

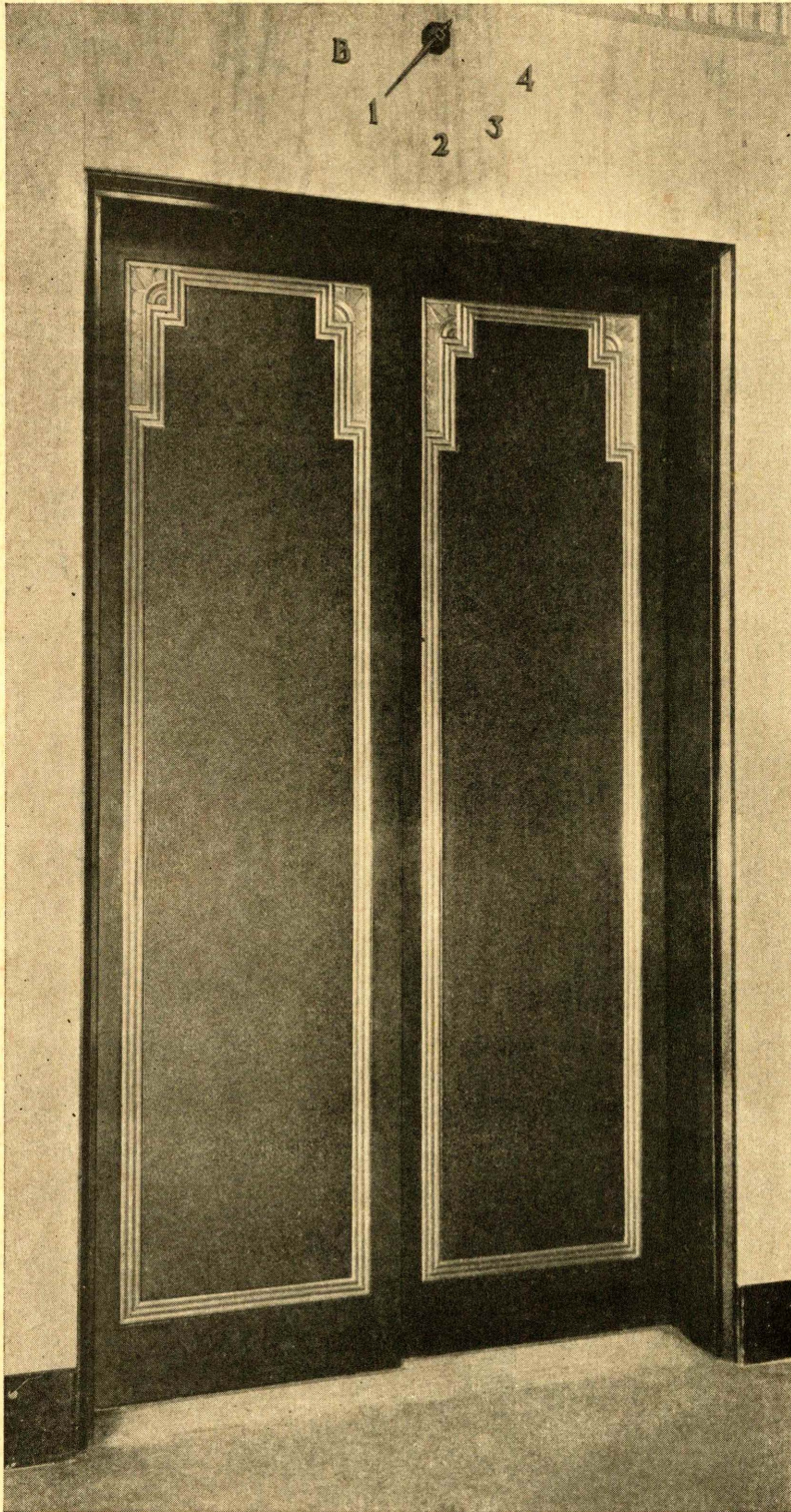


THE AMERICAN ARCHITECT

FOUNDED 1876

November 1930

Elevator enclosures, Film Exchange Building, Minneapolis. Design by Larson and McLaren, architects.



Specify **THORP DOORS**

SIMPLE in line, modern in effect, rich in character, these Thorp Elevator Enclosures add a striking note of beauty to the lobby of the new Film Exchange Building, Minneapolis, Minnesota. The doors are of Thorp tubular construction with cast ornamental mouldings. Noiseless continuous guides kill light strikes at the bottom. Hollow metal frames and trim were used. The finish is stippled bronze.

Thorp craftsmanship, here as always, combines beauty with mechanical efficiency.



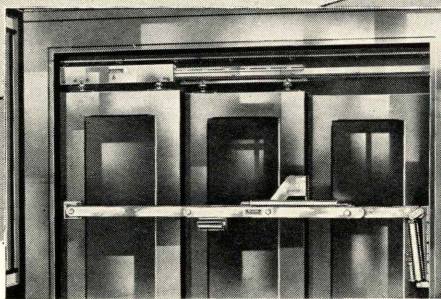
THORP FIREPROOF DOOR CO., Minneapolis, Minnesota

Floor space saved pays for **R-W** elevator door equipment

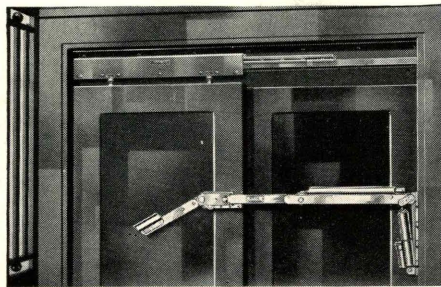
50
years
1880/1930

5 to 7½ inches
clearance is re-
quired by ordi-
nary elevator
door closers.

½ inch clearance—
the maximum space
required by R-W
closers. Single speed
types require no space
behind doors!



Two and three speed types require
only ½ inch clearance.



Single type doors require no space
for R-W closers.



"Quality leaves
its imprint!"

FLOOR space saved by R-W closers can bring
rentals the first year in excess of this R-W
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Because the closer and check are separate mechanisms, this R-W equipment provides more closing power and demands less effort in opening doors.

You will meet all conditions required by building and safety codes if you specify R-W closers, hangers, checks, interlocks, the PowR-Way Electric Door Operator and R-W signal systems of all modern types. Depend on R-W equipment for complete elevator door responsibility. Consult an R-W engineer at any time without obligation.

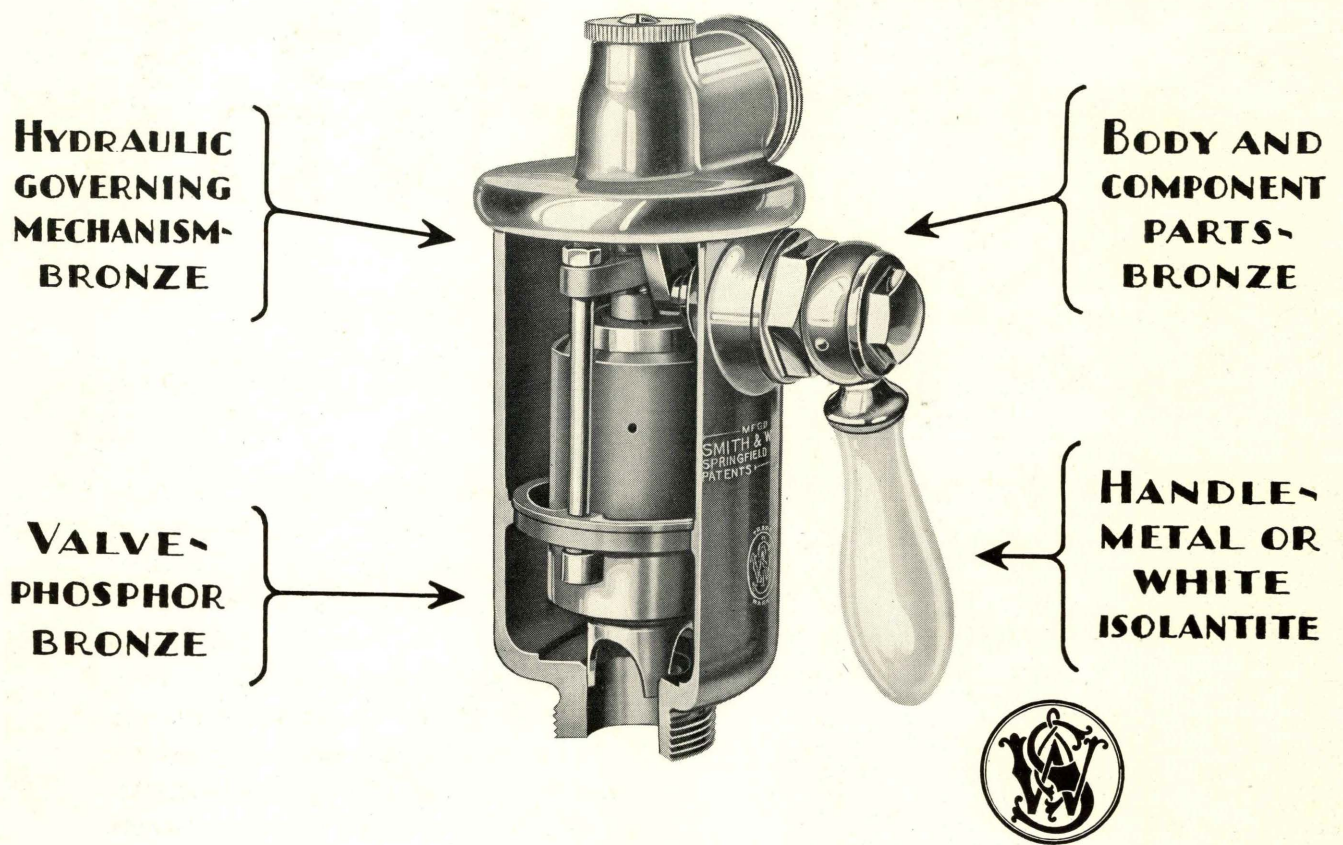
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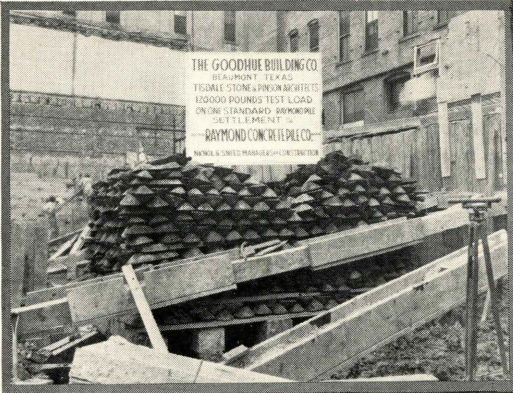
For Further Information Write

SMITH & WESSON

FLUSH VALVE DIVISION

SPRINGFIELD, MASSACHUSETTS

The American Architect, published monthly by International Publications, Inc., 57th Street at 8th Avenue, New York, N. Y.; Yearly subscription, \$5.00. Entered as second class matter, April 5th, 1926, at the Post Office at New York, N. Y.; under the act of March 3rd, 1897. Issue number 2589; dated November, 1930.



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The RAYMOND METHOD

No settlement—or settlement so slight as to be well within all calculations of load-support—this is the invariable story told by tests where concrete piles are poured into tapering, spirally reinforced steel shells and each shell left in the ground. These shells serve among other things to preserve the pressure created by driving—hence the load carrying capacity of Raymond Concrete Piles.

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A Pile for Every Purpose”*

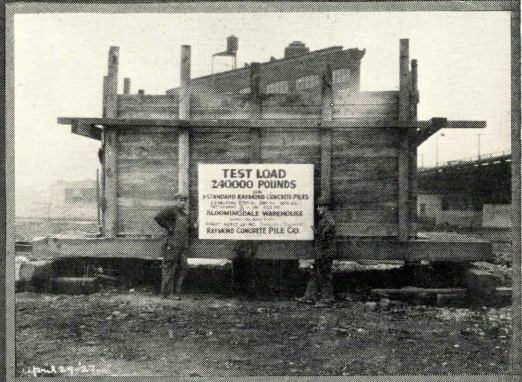
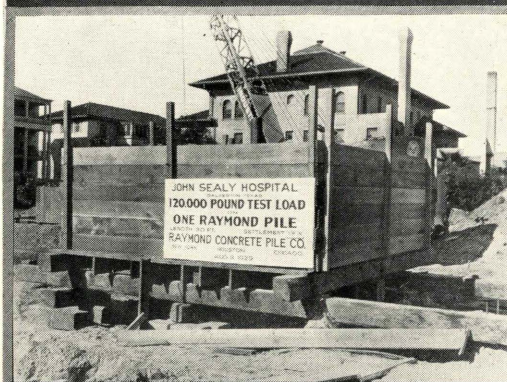
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NEW YORK: 140 Cedar St.

CHICAGO: 111 West Monroe St.

Raymond Concrete Pile Co., Ltd., Montreal, Canada

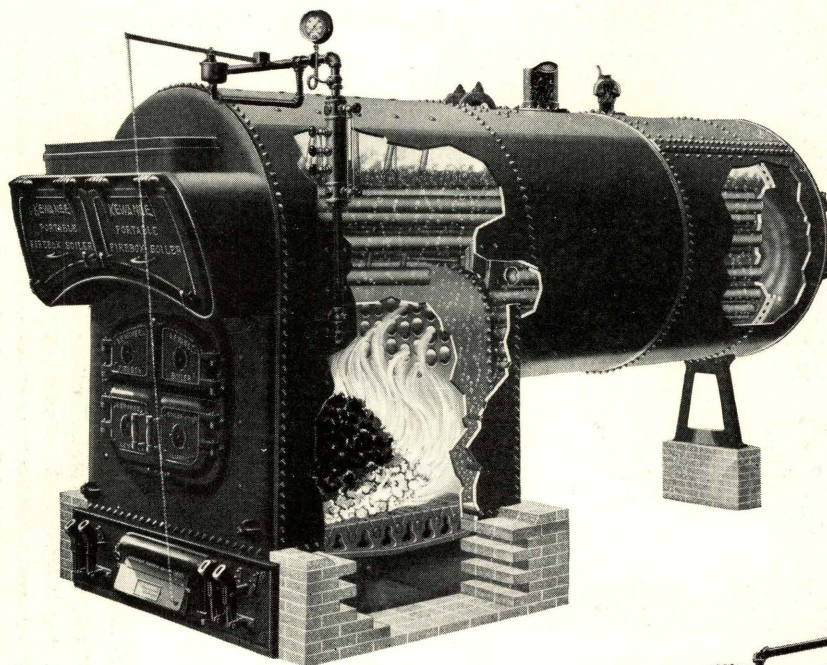
Branch Offices in Principal Cities



KEWANEE

STEEL BOILERS

A Type and Size for



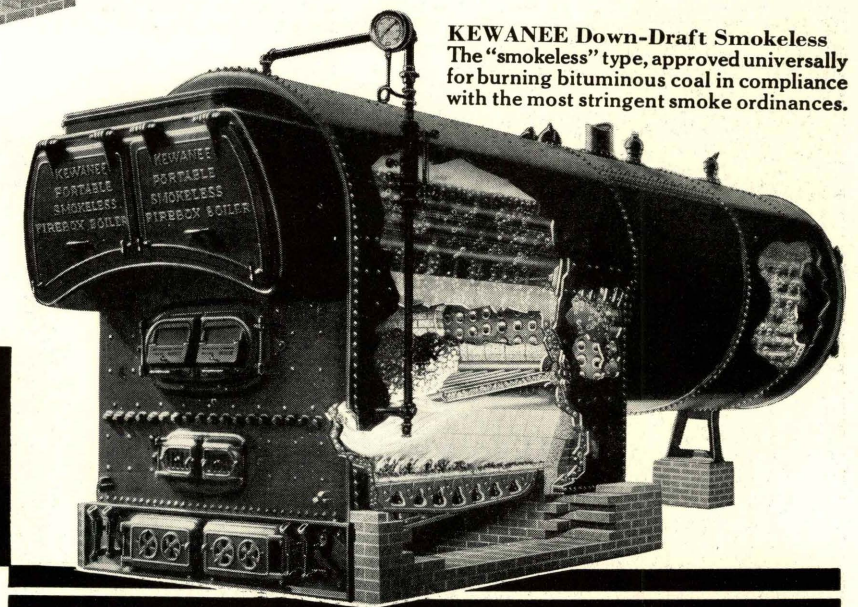
KEWANEE Up-Draft Firebox
The Portable Firebox Heating Boiler with steel-riveted strength. Simple to operate.

*Also a dozen other types
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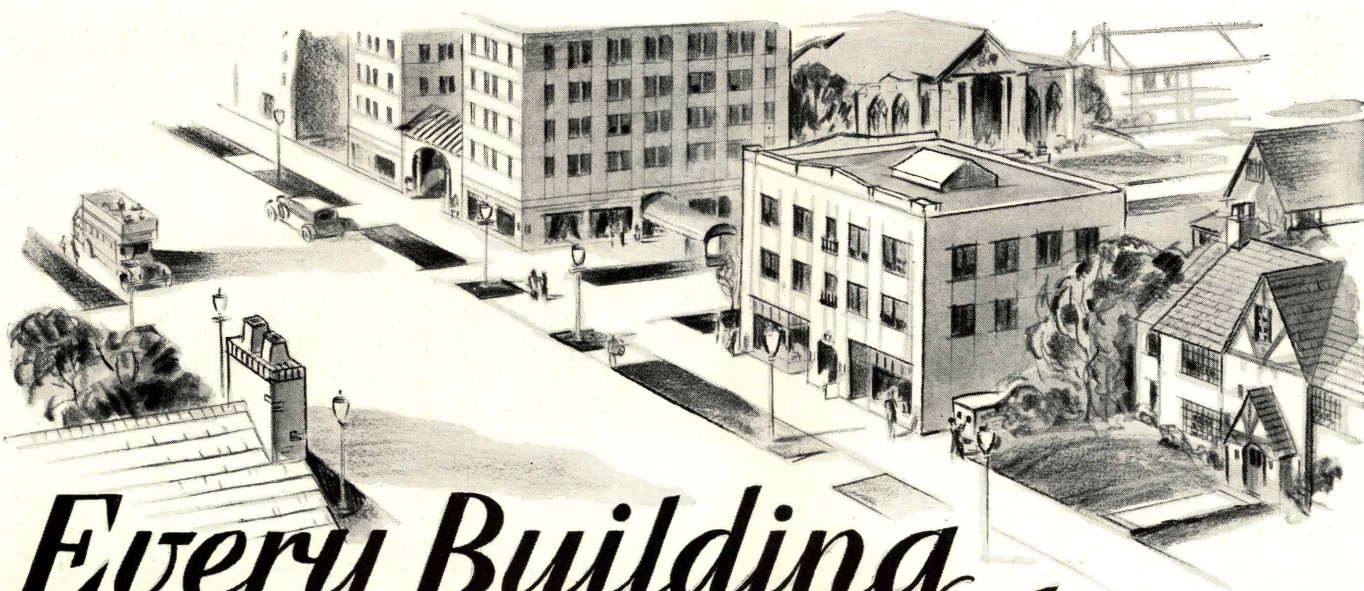
*All adaptable
for ANY Fuel
COAL-OIL-or GAS*

BUILT in the world's greatest steel heating boiler plant—backed by more than 60 years experience—there is a Kewanee Steel Boiler just right for every building.

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without “pushing”—sturdiness that means many extra years of life.

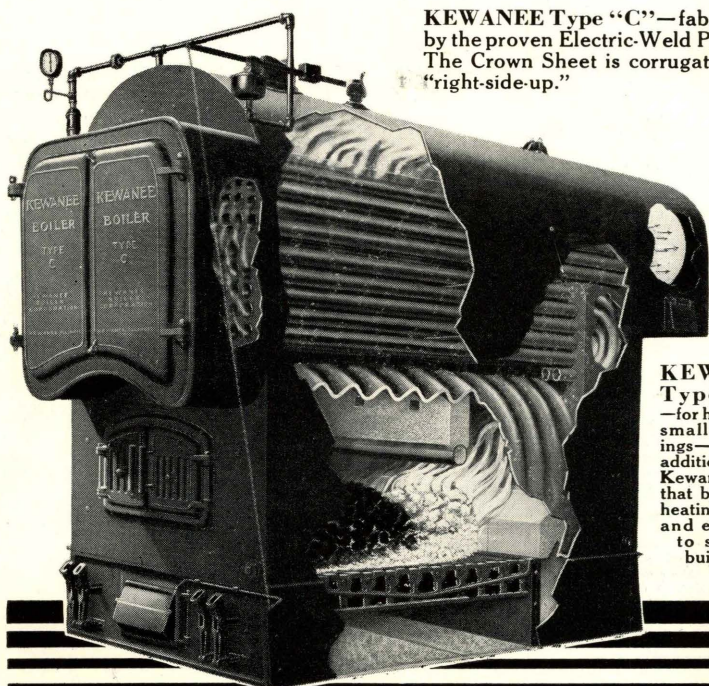
The selection of the proper boiler has much to do with the efficiency at which it will operate. Competent sales engineers, in each of our branches, are particularly well fitted to assist you in making the selection. Their service is at your disposal.

KEWANEE BOILER CORPORATION

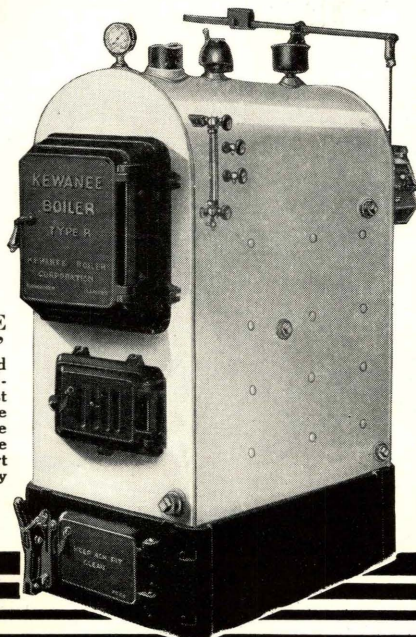
division of American Radiator & Standard Sanitary Corporation

Branches in Principal Cities KEWANEE, ILLINOIS MEMBER OF STEEL HEATING BOILER INSTITUTE

KEWANEE Type “C”—fabricated by the proven Electric-Weld Process. The Crown Sheet is corrugated and “right-side-up.”



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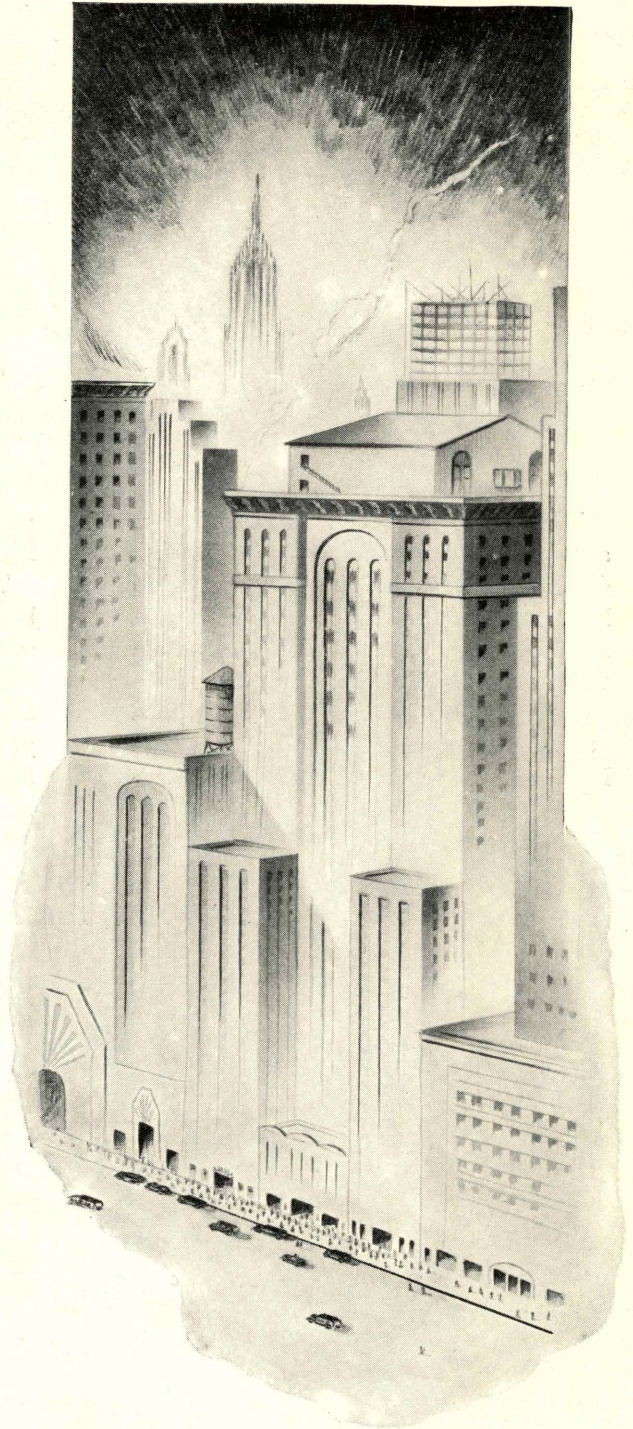


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Rental values of older buildings must ordinarily go down in order to meet the increasing competition of adjacent modern buildings. If the older buildings are modernized, the rental value can be maintained.

“ “ “

New elevator cars and fronts, and other new elevator accessories greatly aid in making an older building more attractive to desirable tenants.



OTIS ELEVATOR COMPANY

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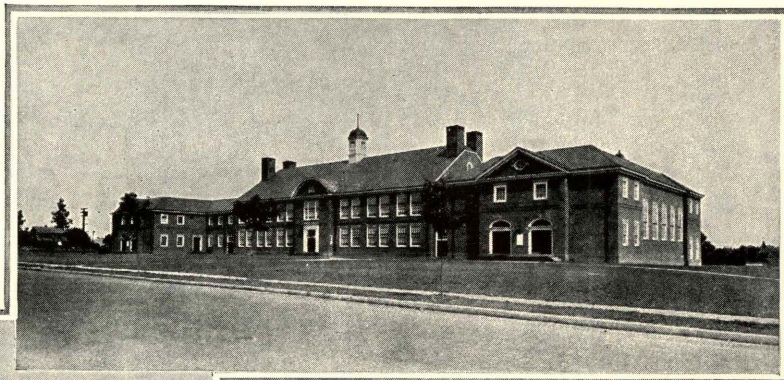


New Jersey's Modern School Buildings

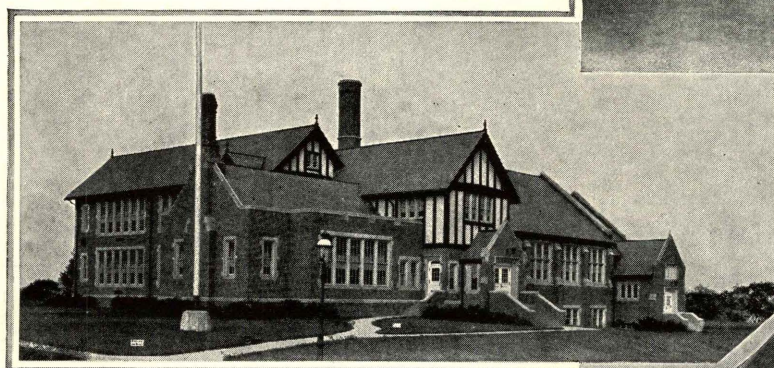
with

Buckeye Heatavent Modern Ventilation

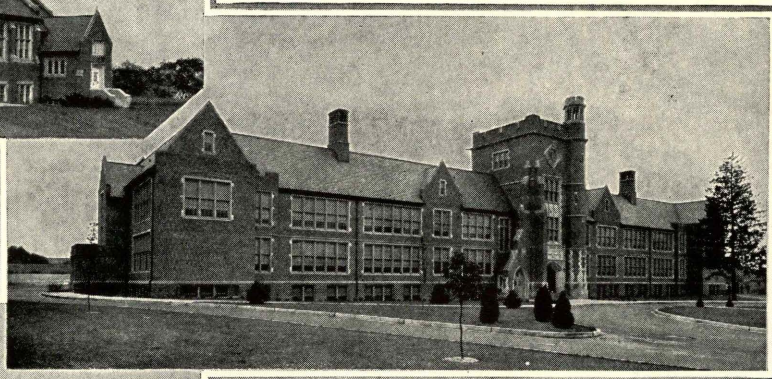
*The Unit System
of Heating and Ventilating*



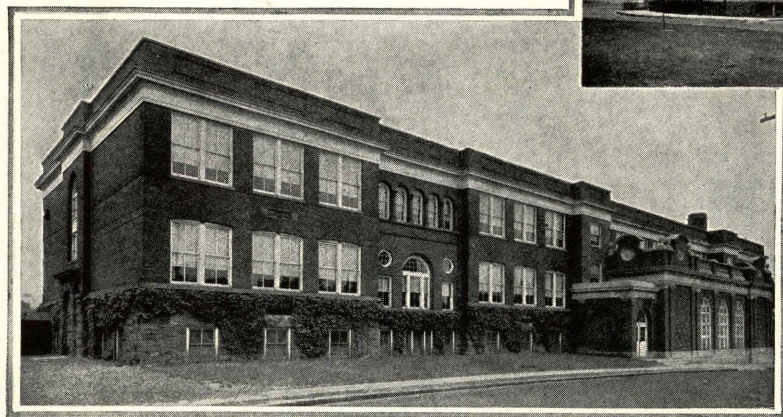
Junior High School, Oradell, N. J.
Architects: Coffin & Coffin, New York City
Heating Contractor: Schrenell Bros.,
Newark, N. J.



Forest Avenue School, Glen Ridge, N. J.
Architects, Guilbert & Betelle, Newark, N. J.
Heating Contractor: The Newark Heating
Co. Inc., Newark, N. J.



Vineland High School, Vineland, N. J.
Architects: Guilbert & Betelle, Newark, N. J.
Heating Contractor: Howard Hutchison,
Philadelphia, Pa.

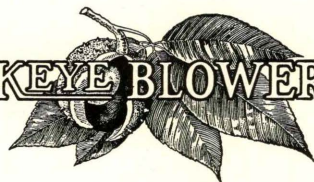


Yantacaw School, Nutley, N. J.
Architects: Guilbert & Betelle, Newark, N. J.
Heating Contractor: Richard P. Lester,
Verona, N. J.

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 and
 BERTRAM G. GOODHUE ASSOCIATES, *Continuing Architects*

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Herbert N. Straus Stable, Red Bank, N. J.

Alfred Hopkins & Associates, Architects

“Stable Fittings by FISKE”

THE Herbert N. Straus stable at Red Bank, N. J., interior view of which is shown above, is another example of the predominating excellence of FISKE stable fittings. If there is any one factor more responsible than another for the ever growing roster of FISKE successes, it is FISKE experience, which extends over the past 70 years.

Architects who specify materials for such installations realize that to specify “stable fittings by FISKE” is to command the

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FISKE consultory service is gladly offered to architects interested in stable design or ornamental metal work of any kind.

Write for illustrated catalogue of what FISKE has done for others in the “home of the horse.”

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 80 Park Place ~ New York
 ESTABLISHED 1858

SPECIALISTS IN ORNAMENTAL METAL WORK

A New Te-pe-co Product

Integral Trap Lavatory

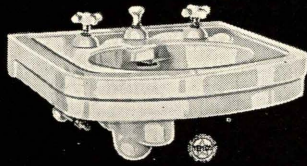


Plate 2081-T
Te-pe-co "Gothian"
Lavatory with combi-
nation Supply Fittings
on Slab.

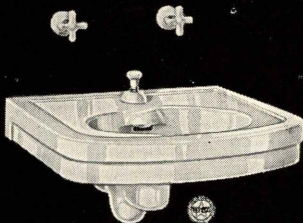


Plate 2085-T
Te-pe-co "Gothian"
Lavatory with Combi-
nation Supply Fittings
through wall.

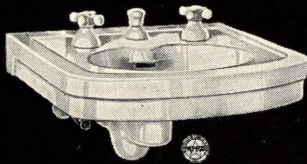
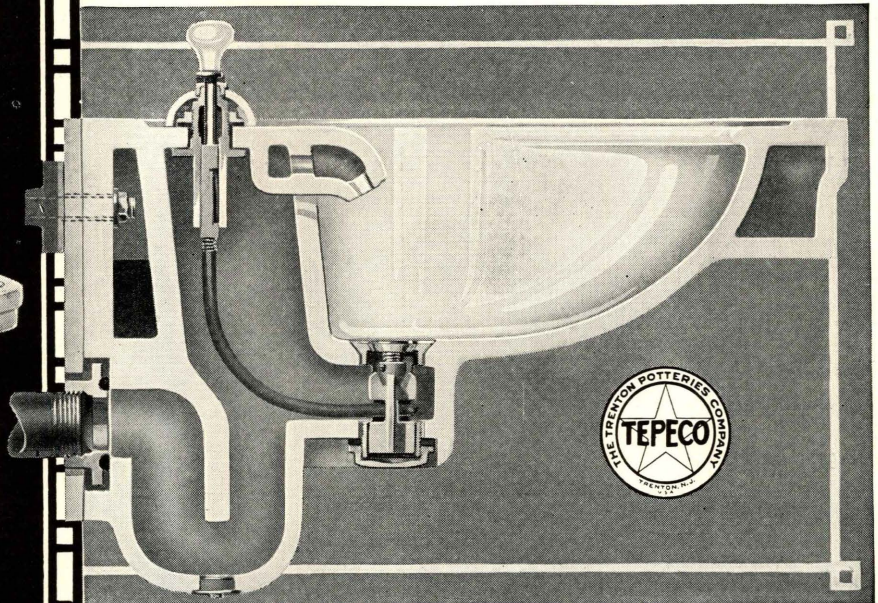


Plate 2083-T
Te-pe-co "Gothian"
Lavatory with All-China
Combination Supply
Fittings on Slab.



ONCE AGAIN have Te-pe-co Sanitary Engineers advanced the standards of sanitation by the design of a lavatory which eliminates entirely the customary brass trap. The advantages of this Integral Trap Lavatory are obvious. It is better looking. It can be readily kept clean. It affords a clear, unobstructed floor space. Its installation can be accomplished in shorter time.

We have named this new Lavatory the "Gothian". It is exclusively a Te-pe-co Product, covered by patents granted and pending. Unquestionably it is the most beautiful and sanitary lavatory of all time. Aside from these points, its complete elimination of exposed brass and its ease of installation make it a wonderful advance in the field of sanitary plumbing.

All credit cannot be given to our sanitary engineers for this achievement for this type of lavatory has been in the minds of plumbing men for many years. Rather should our factory and its skilled potters, who solved its intricacies of manufacture, be given the major credit for this wonderful achievement.

Detailed Circular, telling how to specify, on request

THE TRENTON POTTERIES COMPANY
Trenton, New Jersey, U. S. A.

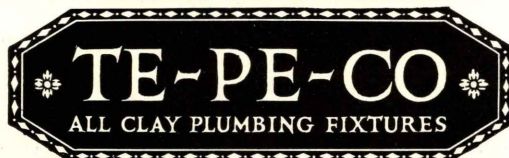
National Showroom
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We make but one grade of ware—the best that can be produced—and sell it at reasonable prices. We sell no seconds or culls. Our ware is guaranteed to be equal in quality and durability to any sanitary ware made in the world. The Te-pe-co trade mark is found on all goods manufactured by us and is your guarantee that you have received that for which you have paid.





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rubber
yardstick
will
give
you
some
amazing
measurements
... if
you
want
amazement!
... But if**

you
want
the
truth
you
must
use
a
surer
standard.
For
example,
in
judging
heating
systems,
an
isolated
figure

in
"lbs. per sq. ft.
per season"
is
meaningless
unless
32
variable
factors
are
first
checked.
Fail
to
consider
any
one
of
these
factors
and
you
may
have
"a
rubber
yardstick"
result.

For example: In one case—a department store—where steam consumption stated in "lbs. per sq. ft." seemed phenomenally low, investigation disclosed a "scotch" engineer who was using the air exhausted from a crowded basement to heat the entrance vestibules! After allowing for this uncounted factor, the system was found to be below average.

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Heating requirements vary so widely that no one type of heating system can be expected to provide the greatest return on the dollar invested in the heating equipment for all types and sizes of buildings. Realizing this, Warren Webster & Company have consistently developed an entire group of Webster Systems of steam heating to provide a heating system for every need and every purpose.

Webster MODERATOR System provides "Controlled by the Weather" heating and makes possible new methods of operation and new standards of economy. Can be applied to any existing steam heating system of sufficient size.

IMPROVED Webster Vacuum System provides distribution balanced from the start—the supply of steam to each radiator is so equalized that all radiators get steam at the same time and in substantially the same proportion, regardless of distance from the boiler. May be supplemented by HYLO Vacuum Variator, permitting manual control by building operator. Applicable to new or existing installations.

IMPROVED Type "R" System for residences and larger buildings as well, combines advantages of steam heating with advantages of hot water, but without limitations. Meets fully the operating requirements of newer fuels, newer types of radiation and newer thermostatic controls. Also provides better-than-ever heating service with old radiation and old controls.

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Branches in 52 Principal U. S. Cities
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Webster
**Systems of
Steam Heating**

a 1 54

This is one of a series of advertisements discussing the factors affecting heating steam consumption. The purpose of the series is to call attention to the methods of heating steam consumption analysis, estimate and heating cost accounting developed by Warren Webster & Company to provide a reliable basis for comparing heating system efficiency. Actual detailed facts and figures of steam consumption of a number of Webster Systems of Steam Heating, prepared in accordance with these methods, are available for your examination.



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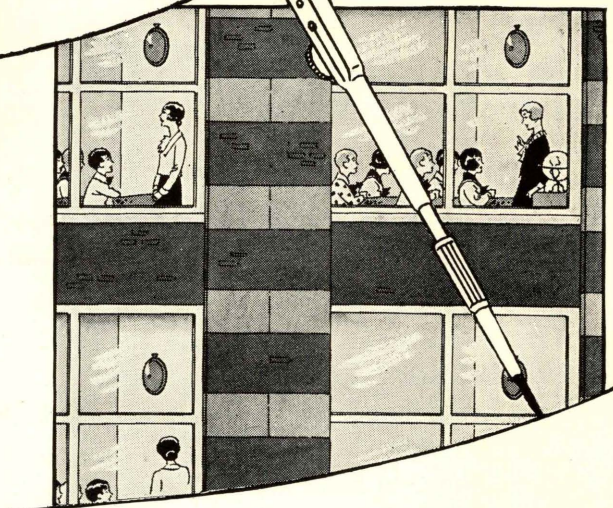
WIDEN THE HEARING CIRCLE



AT HIS DESK—YET ALL THE SCHOOL HEARS!

Now the principal can sit in his office and send his voice to every room in the school at the same time. Or to any combination of rooms he wants to reach. With a Western Electric Public Address System, exercises, special instruction, general announcements can be given without interrupting class room work for extra auditorium sessions.

Here is a system—that amplifies and distributes sound transmitted into a microphone. Realizing its wide application, architects are including Public



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A.A.-11-30

GRAYBAR ELECTRIC CO.,
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NAME

ADDRESS

CITY.....STATE.....

Western Electric

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In fact, during the winter months more Brixment is sold in proportion to the volume of building construction *than at any other time*. Louisville Cement Company, Incorporated, Louisville, Kentucky.

