

AIA

JOURNAL

OF THE AMERICAN INSTITUTE OF ARCHITECTS

CRITIQUE ON OUR EXPANDING "SUBTOPIA"

by Sir Hugh Casson, FRIBA

THE TIME HAS COME FOR ACTION

by Hugh R. Pomeroy

FEBRUARY 1958

The American Institute of Architects

BOARD OF DIRECTORS

OFFICERS (*Terms expire 1958*)

LEON CHATELAIN, JR., President

1632 K Street, Washington 6, D. C.

JOHN N. RICHARDS, First Vice President
1600 Madison Avenue, Toledo 2, Ohio

PHILIP WILL, JR., Second Vice President
309 West Jackson Blvd., Chicago 6, Ill.

EDWARD L. WILSON, Secretary, P.O. Box 9035, Fort Worth 7, Texas

RAYMOND S. KASTENDIECK, Treasurer, 128 Glen Park Ave., Gary, Indiana

EDMUND R. PURVES, Executive Director

REGIONAL DIRECTORS (*Terms expire 1958*)

MATTHEW W. DEL GAUDIO, 545 5th Ave., New York 17, N. Y. New York District
BRADLEY P. KIDDER, 717 Canyon Rd., Santa Fe, N. M. Western Mountain District
BRYANT E. HADLEY, Myers Bldg., Springfield, Ill. North Central States District
AUSTIN W. MATHER, 211 State St., Bridgeport 3, Conn. New England District

(*Terms expire 1959*)

J. ROY CARROLL, JR., 6 Penn Center Plaza,
Philadelphia 3, Penn. Middle Atlantic District
BERGMAN S. LETZLER, 543 S. Fifth St., Louisville 2, Ky. Great Lakes District
JOHN H. PRITCHARD, Tunica, Miss. Gulf States District
DONALD J. STEWART, 219 S. W. Stark St., Portland 4, Ore. Northwest District

(*Terms Expire 1960*)

I. LLOYD ROARK, 7133 W. 80th Street, Overland Park, Kans. Central States
SANFORD W. GOIN, 518 N.E. 4th Avenue, Gainesville, Fla. South Atlantic
U. FLOYD RIBLE, 3670 Wilshire Blvd., Los Angeles 5, Calif. Calif.-Nevada-Hawaii
R. MAX BROOKS, 203 Perry-Brooks Bldg., Austin, Tex. Texas

THE EXECUTIVE COMMITTEE OF THE BOARD (*Terms expire 1958*)

