# ARCHITECTURE 

 February I932

A Ferro-concrete House of To-day JOHN WALTER WOOD, ARCHITECT

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With an Introduction by FISKE KIMBALL
"That the great plantation houses of the Virginia Tidewater should have hitherto lacked exact study is surprising, but it is true. By those who know the Tidewater it will be readily understood. Standing by the riversides in vast stretches of coastal territory where communication was once almost solely by water, approached from the land mainly on horseback over roads which until recently were frequently almost impassable to vehicles, they . . . have remained deeply inaccessible to the hurried architect of an industrial world.
"A few houses, to be sure, fortunately placed near the growing urban centres, early attracted visiting students. Westover and Shirley owed their exclusive early fame little more to their own magnificence than to their being within reach from Richmond for a hasty trip with camera and rule. Blandfield and Stratford were as imposing in their distant retreats; Rosewell, Mount Airy, and Cleve were once as richly finished, before fire gutted them in their succorless isolation.
"The pioneer student of a generation ago made hasty measurements, guessed heights, finished his drawings far from the possibility of verification, forgot out-buildings, neglected to note materials and colors. To this day architects using the older works generally suppose the doorways of Westover to be of wood. Pretty are the theories which have been built on such premises! The vast plane surfaces of houses like Carter's Grove have seemed barren to those who were not informed of the rich variety of color and gauging in their brickwork, and which, unlike mouldings, did not appear in summary outline drawings.
"A whole province of great mansions, most of them never drawn or published before, is rediscoverect. The background of a vanished civilization is exactly set forth."-Fiske Kimball.

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## H. R. 6187

T'HE Honorable Robert A. Green, representative of Congress from Florida, introduced on December 17, 1931, a bill
"To direct the Secretary of the Treasury to contract for architectural and engineering services in the designing and planning of public buildings.
"Be it enacted by the Senate and House of Representatives in Congress assembled:
"That the Secretary of the Treasury is hereby authorized and directed to employ by contract, and at the established rates of compensation, outside professional or technical service of competent persons, firms or corporations, for the architectural and engineering designing and planning of such Federal buildings as are now or may, in the future, be placed under the jurisdiction of his Department, without reference to the Classification Act of 1923, as amended, or to Section 3709 of the Revised Statutes of the United States.
"Section 2. That such employment shall be based at all times on the highest grounds of proven professional ability in order that our Federal architecture may truly represent our national genius and keep. pace with the rapid development of the arts of architecture and engineering. Architects or engineers shall not be employed without prior submission to the Secretary of the Treasury of satisfactory evidence of their qualifications and experience.
"Section 3. That wherever circumstances warrant, such services shall be contracted for by the employment of the ablest architects and engineers resident in the general sections of the country wherein such Federal buildings are to be erected.
"Section 4. At the discretion of the Secretary of the Treasury, the employment of outside architects or engineers may be omitted in connection with public buildings of a total cost for building and site of not more than $\$ 50,000$.
"Section 5. That all such individuals, firms or corporations shall render their services subject to the approval and under the direction of the Supervising Architect of the Treasury, whose duty it shall be to act for the Government in all matters regarding sites, the allotment

and sub-division of space, the control of technical detail, the letting of contracts, and the supervision of the erection of said Federal buildings.
"Section 6. Nothing in this act shall be construed to affect the duties of the Supervising Architect of the Treasury in regard to maintenance, alterations, repair, or supervision of either existing or proposed public buildings.
"Section 7. That the cost of compensation for outside professional or technical services shall be charged to the appropriation for the construction of the building for which such services are rendered.
"Section 8. All acts or parts of acts inconsistent with the terms of this act are hereby repealed."

## П)

## HARRODSBURG MEMORIAL COMPETITION

THE Jury of Award in the Competition for the Memorial to be constructed by the Quartermaster Corps of the Army under the direction of the Secretary of War, at Harrodsburg, Ky., met on December 18 and awarded the commission for the work to Francis Keally, architect, and Ulric Ellerhusen, sculptor, of New York City. The Jury consisted of Robert Aitken, sculptor, of New York City, chairman, Mrs. James Darnell, representative of the Governor of Kentucky, Frankfort, Ky.; Frederick Law Olmsted, landscape architect, of Boston, Mass; Edward W. Donn., Jr., and George G. Will, architects, both of Washington, D. C. The finding of the Jury was in part as follows:
"After a repeated, careful, thorough examination and serious consideration of the entire series of designs, numbering seventy-three (73), and by process of successive elimina-

tions, the Jury appointed to judge the designs and models submitted in the competition for a Monument to the Memory of the First Permanent Settlement of the West at Harrodsburg, Ky., has reached the unanimous decision to recommend design No. 73 as being of outstanding merit and suitable in every way for carrying out the intentions of the Program."

## $\bigcirc$

THE SMALL HOUSE PROBLEM
$W^{\mathrm{E}}$ are asked to give space to the following communication.

November 7, 1931.
To all Chapters of the American Institute of Architects and other Architectural Organizations.

## Dear Sirs:

The architectural organizations in the suburbs of New York, and at least two within the city, have signified their opposition to the Architects' Small House Service Bureau.
The Bureau undoubtedly was conceived with worthy motives, but in its workings has brought real hardships upon the residential architect and others just starting their practice.

We have found the Bureau acting not so much as a "clinic" for that poor client who cannot afford both an architect and a colored tile bathroom, but rather as an aggressive, price-cutting competitor of the architects for their already established clientele; and this at a time of depression when architects need every bit of work they can get.

No other allied part of the building industry, such as the realtor, mortgage company, material yard, nor the labor union has a similar official "bread line" to give away its services and thus endanger its firmly set scale of payment achieved by years of effort.

A director of the Bureau told the writer that he saw no reason why the Bureau's activities should not be extended to include the eight or nine room house with garage attached. The possibilities of extending the "clinic" are unlimited in scope and feasible for every phase of architectural service. Also a large market is open for organizations such as Sears, Roebuck, who recently advertised to ten million people that the architectural fees could be saved by dealing with that company.*
The architectural publications are printing many articles by the officials of the Architects' Small House Service

* Sears, Roebuck \& Company have repudiated this statement since its publication, and have announced that their policy contemplates collaboration with the architectural profession rather than competition with it.-Editor.
(Continued on page 11)

Whether in the traditional classic or the designs of today, the beauty of a monumental building is enhanced by the use of Georgia Marble


MARBLE, through which the architecture and sculpture of the ages have been given to the world, becomes the medium for the expression of the new design of today.

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## GEORGIA MARBLE

## THE BULLETIN-BOARD Continued

Bureau extolling their new doctrine of their stock plan idea for architects, namely, that supervision is more important than individuality of design. These writers completely overlook the fact that architects are not enthused about supervising somebody else's stock plan; and that architects are not trained to offer their services primarily as supervisors, and secondly as designers.

During the past winter architects in the vicinity of New York City were solicited for funds to aid the unemployed draftsmen, and they responded generously. The Architects' Small House Service Bureau became the recipient of that generosity by a gift of forty-eight draftsmen whose salaries were paid out of that charitable fund! This winter promises to be long, hard, and meager for every one; but in addition, architects are expected also to compete against their own last winter's charity.

At the present time the American Institute of Architects endorses the Architects' Small House Service Bureau.

We consider that this Bureau, as now constituted, is merely another commercialized stock plan company, operating under the guise of a "clinic," and is no more entitled to favored endorsement of the A. I. A. and the U. S. Department of Commerce than you or $I$, or any other architect or stock plan company.

This continued endorsement, especially during this depression, is increasing an already aroused antagonism and resentment among architects and their organizations, and if allowed to grow will menace the prestige of the A. I. A. and imperil, by loss of good will, its attraction for future membership.
Unity and harmony in the profession are most vitally needed, and we should greatly appreciate an expression of your opinion on this critical matter,

> Yours sincerely,

Clarence H. Tabor, Jr., President, The Architects League of Northern New Jersey.

## MELLON INSTITUTE FELLOWSHIPS

DR. EDWARD R. WEIDLEIN, Director of Mellon Institute of Industrial Research, Pittsburgh, has recently announced the establishment of several fellowships in the Institute, the purpose of which is the scientific investigation of special branches of industry processes.

Raymond C. Briant will study the chemical and physical properties of Portland cement and the development of certain new cement products. Dr. Rob Roy McGregor will investigate the possibilities of illu-

minating glassware, and Erle G. Hill will study the processes employed in the manufacture of steel plates.

## NEW YORK CHAPTER, A. S. L. A.

THE New York Chapter of the American Society of Landscape Architects will hold its Ninth Annual Exhibition of photographs of work of the members of the Chapter at the Ferargil Galleries, 63 East 57th Street, New York City, from March 16 to 26 , inclusive. From more than 225 photographs submitted by members of the Chapter, the Exhibition Committee has selected approximately 125 photographs to hang.


## NEW YORK UNIVERSITY

DEAN BOSSANGE, College of Fine Arts, Department of Architecture, New York University, announces two new options in architecture to begin in September, 1932. These are Options III, Interior Architecture, and Option IV, Domestic Architecture. Both of these courses lead to the degree of Bachelor of Architecture, and will provide the scholastic requirements set by the State Board of Regents for registration in the State of New York. Both are open to women.

