

SIACAS



AMERICAN ARCHITECT

FOUNDED 1876

September 1931



ENTRANCE TO THE MAIN CONCOURSE — FRISCO UNION STATION — TULSA, OKLAHOMA

R. C. STEPHENS, ST. LOUIS, MO.
Architect and Engineer

*Thorp Installation: Hollow metal frame,
trim and doors; finish, baked mahogany.*



● Doors, frame, and trim are of hollow metal construction with baked mahogany finish. All frames throughout the station of special design were also supplied by Thorp in hollow metal.

● Although 12 feet by 28 feet in size, the entire frame for this large concourse entrance was made up and shipped by Thorp as a single unit. This typifies the ability of Thorp to handle economically even the unusual in fabrication. The Tulsa installation, illustrated here, is a tribute to the satisfying result achieved in a previous installation for the St. Louis and San Francisco Railway System in the Union Station at Oklahoma City. In both cases the architect was Mr. R. C. Stephens.

THORP FIREPROOF DOOR CO. Minneapolis, Minnesota

NO OPENING TOO HIGH ... NONE TOO WIDE



"Quality leaves
its imprint"



OVER
50
years
1880/1931

for

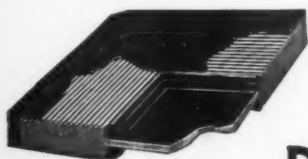
FoldeR-Way partition doors

With FoldeR-Way, whole walls disappear and reappear, with practically no effort and no noise. Idle floor space is utilized; not a foot of it need be wasted with R-W equipment.

Here is a typical example, the Junior & Senior High School, Quakertown, Pennsylvania. The doors are 22 feet high, the opening 60 feet wide. Yet one man experiences no difficulty in moving the entire set of 20 doors. There has never been any trouble or costly upkeep connected with this or any other R-W engineered installation.

Let an R-W engineer show you how FoldeR-Way equipment will slide and fold away doors of any size. Write for Catalog No. 43 today.

The beauty and smooth operation of R-W Compound Key Veneered doors are lasting. Sagging, warping, swelling, shrinking are practically eliminated by tongue and groove method of applying veneer. These famous doors are now made exclusively and sold only by R-W for FoldeR-Way partitions.



Write for Catalog No. A-53, illustrating R-W Disappearing Door Wardrobes for the classroom.



Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.

Branches: New York Chicago Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines Minneapolis
Kansas City Los Angeles San Francisco Omaha Seattle Detroit Atlanta Richards-Wilcox Canadian Co., Ltd., London, Ont. Montreal Winnipeg



*Francis E. Johnston Residence, Peapack, N. J.
Hyde & Shepherd, Architects*

Artistry in Metal

as expressed by Fiske

METAL work by FISKE is expressive of the finest old-world craftsmanship; it possesses individuality yet blends harmoniously with its surroundings. That is why it is found in so many of America's finest homes.

Architects are invited to write for catalogue on any of our specialized lines. Consultatory and design services are gladly offered in the service of architects interested in any of our products.

J.W. Fiske IRON WORKS
80 Park Place—New York
ESTABLISHED 1858



A Few FISKE Specialties:

DECORATIVE RAILINGS and GRILLES
ENTRANCE GATES
GARDEN and TERRACE FURNITURE
RESIDENTIAL or INDUSTRIAL FENCING
FOUNTAINS and SUNDIALS
LANTERNS and LAMP BRACKETS
STABLE and TACK ROOM FITTINGS
ARCHITECTURAL BRONZE

SPECIALISTS IN ORNAMENTAL METAL WORK

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, 1879. Issue number 2599, dated September, 1931.



Mixing Mortar for the Lane Technical High School, Chicago

INSTANTLY PLASTIC

Carney Cement mortar goes straight from the mixer to the wall

AGEING and soaking are now entirely eliminated when Carney Cement is used for the mortar—yet the smooth fast working qualities for which Carney Cement has always been noted are fully retained. With this improved material, two men with a one-fourth yard mixer easily furnished mortar to 100 bricklayers on the Lane Technical High School, Chicago. Furthermore, the number of bricks each workman can lay is considerably increased because of the excellent consistency of the mortar.

In addition to the time and labor saved, the new Carney Cement also resists moisture absorption completely. This characteristic assures watertight joints and definitely checks the spread of efflorescence because the joints cannot absorb efflorescence producing salts in solution. These superior features of the material have been fully tested and proved in our laboratories and on many jobs. Carney representatives are equipped to demonstrate these features to your complete satisfaction right in your own office. Call or write your nearest branch.

THE CARNEY CEMENT COMPANY

DISTRICT SALES OFFICES

CHICAGO

CINCINNATI

DETROIT

ST. LOUIS

MINNEAPOLIS

Mills: Mankato and Carney, Minn.

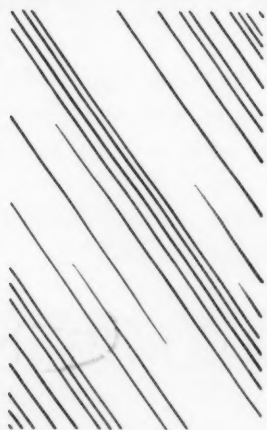
Originators of Masonry Cement—Established in 1883

CARNEY CEMENT
for Brick and Tile Mortar



Birks Building, Calgary, Alberta. Nobbs & Hyde, Architects. Tennessee marble for curb, pilasters and cornice; Verde Antique for base and trim; Breche Pavonazzo for panels.

THE MODERNISTIC MOVEMENT PLATE EIGHT



ONLY the exterior of the Birks Building is being shown on this page. Much marble was used also on the interior walls, but the treatment as a whole is less strikingly modern and not so well adapted for the present series. As the title indicates, our shops provide and finish many kinds of marble, both American and Foreign.

VERMONT MARBLE COMPANY, PROCTOR, VT.

Branches in the larger cities

See Sweet's Catalog for Specifications and Other Data

VERMONT MARBLE

AMERICAN ARCHITECT

© 1931
T. H. N. Corp.

THE HERMAN NELSON CORPORATION



Univent Ventilation because of definite results it achieved in the schoolroom, established the popularity of Unit Ventilation. But only the Univent can give Univent Ventilation.

Where the ventilation requirement is: a continuous supply of outdoor air to every pupil in the room, the Univent gives the proper atmospheric conditions in the simplest, most effective and economical manner.

It brings in outdoor air—cleans it, heats it to the right temperature and distributes it throughout the room with gentle air motion but without draft.

Over ten years of Univent Ventilation in schools throughout the country have demonstrated the fact that the architect or engineer who specifies Univent Ventilation is taking no chances.

Write for the book—"Univent Ventilation".

HERMAN NELSON

UNIVENT

(TRADE MARK)

VENTILATION

The Herman Nelson Corporation are makers of the Univent System of Ventilation, the Her-Nel-Co System of Ventilation, the Herman Nelson Invisible Radiator, the Herman Nelson hiJet Heater, and other heating and ventilating equipment.

A HERMAN NELSON PRODUCT

Factory at Moline, Illinois

BELFAST, ME.
BOSTON
SPRINGFIELD, MASS
PROVIDENCE, R. I.
HARTFORD, CONN.
NEW YORK CITY
SYRACUSE
ALBANY
ROCHESTER
BUFFALO
PHILADELPHIA

SCRANTON
KINGSTON, PA.
HARRISBURG
PITTSBURGH
JOHNSTOWN, PA.
ALLENTOWN, PA.
ERIE, PA.
WHEELING, W. VA.
WASHINGTON, D. C.
BALTIMORE, MD.
CHARLOTTE, N. C.

Sales and Service Offices in All Principal Cities

GRAND RAPIDS
SAGINAW, MICH.
DETROIT
CLEVELAND
COLUMBUS
CINCINNATI
TOLEDO
INDIANAPOLIS
EVANSVILLE, IND.
CHICAGO
PEORIA, ILL.

DES MOINES
MILWAUKEE
APPLETON, WIS.
MINNEAPOLIS
DULUTH
ST. LOUIS
BIRMINGHAM
NASHVILLE
CHATTANOOGA
MEMPHIS
NEW ORLEANS

MIAMI
DALLAS
OMAHA
EMPORIA, KAN.
KANSAS CITY
DENVER
SALT LAKE CITY
BUTTE, MONT.
SPOKANE
PORTLAND, ORE.
SEATTLE

SAN FRANCISCO
LOS ANGELES
VANCOUVER, B. C.
TORONTO, ONT.
WINNIPEG, MAN.
CALGARY, ALTA.
LONDON
OSLO
MELBOURNE
TOKIO, OSAKA
BUENOS AIRES



The Philadelphia Convention Hall—Roofed with 101,800 square feet of Carey Built-Up Roofing
Philip H. Johnson, Architect

Specific Exposure Conditions require specific roofing construction

When the plans are drawn, every stress bearing member is specified according to its ability to carry a definite load, plus a safety factor. The same procedure should govern the selection of a built-up roof—it should be designed to best withstand climatic and atmospheric conditions as well as to suit the type of roof deck, the roof slope and the estimated life of the building.

These service conditions vary so widely that no single type of built-up roof can meet all of them. Consequently, Carey

Specifications, based on 58 years of roofing experience, include various multi-layer built-up roofs of all types—Asbestos, Asphalt or Tar and Gravel—designed to give the best service under any given conditions of exposure.

Carey Built-Up Roofs are applied according to rigid specifications by a nation-wide corps of expert roofers, and are bonded for 10 or 20 years. Carey roofing engineers are always available for consultation regarding the type roof which will give the best service on any proposed structure.

THE PHILIP CAREY COMPANY, Lockland, Cincinnati, Ohio

Branches in Principal Cities

BUILT-UP ROOFS
ASPHALT PRODUCTS
ELASTITE EXPANSION JOINT
WATERPROOFINGS
ROOF PAINTS

Carey
PRODUCTS

HEAT INSULATIONS
ASBESTOS MATERIALS
CAREYSTONE CORRUGATED SIDING
ASFALSLATE SHINGLES
BUILDING PAPERS

No. 555



REG. U. S. PAT. OFF.

Enduring beauty and much less weight for elevator doors on every floor

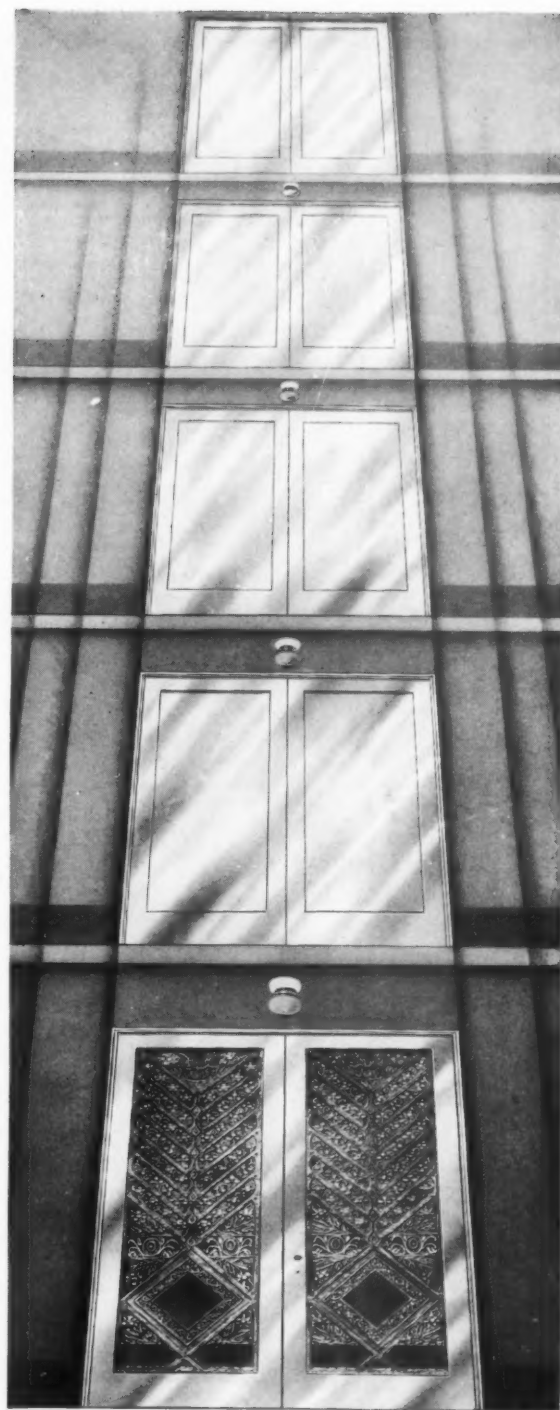
Design your elevator doors to reproduce Moorish intricacy, Grecian simplicity or Modernistic caprice. Alcoa Aluminum will permit the faithful reproduction of every line and curve, emphasize every shadow and highlight, carry out every tone and texture.

But there is more than lasting beauty in elevator doors fabricated from Alcoa Aluminum. Very much lighter than doors made of other commonly used metals, elevator doors of Alcoa Aluminum operate faster and with less effort. Lighter structural support may be used. Multiply these advantages by the number of elevator openings throughout the building and you can see why it is good practice to use Alcoa Aluminum elevator doors for the upper floors as well as for the lobby. Light weight and beauty do not exhaust the advantages of Alcoa Aluminum for elevator doors. This metal resists corrosion even where moisture, smoke and fumes are present. Its pleasing metallic appearance is readily maintained.

Because Alcoa Aluminum weighs only $\frac{1}{3}$ as much as other metals commonly used, it materially lightens the structure of elevator cabs also.

SPECIFICATIONS

Alcoa No. 43 Aluminum Alloy is recommended for most architectural purposes. To meet the numerous demands for structural stability, Alcoa Aluminum

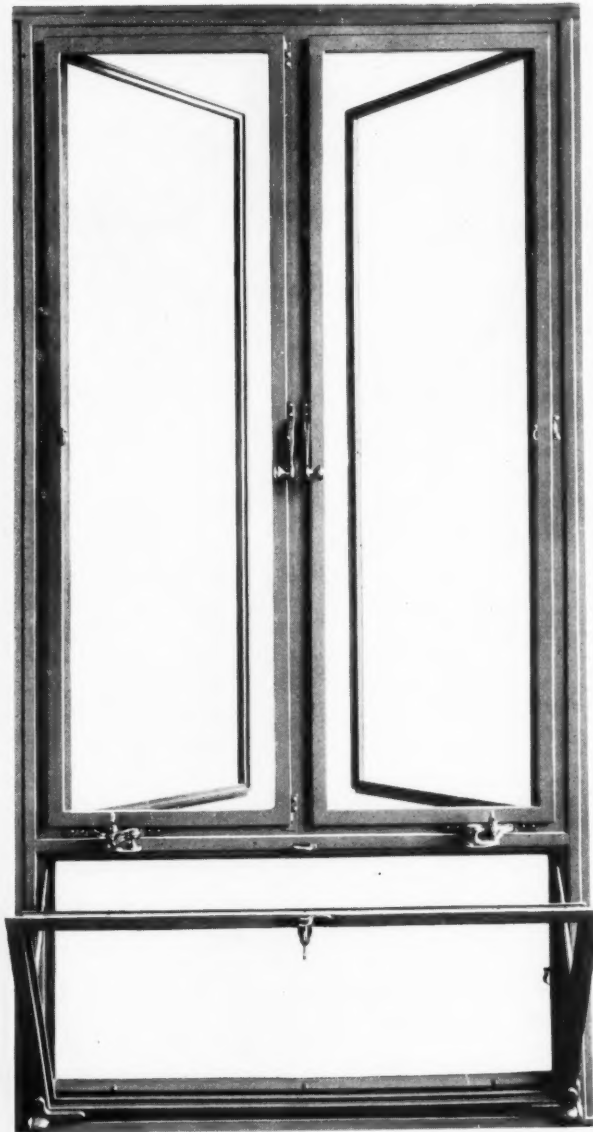


alloys are available in various tensile strengths. In designing and writing specifications for buildings in which Alcoa Aluminum alloys will form a part, may we urge you to accept our cooperation without obligation? ALUMINUM COMPANY of AMERICA; 2440 Oliver Building, PITTSBURGH, PENNSYLVANIA.

Elevator Doors and Cabs Made of ALCOA ALUMINUM

FOR SEPTEMBER 1931

INTERNATIONAL CASEMENTS



SPECIAL casement sections having a combined weight of 3.55 pounds per foot have been designed to make this window the best of its kind. Casements and Frames are solid welded units; riveted or spot-welded linings for weathering are not employed, and the dangers which follow when linings are forced away by corrosion are avoided. International integral screens can be fitted when desired.



*Send for
descriptive
pamphlet
No. 18*



INTERNATIONAL "HOPKINS" WINDOWS
are particularly suitable for Hospitals, Schools, Court Houses,
and other Public Buildings where permanency of construc-
tion, control of ventilation, and simplicity of operation are
of paramount importance.

INTERNATIONAL CASEMENT CO. INC.

JAMESTOWN, NEW YORK

T
“
a
c
M
n
n
.
a
e
h
v

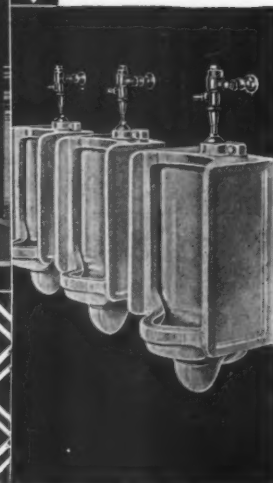
The APPROPRIATE CHOICE of

"In the Rush of Today and Tomorrow, the curious being that is Modern Man, looks neither to the right nor to the left" . . .

. . . Your interior appointments however are constantly before him. Let them win his approval . . .



Te-pe-co recommends the Penn Blow Out Urinal for toilet rooms where it is desired to keep all piping above the floor. Over one hundred of these fixtures are installed on various floors of the new Pennsylvania Railroad Office Building in Phila., Pa.



BEAUTIFUL and enduring buildings deserve beautiful and enduring plumbing fixtures . . . Te-pe-co All-Clay Plumbing Fixtures. Architects who take real pride in the completeness of their achievements specify "Te-pe-co". Building owners now realize that Te-pe-co fixtures enhance the investment value of their properties.

OUR GUARANTEE—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.

THE TRENTON POTTERIES COMPANY

Trenton, N. J., U. S. A.

National Showrooms
New York City 101 Park Ave., Entrance on 41st St. Philadelphia Architect's Building, 17th & Sansom Sts.
Branch Offices
Boston and Chicago Export Office: 115 Broad St., New York City





STAINLESS AND HEAT RESISTING ALLOY STEELS

Special Steels for Special Purposes

IMMUNITIES are special—not universal. There is a solvent for gold. Platinum succumbs to the attack of certain chemical reagents. The remarkable properties of USS Stainless and Heat Resisting Alloy Steels vary as the proportions of chromium or of chromium and nickel are increased or diminished. From almost endless formulae with which experiments were made, a few were adopted because they proved satisfactory under typical conditions of use. Additional alloying elements are added when necessary or advisable.

These steels are recommended with discrimination. There is one best adapted to each particular requirement. Correspondence is invited by the Subsidiary Companies of the United States Steel Corporation whose names appear below:

Chromium-Alloy Steels Ferritic

USS 12
USS 17
USS 27

Chromium-Nickel Steels Austenitic

USS 18-8
USS 18-12
USS 25-12

American Sheet and Tin Plate Company, Pittsburgh
Sheets and Light Plates

American Steel & Wire Company, Chicago
Cold Rolled Strip Steel, Wire and Wire Products

Carnegie Steel Company, Pittsburgh
Bars, Plates, Shapes, Special and Semi-Finished Products

Illinois Steel Company, Chicago
Bars, Plates, Shapes, Special and Semi-Finished Products

National Tube Company, Pittsburgh
Pipe and Tubular Products

Pacific Coast Distributors:
Columbia Steel Company
San Francisco



Export Distributors:
U. S. Steel Products Company
New York City

USS Chromium-Nickel Alloy Steels are produced under licenses of the Chemical Foundation, Incorporated, New York; and Fried. Krupp A. G. of Germany.

Typical Uses:

Q AUTOMOTIVE and AERONAUTIC—For radiator shells, hub caps, lamps, bumpers, moldings, polished parts and fittings, hardware and trim, airplane parts and instruments.

Q MANUFACTURING and INDUSTRIAL—Machinery and furnace parts, dampers, fans, preheaters, pumps, conveyors, turbine blades, nozzles, plungers, and machinery specialties.

Q CHEMICAL—Vats, tanks, stills, digesters, condensers, retorts, paper and pulp manufacturing equipment, circulation systems, and laboratory apparatus.

Q OIL REFINING—Bubble caps, still tubes, linings, heat exchangers, ducts, containers, tanks, agitators, and other refining equipment.

Q FOOD HANDLING—Pasteurizers, tables, hospital and hotel kitchen equipment, restaurant fixtures, cafeteria trays, food preserving and dairy machinery and accessories, ice cream and milk containers and utensils.

Q ARCHITECTURAL—Structural members and supports, hinges and hardware, decorative metal embellishments, flat surface facings, moldings, doors, grilles, panels, and ornamental work.

Q HOME APPLIANCES—Kitchen equipment, cooking and canning utensils, furniture, cabinets, electrical appliances, sinks, plumbing fittings, stoves, ranges, and tableware.

Q MISCELLANEOUS—Packing house equipment, soda fountain counters and fixtures, display cases, laundry machinery, tank cars, fittings, and similar uses.



Yale Law School, New Haven, Conn.

James Gamble Rogers, Architect

Yale Law School, of which William Howard Taft was once dean, is the newest aspirant for architectural honors on Yale University campus. As in recently completed Sterling Memorial Library, floors are of W. & J. Sloane Linoleum.

THIS DATA BOOK WILL PROVE VERY HELPFUL
WHEN SPECIFYING LINOLEUM FLOORS



WE SHALL GLADLY SEND YOU A COPY ON REQUEST.
W. & J. SLOANE, 577 FIFTH AVE., N. Y.

W. & J. SLOANE LINOLEUM

FOR SEPTEMBER 1931



A fifty-yard putt! No Control!

It's not the club
nor the ball
nor the length
of your
plus-fours
that makes
a golfer.
It's
proper
control
every time!
Likewise,
in a
heating
system
it isn't
alone

the kind of
fuel you burn
nor the size
of your
fire box
nor the type of
radiators.

*You need proper
control
throughout
the system.*

The steam consumption of heating systems as well as the comfort of the occupants is very definitely related to the method of controlling the heating system. The usual "On-and-Off" method is, by itself, quite inadequate.

First of all you must have a CONTROLLABLE heating system, one in which the supply of heat can be varied at will from nothing at all to maximum by minute degrees just as you control the speed of your car by a slight pressure on the throttle.

A Heating System and Control for Every Need and Every Purpose

Heating requirements vary so widely that no one type of heating system or no one control can be expected to provide comfort, economy and maximum investment return for all types and sizes of buildings. Realizing this, Warren Webster & Company have consistently developed an entire group of Webster Systems of Steam Heating together with effective central control which functions with the smoothness of Bobby Jones' famous "Calamity Jane".

Learn about these NEW Webster Systems and Controls

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 — a truly CONTROLLABLE vacuum system!

HYLO Vacuum Variator Control applied to an Improved Webster Vacuum System gives the building operator a throttle to adjust heat delivery by varying steam flow from maximum down to less than one-third of maximum. Where semi-automatic operation is desirable, the HYLO may be supplemented by an exclusive Webster key room thermostatic control.

Improved Type "R" System for residences and larger buildings gives advantages of steam with advantages of hot water, but without hot water limitations. Distribution balanced from the start — fully CONTROLLABLE by a choice of control means depending on the needs of the installation.

Webster MODERATOR Control—applicable to vacuum or open return line Webster Systems (5,000 sq. ft. and upward). Provides the ultimate in control—a single centrally located gradualacting control—automatic Roof Thermostat takes care of all factors for which automatic regulation is suitable; convenient co-ordinated manual control provides amazing flexibility to meet unexpected operating conditions; supplementary zone control, manual or automatic, if you want it. The MODERATOR System literally puts your building under "Control-by-the-Weather".

Complete details of any or all the above systems and controls on request.

Warren Webster & Company, Camden, N.J.
Pioneers of the Vacuum System of Steam Heating
Branches in 60 Principal U. S. Cities
Darling Bros., Ltd., Montreal, Canada

a 164

-since 1888
Webster
**Systems of
Steam Heating**

This is one of a series of advertisements discussing the subject of heating system control. The purpose of the series is to call attention to the need for adequate control and operation of heating systems, and to the control equipment and operating methods developed by Warren Webster & Company. Ask a Webster steam heating specialist to discuss with you this vitally important subject.



Residence:
Harrison, N. Y.

Julius Gregory,
Architect

A slate roof is the logical choice for the half-timbered house in the English style. To secure perfect harmony, however, the roof must be especially designed. Where Tudor Stone is specified our Architects' Service Department co-operates with the building architect in this important detail.

Rising and Nelson Slate Company

WEST PAWLET, VERMONT

Architects' Service Department: 101 Park Avenue, New York City

CHICAGO

DETROIT

PHILADELPHIA

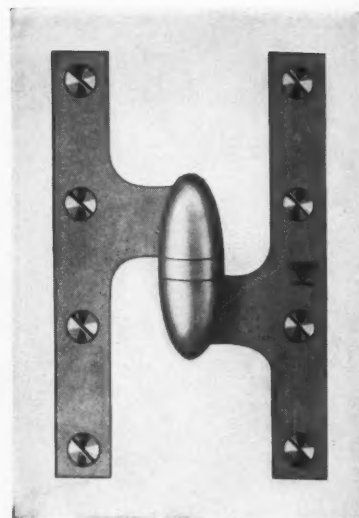
BOSTON

STANLEY BALL BEARING BUTTS

are used

where

*Hospitality is the
Keynote*



WALDORF-ASTORIA HOTEL
New York

Architects, Schultze & Weaver, New York



HOTEL PIERRE
New York

Architects, Schultze & Weaver, New York



BOOK-CADILLAC HOTEL
Detroit

Architect, Louis Kamper, Detroit

The traveling public notice everything that bespeaks comfort. Consequently, the service given by leading hotels in America includes smooth and silent operation of all doors.

Architects who designed the buildings shown here specified Stanley Ball Bearing Butts because of their reputation for silent, trouble-free service.

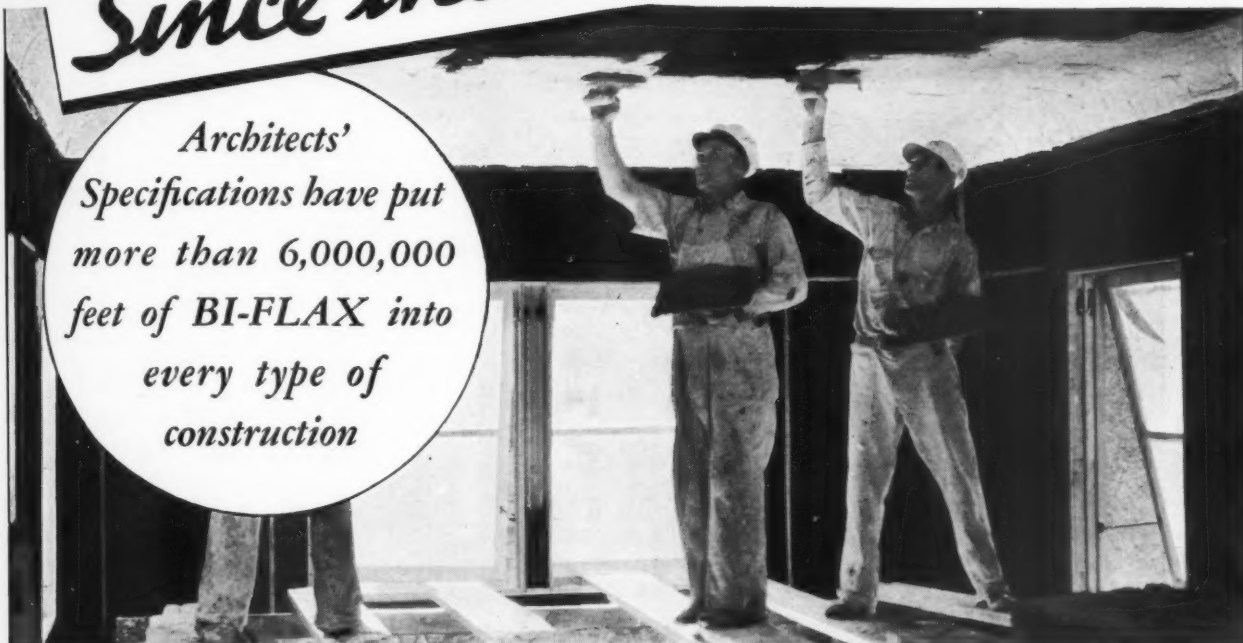
THE STANLEY WORKS
New Britain, Conn.



A little more than a year ago the First Architect Specified BI-FLAX

Since then-

*Architects'
Specifications have put
more than 6,000,000
feet of BI-FLAX into
every type of
construction*



JUST a little more than a year ago, Bi-Flax was introduced to the building industry through architects. This followed four years of experimental work to develop an insulating plaster base which would give maximum insulation and at the same time, have maximum efficiency as a base for plaster. During this period of development engineers of the Flax-li-num Insulating Company worked in close touch with architects. The cooperation of these men was indispensable. To them belongs a great part of the success of Bi-Flax.

For more than twenty years, Flax-li-num has been accepted as standard insulation. Its strong, tough fibres of flax, giving great durability—its semi-rigid construction and low density, giving the greatest possible insulating efficiency for an economical thickness of the material. Flax-li-num is the insulation used in Bi-Flax. Its efficient insulating quality is unimpaired. The Flax-li-num functions solely as insulation. This gives maximum insulating value.

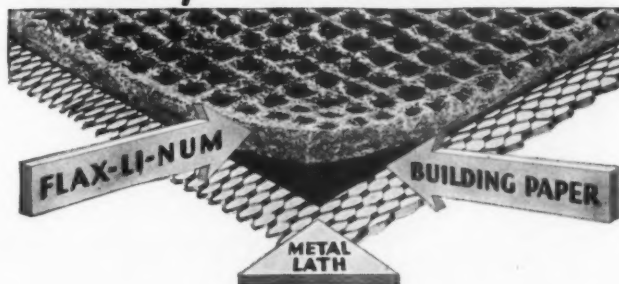
In Bi-Flax, metal lath is combined with Flax-li-num and waterproof building paper. This lath is diamond mesh, flat expanded painted. Lath for use in Bi-Flax was selected after tests of every known lath manufactured. All lath used in Bi-Flax must pass rigid tests—paint flaking, micrometer and acid. Lath failing to pass these tests is immediately rejected. Building paper in Bi-Flax must be waterproof—must pass 14 day non-leakage water test.

Tests of materials used in Bi-Flax are for one thing only. Bi-Flax must at all times represent the highest possible standard of efficiency.

Two main features of Bi-Flax will interest you. Bi-Flax is the *only* insulating plaster base which gives a positive mechanical key for the plaster. Bi-Flax is the *only* insulating plaster base in which the insulation functions as insulation only and gives maximum insulating value.

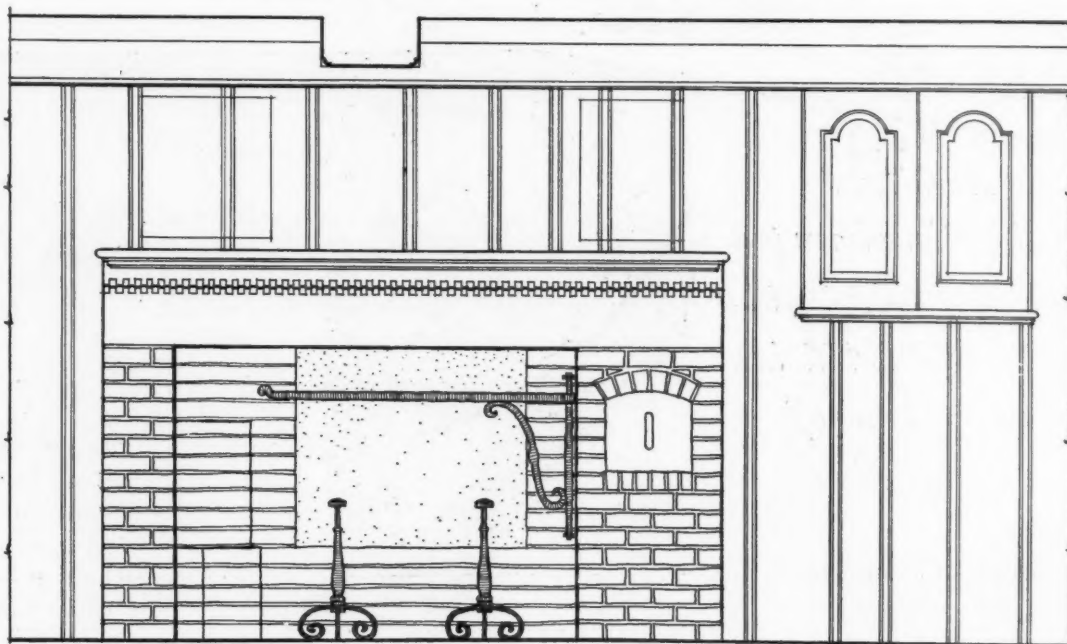
We believe that you will recognize unusual merit in this new material. May we send you a sample? Just address Flax-li-num Insulating Co. (Dept. AA5) Saint Paul, Minnesota.

BI-FLAX The *Only* Material of Its Kind



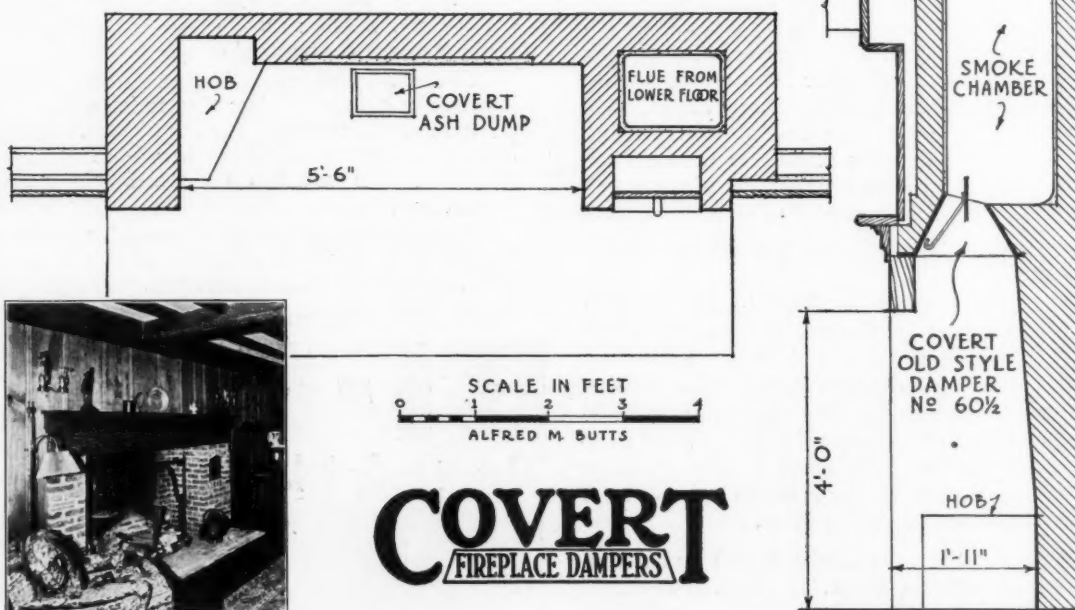
COVERT

Fireplace Construction



RESIDENCE OF MRS. M. C. REILLY
UPPER MONTCLAIR, N. J.

FRANCIS A. NELSON
ARCHITECT



SCALE IN FEET
0 1 2 3 4
ALFRED M. BUTTS

COVERT
FIREPLACE DAMPERS

THIS IS THE FOURTH OF A SERIES ON "SUCCESSFUL FIREPLACES"
IF YOU WILL SEND US YOUR ADDRESS WE SHALL GLADLY FORWARD YOU A COMPLETE SET OF THE SERIES
THE H. W. COVERT COMPANY, 229 East 37th Street, New York

MODERN

in design

Reflecting the modern trend in architectural design, the Philadelphia Saving Fund Society Building at 12th and Market Streets will add new interest to the rapidly mounting sky-line of down-town Philadelphia. Howe & Lescaze are the architects and Purdy & Henderson, the engineers for this interesting contrast to the more conventional architecture of the Quaker City.

in construction

Equally modern is the structural framework, embodying CB Sections . . the latest contribution to structural steel. American Bridge Company are the fabricators and George A. Fuller Company, general contractors. If you are interested in efficient and economical steel

construction . . investigate the merits of CB Sections. Carnegie Steel Company,

Pittsburgh, Pa.

Subsidiary of United
States Steel Corporation



149



SECTIONS



True-color reproduction of the terrazzo floor in the Western Air Express Depot, Alhambra, Calif. A. C. Zimmerman, architect; Wm. Y. Eaves, general contractor, both of Los Angeles. Terrazzo, made with Atlas White, by Consolidated Terrazzo Co., Inc., Los Angeles.

Distinctive color in terrazzo floors is secured with Atlas White portland cement

HAVE you noticed that the color seems much brighter, fresher and sharper in some terrazzo floors than in others? The difference is not caused by age; neither is it due to differences in marble chips used. The brighter, clearer colors and delicate shades you most admired resulted from the use of *white* portland cement in the matrix.

Atlas White portland cement furnishes a pure white background for the colored marble chips and pigments used in terrazzo just as a white canvas furnishes the background for the colored paints and oils of the artist. Complete information on terrazzo or on other products made with Atlas White will be furnished promptly, on request.

Name _____
Address _____
UNIVERSAL ATLAS CEMENT CO.
208 S. La Salle St., Chicago
Without obligation, please send
me further information on
Atlas White terrazzo.
A. A. 9-31

CONCRETE FOR PERMANENCE

Universal Atlas Cement Co.

Subsidiary of United  States Steel Corporation



CHICAGO • NEW YORK • PITTSBURGH • MINNEAPOLIS • KANSAS CITY

© U. A. C. Co.



This Month's Cover

CANYONS OF FEZ

LAST spring, J. Scott Williams went on a cruise to Mediterranean ports including a trip by automobile across northern Morocco and Algiers. In two months Mr. Williams travelled twelve thousand miles and made over one hundred water color sketches in addition to many pencil notes. Between land trips, a large light state-room served as a studio in which hasty impressions of rapidly moving scenes were developed before fresh scenes destroyed the vivid memory of previous observations.

About Fez, Mr. Williams says, "The city is a maze of alley-like streets, tunnels and covered ways. Shops, camels, donkeys, natives, trees, walls, nooks and corners are arranged in every conceivable picturesque combination to suit every taste for the pictorial.

"Fez grew as haphazard as a crowding swarm of human beings would make it. Here, you are impressed with the idea that you are in the midst of a civilization far removed from our own—a complete expression of Mohammedan fatalism, medieval and feudal suspicion, untouched by the swift changes of our own mechanical and strictly up-to-date system."

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

ERNEST EBERHARD, *Managing Editor* WALTER E. DEXTER, *Advertising Manager*
RAY W. SHERMAN, *Editorial Director* R. F. GARDNER, *Business Manager*

IN THIS ISSUE

Cover—A water color by J. Scott Williams

History in the Making.....	Benjamin F. Betts	21
Two Photographs.....	John Kabel	22
Log House Construction.....	R. Harold Zook	24
The Percentage Fee is Wrong.....	Alexander B. Trowbridge	28
Beaux Arts Graduates Journey to Paris.....	Louis La Beaume	30
Inexpensive Plan to Educate the Public.....	Bennett Chapple	32
What We Should Consider Before We Criticise.....	Talbot Faulkner Hamlin	34
Modern Veneer Construction.....	Eugene Clute	36
Unification of the Profession.....		42
European Sketches.....	Joseph B. Wertz, Alfred E. Poor, Gerald Tyler and Morris Ketchum, Jr.	44
All in the Day's Work.....		46
Good Lighting.....	Walter W. Kantack	48
What Makes a House a Good Risk?.....	John M. Wyman	52
Sketches.....	John T. Jacobsen, M. E. Gluckman	54
"Let the Sucker Beware".....	W. W. Beach	56
What Architects are Talking About.....		58
Air Infiltration of Various Materials.....	Frank P. Cartwright	60
As It Looks to the Editors.....		62
Legal Problems.....	George F. Kaiser	64
Books.....		66
Medieval Architecture in a Modern Museum.....		70
New Materials and Equipment.....		72

Next Month

ETCHING—Chamberlain tells how to make a dry point
PLANNING—What modern church congregations demand
PLUMBING—An easy way to size soil and vent stacks

THE AMERICAN ARCHITECT, Published monthly by INTERNATIONAL PUBLICATIONS, INC.
Fifty-seventh Street at Eighth Avenue, New York, N. Y.

William Randolph Hearst, President; Ray Long, Vice President; Thomas J. White, Vice President; John Randolph Hearst, Vice President; Arthur S. Moore, Secretary; Austin W. Clark, Treasurer. Copyright, 1931, by International Publications, Inc. Single copies, 50 cents. Subscription price, United States and Possessions, \$5.00 per year; \$7.00 for two years; Canada, \$1.00 extra; foreign countries, \$2.00 extra. Entered as second-class matter, April 5, 1926, at the Post Office at New York, N. Y., under the act of March 3, 1879. THE AMERICAN ARCHITECT is fully protected by copyright and nothing that appears in it may be reproduced either wholly or in part without permission.


 CRANE
 REALIZES THAT
 TASTE LIES IN THE
 ARCHITECT'S
 PROVINCE




+ + + If one were to ask Crane Co. what the most important factor in creating a beautiful bathroom is—the reply would be *taste*. Taste is the background of every Crane bathroom appointment. It is introduced when Crane Co. goes to the most famous artists in the world for its designs. It continues when Crane Co. commissions noted architects to assemble these appointments into rooms. But even this is not enough; taste must dominate the completed bathroom. Accordingly, whether Crane Co. is making public such an elaborate powder room as this or a most inexpensive cottage bathroom, the same pronouncement is given: "For guidance in planning see your architect."

CRANE

+ + + + + +
 FIXTURES, VALVES, FITTINGS, AND PIPING, FOR DOMESTIC AND INDUSTRIAL USE
 Crane Co., General Offices: 836 South Michigan Avenue, Chicago + 23 West 44th Street, New York + Branches and sales offices in one hundred and ninety cities



PROTECT YOUR HOME NOW AGAINST PARCHED AIR NEXT WINTER

No longer need your clients endure desert dry air in their winter homes. The Doherty-Brehm Humidifying Radiator is easily installed in any radiator heated house. The scientifically humidified air it automatically supplies protects against colds and many winter ills, preserves woodwork and furniture, reduces fuel bills. One humidifies the average home. You can modernize homes with this, or any plumbing or heating improvement, on monthly payments.

HISTORY

in the Making

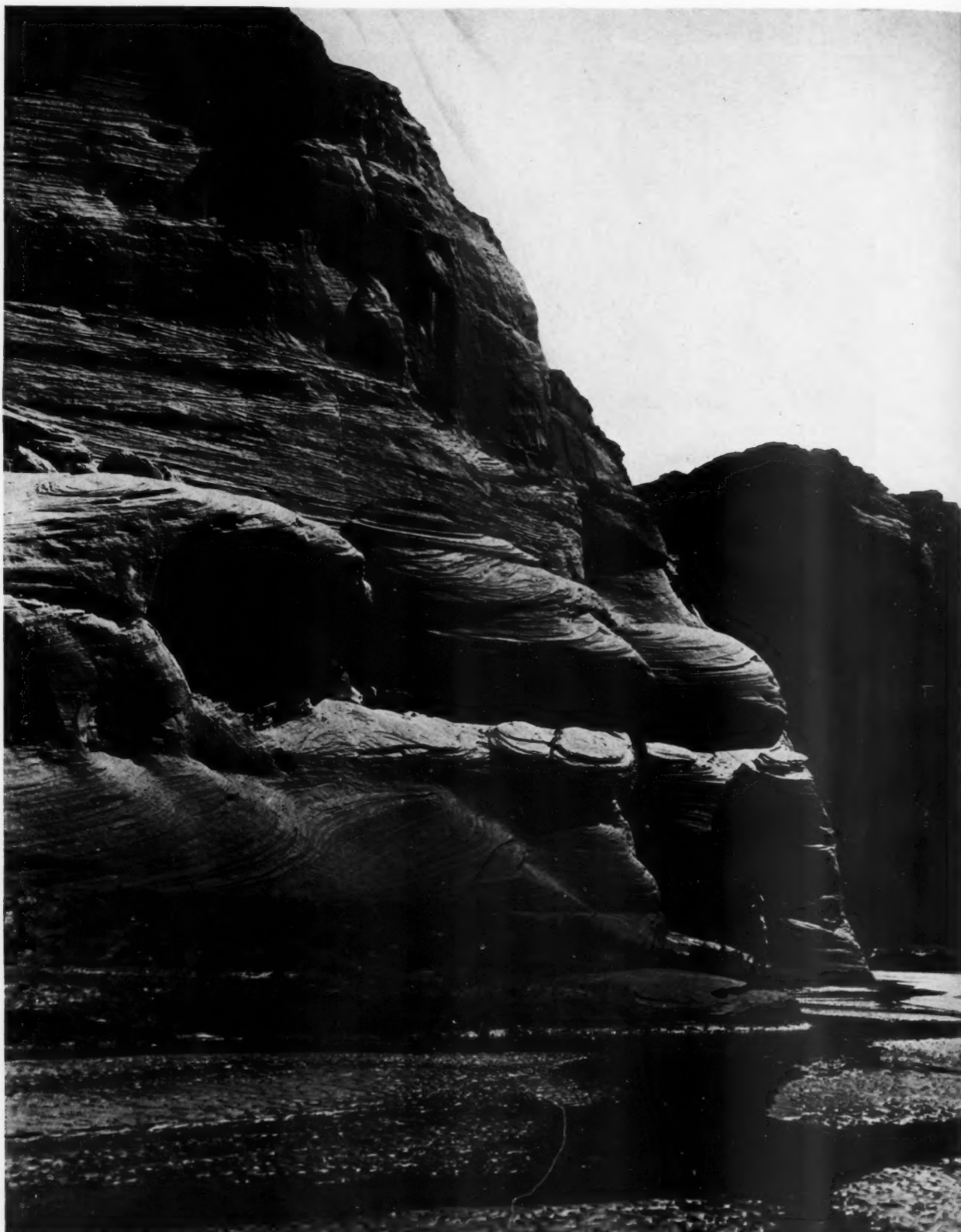
By BENJAMIN F. BETTS, A.I.A.

