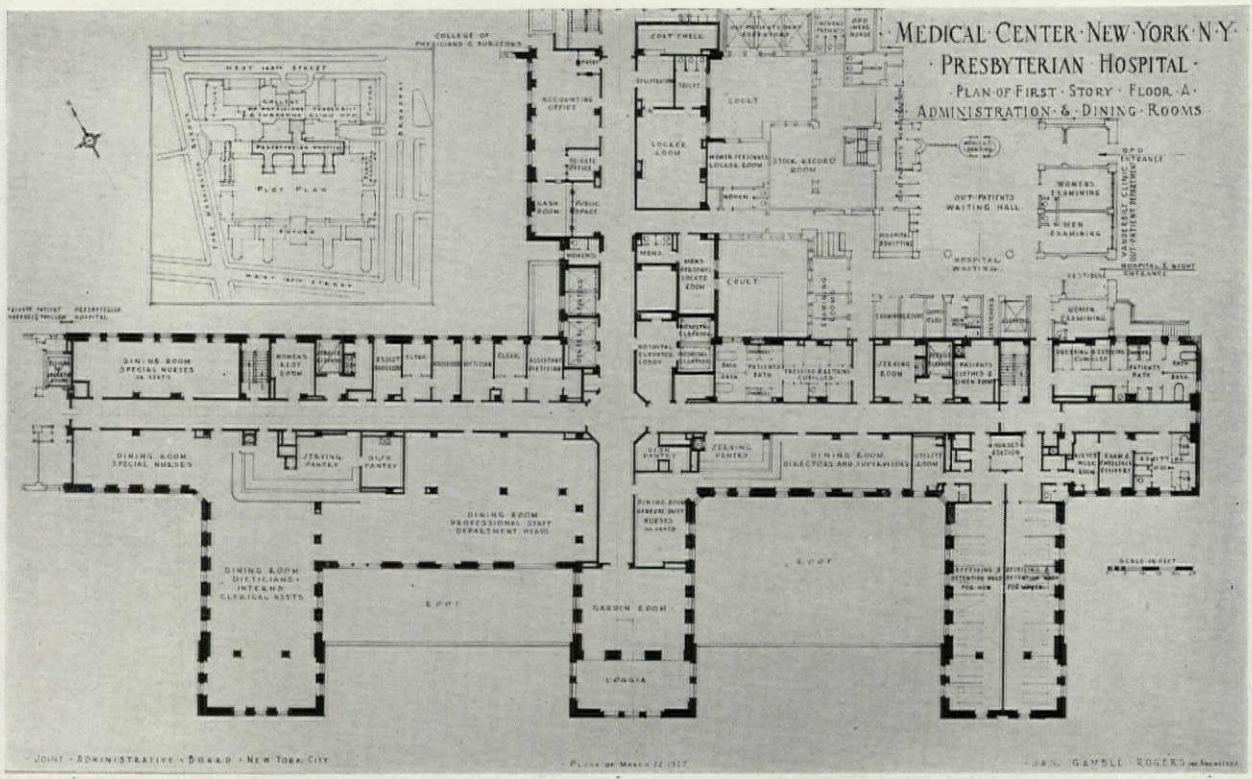
JAMES GAMBLE ROGERS, ARCHITECT

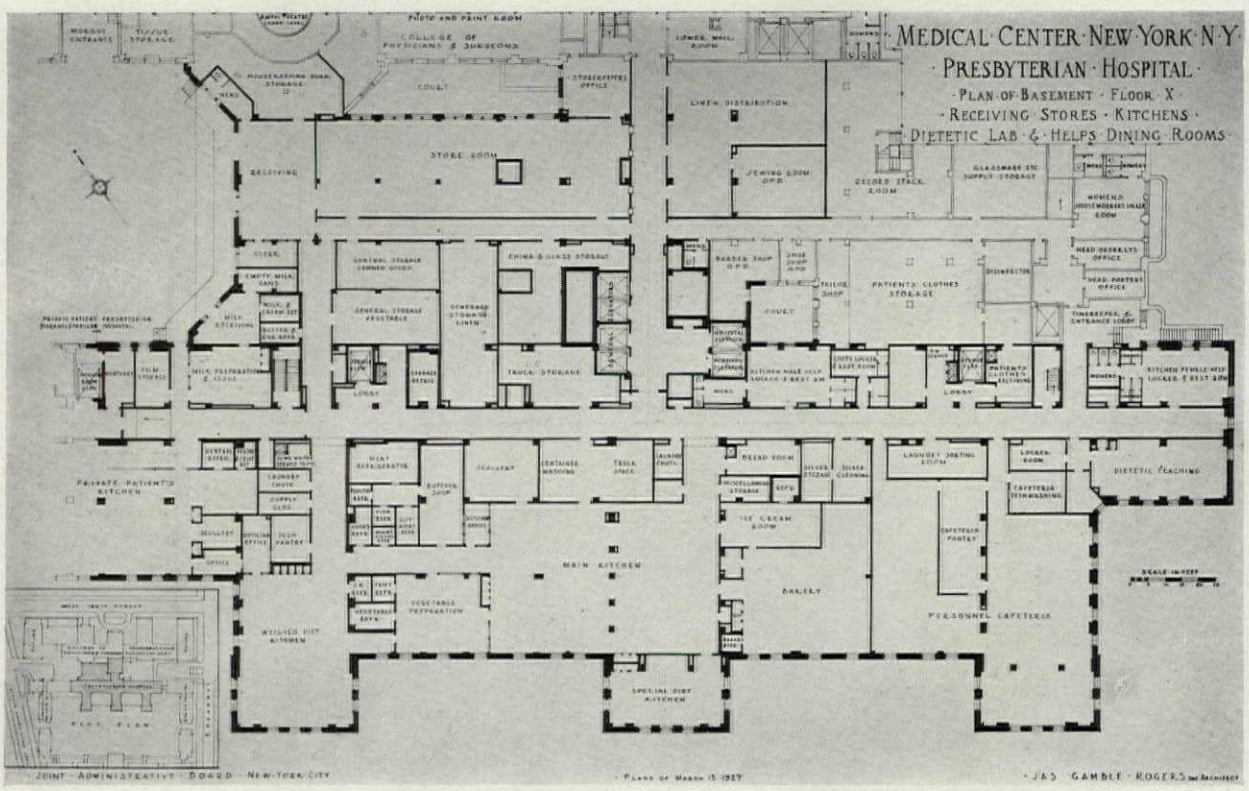
Looking Southeast from Corner Ft. Washington Avenue and 168th Street. Left Foreground, Ash-hoist Building, Ambulance Garage; Center Foreground, Service Building; Right Foreground, Harkness Pavilion; Left Background, College of Physicians and Surgeons; Center Background, Presbyterian Hospital

THE MEDICAL CENTER, NEW YORK

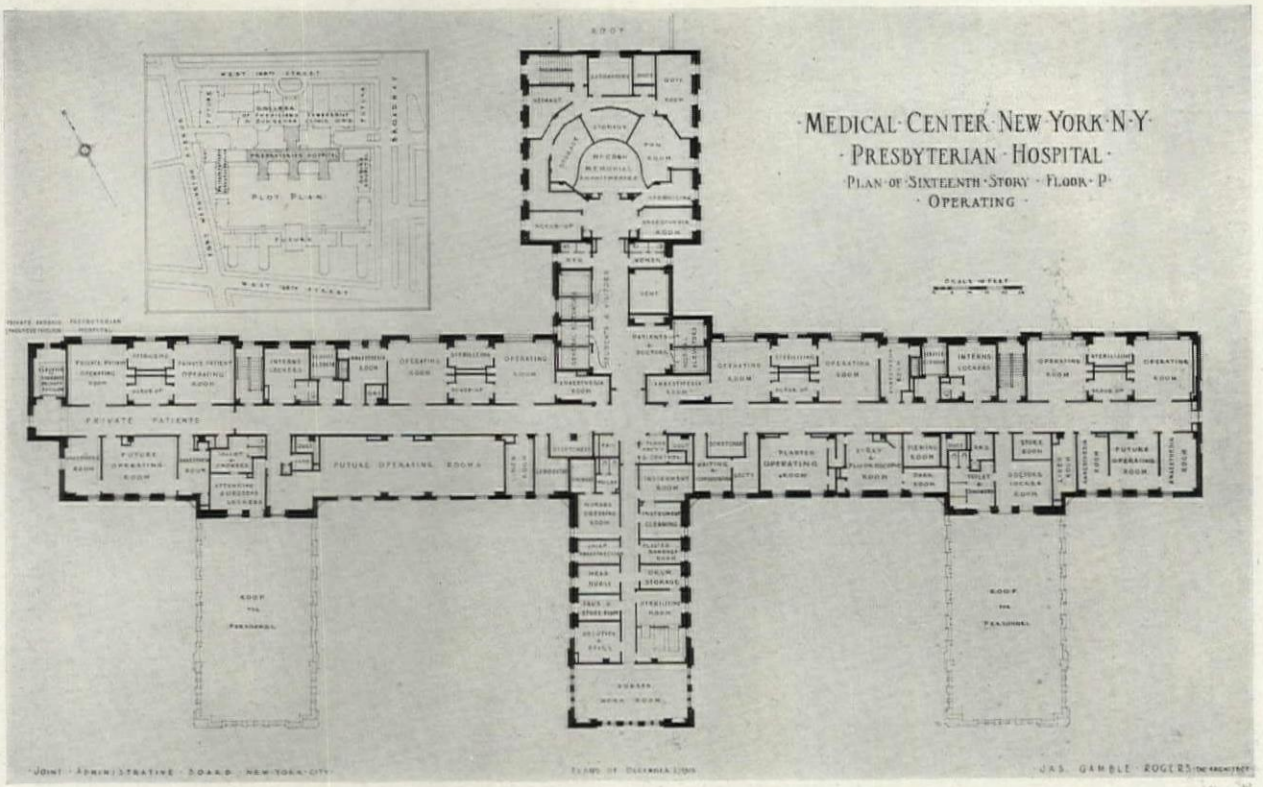
JAMES GAMBLE ROGERS, ARCHITECT

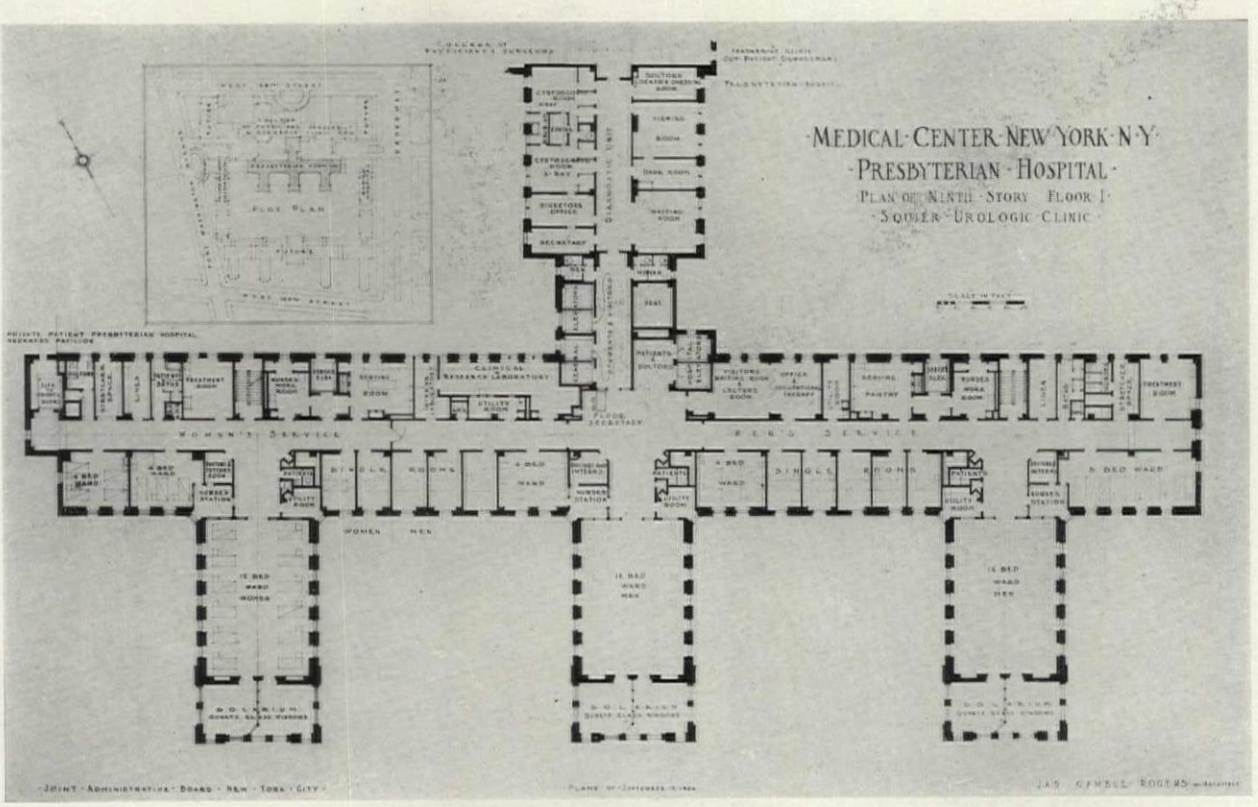
Service Building (Left Foreground), College of Physicians and Surgeons (Left Background), Harkness Private Pavilion (Right Foreground), Presbyterian Hospital (Right Background)





PLANS OF THE PRESBYTERIAN HOSPITAL
THE MEDICAL CENTER, NEW YORK
JAMES GAMBLE ROGERS, ARCHITECT





PLANS OF THE PRESBYTERIAN HOSPITAL
THE MEDICAL CENTER, NEW YORK
JAMES GAMBLE ROGERS, ARCHITECT

THE MEDICAL CENTER, NEW YORK

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Patients' Entrance (On Broadway); Presbyterian Hospital in Background; Vanderbilt Clinic and School of Oral and Dental Surgery (At Right); Babies' Hospital (At Left)

THE MEDICAL CENTER, NEW YORK

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Neurological Institute from Southeast (Or from Entrance to Harkness Private Pavilion)

THE MEDICAL CENTER, NEW YORK

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N. Y. State Psychiatric Hospital from the Northwest on Riverside Drive Front, (Sullivan W. Jones, State Architect, To Right, Anna C. Maxwell Hall, School of Nursing Residence (James Gamble Rogers, Architect)

THE MEDICAL CENTER, NEW YORK

JAMES GAMBLE ROGERS, ARCHITECT

Upper Stories, or Tower, of State Psychiatric Institute (Sullivan W. Jones, State Architect)

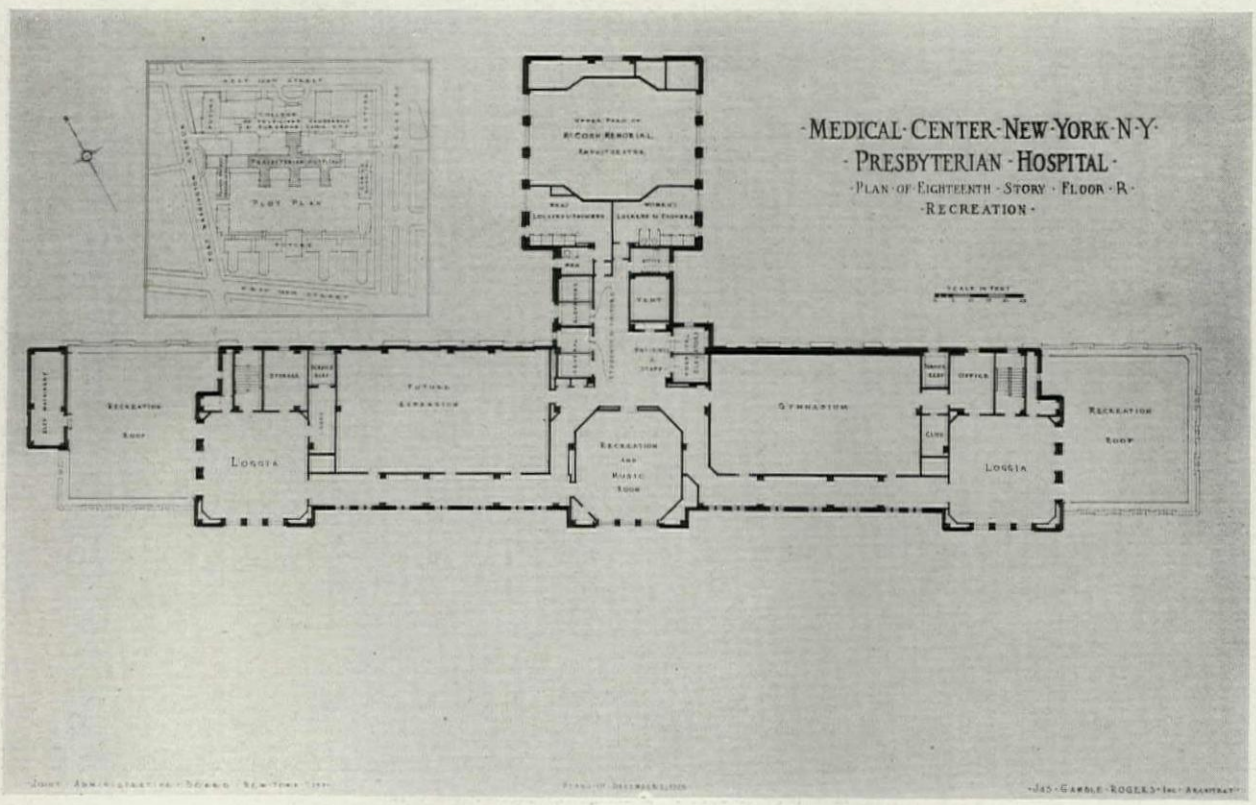
with the College. Communication on every floor is immediate, the laboratories and departments of the medical school being so far as possible on the same floors as the hospital departments with which they are most intimately associated, while the axis building is used for work which concerns both institutions.

It was also obvious that the Vanderbilt Clinic building (which houses on its three top floors the School of Dental and Oral Surgery) should directly adjoin both the medical school wing (to afford accessibility for students) and the main hospital group, for which it serves as an admitting unit, its entrance being convenient to lines of transportation. Contiguous to the Presbyterian Hospital building on the west, with direct access to its operating rooms, is the Harkness Pavilion for Private Patients, and correspondingly located on the east is the Babies' Hospital, still under construction. The orientation of the group is such that all patients' quarters,—wards or private rooms,—have sunny exposures, while areas to the north are used for service rooms, laboratories, etc.

In the cases of the Neurological Institute of New York and the New York State Psychiatric Institute and Hospital, the nature of their specialties and certain other considerations demanded a location apart from the main group. Consequently, they were placed on the opposite side of Ft. Washington Avenue, which divides diagonally the 20-acre site. In close proximity to each other because of their related work (both are still under construction at this date), they will be connected by tunnels to the main group. The Anna C. Maxwell Hall, the residence of the Presbyterian Hospital School for Nursing, is also dissociated from the other buildings to give the nurses an ideal residence site overlooking the Hudson, and to ensure a reasonable isolation from the scene of their intensive work with the sick.

Of special interest was the building problem of the Psychiatric Institute, in that its site is on two levels, with a sheer drop of 85 feet over a cliff and retaining wall. Making an asset of this situation, Sullivan W. Jones, the State Architect at that time, so planned that the entrance from its higher level (looking toward the main group) gives access to the ten upper stories devoted to research and out-patient work, while the ten lower stories, facing the river and with the natural rock as backing, offer the greater seclusion desirable for the mentally ill.

Skyscraper construction has been used for metropolitan hospitals in numerous instances, but never to the extent to which it is used at the Medical Center. Its time-saving possibilities and its other advantages for the sick have been developed to a new degree. With 22 elevators in the main group of buildings, some of these serving as a connecting link between two or more institutions, the availability of all branches of the medical service becomes a matter of seconds. This is only one instance of the application of a modern device to the special needs of the hospital. Because of the varying heights of the buildings, roofs and terraces have lent themselves particularly well to the purposes of recreation and rest

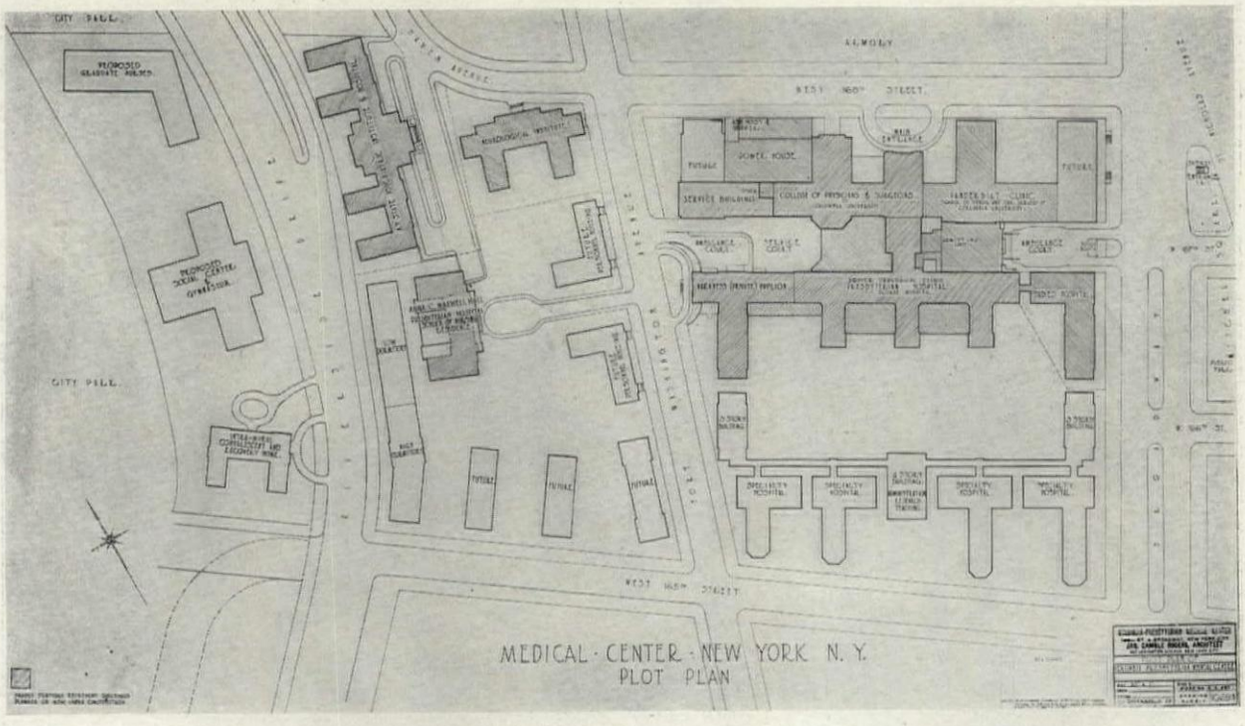


for convalescents, and the economy of ground space incidental to skyscraper construction has left room for a garden and campus which are of psychological as well as physical importance to the patients. These are, perhaps, from the architects' viewpoint, merely by-products.

Turning to the larger aspects of the achievement, the question may be asked: "What form has this building project assumed? Is it an adaptation of a recognized style of architecture, or is it something entirely new?" In making the fundamental designs, the architects were very closely governed by the exigencies of the various units. Furthermore, in an enterprise so vast, depending largely on private contributions, which, munificent in themselves, have nevertheless not been unlimited in proportion to the undertaking, economy was urgent. With these two factors directing and constricting the architects' plan, traditions and historic styles were abandoned. Ornamentation was reduced to the minimum. Even symmetry was neglected, except as it furthered the best planning of the interiors. The resulting irregular massing of skyscraper against skyscraper may be said to have, in its cumulative effect, the beauty which comes from austerity and simplicity,—from perfect adaptation to its end. So there has been created something new and outstanding in the field of design, while at the same time the profession of architecture has made a notable contribution to the world of medicine. In this connection tribute should be paid to James Gamble Rogers, architect of the Joint Administrative Board, and responsible for the main group of buildings; Henry C. Pelton and James Gamble Rogers, associated architects for the Babies' Hospital; and to Sullivan W. Jones, architect for the New York State Psychiatric Institute and Hospital.

Now to all of us who have been associated in the years of planning, there comes the hope that the efforts of the professions of medicine, architecture and building may have produced something more than a mere machine of relative perfection in its day, and that they have made possible an intellectual uniting of medical teaching, medical research, and care of the sick not accomplished heretofore. Then comes a wish that whatever step forward the Medical Center of New York may prove to be, it may be followed, as surely it must be, by other and greater advances in medical center planning in the future.

Editor's Note. As has already been explained, the Medical Center, which has attracted world-wide attention, consists at present of these units: College of Physicians and Surgeons of Columbia University; De Lamar Institute of Public Health of Columbia University; School of Dental and Oral Surgery; Presbyterian Hospital of New York; Presbyterian Hospital School of Nursing; Squier Urological Clinic; Harkness Pavilion; Neurological Institute of New York; Babies' Hospital of New York; Sloane Hospital for Women; and the Vanderbilt Clinic. The New York State Psychiatric Institute and Hospital, an institution owned and operated by the state, is also located at the Medical Center and will operate under an agreement with the Joint Board.



THE MEDICAL CENTER, NEW YORK
JAMES GAMBLE ROGERS, ARCHITECT
The Three Ward Wings from the Southwest

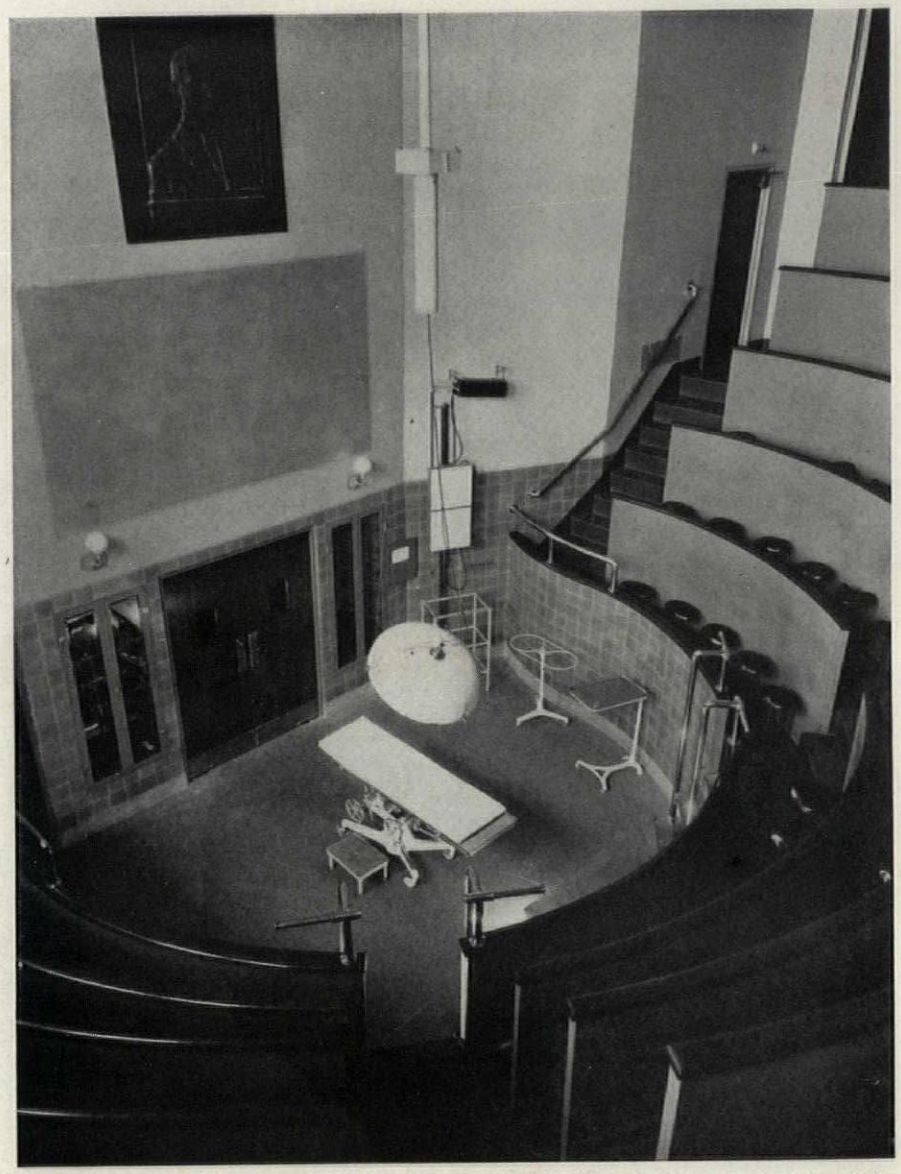
THE MEDICAL CENTER, NEW YORK

JAMES GAMBLE ROGERS, ARCHITECT

On the East Roof of Presbyterian Hospital, Looking West to Central Tower

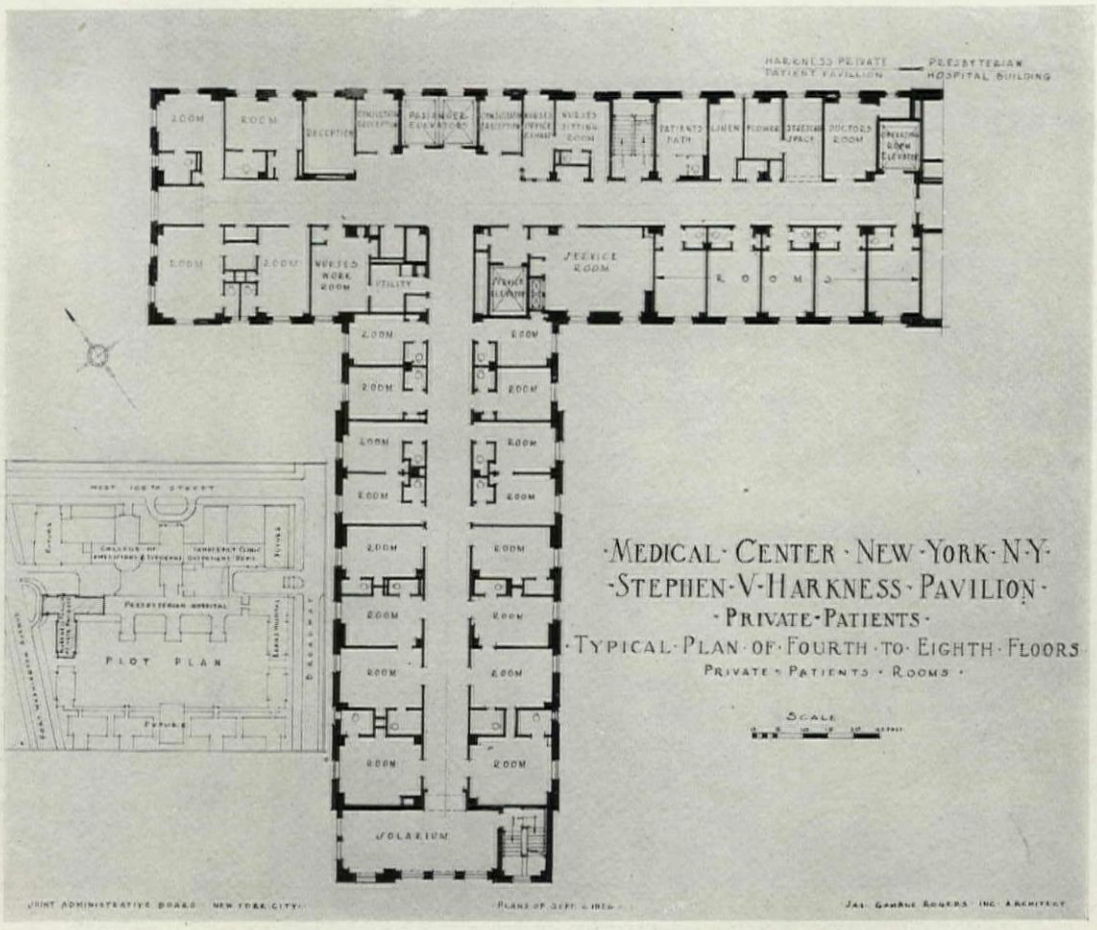
THE MEDICAL CENTER, NEW YORK
JAMES GAMBLE ROGERS, ARCHITECT
Looking Up in an Angle of the South Court

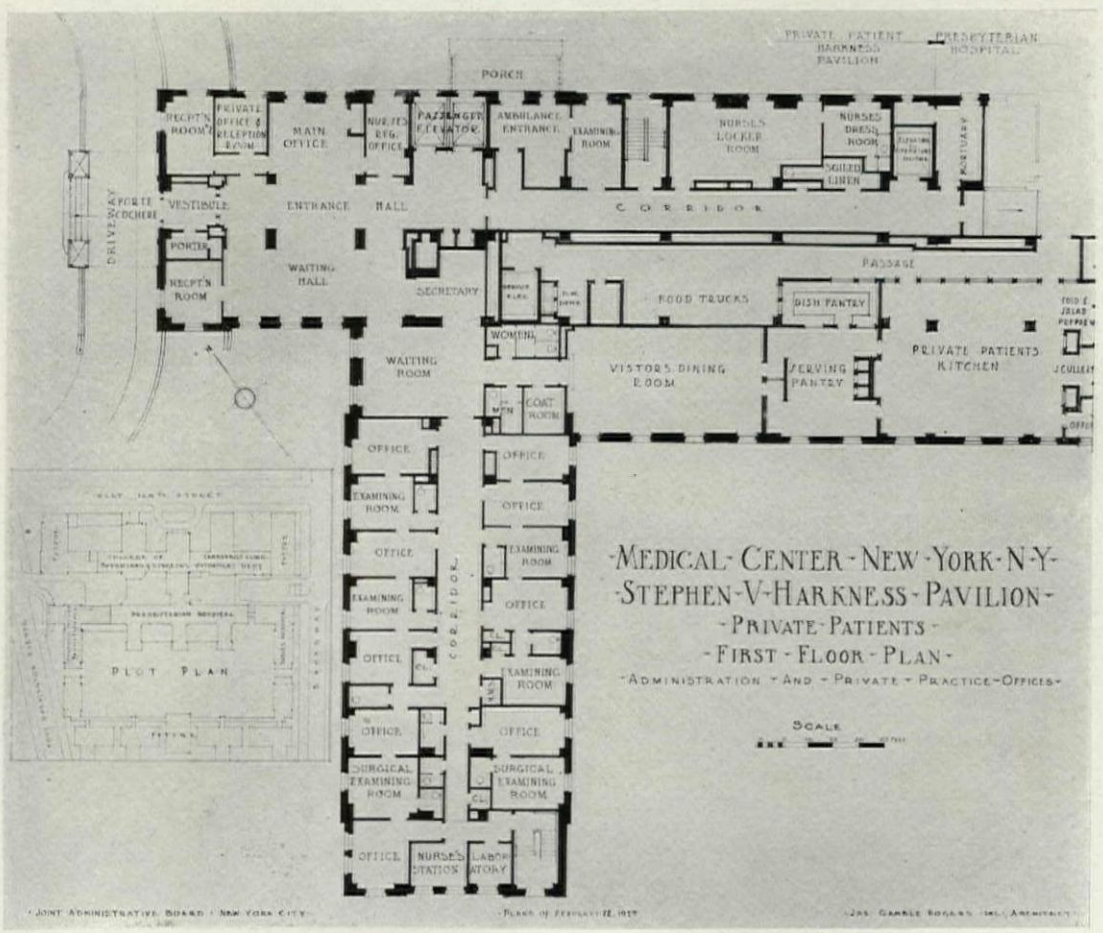
MUSIC AND RECREATION ROOM



McCOSH OPERATING AMPHITHEATER

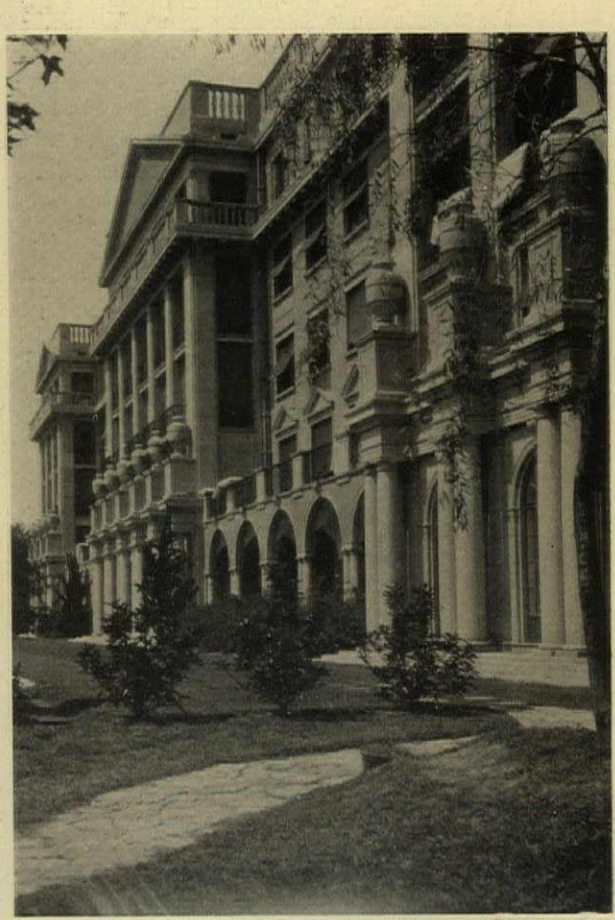
THE MEDICAL CENTER, NEW YORK
JAMES GAMBLE ROGERS, ARCHITECT


HARKNESS PRIVATE PATIENT PAVILION — PRESBYTERIAN HOSPITAL BUILDING
ROOM
RECEPTION
PASSENGER ELEVATORS
NURSES SITTING ROOM
PATIENTS PATH
LINEN
FLOWER
STERILIZING SPACE
DOCTORS ROOM
DRESSING ROOM ELEVATOR
NURSES WORK ROOM
UTILITY
SERVICE ROOM
SOLARIUM
PLOT PLAN
MEDICAL CENTER NEW YORK N.Y.
STEPHEN V. HARKNESS PAVILION
PRIVATE PATIENTS
TYPICAL PLAN OF FOURTH TO EIGHTH FLOORS
PRIVATE PATIENTS ROOMS
SCALE
JOINT ADMINISTRATIVE BOARD NEW YORK CITY
JAS. GAMBLE ROGERS INC. ARCHITECT


PRIVATE PATIENT HARKNESS PAVILION — PRESBYTERIAN HOSPITAL
PORCH
RECEPT'N ROOM
PRIVATE OFFICE & RECEPTION ROOM
MAIN OFFICE
NURSES REG. OFFICE
PASSENGER ELEVATOR
AMBULANCE ENTRANCE
EXAMINING ROOM
NURSES LOCKER ROOM
NURSES DRESS ROOM
SOILED LINEN
CORRIDOR
PORTE COCHERE
VESTIBULE
ENTRANCE HALL
PORTER
RECEPT'N ROOM
WAITING HALL
SECRETARY
PASSAGE
FOOD TRUCKS
DISH PANTRY
WOMEN
WAITING ROOM
VISITORS DINING ROOM
SERVING PANTRY
PRIVATE PATIENTS KITCHEN
COAT ROOM
OFFICE
EXAMINING ROOM
SURGICAL EXAMINING ROOM
NURSES STATION
LABORATORY
PLOT PLAN
MEDICAL CENTER NEW YORK N.Y.
STEPHEN V. HARKNESS PAVILION
PRIVATE PATIENTS
FIRST FLOOR PLAN
ADMINISTRATION AND PRIVATE PRACTICE OFFICES
SCALE
JOINT ADMINISTRATIVE BOARD NEW YORK CITY
JAS. GAMBLE ROGERS INC. ARCHITECT

GENERAL VIEW

MAIN HALL



FRONT ELEVATION

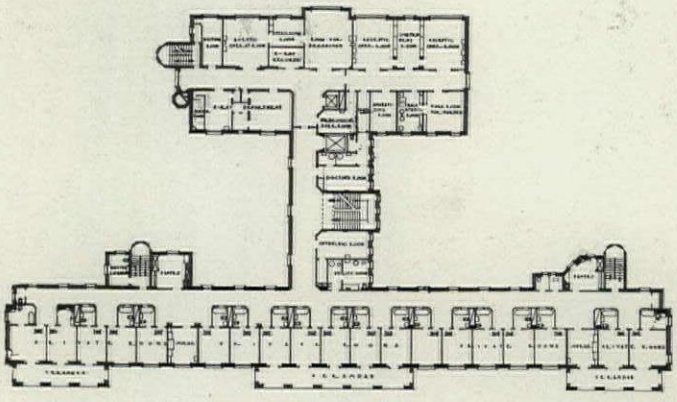
Plans on Back

THE COUNTRY HOSPITAL, SHANGHAI

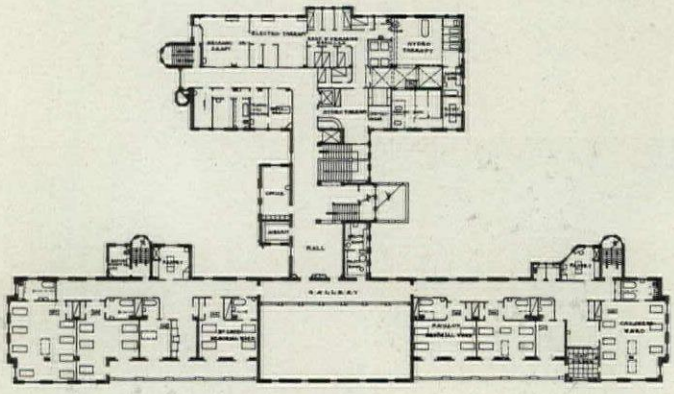
L. E. HUDEC, ARCHITECT

COST AND CONSTRUCTION DATA

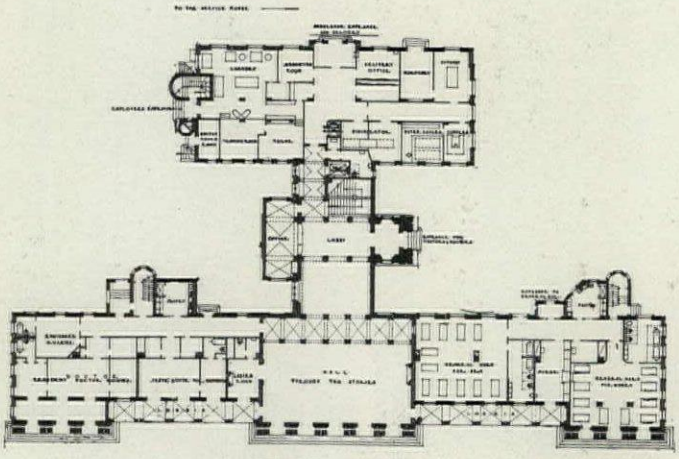
Date of Completion: July, 1926.
Type of Construction: Reinforced concrete.
Exterior Walls: Stucco and stone.
Floors: Various.
Windows: Metal.
Heating: Steam.
Cost of Building, with Equipment: $1,000,000.
Number of Beds: 150.



THIRD FLOOR



FIRST FLOOR



GROUND FLOOR

PLANS: COUNTRY HOSPITAL, SHANGHAI
L. E. HUDEC, ARCHITECT

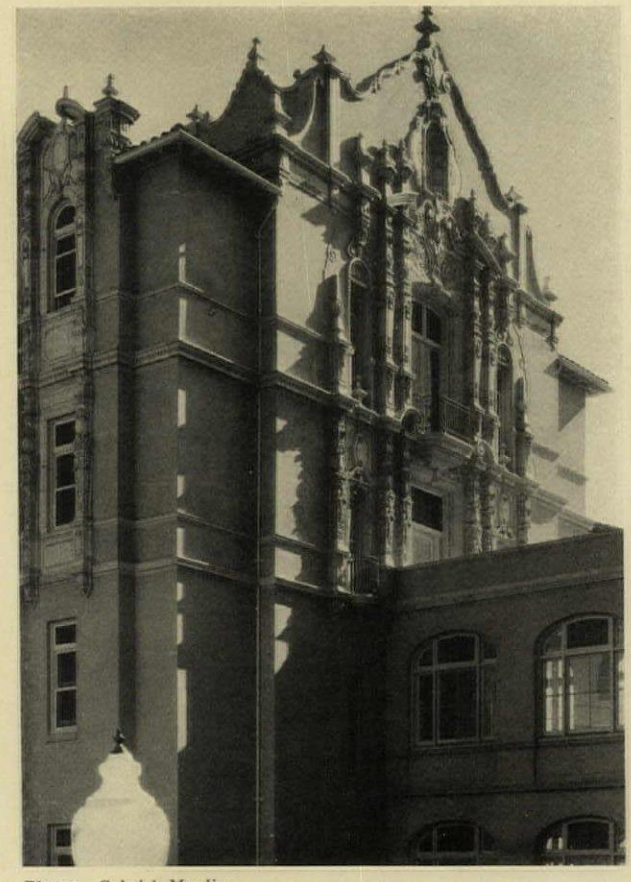
MONUMENTAL STAIRWAY

MAIN HALL

THE COUNTRY HOSPITAL, SHANGHAI

L. E. HUDEC, ARCHITECT

GENERAL VIEW



Photos. Gabriel Moulin

END ELEVATION

Plans on Back

MAIN ENTRANCE

HIGHLAND HOSPITAL, OAKLAND, CAL.

HENRY H. MEYERS, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: January 1, 1927.

Type of Construction: Reinforced concrete.

Exterior Walls: Reinforced concrete with terra cotta and stucco.

Roof: Partly tile and partly felt and gravel composition.

Floors: Cement, tile and battleship linoleum.

Windows: Wood except in operating rooms, where metal is used; double-hung and transoms.

Heating: Central plant, steam, oil fuel. Direct radiation, except in operating unit.

Cubage of Buildings: Present buildings, 4,800,000 feet. Completed group, 6,300,000.

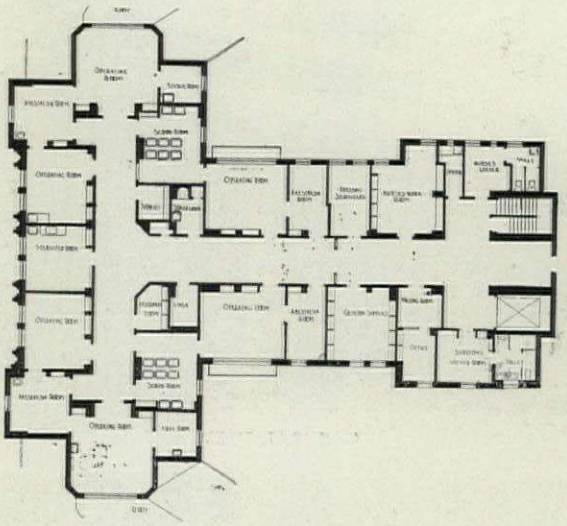
Cubic Feet Per Patient: 7,000.

Cost of Building, without Equipment: Present cost plus estimated cost of completion, $4,250,000.

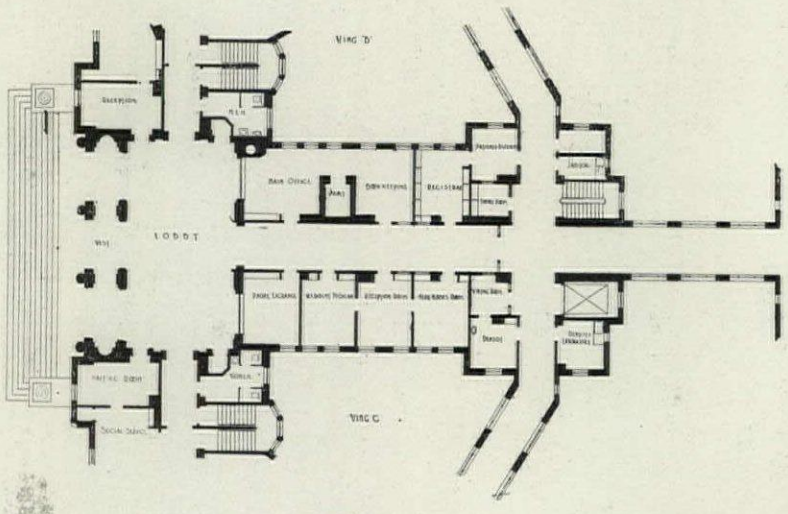
Cost Per Cubic Foot Completely Furnished: Based on completed group, 70 cents.

Number and Cost Per Bed: Present capacity, 456 beds. Capacity when complete, 900 beds. $5,000 per bed.

Cost of Operating Per Bed Per Day: At present, $4.40; when complete, estimated $2.50.



THIRD FLOOR

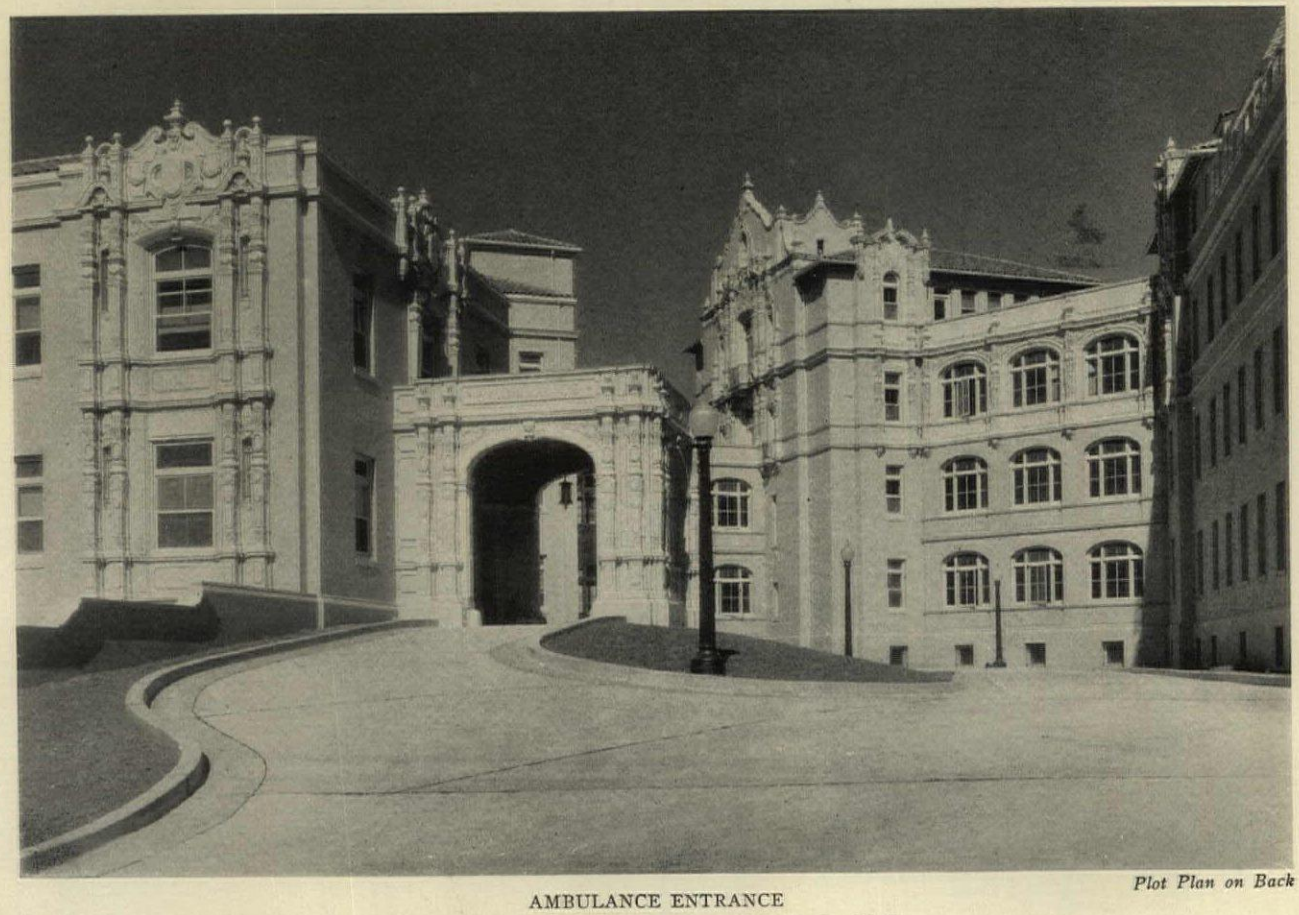


FIRST FLOOR

PLANS: HIGHLAND HOSPITAL, OAKLAND, CAL.

HENRY H. MEYERS, ARCHITECT

ADMINISTRATION BUILDING

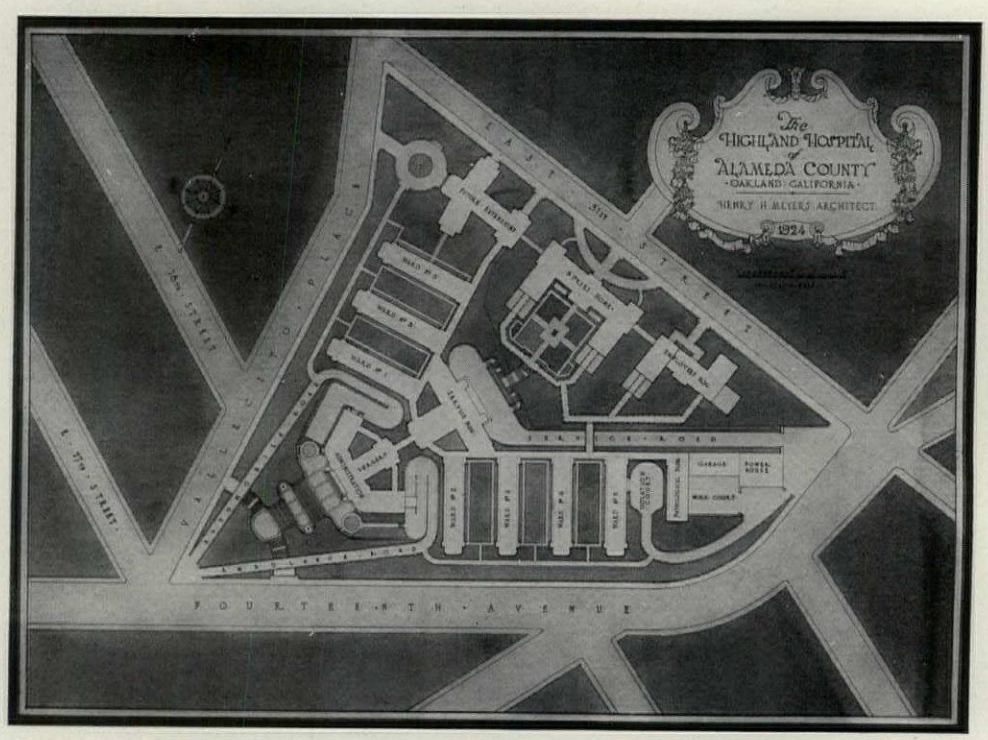


Plot Plan on Back

AMBULANCE ENTRANCE

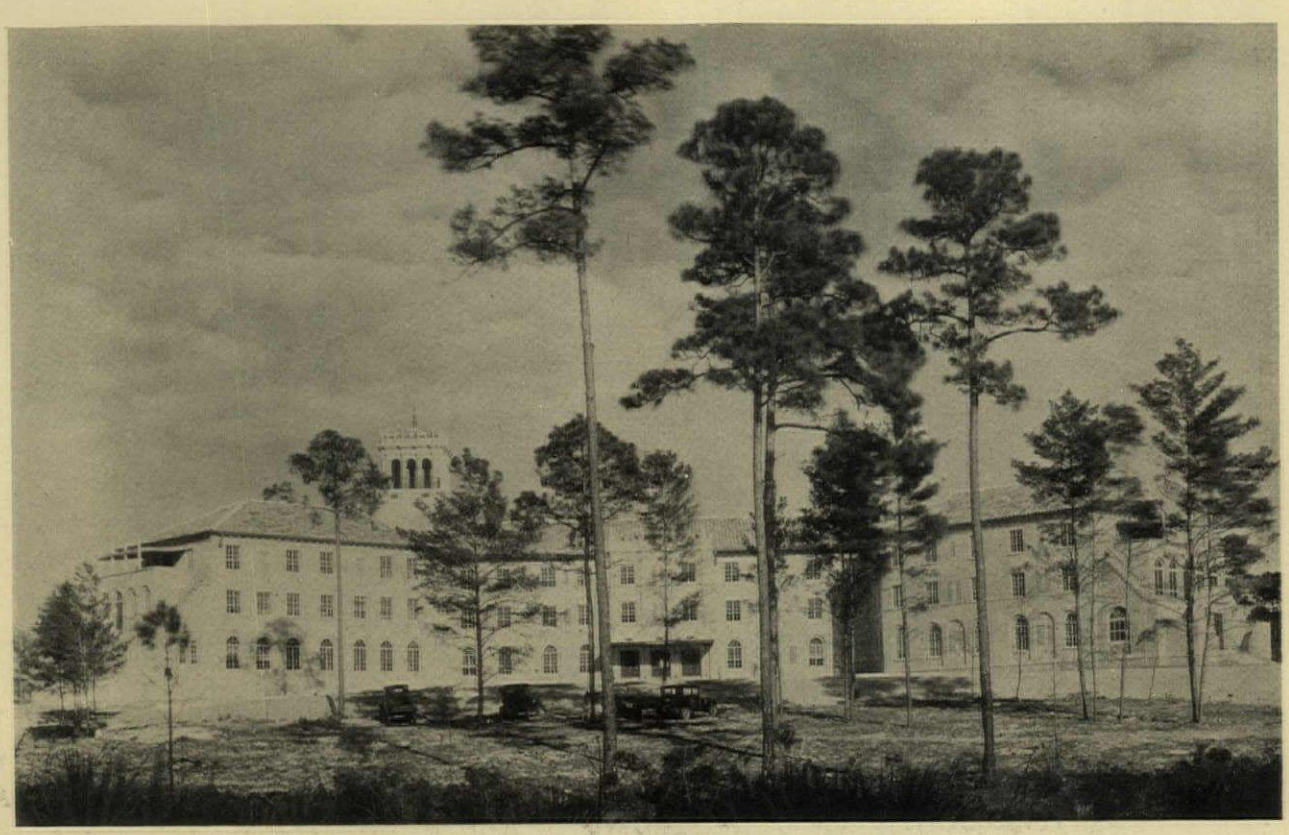
HIGHLAND HOSPITAL, OAKLAND, CAL.

HENRY H. MEYERS, ARCHITECT



PLOT PLAN

HIGHLAND HOSPITAL, OAKLAND, CAL.
HENRY H. MEYERS, ARCHITECT



FRONT ELEVATION

Photos. Hilty Studio *Plans on Back*

GENERAL VIEW, HALIFAX DISTRICT HOSPITAL, DAYTONA BEACH, FLA.

CHARLES C. WILSON, ARCHITECT

STEVENS & LEE, CONSULTING ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: November 1, 1927.

Type of Construction: Fireproof.

Exterior Walls: Hollow tile, stucco.

Roof: Steel trusses, gypsum slab, tile, copper trim.