## LE ROY MINTON, 1882-193I

LE ROY H. MINTON, consulting engineer, died in his home at Metuchen, N. J., on December 15 . Mr. Minton has been known for his outstanding work in the development of color in terra-cotta. He was a graduate of the College of Ceramics, University of Ohio, and had been president of the American Ceramics Society and president of New Jersey Clay Workers' Association.

## A SON CARRIES ON

SINCE the death of Adrian A. Buck, for many years distributor for the United States and Canada, representing James Powell \& Sons (Whitefriars), Ltd., Paul S. Buck,
his son, has been appointed to carry on this work as distributor in the name of Adrian A. Buck.

## PERSONAL

Spencer J. Warwick, architect, announces his withdrawal from the partnership of Smith \& Warwick as of August 1, 1931, and the opening of his office for the general practice of architecture at 84 Thornton Avenue, Youngstown, Ohio. Manufacturers' catalogues are requested.

Charles S. Peabody is withdrawing from the firm of Ludlow \& P'eabody, architects. Mr. Ludlow vill continue the practice of architecture under the title of William Orr Ludlow, at ioi Park Avenue, New York City.

The architectural firm known as Ivan H. Riley \& Company of Chicago, is dissolved by mutual agreement. Mr. Ivan H. Riley has opened architectural offices in the State National Bank Building, Brownsville, Texas, and in the Rio Grande National Life Insurance Building, Harlingen, Texas. Catalogues for the year 1931 will be appreciated as well as those coming during the new year.

Howard W. Cutler, architect, has moved his offices to 1108 Sixteenth Street, N. W., Washington, D. C.
Brown \& Von Beren, architects, announce the removal of their offices to 295 Sherman Avenue, New Haven, Conn.

Frederic W. Mellor, architect, announces the removal of his office to 386 Fourth Avenue, New York City.

Francis B. Jacobberger, architect, announces that he is continuing the practice of architecture of the firm of his father, the late Joseph Jacobberger, with whom he has been associated during the last ten years. The offices are at 208 McKay Building, Portland, Ore.

Norman T. Newton announces that he has established an office for the practice of landscape architecture at 1oI Park Avenue, New York City.
W. Gordon Jamieson, architect, announces the opening of his office for the general practice of architecture at 816 Twelfth Street, Denver, Colo. Manufacturers' catalogues are desired.


In 1895 the St. Croix Lumber and Manufacturing Co. built the logging dam shown above at Kawaschachong Falls, on the Kawishiwi River, near Winton, Minnesota,
 T'S not difficult to picture the sturdy rivermen of northern Minnesota considering the future of the dam they were building and cheerfully daring the Kawishiwi to do its worst.
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## ARCHITEGTURE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXV, NO. 2

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Clocks
A collection of sixty photographs

# CHARLES SCRIBNER'S SONS, PUBLISHERS 



The private pool of Mr. Max Straus, Beverly Hills, California. Sterilized with a Wallace \& Tiernan chlorinator

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Manufacturers of Chlorine and Ammonia Control Apparatus

[^1] BP-30


Photograph by Palmer Shannon

[^2]
## ARCHITECTURE

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Photograph by John Walter Wood
Aerial view of Mr. Pratt's house and island in the Thousand Islands of the St. Lawrence

# A Ferro-concrete House of To-day 

JOHN WALTER WOOD, ARCHITECT

## By Henry H. Saylor

UT of the dense fog that settled down $\lambda_{4}^{*}$ over architecture after the quarter N $_{d}$ century, a few results are beginning
 have about them nothing of the Puritanical baldness contributed by the extreme functionalists, nor, on the other hand, have they the familiar earmarks of those who have felt that architecture must primarily be startling and bizarre.

Here is a house for Mr. Sherman Pratt at Niagara Island, Ontario. Mr. Pratt is a bachelor who wanted, for an isolated site on one of the Thousand Islands, a house that would be fireproof, that would require a minimum of upkeep, that would express as nearly as might be the simplicity of life upon such an island, and, finally, that would be economical in construction.

The problem was unusual in that the isola-
tion of its site brought considerable difficulty in the assembling of materials and labor. Mr. Wood not only designed the house, but found it necessary to build it as well, spending most of a year on the job. It seems unquestionable that the result owes much of its success to this fact. Like the master builders of old, Mr. Wood constantly found ways of achieving the ends desired that could not have been contemplated in the drawings and specifications. Results that were not entirely to his liking could be changed before they had gone too far. It is apparent also from the photographs-even though these do not convey the color-that Mr. Wood has tried to evolve, and has succeeded in evolving, style from the materials at hand. The work has been carried far beyond the point where it merely satisfies the functional requirements, for one can see at every turn the result of painstaking study



First floor: I-living room, 2-study, 3-hall, 4-coat closet, 5-dark room, 6-dining-room, 7-pantry, 8-dining-alcove, 9-kitchen, 10maid's room
Second floor: 1, 3, and 5-dressing-rooms ; 2, 4, and 6-sleeping-porches
Tower room and roofs : $I$-hatchway to tower roof, 2-tower room
Basement floor: 1 -wine cellar, 2-boiler-room, 3-store closet, 4-laundry, 5-game room
in the composing of masses in light and shade, the arrangement of voids, and the interplay of color and texture.


Ferro-concrete was chosen as the building material because of its economy, plasticity, and permanence. It should be noted particularly, however, that to achieve a finished result of this character, the whole idea of " $I: 2: 4$ concrete" must be abandoned at the outset. Those who will make of a ferro-concrete structure a living, glowing composition, faceted in pleasing textures that vary in character according to the need, must be willing to do far more than pour water, cement, and aggregate into a mould. The potentialities of concrete must be understood, and particular emphasis placed on the intelligent application of the water-cement
ratio, methods of pouring, and curing. Concrete possesses possibilities of color and surface textures that have been little appreciated. Mr. Wood here had the advantage of being on the job and, therefore, of having been able to make scores of samples and tests to get the desired result, varying his sands, aggregates, and combinations of pigments. The color finally selected was a warm buff for the building itself, with a light tile red for the balustrade copings. This color was matched in painting the metal casements. Variations of these two colors were used on the roof terraces, which were patterned in color.

For the terrace retaining walls and the exterior of the balustrades a rough texture was used to effect a transition from the rough broken surface of the rock base to the smooth texture of the walls themselves. Mr. Wood's superintendent on the job was A. C. Hammond, while the


Photograph by Palmer Shannon
This view over several of the roof terraces is convincing evidence that any more conventionalized treatment of a house posite page


PhotJgraph by John Walter Wood
The dining-room wing with the east sleeping-porch above. At the right is the awning over the dining-terrace. The basement wall has a rough texture to form a transition between the rocky base and the smooth tex-
ture of the house walls


Photograph by Palmer Shanron
The west front with living-room chimney channelled in subtle suggestion of the flue lines. At the right is the front entrance
engineer who designed the reinforced concrete structural details was H. H. Koons. Beatrice M. Pruyn was the landscape architect.


Walls, floors, roofs, terraces, all steps, chimney, balustrades, and copings are of poured concrete. The exposed basement walls up to the first-floor level were treated chemically to expose the aggregate. Above the first floor the vertical surfaces were poured with a half white and half gray cement mix with integral pigment to produce the buff color. Necessary patching was done immediately upon stripping the forms. Upon completion, the walls were ground with a carborundum wheel to obtain a smooth texture.

With the extensive views of the site in mind, obviously the roofs and terraces became the main living quarters of the house, and they have been designed in recognition of that fact. As a practical detail of building, the rough concrete roof slabs were covered with two inches of insulation, above which a five-ply felt roof was laid. On top of this roofing a sand cushion was
deposited and a finished concrete slab two inches thick was poured, with reinforcing of hog wire. These finished roof slabs were poured to patterns, in color variations, no slab exceeding eighty square feet in area.

It will be noticed that while the architect has shown restraint in the use of his decorative details, he has not hesitated to use them where they would serve to emphasize the relations of the main and secondary masses. For instance, there are the incised horizontal bands of the exterior, the projecting string courses, the curved profile of the sleeping-porch beams, and the swell of the great bay window in the living-room. He has also used small forty-five-degree splays at the corners of the main masses, and an interesting play of line in the chimney design. Incidentally, the incised bands of the upper part of the tower mark the radio aerial, carried on glass insulators.

Mr. Wood's house for Mr. Sherman Pratt is, in my opinion, an unmistakable milestone along the architectural highroad leading from the recent Babel of Tongues to something ahead of us-something in which clear logic and beauty are once more happily wedded.