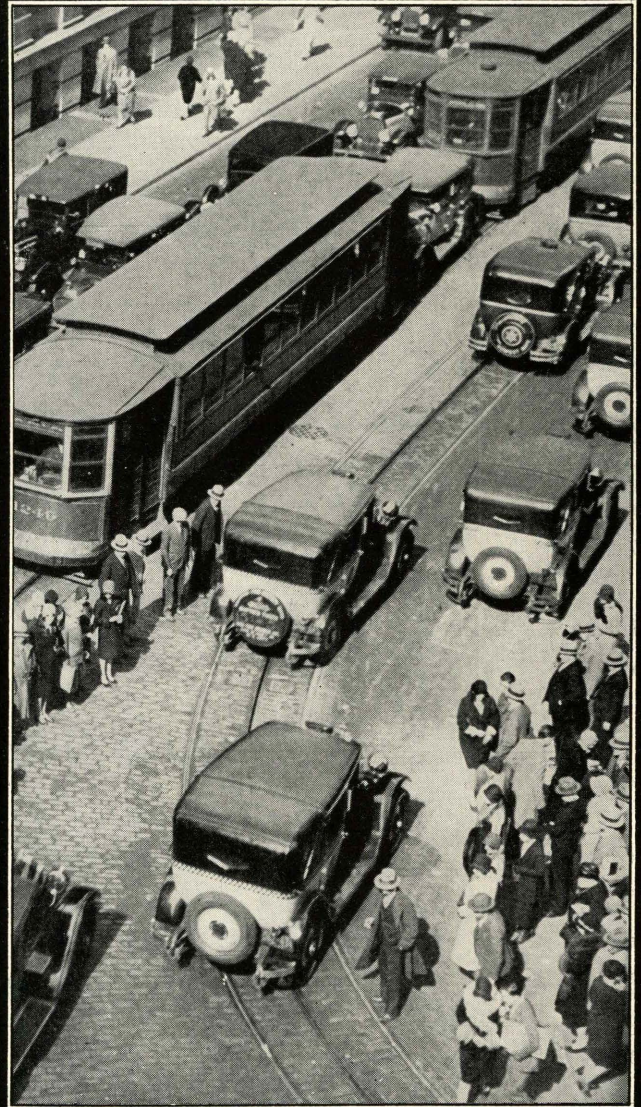
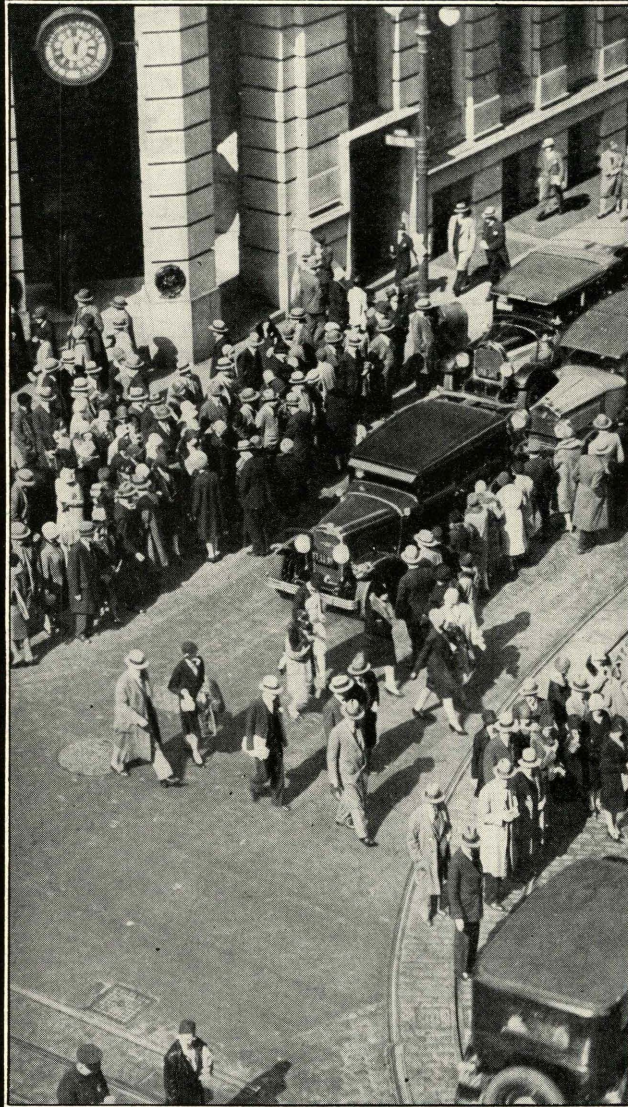
CEMENT MANUFACTURERS SINCE 1830

BRIXMENT

for MASONRY and STUCCO



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THROUGH THIS NEW, FLATTER GLASS**



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flat drawn
WINDOW GLASS



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100,000
bags of

Plaster will
be used in the
**Empire State
Building**

GYPSTEEL

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are being used on this build-
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Linden 2-3700

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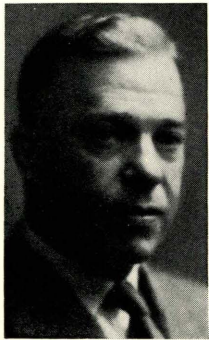
Subsidiary of United  States Steel Corporation

Concrete for Permanence

46

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FOUNDED 1876



The Cover

TORRE DEL SALVADOR, the subject of this month's cover, is an ancient fort often referred to in old tales of mediaeval warfare, for it was a noted frontier post against the Moors. The tower is located in Zamora, Province of Leon in Northern Spain. It is a town rich in fragments of the Romanesque and a fruitful source of material for the artist. As Mr. Bill writes, "the huge square mass of the tower, yellow-gray against a tumbled background of driving storm clouds, gave me, as could nothing else, the story of the grimness and the strength of Northern Spain."

Carroll Bill is a graduate in architecture from Harvard, and for many years had charge of the drafting room of Irving & Casson—A. H. Davenport Co., in Boston. He now has a studio of his own and is a member of the Boston Society of Architects as well as of other art and architectural organizations.

Next Month

BUSINESS—Frank Lloyd Wright vigorously discusses why architecture as a profession is all wrong.

STOCKHOLM EXPOSITION—Francis Keally, A.I.A., gives his impressions.

ECONOMICS—How \$500 spent in computation added \$50,000 to the annual income of an office building.

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*

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Church of the Holy Child, Philadelphia. George I. Lovatt, Architect.

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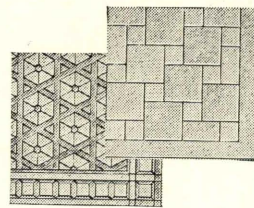
WITH the increasing desire to abate noise and provide better hearing conditions in all types of business, residential and public buildings, there has come a vital need for an organization which can render a complete service on all phases of architectural acoustics.

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A C O U S T O N E

They talk about "Plumbers' Tools" . . . and "ARCHITECTS' ESTIMATES"

By Benjamin F. Betts, A.I.A.

PRELIMINARY estimates of the cost of a building made by the average architect are frequently and unfortunately so far from the truth that they are one of the standing jokes of the profession. One's sense of humor would be justly tickled, if the jest did not so seriously affect both clients and architects.

Since the amount of money available to most clients for building purposes is limited, a reasonable estimate of cost in advance of building is of vital concern to them. Inaccurate estimates—too often rash guesses—are the direct cause of many buildings being designed but never built. They are also responsible for the impression held by the general public that little faith should be placed in what an architect says the work will cost.

Incorrect estimates unquestionably are responsible for sending many people, who should have secured the benefits of professional advice, to contractors and speculative builders. The situation has proved a boomerang to architects as a whole. It is today a serious indictment of the profession.

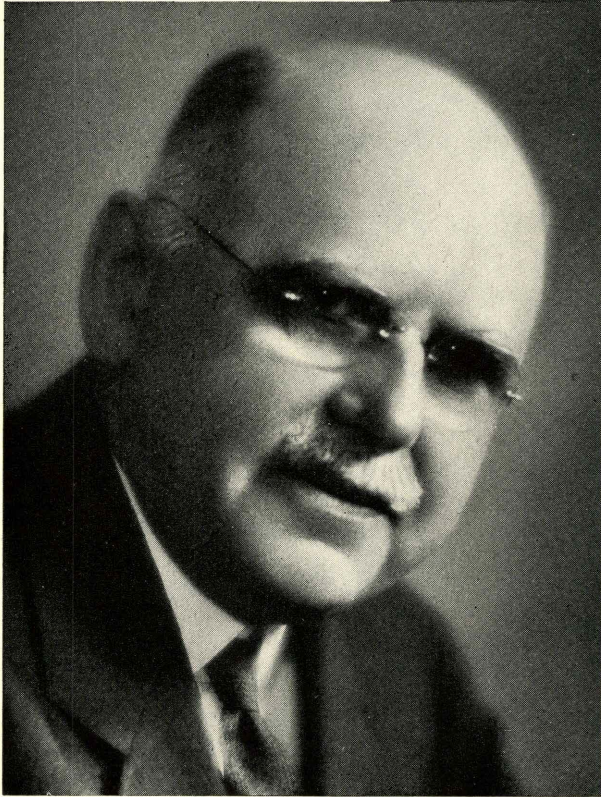
MANY reasons contribute to this situation. Often a client's desires cannot be controlled; the best of everything is wanted until the price is learned. Sometimes items are intentionally or unintentionally omitted. Again a good hearted architect, anxious to please, hopes against his better judgment that he can obtain for the owner what he wants for what he can afford to pay. But in most cases, the basic cause is ignorance of building costs or incorrect methods of estimating.

Several months ago the editor of an architectural magazine, writing in a layman's building magazine, no doubt expressed the attitude of the average architect toward this question when he said, "with all the emphasis at my command let me warn the prospective home builder *never* to trust his architect in this matter of estimates. It is one of the things which he cannot cope with. . . . Architects cannot estimate." This was a rather broad and damaging statement if true, especially when broadcast to thousands of prospective clients.

ACCURACY of their preliminary estimates is the pride of many architects. Unfortunately, as is so often the case, the good in the profession is submerged and overcast by the bad. Improving the correctness of cost estimates is one of the most important tasks before this profession today.

A request for articles on this subject appears on page 66 of this issue

sale barricades also
to prevent the pick
this neighborhood,



Why not Specifications

BY ARTHUR F. WOLTERS DORF, F.A.I.A.

Chicago, Illinois

INDIVIDUALISM
in a specification makes the
document more vivid to the
man on the job and results in
a better understanding of
what is wanted than a matter
of fact accumulation of words

IN Grand Opera the text
is often drawn from mythology, and sagas play an im-
portant part in such themes. Even land surveying points
with pride to the days of ancient Rome when the god
Terminus stood guard over private and public bound-
aries. And coming to the Middle Age, the practice of
yearly perambulations of parish boundaries or surveys,
which was called in England "beating the bounds," is
recorded with pride. The clergymen and other notables
of the parish, followed by the boys of the school, walked
around to the land-marks which the boys struck with
peeled willows. Sometimes the boys were whipped at
important boundary marks to make them remember. The
infancy of surveying surely had its moments of anguish!

But how about the mythology—the sagas—of archi-
tects' specifications? Did anyone ever hear of anything
like that? Some tradition, perhaps, but not very much
of that. John McComb, architect for New York City's
famous City Hall, left some accounts, some records, of
materials, more particularly of stone that was quarried
for the City Hall. But these records are not much more
than columns of figures. Little—too little—is recorded
of the ambitions or desires of the architect for the
unborn building as expressed in the documents to the
builder who was to execute that work.

Writers on architecture tell us that the birth of the
practice of architecture as pursued today may be traced
to the Renaissance, before which time the architect was
the master-builder, who handled tools on the job, as well

ing the sidewalk and the alley
aninnies who are prolific in
from falling into the trenches

make your
HUMAN?

as the designer of the structure. But there comes to mind a medieval work in England that does reflect something of the modern practice. When William of Wykeham, bishop of Winchester, decided to metamorphose that cathedral which had been started in 1079 and was a Norman structure whose nave walls were divided equally into three stories—aisle arches, triforium openings, clerestory), he began in 1394 a remodeling job that ranks as the conspicuous reconstruction of the Middle Age. He retained the main supporting masses of the Norman work while eliminating the parts between, reconstructing in two stories where there had been three. Moulded stone piers had run up to support wooden trusses, and into these piers Wykeham gathered his groin ribs of the stone vaulting, leaving the top of the piers hidden in the roof space. The clerestory and the piece of blank wall below it were combined into one whole by carrying heavy mullions up from the balcony to the vaulting, so that the whole is, as it were, one large window, the lower part of which is filled with stone.

WHAT drawings were made by or for Wykeham and what specifications to elucidate the work, I do not know. But when Wykeham died in 1404 at the age of eighty, the work remained unfinished. He had made, however, full provision for completion in his will. This businesslike will described the order in which the remaining work was to be done and the conditions on which he bequeathed his money: "The prior and convent are to provide the scaffold, they are to permit the bishop's workmen to dig the best lime and sand on their lands or the lands of their tenants, and all the old stone, timber, lead, iron, and glass, and any other materials which may be obtained from the old building are to be used in the new work." The conduct of the work was to be entrusted to Master William Winford and such others discreet,

sufficient, and approved in their art as might be chosen by his executors.

Winford was probably what we should call a clerk of works acting as manager without a general contractor. These will clauses certainly sound like notes for a modern specification.

I suppose specifications were, from the beginning of the Renaissance times to thirty years or more ago, little more than elaborations such as might have been made on Wykeham's will.

Then, in the United States at least, architects took notice of findings and recommendations of laboratories and scientific bureaus, whose business it was to test materials, manufactures, and machinery. I think of such institutions as the Bureau of Standards, American Society for Testing Materials, Underwriters' Laboratories, American Institute of Steel Construction, and others. Buildings began to have mechanical equipment for elevators, heating, ventilation, conveying, and the like; and with these came co-operation with mechanical engineers, experts in their particular line whose business it was to keep abreast of the latest developments. They became responsible for specifications in their field. And the specification writer in the larger architects' offices became a specialist who did nothing else. But the alert architect, even though not writing his specifications himself, remained en rapport with all this advance. The specification of the older trades—masonry, carpentry, plastering, metal work, painting, and the like—reflected the experiences of the architect; and with the old practitioner these experiences were at times drawn upon to elucidate the character of work desired.

I fear, however, that where specifications were turned over to a specification man who did nothing else, and perhaps seldom visited the growing building or the shops fabricating for this building, the specification became more and more a standardized document culled from manuals on specifications. These manuals have their great value as reminders, but with them the danger is always present to mark for copy long passages from such manuals, producing a lengthy specification which the builder and his foremen only read in case of necessity. And then very often only when trouble is brewing.

My appeal here is for specifications that will eliminate all the padding, but that show that the writer and the architect he represents know the construction and composition of what he

(Continued on page 116)

How to create an ADVERTISING PLAN to advertise architectural service

By ALFRED E. FOUNTAIN, Jr.

Vice President Lyddon, Hanford & Kimball

LAST MONTH *Mr. Fountain discussed how advertising could help architects.*

NOW HE TELLS *how architects can apply the force of advertising and make the man in the street want to employ an architect*

LET us assume that from innumerable conferences and meetings and vast clouds of talk and argument pro and con, the architects of the country have come to the point where they realize that after all paid advertising is not the terrible thing they had imagined it to be. The question then arises—how should they proceed to get a clear and concise picture of what would happen if they decided finally to enter into an advertising campaign? How could they avoid waste of money and in no way jeopardize that precious thing called ethics?

Obviously, the first thing to do is to create a committee of architects empowered to select an advertising agency to do one thing only—for a lump sum to prepare an analysis of the market for architectural service and make recommendations for advertising procedure based thereon. The duties of this committee would not be arduous, but experience dictates that it be as small numerically as possible. Large committees seldom get anywhere, and usually a few men do all the work.

This committee would then select an advertising agency and contract with it to deliver, for an agreed sum, within a specified time, in printed form, a complete and detailed analysis of the present and possible market for architectural service, and based on these facts and figures a recommendation for advertising procedure. These recommendations should include methods of raising funds for the advertising, where and when the advertising should run, mediums to be employed, objectives to be obtained each year or group of years, and examples of advertisements best calculated to create the desired results.

It is my earnest hope that if and when a committee

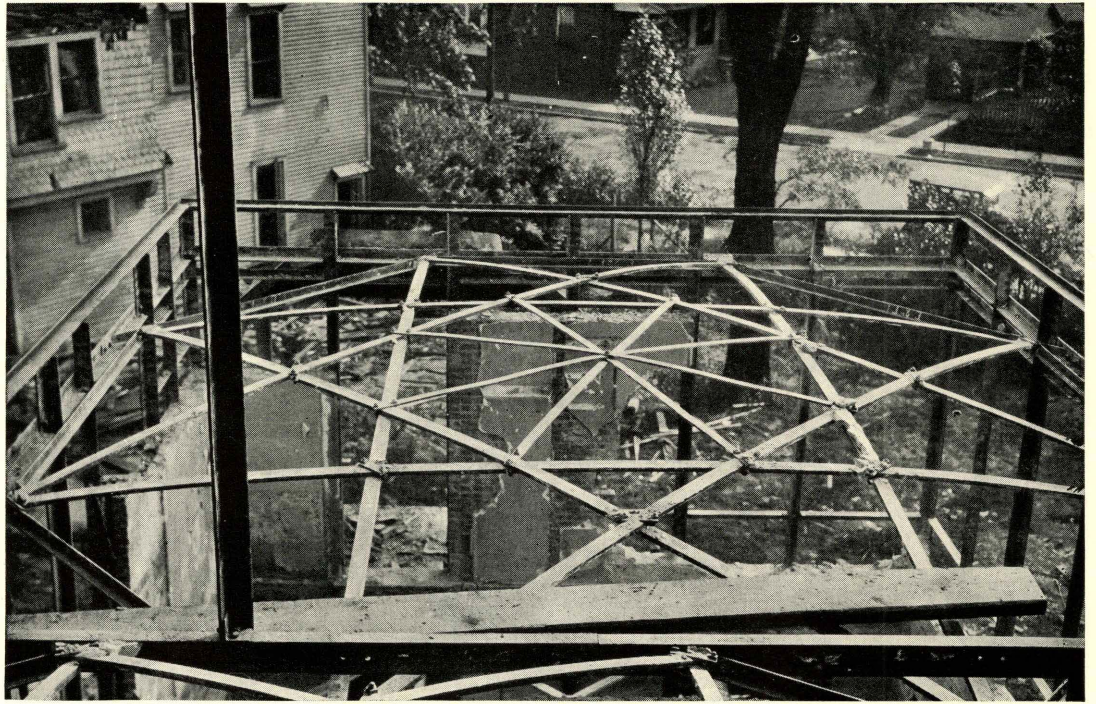
of architects starts to select an advertising agency to perform the functions mentioned above, it will tear a leaf from its own precious book of experience and not do what it has so often criticized its own prospective clients for doing. Just because an architect can create a beautiful and successful church does not mean that a garage from his board would be well done. I have seen residences from the offices of famous school architects that would really be better schools than residences. The same can be said of advertising agencies. Because one has been successful with a great food campaign, or has successfully launched an automobile in an overcrowded market, does not imply that it would succeed with a campaign for architects. There are advertising agencies in this country that know architects and the building industry, and who have done many successful jobs in that field, and it seems to me that they could more reasonably be expected to function accurately and with less waste than those not acquainted with the industry.

PROVIDED the agency selected for this preliminary work was fairly familiar with the building industry, they would require about three to four months to complete the market analysis and prepare the advertising recommendations. The charge for this work might reasonably be from \$5,000 to \$8,000. It would be the cheapest yet most valuable step in the entire campaign—the plan on which, although later revised or altered, the success of the whole undertaking depended.

Now, to clear away some of the cloud of mystery that always seems to enshroud that word analysis—market analysis—let me, by using a purely hypothetical situation and figures that mean nothing at all except to illustrate a point—they are not even intended to be a good guess—show why such an analysis is essential to sound, wasteless advertising.

Let us suppose that the architects who were to pay for this advertising campaign did not believe a market study necessary and wanted to employ an advertising agency to proceed at once with the preparation and placing of advertising. To begin with, I don't believe many good agencies would handle the work on such a basis. But if they did, I'd (Continued on page 78)

FLOOR BEAMS discarded all tradition and consisted of flat bars arranged in a geometric pattern. Construction was arched about $\frac{3}{4}$ " per foot. The ceiling pattern followed the floor construction, as shown in the picture on page 29



The FIRST Steel Frame HOUSE

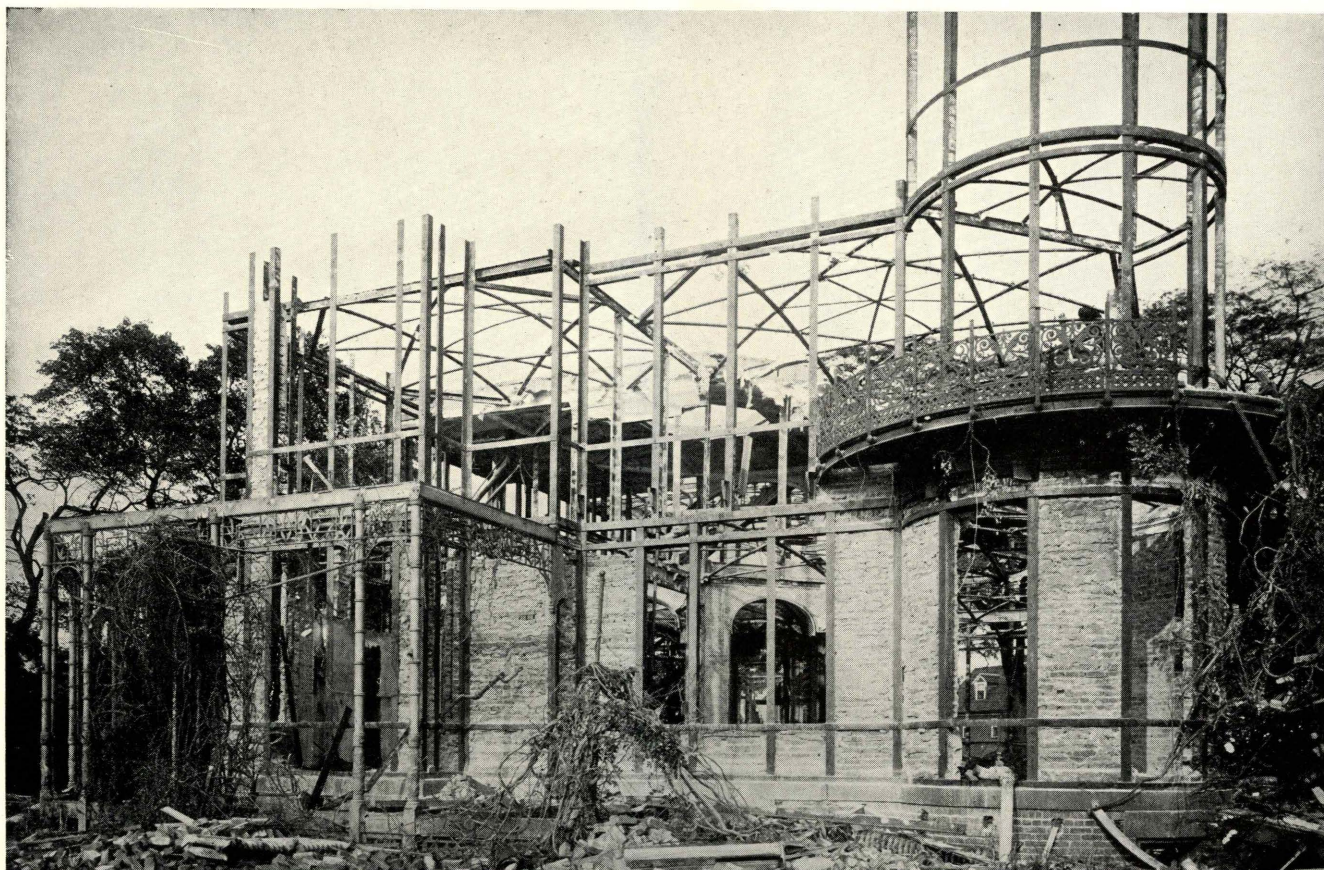
FORTY years ago, Niels Poulson, a pioneer in iron and steel, built in Brooklyn, New York, what was without doubt the first steel framed house in the United States. The house stood in what was then New Utrecht, Long Island and commanded a superb view of New York Bay and Staten Island. Demolition of the house in September, 1930, revived the story of its building and revealed its long concealed construction.

The construction of this house, designed by Niels Poulson and his wife, shows a remarkable attempt to secure a type of construction applicable to dwellings that would be durable and highly resistant to fire. The Superintendent of the Bureau of Buildings, Brooklyn, Thomas P. Flanagan, states that he watched the erection of the Poulson house during the summer of 1890 and believes that never before or since has another house like it been built. Baron Joost Dahlerup, in a biography

of Poulson, referred to the house as unlike any other in the world.

Combustible materials were largely eliminated from the construction. Wood was reduced to that required for blocking, roof construction, doors, frames and trim, window sash and frames, and finished floors. Foundation walls were built of brick. The exterior walls were framed with steel angles built into brick walls eight inches thick and covered on the outside with copper sheets fastened to the steel frame. The floor construction presented an unusual combination of steel I-beams, angles and flats, and wire mesh and concrete. The roof was covered with clay shingle tiles. In certain sections of the house cast iron played an important role.

The steel frame consisted of $4'' \times 4'' \times \frac{1}{2}''$ angles extending through two stories and set vertically about three and one-half feet on centers. Angles $3'' \times 3'' \times \frac{3}{8}''$ were carried around the building horizontally at the



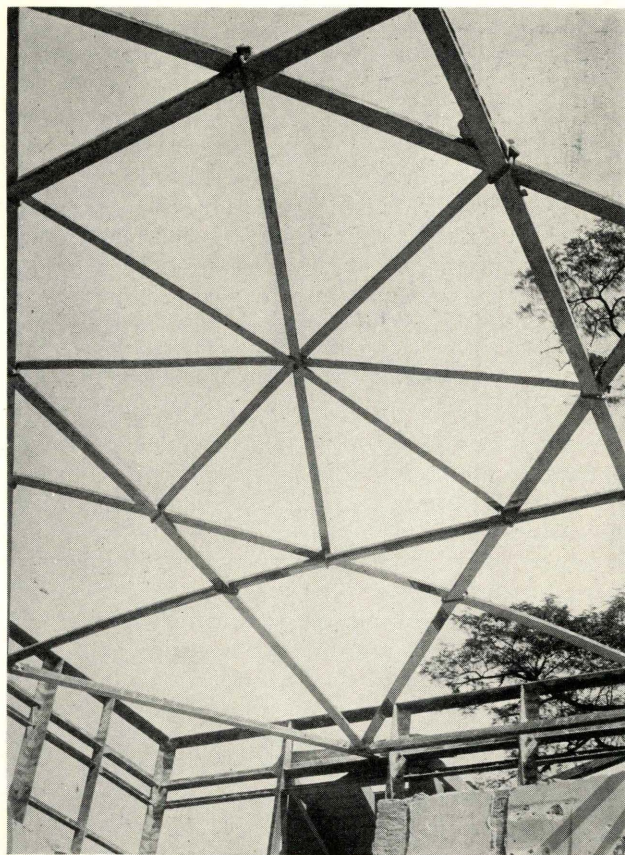
WHEN WRECKING was partially completed. Studs and framing members were all of steel, curtain walls being of brick. The whole structure was covered on the exterior with copper

B U I L T I N 1 8 9 0
wrecked in September, 1930.
House of Niels Poulson
in Brooklyn, New York

BY GEORGE C. WHEAT

window sill line of the first and second stories. Two angles were carried horizontally around the building at the second and third floor levels. Connections were made with counter-sunk, slotted head bolts. In demolition, the entire frame showed perfect rigidity in spite of the shock of sledging out the floors and the battering out of the brick walls.

The floor construction was light and comparatively simple. Five, eight and ten inch I-beams, the size depending upon the conditions to be met, were used in conjunction with a system of flat bars which formed a criss-cross pattern between supporting members. The I-beams or angle supports were braced with angles across the corners at about the quarter points. From these points flat bars four inches wide and one inch thick extended diagonally from support to support, forming an octagon in the center. This in turn was filled in with a series of flat bars two inches wide and one-half



A SPIDER'S WEB in the making is suggested by the center panel of the floor construction



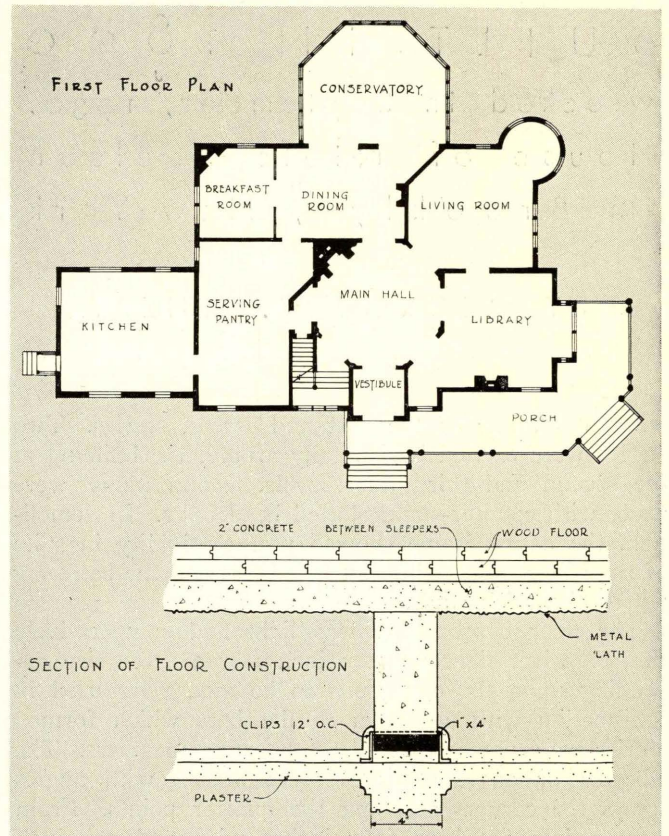
THE OPEN WELL of the main hall, in structural and decorative cast iron, shows how closely the decorative scheme was made to follow construction

inch thick. All connections were made in the field with bolts and iron yokes. The steel members of the floor construction system were crowned or arched from all sides to the center. The rise of the arch of the twenty foot span over the kitchen wing was fourteen inches.

A series of stirrups made of bent flat bars set about twelve inches on centers were hung over the four inch flats of the floor system. To these were fastened a jute reinforcement or base for the plaster ceiling. A level base for the finished floors was secured by casting concrete ribs four inches wide over the four inch flats. The concrete ribs varied in depth to compensate for the arch of the underside of the floor construction.

On top of the concrete ribs a system of two inch by one inch wood furring strips were laid sixteen inches on centers. Angle stiffened woven wire lath was stapled to the furring strips and supported a two inch concrete slab cast over the entire floor area. A matched pine subfloor was nailed to the furring strips and covered with a finished floor of hard wood.

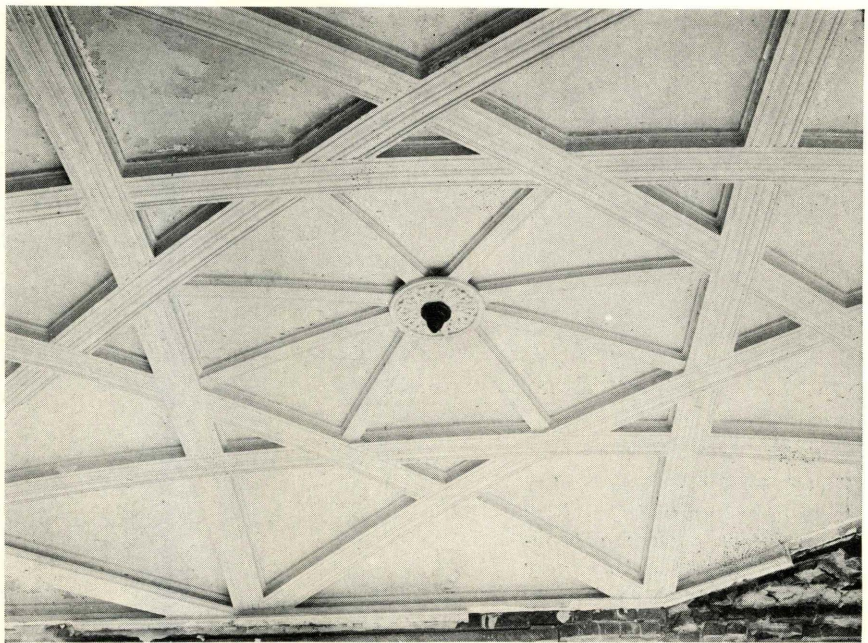
Plaster ceilings followed the arch of the floor construction and were approximately two inches in thickness. Conditions observed at the building during demolition indicated that the rough plaster ceiling was placed before the concrete ribs were cast. The concrete ribs were evidently cast in forms temporarily supported on the iron stirrups to which were fastened the jute reinforcement of the plaster. Shallow plaster beams or ribs



FLOOR PLAN and detail of construction of the first floor frame of the first steel in house. The second floor plan was similar in general layout to the first

FORM FOLLOWS
STRUCTURE IN
THE CEILING
PATTERN

The framing members of the floor construction were revealed in the design of the plaster ceiling, anticipating the "functionalist" school by forty years



STEEL STUDS and girders, with curtain walls of brick, shown in the photograph at the left, suggest the skyscraper construction of today



followed the diagonal members of the steel framing members and thus protected them against fire and at the same time expressed the construction in a decorative manner. In this, the designer of the house anticipated modern argument for truth in architectural design by nearly forty years.

Partitions were framed with structural steel angles and filled in between with light weight clay tile four inches thick. Woven wire lath was used on the interior wood stud partitions of the third story. Clay tile was used as a fire stop at all door openings of this story.

CAST iron was used structurally and ornamentally in the construction of the second floor above the main hall. Concrete was here used for the floor construction in a manner similar to that found elsewhere throughout the structure. This hall was octagonal in shape and was lighted by a skylight above an open well extending through the second story. The main stairway was of cast iron with slate treads. Cast iron was also used for the construction of the conservatory and the porch or piazza, and porte-cochere.

The exterior of this unusual house was covered with copper sheets, made by the "galvano-plastic" process. Here again the structural framing of the building was frankly expressed. A decorative frieze made of copper sheets in twelve foot lengths extended entirely around the house. Four circular medallions, replicas of those on the Albert Memorial of London, symbolizing America, Europe, Asia and Africa, were used as decorative motifs on the exterior. The surface of the mortar of the brick walls backing up the copper sheathing indicated that the exterior wall covering was attached to the steel frame of the Poulson house before the masonry walls were built.

According to Maurice M. Laughlin, in a history of Kings County, published in 1893, the Poulson house was originally heated by a (Continued on page 98)

THE PUBLIC rarely has an opportunity to see how an architect studies a problem in design. Most of these studies are made on tracing paper and discarded so that the public sees only the finished product. Recently the public has perhaps unknowingly been let into the secret through the alteration of the building erected by Stewart & Company in New York. The building was designed by Warren & Wetmore

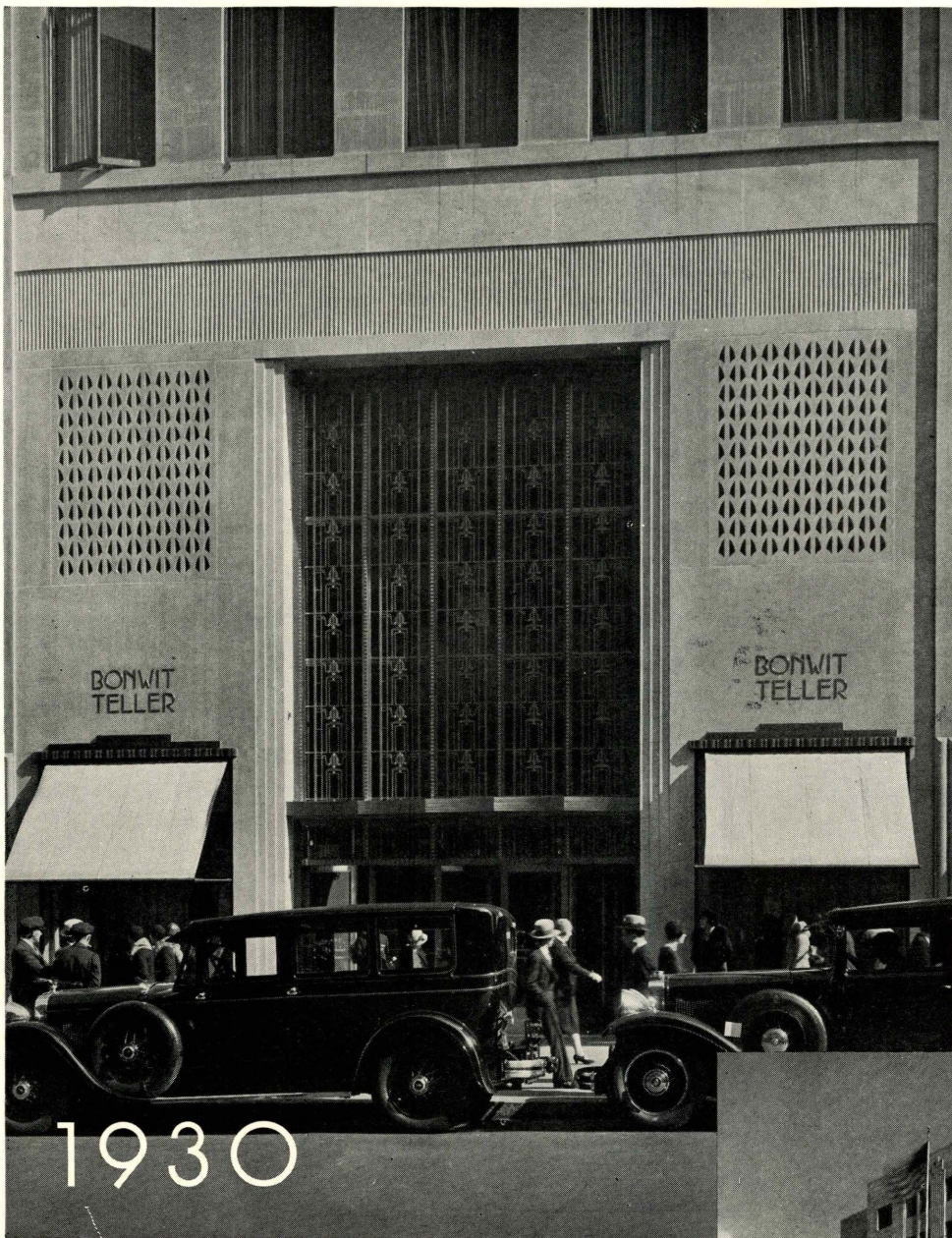


1929

VAN ANDA

IN EIGHT MONTHS
which do

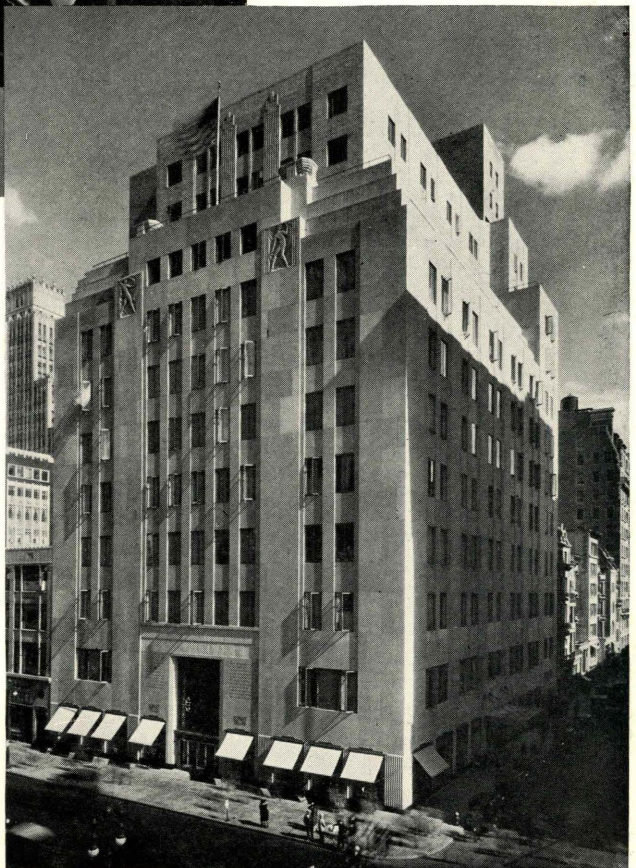


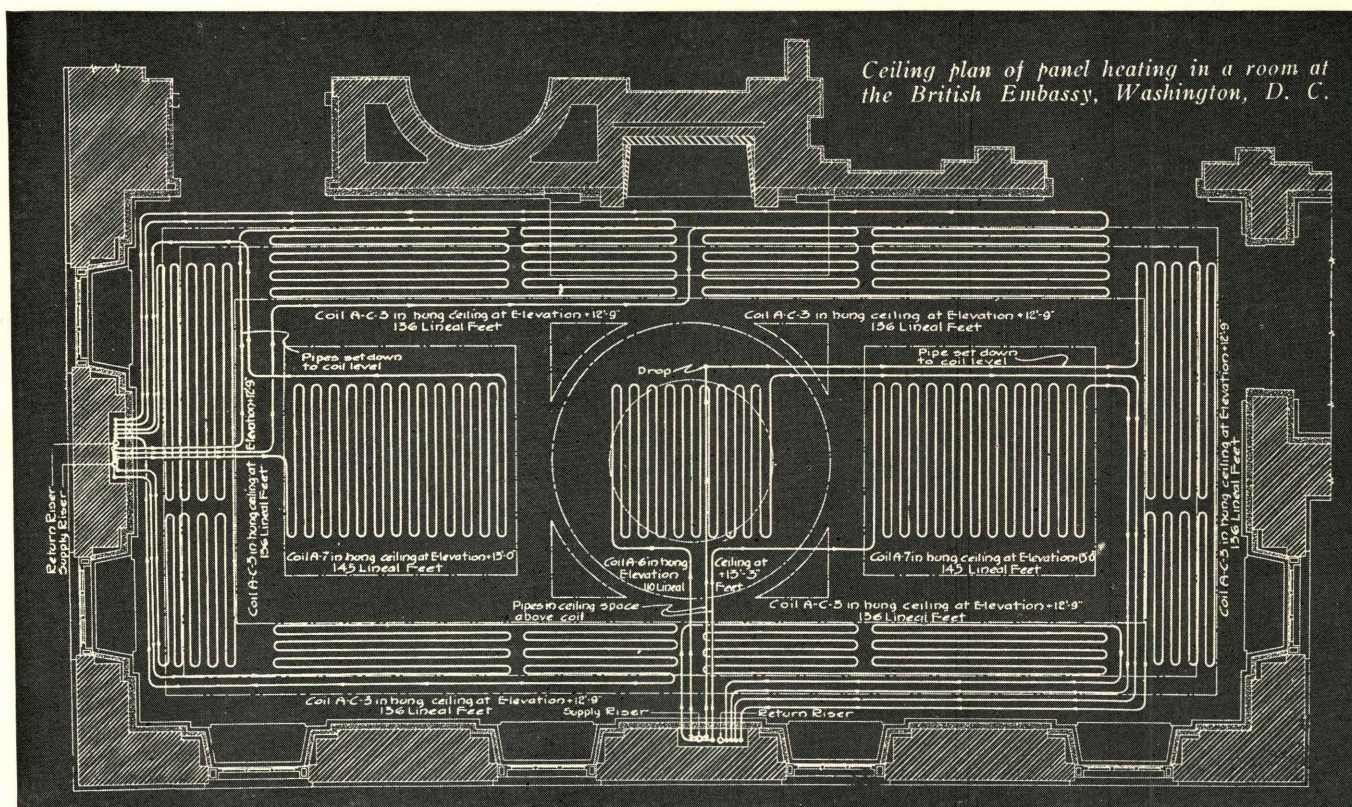


VAN ANDA

SUBSEQUENTLY *the structure passed into the hands of Bonwit Teller. Possibly to erase the identity of the former owners of the property, the entrance motif, as well as the interior, was completely changed by Ely Jaques Kahn. The entrance has been simplified through the use of pierced limestone and a grille of clear glass and metal. The name of the former owner has been cleverly obliterated*

THEY CHANGED IT
 you prefer?