IN 1921, a group of architects, members of the American Institute of Architects and representatives of the advertising departments of many of America's prominent manufacturers, met in Indianapolis. They discussed waste in advertising and the type of advertising most useful to those who practice architecture. As a result of this conference an organization known today as the Producers' Council, affiliated with the American Institute of Architects, was formed. This marked an important step toward unifying the construction industry — architects and building material manufacturers.

AT San Antonio, in 1931, the sixty-fourth convention of the American Institute of Architects authorized its Board of Directors to take such steps as may be necessary to secure a reorganization of the Federal building bureaus; to find a means of unifying the Institute and state associations; and to study the question of forming a National Building Congress. Steps are also being taken by the Institute to promote cooperative action with the Associated General Contractors of America. The latter would forge a link in the chain that would make the building industry of the United States one of the most powerful organizations to be found in any country.

AGAIN in Indianapolis on June 26 and 27, 1931, there met a group of architects, representing the American Institute of Architects and the existing state associations, to study and develop a plan that would unite all architects of the United States in one powerful national organization. The Unification Committee, after many hours of discussion and due deliberation, arrived at a plan agreeable to the committee. The plan will be presented to the state associations and the Board of Directors of the Institute. If this plan in all its aspects should not be accepted, it is at least conceivable that with some modifications, a plan of unification will be approved. When this is done another page of architectural history in America will have been written.

IN a decade history important to every architect practicing now or to those who will practice later has been written. History that is just as important in its way as the construction of the Woolworth Building or the Empire State Building.



■ **FIRST EXPLORED** by white men in 1849, Canyon de Chelly extends through the Navajo Indian Reservation in northeastern Arizona. Erosion through centuries has exposed its copper red, black-streaked walls that extend to a height greater than Eiffel Tower or Washington Monument



■ **CASA BLANCA**, the White House, is one of the finest of many cliff dwelling ruins to be found in the Canyon de Chelly. All the majesty and dramatic quality of its site has been captured by the photographer, John Kabel. In Navajo folk lore, Casa Blanca was an abode of the Gods



New construction problems must be solved in building a two-story log house

WHAT I LEARNED ABOUT

» » »

Log House

KIND OF TREES

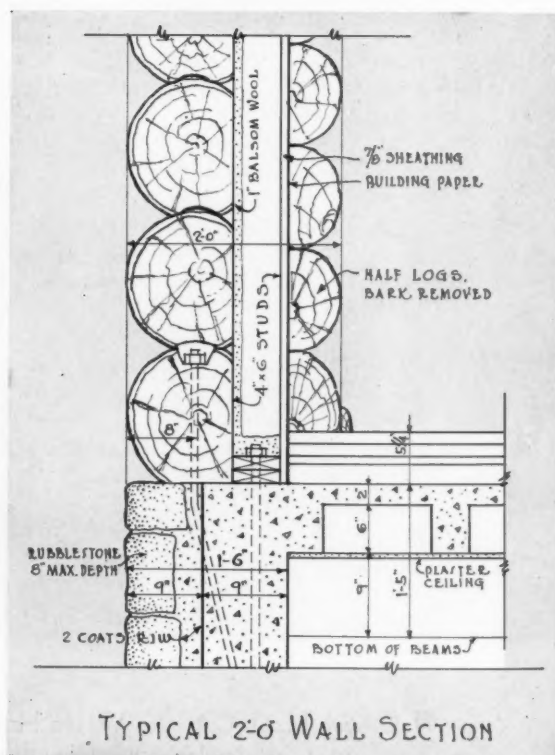
HOW TO BUILD

HOW TO KEEP BARK ON

By R. Harold Zook

THE construction of a log house of the best type involves many problems that are uncommon to architectural practice. Although the dwellings erected by the first white settlers in this country were built of logs, log construction became practically a lost art as applied to high grade, costly buildings. A thorough research was necessary before undertaking the designing and construction of Log Lodge at Lake Geneva, Wisconsin, involving three factors; selecting the most suitable tree, correct designing and competent craftsmen.

In determining the best available species of trees, the quality of wood, durability and appearance were the controlling factors. Appearance was very important and caused the selection of Norway Pine owing to the agreeable salmon color of its bark, which is formed of large scales of the shell-bark type which are in perfect proportion to the size of the logs. Although this selec-

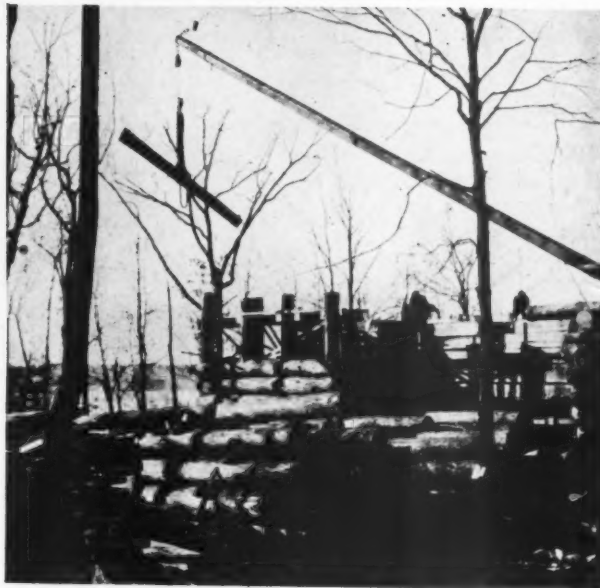


FLOOR AND ROOF loads were carried on 4 inch studs set inside the outside logs and so framed as to allow for shrinkage of the outside timbers



THIRTY-INCH trees could be cut on this circular saw installed on the job

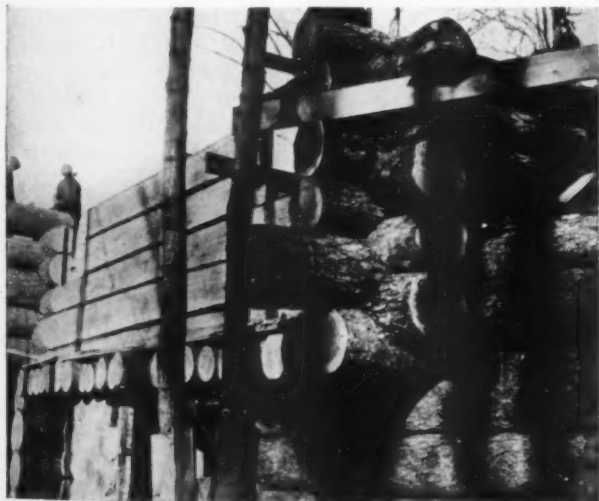
HANDLING THE LOGS was simplified by means of a boom derrick that could reach all parts of the job. Care was required to prevent damage to the bark on the logs



Construction

tion of Norway Pine did not meet the approval of many woodsmen and lumber producers, inquiry among various lumber associations, the Forest Products Laboratory, and tree experts in Sweden confirmed the choice.

The logs were procured in northern Minnesota and conformed to the specifications that they should range from 20" to 30" in diameter; lengths as shown in schedule; sound timber; and bark to be in perfect condition when delivered at the building site. Some of the logs were 74'0" long. Trees fulfilling the specification were found often a mile or more apart.



BLUE STAIN on logs for interior use was avoided by stripping off the bark, protecting logs from the weather, kiln drying, and coating with linseed oil

SCRIBED to fit their beds and trimmed by eye and hand the members fitted like millwork. After being set the inside face of the logs was hewn off straight

TIMBER trusses, logs stripped of bark, stone fireplace, half logs for steps to the second story, a handrail of birch, plank floor, and rough plaster in the living room follow the character of the exterior construction



DRESSED BOARDS on the walls of the sleeping rooms lend a note of refinement

It was necessary to build corduroy roads through swamps and build roads through the forest for the thirteen motor trucks used during a period of three months in transporting the logs to the railroad. The logs were wrapped in straw when loaded on the cars. The trees were felled in such a way as not to injure the bark by preparing a suitable bed on which they were dropped.

The preservation of the bark intact and firmly attached to the log is very important. The detachment of the bark is caused usually by injury in felling a tree or handling the log and also by the larvae of certain insects that penetrate the bark and lay their eggs therein. The larvae subsist on the soft sapwood immediately under the bark and cause it to become loosened and fall from the log. There are two kinds of insects that are especially harmful to the bark. One kind lays its eggs in live trees and the other in dead trees. The logs should be treated when cut with a strong solution of blue vitriol which penetrates the bark and is poisonous to the insects. Similar treatment should be given during construction and each year about the first of May just prior to the egg-laying season of the insects. After the building was finished, the exterior was treated with transparent beechwood creosote as a further preventive against the action of insects.

If the bark is to be retained on the logs permanently, it is best to fell the trees just before the sap begins to return to their roots which causes a better adhesion of the bark to the wood. When possible, it is desirable to bore the center of the log to prevent the large radial shrinkage cracks that might disrupt the bark. Logs that are stripped of their bark for interior use, should be prevented from disfiguration by (Continued on page 76)



HAND FORGED hardware, plank door, plank floor, and logs stripped of bark give to the entrance vestibule a suggestion of the exterior

The Percentage Fee is WRONG

By Alexander B. Trowbridge, A. I. A.

TWO or three years before his death, Howard Shaw of Chicago wrote a delightful letter to one of the architectural magazines commenting in humorous vein on the conventions of the American Institute of Architects and particularly on the amount of valuable time the delegates used in fruitless discussion of the schedule of charges. I was especially amused at his casual comment about Ictinus and the Parthenon and his assertion that if Ictinus had received 100% as a fee for architectural services no one today would care to dispute the justice of such a charge. This playful reference to the world's greatest masterpiece is one way of demonstrating that some designs are worth a great deal more than others.

The percentage system of professional charges has been followed by architects for many years. It has been a continuous struggle to establish a fee high enough to enable a conscientious architect to make a fair profit. As long ago as the '80's and the '90's no one dared ask more than 5%. That was before blueprinting had become available for reproducing tracings. Working drawings were drawn in ink on linen and the linen set was colored to suggest the various kinds of materials that were to be used in the construction. It must have been tedious and unprofitable to turn out plans in that way and the common use of blue prints must have seemed like a god-send to the struggling architect. The use of prints brought with it a greater number of drawings in the "contract set" so that now a set of working plans is many times more bulky than a set of plans of the '80's.

The reward the profession has received for a greatly increased service to its clients is a jump from 5% to 6%. The service in plans, specifications and details, is fully three times as much as it was in the good old 5% days—in brief a 300% improvement. The fee has moved up one-fifth additional or a 20% improvement. This is not as it should be and it is a pretty hard nut to crack, because the public has become familiar with the schedule and has witnessed its use in courts in the settlement of disputes between architects and clients. Frequently an architect is made happy by the existence of the schedule. Sometimes an architect, who has carelessly neglected to have a written agreement with a client, has been able

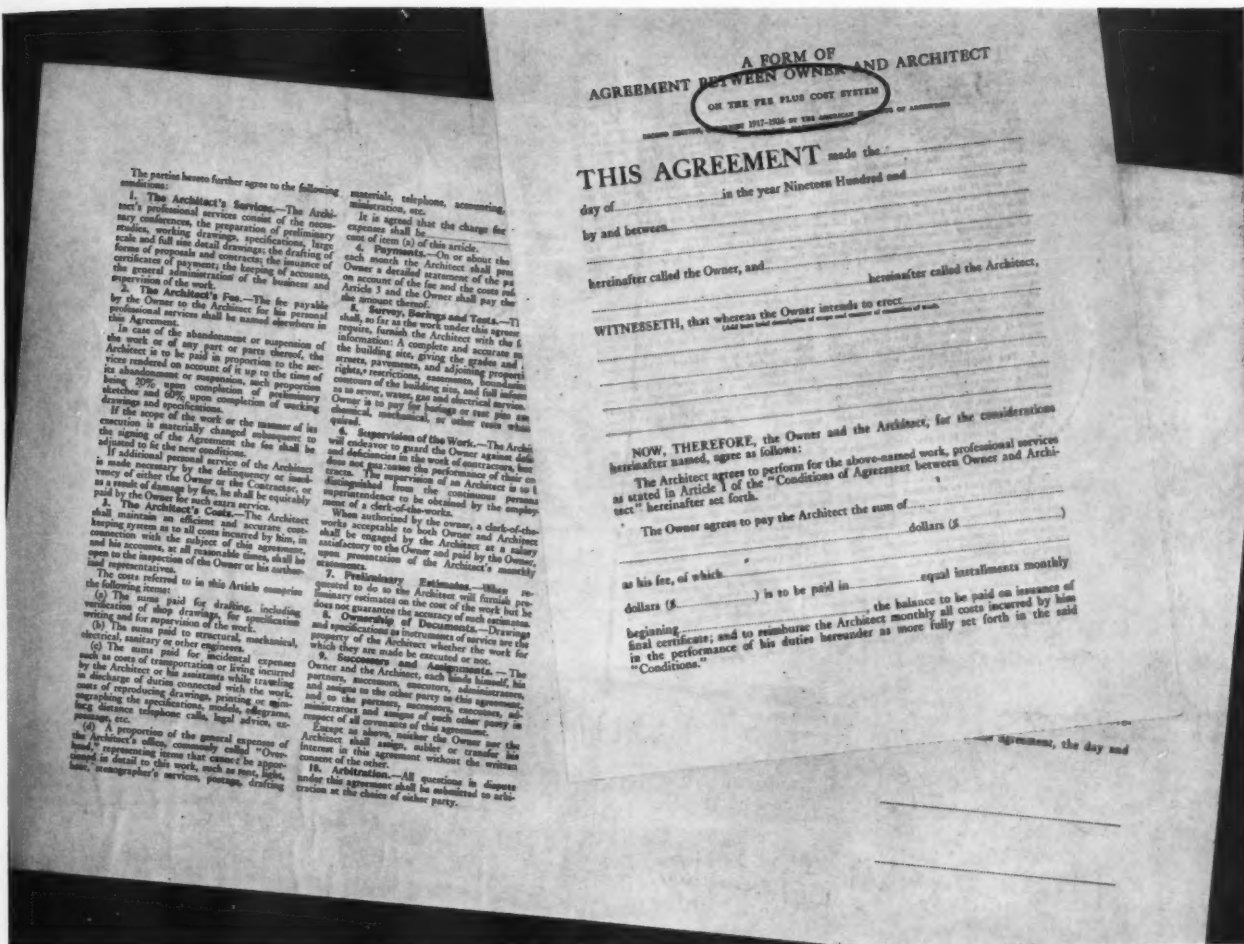


to collect because the A. I. A. schedule is known to judges and has figured in legal decisions.

But what looks like a boon in an individual case is a detriment to the profession as a whole. The average business man is interested in driving a bargain. If he can secure an architect's services for 5%, he will gladly do it. He doesn't differentiate between architects, although he may know that if he selects one of established reputation it may cost him more than if he goes to a younger or less well known firm. But he usually knows that he need not pay more than 6% in any case, because he has heard of lawsuits which have more or less established this as a basic rate.

So the profession has put itself into an awkward situation, because with increased technical skill among its draughtsmen and advanced ideas concerning the quality of workmanship which should go into a set of drawings, it proceeds to deliver a superior service for which it is inadequately paid. How can a business man understand this if he has never seen a contract set of

Why penalize the architect every



THIS IS THE BASIS FAIREST TO ARCHITECT AND CLIENT
provided for in a printed document of the American Institute of Architects

the '80's? I am not writing from hearsay, for I cut my architectural teeth on that kind of a working drawing in 1886.

And so I find myself blaming the profession for the situation it finds itself in. Let us analyze the percentage system to see how logical it is.

We accept, as our professional obligation, the necessity of keeping the cost down. Whenever an owner says, "That's too high. I must ask you to do everything possible to bring that figure down to—," (a figure he arbitrarily selects), we automatically do our best to meet his wishes. Is there any argument needed to prove the absurdity of a system which calls upon an architect to penalize himself in this manner? It is not uncommon for an architect in high-minded observance of the ethical standards of his profession to struggle for days to cut the cost down to a point where his anticipated profit has vanished. That very thing, or something approaching it, is happening all the time. Of course it would be logical to pay an architect a percentage of every dollar he saves by extra exertion, but instead of that fair and equitable plan, the architect is the one who pays the

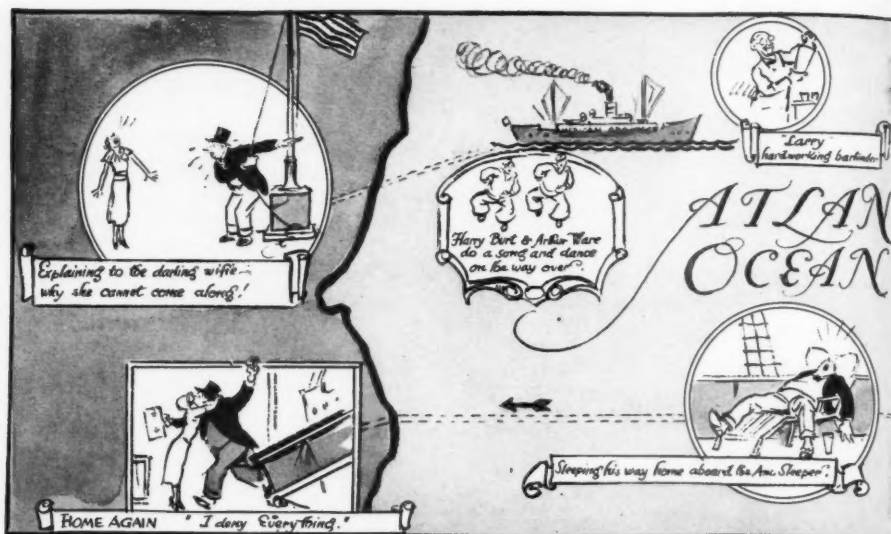
owner a percentage for every dollar he saves the owner.

I claim that the situation in which the profession finds itself is serious, because the public cannot have full respect for a body of men who will continue to pay an owner a percentage on every dollar saved by the architect's efforts. Thank God we still have a goodly number of high minded idealists in our profession who go plugging along doing good work, paying their clients 6% or 10% on every dollar saved, and apparently oblivious of the funny rôle they are playing. But the fact that we have many high minded, conscientious men in our profession does not constitute an argument for letting things go on as they are.

Another feature of the percentage system as broadcasted by a printed A. I. A. schedule, is the very real danger of letting the public believe that one architect is about as good as another. The public sees a youngster just established asking and receiving, even with the support of a court in a dispute, the same fee that firms of forty years' standing receive. If, thinks the public, they charge the same percentage fee, it means that the work is more or less mechanical (Continued on page 114)

time he saves the owner money?

THE START: 53 Anciens Americains joyously go forth to present a flag pole to their Alma Mater, the Ecole des Beaux Arts



CONRAD

in Quest of His Youth

or

The Vindication

of Ponce de Leon

By LOUIS LA BEAUME, F.A.I.A.

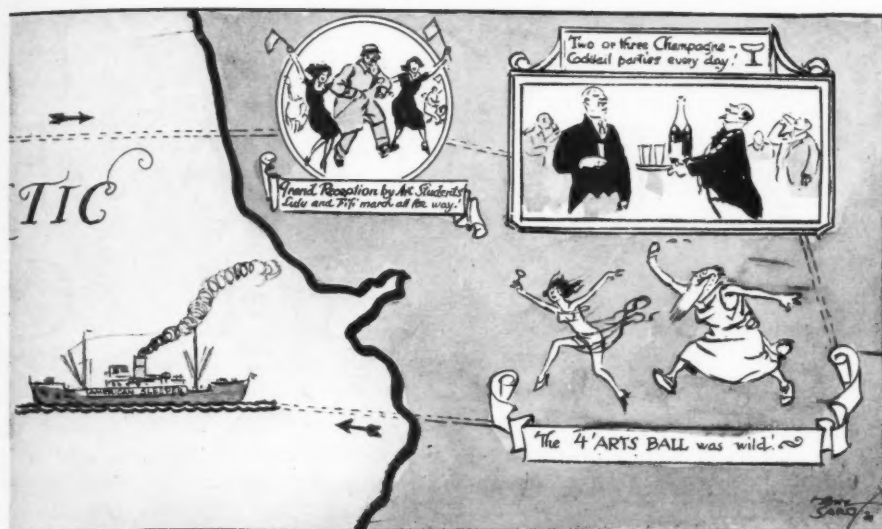
with a map of the adventurous route
specially drawn by Tony Sarg



"WHAT A GAME!" is the evident opinion of Ken Murchison as he tries to get a shuffle board "crick" out of his back



AN HONORABLE EXCUSE for the trip was the presentation of a flag pole to the Ecole des Beaux Arts, that cradle of so many eminent talents. And here is the flag pole



THE OBJECTIVE: Paris, the new freedom, rejuvenation! And, of course, the dignified presentation of the flag pole

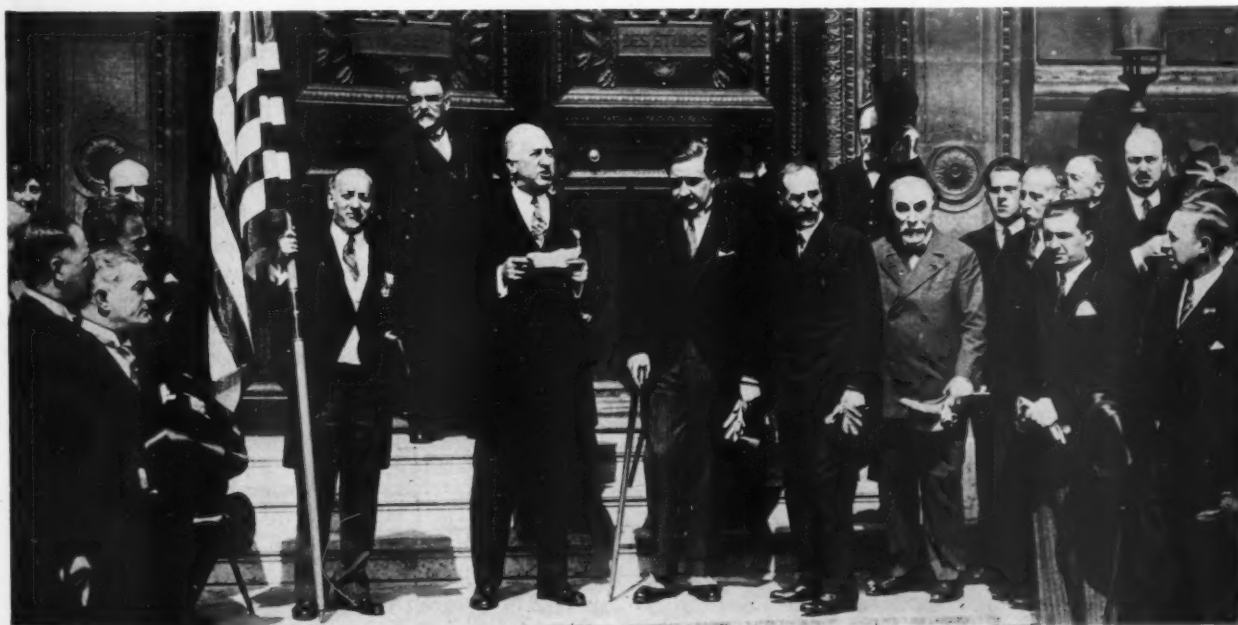
WE lunched at the Architectural League one day late in May. Ken Murchison sat at the head of the table—in MacGregor's seat. At about half past two he arose, tapped on his glass, and said, "Gentlemen, if you have finished your coffee, we will go to Paris." And so it happened, that about two hours later amid a great tooting of whistles and waving of handkerchiefs, the American Architect alias the American Banker steamed down the harbor, bearing fifty buoyant Conrads eager to tilt their lances at the court of love and beauty.

To the world we had announced the noble purpose of our voyage as the presentation of a Flag Pole to the Ecole des Beaux Arts, that berceau in which so many now eminent talents have been cradled. The Flag Pole would be a symbol of our love and devotion; an up-standing witness of our gratitude, an acknowledgment

of our indebtedness to the inspiration of French art. What a Happy Thought! Any excuse is better than none, and an Honorable Excuse is the masterpiece of excuses. Freddie Hiron had designed it, Simeon Shepherd had erected it, and it stood in the little garden of the Ecole awaiting our coming.

Secretly we had longed to visit again the haunts of our youth, with the friends of our youth; longed to recapture, if possible, the spell of those other days. Now that we are back again, safe and sound, we may as well be honest about it; that is, reasonably honest.

We went on a slow boat to build up tissue for the ordeal. We came back on a slow boat to recuperate, thus mitigating the impetuosity of youth with the wisdom of age. There were really fifty-three of us since we have agreed to be reasonably truthful. Not all were architects—that is, Registered Architects— (Continued on page 100)



A FLAG TO TAKE HOME to the Society of Beaux Arts architects was solemnly presented by the Ecole des Beaux Arts. Julian Levi is holding the flag with a firm grasp, while Ken Murchison delivers the speech of acceptance in perfect French

An Inexpensive Plan to EDUCATE the PUBLIC

This plan has been successfully operated by the Advertising Federation of America. It can be conducted just as successfully by the architectural profession

By BENNETT CHAPPLE
Vice President, The American Rolling Mill Co.

ARCHITECTURE is an education as well as a profession, but the education in this instance has to do with the public. Appreciation comes through knowledge and understanding and just so long as the public regards architecture as a thing set apart from the everyday walks of life, just so long will architecture suffer in its opportunity to give expression and to serve mankind to the fullest.

Sifting out the facts, two things are holding back the broader use of architectural guidance today. First, is the strange delusion on the part of some architects that when they take the vows of architecture they must set themselves apart and eschew all contaminating influence of modern sales propaganda. Ask any industry with a new offering for consideration of architects. They'll tell you it is like trying to climb an impassable wall, and only the salesman with complete and sympathetic understanding of this "peculiarity" can get by the outside barriers.

Now the unfortunate thing is that if architecture is to serve the world in the way it should and can, it must serve businesses whose representatives are knocking at their door. Here's where the average architect fails to recognize his responsibility to himself or his profession. It takes but a few minutes to hear the salesman's talk and get a clear understanding of the proposition, and that's all business wants. From this point on, it is solely a matter of the architect's judgment—he sells himself or does not, as the case may be, and every one is satisfied.

This change of attitude on the part of architects would do more than any other one thing to warm the heart of the world to their calling. Ten thousand architects working along these lines could revolutionize the building industry of America in twelve months, because of their frank, earnest spirit to be interested and helpful. It is

the old story of "bread cast upon the waters." A hundred thousand salesmen are calling on architects; these hundred thousand salesmen have millions of friends; these millions of friends make up the general public who, today, regard architecture as something that only applies to public buildings or imposing structures far removed from the ordinary walks of life.

This is not guess work. I know a young architect who started out in a rather unpromising location with just one thought—to be helpful to every one. His first jobs were small ones, but one by one people began to come to him with their building problems, until today, in ten years' time, he has splendid offices with a splendid business, and many pretentious structures to his credit. He sold the idea of architecture to his community through his spirit of helpfulness.

These comments are not for the architect who has arrived, whose reputation is in the hall of fame, who can sit back and let the world come to his door. There are a few of this kind, but the business of architecture cannot draw red blood from such limited reservoirs of accomplishment, outstanding though they may be. And, too, I suspect even these men owe their success to some favoring circumstance, some lucky turn of the card that gave them a chance to unfold their genius.

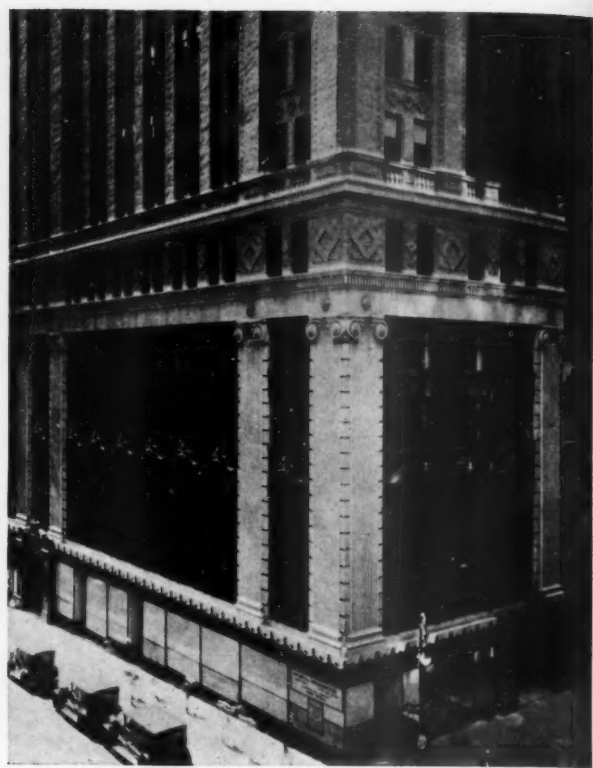
The American Institute of Architects has come to appreciate the need for concerted effort to promote the cause of architecture. Now, the question is how to go about it. Fortunately, there is no lack of available funds for the right kind of promotional effort. If the problem of the architectural profession is to sell architecture, why not begin by taking a page out of business? Business has learned that to be successful it must center on an objective, and that is service. Then it must bring all its forces to play on this one theme until the public is convinced that it has been overlooking something worth while. This means education.

Some have suggested that a generous part of the funds of the Institute be set aside for page advertisements in leading publications to forward this movement. Others are horrified at the suggestion as being too commercial. They prefer to get their advertising through the hidden pipe-lines of free publicity.

But there are many ways to spend money for advertising just as there are many ways to design buildings. Personally, I would begin by spending the Institute's money in a much more conservative way than double page spreads in leading publications, as effective as that might prove to be. I would begin close to the soil with my foundation and I would (*Continued on page 74*)



A GLASS FOUNDATION, without any attempt to express the cantilevers over the show windows



UNSUPPORTED PIERS and a main entrance at right crowded in without relationship to anything

WHAT WE SHOULD CONSIDER Before We Criticise

By TALBOT FAULKNER HAMLIN, A.I.A.

If we are to have architectural criticism, the quality of the criticism becomes of vital importance. In a time of flux in taste neither the criteria of styles nor the "I like it because I know what I like" attitude will be helpful. The condition of style correctness as a mark of beauty is precisely what we are growing away from; the other purely personal basis can be used to justify the most paranoiac work. Architectural criticism today must go behind archeology and behind personal whims: it must be founded on the bedrock of what architecture is; it must get down to brass tacks. Only so can criticism guide, chasten, encourage, and at the same time grow with the growth of the artist's creative power.

This necessitates a simple and complete conception of what architecture is. Let us start with the simplest possible definition: *Architecture is the art and science of building beautifully.* In other words, architecture combines both structural and decorative elements. It is not like engineering, which approaches a problem solely from the point of view of structure and efficiency; nor yet is it like painting, sculpture, or stage scenery,

whose value is based solely on the direct impression upon the sight. Thus, though all architecture is building, only those buildings in which the creative effort—conscious or unconscious—to achieve beauty is added to the structural, engineering design can be called architecture. Thus, too, many buildings which might form admirable pictures or stage designs are, nevertheless, bad architecture—perhaps not architecture at all.

This double nature of architecture, which is part of its special essence, its peculiar value, makes the greatest care necessary in attempting any formulation of the possible basis of a sound criticism. A division into two main classes—structural elements and decorative elements—is inevitable; yet any consideration of an actual building necessitates bearing in mind continually the double aim. Admiration for clever structures must not blind the critic to obvious failures in handling that structure creatively; admiration of decorative facility, richness, and invention must not be allowed to hide structural or planning falsities or slovenliness. With this in mind, with a due sense of (Continued on page 110)



INHARMONIOUS SCALE. The bulky buttresses, the great curling leaves of the frieze, the delicate fish and seaweed of the bronze band below—what has the scale of each part to do with the scale of any other portion?



LIVABLE AND LOVABLE, beauty unafraid, resulting from the expression of the structural system

FOR SEPTEMBER 1931



EXPRESSIVE BEAUTY, with forms which reveal the building's uses—a place full of delicate apparatus

THESE DESIGNS WERE BASED UPON

Modern Veneer CONSTRUCTION

Woodwork in the Irving
Trust Company Building,
1 Wall Street, New York

Voorhees, Gmelin & Walker, Architects

By EUGENE CLUTE

CONSTRUCTION

Vertical wood veneer strips with a fire-proofed wood core, shop glued, were used for the walls.

Veneer strips have rabbeted edges screwed to grounds.

In the recess formed by the rabbets, vertical moulded strips are fastened, the countersunk nail holes being filled with plastic wood.

When V-shaped cuts were desired thicker than the veneer, a strip of solid finished wood was set in the veneer to receive the cut.

DESIGN

Horizontal divisions were necessary as the length of veneer strips is limited.

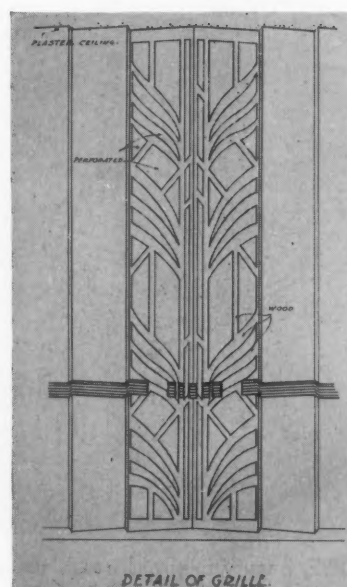
Divisions were secured by using narrow strips of different woods, or by V-shaped cuts in the veneer.

Where large scale was required, adjoining strips were set to form a V-shaped re-entrant angle.

No trim was used, the wall surface being carried into window openings and doorways.

Bases are flush.

Dados and wainscots were capped by a narrow beveled strip.



TEAK natural in color and finished with clear lacquer was selected for the walls of the Board Room. The furniture, of special design, is of Santo Domingo mahogany, reddish in color. The carpet is burnt orange. The ventilating grilles are of perforated wood set flush with the wall surface and are about 12 by 21 inches in size



GOLD LEAF, unglazed, covers the ceiling of the Board Room. The ceiling is beveled in subtle planes that join those of the wall surfaces. The narrow slits at the left of the illustration are auxiliary vents



Detail of typical wall arris used in the Board Room. Subtle angles and planes are the basis of the design

ered to the desired height with vertical strips of wood ranging from 4" to 18" wide. To prevent warping, these strips are built-up of a core of fire-proofed wood upon the face of which is a veneer of finished wood, while upon the back is a veneer of a less costly wood that expands and contracts at practically the same rate as the veneer upon the front. The whole was firmly glued together in the shop and has much less tendency to shrink or warp than a piece of solid wood of the same dimensions.

These strips of wood are placed upright and edge-to-edge against the walls and fastened to grounds with screws run through rabbeted edges. Then, a moulded strip is fitted into the recess formed by the rabbets, covering the screw heads. This strip is held in place by finishing nails, the heads of which are set, and the nail holes filled with plastic wood.

MODERN methods of using wood have been made the basis of the designs for the interior woodwork in the Irving Trust Company Building, and as a result of the thorough study given to detail by the architects, Voorhees, Gmelin & Walker, this work sets a new pace. It shows the kind of originality that makes a worth while contribution to the modern manner in interior architecture—a thoughtful and practical as well as inspirational originality.

This woodwork is used in its true character, as a mere lining or veneer upon the walls without pretense of any non-existent structural character; there are no columns, pilasters or cornices and since this work is not framed together, there are not even the usual rails, stiles and panels, or suggestions of them.

The construction, which finds direct expression in the design, is essentially modern. The walls are cov-

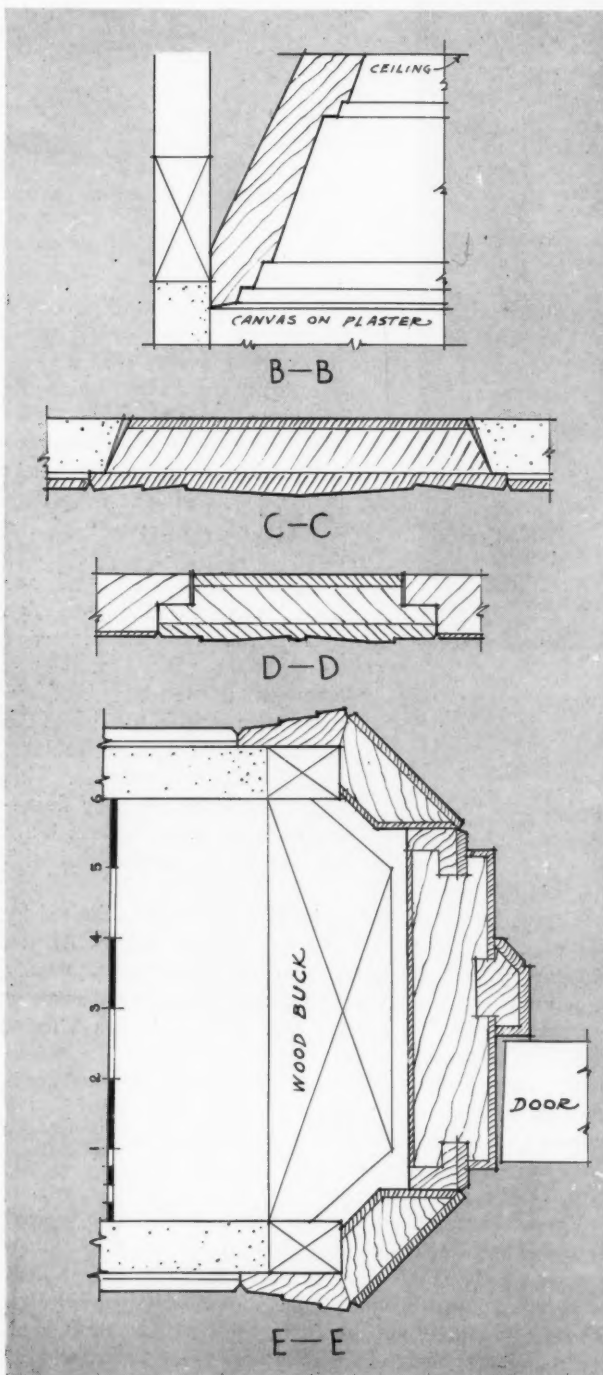
The width of the vertical strips of wood is limited by the diameter of the logs from which veneers of the finishing wood are cut, therefore, there are no unusually wide unbroken surfaces. The veneers run narrower away from the center of the log and there are always more or less ragged edges which still further reduce the width of the veneer which it is practicable to use without joining. In most instances, however, the strips used in the woodwork of the Irving Trust Building are narrower than the widest obtainable veneers, for reasons of design, chiefly considerations of scale and proportion.

The width and thickness of moulded strips are limited by the New York City Building Code, which prohibits the use of pieces of wood of more than one square inch in section, unless fireproofed. Such mouldings have to be cut from the solid which can not be fireproofed, as fire proofing would change its appearance and general

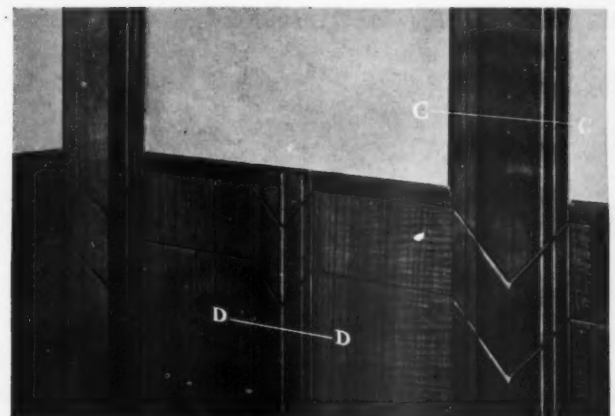
» » » W o o d w o r k U s e d I n

color. One square inch in section does not allow any very deep cutting. Consequently, the profiles of mouldings must be rather shallow, even though the bulk of the strip back of the moulded finished wood is of fire-proofed wood.

The length of the veneered strips is limited by the length of the pieces of veneer obtainable and, when a greater length is required, a horizontal division must be made. In two of the rooms, the first-floor banking room and the board room, for this reason, there is a double



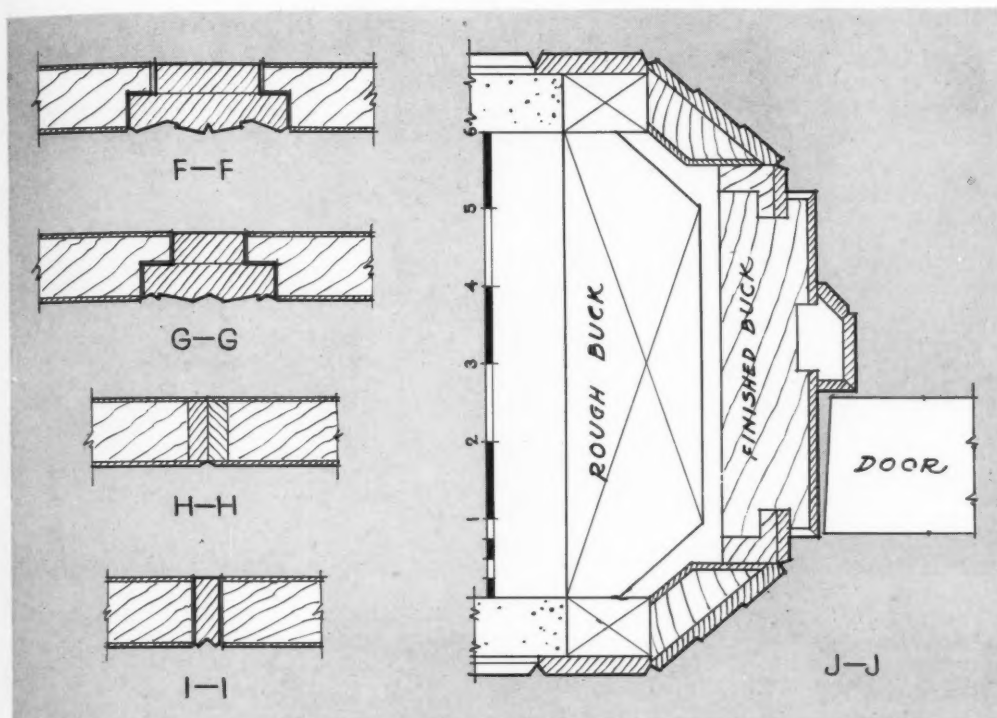
YUBA wainscot with birch stiles are used in this conference room. Walls are painted the color of the woodwork



MOULDED stiles of flat projection in character with veneer technique are used in offices and conference rooms

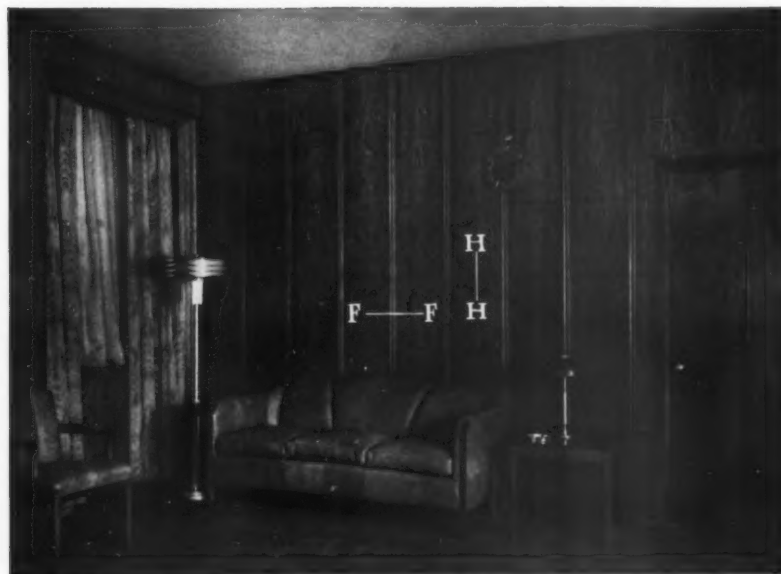
DETAILS of ceiling mould, vertical stiles, and door jamb of room with low wainscot and plaster walls. The construction is based upon the use of veneers on a fireproof wood core backed up with a veneer of an inexpensive wood. Solid wood moulds are limited by New York Code to an area of 1 square inch

Its True Character...



VARIETY has been secured in moulded division strips between flat veneer panels. Verticals have been emphasized. Horizontal divisions have been reduced to shallow incised v joints between veneered panels. All projections are flat and breaks slight and subtle

CONFERENCE room in lacquer finished teak with brown and gold carpet and golden brown ceiling



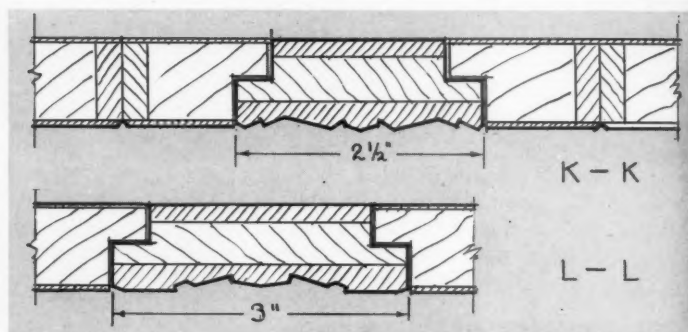
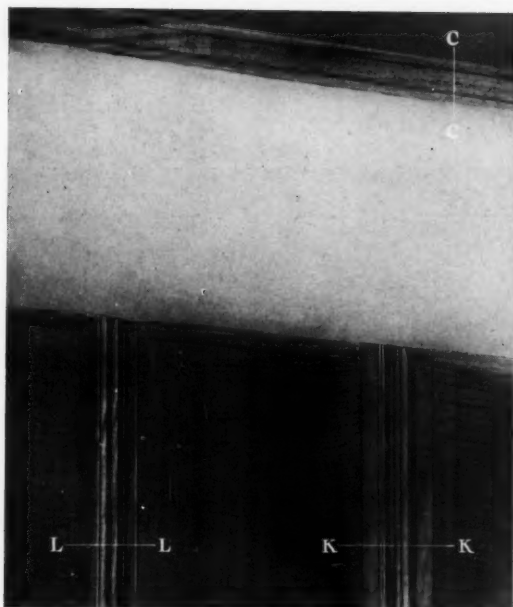
V-shaped cut all around the walls three or four feet above the floor. Elsewhere such horizontal cuts have been employed purely for reasons of design, usually to secure desired scale or proportion.