Floors: Reinforced concrete, ribbed joist, tile filler, tile finish.

Windows: Steel casements.

Heating: Vapor modulation, oil-burning, direct radiation.

Ventilation: Exhaust through fan in attic.

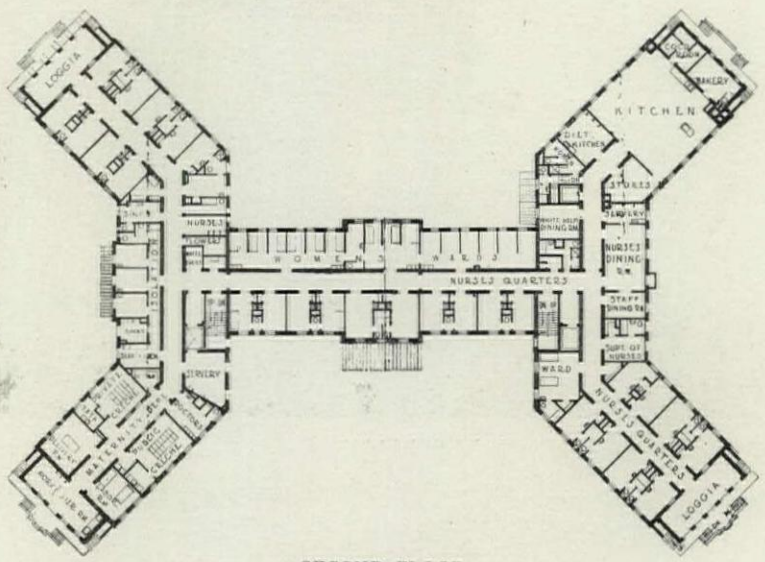
Cubage of Building: 828,930.

Cubic Feet Per Patient: Gross 7431, Minimum in room or ward, 960.

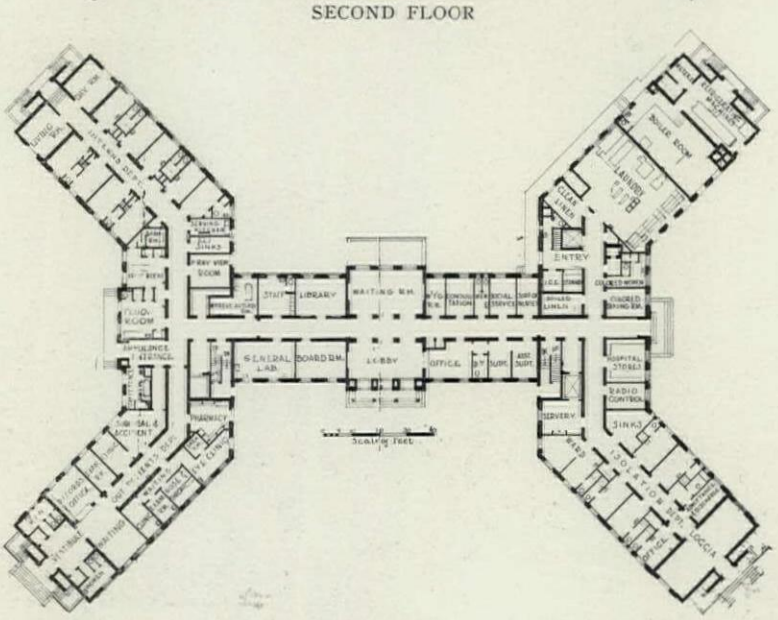
Cost of Building, Without Equipment: $519,373; or per cubic foot, 63 cents.

Cost Per Cubic Foot Completely Equipped: 69 cents.

Number and Cost Per Bed: 125 beds; cost per bed $4,595.



SECOND FLOOR

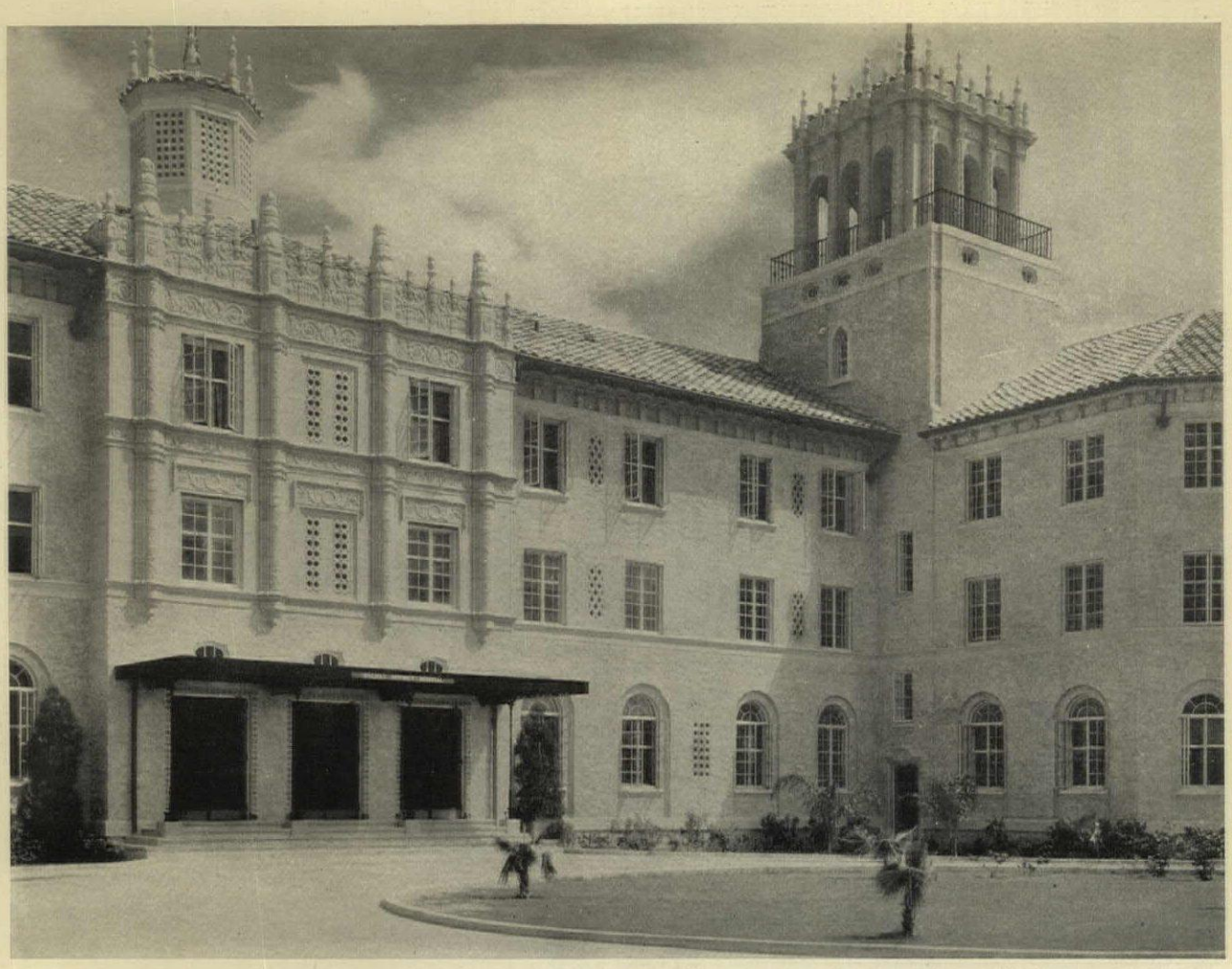


FIRST FLOOR

PLANS: HALIFAX DISTRICT HOSPITAL, DAYTONA BEACH, FLA.

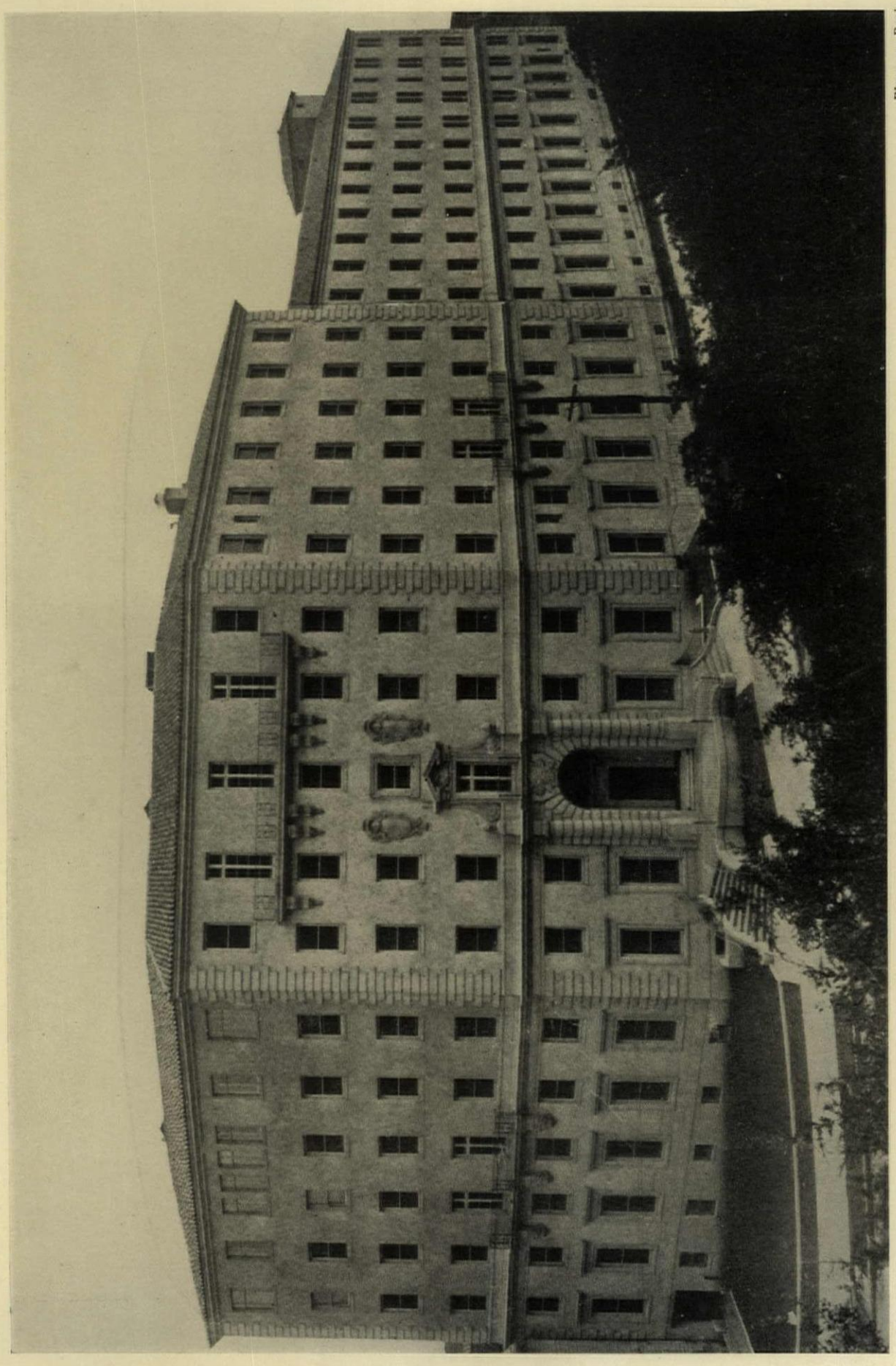
CHARLES C. WILSON, ARCHITECT

STEVENS & LEE, CONSULTING ARCHITECTS



MAIN ENTRANCE

ENTRANCE LOBBY, HALIFAX DISTRICT HOSPITAL, DAYTONA BEACH, FLA.
CHARLES C. WILSON, ARCHITECT



Plans on Back

ST. JOSEPH'S HOME AND HOSPITAL, SAN FRANCISCO

BAKEWELL & BROWN, ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: May 3, 1928.

Type of Construction: Steel frame.

Exterior Walls: Curtain walls, reinforced concrete.

Roof: Concrete slab with tile roof.

Floors: Concrete with linoleum.

Windows: Double-hung, wood.

Heating: Steam heat.

Ventilation: For kitchen, toilets and operating rooms.

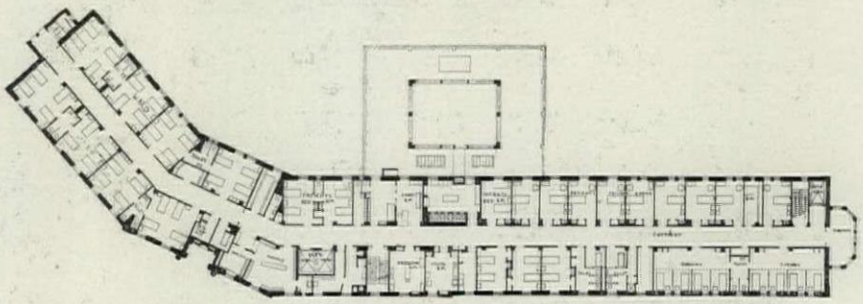
Cubage of Building: 1,500,000 feet.

Cubic Feet Per Patient: 7317. Actual air space per patient in patients' rooms varies from 1,000 to 2,012 cubic feet.

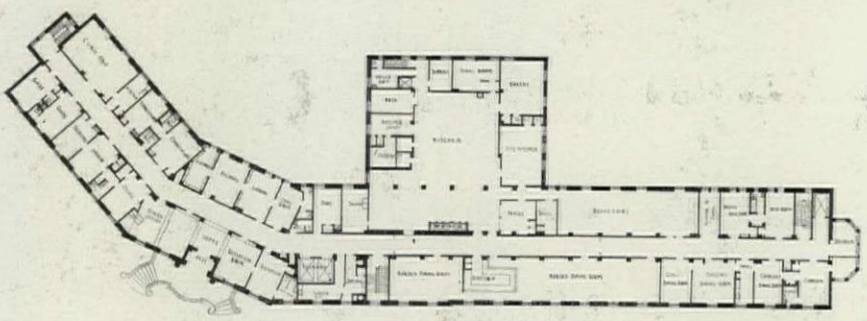
Cost of Building, Without Equipment: $899,000, including architects' commission.

Cost Per Cubic Foot, Completely Furnished: 65½ cents.

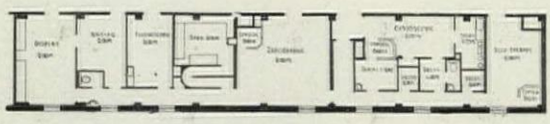
Number and Cost Per Bed Per Day: 205 beds at Average price of $4.



SECOND FLOOR



FIRST FLOOR



BASEMENT

PLANS: ST. JOSEPH'S HOME AND HOSPITAL, SAN FRANCISCO

BAKEWELL & BROWN, ARCHITECTS

MAIN ENTRANCE AND SOUTH ELEVATION

Plans on Back

CHILDREN'S HOSPITAL, CINCINNATI

STANLEY MATTHEWS—ELZNER & ANDERSON, ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: November, 1926.

Type of Construction: Reinforced concrete columns, beams and girders. Floors, concrete rib construction.

Exterior Walls: Brick above water table and concrete block facing below.

Roof: Wings are roofed with promenade tile. Remainder 3-ply felt, pitch and gravel.

Floors: Corridors, wards, etc.,—rubber tile. Stairs, baths, etc., terrazzo. Tile, cement and wood elsewhere.

Windows: Wood double-hung windows except in chapel, where casement windows were used. Special steel windows in operating room.

Heating: Vapor.

Ventilation: Forced draft.

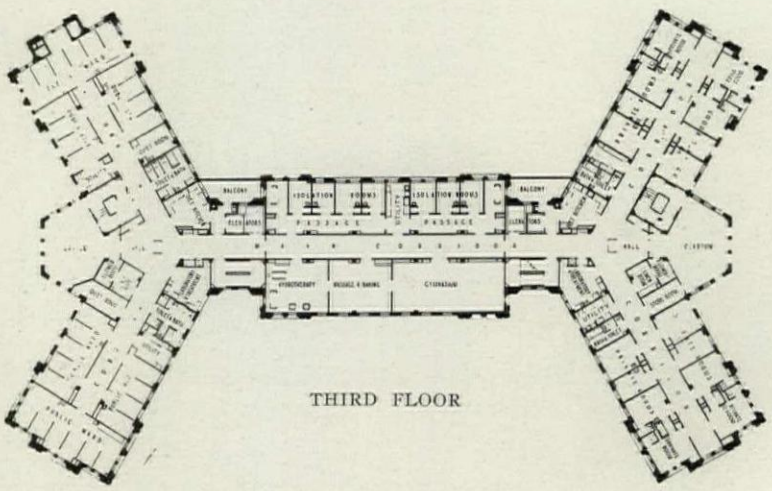
Cubage of Building: 1,400,000 feet.

Cost of Building Without Equipment: $998,500.

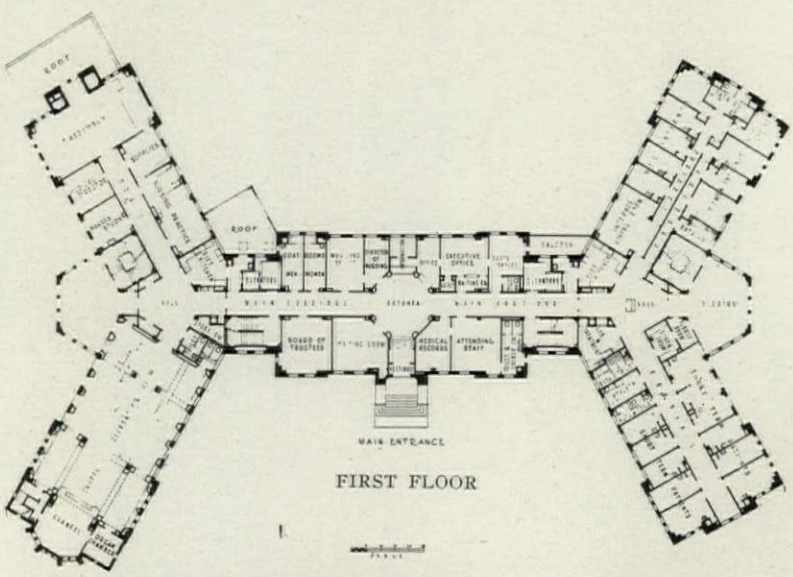
Number and Cost Per Bed: 152 beds at approximately $7,000. When completed, $5,500.

Cost Per Bed Per Day: $5.63.

Cubic Feet Per Patient: 6,542, based on 214 beds, when completed.



THIRD FLOOR



FIRST FLOOR

PLANS: CHILDREN'S HOSPITAL, CINCINNATI

STANLEY MATTHEWS—ELZNER & ANDERSON, ARCHITECTS

Photos. Wurts Bros.

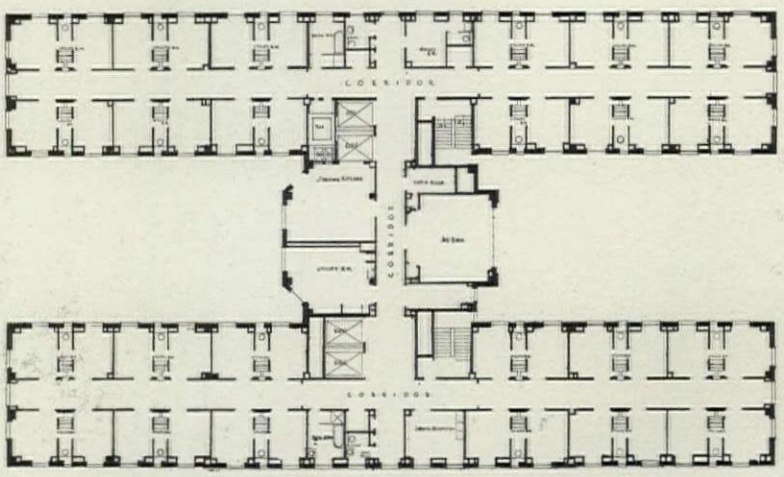
Plans on Back

BETH ISRAEL HOSPITAL, NEW YORK

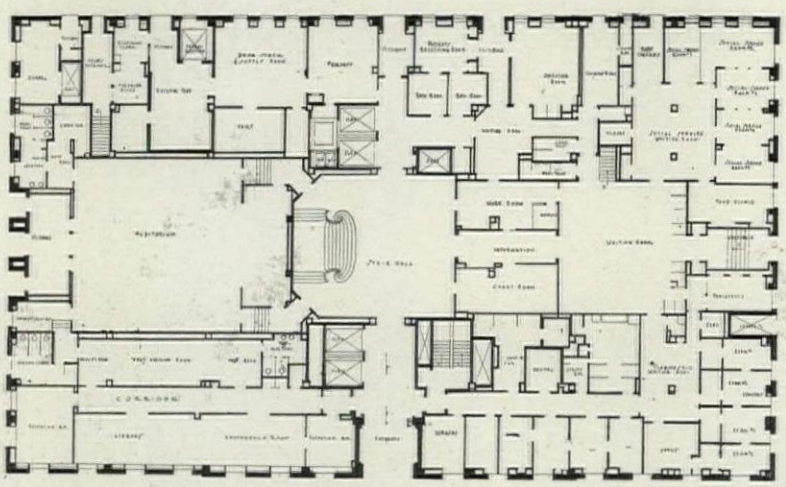
LOUIS ALLEN ABRAMSON, ARCHITECT

COST AND CONSTRUCTION DATA

Year of Completion: 1928.
Type of Construction: Steel skeleton.
Exterior Walls: Brick and back-up tile.
Roof: Tile.
Floors: Terrazzo and rubber.
Windows: Steel.
Heating: Modulating.
Ventilation: Fresh air supply and exhaust.
Cubage of Building: 3,220,000 feet.
Cost of Building Without Equipment: $3,700,000.
Number of Beds: 500.



FIFTH, SIXTH AND SEVENTH FLOORS



FIRST FLOOR

PLANS: BETH ISRAEL HOSPITAL, NEW YORK
LOUIS ALLEN ABRAMSON, ARCHITECT

GENERAL VIEW

Photos. Luckhaus & Hoops

MAIN ENTRANCE

Plans on Back

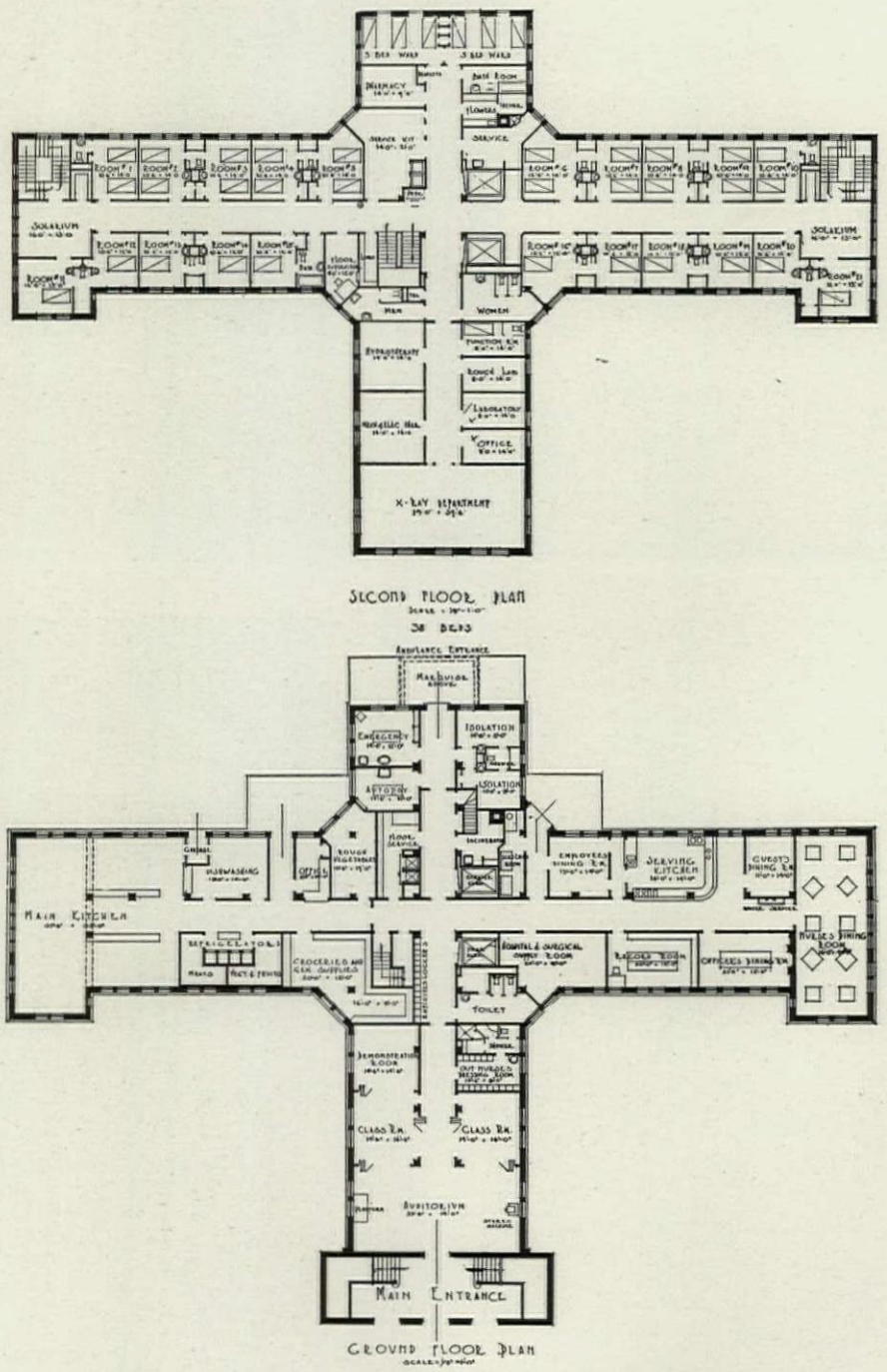
ENTRANCE STAIRWAY

HOLLYWOOD HOSPITAL, LOS ANGELES

ROBERT H. ORR, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: January, 1924.
Type of Construction: Class A, reinforced concrete.
Exterior Walls: Concrete filler.
Roof: Clay tile on concrete slab.
Floors: Linoleum on concrete slabs and joists.
Windows: Wood casements.
Heating: Vacuum steam.
Ventilation: Windows.
Cubage of Building: 719,250 feet.
Cost of Building, Without Equipment: $400,000.
Cost Per Cubic Foot, Completely Furnished: 75 cents.
Number and Cost Per Bed: 160 at $3370.
Cost of Operating Per Bed Per Day: $6.46.



PLANS: HOLLYWOOD HOSPITAL, LOS ANGELES
ROBERT H. ORR, ARCHITECT

GENERAL VIEW

Photos. A. F. Crooks

ENTRANCE LOBBY

MAIN ENTRANCE

Plans on Back

HURLEY HOSPITAL, FLINT, MICH.

THIELBAR & FUGARD, ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: November 1, 1928.

Type of Construction: Fireproof throughout.

Exterior Walls: Reinforced concrete frame, brick and stone exterior walls backed up with hollow tile.

Roof: Composition.

Floors: Terrazzo, rubber tile, and mastic composition.

Windows: Wood frames and sash; steel casements.

Heating: Vacuum steam.

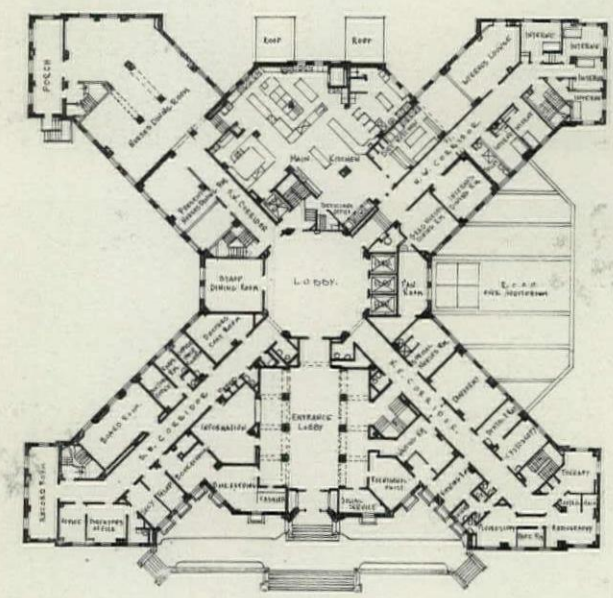
Ventilation: Exhaust for inside toilets, supply and exhaust for operating rooms.

Cubage of Building: 2,200,000 feet.

Cubic Feet Per Patient: 7285.

Cost of Building Without Equipment: $950,000.

Number Feet and Cost Per Bed: 302 at $3146.



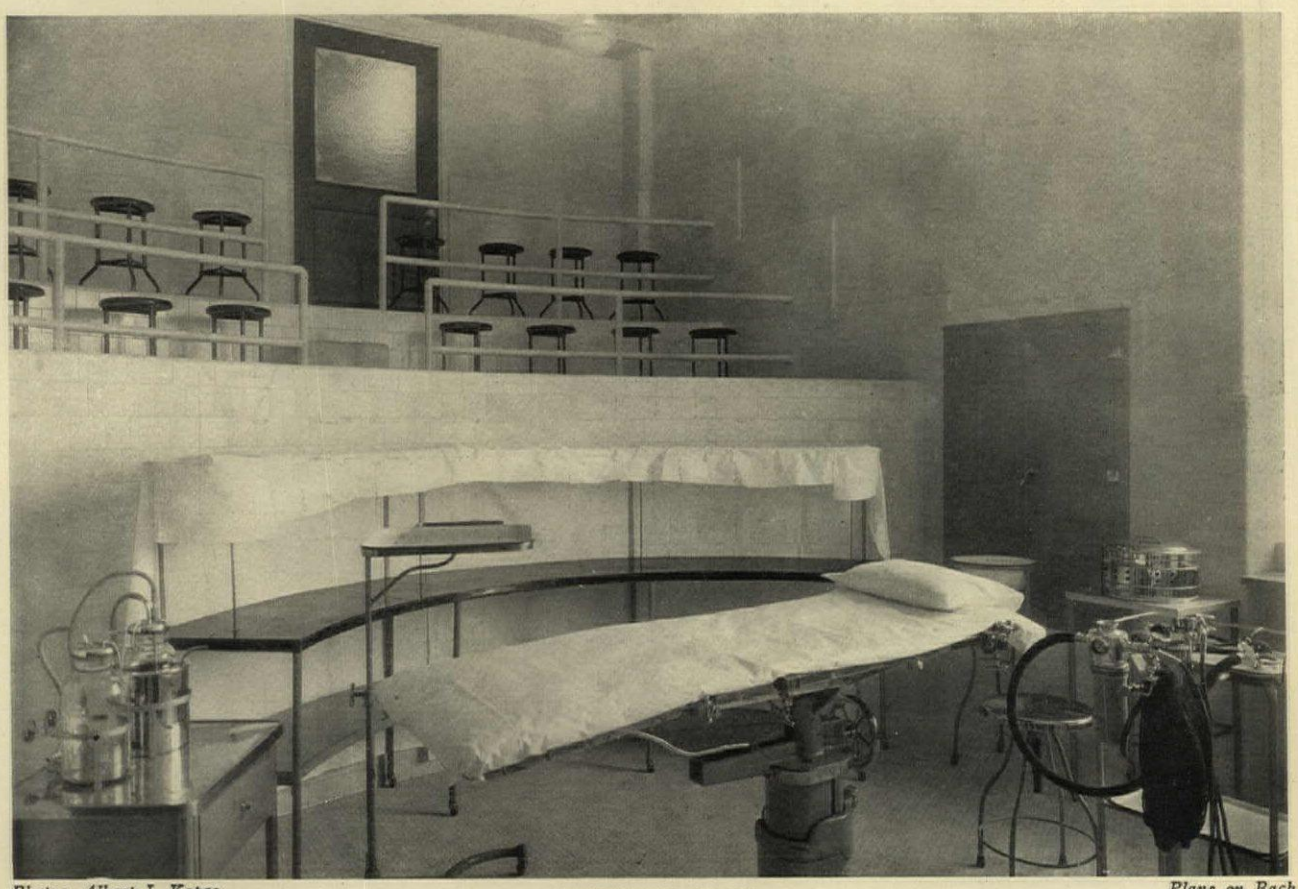
FIRST FLOOR

PLANS: HURLEY HOSPITAL, FLINT, MICH.

THIELBAR & FUGARD, ARCHITECTS

Photo. Weaver

GENERAL VIEW



Photos. Albert J. Kopec

OPERATING ROOM

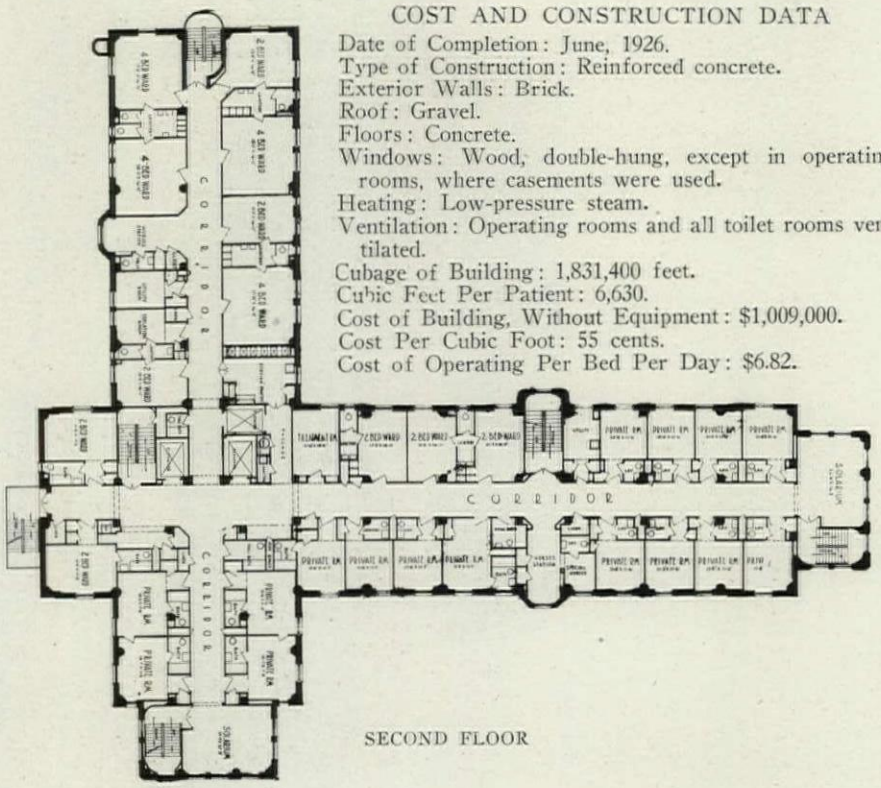
Plans on Back

CALIFORNIA LUTHERAN HOSPITAL, LOS ANGELES

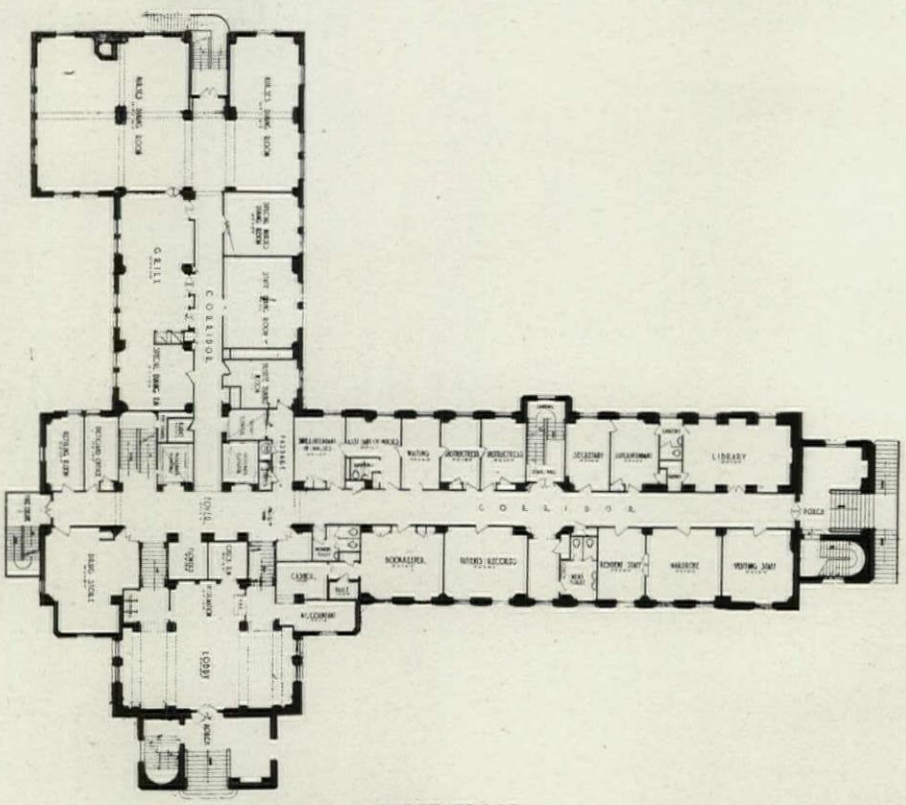
WALKER & EISEN, ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: June, 1926.
Type of Construction: Reinforced concrete.
Exterior Walls: Brick.
Roof: Gravel.
Floors: Concrete.
Windows: Wood, double-hung, except in operating rooms, where casements were used.
Heating: Low-pressure steam.
Ventilation: Operating rooms and all toilet rooms ventilated.
Cubage of Building: 1,831,400 feet.
Cubic Feet Per Patient: 6,630.
Cost of Building, Without Equipment: $1,009,000.
Cost Per Cubic Foot: 55 cents.
Cost of Operating Per Bed Per Day: $6.82.



SECOND FLOOR



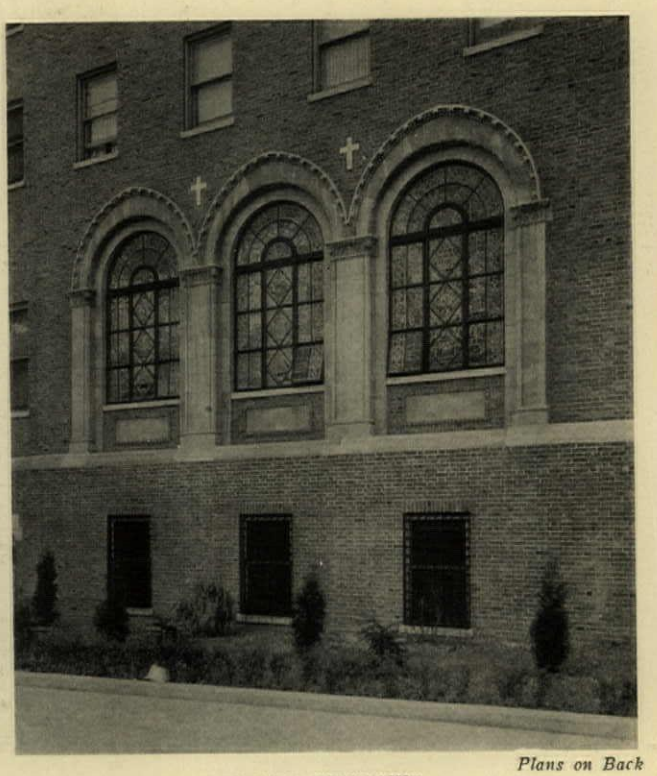
FIRST FLOOR

PLANS: CALIFORNIA LUTHERAN HOSPITAL, LOS ANGELES

WALKER & EISEN, ARCHITECTS

ELEVATION ON FT. WASHINGTON AVENUE

MAIN ENTRANCE



CHAPEL WINDOWS

Photos. George H. Van Anda *Plans on Back*

ST. ELIZABETH'S HOSPITAL, NEW YORK

JAMES W. O'CONNOR, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: October, 1927.

Type of Construction: Fireproof throughout.

Exterior Walls: Brick facing, with 8-inch bonded backup tile, furred with 1½-inch split furring tile on inside.

Roof: Tile over roof laid into flashing blocks at all parapet walls.

Floors: Long-span reinforced concrete.

Finished Floors: Terrazzo floor and base throughout corridors, shower rooms, kitchens, etc. Maple wood flooring in patients' rooms.

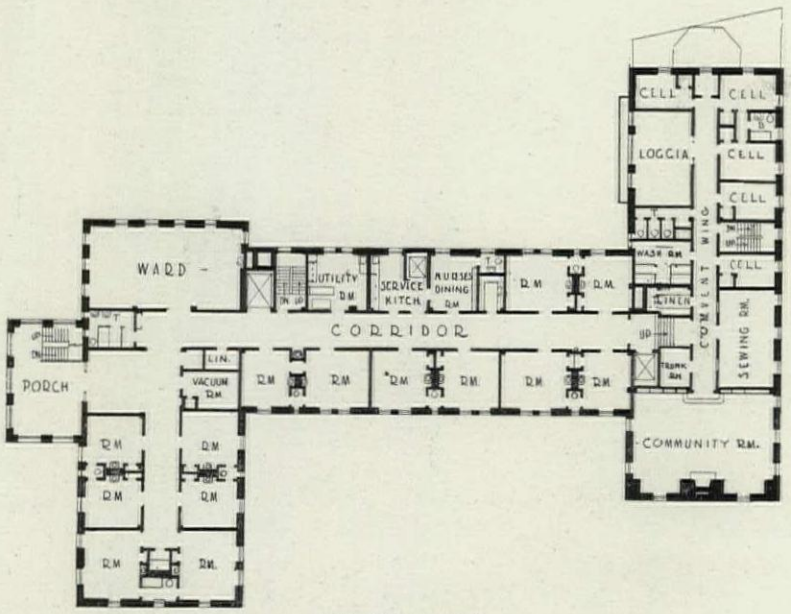
Windows: Double-hung type, wood.

Heating: Vacuum steam heating system.

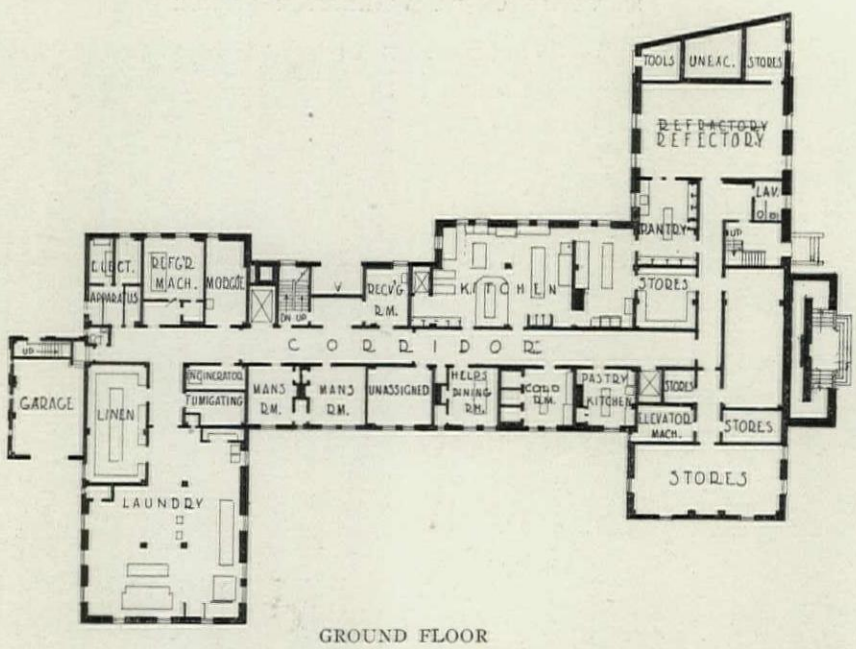
Ventilation: From kitchens and operating rooms only, —electric exhaust fans.

Cost of Building, Without Equipment: $739,285.79.

Number of Beds: Sixty private rooms; 40 beds in wards of 10 each.



SECOND FLOOR



GROUND FLOOR

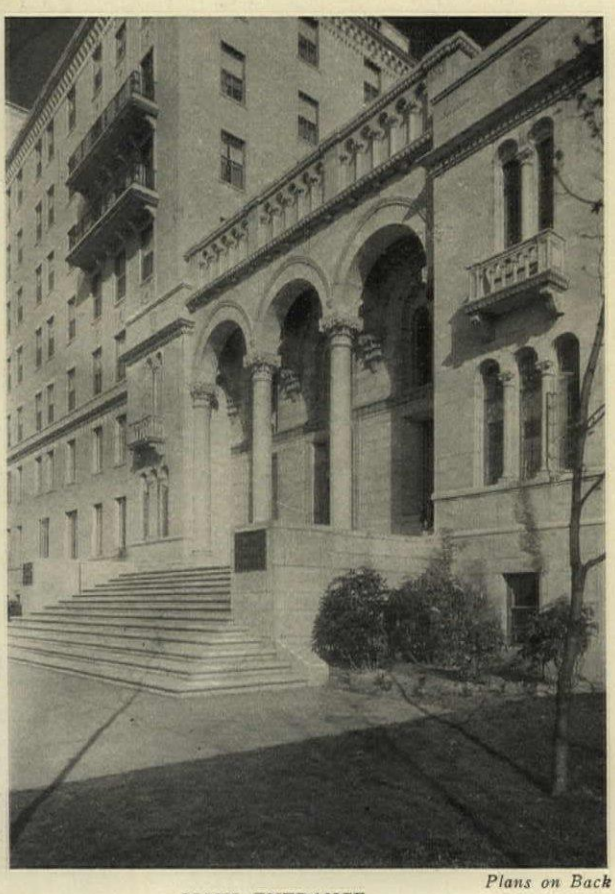
PLANS: ST. ELIZABETH'S HOSPITAL, NEW YORK

JAMES W. O'CONNOR, ARCHITECT

GENERAL VIEW

Photos. Paul J. Weber

ENTRANCE HALL



Plans on Back

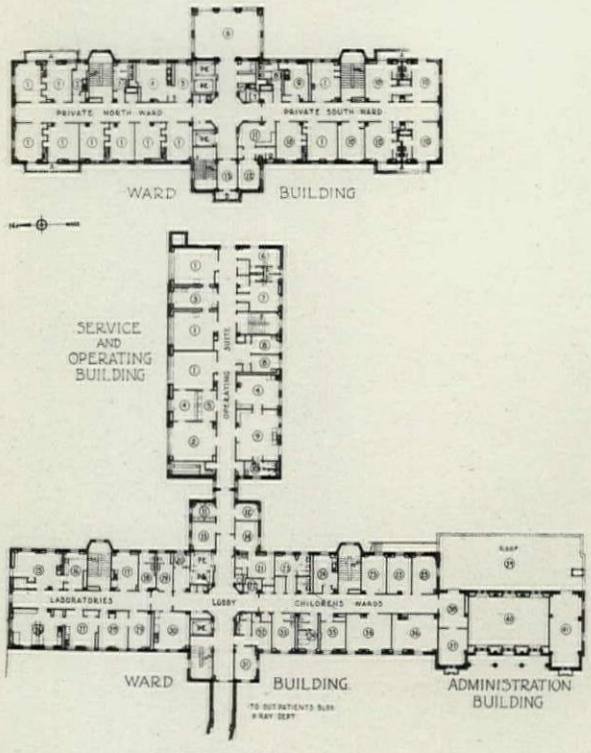
MAIN ENTRANCE

BETH ISRAEL HOSPITAL, BOSTON

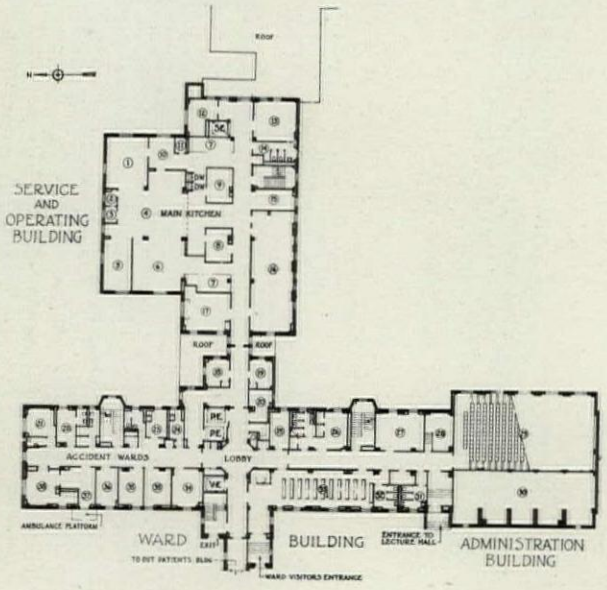
DENSMORE, LE CLEAR, & ROBBINS, ARCHITECTS

CONSTRUCTION DATA

Date of Completion: August, 1928.
Type of Construction: Brick, reinforced concrete.
Exterior Walls: Brick.
Roof: Concrete.
Floors: Concrete.
Windows: Some steel, some wood.
Heating: Steam.
Ventilation: Fans.
Cubage of Building: Ward building, 975,000; service building, 310,000; connecting corridor, 67,800; power house, 183,700; administration building, 158,000; out-patients' building, 381,000; nurses' home, 365,500.



SECOND FLOOR PLAN



GROUND FLOOR PLAN

PLANS: BETH ISRAEL HOSPITAL, BOSTON

DENSMORE, LE CLEAR & ROBBINS, ARCHITECTS

FRONT ELEVATION

Photos. Padilla Company

Plans on Back

HOSPITAL OF THE GOOD SAMARITAN, LOS ANGELES
REGINALD D. JOHNSON, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: April 19, 1927.

Type of Construction: Reinforced concrete.

Exterior Walls: Concrete with a plaster dash coat.

Roof: Covered with tile on pitched surfaces; composition for all flat decks.

Floors: Heavy battleship linoleum used generally, with tile; wood and terrazzo where special conditions occur.

Windows: Double-hung in patients' rooms and various types of casement and special metal sash in operating rooms, service portion, etc.

Heating: Direct steam radiation.

Ventilation: Electrically operated mechanical ventilating system.

Cubage of Building, 2,300,000 feet.

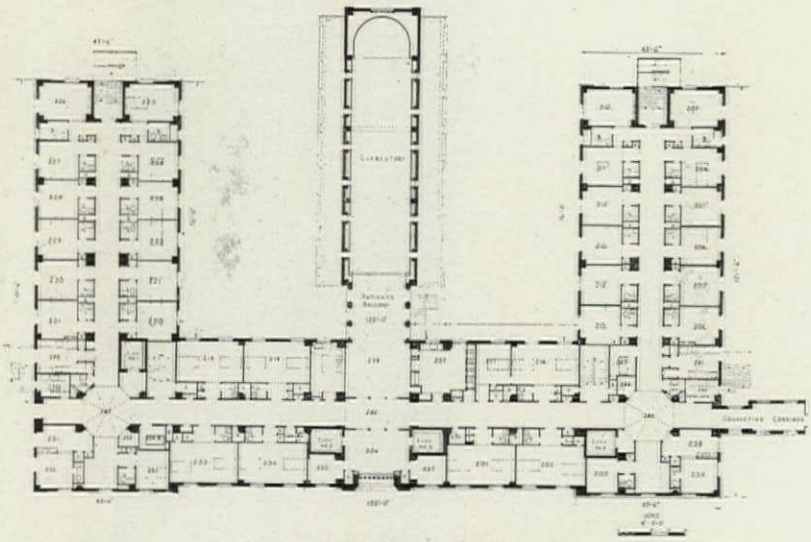
Cubic Feet Per Patient: 8,014.

Cost of Building, Without Equipment: $1,240,175.

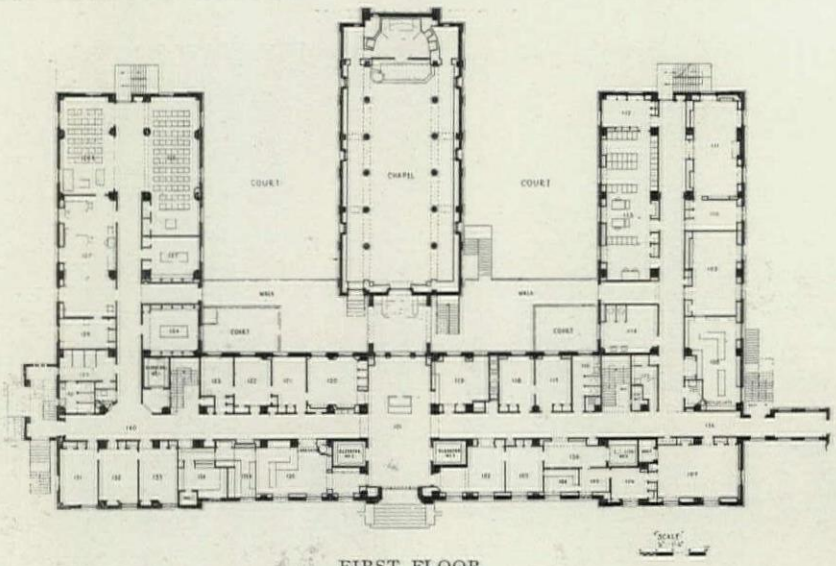
Cost Per Cubic Foot: 53 cents.

Cost of Building, Completely Furnished: $1,472,000 or 64 cents per cubic foot (not including chapel).

Number and Cost Per Bed: 287 at $5,126.