LEON CHATELAIN, JR., Chairman

AUSTIN W. MATHER

EDWARD L. WILSON, Secretary

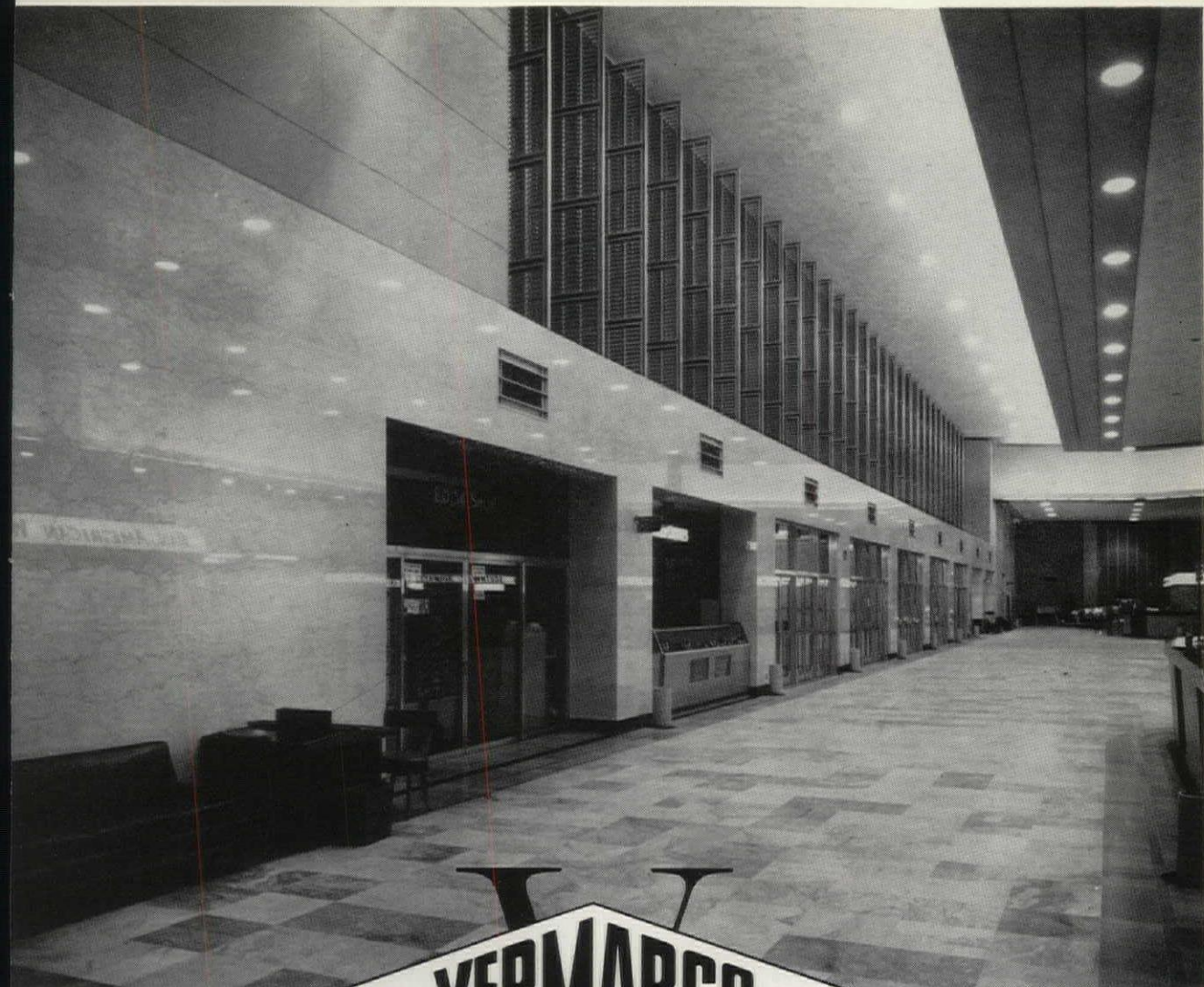
J. ROY CARROLL, JR., Alternate

RAYMOND S. KASTENDIECK

R. MAX BROOKS, Alternate

The *Journal of The American Institute of Architects*, official organ of the Institute, is published monthly at The Octagon, 1735 New York Avenue, N. W., Washington 6, D. C. Editor: Joseph Watterson. Subscription in the United States, its possessions, and Canada, \$4 a year in advance; elsewhere, \$5.50 a year. Chapter Associate

members, \$2.00; Students, \$1.50. Single copies 50c. Copy right, 1958 by The American Institute of Architects. Entered as second-class matter February 9, 1929, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Change of Address: Notify The Octagon, giving both old and new addresses. Allow four weeks for change.



*International Airport Terminal Building
San Francisco, California
W. P. Day & Associates, Architects*

MARBLE

*The ideal choice
for public buildings*

Whenever you design a heavy-traffic area that must serve hundreds, even thousands of people every day . . . which must still look as fresh and beautiful after twenty years as it did the first day . . . you can make no better choice than to specify the enduring beauty and prestige that have come to be synonymous with Vermarco marble.

Vermarco marble, whether produced in the United States or imported as quarry blocks into this country, is fabricated and finished with the care and attention to quality which only the oldest and largest marble producer and fabricator in this country can provide.

V E R M O N T  **M A R B L E C O .**
P R O C T O R V E R M O N T

RANCH OFFICES BOSTON CHICAGO CLEVELAND DALLAS HOUSTON PHILADELPHIA LOS ANGELES NEW YORK SAN FRANCISCO WASHINGTON, D.C.
CANADA: ONTARIO MARBLE COMPANY, LIMITED, TORONTO AND PETERBOROUGH, ONTARIO. CONTINENTAL MARBLE CO., LTD., VANCOUVER, B.C.

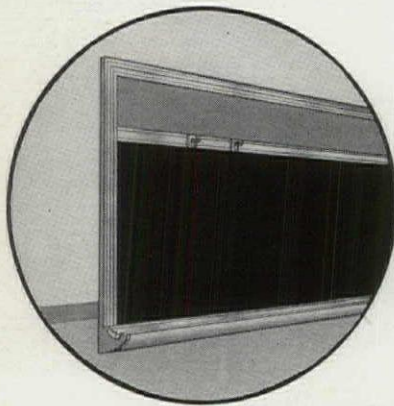
the Key to Successful Installations . . .



Simplifies Your Construction Problems

The Loxit Complete Chalkboard System, the Loxit Floor Laying System, and the Loxit Victory Acoustical System all have one thing in common: they are SIMPLE in principle. If your planning includes chalkboard and tackboard installation, wood floors laid on concrete, or acoustical suspension, you'll

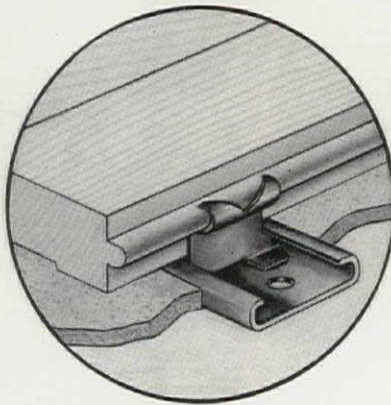
do well to consider the many proven advantages these Loxit Systems offer—how they simplify construction problems, meet unusual conditions, assure permanent beauty, and reduce maintenance costs. Because of their simplicity, Loxit Systems are easy to erect and assure years of trouble-free service.



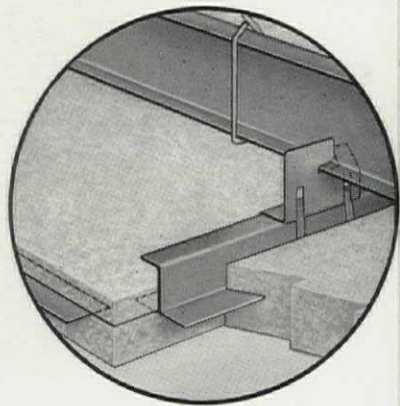
LOXIT CHALKBOARD SYSTEM

This is a COMPLETE system. It provides the answers to all your chalkboard, tackboard and trim problems. Included are porcelain steel, composition and cement-asbestos chalkboards in eight colors; Loxitex and Loxikork tackboards in six colors; boards completely trimmed ready to set in place with or without the use of the new Loxit Miracle Adjustable Chalkboard Setting System, sliding boards, trophy cases, bulletin boards and a complete line of accessory items.

LOXIT FLOOR-LAYING SYSTEM



A simple and practical mechanical system which solves the problem of wood floors laid on concrete slabs using cleverly designed metal clips in combination with metal channels instead of wood sleepers and nails, or adhesives. Assures uniformly "live" resiliency throughout with positive end match protection. Limits expansion. Eliminates squeaks. Floors are easy to lay, easy to maintain.



LOXIT ACOUSTICAL SYSTEM

The "XYZ" of dependable acoustical suspension systems. Type "X" Regular—used when furring channels or structural sections serve as the supporting members for the Loxit suspension system. Type "Y" Surface-Applied—used when no suspension is required, the acoustical tiles being applied directly to the ceiling. Type "Z" combination Types "X" and "Y" to meet special conditions.

LOXIT SYSTEMS, INC.