TYPICAL of rooms with wainscot to the ceiling and having a variety of wood moulds

When a V-shaped cut is desired deeper than the thickness of the veneer permits, banding is used; that is, a strip of solid finished wood is set in the veneer to receive the cut. Such banding was glued in and grooved at the shop.

Another means employed in dividing the surface for decorative effect consists of inlaying a narrow strip of a

PINK - YELLOW
yuba from Africa
sets the color
scheme in this
conference room.
The wood is fin-
ished in clear
lacquer and the
ceiling painted
about the same
color as the wood



STILES of varying width and detail
are combined in some of the rooms

AT LEFT a close-
up detail of the
high dado in the
room shown above

AT RIGHT detail
of a doorway with
deep jambs showing
method of handling

different wood in the veneer. An example of this is found in the elevator lobby on the forty-ninth floor, where the koa wood upon the walls is divided into rectangles about 16" wide by 25" high by inlaid strips of ebonized holly wood one quarter of an inch wide.

Where a vertical feature of large scale is required, two adjoining vertical strips of veneered wood are set to form a wide, V-shaped reentrant angle or sinkage of slight depth in the wall. For relief, the relatively wide surfaces of such sinkages are broken by a series of arrises of slight projection, very much like the edges of boards lapped one upon another.

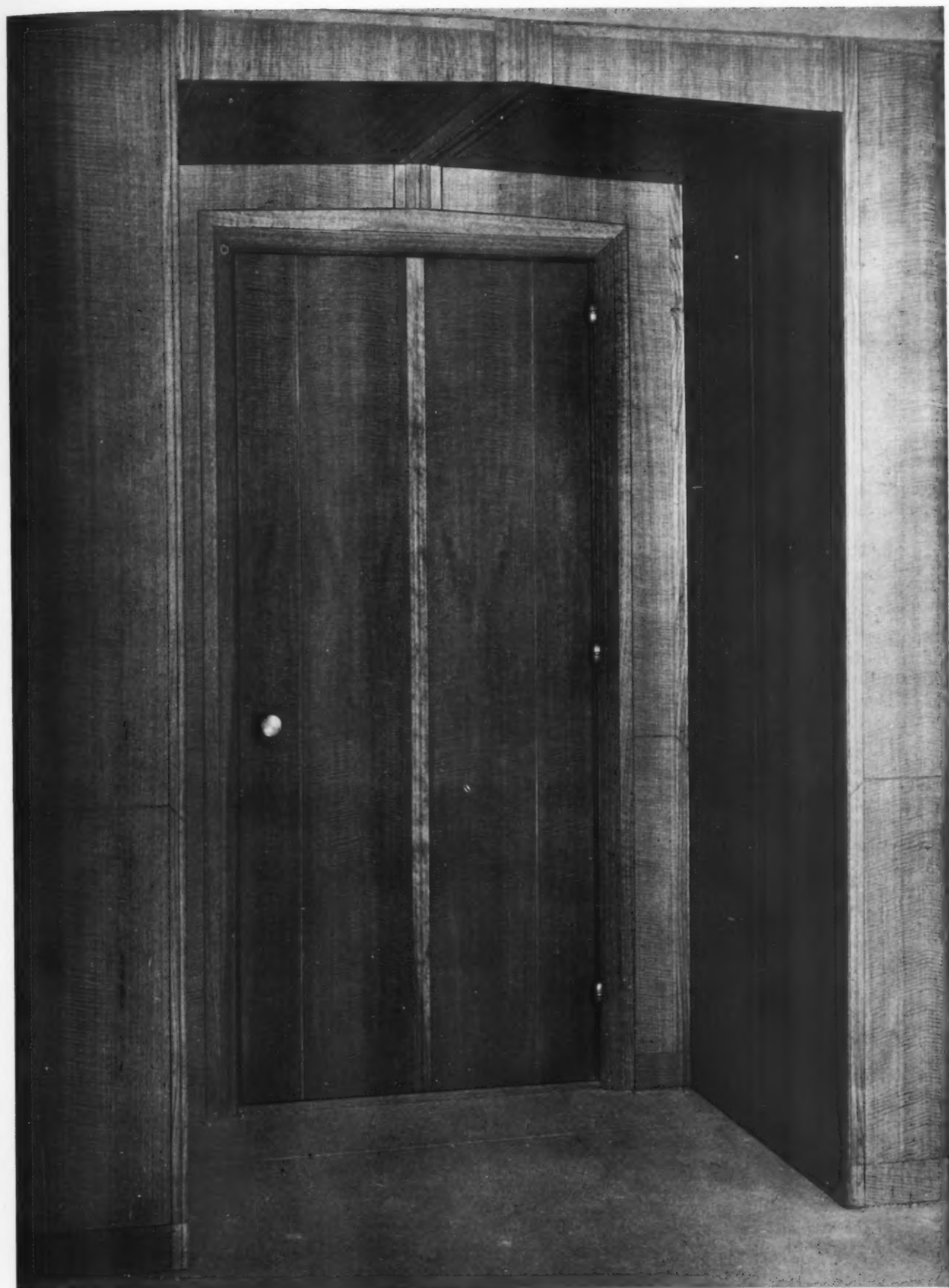
This method of treatment is used in the board room,

where features of this form are carried to the ceiling in wood and across the ceiling in plaster. Arrises similar to that described are employed at smaller scale elsewhere, as in some of the door jambs.

Anything that might make the woodwork seem more than a lining or veneer is avoided. The bases do not project, but are flush with the face of the woodwork above them, and they are only 3" high throughout the building. The dados and wainscots have no marked crowning member; instead, they have a narrow beveled strip along the top that effects an easy transition to the plaster wall above.

There is no "trim" in its (Continued on page 90)

Recognition of Modern Methods



Produced Inspired Originality

FOR SEPTEMBER 1931

41

Comment Requested on Committee Report For UNIFICATION of the PROFESSION

UNIFICATION of the entire architectural profession throughout the United States is actively under way. Because of its vital importance to every architect, the preliminary report of the committee is presented in these pages for comment and criticism by architects, regardless of their affiliation with the Institute or other architectural societies. Such comment should be addressed to Edwin Bergstrom, chairman of the joint committees on unification, 1129 Citizens National Bank, Los Angeles.

The necessity for this unification, and its importance to the very life of the profession, is emphasized by Frank C. Baldwin, secretary of the American Institute of Architects, in the foreword to the report of the Unification Committee. He states in part:

"When stabilization finally comes in the United States the architectural profession, and the individual architect, will be confronted with conditions of practice and with forms of competition not encountered before. The opinion of many architects is that the profession of architecture, at least in the United States, must be prepared to meet the new conditions if it is to survive as a profession, and if it intends to maintain intellectual command in the building industry. Now is the time to lay the foundation, to prepare for competition, and to make ready for the opportunities of the future.

"In numbers the architects are but a handful. Because they are individualists they have so far failed to unite as one professional group under national leadership. At present there are a multiplicity of independent state, city and county organizations of architects and of draftsmen, and other types of local societies—all of which are uncoordinated and, therefore, a source of confusion to the architectural profession itself, to the building industry, to the community, to the public press, and to the legislative and executive agencies of state and federal governments."

The preface to the report of the committees states in part:

"The Board of Directors of The American Institute of Architects stated to the sixty-fourth convention of the Institute at San Antonio in April of this year that—

"The exercise of leadership is primarily the function of the national body and always should be. The Institute must lead the architectural thought of the country, and develop general principles and policies which it must promulgate for the general benefit of the public and the architectural profession. Consequently, it cannot act in detail to carry out these policies throughout the forty-eight states, and the state societies that have been developed are agencies which will achieve this result."

FOLLOWING the sixty-fourth convention of the American Institute of Architects, President Kohn and the Board of Directors appointed a special Committee on Unification to meet with a like committee from the State Societies. The chairman of the joint meeting held in Indianapolis on June 26 and 27, 1931, was Edwin Bergstrom. The members of the Unification Committee representing the Institute were Edwin Bergstrom, Charles Butler, Frederick Garber, Louis LaBeaume, and Frederick Meyer. The State Societies were represented by a committee consisting of Tirrell Ferrenz, Merritt Harrison, Frederick Mathesius, Jr., Walter McCornack, Lancelot Sukert, and R. M. Trimble.

The Unification Committee desires comments on its report from all architects. The matter is important and warrants careful thought and consideration. The report is stated to be tentative and sets forth certain basic principles. Comment is desired on the fundamentals and not upon the phraseology and lesser details of the proposed set up.

The report of the joint meeting of the Unification Committees, representing respectively the American Institute of Architects and the state societies, follows:

The members of the two committees unanimously agreed that the final plan of unification must be based on and embody certain fundamental elements, the most essential of which were declared to be as follows:

1... One National Organization

There should be only one national organization of architects and that should be The American Institute of Architects.

2... The Institute Should Be Inclusive

The American Institute of Architects should represent all factors of the profession of architecture nationally.

3... State Organizations

A state-wide organization should be incorporated and

maintained in each state to represent all factors of the profession of architecture within the state.

4... Local Branches of State Organizations

Every state organization of architects should establish and maintain local branches within the political divisions of the state, and such local branches should be allied with the local chapters of the Institute for pronouncements and affairs affecting the profession locally.

5... Chapters of the Institute

The Institute should establish and maintain chapters of the Institute within the states as local organizations of Institute members.

6... Membership of State Organizations

Every state organization should provide corporate memberships to which shall be eligible every registered, licensed, practicing or resident architect in the state and every person teaching subjects relating to the profession of architecture in recognized schools of architecture in the state.

7... Architectural Clubs—Junior Associates

Local architectural clubs should be established and maintained within every state to which shall be eligible every person, not a corporate member in the state society, who is employed within the state for the preparation of drawings, specifications, or other documents or for the supervision or superintendence of the construction of works of architecture.

Such architectural clubs or the members thereof shall be allied as Junior Associates with the chapters of the Institute within the state.

The Junior Associate should be under no compulsion to change his membership status, unless he becomes a practicing architect. This would also replace the present Junior Class of the Institute.

8... Student Clubs—Student Associates

Local student clubs should be established and maintained in every recognized school of architecture within the state, wherein every student of architecture shall be eligible to become a member while he is attending such school or while he is spending the major part of his time in post graduate architectural studies in such school, or elsewhere under its jurisdiction.

Such student clubs or the members thereof shall be allied with the chapters of the Institute within the state as Student Associates.

9... Alliance of State Organizations with the Institute

Every state organization of architects, as and when it becomes representative of the entire profession of architecture within the state, shall be eligible for alliance with The American Institute of Architects.

10... Convention Representation

Every state organization of architects when allied to The American Institute of Architects should pay annual dues to the Institute, dependent on the number and classes of the members of the state organization, and be represented by a delegate and one or more alternates in the conventions of the Institute. Such delegates shall be Institute members. Each state organization shall be

entitled to cast through its delegate or his proxy at least one vote on each question at the convention, and not more than three such votes apportioned according to the membership of the state organization, but the total number of such votes of all delegates of the 48 state societies shall not exceed 96 votes in a convention limited to a total of 250 votes.

11... Election of Directors by Divisions

Those members of the Board of Directors of the Institute who represent geographical divisions of the country, the Regional Directors, should be nominated by the chapters of the Institute within the respective divisions and elected by letter-ballot of the Institute members within the respective divisions, prior to conventions.

12... Objects and Purposes of State Organizations

The objects and purposes of every state organization of architects should be similar to the objects and purposes of the national organization.

13... National Leadership Vested in Institute

The American Institute of Architects should adopt and promulgate the general policies of the profession of architecture and carry on all national activities relating to that profession.

14... Support of Institute by State Organizations

Every state organization of architects and its branches should support the national organization unreservedly in its national activities.

15... Freedom of Action of State Organizations

Every state organization of architects should maintain and exercise the freedom of action of an independent organization with respect to the manner, degree and extent to which and the time within which it supports and carries out the general policies adopted by the national organization, but it shall not nullify or subvert any such general policy.

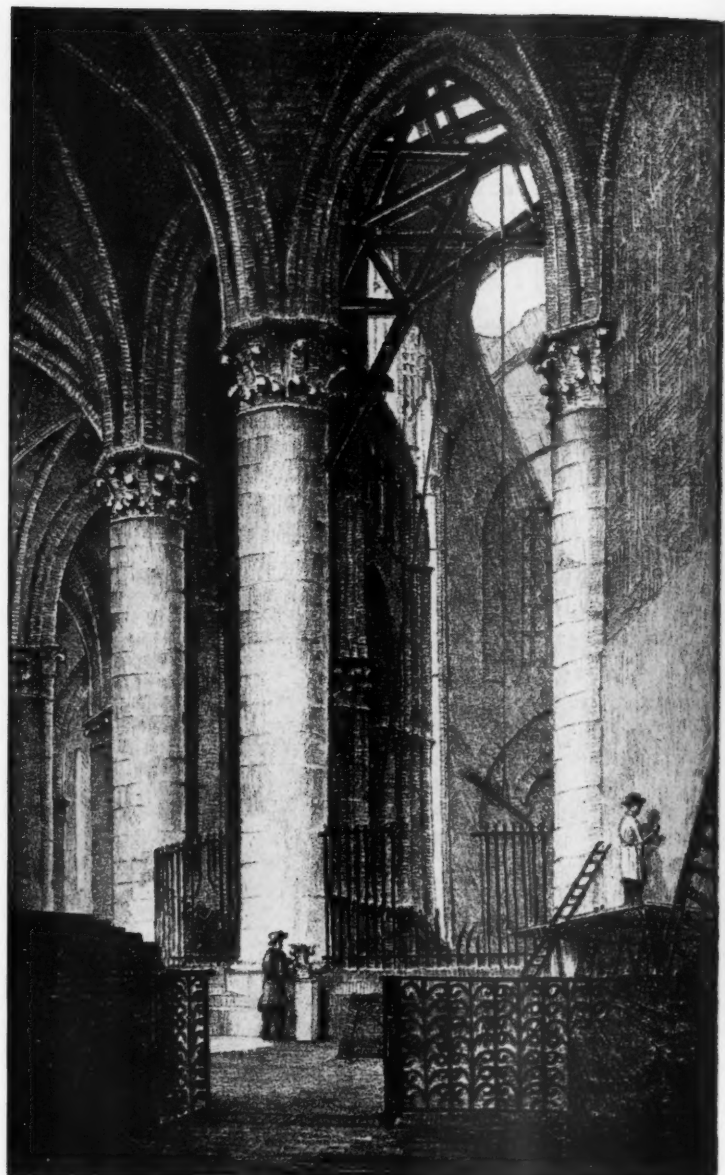
IN making the above declarations the committees did not intend thereby to suggest any change in the memberships of individual architects in the Institute, their representation by delegates in the conventions of the Institute, their method of selecting the delegates, or the value of the votes of the delegates. Nor did the committees intend to suggest any change in the disciplinary procedure with respect to Institute members or in the status of the chapters other than to require the chapters to act in collaboration with the local branches of the state organizations in matters of local pronouncements and affairs, and probably to place upon the chapters the prime responsibility for the Junior Associates and the Student Associates.

The report has been submitted to all Institute chapters, Board of Directors of the Institute, and State Societies to invite their consideration of the reasons for unification and to invite support of the fundamental principles set forth in the report. Comment on the report is desired before September 1. Edwin Bergstrom, chairman of the joint committees, will analyze any comments submitted and present them to a second meeting of the Unification Committees before the November meeting of the Board of Directors of the Institute.



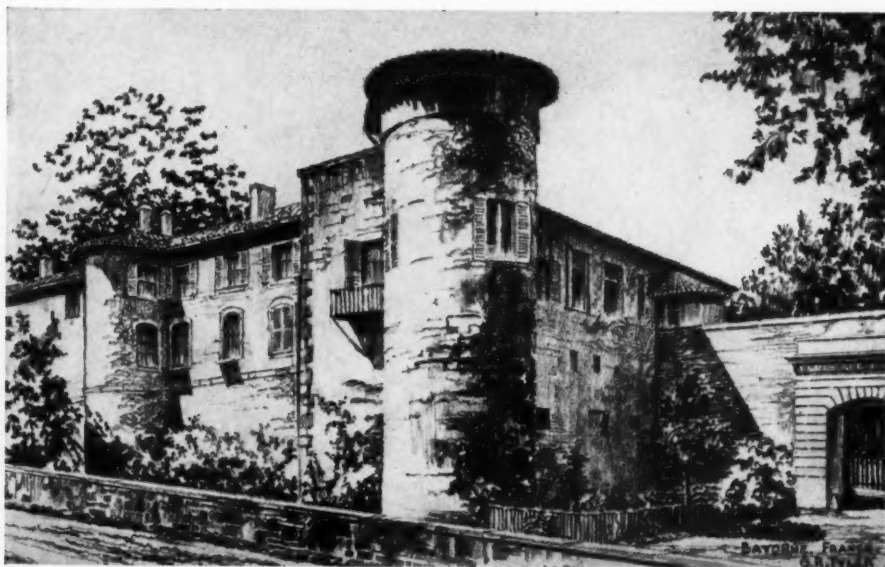
JACQUES COEUR HOUSE, Bourges

once a medieval palace, now a museum.
Pencil sketch by Morris Ketchum, Jr., of
the architectural office of Francis Keally



RHEIMS CATHEDRAL

a lithograph on stone made in 1925 and showing
the restoration work being done on the
apse. By Alfred E. Poor, architect, New York



FROM BAYONNE, Basses-Pyrenees, France

An old chateau built on the
site of an ancient Roman
Atrium; probably some parts
of the old structure were
used in this building, and
added to from time to time.
Alonso the Battler, King of
Navarre, lived here in 1130;
other kings also used this
castle. The sketch was made
with lithographic pencil by
Gerald Tyler of Marshall
& Tyler, architects and
engineers, Philadelphia



ST. MARK'S, VENICE

Lithograph by Joseph B. Wertz, New York, who was winner of the Le Brun Travelling Scholarship in 1930



EUROPEAN SKETCHES

CAUDEBEC, FRANCE

Pencil sketch by Alfred E. Poor, Rogers and Poor, architects, New York

» » » ALL IN THE Ideas that have solved some



• SANDBLASTING CORRECTED MISTAKE

By Louis A. Brown, Jr.,
of Pruitt & Brown, Architects, New York

IN building Childs' Old England restaurant in New York City, it was proposed to use a blow-torch to darken the oak panelling. The mechanics, unfortunately, in their enthusiasm, proceeded to char the wood so that it looked more like charcoal than wood. To correct the mistake the workmen tried to clean the surface with glass, sand, wire brushes, and other implements without making any appreciable impression on the wood.



Sandblasting was, at this time, being used to clean a building across the street. Negotiations were entered into with this contractor to borrow his equipment for one night as a final experiment on the woodwork before ordering the woodwork removed from the job. After an hour's work, an area of four square feet was cleaned off with the sandblasting machine. Through the dust and fog it appeared to be reasonably satisfactory and orders were given to clean the entire room by this method. By the next morning the dust and fog had settled and it was discovered that the result was all that anyone could wish for in beauty of finish, color and texture.

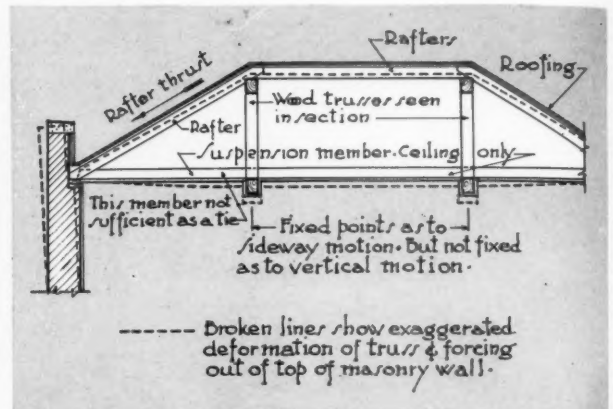


Fig. 1. The roof as framed and the result.

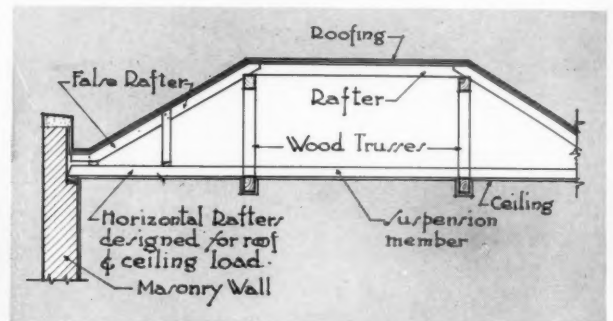


Fig. 2. The roof as it should have been framed.

• POOR ROOF DESIGN BULGES WALL

By Joshua H. Vogel,
of Baker, Vogel & Roush, Architects, Seattle

THE parapet of a building about one year after the building was completed, was found to be bulging out several inches. Investigation disclosed that trusses of over forty feet span had been built as shown in Fig. 1. Apparently, for reasons of economy, the roof of rafters had been placed diagonally from the trusses to the masonry wall. The rafters were nailed to the top cord of the truss, had adequate bearings on the wall, and were of sufficient size to carry the roof load. The trusses took their natural and inevitable shrinkage, settled into permanent shape, and the only place for the resulting thrust was against the diagonal rafters which pushed out the top of the wall.

The roof should have been suspended on horizontal rafters from truss to masonry as shown in Fig. 2. If diagonal rafters were desired for exterior effect, these diagonals should have been carried on struts, leaving plenty of clearance for movement at the base of the diagonals toward the masonry. Slip jointing the flashings would keep the roof water tight.

DAY'S WORK

problem or made a job easier

• KNOCKDOWN COAT RACK SAVES STORAGE SPACE

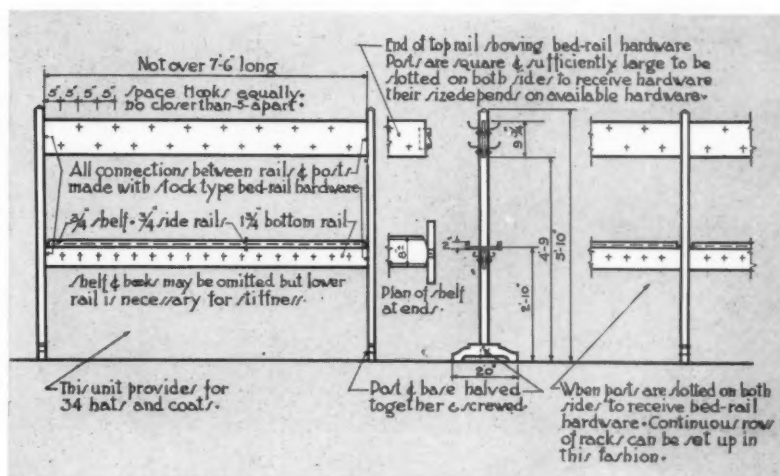
By Lancelot Sukert,
of Sukert & Cordner, Architects,
Detroit

WHERE space cannot be provided for a check room, it is usually desirable and necessary to provide hat and coat racks that can be stored away when not in use. As usually built, these racks require considerable storage space. A knock-down rack has been found in several instances, particularly in parish houses, to be a satisfactory solution of the problem.

The construction of a knockdown rack is simple and takes advantage of a seldom-thought-of item of hardware—the bedrail hook. You know how snugly and perfectly tight a wood bedrail fits against the corner posts and how comparatively easy it is to assemble a wooden bedstead.

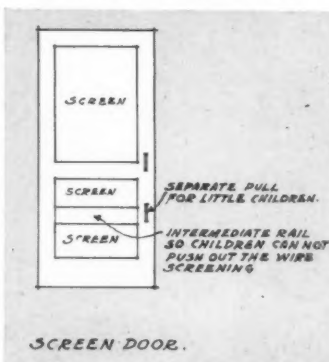
The horizontal rails of the knockdown hat and coat rack fit into the posts in exactly the same manner. One unit can be used in any room where small gatherings occur or several rows of continuous units can be set up in any convenient room to form a temporary coat room.

A coat rack of this type would be useful in many hotels and clubs. It could easily be made more attractive by means of a few mouldings and turned posts. The rails should be made sufficiently short so that they will easily pass through the average doorway.



• TO SAVE THE SCREEN DOOR

By Frank Cordner,
of Sukert & Cordner, Architects, Detroit



OWNERS of houses in which children live, often experience the necessity of frequent repairs to screen doors if no precautions have been taken to prevent the youthful members of the family from opening the screen doors by pushing on the wire screen panel.

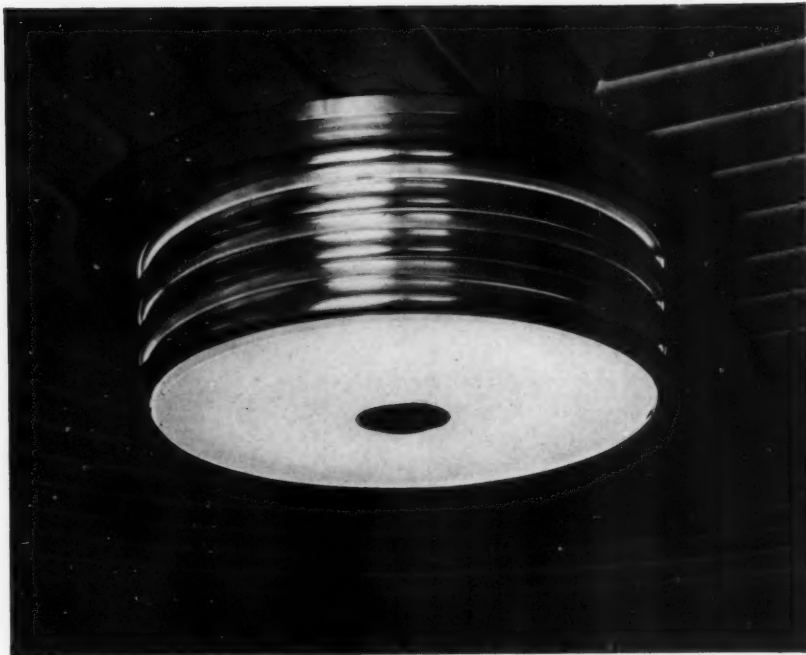
This can be easily provided for, by screwing an intermediate rail on the face of the door, at the level at which the children are apt to find most convenient. A separate door pull opposite the intermediate rail is also convenient and usually appreciated.

• A GOOD SHELF WOULD HELP

By R. J. Pearse, Landscape Architect,
Birmingham, Ala.

MOST men when traveling carry their shaving equipment in a case that can be laid on a shelf twelve inches square. It is a rarity to find a hotel bath room provided with a shelf of this size and as a result the case must be placed on the floor or other inconvenient place. Every hotel manager or designer should be made to live in a typical hotel bed room for several days to thoroughly understand the minor conveniences that are appreciated by guests. One of these would be an adequate shelf such as that referred to above.

Every architect and draftsman has at some time designed some unusual detail that has solved a real problem. Perhaps it is not a spectacular idea, not worth writing an article about, but is worth passing on to some one else. A difficult flashing problem, a difficult structural detail, a space saving closet or cupboard, or possibly a specification "kink" are but a few of a great many ideas that are worth describing. Drawings should be made in ink ready for reproduction. Descriptions should be brief. Modest payment will be made for all ideas that are accepted for publication. Address the Editors, American Architect, Eighth Ave. at 57th St., New York.



DIRECT lighting of a stair landing having low head room. Fixture combines glass bottom disk and louvre rings to diffuse the light



INDIRECT illumination using a fixture based upon the architecture of which it is a part. Use is made of walls of the entrance as reflecting surfaces

FUNDAMENTALS IN
PROVIDING FOR

Good Lighting

By WALTER W. KANTACK

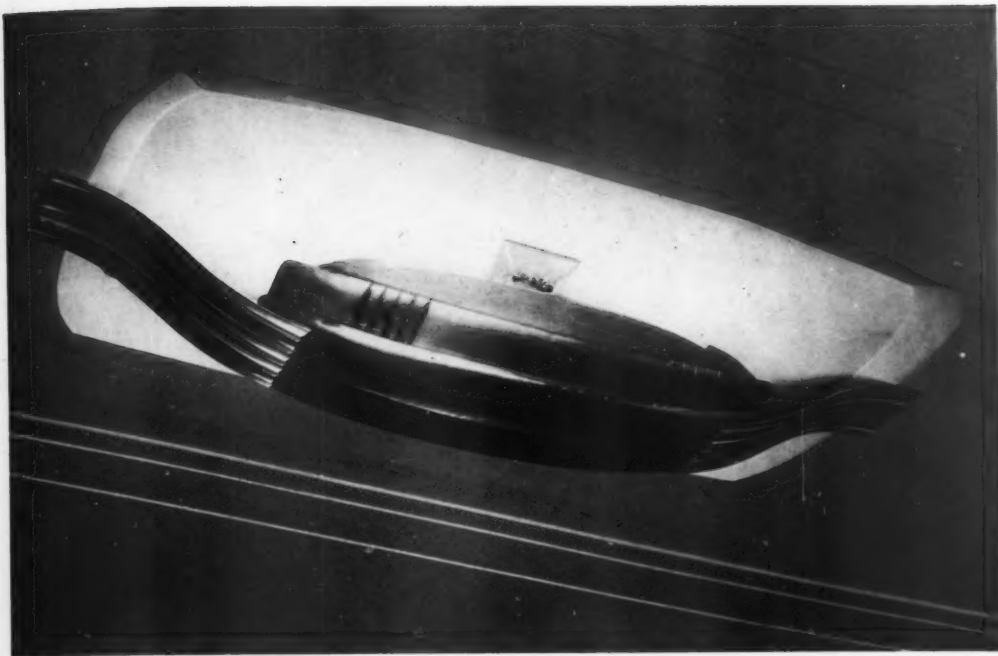
President, Kantack & Company, Inc.

DURING the past few years it has become evident that we have had in our midst a new medium and element for illumination, but have been trying to handle it and dress it up in the habiliments of its predecessors, instead of becoming familiar with its nature and characteristics, and then making use of it in an understanding manner. In all the confusing turmoil of argument, pro and con, relative to contemporary expression in design, the lighting fixture designer has met the least resistance and received the most encouragement, with the result that numerous definitely progressive contributions to architecture and building have been achieved. As a matter of fact, it is being realized that only by forgetting the past in lighting fixtures can full benefit and efficiency in lighting be obtained.

Lighting has resolved itself into a definite problem of illumination, with *design forms* following the lines of utility and practicality, rather than setting the pace as



DIFFUSED indirect illumination obtained from a fixture designed around a single 500 watt lamp with baffles built in the fixture



CURVES and angles of the plaster ceiling serve to spread and focus the angles of illumination from this fixture designed upon the basis of directed-indirect lighting principles

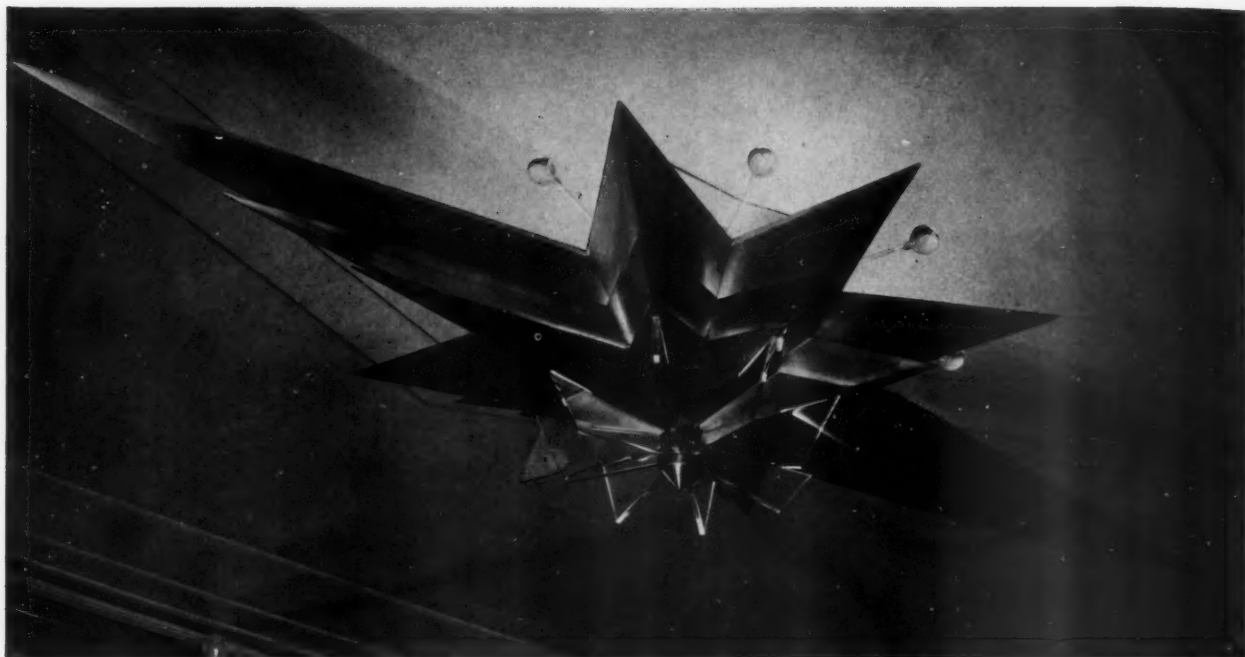
in the past. Instead of spotting electric outlets in balanced arrangement on blue prints, we are beginning to think of *methods of illumination* and making provision for the required wiring facilities, after it has been determined which method of utilizing electric light will be most likely to give the desired result. We are finding that electric light is a tangible something which we can utilize and mould and bend. That there are definite means of controlling and directing the path of light as well as its color and volume. In other words, *light can be made to do things*.

These possibilities have existed ever since Edison perfected the first incandescent lamp, but men engaged in lighting fixture design did not realize their presence, and for a long time did not seem to be able to understand the lighting research engineer's language. Some engineers endeavored to design lighting fixtures, but the results were, as a rule, pretty sad because they had not the training which would enable them to properly apply their knowledge. As always however, the progressive development of an idea forces recognition of its merits and possibilities, and today we find that many architects have in their employ those who understand the technique and art of illuminating by means of electricity. Others work in intimate collaboration with designers of lighting equipment who have a thorough knowledge of their subject as well as a sufficient understanding of architecture, to make their assistance both sympathetic and helpful.

One of the chief contributions made by the research engineer to the designer's opportunity, is the high wattage lamp. No other factor has influenced the change in lighting fixture design more than has this powerful lighting source, which by its nature demands special handling, and compels original thought on the part of the designer. We have been accustomed to dealing with small units of low intensity used in multiples. Utilizing the single lamp of high intensity introduces previously unheard of



A PENDANT lighting fixture that provides direct and indirect illumination by means of combined high and low intensity lamps



A METAL SHIELD utilized to direct light against a beveled ceiling using directed-indirect lighting principle



CARVED PLATE glass panels accented by light from below are possible decorative elements for fixtures designed upon direct and indirect fundamentals

elements of glare, due to concentration and a great deal of heat, for in the present development of light sources much light brings with it much heat. This makes it necessary not only to break up the light rays by means of diffusion or reflection, but one must also make provision for the dissipation of the heat rays. Because of this we have been compelled to develop certain classifications of light treatment and proceed with design forms along the lines of the fundamentals involved.

Broadly speaking, we are at present thinking of four definite methods of supplying artificial illumination to a

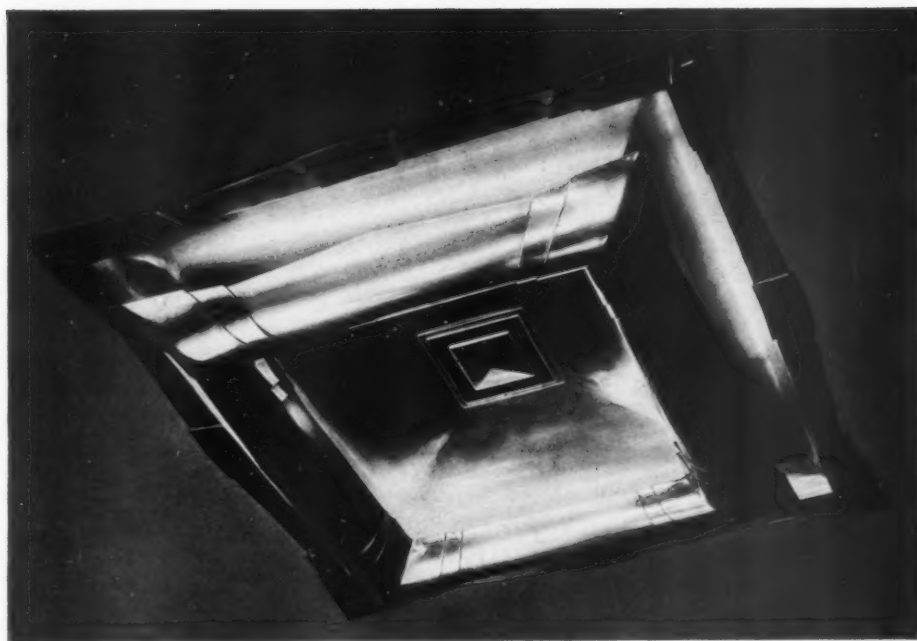


DIRECTED-INDIRECT principle of lighting as applied in this room gives clear, even illumination where most desirable

» » » Modern Lighting Follows the



METAL LOUVRES conceal the lamps and reflect the light against a plaster rosette designed to spread light over the entire area. Directed - indirect principle



PARTLY RECESSED in the ceiling, a metal shield and reflector have been made to serve the principle of directed - indirect lighting

given space; viz: direct lighting, indirect lighting, combined direct and indirect lighting and, what may be termed—*directed* indirect lighting. Each of these methods can be used and expressed in a variety of forms and combinations that are applicable as lighting principles on ceiling wall, table or floor. I am speaking from the standpoint of the designer of lighting equipment, and in making these groupings I am not including the consideration of various forms of concealed or built-in lighting, which are essentially engineering problems to be worked out in conjunction with architecture.

The term "direct lighting" is applicable to lighting fixtures of many varying types and characteristics, and covers what is probably the most familiar type of illumination. One interesting and unusual instance of light applied directly to a given space and for a specific function consisted of the lighting of a stair landing occurring between the basement and the first floor of a restaurant. The first consideration was to adequately light the landing. The ceiling over this landing was so low as to bring whatever lighting unit which might be installed directly in the line of vision of those (Continued on page 120)

Lines of Utility and Practicality

FOR SEPTEMBER 1931

51

A MONEY LENDER'S OPINION ABOUT

» » » what Makes a House a Good Risk

By JOHN M. WYMAN

Editor American Building Association News



Mr. Wyman is a member of President Hoover's Conference on Home Building and Home Ownership, author of "Building and Loan Construction Standards," and is widely known in building and loan circles

A FEW months ago the vice president of a large company engaged in the production of building materials met me at a New York hotel to discuss the necessity and advisability of providing funds and machinery to supplement the 50 or 60 per cent of the appraised value which grey-bearded wisdom has decreed the only safe and sane maximum for first mortgage loans on improved, residential property.

Reminding him of the fact that heavy discounts and high interest rates—universal adjuncts of extensive junior financing—handicap rather than stimulate business, I expressed the conviction that the chief concern of the home building industry should be to encourage such standards of design and construction as would enable established, first-mortgage companies to lend a larger percentage of the appraised value of houses offered as security for loans.

He doubted whether home financing organizations, under any conditions, would materially increase the time-honored maximum for first-mortgage loans. A meeting was, therefore, arranged with the president of a building and loan association—an institution, incidentally, with considerably more than \$40,000,000.00 in resources. He informed us that his association had already established the practice of lending 75 to 80 per cent of the appraised value of houses that were suitably located, properly designed, and built in accordance with good construction practice—ten to twenty per cent more than is safely possible in the absence of these qualities.

This incident is significant of present-day thought on the most practical and most consequential problem of the business of home financing and home owning—the problem of providing maximum aid, at minimum cost—to the individual or the family that needs such aid. The solution of that problem lies in giving less consideration to cubical content and custom and more to the intrinsic value of design, materials and construction in determining the percentage of the appraised value to be loaned upon each house.

If time and experience have proved one thing pre-eminently to those who lend money on homes, it is this:

foreclosures do not pay dividends. The business of home financing is only profitable when borrowers are able and willing to meet their obligations. The building and loan association, bank, insurance company, or other home financing agency that strengthens the position of the borrower in these respects augments the profit side of its ledger and gives a decided impetus to the business of home owning.

The willingness of the borrower to make his payments promptly and consistently can be materially strengthened and prolonged by surrounding him with the satisfaction and protection that result from owning a house that is architecturally good.

The day of the partitioned "soap box," inverted over a hole in the ground and called a house, is almost gone. A people which demands well designed automobiles, refrigerators, and radios will not remain satisfied with haphazard collections of lumber, cement, bricks and shingles in its dwellings. Into the design of every house there should be incorporated a sufficiency of the beautiful to give that feeling of pride and satisfaction which can come only from the perfect adaptation of a given building material to its purpose.

Not for the sake of beauty alone is the demand for good design becoming an increasingly important factor in the business of owning and financing a house, but also because of the pronounced and admitted effect of such design upon the profit side of that business. Al-

FORECLOSURES

do not pay dividends

PROFITABLE FINANCING

is possible only when borrowers are willing and able to meet their obligations

MORE PERMANENT SECURITY

for a loan is provided when both design and construction are good

VALUE IS INCREASED

by the use of good materials and workmanship in greater proportion than their additional cost

ARCHITECTURAL SERVICE

should be made a part of the loan and, when it can not be obtained by the borrower, should be provided by the financing agency

PRIDE AND SATISFACTION

in home ownership come from good design

"IS IT CHEAPER

to own a home or to rent?" is a question more important than traditions of the family fireside

UGLY HOUSES

find a slower and lower market than those which are well designed

REPAIR BILLS

are generally unexpected and loaded with danger for those paying for a house

PURCHASERS HAVE A RIGHT

to expect that no repair bills will be necessary until the house is completely paid for

QUICK DEPRECIATION

makes the borrower wonder if he is paying for an asset or a liability

FORGET

CUBIC CONTENT

AND CONSIDER

DESIGN

MATERIALS AND

CONSTRUCTION

though the line of least resistance might lead us blindly to entrust the future of the occupant-owned house to instinct and sentiment, one fact is conspicuously evident: the home owner is giving consistently less thought to the traditions of the family fireside and more to the question, "Is it *cheaper* to own a home than to rent?" He is considering that question largely in the light of possible appreciation in value and cost of maintenance from the day of purchase to the day of sale. In his analysis of the many factors that determine the ultimate answer, he recognizes the cold reality that a structure grossly lacking in good design finds a much slower market, and a much lower one, than the house that is well designed.

Architectural design should be a *sine qua non* of home financing. It increases value, substantiates pride, and perpetuates incentive. When the borrower is otherwise unable to obtain architectural service in designing his house, it should be provided, in fact or in effect, by the financing agency. The cost of such service should be included in the appraised value of the house and made a part of the loan. If repayment is too burdensome, as a result of this procedure, the period of amortization should be lengthened. The mental attitude of the borrower is more important than time in the business of financing houses. It always pays, and pays all ways, to keep the borrower satisfied. Architectural design, financed when necessary, as an inseparable part of the loan, is therefore good business.

The cost of upkeep and repairs is a vital factor in the business of home owning. To minimize that cost, through the use of good

(Continued on page 86)

• ONLY FOUR HOMES FORECLOSED

up to December 9, 1930, by a Shreveport, La., building and loan association, which refuses to lend money except on good construction.