TYPICAL FLOOR



FIRST FLOOR

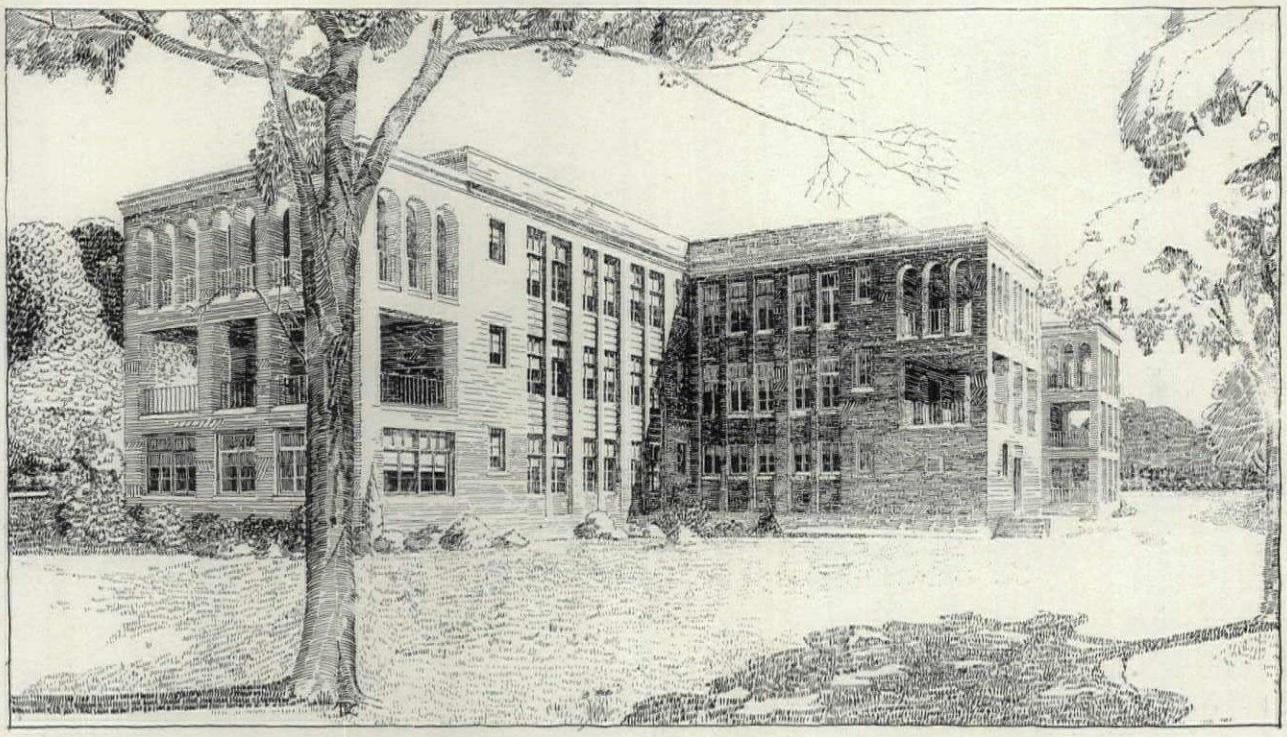
PLANS: HOSPITAL OF THE GOOD SAMARITAN, LOS ANGELES

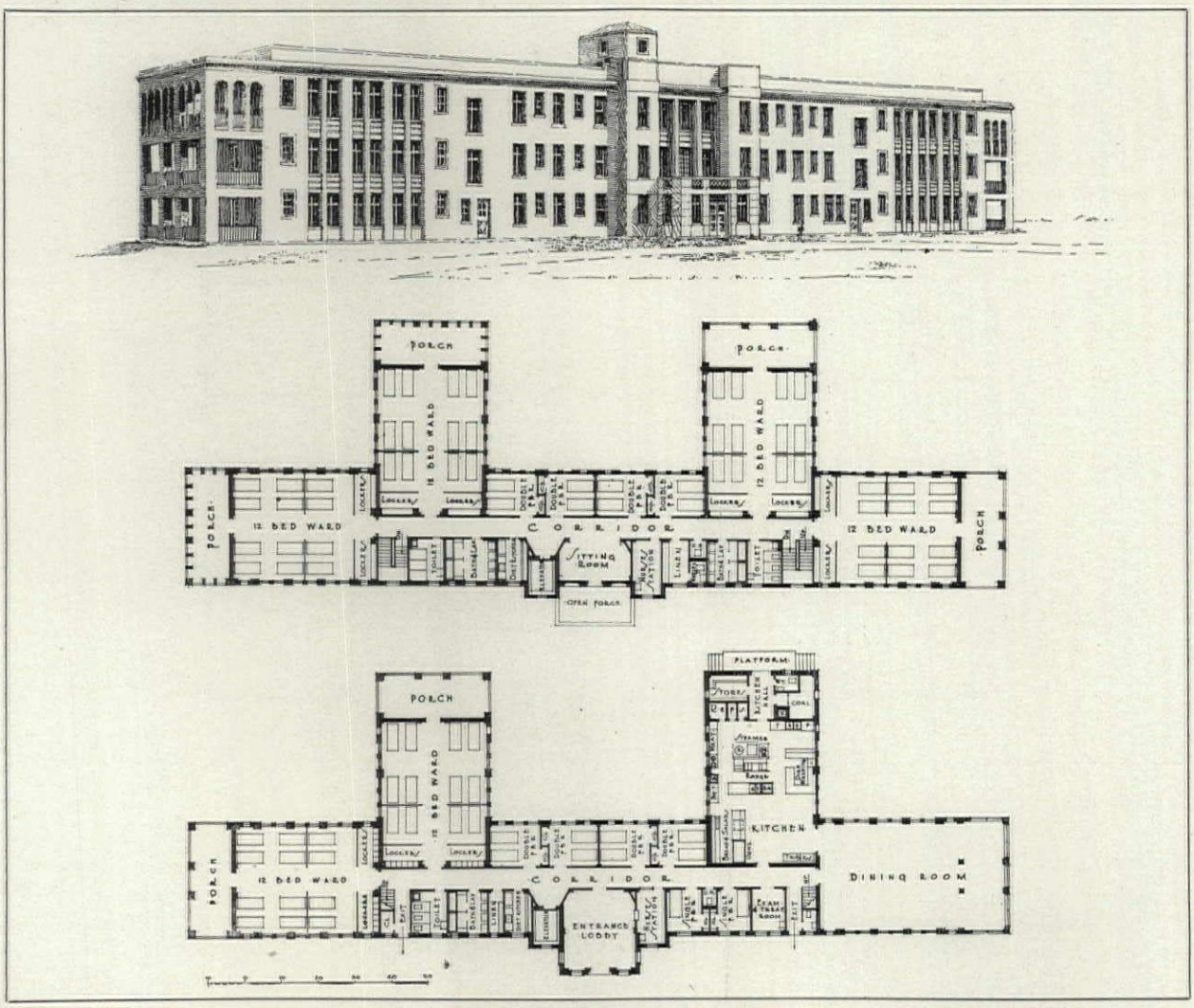
REGINALD D. JOHNSON, ARCHITECT

ENTRANCE

CHAPEL

HOSPITAL OF THE GOOD SAMARITAN, LOS ANGELES
REGINALD D. JOHNSON, ARCHITECT





WARD BUILDING, WILLIAM H. MAYBURY SANATORIUM, NORTHVILLE, MICH.
STRATTON & HYDE, ARCHITECTS

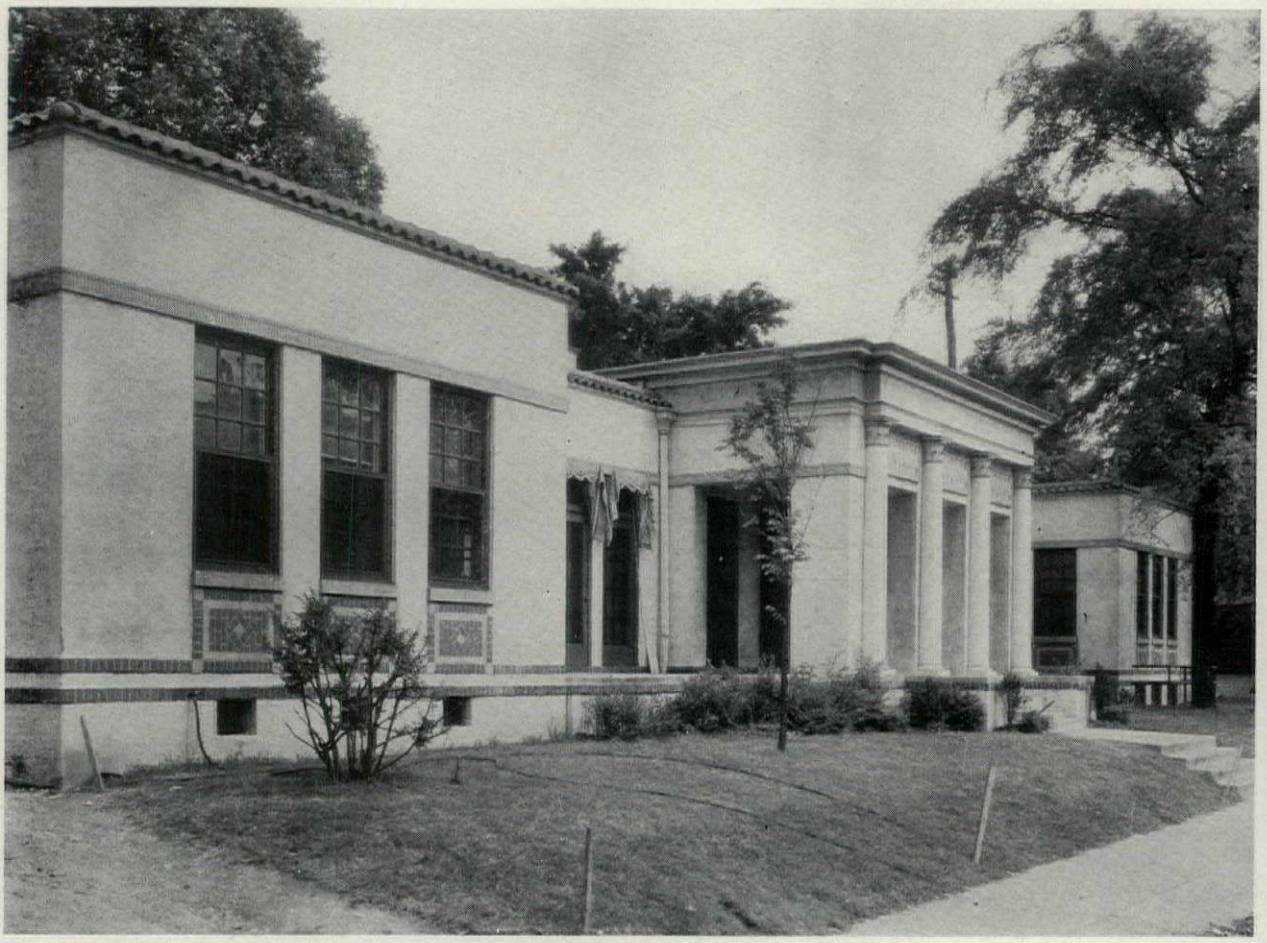
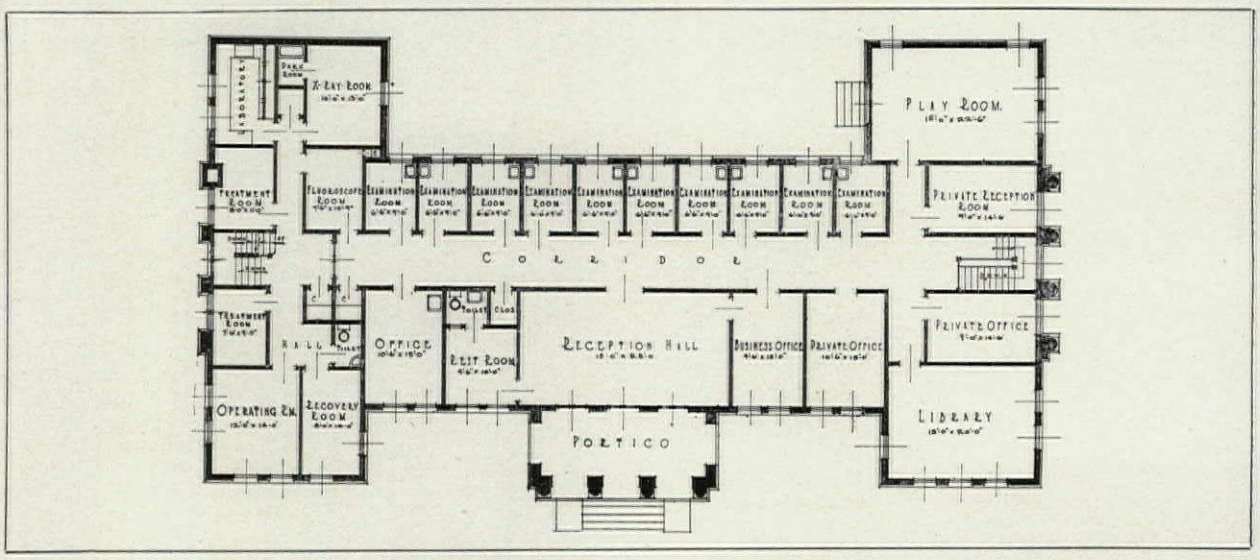


Photo. Tebbs & Knell, Inc.

ENTRANCE FRONT



CHILDREN'S CLINIC, MEMPHIS
GEORGE MAHON, JR., ARCHITECT

ALTHOUGH a one-story building, simple and direct in plan, the architects have created a design monumental and dignified in character. The rooms have high ceilings with air space above which keeps the temperature cool in summer. The use of brick in patterns and bands relieves the plainness of the stucco walls. Importance is given to the entrance portico by the use of engaged columns and a heavy entablature. Possibly the omission of this treatment and the substitution of brick in interesting panels between and above the openings of this portico might have contributed to a more modern spirit in the design. The planning provides for an excellent and economical disposition of available space.

HOSPITAL PLANNING AND ITS TREND

BY

FRANK E. CHAPMAN

DIRECTOR, MT. SINAI HOSPITAL, CLEVELAND; CONSULTANT, HOSPITAL ORGANIZATION, BUILDING AND OPERATION

AS a preliminary to a discussion of a program of development and an evaluation of hospital planning trends of the last few years, it is deemed essential to submit in general terms an outline of the demands that the planning of the general community hospital makes upon the individual responsible. It is, after all, the general community hospital that a large majority of the readers of THE ARCHITECTURAL FORUM are interested in. Proprietary hospitals have, of course, their place in the communal health scheme, but they are relatively few in number, and their problems are not as complex as those of the hospital designed to render general community service. The hospital building program is one of the most complex problems presented to the architect. This statement has ample confirmation by recognized authorities in the profession. By the large extent of mechanical costs in a hospital building a part of this complexity is accounted for, but this is by no means the real problem. The problem is the proper evaluation of the professional needs of the institution, related to the health service demands of the community. The modern hospital has ceased to be a self-contained unit. Its operation is a composite of all the requirements of the health program of the community. The individual responsible for planning must properly evaluate service needs and present to the community a finished plant, equipped within the limits of the building budget to meet the demands of all phases of the community health service.

The practice of medicine is itself becoming more and more complex. It is within the memory of many when the clinician needed no supplemental facilities to aid him in the diagnosis and treatment of disease,—when the percussion hammer (in many instances there were used instead the first and second fingers!) and the stethoscope were all that were used. That day is past. The modern practitioner of medicine relies no longer entirely on his own findings for a diagnosis. He confirms these clinical findings by the X-ray, the pathological, bacteriological, and chemical laboratory, by the electro-cardiograph, and by other services of precision, that are deemed essential to the modern practice of medicine. The equipment necessary to render these services is expensive, and the technical assistants require a high degree of training. Their proficiency in their work depends largely on there being a number of patients far greater than the average practitioner of medicine can expect. Therefore, except in isolated instances, the doctor has refrained from the development of these facilities as a part of his office equipment, and is relying upon the hospital to furnish them. Another phase is the recognition on the part of the attending physician, that scientific nursing care, proper dietary service and proper control of patients, can best be secured in the hospital. To summarize, the modern hospital is the health center of the community it serves. Its obligation to the patient and to the attending physician is to furnish every known means for the scientific diagnosis and treatment of disease. To meet that obligation, within the limited building budget of the average hospital, requires an intimate understanding of operating problems to allocate areas within the building to these services.

Selection of Site. Many readers will recall having been confronted with the necessity of properly using a site received as a gift, or a site purchased in advance of a program because it was cheap or because of expediency. It is true that with motor transportation, distances are not as important as they were formerly, but it is equally true that the proper selection of a site is exceedingly important to the future operation of a hospital. It is believed that a hospital should be closely adjacent to an artery of travel. If at all possible, it should not be located on but reasonably close to a street car line, for the convenience of visitors and the personnel of the hospital. Ideally, perhaps, from a standpoint of environment, the hospital should be located in the country, but such a selection could be made only without regard for other considerations that are of greater importance. In considering the environment, sources of air contamination must be eliminated. Adequate sewage disposal and water supply are prerequisites. The site must be sufficiently large to permit of a proper location of buildings, with adequate areas for courts. Plan the location of the first buildings thereon so that expansion of the institution may be made easily and at a minimum of cost. Evaluate the site as it relates to other hospitals in the community, to the end that there may be a reasonable geographic distribution of hospital facilities.

Type of Building. There are three general types of buildings to be considered: (1) The pavilion type; (2) the H-shaped, or modifications thereof; and (3) the multi-storied parallelogram. The pavilion type of institution has seen its ultimate development in European countries where ground values are relatively low and where operating labor costs are not as great as they are in America. It was conceived on the theory that isolation of types of disease demanded individual buildings. With our present understanding that disease may be controlled "inter-floor" as well as "inter-building," the philosophy of this planning is dissipated. When one further realizes that land values in the average community are high, that the excess cubage contained in necessary connecting corridors produces excessive bed costs, and that the maintenance cost of this type of institution is exceedingly high, it logically follows that we see a departure from use of the pavilion type of institution. Practically, the complete elimination of the pavilion type for general hospitals has been a definite

trend of plan of the best type in the last few years.

There are grouped together for discussion many modifications of the H-type design. There is no question that this general scheme lends itself to use very efficiently, from both an operating and a construction point of view. The size of the ultimate institution should govern, in large measure, the determination as to which of these general forms is to be followed. If the various major operating facilities may be properly located, and the nursing units so planned that visual control of individual patients' units is obtained (which can all be done), it is submitted that for the hospital of 150 beds or less this general type of plan is perhaps the best that can be adopted. It will please be understood that this is a general statement only. There is no such thing as a "best type" or "best plan." Each program presents a problem unique in itself. The multi-storied parallelogram is gaining increasing favor in large centers of population, where land values are high and where the community is accustomed to up-and-down travel to a degree which is not the case in small communities. With modern elevator equipment, vertical travel is much more economical than horizontal travel. The stacking of mechanical facilities of various types that must be duplicated in many places is more economical of construction than any other plan. Therefore, we see perhaps the greatest change in hospital planning in the examples of 20-, 25- and 30-story buildings developed for hospital service.

General Planning and Development. With an understanding that we are discussing the average hospital, and in no sense of the word attempting to present a formula for the planning of all hospital buildings, it is a fairly accurate general statement that the size and type of the hospital are predicated in large measure upon the character of nursing service to be rendered, and an evaluation on the part of the operating personnel of what constitutes an ideal nursing unit. The remainder of the institution must be planned around the nursing unit, and the location of all correlated facilities must of necessity be determined by their relation to it. With this as a premise, there is the necessity of determining the type of patient facilities to be furnished, and the size of the nursing unit. A statement as to what constitutes the ideal nursing unit cannot be made by reason of the many factors that enter into the determination of its size. Somewhere between 28 and 35 beds is the ideal nursing unit. Experience demonstrates that a charge nurse cannot efficiently take care of more than 35 patients, and that any number below 28 patients is not of sufficient size to engage her undivided attention. Accepting this, it is then necessary to determine the ratios of private, semi-private and ward beds that are to be provided.

Recent hospital developments have almost universally eliminated the large ward. Administrators recognize its inflexibility. Modern practice recognizes that the environment which characterizes large wards is not conducive to ideal medical practice. Furthermore, large wards interfere with many schemes of development unless they are put in separate buildings. We, therefore, see the development of ward facilities in four-, six- and eight-bed rooms, with an adequate number of quiet rooms immediately adjacent so that acutely sick patients may be cared for in these isolation rooms. This is a further definite trend of planning. The incorporation of ward, semi-private and private beds in the same nursing unit presents operating problems to be avoided if possible. Where at all possible, ward, semi-private and private beds should be kept in separate nursing units. It is recognized that this is not always possible. In general the patient will be happier, and the operating personnel will be happier, if these facilities are not combined. It is desired to submit the component parts of a properly planned nursing unit, with no thought that a general scheme of planning is submitted, but merely to act as a check list. The scope of this article will not permit of a detailed discussion of each of these facilities.

The Patient's Room. Sufficient be it to say that the minimum areas established in the building codes of most of our states, proper relationship of bed, window and door to each other, proper consideration of ventilation and illumination, are all essential.

Charge Nurses' Station. This is an item of planning that is very often given insufficient understanding. The location of the charge nurses' station will reflect itself for good or for evil in the service to be rendered to the patient, visitors and the attending physician. This station should be located approximately at the center of the nursing unit. It should be close to and control the entrance to the unit from the elevator and the stairs, for control of visitors. It should be so located that there is visual control of all of the rooms of patient occupancy. The location of the nurses' call annunciator at the station is not sufficient. It should be located reasonably close to the chart room, medicine cabinet and facilities provided for the congregating of nurses when they are not occupied with the care of patients.

Reception Room. Another facility, the importance of which is very often overlooked, is the reception room. Even at the sacrifice of a bed, in my judgment, this room should be provided. This facility should be provided in addition to any day room facilities that may be desired for patients. It is designed to provide privacy for those near and dear to acutely sick patients, so that they may not be compelled to sit in either the patient's room or the corridors. Reference has been made in a previous paragraph to the nurses' waiting room, medicine cabinet and chart desk. These facilities may be combined and be adjacent to the charge nurses' station.

Ward Serving Kitchen. Irrespective of whether centralized or decentralized dietary service is contemplated, there is a need of a ward serving kitchen planned to fit the type of service to be provided.

Utility Rooms. At this point we come to consideration of one of the pronounced trends of planning

in the last few years. We have heard a great deal about individual utility facilities for each patient, and have been presented with many plans for providing these units, some of them very meritorious. There is no desire to interpret the correctness or incorrectness of providing individual utility facilities for each patient or for each room of patient occupancy. Suffice it to say that whether this scheme or whether the scheme of providing central utility facilities for a given number of rooms is followed, it should be borne in mind that utility facilities must be located so that they are reasonably close to each patient's bed. It would seem proper to say that not to exceed 75 feet of travel should be necessary from a utility unit to any patient's bed. If individual units are planned, there is a need quite aside from these individual units for a central utility and work room, with facilities for sterilization and storage. There is no desire to submit a plan of this room. It is desired, however, to emphasize that seeming extravagance, by the inclusion of all facilities requisite for proper care, in reality is not extravagance, but is merely an assurance of a higher type of nursing service to patients, by providing facilities that expedite the service and minimize the energy necessary to render it.

No nursing unit ever had an adequate supply of storage facilities. This may be construed as an exaggerated statement, but it is believed that it can be successfully defended. Most of us who plan hospitals, no matter what our experience, realize the value of adequate supply closet space. There is submitted a list of these facilities for general supplies, —stretchers; treatment trays; linen room; flowers; maids' hopper facilities. May I emphasize the need for a properly planned flower closet? How many of us have gone through the corridors of a hospital at night and seen flowers from patients' rooms out in the corridor, subject to the abuse of such a practice!

Mention has not been made, and it is desirable that it be made, of the need for public toilet facilities for each nursing unit. The provision of these facilities is required by law in some states, but experience dictates that they should be provided in all institutions. There is a growing tendency to increase the proportion of rooms with baths. It is my judgment that such a trend should be discouraged. It not only increases the cost of construction, but it also adds a definite burden to the operating cost, all of which would be justified if the facilities were used by the patients; but as a matter of fact, most of these baths are for the patients' relatives and friends, and for nurses assigned to the care of the patients.

Operating Suites. It is too often true that the planning of the operating room is given a degree of study and an importance attached to this facility beyond the importance attached to other equally as necessary facilities in other parts of the institution. It should not be inferred that less care should be given in the planning of the operating room, but it is believed that there is a tendency to develop operating rooms beyond the real requirements of institutions. The type of staff that the hospital is to have must be determined in advance of planning the operating room. If it is to be a restricted group of men who are to do the operative work of the institution, then a relatively small operating suite may be developed. If, on the other hand, it is to be an open staff, then there immediately comes the need of the development of a larger number of individual operating rooms. Therefore, an attempt to establish a ratio of operating rooms to beds is impossible in a general article. It is desired to call attention to the fact that the efficiency of an operating suite lies very largely in the proper planning of the suite, and the allocation of an adequate area within the suite to work rooms, sterilizing rooms and other than strictly operating rooms. Surgeons are recognizing more and more that huge rooms are not requisite to good operative practice,—that quite the contrary is the case. Operating rooms in some institutions have an area of as low as 250 square feet. This, however, is believed to be a bit too small.

Another change in the thought of surgeons is the installation of skylights. They are depending more and more on properly installed artificial light, recognizing that its source is more constant and dependable. Without skylights, operating rooms need not be on top floors, but may be related closer to other facilities. Operating rooms for many years were planned as simply as possible, with the elimination of all fixed equipment in the room, on the theory that the simpler the room the more easily could surgical technique be maintained. We then saw a period of development in which built-in cabinets, sterilizing facilities, plumbing and items of a comparable nature were included in the room. This had its day, and now we see a trend toward the simplification of operating rooms again and a recognition that the operating room is not the place for the storage of supplies, sterilizers, wash-up sinks and items of this type. These details are now being located in separate rooms rather than in the operating room.

Prose and poetry have made the white hospital wall traditional, up to a few short years ago white was considered the only acceptable color to be used. Quite aside from the harmful effect on the patients (and that this harm has been definitely demonstrated is not subject to discussion) was the unfortunate effect that this hyper-aseptic atmosphere created on everyone. The acceptance of color and the introduction of warm color schemes into the institution, to my mind, is one of the main things which have come out of the last ten years of thought in hospital planning. There is no question that the white tile floor, walls and ceiling of the operating room could not have been more trying if they had been designed for that purpose. Restful colored tile dispels in a measure the exceedingly fearsome environment of an operating room for a patient. More important still, it increases decidedly the efficiency of the surgeon. It took surgeons a long time to accept this change and to agree to the installation of colored

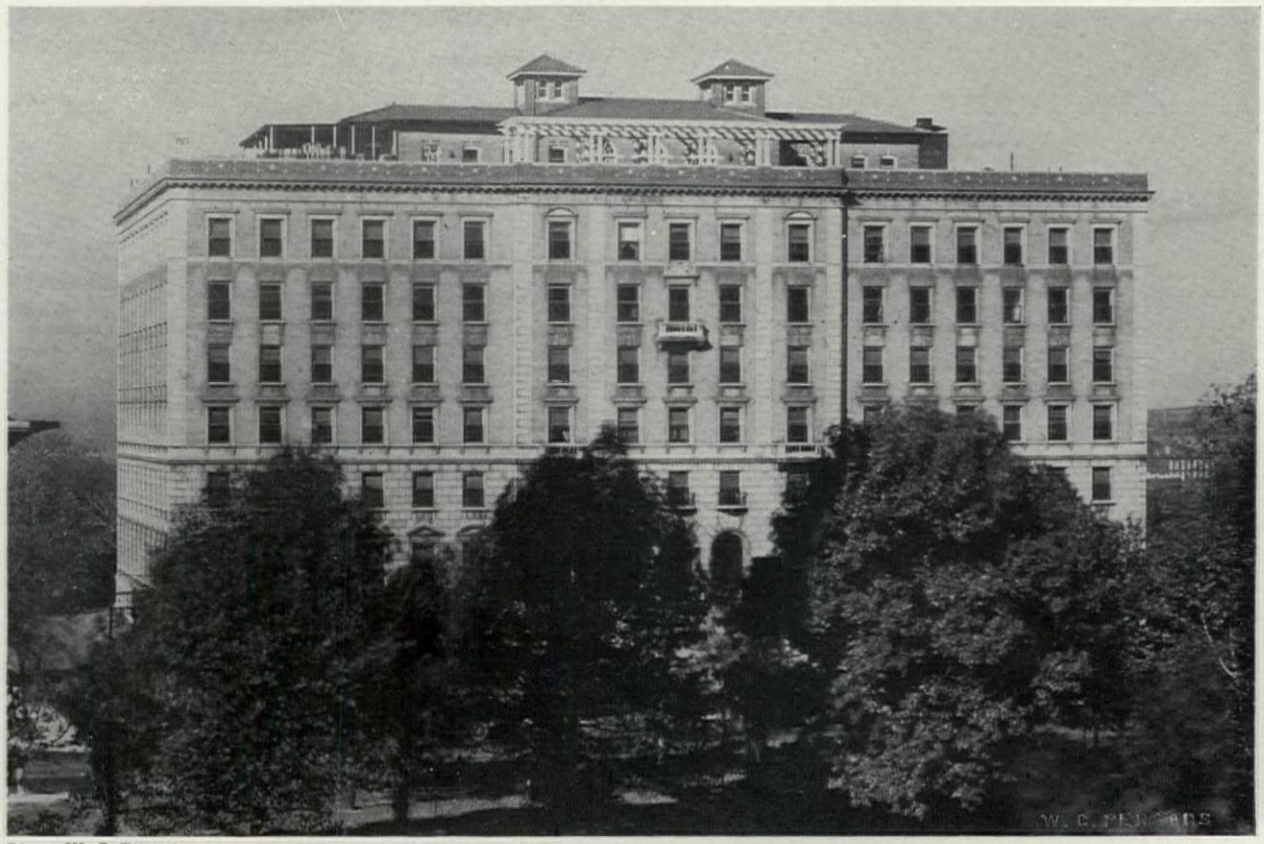


Photo. W. C. Persons

Missouri Pacific R. R. Hospital, St. Louis
Charles H. Wray, Architect

operating rooms, but I question if any of them would go back to the old dazzling white rooms.

X-ray Facilities. The X-ray as a means of diagnosis and treatment is a relatively new thing in medical practice, but it has been developed to a stage where it is absolutely essential to modern hospital practice. A few short years ago if the hospital provided for Roentgenological service for fractures, it had fulfilled its obligation. Today the surgeon uses the X-ray machine no more than the internist or pediatrician. Diagnosis of diseases of the soft tissues is an integral part of the duties of the Roentgenologist. Machines for the treatment of certain forms of pathology have reached a marked degree of efficiency. Formerly it was the practice to locate the X-ray room in the basement, in some out of the way space that could not be used for anything else. This was good enough. Today the Roentgenologist's value and the demands made upon him by the clinician compel the location of the department at the center of the professional activities of the institution.

It is suggested that rather than install many pieces of apparatus in a large room, small cubicles be provided for each piece of apparatus, providing a flexibility of usage and an ease of operation that are not provided for in the first plan. Important items to consider in an X-ray department are proper ventilation, protection against the Roentgen rays, illumination, installation of supplemental wiring, and the furnishing of separate power service to the department. Close proximity to the surgery rooms is a prerequisite for certain types of treatment. The department should be properly serviced by elevators, in a multi-storied building, and have a waiting room and record facilities within the unit. Care should be taken to provide facilities for the storage of films and plates that will meet requirements of underwriters.

Department of Laboratories. Perhaps the most revolutionary change in hospital planning is the thought that is being given to laboratory facilities. This, of course, is due to the demands of the clinician for a type of laboratory service in keeping with an improved understanding of the needs of this type of facilities in the proper diagnosis and therapy of disease. It would be folly to develop laboratory facilities beyond the demands of the clinical staff, but wise planning will include a laboratory development in excess of the present-day recognized need of the staff, on the theory that the next few years will see an increasing demand rather than a diminution, and that without physical space allotted, the meeting of these demands will be difficult. As part of the wisdom of planning, it is suggested, as in the X-ray department, that small rooms for various types of service be developed rather than that an attempt be made to incorporate all of the facilities in one large room.

Electro-cardiograph Facilities. A change in thought in the last few years has eliminated use of special conduit systems and special systems of wiring for

Passavant Hospital, Chicago
Holabird & Root, Architects

the development of heart stations on nursing units, and has substituted the portable machine for bedside electro-cardiography. The central heart station need not be elaborate. The needs are not many, but if the clinician demands the service, it should be furnished.

Metabolism Room. There has been a tendency to place this room close to the laboratory facilities rather than close to patients' rooms. It would seem that it is better, and it is advocated to place this room near the latter. A certain amount of metabolism work can of course be done in the individual rooms, but it is believed desirable that there be a metabolism station where the major part of the work may be done.

No attempt has been made to list in detail here all of the professional and quasi-professional facilities requisite to modern hospital work, but enough has been presented to demonstrate why such a small ratio of the hospital's total cubage is occupied by patients. An intensive study of this ratio and an interpretation of its correctness has been made by a member of the American Institute of Architects (the only study of its kind that has ever been made, to my knowledge) of large groups of plans and has been presented to interested groups in the form of colored slides with computed ratios. This study presents in a very graphic way the complexity of hospital planning and proves that very seldom is more than 25 per cent of the total area of a building devoted actually to the bed care of patients.

Dietary Facilities. In this department we have seen another startling change in planning. The internist today recognizes the therapeutic value of properly prepared and balanced diet, with the result that the professional dietitian trained in food values and competent to interpret clinical needs is more and more taking the place of the steward or the chef, who formerly controlled the diet destinies of an institution. The importance of special diets has materially increased, with the consequent necessity for a larger diet kitchen. This diet kitchen should be located closely to the general kitchen, permitting of ease of supervision, but it should be a detached unit of operation. The development of centralized food service, designed to reduce to a minimum the handling of foods, is perhaps the most significant trend in operation in the last few years. This type of service immediately calls for a change in thought on the part of those planning the general kitchen. Therefore, before the kitchen plan can be evolved, it is necessary that there be had a very specific statement from the operating personnel as to the type of service to be rendered and the development of a plan around that scheme. Without this scheme of operation, no efficient kitchen scheme can be planned.

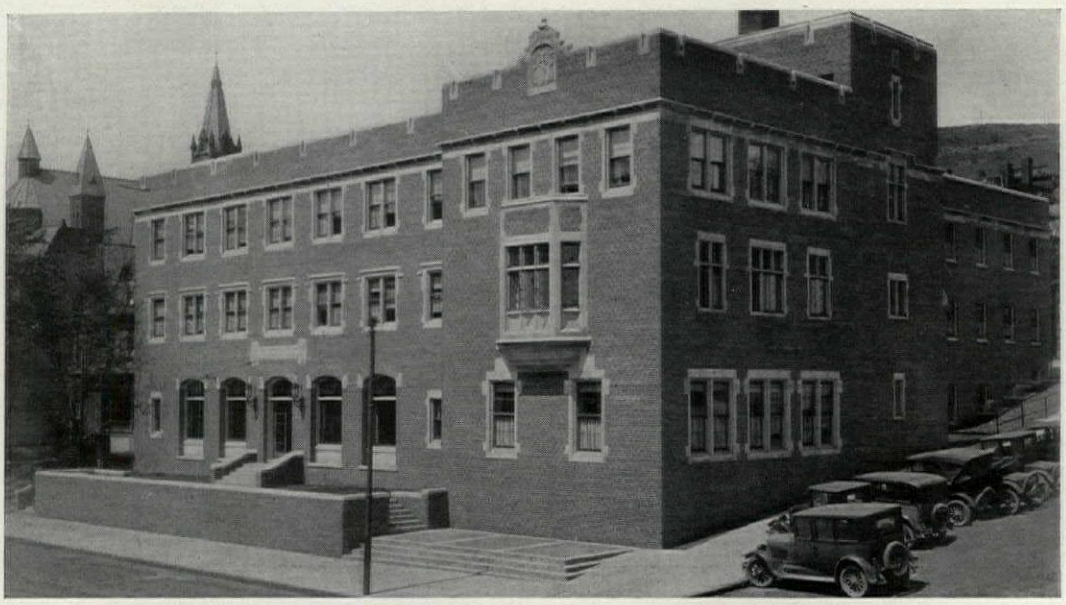
Storage Facilities. Just a few words to emphasize that the efficiency or inefficiency of a hospital rests very largely upon the provision of properly located and adequate storage facilities. An interpretation of what is adequate cannot be made in a general statement, but too much stress cannot be placed on it.

Administrative Facilities. Plan a large, commodious lobby, and then use every means possible in the development of a pleasant, cheerful atmosphere in that lobby. First impressions are always lasting impressions. It is desired to point out that the major heads of departments of an institution are handling problems that require privacy, and it would seem desirable to provide private offices for them. The telephone switchboard should never be located in the front office. It should be placed at a point where privacy may be assured. Do not overlook the necessity of providing adequate rest and cloak rooms for the attending staff, special nurses and female personnel.

Admitting and Emergency Rooms. With traffic increasing and the demands made on most of our hospitals for an increasingly large amount of emergency service, it is necessary to provide proper emergency facilities. An interpretation of the term "proper," again, is impossible, in a general statement. This paragraph is inserted to bring to the attention a need which is becoming increasingly great. It would seem logical that the admitting service of the institution should be adjacent to the emergency suite. This is not always possible nor desirable, but the suggestion is offered as one solution of the problem.

Housing of Personnel. A great many of our institutions follow, as a matter of expediency, the housing of nursing personnel in parts of the hospital. This is believed to be extremely undesirable, both from the standpoint of cost of building and from the standpoint of the effect upon the personnel. There is a great divergence of thought as to whether or not hospitals should house their personnel. It is not within the scope of this article to discuss this question, but it is desired to submit that the policy of the hospital must be established before the plan of development may be made, and that this policy having been adopted, such facilities as are deemed requisite for the housing of personnel may be provided. If it is desired to house various groups of a hospital's personnel, it should be borne in mind that recreational facilities, such as reception rooms, etc., must be provided for each group and sex, quite aside from any recreational or educational facilities that are provided for the student or graduate nurses.

It must be apparent that the presentation of a subject of this scope, within the restrictions of space allotted here, can be made only in general terms. It is hoped that the foregoing discussion has in a measure emphasized the complexity of the problem confronting the individual responsible for the development of a set of plans for a general hospital. These problems require an interpretative study of many phases, quite outside the realm of the architect's experience. Just as the ventilating engineer, the structural steel engineer, and other technical advisers are called into a study on structural problems, so should the operating point of view hold a very prominent place in the study of the type and size of building and the character of service to be included therein. This point of view cannot be too strongly emphasized. When one considers that efficiency of planning has a direct, continuous effect upon the type of service rendered, and when one sees the many instances in which hospitals have been developed without thought of operating problems, one cannot but feel that the architect must fortify himself, with every known means, to prevent inexcusable waste in construction and inexcusable lack of efficiency in the operating institution, the result of poor planning. The obligation to secure maximum efficiency is sacred. Institutions of healing touch the very foundations of our social structure more intimately than any other phase of social endeavor, with the possible exception of the Church. They are universally restricted in funds, for construction and for operation. Therefore, the conservation of funds will mean a more efficient health service and a better community.



The Duluth Clinic
W. C. Agnew, Architect

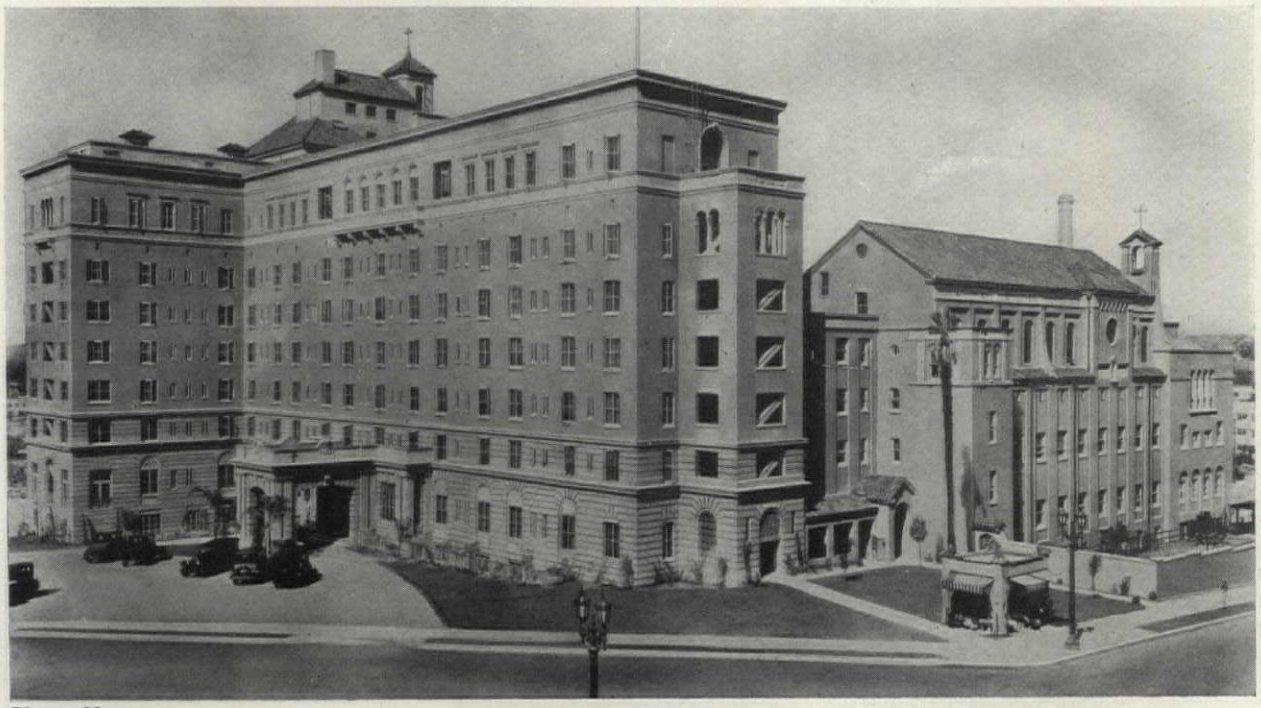
ST. VINCENT'S HOSPITAL, LOS ANGELES

JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS

BY referring to the plot plan, it will be seen that St. Vincent's Hospital occupies a block of land, approximately 300 by 350 feet, and as planned consists of a group of five buildings, three of which are completed; the remaining two units will be commenced in the near future. The completed buildings are the main building, or hospital proper; the sisters' home containing chapel, dormitories and living quarters, and dormitory for the female servants; the boiler house and laundry, containing machinery for refrigeration, laundry, boilers and other accessories for heating, hot water apparatus and emergency generator for electric light. In addition to and connected with this building there are 30 rooms for the male servants. The nurses' home has not yet been built, but plans have been prepared for a five-story building containing 150 sleeping rooms, library, living room, waiting room, office, trunk room, classroom for class of 35, assembly room for 300, and small chemistry classroom. The outpatients' clinic building has not yet been planned.

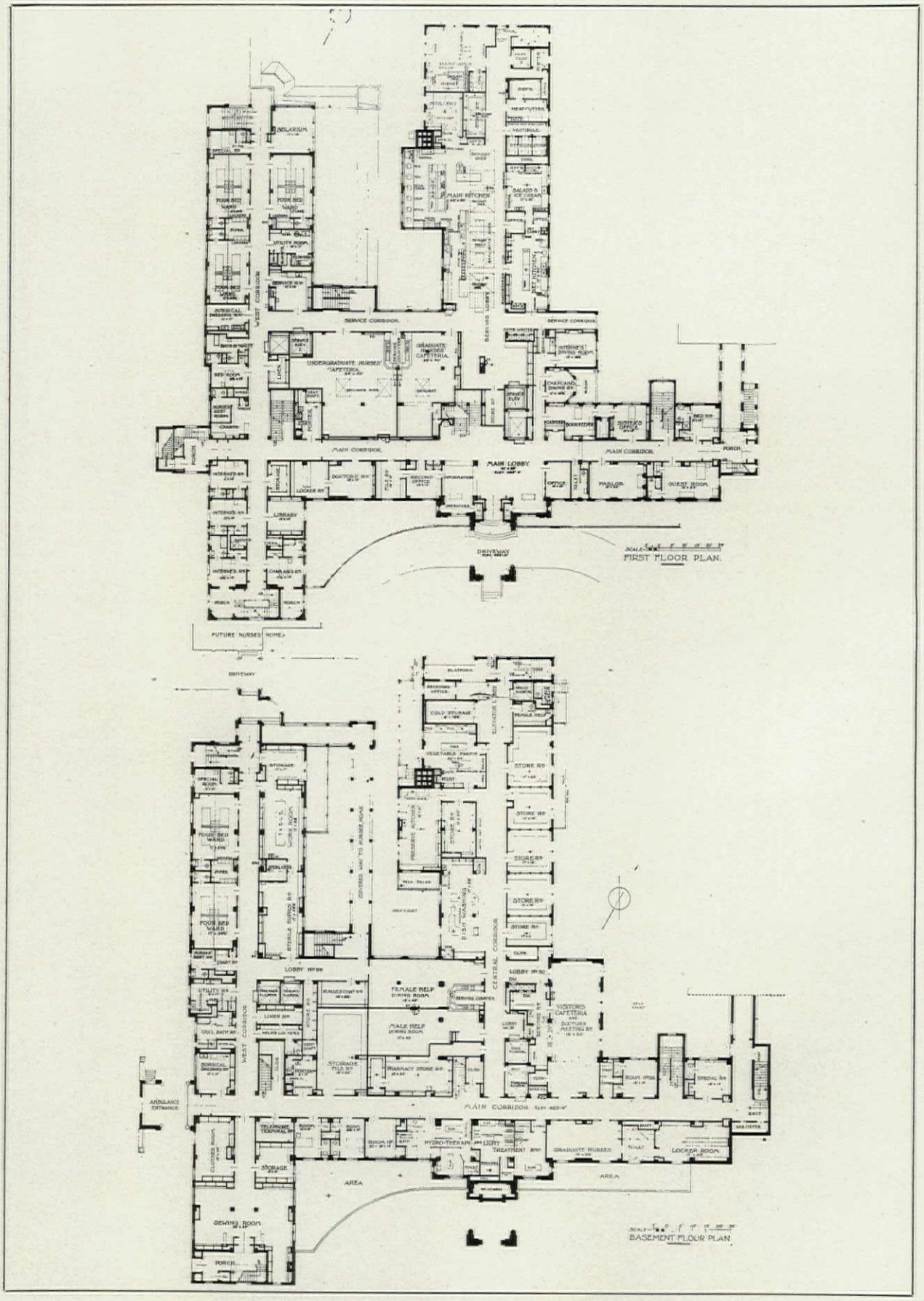
All the buildings are of reinforced concrete construction and are fireproof throughout. Exterior wall surfaces are of cement stucco, finished with various textures. Terrazzo has been extensively used in the hospital and dormitory buildings. Floors of all rooms and corridors, bathrooms and lavatories, stairs and stair landings, the bases in rooms and corridors, around toilet stalls and on walls of dressing rooms are of this material; the only exceptions made are in the X-ray department and lavatory, where rubber tile has been used as a floor covering, and in the operating rooms, in which all floors and walls are covered with a special sanitary tile. Owing to the plastic condition of terrazzo during its application, many very practical uses were devised,—for instance, the use of a continuous ledge formed on the base along one wall of every patient's room to prevent the bed from coming in contact with the wall. This may seem a trivial detail, but in the maintenance of a hospital it is really of considerable importance. Again, instead of using marble or metal for window stools, terrazzo was employed and found to be a very practical substitute. Most of the plastering in the buildings is of lime and Keene's cement. All surfaces are troweled smooth, and all projections and angles neatly rounded to ¾-inch radius. All interior door frames are of steel finished with lacquer, corners are rounded to a 2-inch radius, and the usual trim has been omitted. Door stops extend to within 3 inches of the floor, and the terrazzo base is carried around the jambs, making continuous sanitary surfaces with round corners, which are easily cleaned.

All doors are of the "flush" type, veneered with quarter-sawed white oak, stained and lacquered. A few of the patients' rooms have baths attached, but where these are lacking, toilet compartments have been provided. The equipment and appointments of these toilets and bathrooms are rather interesting

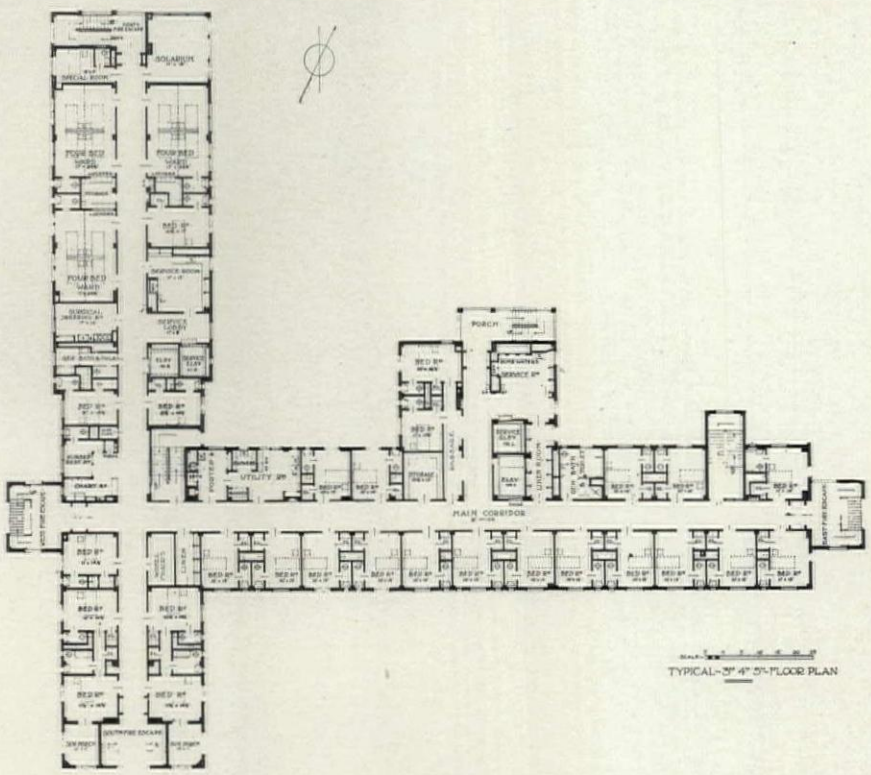


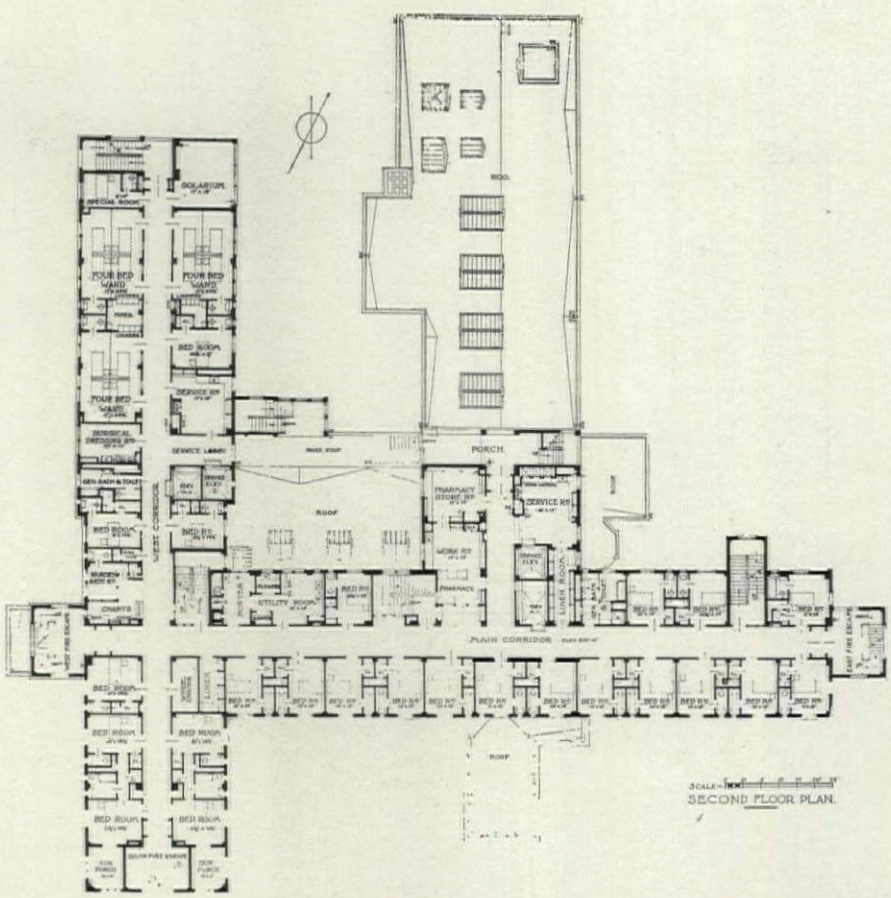
Photos. Moss

St. Vincent's Hospital, Los Angeles
John C. Austin and Frederic M. Ashley, Architects

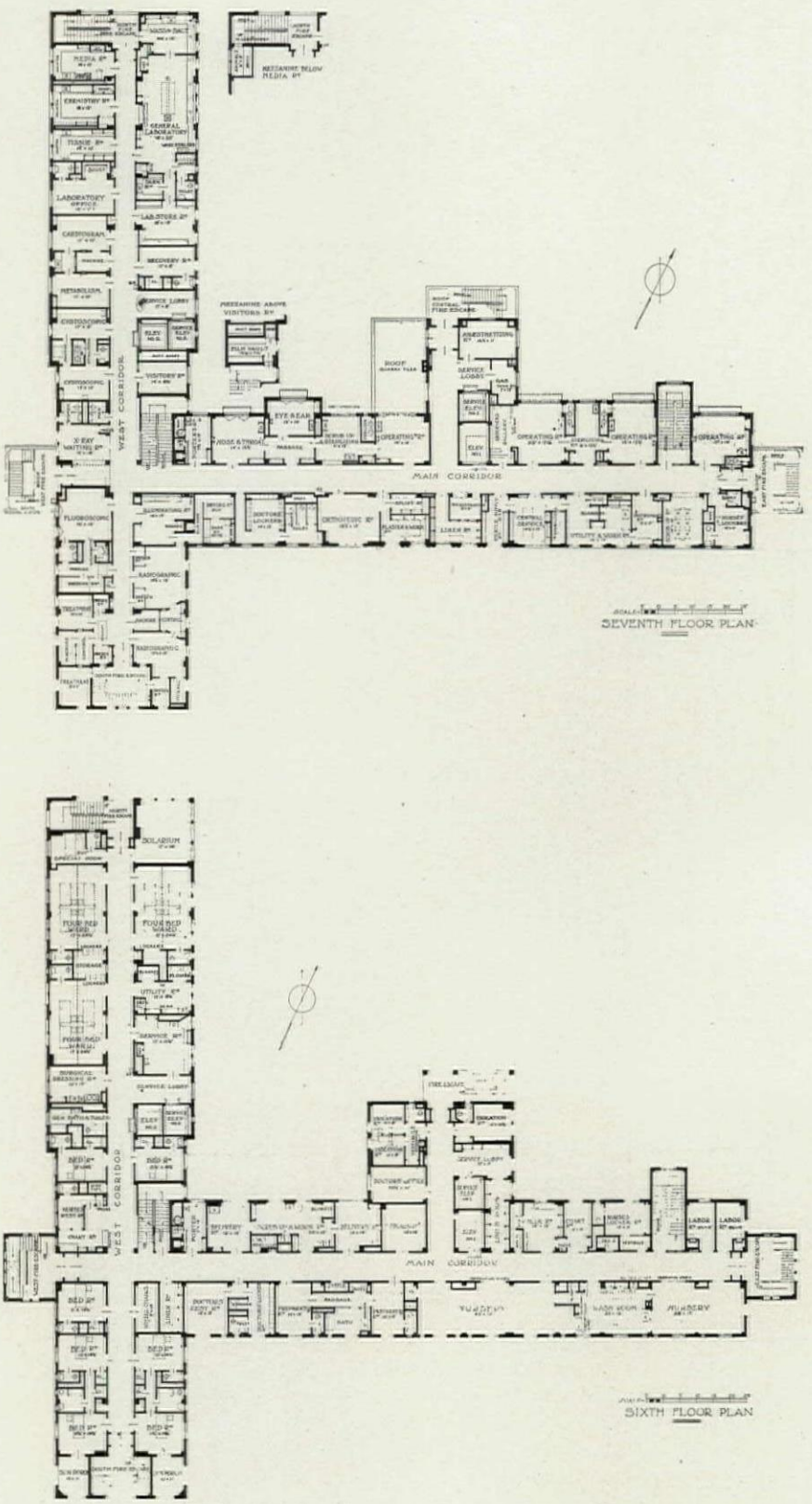


PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS

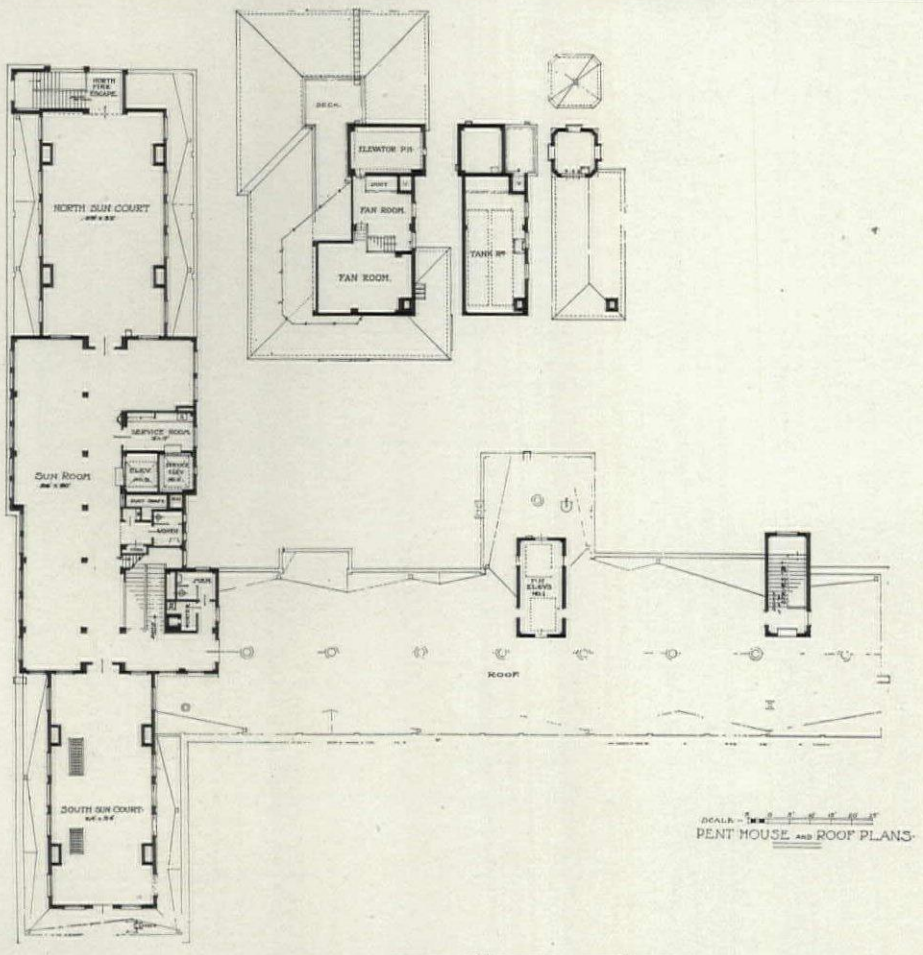


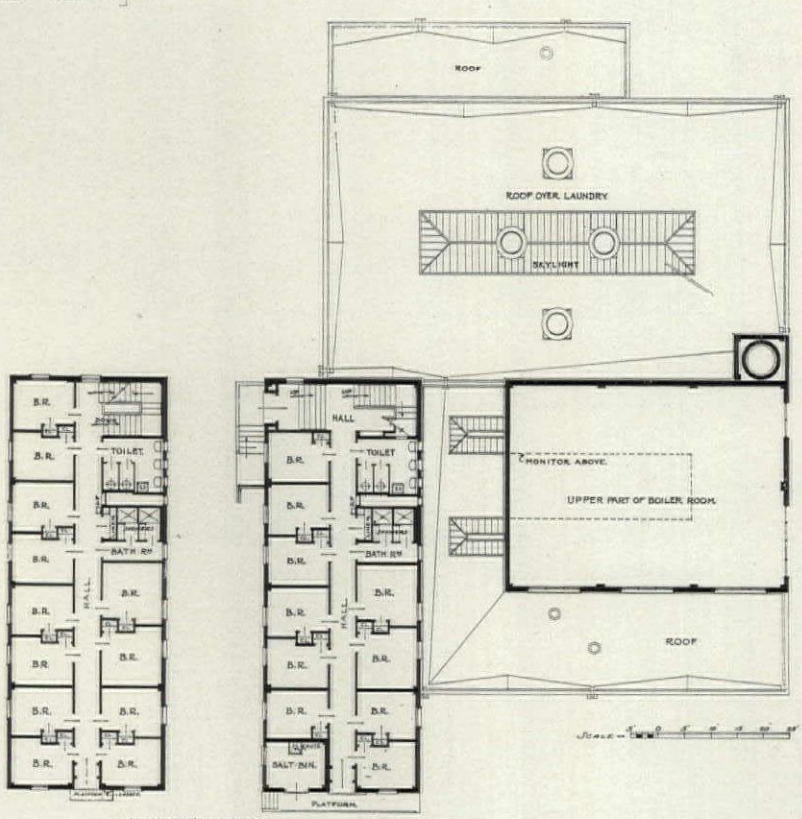


PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS

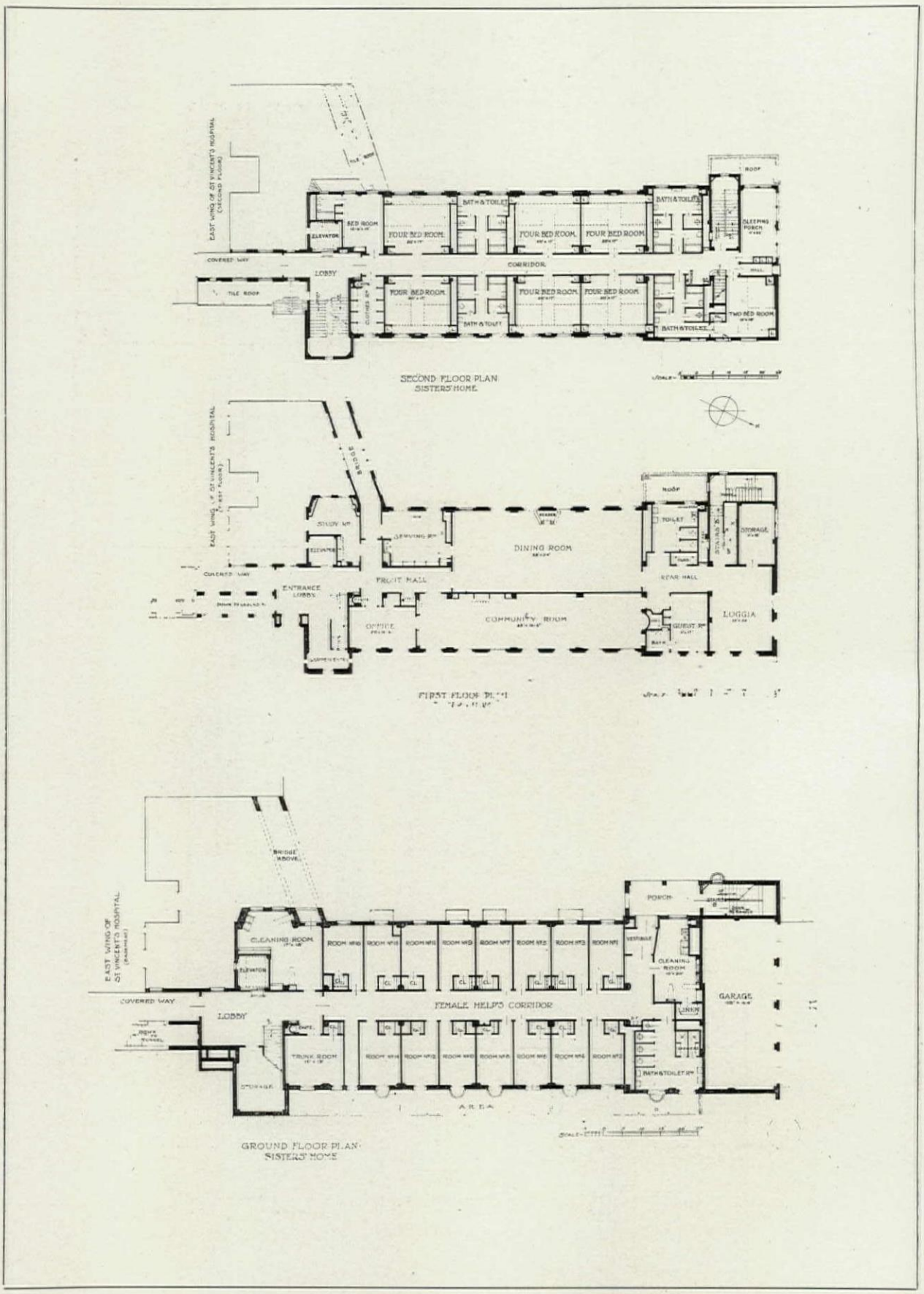


PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS

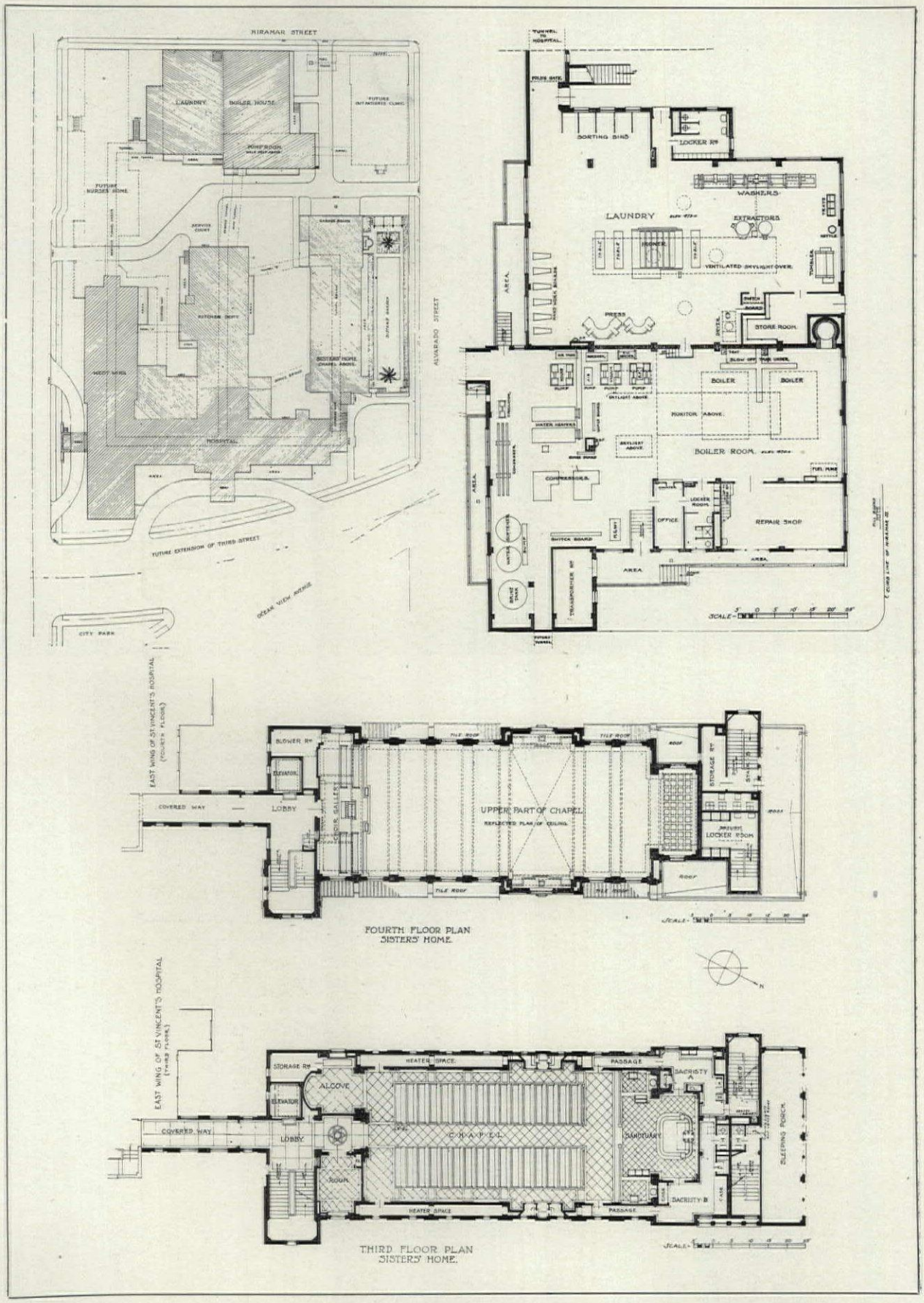




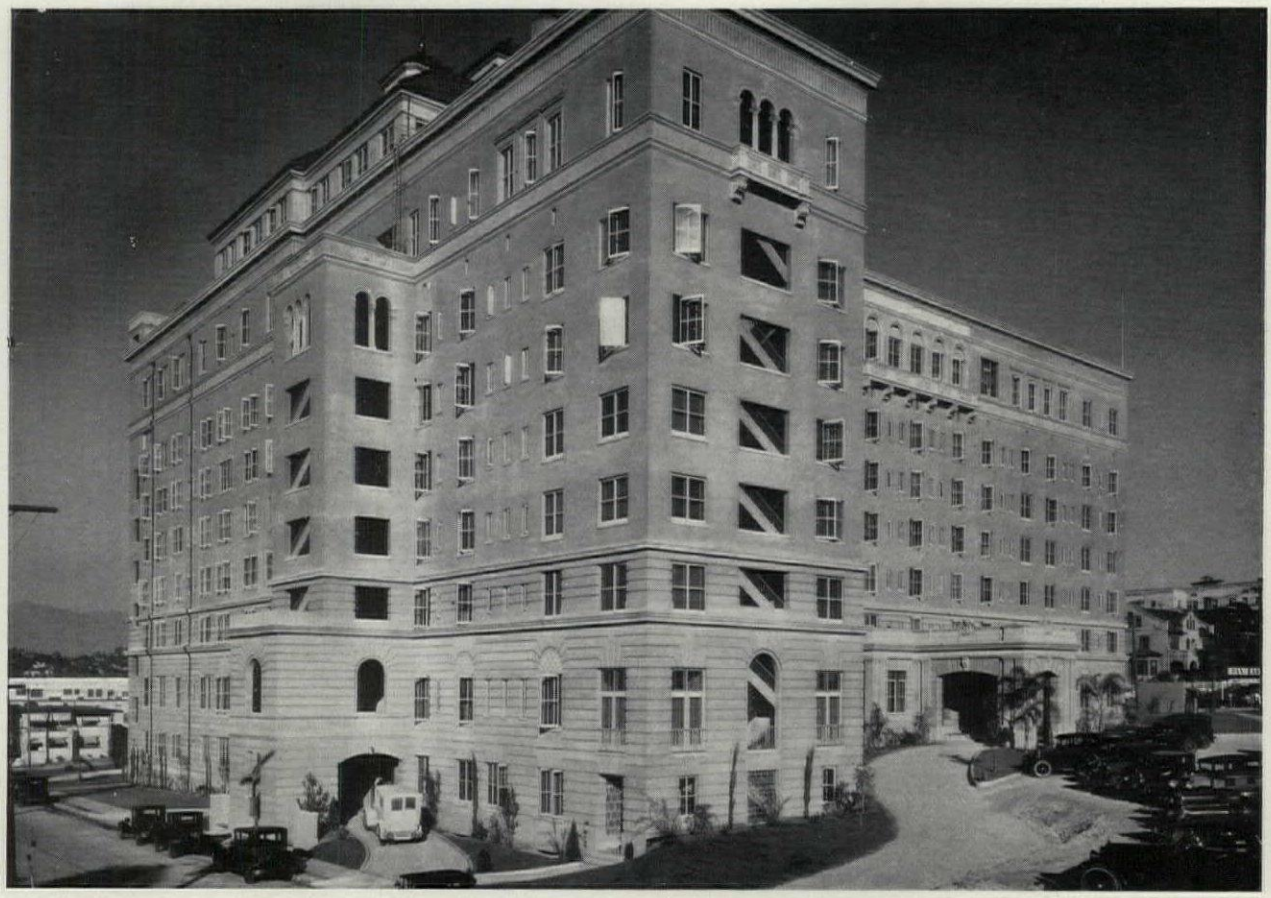
PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS



PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS



PLANS: ST. VINCENT'S HOSPITAL, LOS ANGELES
JOHN C. AUSTIN AND FREDERIC M. ASHLEY, ARCHITECTS



St. Vincent's Hospital, Los Angeles
John C. Austin and Frederic M. Ashley, Architects

and worthy of study, owing to the fact that few if any other hospitals are similarly equipped. For instance, every water closet, in addition to having a flush valve, is fitted with hot and cold "bidet" jets, and the bowl has lugs cast in the porcelain to support the bed pan during the process of cleaning, the pans being specially made to fit in the tops of the bowls. Every bathroom and lavatory adjoining a patient's room is provided with a cabinet lined with sanitary tile and thoroughly vented, the front being enclosed with monel metal doors. These cabinets contain a complete equipment, consisting of all appliances needed for the proper care of the patient, making it unnecessary for the nurse to leave the patient. These appliances are not allowed to be taken from the room except for being sterilized.

Between the ceiling of the sixth story and the floor of the seventh, an intermediate story 6 feet, 6 inches high has been provided and is utilized as a pipe loft. Piping serving all floors up to the sixth story ceiling constitutes one system, and all above this level another system. In this pipe loft the vents from all fixtures are assembled in groups and carried through shafts to the roof. Mechanical vent systems are installed to exhaust the air from all vertical shafts occurring at the back of the lines of bath and toilet rooms. Independent vent systems are used to exhaust the air from operating rooms, laboratories, and other departments on the seventh floor, where special ventilation is necessary. It was found advisable to keep supply and waste systems of operating rooms and laboratories independent of all others, owing to the fact that there is more trouble developing in these departments than in the ordinary operation of the hospital. In addition to the plumbing system of the seventh floor, there are special gas lines conducting various kinds of gas to the operating rooms, and a complete system of steam lines to the sterilizers. All sterilizing apparatus adjacent to operating rooms is concealed in special compartments, so that only the valves and nozzles are exposed on the faces of the operating room walls. All these compartments are thoroughly ventilated. The continuing vertical shafts from sub-basement ceiling level to the pipe loft above the sixth story at the back of every line of plumbing fixtures, and the pipe distributing loft, make it possible to repair or remove any or every pipe without interference with the operation of the hospital. Also the pipe loft immediately below the surgery floor makes it possible to install any new sanitary, electrical or ventilating appliance that may be discovered or invented, and found to be desirable, without disturbing the structural elements of the building.

There is a complete system of tunnels extending from the power house and the laundry to and under every building, equal in width and location to the corridors in the upper stories of each building.

GENERAL VIEW

Photos, Harold H. Costain

Plans on Back

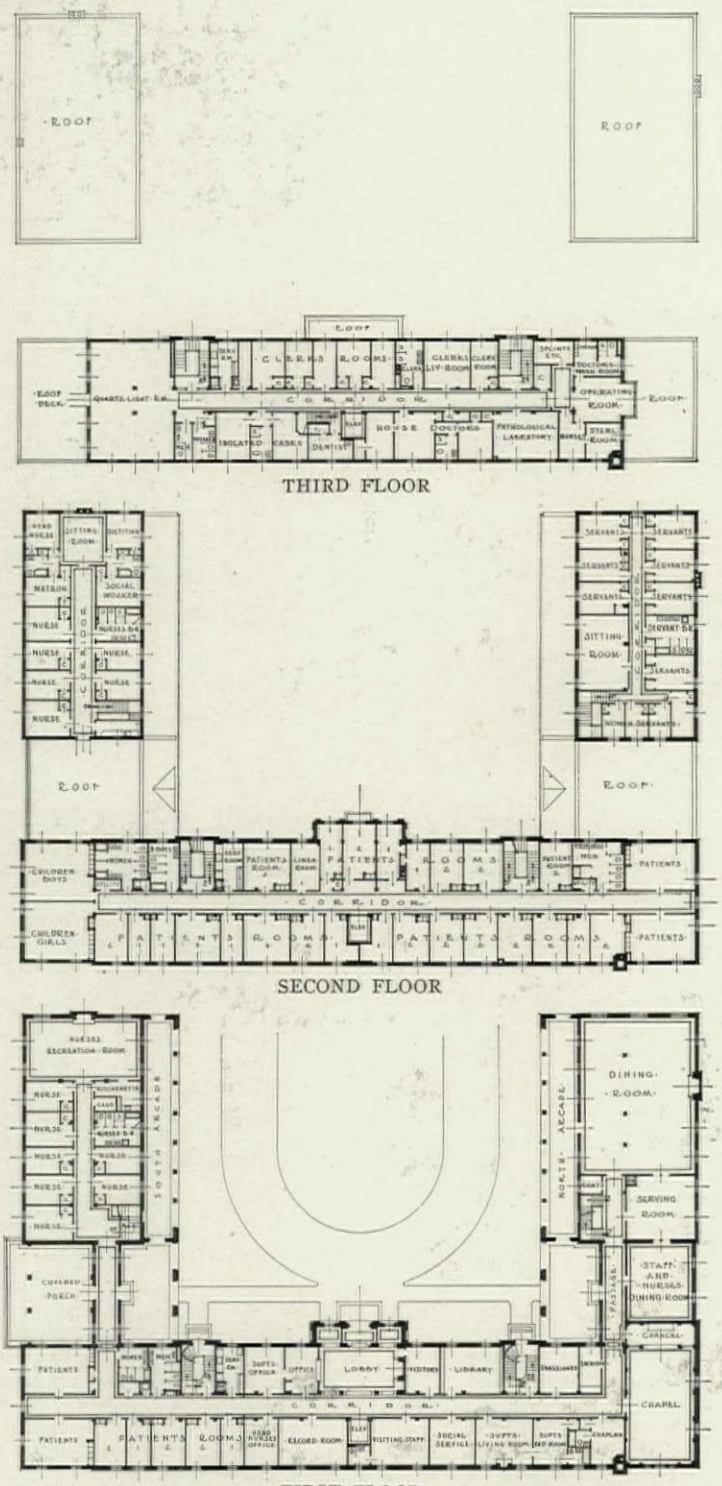
MAIN ENTRANCE

ST. LUKES CONVALESCENT HOSPITAL, GREENWICH, CONN.

WILLIAM S. GREGORY, ARCHITECT; ERNEST FLAGG, CONSULTING ARCHITECT

COST AND CONSTRUCTION DATA

Year of Completion: 1927.
Type of Construction: Fireproof.
Exterior Walls: Basement, concrete; upper stories, hollow tile with facings in brick and stone.
Floors: Linoleum, cemented directly to concrete and wax finished.
Windows: Wood.
Heating: Steam vapor system.
Ventilation: Mechanical for kitchen, toilets and baths.
Cubage of Building: 689,000 feet.
Cubic Feet Per Patient: 8600.
Cost of Building, Without Furnishings: 70 cents per cubic foot.
Cost Per Cubic Foot Completely Furnished: 80 cents.
Number and Cost Per Bed: 80 at $6,890.



THIRD FLOOR

SECOND FLOOR

FIRST FLOOR

PLANS: ST. LUKE'S CONVALESCENT HOSPITAL, GREENWICH, CONN.
WILLIAM S. GREGORY, ARCHITECT
ERNEST FLAGG, CONSULTING ARCHITECT

PATIENTS' OPEN AIR COURT

MAIN ENTRANCE LOBBY

ST. LUKES CONVALESCENT HOSPITAL, GREENWICH, CONN.

WILLIAM S. GREGORY, ARCHITECT; ERNEST FLAGG, CONSULTING ENGINEER

GENERAL VIEW

ENTRANCE HALL

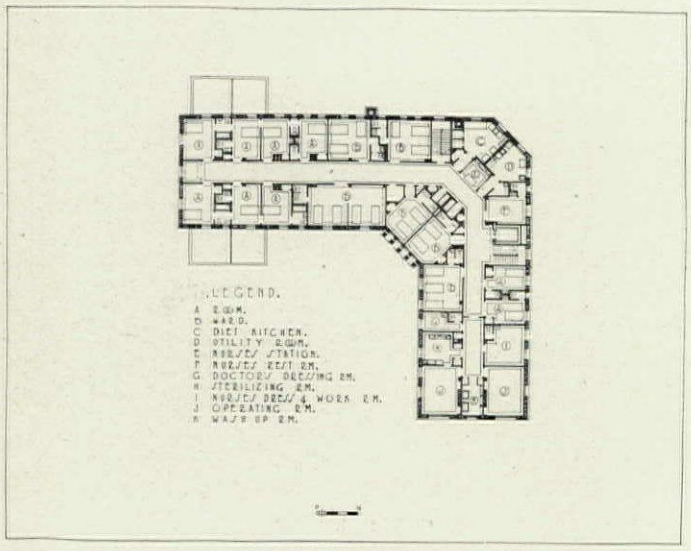
MAIN ENTRANCE

Photos. Gabriel Moulin *Plans on Back*

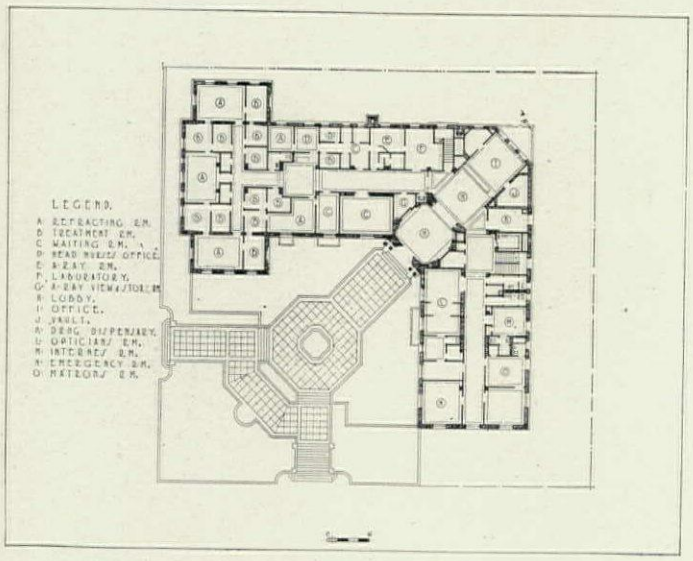
GREEN'S EYE HOSPITAL, SAN FRANCISCO
FREDERICK H. MEYER, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: April, 1928.
Type of Construction: Reinforced concrete.
Exterior Walls: 12-inch reinforced concrete.
Roof: Wood frame covered with tile.
Floors: Concrete slabs, tile and linoleum finish.
Windows: Wood frames and sash; metal in operating suite.
Heating: Steam heat, direct radiation, oil-burning boilers.
Ventilation: In operating rooms and baths.
Cubage of Building: 375,186 feet.
Cost of Building, Without Equipment: $208,000.



SECOND FLOOR



FIRST FLOOR

PLANS: GREEN'S EYE HOSPITAL, SAN FRANCISCO
FREDERICK H. MEYER, ARCHITECT

ENTRANCE FRONT

Photos. Paul J. Weber

REAR ELEVATION

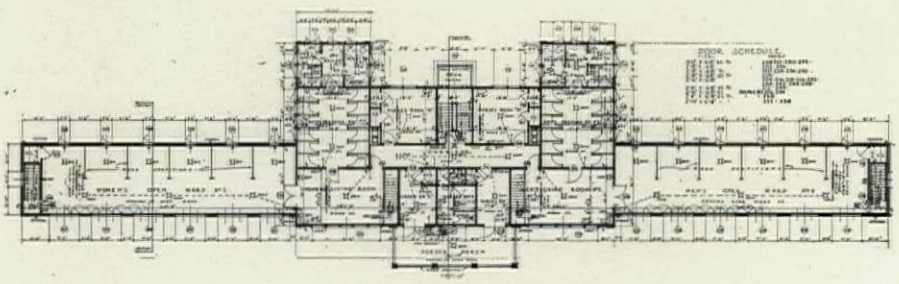
TUBERCULOSIS HOSPITAL, PHILMONT, N. Y.

TOOKER & MARSH, ARCHITECTS

Plans on Back

COST AND CONSTRUCTION DATA

Year of Completion: 1919.
Type of Construction: Frame.
Exterior Walls: Frame.
Roof: Slate.
Floors: Wood, and canvas over wood.
Windows: Wood, double-hung.
Heating: Low-pressure steam.
Cost of Building, Without Equipment: $90,000.



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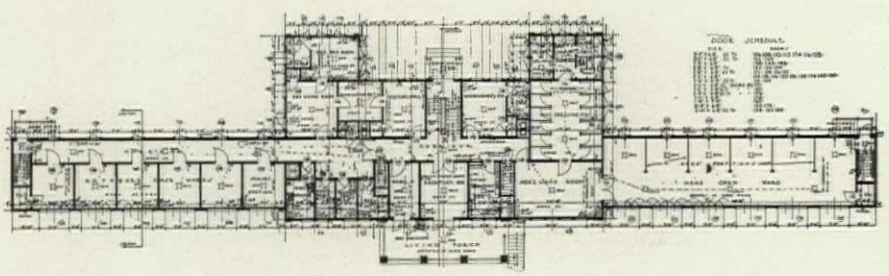


FIRST FLOOR

PLANS: TUBERCULOSIS HOSPITAL, PHILMONT, N. Y.

TOOKER & MARSH, ARCHITECTS

ENTRANCE ELEVATION

END AND REAR ELEVATIONS

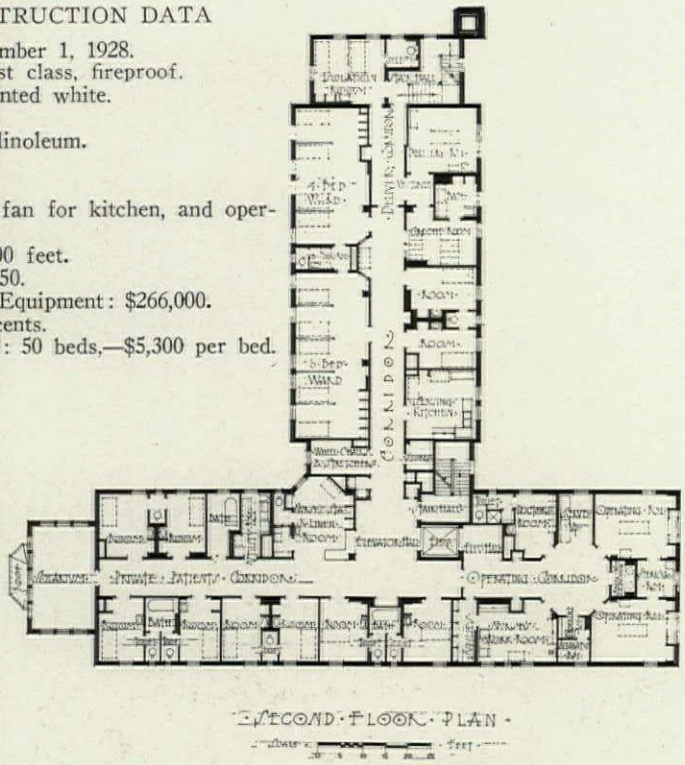
COTTAGE HOSPITAL, GROSSE POINTE, MICH.

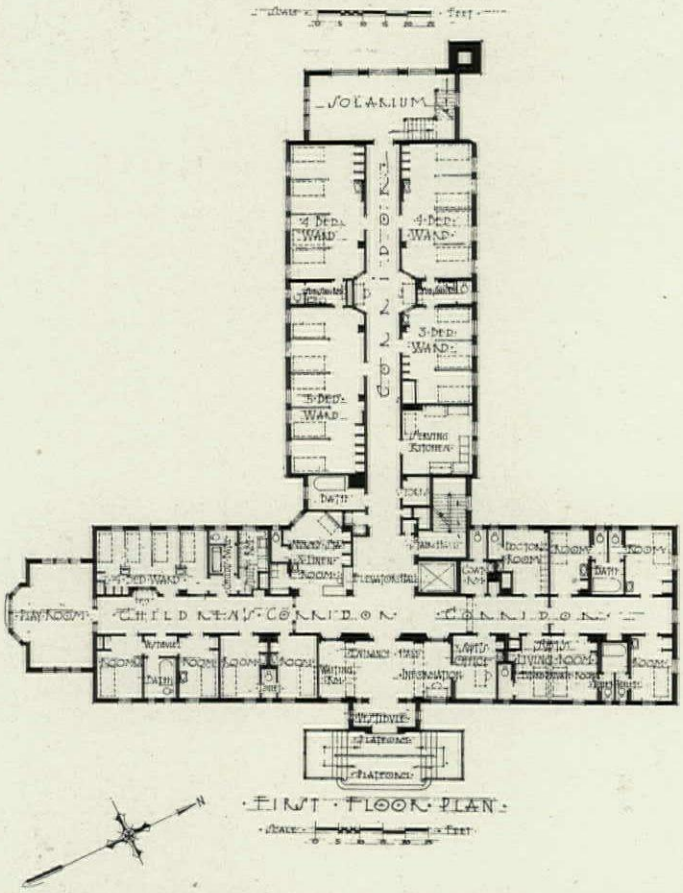
STEVENS & LEE, ARCHITECTS

Plans on Back

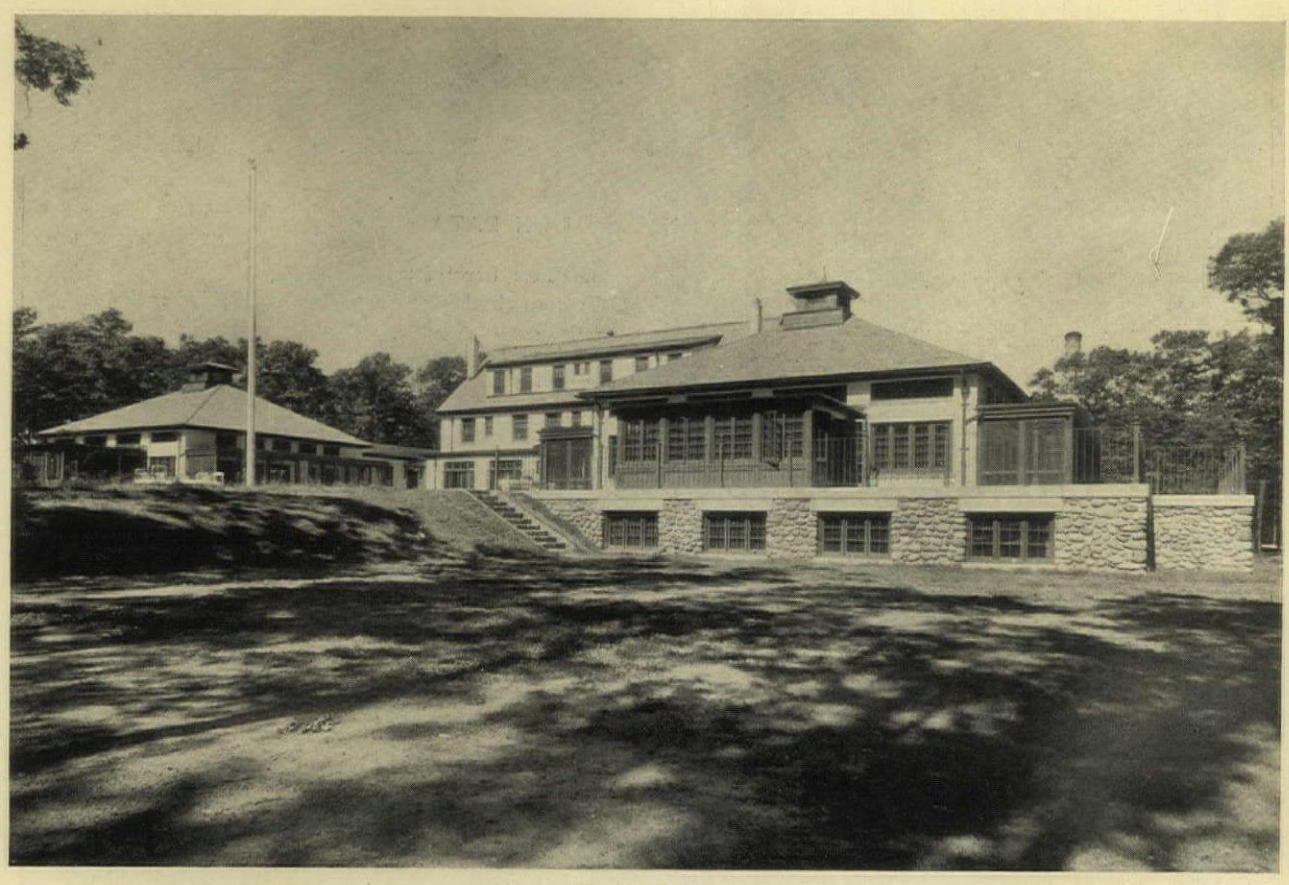
COST AND CONSTRUCTION DATA

Date of Completion: November 1, 1928.
Type of Construction: First class, fireproof.
Exterior Walls: Brick, painted white.
Roof: Brown tile.
Floors: Rubber, terrazzo, linoleum.
Windows: Metal sash.
Heating: Direct steam.
Ventilation: Gravity, with fan for kitchen, and operating room ventilation.
Cubage of Building: 471,000 feet.
Cubic Feet Per Patient: 9450.
Cost of Building Without Equipment: $266,000.
Cost Per Cubic Foot: 56 cents.
Number and Cost Per Bed: 50 beds,—$5,300 per bed.





PLANS: COTTAGE HOSPITAL, GROSSE POINTE, MICH.
STEVENS & LEE, ARCHITECTS



GENERAL VIEW

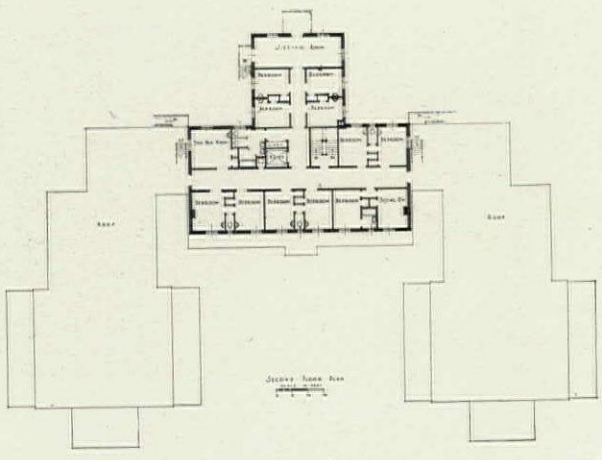
Photos. Paul J. Weber

Plans on Back

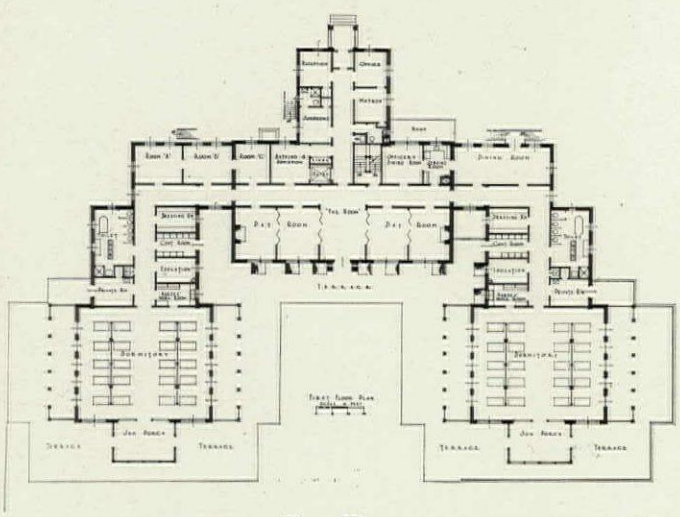
OUTSIDE PAVILIONS
SOLEMAR HOSPITAL, SOUTH DARTMOUTH, MASS.
KENDALL, TAYLOR & CO., ARCHITECTS

COST AND CONSTRUCTION DATA

Date of Completion: June, 1924.
Type of Construction: First and second class.
Exterior Walls: Tile and stucco.
Roof: Slate and flat.
Floors: Terrazzo and linoleum.
Windows: Wood sash, double-hung.
Heating: Steam, vacuum system, separate power plant.
Ventilation: Local fans.
Cubage of Building: hospital, 310,000; boiler house, 27,130; garage 12,420 feet.
Cubic Feet Per Patient: 6,000.
Cost of Building Without Equipment: $295,044.
Number of beds: 50.



Second Floor



First Floor

PLANS: SOLEMAR HOSPITAL, SOUTH DARTMOUTH, MASS.
KENDALL, TAYLOR & CO., ARCHITECTS

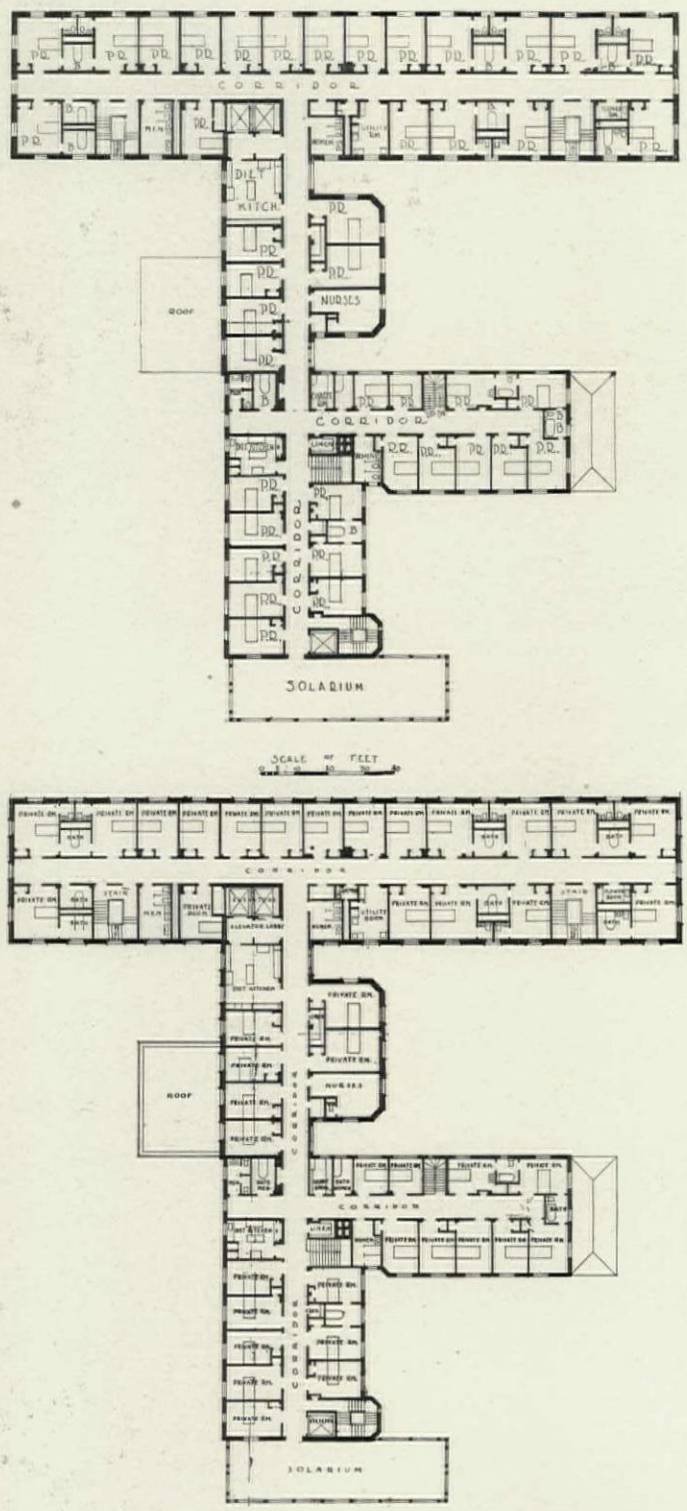
ENTRANCE FRONT

Plans on Back

MILLS MEMORIAL HOSPITAL, SAN MATEO, CAL.
LEWIS P. HOBART, ARCHITECT

COST AND CONSTRUCTION DATA

Year of Completion: 1927.
Type of Construction: Reinforced concrete.
Exterior Walls: Concrete with stucco finish.
Roof: Slate.
Floors: Concrete, tile finish in corridor and living rooms.
Windows: Wood, double-hung.
Heating: Low-pressure steam.
Ventilation: Forced draft.
Cubage of Building: 612,730 feet.
Cost of Building, Without Equipment: $418,170.
Number of Beds: 80.



PLANS: MILLS MEMORIAL HOSPITAL, SAN MATEO, CAL.
LEWIS P. HOBART, ARCHITECT

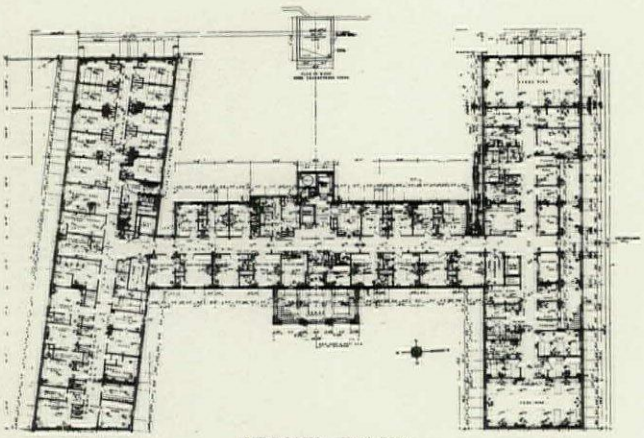
GENERAL VIEW

Photo. Tebbs & Knell

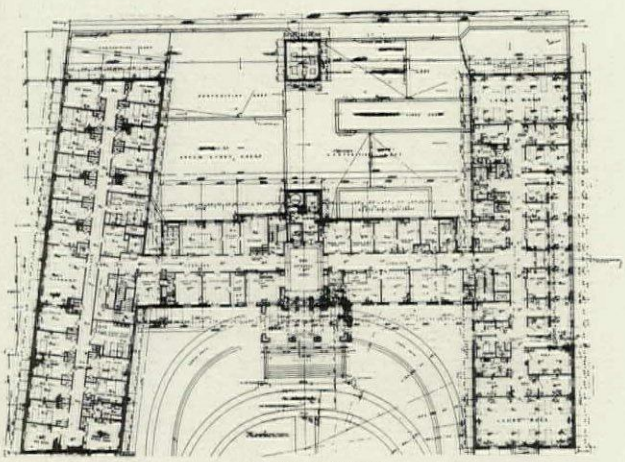
Plans on Back

JEWISH HOSPITAL, ST. LOUIS

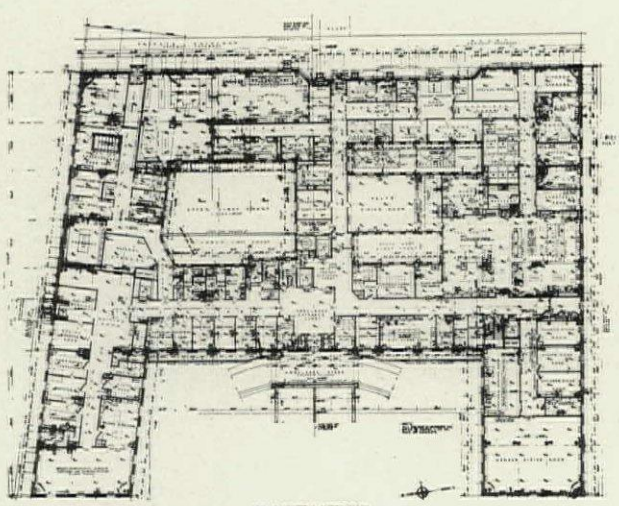
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS



SECOND FLOOR



FIRST FLOOR



BASEMENT

PLANS: JEWISH HOSPITAL, ST. LOUIS

GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

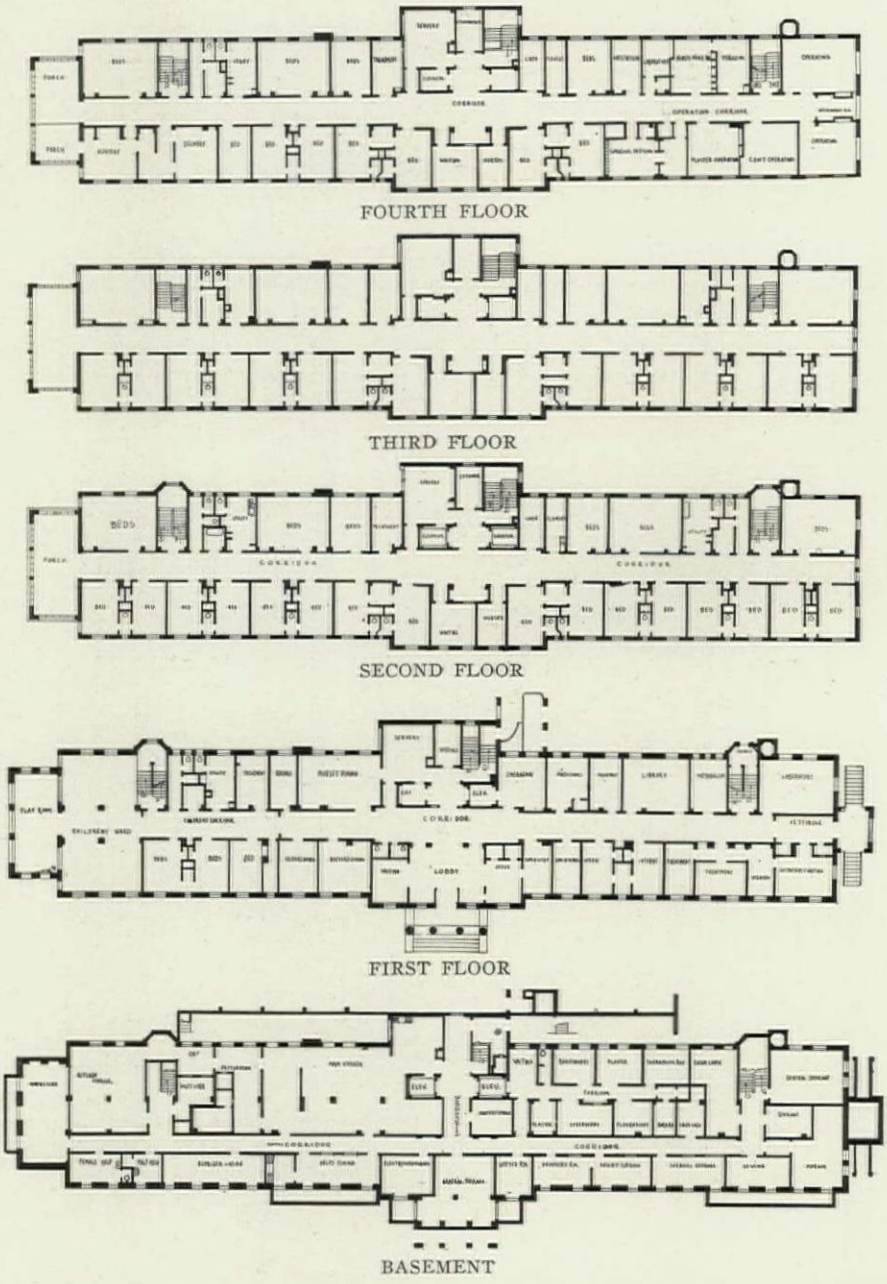
Plans on Back

GENERAL HOSPITAL, LINCOLN, NEB.
DAVIS & WILSON, ARCHITECTS

COST AND CONSTRUCTION DATA

Year of Completion: 1924.
Type of Construction: Reinforced concrete.
Exterior Walls: Brick, limestone trim.
Roof: Slate.
Floors: Oak, linoleum, tile.
Windows: Double-hung wood.
Heating: Vacuum steam.
Ventilation: Natural, except for exhaust fans in kitchen and sterilizing room.

Cubage of Building: 762,000 feet.
Cubic Feet Per Patient: 6,800.
Cost of Building, Including Fixed Equipment: $288,-338.62.
Cost per Cubic Foot, Including Fixed Equipment: 37.8 cents.
Number and Cost Per Bed: 112 beds at $2,570.
Cost of Operating Per Bed Per Day: $4.50.



PLANS: GENERAL HOSPITAL, LINCOLN, NEB.
DAVIS & WILSON, ARCHITECTS

Photo. F. L. Fales

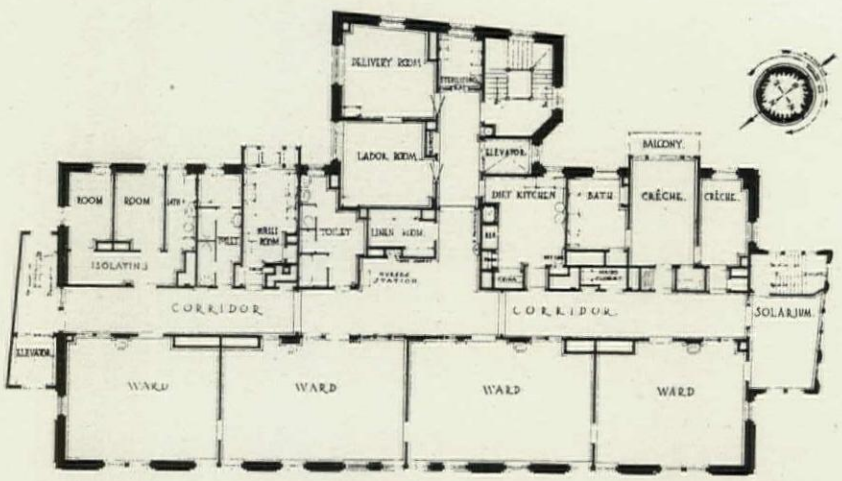
Plans on Back

ROBINSON MEMORIAL BUILDING, HOMEOPATHIC HOSPITAL, BOSTON

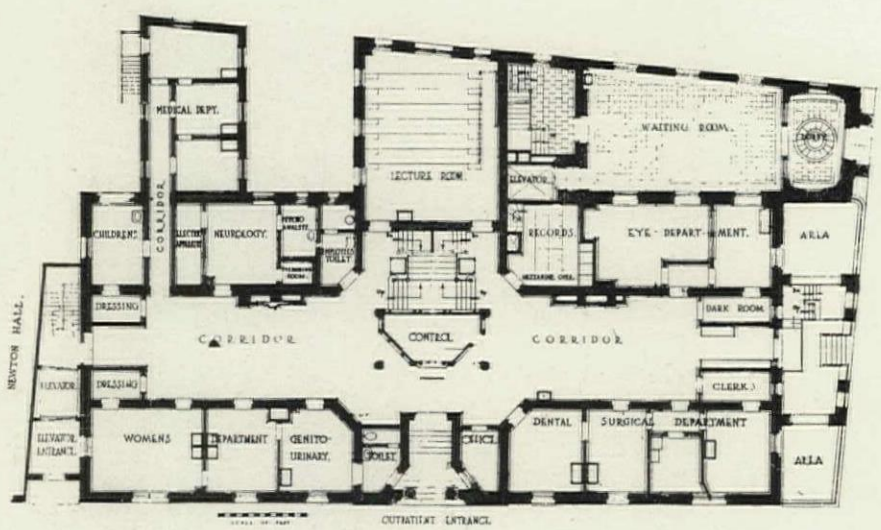
KENDALL, TAYLOR & CO., ARCHITECTS

CONSTRUCTION DATA

Date of Completion: November, 1915.
Type of Construction: First class.
Exterior Walls: Brick and limestone.
Roof: Flat.
Floors: Gypsum slab, tile, terrazzo and linoleum.
Windows: Wood, double-hung sash.
Heating: Steam.
Ventilation: Exhaust fan, partial.
Cubage of Building: 616,760 feet.
Cost of Building, Without Equipment: $275,000.
Number of Beds: 84.



THIRD FLOOR PLAN



FIRST FLOOR PLAN

PLANS: ROBINSON MEMORIAL BUILDING, HOMEOPATHIC HOSPITAL, BOSTON

KENDALL, TAYLOR & CO., ARCHITECTS

FRONT ELEVATION

Photos. George B. Brayton

Plans on Back

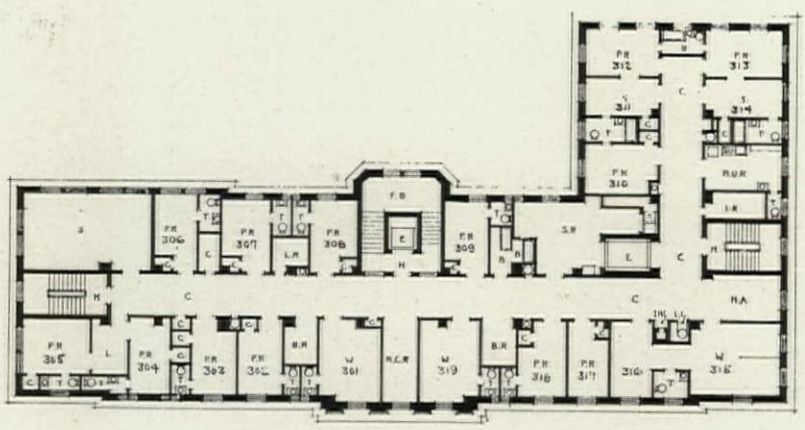
REAR ELEVATION

PALMER MEMORIAL HOSPITAL, BOSTON

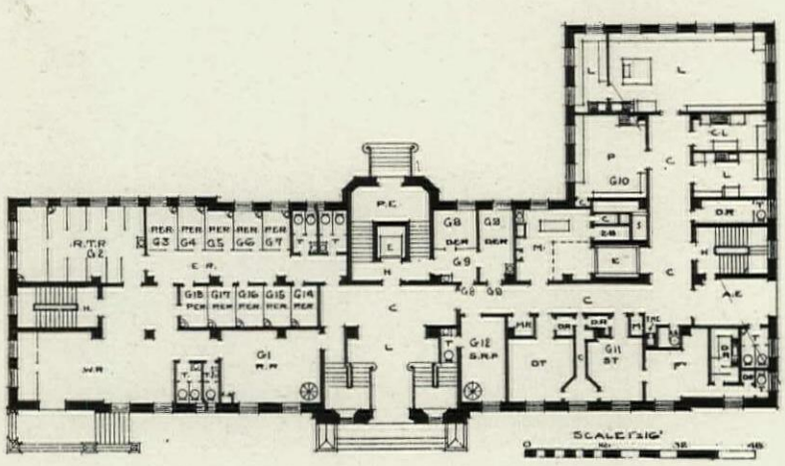
ERNEST W. DEARING, ARCHITECT

COST AND CONSTRUCTION DATA

Date of Completion: February 1, 1927.
Type of Construction: Fireproof (one-way terra cotta.)
Exterior Walls: Brick.
Roof: Tar and gravel on concrete, and copper on concrete.
Floors: Tile and concrete construction: tile and rubber in upper floors.
Windows: Wood.
Heating: Steam from main plant.
Ventilation: Mechanical.
Cubage of Building: 736,700 feet.
Cubic Feet Per Patient: 1,500.
Cost of Building, Without Equipment: 66½ cents per cubic foot.
Cost per Cubic Foot, Completely Furnished: 95 cents.
Number and Cost Per Bed: 67 beds at $10,000 each.



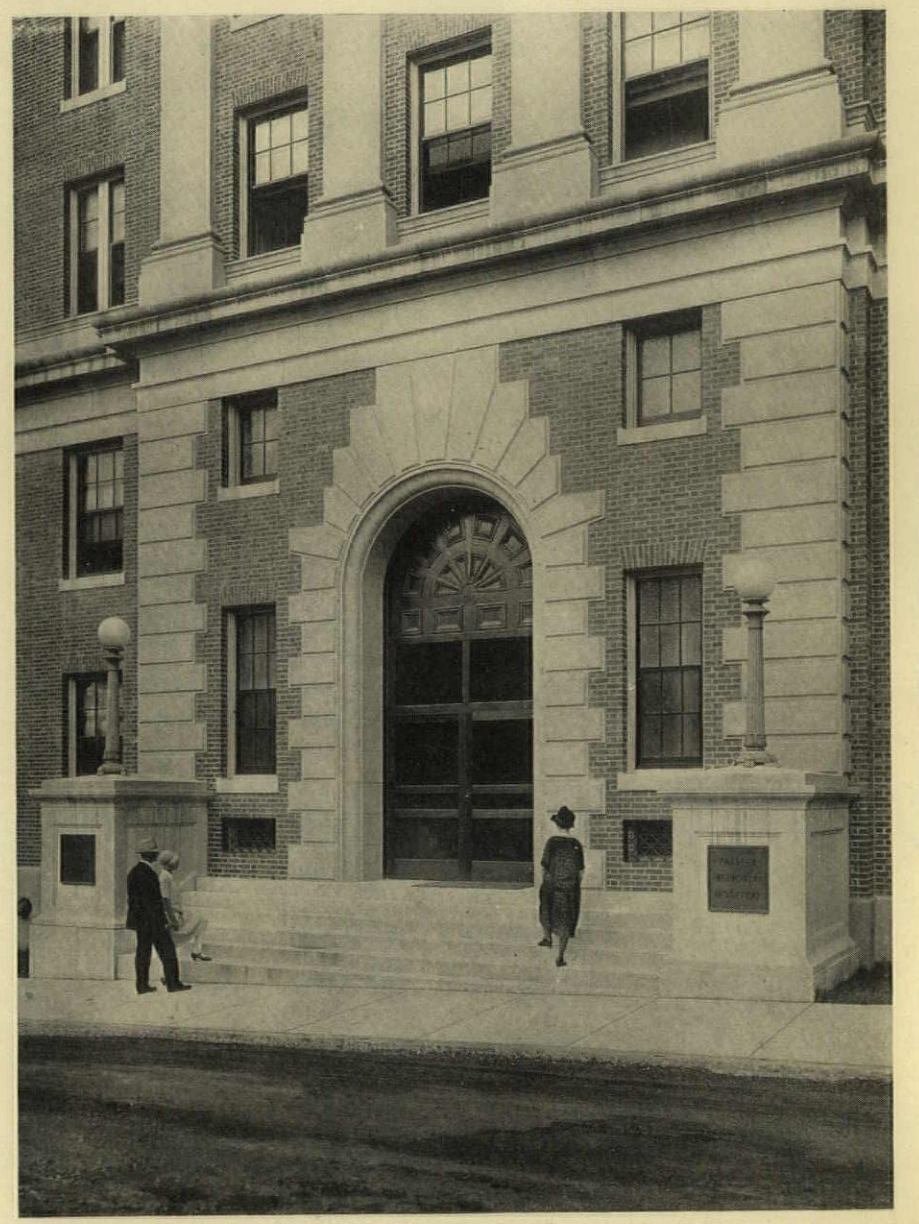
SECOND FLOOR



FIRST FLOOR

PLANS: PALMER MEMORIAL HOSPITAL, BOSTON
ERNEST W. DEARING, ARCHITECT

STAIR HALL

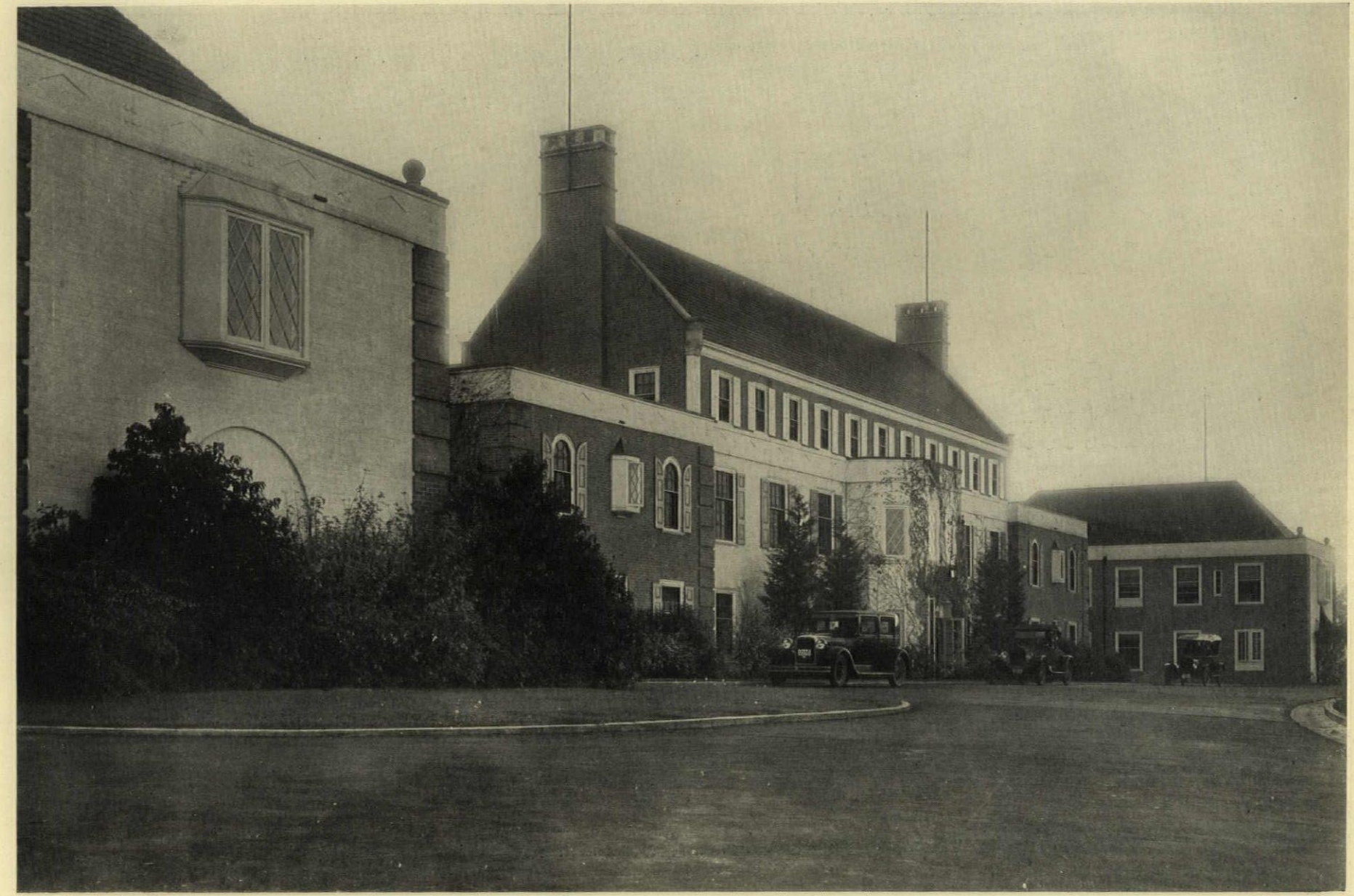


MAIN ENTRANCE

Photos. George B. Brayton

PALMER MEMORIAL HOSPITAL, BOSTON

ERNEST W. DEARING, ARCHITECT



Photos. Peasley-Jourdan

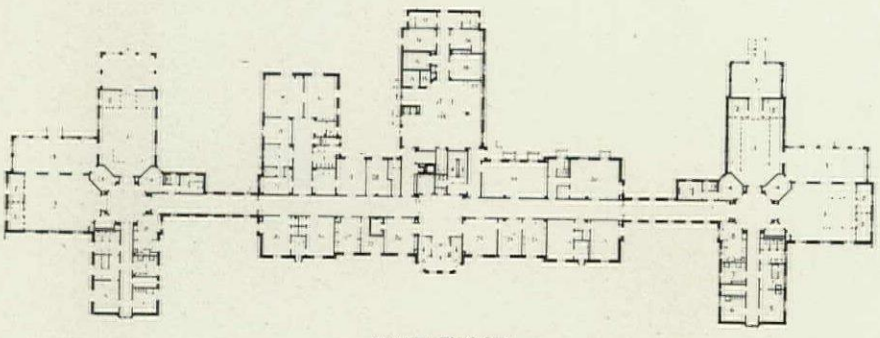
SHRINERS' HOSPITAL, PORTLAND, ORE.
SUTTON & WHITNEY, ARCHITECTS

Plans on Back

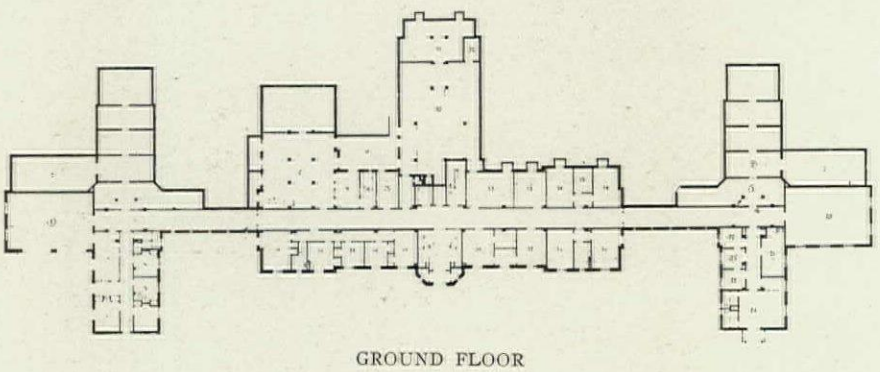
COST AND CONSTRUCTION DATA

Year of Completion: 1923.
Type of Construction: Reinforced concrete.
Exterior Walls: Concrete, faced with brick.
Roof: Copper shingles and tar and gravel.
Floors: Cement and mastic.
Windows: Wood.