Write today for literature and samples

1217 W. WASHINGTON BLVD., CHICAGO 7, ILLINOIS






NEW

**WOOD TRIMMED
ALUMINUM RAILING POST BY**

Blumcraft OF PITTSBURGH

SEE 1958 SWEETS 6e/Blu OR SEND FOR CATALOGUE M-58
460 MELWOOD STREET, PITTSBURGH 13, PENNSYLVANIA



ARMCO

SPECIAL STEELS for Architecture

ENAMELING IRON STAINLESS
ZINGGRIP PAINTGRIP ALUMINIZED STEEL



—steels that provide unique advantages in the design of contemporary architecture—freedom in design concept and execution, integration of structure and color, economical durability that preserves beauty and structural integrity.

ARMCO ENAMELING IRON—The world's standard base metal for porcelain enamel. Because of uniform quality, it is used more than any other material as a base for architectural porcelain enamel.

Proved by more than a quarter-century of use in architecture, porcelain enamel on Armco Enameling Iron assures durable, colorful beauty and low maintenance for curtain walls. Form and texture as well as unlimited color can be made basic design factors because Enameling Iron is readily fabricated into strong, rigid embossed or shaped panels.

Armco Stainless Steel—Maintains its lustrous beauty with little or no maintenance in outdoor exposures. The combination of high strength, timeless beauty and low maintenance has made stainless a standard material for facades, mullions, curtain walls, entrances and interiors.

Armco ZINGGRIP® PAINTGRIP® Steel—This special hot-dip zinc-coated steel combines economical rust protection and a surface that takes paint immediately, holds it longer. The zinc coating won't flake in fabrication and requires no pretreatment before painting. Ideal for roof drainage, metal partitions, building panels, metal doors or curtain walls.

Armco ALUMINIZED STEEL Type 2—A hot-dip aluminum coated sheet steel that combines the surface properties of aluminum with the strength of steel. Gives long time resistance to atmospheric corrosion without paint. Provides strength and durability for roof decking, building panels, rolling doors, curtain walls.

For full information on Armco's Special Steels and how to specify them, just fill out and mail the coupon.

ARMCO STEEL CORPORATION

1208 Curtis Street, Middletown, Ohio

Send me your booklet, "Architectural Design with Porcelain Enamel on Armco Enameling Iron," and information on:

- Armco Stainless Steel
- Armco ZINGGRIP PAINTGRIP Steel
- Armco ALUMINIZED STEEL Type 2

NAME _____

TITLE _____

FIRM _____

STREET _____

CITY _____ ZONE _____ STATE _____

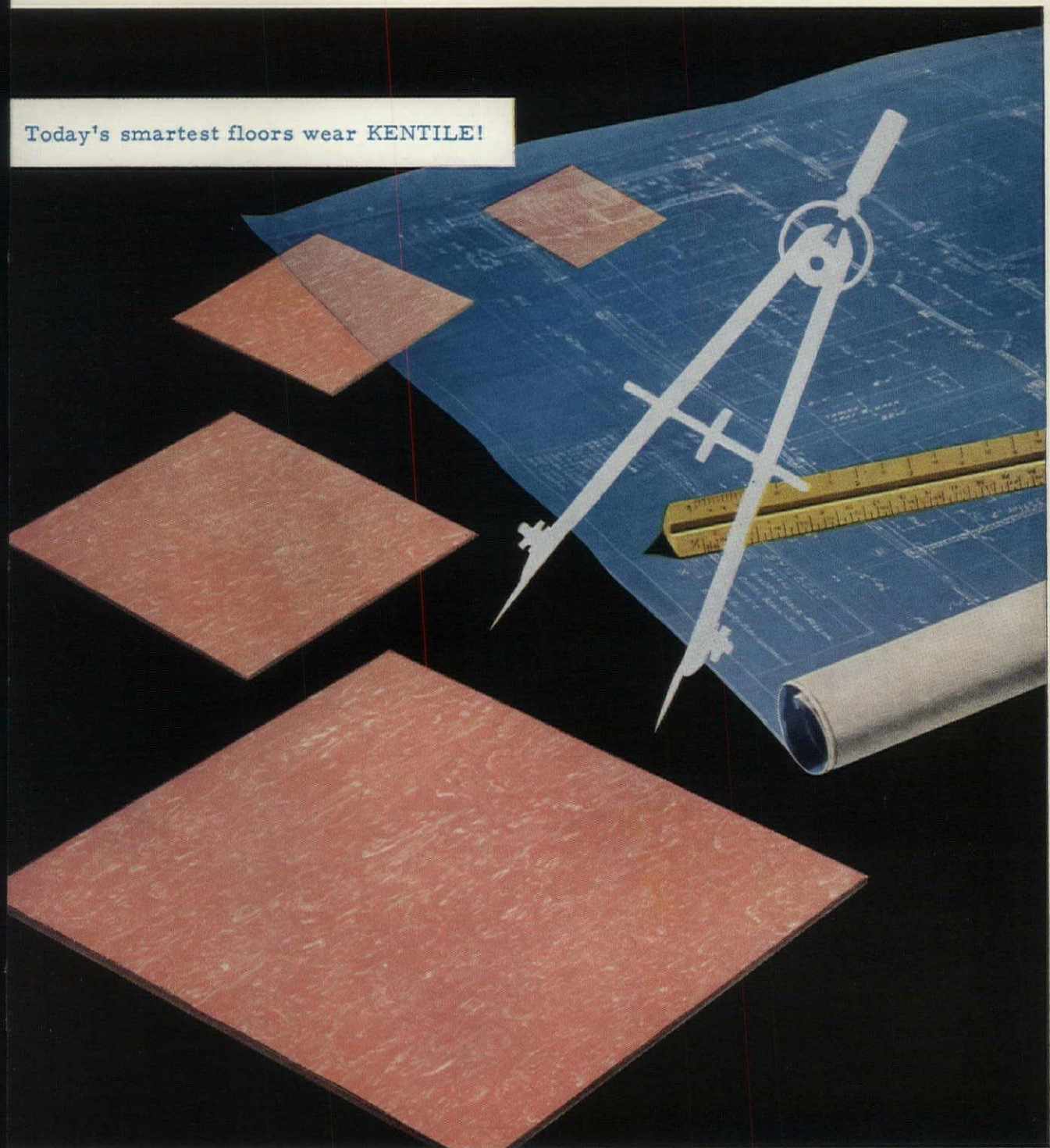
ARMCO STEEL

ARMCO STEEL CORPORATION, 1208 CURTIS STREET, MIDDLETOWN, OHIO



SHEFFIELD DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION

Today's smartest floors wear KENTILE!