A raking view of the front entrance. The incised lines of the base carry along The spiral ceiling of the stair hall centring in a light which, parenthetically,

The stair hall. Steps are poured concrete of buff color, with composition tread inserts. Flooring is of com-

The living-room has a flooring of random-width walnut, ivory plaster walls, and fireplace of concrete


Pholographs by Pulmcr Shannon
A great window opens most of one side of the living-room to an extensive view of the St. Lawrence River

A built-in seat extends along the east end of the dining-room and adjoining this a breakfast table is set



The south dressing-room has oak floor and a natural-fnish wood wainscot. Folding seats, desk, and table close flat against the wall to provide bed space in severe weather

East sleeping-porch, indicating the typical construction of cantilevered roof and the adaptable shelter of Venetian blinds



Photographs by Palmer Shannon
In the tower room, where the stair bulkhead has been developed into a logical provision of built-in couch, bookshelves, desk, and map cases

Looking down from the tower upon the various levels of color-patterned terrace paving and the natural planting about the base


Photograph by Palmer Shannon


Photograph by Hedrich-Blessing Studio
Board of Trade Building, Chicago, Ill.
holabird \& ROot, architects
The building is forty stories in height, dominating the financial district at the foot of LaSalle Street. The entire structure is faced with Indiana limestone above a thirtyfoot base of pink Minnesota granite. The roof tower is covered with aluminum excepting that at its lower part glass panels are inserted in connection with an observation platform


Plan of typical floor for offices


Fourth-floor plan showing the great Trading Room

Board of Trade Building

## Chicago, Ill.



Ceres, 馬 Goddess of Agriculture, the aluminum figure, forty feet in height, crowning the roof

First-floor plan at street level



Photograph by Shigeta-Wright
Ceres, Goddess of Agriculture, a mural by Fohn Norton, in the Trading Room


Photograph by Hedrich-Blessing Studio
The entrance arcade. The floors here are Batesville marble tile with ornamental inserts of colored marble and a contrasting base and border of Belgian Black. All of the metal is brilliant nickel silver
Board of Trade Building, Chicago, Ill. holabird \& root, architects



Entrance lobby detail. The piers are of Blue Belge, the corbels of Premier

Pholographs by Hedrich-Blessing Studio
Directors' Room. Woodwork, natural oak. Pigskin-upholstered furniture
Board of Trade Building, Chicago, Ill. holabird \& root, architects
Walls are of African mahogany
Hedrich-Blessing Studio
A corner of the libr



The Trading Room, with the wheat pit in the foreground. The walls are sheathed in English
Board of Trade Building, Chicago, Ill. holabird \& root, architects

## « ARCHIIECTURE »



Detail of the Trading Room, showing the balcony overhanging telephone booths and telephone desks, with the quotation board immediately above it. In addition to the soundabsorbing ceiling similar material has been used back of the metal grilles. The room is 111 by 167 feet, 57 feet in height
Board of Trade Building, Chicago, Ill. holabird \& root, architects

The Stock Exchange is approximately 5I by 72 feet, 40 feet in height. Here again the woodwork is English oak
Board of Trade Building, Chicago, Ill. holabird \& root, architects


Photograph by Hedrich-Blessing Studio
A detail of the Stock Exchange showing the telephone booths of English oak extending along one side of the room. The floor is of rubber tile

Board of Trade Building, Chicago, Ill. holabird \& root, architects



Dinan, France
« ARCHITECTURE »
From the lithograph by A.W. K. Billings, ㅋr.


The new Library Building for Fisk University, Nashville, Tenn., dedicated November, 1930. Henry C. Hibbs, architect

The proposed Field Building on the site of the old Home Insurance Building, Chicago. Graham, Anderson, Probst 8 White, architects


## Architectural News in Photographs



Proposed Andrew 7ackson High School, Queens County, N. Y. Walter C. Martin, Board of Education architect

The Harvard University Memorial Chapel to stand between Thayer and Lever Halls, which is expected to be completed next September. Coolidge, Shepley, Bulfinch \& Abbott, architects


Preliminary perspective of New York City's Municipal Building Annex, to house the Departments of Health, Hospitals, and Sanitation. Charles B. Meyers, architect


(C) Harris \& Ewing

The Folger Shakespeare Memorial Library, Washington, D. C. Paul P. Cret, architect

Bahia, a city in northern Brazil, has built this monumental elevator tower to sup-


A detail of the proposed sunken plaza of Radio City. Reinhard \& Hofmeister; Corbett, Harrison \& MacMurray; and Hood \& Fouilhoux, architects


The Southern California Telephone Building, of white glazed terra-cotta, Los Angeles. 7ohn and Donald B. Parkinson, architects


Flagg Court, South Brooklyn, of which Ernest Flagg is architect and principal owner
plement an inclined railway
carrying its citizens between the upper and lower towns


THE CHRISTOPHER COLUMBUS MEMORIAL LIGHTHOUSE COMPETITION: Second Stage. Prepared by Albert Kelsey, F. A. I. A. 185 pages, $9^{1 / 2}$ by $13^{1 / 2}$ inches. Illustrations from the competitive designs, some in color. Washington: 1931: Issued by the Pan-American Union.
In view of the recent announcement of the final stage of this widely heralded international competition, the volume is an interesting document in bringing together the ten premiated designs in the first stage. In addition to these Mr. Albert Kelsey, the technical adviser, has included many other designs from among the 456 projects submitted, together with individual comment upon them. There is in addition a chapter devoted to the impressions of the technical adviser as to the architectural development of the American Republics, and also the regulations governing the second competition.

WHEN ANTIQUES WERE YOUNG. By Marion Nicholl Rawson. 271 pages, $5^{1 / 2}$ by 8 inches. Illustrations from photographs. New York: 193I : E. P. Dutton \& Company, Inc. $\$ 5$

This is not another antique collector's book, but rather an exposition of early American society customs and their relation to the furniture, implements, and naïve art of earlier days in America.

WIND PRESSURE ON A MODEL OF A MILL BUilding. By Hugh L. Dryden and George C. Hill. 21 pages, $53 / 4$ by $91 / 4$ inches. Illustrations from photographs and diagrams. Research Paper No. 301 . Reprint from Bureau of Standards Fournal of Research, Vol. 6, April, 193I. Pamphlet binding. Washington: 1931: U.S. Department of Commerce, Bureau of Standards. Io cents.

## THE NEW STYLE ARCHITECTURE AND

 DECORATIVE DESIGN. Introduction adapted from the French of Maurice Casteels. iso pages, $83 / 4$ by 11 inches. Illustrations mostly from photographs. Made and printed in France. New York: 1931: Charles Scribner's Sons. \$8.50. In its original French this book was called "L'Art Moderne Primitif," a title which cannot be adequately translated into English. The author is showing, largely by illustrations, that we are groping our way toward a new style of art, a style still in its primitive stages. The book is retrospective in that it demonstrates what the new style has accomplished in its short but rapid progress from uncertain experiment to disciplined assertive production. The author attempts no prophecy of what may be just ahead of us. He is content to show some milestones along the road we have recently travelled in architecture and decorative art.THE HOUSE FOR THE GROWING INCOME. Designed by Eldred Mowery, A. I. A. 23 pages, 8 by $103 / 4$ inches. Illustrations from pen drawings, plans, and elevations. Pamphlet binding. Washington: 1931: National Lumber Manufacturers' Association.
A three-room cottage which may be expanded readily by one, two, three, or four rooms.

CHINESE GARDEN ARCHITECTURE. A Collection of Photographs of Minor Chinese Buildings. By Edwin L. Howard. Foreword by Everett V. Meeks. 110 pages, $91 / 2$ by $113 / 4$ inches. Illustrations from photographs and color frontispiece. New York: 193I: The Macmillan Co. \$6.
It seems unfortunate that wide differences of tradition and understanding keep us from utilizing more freely the elements of Chinese garden design such as appear in this volume. The repose and scale of the Chinese gardens are greater than in the more familiar Japanese types.

TRAVEL SKETCHES IN THE OLD WORLD. By Woodruff K. Aykroyd. 6I pages, 9 by 12 inches. Chicago: 193I: Thomas S. Rockwell Co. $\$ 5$.
An interesting collection of pencil drawings from one who has learned "instead of just looking at houses and trees, to look at houses and trees against the sky. And he learned also that shadows are not black but colored."

SOUTHERN ARCHITECTURE ILLUSTRATED. Foreword by Lewis E. Crook, Jr. Introduction by Dwight James Baum. 287 pages, 9 by in $3 / 4$ inches. Atlanta: 1931: Harman Publishing Co. $\$ 5$.
A collection of photographs and plans of work old and new, as selected by a committee of architects. Much of the work has appeared from time to time in The Southern Architect and Building News, but its value is increased by the compilation on a geographical basis. The presswork is not impeccable throughout.

THE GATES OF LIGHT. A Record of Progress in the Engineering of Colour and Light. By Beatrice Irwin. I 60 pages, $51 / 4$ by $81 / 2$ inches. Illustrations from photographs, drawings, and colored frontispiece. Printed in Great Britain. Philadelphia: 193 I: David McKay Co. $\$ 3$.
The author offers the results of twelve years' observation and experiment in her English practice as a color expert and illuminating engineer. She urges a much wider use of color in all our lighting.

# Special Features in English Brickwork By Gerald K. Geerlings 

Photographs by the author
WAS disappointed with Bruges," writes an Edinburgh friend, "because all the build-ings-even the monumental ones-are of brick; we in Scotland think to use it only for such utilitarian purposes as factories."