First United States Installation of PANEL HEATING

By Harold F. Blanchard

IMAGINE a room with brilliant light streaming through a frosted glass ceiling. From this glowing surface, light radiates in all directions to walls, floor and furniture, where it is partly absorbed and partly reflected, the reflected light impinging on other surfaces where the process is repeated and so, ad infinitum, until all the light is absorbed by the objects upon which it falls. Shadows are reduced to a negligible minimum and every nook and cranny of the room, even under tables and chairs, is suffused with a soft, even glow.

Now it happens that radiant heat waves are just like light waves except that the heat waves are longer; that is, the distance from one wave crest to the next is greater. The eye is tuned to recognize light waves whereas heat waves are invisible. Heat waves, on the other hand, have the ability to increase the temperature of any object upon which they fall—your face or a chair for example. The warmth felt when standing before a blazing fire is due to heat waves—radiant heat.

Radio waves belong to the same family, but are still longer than heat waves.

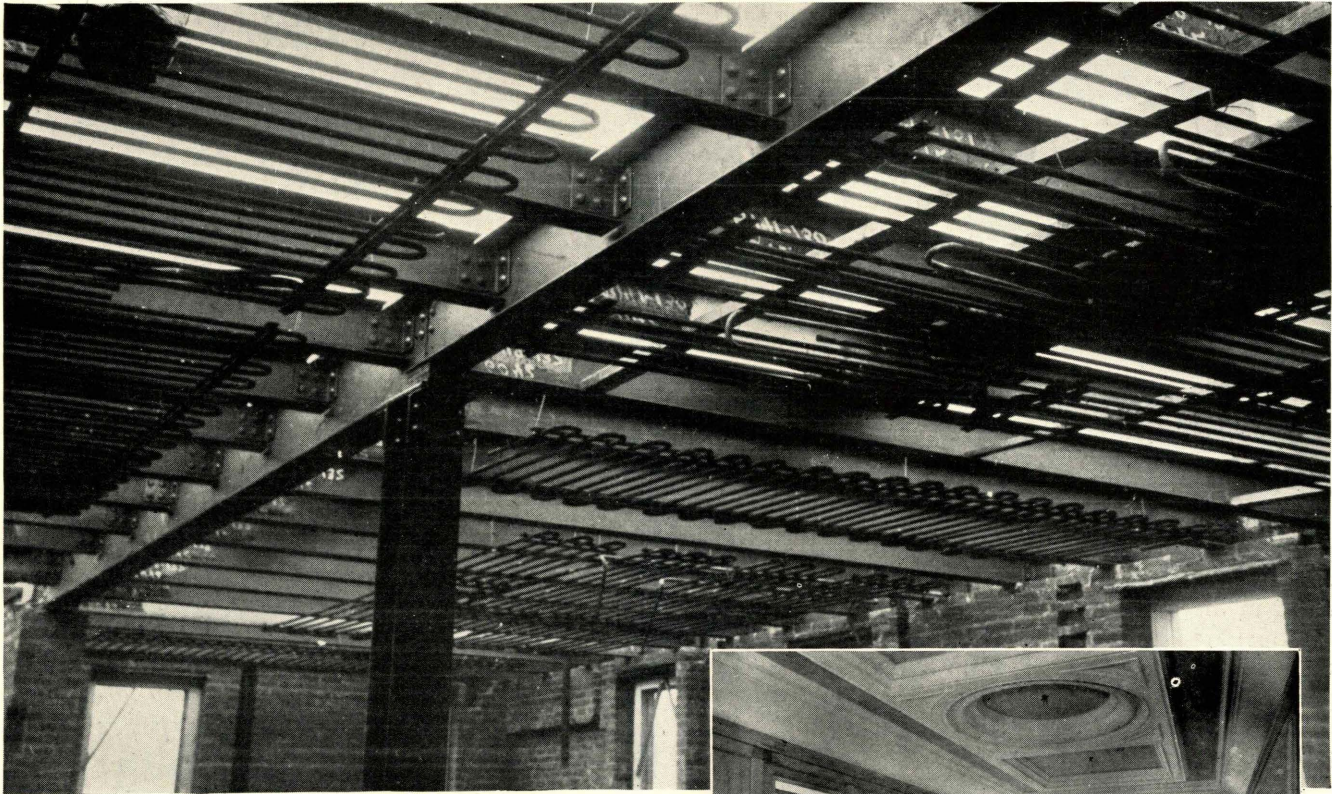
Waves in what? That is a hard question. Those of us who are old-fashioned enough to insist upon a name for it, still call it the ether, that incomprehensible something which fills all space and in which these various

waves ripple and surge without getting mixed up.

Suppose that the ceiling of a room, instead of radiating light waves, sends off heat waves obtained by raising the temperature of the ceiling by means of embedded coils of pipe through which warm water circulates. The piping, of course, is completely concealed. The necessary temperature at the ceiling depends on how cold the weather is and how well the building retains its heat. Rarely, however, is it necessary to have a ceiling surface temperature in excess of 120 degrees on cold days and most of the time it is less. As explained later, in some special cases heating panels can also be placed in walls or floors.

SUCH a heating system has been developed by Richard Crittall & Co., London, England. It has seen extensive and successful use in that country and it makes its debut in the United States as the most interesting feature of the recently completed British Embassy at Washington, D. C. This panel heating system, as it is called, appears to possess numerous advantages including a saving in fuel, under average conditions, of nearly 35 per cent, according to the writer's estimate.

The heat waves distribute themselves from the ceiling throughout the room just exactly as would the light



HOW IT WORKS

pipes are concealed in the ceiling,
hot water circulates through pipes,
heat radiates from ceiling
through entire room

•

ROOM TEMPERATURE
IS LOWER . . . HUMIDITY
IS HIGHER

•

FIRST COST 12% GREATER
ANNUAL FUEL SAVING 35%

•

AND NO RADIATORS

•

Sir Edwin Lutyens, *architect* Frederick H. Brooke,
supervising architect

Jaros & Baum,
engineers

PANEL HEATING in this room was installed according to the ceiling plan on the facing page. Detail photograph of typical piping shown above

waves first imagined, and this brings us logically to a simple question with a most unexpected result. What is the primary function of a heating system? It is, you answer, to keep the occupants warm. Quite right.

MOST readers, however, probably will be surprised to learn that, fundamentally, "keeping the occupants warm" does not refer to room temperature but to the temperature between the clothing and the skin. For comfort, indoors or outdoors, winter or summer, the average individual in repose demands a temperature next his skin of about 90 degrees. With less temperature he feels cold and with greater temperature he feels uncomfortably warm. Humidity, of course, also has its effect on comfort but it is a separate question with which we are not at the moment concerned.

In all heating systems so far used in this country the 90 degree temperature next the skin is maintained by immersing the occupants in a sea of air at a temperature of say 70 to 75 degrees. With less temperature too much heat passes out

(Continued on page 90)

keep partners friendly

By CLINTON H. BLAKE, of the New York Bar

A PARTNERSHIP may be created and exist without the formality of a written agreement. It depends not so much on what the parties call themselves as on what they do. If they share in the profits and in the losses, they ordinarily will be legally classed as partners, whether or not they are so denominated in the bond.

While from the legal point of view it is not essential that the agreement be in writing, from the practical point of view it is important that it should be. The reasons which make a written contract with the client advisable are equally applicable to a partnership understanding between architects. The relationship is such an intimate one that the rights, liabilities and status of the parties to it should be clearly defined.

He who contemplates entering into a partnership with another must remember that so far as third parties are concerned either partner has the right to speak for the firm and to incur obligations in its name and in its behalf. He must remember also that each partner is personally liable for the obligations of the firm, irrespective of which partner incurred them, and that this liability is not limited as in the case of a corporate stockholder. I am speaking here, of course, of the ordinary general partnership as distinguished from a special or limited partnership, which is suited to firms engaged in banking or mercantile pursuits but cannot be applied satisfactorily to the practice of architecture. It is a good rule not to have as your partner anyone whom you would not gladly have as your executive.

The partnership agreement may be brief or it may go into great detail. In any event, it must at the minimum set forth certain fundamentals. It should not be necessary in the ordinary case to cover every possible eventuality in detail. If your proposed partner is not one upon whom you can rely to do the fair thing under all conditions, you would do well to forget him and to seek another candidate or continue in practice independently. No matter how dependable a partner may be, however, it is certainly advisable to set up in written form the essential timbers upon which the architectural structure rests. It is my purpose here to identify these timbers and to suggest the form which that structure should take.

The partnership agreement should clearly define the partnership. It should give the date when the partnership is to commence and its duration. It should set forth the firm name under which the practice is to be carried on. It should provide for the termination of the partnership by voluntary act of the partners or by the death of either of the partners, and for the adjust-

THE BEST WAY to avoid misunderstanding is to have a simple, easy-to-understand agreement which will chart the path for each partner.

CHANCES FOR ARGUMENT are then reduced to a minimum. And if a few words on paper are likely to increase the chances for the permanent success of a partnership, why not write them?

ments to be made between them or between the surviving partner and the estate of his deceased partner, in the event of such termination. It should, of course, define the respective shares of the partners in the expenses of running the practice and in the firm profits. If there are any limitations to be placed upon either of the partners with respect to the signing of checks, the incurring of firm obligations, and the like, it is desirable that these also should appear in the agreement.

SO far as the duration of the partnership is concerned, the simplest and most practical method is to provide in the agreement for a definite term of years, and for the automatic renewal of the partnership thereafter for successive periods unless notice of termination be given, or unless the partnership be terminated by the death of either of the partners. In the case of termination by death, various provisions may be made as to the rights of the surviving partner and the estate of the deceased partner. These will vary in each case in accordance with the ideas of the partners framing the partnership agreement. The agreement should, in any event, state that upon the death of one partner, the surviving partner will cause a balance of accounts to be struck as promptly as possible, and pay to the estate of the deceased partner all sums due to it. In many cases, these payments represent merely the accrued proportionate share of the deceased partner in the firm practice as of the date of his death. I have always felt, however, that as a matter of fairness, the contract should go further than this, if the surviving partner continues in the practice, and provide for the payment to the estate of the deceased partner of some minor

PARTNERSHIP AGREEMENT

AGREEMENT made....., 1930,

between GEORGE SMITH of

and WILLIAM JONES of:—

WHEREAS,, the parties desire to form a partnership for the practice of architecture, now, therefore, in consideration of one dollar and other valuable considerations paid by each of them to the other, they agree as follows:—

1: **COPARTNERSHIP.** The parties hereby form a copartnership for the general practice of architecture, to commence as of the date of this agreement and to continue as hereinafter stated.

2: **NAME.** The partnership practice shall be conducted in the firm name of SMITH & JONES, with offices at such place or places as the partners may from time to time deem proper.

3: **BANK ACCOUNT.** A partnership bank account shall be opened and maintained in the firm name in such bank or trust company as the partners agree. All firm receipts shall be deposited therein and all firm withdrawals made therefrom. Checks on the account may be signed in the firm name by either of the partners. Neither of the partners, however, shall, without the written consent of the other, pledge the firm credit, or sign or endorse in the firm name any promissory notes or similar instruments.

4: **DIVISION OF EXPENSES.** All expenses of conducting the firm practice shall be borne in the proportion of percentage thereof by Mr. Smith and percentage thereof by Mr. Jones. All of the net profits of the partnership remaining after the payment of such expenses shall be divided between the partners from time to time as the same shall be available in the proportion of percentage thereof to Mr. Smith and percentage thereof to Mr. Jones.

5: **LENGTH OF PARTNERSHIP.** The partnership shall continue for a term of two years from the date hereof and shall thereafter be auto-

matically extended for successive periods of two years each, unless notice of termination thereof shall be given by either partner to the other in writing not less than six months prior to the end of the two year period in which the notice is given.

6: **DEATH.** In the event of death of either of the partners, the partnership shall thereupon terminate.

7: **TERMINATION OF PARTNERSHIP.** Upon the termination of the partnership by any reason other than the death of a partner, a balance shall be struck as of the date of termination and, after the payment of all firm indebtedness, the net profits, if any, remaining shall then be divided between the partners in accordance with the foregoing percentages; thereafter neither partner shall have any further right to the firm name, and each partner shall be entitled to continue to practice independently of the other and in such way as he deems best.

8: **PAYMENT TO DECEASED'S ESTATE.** In the event of the termination of the partnership by the death of either of the partners, the surviving partner shall be entitled to continue the practice of architecture under the firm name but shall pay to the estate of the deceased partner as promptly as possible thereafter the share of the deceased partner in the net profits of the firm as of the date of termination, and shall thereafter pay to said estate twenty per cent. of the net profits derived by the surviving partner from work done by him for former clients of the deceased partner during the two year period next following such date of termination.

..... (L.S.)

..... (L.S.)

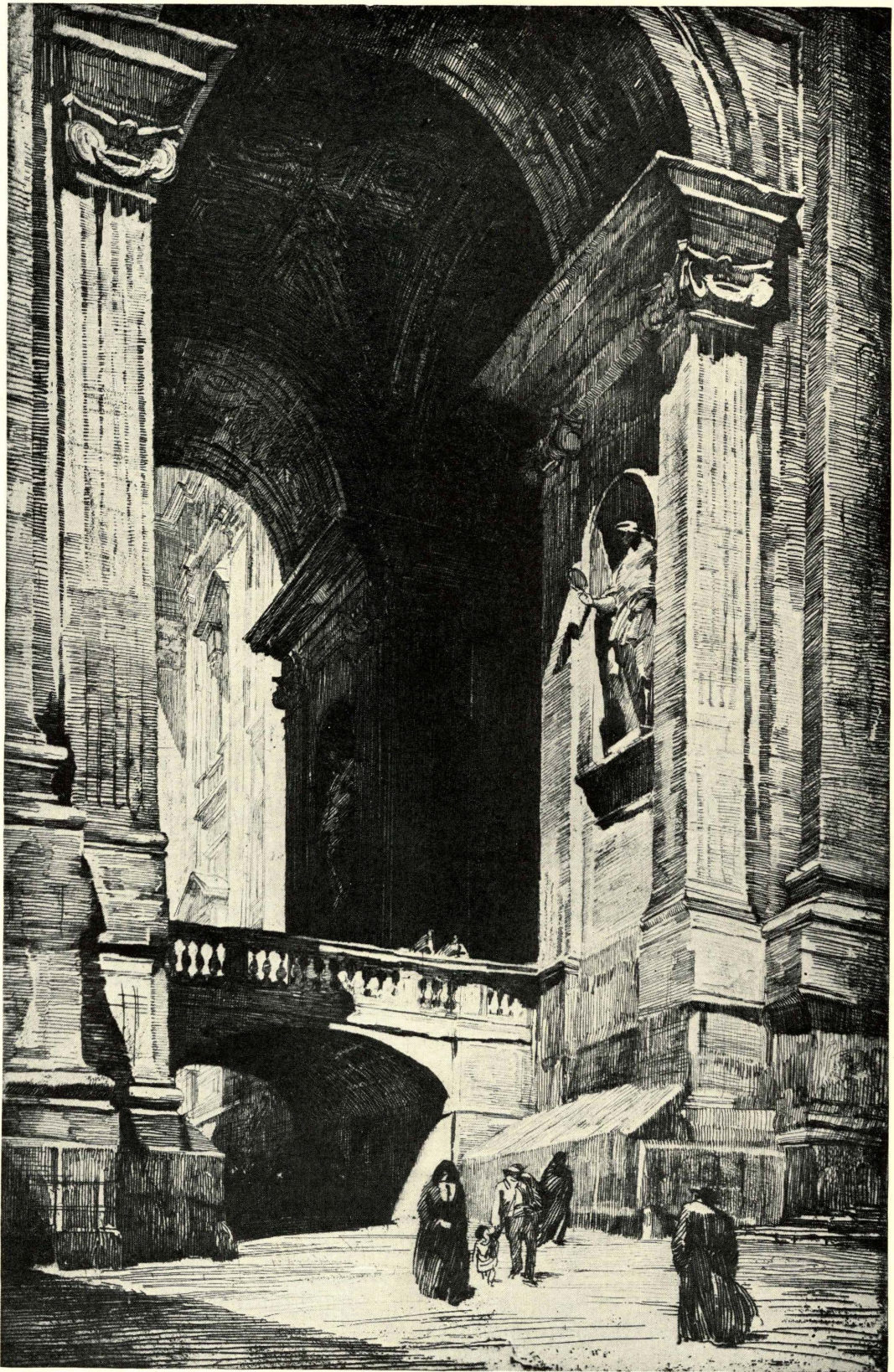
WHAT EACH PARTNER *may expect of the other. Suggested form of agreement that is clear and easy to understand*

share of the profits thereafter derived from the practice for a stated and limited term of years. Such a payment in effect represents an allowance for the good will of the partnership — a good will to which the deceased partner contributed and in which, to some fair extent, his estate should share.

[F it is desired that the surviving partner shall have the right to continue the firm practice and use the firm name, the agreement should so state. Otherwise he might find it impossible legally to continue the use of the firm name. This in turn might result in the loss of considerable good will.

If it is desired to provide for certain drawing accounts by the partners to be charged against their share of the profits, the amount of the drawing account should be provided. In the ordinary simple partnership, however, I see no necessity for such a provision. If there are profits, the partners can divide them from time to time as they are available, and if there are no profits a provision for drawing accounts will be a gesture only.

In the suggested form of agreement which is published above, I have made no effort to cover all possible contingencies. I have tried rather to boil down the agreement to its simplest form, including only the fundamental and essential provisions for a (*Continued on page 100*)



Courtesy Goodspeed's Book Shop

T W O E T C H I N G S B Y
D E S C A R I S

Albert Descaris, well known French etcher, won the Prix de Rome at the age of eighteen
above *at right*

ST. PIERRE DE ROME

THE RENAISSANCE TOWER



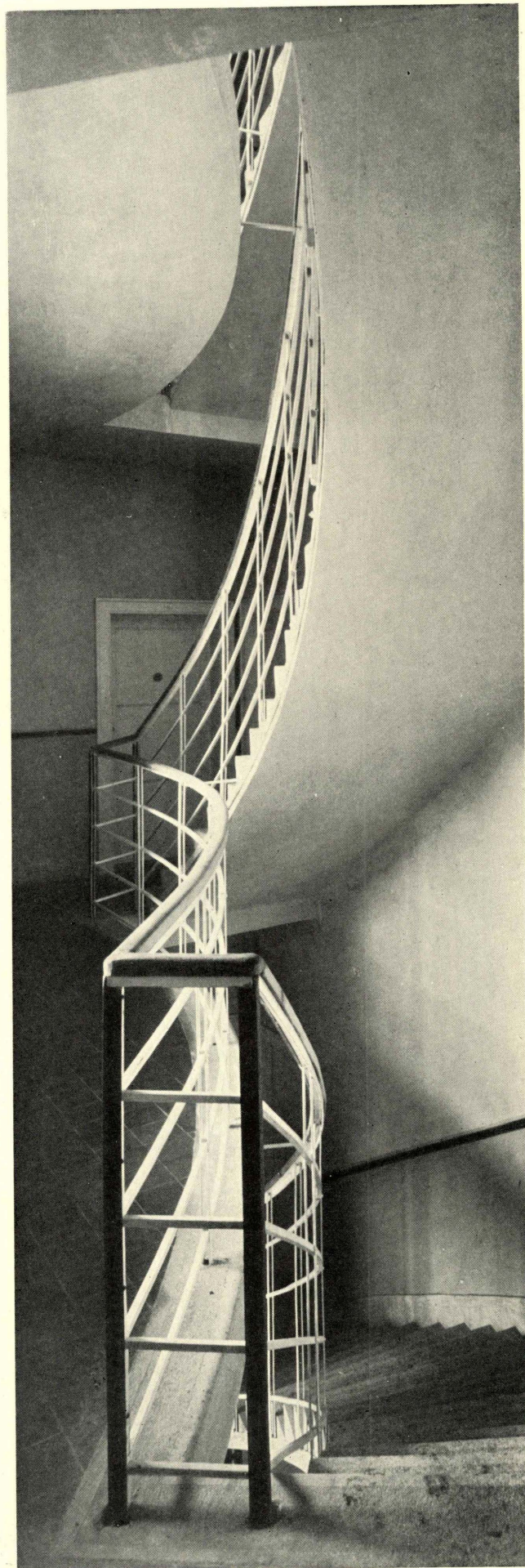
NEW STYLE OR POLYGLOT ?

By RICHARD F. BACH
of The Metropolitan Museum of Art

BEN FRANKLIN counseled: many words will not fill a bushel. If we may paraphrase the statement of one so skilful, we might say that while it is the accepted function of art to conceal art, it is not the purpose of language to conceal the thought it is intended to clothe or convey. And further, to make the application in the field of the now-so-often-mentioned industrial arts, technique is now too deftly used to hide a paucity of imagination or the lack of ability to give it adequate expression. Too much language and too little to say: the essence alike of cart-tail electioneering and of over-designed (overstyled is a better word) industrial art.

In fact, it is that we have laboriously set to work to carve out new and "different" destinies, seeking to show in our art that we are not slaves but men, and, as men, owe allegiance to nothing not of our own making or at least of our own liking. So we eschew the historic motive and, being but slightly trained as independent thinkers, most of us by dint of stern reasoning turn our heads away from these motives that spell age and history and period, and preach the gospel of today and here and now—wondering the while what all this may mean. Some see the answer in mass and volume, others in invention, still others in night life and

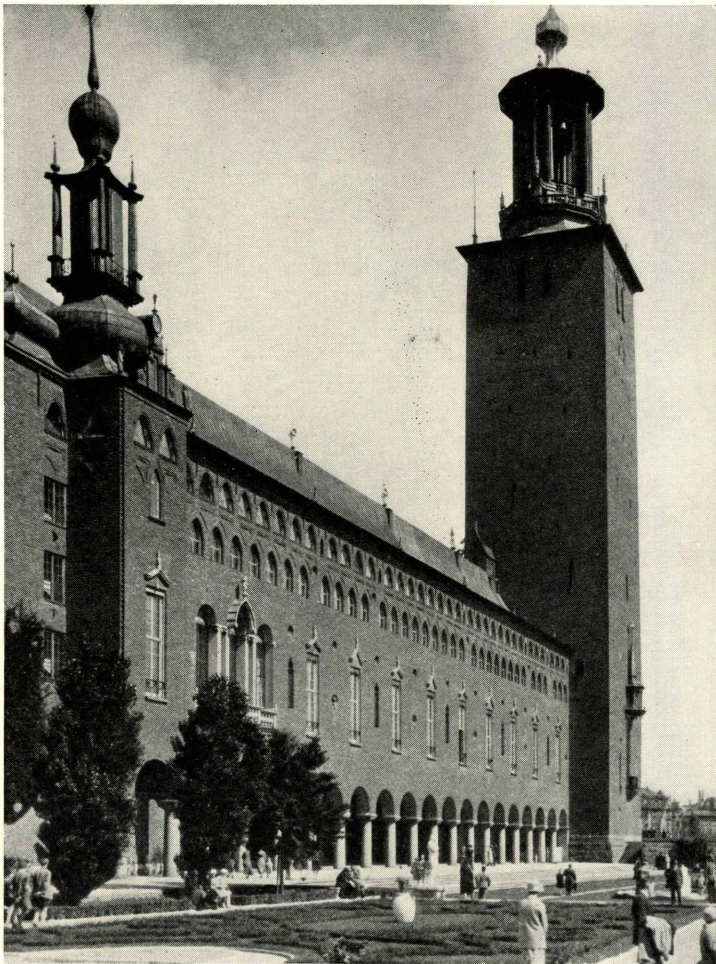
TRADITION CAST ASIDE in this stairway designed by Otto Eisler, architect, for a Czechoslovakian apartment house



BONNEY



GALLOWAY



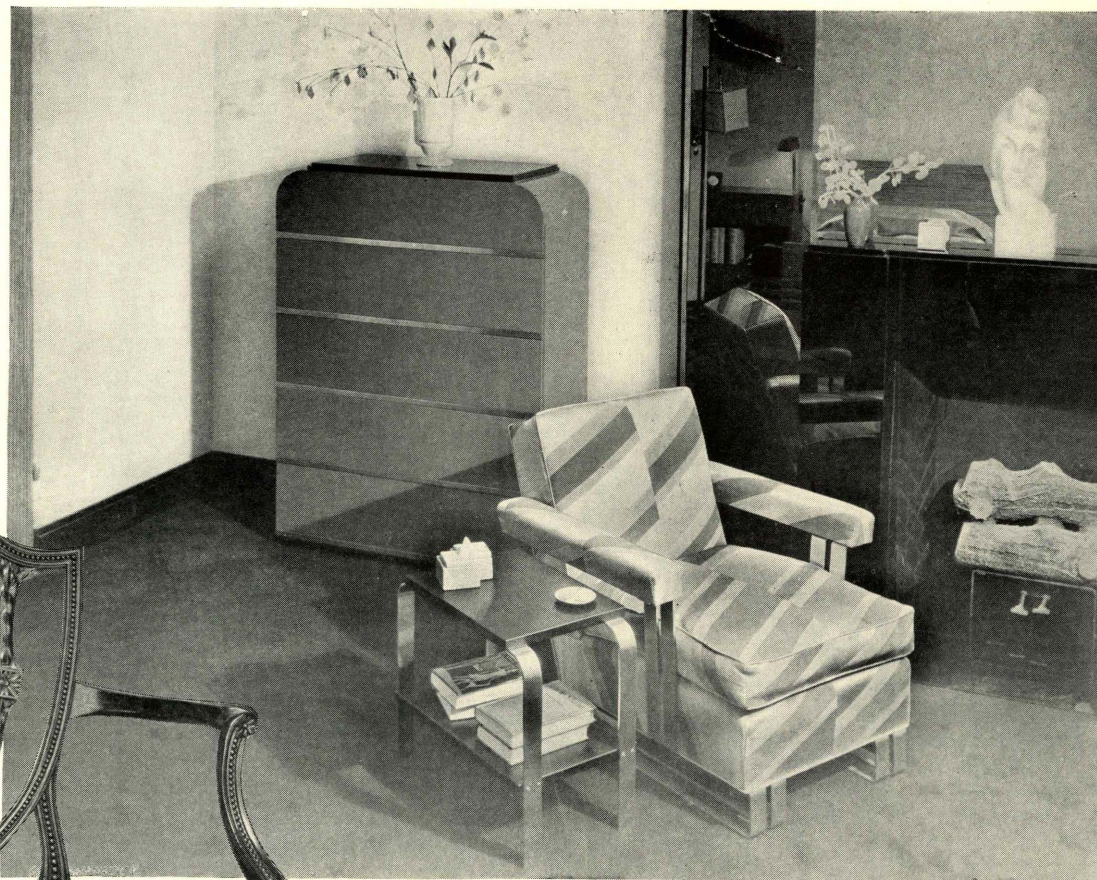
GALLOWAY

ON SIMILAR SITES. *The Palace of the Doges, Venice, and the Stockholm City Hall both face the water. Each is a sincere and sane solution of an individual problem. Six centuries separate their building*

the alleged rollicking of our lately emancipated youth. And not a few more, with an eye to the quick penny quickly turned, make of the whole procedure a congeries of novelties and allow these to swamp the market and dazzle prospective purchasers in one tumbling wave after another of highly appealing, colorful, albeit insignificant specialties, each the last word, which many of us who love good design devoutly hope it may be, though we are almost invariably disappointed.

The result of multifarious efforts has been polyglot. Ready to hand we find invention, science, technology, and unheard of merchandising skill, but our fingers do not work freely, rhythmically, in composing the new motive. We are improvising and anyone can strike a decent chord now and then doing that. Yet we know or at least are willing to argue that Debussy is an old-timer and today we must have Scriabin. But why Scriabin? If one were to say even Antheil, the explanation would be easy. And if Gershwin were proclaimed the arch portrayer of the obvious but musically mysterious and not infrequently

MODERN
OR A
PASSING
FANCY?



WORSINGER

135 YEARS SEPARATES the making of these two chairs. The formal beauty of the Heppelwhite has been replaced by an inviting comfort that indicates design for utility as well as appearance — or functionalism. The modern group was designed by Donald Deskey

cacophonous (we love that word), here and now we should say: why, yes, of course. And why not?

In the industrial arts there are only a few Gershwins but many Paul Whitemans; that is our difficulty: too many interpreters, too few to speak in the vernacular. There are some who think that angles, circles, the crash of non-complementary colors are the essence of "modernistic" art. They also think that "color in the kitchen" doesn't mean just what it says; they take it to mean the same as beauty recaptured and domesticated (with a mark-up because of the color line); recaptured and enthroned, indeed, upon a heap of red alarm clocks, and green pot lids, with a blue handled soup ladle for sceptre.

What color in the kitchen has done to color harmony is matched by similar transgressions on the part of misguided or unguided industries in numerous other lines.

They are convinced that the new style is here, or at least that it has been hatched. Some even believe that weaning, childhood and adolescence are past and that the full-blown beauty of maturity is to be seen on every side—witness recent exhibitions in many stores and galleries. There are producers, indeed, who see afar the end of this style and the return to the dear old periods on which they made their fortunes thirty and twenty and even ten years ago, and not a few are slowly making fortunes even now.

BUT the majority are neither prophets nor historians, neither good guessers nor good gamblers. Their material gods have been smashed; spiritual gods of design they have not had at all. Where shall they worship now? As in a dream they find themselves afield in the pastures of a strange country surrounded by a phantasmagoria of, to them, weird and unreasonable flora. Where shall they seek guidance?

When there is no established belief it is not easy to distinguish between heresy and faith; either may substitute for the other, at least for a while. In industrial art design today we *are* formulating a new faith. To the "period" adherents the designers in the new manner are reds, novelty seekers, iconoclasts and nonconformists; at best unmoral hedonists, emancipated beyond their



WORSINGER

FUNCTIONALISM— OR MERELY EFFORT TO BE DIFFERENT?

Certainly the chair is comfortable; the desk table and other fittings have a ready adaptability to purpose. Designed by Donald Deskey

We may well have an eye to intolerance as well as to bigotry, for both of these exist in design, too. Nor should we allow ourselves to be bedevilled by the hasty writing of propagandists for modernism who were born after the style began and who have thus far had no time to read or study the history of styles.

The new manner in design, for it is still new, is young enough to be easily spoiled and unfortunately there are many ready to spoil it, both by pampering and by abuse, notably those who think backward from the salesbook through the advertising page to the manufacture of the product.

We should have the utmost faith in contemporary design; we should, indeed we must, give it credit for every degree of sincerity and candid searching that it displays. It is not a hotbed of novelties: in fact, new and novel are not related words. Make of it a chief reliance for the supply of gift shop truck and you have an overcultivated plant with weak roots. The wind of public opinion will throw it down before it can scatter its seeds.

THIS style of today (never call it modernist!) must grow solidly, as has every other before. The soil is different, the gardeners are different. There is every reason why it should only remotely resemble any other we have ever known. But, by the same token, there is, as well, every reason why it should be logical, reasonable, characteristic, and sincere.

We are convinced that our standards in present day design are rapidly taking shape to conform to this description. We are convinced that, with the emphasis upon the contribution of the designer today, we shall presently witness the emergence of leaders worthy of the potentialities of the style and capable of realizing on its possibilities. Meanwhile we can help in the general purpose and aid in crystallizing the hope that reason may yet rule, which, let us pray may come to pass less by formula than by flux.

capacity to appreciate their freedom. To the modernists these old-line designers are rut-bound, unimaginative, reactionaries living in the past, babbling the historic formulary in lip service to dead-and-gone styles. And we, *ex cathedra*, pronounce them right and wrong at the same time, for, to be quite honest, what else can we do?

You the designer, you the manufacturer, you the retailer and we the consumer, all are together engaged in this one purpose, if it may be so definitely described, certainly in this one hankering or desire for something different from the hopeless, dispassionate, unenthusiastic period cycle. Some of us have chortled with unseemly mirth in contemplating the flat tire this cycle now displays upon the smooth highway of contemporary design. Whereupon we became uneasily aware that while an old shoe worn thin may cause a flat tire, there is nothing to prevent a new shoe from picking up nails that will make an old one of it promptly. In present day design in the industrial arts our chief task should be, if we are wise, to watch for these nails and to discover them on the road rather than already embedded in the tire.

Among others we may watch for is one called efficiency, another called speed, and a third glibly described as the creed of utility (read *greed*, if you like).

and the banker thought "I'm Saving MONEY!"

Have you ever
saved a client money?

By BENJAMIN F. BETTS, A.I.A.

A MANUFACTURER in Buffalo, New York, required a new factory building. Unfamiliar with architectural service he obtained, without plans, an estimate from a contractor. He then decided that he should have competitive bids. The contractor recommended that an architect be engaged. This was done. The factory was built. The owner obtained a building designed by a planning specialist, planned for future expansion, and of more substantial construction than the contractor had originally estimated. The total cost was several thousand dollars less than the contractor's original price. The employment of an architect saved this manufacturer money and he will not build in the future without seeking expert building advice.

In the experience of architects throughout the United States, there are many interesting occurrences, both commonplace and unusual, that are convincing evidence of the value of architectural service. Actual cases such as that cited above have more weight with the building public than all the arguments and abstract statements that can be made on the subjects of planning, beauty, and fitting a building to its site.

The question of properly designed buildings can be safely left in the hands of capable architects providing they are given the opportunity. Savings to the advantage of a client can be accomplished in many different ways, and the man in the street needs to be convinced of this fact.

This can be accomplished by compiling a large number of cases demonstrating that architects have saved and can save money for their clients. THE AMERICAN ARCHITECT will publish such cases in book form providing architects will lend their support to the movement by forwarding the required information. Until a sufficient number of these cases have been received to make a booklet feasible, these experiences will be published within the pages of this magazine. Later, the booklet will be made available to architects everywhere for distribution to prospective clients and others who may be interested.

Architects who have had personal experiences that demonstrate the financial value of their services to their clients are requested to promptly forward the facts to the Editorial Department of THE AMERICAN ARCHITECT. Describe the case briefly but clearly and state whether your name and the client's name may be published.

Fred B. O'Connor read this editorial in the August issue of THE AMERICAN ARCHITECT and thought, "It's all right to talk about an architect saving money for a client—but what happens when a client tries to save money for himself?"

By FRED B.
O'CONNOR

*an architect of
Syracuse, N. Y.*



*"It's out of plumb, by
an inch at the head"*

THE phone had just been hung up when Elmer yelled out, "Say Gus! The National Bank just called up and wants us to come over and see Mr. Black, the vice president, in regard to a building they contemplate erecting alongside their East Side Branch. You had better hot foot it downtown."

"Check!" was Gus's only reply as he grabbed his six foot rule and the stub of a 4H pencil, for he knew Elmer was busy with Mrs. Vanastor's kitchen cupboard details.

The next half hour found Gus seated besides Mr. Black's mahogany desk, after he had dodged a dozen autos and knocked down several messenger boys in his mad rush to grab the job.

"Good morning, Mr. Black, we understand the bank expects to do something up on Lexington Avenue," was Gus's greeting as he pushed the chair to one side for a better view of the stenographer.

"Yes," was the cheerful answer, "we expect to put up a four story building, forty by seventy, as a speculation, on the vacant lot for the new chain store concern from Chicago."

After a lengthy discussion about materials and various details, Mr. Black asked if he could have the drawings and specifications in a couple of days (just like a banker) and then asked who Gus expected to have bid on the job.

Drawings by
Stuart Hay



“Where are the integral waterproofing containers, Tony?”

“Why,” started Gus, “we’ll ask Noswad Construction Company. They generally do the building for the bank. And the J. E. Heffer Construction”—just at this point Gus was interrupted by Mr. Black.

“Noswad would be high and no need to ask J. E. Heffer. Can’t you save us some money, Gus? You say the job will cost approximately seventy thousand. Well, get Tony Amato, Jerry Angelo and Eric Swanson to bid.”

By this time Mr. Black started to straighten his glasses, for the expression on Gus’s front elevation registered his disapproval of the list. “What’s the matter with these contractors, Gus?”

“Some job you are going to get,” said Gus as he insisted on adding Noswad and Heffer Construction Company’s names to the list.

After a busy ten days, answering a lot of unnecessary questions by Tony, Jerry and Eric, the bids came, Gus snapped a rubber band on them and went down to open them up with Mr. Black.

When the last bid on the list was tabulated, Mr. Black tipped back in his comfortable chair and said, “Well! Just as I expected, Gus! Noswad Construction Company high, Heffer Construction Company second and Tony the lowest.”

“Yes, Mr. Black. But the two high bids are two thousand less than my estimate of seventy thousand.”

“True, Gus. But Tony Amato will build the job for sixty thousand. We’ll save money, eight thousand dollars of it. Write a contract up for Tony Amato and,

by the way, better put a penalty bonus clause in that contract, for the job must be done in ninety days,” said Mr. Black as the dark shadow of doubt crept through his mind.

At the end of ninety days, what was the result? Nothing more than Gus had expected from the client’s false idea of saving money. The corner beads were omitted around plastered openings and the expansion joints in concrete floors looked as if the cement worker was still under the influence of the red wine of the night before. When Gus asked the contractor to pull up the wire reinforcement in the basement concrete floor, it just couldn’t be done—it wasn’t there.

“Where are the integral waterproofing containers, Tony?” asked Gus on one of his daily inspection trips.

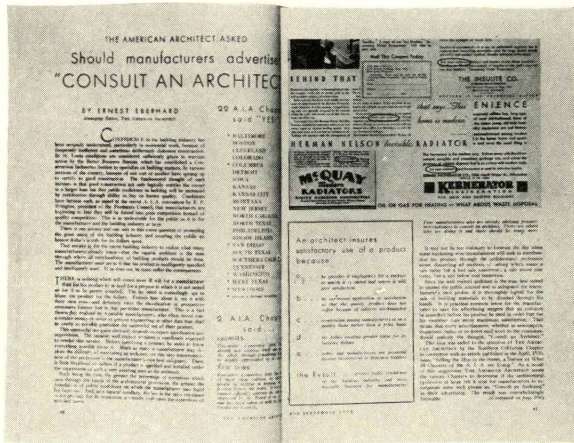
“Oh, Dat wasn’t put in, dis is er good concrete floor,” replied Tony.

“You’ll have to change this second floor window and set it straight, it’s out of plumb by an inch at the head and there’s another out of plumb on the third floor. And I find your sub-contractor for the painting hasn’t covered up the pencil marks I made on the first coat of paint. The specifications call for three coats,” said Gus, as he sharpened his pencil to continue his list.

So it goes; and we ask, “Have you saved money for the client?” Never, when architecture is sold “to the man in the street” who insists on the architect dealing with contractors of the “Tony” variety and ability with the final expectation of saving money.

THE AMERICAN ARCHITECT ASKED MANUFACTURERS WHAT THEY THOUGHT OF ADVERTISING

"Consult an Architect"



BY ERNEST EBERHARD
Managing Editor of THE AMERICAN ARCHITECT

HOW can the great American public be assured of full value for its building dollars? That is a question which closely concerns the reputable manufacturer of building products. It is highly important to him because unless those products can be competently and honestly assembled in a building, the quality product will suffer in service and be classed with the inferior product.