This is KENTILE[®] rubber tile

It has the finest, most evenly distributed marbleization possible... with mirror-smooth, jewel colors that wear longer!

KENTILE FLOORS

Available in Rubber, Cork, Vinyl Asbestos, Solid Vinyl, Cushion-back Vinyl, and Asphalt Tile... over 150 decorator colors.

SPECIFICATIONS:

SIZES:

9" x 9", 6" x 6", 12" x 12",
18" x 36". (37" x 37" untrimmed
slabs also available for custom
designs.)

COLORS:

23 exciting marbled colors.

THICKNESSES:

5/64", 1/8", 3/16"

From The AMERICAN INSTITUTE OF ARCHITECTS
1735 New York Avenue N.W., Washington 6, D.C.

An Accounting System designed for your office . . .

Four years of intensive research by a Committee of the Institute has resulted in the completion of a Cost Accounting System which is adapted to the special needs of architectural offices.

Heart of the System is the Book of Instructions, available with each of the offers; or sold separately at \$5.00 per copy. In it are all the necessary instructions, along with samples of most of the forms, filled out as examples.

The System can be purchased in three separate Offers. Each contains a year's supply of forms. Full information on the contents of each Offer, and prices of individual forms, may be obtained upon request.

● OFFER NUMBER ONE

Includes instructions, Accounting Forms, Owner-Contractor Forms, Binders, with names imprinted on Binders and Forms.
\$55.00

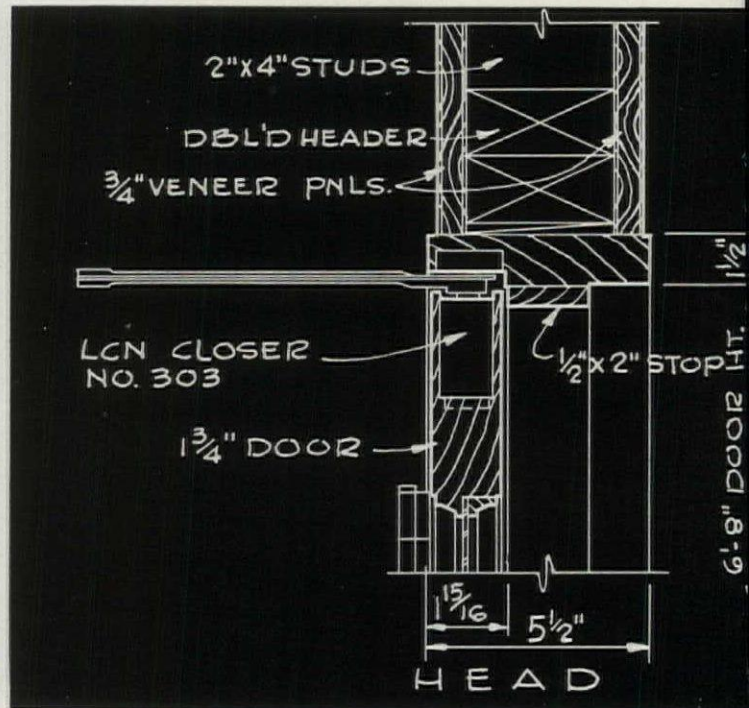
● OFFER NUMBER TWO

Includes Instructions, Accounting Forms, Owner-Contractor Forms.
\$31.50

● OFFER NUMBER THREE

Includes Instructions, Accounting Forms.
\$22.50

Direct inquiries to:
The American Institute of Architects
1735 New York Avenue N.W.,
Washington 6, D.C.



CONSTRUCTION DETAILS

for LCN Closer Concealed-in-Door Shown on Opposite Page

The LCN Series 302-303 Closer's Main Points :

1. An ideal closer for many interior doors
2. Mechanism concealed within door; flat arm not prominent, and provides high closing power
3. Door is hung on regular butts
4. Closer is simple to install and to adjust
5. Hydraulic back-check protects walls, etc. on opening
6. Practically concealed control at little more than exposed closer cost

*Complete Catalog on Request—No Obligation
or See Sweet's 1958, Sec. 18e/La*

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Canada: Lift Lock Hardware Industries, Ltd., Peterborough, Ontario