The reason—first cost has been the only cost

WITH BRUSH AND FOUNTAIN PEN INK

By John T. Jacobsen

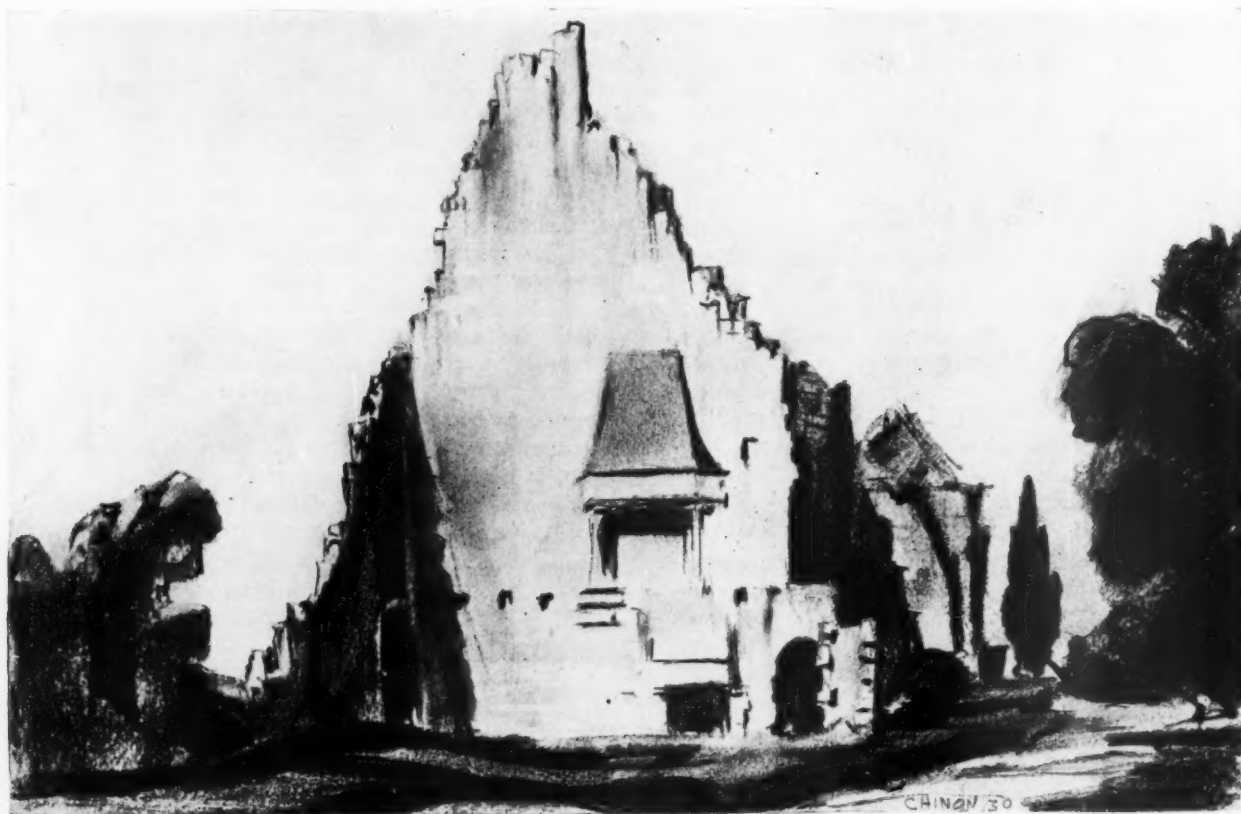
At the right are two sketches made in Viterbo, Italy, a small town about 25 miles north of Rome. It is noted for its many fountains. Mr. Jacobsen has been connected with the offices of Day and Klauder, Philadelphia; Cram and Ferguson, Boston; and Ely Jacques Kahn, New York. At present he is on a sketching tour along the Maine coast



BELOW
CHINON, FRANCE

Charcoal on white paper

By M. E. Gluckman





WITH PENCIL AND CRAYON

A STREET IN ROUEN AND

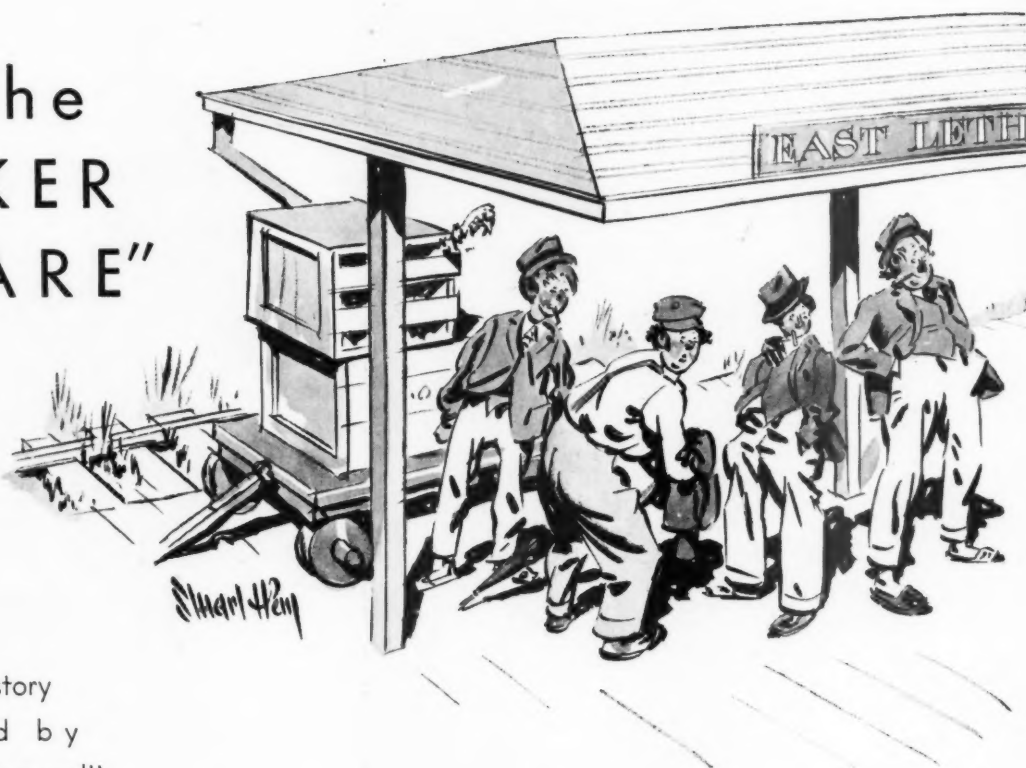
MORLAIX, FRANCE

By Maxfield E. Gluckman

Mr. Gluckman, now in the architectural office of Taussig and Flesch, New York, was awarded the Emerson prize in 1928. He spent last summer in Europe as winner of the Walter L. Hopkins Scholarship to the Fontainebleau School of Fine Arts

» » » SKETCHES

"Let the SUCKER BEWARE"



another story
as told by
"Chester Howard"
to W. W. BEACH
Chicago Architect

"I'd been thinking about taking a run out to the home



"Yes, but these architects don't fool you.
I can see that," persisted the flatterer

ON our way up from Florida, we stopped over in Washington, Harry Becker and I, and did a little sight-seeing. I wanted to go up to New York, for neither of us had ever been there, but Harry didn't favor it—thought we ought to make Chicago before winter closed in too tight.

When we got there, we answered a couple of ads for subdivision sales managers, and I'll be a garrulous gargoyle if we didn't find they were working the same identical racket we had been using down in Florida. They weren't any more looking for sales managers than you are right now. Though we were first on hand on Monday morning following the appearance of the ads, we were regretfully advised in each case (we didn't go together, of course) that the particular position had been filled, but that the concern always had a good opening for a salesman that was up and coming and was willing to start at the bottom. To be sure, he wouldn't have a drawing account, such as was advertised for a division sales manager, but he'd have inside chance at the next such job that was open.

I pulled the guy's leg until he came to the third section of his song, the part where he intimates that every new salesman is expected to show his confidence in what he is offering for sale by contracting for the purchase of one of their lots. This could be arranged on easy payments, et cetera,

Drawings by
STUART HAY



town and making a cheap show-off."

blah, blah. How well I knew the palaver. I let him rave on until he came to the climax where he was supposed to find out how much ready cash the sucker had.

Then I cut in, "Say, Low-pressure, I thought your ad was for a salesman, not a customer. Seems to me you've been wasting my time under false pretenses, and my time is worth just fifty bucks an hour, minimum, see? If you value yours at one-tenth that, why, you've been wasting just that much of your own, too. How much have I in cash? Well, I could lay down a binder for a hundred grand if I wanted to buy your punk subdivision, which I don't. Instead, I'm going out to see a lawyer and start suit for being deceived and damaged by your crooked advertising."

Harry's experience tallied with mine, so we concluded that the realtors must be running out of suckers, same as they were in Florida. An old friend took us to one of his company's big salesmen's meetings that night, and, honest to Hoover, when the silver-voiced lecturer let himself out on the future of Chicago real estate values, I could have sworn I'd heard the same guy discourse on a similar subject in Miami, a year previous. I talked to half a dozen of the fall guys I met there and each of them had bought a lot in order to prove that he was a real dyed-in-the-wool salesman, but only one of them had closed a sales-contract—and that was to a relative, by the way. Salesmen? Ye gods!

Anyway, I'd been thinking about taking a run out to the home town and making a cheap show-off, you know, to my old Uncle, the Big Banker in the Little Town.

When I got there, I found that a fire in a building to the rear had wrecked the back room of the bank, but nothing had been done about it, for old Unc was actually figuring on a new building! He had a young fellow with him in the front cubby-hole, whom he introduced as a representative of a big eastern concern that planned and built up-to-date bank buildings, and suggested that we go over to the hotel and see what he had to show, which we did.

Well, I hadn't listened to the guy's spiel very long, before I recognized the old high-pressure stuff in a guise that was brand new to Chester. As the bozo put it, his concern didn't have a single cock-eyed thing to sell but service, but, oh, my gosh, what service! Old Unc wouldn't have a cussed thing to do but pay the bills.

"We have the best designers available, and our experience with such progressive institutions as yours enables us to produce exactly the layout that will best serve your individual needs, not only at the present time, but for ten or twenty years to come,—" and he ranted on.

"Yeh," admitted Uncle, "that's what they all say." He thought he was being coy and hard to land.

"Yes, but they don't fool you. I can see that," persisted the flatterer. "You've read our literature and you are well aware that we are the biggest concern in the country in this field. There's no other so capable of taking your problem from its inception and carrying it through without a break until it's delivered finished and complete, right down to the blotters on your desks. From the time you place the proposition in our hands, you won't have a single thing to worry about in connection with it."

"Yeh," agreed the old fox, winking at me, "all I'll have to do will be to sign the checks. That part's all right, but what are some of my customers in the building business going to say if I let the work to an outside concern? And there'll be some of the Rotarians and Odd Fellows that'll maybe be sore about it, too."

"Yeh," admitted the slicker. "Of course, they will. Ever since the fire, they've been eyeing this job like hungry vultures. Each of them is fixing to trim you—first chance they've had to get even for the interest they've been paying you for the past thirty years. And you'd sit back and let 'em do it? Not if I size you up right you won't. You'll just say to those babies, 'Sure, I want you to do our work—always counted on it, when the time came. But I've arranged with my builders to do all the buying, so you'll have to make your propositions to them. I hear they're pretty close buyers, though, so you'll have to get down to bed-rock.' They won't like it, but they can't take

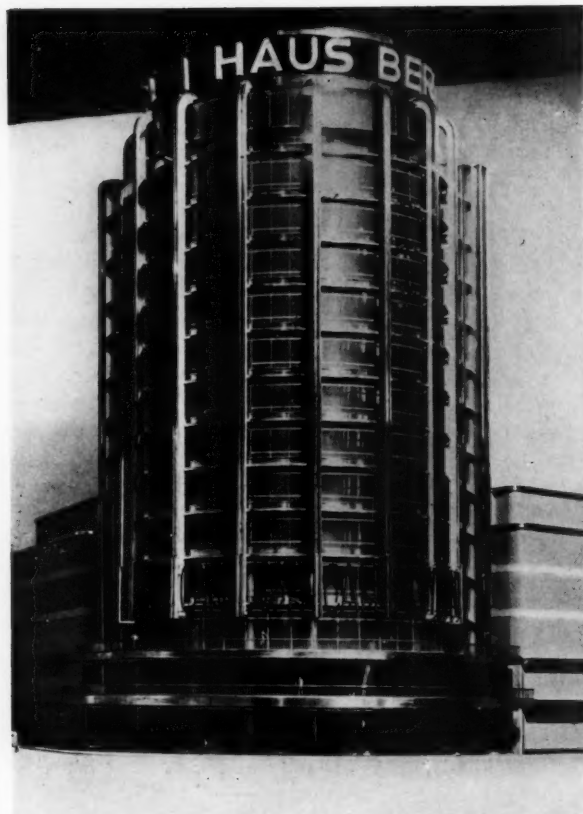
(Continued on page 92)

WHAT ARCHITECTS

Senator Attacks Government Sloth

Protest Design of Little Rock
Post Office

Carrere's Opinion of Competitions



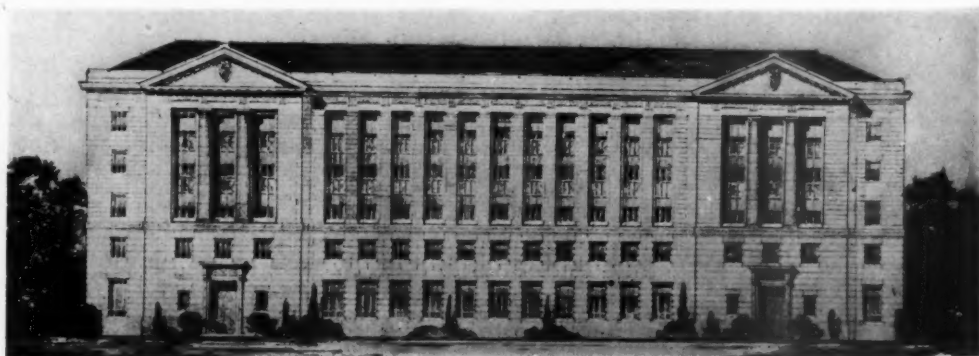
R. L. NESMITH AND ASSOCIATES

GLASS SKYSCRAPER for Potsdamer-Platz, Berlin,
a model shown at the recent "Bauwelt" exposition

ABOUT twenty-five years ago, John M. Carrere of Carrere & Hastings said, "I have entered in a great many competitions. I cannot tell you the exact number, but I think that in my 21 years of practice I have entered over 40. I have won five. I cannot say it has been a profitable investment. Neither do I feel that I would not have arrived at the same end without going into these competitions. As I look around me and pick out the buildings which to me seem most successful, I do not believe that the great majority of these buildings would have won the prize in any competition."

PROTESTED POST OFFICE

for Little Rock, Ark., designed by the Office of the Supervising Architect. The Chamber of Commerce and local architects have vigorously protested against this design. Local newspapers have also entered their protests



ANNUAL wages instead of daily wages for workers in the building trades is proposed in New York. The idea is that employers guarantee steady yearly employment at an annual figure based on the present actual average of annual earnings in the trades.

PLACING of automatic sprinkler specifications in the plumbing and heating specifications has been condemned by the United Association of Journeymen Plumbers and Steam Fitters, Washington, D. C., which states, "This practice has made much trouble for all concerned and will lead to serious difficulties if continued. . . . We ask that architects and engineers shall separate sprinkler specifications from plumbing or steam fitting, or any other specifications, and thereby assist in the speedy completion of work without jurisdictional strife."

"A BUILDING begins to grow old both in style and accommodations slowly but surely from the time it is erected," states A. E. Price of F. P. Platt & Bro., architects. "The first serious reaction is a gradual loss of tenants or a gradual lowering of rents, or if the owner is occupying his own building, he senses a gradual loss in appearance, inside and out, as well as an increasing loss in accommodations, comforts and facilities."

"It is therefore apparent that there must come an intermediate stage between erection and demolition when every building should be completely rejuvenated in order to hold its own against surrounding competition and achieve the maximum of usefulness and return during the various stages of its existence. Once the owner has warning that his building is growing old, he must face the necessity of providing the adequate remedy."

ARE TALKING ABOUT

Keep Buildings From Growing Old

Annual Wages Proposed for
Building Workers

Placing Sprinkler Specifications

"It appears that a large part of the government's emergency building proposal to relieve the unemployment situation is unavailable because the government hasn't a large enough architectural staff to design the proposed edifices," states Senator Duncan O. Fletcher, of Florida, who goes on to say: "According to George H. Gray, New England Director of the American Institute of Architecture, the government will not catch up with the program until 1937.

"Such an absurd tying up of the most obvious method of alleviating the existing unemployment situation is typical of the inefficiency with which the administration has bungled its job ever since the depression came upon us. New buildings have been authorized, Congress has appropriated the money for them, and the whole programme has been proclaimed as an evidence of the skill and promptness with which the administration has met



IN THE PENNSYLVANIA MUSEUM OF ART in Philadelphia is this rose-colored marble facade from the Abbey Church of St. Laurens, which was lent by George Gray Barnard, sculptor

the emergency. . . . Congress appropriated the money for use now, not six years hence when the emergency will have passed and the unemployed will again have found positions if they have not starved in the interim."

THE Oregon Building Congress has adopted a resolution to the effect that the Office of the Supervising Architect should act as a normal owner, engage private architects to handle the work, and be so reorganized as to do this efficiently.



R. L. NESMITH AND ASSOCIATES

MULTI-DWELLING HOUSE, one of a row recently completed at Siemensstadt, near Berlin, Germany

BANKS to the number of 1,256 are planning to build or remodel, according to a survey recently completed by the American Bankers Journal.

MUNCIE, IND., inaugurated a campaign that started 114 modernizations in one week and increased employment in the building trades from 18% to 70%. The campaign was put on through the Chamber of Commerce.

THE composite hourly wage-rate of 15 building trades, in 23 principal cities, was 27.4% higher in 1930 than in 1923, according to the National Industrial Conference Board.

BLACK concrete pavement has been laid in Glenwood Road, a high-class residential section of Englewood, N. J. Eight lbs. of iron oxide per sack of cement gives the desired color.

CONCERNING the proposal to demolish certain Federal buildings in Washington, Representative Thatcher, of Louisville, Ky., of the House Committee on Appropriations, states: "While it is altogether desirable to construct all new public buildings in the National Capital with the idea of artistic unity in mind, I do not believe it wise or just to the taxpayers to demolish existing buildings, which are (Continued on page 68)

PANEL NO.	DESCRIPTION OF CONSTRUCTION				STANDING PERIOD IN DAYS	AIR INFILTRATION IN CU. FT. PER HOUR PER SQ. FT. OF WALL		
	OUTSIDE CONSTRUCTION			INSIDE CONSTRUCTION		WIND VELOCITY—MILES PER HOUR		
	SHEATHING	BLDG. PAPER	SIDING			5	15	30
1A	1x6 Green Dressed and Side Matched No. 1 Common..	None	None	None	29	16.3	81.2	188.0
1A1	As in 1A except knot hole plugged	None	None	None	29	16.3	78.6	182.0
1B	1x6 Air Dried Butt-Edged No. 1 Common.....	Bldg. Paper B.	1x10 Bevel Siding Air Dried	None	70	0.04	0.28	0.78
1B1	As in 1B	As in 1B.....	Paint Added to 1B.....	None	6	0.03	0.18	0.43
1C	As in 1B	As in 1B.....	As in 1B1.....	Wood Lath and 3 Coats Gyp. Plaster	68	0.03	0.16	0.33
1D	1x6 Air Dried Dressed and Side Matched No. 1 Com.	None	¾x2, Expanded Metal 1½"—3 Coats Stucco..	None	29	0.02	0.08	0.15
2A	1x6 Air Dried Dressed and Side Matched No. 1 Com.	None	None	None	28	2.4	15.3	42.3
2B	As in 2A.....	Bldg. Paper A.	1x6 Drop, Air Dried....	None	14	0.04	0.28	0.78
2B1	As in 2A.....	As in 2B.....	Paint Added to 2B.....	None	6	0.03	0.27	0.75
3A	1x6 Air Dried Dressed and Side Matched No. 1 Com.	None	None	None	28	1.3	9.3	28.8
3B	As in 3A.....	Bldg. Paper A.	1x6 Bevel, Air Dried....	None	14	0.04	0.28	0.78
3B1	As in 3A.....	As in 3B.....	Paint Added to 3B.....	None	6	0.02	0.11	0.27
3C	1x4 Boards on 5" Centers No. 2 Common.....	None	5 2-16" Red Cedar Shingles, 5" Exposed..	None	69	13.4	69.5	172.0
3D	As in 3C.....	Bldg. Paper B.	As in 3C.....	None	69	0.07	0.38	0.84
4A	1x6 Air Dried Dressed End & Side Matched No. 1 Com.	Bldg. Paper A Studs Vert..	None	None	29	0.05	0.31	0.90
4A1	As in 4A.....	Cut Out	None	None	None	20.0	80.3	184.5
4B	1x8 Air Dried Shiplap No. 2 Common.....	None	5 2-16" Red Cedar Shingles, 5" Exposed..	None	14	2.1	15.3	45.3
4D	None	Bldg. Paper B Studs Vert..	1x6 Air Dried Select Drop Siding Painted..	None	4	0.06	0.23	0.45
4E	None	As in 4D.....	As in 4D.....	1x6 Sheathing End and Side Matched	6	0.06	0.23	0.45
4F	1x6 Air Dried Dressed End Side Matched No. 1 Com.	None	None	None	None	3.6	28.3	82.7
5A	Insulation A Sheathing Board	None	None	None	30	3.8	16.1	36.4
5B	None	None	Corrugated Steel	None	14	9.0	45.4	106.7
5C	1x8 Air Dried Shiplap No. 2 Common.....	None	24" Red Cedar Shingles—11" Exposed	None	14	7.2	43.8	116.7
5D	None	None	1x10 Boards—Spaced 1x4 Battens Paint.....	None	14	16.3	86.9	206.0
6A	Insulation B Sheathing Board	None	None	None	30	1.6	9.1	22.8
6B	1x6 Boards on 11" Centers No. 2 Common.....	None	24" Red Cedar Shingles—11" Exposed	None	15	22.1	122.5	307.1
6C	As in 6B.....	Bldg. Paper B.	As in 6B.....	None	67	0.02	0.13	0.25
6D	1x6 Air Dried Shiplap....	Bldg. Paper B.	5 2-16" Red Cedar Shingles—7½" Exposed	None	7	0.03	0.17	0.42
6E	As in 6D.....	As in 6D.....	As in 6D.....	Wood Lath and 3 Coats Gyp. Plaster	14	0.02	0.12	0.31
7A	None	None	None	Wood Lath and 3 Coats Gyp. Plaster	15	0.02	0.17	0.52
7B	None	None	None	As in 7A Plus Decorative Paper	10	0.01	0.10	0.26
7D	None	None	Insulation A Lath and Stucco	None	29	0.07	0.39	0.90
7E	1x6 Air Dried End and Side Matched No. 1 Common..	None	None	None	2	3.6	28.3	83.8
7F	As in 7E.....	Poor Grade Resin	None	None	None	0.4	2.9	5.9
7G	As in 7E.....	As in 7F.....	1x6 Drop Siding Painted	None	13	0.01	0.10	0.21
8A	None	None	None	Metal Lath and 3 Coats Gyp. Plaster	14	0.03	0.23	0.60
8B	None	None	None	As in 8A Plus Sizing and Flat Paint	10	0	0	0
8C	None	None	None	1x6 Sheathing End and Side Matched	7	8.3	48.8	122.8
8D	None	None	Corrugated Steel	As in 8C.....	4	1.2	8.1	22.2

DESCRIPTION OF TEST PANELS AND RESULTS OF TESTS

RESULT OF TESTS ON

AIR INFILTRATION

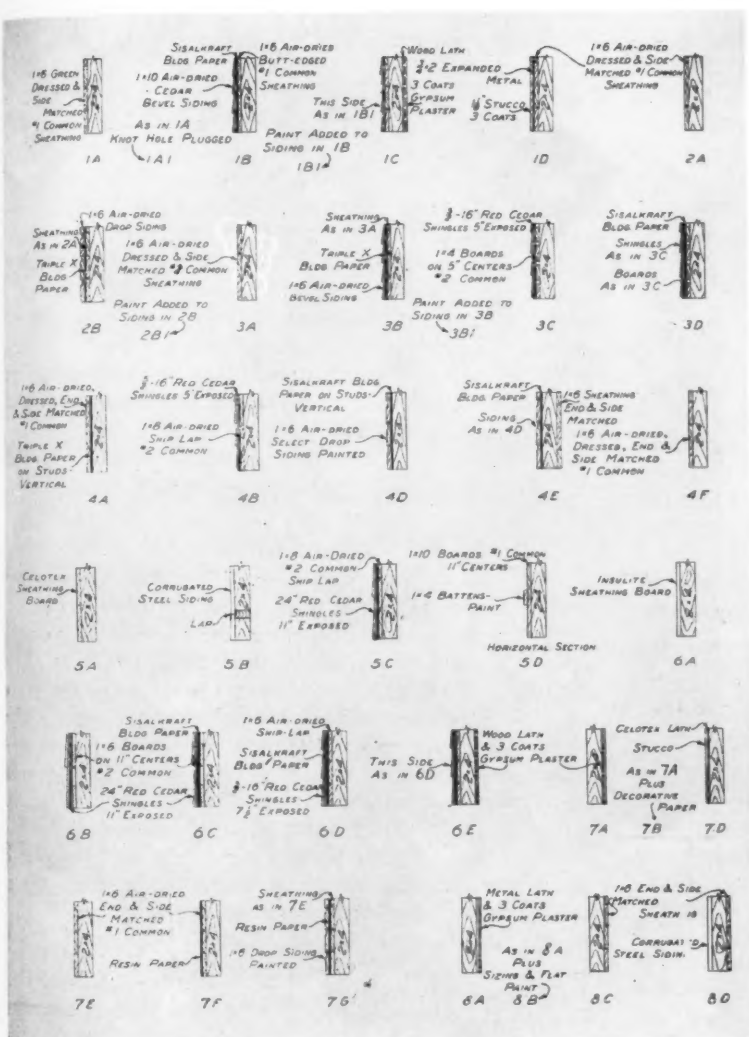
OF VARIOUS MATERIALS

By

Frank P. Cartwright,

Chief Engineer,

National Lumber Manufacturers Association



Various types of construction tested. Results shown in the table at the left

NEITHER humidity control nor well regulated temperature is possible without control of air infiltration. Twenty to fifty thousand cubic feet of unheated, unconditioned air flooding into and through an ordinary dwelling hourly put effective heating and air conditioning equipment at naught. Unseen currents eddy in around windows and doors. A house-wide column of air, often bearing dust and furnace fumes, rises from the basement through floors and attic to find its way out through the roof. A steady leakage occurs through the walls themselves.

Laboratory research has demonstrated the value of storm doors and windows and weatherstrips as a means of controlling leakage around openings, or at least of

reducing it to immaterial amounts. The problem of wall and roof leakage, until recently, was unstudied. Experiments two or three years back gave some information on air leakage per hour through brick walls of various types. These were followed more recently by tests on over forty types of frame wall and roof construction. The work was done at the University of Wisconsin under the auspices and supervision of the American Society of Heating & Ventilating Engineers.

The tests were made on panels approximately six feet by nine feet in size, placed between an air tight chamber, in which air pressures corresponding to different wind velocities could be maintained and a similar chamber near atmospheric pressure which collected and metered the air which penetrated the panel. Leakages were measured in cubic feet of air per hour (Continued on page 80)

. . As It Looks

Noise As An Asset

QUIET is usually assumed to be a desirable quality in restaurants but in a cafeteria apparently noise is recognized as one of its features. A fine large cafeteria was built in a large office building. Sound absorbing materials were used on the ceiling and a thick carpet covered the floor. Patronage, which at first was large, gradually grew less and less. Recently the sound absorbing materials, including the carpet were removed. The place has plenty of *noise*. And prosperity has returned to the cafeteria.

Business Can Be Increased

NEXT year a certain volume of building construction will be done. Probably a normal percentage of this volume will pass through the offices of architects. It may be small in amount as compared with that of a few years ago. But how many architects realize that this difference would be little, if they could secure next year a larger percentage of the total than they executed a few years ago? It could be done if they would apply the same, sound, fundamental methods used by countless other business men.

No Time for Individualists

AT a recent regional conference of New York State Chapters of the American Institute of Architects, Theodore Coe said that architects too long have been individualists, and that the time has come when they all must pull together and work for the profession at large. Changing conditions and aggressive competition for rendering the service of the architect demand more united action and less individualism than at any previous time. It is unfortunate that the movement to correlate the Institute and the architectural societies and associations was not undertaken several years ago. It is even more unfortunate that the actual accomplishment of this end must be awaited for nearly a year. It is needed right now.

Extra Service Would Pay

HOW many architects periodically inspect a building after it is completed and accepted by an owner? Few if any is the probable answer to this question. Yet the advantages and importance of doing this are many. Such procedure over a period of years would afford an excellent opportunity to determine fundamental errors in building methods, choice of materials for certain purposes, or mistakes in planning. Warnings to the owner that flashings should be painted or repaired would forestall complaints of leaky roofs. The owner might appreciate having this and sundry other items called to his attention before serious and costly damage had been done. Evidence of continued interest in work com-

pleted is always a source of satisfaction to the purchaser. And he might build another building or know some one who intends to do so. Has any architect done this and with what result?

Death of G. E. Sly

MANY of the older subscribers of *THE AMERICAN ARCHITECT* will be grieved to learn of the death of a former owner of the paper, George Eugene Sly, familiarly known as Gene Sly. Mr. Sly, with H. M. Swetland, became publisher of *THE AMERICAN ARCHITECT* in 1905; three years later he purchased it and held ownership until 1915, when he sold it to the United Publishers Corporation. His association with this latter organization lasted until 1924, when he retired from business. Mr. Sly was sixty years old at the time of his death in St. Charles, Mo.

Competition Is Keen

GARDEN patterns for twenty-five cents are offered by a popular magazine. This same magazine supplies house patterns from plans by architects for one dollar apiece. Landscape architects are finding competition keener, if anything, than their brothers, the architects. What are the landscape architects doing to meet this competition, if anything? What ought they to do? Could the two professions join hands to advantage and meet this situation? Do you say, "Small work that neither profession finds profitable to handle"? But there are many young men in both professions who would no doubt find it possible to render complete and satisfactory service, including plans, at a reasonable price. Why not give them a chance?

Too Much Tax Exemption

NEARLY one-fourth of the total assessed valuation of Yonkers, N. Y., is carried tax exempt, according to its tax commissioner. In New York City, the site of the Chrysler Building is tax exempt as a leasehold of Cooper Union, an educational foundation, and an action is now being pressed to have the building also exempted under the provisions of the Cooper charter. In Dolgeville, N. Y., the essentials of a test case lie in the parsonage of a Lutheran church, which is being rented out as there is no resident pastor—but no taxes are paid, although the State Tax Commission has advised that the property should be taxed as it is not occupied by a clergyman.

Twenty-five per cent of New York rentals go for taxes, according to E. R. Stix, of the real estate firm of L. J. Phillips & Co., who says, "It has reached a point where the tax itself is destroying value and defeating the ends for which it is designed." The question is, are tax exempt properties helping to make the tax burden unbearable?

to the Editors . .

Give Ourselves a Chance!

FRANK LLOYD WRIGHT once said, in part, "If we would only give ourselves half a chance." He was referring specifically to the question of design. The idea, however, has further application. There are not many things the matter with architects. Perhaps in design they do not always go as far as they might. But think how far they could go in a business way, in being of public service, and improving architecture everywhere, if they only gave themselves half a chance.

Danger in Progress

IT is said that the development of welding and its application to building construction, has introduced a new hazard in construction work. The welders occasionally drop short electrodes out of their holders. The electrodes are of metal, about five inches long and *hot*. In falling they sometimes strike men working or passing below, or fall on combustible material and start fires. This is not deterrent to the advancement of welding, but merely a hazard to guard against. Progress always introduces new elements and problems for solution. No type of construction is free from dangers peculiar to itself.

Protests Fee Competition

JOHN GRAHAM, of the Washington State Chapter, A. I. A., called the attention of Congressman Horr to the fee competition conducted for a Weather Bureau building on Tatoosh Island, mentioned on page 56 of the June issue of *AMERICAN ARCHITECT*. Congressman Horr wrote a strong letter of condemnation to the United States Weather Bureau. He stated, "As a lawyer I could not conceive of the Government asking for bids in choosing men in the legal profession, as undoubtedly the police court lawyer and the one least successful, would in all probability be the successful bidder. . . . I am of the opinion that we have a sufficient number of architects of high standing to look after our own particular business and I hope that the policy of your department will be changed in the near future. . . ."

Bureaucratic Methods

IN a certain city a government post office is now under construction. The contractor was interviewed by an interested citizen who asked him whether he would prefer to carry on the work under the direction of a local architect instead of the Supervising Architect of the Treasury. The contractor said, "You bet I would. Do you see those floor forms and reinforcing steel over there? Well, they have been in place more than three weeks. After the steel was in place, I had to have a photograph taken of the steel reinforcement and sent to Washington. I haven't yet received approval from the Washington office

and I can't pour the flour; same way with those columns over there!"

It is understood that there is a government field representative on the job, too! A local architect could have approved the placing of the steel promptly.

Scented Ink

SCENTED ink has made its appearance. It is being used in a series of eight direct mail pieces by the "Woman's World" with the thought that it will be more likely to establish a sense of continuity in the minds of the women written to. Is the day coming when one perfume will be used for specifications for residences, another for office buildings, and still another for hospitals? Will every architectural office have its scent expert to determine whether rose, violet or heliotrope shall be used for drawings and specifications?

What Price Architecture

DESIROUS of remodeling, a physician called in an architect and had him prepare some sketches. After several conferences, the matter languished until the architect got tired of waiting, and phoned. "Oh, yes," said the physician. "We gave your sketches to a carpenter and had him do the work." The architect sent a bill. The physician protested, saying he had no idea that he was expected to pay anything. Upon being told that consultation with an architect was naturally on the same basis as with a physician or a lawyer, he said, "Well, I'll pay the bill, but I don't want it to establish a precedent!"

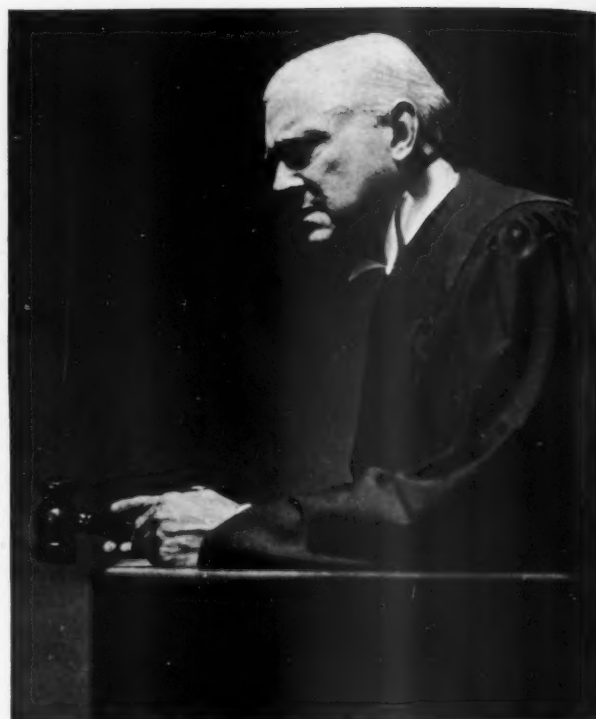
Talk Votes, Not Architecture

GOVERNMENT employment of private architects was recently discussed at a Chapter meeting. The statement was made that, when talking with politicians, the service to architecture should be stressed and not jobs for architects. Politicians are not particularly altruistic people. It is not likely that they ever will care much for the good of architecture as architecture. Far better to show them, in terms which they can appreciate, why all government buildings should be beautiful. Any administration, especially a local one, has little of concrete accomplishment that it can point to with pride. Public buildings are one of the few possible concrete accomplishments. A beautiful school, well planned and convenient, is a mighty influence on the voting parents. A city hall that can be pointed to with pride is an asset that impresses every citizen. Buildings are something the voters can look at, can go up to and touch. Good architecture, handled as a politician can handle it once he appreciates its vote-getting value, can be made to swing many a doubtful election. And elections are what politicians are mostly interested in—not architecture.

MUST ARCHITECT BE REGISTERED IN STATE TO GIVE Architectural ADVICE?

By George F. Kaiser, LL.B.

WHAT HE DID. Jones was a practicing architect, specializing in the building of large auditoriums, who decided that he would have a wider field if he moved to New York. When he applied for a license to practice as an architect under the New York Law, his application was denied, although he claimed to be a graduate of a prominent university, a member of five chapters of the American Institute of Architects, and the holder of a license to practice in several states. He continued to maintain an office in New York with a listing as "architect" in the telephone book, and continued to give professional opinions, as to the desirability of auditorium sites. In addition, he acted as consultant to committees appointed by various city officials to plan for civic auditoriums.



WHY HE DID IT. Jones contended; first, that a license to practice in New York had been unjustly withheld from him, and second, that he had not practiced architecture in that state, but had merely given opinions as to the most suitable locations for auditoriums in various cities.

WHY HE SHOULDN'T HAVE DONE IT. When the case against Jones came up and was tried, however, he was found guilty of practicing architecture in New York State without a license, under the New York State Law, and on his conviction he was fined \$50.

» » » WHAT IS ARCHITECT'S RESPONSIBILITY FOR DEFECTIVE PLANS?

WHAT HE DID. Without the formality of a written contract, Delaney, an architect, at the request of a client, executed plans and specifications for an apartment house which was to be erected. Before the building was completed, Delaney and the client had a disagreement and the architect was discharged. Delaney demanded payment for his services and the client, seeking some justification for his refusal, contended that Delaney's plans were faulty, defective, and unskillful.

WHY HE DID IT. The client thought that he could hold Delaney responsible for any mistake or defect. If he had been dealing with a doctor or lawyer, he would have thought differently, but he believed that an architect's work could not show a mistake or defect without liability on the architect's part.

WHY HE SHOULDN'T HAVE DONE IT. A doctor's patient may die, and the doctor not be held responsible. A lawyer's client may lose his lawsuit, and the lawyer not be liable.

So too, an architect who possesses requisite knowledge and skill, and uses his best judgment in the exercise thereof, does all that the law requires of him, for an agent owes to his principal only the exercise of that degree of care and skill which a reasonably prudent man could be expected to exercise under like circumstances. Thus, an architect does not insure or warrant that a certain result will be produced—all that is required of him is the exercise of that degree of care, skill and knowledge which would ordinarily be displayed by members of his profession under like circumstances.

Delaney was awarded payment for his services.

Has this ever happened to you?



The MOST IMPORTANT Specification in an Office Building is RENTABILITY

Office buildings are built to rent and the degree to which they rent determines their value to their owners.

The architectural profession is concentrating on this major specification of rentability. That is why architects have recently come to place such emphasis upon the type of partitions specified. That is why Hauserman Movable Steel Partitions have gone into almost every important commercial structure completed during the last two years.

Hauserman Partitions are everything a subdividing wall should be. They are less bulky—thereby increasing rentable floor space. They are beautiful and available in any desired finish and color—thereby insuring maximum tenant appeal. They are entirely movable, at low cost and without waste—thereby insuring the building of maximum partition economy plus the ability to meet almost without penalty every need, whim and fancy of the tenant who requires subdivision changes.

The cooperation of Hauserman engineers is at the disposal of any interested architect.



This careful study of office layout and planning may be of great value to you. Copy mailed free on request

THE E. F. HAUSERMAN COMPANY

"Organized for Service Nationally"

6884 GRANT AVENUE

CLEVELAND, OHIO

Factory Directed Planning and Erection Service from these 14 Factory Branches

Newark
Detroit

Philadelphia
Cincinnati

Buffalo
St. Louis

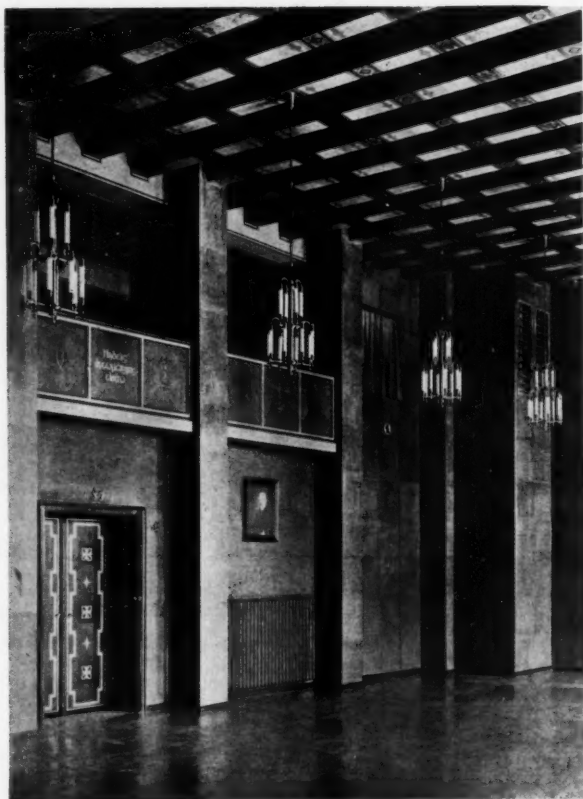
Boston
Washington, D. C.

Kansas City
New York

Chicago
Cleveland

Pittsburgh
Albany

HAUSERMAN MOVABLE STEEL PARTITIONS



Schoolhouse auditorium, District Tempelhof, Berlin, Germany. Bräuning, city architect. From "School of Today and Tomorrow"

SCHOOL BUILDINGS OF TODAY AND TOMORROW

By W. K. Harrison and C. E. Dobbin. Compiled and edited by R. W. Sexton. Published by the Architectural Book Publishing Company, Inc., 108 West 46th Street, New York. Illustrated; 233 pages; size 10 x 13; price \$16.50.

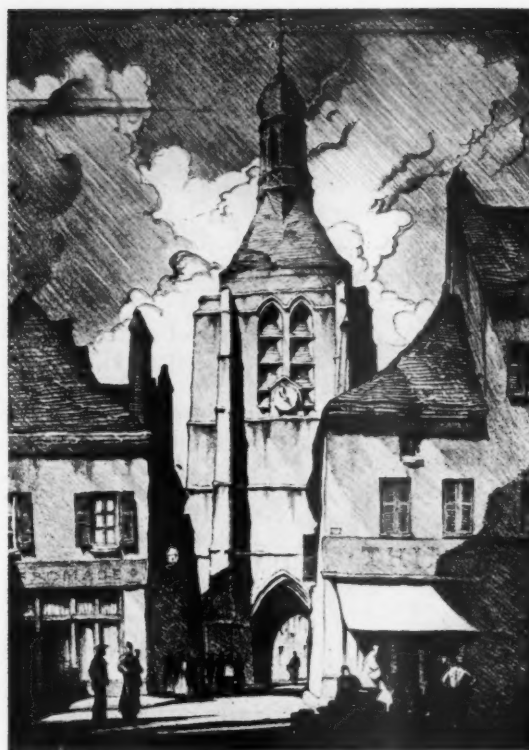
MUCH more than merely another book on schools is this volume, which bears the unmistakable stamp of having been written by men who thoroughly understand their subject and have the facilities of making themselves understood by others. W. K. Harrison is a member of the architectural firm of Corbett, Harrison & MacMurray. C. E. Dobbin is deputy superintendent of school buildings, New York City.

Part 1 is entitled, "The Design of the Modern School." It is by Mr. Harrison and contains a wealth of ideas of interest not only to school architects, but to architects doing other classes of buildings. Particularly interesting are his ideas on fenestration and comments on planning. This section is well illustrated by diagrams, sketches of exteriors, and plans which help to visualize Mr. Harrison's ideas.

Part 2 is entitled, "A Group of Modern Schools in

Foreign Countries," designed by architects in Germany, Sweden, Denmark and Holland. This section contains pictures and plans of such buildings.

Part 3 is by Mr. Dobbin and is entitled, "The Standardization of School Buildings." It covers elementary schools, junior high schools, high schools, standardization of types, and standardization of architectural details. There are pictures of classrooms for various purposes together with descriptions thereof, layouts for various types of classrooms and similar data, also pictures of existing school houses, their plans, and playground or athletic fields.



Provins, by John Richard Rowe. From "Metal Plate Lithography"

METAL PLATE LITHOGRAPHY FOR ARTISTS AND DRAFTSMEN

By C. A. Seward. Published by the Pencil Points Press, 419 Fourth Avenue, New York. Illustrated; 69 pages; size 9 x 12 1/4; price \$3.50.

THIS is said to be the first book to present the technique of metal plate lithography. It covers every point from the graining and preparation of the plate, making the drawing, etc., to the finishing of the plate and printing. Formulae for the various solutions are also given together with complete lists of the materials required. There is also a list of supply houses and professional printers from whom requisites may be obtained.



*Residence of William Eshbaugh
Montclair, N. J.*



*Goodwillie & Moran, Architects
New York City*

THE ATTRACTIVE QUALITY of this home of the type so frequently found in the Cotswold Hills is due in part to the soft shades, alluring texture and sheenless quality of the roof of Ludowici Crude Shingle Tile. . . . Although a large house, the warmth of the roof covering provides immediately a feeling of intimacy. . . . For buildings large or small—for all types of architecture—there are patterns of Ludowici Tile which provide perfect roofs. . . . And the beauty of these roofs is as enduring as their protection against fire and weather. . . . We shall be glad to mail our catalog or have a representative call. . . . Please refer to our pages in Sweet's.

LUDOWICI TILE

Made by LUDOWICI-CELADON COMPANY

NEW YORK: 565 FIFTH AVE. • CHICAGO: 104 SOUTH MICHIGAN AVE. • WASHINGTON: 738 FIFTEENTH ST., N. W.

FOR SEPTEMBER 1931

There are full page reproductions of prints by Rockwell Kent, Ernest Born, Birger Sandzen, Mildred Rackley, John Richard Rowe, Wanda Gag, Kenneth M. Adams, George Biddle, William Dickerson, Louis Lozowick, Lloyd C. Folts, Gerald Cassidy, and the author.



Old Whaling Station, Monterey. From "Spanish Colonial or Adobe Architecture of California"

SPANISH COLONIAL OR ADOBE ARCHITECTURE OF CALIFORNIA, 1800-1850

By Donald R. Hannaford and Reval Edwards. Published by the Architectural Book Publishing Co., Inc., 108 West 40th Street, New York. Illustrated; 110 pages; size 8 x 11; price \$7.50.

SOME years ago the authors, who are architectural draftsmen, were in search of authentic information

concerning the adobe or Monterey type of house and finally decided that any printed material on the subject would have to be collected by themselves. So they made a thorough study of the subject, including time spent in New England and Southern Spain—the districts which most strongly influenced the Monterey type of house. Their time spent in Monterey was put to good use in talking with old settlers, measuring up old work, and gaining a good knowledge of their subject.

The result is a book which forms an interesting collection of pictures of this period in California architecture, together with 24 pages of measured details and an introduction telling something of the details of construction and planning ideas of the early builders.

LUMBER AND ITS USES

By Royal S. Kellog. Published by the Scientific Book Corporation, 15 East 26th Street, New York. Illustrated; indexed; 378 pages; size 6 x 9; price \$4.00.

THIS is the fourth edition of a book which tells in simple, non-technical language, important facts as to the properties and uses of the principal commercial species of wood which are manufactured into lumber. New data has been added to this edition to assist in problems of wood construction.

The book covers the physical properties of wood, lumber grades and sizes, structural timbers, wood preservation, paints and wood finishes, fire-resistance, planing mill products, construction for various types of structures and for various purposes, and similar data.

What Architects Are Talking About

(Continued from page 59)

artistic and are serving the purposes for which they were constructed, in order to erect new structures which may harmonize a little more closely with the general ideals involved.

"Some of the older buildings are landmarks. They have a distinct historical value and that should be borne in mind."

THE "cornstalk columns" are said to be the only ornamental sculpture in the United States Capitol to escape the fire set by the British in the War of 1812. These columns, located in the vestibule leading to the law library of the Supreme Court of the United States, are fluted with cornstalks and capitals modeled from ears of corn. They were designed by Benjamin H. Latrobe, architect, and set in place in 1809.

PLANNING and promoting of apartment houses will be made the subject of a special course in the Department of Architecture of New York University. The course will consist of 15 one hour lectures, beginning in October, 1931. Among the lecturers will be Clarence S. Stein, Ernest Flagg, Rosario Candela, and Edwin A. Kingsley. The course is primarily intended for practicing architects, though a few students will be admitted.

H. VAN BUREN MAGONIGLE recently received the first honorary degree of Doctor of Architecture ever to be conferred in this country. He is a past president of the New York Chapter, A.I.A., and was at one time one of the directors of the Institute.

ABOUT 2,321 building trade labor hours are required for the average small house, thirty-two workers in eleven building trades being employed, according to a recent analysis by Sears, Roebuck & Co. The following table shows the distribution of workers and time among the eleven building trades:

Trade	Average men	Average hours per house
Carpenters	5	968
Masons	4	411
Painters	3	250
Plasterers	4	188
Steamfitters	2	124
Excavators	4	120
Electricians	2	76
Plumbers	2	88
Metal workers.....	2	16
Tilers	2	20
Lathers	2	60

Protecting Public Buildings



THE contents of many modern public buildings are often more priceless than the

gold in the vaults of most banks.