Since each building operation is a distinct and individual operation and since control of a product generally passes out of the manufacturer's hands with delivery to the job, it is of prime importance to the manufacturer that there shall be some competent, disinterested person who understands not only how a product should be installed but who has the authority and capability of seeing that the work is properly done. This is just as important to the reputable manufacturer as it is to the owner.

There is only one factor in the building industry that is fitted by the very nature of its manner of employment to become a competent, disinterested leader of building operations. That factor is, quite obviously, the architect. He is the man who conceives the building in its entirety, whose advice to the owner and whose selection of products is disinterested. He has nothing to gain and everything to lose by permitting inferior work and equipment. In the last analysis, he is the man who must take the blame for anything that goes wrong. The owner relies upon his good judgment.

This being the case, it is to the best interests of the manufacturer to urge that an architect be consulted on work which makes use of his product. The manufacturer must do this to protect his customer as well as himself. The logical thought which follows this line of reasoning is that manufacturers should carry in their advertising some such idea as "consult an architect." It was to secure the reactions of manufacturers to this idea, as well as to the concomitant question, "what do manufacturers think of architects," which inspired the questionnaire for the basis of this article sent out to the manufacturers by THE AMERICAN ARCHITECT.

The returns to this letter were about fifteen per cent, an unusually high percentage to a circular letter, which indicates the interest of manufacturers in this sub-

300 manufacturers, selected at random, were asked to comment upon this article in our September issue. Forty-five replied

Of these, ten said that they were already using the idea; nine said that they would use it in 1931

Of eight members of the Producers' Council, six favor the idea; two refuse to commit themselves until the A. I. A. expresses an opinion

Fifteen other manufacturers favor the idea but do not say whether or not they will use it

Only three out of the forty-one manufacturers are opposed to the idea, largely for individual business reasons. As a consequence, none of these three have any objection to other manufacturers making use of the idea

WHAT WOULD HAPPEN IF manufacturers were to advertise "Consult an Architect"

OBJECTION: a person might consult an incompetent architect and become prejudiced against all architects.

ANSWER:

Advertising will not affect this one way or another. But if the architectural profession is so incompetent as to fear to advise a man to consult an architect except with reservations and cautions, then we certainly have no reason to be proud of calling ourselves architects.

OBJECTION: a good school architect might be retained on a hospital project: i. e., architects be engaged for work with which they are not familiar.

ANSWER:

Advertising will not affect this one way or another. But would you hesitate to advise a man to buy a custom made suit for fear he would visit Patou instead of Wetzel? The public, as a whole, may be credited with having common sense.

OBJECTION: it might look as if architects and manufacturers were in cahoots.

ANSWER:

Slight basis—it is obviously impossible for thousands of manufacturers of building materials and thousands of architects scattered all over the country to act in concert.

OBJECTION: it might appear as if architects were trying to "black-jack" manufacturers.

ANSWER:

Far fetched—the manufacturer would benefit as much as, or more than, the architect through cleaner competition and more intelligent use of his product.

OBJECTION: it would put architects under obligation to manufacturers.

ANSWER:

The manufacturer must truly serve the public to succeed. It is the manufacturer who is under obligation if the architect sees to it that his product is properly used.

ject. Only three of the forty-five manufacturers replying were adverse to the idea of advertising "consult an architect," though none of these three holds it an objectionable idea for other manufacturers to use. Ten of the manufacturers replying said that they are already using the idea, and one commented upon the many letters received from architects cordially complimenting them upon their use of it. Nine other manufacturers said that they would use the idea next year. Many manufacturers not written to or not replying are either using the idea or will use it.

Members of the Producer's Council, according to such letters as were received, indicate approval of the idea. This organization proposed the same idea to the American Institute of Architects in 1928 but were requested by the Institute not to take action. The Board of Directors of the Institute will consider the matter about the middle of this November and it is to be hoped that their sanction will be secured, particularly in view of

the many manufacturers who are already using the idea and the overwhelmingly favorable reaction of A. I. A. Chapters towards it, as indicated in the article on this subject published in the September issue of THE AMERICAN ARCHITECT. Since the publication of that article, still other A. I. A. chapters have written in to the editors endorsing the idea. This, combined with the fine reaction by manufacturers to the questionnaire sent them by this magazine, indicates that the stage is set for an excellent bit of promotion for the architectural profession particularly if the Board of Directors of the American Institute of Architects places the weight of their position behind it.

What should such a slogan consist of? The individual problems of manufacturers and the variations in public reaction indicate that the exact phraseology and manner of its use should be left to the good taste and common sense of each individual manufacturer, although there is much to be said in favor (Continued on page 110)

CEMENT

Modern French Sculpture

By

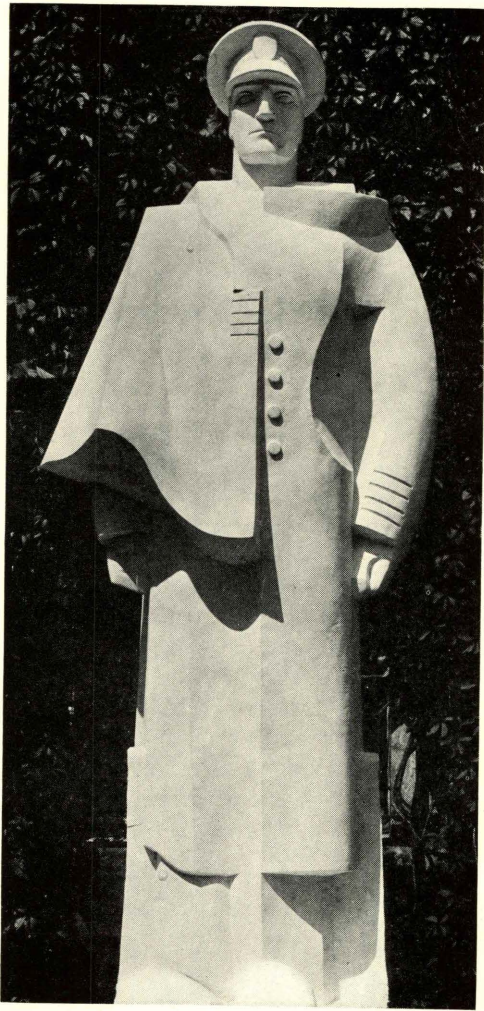
SARRABEZOLLES

and

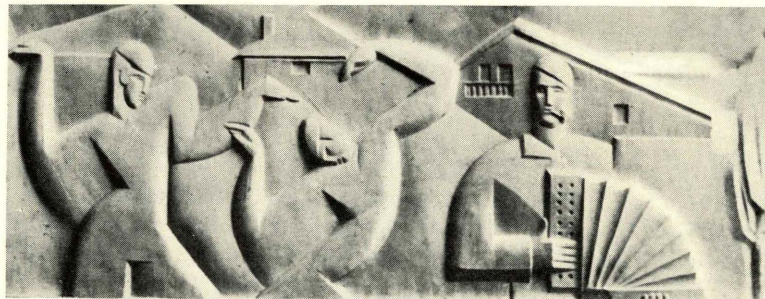
JAN and JOEL MARTEL

photographs by Bonney

BAS RELIEF for villa at Chiberta, near Biarritz



MONUMENT in the Vendée, erected to Colonel Guilaud. Designed in cement by Jan and Joel Martel, sculptors



MODERNISTIC FRIEZE depicting dances and festivals of the Basque country. Designed for the casino at St. Jean de Luz by the twin French sculptors, Jan and Joel Martel

CURE AND PARISHIONERS posed for the figures of the saints and apostles in the campanile of the church of Villemomble, designed by the sculptor Sarrabezolles





A PARISHIONER POSED for this head, representing an early saint, in the campanile for the church of Villemomble. Executed in cement by Sarrabezolles



He must draw . . .



interview contractors . . .



In the July issue of THE AMERICAN ARCHITECT, a request was made for articles on the hiring of draftsmen. Last month Alexander C. Guth expressed his views. This month, Mr. Frank, of Akron, Ohio, has a word to say. Next month, Clement Fairweather, A. I. A. will explain the basis on which he selects draftsmen

FOR the successful operation of a small architectural office, it is absolutely essential that some yard stick method for the employment of men be established. By "small office," I mean, an office employing from one to fifteen men. In the larger offices where work aggregates several millions of dollars, it is undoubtedly economy to employ men with special training along various architectural lines. In such an office, it is possible to have one or more men for design alone, full size detailing, working drawings and specifications.

IN THE SMALL OFFICE a Jack-of-

BY CHARLES W.

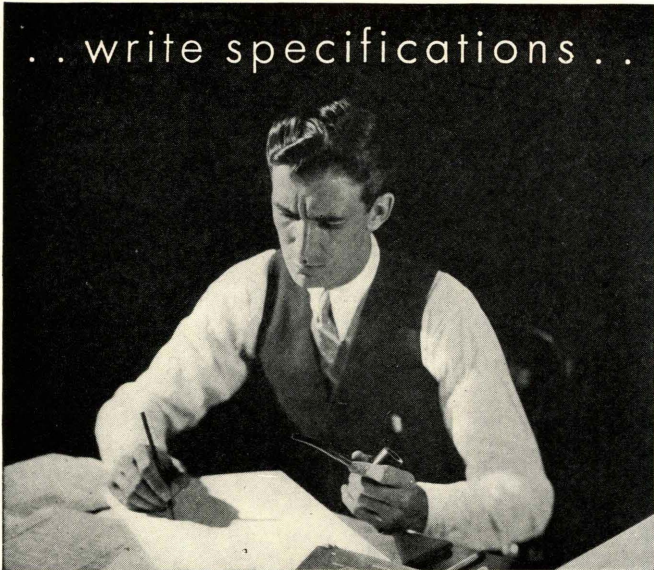
This method, while possible to follow in the smaller office, is not the economical procedure.

The very heart of an architectural organization is the drafting room. No matter how clever an architect is in the presentation of his problem to a client, no matter how sparkling his renderings appear, no matter how brilliant his salesmanship—this all becomes lost upon the failure of his draftsmen to properly produce the finished drawings and specifications so that the building project may go forward. The very nature of architectural education means that the average architectural draftsman is a man of culture and refinement and, in most cases, of high ambition. For that reason, it is exceedingly difficult to obtain really competent men because, when they arrive at the point that they are truly useful, they usually are looking for something better than a job as a draftsman.

Over a period of fifteen years, in the attempt to build up a smooth running small architectural office, I have determined that the following items comprise the "yard stick" by which I am forced to measure applicants for my organization:

1. AGE—I have tried the mixture of young and elderly men, with no success whatever. It is almost impossible for a man over forty-five years of age to work in coöperation with younger men. He has passed

.. write specifications ..



.. supervise construction



LAZARNICK

THE DRAFTSMAN IS all-Trades

FRANK, A.I.A.

that stage where he believes in the future, and can only see the fact that his experience is larger and more varied than the younger man's. For that reason, he usually has an arbitrary method with the younger draftsman, which does not tend towards cooperation. My yard stick limits the age, therefore, to not over forty years of age. I have had several instances where young well trained draftsmen were swayed into obsolete ways of doing things by elderly men who had not progressed beyond the draftsman stage and still thought their way of doing things was the right way. This naturally sounds hard on the older draftsman, but it is a situation that the small office has to face.

2. TRAINING—The young man employed by my organization does not necessarily have to have a college education, although I feel that men with college training have a distinct advantage over those without. They usually have the desire and ability to continue their study, although many office trained men possess the same qualities. My yard stick reads that a man must be so trained that he may be able to make sketches with my help, make working drawings and details, and I expect him to train himself, if not already trained, in writing specifications. In other words, he must have an all around training, or be a man capable of assimilating a broad training. He need not be a specialist in any one

direction and, in a small office, it is even a drawback if he thinks he can do one thing better than the other. To my way of reasoning, this is of tremendous aid to the man, as well as to the office, for it fits him practically along all directions of architectural practice. It also makes the office very flexible, so that during illness, vacation, or resignation, the office continues to operate smoothly. I am not dependent upon any one man to do any one thing. In measuring the applicant with the yard stick, it must be borne in mind that few men come to you with complete training, but many men can assimilate it if properly directed. The applicant must concede that it is his desire to learn as much as possible in all departments of the game. If his desire is simply to be a designer, or a detailer, or specification writer, then he is the wrong man for my organization.

I remember a young chap who came to me several years ago and the only reason he was attempting to be a draftsman was his intense love for drawing and designing. He refused to take the practical end of the business seriously. He thought he had artistic temperament. I explained to him just what his future would be, granting that he became an expert designer, and then told him the success possible to achieve by broadening out and knowing the fundamentals of the practice of architecture. Today he is probably more interested in the practical side, even to supervision, than in design, and it will not surprise me to find him in practice for himself within a few years, for he has not only trained himself thoroughly, but has a personality that should make him a good salesman.

3. MORAL INTEGRITY AND PERSONALITY—When it comes to these two items, my yard stick is a little longer, and harder to measure up to, because, given all other characteristics, a draftsman working in a small office, close to other men, must have moral integrity and pleasant personality to get along. These traits cannot be determined in the first interview, when a man may be on his good behavior, and I tell him so, letting him know that even if his work is satisfactory, his integrity and ability to get along with men, place him on trial at all times. My yard stick says that no draftsman is capable (Continued on page 86)

M O D E R N I S M



BARRY BYRNE has gleefully jostled standard ideas of church design and is replacing frilled and lacy masses with an array of lines, angles and pilasters which are like nothing that ever happened before in church design

WHEN the Rev. Father Beauregard and his fellow Franciscans built the flat masonry arches which still stand in South American jungles, they were dedicating a work to God and an architectural design to the period. The same was true of Gothic builders who piled up the flying buttresses and huge high vaulted barrel arches of Notre Dame de Paris and the Cathedral of Rheims. But now—the church goes modern!

Out of a littered office under the pigeon infested gables of the Monroe Building in Chicago have come four churches to batter on the doors of convention and throw several startling images on the mind screens of a temple building public. Barry Byrne, presiding genius of this office, seems to have suddenly bounced up with native Celtic gusto to gleefully jostle more or less standard ideas of church design; and in place of frilled and lacy masses he now substitutes an array of lines, angles and pilasters which are very much like nothing that ever happened before in the way of churches.

Mr. Byrne's churches are not the children of fancy, neither are they structures which exist only in the mind or on paper. Today there are three of them completed, and the fourth and most unconventional of all is rearing itself in a mass of concrete and masonry in Cork, Ireland.

Odd as it may appear, it is not a new religion which

..... Today's congregation requires a new design

By JOHN F. RYAN

has gone to Byrne for its church design, but a religion nearly 2,000 years old and one which the non-speculative mind might deem to be as unchanging in its architecture as it has been in its faith—the Roman Catholic Church.

But here the idea hinges for, though it may not be at once apparent, the Roman Catholic church seems to have changed through the course of years. The architecture developed in a former day was pertinent and fitting to the feeling of the service. It brought long aisles and high barrelarch ceilings, and construction which made necessary the use of massive walls and flying buttresses, for steel and concrete were things of an age to come.

But somehow the service has crept nearer to the parishioner.

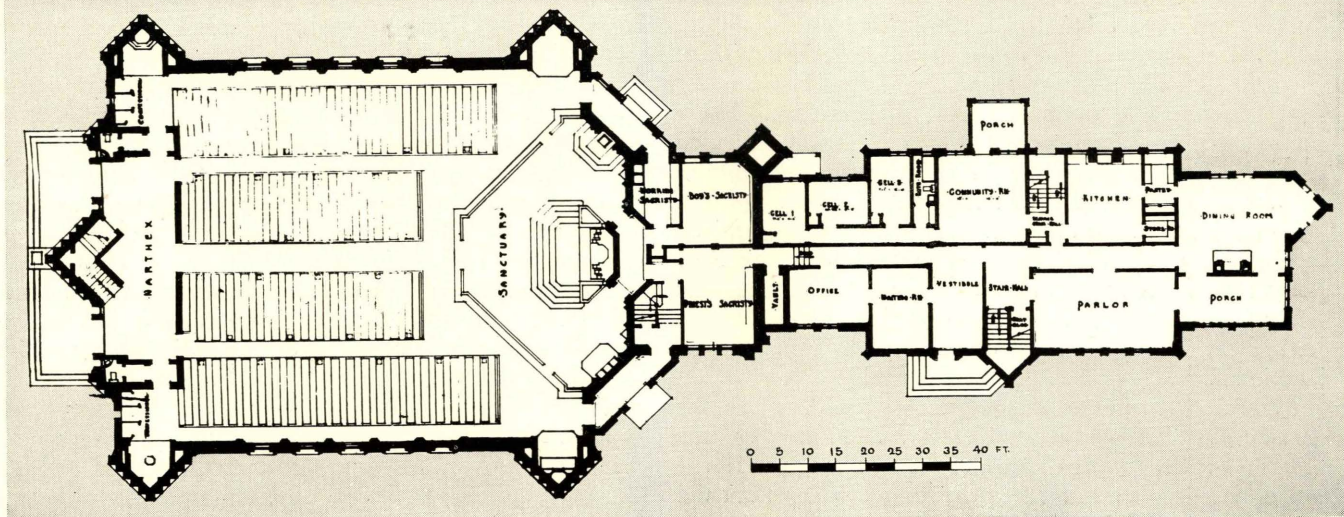
Today the distance is shortened between the layman in his pew and the clergyman in his service. The position of the older church architecture in this situation might be likened to placing a size Six C foot into a Ten AA shoe—the parishioner area may be the same, but the lateral dispersion is a trifle uncomfortable.

Into this scheme, and following the school of Frank Lloyd Wright, Byrne has stepped with designs evolved in a series of geometric patterns. The object in plan has been to bring the service in closer contact with the congregation. This partially ruled out architectural types which elongate the nave-sanctuary relationship. It necessitated a type of architecture wherein a tightened, circular effect was given to the composite of nave, altar, sanctuary, priest, service and parishioner.

"Functionalism" is the term which Mr. Byrne applies to this development—the art of designing the building basically to suit a specific need rather than designing the same structure along the lines of buildings of a former age. Functionalism, imaginatively treated, brings about new forms. Somewhat akin to the general public, Mr. Byrne shies at the mention of "modernism" in connection with his work, probably conjuring up visions of the earlier works of impressionistic artists.

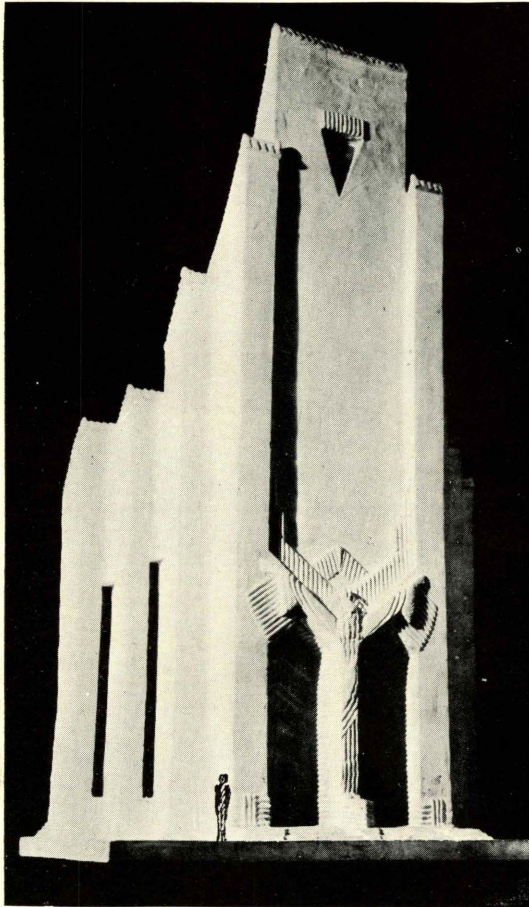
The departure from conventional church design was

goes to CHURCH

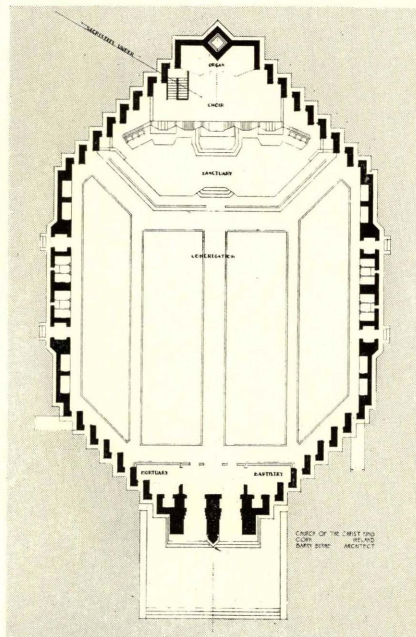
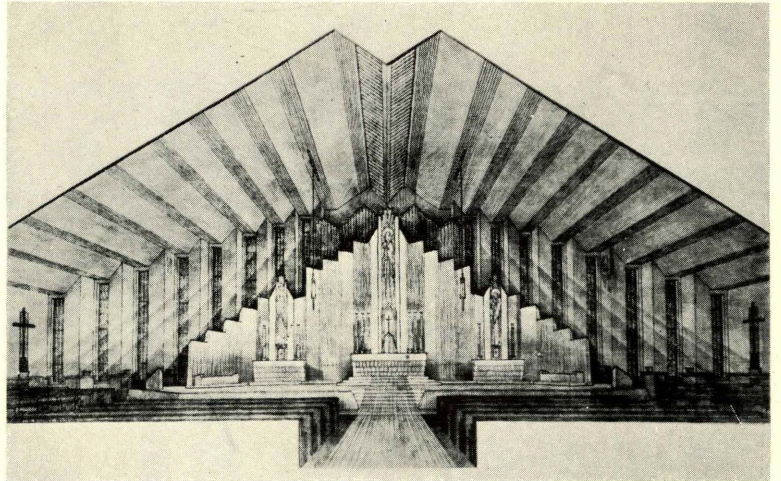


MOST REVOLUTIONARY CATHOLIC CHURCH DESIGN IN AMERICA
Church of the Christ King, Tulsa, Oklahoma. The sanctuary juts out into the body of the church, the parishioners being seated not only in front of the altar but almost up to its sides

CLERGY AND LAYMEN ARE BROUGHT



IN CORK, IRELAND, is to be built Byrne's latest design, the Church of the Christ King, of which this is a model. A figure of the Christ adorns the pier between the portals



SERRATED ROOF AND WALL LINES

The church in Cork shows a radical departure from everything which suggests tradition. Concrete, in various forms, is employed in practically every element of the structure

probably given its first impetus in the Rhine provinces. The clerical idea in the area seems to have been that art must be created, and if the created art is new it is also good for the church. Several churches in Germany have been built in the sunlight of this attitude. There is also a notable structure at Le Rance, in France, which might be classed along with four or five more in that country as falling within the modernistic class.

However, the bulk of these structures are modernized versions of academic designs. The same holds true of many new churches built in this country and one may safely say, within limits, that perhaps the only truly modern structures are those created by the exponents of functionalism.

Byrne's first church, the Church of St. Thomas the Apostle, in Chicago, was followed, in 1924, by the Church of St. Patrick, at Racine, Wisconsin. Byrne had gone from a rectangular structure, wider than the conventional church pattern, to a structure which was almost square. The corners of the Racine structure were truncated and the steeple, as such, had vanished.

As far as the interior was concerned, Byrne had taken

huge slices of liberty with what one might conceive to be orthodox design for a Roman Catholic church.

Interiors have been made plain to the point of severity. Bare masonry walls have been made to rise in sharp right angles from the lateral lines of the pews; the altar, unlike the usual mass of feathery marble spires, has been made a beautifully simple stepped form against an array of strong, clean masonry panels with serrated tops. Even candlesticks were designed to fit the general scheme.

Most noticeable of all, in this amazing arrangement of things, is the fact that the choir and organ are not in their accustomed places at the rear of the church, but on an elevated floor above the sacristies and back of the altar!

In 1926, Byrne was called to Tulsa to design a church for the Rt. Rev. Francis Clement Kelly, D.D. Again for the square form, again the serrated lines, but this time he went a step or two ahead with his idea. The sanctuary, instead of being remote, was made to jut out into the body of the church. The parishioners were now seated not only in front of the altar but also almost

CLOSER TOGETHER IN BYRNE'S PLANS

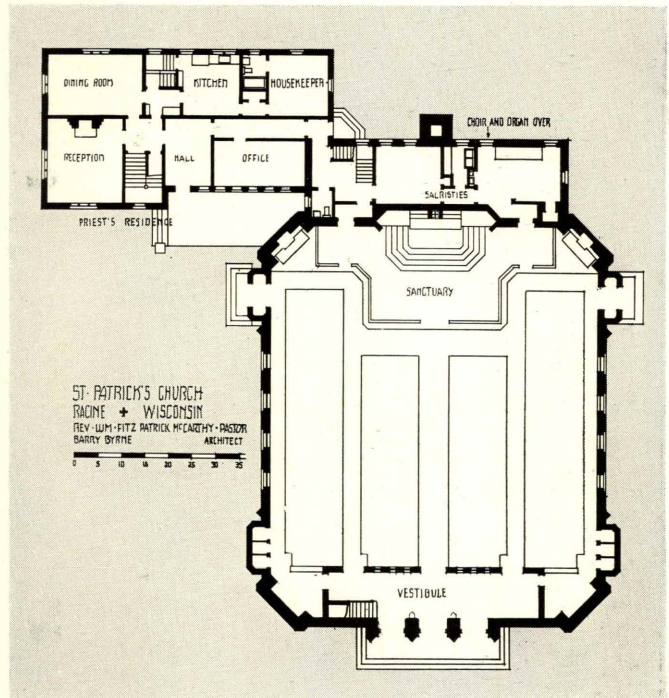
up to its sides. The lines of sanctuary, main altar, side altars and vestibules were made to follow the same straight-lined geometric shape.

But all of this may be regarded in the light of first attempts in comparison with his venture in Cork. Completely abandoning everything which might have remotely resembled the historic styles, the architect has achieved a design which is approximately hexagonal in shape and as interestingly full of new ideas as its walls are full of windows—and there are plenty of these.

One wonders what effect this church may have on future architecture in Ireland, for, besides the fact that its design is revolutionary, it is probably the first outstanding church of monolithic concrete to be erected in that country. Here, too, in its structural material, Byrne has indicated a modern trend of thought. Concrete, in various forms, is employed in practically every element of the structure. Floors and wainscoting are of terrazzo; the altars and various other fittings are of pre-cast concrete; the peculiar step-like walls and the monolithic shell in general are all more or less the same thing in different guises.

His reasons for the choice of materials are interesting: "The monumental and enduring nature of concrete appeal to me as being singularly fitted for the nature of the structure. The surface of its use has hardly been touched and I think we can look forward to future structures in concrete which would seem miraculous in the presence of current construction."

(Continued on page 86)



FUNCTIONALISM, the basis for all churches designed by Byrne, is shown in this square plan with choir and organ elevated above the sacristy. Photograph below. Church of Saint Patrick, Racine, Wis.





Specification and Supervision of PLASTER WORK

By Oscar A. Reum

President, Contracting Plasterers' International Association

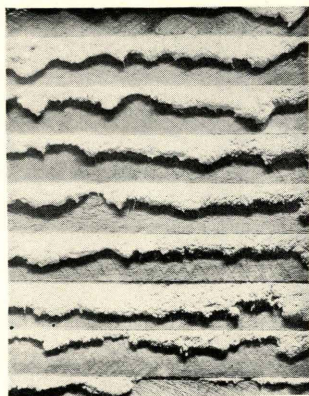
THE mechanical skill of the craftsman utilized in the operation of plastering is a large and controlling factor in the cost of a job, labor representing approximately seventy per cent of the cost of a good job. It is the one element of cost that is mainly responsible for the wide difference in competitive figures. Plastering is a manual operation. The walls and ceilings and other parts of the building receive their finished form from plastic material applied and built up by the craftsman. There is an inescapable labor cost in the time needed by the mechanic to make surfaces that are plumb, straight and true. There is a substantial difference in both labor and material cost where thin, flimsy coats and oversanded or improperly mixed materials are used instead of good, sound construction.

Architects and others, as a matter of routine, specify $\frac{5}{8}$ " grounds upon masonry surfaces that are to be plastered. Unfortunately, only too often $\frac{5}{8}$ " grounds are specified or used where a lathing base is required. This gives rise to the use of thin and inadequate coats of plastering, a prime cause for cracked and falling plaster and skinned jobs.

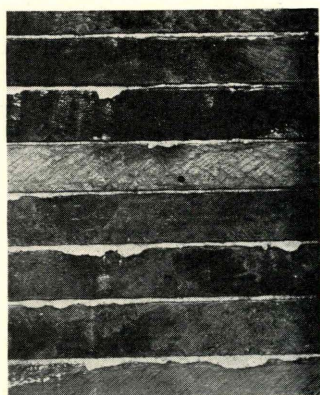
It is of the utmost importance that grounds for two coat work over wood lath, gypsum lath and fibrous insulating lath be not less than full $\frac{7}{8}$ "; where three coat work is used over such lath, the grounds should be a full inch in thickness. Grounds for three coat work on metal or wire lath should be $\frac{3}{4}$ ". Grounds for two coat work upon masonry surfaces should be $\frac{5}{8}$ ". All grounds should be the full sizes herein called for and not diminished lumber sizes.

In order to get a good job of plastering, it is necessary to use plastering which consists of body coats and not the thin, flimsy veneer called for by so-called plaster savers. The minimum thickness of two coat plastering over wood lath, gypsum or fibrous insulating lath, should not be less than $\frac{1}{2}$ "; as such lath are usually $\frac{3}{8}$ " in thickness, full $\frac{7}{8}$ " grounds are necessary to secure the required $\frac{1}{2}$ " of plaster.

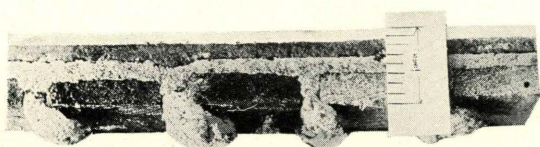
WHERE wood lath is used, the key space between such lath is of great importance. Such spacing between the lath should never be less than $\frac{1}{4}$ ", and $\frac{3}{8}$ " is better. Proper key space adds to the adhesion of the



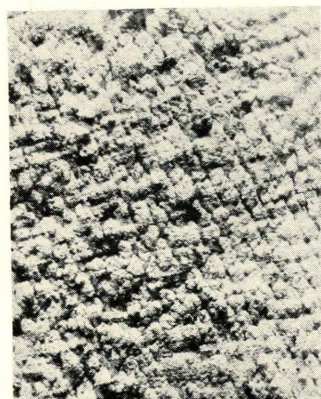
RIGHT because sufficient space between lath permits good key



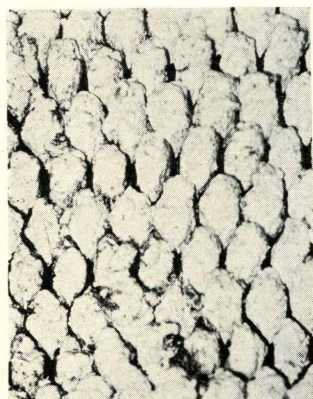
WRONG because lath are spaced too close to permit a good key



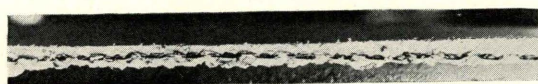
PROPER THICKNESS and key on wood lath, three coat work. One inch grounds



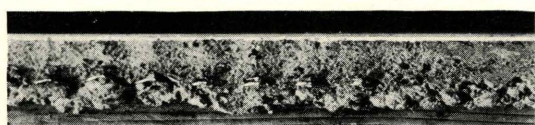
RIGHT. Sufficient pressure has been used to thoroughly embed the metal lath



WRONG. This metal lath will rust because it has a poor key and lath is exposed



WRONG. Section of plaster on metal lath with poor key and insufficient thickness



RIGHT. Section showing how proper thickness and key make a quality plaster wall

If the lath and first coat are wrong a good plaster job is impossible

plastering as well as to the fire resistance of the walls and ceilings. Wood lath should always be nailed with 3d fine lath nails, full driven into each bearing. All wood and sheet lath should be laid up with broken joints.

Metal and wire lath are deservedly worthy of consideration, especially in the housing field. The open mesh types, which allow for embedment in the mortar, are to be preferred, such embedment being a protection against corrosion of the lath. Metal or wire lath weighing not less than 3.4 pounds per yard is well worth the slight added cost over lighter weight metal or wire lath.

STAPLES and nails are used to attach metal and wire lath to wood construction. Where staples are used, they should be one inch in length; when nails are used they should not be less than 6d on ceilings and 4d on walls. The lath should be lapped at ends, joints or seams at least one inch, and nailed or stapled to bearings each six inches.

Clean, sharp sand, free from loam, is a vital essential for good plastering. Fine or loamy sand makes "lifeless" mortar that even the generous use of gypsum, lime or cement will not overcome. The use of improper sand is too often the cause of poor plastering.

The commonly used types of material for plastering, both for base and finish coats, are gypsum, lime, Keene's cement and Portland cement. These useful materials are used singly or in combination with each other.

There are three types of gypsum plaster which can be briefly summarized as straight gypsum: so-called white plaster, gypsite or dark plaster, and gypsum and lime mixture. Lime types come in the form of quick lime (lump lime) and hydrated lime, both types being used for base and finish coats.

Plastering upon concrete, especially concrete ceilings, requires care in the preparation of the surface and of the materials used. Oiled, greasy or soaped forms should never be used, nor should so-called paint bonds be used under the plastering. Careful cleaning of the concrete surfaces and a wash of 10 per cent muriatic acid in water, well brushed on with afterwards a thorough washing with clean water, is a good procedure for the application of a light brown coat of rich or bond plaster as a base for the finish coat. Good, adhesive results are also obtained in the use of a bonding coat of damp proofing material and sand aggregate applied under air pressure. The use of Portland cement mortar over paint bonds is fraught with danger and is not recommended.

In fire-proof construction, especially concrete pan types having metal or wire lath attached ceilings, the present day tendency to (Continued on page 114)



WAITING for the Sardine Boats. From
a pencil sketch on Cameo paper, by Natt
Piper of Long Beach, California

• SKETCHES

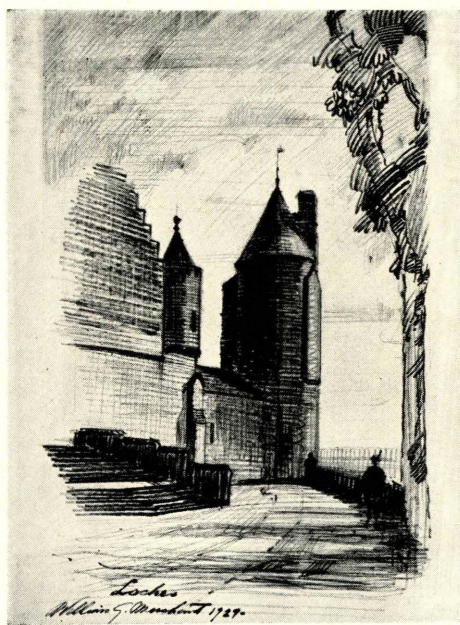


VENICE, colorful and picturesque, has ever been a mecca for artists. An out-of-the-way nook of the city was selected for the above sketch by W. C. Douglas of New York City

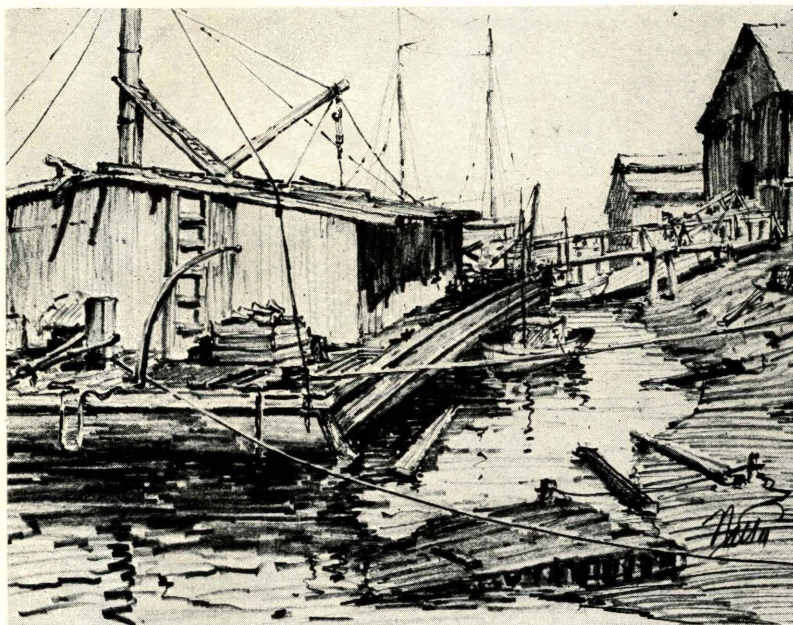


OLD MILLS seldom fail to possess sufficient interest to hold the artist's attention. An old mill in Tacoma, Washington, by H. J. Overturf, is shown at the right

THE OLD MILL
 H. J. OVERTURF
 TACOMA



LOCHES, by William G. Merchant of San Francisco. One of a series of lithograph pencil sketches made while traveling abroad



WATERFRONT scenes are full of romance and hold a fascinating interest for everyone. In this sketch of an old barge, Natt Piper has caught an impression that is familiar to many who like to explore the average shore line

As It Looks

Noise and Health

NOISE in New York City has reached the stage where something must be done about it. As a result, the city's Health Commissioner appointed a committee to find out what makes all the noise and to develop a means of abating it. In studying noises from specific sources some interesting information has been developed. For instance the maximum noise level of church bells was found to be 61 decibels, while hammering on steel plate, listed as "almost painful," was 113 decibels. Riveting is almost as bad, for it reaches a level of 101 decibels, and is in fact noisier than a blast of explosives, which is given as 96. A lion's roar at 87 is but little more than the radio loudspeaker at 81 decibels. Thunder at a distance of from one to three miles away is hardly more noticeable than church bells and is represented by 70 decibels.

A decibel, by the way, is a unit of loudness described as the smallest change which the ear can detect in the level of sound. A normal conversation carried on at a distance of three feet is stated to have a loudness of 60 decibels. Ten decibels above the threshold of hearing represents an actual intensity above the threshold of ten; one hundred decibels is equivalent to an actual intensity above the threshold of hearing of ten billion.

A Readable Specification

"**W**HYY not make your specifications human?" by Arthur Woltersdorf, printed in this issue, is reminiscent of the story of the Irish councilman who proposed that the town build a new jail, that the new jail be constructed of materials removed from the old jail, and that the prisoners be confined in the old jail until the new one was completed.

The First Steel Framed House

FOUR years ago, the steel framed house was hailed as a new idea. The recent demolition of the Niels Poulson House in Brooklyn, New York, shows that the idea was possibly new forty years ago. At that time it was probably viewed as an ambitious and impractical venture of an eccentric individual. Evidently its construction was given scant consideration as to future possibilities and soon faded into oblivion. It was designed by a man who thoroughly knew and understood metal and its uses. The frame, consisting of vertical angles placed about three and one half feet apart, closely resembled the system more recently developed by Robert Tappan of Forest Hills, New York, in which light H section columns spaced four feet apart are used. Both of these differ from systems advanced by others in that metal has been employed as such instead of with the idea of replacing wood framing members by structural steel. Like many other pioneers, Niels Poulson was apparently forty years ahead of his time.

Sacred Cows of the Profession

TRADITIONS and taboos close to one's own heart often become extremely amusing and inexplicable when viewed by somebody else. In India, they venerate the cow. Thousands of scrawny, sickly animals, good only to breed T.B., are held as sacred and unkillable. The foreigner can not understand this attitude; it is so obvious that the world would be far better off if these diseased cattle were out of the way.

The profession of architecture has its own sacred cows in the form of traditions that are often as inexplicable to an outsider as is cow veneration. And those traditions are often as harmful to the business health of the profession as the sacred cow of India is to the physical health of the population.

Ethics and Medicine

AN active critic of the medical profession's ethical code, Dr. Shirley M. Wynne, Health Commissioner of the City of New York, has resigned from his membership in medical societies following friction due to his allowing the use of his name and photograph in a dentrifice advertisement. Dr. Wynne, who states that he never received any remuneration for the use of his name in the advertisement, says that he allowed it to be used because he believed it in line with sound public health education and in accordance with his views on medical ethics. He has referred to the medical code as a "cloud" used to obscure the faults within the profession, while medical societies failed to attack the quacks. The action of Dr. Wynne indicates the feeling of many physicians that the profession should advertise, and, in fact, such paid advertising is at present being done in various sections of the country by local medical societies. This sentiment is naturally of interest to the architectural profession, for many of its members take the mistaken point of view that since physicians do not advertise neither should architects.

Architect Ignored

NEW YORK educational authorities are enthusiastic about the plans of the new Brooklyn Technical High School and agree that it will be the largest, finest, best equipped, and best planned building of its kind ever erected. A program given wide distribution states, "the facilities for instruction in the technical courses will not be excelled by any other technical high school in the United States." Yet in this program of the ceremonies incident to the breaking of ground for the building, no mention of the architect is made even though his drawing of the proposed building is prominently displayed. It seems most illogical to praise a building highly and yet give absolutely no credit to the man most responsible for its excellence—the architect.

to the Editors . . .