MODERN DOOR CONTROL BY *LCN*

CLOSER CONCEALED IN DOOR

WALT DISNEY ELEMENTARY SCHOOL
TULLYTOWN, PENNSYLVANIA

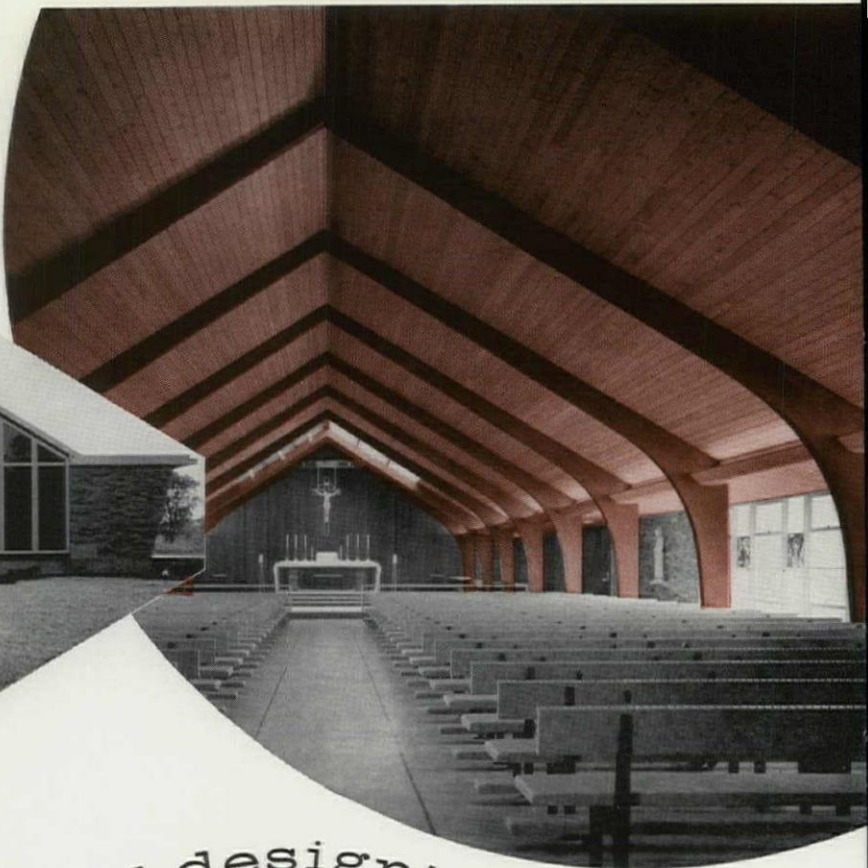
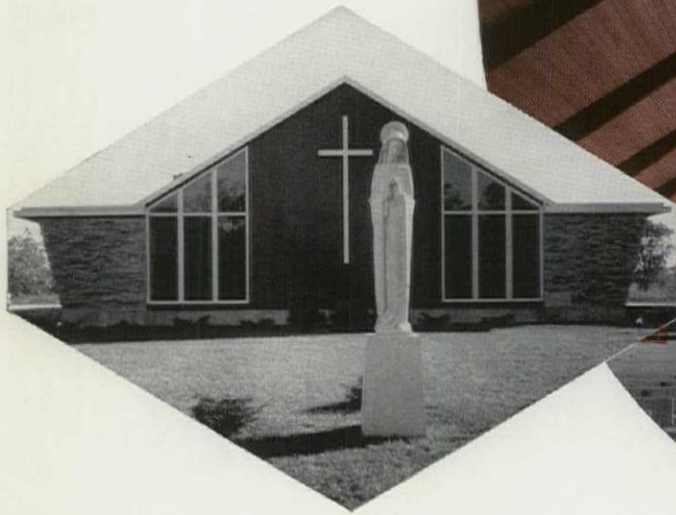
John S. Carver, Architect

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page



DREAM
PRODUCT!



A Reality-
...for functional design!

Our Lady of Humility Church, Zion,
Illinois. Architect: Joe L. Bennett,
Des Plaines, Illinois

UNIT *Laminated* **Roof Supports**

Glued laminated arches which function as the main structural component of the building, permit the use of economical, non-bearing side wall design. For instance, notice the attractive display of glass-wall construction in the photograph above.

If your next project requires full design freedom, if fire resistivity, economy, and beauty are prime requisites, investigate the versatility

of UNIT laminated structural members. No other building medium equals the inherent beauty of wood for church construction and no beauty surpasses that of UNIT laminated Southern Pine members . . . available factory finished, stained and varnished when desired. Our Engineering Department is fully prepared to assist you with any of your design problems. Full quotation service and name of your nearest sales office upon request.



NEW! A profusely illustrated and detailed brochure on unusual church designs is now available upon request without obligation.

Name.....
Firm Name.....
Address.....
City..... State.....

Free Film... pertaining to fabrication and erection of UNIT laminated members available free of charge for group showings.



UNIT STRUCTURES, Inc.

Plants and offices in Peshigo,
Wisconsin and Magnolia, Arkansas

*Look down
the aisle
and see
for yourself...*



**THIS UNIQUE VINYL TILE FLOOR
STAYS BEAUTIFUL DESPITE:**

- ★ SPILLED FOODS
- ★ HEAVY TRAFFIC
- ★ TRACKED-IN DIRT
- ★ STRONG CLEANERS
- ★ GREASE, WATER

Aisles always betray first signs of wear. But at New York's busy Hotel Commodore Coffee Shop—well—see for yourself.

This floor is Gold Seal Nairon® Custom vinyl plastic tile in the exclusive Venetian* pattern—the one that looks like fine marble. And every day it defies all the forms of abuse listed.

But here, even seam lines are all but invisible. And cracks, furniture dents and dull spots simply don't exist. Because this full-thick homo-

geneous plastic tile defies the most rugged kind of wear.

No other vinyl plastic tile floor offers so much value or luxury. It's quiet, comfortable and totally unique in design. And it's available in nine colors. So before you write your next flooring specifications—for new or replacement, commercial or institutional flooring—see Nairon Custom "Venetian." It's just one of the many remarkable floors in the complete* Gold Seal line.

SPECIFICATIONS: Nairon Custom Plastic Tile—9" x 9" tile, 1/8" or .080" gauges—3 patterns, "Venetian," Sequin,* "Marble"—total of 49 colors. May be installed over, on, above or below-grade concrete floor or over suspended wood underfloors.

FOR HOME/BUSINESS/INSTITUTIONS:

By the yard and tiles—Inlaid Linoleum • Nairon® Plastics • Vinylbest* Tile
Cork Tile • Rubber Tile • Asphalt Tile
Printed Floor and Wall Coverings—Forecast* Vinyl, Congowall® and
Congoleum® Satisfaction Guaranteed or Your Money Back *Trademark



FOR THE LOOK THAT'S YEARS AHEAD

Gold Seal®
FLOORS AND WALLS

Congoleum-Nairn Inc., Kearny, N. J.