America has lately painted so much of its architectural canvas with brick, that our Scottish friend's opinion may seem a little passé. However, while we may assume a superior attitude in accepting the propriety of brick for our loftiest citadels, it can scarcely be said to our credit that we have advanced the actual handling of brick to the same degree to which we have raised its social standing. We are content to vary brick bonds, and occasionally make bold to form a few arches or corbels. On the whole we regard a brick as a solid fact, 8 by 4 by $21 / 2$ inches, unsuited to experimentation or imaginative usage.

American brickwork, up to about 1820 , used moulded brick courses and copings extensively, and gave promise of a future worthy of its English heritage. But the blight which extended to all expressions of nine-teenth-century art practically terminated the employment of special brick forms. During the last decade stock forms of moulded brick have appeared on the market, and occasionally a bit of architecture takes a brave breath, and buds forth with some noteworthy features. Some architectural offices are cowed by a bugaboo of a job dated back to about 1915 perhaps, when the estimates ran too high

(probably based on a preliminary set of vague sketches). Other offices, fewer and "less business-like," have dared to make brick imaginative - and have created architecture which holds out the hope that future American brickwork will not all be prosaic, sterile, and "purely utilitarian" for lack of incentives.

The Flemish brickwork of East Barsham Hall, Norfolk (Figs. 3 and 4), and the rectory at Great Snoring, Norfolk (Fig. 2), need not be - in fact, should not be - literal copybook exercises for the American architect. The present rector at Great Snoring gravely recalled that an American zealously examined the intricate brickwork, in order to see how faithfully as an archæologist his architect had served him. While there may be some sentimental value attached to rebuilding a sixteenth-century set of details, and while it may


1. A house at the corner of Queen's Gate, of dullred brick, dark-green shutters with gray to buff storm entrance. Note the base projection running up under first-story windows, and the unusual brickwork under second-story windows serve an educational purpose, like casts of the Elgin marbles, mereslavish imitation can scarcely be termed the goal of living American architecture. The early Flemish brickwork in England taught English builders many lessons which they profitably applied to their own social environment and problems. Similarly, the chief value of English, or any other, precedent to America should accrue from studying the purpose of bands of vertical or horizontal ornament; analyzing the contrasts of voids with plain surfaces, and plain surfaces with ornamental ones; observing the deft handling of planes and masses; and appreciating the introduction of the unexpected details.

2. End of Rectory, Great Snoring, Norfolk. The bricks are a soft red, diapered in purple, weathered gray. Terra-cotta ornament and gray plaster are used with the brickwork

3. East Barsham Hall, Norfolk. Detail of bay at base of main tower. The terra-cotta plaques appear against a background of duilred bricks, diapered in deep purple

4. The Main Gate of East Barsham Hall, Norfolk. Here again the bricks are dull red in tone, weathered to gray

5. In Wroxham Manor, Norfolk, the bricks are bright red and deep red with a pattern of purples. The stepped gable end is a direct importation from the Lombard, as well as the detail

6. A house at the ford, Kersey, Suffolk, with bricks of a reddish tan. Where the decorative quality of the brickwork could not be carried over the whole work, it was frequently concentrated on a feature
deliver a modern problem from stolid mediocrity. In America projecting eaves on a gable end seem so universal that it would be a welcome relief to see other solutions - not necessarily stepped in the Flemish manner, or semi-circular, but in some equally refreshing form.

7. Another view of Wroxham Manor, Norfolk, where the gableend treatments and the pediment offer suggestions



IO. An arch at Chancery Lane Court of-
fers a simple solution of a horizontal
accent of ordinary bricks above the arch proper which is of yellow, gray, and wall with enlarged windows
proper
black

9. The court façade of the low-lying quadrangular Almshouses at Bray turns an unexpected trick at the corner by introduith a brick-faced dormer squatting above it on the
red tile roof

8. The Almshouses, Bray, Berks, where one's impression is dominated by the splendid red and yellow-red mosmine the wall and the deeper tum-purples which continue up the roof slope


Storrs Congregational Church
A Church and Community House at Storrs, Conn. delbert k. perry \& earle k. bishop, architects
The church is built with a steel frame; granite, brick and marble exterior walls, variegated slate roof. It has a cubage of I85,000 cubic feet and was built at a cost of $\$ 0.715$ per cubicfoot. Received Honorable Mention in the 1929 Christian Herald Church Building Competition


Plan of main floor


Plan of balcony floor


There is a carillon of thirty bells in the tower, and, since this photograph, a three-faced clock has been set in the brick base of the tower


Entrance to the hall adjoining choir room


The pulpit, of white pine, ivory color, antiqued

Storrs Congregational Church, Storrs, Conn.


The church interior: tops of pews and balcony rail, mahogany; draperies and pew cushions, dark red
Below, the social room and game room in the Community House


DELBERT K. PERRY \& EARLE K. BISHOP, ARCHITECTS


Storrs Community House, Storrs, Conn. delbert k. perry \& earle k. bishop, architects

The Community House is built in the same manner and of the same materials as the Church. Both buildings have reinforced concrete floors, and are heated from a central plant. The cubage here is 137,000 cubic feet, and the cost per cubic foot $\$ 0.60$

Plan of ground floor
Plan of main (upper) floor



Photograph by Wurts Bros.

A House at
East Norwich, Long Island


JAMES W. O'CONNOR,
ARCHITECT

(C) Amemya

Living-room and (below) dining-room


# Some Pitfalls in Supervision 

 A N U FAC TURED heat, to the inhabi-
 countries, may be a luxury, but to millions of people in this country it has come to be a vital necessity. Any breakdown in the heating system of a building during cold weather is sufficient to paralyze business and cancel dinner parties.

In the giant skyscraper the heating contractor is less able to employ any of the one thousand and one methods of cheating than on the smaller operation. The towering structures generally require the services of a heating engineer constantly on the job to check over the work. Then, too, there are other factors that hold a scheming contractor in leash. The boiler manufacturers, anxious to see that their products uphold their reputation, will probably check the amount of radiation required. The people supplying the air-conditioning apparatus will determine whether enough heat is being furnished, and the firms supplying the pumps and specialties will keep an eye out for any deficiencies which might bring discredit on them.

It is chiefly in the smaller buildings that the superintendent must be more than alert when the heating plant is being installed, for here there are fewer supervising engineers and less troublesome inspectors-with the chances for chicanery consequently greater.

As in most things, it is best to begin at the bottom and work up. In the cellar the boiler must be set level and in such a position that the connections to it will not in any way be interfered with. There should be room for the janitor to be able to work around it in comfort, and space for cleaning the tubes. The number of the boiler should be checked, for by so doing it can readily be determined from the maker if it is the size specified. If it is a sectional boiler the number and size will readily enable any one to get the rating of the boiler from the manufacturer's handbook. At this point in the installation it might be well to make sure that there are to be no hot-water heating attachments put on the boiler without the makers of the boiler being apprised of the fact and approving the amount of radiation lost. All other attachments should be installed according to the boiler manufacturer's instructions. A very important item to check is the steam outlet. In no case should

# By W. F. Bartels 

XVII. HEATING

it be bushed down-that is, a bushing put in the outlet so that a pipe of smaller size may be run out from the boiler. This will allow a smaller sized main to be run-a very poor practice, which should not be permitted. It is done more generally than is realized and is seldom discovered because the contractor immediately covers it with pipe covering, hiding most of the evidence. The boiler should be well covered and wired so that the insulation will not tend to peel off when dried out under the heat. Before leaving the boiler-room the inspector should be certain to see that there is a drain in the boiler-room floor. Too often the drain is omitted or is later discovered to be only a blind drain. It is very discouraging to the janitor to find out that when he "blows the boiler down" he also floods the boiler-pit.

From the boiler the main leads off to the risers. This horizontal run of the main should be well supported on hangers and be free to move when it expands. The sizes, of course, should be checked. Drips or bleeders must be put in where called for, and when in doubt there should be no hesitancy about adding an extra one, because the smooth working of the system depends upon them. Bleeders are pipes which allow the condensed steam to trickle back to the boiler by a separate line. This clears the steam pipe of water to make way for live steam.

From the main, the riser (as its name signifies) goes up in the building to supply the branches. At the bottom of the riser there should be a dirt pocket in which the accumulated dirt and scale may collect as it falls down the riser. The riser normally has a tee at each floor where the branches are taken off to supply the radiators. Sometimes there may be noticed a coupling between the floors. In most cases, although not all, it is indicative of cost cutting. Steam pipe comes in lengths averaging between 18 ft . and 20 ft . long. If the average story height is 9 ft ., then out of one length two full pieces are obtained. If the pipe was originally 22 ft . long, there is a four-foot piece left over. These pieces are coupled together with other remnants to make the required height and thus pipe is saved. The chief objection against this practice, where the riser is concealed, is the increased chances of leaks. However, in these days they are generally put together by machine
at the shop, so there is little likelihood of this. Of course, a coupled riser, when exposed, does not add to the beauty of the room.