Says A. I. A. Lacks Esthetic Sense

A WRITER to one of the New York newspapers defends the right of billboards to spoil the highways and

landscape beauties of this country. Aroused by the stand taken by the American Institute of Architects on the question, he takes the profession to task as follows:

".....the American Institute of Architects is in poor position to lead a movement for esthetic censorship in this country, as no one has more freely used the present permitted latitude than the architects. The result, as we know, is that American cities are an international byword for everything that is hideous. Yet they are beautiful to the mind, if not to the eye, as expressing the principle that a man may do as he likes with his own.

"Now, suddenly, these architects, gone esthetic, demand the removal of billboards from cabbage patches. It is notable that they think the rural regions rather than the cities, which they themselves built, worth protecting."

This activity of the Institute seems to be adding considerable impetus to a movement which the sellers of outdoor advertising space themselves realize as an important one. In fact, these organizations have not infrequently shown themselves willing to cooperate in civic and country beautification through the ready removal of obnoxiously placed poster boards that spoil attractive scenery, and a sincere effort to improve the appearance of the boards erected.

More Steel Used in Germany

OTTO VON HALEM, director of an advisory committee for the promotion of the steel industry in

Germany, speaking before the American Institute of Steel Construction in New York, stated that since the founding of the committee in 1927 it had succeeded in increasing the tonnage of steel for non-industrial buildings from 70,000 tons in 1927 to 250,000 tons in 1929. The use of steel for doors, windows, metal lath, furniture and products made of sheet steel has also shown equally remarkable increases. This should be encouraging news to American manufacturers, for if the idea is adopted by other producers in Germany its effect will be to reduce the necessity of finding a market for their materials outside of their own country.

Freight for Ocean Planes Wanted

ADVERTISING for freight to be carried from New York to Paris by seaplane is the latest indication that the

time is quickly arriving when architects will find flying a serious influence on their business. New York papers recently carried a display advertisement announcing the flight of a plane called "The Trade Wind" and stated that a commercial cargo would be carried.

Architects Can Speed Up Builders

MEN who understand the fundamentals of a business but who are away from its active workings can frequently see how that business may be better conducted.

For instance, while many building contractors are constantly thinking of ways and means to speed up work, an architect with plenty of common sense can walk around a job and see perfectly obvious things which can be done to make it move faster. Many of those things are so obvious that no one in the contracting business would be likely to think of them. Few contractors on an average sized building, for example, have stopped to think that their material lifts are too small and carry too little a load. Or that wheel-barrows and hand-labor are an anomaly in these days of belt conveyors. If the A. I. A. assumes relations with the Associated General Contractors, as is talked about, the appointment of a committee of architects might well be advisable to consider this subject to mutual advantage.

Memories of Glenn Brown

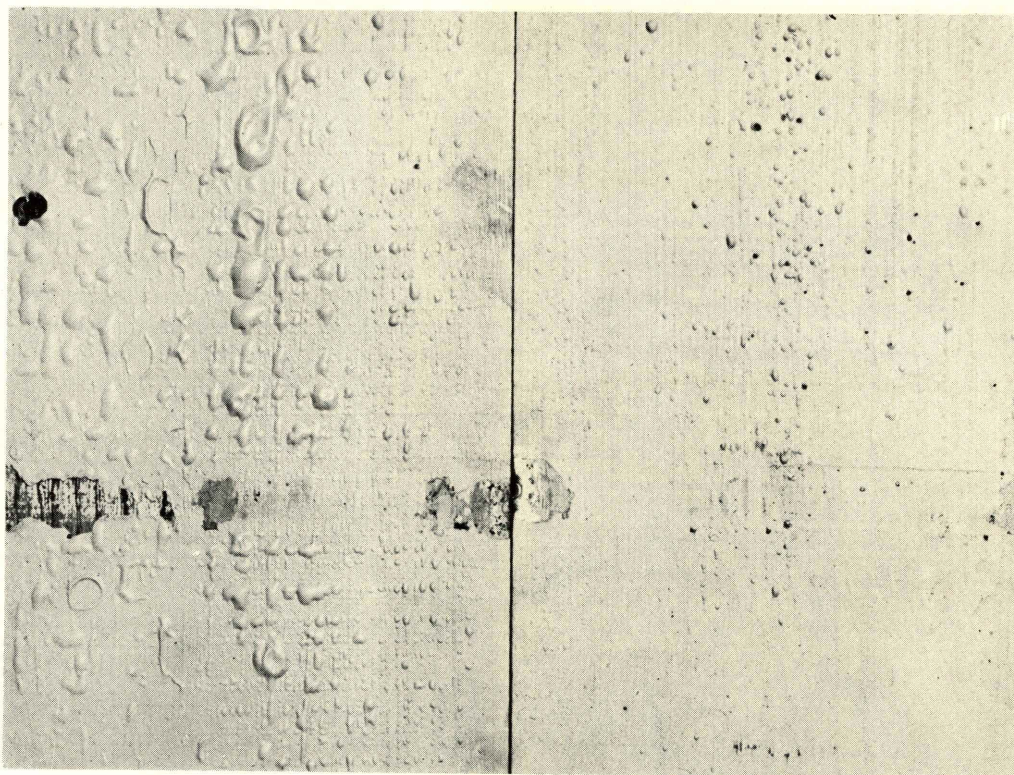
IMPORTANT public service achievements of the American Institute of Architects are to be incorporated into a

book entitled, "Memories of Glenn Brown." The author's personal contact with such outstanding figures in the field of architecture as William R. Ware, H. H. Richardson, Thomas U. Walter, Charles F. McKim, Daniel H. Burnham, Augustus St. Gaudens, and Frederick Law Olmsted has given him a background that should make a book of personal reminiscences of much interest. Glenn Brown served as Secretary of the Institute under eight presidents, during which time his close association with Robert S. Peabody, Cass Gilbert, Henry VanBrunt, W. S. Eames, I. K. Pond, Walter Cook, Elihu Root, James Bryce and others should make anything that he has to record of sufficient importance to warrant a large and spontaneous subscription to this volume that will assure its successful publication.

A Sane View of Advertising

JOHN GLOAG, writing in the "Architectural Review" of London, recently said,

"The practitioner in advertising is thought to be either a billposter or an inventor of exasperating slogans; for a large proportion of educated and intelligent people are ignorant of the economic function of advertising and incontinently damn it, root and branch because some of its manifestations are unsightly, which is about as silly as damning architecture because jerry-builders erect Swiss-Tudor bungalows." Advertising the profession of architecture should be viewed in a sane and proper manner with due consideration of its economic function, what it can do for the profession, the industry at large, the general public and the beautifying of our towns and cities.



COMPARATIVE BLISTERING from moisture, determined by laboratory test, of three coats of standard outside white paint and two coats of white paint with an aluminum priming coat. The aluminum primer reduced the number and size of blisters

Things to know about Aluminum Paint

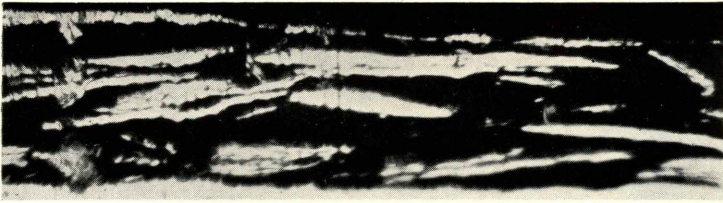
BY JUNIUS D. EDWARDS

Assistant Director of Research, Aluminum Company of America

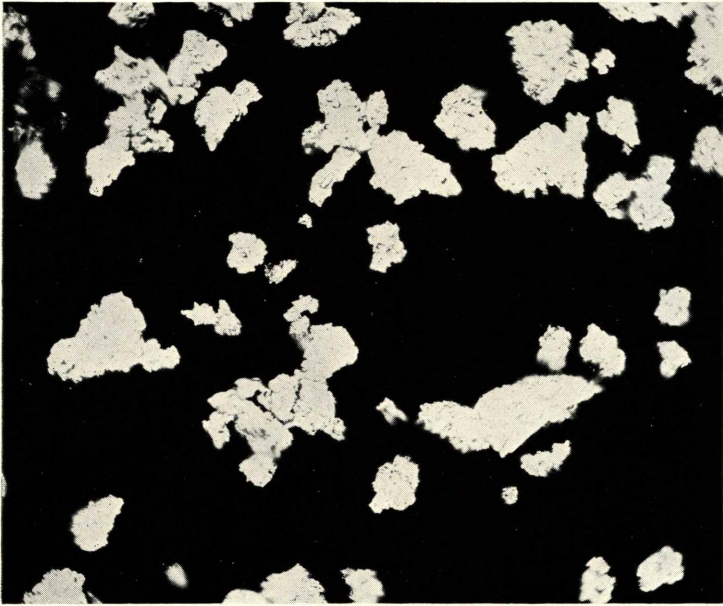
PAINTING with aluminum is a relatively new idea but it is not an experiment. Ten years of intensive research and testing have established the merits of aluminum paint, and practical application in thousands of places has completed the demonstration. Aluminum paint is different from other paints; the pigment is actually metallic aluminum in the form of very thin, flat flakes. Many of the unusual properties of aluminum paint can be traced not only to the metallic character of these particles, but to their flake-like shape. As a metal, aluminum is noted for its resistance to corrosion, and this characteristic extends to the metal flakes in aluminum paint.

In making aluminum paint, a different procedure is followed than that customary with non-metallic paints. The pigment is not ground with the vehicle but is mixed with it by simple stirring. This permits the painter to mix powder and vehicle as he needs them and in the proper proportion for any application.

To appreciate the adaptability of aluminum paint for many purposes, it is necessary to understand some of its properties. One of the most interesting and distinctive of these properties is known as "leafing." When stirred in the vehicle, some of the tiny flakes of aluminum bronze powder come to the surface of the mixed paint, where they form a bright and almost continuous film of metallic aluminum. Aluminum itself is, of course, opaque to light, and the layers of flakes of aluminum bronze powder in a paint film make it a paint of unusual opacity. This gives the paint unusual hiding power. The bright flakes of aluminum in a leafed film of aluminum paint make it reflect light exceptionally well. The minute flakes of aluminum bronze powder make the paint film quite impervious to moisture, and on this property are based many recent applications of aluminum paint. A number of other useful properties of aluminum paint films will be mentioned in connection with its various applications.



CROSS SECTION, *aluminum paint film, magnified 500 diameters, showing the distribution of the aluminum flakes*



FLAKES of *aluminum bronze powder, magnified 250 times*

Aluminum and its alloys with their silvery color fit harmoniously into many decorative schemes. Aluminum painted surfaces of metal or wood match surfaces of aluminum so closely that they are frequently indistinguishable except on close examination. For example, a steel staircase may be painted with aluminum paint to harmonize with an aluminum balustrade. Plaster walls may be effectively decorated with aluminum paint, providing they have a rough sand finish, so as to give a good light-diffusing surface.

If a smooth plaster wall is to be coated with aluminum paint, it may be given the proper diffusing surface by stippling. A convenient way of doing this is by means of a sponge dipped in a rather thick aluminum paint. Aside from its decorative effect, the aluminum paint fulfills a necessary function in sealing "hot spots" in the plaster.

Aluminum painted surfaces have good light reflection—say 60 to 65 per cent. For this reason, aluminum painted interiors in workshop and factory aid in efficient lighting. The use of aluminum paint for this purpose is also very economical because one coat will cover and hide any dark colored surface. Aluminum paint, because of its great opacity, is unsurpassed in hiding power, and properly made and applied, develops almost maximum reflectivity in a single coat. Basements, for example,

can be given a single coat of aluminum paint over wood, brick, stone and cement. The result is a lasting cheerful interior in a part of the house which far too often is rather dingy and neglected. A coat of aluminum paint on the furnace or any other heated surface will decrease radiation and conserve heat.

MANY industrial plants present special problems in protection which can be solved with aluminum paint. An electrolytic chlorine plant found aluminum paint to give unusually good protection on metal and wood in cell rooms. The dye rooms of textile plants present a combination of moisture and chemical fume which aluminum paint will withstand. Laundries and food-packing plants may present high humidity conditions which are very satisfactorily handled by moisture-proof aluminum paint. Plaster walls in the shower rooms of clubs and gymnasiums are extremely difficult to protect. Aluminum paint has done yeoman's service under difficult conditions. In this connection it is important to know that aluminum paint can be readily washed with soap and water. Better still are a number of proprietary cleaners of a mildly alkaline nature, such as those containing trisodium phosphate.

The property of moisture-proofing demands more than passing attention. Some (Continued on page 76)

3

PLACES TO USE

- primer or back primer
- first coat over old paint
- finish coat

5

ADVANTAGES

- has unusual hiding power
- reflects light well
- impervious to moisture
- resists chemical fumes
- easily washed with soap and water



PHOTOS BY LAZARNICK

A MAGIC CALDRON,

from which come the sinews that bind the
mighty skeleton in one firm, united mass

ARE TALKING ABOUT

Oldest Mortgage Record

Sears Roebuck To Finance
Modernization


"Real Estate Taxed Too Heavily"
says Reaume

main posts, each composed of a cluster of columns arranged in the form of a square with 20 foot sides, would be tied together with diagonal members. Each post would rest on a foundation 12 ft. thick and 85 ft. square. The entire structure would be arc-welded and 19,000 tons of steel would be required, this tonnage not including allowance for landing stages, observation galleries, elevator hatch framing, etc.

SEARS, ROEBUCK & CO., will finance modernization of the home on the partial payment plan within a radius of fifty miles of New York City. Five million dollars will be made available for those who wish to attempt such work. The minimum repair job accepted will be \$100. A down payment as low as ten per cent will be accepted; partial payments may be extended over a twenty-four month period. If the idea proves to be workable in this section, it will be extended to other parts of the country.

THE oldest existing mortgage record is said to be one found in 1893 by an archeological expedition of the University of Pennsylvania. It is a clay tablet stating that in 430 B. C., an inhabitant of Nippur, Babylon, borrowed thirty bushels of dates from a fellow townsman and pledged his ancestral lands as security for their return. It has been definitely established that similar agreements were in common use as long ago as 2,200 B. C.

WHEN A FELLER NEEDS AN ARCHITECT



RooFs . . . windows . . . floors . . . heaters . . . plumbing . . . and so on, and so on! What a help it is to have a few experts among your intimate friends when you come to that thinking, intricate adventure—building a home.

Get an architect off in a quiet corner and ask him a few pointed questions. He'll tell you that quality always pays, that no budget is too small to cover good design and good service. He'll show you that integrity at critical points of construction is plain common sense, and a joy forever! It pays, in many ways, to be right.

Even to casual callers, the bathroom speaks volumes about your way of living. The true story of your character and carefulness is told in your facilities for keeping clean.

Often you find Kohler fixtures and fittings in the homes of architects, real estate men and others who know more about plumbing than the man on the street. Any one appreciates the fine lines and lustrous finish of Kohler ware . . . the restful charm of its soft pastel tones . . . the clear whiteness of Kohler white and the brilliance of Kohler black. Experts know that the Kohler mark means thoroughness-through fastness, that Kohler engineers and workmen put a craftsman's pride in their products . . . a pride that blossoms again in your home.

Be sure that Kohler quality extends to the metal parts. Washbasin here's a trouble header, a money waster—and a positive danger. All Kohler fittings are made of tough, rustless brass . . . using heavier, simpler parts . . . obviously more efficient in operation . . . good for many more years of fine service.

In country cottage or big-city apartment, the finest plumbing adds relatively little to the building bill and always makes money! Increases property values. Reduces renting expenses. Prevents trouble . . . Besides paying daily dividends of comfort and pride, that careful people simply will not sacrifice.

If you plan to build or buy or remodel soon, get the advice of experts on this vital matter. Your own architect and plumber will show you how and why an all-Kohler installation gives maximum service at minimum costs. Meanwhile, write for an interesting new booklet, C-10, which shows the beauty and benefits of modern plumbing, at its best. Write for it now . . . Kohler Co. Founded 1873, Kohler, Wisconsin. Manufacturers of Kohler Electric Plumbings . . . Branches in principal cities.

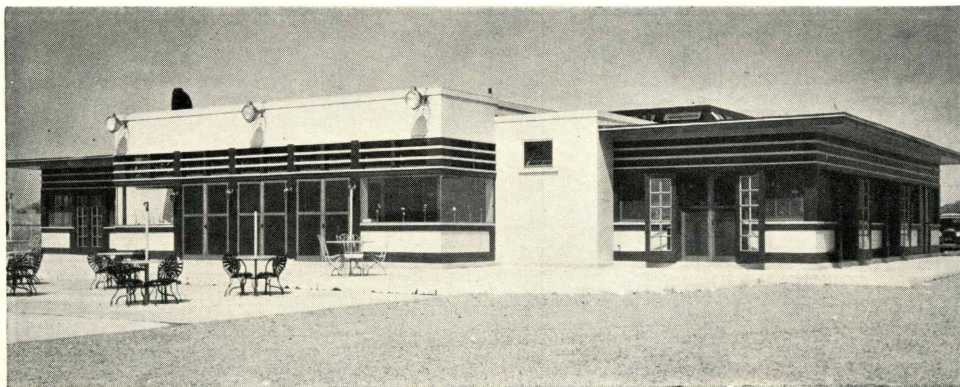
ELEVEN IMPORTANT POINTS

- 1 Kohler designs are decorative, purposeful, correct.
- 2 enamel-finish with an everlasting bond . . . leaves its smooth, shining surface.
- 3 Porcelain enamel—sintered with a flat, lustrous, lasting gloss.
- 4 Kohler colors are soft, livable pastels. The white is a perfect white.
- 5 Metal fittings match the fixtures in style, character and quality.
- 6 Made of finest materials . . . show craftsmanship and care.
- 7 This year's Kohler products are next year's new ideas in plumbing.
- 8 Kohler quality extends to kitchen and laundry.
- 9 Kohler quality costs no more . . . and saves money later.
- 10 Handled and installed by qualified plumbers.
- 11 Backed by an entire community . . . beautiful Kohler Village.

KOHLER OF KOHLER
LOOK FOR THE KOHLER MARK ON EVERY FIXTURE AND FITTING

APPRECIATION OF THE ARCHITECT and his importance is shown by this advertisement, appearing in magazines reaching the general public

ACCORDING to figures issued by the United States Department of Commerce, building stone sold in 1929 amounted to 34,761,140 cubic feet, which was 13 per cent more than that sold in 1928. More than one-half of this quantity was limestone valued at \$20,649,257. Total sales of granite for architectural work were valued at \$7,488,651; sandstone \$2,345,684; and marble \$12,125,716. These figures do not include material used for monumental and memorial work. The limestone figures include rough stone, sawed stone, semi-finished stone and cut stone. (Continued on page 106)



AIRPORT restaurant at the new Curtiss-Wright Airport at Valley Stream, Long Island. Designed by Kenneth Franzheim, architect

TEBBS & KNELL



"Why do your jobs go ahead when mine don't?"

THEY were enjoying a friendly luncheon talk, which finally swung around to business.

"How do you find things these days?" asked the younger man, often referred to as one of the "comers."

"Pretty good. I've no cause to complain, all things considered. There are several jobs in the office and three under construction."

"You're lucky. I've had quite a bit of work on the boards, but nothing goes ahead. Costs seem altogether too high."

"Well, young fellow, maybe you're too much of an optimist. Are you quoting what you think the job will cost—or what you hope it will cost?"

The younger man grinned sheepishly. "But," he argued determinedly, "if you quote too high a figure, you scare the clients off and they go to a contractor who will promise anything and everything at any old price."

"You're quoting them low, maybe because you don't know how to estimate, maybe because you're afraid to tell the truth. If you play fair with a job, the chances are that it will go ahead. I tell them what the job will

cost, and make it high, if anything. I explain what must be done to bring the building down to what they want to pay. But, and this is a big point, my boy, all my cutting and paring down is done before their minds are firmly fixed on what they think they are going to get. Let them once see a complete set of drawings with all the things they want, and it's almost impossible to get them to take less—and like it. If you don't make your changes before their minds are fully made up the chances are that they'll insist on the building as designed—or nothing. That's just human nature."

"You mean to work out something within the price they want to pay for the building while they are still thinking of what they want and before any sketches have assumed a final shape?"

"Exactly. It's good business and it's mighty good salesmanship."

"But how do you make an accurate estimate? I honestly try to get it right but, I'm frank to confess, I'm generally much too low."

"Well, the first thing I do is"

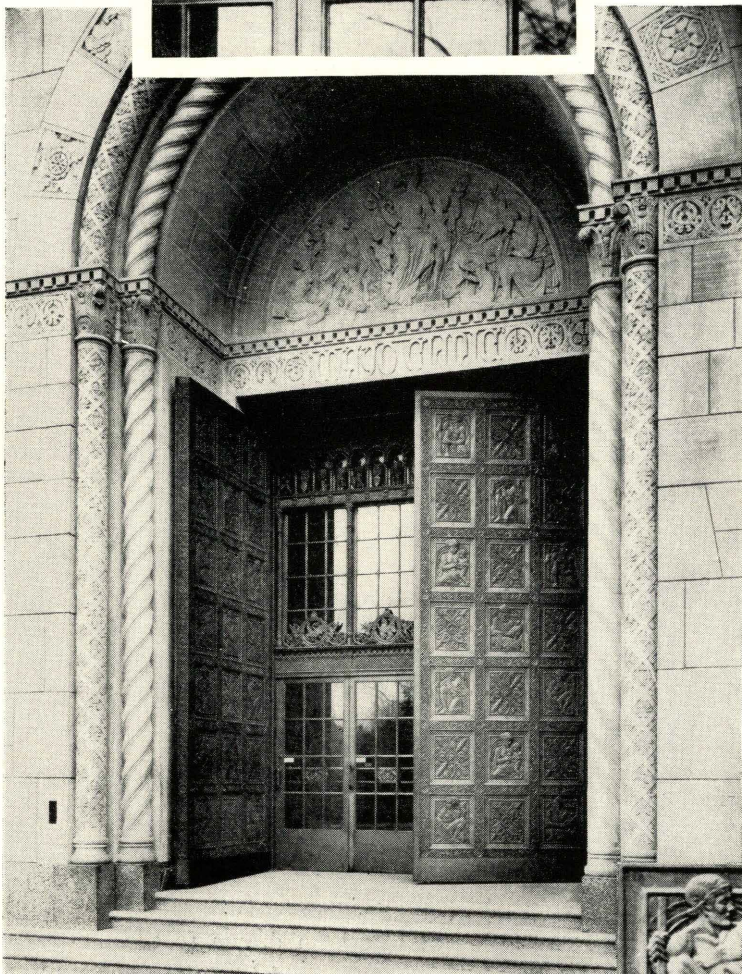
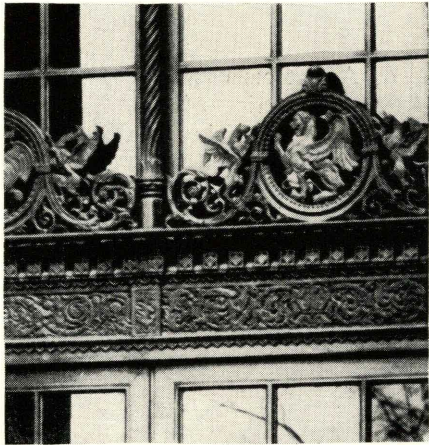
who has an accurate estimating system, easy to use?

WHAT would an architect think of an automobile salesman who indulged in a flowery description of the car he was selling and quoted a price that, when the architect started to make out his check, was found to be twenty-five per cent too low? He'd consider that the salesman did not know what he was talking about. So it is with the man in the street who engages an architect long on design but short on a knowledge of costs.

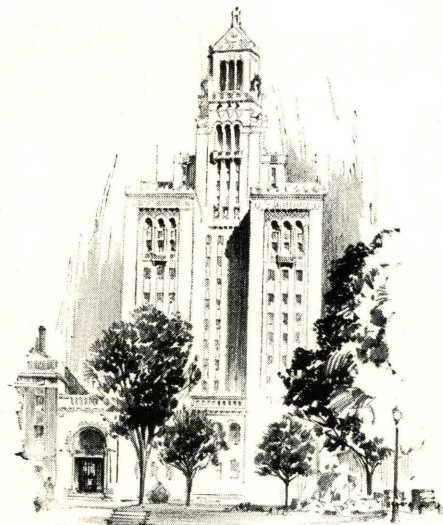
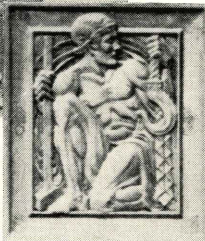
The editors of THE AMERICAN ARCHITECT wish to publish ideas from architects who have developed accurate, easy methods of estimating. Articles on this subject are desired and seventy-five dollars will be paid for each one accepted. Articles should be not more than two thousand words and should be in the hands of the editors of THE AMERICAN ARCHITECT, 57th street and Eighth avenue, New York City, by December 1.

MAYO CLINIC

ROCHESTER MINNESOTA



This photograph of the Mayo Building entrance shows its outer bronze doors and vestibule screen of glass and bronze. . . . A detail from the ornament of this screen is shown in the inset above. . . . At the right is reproduced one of the panels from the outer door



A Doorway of Remarkable Beauty

THE doorway of the Mayo Building is a symbol of hope to sufferers. None are turned away. † † † Under an impressive archway of Mankato stone stand the huge doors enhanced and beautified by cast bronze. † † † The outer doors weigh nearly three tons. Closed or open they show a paneled design decorated by symbolic ornament. Each leaf is 16 x 6 feet in size. . . . The doors are electrically operated and swing with remarkable ease. † † † Behind the doors is a bronze and glass vestibule screen finished in brown patine on a green background. † † † Bronze ornamentation gives the entrance an effect of thoroughness, completeness and sincerity which must inspire confidence.

Architects ELLERBE & CO.
Builders G. SCHWARTZ & CO.
Modeler, LOUIS RICHARD KIRCHNER

All ornamental metal work executed by

GENERAL BRONZE CORPORATION

480 HANCOCK STREET, LONG ISLAND CITY, N. Y.

"DISTINCTIVE PRODUCTIONS IN ALL METALS"

THE READERS

Have a Word to Say

SANTA BARBARA CHAPTER ENDORSES "CONSULT AN ARCHITECT"

This letter was received too late to include in the article, "The American Architect Asked, Should Manufacturers Advertise 'Consult an Architect'", printed in the September issue. Twenty-six A. I. A. chapters have now officially endorsed this idea.

Editor, THE AMERICAN ARCHITECT:

This is a belated answer to your letter of May 27 written to the Santa Barbara Chapter, A.I.A., in connection with the national advertising of manufacturers of building materials. At a recent meeting, this Chapter went on record as endorsing some such phrase as "consult your architect" in connection with the advertising of building materials.—*E. Keith Lockard, secretary, Santa Barbara Chapter, A.I.A., Santa Barbara, Cal.*

CENTRAL ILLINOIS CHAPTER ENDORSES "CONSULT AN ARCHITECT"

Editor, THE AMERICAN ARCHITECT:

The Central Illinois Chapter of the American Institute of Architects met on Saturday, October 11, and the matter of your editorial "Should Manufacturers Advertise 'Consult an Architect'?" was discussed.

While no resolution was officially passed with reference to this editorial, the secretary was instructed to inform you that both the editorial and the policy of your magazine in regard to this matter met with their approval.—*P. R. Hooton, secretary-treasurer, Central Illinois Chapter, A.I.A.*

SOUTHERN CALIFORNIA CHAPTER A.I.A. ASKS PRODUCER'S COUNCIL ABOUT "CONSULT AN ARCHITECT"

H. Roy Kelley, secretary of the Southern California Chapter of the A.I.A., wrote a letter to Mr. F. S. Laurence, secretary of the Producers' Council, asking what the Council thinks of developing in a large way the suggestion incorporated in an article in our September issue, "The American Architect Asked, 'Should Manufacturers Advertise 'Consult an Architect'?" Mr. Kelley was good enough to send THE AMERICAN ARCHITECT a copy of the letter. On receipt of the letter, the editors telephoned Mr. Laurence, who stated that the Council feels that as this matter concerns the architectural profession, it is advisable for the Council to await an expression of opinion from the body which represents the profession, e. g., the A. I. A. The Board of Directors of the Institute will meet in November and it is expected that some action will then be taken. Mr. Kelley's letter follows:

The Southern California Chapter of the American

Institute of Architects has been more or less interested in the idea of advertisers in the building trades incorporating in their advertising matter some expression referring to the architect.

We rather think that in this manner the product will receive a certain amount of stability and the architectural profession in general can receive a certain amount of proper publicity. We would like to have the opinion of your Council as to whether this would be a feasible thing to develop in rather a large way.

Enclosed is a page cut from THE AMERICAN ARCHITECT of September, 1930, which deals with this same matter, but to a certain extent in a rather unfortunate way. I refer particularly to the advertisement of the Insulite Company which says "Consult your architect, builder and lumber dealer." This, of course, defeats the entire purpose that we have in mind. The point that we would like to have stressed is that the architect, and presumably in some cases the engineer, are the only people to consult if an unbiased opinion in connection with a given material is desired.

Whereas, the lumber dealer or the builder can hardly be expected to have an unbiased opinion in the true sense of the word. Furthermore, we think it important that there should be no suggestion of endorsement conveyed in the advertising matter, but rather that the architect should be consulted for the proper use of the particular material. In fact, a slogan such as "Consult your Architect for the Proper Use of This Material" would probably express our feelings about as clearly as anything that comes to mind.

We would appreciate hearing from you at your earliest convenience as to just what suggestions, if any, your Council might have to make in this connection.—*H. Roy Kelley, secretary, Southern California Chapter, American Institute of Architects.*

"NAVAL ARCHITECTS ADVERTISE;" WRITES SECRETARY PRODUCERS' COUNCIL

Editor, THE AMERICAN ARCHITECT:

My attention has just been drawn to the article by Mr. Ernest Eberhard appearing in a recent issue and entitled "THE AMERICAN ARCHITECT asked, should manufacturers advertise 'consult an architect'." I am led to offer a suggestion which is not advanced as a definite recommendation. It must remain for members of the architectural profession to decide their own problems.

Nevertheless I would point out that there is one profession very closely comparable to that of architecture and equally honored and esteemed whose members for years past have advertised outright in the form of "paid advertising," too, in the pages of magazines. I



IMPERIAL Provincial Shingle Tiles



IMPERIAL Antique Shingle Tiles

THERE ARE MANY PATTERNS OF IMPERIAL SHINGLE TILES FROM WHICH TO CHOOSE

Pictured here are four of the many patterns in which IMPERIAL Shingle Tiles now are available. They range from surprisingly inexpensive machine made tiles to somewhat higher priced hand treated ones. Wide variations as to color and surface texture make it possible to satisfy individual requirements of taste and design, no matter how particular.

Write for folder which illustrates the entire line of IMPERIAL Shingle Tiles.



IMPERIAL Brittany Shingle Tiles



IMPERIAL Colonial Shingle Tiles

L U D O W I C I - C E L A D O N C O M P A N Y
Makers of IMPERIAL Roofing Tiles

NEW YORK: 565 FIFTH AVENUE

104 S. MICHIGAN AVENUE, CHICAGO

WASHINGTON: 738 FIFTEENTH ST., N. W

refer to the profession of Naval Architecture, the individual members of which all appear to carry in the pages of "Yachting," "Motor Boating," "The Rudder," and other marine journals, advertisements in no wise differing from those of high class, dignified producers of marine equipment and which feature examples of their completed work presented without any suggestion of "blah" and sensationalism in text or illustration.

The circumstance suggests two thoughts which it seems to me might be kept in mind in viewing the ethical question presented:

(a) The thought voiced by Mr. Bennett Chapple of the Producers' Council in an address to an evening session of the A.I.A. at Washington last May: that "paid advertising" should not be envisioned, necessarily, as the raw, crude type of thing followed by some branches of commercial enterprise; and that such identification of it in the architectural mind appears responsible for much confusion of thought and purpose in a matter where all want the same thing—dignified, legitimate, effective publicity.

(b) That the custom of Naval Architects not only strikingly confirms Mr. Chapple's clarifying explanation of what "paid advertising" can be and often is, but that this practice of the Naval Architects carried on for years has in nowise diminished their professional standing in the eyes of the public, their fellows, or, what may be of even more convincing consequence, the disposition of the wealthiest elements of our social and industrial life to employ them for the design of the finest type of pleasure and commercial craft. I might cite the instance of Mr. Pierpont Morgan's new \$3,000,000 yacht, the Corsair, the commission to design which was given a prominent American firm of Naval Architects which advertises regularly and which was built to their specifications in an American shipyard. The same confidence in professional integrity and competence is likewise shown by large steamship companies which entrust to American naval architects the designing of passenger liners costing \$15,000,000 and upwards.

No one questions the ethical and professional standing of these men, many of whom lead the world in their line. Is it not therefore a question of *how* the advertising is done, rather than the form it may take?

In closing it may be of interest to quote the code of ethics of the Society of Naval Architects and Marine Engineers, a professional body of some 1500 which includes some of the most distinguished names in this country and Europe concerned with marine engineering and design:

"That the dignity of their chosen profession may be maintained, it is the duty of all Naval Architects and Marine Engineers to conduct themselves according to the principles of the following Code of Ethics:

1—The Naval Architect and Marine Engineer will carry on his professional work in a spirit of fairness to employees and contractors, fidelity to clients and employers, loyalty to his country, and devotion to high ideals of courtesy and personal honor.

2—He will refrain from associating himself with, or allowing the use of his name by, an enterprise of questionable character.

3—He will advertise only in a dignified manner, being careful to avoid misleading statements.

4—He will regard as confidential any information

obtained by him as to the business affairs and technical methods or processes of a client or employer.

5—He will inform a client or employer of any business connections, interests or affiliations which might influence his judgment or impair the disinterested quality of his service.

6—He will refrain from using any improper or questionable methods of soliciting professional work, and will decline to pay or to accept commissions for securing such work.

7—He will accept compensation, financial or otherwise, for a particular service, from one source only except with the full knowledge and consent of all interested parties.

8—He will not use unfair means to win professional advancement or to injure the chance of another Naval Architect and Marine Engineer to secure and hold employment.

9—He will cooperate in upbuilding the profession of Naval Architecture and Marine Engineering, by exchanging general information and experience with his fellow-Naval Architects and Marine Engineers and students, and also by contributing to the work of technical societies, schools of applied science, and the technical press.

10—He will interest himself in the public welfare, in behalf of which he will be ready to apply his special knowledge, skill and training for the use and benefit of mankind."

The opinion which may be inferred from the foregoing should be regarded as purely personal and inspired by what Mr. Eberhard has to say of the restraining modesty of the architectural profession. The profession however, must decide its own problems, not the manufacturers. Doubtless there may be good and sufficient reasons why architects should not advertise. My purpose is merely to suggest:

1—That such reason is not to be found in the necessary character of what is known as "paid advertising."

2—That another profession, highly honored, has pursued paid advertising for a number of years with no detriment to its professional integrity and public esteem.—*F. S. Laurence, Executive Secretary, The Producers' Council, New York City.*

HOW TO CHARGE FOR OVERTIME

Mr. H. P. Van Arsdall,
Care THE AMERICAN ARCHITECT:

Your article in the June issue of *The American Architect*, entitled, "An Easy Accounting System That Increases Architects' Profits," is of particular interest to us.

We feel a deep sense of satisfaction in the realization that our basis of figuring costs bears a rather close resemblance to the one described by you.

A point of concern to us at this time, however, is whether an architect would be justified in charging overhead on the productive overtime hours. We base our question in this matter on the assumption that overhead is fixed by the regular weekly productive time schedule.

We feel, nevertheless, that if an architect can main-

STRUCTURAL STEEL CREATED THE SKYSCRAPER

INEVITABLE . . . THE ALL-STEEL CITY

TODAY'S breath-taking spires and spans of steel were "impossible" only a few brief years ago. Now walls of masonry are yielding to solid-section steel windows . . . new beauty comes in steel shapes and new skill devises their application . . . and on the horizon looms the amazing battle-deck floor.

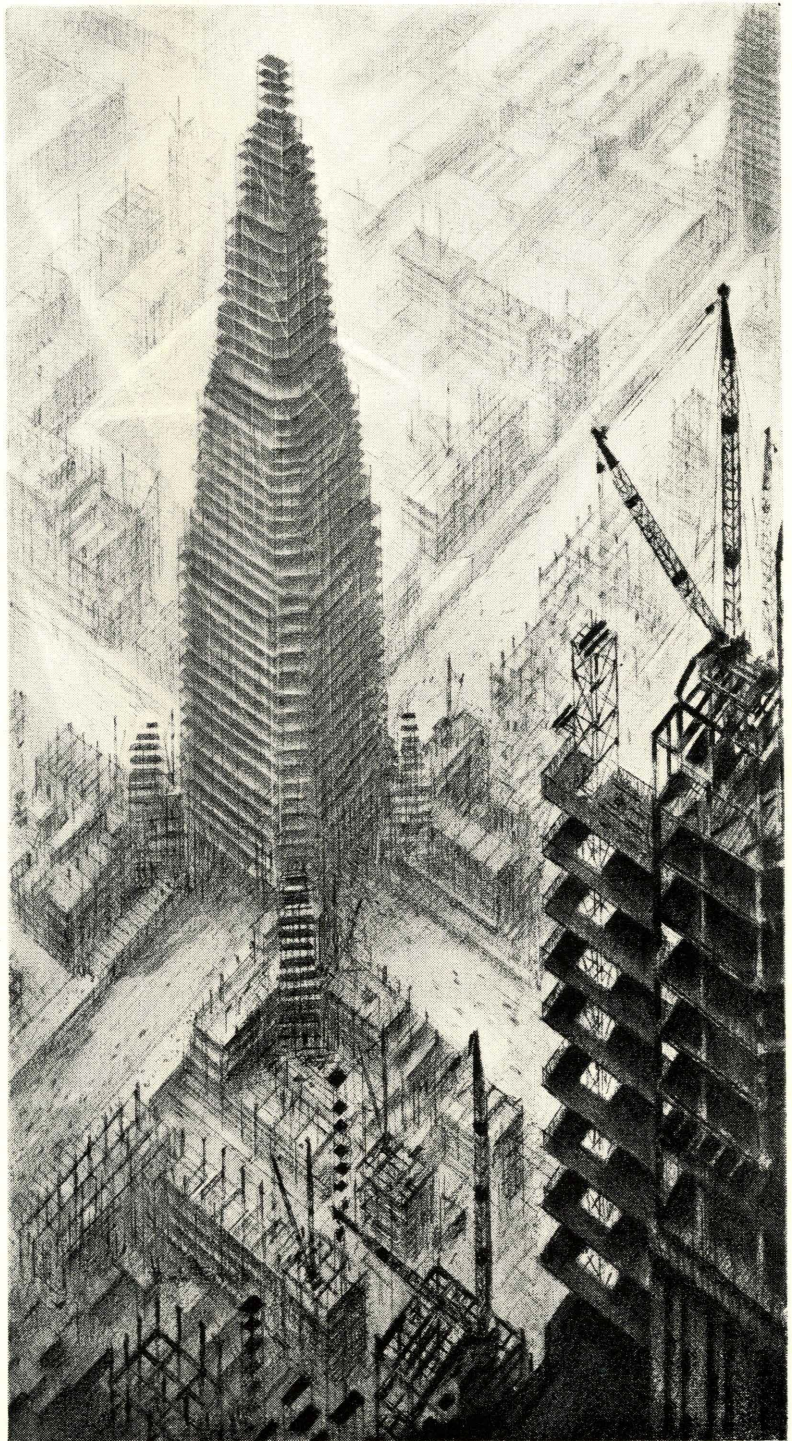
Eventually, cities will be all steel. Not only the skyscrapers and great bridges, but the homes, schools, small apartment and mercantile houses, small factories and small bridges as well. For steel is the strongest, most versatile and fastest building material. Fabricated in mills, weather cannot delay its production—and rain, intense heat, or freezing does not impair its strength. It can be erected anywhere, at any time, as long as men can work—thus earlier returns on invested capital are insured, interest charges are saved.

In cities, too, there is constant change, growth. Small structures give way to larger ones—must be altered, added to or replaced. Steel facilitates alteration and addition—and no other building material has such high salvage value, is so economically recovered, or is so readily marketed afterward.

Before building anything find out what steel can do for you. The Institute serves as a clearing house for technical and economic information on structural steel, and offers full and free co-operation in the use of such data to architects, engineers and all others interested.



The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every phase of steel construction, are available on request. Please address all inquiries to 200 Madison Avenue, New York City. Canadian address: 710 Bank of Hamilton Bldg., Toronto, Ontario. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas, San Francisco and Toronto.