Trinity White

PORTLAND CEMENT

Helps the Sale of Merchandise

Merchants have long recognized the profit-producing power of attractive store exteriors. The maximum is often attained when an excellent architectural design is projected by the shimmering beauty of a Trinity White exterior.

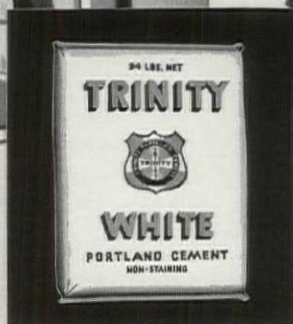
Trinity White—the *whitest* white cement—is a true portland that meets all Federal and ASTM specifications. Use it for architectural concrete units, stucco, terrazzo, etc. Gives purer tones where colors are to be added.

GENERAL PORTLAND CEMENT CO.
Chicago, Dallas, Tampa, Chattanooga, Los Angeles

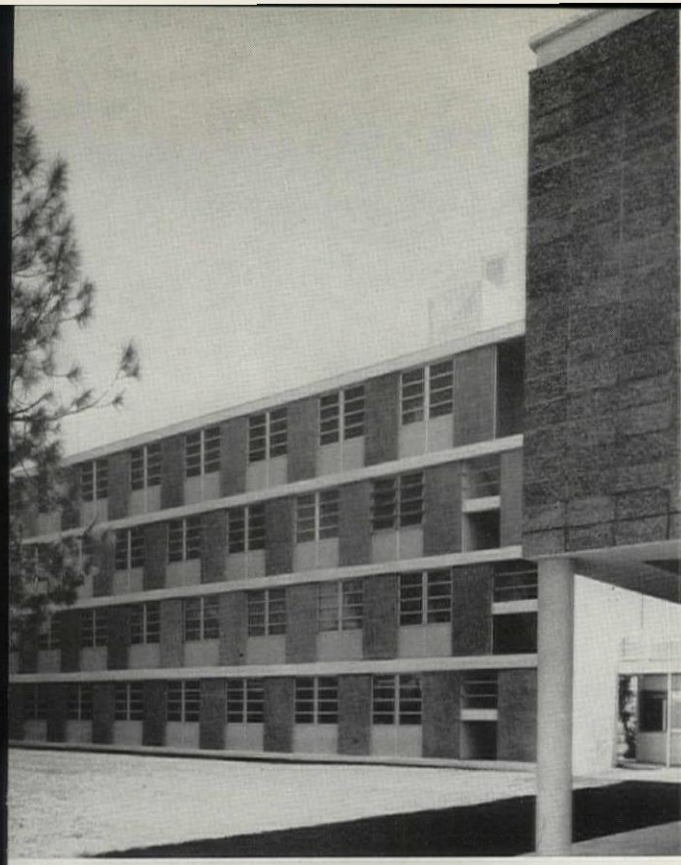
... as white



as snow



the whitest white cement...



3

PROVEN
ADVANTAGES
TO ARCHITECTS

in LUDMAN Curtain Wall

OF MIAMI LAW BUILDING Architect: Robert M. Little, Miami, Fla.
by Ludman Contractor: Fred Howland, Miami, Fla.

TECHNICAL CO-OPERATION

From drawing board to on-the-spot supervision of installations, an architect can always rely on Ludman Engineering Service for assistance at any stage of planning or construction.

FIELD-TESTED PERFORMANCE

Ludman products are subjected to the most rigid laboratory and field tests for the perfect performance of every integral part of every Ludman product, before release.

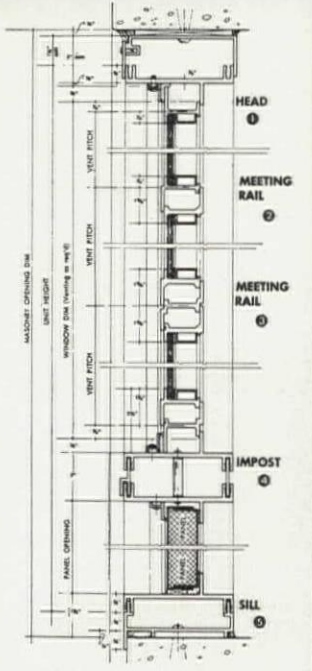
EXPERIENCE

Ludman was one of the first to enter the field of curtain wall construction. As a result, hundreds upon hundreds of Ludman Curtain Wall installations today give tested proof of the superiority of Ludman engineering and Ludman know-how. When you specify Ludman, you specify experience!

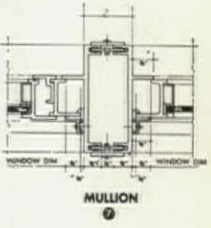
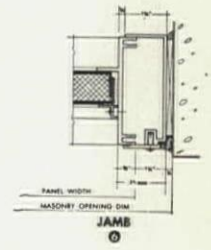
CURTAIN WALL...by LUDMAN

Ludman Curtain Walls match architectural vision with superb engineering that reduces construction time and costs, practically eliminates maintenance, yet is always beautiful, efficient and flexible.

From basic wall treatment of integral wall units that combine window and wall in one easily handled, quickly fastened labor-saving unit, Ludman Curtain Walls are easily adaptable to any treatment desired, offering a wide range of materials, colors and textures for interior and exterior walls.



Typical example of one of many Ludman Curtain Wall Units.



Detail showing one of many choices available of Ludman Curtain Wall Systems.