Blind risers are those which do not serve any radiators but in themselves supply a certain amount of radiation. They are often larger than ordinary risers, and will generally be found in kitchens and bathrooms. For safety's sake they should be connected at each floor by a tee with a brass-plugged outlet. In the event that the riser proves inadequate, the plug may be removed and a radiator attached. It is well to have the plug "look," or face, the way the radiator would run, thus avoiding unnecessary projections when the radiator is installed.

If at any time the risers or mains show signs of having been made tight by caulking, the superintendent should have the offending piece immediately removed. The risers should be properly and securely hung-this being accomplished by clamps tightly fastened to the risers and anchored either to arch or floor beams. The lines should be checked to see that their expansion is taken care of either by swings or by expansion fittings. In the latter case an access door should be provided.

The "branches" are those pipes which lead from the risers to the radiators. Their ends should be reamed so as to remove the burr formed by cutting - a common starting point for rust. Then too they should have as much swing as possible in reaching the radiator so that their expansion and contraction will be taken care of. Of course, they will have to pitch, so as to drain properly either to the riser or to the return. Failure to check up on this point may result in either an irritating noise or no heat. It is well to make the branches of extra-heavy pipe where they pierce inaccessible places, such as under tile floors; no close nipples should be allowed which are not cut from extra-heavy pipe. A close nipple cut from standard pipe is so thin as not to be able to stand much strain. In no case should a nipple be put in the riser tee and then connected with the radiator valve without a swing. This will cause the system not to work or else snap off the branch. Where the branch comes through a wooden floor it should have a galvanized-iron sleeve to protect the flooring, while on the floor itself there should be a neat floor plate or escutcheon.

The superintendent should check the radiators to see if the sizes, number of tubes, and sections correspond to those called for on the
plans. They should be set nearly level, but so that water will drain away. For appearances' sake they should be centred on the windows or as otherwise specified by the architect. Radiators in the cellar or on the basement ceilings should be well above the water line of the boiler so that condensed water in them will flow back.

All risers should have valves to cut them off from the main in case of necessity for repairs to that line. Then there should be valves on the boilers so that the boilers may be cut off from the mains if necessary. Various systems of heating will probably have valves in different places, and the duty falls upon the superintendent to check them and see that they are all installed in working order.

Check the fittings to see that they are of the weight and size specified.

Sleeves should be insisted upon. They are essential both in horizontal and in vertical runs. If they are not used the movement of the pipes is bound to cause cracks in the walls or ceilings.

All risers and branches should be covered with insulating material. On hot-water systems the returns should be covered but in some steam systems the engineers feel that returns may be left uncovered to advantage. Where branches are run in cinder fill the pipes should be covered with the covering specified, and then it will generally be found that sheet-iron $U$ covers are to be placed over them. This protects the cover from damage when the fill is put in. While the pipes are being covered the superintendent should make sure that the elbows are being properly protected. Most specifications provide that these shall be covered with an asbestos cement and then with muslin. Failure to put the muslin on allows the covering at these points to be easily knocked off or damaged. The sectional covering must be well attached by means of bands, and in some cases as an added precaution a canvas is specified to be sewed over the asbestos covering.

Steam systems may be tested in several ways, but all have their drawbacks. Both air and water tests will show any defective fittings, split pipes, etc. With a steam test, if the nipples and caps are left loose it will be difficult to make certain that there are no leaks, since the steam running down the pipes will wet them. None of the "trick methods" of making the job tight, many of which are known to steamfitters, should be allowed; any leaky or defective parts should be ordered removed by the superintendent.

Tuesday, December 1.-Harold S. Buttenheim, editor of The American City Magazine, says that this country has been subsidizing bad housing for many years, and ought to stop it. He says we subsidize bad housing, first by a tax system which assesses slum dwellings much less heavily than modern homes, and second, by imposing on reputable home owners the cost of juvenile delinquency, adult crime, and other expenditures for public health, safety, and welfare resulting from bad housing conditions. His cure for this condition provides for far more drastic laws for the compulsory demolition or reconditioning of sub-standard dwellings, and, furthermore, readjustment of our tax system so as to stop penalizing the man who modernizes or rebuilds his home, and stop subsidizing the man who keeps land out of proper use for speculative gain.

Wednesday, December 2.-To Washington for the President's Conference on Home Building and Home Ownership, travelling with Mr. and Mrs. Julian Clarence Levi and Harry Allan Jacobs, and finding most of the train occupied by delegates to the Conference from New York and Boston.
President Hoover addressed the Conference in Constitution Hall standing in front of J. Monroe Hewlett's painted hangings, and screened from his'audience by a small forest of microphones. The address was broadcast throughout the country on the two big networks, and it came to me rather as a jolt to find that the evening's proceedings were under the direction of the radio announcer, rather than the traditional chairman, who in this case happened to be Secretary Lamont.
Afterward, meeting the Wharton Clays, Mrs. Wilson Compton, Knickerbacker Boyd, and Harry Jacobs, we motored all over Washington and its suburbs inspecting by moonlight the more recent architecture. Paul P. Cret's Folger Shakespeare Library, the new Japanese Embassy, and the hole in the ground which is to be the famous triangle, were among the most interesting things to see. The amount of building going on in Washington at present is astonishing, even when one is familiar with the enormous Federal building programme.

Thursday, December 3.-The Conference started in at high speed to-day with five or six committee meetings in the morning, and a like number in the afternoon and evening, held in various auditoriums throughout the centre of the city, all of which meetings could have been attended profitably by all the delegates. However, it was necessary to choose one's favorite topic and specialize on that, since each meeting continued throughout the three or four hour


## The Editor's Diary


period. Fortunately, printed copies of the tentative reports were made available, so that what one could not hear, one might read at leisure, if any. The floor discussion at these meetings, however, often proved to be as interesting or more so than the report itself. The discussion on taxation, for example, kept us until about midnight.

Friday, December 4.- One sees scores of familiar faces among the delegates, who, incidentally, are rumored as numbering three thousand seven hundred, invited by the President. I have met Colonel Starrett, Charles F. Cellarius, Electus Litchfield, Pope Barney, Stephen Voorhees, Peter Grimm, Frank Bourne, Wharton Clay, Charles Z. Klauder, Leonard Schultze, Thomas Adam. By nightfall I was fairly dizzy with following the reports of Building and Housing, Homemaking, Farm and Village Housing, Home Ownership and Leasing, Home Information Services, and, finally, Standards and Objectives, under the stimulating chairmanship of Lawrence Veiller. All of this was interrupted at five o'clock to meet the President and Mrs. Hoover at the White House. In the evening, once more in Constitution Hall, Secretary Lamont, Mrs. Jane Deeter Rippin, and Secretary Wilbur tried each to focus for us the findings of the Conference.

Saturday, December 5.-Packing up a heavy suitcase full of printed reports, I had to forego the benefits of hearing the discussion of Technological Developments, Legislation and Administration, Research, Education and Service, and journey back to New York. On the train I fell in with William H. Ham, secretary of the Bridgeport Housing Company, whose experience in the building of small dwellings extends back of the World War. He knows not only what the American family wants and what it will put up with, but he knows also how to approximate very closely the extent of its aspirations, through
quantity production. However, I have persuaded him to tell this story in his own words in an early issue of the magazine.

Tuesday, December 8.-Called on William Gehron, of Gehron \& Ross, to see some of the things his firm has been doing in the Harrisburg Civic Center. It will be recalled that a plan for this was originally made by Arnold W. Brunner, and the various units of the original group have been added slowly through a generation. One of the most interesting things about the group is the logical transformation from the earlier buildings with the classic motives here merely copied, down to the latest units in which classicism forms a marked background, but no longer imposes its detail. This, it seems to me, is as it should be-architecture writing the history of a people's thought. The City of Washington, on the other hand, seems to be cramped in a tradition which permits very little of this logical growth.

Wednesday, December 9.-Down in Australia they are suffering apparently from the depression even more severely than in America. Mr. L. F. Irwin, president of the Royal Victorian Institute of Architects, estimates that the average net earnings of the registered architect in Melbourne must be about $£_{144}$ a year. There are three hundred and fifty registered architects serving a population of $1,014,600$. Mr. Irwin estimates that even in the peak year of 1928 the average of an architect's gross earnings was $£ 540$, with an average net return of $£_{3} 60$. Mr. Irwin censures his brother practitioners for many of the faults that are common among American architects-failure to keep abreast of modern development of construction and planning, weakness in estimating, failure to take their rightful position in communal and political activities, inefficient business administration, and lack of educational efforts as to the architect's place in the scheme of things.

Thursday, December 1o.-Eugene Savage says, "A good subject for reflection lies in the contrast between the unhealthy violence and rapidity of some of our modern movements and the sustained, majestic sweep of four thousand years of beauty in Chinese art."

Friday, December II.-David Lynn, architect of the Capitol, points out that in this period of extensive government building, it is strange that the Capitol itself should remain unfinished. The final work, planned in 1864, remains in the blueprint stage.