Heating: Forced hot water.
Ventilation: No ventilation except in kitchen.
Cubage of Building: 535,000 feet.
Cubic Feet Per Patient: 8,900.
Cost of Building, Without Equipment: $263,750.
Cost Per Cubic Foot, Completely Furnished: 56 cents.



MAIN FLOOR

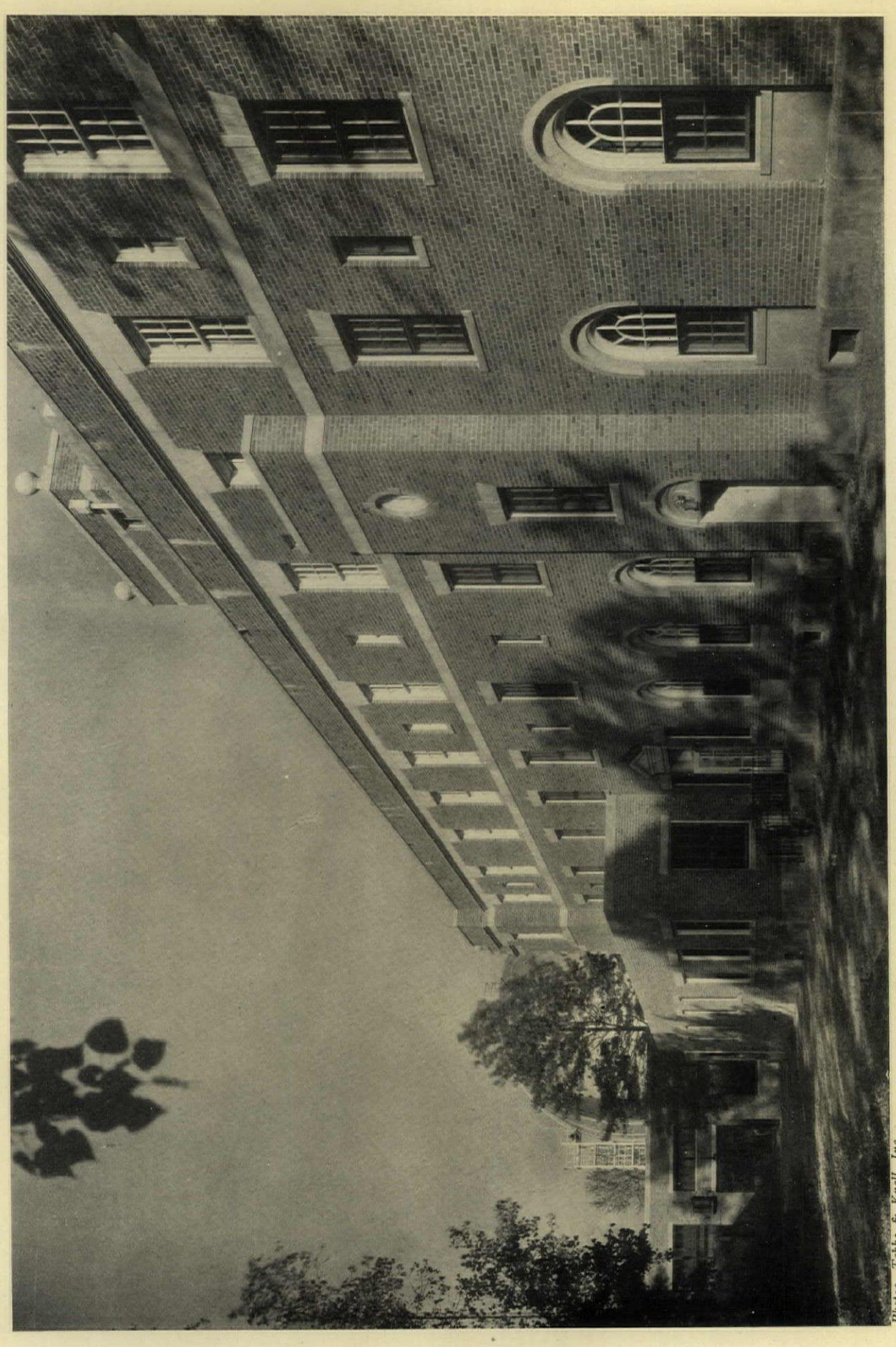


GROUND FLOOR

PLANS: SHRINERS' HOSPITAL, PORTLAND, ORE.

SUTTON & WHITNEY, ARCHITECTS

OUT PATIENTS' ENTRANCE, SHRINERS' HOSPITAL, PORTLAND, ORE.
SUTTON & WHITNEY, ARCHITECTS



CUNNINGHAM SANATORIUM, CLEVELAND
VERNON REDDING & ASSOCIATES, ARCHITECTS

Photos. Tebbs & Knell, Inc.

AIR PRESSURE WARD, CUNNINGHAM SANATORIUM, CLEVELAND

GENERAL CONSIDERATIONS IN PLANNING A SMALL HOSPITAL

BY
H. ELDRIDGE HANNAFORD
OF SAMUEL HANNAFORD & SONS, ARCHITECTS

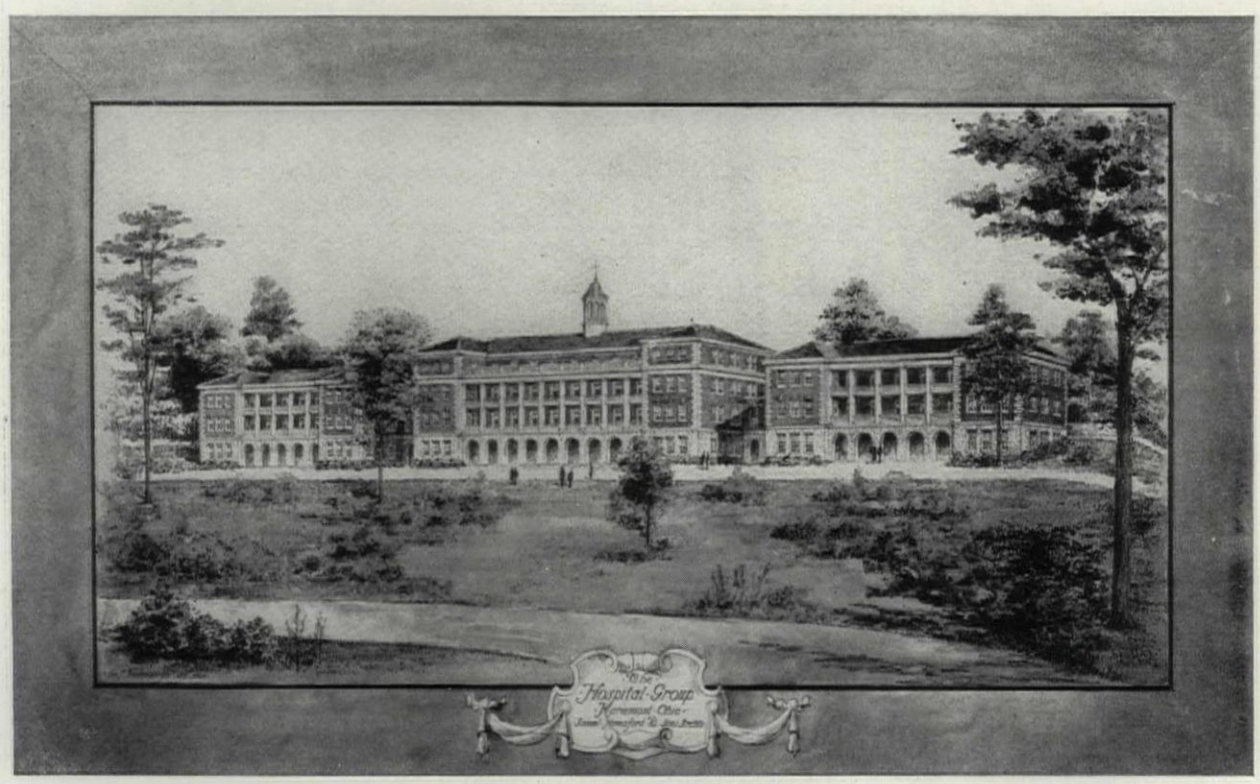
THIS article will touch on the major general considerations in the development of a small hospital program and the grouping and arrangement of the various component units. Plans on pages 874 and 875 are to exemplify a few of the general principles which governed the planning of one particular hospital, but which apply with equal force to hospitals twice or three times the size.

Site. This important factor is too often not given given sufficient consideration, and where possible the architect should give to the building committee every assistance in selecting a proper site. In the final analysis, the location of a hospital is the only part of the undertaking that may be considered as permanent. Buildings deteriorate structurally and become obsolete. Equipment wears out, becomes antiquated and must be replaced. It is obvious, therefore, that great care and sound judgment should be exercised in selecting the hospital's location.

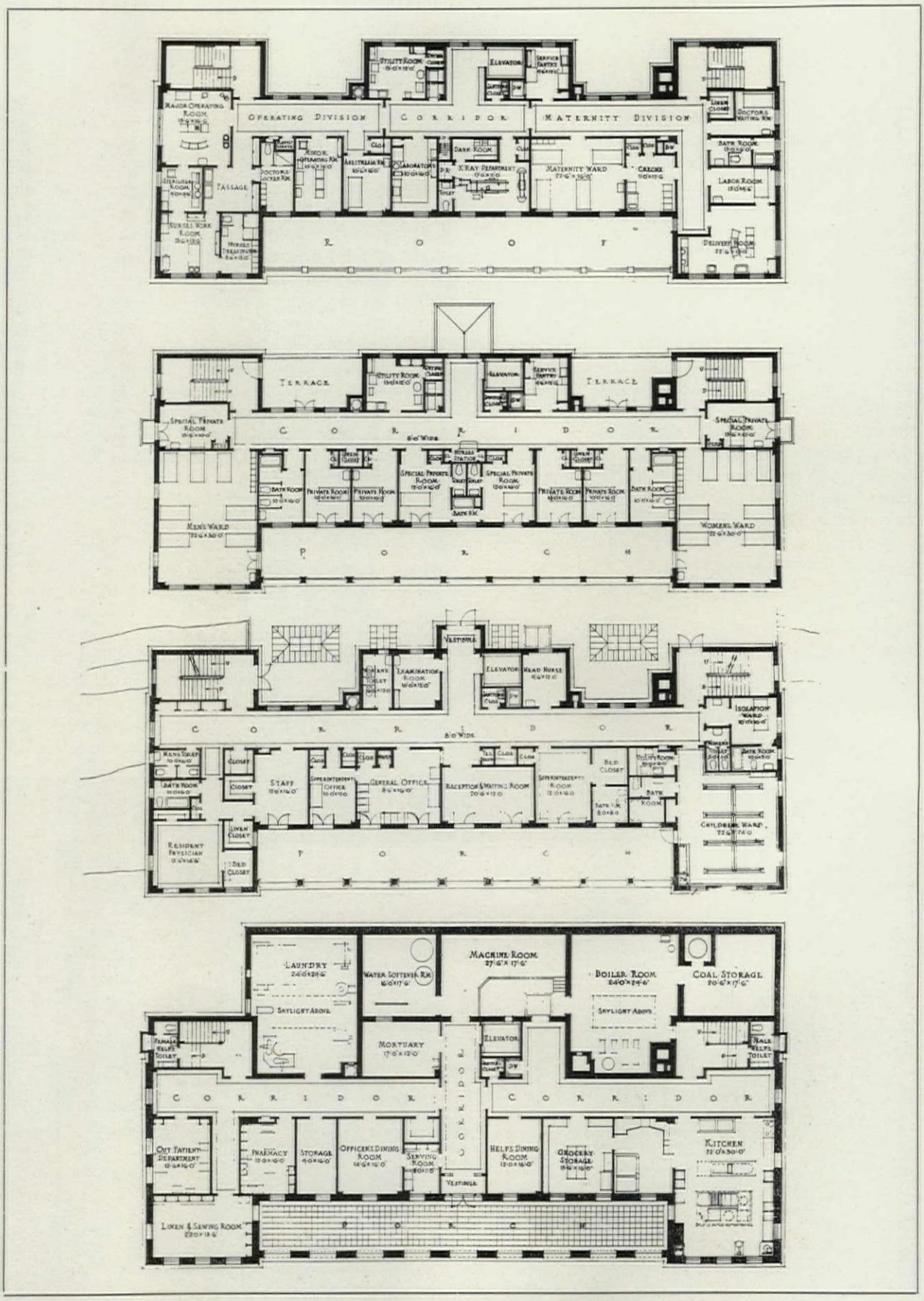
Briefly, the factors entering into a wise decision in the choice of a hospital site are:

1. Quiet,
2. Clean Air,
3. Absence of Insects,
4. Suitable Outlook,
5. Accessibility,
6. Permanency,
7. Additions,
8. Costs,—Original Cost and Maintenance Cost.

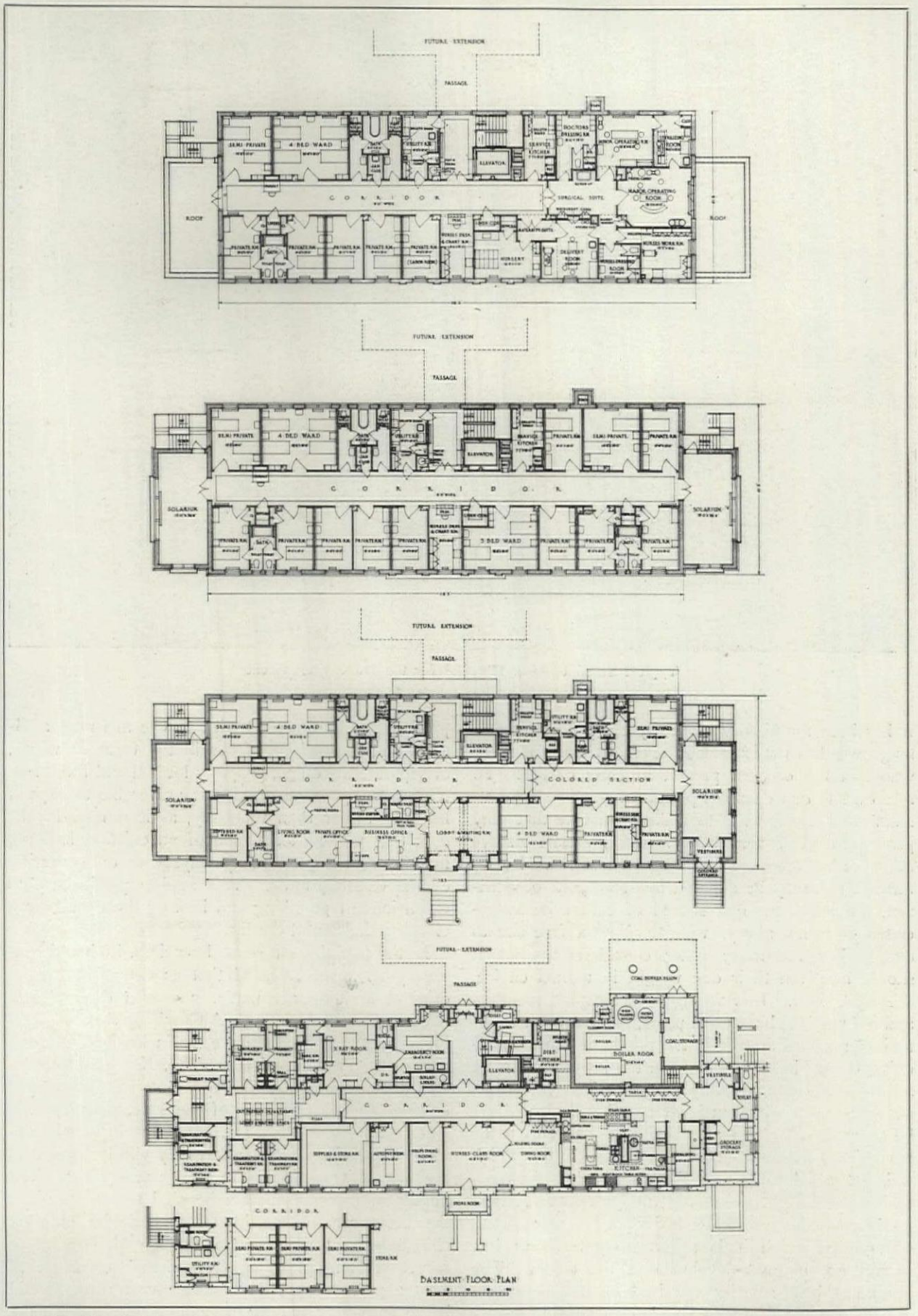
Quiet can be secured by avoiding locations in close proximity to railroads, street car lines, factories and places of public assembly, such as churches, schools and playgrounds. Clean air, free from smoke, dust and odors, can be secured by avoiding manufacturing neighborhoods, railroad yards, and locations near much traveled or unsurfaced highways. Absence of insects, especially flies and mosquitoes, can be obtained by choosing a location at least half a mile from stables, stock yards, swamps or marshy places that cannot be controlled or drained. A suitable outlook is one that is restful and attractive. The sick and convalescent should not have to look out from rooms or verandas facing upon crowded streets or busy manufacturing sections. Rest is a universal remedy for all diseases, and it is too inexpensive for the sick not to have it in abundance. Beautiful natural scenery, fields, woods and distant hills, are very definite aids in hastening the convalescence of the hospital patient. Accessibility is obtained by locating the hospital as near as possible to the center of the population area to be served. It goes without saying that the hospital should be on a good road or roads and of easy access at all times. Permanency can be obtained by avoiding districts that are likely, in time, to change in character, or which may possibly develop into commercial or manufacturing centers. Additions to the hospital should be given their due weight in a final choice.



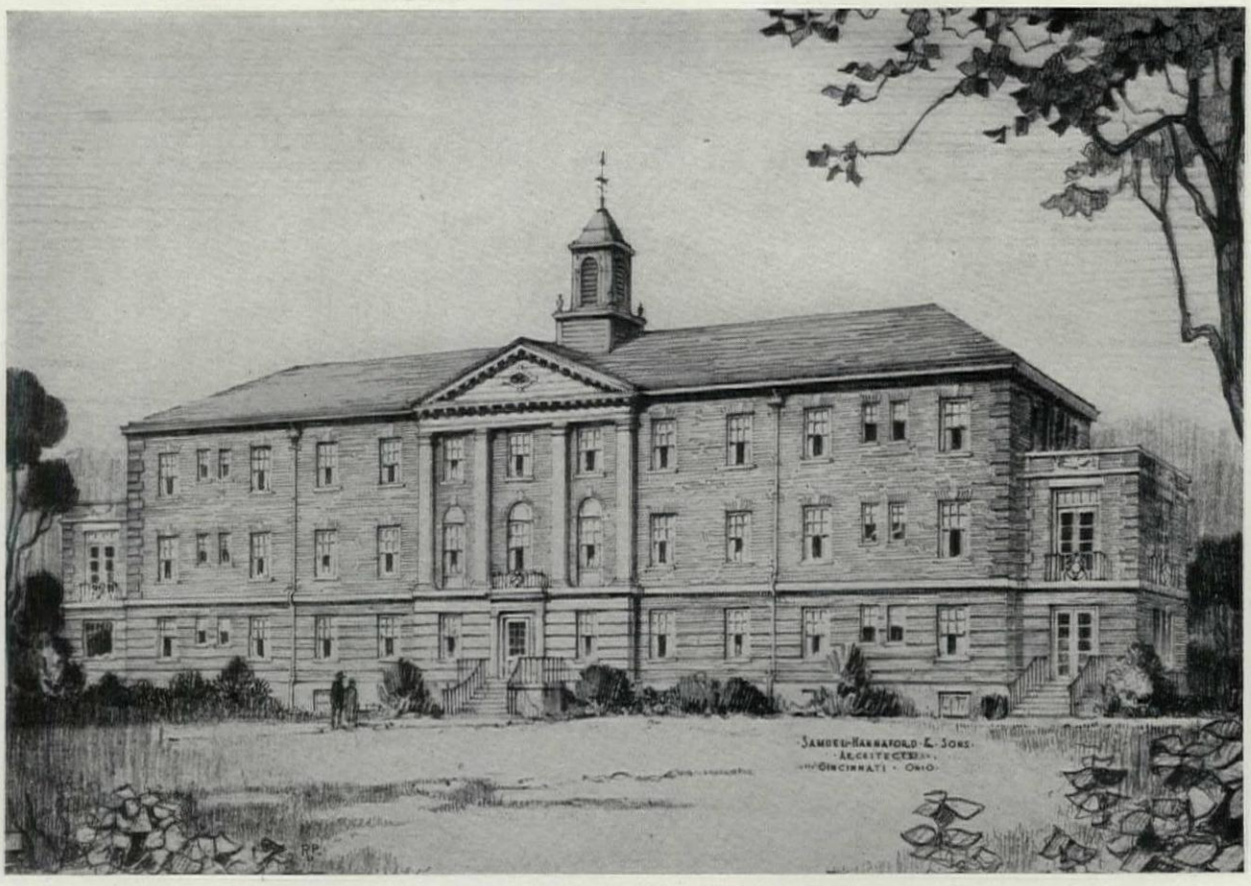
Hospital Group, Mariemont, O.
Samuel Hannaford & Sons, Architects



PLANS: TYPICAL SMALL GENERAL HOSPITAL FOR THE DUKE ENDOWMENT, CHARLOTTE, N. C.
SAMUEL HANNAFORD & SONS, ARCHITECTS



PLANS: TYPICAL SMALL GENERAL HOSPITAL FOR THE DUKE ENDOWMENT, CHARLOTTE, N. C.
SAMUEL HANNAFORD & SONS, ARCHITECTS

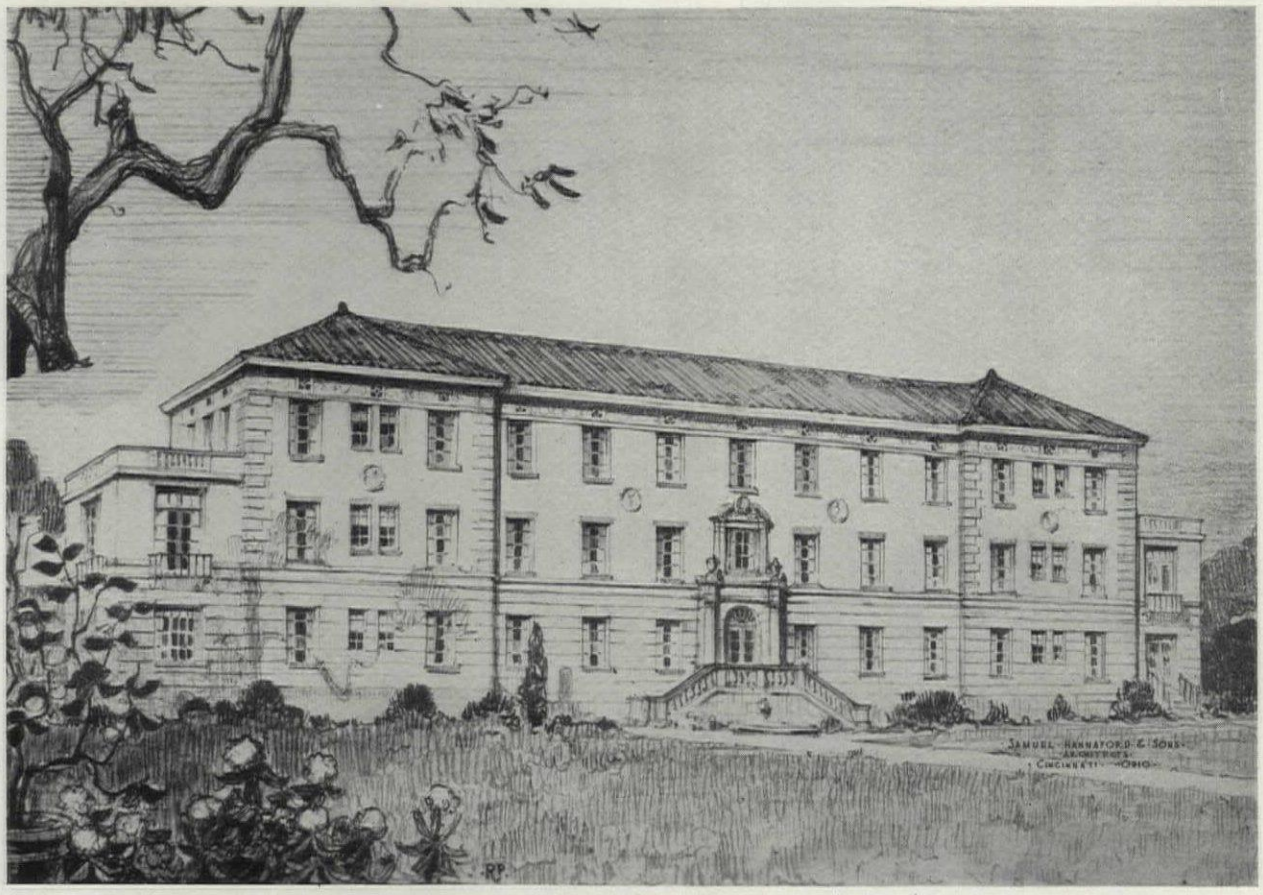


Typical Small General Hospital for the Duke Endowment
Samuel Hannaford & Sons, Architects

It has been the history of nearly every hospital that its growth has far exceeded the expectations of those who had the original project in their charge. To select a site that does not permit of possible enlargements and additions is to make a mistake that may prove ultimately very costly. Costs almost always influence the choice of a hospital location. Sometimes a site may be donated by some generous citizen, but while the gift should of course be appreciated, it is not always wise to allow a free site to overshadow the many other considerations which should be given their due weight in a final choice.

Adaptability. In working out a hospital program and in evolving the general plans, the matter of adaptability must be always in the minds of those developing the project. First of all, the hospital must be adapted to the community's purse. Too often one sees a hospital which in itself may be ideal, and yet be so extravagantly planned and equipped as to be beyond the financial range of the community which it is supposed to serve. Such a hospital does not fill, to the fullest extent, its true function. A hospital should be carefully adapted to the size of the community which it is to serve, and the project should not be over-developed at the outset. The minimum bed capacity required should be determined, and the first unit be built to meet these demands, without, however, losing sight of possibility of future expansion as the needs arise. Every hospital should be designed with an eye to future additions and expansions, either in the form of wings, or separate buildings, properly located and fitted into the general plan. It is always preferable to expand laterally rather than vertically, as it can readily be seen that vertical expansion of an existing building interferes in a great many ways with the operating of the existing units. This applies particularly to extensions of plumbing and heating lines, stairways, elevator shafts and the like.

In the planning of general services, it should constantly be borne in mind that as extensions to the original building are made, increased demand will develop for the services. All such services as heating equipment, food service, main kitchen and diet rooms, utility rooms, laboratories, X-ray and operating departments should, where possible, be so sized originally as to take care of the additional demands when extensions are made. It is often possible to locate general services so that they will be central to the first unit as well as to future extensions. The matter of orientation of a hospital should be given the most careful consideration, and the building should be so located and adapted to the site as to secure sunlight in all of the patients' rooms for at least a part of each day. The power plant should be so arranged that the prevailing winds will blow all smoke and vapors away from the hospital. The surgical department should be so orientated that the



Typical Small General Hospital for the Duke Endowment
Samuel Hannaford & Sons, Architects

major operating rooms have either a north or western exposure. While it is true that the north exposure is preferable, a western exposure has become acceptable, due to the fact that more than 90 per cent of major surgical work is done before noon.

Choice of Materials and General Considerations. Unless a hospital is definitely determined to be a one-story building, with one-story extensions later, only a fireproof type should be considered. The advantages of this type of construction are manifest, even though the initial cost is somewhat higher than a composite or non-fireproof structure. Some of the more important advantages of fireproof construction are:

1. Safety of Patients.
2. Permanence and Low Depreciation.
3. Minimum Upkeep and Repair Cost.
4. Superior Sanitary Qualities.
5. Low Insurance Rates.

Assuming that the fireproof type of hospital has been determined upon, the various factors which should influence the selection of material through the building are in general:

1. Permanency,
2. Suitability for Type of Service,
3. Ease of Maintenance and Repair,
4. Availability in Local Markets,
5. Cost,—Original Cost and Maintenance Cost.

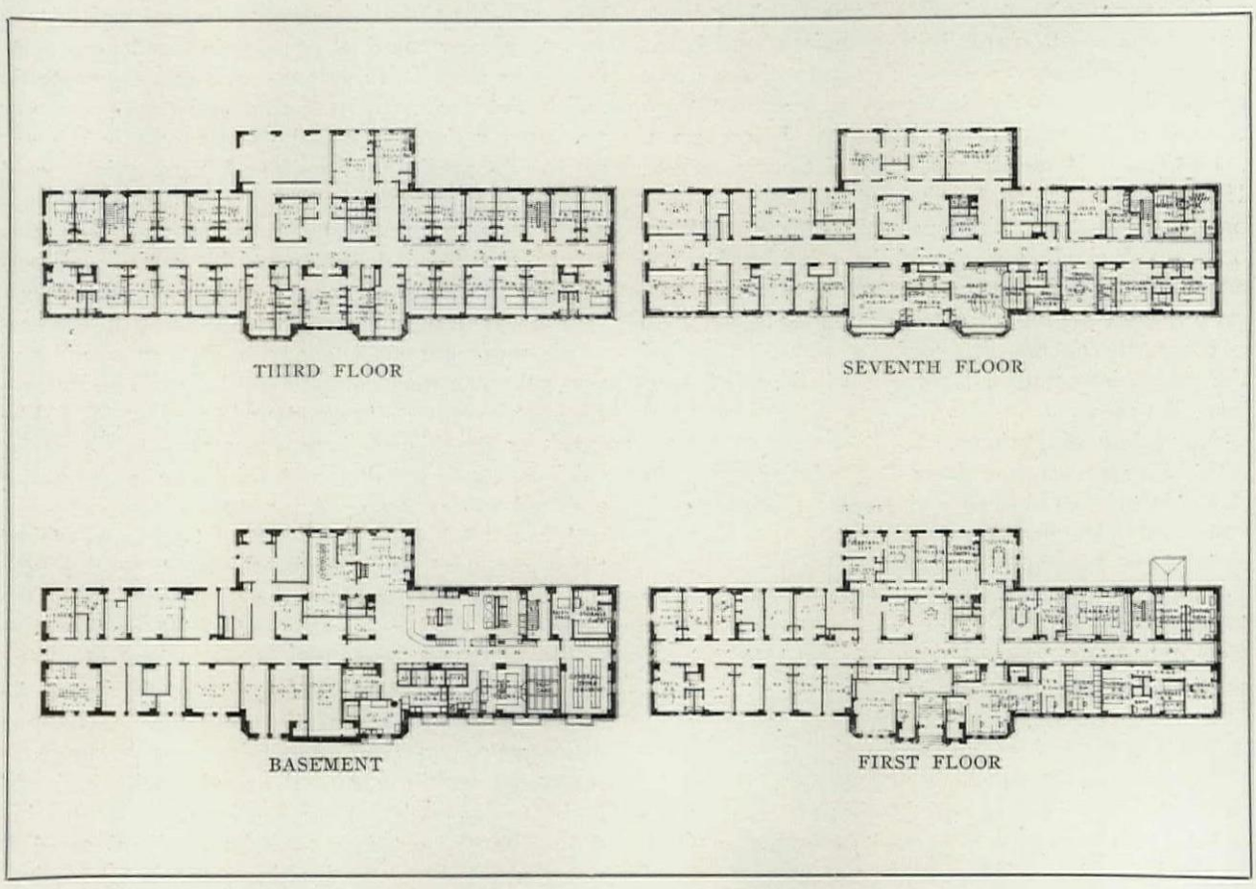
The item of cost is purposely put last for several reasons. First, the lasting qualities and satisfactory service of any material are remembered long after its initial price is forgotten. Second, any material which needs constant attention and thereby creates perpetual maintenance and upkeep cost is too expensive to consider, even if such a material should cost nothing originally. Third, true economy is not merely buying cheaply, but spending so wisely as to secure for every dollar spent the greatest returns possible in terms of service and low upkeep cost.

In order to keep the cost of a hospital to the economic minimum consistent with efficient administration, all component parts should be given most careful study. Floor space and cubic contents should be carefully considered, both from the standpoint of efficient administration and minimum maintenance and upkeep expense. All rooms should be sized and developed from the functional arrangement of the room, and all equipment should be carefully thought out and its location pre-determined on the drawings. Ceiling heights need not be greater than 9 feet. Every surplus inch of height in the building not only increases the original cost, but must be heated and kept clean, thus creating continuous maintenance expense. All units must be properly correlated, and in locating the service units, it should be borne in mind that the service units in question should be so located as to satisfactorily accomplish two things,—first, the location must be convenient

Photo. W. T. Myers & Co.

MEDICAL AND SURGICAL BUILDING FOR BETHESDA HOSPITAL, CINCINNATI

SAMUEL HANNAFORD & SONS, ARCHITECTS



to the patients' rooms served by this unit, and secondly, the service unit should be so situated as to reduce to the minimum all nursing travel, and thus accelerate the nursing service, making each nurse more effective, and improving the hospital's service.

With regard to exterior design, it is never good policy to permit the exterior to influence the planning of a hospital. The exterior must be a dignified, frank and logical expression of the plan. While this is true with regard to all types of buildings, it is particularly true with regard to a hospital, because, after all, a hospital has but one purpose,—namely, to cure the sick; and a well planned, efficient and convenient hospital will accomplish this in less time and at a lower expense than will an inefficient type. The importance, therefore, of plan and general arrangement is paramount, and takes precedence over every other consideration until a satisfactory plan is worked out.

Service and Service Relations. No type of building requires so many service facilities to properly function as a hospital. In addition to the matter of services, the problem of traffic, both to and within the hospital, must not be lost sight of. In general there are five separate and distinct types of traffic converging at a hospital, and in the south a sixth type of traffic must be taken care of. In brief, this traffic divides itself thus:

1. Ambulant In-patients and Visiting Public,
2. Ambulance and Stretcher In-patients,
3. Out-patients,
4. Hospital Personnel and Staff,
5. Supplies,

and in the south, the sixth type of traffic,

Colored In-patients.

The hospital must be so planned as to provide for the efficient handling of the various types of traffic without their conflicting, crossing or interfering, one with another. By consulting the various plans in connection with this article, it can be seen how the matter of traffic has been worked out. The small hospital illustrating this article was designed for a rural county in the south, and the general types of traffic are taken care of in this manner: White hospital patients (that is, patients who are able to walk to the hospital, but who will remain in the hospital for some time) and the visiting white public, enter the hospital at the central front entrance on the first floor. Ambulance and stretcher cases enter at the rear central entrance on the basement floor. The colored in-patients are segregated in a suite on the first floor, reached by a separate entrance at the end of the building, this entrance being also used exclusively by ambulant colored in-patients and the visiting colored public. The out-patients (patients who merely visit the hospital for treatment) enter the basement at one end of the building, the white and colored out-patients being separated by assigning different days for their visits. All personnel can enter and leave the building through the front central entrance, or, preferably, the entrance on the first floor at the opposite end of the building from the colored entrance, or the rear central entrance in the basement. Supplies enter the building at a rear entrance in the basement, located near one end and of easy access to the main kitchen and store rooms. Under this general plan, as illustrated by the cuts, it can be seen that the crossing or interference between various types of traffic is eliminated or at least reduced to the minimum.

To be efficient, a hospital must have adequate service facilities properly located, so that all work can be done with the minimum loss of time and the least amount of effort by the hospital personnel. Some hospitals make the mistake of sacrificing service spaces in order to increase the number of patients' beds. This is a serious error, an error which it may be costly to rectify later, and it is far better to frankly face the fact that adequate service facilities must be installed than to under-service the building in order to slightly increase the bed capacity and then render a second class service at considerable expense year after year for as long as the building exists.

General services are, briefly, those services which are necessary to the entire hospital, such as stairs, elevators, dumbwaiters, incinerator, linen chute, main kitchen, boiler room, laundry, X-ray department, laboratory, pharmacy and emergency room. General services should be so located as to be central and convenient. Stairs should be central to the area served and easily accessible at all times. Where possible, stairs should be so located as to serve not only existing areas, but to be central to future extensions. Stairs should also be so distributed as to divide up equally the possible demands on them. Elevators should be located as near the center of the hospital as possible and should be in direct connection with, or easily accessible to, the ambulance entry, emergency room, main kitchen and public waiting room. While the drawings in this article show but one elevator, it is preferable, where funds permit, to install at least two, as this not only makes for a better classification of traffic in the elevators, but also provides a spare elevator should one, in an emergency, fail. Dumbwaiters should be centrally located and should furnish the vertical connection between the main diet kitchen and the service pantries on the various patients' floors.

Incinerator shaft and linen chute should be located near the center of the building so as to be about equi-distant from the extreme ends of the various floors. If possible, the linen chute should discharge in or near the laundry, although this is not absolutely essential. The main kitchen and diet kitchen should be located in the basement (provided adequate ventilation can be secured), and should be near or directly connected with the supply entrance and the elevators. The boiler room, if within the building, should be located near the supply or service entrance and should be in fairly close proximity to the kitchen. If funds are available, however, it is a better plan to locate the boiler room in either a separate building or wing,

and have it independently serviced in every respect.

The laundry, if within the building, can be located in the basement at the most convenient point. A good location for the laundry is under the children's ward, as this class of patients is not so easily disturbed by the noise of the laundry's operations. It is, however, good practice to consider the sound-proofing of the laundry ceiling, if within the building. A better scheme is to locate the laundry in a separate building or wing, usually over the boiler room, if the boiler room is also detached from the main building, as should always be the case where possible.

The X-ray, laboratory and pharmacy may be located in any one of several places, depending on the service demands. It is usually customary to locate the X-ray department and the laboratory on the surgical floor, and a great many hospital superintendents prefer this location. On the accompanying drawings, however, the X-ray, laboratory and pharmacy have been located in the basement in connection with the out-patient department. This location is satisfactory, inasmuch as these services are of great importance in connection with diagnostic and treatment work. It will also be noted on the plans that the X-ray department is convenient to the emergency room, as it very often happens that it is desirable to use the X-ray in connection with accident cases, particularly fractures. The emergency room, as the name implies, is designed to care for the sudden arrival of an unexpected case, such as an accident, poison, burn, or sunstroke case. This room should be closely related to the ambulance entrance and to the elevators to give it the greatest usefulness.

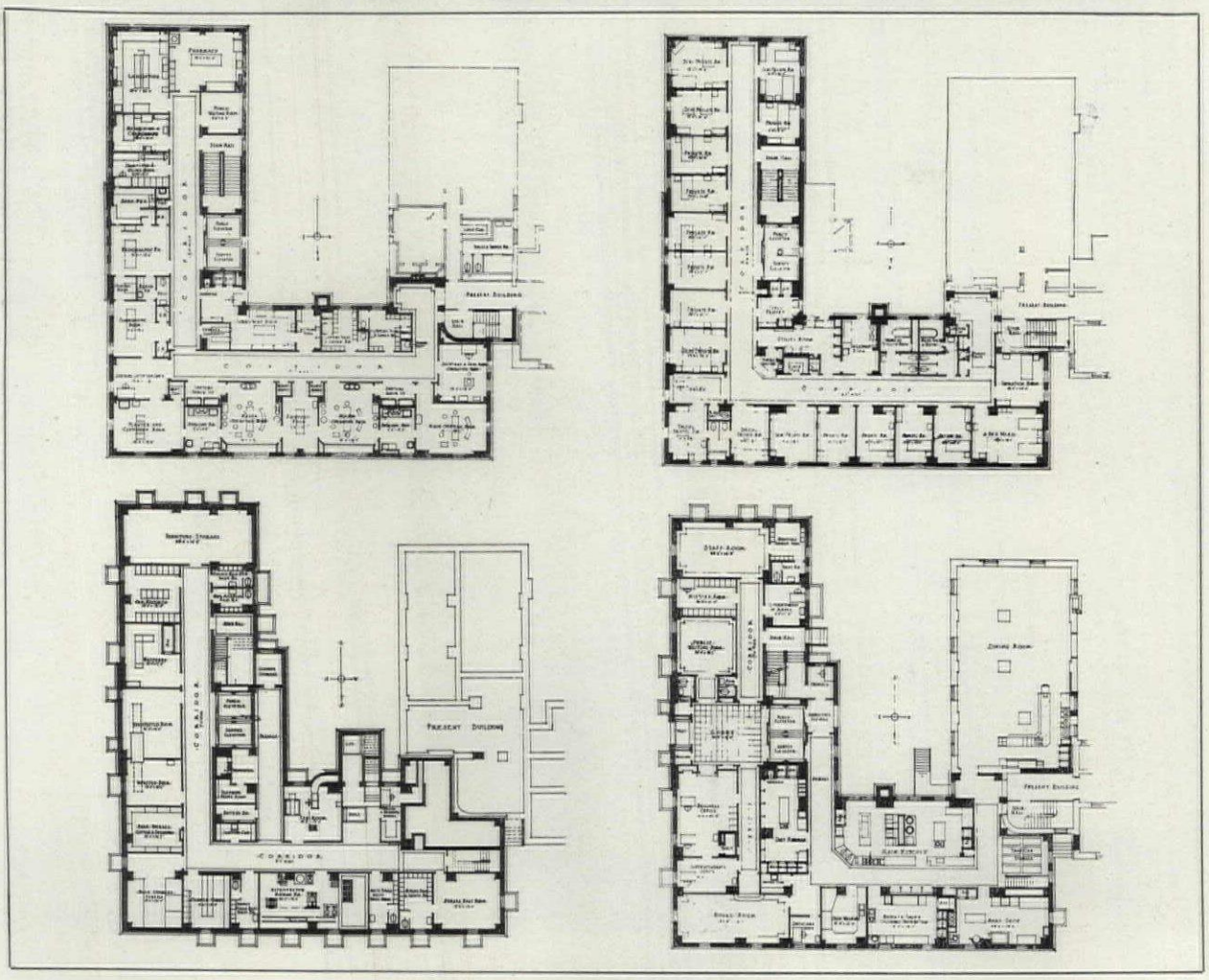
Special services are those service units which serve only a portion of the building, such as the floor nurses' station, the chart room, floor utility rooms, floor service pantries, and public toilets and bathrooms on the various patients' floors. The floor nurses' station and chart room should be located at such a point on each floor that the floor supervisor will have visual control of the entire floor. From this station the nurse in charge should be able to see the full length of the corridors and should have full view of elevators, stairs and other floor services. Since all patients' charts will be kept under the floor supervisor's control, it is also important to locate the nurses' station and chart room at a point as nearly at the center of the floor areas as possible. The utility room should be as nearly as possible equi-distant from the most remote rooms in this area. If possible, it is well to locate this particular service at a point where it will be central to future extensions as well as to present units. The utility room is probably the most important floor service of all and should be given most careful study, both as to location and arrangement of equipment. Floor service pantries should be centrally located for the same reason as given for utility room locations, but in addition to this, proper consideration must be given to the vertical connection with the main kitchen and main diet kitchen by means of dumbwaiter or elevator. Public toilets and bathrooms need not be centrally located, but such a location is preferable. By the term "public toilet and bathroom" is meant, of course, those rooms which serve the needs of patients occupying rooms without private toilet and bath facilities.

The foregoing represents, in a broad, general way, the main or basic considerations in planning any hospital, and has to do principally with inter-relationship of units, with regard to both areas and vertical connections. At the outset of the development of any hospital project, the architect, the hospital superintendent or the chairman of the building committee should confer with a hospital consultant of recognized ability and should carefully determine the bed capacity required and the general extent of the various services and departments. The surgical and medical units should be carefully considered, and the number of operating rooms and delivery rooms determined upon. The next step in developing the problem is for the architect and consultant to properly locate and inter-relate the various component parts of the plan, paying particular attention to the location of general and special services in relation to areas served thereby. After a general assignment of the major spaces has been made, each department should then be given careful study; furniture and equipment should be planned out in the most efficient manner, and department or room sizes should then be determined from this functional arrangement; doors and windows should be located so as to most efficiently serve each unit throughout the hospital.

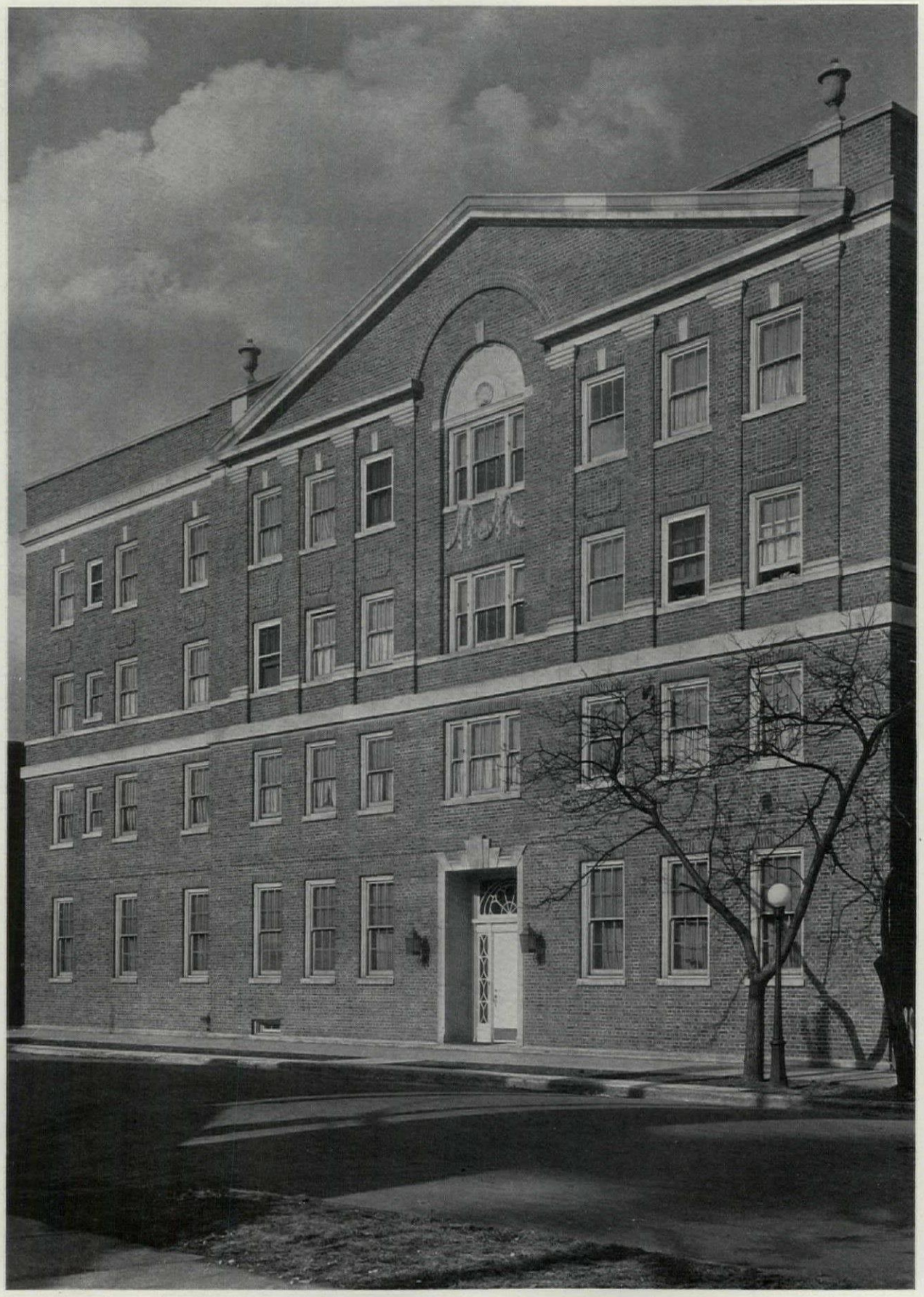
Having carefully studied and planned each department, the matter of detailing and arranging for the various details of furniture, specialties and equipment should then be studied. In designing equipment, etc., bear in mind these main factors:

1. Equipment must be substantial in all respects and designed to withstand hard wear.
2. It must be designed and installed so as to be at all times easy to keep clean.
3. All projecting ledges, mouldings, etc., where dust may accumulate must be eliminated. Tops of cases or lockers should be furred in.
4. Where possible, equipment should be set up on sanitary bases of an impervious material, such as tile or terrazzo, so as to close up all joints or open spaces between the equipment and the floor, and also to permit mopping up the floor without damaging or defacing equipment, and also to reduce the costs of labor.

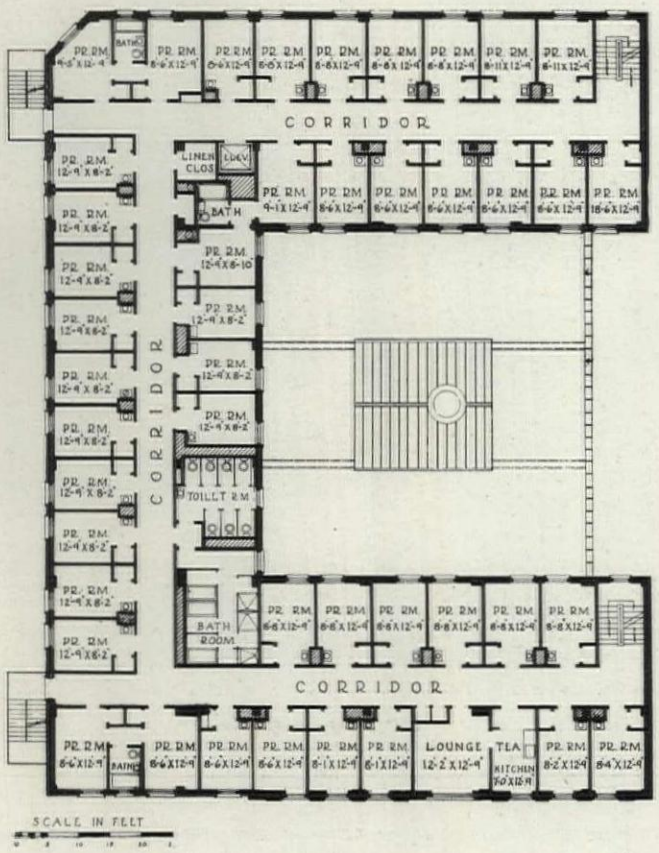
After all, the development of a properly planned hospital is merely the clear visualizing of hospital needs and pre-determining an exact program. From there on, common sense, painstaking care (particularly for little details), and an accurate knowledge of hospital technique and hospital requirements on the part of the architect will carry him successfully through. Success, however, let it be emphasized, is gained only by constant vigilance and attention to details apparently trivial but which are important.