And leading architects are now providing the same measure of protection for Public Buildings that is used by the Federal Reserve and the majority of large banks—a permanent wire connection with an A. D. T. Central Station.

A. D. T. supervises watchmen, provides fire alarm service, places electrical "ears" in vaults, and supervises sprinkler systems. In fact, A. D. T. Protects Property—day and night with a nation-wide service which has been recognized as a Symbol of Security since 1873.

When you plan a commercial, industrial or public building—look into this question of complete and permanent protection. A. D. T. engineers will show you how to save your client money on operating costs and on insurance with the right combination of A. D. T. Protection Services.

Specifications in Sweets. Bulletins on request.

Controlled Companies of
American District Telegraph Co.

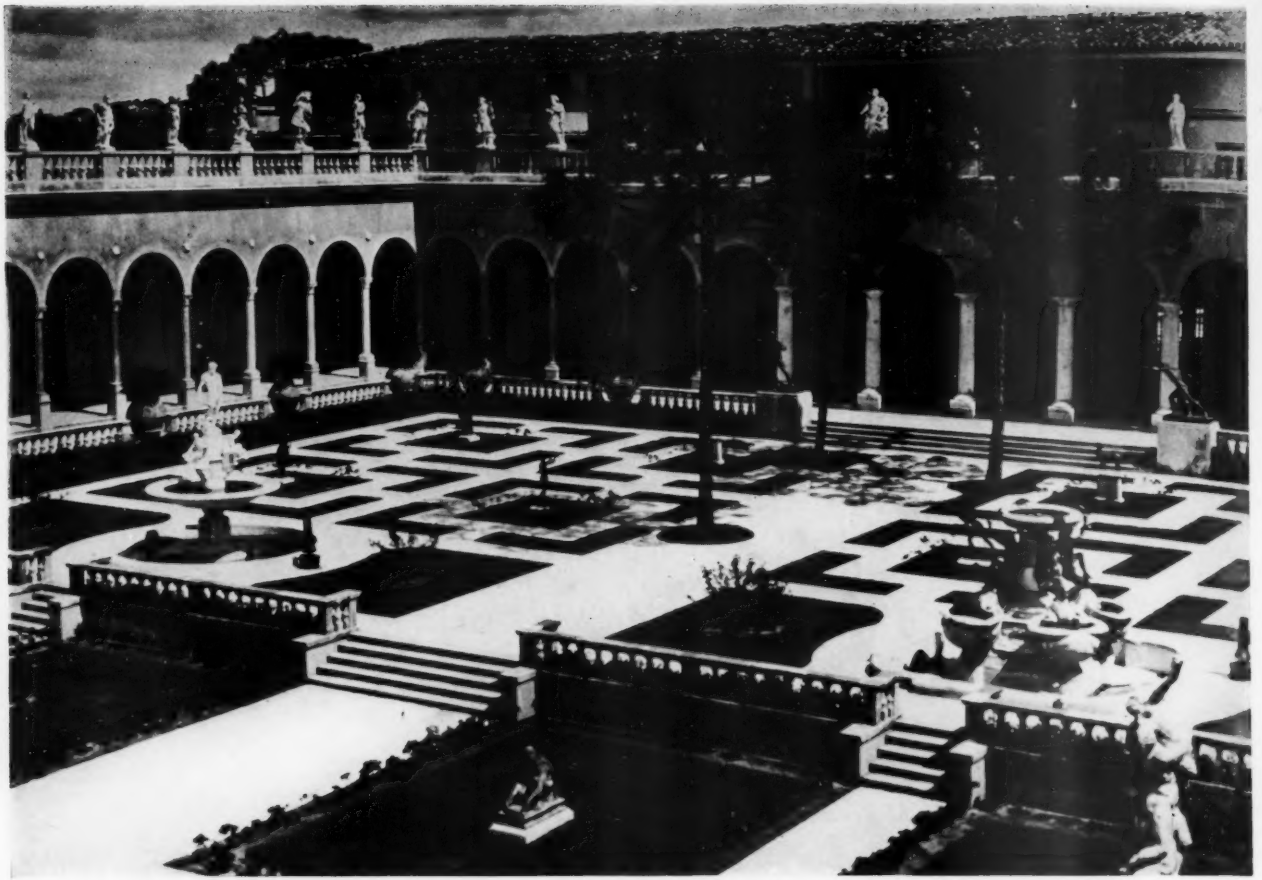
155 Sixth Avenue, New York, N. Y.

**J. B. Speed Memorial
Museum, Louisville, Ky.**

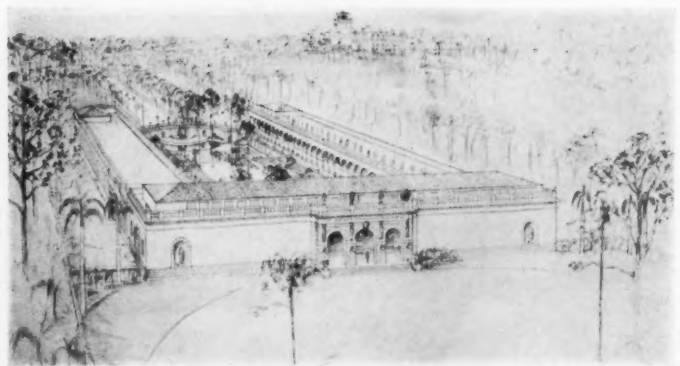
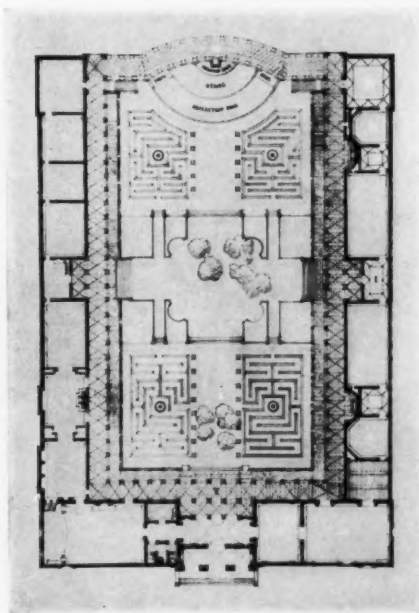
Arthur Loomis,
Architect
Louisville,
Ky.



Landmarks of Modern Protection



MEDIEVAL ARCHITECTURE IN A modern museum



¶ With the idea of giving the public an opportunity to view originals and reproductions of famous works of art, John Ringling has established this museum at Sarasota, Fla. The problem confronting the architect, J. H. Phillips, of New York City, was to design a museum building which would incorporate in its design some one hundred columns and eighty statues, mostly Florentine, dating from the 11th to the 17th centuries, also to make suitable provision for Italian cartouches and fountains, and galleries to exhibit paintings executed by early masters.



ONCE FIXED-STAY FIXED

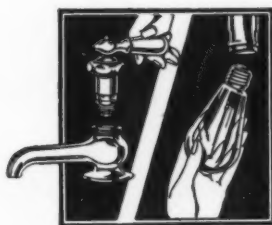
but other faucets go back on you the next day

"During the past six or eight years we have been replacing all worn out faucets with Chicago Faucets in our skyscraper because they are so easy to take care of. We've gone through all this business of 'trying' half a dozen makes, only to find out you have to throw them away anyway. With more than 200 Chicago Faucets in our building, the box of seats and washers we bought a year ago is still in use. No seat grinding, no throwing faucets away, once Chicago Faucets are fixed they stay fixed, you can depend on them, whereas we have had the experience of fixing others only to find that they go back on you the very next day."

HERMAN C. BENEDICT

Chief Engineer
Peoples Trust Building
Chicago

Made with a standardized, removable unit. Fits all Chicago Faucets. Body does not wear out—never needs replacing.



Renewed as easily as changing a light bulb—and at no greater cost. Seat and washer only two parts that need changing occasionally.

CHICAGO-FAUCETS

The Chicago Faucet Company
2700-22 N. Crawford Avenue, Chicago.
Tell me how to save money on faucet repairs and replacements.

A. A. 9-31

Name.....

Address.....

NEW MATERIALS & EQUIPMENT

BRIEF REVIEWS THAT MAKE IT EASY TO KEEP IN TOUCH WITH THE PROGRESS MADE BY PRODUCERS



Water-tight Brick Wall

A new type of brick construction has been developed by the Sealed Joint Construction Company, New York. It is claimed to afford an absolutely water-tight brick wall. A specially moulded brick bisected by a shallow groove is used; as the wall is built, thin strips of a white metal non-rusting alloy are set in the grooves, forming a sort of metal dam beyond which the water is unable to penetrate. Tests indicate that this type of wall is stronger than the ordinary wall.

Shallow Type Safety Panel

The Switch & Panel Division, Square D Company, Detroit, Mich., has introduced a line of shallow safety panelboards to augment its line of standard safety panels. Cabinets in the new line are 6" deep and 19" wide, supplied for flush or surface mounting.

New Concealed Heating Unit

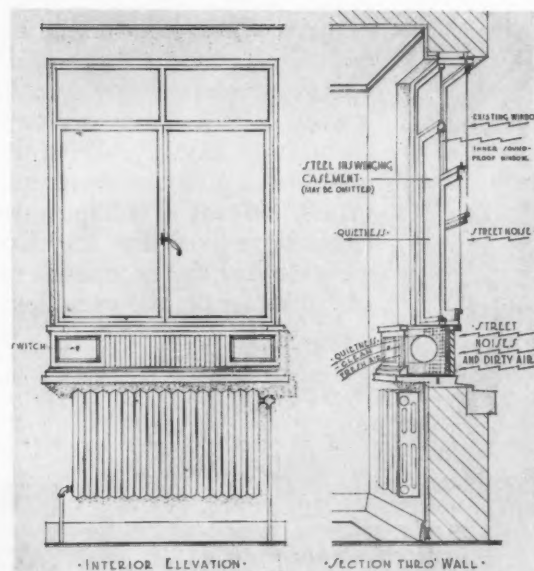
The Rome Radiation Company, Division of Revere Copper and Brass, Inc., 230 Park Avenue, New York, has brought out a new concealed heating unit known as "Rocop." The heating element is of copper. It is a companion to the Robras radiator, and is offered in a range of sizes.

Plywood Faced with Iron

The United States Plywood Co., Inc., 603 West 36th Street, New York, is marketing a product called "Armorply," which is marine plywood in any thickness from 1/4" up, faced with galvanized iron sheet on one or both surfaces. Any width up to 48" x 144" can be furnished. It is stated to take a perfect paint surface. It can be used for light weight strong partitions.

Fittings for Welding

The Bonney Forge and Tool Works, Allentown, Pa., has introduced what are called "Weldolets" and "Thredolets" as a satisfactory method of making welded Tee junctions. These are individual fittings, designed to be installed by simply welding them to the main line, using a fusion or "v" weld, then removing the button and completing the junction by welding or screwing the branch pipe to the outlet of the Weldolet or Thredolet. The fittings are designed with a heavy external rib to provide strength and to dissipate the excess heat when welding, thus preventing shrinkage and distortion.



Silencer and Air Filter Unit

Hiram Maxim, inventor of the Maxim Silencer, and Harry E. Campbell, inventor of the Campbell windows, have produced a unit called the Maxim-Campbell Silencer and Air Filter Unit, which is intended to be placed in windows and, while admitting outside air, to eliminate outside noises. This unit is operated electrically so that when it is desired to admit fresh air, the current is turned on and the unit thereby placed into operation. The device is contained in a metal box that rests on the window sill. It is 10" high and 12" deep, painted to match the woodwork. It is made by the Campbell Metal Window Corp., 100 East 42nd Street, New York.



RU-BER-OID BUILT-UP ROOFS HAVE BUILT-IN QUALITY

It's the quality built in a roof that keeps the weather out. When the specifications are RU-BER-OID you can be assured of "built-in" quality, for rigid laboratory control keeps RU-BER-OID quality standards unfailingly uniform.

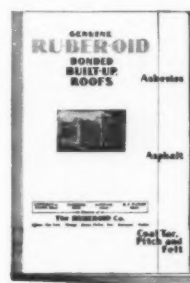
Moreover, you can get this same RU-BER-OID quality in all types of Built-up Roofs—Asbestos, Coal Tar Pitch and Felt, and Asphalt. The Ruberoid Co. makes them all—and in specifications and price range to fit every job.

When desired, RU-BER-OID Built-up Roofs are guaranteed both as to material and workmanship for 10, 15 or 20 years, according to the specifications used. Such roofs are applied only by

approved roofing contractors and are known as bonded roofs. The guarantee is backed by a National Surety Bond.

Wherever you may go, the world over, RU-BER-OID Built-up Roofs have made good, regardless of the climatic conditions or the unusual tests they have had to face.

For your convenience, you will find standard specifications of RU-BER-OID Built-up Roofs in Sweet's. Special specifications to meet unusual conditions will be gladly given you. Simply tell us your problem and address your letter to the nearest RU-BER-OID Office, attention Engineering Department.



The RUBEROID Co.

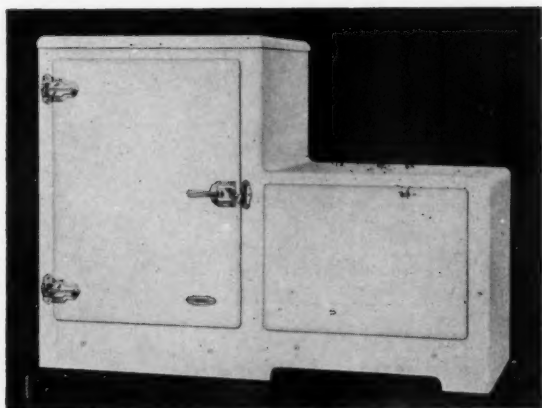
ROOFING MANUFACTURERS FOR OVER FORTY YEARS

Sales Divisions: RUBEROID MILLS—CONTINENTAL ROOFING MILLS
SAFEPAK MILLS—H. F. WATSON MILLS—ETERNIT

ASPHALT SHINGLES AND ROLL ROOFINGS—ASBESTOS CEMENT SHINGLES AND CORRUGATED SHEETS—ASBESTOS, ASPHALT, COAL TAR PITCH AND FELT BUILT-UP ROOFS—ASBESTOS, SHEATHINGS, FELTS, MILL BOARD, PIPE COVERINGS—KRAFT WATERPROOF PAPERS—COAL TAR AND ASPHALT FELTS AND SHEATHINGS—ASPHALT WATERPROOFING PAINTS AND CEMENTS—DRY FELTS AND SHEATHINGS

Offices & Factories: New York, N. Y.—Chicago, Ill.

Millis, Mass.—Erie, Pa.—Baltimore, Md.—Mobile, Ala.



Electric Refrigerator for Small Kitchens

The Norge Corporation, Detroit, has introduced a new electric refrigerator for use in small kitchens. Part of the cabinet goes under the sink. The refrigerator has a capacity of 5.12 cubic feet with a shelf area of eight square feet. The overall width is 47½ inches, maximum height is 33 1-16 inches, height of compressor compartment 19 inches, depth 21½ inches. There are three trays for ice cubes.

Heavy Duty Steel Tank Heater

The Spencer Heater Company, Williamsport, Pa., has produced a new heavy duty steel tank heater to meet the demand for a continuous flow of hot water under the high pressure conditions found in the larger cities. The fuel recommended is No. 1 buckwheat anthracite. There are two series, M-4 and M-5.

New Gas-combination Boiler

A gas-combination boiler has been added to the line of the Spencer Heater Company, Williamsport, Pa. This heater is designed to meet the demand in certain sections for a coal boiler that will burn gas when desired. The basic design of the new product is along the lines of the Spencer magazine feed heater. It is claimed that the new boiler is instantly convertible, affording automatic heat with a choice of fuels.

New Type Kohler Kitchen Faucets

The Kohler Co., Kohler, Wis., has announced three new types of Kohler kitchen faucets, each with a 5" elevated swing spout which curves upward, which makes it possible to fill and wash tall dishes under a kitchen faucet and yet have an 8" back sink. The faucets provide a total clearance of 12". Finished in chromium. A self draining removable soap dish is supplied with two types.

To Educate the Public

(Continued from page 33)

sink it deep so it would carry the structure throughout future generations. Taking a cue from the recent campaign of the Advertising Federation of America, I would plan a program of public education emanating from each of the local chapters, beginning with a series of dinner meetings to which each member would be obligated to bring at least one guest.

These meetings should be planned once each month, with definite subject matter prepared by headquarters delivered by an outstanding architect, told in his own phraseology, and backed by his own experiences. The meetings of the different chapters should be arranged so that they will fall on consecutive days in order that the speaker can go from one city to another without unnecessary loss of time. The schedule in each case should occupy one full week—six talks by a well-known architect whose name will be a drawing card, and who will set apart that week as a volunteer offering for the good of the profession. The expenses, however, should be borne by the Institute.

This would be an inexpensive program; it would be a call to the colors of service on the part of leading architects who would willingly give of their time for the good of the cause. The speakers would not only reach a goodly number of laymen through invitation, but their talks would be carried as news in the newspapers and thus reach the public. This is legitimate publicity, because it reports an activity in which many people are jointly interested.

I'll even go farther—I'll nominate for consideration the subjects for the first six talks. Here they are:

1. The Truth About Architecture
2. Who Benefits Most from Architecture
3. Architecture's Influence on Civilization
4. The Cost Price of Good Architecture
5. Thinking of Architecture Too Late
6. How Architecture Can Help—Civically, Industrially and Personally

THESE talks should be prepared by one skilled in such presentation and loaded with interesting facts—motion pictures may be prepared to add to their effectiveness, and to take some of the burden of the whole evening off the shoulders of the speaker. Discussion could follow, but it should hew to the line indicated by the subject, and not be allowed to drift off into tiresome debates of no interest to the guests.

The idea is worth a trial. The cost is moderate. It will create interest and put the acid test on every member of the Institute. If his heart isn't in architecture enough to be enthusiastic over such opportunities to get the real message over to the public in some such dignified way, he is hopeless.

I have written this straight from the shoulder at the request of the editor of AMERICAN ARCHITECT. However, I cannot close without a sincere word of appreciation of the great work of architects in the past and of my ardent belief in their future service to mankind.

BEAUTY *and* ENDURANCE for these Temples of Worship

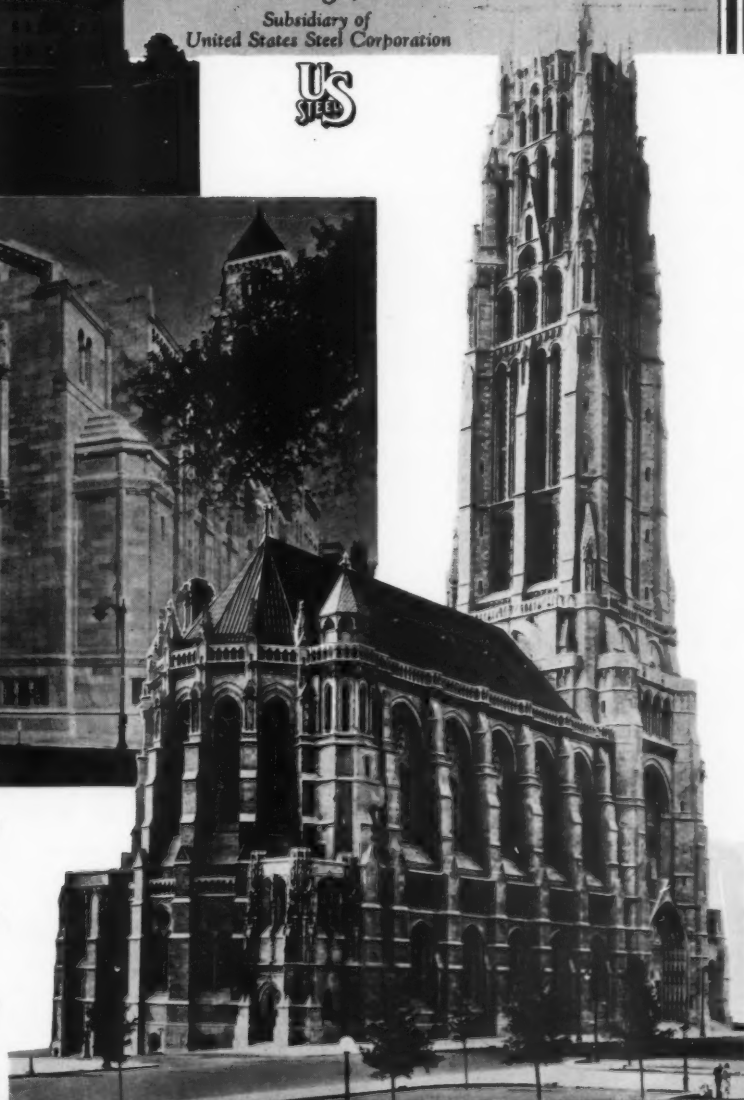
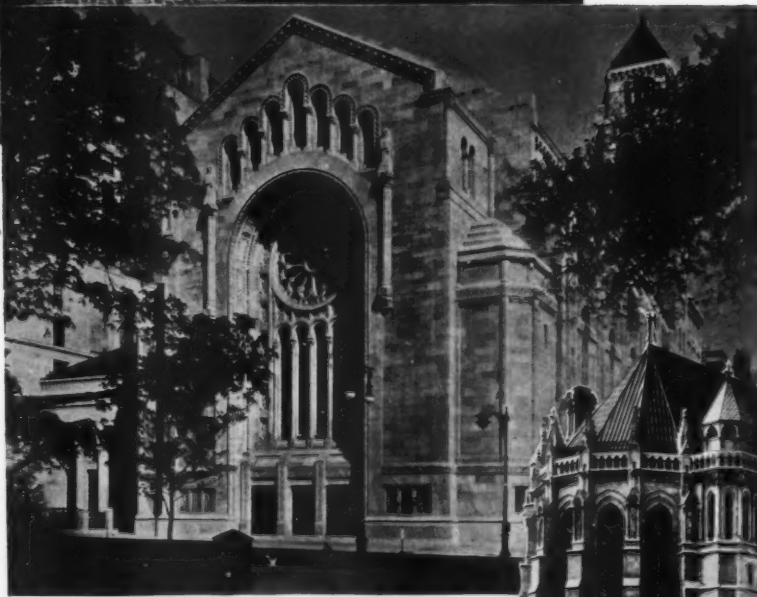
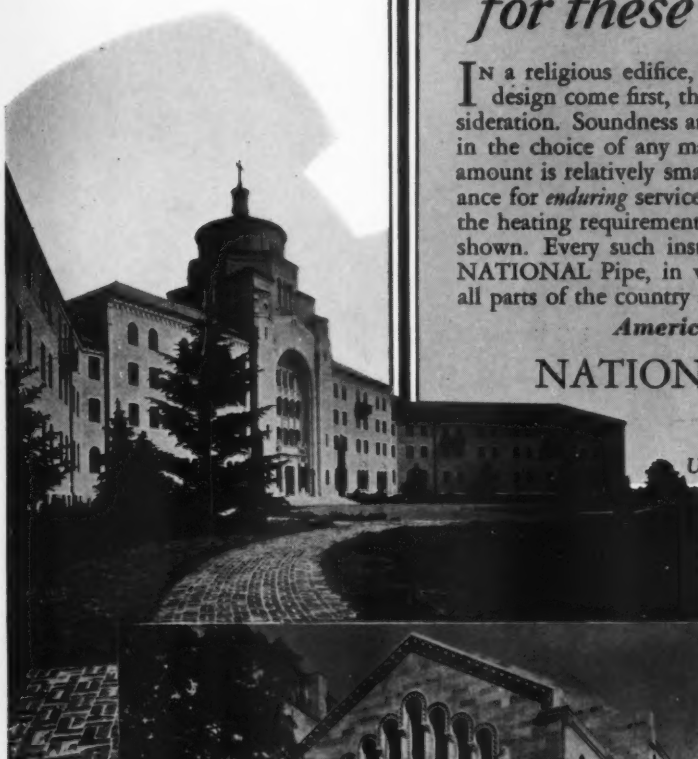
IN a religious edifice, while beauty, dignity, and appropriateness of design come first, the factor of endurance is likewise a leading consideration. Soundness and suitability for its work are not compromised in the choice of any material. The humble role of pipe, though the amount is relatively small in such a building, is of the utmost importance for *enduring* service. Therefore, NATIONAL Pipe was chosen for the heating requirements of the three splendid New York edifices here shown. Every such instance adds a little to the sanction with which NATIONAL Pipe, in various forms for various uses, is acclaimed in all parts of the country as—

America's Standard Wrought Pipe

NATIONAL TUBE COMPANY

Pittsburgh, Pa.

Subsidiary of
United States Steel Corporation



TOP—THE SEMINARY OF THE IMMACULATE CONCEPTION, Huntington, Long Island

Architect: Robert J. Reiley, New York; Cons. Engr.: Chauncey Matlock, New York; Heating Contr.: Almirall & Co., New York.

CENTER—TEMPLE EMANU-EL, New York City

Architects: Robert D. Kohn and Charles Butler, New York; Heating & Vent. Engr.: Jaros & Baum, New York; Heating Contr.: Alvord & Swift, New York.

BOTTOM—RIVERSIDE CHURCH, New York City

Architects: Henry C. Pelton, New York—Associate: Allen & Collens, Boston, Mass.; Heating & Vent. Engr.: Meyer, Strong & Jones, Inc., New York; Gen. Contr.: Marc Eidlitz & Son, New York; Heating Contr.: Gillis & Geoghegan, New York

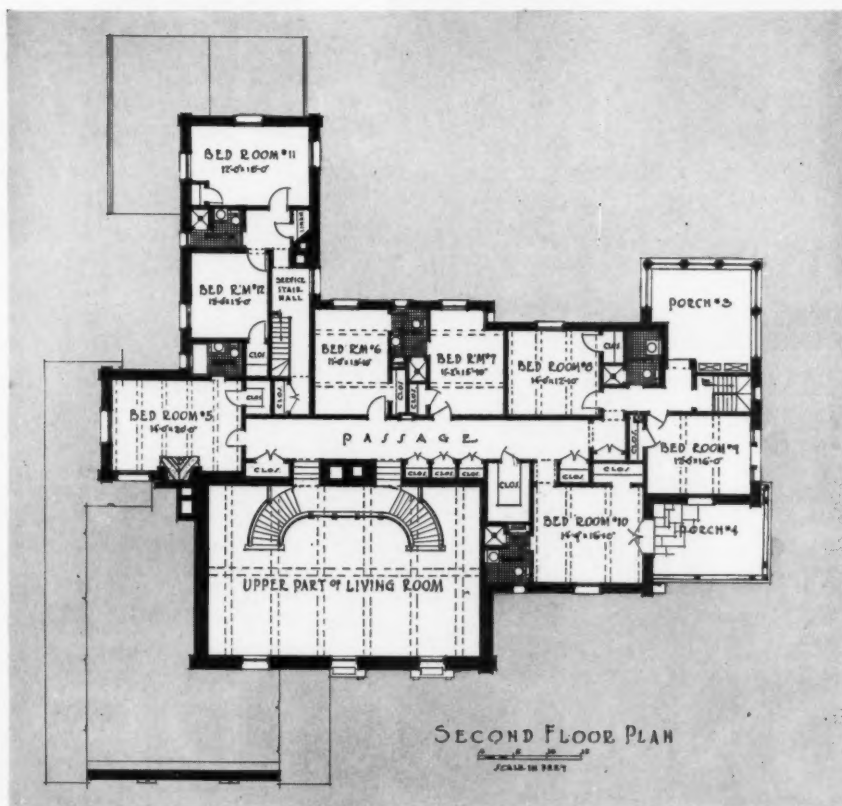
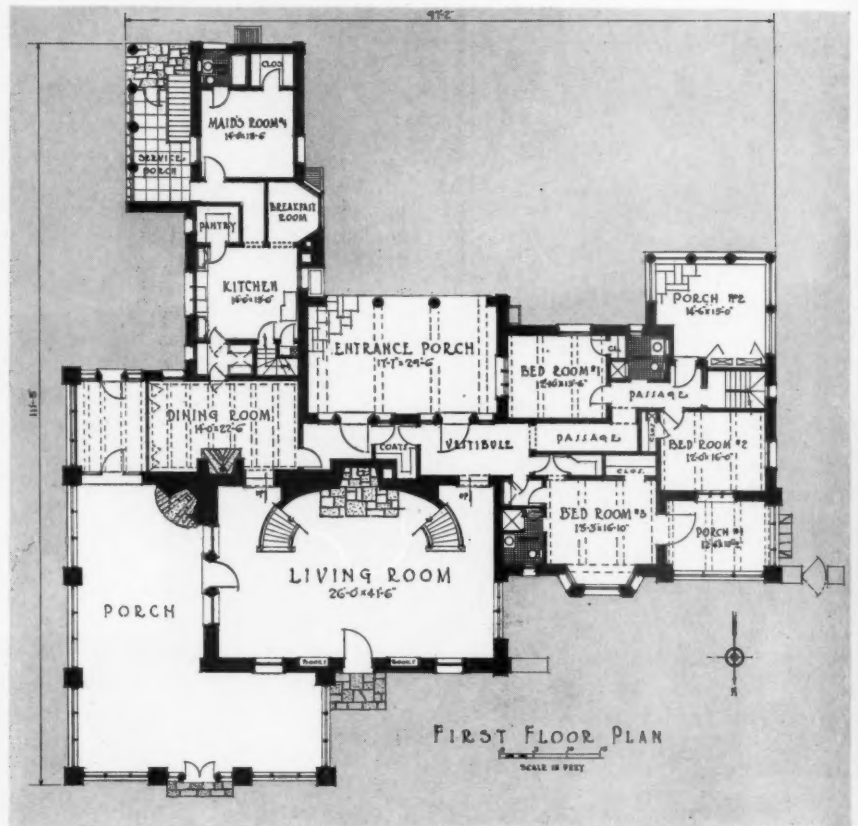
NATIONAL PIPE

LOG CONSTRUCTION

(Continued from page 27)

blue stain caused by fungi. This is done by preventing contact between the logs and the ground, and between individual logs, and by placing the stripped logs in a temporary dry-kiln and on removal treating them with an application of hot linseed oil. This protects the surface from outside moisture and preserves it as white as possible. Stripped logs on the inside were later given a brush coat of oil, rubbed with pumice stone and water, stained, varnished and waxed.

The house was constructed by skilled craftsmen, natives of Sweden and Norway, who were familiar with the work. Every joint and intersection was fitted perfectly. The logs were laid close together with a bed of oakum in the joints to make them weatherproof. In fitting a log, it was placed in position temporarily with a boom derrick, where it was scribed to fit its bed and then lifted from its position and trimmed to fit. The



THIS LOG HOUSE, as indicated by the floor plans, was designed for entertaining a large number of guests

log was then placed in its final position. The workmen did not use a scale, level or gauge, depending on their eyes and hands, producing a job that fits like millwork.

Fifty to sixty men were employed at one time, two or three men working on a log, splitting or hacking with their huge axes. After the logs were placed in their final position, the inside surface was hewn off to make a straight wall. It was a revelation to observe the hewing of these logs from the inside. The logs were handled by a boom derrick which covered the entire job. The logs were not handled with slings, which would damage the bark, but with hooks at each end of the log. A saw was installed, large enough to cut a 30" log.

CORK . . .

in the Empire State Building

WORLD'S HIGHEST STRUCTURE is the Empire State Building, New York. Each of its roofs is protected with Armstrong's Corkboard Insulation, Architects: Shreve, Lamb & Harmon, New York.

climbs higher
than man has ever
built before



THE Empire State Building towers 1248 feet above Fifth Avenue at 34th St., New York. From the first set-back at the Fifth Floor, all the way to the 86th, Armstrong's Corkboard insulates its roofs to bar heat's passage. Seventy-five thousand square feet were installed by the roofing contractor, the Tuttle Roofing Company.

Inside, Armstrong's Vibracork quiets the machinery that operates the 62 high-speed Otis elevators, and absorbs the vibration of pumps and compressors throughout the building.

Few new buildings rise today in which some Armstrong Cork product does not play an important part. In addition to roof insulation, Armstrong's Corkboard is ideally suited for insulating walls of buildings. Armstrong's Corkoustic, the cork material for acoustical treatment and

sound-quieting, also insulates against heat and cold. Corkoustic improves hearing conditions in churches, auditoriums, and theatres; quiets sound in banks, schools, hospitals, offices, Sunday School rooms, factories, and other commercial and public buildings. Resilient Vibracork absorbs shocks and muffles moving machinery. Armstrong's and Nonpareil Insulating Brick insulate against high temperatures. Used in apartment house stacks, they keep heat from adjoining rooms.

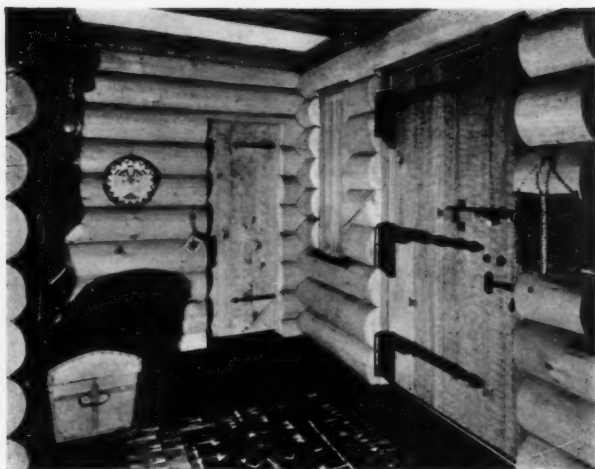
* * *

Literature about these Armstrong products, and samples, are available on request. Armstrong engineers will gladly give you their recommendations on any insulation, vibration, or sound problem. Write the Armstrong Cork & Insulation Company, 936 Concord Street, Lancaster, Pennsylvania.



Armstrong Cork & Insulation Company

CORKBOARD . . CORK COVERING . . VIBRACORK . . CORKOUSTIC . . INSULATING BRICK



DECORATIONS in this log house have been kept in the spirit of its design

The logs were shaped and erected while green and it was necessary to provide for considerable shrinkage in height. To preserve the interior construction intact, 4x4's were erected and sheathed, with a 2" or 3" air space filled with mineral wool. The interior walls were finished with boards, stripped logs or rough plaster. The second floor construction was supported on the 4x4's. Allowance was made in the door and window openings to compensate for shrinkage.

The floors were made of 2" oak boards from 6" to 12" wide, slotted on the underside. An open joint of about $\frac{1}{8}$ " was left with a V-joint at the top. This joint was filled with a slightly elastic black marine glue which permits expansion and contraction in the boards. The boards were screwed to the rough floor and the sunken screw holes filled with walnut plugs. The ends of the boards were tied together with "butterflies." The surface, slightly sanded, was stained and waxed.

THE Better Business Bureau of St. Louis has again come to the front in promoting better construction. In addition to the "Good Practice Specifications" worked out by the Bureau in cooperation with the building industry in that city, a new plan is being proposed whereby an inspection service may be developed through the cooperation of the St. Louis Chapter, A. I. A., or other non-profit organization whose purpose is to stimulate sound architectural and building practices. A bulletin of the Bureau states: "It seems that the public does not sufficiently realize the desirability of employing competent supervision by an engineer or architect, due possibly to a misunderstanding of the amount of the cost of such service. This state of mind exists and must be reckoned with."

An outline of the recommended minimum number of inspections that should be made in order to insure owners that the "Good Practice Specifications for Small Dwellings" are being carried out is as follows:

First Inspection should be made when the excavation is complete. The size of footings could be checked

Winding stairs to the second floor are made of half-log steps supported on log stringers and beams. The balustrade and supporting column are made of birch trees and limbs. It is necessary to bore the pieces longitudinally to prevent their decaying. In the fireplace is an electrically operated three-spindle barbecue. An elevator transports the firewood from the basement and it is fed to the fireplace through an electrically operated door. Electrical equipment is provided for the kitchen. A mechanical system of warm air heating is installed and in summer used for circulating air passed through a cooling chamber. The roof is covered with heavy hand-driven shakes with $\frac{1}{4}$ " butts, stained for a moss-covered, weathered appearance. The hardware was hand forged and specially designed to support the heavy doors. The bedroom doors are provided with wooden latches and strings.

Bathrooms are finished in ceramic tile, the design being based upon Indian motifs. The bathroom fixtures match in color that of the tile work.

The six-car and five-room-apartment garage and the gardener's cottage are constructed in the same manner as the main house, the logs being in proportion to the size of the buildings.

The water supply is obtained from two sources. The domestic supply is furnished by springs on top of a nearby hill, piped to and through the house. The sanitary and yard water is pumped from a well under the Tea House located on the shore of the lake. The well is 12' 0" deep as the lake freezes to a depth of 4' 0" to 5' 0" in the winter. The sewage from the house, cottage and garage passes through a battery of septic tanks into a sub-soil drainage system. The water from the laundry and kitchen is connected to an independent sub-soil drainage system. The storm sewers are connected directly with the lake. The principal landscape work is of the natural, wild variety; a formal garden, however, is located back of the garage not seen from the approaches to the main house.

and the character and condition of the soil observed. Any required change in footing due to soil conditions could be taken care of at that time.

Second Inspection should be made when the first floor joists are in place and when the laying of brick or wall material is on the job and about to begin.

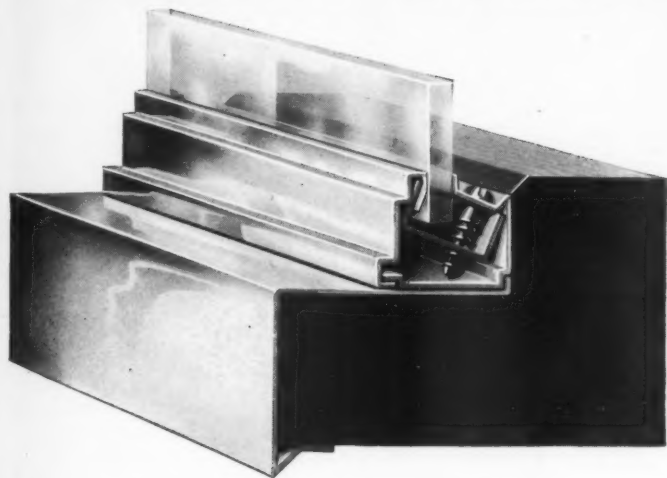
Third Inspection should be made when the roof framing is in place. At this time all of the important structural features will be in place thus completing the inspection of all rough work as it were.

Fourth Inspection should be made when the lathing is in place ready for plastering. At this time all built-in equipment such as electrical work, heating and plumbing pipes can be inspected, together with other features completed at this time such as roofing, gutters and downspouts, and glazing.

Fifth Inspection should be made when the plaster is dry, ready for the application of finished mill-work.

Sixth Inspection should be made upon completion. Painting, flooring, hardware and plumbing fixtures should be inspected, also the special features required.

Now Preferred by Leading Architects Desco Modernistic Store Fronts



DESCO MODERNISTIC STORE FRONTS have already achieved widespread popularity both among members of the building profession and among tenants and owners alike. They give a distinctive touch to the modern building and supply an important detail in harmony with the modernistic architectural style. Note the square corners and the indirect screw pressure. Full information on this No. 16 Modernistic Sash will be sent you on request.

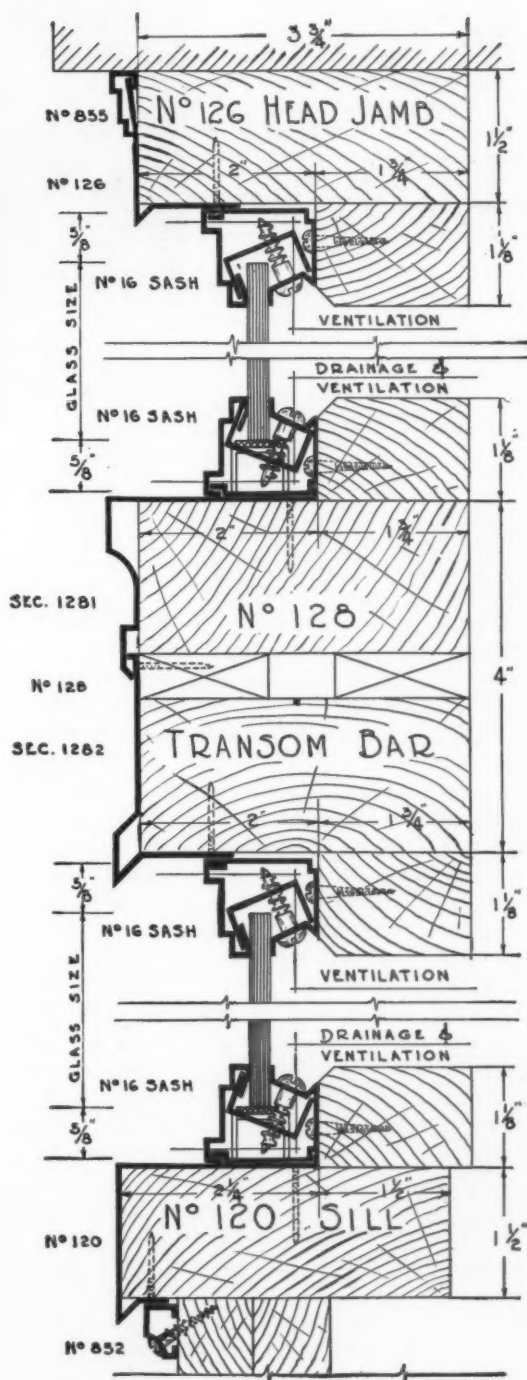
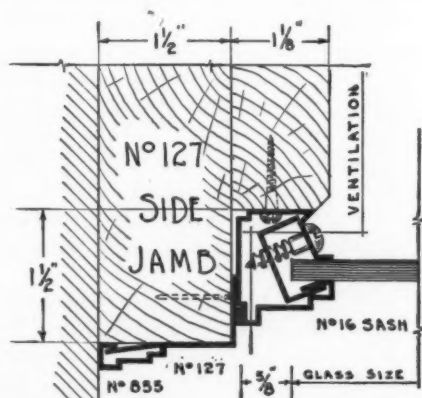
Write us for complete working data and price list. Remember, too, wherever you are there is a distributor near you. We also carry a complete line of "Desco" construction material in our New York City Warehouse.

DETROIT SHOW CASE CO.

1670 West Fort Street Detroit, Michigan

New York City Office and Warehouse: 344-346 East 32nd St.—Philadelphia Office:

316 Commonwealth Bldg.—Pacific Coast Office: 450 Skinner Bldg., Seattle, Wash.

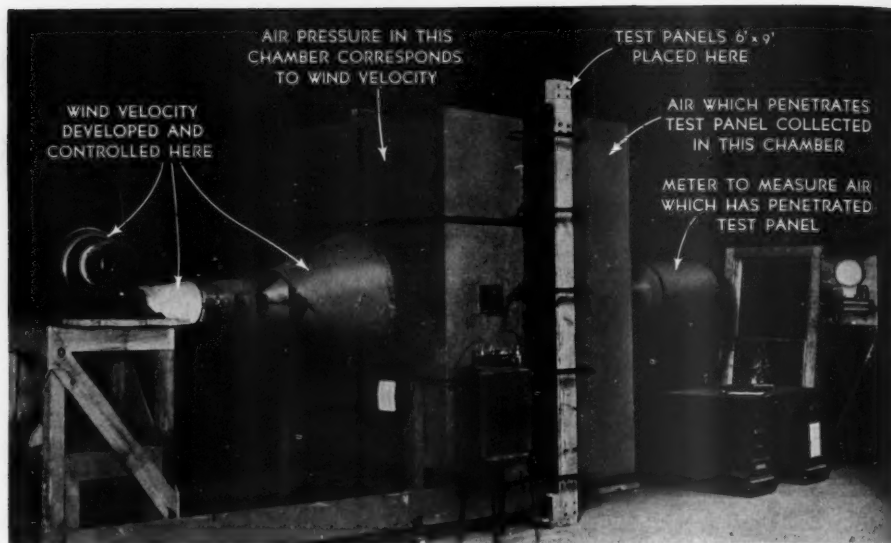


Desco
METAL
REG. U.S. PAT. OFFICE

STORE FRONTS

APPARATUS USED TO TEST INFILTRATION

Test panels are placed in the apparatus, wind velocity is developed on one side, and the amount of air which filters through is measured on the other side of the panel



Result of Tests on Air Infiltration

(Continued from page 61)

per square foot of wall and at wind velocities from 5 to 30 miles per hour, but will be compared in the following pages on the basis of a 15 mile wind, which represents the average prevailing in most localities. Most of the tests were confined to the finish on one side of the wall section, but enough tests on complete walls were included to show the effects of combining interior and exterior surfaces.

Leakage rates obtained in the tests varied from three hundredths of a cubic foot per hour per square foot of wall to as high as 120 cubic feet. In general, plaster on any kind of lath, and lumber sheathing with building paper were found to resist leakage very well. Wood shingles without building paper gave relatively poor results, but when building paper was used, they compared favorably with wood siding. In the shelter building group, board and batten construction showed high leakage, and though building paper was not tried, it is doubtful if it would greatly improve its performance.

This series of tests indicated the importance of using good building paper, the use of which consistently and greatly reduced leakage. Building paper of excellent quality was used in all of the tests except one, which was made with a very poor grade of resin sized paper. This last gave good results as used, but it was the opinion of the investigators that tears and gaps are much more likely with such paper in actual practice, due to its low strength, and that the good results secured with it in the test can hardly be expected in practice.

All panels were allowed to season under cover for from one to six weeks after construction in order to reproduce the condition of walls in actual use.

Following is a detailed account of some of the test results, based on air pressures corresponding to a 15 mile wind velocity. The investigators began with the units of which a wall is made up, testing each in turn,

and then combining them in the whole wall. Results are given in terms of cubic feet leakage per hour per square foot of wall.

The tests showed that matched sheathing, such as often put on farm or shelter buildings or over the outside of house studs, leaks much more if put on in a relatively green condition and allowed to season in place, than if seasoned before application. A panel built of green sheathing and allowed to stand a month before testing showed a leakage of 81.2 cu. ft. whereas the average for similar panels of seasoned sheathing was 12.3 cu. ft. There was evidence in later tests, however, that use of building paper can overcome this difference, and that even square edged green sheathing might be used with about equal effectiveness when good paper is carefully applied, though whether its benefits would be permanent in character is questionable.