As it stands to-day the Capitol's centre portion, which was completed first, is of Aquia Creek stone. It is painted to match the Senate and House wings, which are of marble. Nevertheless, this
lack of uniformity is apparent to laymen as well as architects. The central portion under the dome suffers in comparison with the superb marble-faced wings.
One other element of incompleteness which is more apparent to architects than to the public is the encroachment of the dome upon the central portico. When the wings and the dome were built it was planned to extend the central portion eastward so that architectural harmony would be restored. At present the dome is not in the centre of the building. It presses close upon the eastern edge of the central portion. If a proper balance is to be restored the eastern portico must be extended and enlarged.

Architects have not agreed as to how far the eastern front should be extended. One plan called for an extension of 12.5 feet and another for 20 feet. Still others have suggested that the central portico be built out to the line of the Senate and House wings, but that idea has generally been discouraged. There are still others who feel that it would be just as well not to monkey with the Capitol.

Monday, December 14.-Lunched with Elliott Chisling, and up to see the new work that the office of Wilfred E. Anthony has done in the church that Bertram Goodhue is said to have considered his best work, St. Vincent Ferrer. The new work consists of a magnificent reredos, with new glass for the east windows over it, a new altar and reredos for the east end of the north aisle, new woodwork for the sacristy, and a new pulpit and baldaccino. Chisling told me that, in the effort to be liturgically faultless, they made the mensa of the main altar in one block of marble, and as a result had to brace the floor all the way up the main aisle in order to bring it to its place. All of this work is too much of an architectural milestone to pass with mere verbal description. When the difficulties of photographing it have been overcome we shall have the illustrations in these pages.

Tuesday, December 15.-Lunched with Alfred Berman who told me many amusing incidents in connection with the modern craze for new woods. Apparently the matter of nomenclature of rare woods is very much in the same state of confusion as that of the marble industry. It will be recalled that recently the Federal Trade Commission prohibited the use of the term "Philippine Mahogany" on the contention that the wood was not of the mahogany family. Soon thereafter the fact was dug up that "African Mahogany," long sold as such, is not a real mahogany either. The Federal Trade Commission thereupon reversed itself, and permitted both terms to be used in the trade. There are other complications in the fact that
what we call sycamore is called the plane tree in England, while our maple corresponds to the English sycamore. Alfred Berman is going to try to clear up some of this fog in nomenclature by publishing photographs of the rarer wood grains, with notes about their origin and practical qualifications in woodworking.

Wednesday, December 16.-In the Diary for September 24, I noted having dropped into Electus D. Litchfield's office and having seen there the preliminary drawings of the Albany Post-Office, Court House, and Customs House. I was perfectly aware at the time of the fact that Gander, Gander \& Gander, of Albany, N. Y., are the architects of this work, Mr. Litchfield being consultant and I should have mentioned that fact. This federal building at Albany gives such promise of being a notable public work that there should be no confusion as to the architectural credits involved.

Thursday, December 17.-Went down to the National Conference on Church Architecture being held in the Hotel Pennsylvania this week, to hear what turned out to be a vigorous argument between the traditional and the modernistic points of view with regard to church architecture. Professor Joseph Hudnut, of the Columbia University School of Architecture, showed a lot of slides of contemporary efforts in church building, chiefly abroad, and asked for what he considered a national point of view in the building of houses of worship. Dr. Ralph Adams Cram, on the other hand, characterized modern church architecture as a "conscious search for the hideous," adding, "I defy any one to be spiritually stimulated in a birdcage or a lighthouse"-and the fight was on. Hobart Upjohn, Dwight James Baum, and others participated in the discussion which followed. The churchman's point of view was summarized at the end of the meeting by Dr. Luther D. Reed, who, while recognizing the necessity for constant progress in design of all kinds, begged for the measure of continuity in our church building which would hold fast those elements of our heritage that accord with the attitude of the believer, avoiding the sort of thing that would make of a house of God a mere secular auditorium. In the course of the discussion some one asked Dr. Cram how he reconciled his stated beliefs in the integrity of masonry construction with the use of steel skeleton construction as the frame of his Christ Church, now being erected on Park Avenue, New York City. Dr. Cram explained that the church had been designed by him as a masonry structure in the Byzantine manner, calling for unassisted masonry, but that conditions and circumstances over which he had no
control had brought about the present compromise.

Friday, December 18.-Robert D. Kohn was host to-day at lunch to the A. I. A. Committee on Public Works and the architectural editors. Louis LaBeaume, just up from Washington, told us that at five-thirty on the previous evening a bill, "H.R. 6187," was introduced into the House of Representatives by the Honorable Robert A. Green of Florida. The full text of the bill will be found in the Bulletin Board pages. This is a long step forward in the campaign to have the government cease acting as its own professional advisor in architecture. The bill deserves careful reading. It is unassailable, so far as I can see, and its provisions assuredly lead toward greater economy and efficiency in the design of federal buildings. I have always had the feeling that there is a distinct function for the Supervising Architect's Office: it should be a clearing house for technical information; it should not take the place of the architect, but should supplement the local architect's ability to build in accordance with local conditions and materials, with the technical data accumulated from experience throughout the country. An architect in San Antonio will know best how the local post-office or court house should be built-of what materials and in what style. He will not know, withoút considerable research, how big to make post-office boxes, mailchutes, jury seats, and such things, which the Supervising Architect's Office is able to tell him. The bill provides for just this sort of collaboration, including supervision, which function the government has always held rather decidedly in its own control, and properly should continue to do so. Here is a constructive measure which deserves the support of the whole profession.

Saturday, December 19.-Dr. James Thayer Gerould, Librarian of Princeton University, dropped in to talk over his manuscript on the college library, in which he makes very clear the essentials with regard to the growing educational importance of the librarywhat sort of site it should have, its physical requirements, administrative facilities and equipment. As the president of one of our great state universities remarked some time ago, "American education is of two types, the quantitative and the qualitative. For better or for worse, it is the function of the state university to provide the quantitative." There is an inviting opportunity which many colleges are accepting, of inculcating the student with a habit of browsing among books for his own pleasure rather than to cram for an exam. It is largely along this line that our ideas of college-library design must be revised.

## A Practical Method of

TTHERE is abundant evidence about us that we are on the verge of emergence from our deeply rooted methods of constructing dwellings. The building industry is awakening from its long sleep, ready to abandon ways of building to which it has blindly held for centuries. The lessons of other, younger industries are being learned at last, and the result promises better and more economical houses for America.

Among the wide variety of new construction types being developed is one devised by Arthur H. Olmsted, of Rye, N. Y. Mr. Olmsted is a builder of long experience, particularly in the use of poured concrete. He has used all manner of special forms and has discovered shortcomings in all of them; either they entail an expensive investment in first cost, upkeep, and transportation, or they are not flexible enough to meet all problems. The need for simplicity of equipment, and ready adaptability to any special condition that may be met-these two prime requisites guided Mr . Olmsted in the gradual development of his methods. It was not the happy inspiration of a moment, nor was it a scheme put on paper in the fond hope that it might work. Instead, the method was very gradually worked out, a step on this job, another on the next, each sub-

Immediately to the right is a vertical section of the wall, shown in part with brick veneer, in part with shingles outside. Below is a plan at the same scale, and further to the right an isometric drawing of floor and walls

jected to the acid test of "Will it always work ?"

It goes without saying that in his search for the ideal method (which, of course, will never be completely attained), Mr. Olmsted sought a fire-proof building-we know well enough how to build the other kind! Aside from that one prime desideratum, he had no further limitations. Unlike a great many investigators in building methods, he had no material to push forward, no preconceived theory to prove. Moreover, Mr . Olmsted, being a builder, had long been persuaded that when an architect wants a house of brick, there is no use attempting to sell him one of wood or concrete; if the client is wed to the clapboarded Colonial type, it is a waste of energy to try to talk him into accepting one of stucco. What Mr. Olmsted did undertake to convert the architect to was the fire-proof-or at least slow-burning-idea, and this was not difficult if the hurdle of cost could be shown to be a very low one. In a word, the construction method is made to fit the plan, not vice versa.

In brief, the method calls for the ordinary foundation walls, across which is cast a floor of reinforced concrete, or tile with concrete ribs-

the latter floor requiring less material and labor in form setting. On this finished slab are set reinforced concrete studs which have meanwhile been cast in a simple gang mold on a board platform between 2 by 4's. A nailing edge is given these studs by incorporating a shingle lath containing projecting nailheads to key into the concrete. This wood edge is put only on the inside face of the 2 by $7-\mathrm{in}$. studs unless a nailing is also needed outside for a frame or metal lath covering. On the outside face light wood panel forms are used over and over again to confine concrete poured between the studs. On the inside a concave confining surface is gained by bending insulating board-Celotex or the like - between the studs, this bending being accomplished in a simple board press while the insulation is wet. A pouring is made to the height of the outside form, soon after which it can be raised for the next pouring, the precast studs preventing a slump. The diagrams make the wall construction clear; indicating the resulting air space inside of the insulation form, which latter, of course, remains in place. Here are spaces for pipes, wires, etc., as in frame construction, but the wall is reinforced concrete with an additional web of insulation. Another reinforced floor is cast on top of the first-story walls and partitions, and the second story proceeds in the same manner as the first. The roof, if flat, is cast similarly; if sloping, light steel beams, wood purlins, roof boarding, and slate or tile are


The precast studs are shown in place, a window buck held between two of them by wire under torsion. Note the horizontal rod for reinforcement and the outside form below the window buck
added, the inside being covered with insulating material from a gun. Outside, the wall surface is easily stuccoed, brick veneered (in which case the veneer serves as the outside $f_{o}$ rm), or covered with clapboards or


The terra-cotta tile and reinforcing bars in place for the floor slab, ready to pour the concrete. On top of this a composition or tile floor may be laid, or wood flooring on loose sleepers
shingles as desired. In addition to the vertical reinforcement in the studs, horizontal bars may easily be laid in the stud voids as the pouring proceeds, providing lintels, sills, or ties. Window and door frames are wired in place before the pouring, or wood bucks may be so incorporated and the steel sash inserted later.
Mr . Olmsted brings to the site only a few shovels, wheelbarrows, and a small concrete mixer. Everything else needed is material that can be delivered from stock, usually from the local dealer. If gravel and sand are uncovered in the excavation, these needs are still more simplified. All form material is afterwards used in the building.