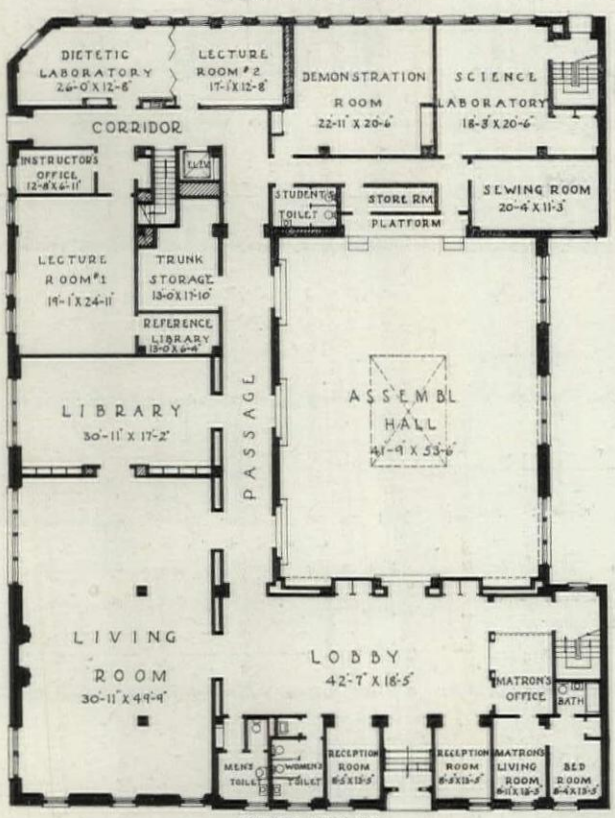
DEACONESS' HOSPITAL, CINCINNATI
SAMUEL HANNAFORD & SONS, ARCHITECTS



GRANT HOSPITAL NURSES' HOME, CHICAGO
SCHMIDT, GARDEN & ERIKSON, ARCHITECTS

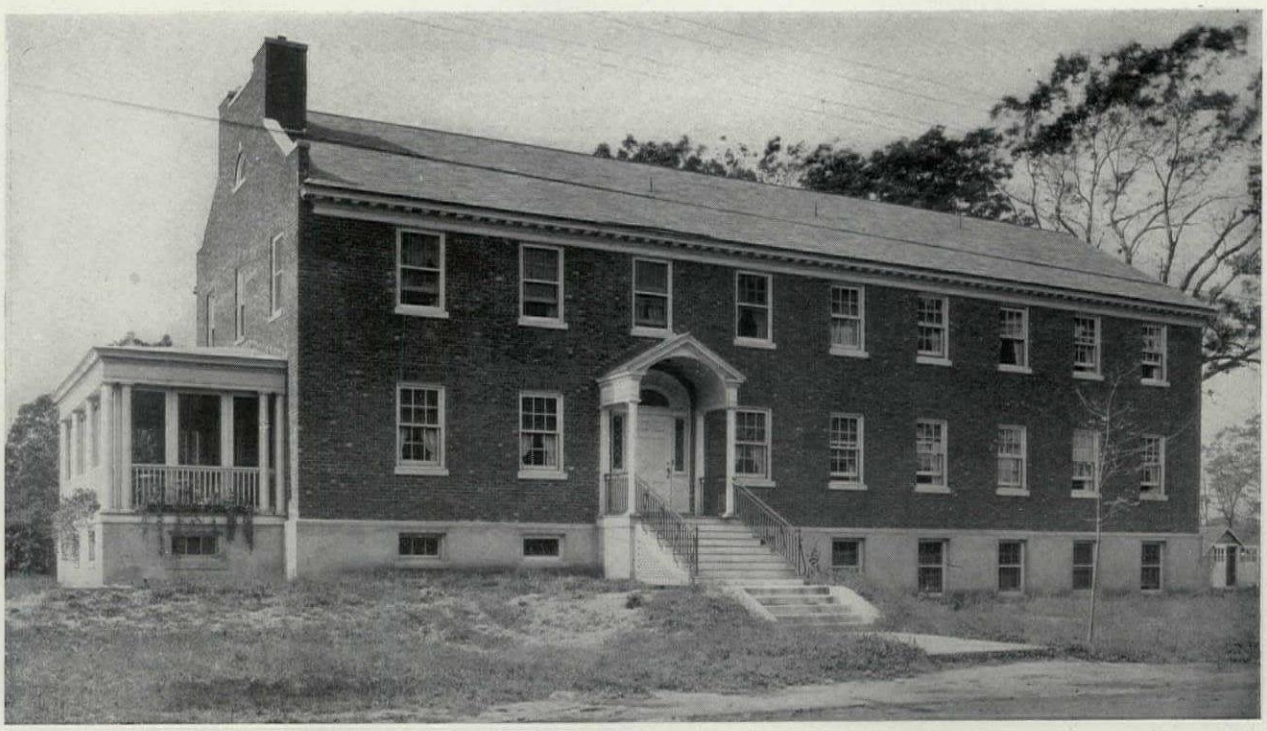


A TYPICAL FLOOR

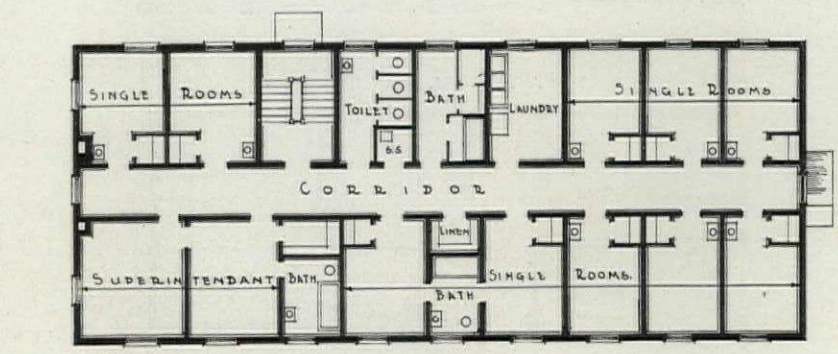


FIRST FLOOR

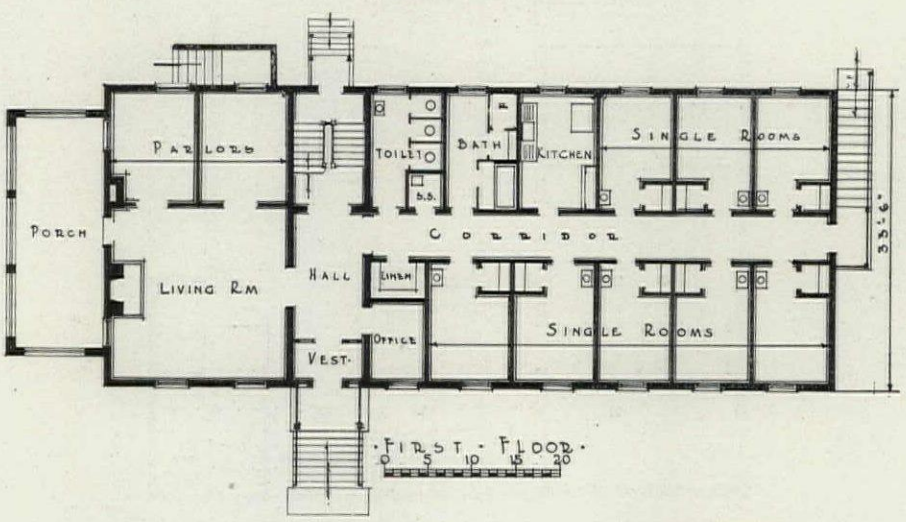
PLANS: GRANT HOSPITAL NURSES' HOME, CHICAGO
SCHMIDT, GARDEN & ERIKSON, ARCHITECTS



GENERAL VIEW



SECOND FLOOR

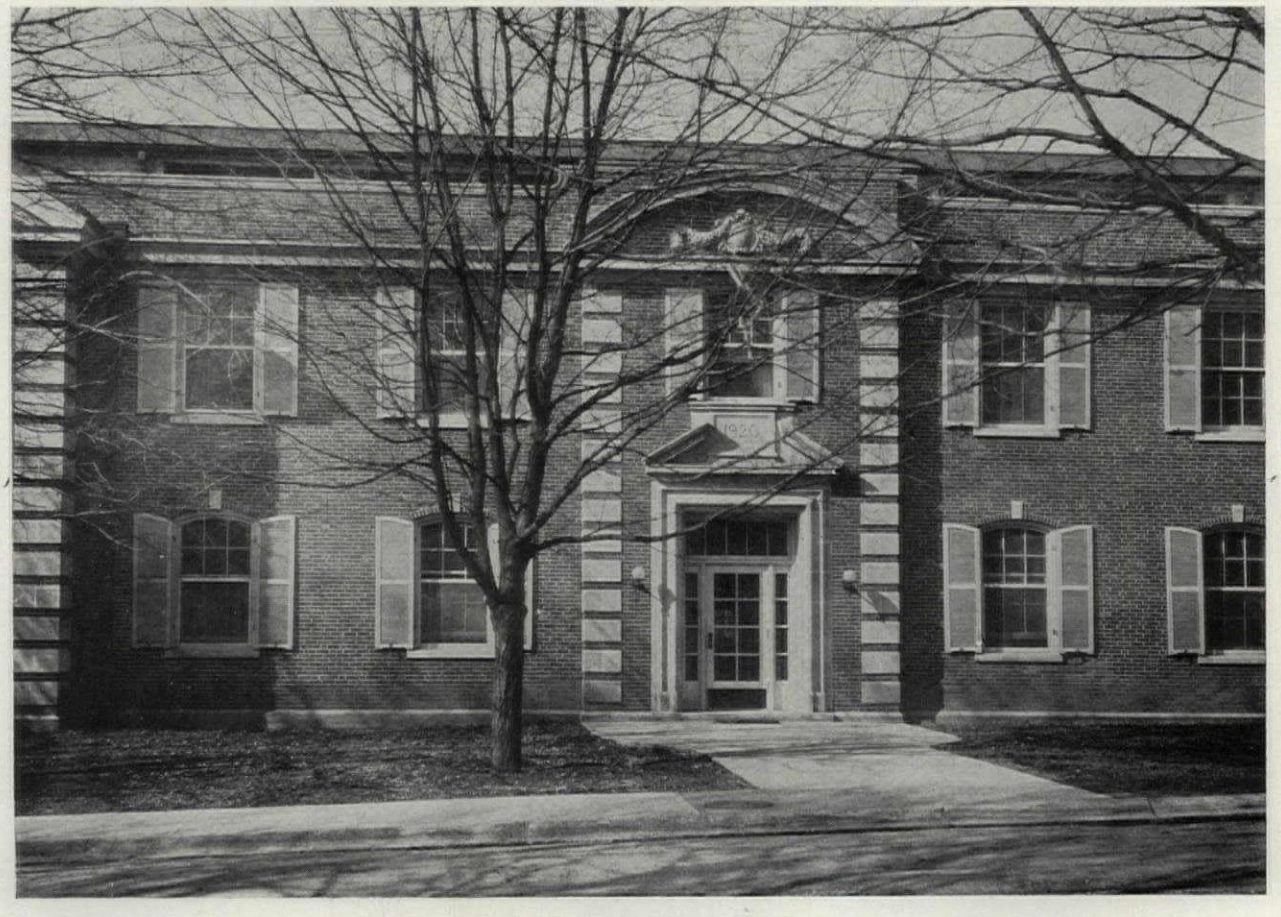


FIRST FLOOR

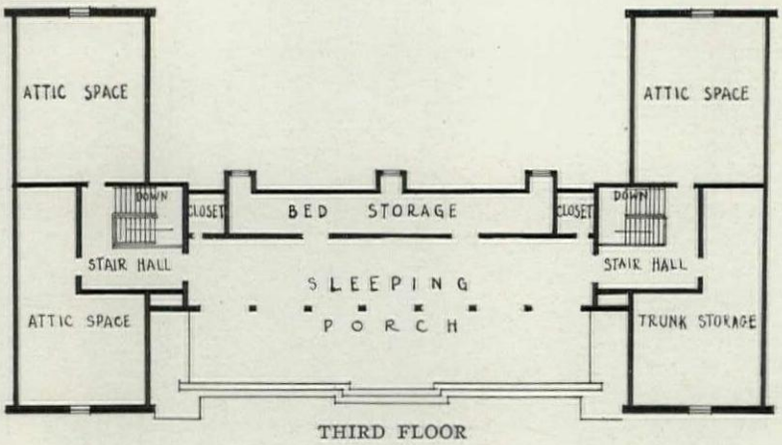
NURSES' HOME, SOUTH SIDE HOSPITAL, BAYSHORE, N. Y.

ROBERT D. KOHN AND CHARLES BUTLER, ARCHITECTS

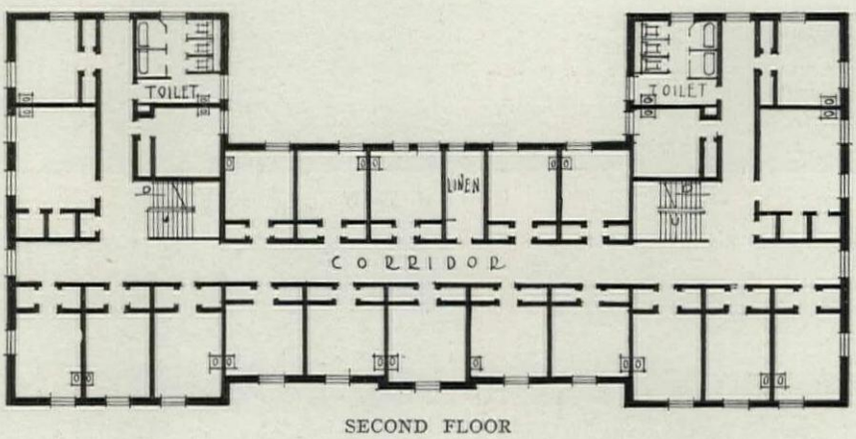
GENERAL VIEW



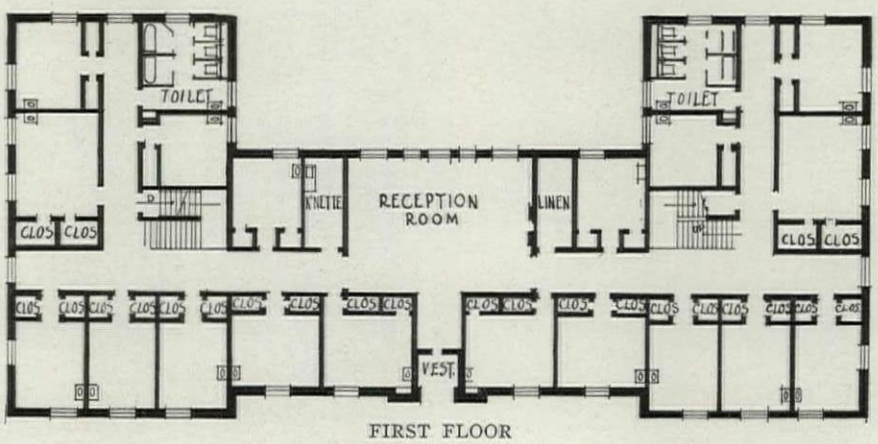
NURSES' HOME, STATE HOSPITAL, ANNA, ILL.
EDGAR MARTIN, ARCHITECT



THIRD FLOOR



SECOND FLOOR



FIRST FLOOR

PLANS: NURSES' HOME, STATE HOSPITAL, ANNA, ILL.
EDGAR MARTIN, ARCHITECT

THE PLANNING AND ARRANGEMENT OF AN EYE HOSPITAL

BY
FREDERICK H. MEYER, ARCHITECT

THE modern general hospital, through the influence of specialized medical service, has been so developed that it satisfactorily cares for most general or special hospital cases. However, it has been found that eye cases, by their very nature, are better cared for and yield to treatment with greater rapidity when brought to a separate institution.

Eye patients in most cases are not ill, nor are they in a great amount of discomfort other than having their eyes bandaged. The very fact of having both eyes bandaged, as is necessary following the majority of eye operations, makes the patient very sensitive to surrounding sounds. He hears things, yet he cannot tell what is going on, and his nervous system is affected. The usual noises that cannot be avoided in a general hospital may so annoy him and cause such aggravated fear as to seriously retard the recovery of an eye patient. When cared for in an institution devoted exclusively to ophthalmology, the patient is less disturbed, is happier and the post-operative recovery period is materially shortened. These are the facts that led to the establishment of Green's Eye Hospital in San Francisco, by Drs. Aaron and Louis Green. It is an institution that is devoted exclusively to ophthalmology, and is divided into two distinct departments. One department cares for the ambulatory cases, the patients who come in for examination and treatment. The other department is the surgical and hospital section.

The site of Green's Eye Hospital is on a corner, and the L-shaped building partly encloses a semi-formal terraced garden through which one approaches the first floor entrance lobby formed by the juncture of the two wings. By placing the two wings of the building away from the street, quiet and privacy as well as the maximum of air and sunshine have been insured. Directly accessible from the entrance lobby is that section of the building devoted to the doctors' offices and treatment room. Here are found the waiting room; the office of the nurse who arranges appointments and conducts the patients to the various treatment rooms; the five refracting rooms and surrounding treatment rooms; the room for special apparatus; the X-ray room and the laboratory all easily accessible to out-patients.

The nature of eye examination and treatment required careful planning of this section of the building. The basic unit in plan is the office or refracting room, from which radiate the small treatment rooms and rooms for dilating and for administering washes and for housing the special apparatus. The work necessitates at times the occupancy of all the rooms by patients undergoing some phase of treatment, and it is obvious that the unit must be arranged so as to permit the maximum amount of intercommunication with the minmum number of steps on the part of the doctor. When more than one unit is used, as is often the case in Green's Hospital, the problem is more difficult, for intercommunication between the various units must be maintained to insure an economical and flexible working arrangement. An efficient arrangement has been produced in this particular hospital by grouping the five refracting rooms in almost a circular formation with the groups of treatment rooms separating them. The refracting rooms are equipped with all essential apparatus pertaining to ophthalmology and are of the correct length for proper refraction. The windows are equipped with darkening shades, electrically operated from one shaft, and controlled by a single switch so that all the shades in a room may be raised or lowered simultaneously at the will of the doctor. Adjacent to the refracting and treatment rooms is the X-ray department with its dark room and a room suitable for the viewing and storage of plates. Also there is a small but completely equipped laboratory for research work. In conjunction with the examination and treatment department, but not directly connected with it, are the drug dispensary and the optician's suite. The optician's suite is a complete unit in itself with offices, waiting and fitting rooms, and connected directly with a large daylight-flooded grinding and work room in the basement.

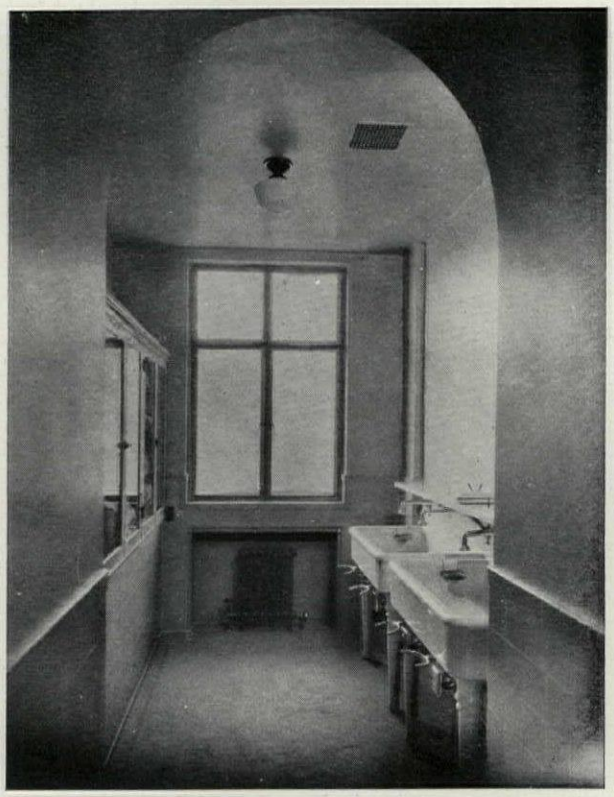
A feature of Green's Hospital is the part-pay dispensary located on the ground floor and accessible through a separate street entrance. This dispensary cares for ambulatory patients who cannot afford the regular fees and yet who do not need or care to attend a free clinic. It is a complete unit in itself, consisting of office and waiting room, refracting and examination rooms, and drug dispensary.

The entire second floor is given over to surgical and hospital uses with all the usual utilities of a general hospital. The diet kitchen is served from the large, well lighted main kitchen located on the ground floor. The surgical suite, in the north wing, contains two standard-sized operating rooms, individually heated and ventilated and fully equipped. In connection with the suite are the wash-up and sterilizing room, work rooms and dressing rooms. Private bedrooms and rooms of two, three and four beds occupy the remaining area of the second floor. Throughout these rooms, and in fact throughout the entire hospital, every effort has been made to create a cheerful and attractive atmosphere. "Hospital white" has been studiously avoided. In its place are seen bright, harmonious colors in the walls, the tile and linoleum floors, in the woodwork, in the draperies and furnishings, and in the lighting fixtures.

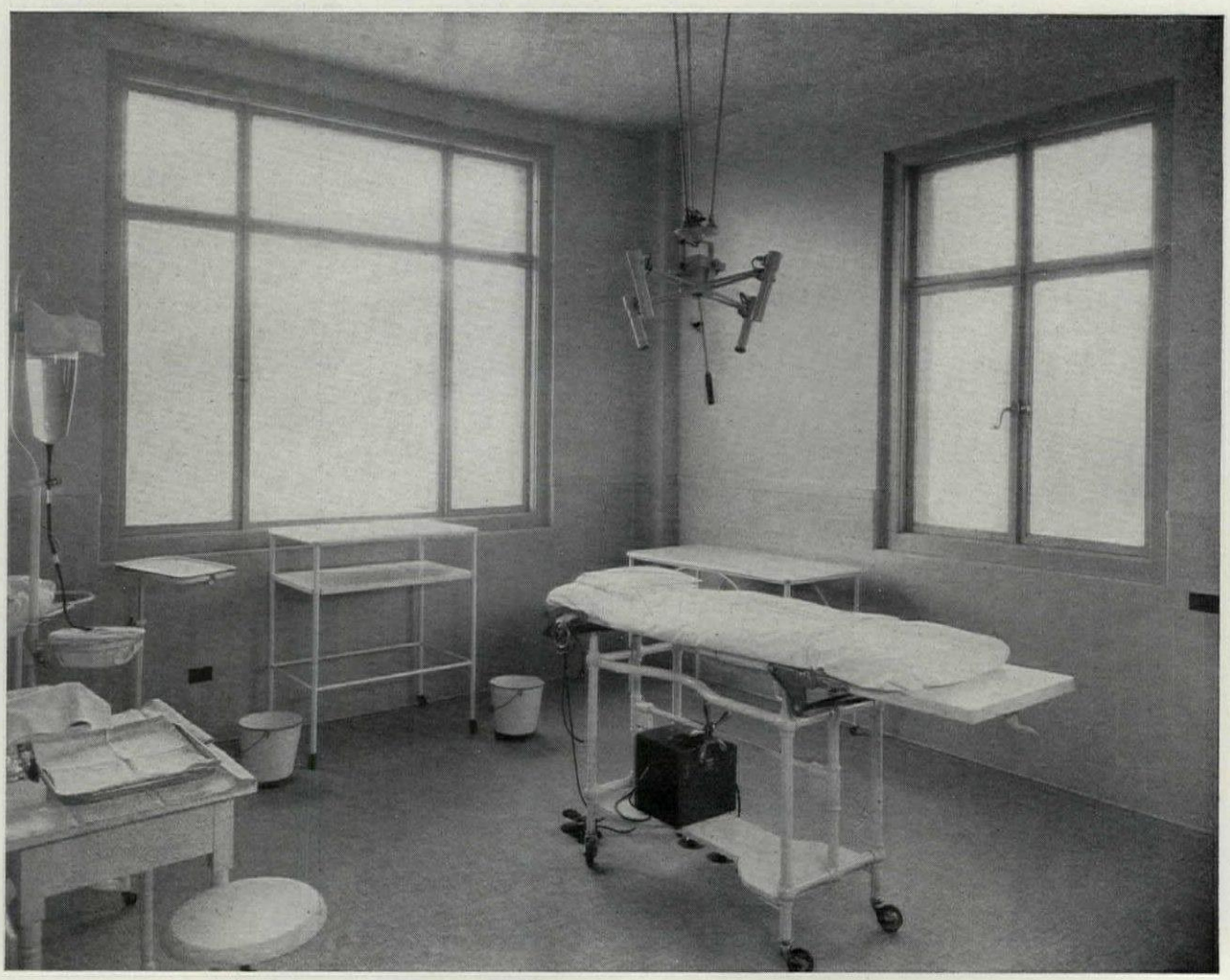
A detail of inestimable value to eye patients is the complete radio installation throughout the building. Every bed has its radio outlet, and all the waiting

rooms and other public rooms are similarly equipped and controlled from a master station. This has proved a great boon to the patients who, through the nature of their disability, are deprived of the usual hospital pastime,—reading. The installation of a dictograph 'phone system in all the bedrooms is another interesting feature. Each room is connected with the nurses' station, and the patient simply takes the receiver or microphone from its place adjoining the bed. On receiving the double signal of light and soft buzz on the board at the central station, the nurse opens the key switch and the conversation is carried on by microphone and loud speaker. This system saves the nurses many needless steps.

In the creation of this building two thoughts were uppermost in the mind of the architect. One was to so plan the structure that the doctors could carry on their work with the utmost efficiency and economy of time and labor. The other was to give the building that atmosphere more suggestive of a luxurious and exclusive club or hotel than that of a hospital. Establishing a specialized institution is more or less a new adventure in the far west, but the faith of the founders is such that provisions have been made for future extensive additions which will more than double the capacity of the hospital and which will doubtless be built during the next few years to come.



Doctor's Wash Room, Green's Eye Hospital

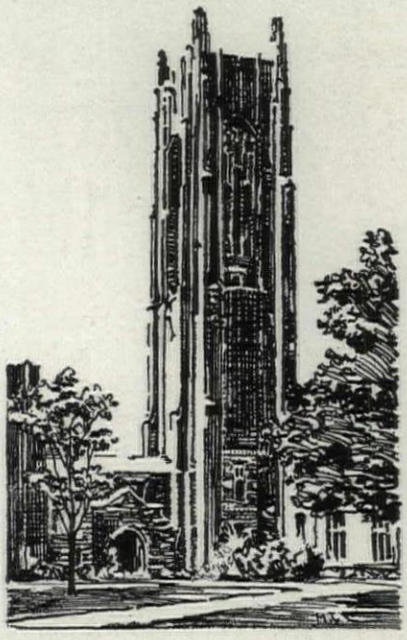


Operating Room, Green's Eye Hospital, San Francisco
Frederick H. Meyer, Architect

Henry C. Hibbs, Architect *Sterchi Bros. Furniture Co., Decorators*

The Social Room, Scarritt College, Nashville, Tenn.

Furniture that Enhances Architectural Dignity



The Belle Bennett Memorial Tower, Scarritt College

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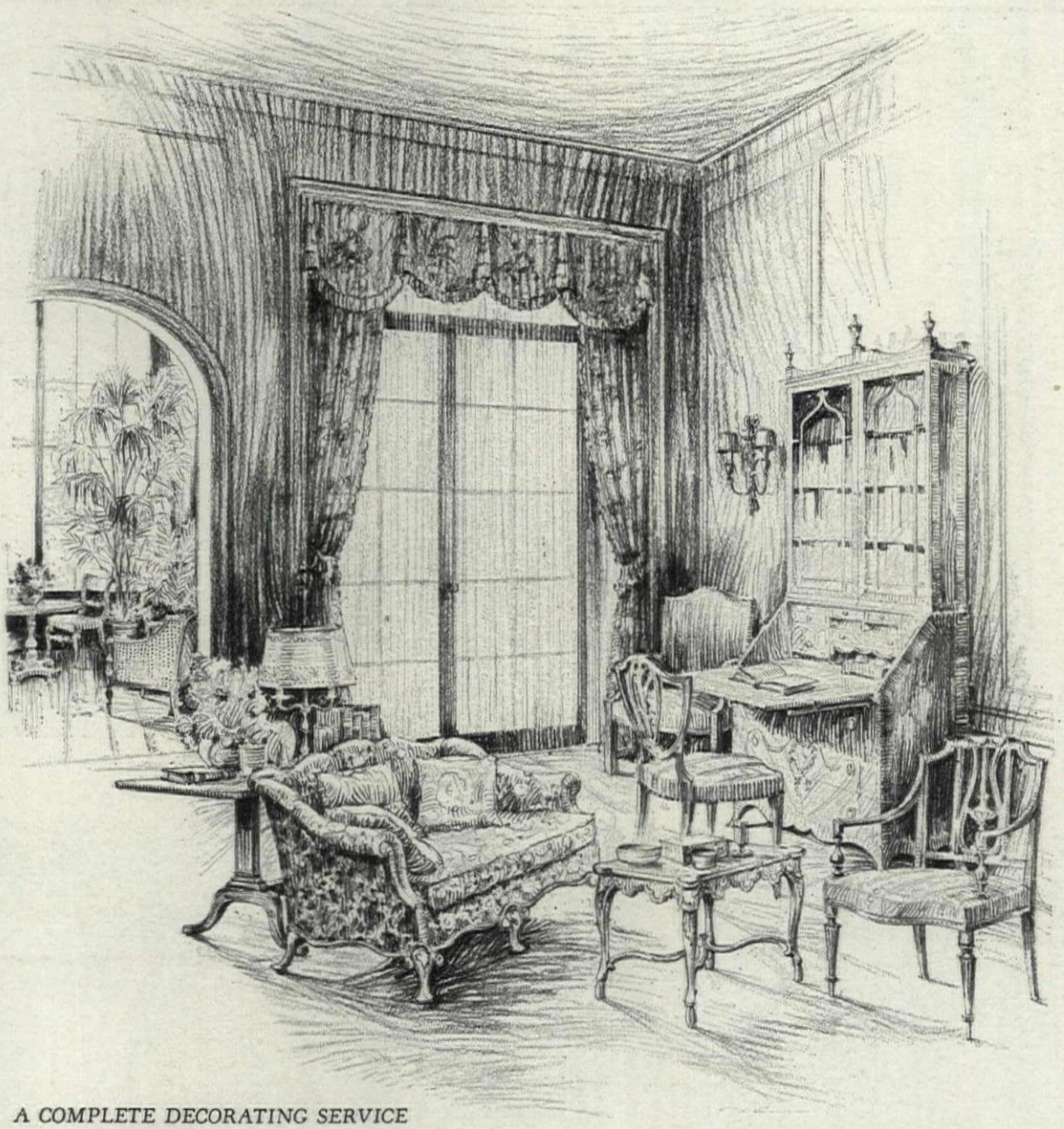

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With this wider use of ornamental plaster a distressing problem often confronts the architect. Sometimes in cases where he himself is anxious to include some plaster detail in the plans, he is reluctant because of the added cost it might entail. Yet a touch of plaster need not be expensive. More and more, architects are coming to rely on the catalogues of the six firms listed below, by means of which correct plaste ornament is quickly available *at moderate cos* in all parts of the country.

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In the interest of creating a wider appreci tion of plaster ornament, these same six firm are acquainting a most discriminating section the public with the real possibilities of this a material through advertising in magazines lik House and Garden.

* * *

Architects and Decorators are invited to wri to each of the six firms listed below for the individual catalogues.

W. STANWOOD PHILLIPS, *Architect*

PLASTER ORNAMENT *for* PERIOD DESIGN

Chicago—THE DECORATORS SUPPLY CO.
Archer Avenue and Leo Street

Cleveland—THE FISCHER & JIROUCH CO.
4821 Superior Avenue

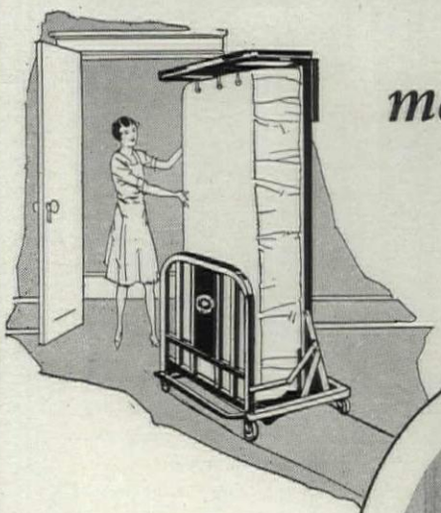
Detroit—DETROIT DECORATIVE SUPPLY COMPANY
4240 14th Avenue

New York—JACOBSON & COMPANY
239-241 East 44th Street

Philadelphia—VOIGT COMPANY
1743-49 N. Twelfth Street

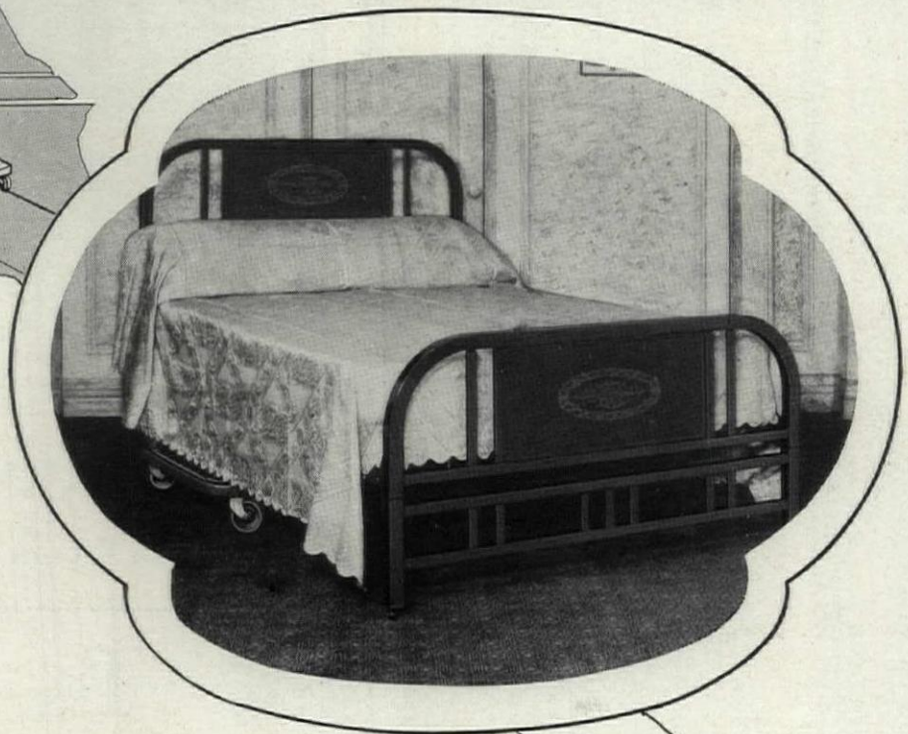
Chicago—ARCHITECTURAL DECORATING COMPANY
1600-12 South Jefferson Street

The "Warwick" Roller Bed



makes any room a "one-room suite"

in hotels and apartment hotels



The "Warwick" Roller Bed is a *perfected* bed . . . ideal for homes and apartments, too!

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The "Warwick" Roller Bed is superlative in every sense of comfort and appearance. It has all the character and quality you are accustomed to . . . plus mobility and convenience. The maid rolls it into the closet in the morning, the guest draws it out when retiring. It moves easily, silently on a special chassis.

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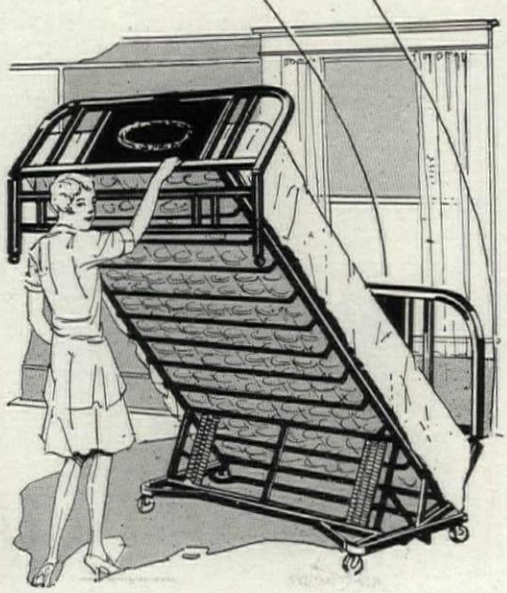
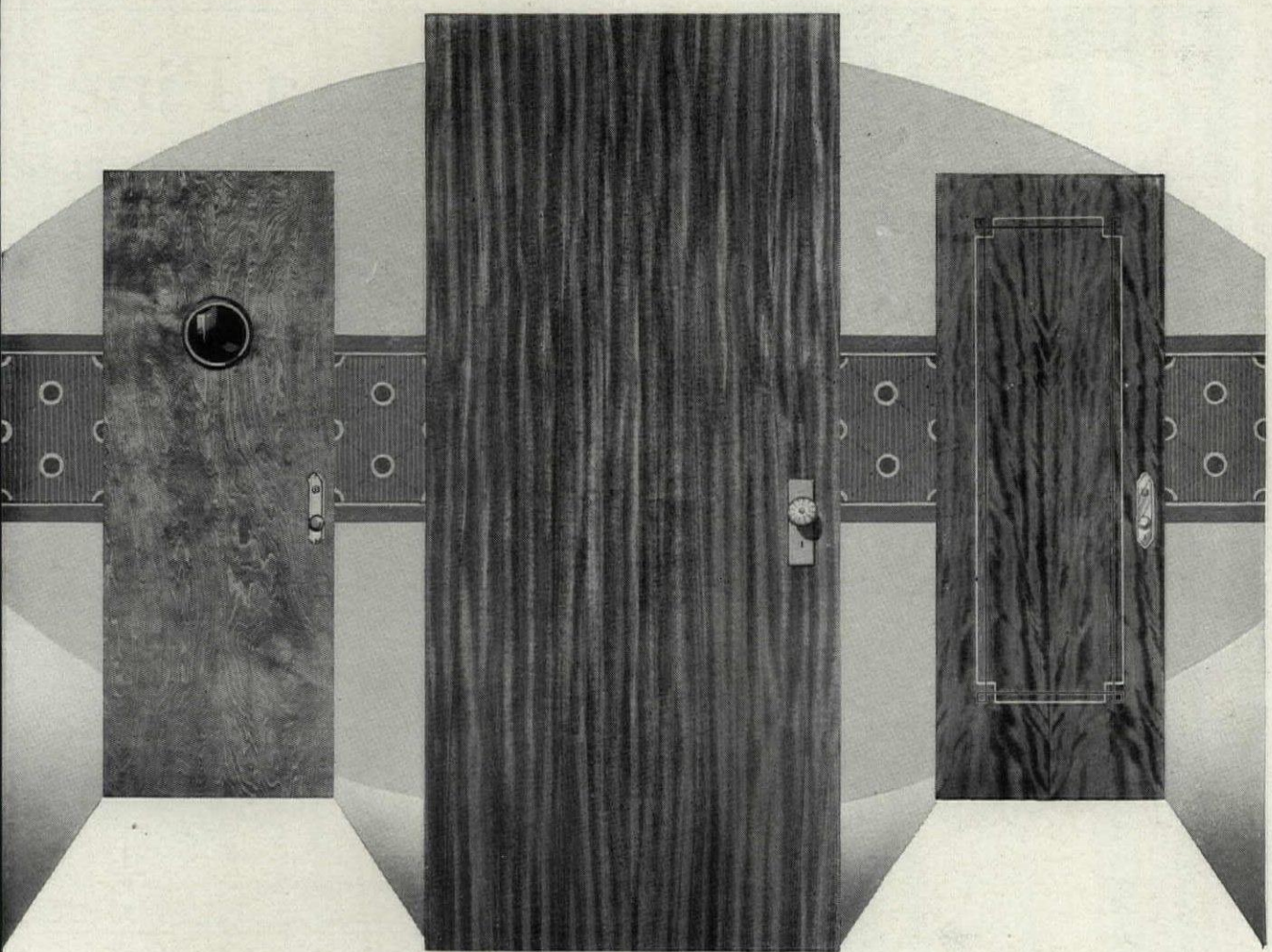
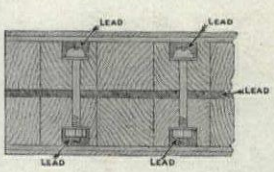


"WARWICK" ROLLER BED



RODDIS FLUSH DOORS

Are Sound Resistant, Fire Retarding, Waterproof . . . And Strictly Sanitary



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THE same beauty of appearance and rigidity of construction distinguishing the standard Roddis Flush Door: however, in the center of the door (as sketched here) is a continuous sheet of lead, bolted in place securely with lead covered bolts. A vast improvement over the awkward and unsightly door in X-Ray rooms, and more conforming to requirements. Furnished in any desired size and finish, with lead armament sufficient to equal any X-Ray Room specification. . . . . More details on your request.

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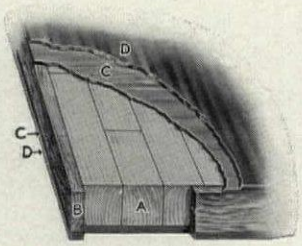

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A — Core of narrow softwood strips cemented together into one integral unit with special waterproof glue.

B — Hardwood strips protecting core against moisture absorption on top, bottom and both side edges.

C — Crossband veneer on both surfaces completing the hardwood closure for softwood core and preventing lateral warpage.

D — Surface veneer, furnished in many woods, giving a wide choice of figure, grain, quality and finish.

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FOR THE SERVICE OF ARCHITECTS, ENGINEERS, DECORATORS, AND CONTRACTORS

The publications listed in these columns are the most important of those issued by leading manufacturers identified with the building industry. They may be had without charge, unless otherwise noted, by applying on your business stationery to *The Architectural Forum*, 383 Madison Ave., New York, or the manufacturer direct, in which case kindly mention this publication.

ACOUSTICS

R. Guastavino Co., 40 Court St., Boston.
Akoustolith Plaster. Brochure, 6 pp., 8½ x 11 ins. Important data on a valuable material.

U. S. Gypsum Co., 205 W. Monroe St., Chicago, Ill.
A Scientific Solution of an Old Architectural Problem. Folder 6 pp., 8½ x 11 ins. Describes Sabinite Acoustical Plaster.

AIR FILTERS

Staynew Filter Corporation, Rochester, N. Y.
Protectomotor High Efficiency Industrial Air Filters. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Data on valuable detail of apparatus.

BASEMENT WINDOWS

Genfire Steel Company, Youngstown, Ohio.
Architectural Details. Booklet, 28 pp., 8½ x 11 ins. Details on steel windows. A. I. A. File No. 16E.

BATHROOM FITTINGS

A. P. W. Paper Co., Albany, N. Y.
Onliwon for Fine Buildings. Folder, 8 pp., 3¼ x 6 ins. Illustrated. Deals with toilet paper fittings of metal and porcelain.

Architects' File Card. 8½ x 11 ins. Illustrated. Filing card on toilet paper and paper towel cabinets.

A Towel Built for Its Job. Booklet, 8 pp., 4¼ x 9⅝ ins. Illustrated. Paper Towel System and Cabinets.

Cabinets and Fixtures. Booklet, 31 pp., 5¾ x 4¾ ins. Illustrated. Catalog and price list of fixtures and cabinets.

BRICK

American Face Brick Association, 1751 Peoples Life Building, Chicago, Ill.
Brickwork in Italy. 298 pages, size 7½ x 10½ ins., an attractive and useful volume on the history and use of brick in Italy from ancient to modern times, profusely illustrated with 69 line drawings, 300 half-tones, and 20 colored plates with a map of modern and XII century Italy. Bound in linen. Price now $3.00, postpaid (formerly $6.00). Half Morocco, $7.00.

Industrial Buildings and Housing. Bound Volume, 112 pp. 8½ x 11 ins. Profusely illustrated. Deals with the planning of factories and employes' housing in detail. Suggestions are given for interior arrangements, including restaurants and rest rooms. Price now $1.00, postpaid (formerly $2.00).

Common Brick Mfrs. Assn. of America, 2134 Guarantee Title Bldg., Cleveland.
Brick; How to Build and Estimate. Brochure, 96 pp., 8½ x 11 ins. Illustrated. Complete data on use of brick.

The Heart of the Home. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Price 25 cents. Deals with construction of fireplaces and chimneys.

Skintled Brickwork. Brochure, 15 pp., 8½ x 11 ins. Illustrated. Tells how to secure interesting effects with common brick.

Building Economy. Monthly magazine, 22 pp., 8½ x 11 ins. Illustrated. $1 per year, 10 cents a copy. For architects, builders and contractors.

CEMENT

Carney Company, The, Mankato, Minn.
A Remarkable Combination of Quality and Economy. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Important data on valuable material.

Kosmos Portland Cement Company, Louisville, Ky.
Kosmortar for Enduring Masonry. Folder, 6 pp., 3½ x 6½ ins. Data on strength and working qualities of Kosmortar.

Kosmortar, the Mortar for Cold Weather. Folder, 4 pp., 3⅝ x 6½ ins. Tells why Kosmortar should be used in cold weather.

Louisville Cement Co., 315 Guthrie St., Louisville, Ky.
BRIXMENT for Perfect Mortar. Self-filing handbook, 8½ x 11 ins. 16 pp. Illustrated. Contains complete technical description of BRIXMENT for brick, tile and stone masonry, specifications, data and tests.

Missouri Portland Cement Company, St. Louis, Kansas City, Memphis.
Twenty-four Hour Cement. Booklet, 15 pp., 8½ x 11 ins. Illustrated. Data on a cement which makes a quick-drying concrete.

Precautions for Concrete Paving Construction in Cold Weather. Folder, 4 pp. 6 x 9 ins.

Design and Control of Concrete Mixtures. Booklet, 32 pp. 8½ x 11 ins. Illustrated.

Concrete Paving Construction in Hot Weather. Booklet. 11 pp. 6 x 9 ins. Illustrated.

Pennsylvania-Dixie Cement Corp'n, 131 East 46th St., New York.
Celluloid Computing Scale for Concrete and Lumber, 4⅝ x 2½ ins. Useful for securing accurate computations of aggregates and cement; also for measuring lumber of different sizes.

Portland Cement Association, Chicago.
Concrete Masonry Construction. Booklet, 47 pp., 8½ x 11 ins. Illustrated. Deals with various forms of construction.

CEMENT—Continued

Town and Country Houses of Concrete Masonry. Booklet, 19 pp., 8½ x 11 ins. Illustrated.

Facts About Concrete Building Tile. Brochure, 16 pp., 8½ x 11 ins. Illustrated.

The Key to Firesafe Homes. Booklet, 20 pp., 8½ x 11 ins. Illustrated.

Design and Control of Concrete Mixtures. Brochure, 32 pp., 8½ x 11 ins. Illustrated.

Portland Cement Stucco. Booklet, 64 pp., 8½ x 11 ins. Illustrated.

Concrete in Architecture. Bound Volume. 60 pp., 8½ x 11 ins., Illustrated. An excellent work, giving views of exteriors and interiors.

CONCRETE BUILDING MATERIALS

Kosmos Portland Cement Company, Louisville, Ky.
High Early Strength Concrete, Using Standard Kosmos Portland Cement. Folder, 1 p., 8½ x 11 ins. Complete data on securing high strength concrete in short time.

CONCRETE COLORINGS

The Master Builders Co., 7016 Euclid Ave., Cleveland.
Color Mix, Colored Hardened Concrete Floors (integral). Brochure. 16 pp. 8½ x 11 ins. Illustrated. Data on coloring for floors.

Dychrome. Concrete Surface Hardener in Colors. Folder. 4 pp. 8 x 11 ins. Illustrated. Data on a new treatment.

CONSTRUCTION, FIREPROOF

Master Builders Co., Cleveland, Ohio.
Color Mix. Booklet, 18 pp., 8½ x 11 ins. Illustrated. Valuable data on concrete hardener, waterproofer and dustproofer in permanent colors.

National Fire Proofing Co., 250 Federal St., Pittsburgh, Pa.
Standard Fire Proofing Bulletin 171. 8½ x 11 ins. 32 pp. Illustrated. A treatise on fireproof floor construction.

Northwestern Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.
Northwestern Expanded Metal Products. Booklet. 8½ x 10¾ ins. 16 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated. Plaster-Sava and Longspan lath channels, etc.

A. I. A. Sample Book. Bound volume, 8½ x 11 ins., contains actual samples of several materials and complete data regarding their use.

CONSTRUCTION, STONE AND TERRA COTTA

Cowing Pressure Relieving Joint Company, 100 North Wells St., Chicago, Ill.
Pressure Relieving Joint for Buildings of stone, terra cotta or marble. Booklet. 16 pp., 8½ x 11 ins. Illustrated. Deals with preventing cracks, spalls and breaks.

DAMPPROOFING

Genfire Steel Company, Youngstown, Ohio.
Waterproofing Handbook. Booklet. 8½ x 11 ins. 80 pp. A. I. A. File No. 7. Illustrated. Thoroughly covers subject of waterproofing concrete, wood and steel preservatives, dusting and hardening concrete floors and accelerating the setting of concrete. Free distribution.

The Master Builders Co., 7016 Euclid Ave., Cleveland.
Waterproofing and Dampproofing Specification Manual. Booklet. 18 pp., 8½ x 11 ins. Deals with methods and materials used.

Waterproofing and Dampproofing. File. 36 pp. Complete descriptions and detailed specifications for materials used in building and concrete.

Sonneborn Sons, Inc., L., 116 Fifth Ave., New York.
Specification Sheet, 8½ x 11 ins. Descriptions and specifications of compounds for dampproofing interior and exterior surfaces.

The Vortex Mfg. Co., Cleveland, Ohio.
Par-Lock Specification "Forms A and B" for dampproofing and plaster key over concrete and masonry surfaces.

Par-Lock Specification "Form J" for dampproofing the wall surfaces that are to be plastered.

Par-Lock Dampproofing. Specification Forms C, F, I and J Sheets 8½ x 11 ins. Data on gun-applied asphalt dampproofing for floors and walls.

DOORS AND TRIM, METAL

The American Brass Company, Waterbury, Conn.
Anaconda Architectural Bronze Extruded Shapes. Brochure, 180 pp., 8½ x 11 ins., illustrating and describing more than 2,000 standard bronze shapes of cornices, jamb casings, mouldings, etc.

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 55*

DOORS AND TRIM, METAL—Continued

Richards-Wilcox Mfg. Co., Aurora, Ill.
Fire-Doors and Hardware. Booklet. 8½ x 11 ins. 64 pp. Illustrated. Describes entire line of tin-clad and corrugated fire doors, complete with automatic closers, track hangers and all the latest equipment—all approved and labeled by Underwriters' Laboratories.

Truscon Steel Company, Youngstown, Ohio.
Copper Alloy Steel Doors. Catalog 110. Booklet, 48 pp. 8½ x 11 ins. Illustrated.

DOORS, SOUNDPROOF

Irving Hamlin, Evanston, Ill.
The Evanston Soundproof Door. Folder, 8 pp., 8½ x 11 ins. Illustrated. Deals with a valuable type of door.

DUMBWAITERS

Sedgwick Machine Works, 151 West 15th St., New York.
Catalog and Service Sheets. Standard specifications, plans and prices for various types, etc. 4¼ x 8¼ ins. 60 pp. Illustrated.

Catalog and pamphlets, 8½ x 11 ins. Illustrated. Valuable data on dumbwaiters.

ELECTRICAL EQUIPMENT

Baldor Electric Co., 4358 Duncan Avenue, St. Louis.
Baldor Electric Motors. Booklet, 14 pp., 8 x 10½ ins. Illustrated. Data regarding motors.

General Electric Co., Merchandise Dept., Bridgeport, Conn.
Wiring System Specification Data for Apartment Houses and Apartment Hotels. Booklet, 20 pp. 8 x 10 ins. Illustrated.

"Electrical Specification Data for Architects." Brochure, 36 pp., 8 x 10½ ins. Illustrated. Data regarding G. E. wiring materials and their use.

"The House of a Hundred Comforts." Booklet, 40 pp., 8 x 10½ ins. Illustrated. Dwells on importance of adequate wiring.

Pick & Company, Albert, 208 West Randolph St., Chicago, Ill.
School Cafeterias. Booklet. 9 x 6 ins. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Electric Power for Buildings. Brochure. 14 pp., 8½ x 11 ins. Illustrated. A publication important to architects and engineers.

Variable-Voltage Central Systems as applied to Electric Elevators. Booklet, 13 pp., 8½ x 11 ins. Illustrated. Deals with an important detail of elevator mechanism.

Modern Electrical Equipment for Buildings. Booklet, 8½ x 11 ins. Illustrated. Lists many useful appliances.

Electrical equipment for Heating and Ventilating Systems. Booklet, 24 pp., 8½ x 11 ins. Illustrated. This is "Motor Application Circular 7379."

Westinghouse Panelboards and Cabinets (Catalog 42-A). Booklet, 32 pp., 8½ x 11 ins. Illustrated. Important data on these details of equipment.

Beauty; Power; Silence; Westinghouse Fans (Dealer Catalog 45). Brochure, 16 pp., 8½ x 11 ins. Illustrated. Valuable information on fans and their uses.

Electric Range Book for Architects (A. I. A. Standard Classification 31 G-4). Booklet, 24 pp., 8½ x 11 ins. Illustrated. Cooking apparatus for buildings of various types.

Westinghouse Commercial Cooking Equipment (Catalog 280). Booklet, 32 pp., 8½ x 11 ins. Illustrated. Equipment for cooking on a large scale.

Electric Appliances (Catalog 44-A). 32 pp., 8½ x 11 ins. Deals with accessories for home use.

ELEVATORS

Otis Elevator Company, 260 Eleventh Ave., New York, N. Y.
Otis Push Button Controlled Elevators. Descriptive leaflets. 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.

Otis Geared and Gearless Traction. Elevators of All Types. Descriptive leaflets. 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.

Escalators. Booklet. 8½ x 11 ins. 22 pp. Illustrated. Describes use of escalators in subways, department stores, theaters and industrial buildings. Also includes elevators and dock elevators.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Elevators. Booklet. 8½ x 11 ins. 24 pp. Illustrated. Describes complete line of "Ideal" elevator door hardware and checking devices, also automatic safety devices.

Sedgwick Machine Works, 151 West 15th St., New York, N. Y.
Catalog and descriptive pamphlets, 4¼ x 8¼ ins. 70 pp. Illustrated. Descriptive pamphlets on hand power freight elevators, sidewalk elevators, automobile elevators, etc.

Catalog and pamphlets. 8½ x 11 ins. Illustrated. Important data on different types of elevators.

ESCALATORS

Otis Elevator Company, 260 Eleventh Ave., New York, N. Y.
Escalators. Booklet, 32 pp. 8½ x 11 ins. Illustrated. A valuable work on an important item of equipment.

FIREPROOFING

Concrete Engineering Co., Omaha, Nebr.
"Handbook of Fireproof Construction." Booklet. 53 pp., 8½ x 11 ins. Valuable work on methods of fireproofing.

FIREPROOFING—Continued

Genfire Steel Company, Youngstown, Ohio.
Fireproofing Handbook, 8½ x 11 ins. 32 pp. Illustrated. Gives methods of construction, specifications, data on Herringbone metal lath, steel, tile, Trussit solid partitions, steel joists. Self-Sentering formless concrete construction.

North Western Expanded Metal Co., 407 South Dearborn St., Chicago.
A. I. A. Sample Book. Bound volume, 8½ x 11 ins. Contains actual samples of several materials and complete data regarding their use.

FLOOR HARDENERS (CHEMICAL)

Master Builders Co., Cleveland, Ohio.
Concrete Floor Treatment. File, 50 pp. Data on Securing hardened dustproof concrete.

Concrete Floor Treatments—Specification Manual. Booklet, 23 pp., 8½ x 11 ins. Illustrated. Valuable work on an important subject.

Sonneborn Sons, Inc., L., 116 Fifth Ave., New York, N. Y.
Lapidolith, the liquid chemical hardener. Complete sets of specifications for every building type in which concrete floors are used, with descriptions and results of tests.

FLOORS—STRUCTURAL

Truscon Steel Co., Youngstown, Ohio.
Truscon Floretyle Construction. Booklet. 8½ x 11 ins. 16 pp. Illustrations of actual jobs under construction. Lists of properties and information on proper construction. Proper method of handling and tables of safe loads.

Structural Gypsum Corporation, Linden, N. J.
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on flooring.

FLOORING

Armstrong Cork Co. (Linoleum Division), Lancaster, Pa.
Armstrong's Linoleum Floors. Catalog. 8½ x 11 ins. 40 pp. Color plates. A technical treatise on linoleum, including table of gauges and weights and specifications for installing linoleum floors.

Armstrong's Linoleum Pattern Book, 1927. Catalog. 3½ x 6 ins. 272 pp. Color Plates. Reproduction in color of all patterns of linoleum and cork carpet in the Armstrong line.

Quality Sample Book. 3½ x 5¾ ins. Showing all gauges and thicknesses in the Armstrong line of linoleums.

Linoleum Layer's Handbook. 5 x 7 ins. 32 pp. Instructions for linoleum layers and others interested in learning most satisfactory methods of laying and taking care of linoleum.

Enduring Floors of Good Taste. Booklet. 6 x 9 ins. 48 pp. Illustrated in color. Explains use of linoleum for offices, stores, etc., with reproductions in color of suitable patterns, also specifications and instructions for laying.

Blabon Company, Geo. W., Nicetown, Philadelphia, Pa.
Planning the Color Schemes for your Home. Brochure illustrated in color; 36 pp., 7½ x 10½ ins. Gives excellent suggestions for use of color in flooring for houses and apartments.

Handy Quality Sample Folder of Linoleums. Gives actual samples of "Battleship Linoleum," cork carpet, "Feltex," etc.

Blabon's Linoleum. Booklet illustrated in color; 128 pp., 3½ x 8½ ins. Gives patterns of a large number of linoleums.

Blabon's Plain Linoleum and Cork Carpet. Gives quality samples, 3 x 6 ins. of various types of floor coverings.

Bonded Floors Company, Inc., 1421 Chestnut St., Philadelphia, Pa.
A series of booklets, with full color inserts showing standard colors and designs. Each booklet describes a resilient floor material as follows:

Battleship Linoleum. Explains the advantages and uses of this durable, economical material.

Marble-ized (Cork Composition) Tile. Complete information on cork-composition marble-ized tile and many artistic effects obtainable with it.

Treadlite (Cork Composition) Tile. Shows a variety of colors and patterns of this adaptable cork composition flooring.

Natural Cork Tile. Description and color plates of this superquiet, resilient floor.

Resilient Floors in Schools. Resilient Floors in Stores. Resilient Floors in Hospitals. Resilient Floors in Offices. Resilient Floors in Apartments and Hotels. Booklets, 8 pp., 8½ x 11 ins. Illustrated.

Specifications for Resilient Floors. Leather bound booklet, 48 pp., 8½ x 11 ins. Illustrated. Practical working specifications for installing battleship linoleum, cork composition tile and cork tile.

Carter Bloxonend Flooring Co., Keith & Perry Bldg., Kansas City, Mo.
Bloxonend Flooring. Booklet. 3¼ x 6¼ ins. 20 pp. Illustrated. Describes uses and adaptability of Bloxonend Flooring to concrete, wood or steel construction, and advantages over loose wood blocks.

File Folder. 9⅜ x 11¾ ins. For use in connection with A. I. A. system of filing. Contains detailed information on Bloxonend Flooring in condensed loose-leaf form for specification writer and drafting room. Literature embodied in folder includes standard Specification Sheet covering the use of Bloxonend in general industrial service and Supplementary Specification Sheet No. 1, which gives detailed description and explanation of an approved method for installing Bloxonend in gymnasiums, armories, drill rooms and similar locations where maximum resiliency is required.

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Contractors—Geo. Seidhoff Const. Co.

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—

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Salvation Army Rescue Home
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THE consistency with which architects specify and approve Carney Cement mortar after one experience with it, is again forcibly brought out in Wichita's skyline. Her thirteen important new projects were all laid up in Carney Cement.

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Cement Makers Since 1883

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Specifications
1 part Carney Cement to 3 parts sand

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 56*

FLOORING—Continued

Thomas Moulding Floor Co., 165 W. Wacker Drive, Chicago.
Better Floors. Folder. 4 pp. 11¼ x 13¾ ins. Illustrated. Floors for office, administration and municipal buildings.
Better School Floors. Folder, 4 pp., 11¼ x 13¾ ins. Illustrated.
Characteristics, Specifications and Uses. Brochure. 16 pp. 11¼ x 13¾ ins. Illustrated. Data on floors.

Structural Gypsum Corporation, Linden, N. J.
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on floorings.

U. S. Gypsum Co., Chicago.
Pyrobar Floor Tile. Folder. 8½ x 11 ins. Illustrated. Data on building floors of hollow tile and tables on floor loading.

United States Quarry Tile Co., Parkersburg, W. Va.
Quarry Tiles for Floors. Booklet, 119 pp., 8½ x 11 ins. Illustrated. General catalog. Details of patterns and trim for floors.
Art Portfolio of Floor Designs. 9¼ x 12¾ ins. Illustrated in colors. Patterns of quarry tiles for floors.

U. S. Rubber Co., 1790 Broadway, New York.
Period Adaptations for Modern Floors. Brochure. 8 x 11 ins. 60 pp. Richly illustrated. A valuable work on the use of rubber tile for flooring in interiors of different historic styles.

FURNITURE

American Seating Co., 14 E. Jackson Blvd., Chicago, Ill.
Ars Ecclesiastica Booklet. 6 x 9 ins. 48 pp. Illustrations of church fitments in carved wood.
Theatre Chairs. Booklet. 6 x 9 ins. 48 pp. Illustrations of theater chairs.

Kittinger Co., 1893 Elmwood Ave., Buffalo, N. Y.
Kittinger Club & Hotel Furniture. Booklet. 20 pp. 6¼ x 9½ ins. Illustrated. Deals with fine line of furniture for hotels, clubs, institutions, schools, etc.
Kittinger Club and Hotel Furniture. Booklet. 20 pp. 6 x 9 ins. Illustrated. Data on furniture for hotels and clubs.
A Catalog of Kittinger Furniture. Booklet, 78 pp., 14 x 11 ins. Illustrated. General Catalog.

McKinney Mfg. Co., Pittsburgh.
Forethought Furniture Plans. Sheets, 6¼ x 9 ins., drawn to ¼-inch scale. An ingenious device for determining furniture arrangement.

New York Galleries, Madison Avenue and 48th Street, New York.
A group of Distinguished Interiors. Brochure, 4 pp., 8¾ x 11¾ ins. Filled with valuable illustrations.

GARAGES

Ramp Buildings Corporation, 21 East 40th St., New York.
Building Garages for Profitable Operation. Booklet. 8½ x 11 ins. 16 pp. Illustrated. Discusses the need for modern mid-city parking garages, and describes the d'Humy Motoramp system of design, on the basis of its superior space economy and features of operating convenience. Gives cost analyses of garages of different sizes, and calculates probable earnings.
Garage Design Data. Series of informal bulletins issued in loose-leaf form, with monthly supplements.

GLASS CONSTRUCTION

Adamson Flat Glass Co., Clarksburg, W. Va.
Quality and Dependability. Folder, 2 pp., 8½ x 11 ins. Illustrated. Data in the company's product.

Libbey-Owens Sheet Glass Co., Toledo, Ohio.
Flat Glass. Brochure, 11 pp., 5⅛ x 7⅝ ins. Illustrated. History of manufacture of flat, clear, sheet glass.

Mississippi Wire Glass Co., 220 Fifth Ave., New York.
Mississippi Wire Glass. Catalog. 3⅞ x 8½ ins. 32 pp. Illustrated. Covers the complete line.

GREENHOUSES

William H. Lutton Company, 267 Kearney Ave., Jersey City, N. J.
Greenhouses of Quality. Booklet, 50 pp., 8½ x 11 ins. Illustrated. Conservatories making use of Lutton Patented Galvanized Steel V-Bar.

HARDWARE

P. & F. Corbin, New Britain, Conn.
Early English and Colonial Hardware. Brochure, 8½ x 11 ins. An important illustrated work on this type of hardware.
Locks and Builders' Hardware. Bound Volume, 486 pp., 8½ x 11 ins. An exhaustive, splendidly prepared volume.
Colonial and Early English Hardware. Booklet, 48 pp. 8½ x 11 ins. Illustrated. Data on hardware for houses in these styles.

Cutler Mail Chute Company, Rochester, N. Y.
Cutler Mail Chute Model F. Booklet. 4 x 9¼ ins. 8 pp. Illustrated.