A panel was tested in which building paper was applied over the stud faces in vertical strips covering two spaces with each strip. When dry 1" x 6" sheathing was nailed over this; tests gave a leakage of only 0.31 cubic feet. This expedient provides an economical and unusually air tight surface finish for tool houses, small out-buildings and garages, and even for stock or poultry shelters.

Tests of two leading different fiber wall boards, used as sheathing, showed a leakage of 16.1 cubic feet and of 9.1 cubic feet, their average being almost exactly the same as for matched sheathing without building paper. This difference was due entirely to a variation in crack widths. The leakage through the two wallboard materials was the same. The results indicate that their use does not remove the desirability of using good building paper.

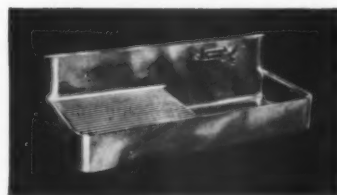
End and side matched sheathing with the ends of boards coming at random between studs showed a leak-

Double drain board Monel Metal sink. Made in nominal sizes of 72" x 21" and 60" x 21".



Standardized
MONEL METAL SINKS
*... bring charm
and character to
modern kitchens*

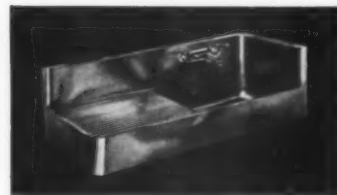
Architects know that the kitchen is one of the most difficult rooms in the house to decorate. No matter how well planned and completely equipped a kitchen may be, its charm and "livableness" may easily be spoiled by a false, jarring color note... by any fixture that is out of tune with the ensemble. • That's why modern architects are specifying standardized Monel Metal sinks for the homes they plan today. They know — and so do their clients — that these radiant sinks with their mellow, silvery tone, blend perfectly with every kitchen color scheme. They know also that Monel Metal's beauty is permanent... that it will not change or lose its soft, reflective lustre despite years of severe household service. • Since Monel Metal sinks are made in standard models and sizes, they can be readily installed in any kitchen. They are carried in stock by plumbing supply jobbers, and can be seen at leading showrooms. Let us send you further information including standard specifications and details on Monel Metal sinks.



Single drain board Monel Metal sink. Available with either right- or left-hand drain board, and in nominal sizes of 60" x 21" and 41" x 21".

EIGHT ADVANTAGES OF MONEL METAL SINKS

- 1 Rich, lustrous beauty with a satiny, glass-smooth surface.
- 2 Rust-proof... highly resistant to corrosion... easy to clean and keep clean.
- 3 Solid metal clear through, with no coating to chip, crack or wear off. Steel-like strength gives lifetime durability.
- 4 Neutral, silver tone that blends with any kitchen color scheme. Gives new freedom to kitchen decoration.
- 5 10 standardized models and 6 standardized sizes. A model and size for any type of kitchen.
- 6 31% more working space than an ordinary sink of same nominal size.
- 7 One-piece construction of heavy gauge Monel Metal. No joints or seams. Reinforced and sound-deadened.
- 8 Standardized construction and quantity production bring prices within reach of the average purse.



Monel Metal corner sink. Available with corner splasher at bowl end and with drain board either right- or left-hand, and in nominal sizes of 61" x 21" and 42" x 21".



A HIGH NICKEL ALLOY
MONEL METAL
NICKEL ALLOYS LOOK BETTER LONGER

Monel Metal is a registered trade mark applied to a technically controlled nickel-copper alloy of high nickel content. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

FOR SEPTEMBER 1931

age of 35.1 cu. ft. or about three times that for sheathing side matched only, and with ends butted over studs.

Drop siding was tested as often applied directly over studs. Building paper was applied over the studs in vertical strips and the drop siding nailed on as usual over it, the combination showing a leakage of only 0.23 cubic feet. Addition of matched sheathing on the other side of the studs did not affect the leakage, though in practice it would undoubtedly reduce the heat losses through the wall considerably by providing an air space.

Corrugated steel siding applied over studs as employed in shelter or temporary buildings was tested in two panels; first, showing a leakage of 45.4 cu. ft., approximately $3\frac{3}{4}$ times that for matched lumber without building paper, and almost 200 times that for drop siding with building paper. A subsequent test in which the laps between the steel sheets were more carefully made gave much better results (9.1 cu. ft. or approximately 40 times the leakage for drop siding and building paper).

Bevel siding and drop siding applied over building paper and sheathing gave exactly the same leakage, i.e. 0.28 cu. ft. A similar test, using 1" x 10" bevel siding, building paper and square edged sheathing boards, gave exactly the same result, indicating that the character of joints in sheathing has little influence so long as building paper is used.

Adding paint to siding in above tests reduced the leakage but the difference is so small in terms of cubic feet that no consideration need be given this factor, except as an additional safeguard.

Tests on shingle panels, such as used both for walls and roofs, showed clearly the effectiveness of building paper in preventing air leakage. Sixteen-inch Red Cedar shingles, five inches to the weather over a deck of 1 x 4 boards one inch apart, showed a leakage of 69.5 cu. ft.; the same construction with building paper leaked only 0.38 cu. ft. Sixteen-inch shingles over a tight deck of shiplap boards showed a leakage of 15.3 cu. ft. or approximately the same as might have been expected of the boards without shingles. The same construction with building paper added showed a leakage of only 0.17 cu. ft. Twenty-four-inch shingles on 1 x 6 boards, spaced on 11-inch centers, allowed the greatest leakage of all, namely, 122.5 cu. ft. This was reduced by the use of building paper to 0.13 cu. ft.

Plaster on almost any kind of base proved practically air tight. Wood lath and three coats of gypsum plaster registered 0.17 cubic feet leakage, and in combination with an exterior surface of 16-inch shingles, building paper and shiplap sheathing, a leakage of 0.12 cu. ft. was recorded. The effect of sizing and one paint coat on plaster surface in reducing leakage to zero was noted in one case. Entire dependence can not be placed on this characteristic of plaster, however, due to the fact that it is liable to cracks in use and the desirability of a highly resistant exterior surface on the wall should be emphasized.

The significance of leakage rates noted in the different walls above may be appreciated from the fact that an average, medium-sized, six or seven room detached dwelling has been found to have 1700 sq. ft. of net wall

area, exclusive of openings, and about 950 sq. ft. of roof area. Assuming a positive differential in air pressure to windward and an equal negative differential to leeward of such a dwelling, equivalent to a 15-mile wind velocity, one-half the wall area or 850 sq. ft. is subject to the leakage recorded. With the several types of wall construction employing building paper and giving 0.2 cu. ft. average leakage per hour per sq. ft., the total infiltration in a 24-hour period is $850 \times 24 \times 0.2$ or 4080 cu. ft. Each cubic foot of air requires approximately 0.018 heat units to raise it one degree Fahr. in temperature or 0.18 times 70 to heat it from zero outside to customary living room temperatures. Assuming a typical furnace efficiency of 60%, the number of pounds of coal necessary to heat this air during a 24-hour period is computed as follows:

$$\frac{4080 \times 0.018 \times 70}{12000 \times 0.60} = 0.71 \text{ lbs.}$$

If the leakage per sq. ft. of wall is one cubic foot per hour, this coal consumption becomes 3.5 pounds on a zero day. With this increased to 12 cu. ft. per hour, as might easily be the case if fiber wall board or lumber sheathing without building paper were used, the coal consumption required for comfort becomes 42 pounds or more.

Assuming a heating season of 163,000 hour degrees of temperature between the inside and the outside of a dwelling, and an average wind velocity of 15 miles per hour, the coal consumption necessary to heat infiltration through walls of an average-sized dwelling will vary somewhat as follows in proportion to the air leakage, this, of course, assuming that the interior of the building is actually maintained at comfortable temperature, which without a fairly tight wall will seldom be the case in extreme weather.

0.2 cubic foot leakage.....	69 pounds
1.0 cubic foot leakage.....	345 "
12.0 cubic foot leakage.....	4,140 "
70 cubic foot leakage.....	24,150 "

Some addition, of course, would be necessary to the figures quoted above to take care of the leakage through roof surfaces induced by the somewhat uncertain but nevertheless actual pressure differentials obtaining through the roof structure.

Whatever the heating economies and advantages to comfort secured by a tight wall construction, it is obvious that they are valuable and important out of all proportion to the slight additional cost necessary to make a frame wall substantially air tight.

HARVEY WILEY CORBETT, discussing the development of a new and modern architecture, stated: "There will be four factors behind this growth. There are new types of construction, new purposes for which buildings will be erected, new materials used in construction decoration and new methods employed in putting them together. It will be contemporary architecture and it will be modern."



OUTSTANDING FEATURES > > >

Wide Chromatic Range

Pleasing Texture . Great Durability

CRAB ORCHARD *Quartzite*

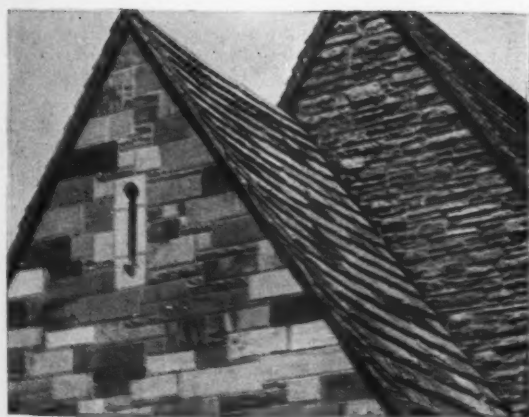


A very beautiful material lending itself to a wide variety of uses. Its fine grain, impervious density and remarkably true surface make it especially well adapted for Roofing, Coping, Exterior and Interior Wall Surfaces, Wainscoting, Floors, Treads, Flagging and Stepping Stones.

Specified by many of the best architects for the construction of buildings of outstanding character.

A few of the notable structures in which Crab Orchard Quartzite has been employed are here given:

The Academy of Arts, Honolulu, The Church of Heavenly Rest, New York City, *Architects, Mayers, Murray and Phillip, New York*; The Lucien H. Tyng Group, Southampton Beach, L. I., *Architects, Peabody, Wilson & Brown, New York*; Harkness Memorial Dormitories, Harvard, *Architects, Coolidge-Shepley-Bullfinch and Abbot, Boston, Mass.*; St. Paul's Episcopal Church, Winston-Salem, N. C., *Architects, Cram & Ferguson, Boston*; Harold Macklin, Winston-Salem, N. C.; Beard Residence, Tuxedo, N. Y., *Architects, McKim, Mead & White, New York City*; Georgia School of Technology, Aviation Building, Atlanta, Ga., *Architects, Bush, Brown and Gailley, Atlanta, Ga.*; William H. Schuchardt Residence, Los Angeles, Calif., *Architect, William H. Schuchardt, Los Angeles, Calif.*; Cleveland Heights Bank, Cleveland, Ohio, *Architect, Andrew J. Thomas, New York City*; Legal Research Building, University of Michigan, Ann Arbor, Mich., *Architects, York and Sawyers, New York City*; D. B. Phillips Residence, Butler, Pa., *Architects, Janssen and Cocken, Pittsburgh, Pa.*; Internal Revenue Building, Washington, D. C., *Supervising Architect, W. E. Wetmore, Washington, D. C.*; Cathedral of the Queen of the Holy Rosary, Toledo, Ohio, *Architect, William Richard Perry, Pittsburgh, Pa.*



In addition to the colorings shown we are able to supply subdued tones of gray and tans, and to ship promptly in sizes up to transportation limits. Our Crab Orchard Quartzite lies in the quarry in separate strata 1/2" to 22" in thickness. The thicker material is used for Dimension stone and Rubble. Write for complete information.

CRAB ORCHARD STONE CO.

INCORPORATED

NASHVILLE

TENNESSEE

JOHN OMAN, Jr., President





No more NERVOUS Landscapes



NOW you can see things as they really are. Through Pennvernon Window Glass, scenes look *natural*—no longer distorted by the wavy, wobbly outlines that used to be so common because of defects in window glass.

Pennvernon, because it is kept absolutely flat from molten metal to finished sheet, affords a wonderful clearness of vision unequalled by any other window glass. More than that, Pennvernon Window Glass retains its original, lustrous finish on both sides—a fact which has led to the enthusiastic endorsement of glaziers everywhere.

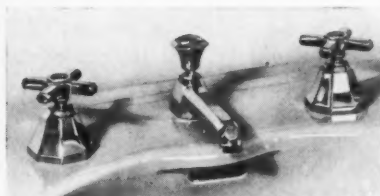
And the incredible part of it is that you can get the unusual advantage offered by Pennvernon *at no extra cost!*

Pennvernon Window Glass is available at the warehouses of the Pittsburgh Plate Glass Company—one in every important city—and at all leading glass jobbers. Write us for large or small samples—examine them and be convinced that here is a new and better glass. We will be glad to furnish you with our booklet on Pennvernon manufacture, too. Pittsburgh Plate Glass Company, Grant Building, Pittsburgh, Pa.

Pennvernon
flat drawn
WINDOW GLASS

HAIR-BREADTH ACCURACY HERE

PUTS AN ARCHITECT'S HOUSE ON SURE GROUND



Kohler fixtures deserve Kohler fittings, their equal in beauty of design and serviceability.

CLIENTS aren't so much concerned about the thought that goes into the making of fittings as about the hot and cold water that comes out. But you have to go deeper than the surface and look for fine points of structure and design. You have to be sure that care at our end will mean comfort at your end . . . fittings that keep a house running smoothly, that fit once and for all.

Talk to some other architect who makes it a habit to specify Kohler real-red-brass fittings on all jobs, large and small, and he'll soon tell you what won him over. Accuracy of manufacture, for one thing. The interchangeable unit of a lavatory valve fits into the outer casing within .004 of an inch! Deep, fast-action threads, always completely engaged, eliminate side-sway and protect against unnecessary wear. Interchangeable handles are so delicately poised that valves open and shut at finger-tip pressure.

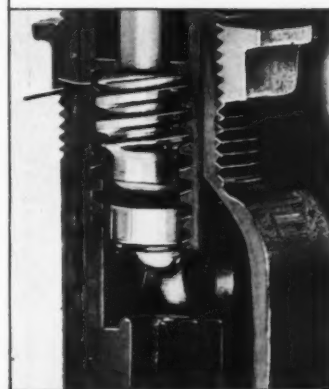
And Kohler accuracy is closely guarded. Each fitting must pass through no less than seven major inspections to maintain Kohler standards of material and workmanship—including tests of the casting, threads, buffing, plating, and a final test before packing under 125-pound water pressure.

Compare Kohler fittings simply by weighing them in your hand. Heavier because they contain an extra amount of virgin copper, finished with a thicker, more uniform coating of hard and durable chromium plate, these fittings are obviously sturdier and more efficient. Designs are modern, correct. Action is quick and precise. Kohler Co. *Founded* 1873. Kohler, Wisconsin. Manufacturers of Kohler Electric Lighting Plants.



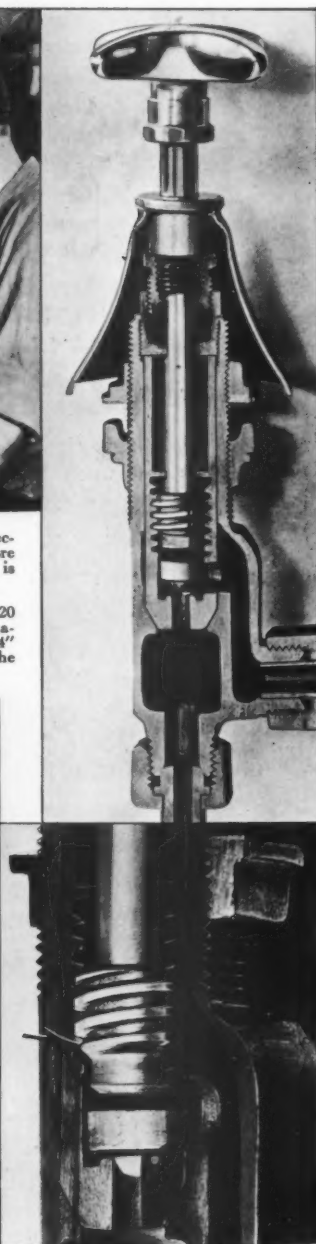
ABOVE—One of the seven major inspections made on each Kohler fitting before it reaches you. Here, the workman is water-testing the casting.

RIGHT—Cross-section of Kohler K-8020 lavatory valve. Note the accurate machining of all parts—especially the .004" fit of the interchangeable unit into the outer casing.



OPEN

The double Acme threads on Kohler valves are always completely engaged. This prevents side-sway, and protects against wear.



CLOSED

KOHLER OF KOHLER

PLUMBING FIXTURES AND FITTINGS

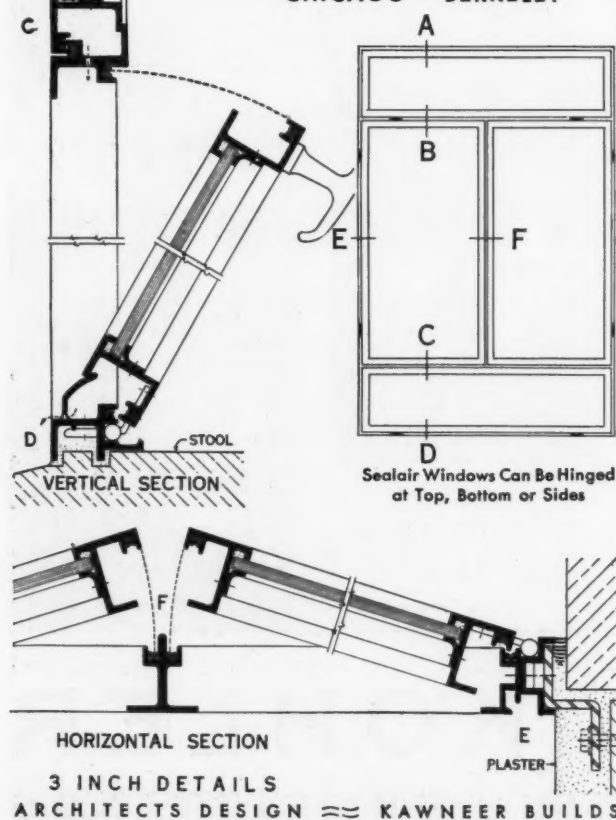
A VERSATILE WINDOW CONSTRUCTION

*Out-swinging
In-swinging
or a combination
of both*

In selecting the proper window, consider the advantages of Sealair. The three-point contact weather-proof feature alone marks this window as outstanding. Ventilation is controlled with specially hinged in-swinging and out-swinging sashes, and washing of the exterior is accomplished from within... WE GUARANTEE THIS WINDOW TO BE WEATHER-, DUST- AND RATTLE-PROOF. A wide variety of types can be furnished in extruded Bronze or Aluminum Alloy. Information and full-size details furnished on request.

Side-Hinged
to Swing Out

THE
Kawneer
COMPANY
NILES, MICHIGAN
FACTORIES
NILES • CHICAGO HEIGHTS
CHICAGO • BERKELEY



What Makes a House a Good Risk

(Continued from page 53)

materials and adherence to sound construction practice, is not only to increase the demand for houses but substantially to increase the willingness and ability of owners to meet such obligations as they may incur in order to consummate the purchase of those houses.

Repair bills are usually unexpected, always unfixed, and, therefore, loaded with danger for the buyer. Unlike taxes, street assessments, and other fixed charges, they are seldom, if ever, provided for in advance. The purchaser or builder of a new house expects, and quite reasonably so, that no outlay for repairs will be necessary until he has liquidated the purchase loan. When, like thunder out of a clear sky, the roof leaks, the plaster cracks, the floor warps, or one of a half-dozen other equally vivid evidences of sub-standard materials or workmanship, or both, bobs up, the stage is in readiness for trouble. Whether the worst comes to pass depends upon the financial status of the owner at the moment. More often than many of us would like to believe, however, that status is undoubtedly such that repairs can not be made. Deterioration accelerates rapidly, and the borrower-owner begins to wonder whether he has an asset or a liability. His incentive vanishes; his enthusiasm wanes; his courage fails. The facts are written into the records of thousands of financial institutions.

In Shreveport, Louisiana, there is a building and loan association which for a period of eight years has rigidly supervised the construction of all houses on which it has loaned money. Setting up certain standards for material and construction, the association employed an experienced, reputable builder, with necessary assistants, to enforce those standards. From the day the supervisor assumed his duties until this, the Shreveport Mutual Building Association—now a fifteen million-dollar institution—has refused to lend money on any house erected after supervision was begun unless it was built in strict accordance with its own standards.

THE results of that service to owners of houses in Shreveport have been little short of phenomenal. The mark of sterling has in effect been placed on every house financed by that association. In a letter dated December 9, 1930, Mr. Philip Lieber, president of the association, informs me that in spite of the severe business depression, "there are only three or four houses that we have had to take back which were built under our supervision." Why? For the simple reason that the first cost of those houses has thus far been their only cost. Even now, according to Mr. Lieber, about all that any of those houses need—and some are now several years old—is a little paint and interior decorating.

That experience is conclusive proof of the benefits of high grade materials and sound construction practice. The individual who, by the actual performance of his house, is made to realize that he has received full value for his investment will feel more keenly the urge that prompted him to take the initial step and move on with renewed determination to complete ownership.

But quality has its price. And to urge quality upon the prospective owner without making it financially pos-



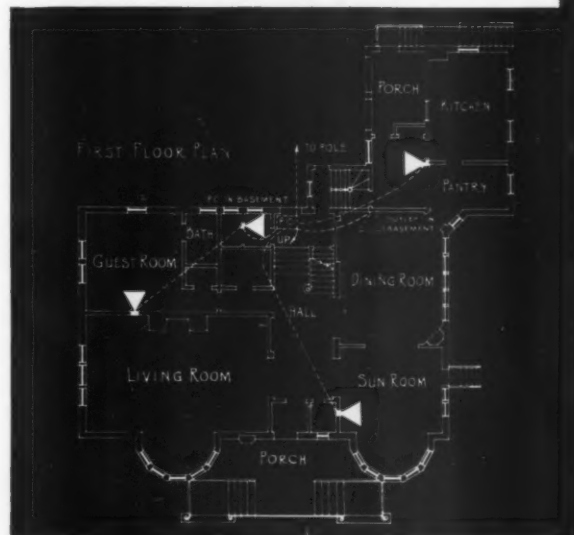
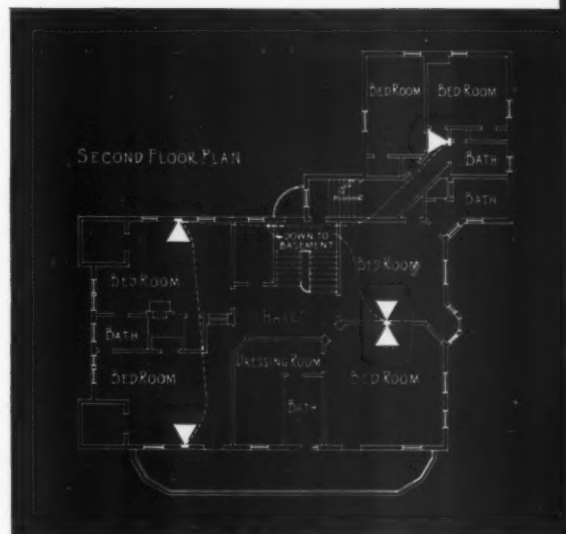
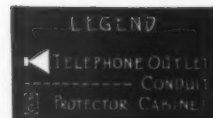
Built-in conduit and ten telephone outlets provide for convenience in the residence of Mr. Eben Atwood, Lake Minnetonka, Wayzata, Minnesota. A. R. VAN DYCK and FLOYD W. BROWN, Architects.

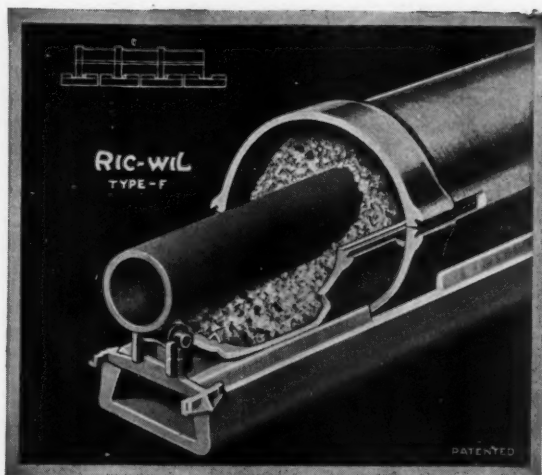
TELEPHONE CONVENIENCE MAKES MODERN HOMES MORE LIVABLE

TELEPHONE convenience is saving steps and minutes in modern homes throughout the country—in distinctive, livable homes like the one illustrated, which overlooks beautiful Lake Minnetonka.

Telephone convenience is simply the placing of telephones at the handiest locations in the most important rooms. It is easily and economically achieved by planning in advance—by providing built-in conduit and outlets in walls and floors. The conduit conceals all wiring, permits the placing of telephone outlets wherever they're wanted and protects against most types of service interruptions.

Let the local telephone company help you with the telephone arrangements for new or remodeled residences. Such consultation will save you time and trouble and assure lasting telephone satisfaction to your clients. There is no charge. Just call the Business Office.





THESE EXCLUSIVE RIC-WIL ADVANTAGES MUST BE CONSIDERED!

—they are essential for the economical, permanent and efficient insulation and protection of underground heating pipes.

- 1—Labor costs to install Ric-wil are very low.
- 2—Base Drain Foundation supports pipes, aligns Conduit and provides ample drainage.
- 3—Pipe Supports are practical and simply snap into place, resting entirely on side shoulders of Base Drain.
- 4—Ric-wil Conduit is fool-proof—top and bottom conduit halves are the same—it can't be put in wrong.
- 5—Loc-liP Side Joints are permanent and water-tight—and easily inspected from top of trench.
- 6—All Ric-wil parts interlock—all joints are staggered and the component parts fit together and are locked.
- 7—Ric-wil Dry-paC Insulation Filler is water repellent and saves the most heat.
- 8—Heat loss less than 10%—and so guaranteed if desired.
- 9—Maintenance cost is practically nothing—Ric-wil is well engineered.
- 10—Ric-wil is made in different types and different materials to meet all practical conditions—we can therefore recommend impartially what is best in every case.
- 11—You can specify Ric-wil easily and be sure of exactly what you will get—it's The Certified System.

Without obligation, Ric-wil Engineers will submit full details on the most practical and economical type of installation to meet your conditions. Write for Catalog No. 8 and detailed drawings of typical installations.

Ric-wil Systems are compact and complete, as shown in this cross section of the Type F System insulated with Dry-paC.



THE RIC-WIL COMPANY

1562 Union Trust Building Cleveland, Ohio

Branches: New York • Atlanta • Chicago
AGENTS IN PRINCIPAL CITIES

REG. U. S. PAT. OFF.

Ric-wil

CONDUIT SYSTEMS FOR
UNDERGROUND STEAM PIPES

sible for him to obtain it not only adds insult to injury but is a gross misuse of God-given time. Supervision of construction provides a happy and practical solution of this problem. High grade materials and sound construction—demanded and assured by rigid supervision—create more *permanent* security for loans; they establish a literal wall of protection against repair bills that frequently limit the ability and thwart the desire of the borrower to make his payments; and they provide a maximum of insurance against loss, should foreclosure become necessary. It is not only safe to lend a larger percentage of the appraised value of a house so constructed, but it is, indeed, mandatory.

As compared to inferior grades, high grade materials increase the value of a house by an amount greater than the additional cost of the better materials. Properly seasoned lumber, for example, not only means more permanent joists, studs, and rafters, but it also assures more permanent floors, walls, and roof. Good workmanship, likewise, increases the value of a house.

There is a sliding scale relationship between the structural quality and the value of every house; a dollar invested in the former adds more than a hundred cents to the latter. For this reason also—to obtain the additional margin of safety which is established and perpetuated by this increased value—home financing institutions are morally obligated to lend a sufficiently larger percentage of the appraised value of the house to make the use of high grade materials and sound construction possible, practical, and certain.

The practice of lending a larger percentage of appraised value is not unknown to the home financing industry. The Shreveport Mutual Building Association increased its loans from a long-established maximum of two-thirds to three-fourths of the appraised value of all new houses built in accordance with its own standards and under its own supervision. The results of that practice—have been satisfactory beyond question.

It was largely because of those results that, with the establishment of supervision of construction in March, 1930, the building and loan associations of Oklahoma City increased their loans from the customary 60 or 65 per cent to 75 per cent of the appraised value of all houses that are built in accordance with their "Class A" requirements. House construction is supervised in Oklahoma City by a central bureau maintained and operated by building and loan associations whose resources exceed \$50,000,000.00. There, also, the results of lending a larger percentage have been completely satisfactory.

To so increase home consciousness that the demand for one and two-family, detached houses will be stabilized along consistently higher levels is a real problem of the building industry. The solution of that problem will be found in the substitution of quality for cubical content and custom as the basis of home financing, and the assumption by home financing institutions of the double responsibility to provide each home owner with that measure of quality to which he is entitled and the funds to obtain it. Then, and then only, will home consciousness have a fair chance to hit a positive stride and "pride of home ownership" to become something more than linguistic camouflage. Call it sentiment, public service, or whatever is harmonious with time and temperament. But first of all, it is good business.



THOUSANDS of moulds...



**for 100%
lighting
efficiency**

MOULDs for magnificent Celestialite globes...thousands, to answer every lighting need...to adapt to every type of interior and exterior! The skill required in the fashioning of the moulds demands all the extraordinary craftsmanship that produces the Celestialite globes. The range of style and design available in Celestialite is nearly endless. Indeed, moulds are frequently "custom-made" to meet individual taste or unusual settings.

Architects have found in Celestialite the fortunate combination of high quality lighting and distinguished globe design to meet the demands of any interiors. For that reason, great buildings of every character—offices, universities, industrial plants, hospitals, theatres, and department stores—have turned to Celestialite as the ultimate answer to the problem of interior lighting.



CELESTIALITE's Three Layers The Reason for its Superiority

- [1] A layer of crystal-clear transparency—for body and strength.
- [2] A layer of white glass—to diffuse the rays and soften the light.
- [3] A layer of blue glass—to whiten and improve the quality of the light.

CELESTIALITE

(Registered and Patented)

"NEXT TO DAYLIGHT"

Gleason-Tiebout Glass Company, 200 Fifth Avenue, New York City

Sante Fe Building, Dallas Texas, one of the many fine buildings lighted with Celestialite. Write us at once for information that will secure you as fine a lighting system. We will also send you a free fragment of Celestialite, showing its three-layer construction.



**IRVING TRUST COMPANY OFFICES
PANELED IN FLAIMPURF WOOD
BY HENRY KLEIN & CO., INC.**



Section of executive suite, fifth floor, paneled in Yuba Wood.



Corner of private office, Chairman of the Board, paneled in Teakwood.



Section of officers' room, main floor, paneled in Teakwood.

HENRY KLEIN & CO., INC., NEW YORK

Modern Veneer Construction

(Continued from page 41)

usually accepted sense; the surface of the walls being carried around into window openings and doorways. This necessitated the designing of a door jamb in such a way that the practical requirements are met. This was not easy, but it has been done. The grounds rest against a solid buck, which is securely anchored with iron straps to the terra cotta back of it, to prevent even the most violent slamming of the door from opening up the joints of the woodwork, or causing cracks to develop in the adjoining plaster where low wainscots are used.

Where the finish of the wall above a doorway is of vertical veneered strips with narrow moulded strips between them, and the reveal of the doorway is deep, the mouldings are generally continued horizontally upon the soffit of the doorway; a treatment that is highly effective.

Several rooms have a three foot wainscot of wood, formed of vertical strips and intervening mouldings. Some of the mouldings, which are set flush in the dado, are carried to the top of the plaster walls, projecting one-quarter of an inch beyond the face of the plaster. During the plastering, temporary grounds, oiled to prevent the plaster from adhering to them occupied the place of the moulded strips of finished wood, which were inserted after the plaster had dried out. In these rooms the transition between the walls and ceiling is effected by a wood strip moulded to slight depth, which forms a relatively narrow sloping surface that eases the wall into the ceiling. This connection between the walls and the ceiling is used also where woodwork is carried from floor to ceiling.

The veneers are used upon adjoining strips in the order in which they come in the flitch, the same as in the log before it was sawn into veneers, so that there are no sudden changes in the character of the grain.

THE wood has been given very little finish, so that its natural color and grain may appear in full advantage. In some instances boiled linseed oil was applied, which acts as a filler and makes the wood somewhat richer in color. This was followed, when dry, by two coats of transparent lacquer. Generally only transparent lacquer has been used, rubbed to a finish that has no gloss. Even transparent lacquer changes the color of the wood somewhat, but sand-blasting with 100 mesh sand restored the original color. This method has been used, in finishing the wood of the elevator cabs, which was given three coats of transparent lacquer, the last coat sand-blasted.

The following woods were used; yuba, English oak, figured teak, koa, blackwood, and American walnut, with a sparing use of ebonized holly in inlaid strips.

It is notable that the scale has been studied with great care in all of this woodwork and that in most of the rooms in which wood is used it is of "furniture scale."

The system of design and construction used has been described in its main essentials, and the results achieved make this installation worthy of careful study for its artistic sincerity and advanced character.

Offices of the IRVING TRUST CO.

NUMBER ONE WALL STREET

Architects: Voorhees, Gmelin & Walker
Builder: Marc Eidlitz & Son, Inc.



THE paneled interiors in the new home of the Irving Trust Company, Number One Wall Street, New York, were installed by Henry Klein and Company. All paneling is in Flaim-pruf Wood, and can neither flame nor spread flame. Information on installations will be furnished on request.

●
Photo at Left: Close-up detail of wall behind dais in Directors' Room.

●
Photo Below: General view of Directors' Room, 47th floor, paneled in Teakwood.



Architectural Cabinet Work by:

HENRY KLEIN & CO., Inc. (EST. 1909)

40 West 23rd Street, New York Plant: Elmhurst, N. Y.

Let the Sucker Beware

(Continued from page 57)

exception, can they? We buy wherever it's to your best advantage. Fair enough, isn't it?"

Naturally, Uncle had to admit that it seemed so. But he wasn't landed yet. "But," he protested, "if I hired an architect, he'll get competitive figures on the whole shooting-match, then I'll know just where I stand before I commit myself."

"Not when you first employ an architect, you won't," the fellow pointed out. "Until the bids come in, the best of architects can only guess, and, naturally, they guess low in order to encourage you. They all do. Now, f'r instance, what do they say this job would cost?"

"Why," says my astute Uncle, playing right up to the gink, "one of 'em says it can be done for \$34,500 and the other says 'not under \$36,000.' What would you say?"

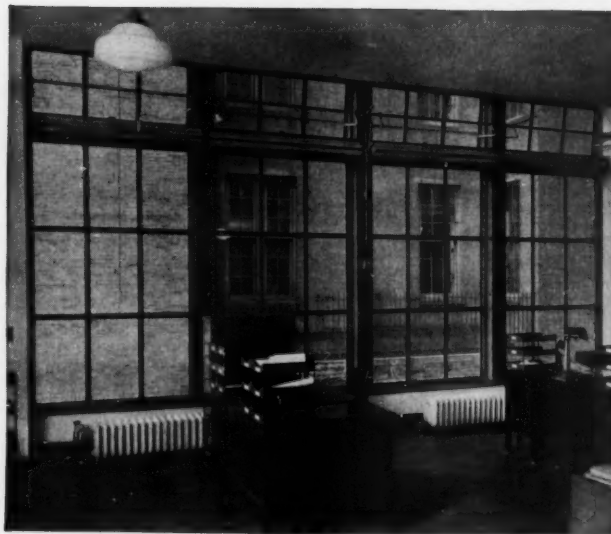
"Now, that's just it," complained the wise guy. "Either they don't know or they willfully mislead you. They play safe, you see, 'cause they don't guarantee their estimates like we do. Now, we *know* within a close percentage just what such a building will cost, having produced so many of 'em, and we won't mislead you into a bigger outlay than you're prepared to meet. But, once signed up with an architect, you're at his mercy. He may start you out at, say, \$35,000, and before you're

through, you've spent fifty or even sixty, and are wondering where it all went."

This was all new stuff to me and I was drinking it in, wondering all the time where the joker was. I knew it was in the deck somewhere, for the tin-horn wasn't laying *all* his cards on the table.

AGAIN Unc helped him out. Says he, "It ain't that I'm so particular about what it costs me, as that I get what I'm paying for, see? I could pay forty thousand if I had to." Just the bit of Scotch brag that a salesman yearns to hear. This boy wasn't such a much, but Unc was so smart himself that it didn't take a great deal to lick him, which the lad proceeded to do. While talking, he was faking a lot of figures on his firm's estimate sheets and flourishing a slide rule which seemed to fascinate the old gent. I've had plenty of experience with these bank presidents since I learned how to manipulate a "slip-stick," and I've met very few that didn't think themselves quite capable of playing the other fellow's game. A little judicious flattery will get them nearly every time and, believe you me, we high-pressure boys know how to dish it up.

Presently, this one says, "Now, le' see. You want pressed-brick on two fronts with marble base, terra

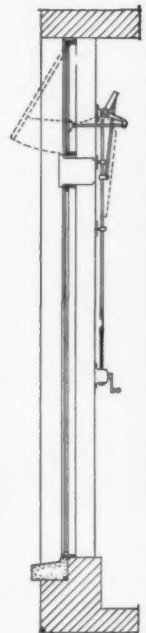


Daily News Building, East 42nd Street, New York City. Sash operating device by Lord & Burnham Company

A Practical Device to Operate Transoms in Series

IN the Circulation Department of the Daily News building, the iron transom sash are controlled by Lord & Burnham screw thread apparatus.

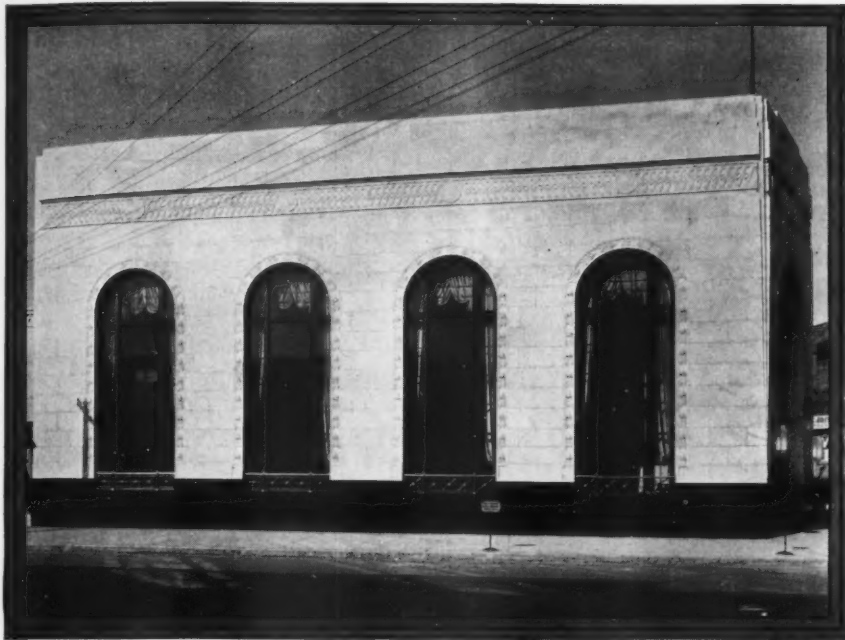
Smooth, quiet operation is obtained, and the sash are locked in any desired position, at all times. The entire installation was made without disturbing the usual office routine. As in this case, operating equipment may be installed on sash already in place, although not originally provided for it.



Section through windows showing type of equipment used.

Lord & Burnham Co.
SASH OPERATING DIVISION
Graybar Building, New York City
Representatives in principal cities of the
United States and Canada

Permanent Beauty and Low Upkeep insured by the use of Georgia Marble . . .



CITIZENS SAVINGS BANK, MT. CLEMENS, MICHIGAN
Bonnah & Chaffee, Architects
F. Korneffel Co., Contractors

GEORGIA MARBLE needs no costly enrichment. It is in itself a decoration for the exterior of any monumental or business structure.

The Citizens Savings Bank, a distinct departure from the traditional classic design, would surely appear drab and uninteresting if any of the commoner materials had been used for the exterior.

The Georgia Marble used here has complimented the simplicity of the design and produced "an imposing financial structure."

The GEORGIA MARBLE CO. • Tate • Georgia
New York Chicago
Atlanta Cleveland Dallas

The directors are glad they have a Georgia Marble Bank see letter below.

Citizens Savings Bank
Mt. Clemens, Mich.

July 11
1931

Mr. W. Siegel
c/o The Georgia Marble Company,
1200 Keith Building,
Cleveland, Ohio.

Dear Sir:

Relative your favor of the 11th instant, wish to state that our first intention in the construction of the Citizens Savings Bank Building was to use the general type of darker stones. As you know, we finally decided to use Georgia Marble on exterior.

Our building is an imposing financial structure and its appearance causes most favorable comments from those who see it and our directors are much pleased that their final decision worked out so satisfactorily. Considering the cost of marble compared with the use of stone in our building we feel that the extra amount has proven an excellent investment and one that will pay permanent dividends in the way of imposing and stable appearance and upkeep.

Very truly,

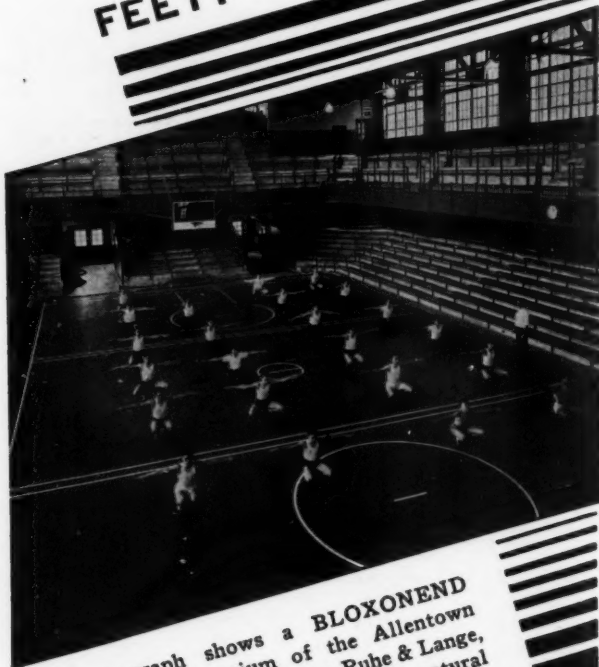
Charles G. Wismetta
Charles G. Wismetta
Chairman Building Committee
Citizens Savings Bank
Mount Clemens, Michigan.

CGW:EW

GEORGIA MARBLE

SAFETY

..... FOR HUNDREDS
OF PAIRS OF YOUTHFUL
FEET!



This photograph shows a BLOXONEND Floor in the gymnasium of the Allentown (Pa.) High School, designed by Ruhe & Lange, Architects. From the standpoint of natural lighting, ventilation, flooring, seating accommodations and general design, it is considered one of the most modern gymnasiums of its type in America.

The floor of Genuine BLOXONEND is splinterless and inherently non-slip because the end-grain fibres form the surface. These safety features alone justify the use of BLOXONEND at a higher first cost. Beauty, long life and resilience are added advantages. Specified by nearly all prominent school architects for gymnasiums and shops and widely used in factory service.

Write for specifications and sample
CARTER BLOXONEND FLOORING CO.
KANSAS CITY, MISSOURI "IN SWEET'S"

BLOX-ON-END FLOORING

Lays Smooth
Stays Smooth

Genuine Bloxonend is furnished in 8-ft. flooring lengths. The end-grain fibres form its surface.

cotta trim, plate glass, fixtures of mahogany, marble and bronze, room trim to match, burglar proof vault and door, et cetera," through a long list. I marveled at his glibness, though I know it by heart now.

Lots of it was over Unc's head, too, and the old boy was growing restless. "Yeh," says he, "but what's your estimate? That's the point."

Sure, that was the point. It's the crucial moment and Mr. Salesboy was sizing up his man as carefully as he knew how. I kept perfectly still. No time for a kibitzer to butt in.

"Well, I'm just wondering," wondered he, "just what kind of a building these architects think will satisfy you. Now, you don't look to me like the kind of a cheap skate that wants to surround himself with second and third grade stuff. (Uncle hadn't been surrounded by anything else since Heck was a pup.) You ought to be as well satisfied with your building five years from now as on the day you move in, and, believe me, you wouldn't be if you tried to get by under forty thousand."

"No?" says Mr. Fox. "How much then?"

"Well, you understand our proposition. You pay only net cost, plus ten per cent for our services, including plans and specifications, purchasing auditing and all that overhead. (He didn't think it necessary to explain that he was alluding only to home-office overhead, or that the job overhead, including the salesman's five per cent and expenses, almost as much as an architect's fee, would be billed to the owner as part of the construction cost.) Then again, if you're going to compare our estimate with that of an architect, you want to remember that our ten per cent is only what you'd have to pay a contractor, so we're practically throwing in the architectural service. That's another five or six per cent saved. So, all told, complete, the way we turn a job over, I'd say that, for everything first class, it will cost you pretty close to fifty thousand. I doubt if I could get the company to guarantee it for less than that."

I'd been suspecting what the cuss was leading up to, but I didn't know it all yet. Uncle didn't appear unduly shocked at the price for he'd been around a little with the salesman and learned what similar buildings were costing.

"Well, will you guarantee it at that figure?" he wanted to know.

"Well," the boy hesitated, "that's only my rough estimate, you know." (I'll say it was damned rough.) "But, I think I'm safe in committing the house to it. As I said, we guarantee that a job will not exceed our estimate by more than ten per cent."

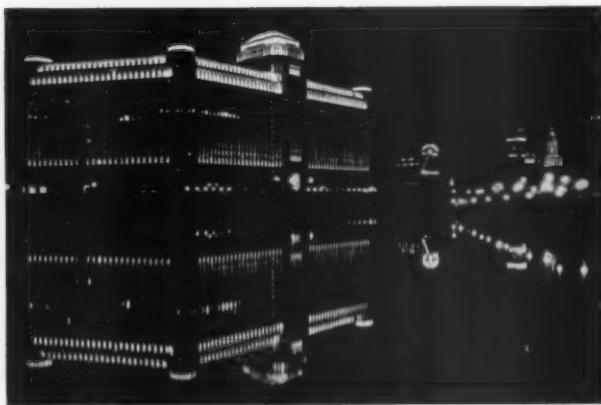
"But, in that case," Unc protested, "it might run to \$55,000."