LUDMAN PRODUCTS MADE BY THE MAKERS OF FAMOUS

- LUDMAN AUTO-LOK ALUMINUM AWNING WINDOWS
- LUDMAN INTERMEDIATE ALUMINUM PROJECTED WINDOWS
- LUDMAN WINDO-TITE ALUMINUM AWNING WINDOWS
- LUDMAN ALL-WEATHER SLIDING GLASS DOORS



LUDMAN
INCORPORATED 1936 CORPORATION
MIAMI • FLORIDA



See SWEET'S Arch. File

Auto-Lok & Projected Windows ^{17a}/_{Lu}
Curtain Wall ^{3d}/_{Lu}

LUDMAN Corp. • Miami, Florida • Dept. 100

Please send me full information on the following Ludman Products:

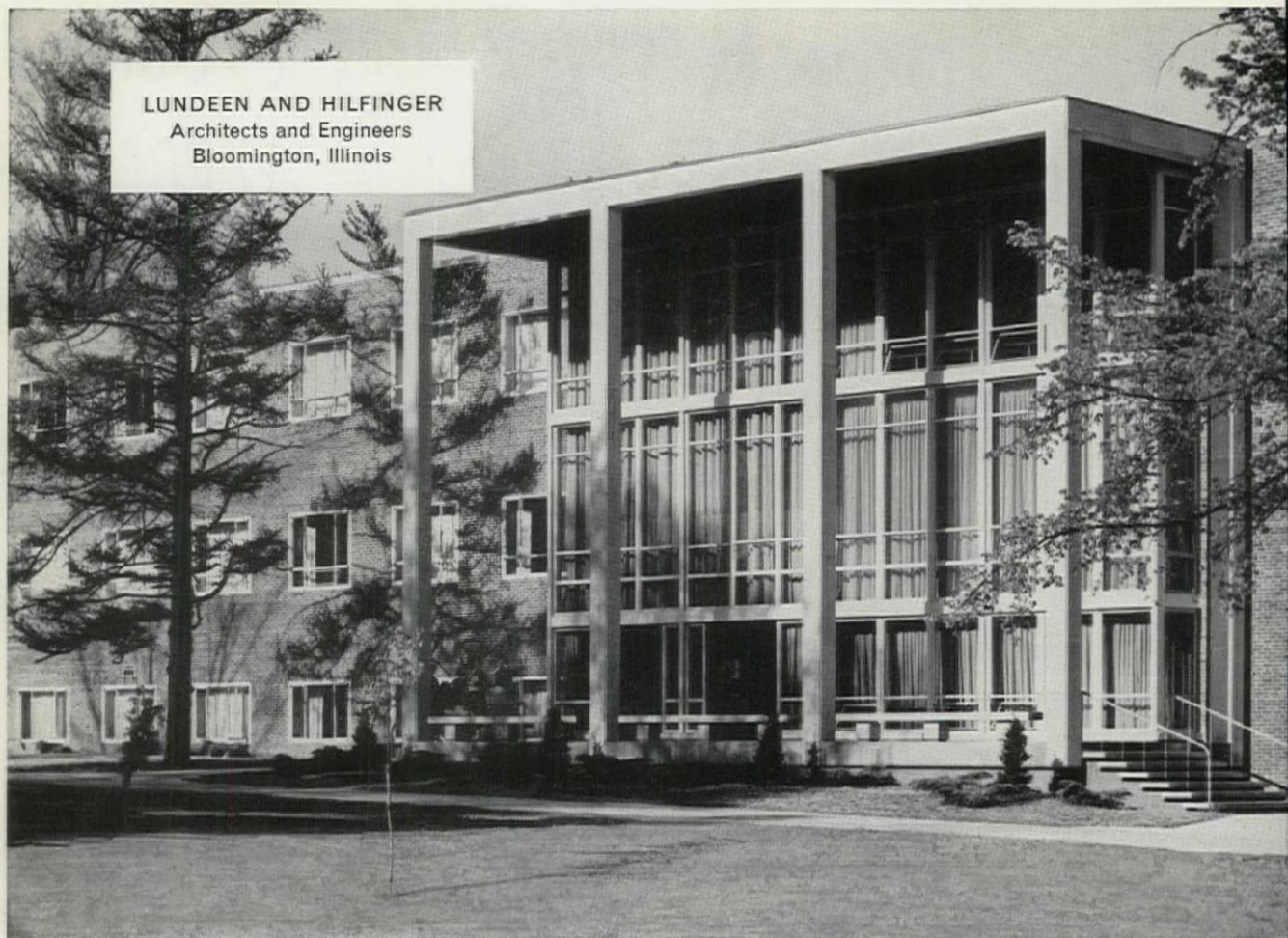
- Curtain Walls
- Intermediate Aluminum Projected Windows
- Auto-Lok Aluminum Awning Windows
- Windo-Tite Aluminum Awning Windows
- All-Weather Sliding Glass Doors

Name.....
Firm.....
Street.....City.....Zone.....State.....

LUDMAN LEADS IN WINDOW ENGINEERING

A continuing series of distinguished public buildings, schools, churches, hospitals and industrial structures

LUNDEEN AND HILFINGER
Architects and Engineers
Bloomington, Illinois



PROGRESSIVE IN EVERY DETAIL New Student Union Has Norton Door Closers

ILLINOIS STATE NORMAL UNIVERSITY, NORMAL, ILLINOIS

To be functional, modern education requires modern functional facilities. Illinois State Normal University at Normal, Illinois is no exception! Every detail of design—down to the streamlined Norton Door Closers—was planned for maximum efficiency and the utmost in modern simplicity.

Both Norton INADOR® and surface-mounted

closers were extensively used, the latter on doors where concealment was not considered essential. Both are true liquid type closers with all the reliability, low maintenance and precision workmanship which the name NORTON always implies. For complete data on these and other Norton models, consult the current catalog. Write for it today if you don't already have one.



A complete line of Norton Surface-type Closers is available for installations where concealment is not essential.



NORTON

DOOR CLOSERS

AIA 28 • Berrien Springs, Michigan



The Finishing Touch

that ASSURES CLIENT APPROVAL!

Beverly Hilton Hotel—Beverly Hills, California
 Architect: Welton Beckett & Associates—Los Angeles, Calif.



specify HILLYARD Floor Treatments for final Clean-Up and Initial Finish

The floors you have so carefully selected for color and design will be a sorry-looking sight by the time the interior trades have completed their work.