"BUILDING THE CITY OF STEEL"—BY HUGH FERRISS. AN ENLARGEMENT, ON SPECIAL STOCK FOR FRAMING, WILL BE MAILED WITHOUT CHARGE TO ANY ARCHITECT, ENGINEER OR BUSINESS EXECUTIVE.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

STEEL INSURES STRENGTH AND SECURITY

tain a normal year's practice under the regular weekly hour schedule, he should not be penalized if, due to the pressure brought to bear by his client, he is obliged to resort to overtime work, thus completing the work in a much shorter length of time.

We would value good opinion on this point.—*Springsteen & Goldhammer, Architects, New York City.*

Editor, THE AMERICAN ARCHITECT:

You have enclosed a letter from Springsteen & Goldhammer, Architects, of your city, wherein they have made inquiry concerning certain features of the accounting system devised by me, and published in the June issue of THE AMERICAN ARCHITECT. The point with which they are principally concerned is in the following question: Would an architect be justified in charging overhead on the productive overtime hours?

My answer to the above would be as follows: You should charge overhead against overtime productive hours the same as you would against regular productive hours. In the first place, the rate or unit of overhead applicable to any particular job is determined by dividing the monthly total overhead expense by the monthly total productive hours. When this rate has been determined, it should be applied to each productive hour on every job passing through the office, whether the job is done during the regular daily working hours or during the evening overtime hours. You will understand that the overtime work must be done in the office the same as the daily work and therefore it seems logical that the overtime work should bear its proportion of the expense for rent, light, heat, phone service, tracing paper and cloth, supervision, stationery, stenographic work, etc.—*H. P. Van Arsdall, of Samuel Hannaford & Sons, Architects, Cincinnati.*

• WHY NOT AGITATE TO GIVE ARCHITECTS CREDIT ?

Editor, THE AMERICAN ARCHITECT:

The editorial entitled, "Guide Books and Architects," on page 51 of the July issue of THE AMERICAN ARCHITECT, reminds me of an incident that came to my attention recently.

A very beautiful church designed by one of our most noted architects was recently completed in a neighboring suburb. The congregation had made plans to dedicate some symbolic stained glass windows designed and executed by one of our best American stained glass designers and the designer furnished an excellently worded description explaining the symbolism, which was printed in the program of the dedication service, and provided the most interesting feature of the service. The committee in charge failed to mention the name of the designer in any way in the program, although he was a resident of the same suburb and personally known to many members of the congregation.

I took occasion to let a prominent member of the congregation know that I considered this a breach of etiquette and when he came to consider the matter, he agreed with me.

In my opinion, the public press and the public generally is very lax about giving credit to architects. It is almost the rule rather than the exception that descriptions of buildings or proposed buildings either neglect

altogether to mention the name of the designer, or if the name is mentioned, it usually occurs in the least conspicuous place, after the names of everybody else who can be connected with the matter, even remotely, have been displayed.

Sometime later, the church attempted to make such amends as it could by acknowledging its neglect and publishing the name of the designer. This belated recognition of the artist was brought about, no doubt, because someone had called attention to the lack of courtesy.

This bears out and emphasizes the point that I wish to make, which is that the public generally, including many editors who ought to know better and many representatives of churches and other organizations whose aims are to promote ethical standards, are very careless about this matter of giving credit to artists and designers when they take the liberty of exhibiting, reproducing or discussing at length their designs or works of art. The way to correct this situation is to call attention to it whenever it arises. It is the barest justice to give the artist credit for his productions and that portion of the public which is interested in the productions is also interested in knowing the name of the artist.—*Clarence E. Dobbin, A.I.A., New Rochelle, N. Y.*

A SUGGESTION AS TO HOW THE A.I.A. CAN ASSUME LEADERSHIP OF THE BUILDING INDUSTRY

Editor, THE AMERICAN ARCHITECT:

You are attacking the architect's problem at the right spot in the publication of Mr. Alfred E. Fountain's article, "Can Architects Advertise Nationally?"

For many years I have personally thought out and have by trial experimented with the publicity idea for architects. In fact, by newspaper, phone book, direct-by-mail advertising, I have endeavored to discover the correct method of approach, but these have failed. Why? Because they did not have the correct approach to the problem.

In the past, when communities were small and the word of mouth method of disseminating knowledge of the arts by private exhibition was possible, publicity and advertising were not so necessary as they are today.

The average architect through his extensive club membership, his friends, his donations to charity and such other time consuming and expensive methods, attempts to gain publicity. He is eager to have his new commission photographed and published in the newspaper with his name attached. Why? Publicity. Advertising. The doctor, the lawyer and other professional men, if they are honest with themselves, have the same feelings about being known in their community and they do all sorts of things that exasperate the City Editor in their endeavor to get publicity.

This seems to be a mad scramble, undignified, unfair and lacking in desired results.

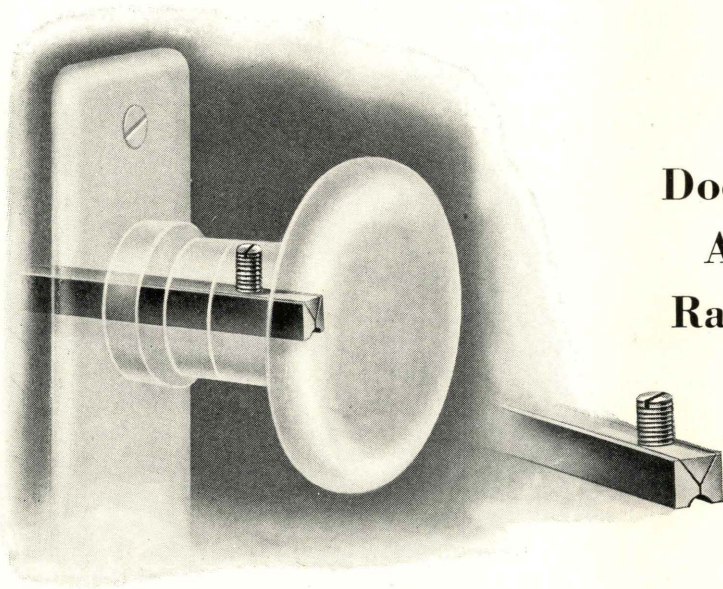
Why not budget the money and energy that is thus used for a helter skelter publicity into a dignified program, placed in the hands of a competent advertising agency, just as we expect our clients to place their building programs into our hands? This will cost money, certainly, but I believe it will be an investment and not an expense.

Out here in Indiana we have organized the Indiana

TRADE

YALE

MARK



Yale Triplex Door Knob Spindles Assure Firm and Rattle Proof Knobs

THE annoyance and distraction of loose, rattling door knobs are definitely eliminated by the Yale Triplex Spindle. The Yale Triplex Spindle consists of three parallel bars, which together form a square rod. A set screw in the knob-shank bears on the center bar, and the wedge form of this forces the other two bars apart and into frictional engagement with the knob. The spindle itself is screwless, and no tendency exists to loosen the set screw, so that when once tight-

ened it will so remain under all conditions of use.

The Triplex Knob Spindle is used in almost the entire line of Yale Builders' Locks and Knobs. *It is furnished at equal price with the old "common" spindle.* Thus there is no longer any excuse for inefficient door knobs. Tried and tested for years of service, the Yale Triplex Spindle is a proven device.

Write for copy of Architects' Manual giving complete information.

THE YALE & TOWNE MFG. CO., STAMFORD, CONN., U. S. A.

YALE MARKED IS YALE MADE

Building Congress, whose membership is composed only of state organizations in the building industry—no individual memberships. There are about 40,000 men represented who are vitally interested in the welfare of the entire industry. Our hope has been to advertise the entire industry, starting with the architects, then the engineers, the contractors, the sub-contractors, the craftsmen, the material supply dealers and manufacturers. By this method we hope to make the public conscious of the procedure necessary for obtaining the product of this organized industry, convenient and attractive shelter to serve the public's best interests. We can thus ward off to a great degree the coyotes that prey upon the building public and the industry.

I believe a United States Building Congress, built up of national organization membership interested in the building industry similar to The Indiana Building Congress, would be an effective body back of a concerted action for a national publicity campaign.

The American Institute of Architects as a body should lead in this organization. The amalgamation of such a powerful group would do more for the constituent elements in such an organization than the smaller elements could possibly do for themselves. Immediately national recognition would be the result.

The conceiving of the building industry as an organized whole, with its product, convenient and attractive shelter, to serve the best interests of the public, will rebound not only to the benefit of the architect but to the entire industry.

The many affiliations of The American Institute of Architects now point in that direction. Why not go all the way?—*Merritt Harrison, A.I.A., Harrison and Turnock, architects and engineers, Indianapolis, Indiana.*

COMMENT ON BLAKE'S ARTICLE "WHAT TO PUT IN A CONTRACT"

Editor, THE AMERICAN ARCHITECT:

I was much interested to read the article by Mr. Clinton H. Blake in your September issue and the form of Architect's Agreement which accompanied it. I think the architectural profession is indebted to Mr. Blake for the presentation of the architect's legal status, and the pitfalls to guard against, in his two books and his many contributions such as this one.

His urge to use written agreements may well be followed and I believe will be followed increasingly as time goes on. There are one or two points in his article that I think are worth commenting on.

Mr. Blake suggests that the Institute Form of Agreement "is the result of an effort to produce a form which shall be applicable, so far as possible, to the practice of the ordinary architect." This is, of course, true, and I assume the form he suggests is equally intended to be as broadly applicable to general practice as possible. As Mr. Blake says, individual practices differ and a form satisfactory to one may not be to another. However, the form he suggests varies from the Institute form only in details of phraseology rather than in the matters covered, except as noted below, and it is not clear that there is any real distinction between the two forms on this score.

The form he suggests does omit a number of items covered by the Institute form and suggests a final para-

graph to make good the omission by reference to the "Schedule of practice and charges" of the Institute.

The points omitted cover:

(a) Additional 4 per cent for separate contract procedure.

(b) Extra fee for work resulting from damages by fire.

(c) Special fee for work let on cost basis.

(d) No deductions from fee on account of penalty, etc.

(e) Fee on basis of market value of any materials furnished by owner.

(f) Adjustment of disputes by arbitration.

It seems to me all these points should be covered in any agreement. They comprise, in the Institute form, a total of 186 words. Mr. Blake's concluding paragraph holds 33 words. A saving of only 153 words seems hardly worth while in view of the complications involved in reference to another document.

Mr. Blake's plea to have the estimated cost stated in the agreement is sound. Wherever it is possible to do so it should be done. There is, of course, ample space to include it on the first page of the Institute form, which, however, is more simply adaptable to cases where it is not a definite factor.

Mr. Blake suggests that the Institute form is not clear as to the adjustment of the fee when work is abandoned between two of the stages of the work at which payments fall due as specified. I feel that he is not correct in this.

The last paragraph of Art. 4 of the Agreement reads as follows: "If any work designed or specified by the Architect is abandoned or suspended the Architect is to be paid for the service rendered on account of it." This is a slight abbreviation of the parallel clause in the "Schedule of Charges," which adds the words "in accordance with or in proportion to the terms of Article 9 of this schedule," Article 9 being the same as Article 5 of the Agreement which notes the progress payments of 1-5, 2-5 additional, etc.

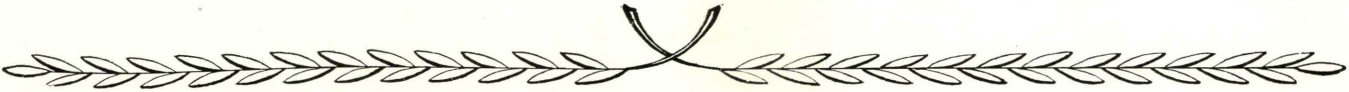
In either form it seems to me clear that the Architect is to be paid for service rendered, not for merely some portion of that service.

Mr. Blake suggests that the Architect be given the right to order changes and incur extra expenses, provided the change and the expense are not "material." I cannot help wondering if this really is desirable. It would, of course, be a pleasant clause to have at hand many times, but it gives the Architect a right that seems to me, on the whole, to carry with it undesirable possibilities. I would be interested to know how this strikes other architects.

I can understand the legal adviser of the Architect feeling that it is a protection but, as an architect, I am inclined to feel that I would prefer to function without this power which would frequently be an awkward temptation to cover up omissions or errors at the risk of creating an unfavorable relationship with the owner.

Without this clause the architect needs clearly to exercise more caution in making changes without the knowledge and consent of his client; a sense of relief from such caution might well lead to greater difficulties.—*William Stanley Parker, A.I.A., of The Office of R. Clipston Sturgis, Boston, Mass.*

(Continued on page 106)


 To Remind You
RUBEROID Now Offers **ASBESTOS,**
COAL TAR PITCH and **FELT,** and **ASPHALT**
 Built-up Roofs

Regardless of what conditions you have to meet—climate, fumes, unusual wear, roof design or price, there is a Ruberoid Built-up Roof specification to successfully meet them.

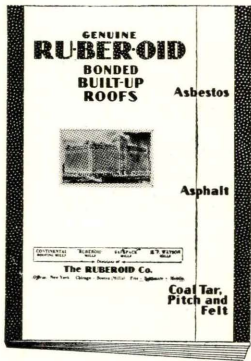
Through the association of four great roofing companies, The Ruberoid Co. can now supply you with Asbestos, Coal Tar Pitch and Felt, or Asphalt Built-up Roof-

ing in various thicknesses and specifications.

When bonded roofs are desired, the architect, builder and owner secure a guarantee both as to

workmanship and material for 10, 15 or 20 years, according to the specification used. These roofs are applied only by approved roofing contractors, and the guarantee is backed by a National Surety Bond.

For your convenience, you will find a complete catalogue of Ruberoid Built-up Roof Specifications in 1931 Sweet's. Should you desire supplementary information, or face a roofing problem resulting from unusual conditions, our Engineering Department is always glad to be of help. Simply write or 'phone any office listed below.



CONTINENTAL
ROOFING MILLS

RUBEROID
MILLS

SAFEPACK
MILLS

H. F. WATSON
MILLS

Divisions of

The RUBEROID Co.

Offices: New York Chicago Boston (Millis) Erie Baltimore Mobile

tance in the construction of porch floors and steps and other wooden structures where the underside of the lumber may be close to damp earth. It is common practice in the construction of porch flooring to paint the tongue and groove before assembly. It is equally important to protect the underside of the wood against moisture.

Aluminum paint is making rapid progress in its adoption by bridge engineers. A number of states use it exclusively in painting highway bridges; it has also been used extensively on major structures. One of the largest bridges painted with aluminum paint is the Washington Crossing bridge over the Allegheny River at Pittsburgh. This bridge is of concrete with the struc-

tural steel aluminum painted to harmonize with the concrete piers. The steel in this bridge was painted in 1924-25; a recent inspection shows the aluminum paint to be in excellent condition and good for several years' more service.

In every application of aluminum paint, the best results are secured only if the vehicle is adapted to the particular class of work. For use on steel, concrete, brick and plaster, long oil varnishes, meeting a specification developed by Aluminum Company of America are recommended. For use on wood, vehicles of the bodied oil type or *very* long oil varnish work best. Hundreds of paint and varnish manufacturers are now supplying vehicles meeting these requirements.

Advertising Plan

(Continued from page 24)

immediately ask the question—What mediums would you use to carry the advertising, and why? What size space—what type of illustrations, and why? What would be your appeal, and to whom?—men, women, home owners, professional people, business men?—and also why? These are only a few of the questions that would greatly embarrass any man burdened with the responsibility of a large expenditure of money whose chances of success were based on a guess. A careful and skillful market analysis is usually worth all of the effort, time and money that it costs.

WITHOUT going into the ramifications or the detail of a market analysis, let me give just a hint of how it gets its desired result. A chart or table of all sorts and kinds of facts that are thought desirable is laid out. It might ask such questions as, or look like, the following:

The Market

Where it is (sectionally in order of importance)

At what time of year is it best?

For what class of work

For what class of owners—analyze them

Forecast the probable number of each type of building to be erected in the next 3 years based on accurate figures of the past 5 years.

Why do not more owners employ architects?

Analyze the various competing factors in order of importance.

Why do so many owners employ architects?

Analyze reasons in order of importance.

Such questions, you see, when carefully worked out and analyzed by trained minds begin to unfold a mass of valuable information upon which actual expenditures and advertising money can be reasonably made. Just the few fundamental questions outlined would reveal the answer to:

A—When to advertise (time of year)

B—What mediums to use (magazines, radio, mail, etc.)

C—Copy appeal (what sales argument to use)

D—Size of space most economical to use.

Please bear in mind that I have so far outlined in a very sketchy way but one part of a market analysis. After or with this would come, among other things, an

analysis of the present methods employed in the practice of architecture, especially as they apply to the sales end of the business. This would be made in the hope that it would lead to better and more resultful sales methods by architects themselves.

And so the study would go forward, asking and answering all manner of questions until, when put in typed form, it would furnish data that would be a revelation even to architects themselves.

Now that we have all the facts and figures of the market arranged and typed and *digested* . . . what? We should, I feel, imagine that we are about to engage in a long hard battle.—We are a group of generals forming a board of strategy—and must plan a campaign of action calculated to ultimately bring success. First, we have facts (our enemies haven't). We have all the most modern weapons of attack. (I assume here that sufficient money will be available to accomplish our end. If it is not we will change the objective). We have the great strength of color pages in magazines; we have the deadly power of newspapers—we have radio—we have everything we need except a clearly defined objective. As you know, modern warfare sets definite objectives to be obtained at specified times. If the objective is overrun or not reached the whole campaign is endangered. By the same token lines of retreat as well as advance must be kept open. Many an advertising campaign has failed because it not only set no objective but could not stop and retreat if necessary.

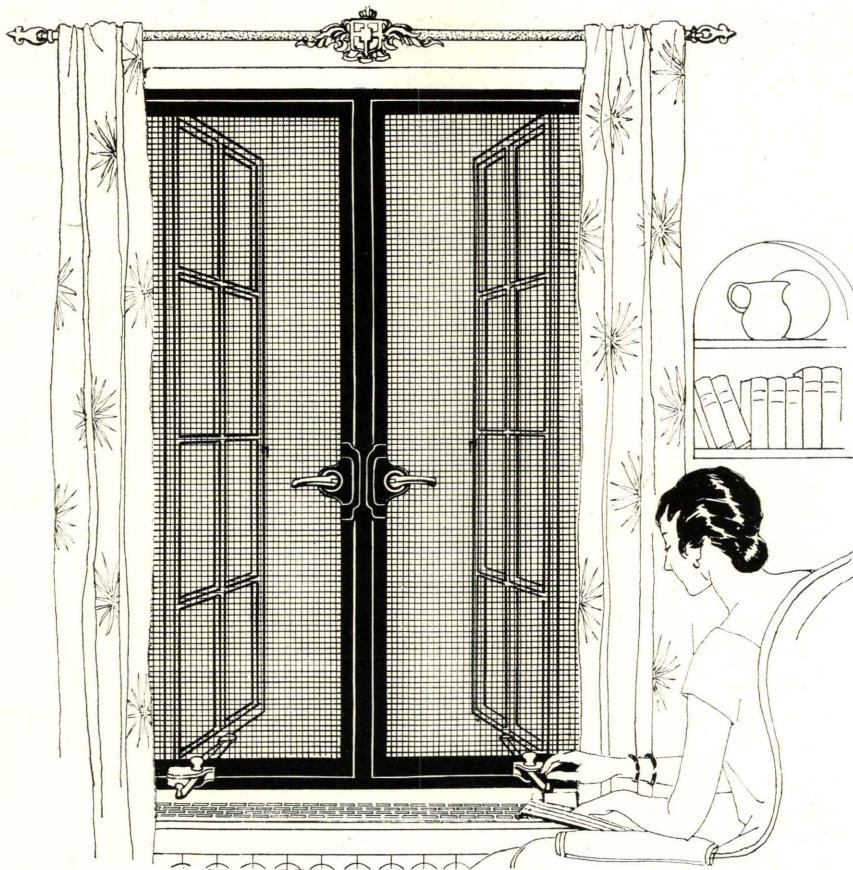
LET us then imagine that our campaign will last three years. For each of these years we set a goal of accomplishment that our experience tells us is possible of attainment.

1st year—We want every possible prospect for architectural service to know what architects have done, are doing, and can do.

2nd year—What they can do for you (the owner) and how they can save the owner money.

3rd year—The fallacy of building without an architect.

This brings us to the point where we have to select the ammunition we are to use for each of these objectives. Space does not permit me to tell in detail of the very interesting though laborious task it is, to select



Casements Opened, Closed, Locked without touching Inside Screens

Specified by Chicago Architect for his Own Home

Attracted by their unique practical advantages which include screen-free operation, William B. Betts, Architect, of Chicago, selected Fenestra Steel Casements equipped with Fenestra Screens for his own home.

Permanent fly tightness is assured by these screened casements, the flat, non-warping screen frame making a metal-to-metal contact against the flat casement frame.

Construction of Fenestra Casements is by craftsmen in the shops of America's oldest and largest steel window manufacturer. Ask for catalog.

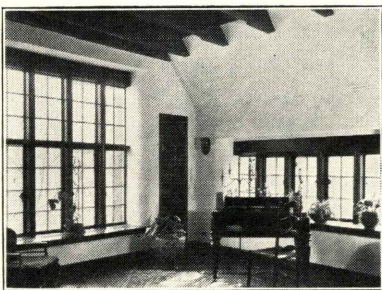
DETROIT STEEL PRODUCTS COMPANY, 2288 East Grand Boulevard, Detroit, Michigan

Factories: Detroit, Mich. and Oakland, Calif.

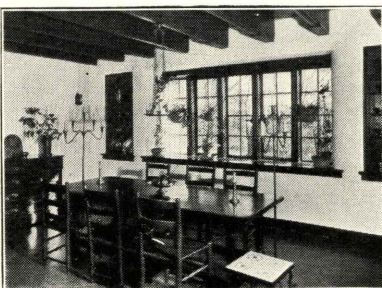
Convenient Warehouse Stocks

Fenestra

STEEL CASEMENTS (Screened)



Living room in the house of William B. Betts, Architect, Chicago



Dining room in the house of William B. Betts

just the right mediums to use in a year's campaign. But to give you a quick picture of how this problem is attacked, let us imagine again. To make it as simple for myself as possible let us say we are debating whether to use certain magazines of gigantic circulation. Let us look at two sections of our map.

Let us take the State of New York and the State of South Dakota. The best available figures at this writing are for the year 1929, and reveal the population of New York as about 12,500,000 people against about 700,000 in South Dakota. It is obvious that all of these people are not, nor could be made, prospects for architectural service. Among these millions there are children, invalids, illiterates, imbeciles and the like who have to be subtracted before we can arrive at anywhere near the group that could be called prospects.

AFTER looking over our population in order to determine what nature of people they are, we must know something of their financial condition and their probable need for architectural service. To do this we group various types of buildings—factories, theatres, churches, residences of different sizes, apartments and the like, and get an idea of their availability and desirability for today's market. We check vacancies. Against this we note the rate of new construction year by year for the past few years, as it is somewhat indicative of the requirements for new construction. In this check we see figures somewhat as follows:

New Construction for 1929

	<i>New York State</i>	<i>South Dakota</i>
New Factories	\$ 49,037,200	\$ 267,600
New Hospitals	27,106,600	25,000
Churches	9,671,900	43,000
Schools	81,763,300	941,100
Public Works Employing Architects	236,577,700	5,220,700

And so the research plugs along, gathering, charting and digesting facts and figures until even a layman can begin to see what the market for architectural service in the United States really is.

It is apparent then that the problem of the selection of the mediums to carry advertising is an interesting and often complex one. And, of course, when the amount of money available is small the problem increases in difficulty. In selecting the media for highly concentrated areas like New York City, careful breakdowns of population have to be made; the most likely groups from which prospects for architectural service would come have to be selected; then the most economical method of getting the advertising before these groups has to be determined. Truly, it is an undertaking comparable with the skill required in the planning of a modern skyscraper.

AFTER the selection of the various ways of getting our advertising messages to the most likely prospects have been determined, the number and time of insertions of appearances figured out, the size of space agreed upon, and whether the advertising should be in color or black and white, comes the creation of the advertising itself. Generally there is an underlying theme to a campaign (a campaign being the concerted effort to reach a desired objective within a given time) with, of course,

different terminology and phraseology used for different groups of prospects. Quite obviously, advertising to doctors and hospital boards should attempt to use words familiar to them, while the appeal to prospective home owners or heads of manufacturing plants would be entirely different. The accompanying illustrations show how this appeal is varied while carrying on the main underlying theme.

A very important factor in the planning of any major advertising campaign is the coördinating of all possible collateral advertising. A skillful advertising agency would undoubtedly recommend that, coincident to and parallel with the main national campaign, the local A.I.A. chapters or groups of architects conduct local campaigns in harmony with the main effort. Building material manufacturers, money interests, building supply dealers, and other important factors in the building industry could be easily prevailed upon to coöperate through their own advertising. All of this would add to the weight and impressiveness of the parent campaign.

These various interests could be of material help to the national effort by assisting in the preparation of mailing lists, as well as the actual distribution of printed matter. Mail advertising could, and I think should, be an important point in a campaign to increase the use of architectural service. Unquestionably, a broad publicity campaign closely related and keyed in with the paid advertising would be part of a general plan. Contrary to an expressed belief a publicity campaign planned in conjunction with an advertising campaign would have greater force and should find readier acceptance among periodicals.

HERE, then, in a very sketchy way is the outline of what the advertising agency selected to make the market study and advertising recommendations would have to contend with. And if the advertising committee of the associated architects were wise it would invite the agency to bundle up all of its material with charts and exhibits of actual advertisements, mail pieces, radio programs, motion pictures, or whatever it recommended, and go to a national conclave of prominent architects where it would be given a prominent place on the program, and enough time to enable it to explain all of the details of its work. It might even be worth the expense for the advertising committee to have the analysis and plan put in printed form and sent to every architect in the country. I think it only fair and just that those who are expected to contribute to the work be as familiar as possible with every phase of it. I am not wholly unselfish in this thought, for my experience has been that the better men understand what a thing is all about the more they talk about it and boost for it. Ten thousand enthusiastic architects, each familiar with how their campaign was expected to work, would make just ten thousand very fine salesmen for an architectural service campaign.

Temperature Regulator

The Automatic Heat Regulator Company, 2655 W. Harrison Street, Chicago, announces a low priced, all electric temperature regulator (domestic) for coal, coke or gas furnaces, steam or hot water systems. The thermostat operates on a variation of less than one degree.

ARCHITECTURAL AND ALLIED ARTS EXPOSITION

UNDER THE AUSPICES OF

THE AMERICAN INSTITUTE OF ARCHITECTS
THE ARCHITECTURAL LEAGUE OF NEW YORK

WITH THE ENDORSEMENT OF

THE SOCIETY OF BEAUX-ARTS ARCHITECTS
THE NEW YORK BUILDING CONGRESS

APRIL 18 - APRIL 25, 1931

GRAND CENTRAL PALACE, NEW YORK

SPECIAL EXPOSITION
COMMITTEE

RAYMOND M. HOOD

FREDERICK G. FROST

JULIAN CLARENCE LEVI

SPECIAL COMMITTEE
OF THE ARCHITECTURAL LEAGUE
ELY JACQUES KAHN, CHAIRMAN

EXECUTIVE OFFICE

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PHONE PENN 1123

MANAGING DIRECTORS

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(DELANO & ALDRICH)
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(MARC EIDLITZ & SON, INC.)
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681 FIFTH AVE., NEW YORK

CASS GILBERT
244 MADISON AVE., NEW YORK

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(WALKER AND GILLETTE)
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(HEGEMAN-HARRIS CO., INC.)
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(HOOD, GODLEY & FOUILHOX)
40 WEST 40TH ST., N. Y.

LOUIS J. HOROWITZ
250 PARK AVE., NEW YORK

ELY JACQUES KAHN
2 PARK AVENUE, NEW YORK

WILLIAM F. LAMB
(SHREVE LAMB & HARMON)
11 EAST 44TH ST., N. Y.

JULIAN CLARENCE LEVI
(TAYLOR & LEVI)
105 WEST 40TH ST., N. Y.

BENJAMIN WISTAR MORRIS
101 PARK AVE., NEW YORK

KENNETH M. MURCHISON
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WILLIAM A. STARRETT
(STARRETT BROS. & EKEN, INC.)
101 PARK AVE., NEW YORK

HENRY C. TURNER
(TURNER CONSTRUCTION COMPANY)
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WILLIAM VAN ALLEN
331 MADISON AVE., NEW YORK

STEPHEN FRANCIS VOORHEES
(VORHEES, GMELIN & WALKER)
101 PARK AVE., NEW YORK

D. EVERETT WAID
ONE MADISON AVE., NEW YORK

RALPH T. WALKER
(VORHEES, GMELIN & WALKER)
101 PARK AVE., NEW YORK

ANNOUNCEMENT

The Fourth Biennial Architectural and Allied Arts Exposition will mark an important epoch in architectural history as it will commemorate the Fiftieth Anniversary of the founding of the Architectural League of New York. Fifty years of service—during which time American architecture has had its greatest development.

The exposition will furnish an exceptional educational opportunity to the public by establishing under one roof a visual contact with the latest devices and materials entering into the construction of the home and its decorative embellishment. This unique exposition will be correspondingly instructive to the building trades and the technical professions, tending to develop a better understanding, through the creation of an opportunity for a thoroughly comprehensive survey of the latest and most up-to-date appliances which the Manufacturers of America have created and placed at the disposal of the building industry.

In view of the general interest and educational stimulus which such an exhibition must encourage and foster, representing as it does the superlative expression of the fine arts on one hand, and their practical application to the every-day life of our people on the other, the general interest in the Architectural and Allied Arts Exposition will be far-reaching in its effects. Because of the increased appreciation certain to follow this display of vital inventive and constructive elements presented by the manufacturers and builders of modern times, tending toward the improvement of taste and the development of better and more beautiful buildings throughout the land, it is anticipated that the responsive cooperation of exhibitors will be spontaneous. It is felt that this enterprise representing the combined effort of Art and Industry, will be of the greatest inspirational influence throughout the whole country.



President,
The Architectural League of New York,

FIFTIETH ANNIVERSARY

1881 THE ARCHITECTURAL LEAGUE OF NEW YORK 1931

FIFTY YEARS OF SERVICE

NEW CATALOGS

Covering What Manufacturers Have to Say About
the Advantages and Uses of Their Products

COLOR AND CHARM IN HOME INTERIORS

35 . . . Brochure illustrated in colors and containing practical suggestions for decorating the main rooms of the house, featuring the complete color schemes, furniture, and floors. Written by Margaret McElroy and issued by Congoleum-Nairn, Inc., Kearny, N. J. Has a chart explaining what patterns of linoleum are suited for various rooms and contains illustrations of patterns in colors with suggestions as to their suitability for various rooms. Specifications for laying over wood and concrete underfloors. A.I.A. file 23 j.

WELDCRETE INSURED MASONRY

36 . . . Booklet of the Covell Corporation, 1600 Walnut Street, Philadelphia, Pa. Explains the guarantee issued by this company to protect owners against damage by water penetration where an all-masonry wall is used. This construction consists of a masonry wall laid up with Straub Covell Cinder Concrete Units with joints filled with Gunite Mortar. Guarantee consists of an insurance policy issued by the National Union Fire Insurance Co., Pittsburgh. A.I.A. file 10 a.

PUBLIC FLOORS OF ENDURING BEAUTY

37 . . . A presentation of modern custom-built floors for business, homes, public buildings and institutions, issued by the Armstrong Cork Company, Lancaster, Pa. Contains pictures in colors of such floors together with pictures in black and white.

SPECIFICATIONS FOR BRICKWORK

38 . . . Contains specifications suggested by the Common Brick Manufacturers' Association, Cleveland. Also contain pictures showing construction of hollow walls built of brick and effects that can be secured by skintled brickwork, line drawings showing various bonds and joints, details of parapet wall

and spandrel waterproofing, and materials and labor required for 1,000 sq. ft. of wall. A.I.A. file 5.

SWIMMING POOLS

39 . . . Booklet illustrating and describing swimming pools, indoor and outdoor, in various parts of the country. Gives specifications. Contains methods of financing, condensation, pool linings, lighting, sanitation, winter protection, etc. Issued by the Portland Cement Association, 33 West Grand Avenue, Chicago.

TRI-TREET: A WOOD PRESERVATIVE

40 . . . Contains a technical report concerning the rotting of wood and its attack by termites. Describes Tri-Treet, a new process of wood preservation developed for the E. L. Bruce Co., Memphis, Tenn., which is said to impregnate the wood, immunize it from rot, prevent destruction by insects; handled like untreated wood, and can be painted. A.I.A. file 19 a 34.

CONTEMPORARY DETAIL IN COMMON BRICK

41 . . . Loose leaf plates containing pictures of brickwork from various parts of the world with many accompanying detail drawings. Issued by the Common Brick Manufacturers' Association, Cleveland, Ohio. A.I.A. file 5.

BI-FLAX, AN INSULATED METAL LATH

42 . . . Standard specifications No. 20-A for frame and masonry walls, partitions and ceilings constructed with Bi-flax, a new insulation combined with metal lath, issued by the Flax-li-num Insulating Co., St. Paul, Minn. A.I.A. file 37 b 1.

WIRING DEVICES

43 . . . Catalog 30 of the Bryant Electric Company, Bridgeport, Conn. Illustrates and describes various types of wiring devices made by this company.

REPORT OF TESTS ON SOUND-PROOFING OF PARTITIONS AND FLOORS

44 . . . Illustrates and describes tests made by William R. Barss, Ph.D., consultant on acoustics for the Massachusetts Institute of Technology, on the sound-proofing of partitions and floors where Cabot's Quilt was used. Issued by Samuel Cabot, 141 Milk Street, Boston. Illustrates various types of construction used and tells the results on each type. Arranged for easy comparison. A.I.A. file 37 d.

KNOTTY PONDOSA PINE PANELLED DINING-ROOM

45 . . . Describes and illustrates in color a knotty pine Pondosa Pine panelled dining-room built at the Good Housekeeping Studio of Furnishings and Decorations in cooperation with the Western Pine Manufacturers Association, Portland, Oregon, and reprinted from the July, 1930, issue of Good Housekeeping.

SMITH & WESSON FLUSH VALVE

46 . . . Illustrates and describes the various types of flush valves made by Smith & Wesson, Springfield, Mass. The different features of each valve are taken up one by one and illustrated wherever possible. There is general information on installation. A.I.A. file 29 h 21.

SPECIFICATIONS FOR INSTALLATION OF GOODYEAR RUBBER FLOORS

47 . . . Looseleaf specifications for the installation of rubber floors and rubber wainscoting made by the Goodyear Tire & Rubber Co., Inc., Akron, Ohio. Includes drawings showing manner of installation. Contains illustrations showing various cove bases and corners, also photographs of installations with many patterns in colors. A.I.A. file 23 c.

CRYER RADIATOR CONTROL VALVE

48 . . . Describes and illustrates new type of radiator valve stated to give all the advantages of hot water heating in steam heating systems and manufactured by the D. G. C. Trap and Valve Company, Inc., 1 East 43rd Street, New York. A.I.A. file 30 c 2.

THE WAY OUT OF THE TWILIGHT ZONE

49 . . . Circular 1885 issued jointly by the Westinghouse Lamp Company, New York, and the Westinghouse Electric & Manufacturing Co., Cleveland. Contains valuable data on how much illumination is required and how to provide that required quantity. Also discusses the value of proper illumination and cites instances where production has been improved with better lighting. A.I.A. file 31 f 1.

AMERICAN ARCHITECT

57th Street at Eighth Avenue, New York City

November

Please see that I receive the following catalogs reviewed on this page:

Numbers
Name
Address
Occupation

ORIGINALITY *-in a medium that encourages ORIGINALITY*



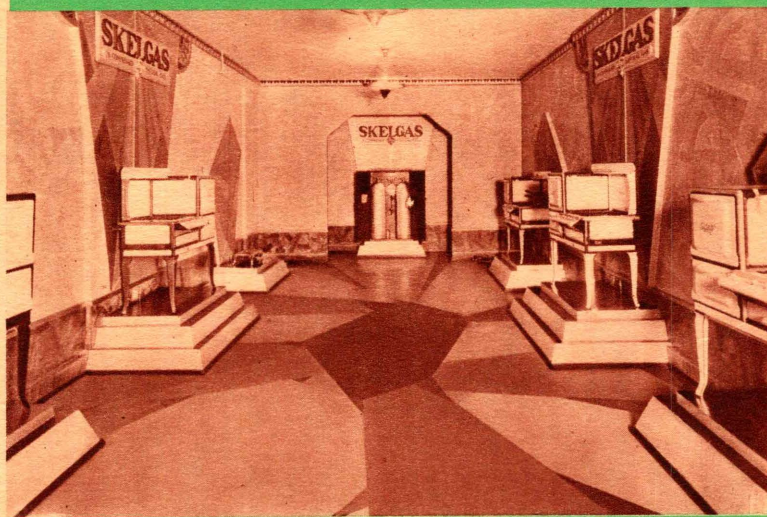
The adaptability of Sealex materials to interior decoration is well illustrated by this office reception room of the Walker Gordon Milk Co., New York City. That the unique Sealex floor was designed-to-order is unmistakable.

We think there is something at once challenging and inspiring about these pictures. You can't look at them for long without wanting to reach for a pencil and sketching paper. You feel an itch to try your hand at designing a floor or two of your own.

All right, go ahead. The only thing to remember is that *there are no rules*. No blue-laws. No inhibitions.

Because you are working in the world's most "workable" floor material. A sharp linoleum knife in the hands of a skilled mechanic can make *Sealex Linoleum* or *Sealex Treadlite Tile* as-

(Continued on following page)

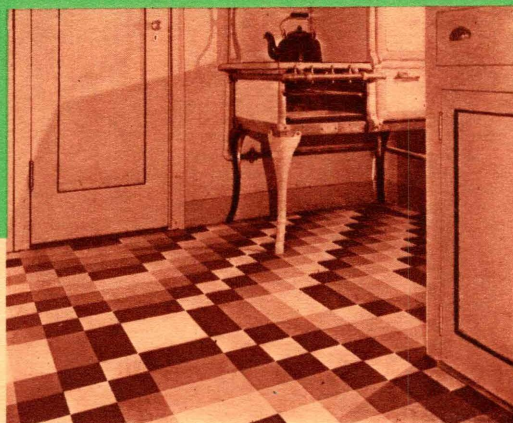


Modernistic floor of Sealex Linoleum above is carried out in Black, Dark Gray, Light Gray, Terra Cotta, and Green. A standard design for the chain of showrooms of the Skel-Gas Co.



An illustration of the effective use of a cut-to-order inset. Judicial placement of insets makes a pleasant departure from monotony.

Unusual kitchen floor design in Sealex Treadlite Tiles of several colors:—Mahogany Brown, Craft Brown, Fawn Gray and Colonial Buff.



BONDED FLOORS

Materials for Bonded Floors are manufactured by Congoleum-Nairn Inc.

(Continued from preceding page)

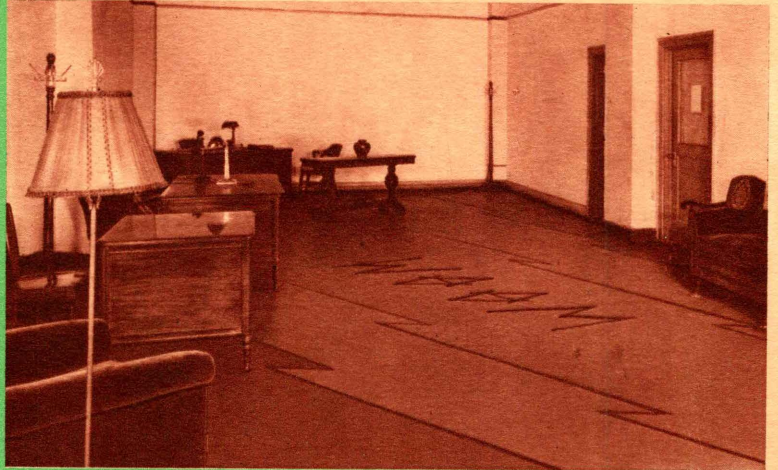
sume almost any two-dimensional form your mind can conceive.

So reach for that pencil and paper. The sky's the limit. Plan a modernistic floor for a smart shop. An office floor with the firm's trade-mark as part of the design. A formal "period floor" for a public building. A living room floor with the owner's hobby symbolized in the floor design.