"Might," the fellow admitted, "but it would be just as likely to be under \$45,000, the way we do the work and economize on the buying. No, you needn't be afraid of it running over fifty."

Right here, I butted in for the first time. Of course, I had no business to, with no chips in the pot, but I was getting specially interested. Says I, "Did you-all ever turn over a job for less than your guaranteed limit?"

"Sure we have," he comes back. "On one job about this size, we turned back over five thousand that we had saved the owner." (It was the only job on which they ever made such a showing, and it was done for advertising purposes, pure and simple, as I learned later.)

LOOKING TO THE FUTURE... *in wiring the world's largest building*



The Merchandise Mart, Chicago—Graham, Anderson, Probst & White, Chicago, Ill., Architects. Frederick Pearson, Chicago, Ill., Consulting Engineer.

THE Merchandise Mart in Chicago has a life expectancy of at least 99 years, according to the terms of the lease for the space which it occupies. What changes in the use of electricity . . . what new standards of lighting practice . . . may it be called on to meet in that period?

No one, of course, can answer that question. But, in designing the electrical installation, care was taken to provide reserve for increased requirements.

The local electric service company were consulted in the matter and a thorough study was made to determine a practical and economical basis for providing for these increased requirements.

As a result of this study, the building rates high under present lighting practice. The installation is easily adaptable to the requirements of either office or industrial lighting and there is ample attractive ex-

terior floodlighting. The wiring installation is designed with a 40% reserve over the present connected load, while, with minor changes in connections, a further increase of 100% in wiring capacity may be accommodated. A generous proportion of spare circuits are available for future use on the panelboards.

Thus, by giving thought to the future, this great building has been made secure for many years against inadequate electrical facilities . . . is protected against the high expense involved when an inadequate wiring installation must be replaced.

It is not sufficient to consider only present demands and present practice in the design of the wiring installation of a building. So important is wiring to the efficient operation of a building that thought must be given to the future.

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.

NATIONAL ELECTRIC LIGHT ASSOCIATION, 420 LEXINGTON AVENUE, NEW YORK, N. Y.

Well, after a few more conversations, Uncle got up, saying he'd think it over. He motioned to me and, as soon as we reached the street, he says, "Well, Chester, what d'you think of the proposition? Be something purty swell for the old town, eh?"

Well, of course, I didn't give a tinker's damn how badly they trimmed the old skinflint. I figured he'd been doing it to others so long he had it coming. Anyway, my old bean was working along another line. I just told him it was way out of my sphere of knowledge, as I wasn't used to big deals like that. Then I complimented him on the way he had held the salesman down and added that there didn't appear to be any way he could lose if the guaranty held.

"Of course, you'll have all the accounts audited," I opined, just so he wouldn't think I was too dumb.

"Oh, sure, sure," he says. "Fred will attend to that. They won't put anything over on him."

Fred Foster was the cashier, you remember. He'd been raised to seventy a week, about a year before. Poor Fred! I could see him working nights and Sundays auditing those damned bills he didn't know anything about.

"Then," says I, "I can't see anything wrong."

Nor could I, though I knew damned well there was something wrong with it. But the old man was sold and I let it go at that. I shook him, presently, and took Isabel over to the hotel for lunch. She's a good scout and I felt sorry for her, under the old hyena's paw, the way she'd been ever since Ralph died.

"Well," I says, after shocking her with my liberal ordering, "I see old Tightwad is still supporting his favorite daughter-in-law."

"In the same old way," she admitted. "It's a wonderful existence. But, tell me about yourself. At least, you don't have to live in this gott-verloren hole."

"Not much to tell," and I gave her a brief sketch of the highlights of Floridan realty, as had been. "But, what's this building deal that dear old Shylock's being sucked into?" I begged to know.

"Well," says she, "if I size up that sales person correctly, your more-or-less esteemed uncle is in for a nice little trimming. How's it strike you?"

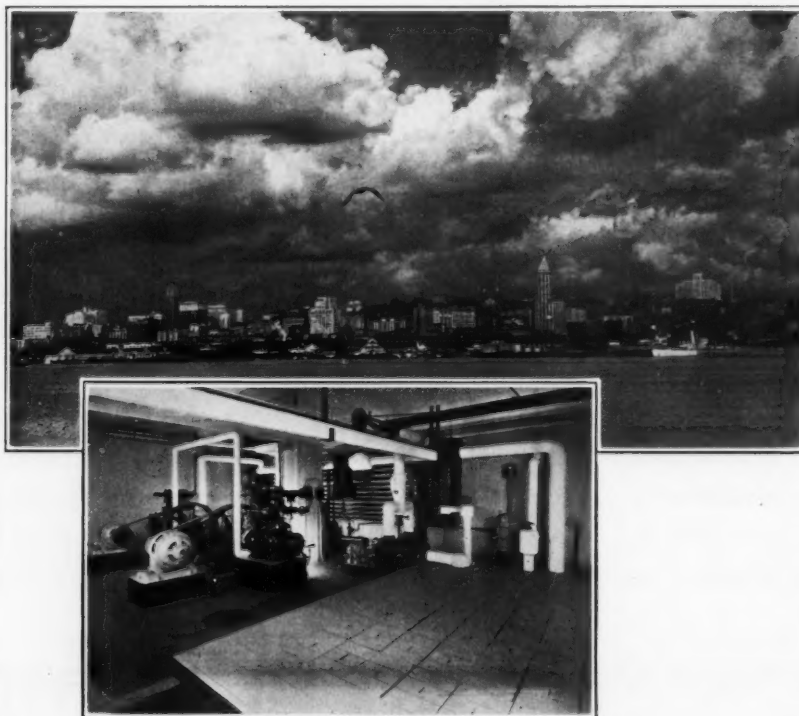
"Same here," I told her, surprised that she had it doped out so well. "But who cares? Not you nor I."

"No," she agreed, kind o' bitter, "nor anyone else I know of. It wouldn't make any difference to him though, if I did warn him. He told me once, he paid for my time, not my opinions, and I'm not forgetting it. How I hate this life. What wouldn't I give to get out!"

And right then and there, Chester made up his mind that he'd help her get out of it, if he could find a way. And he did—but that's another story.

Uncle signed on the dotted line next morning and eventually moved into his new building, two months late, and paid full \$55,000 for it. Fred Foster realized how utterly impossible it was to audit the immense unsorted sheaf of bills they turned over to him. He couldn't even be certain they all applied to his job. Nor could he and Uncle tell for sure that they had actually been swindled until last year, when the other bank in town moved into its new quarters, exactly the same size, but better in every detail and costing \$500 less than the architect's estimate of \$42,000, including his fee.

What was it Barnum said?



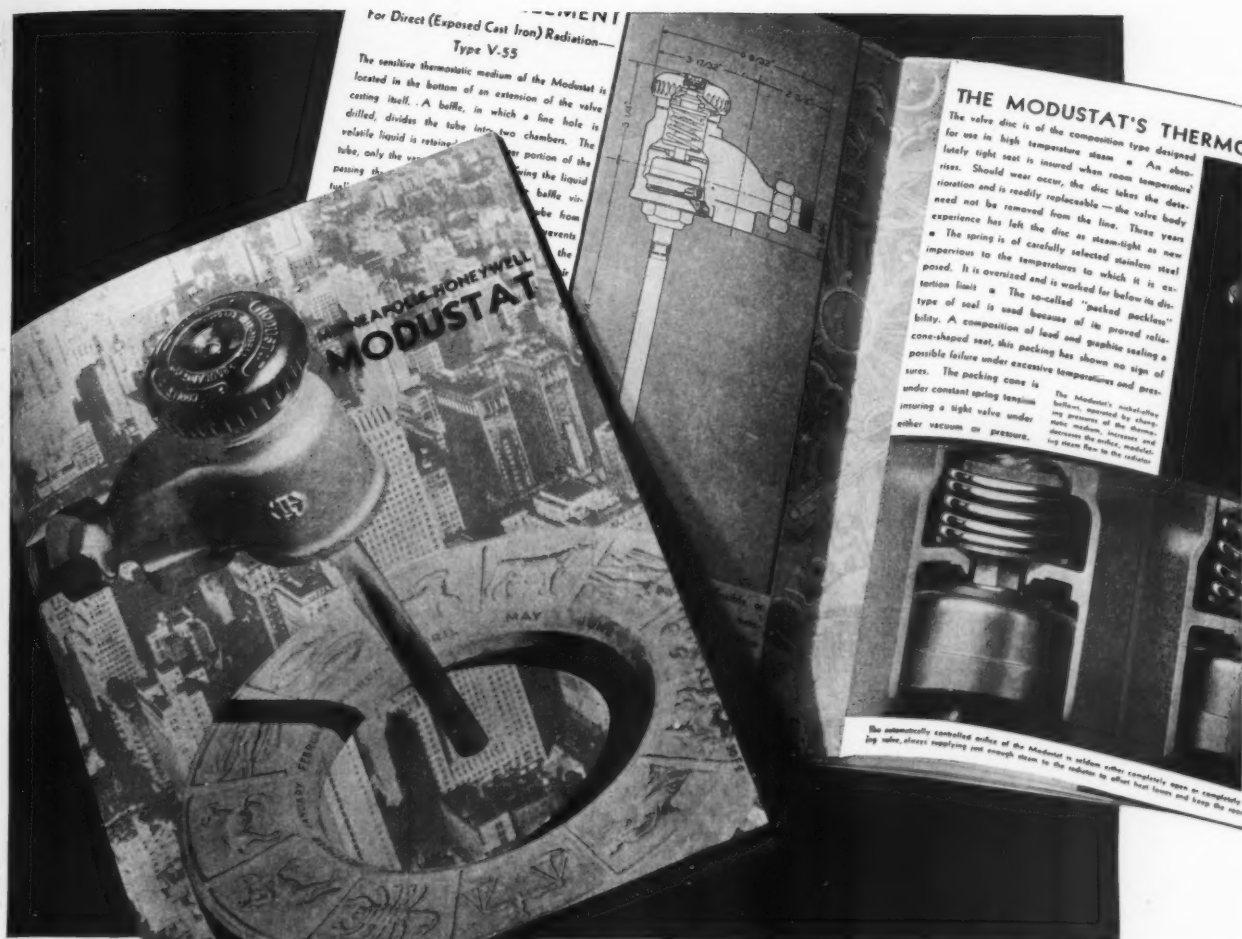
Refrigeration

Cools 16 refrigerators, makes ice, freezes ice cream, and supplies cold drinking water throughout the new \$3,000,000 Harborview Hospital, at Seattle (shown in right background).

The refrigerating machine room contains two 3" by 4" Frick Carbon-dioxide Compressors, high-side and ice tank.

For large or small hospitals, specify Frick Refrigeration. Estimates and literature on request.

Frick Company
WAYNESBURG, PA., U.S.A.
ICE MACHINERY SUPERIOR SINCE 1882



"This book deserves a place in my files"

You will be certain of the importance of this book and its value to you in your daily work when you study it carefully.

It presents concisely the story of the most important recent advance in automatic temperature control—the Minneapolis-Honeywell Modustat, automatic orifice system of individual room temperature control for public buildings, office buildings, apartments, hotels, hospitals, schools, and large residences.

This book gives you working data for the application of the Modustat automatic control system on every type of job, new construction or remodeling.

Send for your copy. The coupon is for your convenience. Minneapolis-Honeywell Regulator Company. *Executive Offices:* 2738 Fourth Avenue So., Minneapolis, Minn. *Factories:* Minneapolis; Elkhart, and Wabash Ind. *Factory Branches or Distributors in all principal cities.*

MINNEAPOLIS-HONEYWELL REGULATOR CO.
2738 Fourth Ave. So., Minneapolis, Minn.

Please send a copy of your book, "The Modustat," for my files.

Name

Firm Name

Street and No.

City State

For **AETNA'S**
New **HOME**
VICTORIA
VENETIAN
BLINDS



Designed by James Gamble Rogers, Inc., Architects.

THE selection of these *better blinds* for this notable structure of the Aetna Life Insurance Co. at Hartford, Conn., is typical of the use of Victoria Venetians in the better office buildings the country over.

No other type of window equipment gives the delightful lighting effects, softening and deflecting the sunlight . . . at the same time allowing draftless ventilation.

The mechanical excellence of Victoria Venetians commends this blind for your consideration. See Sweet's for detailed specifications.

THE BOSTWICK-GODELL CO.

Blinds since 1894

Norwalk, Ohio

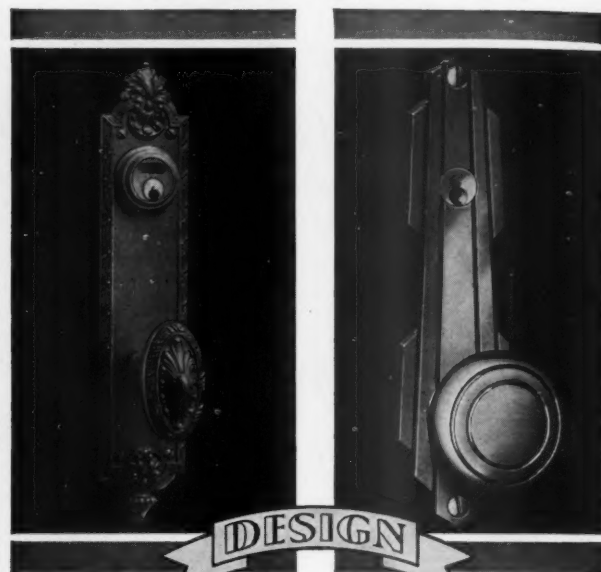
Representatives in Principal Cities

VICTORIA
VENETIANS

The Better Blinds



YALE
FINE BUILDERS'
HARDWARE



DESIGN

FROM

RENAISSANCE TO MODERN

ARCHITECTS favor Yale Builders' Hardware because it combines security and permanence with harmonizing decoration. « « «

The extensive range of Yale patterns enables you to give the final touch of distinction to any environment. «

We invite your correspondence

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

L. SONNEBORN SONS, Inc.

GUARANTEE:



Lignophol is easily and quickly applied with a long-handled brush.

LIGNOPHOL

For Preserving and Finishing Wood Floors

**Penetrates Deep into Wood Fibres and
Fills Cells with Life-Giving Oils . . . Keeps
Floors from Splintering, Wearing, Rotting**

You can get a good floor finish from other companies than Sonneborn. You can also get a floor preservative. But a quality floor finish which also preserves—that's *Lignophol*.

When an architect specifies Lignophol, he helps the client keep his floors new and attractive. At very small cost—only one to two cents a square foot—the floor that is Lignophol-treated takes on an excellent finish and remains free from upkeep expense for years.

Lignophol excels other wood floor treatments because of its great penetrating power. It can't evaporate like floor oil, can't wear off like varnish. It works deeply into the wood, fills the cells with natural life-giving gums and oils, binds the fibres firmly together. Prevents splintering, warping, rotting and drying out.

Lignophol is furnished in penetrating and wax finish and in four standard colors—natural, light brown, medium brown or dark brown. Easily applied with a long-handled three-knot brush. A trained Sonneborn service crew will apply it, if desired, at no extra cost to the contractor.

Sonneborn Consulting Service, backed by 26 years of experience, will gladly aid you and your contractor in any problem of preserving floors, walls, foundations. Send for information and demonstration samples.

S

Some Other Sonneborn Products

LAPIDOLITH

Liquid chemical concrete floor hardener welds loose particles into a close-grained mass, granite-hard.

HYDROCID NO. 633

Plaster bond and damp-proofing paint for interior of exterior walls above ground.

HYDROCID NO. 648

Mastic, Semi-Mastic

For waterproofing and damp-proofing foundation walls and footings.

HYDROCID INTEGRAL

Paste, Powder

For waterproofing mass concrete, stucco, cement plaster and brick mortar.

CEMCOAT FLOOR ENAMEL

For all types of floors where attractive finish is important. Produces dustless, sanitary, high-gloss finish. Extremely durable. Comes in colors.



L. SONNEBORN SONS, Inc., 114 FIFTH AVENUE, NEW YORK



Breaking-out the silk hats on board the American Architect

Conrad in Quest of His Youth

(Continued from page 31)

but all were Architects in Spirit, if you know what I mean; and if you don't you needn't read any more.

Well, we had scarcely passed the Statue of Liberty before we began to feel the intoxication of The New Freedom. The years seemed to roll away, and by the time we reached Cherbourg there wasn't a man in the crowd who felt over twenty-five. Or behaved otherwise.

What a voyage! We had owned the ship, a little ship it's true, but all ours. And now that we have given her back she will never be the same again. Her bar, which is once more a Soda Fountain, and at this moment occupied by earnest schoolmistresses, titters with the ribald animal offspring of Tony Sarg's facile brush—monkeys, pigs, tigers, elephants and giraffes in various stages of inebriation. Tony is a great painter of nature, even human nature as he proved later in Paris; one of the really great figure painters of the age. The lounge is a museum of masterpieces from the hands of Arthur Covey, George Whartin Edwards, C. Howard Walker, Jimmie Hewlett, Ralph Gray, Hubert Ripley, George Idell, Put Brinley and Big Artie Ware. The Music of Les Pompiers is embedded in the panelling and some faint note of "They all ask for you" may be heard every time the ship rolls.

The ride down to Paris through the beautiful Norman landscape, in the most beautiful train they could offer, lulled us into a state of sweet content. But little did we dream of the reception that awaited us. Three times since the war has Paris risen to so high a pitch of enthusiasm, once for Wilson, once for Lindbergh, once for "les Ancien Eleves." A cheering, waving, raving mob of boys and girls filled the Station. We were engulfed in embraces, smothered in *baisers*. Into old fashioned *chara bancs*, each drawn by four venerable nags, and

each with a puffing, perspiring band, we piled, bag and baggage. And then began our fantastic march across the city. The swarm of students howled round us singing and shouting. Some of our more emotional spirits couldn't stand it so they got down and marched too. Did we say marched? They pirouetted, they danced, they whirled like dervishes past the Opera, down the Avenue, across the gardens, and the bridge and up the Rue Bonaparte to the Place St. Germain de Pres a good two miles; old men of— with girls hanging on their arms or round their necks. Oh Shame! Oh Boy!

The home going Parisians stared and laughed and waved and cheered. Traffic stopped and waited on our passing. Before the church we danced until ready to drop. Then a cry, "A boire, A boire" and we all rushed into the Deux Magots packing it from wall to wall, almost from floor to ceiling. Toasts and speeches! Our Ken in the middle looking like Washington, but beginning to feel like Louis Quatorze! We draw the veil, or drop the curtain, on the First Act.

Time, Sunday morning. Scene, The Terrace of the Magots. The golden bells of St. Sulpice. The faithful Parisians gliding out of the sunshine into the sombre shade of St. Germain across the way, as they have been gliding these past eight hundred years. The faithful *Anciens Americain* sitting in the sunshine, sipping their coffee as in a previous incarnation. Time has stood still. Nothing has changed. The beer at Chez Lipp the night before had the same old tang. There were more bright lights on Mont Parnasse, more cafes, more and gaudier dancing places, but the little narrow streets were no grayer, no more wrinkled than of old.

Conrad's chest expands with confidence. He sniffs and finds life good. One by (Continued on page 104)

No,—not Marble » »



THIS is AMBLER MARBLEITE. It looks exactly like the finest marble. The difference is the cost. The price of AMBLER MARBLEITE is one-third to one-fifth that of the quality marble it represents. Leading architects are specifying this new product for both exteriors and interiors, wherever marble has been used. In fact, the remarkable economy of MARBLEITE makes its specification possible in many installations where the cost of marble has previously prohibited the use of such a quality material.

MARBLEITE is available in three types—Verd Antique (Italian Type), Jaune Fleuri (Spanish Type) and Black and Gold (African Type). Each is a beautiful, exact and enduring reproduction of the finest marble on a fireproof, granite-like asbestos base. The sheets of MARBLEITE are 32 x 48 inches in size, and approximately 7-16 inch thick.

We will be glad to send you data sheets and samples for your files. Meanwhile, keep AMBLER MARBLEITE in mind in your specifications.

JAUNE FLEURI (Spanish Type)

Ambler

MARBLEITE

AMBLER ASBESTOS SHINGLE & SHEATHING COMPANY » » AMBLER, PENNA. » » ST. LOUIS, MO.

machines

Steel... iron... brass... copper... metals moulded into countless shapes... animated... machines powered into mass production. Behind the din and whirr of machines, men plan the movement of their output. Products must move in a fast, steady stream... stagnant backwaters spell defeat. Peelle Doors clear the right-of-way for interior traffic... speed its movement to and from the machines, as well as vertically throughout the plant. At every floor they safeguard the economies of machine production by accelerating the flow of shaftway traffic. In the architect's specification, Peelle counterbalanced, horizontal or vertical sliding and bi-fold doors imply a close understanding of industrial needs. Write for catalog, or consult our engineers.

THE PEELE COMPANY, BROOKLYN, NEW YORK

Boston, Chicago, Cleveland, Philadelphia, Atlanta and 30 other cities. In Canada: Toronto and Hamilton, Ontario



PEELLE
MOTORIZED
FREIGHT ELEVATOR
DOORS

**MOTORIZE HORIZONTAL SLIDING . . . VERTICAL
SLIDING AND BI-FOLD DOORS WITH PEELE OPERATORS**



Announcing the GENERAL ELECTRIC HEAT REGULATOR

a new and improved
heat control

IN THE same tradition that distinguishes all products bearing the GE monogram, General Electric now manufactures the General Electric Heat Regulator — for every type of heating system.

Three years' experimental work in the General Electric laboratories produced this new device. With it, you can provide truly modern heating efficiency in the homes and buildings you design.

Its exclusive features include: a "floating" control, which moves furnace dampers, or heat supply valves, to the *exact* positions between open and closed at which full value is derived from every bit of fuel used; a "pre-heat" coil, in the room thermostat, which *anticipates* the rise in temperature as heat is increased and slows down the furnace or other heat source as the selected degree is approached, thus preventing overheating; a "fail-safe" device which insures absolute safety should the electric current supply fail at any time, and the regulator be rendered powerless to operate.

The GE thermostat, as shown here, is neat and small — attractively finished in dull bronze.



The new General Electric Heat Regulator comes in two models, priced to meet different purse and convenience requirements. A single-range model, for manual adjustment of temperature; and a double-range model equipped with an *electric timer* — as in the GE Clock — which operates in the basement and makes day and night temperature adjustments automatically.

Extensive advertising is acquainting the nation with the General Electric Heat Regulator. You can specify it for your clients with the assurance that it has all the proved qualities of the many GE products with which you are familiar.

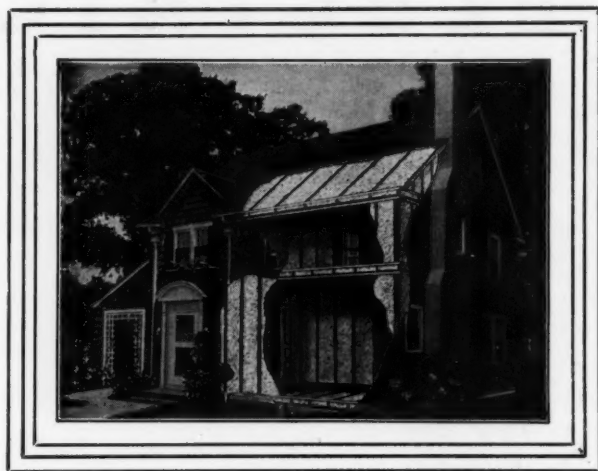
General Electric dealers are now showing this new device. A special folder, designed for the A. I. A. Files, fully explaining the features of this new heat regulator, will be sent on request. Address Penn Heat Control Company, *National Distributors*, Franklin Trust Bldg., Philadelphia.

GENERAL ELECTRIC HEAT REGULATOR

FOR EVERY TYPE OF HEATING SYSTEM

Insulate with U. S. MINERAL WOOL

The Perfect Insulator
COLD PROOF, HEAT PROOF, FIRE PROOF
SOUND PROOF, VERMIN PROOF



Insulation That Is Everlasting!

A home insulated with U. S. Mineral Wool is completely protected as long as the building lasts.

The discomfort of a warm home in summer or a cold one in winter is overcome and fire hazard reduced.

U. S. Mineral Wool is an indestructible, entirely mineral, sound-deadening material in which vermin cannot live.

The initial installation is the first and last cost and the savings it effects in winter fuel will alone pay for this outlay in a short period of time.

Our Free booklet explains the real economy of insulation. Send for it and free sample of Mineral Wool.



U. S. Mineral Wool Company
280 Madison Avenue, New York

Western Connection

Columbia Mineral Wool Co. - South Milwaukee, Wis.

U. S. MINERAL WOOL CO., DEPT. F

280 Madison Ave., New York

Send FREE sample and illustrated booklet to

Name.....

Address.....

City..... State.....

one and two by two other Conrads join him, all beaming, all inwardly purring. For two solid weeks we may sit here, or stroll at our will. But no; there is that Flag Pole business with speeches. We must be very dignified in black coats, shiny hats, be our age. Well, that wouldn't happen 'till Thursday. Meantime, oh damn! the reception at the Embassy. High hats and black coats again. Old Ken is a stickler for the proprieties, and we can't cut these or the party at the Ministry. However there is the Quatz Arts Ball and the Beaux Arts supper, and anyway the nights are ours, especially after twelve. Odd how little sleep a fellow needs over there anyway. Napoleon wasn't so wonderful. It must be the air, or the food, or the wine, or maybe it's just the conversation.

SOME of our French friends come by and join us, and of course Bill Taylor, Ex Architect, Ex Painter, now Big Business man. The Cafe is the rendezvous of several American students whom we know. Bill Lamb and Raymond Hood and Billy Emerson, Harry Jacobs appear and the play seems to be well under way. There isn't to be any plot of course. This is strictly a Revue with something doing every minute, and four or five smashing climaxes. We divide into groups going to some remembered place for luncheon, and losing ourselves for the afternoon at the Louvre; or maybe not there. In the evening we are back asking for Dubonnet or Pernoud. Then to dine with the night before us. And right here I want to pay tribute to Ken for giving us so much free time. While he and Julian Levi were busy with the Beaux Arts officials arranging the Flag Pole ceremony; and Ely Kahn was over at Paquins sewing on our costumes for the Ball, we did nothing but play. Night followed morning and morning followed night, and we panted after.

It isn't necessary to say anything about the reception at the Embassy. It was very decorous. There we were on American ground. But the Flag Pole Ceremony! that was an episode. Clad in the formal dress of respectable Middle Aged Conrads we marched sedately down the Rue Bonaparte to the Courtyard of the School. The Minister, the Director and other High dignitaries, the French Architects and Students awaited us. As we passed the War Memorial on the way to the little garden where the Flag Pole stood we each laid a handful of flowers at its base. We grouped ourselves effectively around the standard before which stood the central figures of the Drama. The French Officials and Murchison; Zantzinger, and Levi who were to speak for us. Both sides played their parts admirably. Our boys proffered their gift in sincerely grateful phrases. C. C. Z's French is French indeed. Murchison and Levi were noble. The gift was accepted in equally graceful phrases, and of course equally good French. Then with great cheers the French and American Flags were raised; beaming Julian pulling at the Tricolor, and a French official exactly matching him in stature at the Stars and Stripes. Both flags reached the top simultaneously. A dead heat—more cheers.

Cameras clicked as we wound our way through the shouting crowds of students to the Salle Melpomene to inaugurate an exhibition of the work of American Students installed by our Beaux Arts Society. It was a



STRONG DURABLE BOND

Brixment mortar assures a strong, durable bond with the brick: (1) *Because* it is so plastic that it spreads out more evenly, permitting a more complete bedding of the brick and an increased area of contact between the brick and the mortar; (2) *because* it hardens slow enough to permit deeper penetration and more thorough keying into the pores of the brick and (3) *because* its stearate water-proofing keeps the brick from sucking the water out of the mortar too fast, thus preventing the mortar from congealing and shrinking away from the brick. . . A good bond keeps water from entering between the brick and the mortar, thus preventing wet walls and efflorescence.

LOUISVILLE CEMENT COMPANY, *Incorporated*, LOUISVILLE, KY.

District Sales Offices: 1610 Builders Bldg., Chicago; 600 Murphy Bldg., Detroit; 101 Park Ave., New York

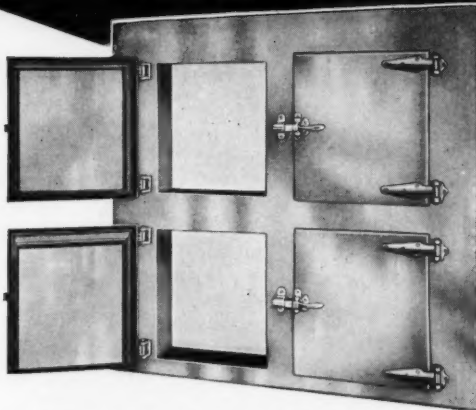
Mills: Brixment, N. Y. and Speed, Ind.

BRIXMENT

A Cement for Masonry and Stucco



REFRIGERATOR FRONTS TO MATCH SURROUNDINGS



Refrigerator fronts and doors for modern hospitals, hotels, restaurants, stores, etc., must combine utility with appearance.

With a background of long experience in the manufacture of insulated products to protect the openings to refrigerated rooms and cabinets, Jamison now offers for the architect's use this same protection combined with appearance.

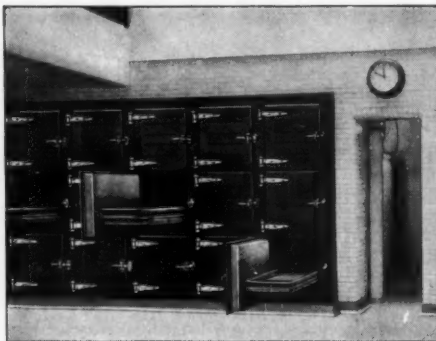
The new fronts and doors are of Monel or Allegheny metal or porcelain, or are of flush type or paneled woods ready for enameling to match surroundings.

Strong—yet graceful—hardware finished to match. The patented WEDGE-TIGHT Fastener is offered as standard equipment.



Complete information on request

Jamison Mortuary Front for the City Morgue, Philadelphia, considered one of the finest equipped in the country. Stevenson Spring Hinges and WEDGETIGHT Fasteners assure easy access to each morgue unit.



JAMISON COLD STORAGE DOOR COMPANY
CONSOLIDATING JAMISON COLD STORAGE DOOR CO., INC.
AND STEVENSON COLD STORAGE DOOR CO.
HAGERSTOWN, MARYLAND, U. S. A.

**Jamison
& Stevenson**
Cold Storage
Doors

BRANCHES, Chicago, New York, St. Louis, Chester, Pa.; San Francisco, Dallas. Southern Ice Supply Co., Marietta, Ga. Gay Engineering Co., Los Angeles. D. E. Fryer & Co., Seattle and Spokane. Foreign: London, Honolulu, Japan.

good show much admired by our hosts. Then Ken standing on the steps of the Musée translated his speech into English for the representatives of Fox Films, Inc., so that our glory might be shared with millions of our countrymen. The walk back to our hotel was not unlike our first reception for we were accompanied by the same army of cheering, singing students, only in our regalia we were the quintessence of dignity. No band of morticians could have been more discreet. And thus the curtain falls on the Second Act.

A GOOD Revue involves many changes of scene and must move quickly. From the quarter we shifted to Fontainebleau, to Versailles, to Rheims, to Vaux le Vicompte and back again. Ernest Peixotto showed us the student work at the Fontainebleau School. M. Bray and Welles Bosworth took us behind the scenes and showed us how the Rockefeller money is being used in needed restoration. Versailles and Vaux le Vicompte never looked lovelier. At the latter place M. Sommier, the present owner, was particularly gracious. We had glimpses of other charming places, like Courances, and the Chateau and garden of Amos Lawrence, and the lovely little house of the Huardes at Versailles. Our hosts everywhere were lavishly hospitable. But always like Arthur Ware, we were fretted lest we might be missing something in Paris. All through the first week we were kept in a twitter over the prospect of the Beaux Arts Supper on Saturday night. We were to go to the "Folies" and the Supper party later was to be an event. It was an event, though for a while it looked like "le plus grande lapin de l'époque," a flock of rabbits, making Artie Ware's disappointment seem like an Easter Bunny. As it turned out however we may call this the climax of the Third Act.

Sunday dawns, dull and gray, the scene is again the Terrace, but the action drags. A good day for the Museums, duty calls, or quiet careful luncheons. Conrad droops a little, but by Monday will be himself again. Monday is much better. We have three parties at the Exposition. It is old home week at Mt. Vernon where the Hon. C. Bascom Slemph receives us, with open face, in the Big Doll's House, which shows what Sears, Roebuck & Company think Mt. Vernon should have looked like.

SOME of our more sensitive fellows fearing the effect or lack of effect of this party go off on other tangents. Henry Saylor, Louis Jallade and Bill Van Alen are at Pierrefonds. Archie Brown and Ralph Gray have found the Vouvray Pavilion, and when they join us later at Marechal Lyautey's reception they are very Vouvray indeed.

The Marechal was inimitably gay and debonair. The mere sight of him, his crisp pompadour, his curling moustaches, and those checked pants inspired every Conrad among us with renewed confidence. We pledged and pledged again. As a matter of fact we took and gave more pledges during our two weeks ashore than we've done since the Volstead Act came into disrepute.

We leave the Marechal's party, and move to the Permanent Musée, that interesting building with the thin stone columns and magnificently sculptured walls where we are to dine with our French colleagues. We wander through the building, admiring its mural paintings, and

LEND US YOUR EAR



The story of The Smith & Wesson Flush Valve is a strict dollars and cents merchandising feature you should hear. It has to do with the superior design, sturdy construction and dependable performance of a flush valve simplified so that anyone can understand why it is better.

You, quickest of all, can see why it is bound to solve flush valve difficulties. Give your customers a chance to see too. Display a Smith & Wesson Flush Valve in your showroom! Tell them about it! Sell it!

SMITH & WESSON
FLUSH VALVE DIVISION
SPRINGFIELD, MASS.



SMITH AND WESSON

FLUSH
VALVES

its exhibits and find ourselves in a great modern Salle. A small platform about twenty-five feet square, slightly raised above the floor has been placed between the two tiers of tables. The dinner is perfection, the speeches masterpieces of brevity. Strange musicians, with stranger instruments, come in and make strange music, while two richly garbed Annamites dance on the little platform. Then another group enters, Annamites also, to enact a little play. They withdraw; and are succeeded by a band of natives from Guinea who whirl through a couple of wild dances. These are followed by a savage tribe from the Cameroons, with painted bodies, weird head dresses, and mask-like facial ornaments made of dangling shells or pieces of bone. They too dance, ending the performance in a crescendo of fury. We are in a ferment, but the end is not yet. We adjourn to the Temple of Angkor Vat, that marvelous reproduction of a marvelous temple, and are guided through its inner courts by M. Blanche and his son who have labored for four years to build it. The Colonial Exhibition is a bold and fantastic enterprise, designed to impress the world with the far flung extent of the French Colonial Empire. It is vivid, beautiful, exciting. We applaud madly as the curtain falls on the Fourth Act.

Some of our fellows were disappointed in the Quatz Arts Ball; said there weren't girls enough, but I don't know. Equal distribution of Beauty may sound all right; like Communism. But what about Incentive? One of our troubles was that we covered up our natural charms with Greek togas and whiskers. Bill Lamb and Ethan Allen Dennison looked like skyscrapers, better than

some skyscrapers, but the French aren't up to skyscrapers; and anyway Bill forgot to bring his mooring mast with him.

It's all very well to say that Form follows Function, but why be so passive about it? Why not let Function do a little chasing after Form? However in spite of certain shortcomings it really was a Big Night. Most of the gals wore too much paint and it kept coming off on our Togas, but what's the use of worrying about a little thing like that in the Fifth Act, when the play is practically over?

NEXT day the Minister of Fine Arts held a reception and some went. Ken of course, for he always did the right thing and made our best impressions for us. Then we sailed home, a gallant twenty-six of us on—The American Farmer. What became of the others nobody knows, but rumors fill the air. Some say that Ely Kahn, Jimmy O'Connor, Archie Brown and Fred Joannes went to Stockholm to study the Swedish movement, that Fred Murphy, Hiron, and Zantzinger, needing tender nursing came back on sweller ships. We left Artie Ware engulfed in a "formidable" at Chez Lipp. But the strong men stuck together as strong men will. On the Sunday afternoon before we landed an impressive ceremony took place; a burial service. Conrad had overreached himself, and we had to *heave* what was left overboard. Ken coached us to the end, and we marched down the gang plank next morning; each man with head erect and his right arm raised, shouting in unison, "I deny everything."



Schrafft's, Chrysler Building, New York City, where work was executed in lustrous stainless steel by Halback. Charles E. Birge, Architect.

Because Flawless Craftsmanship Was A First Requirement

THE metal work for the Schrafft's store in the Chrysler Building was designed to complete the shining loveliness of the building itself. How natural, then, that lettering, reflectors, display signs and cases should have been intrusted to Halback, masters in the handling of modern ornamental metals, for execution.

HALBACK
C. E. HALBACK & CO.
Banker Street, Brooklyn, N.Y.
WORKERS IN METALS FOR ARCHITECTURAL PURPOSES



INSULITE ACOUSTILE

meets the
ever increasing
demand for
QUIET



EVERY year more and more people are appreciating and insisting on quiet . . . quiet offices, quiet homes, quiet theatres, quiet public buildings. Especially since the advent of the "talkies" people have become "sound conscious". They realize the value and importance of proper acoustics. This increasing demand for acoustically correct buildings is best satisfied through the use of Insulite Acoustile, for Insulite Acoustile has a more uniform sound absorbent coefficient throughout the entire frequency range than any other material.

When you specify Insulite Acoustile in the buildings you design, you can be sure they are not only acoustically right, but strong and durable. Insulite Acoustile is a practical and economical material to use, because it is easily and quickly applied to old and new surfaces alike.

Furthermore, the tile-like units of Insulite Acoustile are supplied in many shapes and sizes. They can be arranged in an unlimited variety of patterns to harmonize with any architectural scheme, and can be beautifully decorated to achieve the desired color effect.

May we send you additional information in regard to Insulite Acoustile, and its efficiency in controlling sound? Let our Acoustical Department give you the facts and figures which conclusively prove the superior acoustical qualities of Insulite Acoustile. Write today for samples and the Insulite A. I. A. File of Specifications and Details.



THE INSULITE CO. ENGINEERING DEPARTMENT

The Engineering and Acoustical Research Departments of The Insulite Co., will gladly analyze your acoustical problem and submit a practical and economical method of securing the desired results. There is no charge for this service and you are under no obligation.



BACKUS-BROOKS
INDUSTRIES

THE INSULITE CO.
1200 Builders Exchange, Dept. 231
Minneapolis, Minnesota
OFFICES IN ALL PRINCIPAL CITIES

INSULITE ACOUSTILE

Before We Criticise

(Continued from page 35)

the fact that fools step in where angels fear to tread, I submit the following list of architectural criteria, as those which seem to me to constitute the maximum that can be used in an age of change, and the minimum whose sum might be of constructive value to the designer.

A. Planning, Structure, Material Considerations:

Efficiency . . A building's plan should be so designed as to allow the simplest and most direct carrying on of those functions of individual and communal humanity for which it is intended. Comfort, service, air and light, privacy or the reverse are all included in this category.

Economy . . By this I do not mean cheapness, nor, necessarily any quality connected with the amount of money expenditure. By architectural economy I conceive that quality which avoids vulgar, ostentatious waste; a sort of artistic good manners that results from the use of the right materials in the right places.

Consistency . . Plan, structure, effect are obviously interdependent. The plan types of buildings, and the structural systems used, should be related; effect should grow naturally from both.

B. Artistic Achievement; General

Emotional Effect . . This is both the vaguest and most important question of all. A work of architecture, as a creative art, stands or falls by it. By emotional effect I do not mean specific emotions of aspiration, wonder, bewilderment, which are the standbys of the Romantics; but rather some deeper, vaguer thing—that instinctive catch of the breath—opening of the eyes—which it seems the peculiar genius of beauty to produce. In 20th Century slang, does the building give you a kick? If so, what is it?

Honesty . . I take it for granted that a building should not apparently falsify its structure or its function. I say "apparently" with purpose; for there is an artistic expression of structure more valid than any metaphysical nakedness. It is in a just realization of this fact that much of the difference between architect and engineer lies. The reason why many modern buildings with cantilevered show-window construction are artistically ineffective lies in the failure of architects thus far to produce any adequate artistic expression of this type of cantilever construction.

Expressiveness . . Every new modern problem—factory, apartment house, department store, laboratory—is an opportunity for the creation of forms—new, creative, beautiful, and yet so definitely developed from their programs that their function is immediately appreciable. The Einstein Observatory in Berlin by Erich Mendelsohn, is an excellent example. The same is true of structure; new structural methods offer a thousand new opportunities for beautiful forms. Yet the expression of both function and structure is not a thing which automatically follows an engineering solution; it is a creative quality, art quality, the result of choice, arrangement, emphasis, much study of non-engineering quali-

ties. It is the result of creative play with thoroughly understood and digested forms.

Personality, graciousness . . I believe we may demand that a building have other qualities than those already listed, qualities more directly appealing, more lovable. So many buildings hold one aloof with a harsh superiority! Austerity, dignity, these are magnificent; but that conscious arrogance of holier-than-thou virtue or richness or dogmatic theorizing is mere architectural snobism. People should love to walk by or in or through good buildings, or to live in them. Buildings should be friends as well as monuments.

C. Artistic Method:

General Form . . Compositional values, relations of void and solid, emphasis, proportion, mass and its handling; these all may be examined in any building; their correct handling should be insisted on relentlessly. Many a modern building honest, well constructed, expressive, is bad because proportions are basically wrong; economic use of space, building to the limits of the zoning law; these are reasons, but never excuses, for ugly masses or silhouette. Economic considerations are inevitably conditions of the program, but when they are allowed to dictate shapes, the result is by that much not architecture at all.

Decorative Detail . . I believe that ornament will continue to be used in architecture, despite various recent attempts to prove its unsuitability to the 20th Century building. Mankind has decorated its utensils for too many thousand years for a dogma to break the habit. The kind of ornament changes with the continuous flux of taste and fashion, now naturalistic, now conventional, now geometric, now abstract; yet through all these changes there emerge certain qualifications of good ornament so constant that they may find a place in this canon. Ornament, then, it seems to me, must fulfill the following requirements: It must be suited to its place on the building, and its distance from the average observer's eye. It must clarify and not confuse design, emphasize and not hide structure. In subject matter and treatment it must aid the building's functional expression. It must be suited to its material and the technique that produces it, and during its design and execution it would do many American architects and builders much good to read, and ponder, "The Lamp of Sacrifice" in Ruskins' *Seven Lamps of Architecture*—and then visit—sadly—the nearest great movie theatre.

Scale . . In how many houses one may see the small striving to appear great; how many commercial buildings seem to lack this compelling quality by which things appear their true size! The question of scale underlies every element of a building from the smallest leaf or zig zag of its ornament and the size of window panes to the bulk of mass—and it is in matters of scale that the greatest care is necessary today; the most searching criticism. For in the styles of the past, the "just scale" of element after (Continued on page 114)



Donald Deskey

noted designer of furniture and fabrics
tells why he chooses

EMBOSSSED LINOLEUM



You can see and feel the textured surface of this floor. It's the new Armstrong's Embossed Linoleum, design No. 3220

"IN my opinion," says Donald Deskey, member of the American Union of Decorative Artists and Craftsmen, "embossed linoleum is an exceptionally fine floor for many types of rooms. It possesses all the practical virtues that have always characterized linoleum, plus this one very decided advantage—a textured surface you can see and feel."

This expert opinion is finding response among many architects today. They are quick to recognize that this new Armstrong's Em-

bossed Linoleum offers practical floor effects never before available in a resilient floor material.

No matter what type of interior you have in mind, there's an Armstrong Floor that fits it. Then, too, there are many practical advantages in linoleum: quiet resilience assuring comfort under foot, easy-to-clean Accolac-Process (lacquer-sealed) sur-

face, moderate cost, long life, and trouble-free installation.

We will send you our new file-size specification book, with colorplates and samples of linoleum, on request. Also, you'll find us in Sweet's. Address Armstrong Cork Company, Floor Division, Lancaster, Armstrong's Pennsylvania. (Makers of  Product cork products since 1860)

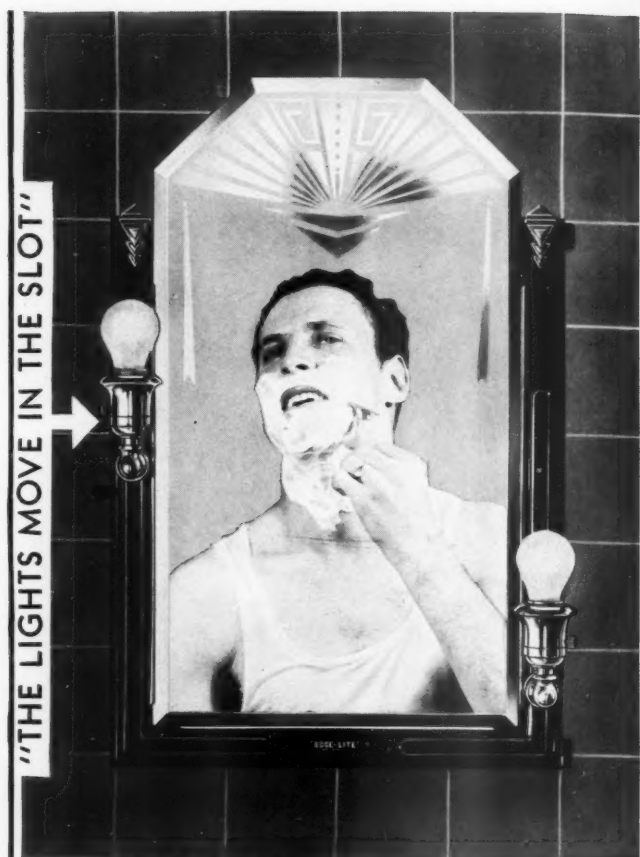
Armstrong's Linoleum Floors

for every room in the house

PLAIN · INLAID · EMBOSSED · JASPÉ · PRINTED · ARMSTRONG'S LINOTILE and CORK TILE

2 OUTLETS,
3 FIXTURES
SAVED—AND

BETTER ILLUMINATION ACHIEVED



WITH their two sliding-slot light fixtures, "Edge-Lite" cabinets flood the whole bathroom with even light. They are served by only one outlet; the other wall and ceiling outlets and fixtures are unnecessary.