McKinney Mfg. Co., Pittsburgh.
Forged Iron by McKinney. Booklet. 6 x 9 ins. Illustrated. Deals with an excellent line of builders' hardware.
Forged Lanterns by McKinney. Brochure, 6 x 9 ins. Illustrated. Describes a fine assortment of lanterns for various uses.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Distinctive Garage Door Hardware. Booklet, 8½ x 11 ins. 65 pp. Illustrated. Complete information accompanied by data and illustrations on different kinds of garage door hardware.
Distinctive Elevator Door Hardware. Booklet, 89 pp., 16 x 10½ ins. Illustrated.

Russell & Erwin Mfg. Co., New Britain, Conn.
Hardware for the Home. Booklet, 24 pp., 3½ x 6 ins. Deals with residence hardware.

HARDWARE—Continued

Door Closer Booklet. Brochure, 16 pp., 3½ x 6 ins. Data on a valuable detail. Garage Hardware Booklet, 12 pp., 3½ x 6 ins. Hardware intended for garage use.
Famous Homes of New England. Series of folders on old homes and hardware in style of each.

HEATING EQUIPMENT

American Blower Co., 6004 Russell St., Detroit.
Heating and Ventilating Utilities. A binder containing a large number of valuable publications, each 8½ x 11 ins., on these important subjects.

American Radiator Company, The, 40 West 40th St., N. Y. C.
Ideal Boilers for Oil Burning. Catalog 5½ x 8½ ins. 36 pp. Illustrated in 4 colors. Describing a line of Heating Boilers especially adapted to use with Oil Burners.
Corto—The Radiator Classic. Brochure, 5½ x 8½ ins. 16 pp. Illustrated. A brochure on a space-saving radiator of beauty and high efficiency.
Ideal Arcola Radiator Warmth. Brochure, 6¼ x 9½ ins. Illustrated. Describes a central all-on-one-floor heating plant with radiators for small residences, stores, and offices.
How Shall I Heat My Home Brochure, 16 pp., 5¾ x 8½ ins. Illustrated. Full data on heating and hot water supply.
New American Radiator Products. Booklet, 44 pp., 5 x 7¾ ins. Illustrated. Complete line of heating products.
A New Heating Problem. Brilliantly Solved. Broadside. 4 pp. 10¾ x 15 ins. Illustrated. Data on the IN-AIRID invisible air valve.
In-Airid, the Invisible Air Valve. Folder. 8 pp. 3½ x 6 ins. Illustrated. Data on a valuable detail of heating.
The 999 ARCO Packless Radiator Valve. Folder. 8 pp. 3½ x 6 ins. Illustrated.

James B. Clow & Sons, 534 S. Franklin St., Chicago.
Clow Gasteam Vented Heating System. Brochure, 24 pp. 8½ x 11 ins. Illustrated. Deals with a valuable form of heating equipment for using gas.

C. A. Dunham Company, 450 East Ohio St., Chicago, Ill.
Dunham Radiator Trap. Bulletin 101, 8 x 11 ins. 12 pp. Illustrated. Explains working of this detail of heating apparatus.
Dunham Packless Radiator Valves. Bulletin 104, 8 x 11 ins. 8 pp. Illustrated. A valuable brochure on valves.
Dunham Return Heating System. Bulletin 109. 8 x 11 ins. Illustrated. Covers the use of heating apparatus of this kind.
Dunham. Vacuum Heating System. Bulletin 110. 8 x 11 ins. 12 pp. Illustrated.
The Dunham Differential Vacuum Heating System. Bulletin 114. Brochure. 12 pp. 8 x 11 ins. Illustrated. Deals with heating for small buildings.
The Dunham differential Vacuum Heating System. Bulletin 115. Brochure. 12 pp. 8 x 1 1ins. Illustrated. Deals with heating for large buildings.

Excelso Products Corporation, 119 Clinton St., Buffalo, N. Y.
Excelso Water Heater. Booklet. 12 pp. 3 x 6 ins. Illustrated. Describing the new Excelso method of generating domestic hot water in connection with heating boilers. (Firepot Coil eliminated.)

The Fulton Sylphon Company, Knoxville, Tenn.
Sylphon Temperature Regulators. Illustrated brochures, 8½ x 11 ins., dealing with general architectural and industrial applications; also specifically with applications of special instruments.
Sylphon Heating Specialties. Catalog No. 200. 192 pp. 3½ x 6¾ ins. Important data on heating.

S. T. Johnson Co., Oakland, Calif.
Bulletin No. 4A. Brochure. 8 pp., 8½ x 11 ins. Illustrated. Data on different kinds of oil-burning apparatus.
Bulletin No. 31. Brochure. 8 pp. 8½ x 11 ins. Illustrated. Deals with Johnson Rotary Burner With Full Automatic Control.

Kewanee Boiler Corporation, Kewanee, Ill.
Kewanee on the Job. Catalog. 8½ x 11 ins. 80 pp. Illustrated. Showing installations of Kewanee boilers, water heaters, radiators, etc.
Catalog No. 78. 6 x 9 ins. Illustrated. Describes Kewanee Firebox Boilers with specifications and setting plans.
Catalog No. 79. 6 x 9 ins. Illustrated. Describes Kewanee power boilers and smokeless tubular boilers with specifications.

May Oil Burner Corp., Baltimore, Md.
Adventures in Comfort. Booklet. 24 pp. 6 x 9 ins. Illustrated. Non-technical data on oil as fuel.
Taking the Quest out of the Question. Brochure. 16 pp. 6 x 9 ins. Illustrated. For home owners interested in oil as fuel.

McQuay Radiator Corporation, 35 East Wacker Drive, Chicago, Ill.
McQuay Visible Type Cabinet Heater. Booklet. 3 pp. 8½ x 11 ins. Illustrated. Cabinets and radiators adaptable to decorative schemes.
McQuay Concealed Radiators. Brochure. 3 pp. 8½ x 11 ins. Illustrated.
McQuay Unit Heater. Booklet. 8 pp. 8½ x 11 ins. Illustrated. Gives specifications and radiator capacities.

Milwaukee, Valve Co., Milwaukee, Wis.
MILVACO Vacuum & Vapor Heating System. Nine 4-p. bulletins, 8½ x 11 ins. Illustrated. Important data on heating.
MILVACO Vacuum & Vapor Heating Specialties. Nine 4-p. bulletins. 8½ x 11 ins. Illustrated. Deal with a valuable line of specialties used in heating.

Modine Mfg. Company, Racine, Wis.
Thermodine Unit Heater. Brochure. 24 pp. 8½ x 11 ins. Illustrated. Apparatus for industrial heating and drying.

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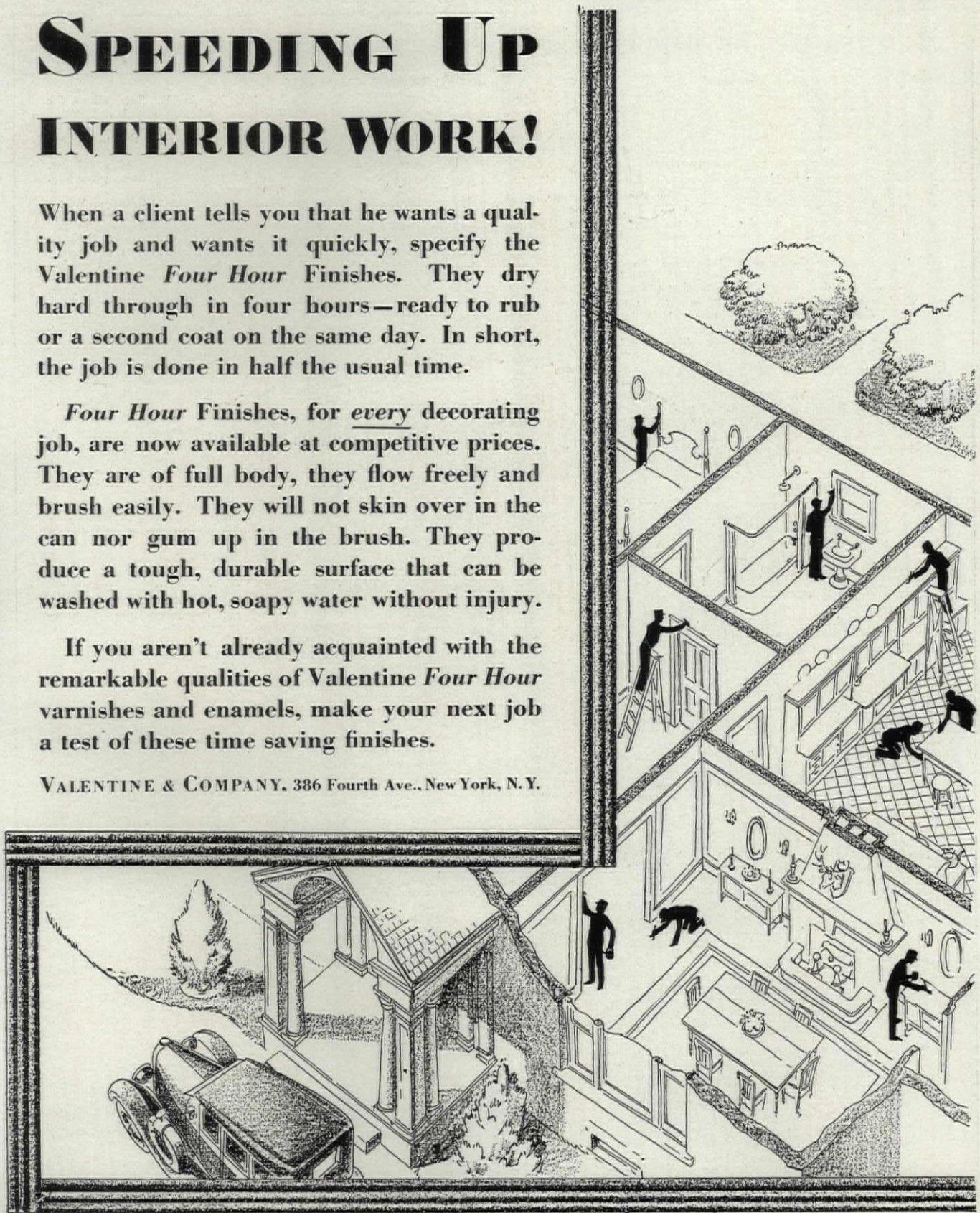
VALENTINE & COMPANY, 386 Fourth Ave., New York, N.Y.



VALENTINES FOUR HOUR FINISHES

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 58*

HEATING EQUIPMENT—Continued

Thermodine Cabinet Heater. Booklet. 12 pp. 8½ x 11 ins. Illustrated. Cabinet heaters to buildings of different kinds.

Nash Engineering Company, South Norwalk, Conn.
No. 37. Devoted to Jennings Hytor Return Line Vacuum Heating Pumps, electrically driven, and supplied in standard sizes up to 300,000 square feet equivalent direct radiation.

No. 16. Dealing with Jennings Hytor Air Line Heating Pumps.

No. 17. Describing Jennings Hytor Condensation Pumps, sizes up to 70,000 square feet equivalent direct radiation.

No. 25. Illustrating Jennings Return Line Vacuum Heating Pumps. Size M, for equivalent direct radiation up to 5,000 square feet.

National Radiator Corporation, Johnstown, Pa.
Aero Radiators; Beauty and Worth. Catalog 34. Booklet. 6 x 9 ins., 20 pp., describing and illustrating radiators and accessories.

Six Great Companies Unite to Form a Great Corporation. Booklet, 27 pp., 8½ x 10½ ins. Illustrated. Valuable data on heating.

Heating Homes the Modern Way. Booklet, 8½ x 11¾ ins. Illustrated. Data on the Petro Burner.

Residence Oil Burning Equipment. Brochure, 6 pp., 8½ x 11 ins. Illustrated. Data regarding Petro Burner in a bulletin approved by Investigating Committee of Architects and Engineers.

Oil Heating Institute, 420 Madison Ave., New York.
What about the Supply of Oil Fuel? Booklet, 16 pp., 5½ x 8 ins. Illustrated.

Petroleum Heat & Power Co., 511 Fifth Avenue, New York.
Petro Mechanical Oil Burner & Air Register. Booklet, 23 pp., 8½ x 11 ins. Illustrated. Data on industrial installations of Petro Burners.

Present Accepted Practice in Domestic Oil Burners. Folder, 4 pp., 8½ x 11 ins. Illustrated. A reprint from Heating and Ventilating Magazine.

Sarco Company, Inc., 183 Madison Ave., New York City, N. Y.
Steam Heating Specialties. Booklet, 6 pp., 6 x 9 ins. Illustrated. Data on Sarco Packless Supply Valves and Radiator Traps for vacuum and vapor heating systems.

Equipment Steam Traps and Temperature Regulations. Booklet, 6 pp., 6 x 9 ins. Illustrated. Deals with Sarco Steam Traps for hospital, laundry and kitchen fixtures and the Sarco Self-contained Temperature Regulation for hot water service tanks.

B. F. Sturtevant Company, Hyde Park, Boston, Mass.
Tempervane Heating Units, Catalog 363. Booklet, 44 pp., 8½ x 11 ins. Illustrated. Data on "Heating Every Corner with Maximum Economy."

Trane Co., The, La Crosse, Wis.
Bulletin 14. 16 pp. 8½ x 10⅝ ins. Covers the complete line of Trane Heating Specialties, including Trane Bellows Traps, and Trane Bellows Packless Valves.

Bulletin 20. 24 pp. 8½ x 10⅝ ins. Explains in detail the operation and construction of Trane Condensation. Vacuum, Booster, Circulating, and similar pumps.

How to Cut Heating Costs. Booklet, 18 pp., 8½ x 11 ins. Illustrated.

HOSPITAL EQUIPMENT

The Frink Co., Inc., 24th St. and Tenth Ave., New York City.
Catalog 426. 7 x 10 ins. 16 pp. A booklet illustrated with photographs and drawings, showing the types of light for use in hospitals, as operating table reflectors, linolite and multilite concentrators, ward reflectors, bed lights and microscopic reflectors, giving sizes and dimensions, explaining their particular fitness for special uses.

Holophane Company, 342 Madison Avenue, New York.
Lighting Specific for Hospitals. Booklet, 29 pp. 8½ x 11 ins. Illustrated.

The International Nickel Company, 67 Wall St., New York, N. Y.
Hospital Applications of Monel Metal. Booklet. 8½ x 11½ ins. 16 pp. Illustrated. Gives types of equipment in which Monel Metal is used, reasons for its adoption, with sources of such equipment.

The Pick-Barth Companies, Chicago and New York.
Some Thoughts About Hospital Food Service Equipment. Booklet, 21 pp., 7½ x 9¼ ins. Valuable data on an important subject.

Wilmot Castle Company, Rochester, N. Y.
Sterilizer Equipment for Hospitals. Book, 76 pp., 8½ x 11 ins. Illustrated. Gives important and complete data on sterilization of utensils and water, information on dressings, etc.

Sterilizer Specifications. Brochure, 12 pp., 8½ x 11 ins. Practical specifications for use of architects and contractors.
Architects' Data Sheets. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Information on piping, venting, valving and wiring for hospital sterilizer installations.

Hospital Sterilizing Technique. Five booklets. 8 to 16 pp. 6 x 9 ins. Illustrated. Deals specifically with sterilizing instruments, dressings, utensils, water, and rubber gloves.

HOTEL EQUIPMENT

Pick & Company, Albert, 208 West Randolph St., Chicago, Ill.
Some Thoughts on Furnishing a Hotel. Booklet. 7½ x 9 ins. Data on complete outfitting of hotels.

INCINERATORS

Home Incinerator Co., Milwaukee, Wis.
The Decent Way. Burn it with Gas. Brochure, 30 pp., 5¼ x 7¼ ins. inside. Illustrated. Incinerator sanitation equipment for residence use.

INCINERATORS—Continued

A. I. A. File. 12 pp., 8¾ x 10¾ ins. inside. Suggestions for architect on incineration, showing installation and equipment.
Specialized Home Comforts Service Plan Book. 40 pp., 8½ x 11 ins. inside, illustrated. A complete outline of the many advantages of incineration.

Blue Star Standards in Home Building. 16 pp., 5½ x 8½ ins. inside. Illustrated, explaining fully the Blue Star principles, covering heat, incineration, refrigeration, etc.

Kerner Incinerator Company, 715 E. Water St., Milwaukee, Wis.
Incinerators (Chimney-fed). Catalog No. 15 (Architect and Builders' Edition). Size 8½ x 11 ins. 16 pp. Illustrated. Describes principles and design of Kernerator Chimney-fed Incinerators for residences, apartments, hospitals, schools, apartment hotels, clubs and other buildings. Shows all standard models and gives general information and working data.
Sanitary Elimination of Household Waste, booklet, 4 x 9 ins. 16 pp. Illustrated. Gives complete information on the Kernerator for residences.
Garbage and Waste Disposal for Apartment Buildings, folder, 8½ x 11 ins. 16 pp. Illustrated. Describes principle and design of Kernerator-Chimney-fed Incinerator for apartments and gives list of buildings where it has been installed.
Sanitary Disposal of Waste in Hospitals. Booklet. 4 x 9 ins. 12 pp. Illustrated. Shows how this necessary part of hospital service is taken care of with the Kernerator. Gives list of hospitals where installed.
The Kernerator (Chimney-fed) Booklet. Catalog No. 17. 20 pp. 8½ x 11 ins. Illustrated. Data on a valuable detail of equipment.

INSULATING LUMBER

Masonite Corporation, 111 West Washington St., Chicago, Ill.
Booklet, 12 pp., 8½ x 11 ins. Illustrated. Gives complete specifications for use of insulating lumber and details of construction involving its use.

INSULATION

Armstrong Cork & Insulation Co., Pittsburgh, Pa.
The Insulation of Roofs with Armstrong's Corkboard. Booklet. Illustrated. 7½ x 10½ ins. 32 pp. Discusses means of insulating roofs of manufacturing or commercial structures.
Insulation of Roofs to Prevent Condensation. Illustrated booklet. 7½ x 10½ ins. 36 pp. Gives full data on valuable line of roof insulation.
Filing Folder for Pipe Covering Data. Made in accordance with A. I. A. rules.
"The Cork Lined House Makes a Comfortable Home." 5 x 7 ins. 32 pp. Illustrated.
Armstrong's Corkboard. Insulation for Walls and Roofs of Buildings. Booklet, 66 pp., 9½ x 11¾ ins. Illustrates and describes use of insulation for structural purposes.

Cabot, Inc., Samuel, Boston, Mass.
Cabot's Insulating Quilt. Booklet. 7½ x 10½ ins. 24 pp. Illustrated. Deals with a valuable type of insulation.

Structural Gypsum Corporation, Linden, N. J.
Heat Insulation Value of Gypsteel. Folder, 4 pp., 8½ x 11 ins. Brochure, by Charles L. Norton, of M. I. T.

JOISTS

Bates Expanded Steel Truss Co., East Chicago, Ind.
Catalog No. 4. Booklet, 32 pp., 8½ x 11 ins. Illustrated. Gives details of truss construction with loading tables and specifications.

Genfire Steel Company, Youngstown, Ohio.
Steel Joists. 8½ x 11 ins. 32 pp. A. I. A. File Number 13G. Illustrated. Complete data on T-Bar and Plate-Girder joists, including construction details and specifications.

KITCHEN EQUIPMENT

The International Nickel Company, 67 Wall St., New York, N. Y.
Hotels, restaurants and Cafeteria Applications of Monel Metal. Booklet. 8½ x 11 ins. 32 pp. Illustrated. Gives types of equipment in which Monel Metal is used, with service data and sources of equipment.

Pick & Company, Albert, 208 W. Randolph St., Chicago, Ill.
School Cafeteria Portfolio. 17 x 11 ins. 44 pp. Illustrated. An exhaustive study of the problems of school feeding, with copious illustrations and blue prints. Very valuable to the architect.
School Cafeterias. Booklet. 9 x 6 ins. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.

LABORATORY EQUIPMENT

Alberene Stone Co., 153 West 23rd Street, New York City.
Booklet 8¾ x 11¼ ins., 26 pp. Stone for laboratory equipment, shower partitions, stair treads, etc.

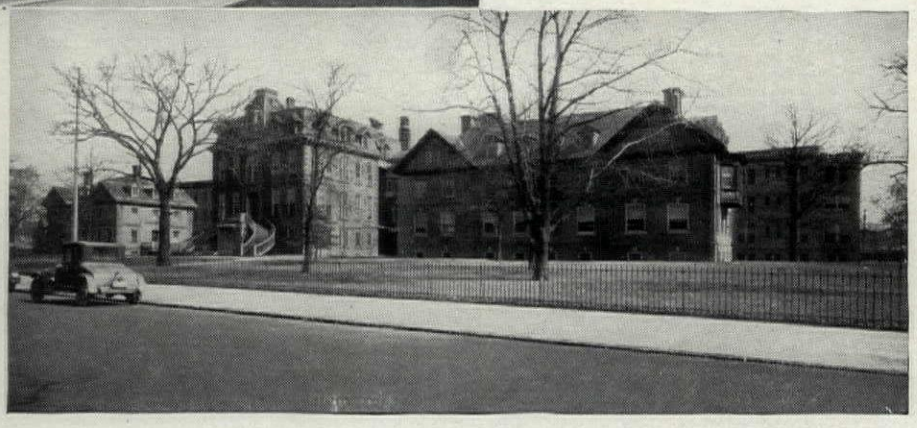
Duriron Company, Dayton, Ohio.
Duriron Acid, Alkali and Rust-proof Drain Pipe and Fittings. Booklet, 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.

LANTERNS

Todhunter, Arthur, 119 E. 57th St., New York.
Hand Wrought Lanterns. Booklet. 5¼ x 6¼ ins. 20 pp. Illustrated in Black and White. With price list. Lanterns appropriate for exterior and interior use, designed from old models and meeting the requirements of modern lighting.

Left—The West Jersey Homeopathic Hospital at Camden, New Jersey. Here 800 gallons of Barreled Sunlight have been used for interior painting—in pure white and buff tint.

Below—The Cooper Hospital, at Camden, New Jersey—a satisfied user of Barreled Sunlight for the past several years.



They are exacting *about their interior painting*

Pure, lustrous white—or easily tinted

By simply mixing colors in oil with Barreled Sunlight white, the painter on the job can easily obtain any desired shade. In quantities of five gallons or over we tint to order at the factory, without extra charge. For tinting small quantities our dealers carry handy tubes of Barreled Sunlight Tinting Colors.

THE two Camden, New Jersey, hospitals shown above are painted for lasting, cheerful cleanliness and good looks. Both of them use Barreled Sunlight as best fulfilling their exacting requirements.

Barreled Sunlight Gloss gives a rich enamel finish with a "depth" peculiar to itself. It reflects adequate light free from glare. Its surface is so smooth and unbroken it can't hold dirt embedded and washes like tile—without wearing away.

Barreled Sunlight Flat produces a surface extremely handsome and uniform.

Barreled Sunlight Semi-Gloss strikes a nice balance between the Gloss and Flat.

Containing no varnish, Barreled Sunlight flows with remarkable freedom, whether applied by brush or spray. And it possesses unusual opacity.

Guaranteed to remain white longer than any gloss paint or enamel, domestic or foreign, applied under the same conditions.

Sold in large drums and in cans. For priming, use Barreled Sunlight Undercoat.

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U. S. Gutta Percha Paint Co., 3-L Dudley Street, Providence, R. I. Branches: New York, Chicago, San Francisco. Distributors in all principal cities.

Barreled Sunlight

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U. S. GUTTA PERCHA PAINT CO.
3-L Dudley Street, Providence, R. I.

Please send me your booklet, "Information for Architects," and a panel painted with Barreled Sunlight. I am interested in the finish checked here:

Gloss ( ) Semi-Gloss ( ) Flat ( )

Name.....

Street.....

City..... *State*.....

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 60*

LATH, METAL AND REINFORCING

Genfire Steel Company, Youngstown, Ohio.
Herringbone Metal Lath Handbook. 8½ x 11 ins. 32 pp. Illustrated. Standard specifications for Cement Stucco on Herringbone. Rigid Metal Lath and interior plastering.

National Steel Fabric Co., Pittsburgh.
Better Walls for Better Homes. Brochure. 16 pp. 7¾ x 10¾ ins. Illustrated. Metal lath, particularly for residences.
Steeltex for Floors. Booklet. 24 pp. 8½ x 11 ins. Illustrated. Combined reinforcing and form for concrete or gypsum floors and roofs.
Steeltex Data Sheet No. 1. Folder. 8 pp. 8½ x 11 ins. Illustrated. Steeltex for floors on steel joists with round top chords.
Steeltex Data Sheet No. 2. Folder, 8 pp. 8½ x 11 ins. Illustrated. Steeltex for floors on steel joists with flat top flanges.
Steeltex Data Sheet No. 3. Folder. 8 pp. 8½ x 11 ins. Illustrated. Steeltex for folders on wood joists.

Northwestern Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.
Northwestern Expanded Metal Products. Booklet, 8½ x 10¾ ins., 20 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated. Plasta-saver and longspan lath channels, etc.
Longspan ¾-inch Rib Lath. Folder 4 pp., 8½ x 11 ins. Illustrated. Deals with a new type of V-Rib expanded metal.
A. I. A. Sample Book. Bound volume, 8½ x 11 ins. Contains actual samples of several materials and complete data regarding their use.
Norwest Metal Lath. Folder. 8½ x 11 ins. Illustrated. Data on Flat Rib Lath.

Truscon Steel Company, Youngstown, Ohio.
Truscon ¾-inch Hy-Rib for Roofs, Floors and Walls. Booklet, 8½ x 11 ins., illustrating Truscon ¾-inch Hy-Rib as used in industrial buildings. Plates of typical construction. Progressive steps of construction. Specification and load tables.

LAUNDRY CHUTES

The Pfaudler Company, 217 Cutler Building, Rochester, N. Y.
Pfaudler Glass-Lined Steel Laundry Chutes. Booklet, 5⅛ x 7⅜ ins. 16 pp. Illustrated. A beautifully printed brochure describing in detail with architects' specifications THE PFAUDLER GLASS LINED STEEL LAUNDRY CHUTES. Contains views of installations and list of representative examples.

LAUNDRY MACHINERY

American Laundry Machinery Co., Norwood Station, Cincinnati, Ohio.
Functions of the Hotel and Hospital Laundry. Brochure, 8 pp., 8½ x 11 ins. Valuable data regarding an important subject.

LIBRARY EQUIPMENT

Art Metal Construction Co., Jamestown, N. Y.
Planning the Library for Protection and Service. Brochure. 52 pp. 8½ x 11 ins. Illustrated. Deals with library fittings of different kinds.

Library Bureau Division, Remington Rand, N. Tonawanda, N. Y.
Like Stepping into a Story Book. Booklet. 24 pp. 9 x 12 ins. Deals with equipment of Los Angeles Public Library.

LIGHTING EQUIPMENT

The Frink Co., Inc., 24th St. and 10th Ave., New York City.
Catalog 415, 8½ x 11 ins. 46 pp. Photographs and scaled cross-sections. Specialized bank lighting, screen and partition reflectors, double and single desk reflectors and Polaralite Signs.

Holophane Company, Inc., 342 Madison Ave., New York.
The Lighting of Schools: A Guide to Good Practice. Booklet, 24 pp. 8½ x 11 ins. Illustrated.
Lighting Specifications for Hospitals. Brochure, 30 pp. 8½ x 11 ins. Illustrated.
Industrial Lighting. Bulletin 448A. Booklet, 24 pp. 8½ x 11 ins. Illustrated.
Holophane Catalog. Booklet, 48 pp. 8½ x 11 ins. Combination catalog and engineering data book.
The Lighting of Schools. A Guide to Good Practice. Booklet. 24 pp. 8½ x 11 ins. Illustrated.

Smyser-Royer Co., 1700 Walnut Street, Philadelphia.
Catalog "J" on Exterior Lighting Fixtures. Brochure, illustrated, giving data on over 300 designs of standards, lanterns and brackets of bronze or cast iron.

Todhunter, 119 East 57th St., New York.
Lighting Fixtures, Lamps and Candlesticks. 24 pp. 8½ x 11 ins. Illustrated. Fine assortment of lighting accessories.

LUMBER

National Lumber Mfrs. Assn., Washington, D. C.
Use of Lumber on the Farm. Booklet, 38 pp., 8½ x 11 ins. Illustrated.

MAIL CHUTES

Cutler Mail Chute Company, Rorchester, N. Y.
Cutler Mail Chute Model F. Booklet. 4 x 9¼ ins. 8 pp. Illustrated.

MANTELS

Arthur Todhunter, 119 E. 57th St., New York, N. Y.
Georgian Mantels. New Booklet. 24 pp., 5¼ x 6¼ ins. A fully illustrated brochure on eighteenth century mantels. Folders give prices of mantels and illustrations and prices of fireplace equipment.

MARBLE

The Georgia Marble Company, Tate, Ga., New York Office, 1328 Broadway.
Why Georgia Marble is Better. Booklet. 3⅜ x 6 ins. Gives analysis, physical qualities, comparison of absorption with granite, opinions of authorities, etc.
Convincing Proof. 3⅜ x 6 ins. 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of Architects and Sculptors.

MARBLE—Continued

Hurt Building, Atlanta; Senior High School and Junior College, Muskegon, Mich. Folders, 4 pp. 8½ x 11 ins. Details.

METALS

The International Nickel Company, 67 Wall St., New York, N. Y.
The Choice of a Metal. Booklet, 6¼ x 3 ins. 166 pp. Illustrated. Monel Metal—its qualities, use and commercial forms, briefly described.

MILL WORK—See also Wood

Curtis Companies Service Bureau, Clinton, Iowa.
Architectural Interior and Exterior Woodwork. Standardized Book. 9 x 11½ ins. 240 pp. Illustrated. This is an Architects' Edition of the complete catalog of Curtis Woodwork, as designed by Trowbridge & Ackerman. Contains many color plates.
Better Built Homes. Vols. XV-XVIII incl. Booklet. 9 x 12 ins. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects for the Curtis Companies.
Curtis Details. Booklet, 19½ x 23½ ins. 20 pp. Illustrated. Complete details of all items of Curtis woodwork, for the use of architects.

Hartmann-Sanders Company, 2155 Elston Ave., Chicago, Ill.
Column Catalog, 7½ x 10 ins. 48 pp. Illustrated. Contains prices on columns 6 to 36 ins. diameter, various designs and illustrations of columns and installations.
The Pergola Catalog. 7½ x 10 ins. 64 pp. Illustrated. Contains illustrations of pergola lattices, garden furniture in wood and cement, garden accessories.

Roddis Lumber and Veneer Co., Marshfield, Wis.
Roddis Doors. Brochure, 24 pp., 5¼ x 8½ ins. Illustrated price list of doors for various types of buildings.
Roddis Doors, Catalog G. Booklet, 183 pp., 8½ x 11 ins. Completely covers the subject of doors for interior use.
Roddis Doors for Hospitals. Brochure, 15 pp., 8½ x 11 ins. Illustrated work on hospital doors.
Roddis Doors for Hotels. Brochure, 15 pp., 8½ x 11 ins. Illustrated work on doors for hotel and apartment buildings.

MORTAR AND CEMENT COLORS

Clinton Metallic Paint Co., Clinton, N. Y.
Clinton Mortar Colors. Folder. 8½ x 11 ins. 4 pp. Illustrated in colors, gives full information concerning Clinton Mortar Colors with specific instructions for using them.
Color Card. 6½ x 3¼ ins. Illustrates in color the ten shades in which Clinton Mortar Colors are manufactured.
Something new in Stucco. Folder, 3½ x 6 ins. An interesting folder on the use of coloring matter for stucco-coated walls.

ORNAMENTAL PLASTER

Jacobson & Co., 241 East 44th St., New York.
A book of Old English Designs. Brochure. 47 plates. 12 x 9 ins. Deals with a fine line of decorative plaster work.
Architectural and Decorative Ornaments. Cloth bound volume. 183 plates. 9 x 12 ins. 18 plates. Price, $3.00. A general catalog of fine plaster ornaments.
Geometrical ceilings. Booklet. 23 plates. 7 x 9 ins. An important work on decorative plaster ceilings.

PAINTS, STAINS, VARNISHES AND WOOD FINISHES

Cabot, Inc., Samuel, Boston, Mass.
Cabot's Creosote Stains. Booklet. 4 x 8½ ins. 16 pp. Illustrated.

National Lead Company, 111 Broadway, New York, N. Y.
Handy Book on Painting. Book, 5½ x 3¼ ins. 100 pp. Gives directions and formulae for painting various surfaces of wood, plaster, metals, etc., both interior and exterior.
Red Lead in Paste Form. Booklet, 6¼ x 3½ ins. 16 pp. Illustrated. Directions and formulae for painting metals.
Came Lead. Booklet, 8¼ x 6 ins. 12 pp. Illustrated. Describes various styles of lead cames.

Pratt & Lambert, Inc., Buffalo, N. Y.
Specification Manual for Paint, Varnishing and Enameling. Booklet, 38 pp., 7½ x 10⅝ ins. Complete specifications for painting, varnishing and enameling interior and exterior wood, plaster, and metal work.

Sherwin-Williams Company, 601 Canal Rd., Cleveland, Ohio.
Painting Concrete and Stucco Surfaces. Bulletin No. 1. 8½ x 11 ins. 8 pp. Illustrated. A complete treatise with complete specifications on the subject of Painting of Concrete and Stucco Surfaces. Color chips of paint shown in bulletin.
Enamel Finish for Interior and Exterior Surfaces. Bulletin No. 2, 8½ x 11 ins. 12 pp. Illustrated. Thorough discussion, including complete specifications for securing the most satisfactory enamel finish on interior and exterior walls and trim.
Painting and Decorating of Interior Walls. Bulletin No. 3. 8½ x 11 ins. 20 pp. Illustrated. An excellent reference book on Flat Wall Finish, including texture effects, which are taking the country by storm. Every architect should have one on file.
Protective Paints for Metal Surfaces. Bulletin No. 4. 8½ x 11 ins. 12 pp. Illustrated. A highly technical subject treated in a simple, understandable manner.

Sonneborn Sons, Inc., L., Dept. 4, 116 Fifth Avenue, New York.
Paint Specifications. Booklet, 8½ x 10¾ ins. 4 pp.

U. S. Gutta Percha Paint Co., Providence, R. I.
Barreled Sunlight. Booklet, 8½ x 11 ins. Data on "Barreled Sunlight" with specifications for its use.

Valentine & Co., 456 Fourth Ave., New York.
How to Use Valspar. Illustrated booklet, 32 pp., 3¼ x 8 ins. Deals with domestic uses for Valspar.
How to Keep Your House Young. Illustrated brochure, 23 pp., 7 x 8½ ins. A useful work on the upkeep of residences.
Architectural Four-Hour Varnishes and Enamels. Booklet, 8 pp., 4½ x 6 ins. Data on a useful line of materials.

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To help your client Select the Color

WALLS, CEILING, wood trim, floors and draperies should show a harmonious color contrast. Oftentimes in the past your ideas on color and those of your client have been at variance on this important point. With the handy Pee Gee Color Selector it is easy to arrive at an agreeable decision in a few moments.

This remarkable device presents fifteen groupings of complementary colors—a complete and harmonious color scheme in each group. Just turn the dial until you have found the arrangement of colors which pleases you most.

There are two Pee Gee Color Selectors, one for interiors, the other for exteriors—they may be had for the asking.

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PEASLEE-GAULBERT COMPANY

Incorporated

LOUISVILLE

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 62*

PAPER

A. P. W. Paper Co., Albany, N. Y.
"Here's a Towel Built for Its Job." Folder, 8 pp., 4 x 9 ins. Deals with "Onliwon" paper towels.

PARCEL DELIVERY DEVICES

Receivador Sales Company, Grand Rapids, Mich.
Architects' Portfolio. Booklet, 12 pp. 8½ x 11 ins. Illustrated. Deals with delivery problems and their solution.

PARTITIONS

Circle A. Products Corporation, New Castle, Ind.
Circle A. Partitions Sectional and Movable. Brochure. Illustrated. 8½ x 11¼ ins. 32 pp. Full data regarding an important line of partitions, along with Erection Instructions for partitions of three different types.

Hauserman Company, E. F., Cleveland, Ohio.
Hollow Steel Standard Partitions. Various folders, 8½ x 11 ins. Illustrated. Give full data on different types of steel partitions, together with details, elevations and specifications.

Improved Office Partition Company, 25 Grand St., Elmhurst, L. I.
Telesco Partition. Catalog. 8¼ x 11 ins. 14 pp. Illustrated. Shows typical offices laid out with Telesco partitions, cuts of finished partition units in various woods. Gives specifications and cuts of buildings using Telesco.
Detailed Instructions for erecting Telesco Partitions. Booklet. 24 pp. 8½ x 11 ins. Illustrated. Complete instructions, with cuts and drawings, showing how easily Telesco Partition can be erected.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Partitions. Booklet. 7 x 10 ins. 32 pp. Illustrated. Describes complete line of track and hangers for all styles of sliding parallel, accordion and flush door partitions.

U. S. Gypsum Co., Chicago.
Pyrobar Partition and Furring Tile. Booklet. 8½ x 11 ins. 24 pp. Illustrated. Describes use and advantages of hollow tile for inner partitions.

PIPE

American Brass Company, Waterbury, Conn.
Bulletin B-1. Brass Pipe for Water Service. 8½ x 11 ins. 28 pp. Illustrated. Gives schedule of weights and sizes (I.P.S.) of seamless brass and copper pipe, shows typical installations of brass pipe, and gives general discussion of the corrosive effect of water on iron, steel and brass pipe.

American Rolling Mill Company, Middletown, Ohio.
How ARMCO Dredging Products Cut Costs. Booklet, 16 pp., 6 x 9 ins. Data on dredging pipe.

Clow & Sons, James B., 534 S. Franklin St., Chicago, Ill.
Catalog "A." 4 x 16½ ins. 700 pp. Illustrated. Shows a full line of steam, gas and water works supplies.

Cohoes Rolling Mill Company, Cohoes, N. Y.
Cohoes Pipe Handbook. Booklet, 40 pp., 5 x 7½ ins. Data on wrought iron pipe.

Duriron Company, Inc., Dayton, Ohio.
Duriron Acid, Alkali, Rust-proof Drain Pipe and Fittings. Booklet, 20 pp., 8½ x 11 ins., illustrated. Important data on a valuable line of pipe.

National Tube Co., Frick Building, Pittsburgh, Pa.
"National" Bulletin No. 2. Corrosion of Hot Water Pipe. 8½ x 11 ins. 24 pp. Illustrated. In this bulletin is summed up the most important research dealing with hot water systems. The text matter consists of seven investigations by authorities on this subject.
"National" Bulletin No. 3. The Protection of Pipe Against Internal Corrosion, 8½ x 11 ins. 20 pp. Illustrated. Discusses various causes of corrosion, and details are given of the deactivating and deaerating systems for eliminating or retarding corrosion in hot water supply lines.
"National" Bulletin No. 25. "National" Pipe in Large Buildings. 8½ x 11 ins. 88 pp. This bulletin contains 254 illustrations of prominent buildings of all types, containing "National" Pipe, and considerable engineering data of value to architects, engineers, etc.
Modern Welded Pipe. Book of 88 pp. 8½ x 11 ins., profusely illustrated with halftone and line engravings of the important operations in the manufacture of pipe.

PLASTER

Best Bros. Keene's Cement Co., Medicine Lodge, Kans.
Information Book. Brochure, 24 pp., 5 x 9 ins. Lists grades of plaster manufactured; gives specifications and uses for plaster.
Plasterers' Handbook. Booklet, 16 pp., 3½ x 5½ ins. A small manual for use of plasterers.
Interior Walls Everlasting. Brochure, 20 pp., 6¼ x 9¼ ins. Illustrated. Describes origin of Keene's Cement and views of buildings in which it is used.

PLUMBING EQUIPMENT

C. F. Church Mfg. Co., Holyoke, Mass.
Catalog S. W.-3. Booklet, 95 pp., 7¾ x 10½ ins. Illustrated. Data on Sani-White and Sani-Black toilet seats.

Clow & Sons, James B., 534 S. Franklin St., Chicago, Ill.
Catalog "M." 9¼ x 12 ins. 184 pp. Illustrated. Shows complete line of plumbing fixtures for Schools, Railroads and Industrial Plants.

PLUMBING EQUIPMENT—Continued

Crane Company, 836 S. Michigan Ave., Chicago, Ill.
Plumbing Suggestions for Home Builders. Catalog. 3 x 6 ins. 80 pp. Illustrated.
Plumbing Suggestions for Industrial Plants. Catalog. 4 x 6½ ins. 34 pp. Illustrated.
Planning the Small Bathroom. Booklet. 5 x 8 ins. Discusses planning bathrooms of small dimensions.

John Douglas Co., Cincinnati, Ohio.
Douglas Plumbing Fixtures. Bound Volume. 200 pp. 8½ x 11 ins. Illustrated. General catalog.
Another Douglas Achievement. Folder. 4 pp. 8½ x 11 ins. Illustrated. Data on new type of stall.
Hospital. Brochure. 60 pp. 8½ x 11 ins. Illustrated. Deals with fixtures for hospitals.

Duriron Company, Dayton, Ohio.
Duriron Acid, Alkali and Rust-Proof Drain Pipe and Fittings. Booklet. 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.

Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago, Ill.
Watrous Patent Flush Valves, Duojet Water Closets, Liquid Soap Fixtures, etc. 8½ x 11 ins., 136 pp., loose-leaf catalog, showing roughing-in measurements, etc.

Maddock's Sons Company, Thomas, Trenton, N. J.
Catalog "K." 10⅞ x 7⅞ ins. 242 pp. Illustrated. Complete data on vitreous china plumbing fixtures with brief history of Sanitary Pottery.

Speakman Company, Wilmington, Del.
Catalog K. Booklet, 150 pp., 8½ x 10⅞ ins. Illustrated. Data on showers and equipment details.

Trenton Potteries Company, Trenton, N. J.
The Blue Book of Plumbing. Bound volume. 181 pp. 8½ x 10½ ins. Illustrated.

PUMPS

Kewanee Private Utilities Co., 442 Franklin St., Kewanee, Ill.
Bulletin E. 7¾ x 10¼ ins. 32 pp. Illustrated. Catalog. Complete descriptions, with all necessary data, on Standard Service Pumps, Indian Brand Pneumatic Tanks, and Complete Water Systems, as installed by Kewanee Private Utilities Co.

The Trane Co., LaCrosse, Wis.
Trane Small Centrifugal Pumps. Booklet. 3¾ x 8 ins. 16 pp. Complete data on an important type of pump.

Weil Pump Co., 215 W. Superior St., Chicago.
Pumps. Booklet, 8½ x 11 ins. Illustrated. Individual bulletins with specifications on sewage ejectors, and bilge, house, condensation, booster and boiler feed pumps.

RAMPS

Ramp Buildings Corporation, 21 East 40th St., New York.
Building Garages for Profitable Operation. Booklet. 8½ x 11 ins. 16 pp. Illustrated. Discusses the need for modern mid-city, parking garages, and describes the d'Humy Motoramp system of design, on the basis of its superior space economy and features of operating convenience. Gives cost analyses of garages of different sizes, and calculates probable earnings.
Garage Design Data. Series of informal bulletins issued in loose-leaf form, with monthly supplements.

REFRIGERATION

The Fulton Syphon Company, Knoxville, Tenn.
Temperature Control of Refrigeration Systems. Booklet. 8 pp., 8½ x 11 ins. Illustrated. Deals with cold storage, chilling of water, etc.

REINFORCED CONCRETE—See also Construction, Concrete

Genfire Steel Company, Youngstown, Ohio.
Self-Centering Handbook. 8½ x 11 ins. 36 pp. Illustrated. Methods and specifications on reinforced concrete floors, roofs and floors with a combined form and reinforced material.

North Western Expanded Metal Company, Chicago, Ill.
Designing Data. Book. 6 x 9 ins. 96 pp. Illustrated. Covers the use of Econo Expanded Metal for various types of reinforced concrete construction.
Longspan ¾-inch Rib Lath. Folder 4 pp., 8½ x 11 ins. Illustrated. Deals with a new type of V-Rib expanded metal.

Truscon Steel Company, Youngstown, Ohio.
Shearing Stresses in Reinforced Concrete Beams. Booklet. 8½ x 11 ins. 12 pp.

ROOFING

The Barrett Company, 40 Rector St., New York City.
Architects' and Engineers' Built-up Roofing Reference Series; Volume IV Roof Drainage System. Brochure. 63 pp. 8½ x 11¼ ins. Gives complete data and specifications for many details of roofing.

Bird & Son, Inc., E. Walpole, Mass.
Bird's Roofs. Folder, 16 pp., 3½ x 6 ins. Illustrated. Data of roofing materials.

Heinz Roofing Tile Co., 1925 West Third Avenue, Denver.
Plymouth-Shingle Tile with Sprocket Hips. Leaflet, 8½ x 11 ins. Illustrated. Shows use of English shingle tile with special hips.
Italian Promenade Floor Tile. Folder, 2 pp., 8½ x 11 ins. Illustrated. Floor tiling adapted from that of Davanzati Palace.
Mission Tile. Leaflet, 8½ x 11 ins. Illustrated. Tile such as are used in Italy and southern California.
Georgian Tile. Leaflet, 8½ x 11 ins. Illustrated. Tiling as used in old English and French farmhouses.

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 64*

ROOFING—Continued

Ludowici-Celadon Company, 104 So. Michigan Ave., Chicago, Ill.
"Ancient" Tapered Mission Tiles. Leaflet. 8½ x 11 ins. 4 pp. Illustrated. For architects who desire something out of the ordinary, this leaflet has been prepared. Describes briefly the "Ancient" Tapered Mission Tiles, hand-made with full corners and designed to be applied with irregular exposures.

Structural Gypsum Corporation, Linden, N. J.
Relative Effectiveness of Various Types of Roofing Construction in Preventing Condensation of the Under Surface. Folder, 4 pp., 8¾ x 11 ins. Important data on the subject.

Gypsteel Pre-cast Fireproof Roofs. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Information regarding a valuable type of roofing.

U. S. Gypsum Co., Chicago, Ill.
Pyrobar Roof Construction. Booklet. 8 x 11 ins. 48 pp. Illustrated. Gives valuable data on the use of tile in roof construction.

Sheetrock Pyrofill Roof Construction. Folder. 8½ x 11 ins. Illustrated. Covers use of roof surfacing which is poured in place.

SEWAGE DISPOSAL

Kewanee Private Utilities, 442 Franklin St., Kewanee, Ill.
Specification Sheets. 7¾ x 10¼ ins. 40 pp. Illustrated. Detailed drawings and specifications covering water supply and sewage disposal systems.

SCREENS

American Brass Co., The, Waterbury, Conn.
Facts for Architects About Screening. Illustrated folder, 9½ x 11¾ ins., giving actual samples of metal screen cloth and data on fly screens and screen doors.

Athey Company, 6015 West 65th St., Chicago, Ill.
The Athey Perennial Window Shade. An accordion pleated window shade, made from translucent Herringbone woven Coutil cloth, which raises from the bottom and lowers from the top. It eliminates awnings, affords ventilation, can be dry-cleaned and will wear indefinitely.

Orange Screen Co., Maplewood, N. J.
Orsco Aluminum Screens. Booklet, 8 pp., 8 x 11 ins. Illustrated. Data on a valuable line of screens.
Orsco Screens and Other Products. Brochure, 20 pp., 8 x 11 ins. Illustrated. Door and window screens and other hardware.

SHADE CLOTH AND ROLLERS

Columbia Mills, Inc., 225 Fifth Avenue, New York.
Window Shade Data Book. Folder, 28 pp., 8½ x 11 ins. Illustrated.

SHELVING-STEEL

David Lupton's Sons Company, Philadelphia, Pa.
Lupton Steel Shelving. Catalog E. Illustrated brochure, 40 pp., 8⅜ x 11 ins. Deals with steel cabinets, shelving, racks, doors, partitions, etc.

SOUND DEADENER

Cabot, Inc., Samuel, Boston, Mass.
Cabot's Deadening Quilt. Brochure, 7½ x 10½ ins., 28 pp. Illustrated. Gives complete data regarding a well-known protection against sound.

STEEL PRODUCTS FOR BUILDING

Bethlehem Steel Company, Bethlehem, Pa.
Steel Joists and Stanchions. Booklet, 72 pp., 4 x 6¾ ins. Data for steel for dwellings, apartment houses, etc.

Genfire Steel Company, Youngstown, Ohio.
Herringbone Metal Lath Handbook. 8½ x 11 ins. 32 pp. Illustrated. Standard specifications for Cement Stucco on Herringbone.

Rigid Metal Lath and interior plastering.
Fireproofing Handbook. 8½ x 11 ins. 32 pp. Illustrated. Describes the full line of products manufactured by the Genfire Steel Company.

Steel Frame House Company, Pittsburgh. (Subsidiary of McClintic-Marshall Corp.)
Steel Framing for Dwellings. Booklet, 16 pp. 8½ x 11 ins. Illustrated.
Steel Framing for Gasoline Service Stations. Brochure, 8 pp. 8½ x 11 ins. Illustrated.
Steel Frame Standard Gasoline Service Stations. Booklet, 8 pp. 8½ x 11 ins. Illustrated. Three standard designs of stations.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
The Arc Welding of Structural Steel. Brochure, 32 pp., 8½ x 11 ins. Illustrated. Deals with an important structural process.

STONE, BUILDING

Indiana Limestone Company, Bedford, Ind.
Volume 3, Series A-3. Standard Specifications for Cut Indiana Limestone work, 8½ x 11 ins. 56 pp. Containing specifications and supplementary data relating to the best methods of specifying and using this stone for all building purposes.

Vol. 1. Series B. Indiana Limestone Library. 6 x 9 ins. 36 pp. Illustrated. Giving general information regarding Indiana Limestone, its physical characteristics, etc.

STONE, BUILDING—Continued

Vol. 4. Series B. Booklet. New Edition. 8½ x 11 ins. 64 pp. Illustrated. Indiana Limestone as used in Banks.
Volume 5. Series B. Indiana Limestone Library. Portfolio. 11⅞ x 8¾ ins. Illustrated. Describes and illustrates the use of stone for small houses with floor plans of each.
Volume 6, Series B—Indiana Limestone School and College Buildings. 8½ x 11 ins., 80 pages, illustrated.
Volume 12, Series B—Distinctive Homes of Indiana Limestone. 8½ x 11 ins., 48 pages, illustrated.
Old Gothic Random Ashlar. 8½ x 11 ins., 16 pages. Illustrated.

STORE FRONTS

Brasco Manufacturing Co., 5025-35 South Wabash Avenue, Chicago, Ill.
Catalog No. 31. Series 500. All-Copper Construction. Illustrated brochure. 20 pp. 8½ x 11 ins. Deals with store fronts of a high class.
Brasco Copper Store Fronts. Catalog No. 32. Series 202.
Brasco Standard Construction. Illustrated brochure. 16 pp. 8½ x 11 ins. Complete data on an important type of building.
Detail Sheets. Set of seven sheets; printed on tracing paper, showing full sized details and suggestions for store front designing, enclosed in envelope suitable for filing. Folds to 8½ x 11 ins.
Davis Solid Architectural Bronze Sash. Set of five sheets, printed on tracing paper, giving full sized details and suggestions for designing of special bronze store front construction, enclosed in envelope suitable for filing. Folds to 8½ x 11 ins.

The Kawneer Company, Niles, Mich.
Store Front Suggestions. Booklet, 96 pp., 6 x 8½ ins. Illustrated. Shows different types of Kawneer Solid Copper Store Fronts.
Catalog K. 1927 Editon. Booklet, 32 pp., 8½ x 11 ins. Illustrated. Details of Kawneer Copper Store Fronts.
Detail Sheets for Use in Tracing. Full-sized details on sheets 17 x 22 ins.
Kawneer Construction in Solid Bronze or Copper. Booklet, 64 pp., 8½ x 11 ins. Illustrated. Complete data on the subject.

Modern Bronze Store Front Co., Chicago Heights, Ill.
Introducing Extruded Bronze Store Front Construction. Folder, 4 pp., 8½ x 11 ins. Illustrated. Contains full sized details of metal store fronts.

Zouri Drawn Metals Company, Chicago Heights, Ill.
Zouri Safety Key-Set Store Front Construction. Catalog. 8½ x 10½ ins. 60 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.

International Store Front Construction. Catalog. 8½ x 10 ins. 70 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.

TERRA COTTA

National Terra Cotta Society, 19 West 44th St., New York, N. Y.
Standard Specifications for the Manufacture, Furnishing and Setting of Terra Cotta. Brochure. 8½ x 11 ins. 12 pp. Complete Specification, Glossary of Terms Relating to Terra Cotta and Short Form Specification for incorporating in Architects' Specification.

Color in Architecture. Revised. Edition. Permanently bound volume, 9⅛ x 12¼ ins., containing a treatise upon the basic principles of color in architectural design, illustrating early European and modern American examples. Excellent illustrations in color.

Present Day Schools. 8½ x 11 ins. 32 pp. Illustrating 42 examples of school architecture with article upon school building design by James O. Betelle, A. I. A.

Better Banks. 8½ x 11 ins. 32 pp. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bossom, Architect.

TILE, HOLLOW

National Fire Proofing Co., 250 Federal St., Pittsburgh, Pa.
Standard Wall Construction Bulletin 174. 8½ x 11 ins. 32 pp. Illustrated. A treatise on the subject of hollow tile wall construction.
Standard Fireproofing Bulletin 171. 8½ x 11 ins. 32 pp. Illustrated. A treatise on the subject of hollow tile as used for floors, girder, column and beam covering and similar construction.
Natco Double Shell Load Bearing Tile Bulletin. 8½ x 11 ins. 6 pp. Illustrated.
Natco Uninbacker Tile Bulletin. 8½ x 11 ins. 4 pp. Illustrated.
Natco Header Backer Tile Bulletin. 8½ x 11 ins. 4 pp. Illustrated.
Natcoflor Bulletin. 8½ x 11 ins. 6 pp. Illustrated.
Natco Face Tile for the Up-to-Date. Farm Bulletin. 8½ x 11 ins.

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Kraftile Company, 55 New Montgomery St., San Francisco.
High Fired Faience Tile. Booklet. 32 pp. 8½ x 11 ins. Illustrated. Presents a fine line of tiles for different purposes.

United States Quarry Tile Co., Parkersburg, W. Va.
Quarry Tiles for Floors. Booklet, 119 pp., 8½ x 11 ins. Illustrated. General catalog. Details of patterns and trim for floors.
Art Portfolio of Floor Designs. 9¼ x 12¾ ins. Illustrated in colors. Patterns of quarry tiles for floors.

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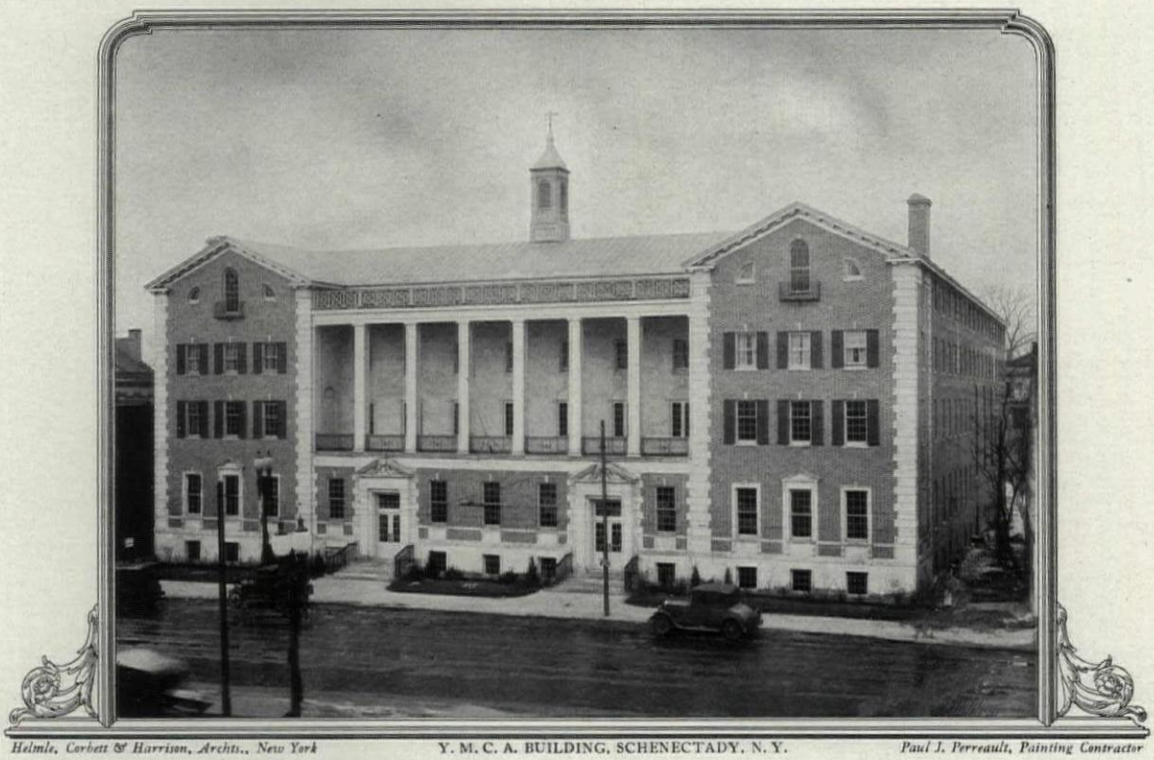

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SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 66*

VALVES

Crane Co., 836 S. Michigan Ave., Chicago, Ill.
No. 51. General Catalog. Illustrated. Describes the complete line of the Crane Co.

C. A. Dunham Co., 450 East Ohio St., Chicago.
The Dunham Packless Radiator Valve Brochure, 12 pp., 8 x 11 ins. Illustrated. Data on an important type of valve.

Jenkins Bros., 80 White St., New York.
The Valve Behind a Good Heating System. Booklet. 4½ x 7¼ ins. 16 pp. Color plates. Description of Jenkins Radiator Valves for steam and hot water, and brass valves used as boiler connections.

Jenkins Valves for Plumbing Service. Booklet. 4½ x 7¼ ins. 16 pp. Illustrated. Description of Jenkins Brass Globe, Angle Check and Gate Valves commonly used in home plumbing, and Iron Body Valves used for larger plumbing installations.

VENETIAN BLINDS

Burlington Venetian Blind Co., Burlington, Vt.
Venetian Blinds. Booklet. 7 x 10 ins., 24 pp. Illustrated. Describes the "Burlington" Venetian blinds, method of operation, advantages of installation to obtain perfect control of light in the room.

VENTILATION

American Blower Co., Detroit, Mich.
American H. S. Fans. Brochure, 28 pp., 8½ x 11 ins. Data on an important line of blowers.