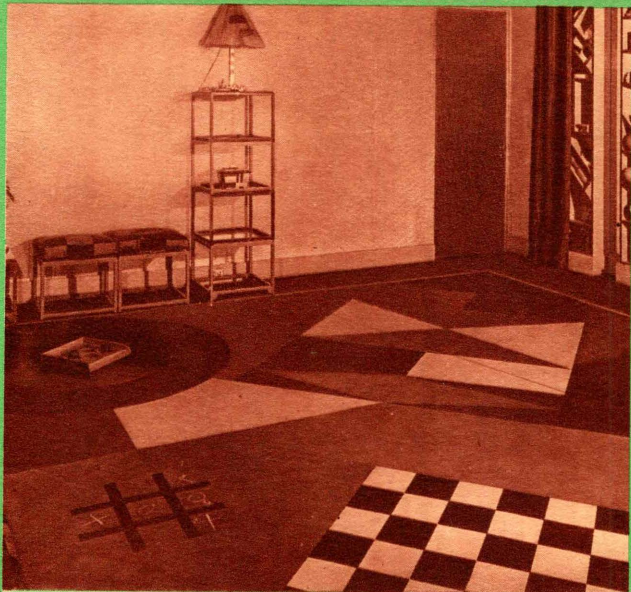
And when the time comes to carry out your conceptions, call in an Authorized Contractor of Bonded Floors. Those firms, as you can see by these pictures, have had specialized experience in this type of work. And their standards of workmanship are so high that we are able to back their floors with Guaranty Bonds against repair expense!

CONGOLEUM-NAIRN INC. General Office: KEARNY, N. J.

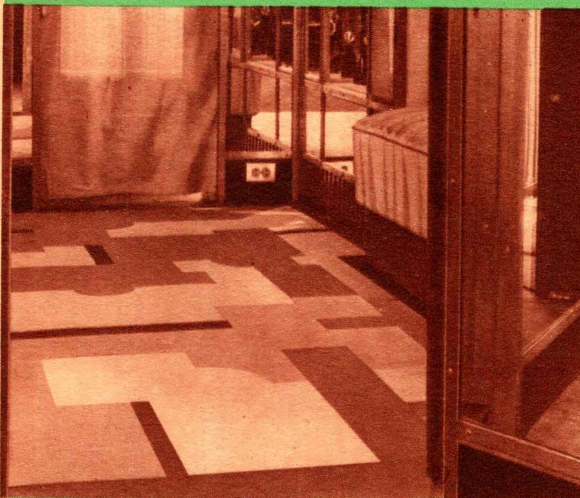
BONDED FLOORS



Floor design reflecting the character of a business. Reception room of Radio Station WAAM, Newark, N. J. Letters WAAM were cut from Sealex Linoleum and inset into the floor.



An unusual type of game-board and floor combined, illustrating the versatility of Sealex flooring materials from a design standpoint.



A modernistic dressing room floor in a custom-made design, cut-to-order from several colors of Sealex Treadlite Tile.

If, rather than prepare floor designs in your own office, you wish suggestions submitted to you, an Authorized Contractor of Bonded Floors will place his and our services at your disposal. Call upon us for estimates, specifications, samples or designs. No obligation, of course



In the World's Tallest Building

AS THE magnificent Empire State Building is reared skyward to its 1248 foot pinnacle, hundreds of tons of Youngstown steel pipe will climb to dizzy heights in the installation of another extensive plumbing system.

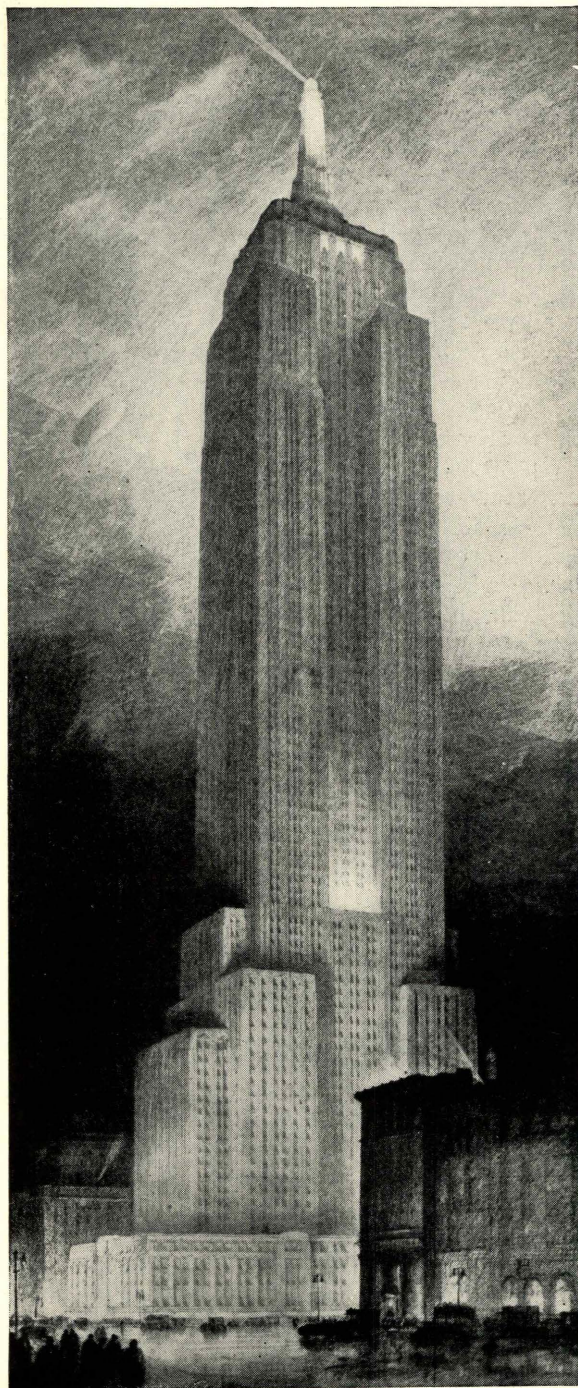
The selection of lifetime Youngstown steel pipe for the world's tallest building, paralleling Youngstown's use in the world's deepest well, again affords striking tribute to its inbuilt quality which has long been recognized by architects and engineers from coast to coast.

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DETROIT—Fisher Bldg.	525 Louderman Building
KANSAS CITY, MO.—	YOUNGSTOWN—
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LONDON REPRESENTATIVE—The Youngstown Steel Products Co., Dashwood House, Old Broad St. London, E. C. England	



The Empire State Building, New York City, which when completed will be the World's Tallest Structure.

Architects—SHREVE, LAMB & HARMON, New York City
Plumbing Engineer—FRED BRUTSCHY, New York City
Builders—STARRETT BROS. & EKEN, New York City
Plumbing Contractor—J. L. MURPHY, INC., New York City

YOUNGSTOWN

GALVANIZED SHEETS PROTECT

∴ ∴ ∴ ∴ ∴

SAVE WITH STEEL

Modernism Goes to Church

(Continued from page 53)

And there we have it again: functionalism in design, functionalism in purpose, functionalism in execution and now—functionalism in materials! A building conceived and made to meet the exigencies of its own individual situation. Byrne, by the way, believes that his next church, wherever it may be, will probably be constructed from base to cap stone of one material.

But as to the church now being built in Cork; its side walls exhibit the most daring use of the step-back form which the architect has yet attempted. Where the step-backs in his first churches served perhaps a minor function, in the new church the steps have been expanded and glorified, they now comprise decoration, pillar support and space for long paneled windows which are one of the building's characteristics.

But the step effect does not end with the walls. It has been carried to the roof, to the sanctuary, to the altars and even to the organ pipes which rise before the choir's post behind the main altar. The seating arrangement brings the parishioner up to the sides of the main altar and the aisles are arranged to give access to seats from all sides of the building.

In one of his earlier churches, Byrne conceived the idea of placing a figure of the Christ on the pier between the front portals. The arms of the figure extended up and outward, parallel to the lines of the doorways. He liked the idea, apparently, for in his newest venture a similar figure, done on a magnificent scale, has been planned for the entrance. Unlike effigies on many an-



MAIN ALTAR and sanctuary extend out into the body of the Church of the Christ King, Tulsa, Oklahoma. Barry Byrne, architect

other church, the image on the church at Cork is designed as the integral part of the structure. It fits the design of the building exactly and is not to be compared with the more usual type of ornamentation which one suspects is made and placed after the building is finished.

Byrne has traveled his geometric course from elongated rectangle, to square, to modified octagon to elongated hexagon. No two of his structures have been exactly alike, although all of them have the characteristic functionalism. He has an idea that his next church will be oval!

Whatever it is that Byrne has done to dent the armor of convention, he certainly cannot be accused of having gone at his problem with an axe. He hasn't put new ornaments on the old familiar Christmas tree of church design; rather, he has brought

forth something which is strikingly useful, a thing which was probably with us all the time. It is our misfortune that we didn't know of it before, but the architect's pencil has finally prodded it out into the open. One is so accustomed to thinking of the church versus modernism that the idea of a new arrangement consisting of church plus modernism is rather difficult to grasp. It may be that this new tendency is to be manifest in religious buildings generally, marking the generation for a complete revision of thought in design. Concrete and steel are probably, in great part, responsible for the beginnings of the change, for architectural periods of the past have been largely bound about by the availability and workability of given materials.

The Draftsman is a Jack-of-All-Trades

(Continued from page 49)

enough to last if he succeeds in borrowing money from his fellow workers, and easily forgets the obligation. The measure operates not only at the time of employing a man, but continuously throughout his employment to determine his attitude towards his natural obligations, whether it may be with his family, friends, or sweetheart, because after all, anyone who holds these obligations lightly will hold his obligation towards his employer in like manner. If he holds his obligation to me lightly, then I can expect in turn that he will have little or no respect for my clients.

Not long ago, I had a man in my employ who knew so much more about the business than I did, that he had little or no respect for my judgment, and I soon found out the same applied to my clients. I was unable to determine this by measuring him at the time of his employment, but I keep the yard stick handy, and apply it whenever necessary.

FINALLY, the yard stick also tells me that I have an obligation to the men I employ. It states conclusively that I must measure up to decent standards in dealing with the men in my employ.



In the residence of Mr. Oscar Webber, 619 Lake Shore Drive, Detroit, Michigan, complete telephone convenience is provided by fourteen telephone outlets, including two in the garage and one on the third floor. Built-in conduit carries the wiring for the telephone system which includes intercommunicating setaures. LEONARD WILLEKE, Architect, Detroit.

Planning in advance for telephones

contributes to the greater convenience and efficiency of the modern home

ARCHITECTS today generally recognize the desirability of providing for telephone arrangements in their plans for new and remodeled residences. In this way the particular needs of each individual family can be fully met.

Telephone outlets are made available not only in all the important rooms, but also in particularly convenient locations in each room.

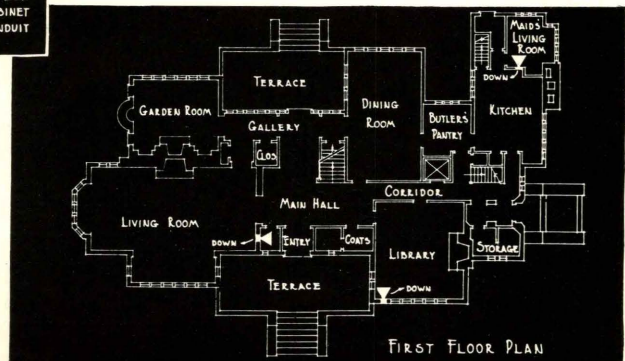
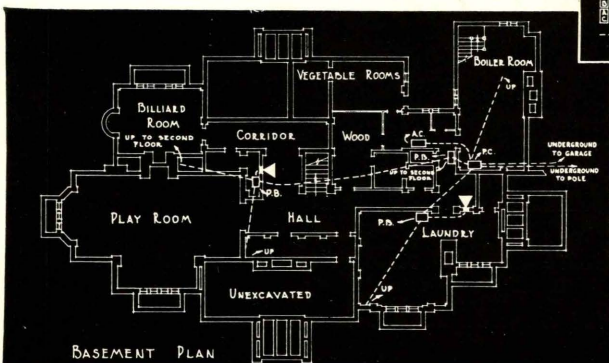
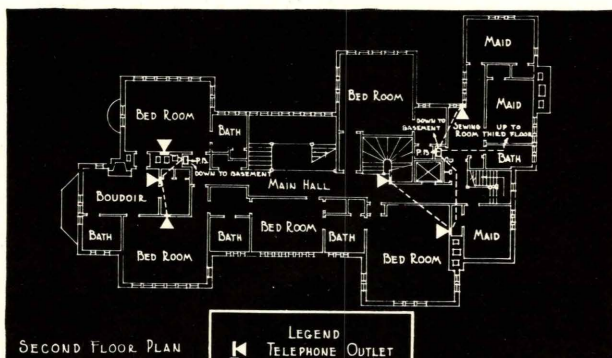
Conduit is specified within the walls and floors, furnishing telephone outlets at the locations selected. This results in improved appearance by concealing the telephone wiring, and guards

against certain types of service interruptions.

The position and number of these outlets need not necessarily be limited to immediate requirements, as it is often advisable to provide for possible rearrangement or expansion of the telephone service in the future.

Your local Bell Company will gladly place important data about household communication at your disposal, as well as arrange for conferences between its representatives, your clients and yourself.

There is no charge. Just call the Business Office.



THESE TWO PAGES ARE

To the man who wishes to upon terms which do not call for

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On the page opposite there are facts of interest to every man who wishes to make a conservative investment upon terms which meet such a situation.

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- 4 It must have a quick liquidating market.
- 5 As it makes possible a larger number of shareholders, thus broadening its distribution, it is advantageous to have it made available on terms which do not put an immediate drain on present cash reserve of the purchaser.
- 6 Its attractiveness is increased if it provides purchasers an opportunity to share in earnings through a participation additional to the fixed stipulated rate of return. In short, the security as well as the company, must have an inviting future.

This offering of HEARST CONSOLIDATED PUBLICATIONS INC. meets the above requirements in every respect as well as affording you an opportunity to save money instantly and have each months savings earn 7% per annum starting from the day each payment is made—You are asked to read first, the statement of earnings.

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Owners of stock have the opportunity to participate in additional profits to the extent of an extra 3%.

These properties have been long established. They are leaders in what has become through the eager, incessant daily demand of the public, one of the great industries of America.

Further, these newspapers serve cities which are growing in population and which will continue to offer markets growing as America grows.

Whether you are a large regular investor or whether you have never made a purchase of stocks, the opportunity to acquire an interest in a carefully administered growing corporation is presented to you. For the first time participation in these properties is offered to the public.

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These are the earnings

Year	Net Earnings*	Times Dividend Requirements on Class A Stock
1926.....	\$10,009,806.....	2.86
1927.....	10,162,284.....	2.90
1928.....	11,044,777.....	3.15
1929.....	12,854,626.....	3.67
Average	\$11,017,873	3.14

*After depreciation, interest and Federal Income Tax.

These earnings come from the operation of these profitable newspapers

	Established
New York Evening Journal.....	1896
Chicago Evening American.....	1900
Pittsburgh Sun-Telegraph.....	1841-1906
Detroit Times.....	1900
San Francisco Examiner.....	1880
San Francisco Call-Bulletin.....	1856-1874
Oakland Post Enquirer.....	1886
Los Angeles Examiner.....	1903
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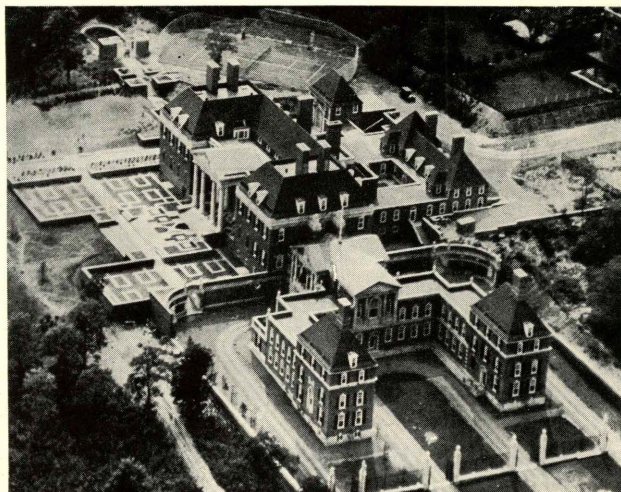
TERRA COTTA

High buildings on every side de-
 pend for color and monumental
 sculpture on

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NATIONAL
TERRA COTTA
 SOCIETY

230 PARK AVENUE
 NEW YORK



Airplane view British Embassy

Panel Heating

(Continued from page 33)

through the clothing, the temperature next the skin drops below 90 degrees, and the individual feels chilly. With much increase above 70 degrees the occupant feels too warm.

Let us see what happens when conventional systems are discarded and the occupants are kept warm primarily by heat radiated from the ceiling. Radiant heat waves strike the individual from all directions. The bulk of these waves assists in warming his clothing to maintain the 90 degree temperature next his skin, while some of the waves also trickle through his clothing to impinge directly on the skin. Although he is not conscious of what is happening, these two effects maintain the required temperature inside his clothing and in consequence he feels as comfortable with a room temperature of 60 to 65 degrees as he would in a room at 70 to 75 degrees heated by any of the well-known methods.

The heat rays also fall on all the objects in the room, being partially absorbed and partially reflected. The reflected rays in turn are partially absorbed and partially reflected and so on ad infinitum until they are completely absorbed. Because of this fact the objects in the room are maintained at a temperature of, let us say, 65 degrees, and the air in turn is warmed to this temperature by direct contact with these objects.

Just what is a comfortable room temperature with conventional heating system is debatable. The writer and many of his friends agree that when dressed in modern light winter clothing, a temperature of 75 degrees is desirable when the occupants are in repose. In comparison it is said that a temperature of 65 degrees or less with panel heating is comparable to 75 degrees with other systems of heating.

By this time some readers no doubt are wondering why, if conventional radiators are really what their name implies, the same result cannot be obtained with them. And the answer is that the term radiator is somewhat of a misnomer. An uncovered cast iron radiator actually radiates only about one-third of the heat which it dissipates. The remaining heat is picked up by the air flowing upward over its surfaces. If the

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Appearance, Service and Mechanical Perfection are factors which determine the satisfaction afforded by partitions

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Study the details by which they achieve beauty of design... insist on pleasing proportions... demand a large variety of attractive colors, color combinations and an absolute duplication of selected grains from which to choose a suitable finish... insist that all finishing be done in the manufacturer's plant—not in your building.

2. Service

Look into the manufacturer's experience and ability. Specify that all planning, erection and rearrangement must be done by the manufacturer's own full-time engineers and expert erection crews. Deal with a concern whose reputation is based on years of satisfactory service.

3. Mechanical Perfection

Investigate the means by which they attain mechanical perfection. Inquire about their exclusive features. Study the details of construction which give them unique advantages.

When these points are carefully compared and fully



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understood, it will be immediately apparent why Hauserman Movable Steel Partitions are so outstandingly superior to all others.

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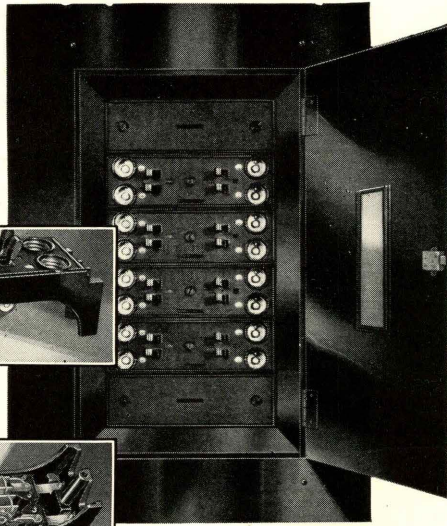
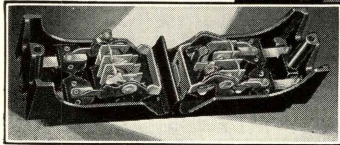
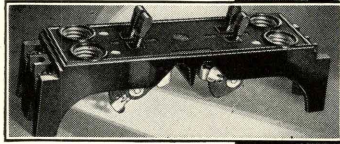
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HAUSERMAN MOVABLE STEEL PARTITIONS

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All current carrying metal mounted on the back

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preclude leakage, including not only the coils themselves but also the risers which are always concealed, either in chases or furred spaces. In other respects the system resembles conventional practice for hot water systems. Steam, of course, cannot be used because its temperature is too high.

In small buildings gravity circulation may be used, in which case the pipe coils are $\frac{3}{4}$ -inch in diameter and are limited in length in order to reduce friction and secure adequate flow. In larger buildings the hot water is circulated by centrifugal pumps of standard type. With them, $\frac{1}{2}$ -inch piping is employed, since the question of friction between water and piping is of lessened importance. Pump circulation is also preferable because it allows more leeway in the location of mains and risers and because the pump system can be more easily controlled in response to changes in temperature. Extra heavy steel pipes are used.

SINCE the pipes are concealed in the ceiling it is not feasible to vent them, and therefore to provide satisfactory venting the downfeed principle is used with the mains above the coils. Consequently there must be space above the top-floor ceiling to provide for the mains and vents.

The panel heating system in the British Embassy may be regarded as a typical installation and therefore the details of its construction are of interest. The building is a fireproof structure with a volume of 700,000 cubic feet, comprising the Chancery where the Ambassador has his offices and the Embassy which is the Ambassador's home. In order to keep down the first cost, only the Embassy enjoys the benefits of panel heating, the Chancery being equipped with radiators fed by a vacuum-return steam system.

The boiler plant and auxiliary apparatus is located under the rear wing of the Embassy. It contains two steel boilers with a total capacity of 175 boiler horse power, fired by fuel oil. One boiler is sufficient except in very cold weather, at which time as much as 125 horsepower may be required.

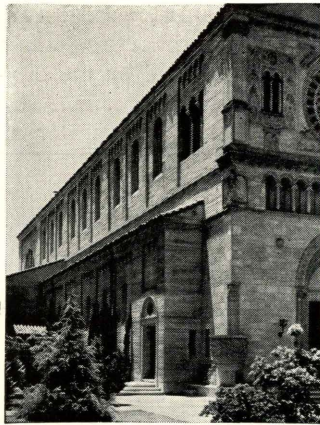
The water for the panel system is heated by steam in two conventional converters with cast iron shells and copper tubes, the temperature of the water being thermostatically controlled, that is, the colder the day the higher the water temperature. Although not employed at the Embassy, it is quite feasible to install a thermostat in each room for individual temperature control.

THE walls are brick. A typical floor consists of steel beams carrying a slab of nailcrete reinforced with hy-rib, to which the wooden floor is nailed. The bottom arch is reinforced concrete. Some floors are marble. The steeply-pitched roofs are steel beam and nailcrete construction. The relatively unimportant attic rooms of the Embassy are heated by radiators.

About 75 percent of the heating coils are embedded in the lower portion of the concrete floor arches. About 15 percent are placed in hung ceilings while the remaining 10 per cent are located in walls and floors where peculiar conditions of exposure make additional radiation necessary. The coils are spaced so as to give a uniform temperature at the ceiling surface. Usually the coils occupy only a portion of the ceiling.

Small coils are completely welded electrically at the

PIERPONT & W. S. DAVIS,
ARCHITECTS, LOS ANGELES



THERE IS AN INTERESTING IRREGULARITY TO A MONOLITHIC SURFACE
WHEN THE CONCRETE IS UNTOUCHED AFTER THE FORMS ARE REMOVED

Concrete builds the complete structure

Because it can be moulded at will, concrete provides a building material that meets nearly every architectural and structural requirement. In fact, it considerably *extends* the architectural possibilities. It combines the richness of hand-tooling with the speed and economy of reproduction from models, permitting decorative motifs which might otherwise be prohibitive in cost.

Consequently, a new era in building decoration—both interior and exterior—is being introduced. Concrete has the enduring characteristics of stone. It can be finished in any color and texture desired.

Portland cement, and the other ingredients which go to make concrete, are readily available in any part of the country. Rapid construction is possible, hence time and labor costs are often lower than with other building materials. The economy—plus the *firesafety* which concrete affords—is rapidly establishing concrete as the complete building material.



PORTLAND CEMENT *Association*

Concrete for permanence and firesafety

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House in Portland, Ore., Kirtland Cutter, Architect. Cabot's Blended Roof Shakes; Cabot's Old Virginia White on brick-work. Cabot's Quilt in walls to deaden noise and make the house quiet and more livable.

Save Their Money

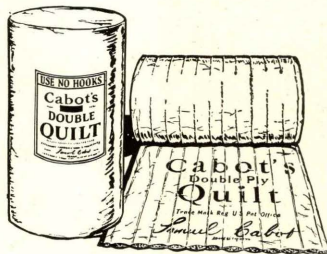
Now is a moment when an architect can as easily make a friend for life as a foe.

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AA-11-30

factory. Coils too large for easy handling during transportation and erection are built in sections at the factory and welded by the oxy-acetylene torch into a complete unit after erection. Coils are tested to 500 pounds air pressure under water at the factory, and coils and all connecting piping are tested to 300 pounds hydrostatic pressure after installation but before plastering.

COILS to be placed in concrete arches obviously must be erected before the concrete is poured. The coils are leveled in place, connecting pipes are welded, reinforcing rods or mesh are laid over them, the forms put in place and the concrete poured. After the forms are removed the coils are found to be either completely concealed or the center of the piping is barely showing. Later on, this surface is covered with rough plaster. Finally a white coat of special plaster is applied, and immediately a scrim reinforcement is troweled in so that it is completely embedded. The scrim gives the surface a certain texture and therefore for uniformity of appearance must be applied to the whole ceiling and not merely to the plaster adjacent to the heating coils. A special plaster is necessary in order to withstand the moderate heat. It costs somewhat more than ordinary plaster, but this cost has been included in the comparative cost of installation mentioned previously.

In the case of hung ceilings, the metal lath is applied as usual to the concrete arches after the forms are removed. The coils are tied to the metal lath, leveled, welded and tested. Suitable insulation is placed on top of the coils to minimize leakage of heat to the floors above. Rough plaster is forcibly troweled up between the coils to secure a good bond as otherwise the conduction of heat from coils to ceiling surface would be inadequate. Finally the white coat is applied as before.

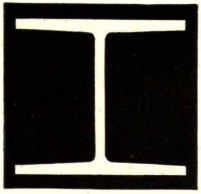
After the plaster throughout the building is reasonably dry, the heating system is started and water is circulated through the coils to complete the drying process. At first the water temperature is just a little above room temperature but as drying proceeds the temperature is gradually increased to 120 degrees.

In designing the system for the Embassy especial care was exercised to secure the same flow of water through all coils in order to secure an even distribution of radiation. Last spring when the system was tested it was found that these efforts had met with complete success and it was not necessary to throttle the flow at any point.

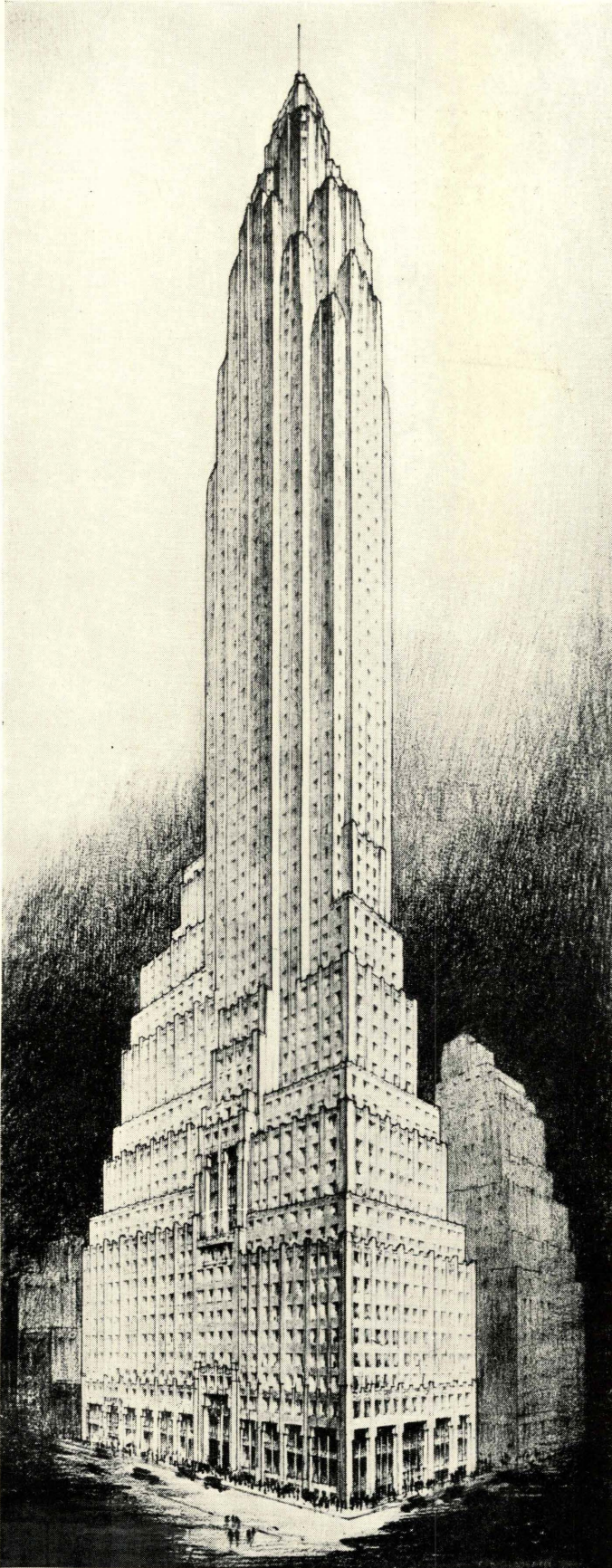
THE coils may be adapted to any form of ceiling. One room in the Embassy, for example, has a curved ceiling and the coils are formed accordingly with the supply branch connecting to the highest point of each coil and the return branch to the lowest.

Around entrances and in certain other rooms with peculiar conditions of exposure, coils are placed in side walls or floor. The ceiling, however, is the preferable location since it is in principle almost invariably a plain plastered surface, whereas walls may be covered with pictures or tapestries which would prevent proper radiation. Likewise rugs may mask the radiation when the panels are placed in the floors.

Porous materials, including wood, are poor conductors of heat and therefore floor heating panels are limited to floors of marble, tile, etc., the coils being placed in the



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cement underneath the floor material. In short, any reasonably good conductor may be used as a heating panel surface. For example, mirrors have been used in some cases where coils have been placed in walls.

EXPANSION of piping causes no difficulty, partly because the temperature is moderate and partly because the length of pipe coils is never more than 10 feet. Also, steel, concrete and plaster all have about the same rate of expansion and therefore the only stress between the coils and the materials in which they reside is due to the slight difference in temperature between the two during warming up or cooling off.

Little heat leaks to the floor above a panel as proved by the fact that the floor temperature is only 2 or 3 degrees above room temperature. The explanation is that the coils are so close to the ceiling surface that most of the heat takes this short easy path, and very little flows through the concrete arch, across the air space to the nailcrete and through the poorly conducting wooden floor.

The heating system installed in the British Embassy was designed by Jaros & Baum, engineers and installed by Wolff & Munier, Inc., under license from Richard Crittall & Co., Ltd. of England.

The First Steel Frame House

(Continued from page 29)

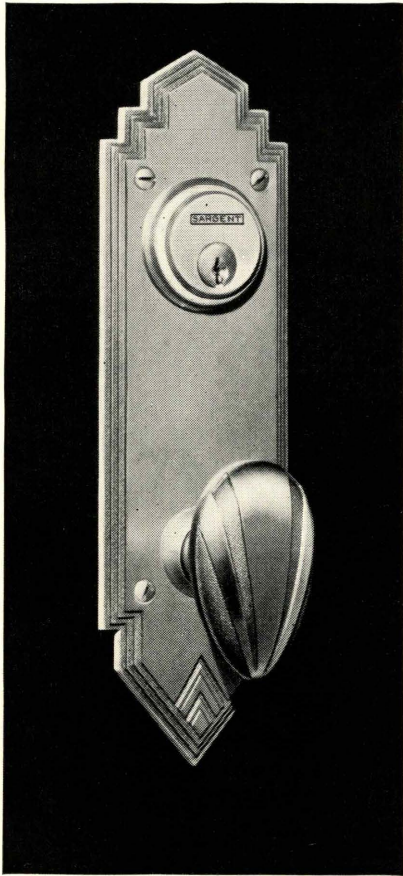
combined steam and warm air system in which warm air was circulated through the air space afforded by the floor construction. In this account it is made plain that the fireplaces played an important part in the heating of the house, as did the open well of the main hall. Changes in the heating were evidently made at a later date, for at the time the house was torn down there was no indication that the fireplaces operated in any other way than as other fireplaces normally do. Warm air risers leading to registers in certain rooms bear out the statement that the house was at one time so heated but the size of existing radiators would indicate that steam was eventually depended upon as the principal source of heating.

An old saying describes the proof of the pudding as being in the eating. The performance in this house is the proof. The outside walls were entirely free of dampness until vandalism removed the copper sheets from the exterior. French hand blocked paper, evidently placed upon the walls when the house was built, still in good condition when demolition began, is proof of the weather resistance of the construction.

The steel frame showed no deterioration and the bolted connections easily came free in demolition. Little or no rust or corrosion was observed. The woven wire lath and some expanded sheet metal reinforcement, while showing some evidence of rust, could not be classed as having reached a serious state. In fact, much of it would have been fit for reuse save for deformation due to its removal from the building.

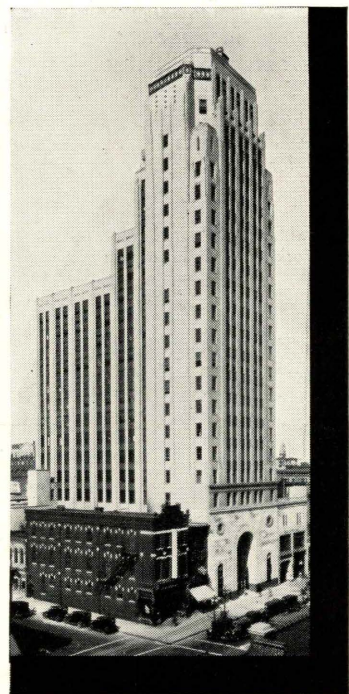
The Poulson house was designed in the prevailing mode of the time, as was then befitting a gentleman's residence, with a conservatory, tower, porte-cochere, and large piazza. The house exclusive of a one-story kitchen wing was approximately sixty feet in length and forty-two feet in width. The first and second stories were practically identical in plan. Minor differences in

A MODERN DESIGN ■ IN PERFECT HARMONY



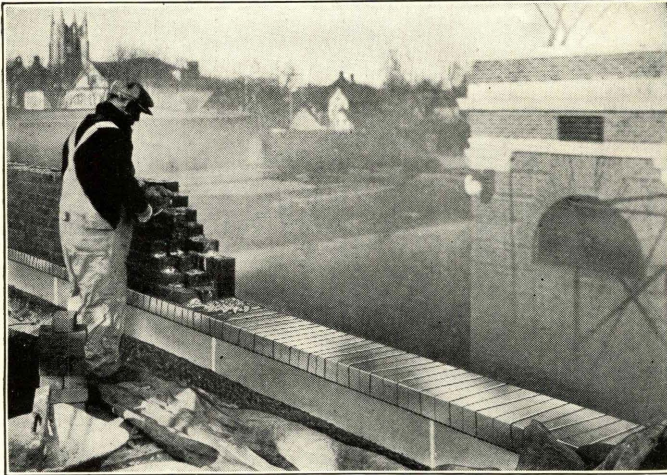
SARGENT'S latest designs are particularly appropriate for the outstanding commercial structures being erected in all sections of the country. They are bold in line and angle, modern in materials, and modern in their mechanical perfection. • Architects find Sargent designs that harmonize with their decorative plans. Engineers and builders recognize the expertness of Sargent workmanship. Owners and constant users receive a smooth and lasting service that is unexcelled by any other hardware equipment. • Sargent Hardware adds to the permanent worth of any structure—office building, hotel, apartment, hospital, school, small Spanish bungalow or stately Colonial residence. For each there are Sargent designs, of solid brass or bronze, that may be considered a definite promise of perfect and enduring operation. All Sargent Hardware is of the quality to maintain Sargent's long-established reputation for excellence. Sargent & Co., New Haven, Conn. In New York City — Builders' Hardware Division and Showroom, 295 Madison Avenue; Warehouse, 94 Centre Street. In Chicago — 150 North Wacker Drive (at Randolph).

• *The Central National Bank Building, Richmond, Virginia. John Eberson, New York, Carneal, Johnston & Wright, Richmond, architects—fully equipped with Sargent Hardware. These photographs show plainly how perfectly the Sargent design blends with exterior and interior decorations.*



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DOES NOT BREAK THE BOND

requirements demanded by differences in use of the two stories were readily solved by subdivision of the space enclosed by the structural partitions.

Niels Poulson, a picturesque figure of his time, a man of unusual intellectual ability and courage, was born in Horsens, Denmark, in 1843. Of humble parentage, reared in poverty, he was deprived of all but the scantiest schooling. He began work as an apprenticed bricklayer, and while working in Copenhagen he attended a technical school at night.

In 1864 he arrived in New York and secured work as a bricklayer. In spite of his European thoroughness, he was repeatedly dismissed for being too slow, but not before he had reached the conclusion that he knew more about construction than the architects of the buildings upon which he worked. He later secured employment as an architectural draftsman and after two years entered the employ of the Supervising Architect of the Treasury at Washington, D. C.

Convinced of the future possibilities of iron and steel construction he resigned his position in Washington to enter the employ of the Architectural Iron Works of New York at a greatly reduced salary. When this company failed financially, Mr. Poulson entered into partnership with Michael Eger, a Norwegian, and established the Hecla Iron Works. Within eight years they were employing more than a thousand men, were conducting a night school for training men as craftsmen in iron and steel, and were employing European trained sculptors and chemists.

Poulson became an important figure in the development of the use of iron and steel construction in the United States. He died in 1911 but not until he had seen his vision of the cities of America built of fire resisting materials and framed in iron and steel well on the road to fulfillment.

Before his death, Mr. Poulson became interested in cementing the relationship between the Scandinavian countries and America. As a result, he gave \$100,000 to establish the American-Scandinavian Foundation and upon his death left the remainder of his fortune, close to one million, to carry on the work of this institution.

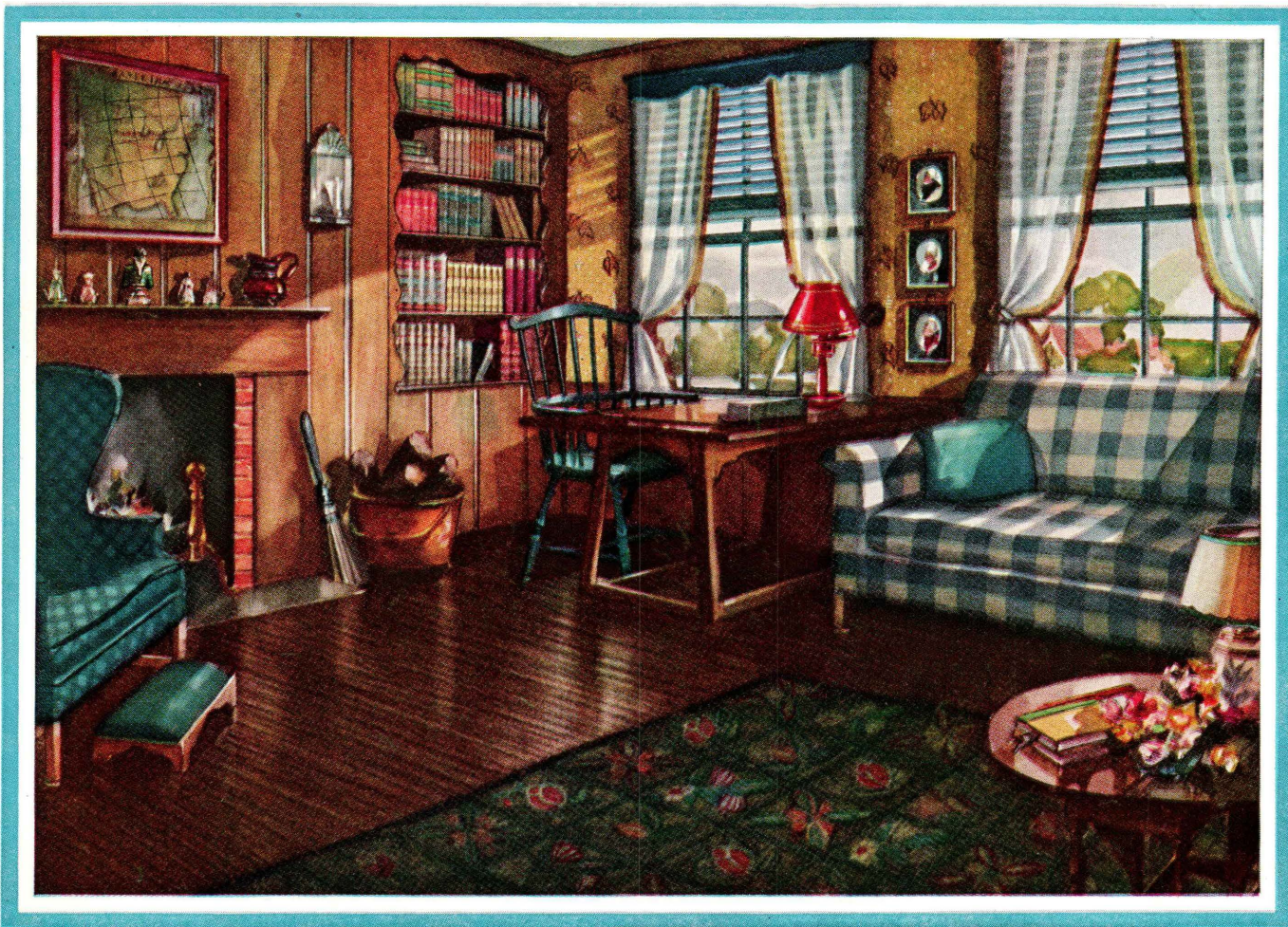
Keep Partners Friendly

(Continued from page 35)

workable and sufficiently definite form of contract. I have included in it a proviso for the payment of a certain share of the profits representing the good will item to the estate of the deceased partner. This can be omitted if desired.