"Shadowless shaving" earns revenue

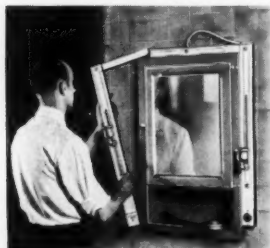
Facial shadow is eliminated by the "Edge-Lite's" sliding-slot light fixtures, giving men "shadowless shaving," providing a "movie-star's make-up mirror" for women. Such *visible* betterments go far to rent apartments and win hotel guests—a suggestion appreciated by clients.

Line is complete; Catalog offered

"Edge-Lites" are made in period and modern styles suitable for homes, hotels, apartments of all types. Worth considering when remodeling is the "Edge-Lite" Aplakay Set—a silver lacquer frame with sliding light fixtures adjustable to fit any old style cabinet, transforming it into a shadowless-shaving "Edge-Lite" in a few minutes at slight cost. . . . Where shall we mail your catalog? Henkel Edge-Lite Corp., 902 N. Franklin St., Chicago, and 19 W. 44th St., New York. In Canada, Henkel Edge-Lite Ltd., Architects' Bldg., Montreal.

Town House, New York
Mayflower, Akron
Schroeder, Milwaukee
Nordic, Minneapolis
Richmond-Leland, Richmond
Nat'l Rys. Hotel, Vancouver
Wallen Apts., Chicago
—all "Edge-Lite" equipped

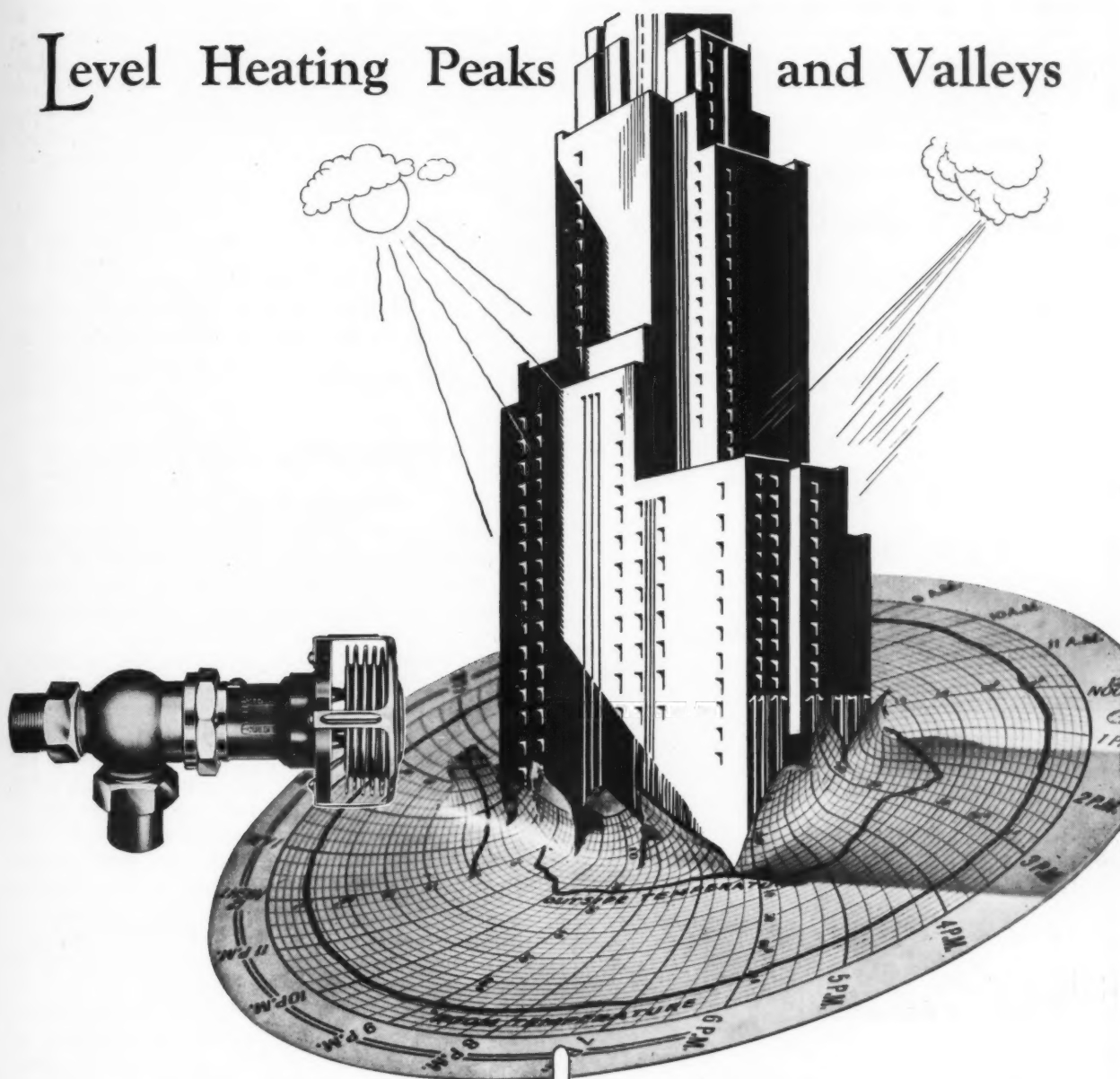
In a few minutes the adjustable Aplakay Set turns old-style cabinets into shadowless-shaving "Edge-Lites."



HENKEL
"EDGE-LITE"
CABINETS ♦ MIRRORS ♦ APLAKAY

PASSED BY FIRE UNDERWRITERS TRADE-MARK REG. U.S. & CAN. PATS. & PAT. PEND. U.S., CAN. & FOREIGN (A4659)

Level Heating Peaks and Valleys



*I*NDIVIDUAL Room Temperature Control is fast becoming a renting feature of first importance, as well as a means for real savings in heating costs. For it is no longer necessary to overheat some rooms to supply sufficient warmth throughout larger buildings.

Sylphon Automatic Radiator Valves have supplied the solution to individual room temperature comfort—simple thermostatic valves that, depending on the desired temperature of each room itself, pass just enough steam, and no more, to maintain that temperature regardless of outside weather conditions and room exposure.

Think what this means in fuel savings. No wasted heat, for steam is supplied only when room temperature demands. No frequently opened windows. Instead of pouring heat out-of-doors, the excess steam is diverted to rooms that need it. The power plant load is constant—

its operation more efficient and economical for now, for the first time, steam can be used as scientifically as it is generated.

Of course, new office buildings, hotels and apartment buildings will employ this means of giving greater comfort and gaining economy in steam plant operation. It is a subject of great interest with new construction work. Here, too, is the opportunity for older buildings—faced with the problem of holding tenants against more modern building competition—to offer an outstanding improvement in comfort that pays for itself. Write for Bulletin—RJ-250.



FULTON SYLPHON Co.
KNOXVILLE, TENN., U.S.A.

European Representatives, Crosby Valve and Eng. Co., Ltd., 41-2 Foley St., London, W.I. Eng.; Canadian Representatives, Darling Bros., Ltd., 140 Prince St., Montreal, Que., Can.
REPRESENTATIVES IN ALL PRINCIPAL CITIES IN U.S.A.



Our Catalogue Showing two hundred styles of EXTERIOR LIGHTING FIXTURES

by
SMYSER-ROYER
is on file in Sweet's



A VARIETY of two hundred stock designs for exterior lighting fixtures is shown in Section D of Sweet's Architectural Catalogues, pages 6034 to 6044. Each design displays the high standard of metal craftsmanship maintained by Smyser-Royer Company for over 90 years.

If an original design is specified, Smyser-Royer Company craftsmen will carefully interpret specifications, reproducing every detail of the design in cast iron, bronze or aluminum.

We will gladly send you our catalogue showing exterior lamps, lanterns and brackets for every period and purpose.

SMYSER-ROYER CO.

Main Office and Works, York, Pa.

Philadelphia Office, 1700 WALNUT STREET

element had come to be accepted; it was part alike of the cultivated observer's innate sense, and of every draftsman's training. Now, on the contrary, thousands of forms are used both structurally and decoratively which are new, which have no such accepted scale, and it requires the clearest eyes and the sharpest discrimination to use them in a scale that shall convince, that shall set, and help, the scale of the whole. Here especially criticism is necessary: already mere scratchings of the surface utterly ineffective, decorative forms of hundreds of feet in the air, or great sprawling leaves several feet across in equally in the opposite direction.

This list, incomplete as it is, comprises the matters which seem most important in architectural criticism, and furnishes a canon that should prove stimulating and helpful to the architectural critic, for these qualities, at least, we may demand of good architecture.

The Percentage Fee Is Wrong

(Continued from page 29)

and can be done in one office about as well as in another. The public knows nothing or next to nothing about those forty years of success and failure, which have in the aggregate given the older firms an experience that is of tremendous value to the owner.

Lest I seem hard on the young men, let me offer a suggestion which will show that I have their welfare in mind. I propose that the young men receive the 6% minimum rate, and that for every five years of practice a firm, or an individual, shall be encouraged to add a half of one percent to the minimum rate. Thus a firm that has been practicing fifteen years would charge 7½%, and thirty years' experience would be considered worth 9%. While this suggestion may have practical faults, it calls attention to the necessity of recognizing the value, in money, of experience. Everyone knows that a young architect learns through experience and that he makes mistakes. When he is no longer young, his advice is worth proportionally more.

If the percentage system permitted the experienced architect to obtain adequate pay for his experience and his matured judgment and taste, and if in this system we could abolish the penalty imposed when costs are reduced, I might, on a pinch, vote for a continuance of the system. The least a client can do, if he wishes to be fair and decent to his architect, is to say, "I want to cut this cost down to such and such a figure, but I am perfectly willing to have you calculate your fee on the cost as divulged by the bidders." How many clients would be so generous minded?

The fixed fee plus cost seems to be a much more logical method of charging, and I am glad to see that it stands today as a definite policy of the A. I. A., for a form of agreement on that basis can be secured among its Standard Documents. While this system may seem new to some, it has been followed by many well known architects for years. The idea in brief is for each architect to decide what his fee for personal service should be for every type of building that comes to him. Of course this is probably not an easy thing to work out, but it has been done for twenty-five years or more, and will doubtless continue indefinitely. Let us analyze a job which the client wishes to keep inside of \$100,000. The



PAINTED
DECORATION NEW
RAMBUSCH YORK
CITY

architect may have formerly followed the percentage system, and he may have decided that he could carry on a fair practice if he could count on one half of his fee as profit. Acting on this belief he decides to ask for his personal fee the sum of \$3,000, and agrees with the owner that all costs are to be paid by the owner—the costs being chiefly draughting and overhead. The draughting costs are easily determined. The overhead is less easy because in dull times when only one or two jobs are in the office the ratio of rent and other overhead costs to draughting cost are entirely different from what they are when the same office space is fully utilized.

Although I advocate the fixed fee plus cost system, I do not find that clients take to it readily. They are used to the old method which enables them to quickly estimate the cost of architectural service, a thing not so easy to determine in the modern system. Let me point out a few of the advantages of this modern system.

A fussy client who wishes many designs and many changes may have them, for he pays for them. If he is the kind of man who decides promptly and does not often change his mind, he will secure his plans for a lower cost, because they will be prepared without delay and with a minimum amount of draughting. This system permits architects to follow the custom among lawyers and doctors, of basing a fee somewhat upon reputation, proved ability and quality of executed work. In most respects the flat fee plan is unassailable. By allowing the fee to remain fixed no matter how much the final cost deviates from the proposed cost, the architect is always free to suggest either a saving or an increased cost. In

the one case he does not penalize himself, and in the other he cannot be accused of recommending an increase in order to improve his fee.

Of course we have to admit the existence of men in our profession who might be tempted to take advantage of a client by padding their payrolls and their overhead costs. But such a possibility is very remote. I believe that a very large majority of our well trained, well educated architects are professionally minded, they naturally do the decent thing. Sometimes we become aware that men who seem to occupy a high place in the ranks of the profession are subject to temptation and do things that injure not only themselves, but their brother architects as well. On the whole, such instances are so rare as to prove by their rarity the very high standards of the profession. And so I claim that concerted action on the part of the Institute could accomplish much to improve the situation in this question of fees.

To sum up, is it not basically wrong to ask an architect to take his pay as a percentage of the cost and at the same time to let him have a great deal to do in the matter of determining that cost? Is he not in theory and in practice, unable to assume a wholly disinterested attitude toward the cost, an attitude he ought to assume automatically? Is it not wrong to place an architect in a position wherein every move he makes affecting the cost of a building, has a direct bearing on his fee? It does not matter how fine a reputation an individual or a firm may have for integrity, fair dealing and good business methods; it is wrong to put an entire profession in this anomalous position.

DOES NOT BREAK THE BOND

Certainly Churches should be flashed *to prevent seepage and leaks*



Above—The church above was so seriously damaged by seepage thru the coping stones that finally all copings were removed and Cheney Thru-Wall Flashing installed. The cost was considerable but the building is now watertight.



Right—Efflorescence caused by seepage. Cheney Thru-Wall Flashing will positively prevent such destruction.



SECTION LENGTHWAYS OF WALL

CHENEY

**INTERLOCKING
THRU-WALL FLASHING**

Runs Completely Thru the Masonry Wall
... Forms a Positive Unbreakable Key-bond in every direction within the mortar bed.

In Church Construction—Flash—under Gable Copings, thru Clerestory Walls, over Lintels and under sills.

Formed—any shape—to fit requirements

The Cheney Company
Winchester, Massachusetts

New York Philadelphia Chicago Pittsburgh
in Canada—Corporate Steel Products, Limited,
Montreal

DOES NOT BREAK THE BOND

Utmost Discrimination in the selection of materials



EMPIRE STATE BUILDING, NEW YORK CITY

VITROLITE EQUIPPED

As one towering monument after another rises to the heavens in recognition of American genius in design and construction . . . it is only human that the manufacturers of the various materials specified and used in these structures should feel some pride in the acceptance of their various products.

And so we, the manufacturers of Vitrolite — the 20th century fused rock slab material — congratulate the designers, Shreve, Lamb and Harmon, and the builders, Starrett Bros. & Eken, upon the completion of the magnificent

structure pictured here — the Empire State Building of New York City.

And further, we take this opportunity to publicly thank these architects and contractors for the confidence they have again placed in Vitrolite, knowing that it will fulfill their every expectation.

Where the utmost discrimination is practiced in the selection of materials, Vitrolite is specified.

Vitrolite is available in many beautiful colors. In combination with the new metals, it gives an installation which is not only modern in appearance but extremely practical. Vitrolite will not stain, craze or absorb odors. It can be kept spotlessly clean with a damp cloth.



THE VITROLITE COMPANY

120 S. LA SALLE ST., Room 1105, CHICAGO, ILL., Factory: PARKERSBURG, W. VA.
REPRESENTATIVES IN ALL PRINCIPAL CITIES IN U. S. AND CANADA



A house with Georgian characteristics from Good Housekeeping. J. Lakin Baldrige, Architect. Photo by Gillies

R I G H T ... *the first time*

WHEN a man builds without benefit of an architect, he usually finds, when it is too late, the cost of rectifying mistakes and oversights would have more than paid for the architect's brains. And his house would have been right the first time.

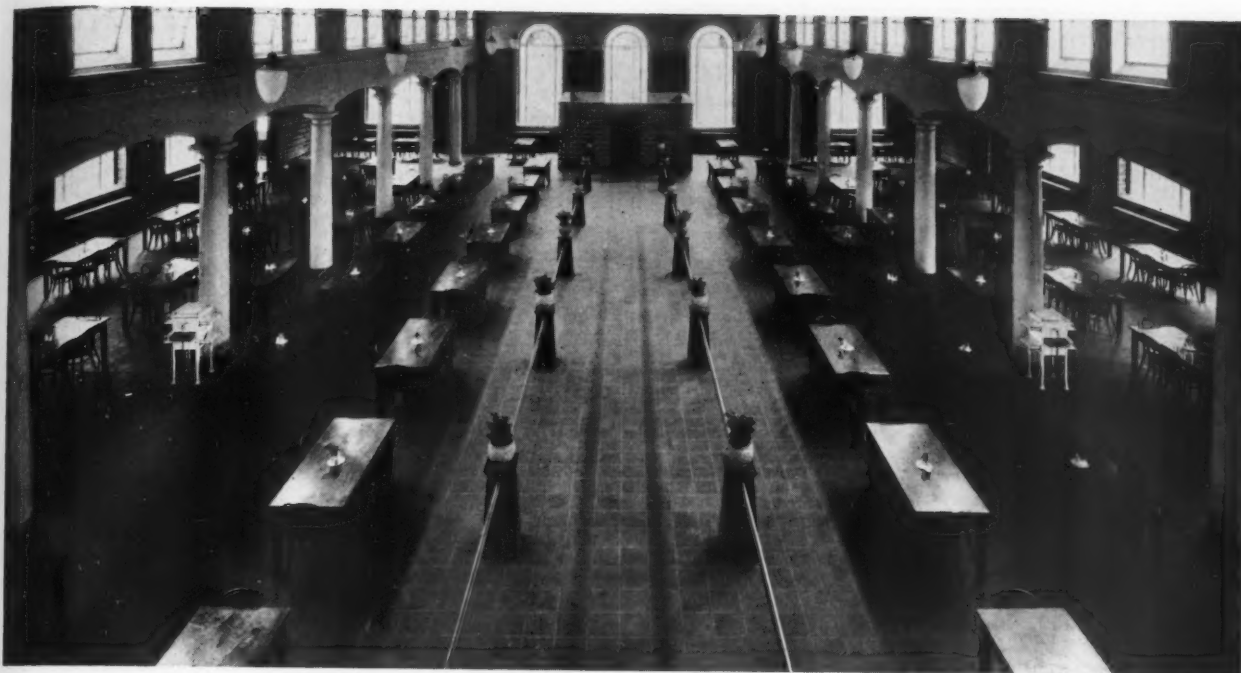
Good Housekeeping is preaching this every month to a group of some 1,800,000 homemakers who look to it for counsel in practically all their domestic problems. The marked interest

in these architectural pages indicates an influence that is bound to increase both building activity and the demand for the architect's services in the small house field.

Just as Good Housekeeping's readers are being educated to appreciate the full value of the architect's services, so are they absorbing a wide knowledge of

the materials that will make their homes "right the first time". They will know what to buy when the time comes. To the foresighted manufacturer of building materials and supplies, this is a golden opportunity to join in the educational process through the use of Good Housekeeping's guaranteed advertising pages.

GOOD HOUSEKEEPING
Everywoman's Magazine



In Institutions—

***Where Non-slip Floors
Are Especially Desirable***



This dining room is in a large New England hospital for the insane. It is of the cafeteria type—an innovation for patients' dining rooms in such institutions but one that is proving very successful.

To provide the very maximum of safety for a place such as this Norton Floors were installed over three years ago and are giving highly satisfactory service. They assure a safe, firm footing at all times—even where liquids are spilled and where traffic is concentrated.

NORTON COMPANY, WORCESTER, MASS.

T-296





BEACON THEATRE

Broadway at 72nd Street, New York
... STAGE EQUIPPED BY PETER CLARK

Again the established excellence of Peter Clark Stage Equipment has led to its specification by the architects of a theatre . . . the Beacon Theatre in New York.

We will gladly cooperate with you in suggesting and designing stage equipment for your next theatre job.

PETER CLARK, INC.

Stage Equipment Specialists for Over 21 Years
544 West 30th Street, New York City

INCINERATION SURELY!

—but what kind?

Before an incinerator is selected it is well to know the answers to these questions: What is the actual performance record of the incinerator over a period of years? How much and what kind of experience is represented in its design? Who accepts the responsibility of correct installation? Who assures service during the years to come and quick response to service calls? What kind of guarantee goes with the incinerator—and, far more important, who stands back of the guarantee? We always welcome the opportunity to discuss these questions.

With GAS
or OIL for
HEATING
—what will
you do with
WASTE and
RUBBISH
?

KERNER INCINERATOR COMPANY
3548 N. Richards St. Milwaukee

Offices in over 150 cities

KERNERATOR

FOR NEW AND EXISTING BUILDINGS

See our catalog in Sweet's, pgs. C-4526-33,
or write for A. I. A. folder.

© 1930 K. I. Co.

Good Lighting

(Continued from page 51)

descending the upper portion of the stairs. If the fixture were made entirely of glass, there would necessarily be glare and possible confusion to any one descending the steps. It was decided to construct the fixture with a series of horizontal louvres designed to permit a seepage of light on to their curved surfaces and to use a glass disk at the bottom through which the major portion of the light could be directed. The result combined practical efficiency in illumination, decoration in harmony with its surroundings, and a well shielded, comfortable light source, thus adding to the safety of those using the stairs.

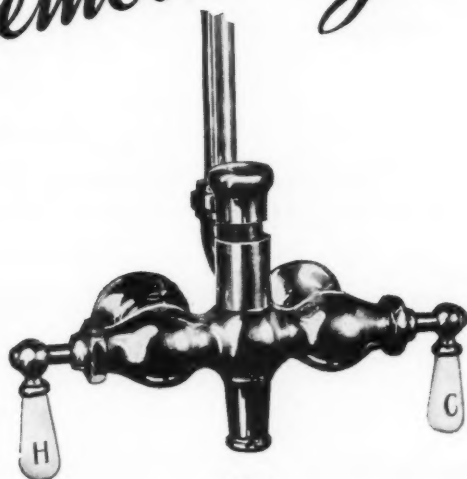
Many refinements of rather crude forms which one has frequently associated with indirect lighting fixtures have appeared in recent years. This type of lighting is often desirable. Indirect lighting can be used in conjunction with architecture and decoration to their mutual advantage.

A NEW building embodying some of the characteristics of modern architecture had been erected for a prominent dealer in antiques and art objects. Asked to design a lighting fixture for the entrance way, we endeavored to combine modern illuminating facilities and methods with decoration comparable with the architecture and the merchandise handled by the owner. The building had been brought out to the building line, therefore the entrance way took the form of a recessed arch with a door at the side. A large clear glass show window extended across the rear of this arched opening. The building is constructed of a light colored stone, which was carried through the arch reveal, thus forming an excellent reflecting surface. We choose the indirect method of lighting, using a series of lamps housed within shells of decorative leaf formation designed to conform with the foliated frieze around the face of the arch opening. In employing this form of lighting fixture instead of the conventional lantern form which had been suggested, we feel that in addition to lighting the area in a pleasant and adequate manner, we have automatically increased the scale of this entrance way by literally making the lighting fixture part of it through utilizing its walls for reflecting purposes. This seemed a desirable thing to do because this entrance occurs in a rather narrow building on an important street, but leads to spacious rooms located on the property fronting on the next street. The design, form and craftsmanship of this fixture provide an extremely decorative pendant, which is indicative of the excellence of the product on display within, even when not in use as a lighting source.

Direct and indirect lighting can be obtained from a lighting fixture with glare practically eliminated by the use of shielded sides. A bulb of considerable intensity may be placed inside the center member and directed downwards. Additional bulbs can also be placed in the outer area with glass above and below them, the light being directed upwards and downwards in equal proportion. A secondary area of less brilliant illumination serves as a buffer between the strong light in the center and the outer boundary of the fixture. This, together with the metal sides, gives a (Continued on page 124)



A COMPLETE SHOWER
and no remodeling necessary!



H-5000

A happy solution to a real household problem—how to add a shower to the bathroom without the bother of remodeling and its expense. This MUELLER Tub Filler and Shower Combination fills this need with a completeness that will delight the most particular.

Complete with riser discharge pipe, wall flange, and supporting arm. Adjustable

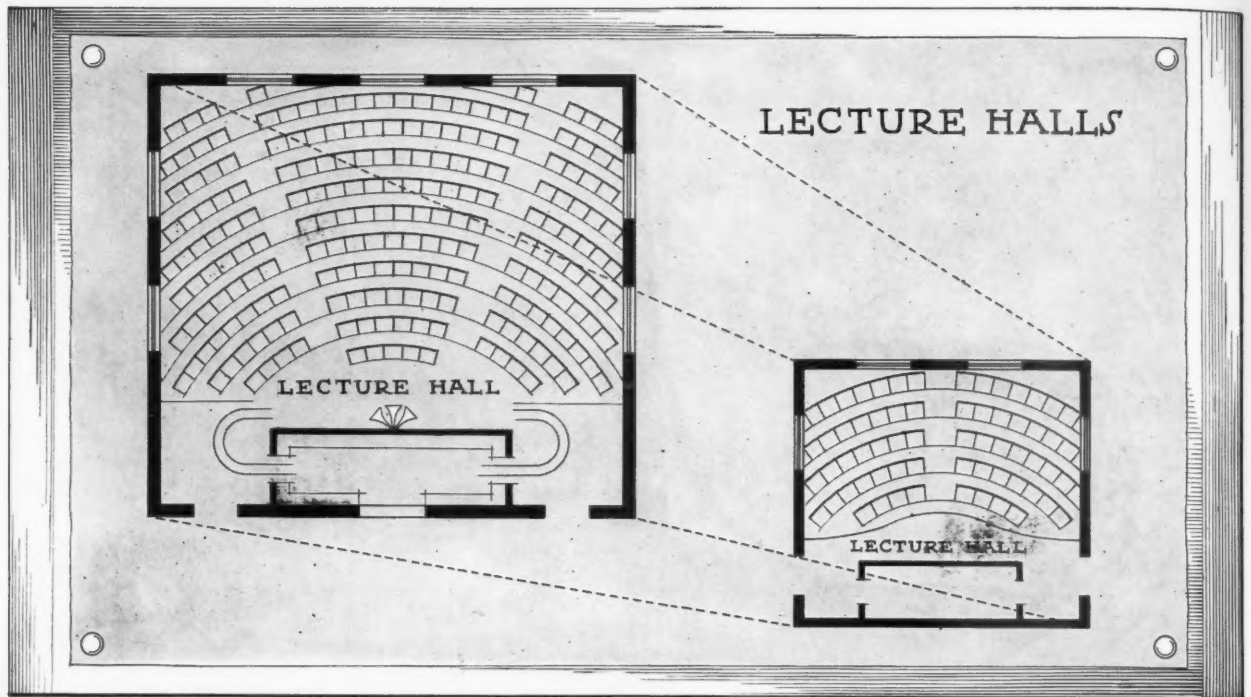
ball joint shower head with 4" removable face. Water is automatically diverted to tub when control valves have been closed.

MUELLER CO. (Established 1857) Factory: Decatur, Illinois. Branches: New York, 135th St. & Walnut Ave., Bronx, Telephone Ludlow 8629-30-3; Dallas, Atlanta, Los Angeles, Chicago. Canadian Factory: MUELLER, Limited, Sarnia.

MUELLER

Trade-mark Reg. U. S. Pat. Office

Plan Big Halls



as easy to hear in as small ones



In your schools, hotels, clubs, public buildings, plan the auditoriums so every seat will be a good seat. Specify a Western Electric Public Address System. This equipment picks up the voice of the speaker, amplifies it without distortion and delivers it so all can hear perfectly. The quality of sound reproduction is unfailingly high — a tribute to the high standards insisted upon by the makers of Bell Telephones. Engineers will be glad to confer with you regarding the installation of Public Address Systems.

GRAYBAR ELECTRIC CO. Graybar Building, New York, N. Y.	AA 9-31
Gentlemen:	
Please send us	
Illustrated booklet on Music Reproduction System	☐
Information on Public Address System	☐
Information on acoustic consulting service	☐
NAME.....	
ADDRESS.....	
CITY.....	STATE.....

Western Electric

PUBLIC ADDRESS AND MUSIC REPRODUCTION SYSTEMS

Distributed by GRAYBAR Electric Company



Simple Mathematics favor

VENTURAFIN UNIT HEATERS

WHEN men refuse . . . or *can't* work . . . too close to heating pipes or equipment . . . when overheated areas become storage space for materials or supplies . . . when cold corners are shunned by workers and left to collect dust, dirt, odds and ends it doesn't take a mathematical genius to realize that valuable floor space is being wasted.

Venturafin Unit Heaters can be easily and quickly installed *overhead* in out-of-the way places . . . are one of the most widely sold unit heaters in the country. Venturafin Units force heated air, at the required speed, directly into working areas. They heat a factory, plant,

warehouse or other type of industrial building in a fraction of the time required by other methods of heating. They easily maintain even temperature or temperatures throughout the entire structure—not too cold, not too hot, but just right.

In planning a new building, or making alterations in an old, remember that Venturafin Unit Heaters enable your client to get 100 per cent use of his floor space and his heating dollar. Phone our Branch Office near you for the new illustrated Venturafin Catalog and Application Guide, or write direct to the Factory. No obligation or cost, of course.



Venturafin Units are equipped with a 3-speed control switch, enabling heat to be forced at low, medium, or high speeds. They can be automatically controlled by a Mercoid Thermostat.

AMERICAN BLOWER CORPORATION, DETROIT, MICHIGAN
CANADIAN SIROCCO COMPANY, LIMITED, WINDSOR, ONT.
BRANCH OFFICES IN ALL PRINCIPAL CITIES



(1180)



THE CUTLER MAIL CHUTE

The achievement of half a century's experience in meeting the exacting requirements of public use under Post Office Regulations.

Simple, practical and sturdy in construction. Can be opened and closed quickly by Post Office representatives and left in perfect condition, with no injury to structure or finish.

Full information, details and specifications on request.

CUTLER MAIL CHUTE CO.

General Offices and Factory
ROCHESTER, NEW YORK

Good Lighting

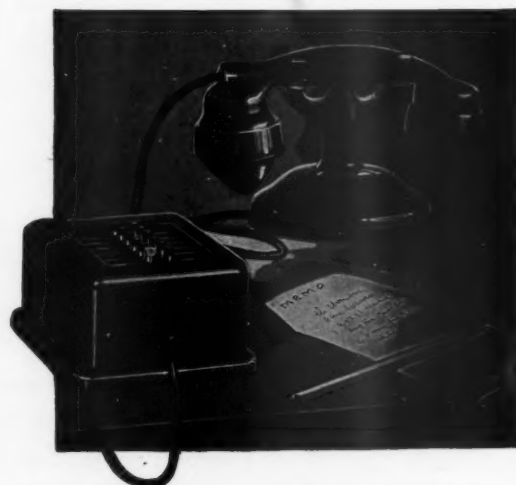
(Continued from page 120)

light of utmost comfort and efficiency, which one can look at from almost any angle without eye strain.

A RECENT development of a direct indirect fixture makes the major component of light indirect. In this case a high wattage lamp with its own silvered bowl reflector is employed in such a way that about eighty-five per cent of the light is sent to the ceiling, while a baffle arrangement within the fixture directs the balance of the light down through a glass bottom plate and furnishes illumination for decorative purposes along lowered side members as well.

A promising mode of illumination may be called directed-indirect. Here the lights are hidden from view by a decorative shield, and the course of the light is controlled and directed by the angles of a recessed plaster panel in the ceiling. The results of this manner of handling light are agreeable and efficient, and its application offers many interesting and novel possibilities.

It is along the foregoing lines, and in such developments as will follow greater familiarity with these usages, that we see progress in the application of electricity as the lighting medium of our time. Principles and methods of such illumination once established, varied forms of expression will naturally follow the lead of the architectural designer.



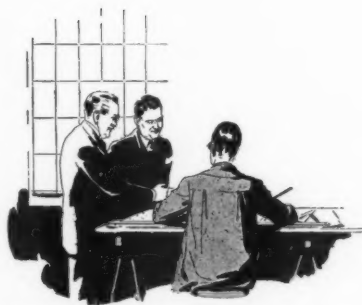
INTER-COMM PHONE SYSTEM

The Stromberg-Carlson Inter-Comm-Phone System is satisfying the service demands of offices, factories, and large residences where simultaneous conversations are necessary, but where the volume of traffic is not large enough for a switchboard system and a paid operator.

Easy to operate, cuts down useless running around, speeds production and increases efficiency. Made by a firm with more than thirty-five years' experience.

Write for literature describing Stromberg-Carlson Telephone and Radio apparatus and trade discounts.
Stromberg-Carlson Telephone Manufacturing Co.
Rochester, N. Y.

Stromberg-Carlson



WHEN I WANT TO BE SURE...

I Specify Hartmann-Sanders Lock-Joint Columns

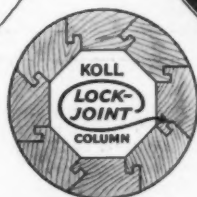
I like to use columns in my work. To me they are the symbol of architecture; and a well detailed, well turned wood column always gives me a thrill. Perhaps that is why I am so insistent that the columns I use shall be "just right." I have found that it pays to be particular, for a column is always out in front where the eye sees it first, and it really makes or mars the building.

Therefore, I always specify Hartmann-Sanders Columns, for they are always authentic and correct in every detail. What is just as important—they are made with a patented Lock-Joint, which absolutely prevents warping, loosening or opening up at the joints. But I am satisfied to leave those details to Hartmann-Sanders, for they have specialized in making exterior millwork for thirty years.

HARTMANN- SANDERS

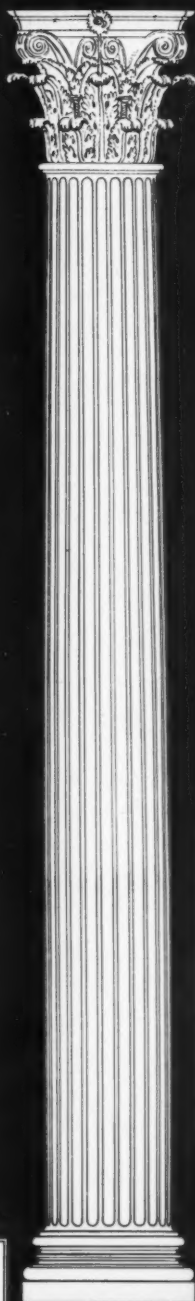
2155 ELSTON AVE., CHICAGO
EAST 39th STREET, NEW YORK

COLUMNS
COLONIAL
ENTRANCES
GARDEN
STRUCTURES
EXTERIOR
MILLWORK

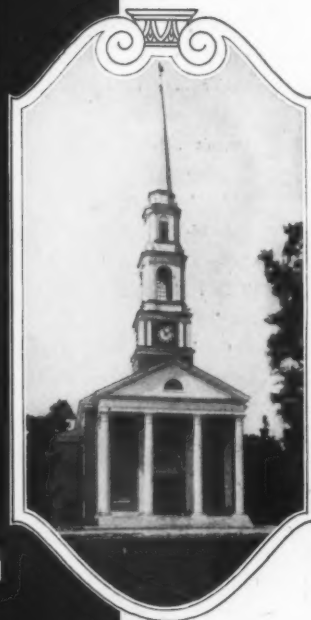


Eight Superior Features

1. Lock-Joint Construction.
2. Authentic in Design.
3. Each Stave Turned to Correct Entasis.
4. Careful, Exact Workmanship.
5. Clear Lumber. Not a Knot in 10,000.
6. Special Weather-resisting Features.
7. Wide Range of Selection.
8. Guaranteed to give Complete Satisfaction.



*Church, Pinehurst, N.C.
Hobart Upjohn, Arch.,
New York City*



Send for these **FREE** books

HARTMANN-SANDERS CO., Dept. Z
Factory and Showroom, 2155 Elston Ave., Chicago
Eastern Office and Showroom, East 39th St., New York

Please send me free, copies of the books checked below:

Hartmann-Sanders Lock-Joint Columns ☐
Garden Structures ☐ Colonial Entrances ☐

Name.....

Address.....

INDEX TO ADVERTISERS

Aluminum Co. of America..... 7	Good Housekeeping 118	Penn Heat Control Co..... 103
Ambler Asbestos Shingle & Sheathing Co. 101	Graybar Electric Co..... 122	Pittsburgh Plate Glass Co..... 84
American Blower Corp..... 123	Halback & Co., C. E..... 108	Rambusch Decorating Co..... 115
American District Telegraph Co..... 69	Hartmann-Sanders Co. 125	Richards-Wilcox Mfg. Co..... 1
American Sheet & Tin Plate Co..... 10	Hauserman Co., The E. F..... 65	Ric-Wil Co., The..... 88
American Steel & Wire Co..... 10	Henkel Edge-Lite Corp..... 112	Rising & Nelson Slate Co..... 13
American Tel & Tel. Co..... 87	Herman Nelson Corp., The..... 5	Ruberoid Co., The..... 73
Armstrong Cork Co., Floor Division... 111		
Armstrong Cork & Insulation Co.... 77		
Bostwick-Goodell Co., The..... 98	Illinois Steel Co..... 10	Sloane, W. & J..... 11
Burlington Venetian Blind Co..... 124	Insulite Co., The..... 109	Smith & Wesson..... 107
	International Casement Co., Inc..... 8	Smyser-Royer Co..... 114
	International Nickel Co., Inc., The... 81	Sonneborn Sons, Inc., L..... 99
Carey Co., The Philip..... 6	Jamison Cold Storage Door Co..... 106	Stanley Works, The..... 14
Carter Bloxomend Flooring Co..... 94	Kawneer Co., The..... 86	Stromberg-Carlson Telephone Mfg. Co. 124
Carnegie Steel Co..... 10, 17	Kerner Incinerator Co..... 120	Stedman Rubber Flooring Co..... 127
Carney Cement Co., The..... 3	Klein & Co., Henry..... 90, 91	
Cheney Co., The..... 116	Kohler Co. 85	Thorp Fireproof Door Co..... Second Cover
Chicago Faucet Co., The..... 71		Trenton Potteries Co., The..... 9
Clark, Inc., Peter..... 120		Truscon Steel Co..... 128
Covert Co., The H. W..... 16	Lord & Burnham Co. (Greenhouse) Back Cover	
Crab Orchard Stone Co..... 83	Lord & Burnham Co. (Sash Operating). 92	Universal Atlas Cement Co..... 18
Crane Co. 20	Louisville Cement Co., Inc..... 105	U. S. Mineral Wool Co..... 104
Cutler Mail Chute Co..... 124	Ludowici-Celadon Company..... 67	U. S. Ozone Co. of America..... 126
		U. S. Steel Corp..... 10
Detroit Show Case Co..... 79	Minneapolis-Honeywell Regulator Co.. 97	
Fiske Iron Works, J. W..... 2	Mueller Co..... 121	Vermont Marble Co..... 4
Flax-Li-Num Insulating Co..... 15		Vitrolite Co., The..... 117
Frick Co. 96	National Electric Light Association... 95	Warren Webster & Co..... 12
Fulton Sylphon Co..... 113	National Tube Co..... 10, 75	Western Electric Co..... 122
	Norton Co..... 119	Westinghouse Electric Elevator Co., Third Cover
General Electric Co..... 103		Westinghouse Electric Elevator Co.
Georgia Marble Co., The..... 93	Peelle Co., The..... 102	Yale & Towne Mfg. Co., The..... 98
Gleason-Tiebout Glass Co..... 89		

Trade Mark



Reg. U. S.
Pat. Office

UNITED STATES OZONE COMPANY of AMERICA

SCOTTTDALE, PA.

OZONE AND ELECTROLYTIC WATER STERILIZERS

OZONE AIR CONDITIONING EQUIPMENT

INDUSTRIAL OZONIZERS

We shall be glad to send
you Complete Information
and Engineering Data

(Business Established 1910)

This Company Controls Exclusively
United States Ozone Company
Pennsylvania Charter
1928

In the Spirit of Youth and Modernity

Stedman Floors are singularly expressive of the modern spirit in architecture. Just as granite walls imply stability, as colonnades distinguish a classical style,—so this rubber flooring signifies the present and the future:—Youth and Modernity. And in Stedman Floors, all the practical and the

aesthetic values of rubber floors—long life, constant freshness, beauty, foot comfort and sanitation—are *intensified* and made more valuable by the exclusive Stedman process of reinforcement.

Send for our complete architectural catalogue with charts in full color and detailed information.

STEDMAN RUBBER FLOORING COMPANY : South Braintree, Mass.

Stedman Reinforced* Rubber Tile

REINFORCED: In the Stedman Process minute cotton filaments, uniting with the rubber under high pressure and heat, are responsible for its unusual resistance to wear and distention, its lasting resilience and smooth impervious surface—characterized by color veinings of great fineness and beauty.

Powder Room in Junior League of Boston; Strickland, Blodget & Law, Architects, Boston, Mass. The effectiveness of the room is enhanced by the custom-made floor produced by Stedman from the original designs of the architects.



INSULATED Steeldecks for Every Roof Condition

For every purlin spacing or roof loading, there is a type of Truscon Steeldeck — Ferrobord, I-Plates or Ferrodeck—to fit the job efficiently and economically.

All Steeldecks can be insulated to any degree to prevent heat loss and condensation. Their light weight saves in structural supports and foundations. Truscon Steeldecks are fireproof, permanent, economical and easily installed. They are used extensively on new buildings and for replacement of old roofs.

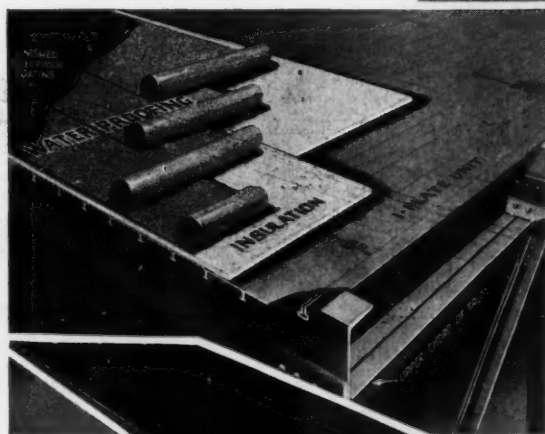
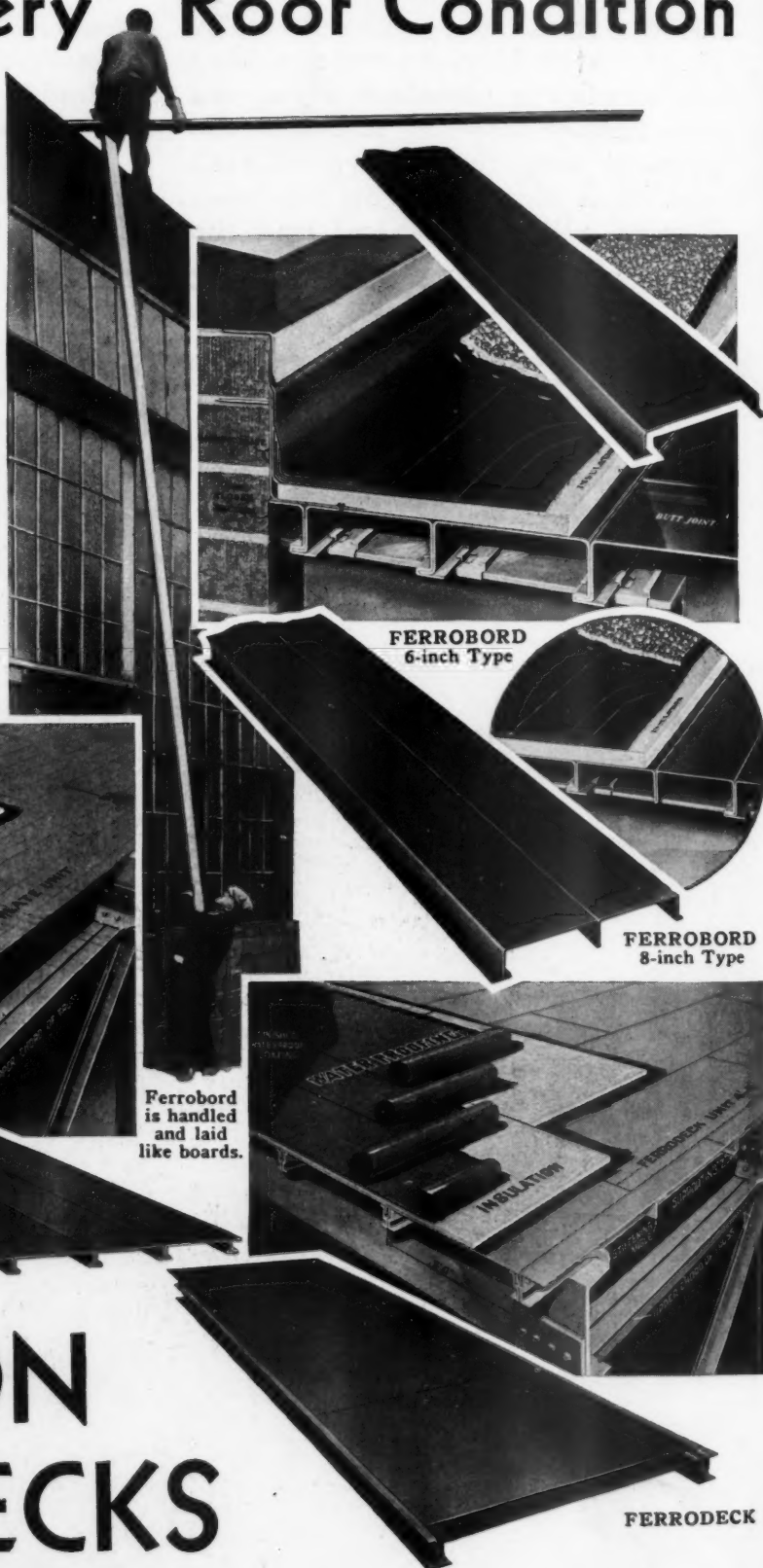
Ferrocoustic—standard Ferrobord with cork insulation on underside—has the sound-deadening quality required for good acoustics.

Suggestions, catalog and prices on request

TRUSCON STEEL COMPANY

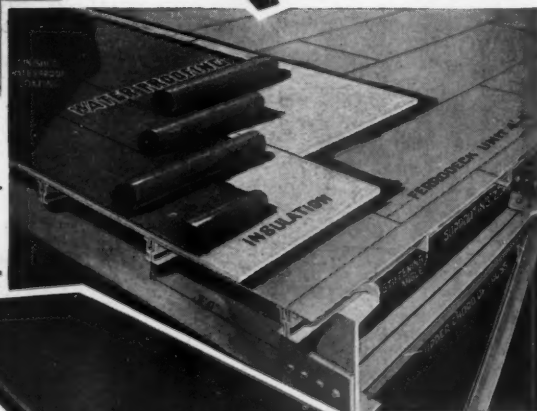
YOUNGSTOWN, OHIO

Engineering and Sales Offices in Principal Cities



I-PLATES

Ferrobord is handled and laid like boards.



FERRODECK

TRUSCON STEELDECKS

INSULATED AND WATERPROOFED