Duriron Company, Dayton, Ohio.
Acid-proof Exhaust Fans. Folder. 8 x 10½ ins. 8 pp. Data regarding fans for ventilation of laboratory fume hoods.

Specification Form for Acid-proof Exhaust Fans. Folder, 8 x 10½ ins.

Globe Ventilator Company, 205 River St., Troy, N. Y.
Globe Ventilators Catalog. 6 x 9 ins. 32 pp. Illustrated profusely. Catalog gives complete data on "Globe" ventilators as to sizes, dimensions, gauges of material and table of capacities. It illustrates many different types of buildings on which "Globe" ventilators are in successful service, showing their adaptability to meet varying requirements.

Staynew Filter Corporation, Rochester, N. Y.
Protectomotor High Efficiency Industrial Air Filters. Booklet. 20 pp., 8½ x 11 ins. Illustrated. Data on valuable detail of apparatus.

WATERPROOFING

Genfire Steel Company, Youngstown, Ohio.
Waterproofing Handbook. Booklet. 8½ x 11 ins. 80 pp. Illustrated. Thoroughly covers subject of waterproofing concrete, wood and steel preservatives, dustproofing and hardening concrete floors, and accelerating the setting of concrete. Free distribution.

Master Builders Company, Cleveland, Ohio.
Waterproofing and Dampproofing and Allied Products. Sheets in loose index file, 9 x 12 ins. Valuable data on different types of materials for protection against dampness.

Waterproofing and Dampproofing File. 36 pp. Complete descriptions and detailed specifications for materials used in building with concrete.

Sommers & Co., Ltd., 342 Madison Ave., New York City.
"Permantile Liquid Waterproofing" for making concrete and cement mortar permanently impervious to water. Also circulars on floor treatments and cement colors. Complete data and specifications. Sent upon request to architects using business stationery. Circular size, 8½ x 11 ins.

Sonneborn Sons, Inc., L., 116 Fifth Ave., New York, N. Y.
Pamphlet. 3¾ x 8¾ ins. 8 pp. Explanation of waterproofing principles. Specifications for waterproofing walls, floors, swimming pools and treatment of concrete, stucco and mortar.

The Vortex Mfg. Co., 1978 West 77th St., Cleveland, Ohio.
Par-Lock Specification "Form D" for waterproofing surfaces to be finished with Portland cement or tile.

Par-Lock Specification "Forms E and G" membrane waterproofing of basements, tunnels, swimming pools, tanks to resist hydrostatic pressure.

Par-Lock Waterproofing. Specification Forms D, E, F and G. Sheets, 8½ x 11 ins. Data on combinations of gun-applied asphalt and cotton or felt membrane, built up to suit requirements.

Par-Lock Method of Bonding Plaster to Structural Surfaces. Folder, 6 pp. 8½ x 11 ins. Official Bulletin of Approved Products,—Investigating Committees of Architects and Engineers.

WEATHER STRIPS

Athey Company, 6035 West 65th St., Chicago.
The Only Weatherstrip with a Cloth to Metal Contact. Booklet. 16 pp., 8½ x 11 ins. Illustrated. Data on an important type of weather stripping.

WINDOWS

The Kawneer Company, Niles, Mich.
Kawneer Solid Nickel Silver Windows. In casement and weight-hung types and in drop-down transom type. Portfolio, 12 pp., 9 x 11½ ins. Illustrated, and with demonstrator.

David Lupton's Sons Company, Philadelphia, Pa.
Lupton Pivoted Sash. Catalog 12-A. Booklet, 48 pp., 8⅝ x 11 ins. Illustrates and describes windows suitable for manufacturing buildings.

WINDOWS, CASEMENT

Crittall Casement Window Co., 10951 Hearn Ave., Detroit, Mich.
Catalog No. 22. 9 x 12 ins. 76 pp. Illustrated. Photographs of actual work accompanied by scale details for casements and composite steel windows for banks, office buildings, hospitals and residences.

Genfire Steel Company, Youngstown, Ohio.
Architectural Details, Casement Windows and Doors. 8½ x 11 ins. 28 pp. A. I. A. File No. 16e. Specifications and construction details.

Hope & Sons, Henry, 103 Park Ave., New York, N. Y.
Catalog. 12¼ x 18½ ins. 30 pp. Illustrated. Full size details of outward and inward opening casements.

The Kawneer Company, Niles, Mich.
Kawneer Solid Nickel Silver Windows. In casement and weight-hung types and in drop-down transom type. Portfolio, 12 pp., 9 x 11½ ins. Illustrated, and with demonstrator.

David Lupton's Sons Company, Philadelphia, Pa.
Lupton Casement of Copper Steel. Catalog C-217. Booklet, 20 pp. 8⅝ x 11 ins. Illustrated brochure on casements, particularly for residences.

Lupton Heavy Casements. Detail Sheet No. 101, 4 pp., 8½ x 11 ins. Details and specifications only.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Casement Window Hardware. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Shows typical installations, detail drawings, construction details, blue-prints if desired. Describes AIR-way Multifold Window Hardware.

Architectural Details. Booklet. 8½ x 11 ins. 16 pp. Tables of specifications and typical details of different types of construction.

List of Parts for Assembly. Booklet. 8½ x 11 ins. 16 pp. Full lists of parts for different units.

WINDOW SHADES AND ROLLERS

Columbia Mills, Inc., 225 Fifth Avenue, New York.
Window Shade Data Book. Folder, 28 pp., 8½ x 11 ins. Illustrated.

WINDOWS, STEEL AND BRONZE

Genfire Steel Company, Youngstown, Ohio.
Architectural Details, Steel Pivoted, Commercial and Architectural Projected Windows. 8½ x 11 ins. 24 pp. A. I. A. File No. 16e. Specification and construction details.

David Lupton's Sons Company, Philadelphia, Pa.
A Rain-shed and Ventilator of Glass and Steel. Pamphlet, 4 pp., 8⅝ x 11 ins. Deals with Pond Continuous Sash. Sawtooth Roofs, etc.

How Windows Can Make Better Homes. Booklet. 3⅞ x 7 ins. 12 pp. An attractive and helpful illustrated publication on use of steel casements for domestic buildings.

Truscon Steel Company, Youngstown, Ohio.
Drafting Room Standards. Book. 8½ x 11 ins. 120 pages of mechanical drawings showing drafting room standards, specifications and construction details of Truscon Steel Windows, Steel Lintels, Steel Doors and Mechanical Operators.

Truscon Solid Steel Double-Hung Windows. 24 pp. Booklet. 8½ x 11 ins. Containing illustrations of buildings using this type of window. Designs and drawings of mechanical details.

Continuous Steel windows and Mechanical Operators. Catalog 126. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

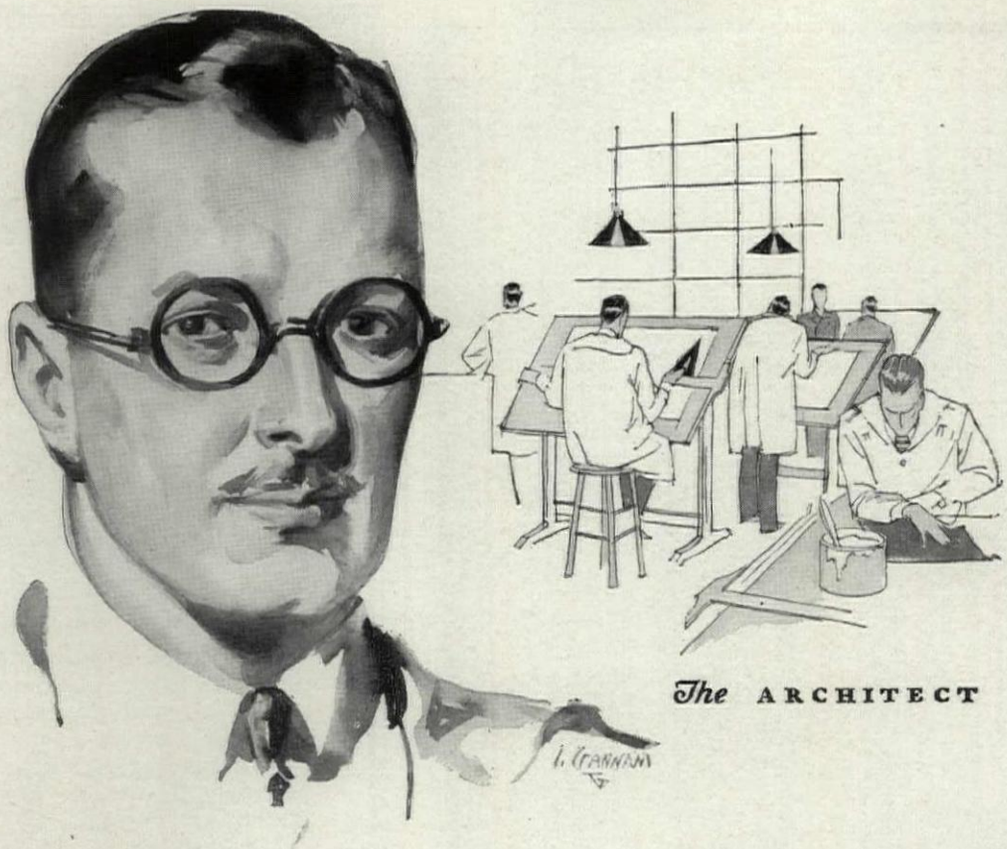
WOOD—See also Millwork

American Walnut Mfrs. Association, 618 So. Michigan Blvd., Chicago, Ill.
American Walnut. Booklet. 7 x 9 ins. 45 pp. Illustrated. A very useful and interesting little book on the use of Walnut in Fine Furniture with illustrations of pieces by the most notable furniture makers from the time of the Renaissance down to the present.

"American Walnut for Interior Woodwork and Paneling." 7 x 9 ins. Pages illustrated. Discusses interior woodwork, giving costs, specifications of a specimen room, the different figures in Walnut wood, Walnut floors, finishes, comparative tests of physical properties and the advantages of American Walnut for woodwork.

Curtis Companies Service Bureau, Clinton, Iowa.
Better Built Homes. Vols. XV-XVIII, incl. Booklet. 9 x 12 ins. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects, for the Curtis Companies.

National Lumber Mfrs. Assn., Washington.
Airplane Hangar Construction. Booklet, 24 pp., 8½ x 11 ins. Use of lumber for hangars.



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REALIZING that his major problem is getting his specifications carried out, the architect says, "Let us eliminate all chance; let us do away with the human element; let us specify a mason's cement which we *know* has the strength, beauty and working qualities we want" . . and he specifies Kosmortar.

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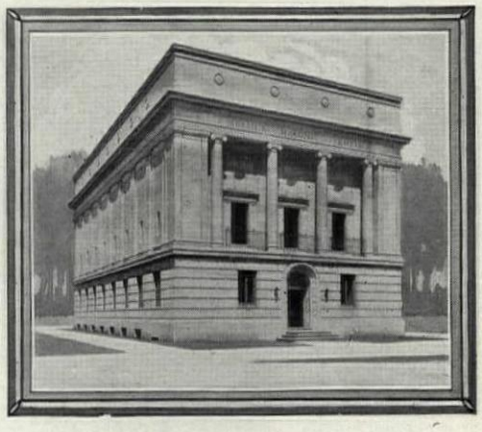
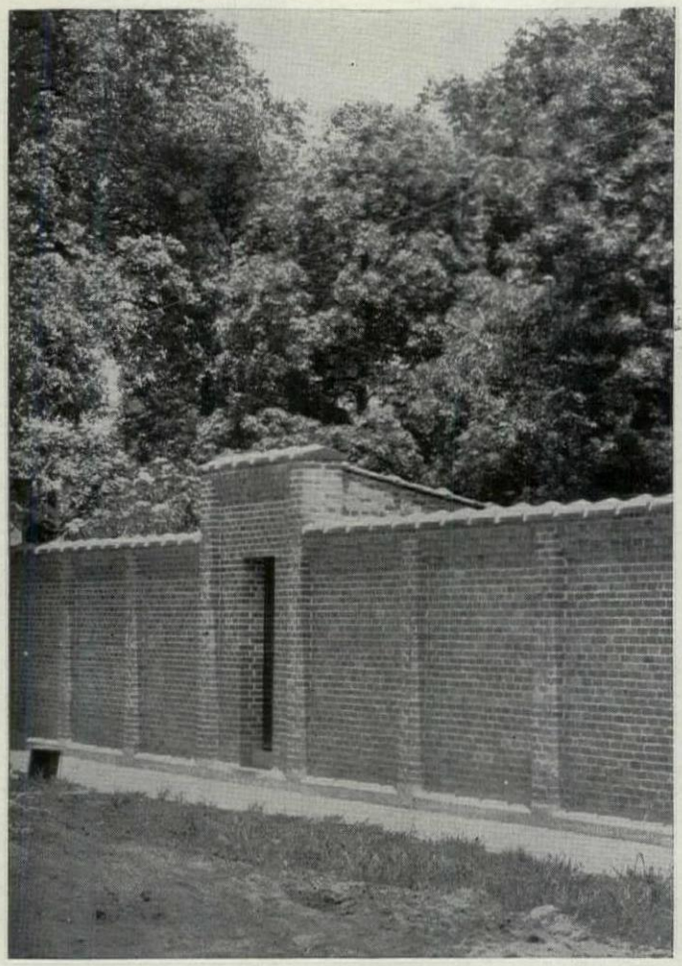
For detailed information write Kosmos Portland Cement Company, *Incorporated,* Kosmosdale, Ky., Sales Office, Louisville, Ky. *Also Makers of Kosmos Portland Cement.*

Messick Masonic Temple, Shelbyville, Ind.; Donald Graham, *Arch.*; Indianapolis, Ind.; Leslie Colvin, *Contr.*, Indianapolis, Ind.



KOSMORTAR

A MASON'S CEMENT—*EASY TO SPREAD*



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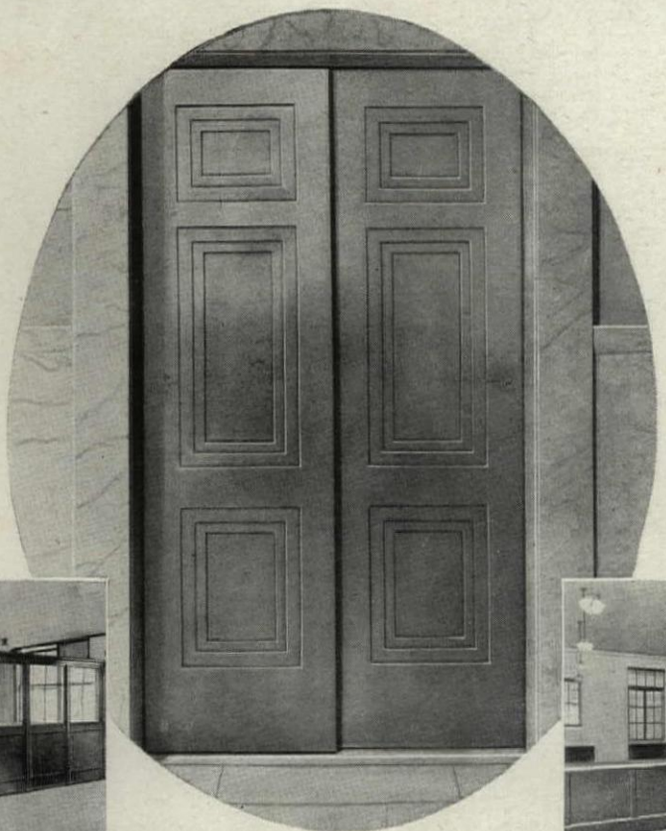
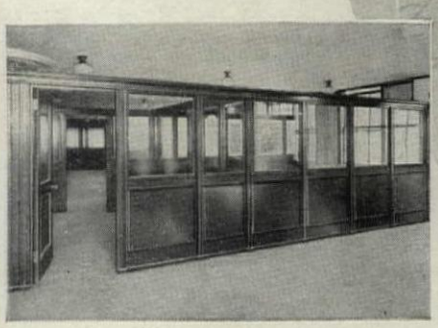
THE NEW RENAISSANCE IN METAL WORKING



ENDURING BEAUTY is an outstanding feature of Art Metal Sectional Office Partition. These private offices in Baltimore's new Municipal Building are all enclosed with this handsome partition. Available from stock in either cornice or ceiling height.



A RICH SIMPLICITY characterizes the bronze elevator fronts throughout Baltimore's new Municipal Building. Designed by W. H. Emory, Architect. Executed by Art Metal.

COMPLETE HARMONY in appearance is achieved by using interior metal equipment all from one source. The Art Metal partitions and counters shown here blend perfectly with one another and with the interior of the building.

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No specifications too varied . . . no job too complex . . . for Art Metal's vast facilities

ARCHITECTS everywhere now specify Art Metal for interior metal equipment. No matter how varied or complex the job may be, Art Metal can handle it quickly and accurately . . . complete in every detail.

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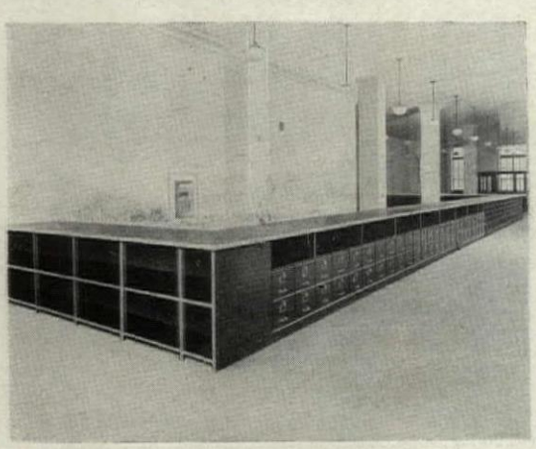

UP TO THE MINUTE in efficiency, this Art Metal counter speeds the work of the Bureau of Buildings in the new Municipal Building of Baltimore. Records are kept right at hand in the files under the counter.

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Aesthetic, Practical—This New Washable Fabric Cuts Shade Replacement Costs

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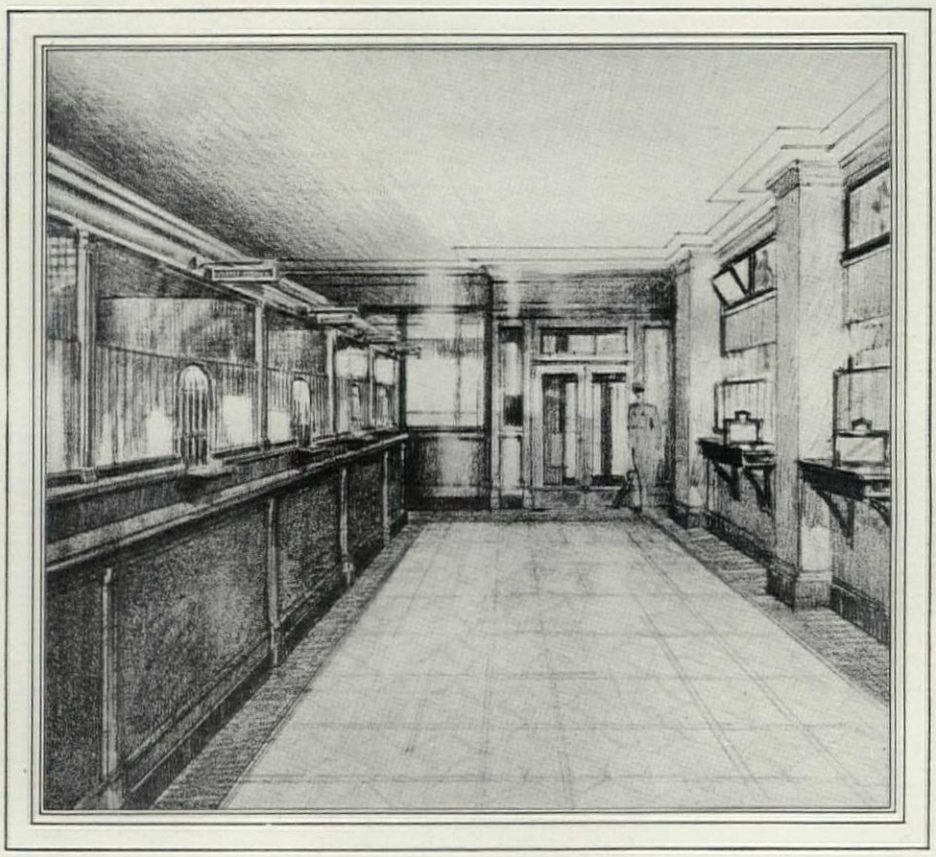
Vision Bank Screens

admit light and permit those on the inside to look out; but effectively screen the interior from passers-by. In the illustration below, "vision screens" are shown at the right, above the counters. The slender aluminum frame is furnished in a variety of finishes,—dull or burnished aluminum, or any colored lacquer finish. The frame is fitted out with double thickness of fine mesh bronze wire screen cloth... We design, manufacture and install a full line of window screens. See column at right.



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Stanley Miller Inc., *Architect*

Same Aluminum as used in Airplane Construction

Extruded Section

These screens are made of *extruded bars* of aluminum, a *special alloy* developed for our use by the *Aluminum Company of America*, and which is one of the strongest non-ferrous materials made. Because of its *lightness* and many *structural advantages*, aluminum such as is used in our screen frames is now used in *Airplane Construction*.

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This shows stationary (removable) half-circle screen with double frame screens below pivot-hinged at sides. The hardware is simple, strong, and easy action. We frequently supply small circular screens for yachts that rest at anchor a part of the time in southern waters.

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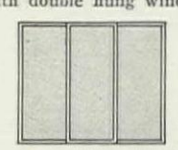
The double frame vertical sliding screen can be used inside or out (as can any of the others shown here) and is used largely with double hung windows.



A triple horizontal sliding screen. Horizontal sliding screens are provided in batteries of two or more frames, and are the ideal screen installation to be used with *casement* windows that open *out*.

Odd Shapes Specially Designed

We recently designed a number of outside screens for an industrial building in which food-stuffs were being handled and canned.

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ORANGE SCREEN COMPANY

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THE construction of a large office or store building on an expensive site has one objective above all others — occupancy. Earning power must begin at the earliest possible moment.

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It represents an absorbing interest in the improvement of construction methods and materials which has prompted the investment of ability and money in the most exhaustive and conclusive tests of Prestolith Velo in the laboratory and in actual work on a commercial scale over a period of five years.

And it represents the vision of complete usefulness which has caused, as a result of these tests, the building of a new $2,000,000 plant at Prospect Hill, St. Louis, for the exclusive and adequate production of Prestolith Velo.

Write for our booklet, "24-Hour Cement."

This is the emblem of the authorized dealer in Prestolith Velo and Red Ring Portland Cement. Through him, as the representative of the Missouri Portland Cement Company, is available the advice and engineering assistance of this entire organization.

MISSOURI PORTLAND CEMENT CO.

ST. LOUIS · · KANSAS CITY · · MEMPHIS

Manufacturers of Red Ring Portland Cement; Prestolith Velo Cement; producers and distributors of sand, gravel and Bethany Falls crushed stone.

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Please send me, without charge, your descriptive booklet, "24-Hour Cement."

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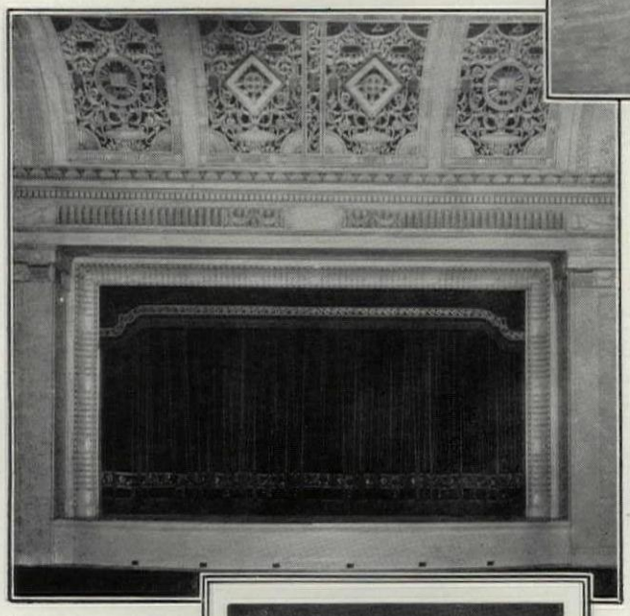
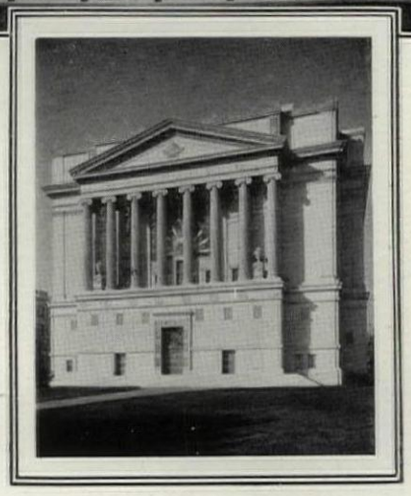
Architect: Carl Werner
Plastering Contractor: Peter Bradley





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This pure gypsum plaster has won a reputation for fulfilling the highest expectations of architects, plasterers and contractors. For nearly 40 years BEST BROS. Keene's Cement has proved its merits by making better walls in buildings of all kinds. Its plastic qualities make it readily adaptable to all modern decorative effects.

Prompt Service—Keene's Cement is the one and only product of Best Bros. In almost the exact geographical center of the United States a plant of large capacity assures prompt shipments of BEST BROS. Keene's Cement throughout the nation.

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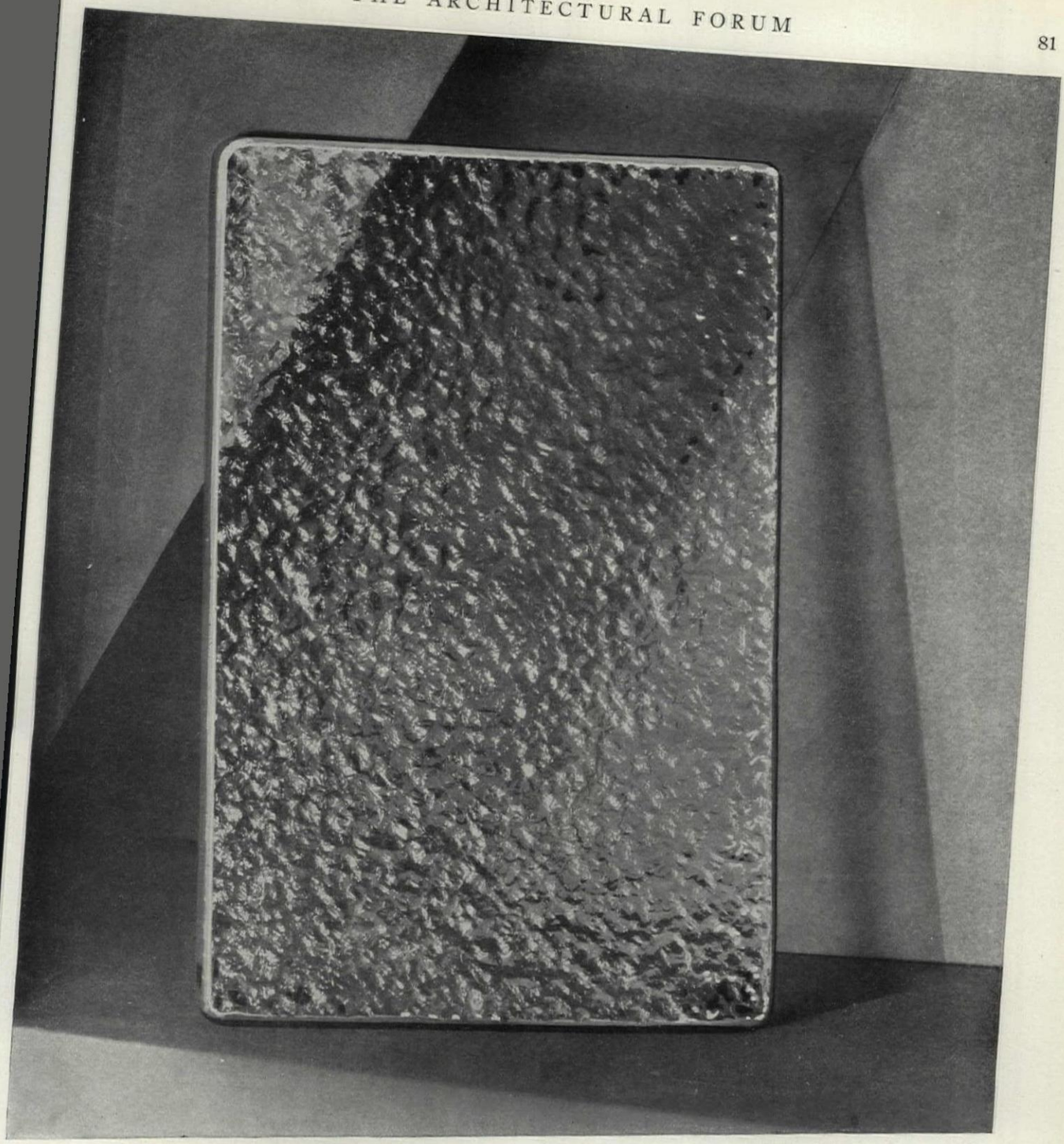
(20)

BEST BROS.
KEENE'S CEMENT
Always "BEST" for Plastering



SYENITE
POLISHED

Office doors and partitions take on a new dignity when glassed with polished Syenite. The irregular design lends itself to any style of architecture. The smooth side, ground and polished to a plate glass surface, gives brilliance . . . Syenite is made from specially refined glass metal. Its thickness approximates ¼ inch . . . It is available with or without wire . . . On request, samples will gladly be furnished.

MISSISSIPPI GLASS COMPANY
220 FIFTH AVE., NEW YORK

REVIEWS OF MANUFACTURERS' PUBLICATIONS

ALBERT PICK & CO., Chicago, and L. BARTH & CO., INC., New York. "Book of Supplies." Equipment catalog.

The building of hotels, some of average size and many upon a colossal scale, which has been going on in all parts of the United States during the last few years, has brought with it the development of firms which specialize in their furnishing and outfitting. The concern formed by the consolidation of these two large firms is among the leaders in this field, and its catalogs and other publications are of great interest to architects, builders and interior decorators. This particular publication has to do with furnishing the great variety of details required in hotels, restaurants and institutions, not only the numerous small objects needed but also such larger details as ranges, steam tables, lunch counters, display cases, key and letter racks, metal bedsteads and such floor coverings as rugs and linoleums of different kinds.

AMERICAN RADIATOR COMPANY, 40 West 40th Street, New York. "IN-AIRID, the Invisible Air Valve."

When one portion of a heated radiator persistently remains cold, it is quite possible that in that particular part of the radiator there is stored a quantity of air, which of course prevents the penetration of steam. When new type radiation is used on one-pipe steam installations, the steam has a tendency to short circuit through the top nipples and close the air valve before all the air has been vented. This trapped air greatly reduces the heat output of the radiators, often to such an extent that additional sections are added,—and needlessly, for the real trouble is caused, not by insufficient heating surface, but by trapped air,—incomplete venting. The new IN-AIRID prevents short circuiting and assures complete radiator venting because it is designed with a baffle disc that fits tightly into the top nipple connection of the last section. It is this distinctive IN-AIRID feature that forces the steam to travel up the last section before it can come in contact with the valve and, in doing so, close it.

F. I. RAYMOND COMPANY, 228 N. La Salle St., Chicago. "The Raymond Duo-Stat." Information regarding a detail.

The regulation of heat has brought about the use of mechanism which, as a writer in THE FORUM has recently said, almost seems to possess human intelligence. This valuable booklet, for example, deals with an important, highly developed detail which would seem to be the last word in apparatus for controlling heat. "In old style systems of heat regulation, a room thermostat turns the fire on at 70, and holds it on until the temperature reaches 72 at the thermostat. Because it takes time for the heat to be transferred from the radiators to the thermostat, the radiators overheat before the fire shuts off. Then, because the radiators cool more quickly than the room, they often become uncomfortably cold before the thermostat again turns the fire on. This hot and cold radiator nuisance has caused a great deal of discomfort to home owners using fuel which requires automatic regulation. And it has caused no end of complaint to oil burner manufacturers who must necessarily use automatic regulation. The fault in a single unit system is that it turns the fire off too late, thereby causing overheating. Some auxiliary means is necessary to prevent this condition. The Raymond Duo-Stat eliminates any possibility of overheating because it automatically compensates the boiler limit to suit the weather. And overheating causes that following uncomfortable period known as 'Cold 70,' when the radiators are cold and the room feels chilly even though the thermostat still says 70. The aquastat in hot water heating systems was a step in the right direction. It at least provided a means of rough compensation when used according to instructions. But it did not go far enough, and it had two great faults. In the first place, it was seldom used according to directions, and therefore failed to accomplish its purpose. In the second place, it was intended to be set according to the season, and the weather has the well known habit of disregarding the calendar. What the aquastat started to do, the Raymond Duo-Stat finishes. It compensates the heating system automatically, continuously and unfailingly throughout the heating season and gives a fineness of control and a freedom from 'Cold 70' which has heretofore been impossible under automatic regulation."

AMERICAN RADIATOR COMPANY, 40 West 40th Street, New York. "How Shall I Heat My Home?"

The comfort and in fact even the practicality of a building, and particularly a residence structure of any kind, depend upon its being adequately heated. The method of heating is of course a matter which must be decided in view of many conditions, and therefore there attaches a special value to this brochure which studies different methods of heating,—by hot air, steam, and hot water. The booklet illustrates and describes the heating apparatus offered by the American Radiator Company for supplying heat by different methods, and several pages are devoted to illustrating and describing water heaters of different kinds. The last page of the brochure lists the different places,—almost all cities and towns of any importance,—where the products described in this booklet may be seen and fully examined.

THE CUTLER-HAMMER MFG. CO., Milwaukee, Wis. "Keeping Pace in the Newspaper Plant."

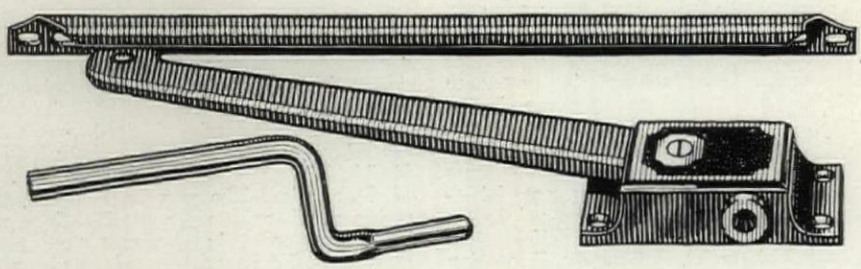
To the uninitiated the workings of a newspaper are wrapped in mystery. One sometimes marvels at the speed with which news is collected or reported and then almost instantly presented in printed form for perusal. It is quite evident, of course, that much of this highly efficient service is due to the smooth functioning of printing presses, and yet one hardly realizes how vast and how intricate these presses are until there are seen illustrations of these triumphs of mechanism. This booklet deals with just this. Issued by a firm which manufactures presses of the first importance, it covers far more than a mere description of the function and operation of the press control, press drives, newspaper conveyors and other items developed by C-H. It points out the advantages of each particular style of apparatus and shows how large and small plants alike are using the equipment to best advantage. Almost 100 actual installations of C.-H. presses are illustrated in the booklet.

NATIONAL LUMBER MANUFACTURERS' ASSOCIATION, Washington. "The Cost of Comfort in the Home."

Whatever may be the type of the building which an architect may design and a contractor erect, there are some considerations which must be and are invariably taken into account, and among these one of the most important is the prevention, as far as possible, of heat losses. This booklet deals with just this. "Builders who have long puzzled over the problem of the right kind of material to choose in order to insure winter comfort at the lowest cost have in this hand-book on the economics of dwelling insulation a valuable manual which treats of the heat-retentive properties of various materials in wall, floor and roof construction. It gives actual labor and material costs for various types of wall, floor and roof construction." The essential teaching of this publication seems to be that while fuel economy can be accomplished by various forms of wall construction, the additional charges resulting in an increase of cost of the structure may much more than offset the fuel saving; and from an economic viewpoint at least the simpler types of dwelling construction are often the most satisfactory. Computations by independent authorities indicate that from about 25 per cent to 35 per cent of the loss from a typical dwelling without weather stripping or special insulation occurs through the walls, from 25 per cent to 35 per cent through the attic ceiling and roof, from 30 per cent to 40 per cent through and around windows and door openings, and from 5 per cent to 10 per cent through other channels, such as the first floor or basement walls. All these factors therefore must be taken into consideration when studying the question of heat loss and comfort in dwelling construction. One of the charts in the publication shows that drop siding construction is the most economical kind from the point of view of comfort. As compared with stucco on frame, face brick veneer on frame, stucco on hollow tile and concrete, drop siding used for the walls of an average dwelling,—having approximately 2,000 square feet of wall surface,—nets the home owner an annual saving of from $17 to $121. This calculation is based on the interest on the cost of construction, interest and depreciation on the heating plant and fuel cost, required to offset the heat loss through the walls.

A STORM IN THE NIGHT

HOW suddenly they come! Night storms with terrific winds .... straining, tearing, shattering .... ▲ It's then that casements must be safe .... rigid against the wind, yet easy to close in a moment. ▲ For outswung casements must withstand sudden as well as average stresses. And that's where Win-Dor Operators and Stays prove their utility. ▲ Win-Dor controlled casements are always rigidly and automatically locked in position .... yet they move easily, smoothly, at a touch! ▲ And Win-Dor



devices offer *more* than mere utility. This Series 25 Win-Dor Operator is remarkably handsome in design, convenient in use, moderate in cost. It solves the inside-screening problem in an utterly unobtrusive and thoroughly efficient way: Casement-control *through* the screen, through any screen. ▲ In fact, all Win-Dor hardware is specifically designed to solve *definite problems* that you meet every day and win quick appreciation among your clients. ▲ A helpful booklet, rather more than a catalog, will be promptly forwarded upon request. Or Sweet's will give summarized specifications.

WIN-DOR Series 25 operators provide the utmost in convenient and easy casement operation.

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REVIEWS OF MANUFACTURERS' PUBLICATIONS

GLEASON-TIEBOUT GLASS CO., New York. "A New Line of Decorated Celestialite Globes." Their value in design.

Lighting fixtures play a very important part in the design not only of interiors but of exteriors as well, and should always be in keeping with the rest of the design. Cheaply made or poorly designed lighting fixtures have a cheapening effect that is out of all proportion to their size, and which is very noticeable in a large number of modern buildings. The choice of lighting fixtures should be as carefully considered as that of any other feature of the design. The Celestialite Division of the Gleason-Tiebout Glass Company has a new line of decorated globes which follow the highest ideals in design. The various styles are each represented by a characteristic motif fused into the glass in such a manner as to be absolutely permanent. These designs are beautiful in their simplicity and are designed to harmonize with settings done in Gothic, Spanish, Colonial, Italian, Grecian, Romanesque, Georgian and other styles. They are all beautifully illustrated in a catalog recently issued by the Gleason-Tiebout Company, called "A New Line of Decorated Celestialite Globes." The various globes are shown in reproduction, both in plan and in elevation.

JOHNS-MANVILLE CORPORATION, New York. "Johns-Manville Waterproofing." A booklet on the subject.

This brochure or booklet presents a concise study of the waterproofing materials supplied by the Johns-Manville firm,—*waterproofing*, that is, and not *dampproofing*, for, as the text points out, there is a vast difference between the two. "Waterproofing is a broad term, often misapplied and misunderstood. It should be thought of only in the case of actual infiltration of water due to pressure from surface seepage and the proximity of water in volume which sets up hydrostatic pressure. Every other case of protection against infiltration of water comes under the heading of dampproofing. Dampproofing is protection against moisture where no actual water pressure is encountered. It is simply the prevention of dampness appearing on the surface of walls or floors." With these definitions to form a sort of text, the booklet goes on to discuss in turn each of several types of waterproofing materials,—Concrete Primer; Asphalt Waterproofing Cement; Asbestos Felted Fabric; Saturated Cotton Fabric; Self-Healing Waterproofing Cement; Picking Tank Cement; Expansion Joint Filler, and so on through the long list of materials for supplying which the Johns-Manville Corporation is widely known. The importance of the publication need not be urged upon architects and engineers who realize the vital necessity of securing absolutely waterproof construction.

EDISON ELECTRIC APPLIANCE CO., INC., Chicago. "Hotpoint Electric Air Heaters." Data on an appliance.

From the standpoint of design as well as that of utility, electric heating has many advantages. The heat units occupy a very small space, and in the case of those built by the Edison Electric Appliance Company, they are beautifully designed and consist of both built-in heaters and heating cabinets. These resemble the high grade metal furniture now so extensively used in homes and offices. The standard finish is baked brown mahogany with a gold stripe outlining the top. Special custom-built designs in two-tone finishes are also available in a variety of colors. The built-in units may be placed in any regular 4-inch partition, and in this way they effect a great saving in floor and wall space and make it unnecessary to have unsightly radiators standing about the rooms. One valuable feature of the Hotpoint Heater is that it operates at a comparatively low temperature in such a way that the warm air is forced out into the room instead of ascending directly to the ceiling, as is the case when it is heated too suddenly. This prevents the walls above the heater becoming sooted, as there is no ascending air current, and particles of dust are not burned by coming in contact with glowing coils. In the booklet "Hotpoint Electric Air Heaters for the Home," stock and special models of these heaters are shown in full color as well as in colored illustrations showing these heaters in connection with interior arrangements, giving an idea of the manner in which they harmonize with beautiful surroundings.

RODDIS LUMBER & VENEER CO., Marshfield, Wis. "Roddis Doors for Hospitals." Their appearance and utility.

Severe simplicity is the keynote of design for hospital interiors and should be strictly adhered to in the use of all fixtures and appointments. This does not necessarily mean that beauty must be sacrificed in the cause of cleanliness and utility, as the quality of simplicity is often a great aid to beauty. To satisfy the various requirements of hospital use, the flush door was designed, having no panels or mouldings or depressions in which dust or germs might collect. These doors are built of several thicknesses of wood veneer cemented together in such a way that they are very durable, and in addition they have the advantage of being highly fire- and sound-resisting. They may be enameled white or may be had in various excellent natural wood finishes. In many hospitals the beauty of these doors is used to offset the rather somber impression of severe architecture. The Roddis Lumber & Veneer Company has issued a booklet devoted to descriptions of this type of door. There are illustrated Roddis flush doors installed in hospitals. A feature of special interest to hospital designers is the lead-lined door, a device designed for use in X-ray rooms.

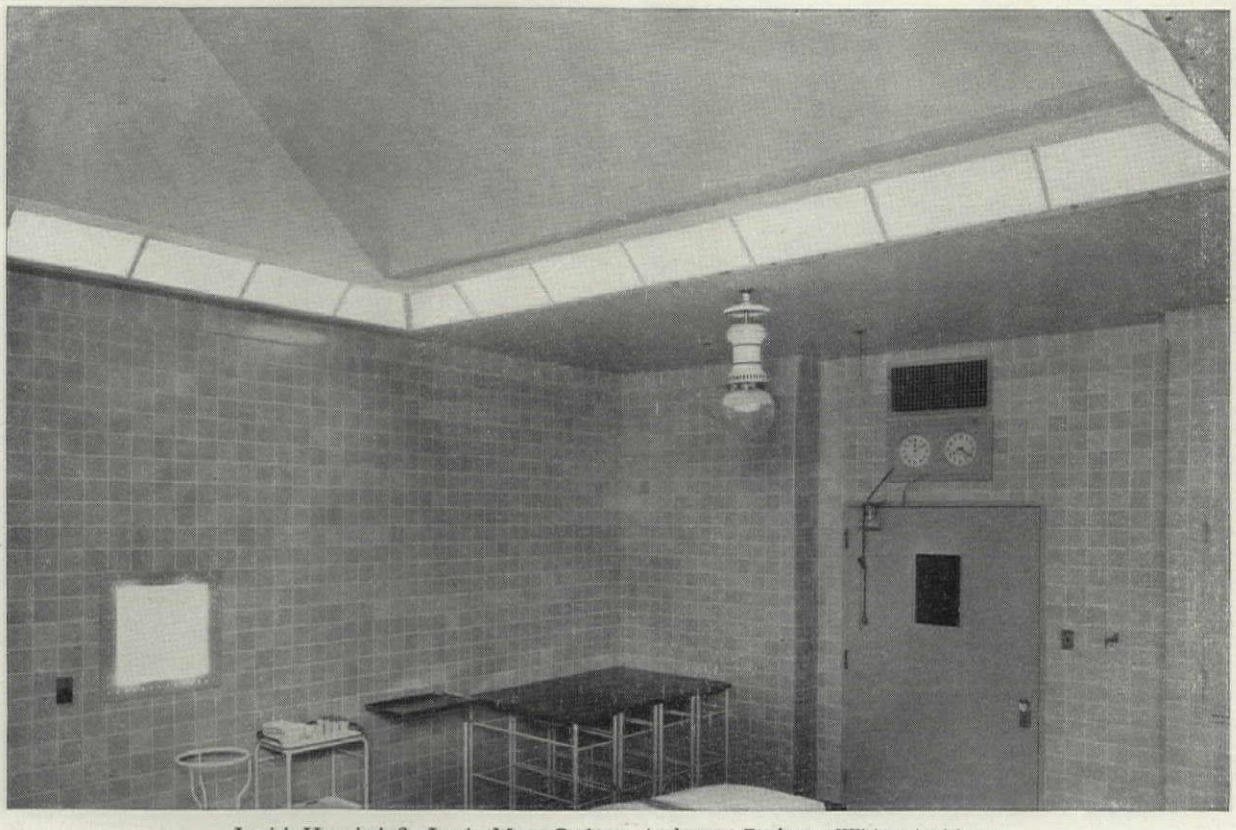
NATIONAL ASSOCIATION OF MARBLE DEALERS, Cleveland. "The Maintenance of Interior Marble."

The wide and constantly increasing use which is being made of marble, for exteriors as well as for interiors, renders of particular value and importance data having to do with the proper treatment of the material. It is of course quite necessary that marble, whether in the form of flooring, wall facing, balustrades or anything else be kept clean, but the cleaning need not involve damaging the material, which unfortunately it only too often does. This little brochure is intended chiefly for the guidance of those concerned with care of marble when used for interiors, though it does not entirely neglect the upkeep of the material when used for exteriors. The booklet describes in condensed form the results obtained from extensive experiments carried out under the auspices of the National Association of Marble Dealers in the laboratories of the National Bureau of Standards. The recommendations which the brochure makes are based on the results of some 10,000 tests and experiments, a study of a vast number of marble installations, and the experiences of people who have been concerned with problems which involve the upkeep of marble. Directions are given for the proper cleaning of marble, and methods are suggested for eradicating all the common types of stains. The booklet also makes a few suggestions which may prove to be highly valuable to the marble setter.

THE ARTISTIC LIGHTING EQUIPMENT ASSOCIATION, 420 Lexington Avenue, New York. "Outdoor Lighting."

"Light from charming lanterns is as becoming to dark doorways as smiles to dull faces, transfiguring them into radiant beauty. It is a symbol and a sign that beyond the door there will be found light hearts and merry voices; a family whose warm cordiality overflows in the message of the lamps." This is a quotation from a little booklet published by The Artistic Lighting Equipment Association in the interest of better exterior lighting for American homes. It expresses admirably the great importance of having the exterior as well as the interior of the home cheerfully and beautifully lighted. In ancient times, when securing light was a much more difficult problem than it is today, people were required by public decree to hang out lights at their doorways during the hours of darkness, and it is from these "lanthornes," beautifully designed in a great variety of patterns, that many of our most attractive modern lighting fixtures are adapted. They are made in sturdy waterproof materials, suited to every possible spot in the grounds where light is needed. Many interesting pen and ink sketches appear in the booklet, and together with the cleverly written text thereof, give an idea of the importance of having well lighted houses and grounds. The association which publishes the booklet is a voluntary organization made up of the leading equipment manufacturers and distributors for the purpose of advancing through coöperative effort a better knowledge of the use and the value of lighting equipment.

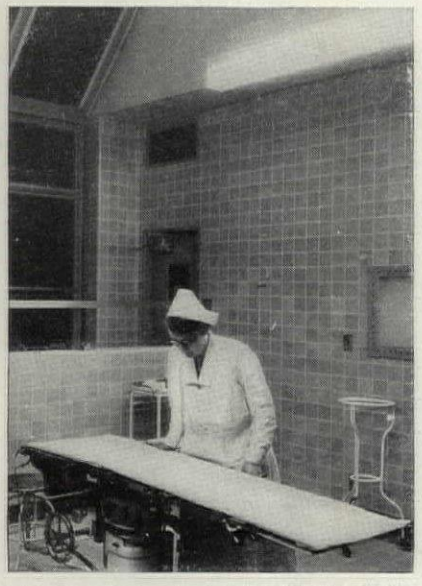
FRINK Reflectors *for* Hospitals



Jewish Hospital, St. Louis, Mo. Graham, Anderson, Probst & White, Architects

Shadowless Illumination for Operating Rooms

THE interesting and highly successful method of operating room illumination shown on this page is worthy of your careful study. To meet the requirements of illumination similar to that obtained from daylight a reflector was recessed into the intersection of the ceiling and skylight, surrounding the skylight opening and producing an intense flood



of light. The light, coming from all directions eliminates harsh shadows as shown in the lower photograph. Specially imported diffusing glass helps shadow elimination. Note that the distance of lamps from the operating table overcomes the heat problem. . . . The Frink Corporation, 365 Lexington Avenue, New York City.

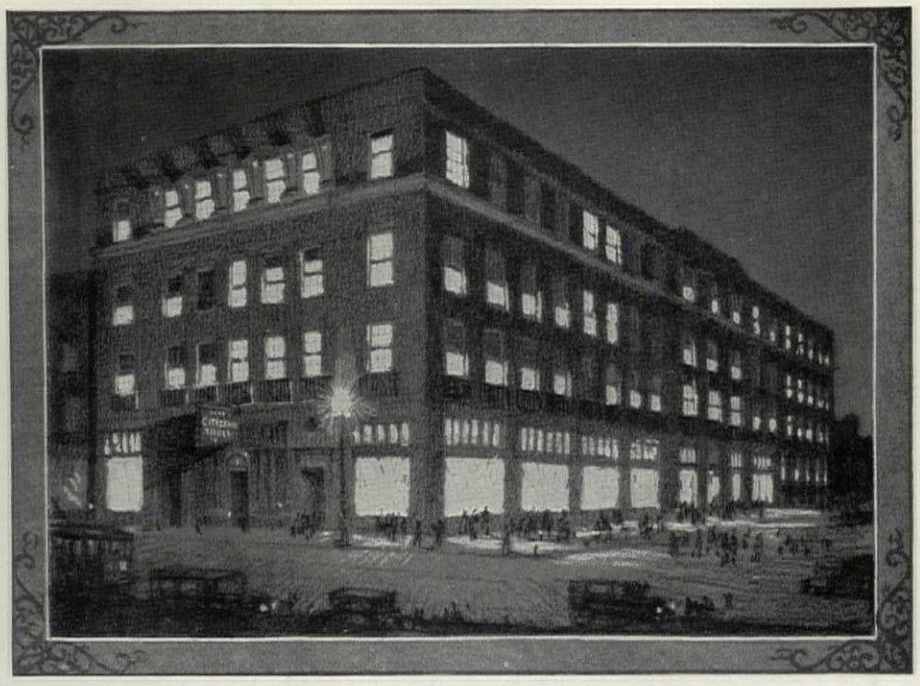
The FRINK *Corporation*

INDEX TO ADVERTISING ANNOUNCEMENTS

PART 1—ARCHITECTURAL DESIGN

PART 2—ARCHITECTURAL ENGINEERING AND BUSINESS

Medical Science chooses CREMAX



Medical Science Bldg., Columbus, Ohio, equipped throughout with Cremax Globes. J. Edgar Outcault, Architect.

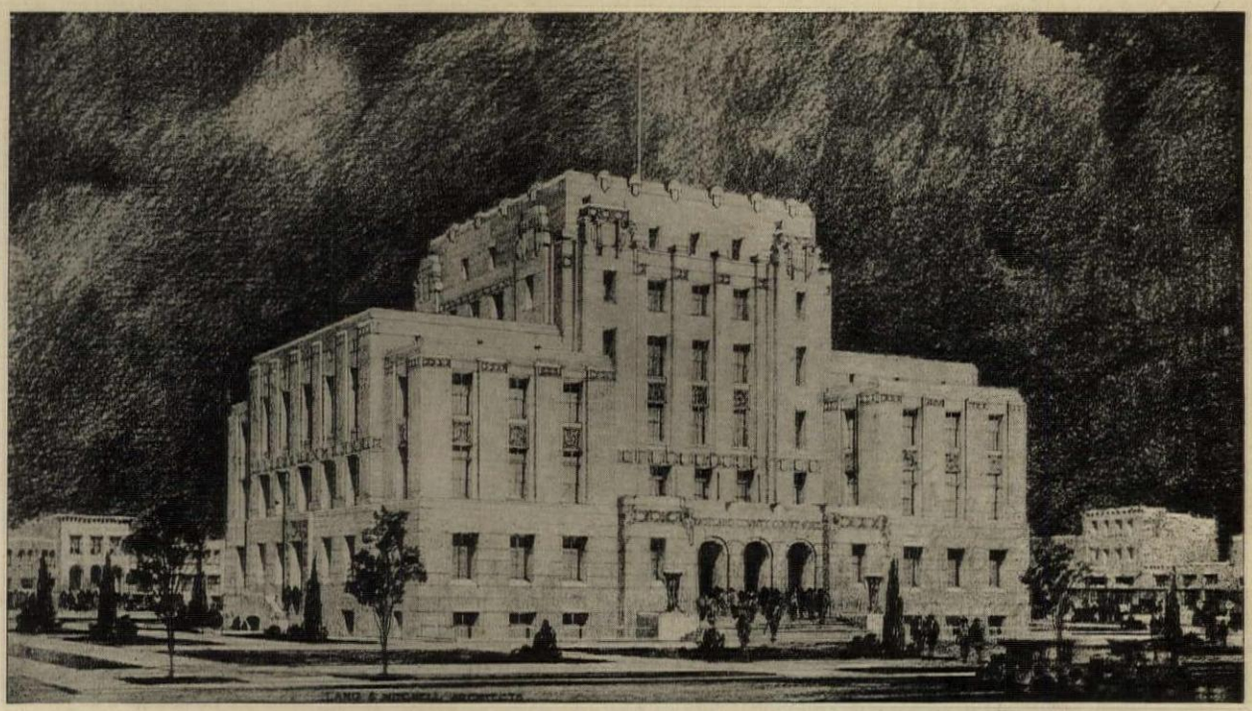
Cremax Globe No. 3756 used in the offices of the Medical Science Building

MINDFUL of the exacting requirements of the medical profession as to lighting, designers of the Medical Science Building, Columbus, Ohio, chose Cremax Globes.

Cremax, newest development of Macbeth Laboratories, is ideally suited to artificial illumination of buildings where *correct*, as well as *artistic* lighting is essential. Instead of the cold white light formerly used extensively, Cremax transmits a warm, mellow-toned light in adequate quantity. Cremax light is thoroughly diffused, eliminating sharp shadow. The absence of excessive surface brightness on Cremax Globes eliminates harsh glare.

Cremax represents the new idea in lighting—artistic and at the same time practical. Macbeth Engineers will be glad to assist architects and building managers in designing and installing correct lighting systems. A demonstration of Cremax will be arranged on request. Macbeth-Evans Glass Company, Department J, Charleroi, Pa.

FOR BETTER CREMAX Globes LIGHTING



Lang & Witchell
Architects

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Eastland, Texas

Christy-Dolph Cons. Co.
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Characteristic Wall Tones Through the Medium of Acme Brick

Use Our Display Offices for Solving Your Color Schemes

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Galveston, Texas
Greenville, Texas
Houston, Texas
Little Rock, Ark.
Lubbock, Texas
Memphis, Tenn.
Monroe, La.
New Orleans, La.
Oklahoma City, Okla
Paris, Texas
Port Arthur, Texas
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THIS splendid building is faced with Acme Brick from our Perla kilns.

Their mellowed ivory tones successfully maintain the spirit of the design in a weather-resistive burned clay product.

Thirty-seven years in the art of brick-making and ten Acme-owned-and-operated plants enable us to offer "a brick for every type, a color for every color scheme."

ACME BRICK

Let us help you solve *your* color schemes in Permanent and Colorful Acme Face Brick—everlastingly beautiful

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Established 1891

MANUFACTURERS OF THE PRODUCTS WE SELL

Plants, Offices and Displays Throughout the South

WELL BURNED CLAYS NEVER DECAY—SPECIFY ACME

AN EXQUISITE DINING ROOM SHOWING DRIWOOD MOULDINGS FOR CEILING CORNICE, WALL PANEL AND CHAIR RAIL

The Restoration of an Authentic Wall Treatment

ONCE it was limited to great mansions ... the use of beautiful decorative mouldings for cornices, wall panels, chair rails, etc. Then hand carving became so expensive that for many years carved wood mouldings have seldom been used except in the wealthier homes.

Recently, however, the use of decorative mouldings in wood has been restored ... since the introduction of Driwood Period Mouldings in Ornamented Wood. For their remarkably low cost makes them available for the small home or large mansion, for apartments, for educational institutions and public buildings, hotels, lobbies, etc.

Driwood Mouldings rival in depth and beauty the original hand-carved mouldings from which they drew their inspiration. They may be used in a single room or throughout an entire home. They are adaptable to many types of interiors. Thus, the illustration above shows the use of Driwood mouldings in a dining room furnished in the Louis XVI period.

...at a cost available even to small homes

Facts For the Architect

Material—Driwood Period Mouldings are neither composition nor plaster—hence will not chip or crack. They are wood—ornamented wood. Can be furnished promptly in poplar and red gum. Also to order in walnut, mahogany or any other wood. Obtainable if desired in Flaimpruf, the permanently fire-safe wood.

Finish—Driwood Mouldings can be finished in white, in color, or to match any wood. The mouldings in poplar are particularly suited for use in white or painted. Red gum is recommended where a walnut or mahogany stained finish is desired.

Design—Driwood Mouldings are made in 119 individual designs—offering the architect limitless opportunities for original combinations.

You will be interested in the Driwood Catalog showing photographs of the 119 Driwood designs in 81 suggested assembles. We shall be glad to send you a copy on request.

HENRY KLEIN & CO., INC.

with which are consolidated the IMPROVED OFFICE PARTITION CO., and DRIWOOD CORP. (Est. 1909)

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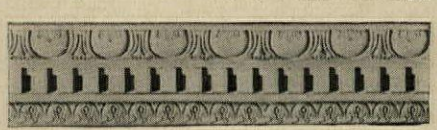
DRIWOOD
TRADE MARK REG.
PERIOD MOULDINGS
in ornamented wood



Section of ceiling cornice... one of many photographs shown in the Driwood Catalog.