While I have left blank the respective shares of the partners in the profits, I believe very strongly that wherever possible the partners should share equally. The ideal partnership is one in which each partner feels that he is to bear an equal share of responsibility and to receive an equal share of the profits. A partnership which rests upon this basis and upon the basis of mutual liking, confidence and trust is far more likely to endure successfully than a partnership which is based merely upon business expediency.

To be really "homey" a room must have a friendly floor. This floor of Armstrong's Brown Jaspé welcomes you with its quiet, friendly warmth.



A Room That Makes You Feel at Home —and here's the reason why!

HERE'S a room that was carefully planned to create the effect of hominess. Everything in the room contributes to this effect. This home planner succeeded because of a conscious "follow through" on every detail from ceiling to floor.

Most important is the floor of Armstrong's Brown Jaspé. It is rich and soothing in tone, quiet underfoot, comforting, resilient. Minimum care will keep it fresh and clean for years. The cost of installation was very reasonable, and the cost of upkeep will be little or nothing for years to come.

Perhaps the effect you want to create in your next interior may be different—you may want dignity, or gaiety, or efficiency, or the modern spirit. But no matter what effect you wish to create, no matter what color scheme you employ to that end, you'll find an Armstrong Floor to serve as a foundation, which will do the job well and for years to come.

Brief paragraphs like these can't give you the complete

story of this modern floor material. But we will tell you what you need to know about these twentieth-century floors if you write for our current file-size specification book which has been compiled for your use. Samples and colorplates, too, if you wish. And look for us in Sweet's Architectural Catalog. Armstrong Cork Company, Floor ^{Armstrong's} Division, Lancaster, ^(A) Pennsylvania. _{Product}

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Chicago

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Although individuality was a purposeful achievement, those responsible for the design and erection of the structure also exercised greatest diligence in the selection of time-tried, quality-proved materials and equipment. Particularly does this obtain in the piping, the major tonnage being NATIONAL—

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General Contractor: Lundoff-Bicknell Co., Chicago
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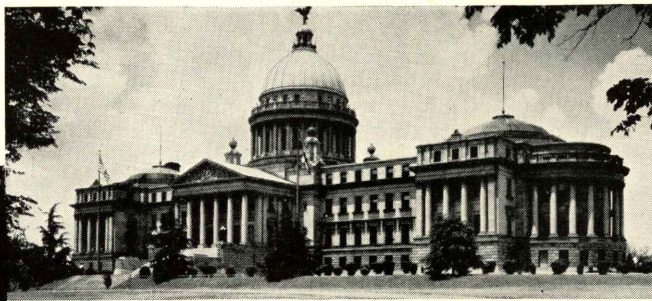
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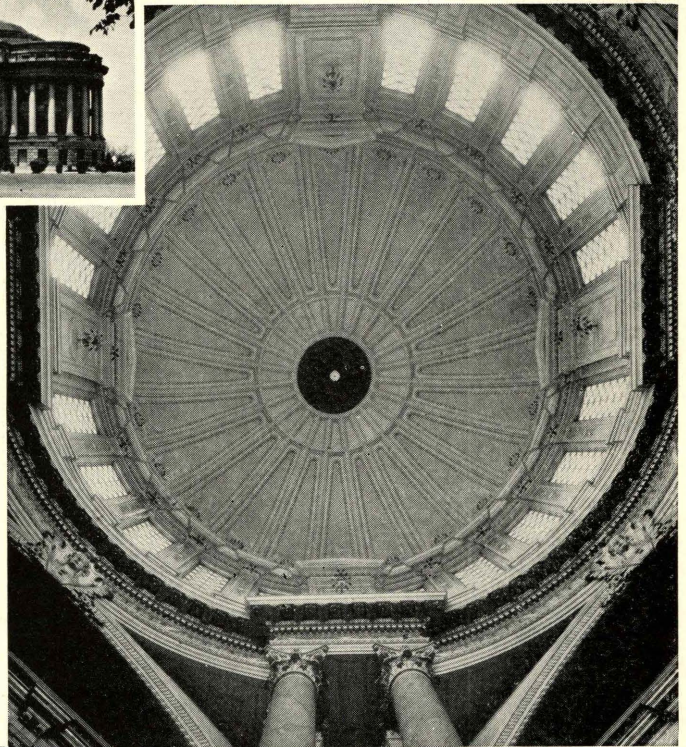
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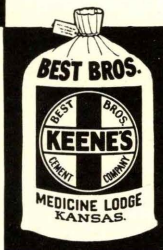
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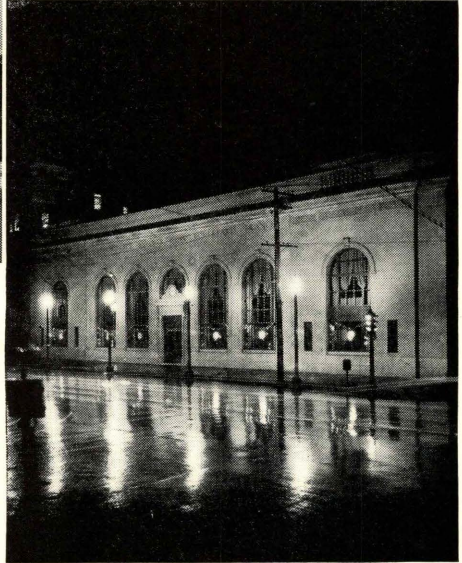
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(39)



Pendant luminaires proved attractive illumination for the banking room.

✓ ✓ ✓

The exterior of the building is floodlighted by five lantern standard units.



BANK LIGHTING

that suggests security and dignity

by WILLIAM NEUMANN, A. I. A.
of William Neumann & Sons, Architects
Jersey City, N. J.

IN the Boulevard Branch of the Hudson City Savings Bank at Jersey City, New Jersey, exterior floodlighting and modern interior lighting lend emphasis to the architectural design of the building and help to create an atmosphere that builds confidence in the bank's services.

In reaching a decision on important points about this lighting installation, the lighting bureau of the local electric service company provided valuable technical advice. The bureau was able to suggest various methods for floodlighting the exterior of the building and to demonstrate the

features of these methods in existing floodlighting installations.

This helped in deciding on a practical and attractive floodlighting installation, using lantern standard units that are in harmony with the design of the building. Five units are used, each with 1000 watts for floodlighting, and 200 watts for auxiliary globe lighting.

The lighting bureau was of further service in planning the interior illumination. It had information readily available that helped in determining the wiring capacities it was advisable to use to provide for future electrical

requirements. Appropriate pendant luminaires were selected for general illumination of the banking room and for the illumination of the offices located in the balcony. A sufficient number of duplex outlets were provided to allow for the use of power driven accounting equipment, electric fans and special-decorative lighting.

The completed building, with its attractive floodlighting and pleasant modern interior lighting, is proof of the value of cooperation between the architect and the illuminating engineers of the electric service company's lighting bureau.

For information about trends in lighting standards, and about adequate wiring, call on the Wiring Bureau of your local electric service company, or write direct.

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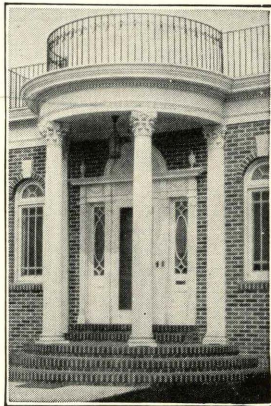
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COMPETITIONS

The Chicago Bridge and Iron Works announces a competition for a typical tank and tower design which will express pleasing esthetic qualities. Prizes for the eight most interesting solutions are respectively \$2,000, \$1,000, \$500, and five honorable mentions of \$100 each. The competition has been approved by the A.I.A. and is open to all architects, draftsmen, and engineers who make application before December 1 to the professional advisor of the company, Albert M. Saxe, Chicago.

A handsome prospectus has been issued for the "International Competition in Composing a Project for the State Ukrainian Theatre, Mass Musical State, with a 4,000 Seat Capacity." N. A. Scripnick, Academician, the Ukrainian Commissar of Public Education, is president of the Jury.

Gold medals will be awarded to the three architects who have designed the best small houses erected in the United States. This announcement is made by "Better Homes in America," an educational institution. Awards will be made by a committee of five architects appointed by Robert D. Kohn, president of the Institute. The medals will be awarded for one story, story and a half, or two story houses with a cubage of not more than 24,000 cu. ft., above the level of the first floor. For the 1930 awards, floor plans, blue prints, elevations, interior details, and photographs of houses completed during 1930 should be sent to the American Institute of Architects, 1741 New York Ave., Washington, D. C., not later than December 1, 1930, so that awards may be made early in January.

• • •

TWENTY to twenty-five per cent of the total light available at a window may be lost on account of the dirt accumulated during a four month period between cleanings, according to an investigation made by Professor H. H. Higbie and assistant professor H. S. Bull of the University of Michigan. In areas subject to more than ordinary pollution, the loss of light may run as high as fifty per cent. This decrease is more rapid after the glass has just been cleaned and depends upon the character of the glass as well as the roughness of surface.

Letters From Readers

(Continued from page 74)

Minnesota Chapter, A. I. A. Endorses "Consult an Architect"

Editor, THE AMERICAN ARCHITECT:

Our Chapter is mindful of the article in THE AMERICAN ARCHITECT, "Should Manufacturers Advertise 'Consult an Architect,'" and we heartily approve your action and hope that your magazine may continue to carry on this work that you have so nobly started.

It is gratifying, indeed, to know that the profession of Architecture has support from the press.

I believe we are entering a new era wherein the public generally are becoming "design conscious" and are looking for competent assistance and direction in managing their building programs.—Guy N. Crawford, secretary, Minnesota Chapter, A.I.A., Minneapolis, Minn.

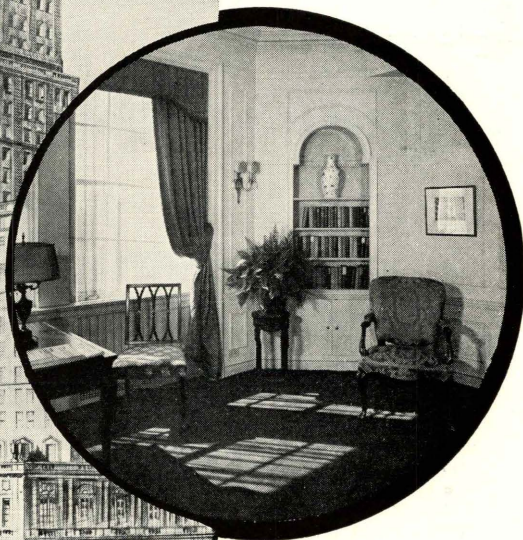
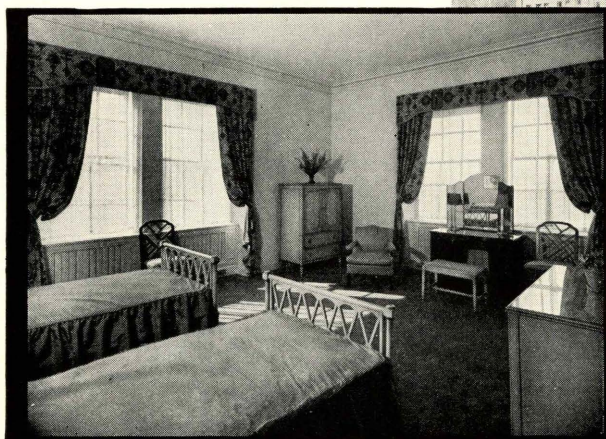
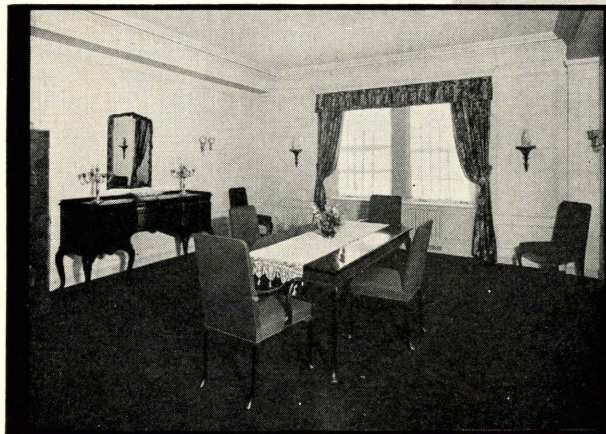
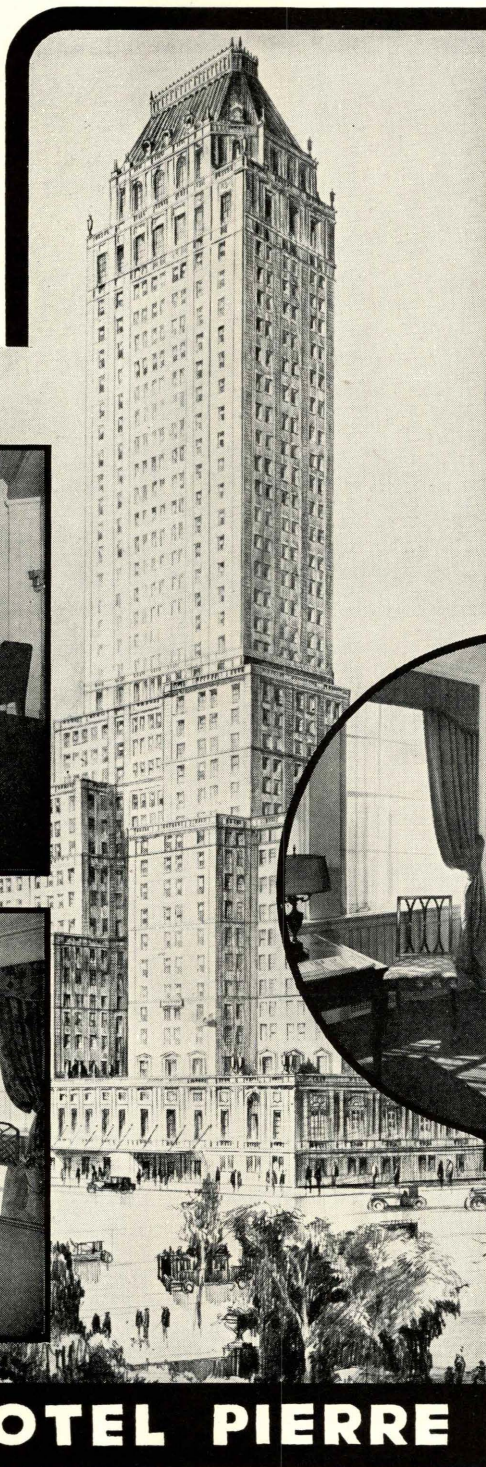
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American Fantom Radiators were selected for the guest rooms, white enamel "American" wall radiators for the bathrooms, and "American" Corto radiators for the reception rooms.

● Healthful even warmth, from graceful good looking radiators is assured for every room in the entire hotel.



● Hotel Pierre, 5th Ave. at 61st St., New York City. Architects, Schultze & Weaver. Heating Contractors, Baker Smith & Company.

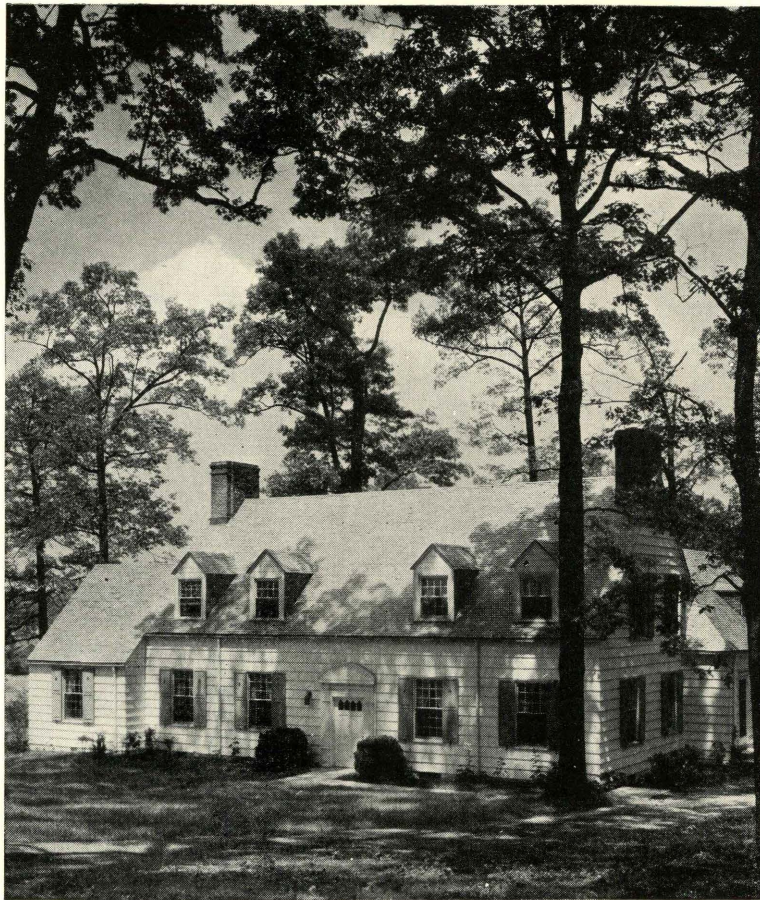
HOTEL PIERRE

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40 WEST 40th STREET, NEW YORK CITY



From November Good Housekeeping: A prize winning house costing less than \$20,000 . . . Barber & McMurray, Architects.

doing what the architect cannot

Good Housekeeping is doing editorially for the architect what the architect cannot do for himself. Through the architectural pages of Good Housekeeping Studio of Architecture and Furnishings, it is "advertising" the need and value of the architect's services to the very class of homes he looks to for his clients.

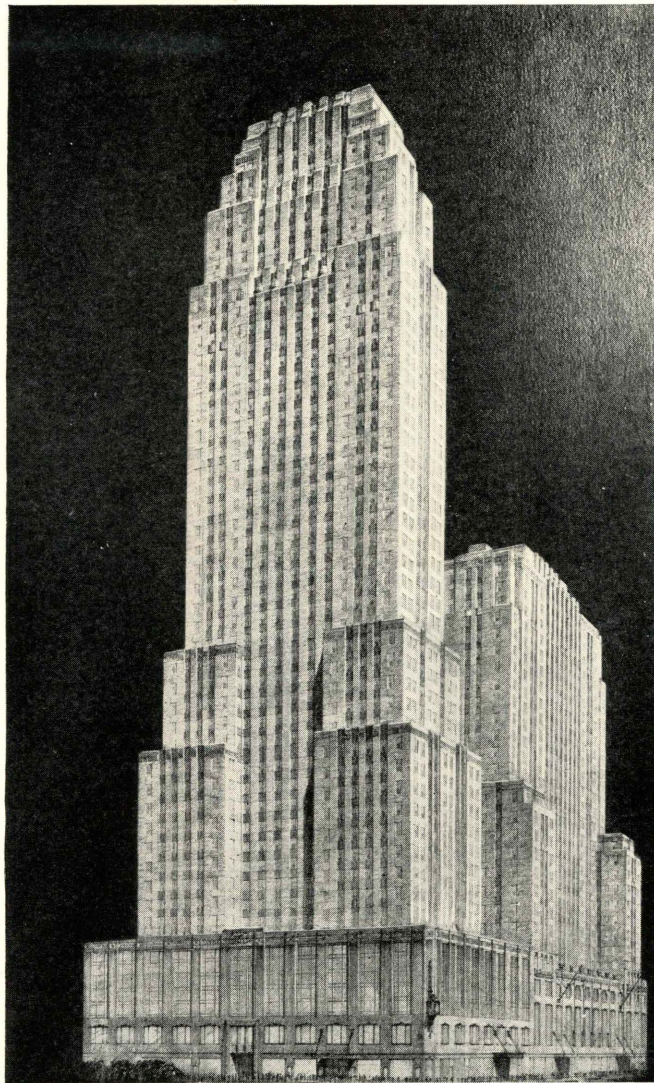
Every month Good Housekeeping's 1,750,000 readers see, from the work of eminent architects how beauty, good taste, comfort and utility can be inherently a

part of the houses they plan to build—if they have a good architect.

This editorial development gives the architect, for the first time, the support of a magazine that is truly one of the most influential. It is creating a deeper appreciation of good domestic architecture and stimulating the urge to build among families everywhere of the type that constitutes the primary market for the architect and the manufacturers whose products he recommends.

GOOD HOUSEKEEPING

Everywoman's Magazine



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96

advance and, most important of all, render a negative service to the architect's clients."

Another manufacturer states concerning this question, "One point that we have been particularly concerned over is the question of allowing the contractor to find substitutes to take the place of the article that is specified. It puts too strong a club in the hand of the contractor, who in reality is not a creator. In our opinion, the architect and the manufacturer are the ones who create the business and then the contractor is placed in the strongest position to break down the good will which has been built up by architects and manufacturers."

Still another, in deploring any interference with the architect's judgment, writes, "If in recent years, competition became one of price instead of quality, it was due to the fact that in the numerous speculative buildings that were being erected, the owner, in an effort to stretch the available funds, robbed the architect's prerogative, which is one of expert advisor, and he used the yardstick of price rather than that of quality to measure the value of building materials, with the result that the owner ultimately suffered through his own inexperience. We strongly endorse any movement that will reinstate the power of advisor and arbitrator to the architect as, after all, this power rightfully belongs to him, not only for the benefit of his client and his profession, but in fairness to responsible manufacturers."

One manufacturer states, "The success or failure of the manufacturer depends, to a great degree, upon the architect's opinion of how much this or that material will benefit his client and enhance his own reputation as a judge of building material. We believe that the re-

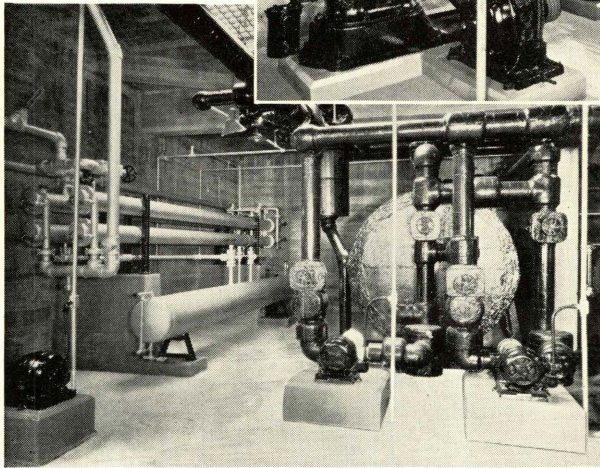
putable architect is in the best position to foster a movement toward better building."

Since manufacturers feel so keenly that the key to quality construction lies in the hands of the architect, it is obviously to the manufacturer's advantage to make an effort to increase the volume of business that passes through architectural offices. The manufacturer cannot be expected to start and contribute a fund towards advertising the profession of architecture. But he can, and quite ethically, too, contribute his bit by making use in his national advertising of some phrase or idea that will help to induce the public to consult an architect for its own protection and to insure the satisfactory use of the manufacturer's product.

• • •

METAL Wood is a new building material devised by German chemists, according to Walter Roth, Cothen correspondent of the American Chemical Society. Its density is greater than that of wood, its power of swelling and combustibility very small, and it is capable of being wrought like wood. The compound consists of wood which has been blended with low fusing point metals, such as lead, tin, or alloys, while still retaining its structure. As desired, the metallization of the wood can be conducted so that the canal systems and medullary rays of the wood can be partially or entirely filled with metal. For this purpose the wood is dried as much as possible, immersed in the liquid metal, and then subjected to moderate pressure in a closed vessel.

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Specification and Supervision of Plaster Work

(Continued from page 55)

eliminate all furring under the lath is a cheapening procedure in no way justified in the case of such an important part of a building as the ceilings. If there is any merit in reinforcing concrete, it is equally important for permanent ceilings to use supporting steel in the form of light channels or angles under the lath.

Good, hard finishing requires the use of 25 per cent gauging plaster in the finish coat. Lime putty used alone or with a small percentage of plaster will result in a white wall or ceiling. It is the addition of the proper amount of plaster that requires troweling labor which means plastering instead of white washing.

Textured finishes in endless form, either in the natural color of the material or in an infinite variety of color, through the use of pigments, are easily and economically obtainable in gypsum, lime, Keene's cement and Portland cement finishes.

THE question of the mix, application and workmanship of all plastering materials is very important for good results. Aside from competent supervision, the surest way to obtain quality plastering is through a greater consideration of contractors accustomed to do quality work rather than awarding a contract upon the basis of the lowest obtainable price.

For such an important part of a building as lathing and plastering, consideration should be given to those materials which have demonstrated their value through the test of time and use. Innovations may be just as good but it takes time measured in terms of years to demonstrate this.

Wood lath should be specified by grade as there is a marked price difference in the different grades of such lath. Metal and wire lath should be specified by weight. Lime, gypsum, Portland and Keene's cement have well defined standards determined by the American Society for Testing Materials.

In specifying a choice, "something or equal," it is reasonable to assume that competitive conditions will create the necessity for a contractor buying the cheapest; it is therefore unfair to put commodities of merit in competition with those that are inferior. Competent supervision during the construction of a building gives an owner a value many times its cost, such value being a continuing one that is reflected in the minimum of up-keep and repair. Competent supervision of lathing and plastering starts with the knowledge that the underlying frame has been properly constructed. Then follow the fundamentals for a good job of plastering:

- 1 That grounds of the proper thickness have been used and are put in place straight and true.
- 2 That where wood lath is used joints be broken each 7th course, with proper key space and that they be nailed, fully driven into each bearing with 3d fine nails.
- 3 That where gypsum or fibrous insulating lath is used, the joints be broken and that the lath be nailed every 4" over each bearing with a 1¼", ⅜" head nail.

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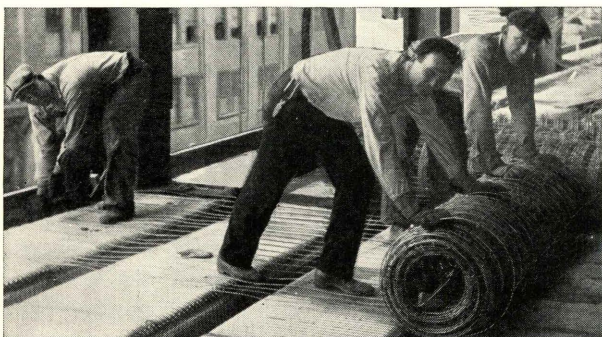
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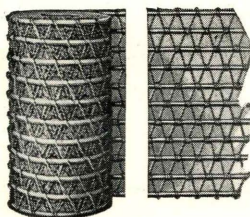
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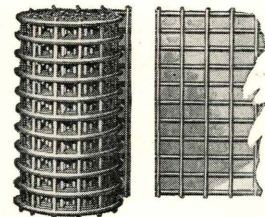
The Carew Tower, Cincinnati, Ohio—Walter Ahlschlager, Architect, Chicago—Delano & Aldrich, Associate Architects, New York—Starrett Building Co., Contractors, Chicago—Lieberman & Hein, Consulting Engineers, Chicago



Wire Fabric being laid on floors of Carew Tower



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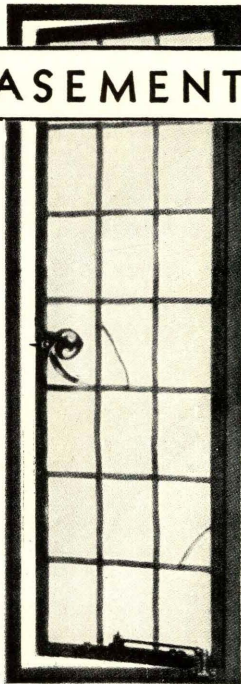
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- 4 That where wire or metal lath is used, it should be of the weight specified, laid with lapped joints, nailed, stapled or tied every 6 inches to bearings.
- 5 That lime mortar be well slaked and screened.
- 6 That Gypsum, Keene's and Portland cement be mixed with clean, sharp sand in accordance with the manufacturer's directions and not with as much sand as it may seem able to carry.
- 7 That lime putty made from quick lime be well slaked and screened and putty made from hydrated lime be well soaked in a water-tight box before use.
- 8 That the base coats should be well laid on just slack of the grounds and be rodged and straightened to receive the finish coat.
- 9 That the finish coat should be gauged with not less than 25 per cent of plaster and laid on in two coats, trowelled not less than twice with water.
- 10 The work when finished unless otherwise specified should be plumb, straight and true.

If these fundamental requirements for a good job of lathing and plastering be conscientiously carried out, we shall have fewer complaints about plastering.

Make Your Specifications Human

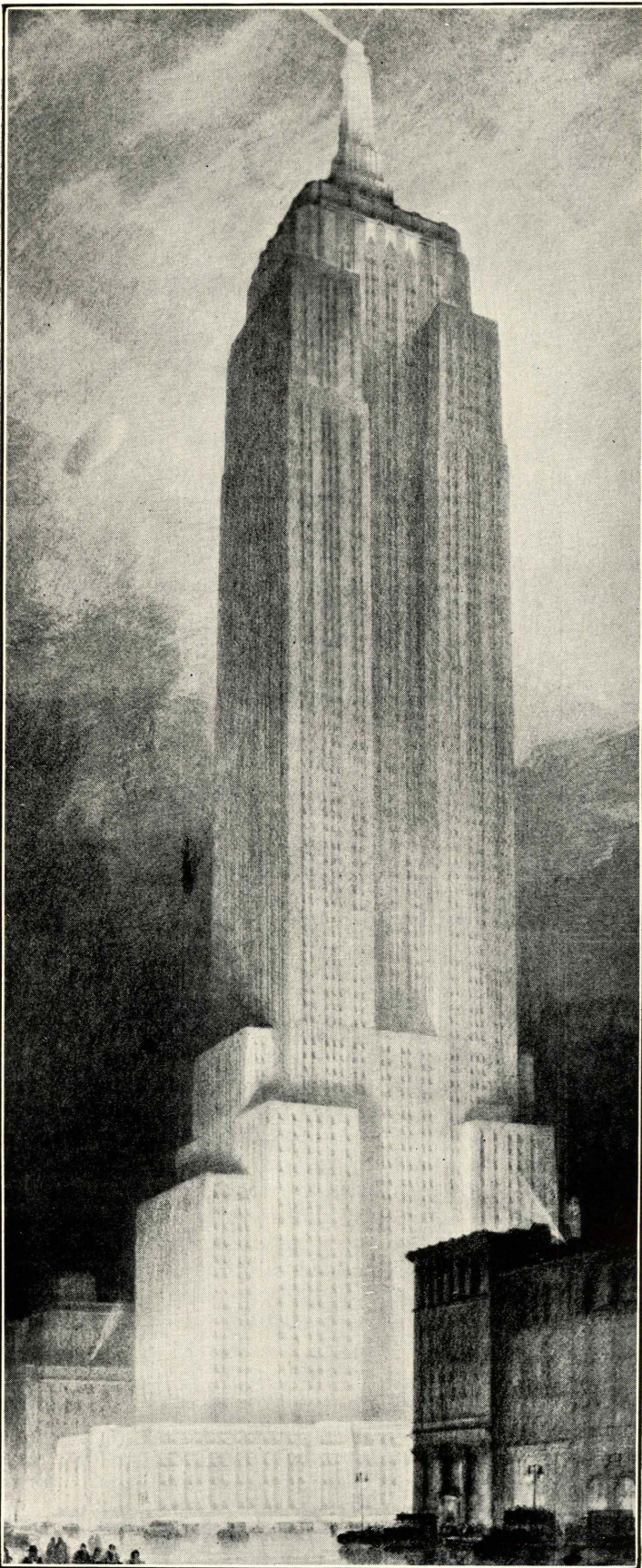
(Continued from page 23)

specifies; and that to drive this home the personality of the architect be not eliminated.

I know from experience that such marks of individualism occurring here and there in descriptions in a specification are what the foreman on the job remembers. The document becomes more vivid to him, with the result that much less is forgotten of what is wanted than where the specification is a dry-as-dust, matter-of-fact accumulation of words culled from various reference books.

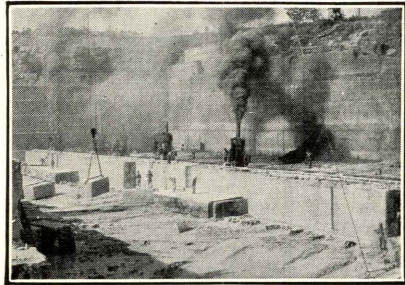
To illustrate, let me describe a commendable specification that I have seen. The job was a studio building to be erected in a large garden court surrounded by a two-story studio building erected about forty years before, and by annexes at the extremities of the original structure forming a "U" shaped plan. The "U" shaped building was entirely occupied. Approach to the proposed structure had to be made through entrances occurring at the junction of original building and annexes—an unusual job. The architect had an introduction to the specification giving a concise history of the entire foundation and showing how the owner, in possession of an entire city block, had been prompted by public spirit to create a home in this rapidly growing city for working artists whose means were limited, for art in middle western cities at that time was considered by the community more a plaything or a luxury than a necessity.

The description continued: "This, then comprises ' . . . Studios' of today. Within the hospitable walls, artists—painters, sculptors, poets, illustrators, even a couple of architects—live and work and have their being. Of a summer's night they gather about the splashing fountain in the Garden Court and dream aloud—dreams of beauty, of grandeur, of harmony. And then, awakening, find this world materialistic and sordid. To complete the picture in the Garden Court, it is proposed to build a studio apartment building in three units, screening the Medina wall. The wings are two stories



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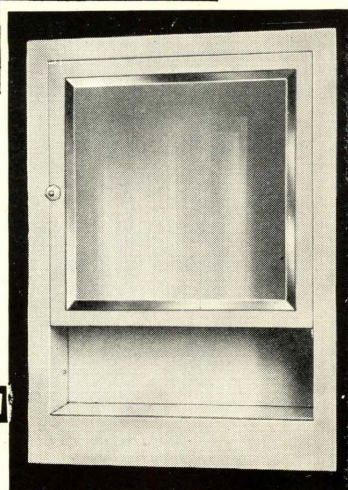
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in height, the center pavilion, three. Studios in each case occupy the top story. Wall, floor, and roof construction (barring gable roof) are of incombustible materials. A heating plant, using oil for fuel, is located in the basement below the south wing. No other basements occur. Accompanying the plans of the new structure is a sixteenth scale plan of the entire court. Here will be seen the walks, fountains, podium with steps, and pergola. The proposed building with its walks is shown lined and stippled over work to be removed."

Under the various headings and sub-headings of the different trades remarks occur, telling the craftsmen what to look out for and what must be achieved.

In a large industrial plant where additions were made inside of existing floors and confining walls, the contractor found in his specification: "It behooves the contractor to plan well the co-operation of his mastic and cork tile sub-contractors for the placement of this ceiling, for if these allied trades are not on hand to place their topping over the concrete section by section as the ceiling construction proceeds, the contractor may have to employ Lilliputians to get into the space left to do the work."

In solving another problem in this same plant, the architect, in stating the problem at the beginning of the specification, said: "Temperature and air control is the watchword in Company's plant. Though nature may provide boreal blasts or Sahara storms; quiet, killing cold or sultry, disintegrating heat; down-pour or drought;—the air condition within this plant where a hundred thousand and more loaves of Silver Cup Bread are given birth each day shall not be affected. This is the law laid down by Mr. . . ."

ELSEWHERE the specifications direct: "The contractor must provide safe barricades along the sidewalk and the alley and make junction with the frame dwelling on the south to prevent the pickaninnies, who are prolific in this neighborhood, from falling into the trenches."

In another specification the final clause on the general contract reads: "The entire job shall be complete and finished in every particular in conformity with the plans herewith submitted and these specifications. The contractor is expected to have honest-to-God mechanics on the job. Particularly in the case of painters and plasterers has this architect had most heart-rending experiences. What often passes for good mechanical work today is beyond his power of understanding. This architect will himself be the judge of what is good work."

And again: "After the plasterer has finished his work, he must remove his tools, his plaster drippings, his old overalls and cap that once were white, and disappear as silently as an Arab who slunk away into the night."

These examples I think suffice to make my meaning clear. What the architect needs is co-operation on the part, not alone of the contractor, but of the foremen and the craftsmen as well. To best get this co-operation, he should instill into his written description of the work proposed enthusiasm and fellow-feeling for the artist and mechanic carrying out his ideas. To do this successfully the specifications must be interesting, technical-ly competent, and complete.

Often have builders and their estimators told the architect's office, "Well, we'll gladly figure even if we can't land the job; the specifications are so vividly enter-taining."



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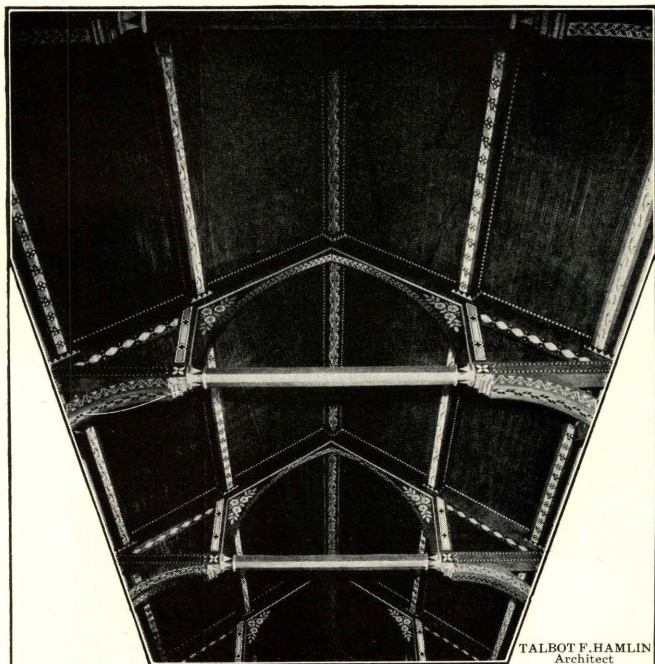
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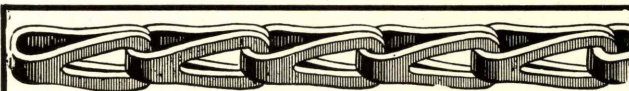
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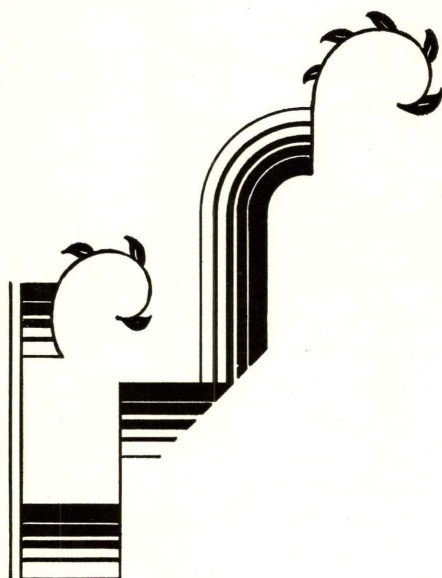
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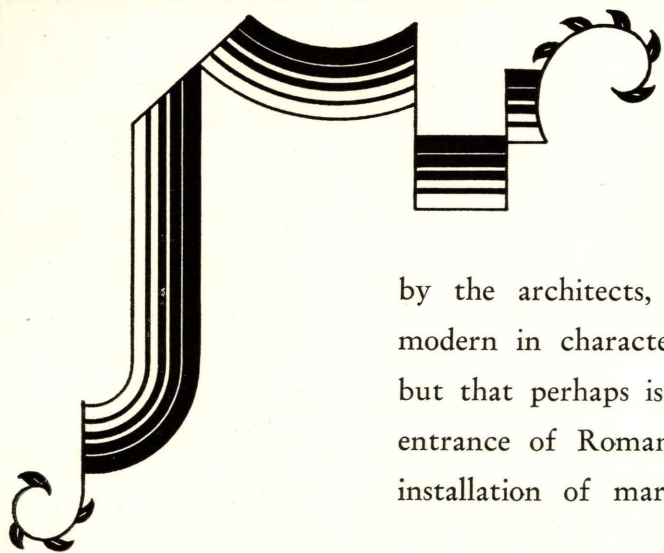
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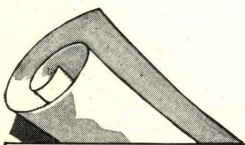


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