Careful figures made at Westchester, N. Y., indicate that the cost of such a method of construction is between six and seven per cent above that of wood frame.

The system is a patented one, but Mr . Olmsted is eager to have it tried under various sets of conditions throughout the country, and charges but a nominal royalty for its use.

# Brick Walls with a New Unit Shape 

A.W. KEICHLINE, an architect of Bellefonte, Pa., is one of those who have attacked the problem of developing a better wall construction. Using the width of wall required for rigidity, and the amount of clay necessary for compressive strength, she has devised a tile shaped to meet accepted construction details with economy, and lend-


Here is the unit shape, easily grasped by the hand and making a complete eight-inch wall without through mortar joints
ing itself to insulation, damp-proofing, reinforcing, and sound-proofing.

The ordinary brick has unquestioned merits in appearance but it provides an excess of compressive strength. Common brick has been developed to carry 4,000 or 5,000 lbs. per sq. in., but it has been computed that the lowest brick in a five-story apartment-house wall carries only 100 lbs. per sq. in. Well within its required factor of safety, a tile may be designed with the proper width to secure rigidity, to use half the clay now employed.
Miss Keichline submits the shape illustrated herewith for analysis. It is obvious that we need a continuous surface both inside and out, so our voids must be within the finished wall. The shape illustrated provides this fundamental requirement and many others. Its interior sur-
faces may be painted with asphalt for damp-proofing. It gives us no through mortar joints. In some climates it does away with the necessity of furring for the inside plaster. It provides faces of standard brick size, permitting the use of our established bonds for decorative purposes. The webs are spaced so that the distance across them is the width of a brick, permitting easy handling. The weight of the unit is that of a common brick; its volume that of two bricks. It can be laid up in less time than is required to lay two bricks and it requires less mortar. It can be laid either side up, losing no time in searching for special shapes. It splits readily to give a 2 by 4 -in. face. With kerfing in the molding, the tile can be broken into different shapes for use at window-jambs, corners, and other special points of the building. For lintel use (2) it is readily used as headers, reinforced and grouted. At the window-jamb (3) the space between inside and outside face blocks takes a standard window-box; steel frames are similarly held. As shown in 5, 6, 7, and 9 , it permits various forms of interior finishing and pipe chases. For joist bearing, two courses are grouted.

Because of its smaller clay content, the tile requires less time in firing. The voids may be filled with
insulating material or sound-proofing material. A wall may be reinforced horizontally or vertically. In compressive tests a unit failed at 200,000 lbs. In conduction per square foot per degree temperature difference, assuming conductivity of brick to be 5 B.t.u., computation shows the tile to pass 0.52 B.t.u. If the wall is filled with granulated


For ease of handling and to prevent breakage the units may be held together by two pieces of scantling and boxing straps
cork, the conductivity of which is 0.35 , the wall shows 0.2 B.t.u. These figures are for the tile itself. If the overall values of transmittance of heat from the air on one side to the air on the other side be desired, the hollow wall shows 0.392 B.t.u. per sq. ft. per degree temperature difference; the cork-filled wall, 0.167 .1


In the upper left corner are shown the dimensions of the unit and the several diagrams illustrate various details of construction with its use

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## THE SIXTY-FOURTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

Forthcoming Portfolios will be devoted to the following subjects: Outside Stairways (March), Leaded Glass Medallions (April), Exterior Doors (May), Metal Fences (fune), Hanging Signs (fuly), and Wood Ceilings (August). Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up about six weeks in advance of publication dates.

|  | subiects |  | Portfolios | * \% * * * * |
| :---: | :---: | :---: | :---: | :---: |
| 1926-27 | 1928 | 1929 | 1930 | 1931-1932 |
| DORMER WINDOWS | BUILT-IN BOOKCASES | DOORWAY LIGHTING | SPANDRELS | BANKING-ROOM CHECK DESKS |
| SHUTTERS AND BLINDS | CHIMNEY TOPS | ENGLISH fIREPLACES | CHANCEL FURNITURE | SECOND-STORY PORCHES |
| ENGLISH PANELLING | DOOR HOODS | GATE-POST TOPS | BUSINESS BUILDING ENTRANCES | TOWER CLOCKS |
| GEORGIAN STAIRWAYS | BAY WINDOWS | GARDEN STEPS | GARDEN SHELTERS | altars |
| Stone masonry textures | cupolas | RAIN LEADER HEADS | ELEVATOR DOORS | Garage doors |
| ENGLISH CHIMNEYS | GARDEN GATES | Garden pools | ENTRANCE PORCHES |  |
| FANLIGHTS AND OVERDOORS | STAIR ENDS | QUOINS | patios | WEATHER-VANES |
| TEXTURES OF BRICKWORK | balconies | INTERIOR PAVING | treillage | BANK ENTRANCES |
| IRON RAILINGS | Garden walls | BELT COURSES | Flagpole holders | URNS |
| DOOR HARDWARE | ARCADES | KEYSTONES | CASEMENT WINDOWS | WINDOW Grilles |
| palladian motives | Plaster ceilings | AIDS TO FENESTRATION | FENCES OF WOOD | CHINA CUPBOARDS |
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## WOOD SASH AND FRAMES

We have perused with much interest the handsome portfolio just released by the West Coast Lumberman's Association of the Stuart Building, Seattle, Wash. The portfolio is divided into five sections: 1. Construction Principles; 2. Residences and Apartments; 3. Schools and Hospitals; 4. Office and Monumental Buildings; 5. Industrial Buildings. These all purposed to give ideas rather than to furnish details for copying. Considerable emphasis is given to a narrow stile sash. The designs embody ideas contributed by architects from all parts of the country for the solving of sash and frame problems they have met in their practice. You will find these portfolios a welcome addition to your library and we advise your sending for them.

## A MODERN AND SANITARY BATH

This has nothing to do with bathing beauties or seashore vacations. In fact, we use the word sanitary in the title-the reference goes back to only the latter half of the first sentence. We are interested at the moment in Fiat Shower Bath Compartments, and so we had better talk about them. In fact, they talk about themselves very well in a new folder published by the Fiat Metal Mfg. Co. at Racine, Chicago. The compartments are of "knock-down" construction with floor of polished, pre-cast terrazzo. The Fiat can be easily installed either on top of a finished floor or counter-sunk tiling; laying of lead pan, grouting, and expensive drainage work are eliminated. The walls are constructed of either vitreous enamel or especially prepared galvannealed steel, and have locking, leak-proof corners. The folder is well illustrated with views of the various models (not bathing beauties), contains dimension table and detailed drawings.

## FREIGHT ELEVATOR SPECIFICATIONS

The Warner Elevator Mfg. Co. of Cincinnati, Ohio, have issued a new A. I. A. file folder, No. 33-C-1, giving specifications and detail drawings for standard size freight elevators. The car size, 5 feet 6 inches by 4 feet 6 inches, is described as a standard permitting economy of manufacture and hence attractive sales price. This folder should be of valuable ready reference.

## DOMESTIC AIR-CONDITIONING

1932 will see a distinct growth in home building. In light of this, the announcement by the Holland Furnace Company of Holland, Mich., of the development of a domestic air-conditioning unit, making air-conditioning available to the masses should be of vital interest to the architectural profession. It is built to temper the air, humidify the air, motionize the air, and purify the air. The unit will provide year-round indoor comfort in the home similar to that enjoyed in the most modern of theatres and other air-conditioned buildings. The unit occupies less than ten square feet of space. Details on request.

## ENTRANCE PROBLEMS SOLVED

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## METALLIZING

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## KOKOMO GLASS

The Kokomo Opalescent Glass Company of Kokomo, Ind., shows in its literature how lighting can be made to harmonize with an interior decorative scheme without sacrifice of lighting efficiency and without employing design or leading. A type and tint of Kokomo glass is made for every glazing purpose.

## STRAUB CINDER UNITS

Recent issue of The National Building Units News includes in its contents an interesting article on the University of Rochester, in many of whose new buildings cinder units were extensively used for backing and partition work. They emphasize the permanence of the operations for which the units were specified. These buildings are built to endure. The cinder unit combining current economy and permanent values finds logical place in modern plans. The issue also contains results and data on a test made in the Columbia University laboratories of Straub Cinder Units as manufactured by the $\mathrm{Na}-$ tional Building Units Corp. of Philadelphia, and clay tile of the types used as column covering in fireresistive construction in New York City. The result was favorable to the Straub Cinder Units.

## KERNERATOR INCINERATION

The Kerner Incinerator Co. announces three new products of interest to the architect and will gladly send details for file reference. I. Kernerator Model A-I; 2. Bennett Bonded Fireplaces; 3. Andelco Lightproof Curtains.

## RADIATOR VALVE

James P. Marsh \& Company of Chicago announce the perfection of a heavy one-hundred-and-fiftypound construction steam radiator valve that can be packed while the system is under pressure or vacuum. It is pronounced as non-jammable in the open position. The cost of repacking is reduced by its special construction features.
(Continued on page 21)

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## Following Dimensions

The corridors and vestibules of the new Convention Hall at Philadelphia is another instance where the architect's drawing dimensions were accurately followed in the production of the Terra Cotta units. This is equally important with the excellent decorative effects made possible through the use of Terra Cotta in interiors.
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## INTERLOCKING WALL FLASHING

The Cheney Company's slogan for Cheney Interlocking Wall Flashing is that it "Does not break the bond." Their new and inclusive booklet contains complete details and specifications for the various applications with illustrations of some of the famous buildings in which this flashing has been used, such as the Empire State Building and the New York Hospital-Cornell Medical College Buildings. The Cheney Company claims the answer to problems of seepage, leaks, and efflorescence.

## "Pittsburg's" best

The Pittsburg Water Heater Company (they spell it without an " $h$ " in their folder) says their new water heater known as "Pittsburg's" Best is head and shoulders above anything in its class. We might say here that if they want architects to send for details, they should put their address on their literature and not just their boast. The heater contains their new Alfol-Aluminum Foil Insulation, an improved flue lining impervious to flue gases or corrosion. If the details interest you, we know the address.

## FLOODLIGHTING EQUIPMENT

To our growing library on floodlighting has been added a new and well-done catalogue by the Westinghouse Electric \& Mfg. Co. of Cleveland. This thirty-two-page publication covers various methods of application and describes the equipment to be used with style numbers, sizes, prices, and other essential data included. Installation photographs depicting the various methods of floodlighting add to the interest and usefulness of the catalogue. The diversity of the subject matter is shown by the fact that it provides for the selection of equipment on the one hand for projects of under-water lighting in color, or to the other extreme for projects of strictly utilitarian nature.

## ARC-WELDED-100 PER CENT

The General Electric Company has issued a supplemental bulletin on the 100 per cent Arc-welded steel building constructed by the Fuller Co. at Pittsfield, Mass. There are new and interesting details included in this article not previously published. The General Electric Co. will be glad to furnish copies of this building story to those who are interested in what can be done in a job IOO per cent steel construction and 100 per cent arc-welded.

## "PLANNED LIGHTING"

Is the title of a twenty-eight-page handbook published by the Curtis Lighting Co., Inc. It is a comprehensive manual for planning almost every form of illumination and is well and profusely illustrated. It contains detailed sketches and data on wattage capacities.

## ALUMINUM ALLOY SAND CASTINGS

The Aluminum Co. of America, Pittsburgh, Pa., have published new specifications for architectural finishes applied to Aluminum Alloy Sand Castings. The finishes described are those standard finishes which have been proven to have the required permanency for exterior and interior work. The methods set forth in the bulletin are those used at the foundry of the company and which have been found to be the most economical from a production standpoint. The specifications given enable exact reproduction of the finishes described, provided of course the instructions are fully carried out. Such finishes as High Lighted Finish, Deplated Finish, Satin Finish, etc., are described.


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## "METALBOARD"

A modern blackboard achievement would seem to have been accomplished in "Metalboard," a new product of the American Seating Co. of Grand Rapids, Mich. It is a vitreous writing surface fused upon Armco Iron. The sample we received and tried, worked swell. School architects take notice!

## "DUSTOP"

An air filter of glass wool promising to revolutionize air-conditioning appliances is the pronouncement of the Owens-Illinois Glass Company of Toledo, Ohio. It is simple of design and low in price. The replacement of a dirty unit is easily and simply accomplished. It is claimed that two units in tandem will remove 99 per cent of the dust from the air (another challenge to Ivory). The company will be glad to furnish details on its application and uses.

## "who Buys?"

"Who Buys Decorative Materials for Interior Walls?" "Who Buys Flooring Materials?" and "Who Buys Roofing?" are the titles of three interesting brochures recently published by Walter C. MacMillan, Inc., of New York. Analysis of the markets for these materials is given.

## commercial lighting

In catalogue 219-B the Westinghouse Electric \& Mfg . Co. of Cleveland takes up commercial lighting equipment in detail, including price, style, numbers, and sizes. The illustrations include installation views and photographs of individual units.

## "MURDOCK" ALTERNATOR CLOSET

Is said not to be just another flush valve on a regular closet bowl, but a complete new combination consisting of a new type bowl with a new type valve, employing an entirely new alternating principle of flushing. Details sent on request to us or the Murdock Mfg. \& Supply Co. of Cincinnati, Ohio.

## live in quiet

Those planning Radio City must believe in the admonition of the Maxim-Campbell Silencer and Air Filter manufacturers to live and work in quiet. Twenty thousand units have been ordered for Radio City.

## WORKING DRAWINGS

Two very useful working drawings have been issued in the past month by the Copper and Brass Research Association of 25 Broadway, New York City. One is on the Copper Box Gutter, and the other on Closed Valley Flashing. Each drawing is enhanced by, a descriptive note. Send for them, if you did not receive yours.

## SARCO SPECIALTIES

A very excellently published catalogue was received this month from the Sarco Company, Inc., of 183 Madison Avenue, New York City. It shows illustrations of typical vacuum and vapor-heating systems and describes their line of thermostatic specialties such as radiator traps, packless valves, receivers, air eliminators, etc.

## PLYWOOD

"Facts About Douglas Fir Plywood" is the title of an interesting file folder from the manufacturers of Douglas Fir Plywood at Seattle. The scope of its usefulness is best shown on a page giving illustrations" of nine different uses, among which are partitions, shelving, dustproof coal bins, waterproof drawers, and built-in equipment.
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Round Sectional Big Twin Sectional Jacketed in Color Tube Type Smokeless Hot Water Supply Welded Steel

RADIATORS


See Sweet's Page D-4864


##  the Spirit of any Interior



The Mudd Memorial Library of Philosophy in the University of Southern California has a floor of Armstrong's Linotile. The colors used are eggplant and sienna . . . an unusual departure from the ordinary drab colored floor.

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## MAKE A NOTE NOW TO READ The MARCH Issue Architecture


One of the most ambitious projects of suburban housing attempted in this country will be featured in the March issue. C. Matlack Price writes an article on the development of the old Rockefeller estate at Cleveland, and his article will be superbly illustrated. 12 pages.

Eugene Clute gives us an intensely interesting article on modern craftsmanship in Terrazzo. 6 pages.


East Hampton, Long Island, and Kalamazoo, Mich., are both fortunate to have community playhouses designed by Aymar Embury, II. A twelve-page feature in the March issue shows these splendid examples of a nice balance between tradition and the fresh note of modern design.
$\longrightarrow \longrightarrow$
Other indispensable features include:
Jack Stewart's Working Drawing
Portfolio-Sixty Illustrations of Outside Stairways
The Editor's Diary
Contacts-"A Builder Looks at Specifications"


## Architecture

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These pictures were taken in the new Harding Street Power Plant of the Indianapolis Power \& Light Company, where AR-KE-TEX Tile was used in the walls of the large turbine room, switch rooms, locker rooms, toilet rooms, corridors and entrance lobby.
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Sheboygan Station of Wisconsin Power \& Light Co., Sargent \& Lundy, Architects and Engineers.
Dodge City Station of The Kansas Power Co., Sargent \& Lundy, Architects and Engineers.
North Platte Power Plant of The Northwestern Public Service Co., Sargent \& Lundy, Architects and Engineers.

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Above-Entrance lobby showing decorative treatment used on AR-KE-TEX Walls. Insert-Exterior of buildins.


Above and below - Two views of turbine room where AR-KE-TEX Tile Walls insure permanent beauty.


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[^0]:    ARCHITECTURE, published by Charles Scribner's Sons, 597 Fifth Avenue, New York, N. Y. February, 1932. Volume LXV, No. 2 . Published monthly
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[^1]:    "SWIM IN DRINKING WATER"

[^2]:    A general view of the house of Mr. Sherman Pratt on Niagara Island in the St. Lawrence River; Fohn Walter Wood, architect. From the power house and boat landing the house piles up in successive roof terraces to the dominating tower and chimney

[^3]:    send for our booklet "Beck Gravure"

[^4]:    REFER TO PAGE 16 FOR ANNOUNCEMENTS OF THE MOST UP-TO-DATE