Final clean-up and initial finish are crucial.

Specify safe cleaning with Hillyard neutral chemical Super Shine-All to be sure that ALL the dirt is gone before the finish is applied.

Be sure color and texture are not damaged by harsh, so called "quick" cleaners.

Specify Hillyard Super Hil-Brite 100% Carnauba Wax to bring out to the full the natural beauty of the flooring material—cover it with a tough, lustrous film of protection that will add years to the floor's life, pleasure to the client's eyes as the floors reflect the beauty of a new building.

The local Hillyard "Maintaineer®", a trained floor treatment specialist, will be glad to serve as your own expert consultant, without charge or obligation.



DEPT. A-3
 ST. JOSEPH, MO.
 Passaic, N. J.
 San Jose, Calif.

Branches and Warehouse Stocks in Principal Cities

Ask him to survey the floors on your boards, recommend treatments, serve as your "Job Captain".

Ask him also for A.I.A. numbered files containing Architect's information on treatment of all types of floors, and detailed step-by-step treatment instructions for use by your contractor.

*The Hillyard Maintaineer is
 "On Your Staff, Not Your Payroll"*



Newark's well publicized "New Look" is enhanced by the beautiful Mutual Benefit Life Building

Architect:
Eggers and Higgins, New York, N. Y.
General Contractor:
George A. Fuller Co.
Material: Alabama Limestone

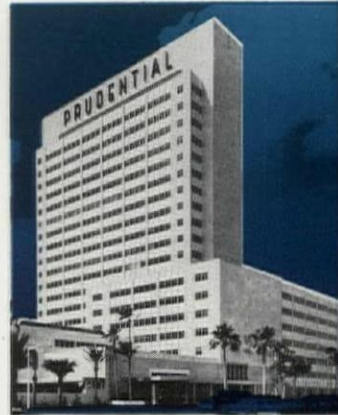


The magnificent Jefferson Standard Building in Charlotte exemplifies the city's amazing progress

Architect:
J. N. Pease & Co., Inc.,
Charlotte, N. C.
General Contractor:
Southeastern Construction Co.
Charlotte, N. C.
Material: White Cherokee Marble

The Prudential Building in Jacksonville is Florida's tallest building and one of its finest

Architect:
Kemp, Bunch & Jackson
Jacksonville, Florida
General Contractor:
Daniel Construction Co. Inc. of Alabama
Birmingham, Alabama
Material:
White Cherokee Marble
and Alabama Limestone



Character Insurance

Nothing can establish strength and stability so eloquently, so permanently as the majestic beauty of natural stone.

Classic is Macon's Insurance Co. of North America, in keeping with the area's traditional architecture

Architect:
Dennis & Dennis, Macon, Georgia
General Contractor:
A. R. Briggs Construction Co.
Macon, Georgia
Material: White Cherokee Marble



The
GEORGIA MARBLE Co.
REG. U.S. PAT. OFF.
11 Pryor Street, S. W., Atlanta, Georgia

DIVISIONS

- | | |
|-----------------------------------------------------------|------------------------------------------------------------------|
| Alabama Limestone Company
Russellville, Alabama | St. Genevieve Marble Company
St. Genevieve, Missouri |
| Calcium Products Division
Tate, Georgia | Tennessee Marble Company
Knoxville, Tennessee |
| Green Mountain
Marble Company
West Rutland, Vermont | Alberene Stone Corporation
of Virginia,
Schuyler, Virginia |
| Willingham-Little Stone Company | Atlanta, Georgia |

AIA

JOURNAL

OF THE AMERICAN INSTITUTE OF ARCHITECTS
 Vol. XXIX, No. 2

FEBRUARY 1958

CONTENTS

Opinions expressed by contributors to the AIA Journal are not necessarily those of the AIA

TODAY SCIENCE—TOMORROW THE ARTS by John Stewart Detlie	57
CRITIQUE OF OUR EXPANDING "SUBTOPIA" by Sir Hugh Casson, FRIBA	58
GEORGE WASHINGTON ARCHITECT by Agnes Addison Gilchrist	61
HONORS	63
FROM THE EXECUTIVE DIRECTOR'S DESK	64
FAVORITE FEATURES	65
THE TREE OF PICTURESQUE SECESSIONISM by Henry Hope Reed, Jr.	66
BERNARD RALPH MAYBECK	68
PUBLIC RELATIONS—A CHAPTER SPEAKERS' BUREAU by Robert R. Denny	69
TWO SONNETS by Arthur C. Holden, FAIA	71
AIA LIBRARY NOTES	72
BOOK REVIEWS	73
RECOMMENDED READING	74
LETTERS TO THE EDITOR	75
"THE TIME HAS COME FOR ACTION" by Hugh R. Pomeroy	78
NECROLOGY	83
SHARP FOCUS	83
LIFE IN A MARTINI GLASS by Alfred Bendiner, FAIA	84
NEWS	85
ARCHROSTIC SOLUTION	85
EDUCATION	86
NEW SUBSCRIPTION RATES FOR ASSOCIATES	86
MODULAR MEASURE IN THE HOUSING LAW	87
CALENDAR	87
THE EDITOR'S ASIDES	88
MODERN WOOD STRUCTURES by Frank J. Hanrahan	89
TECHNICAL NEWS	102

Vatterson
 CAL EDITOR
 Arden Pawley
 AL ASSISTANT
 Neil Letson
 SING ASSISTANT
 J. Cheston
 SISTANT
 E. Harris
 BUTING EDITORS
 Baer
 wart Detlie
 . V. Meeks
 J. Neutra, FAIA
 M. Stotz, FAIA
 alker, FAIA
 ill, Jr., FAIA
 Williams, FAIA
 Wilson Wurster, FAIA
 AL EDITORS
 IA-NEVADA-HAWAII DISTRICT
 Booth
 STATES DISTRICT
 Murphy
 KES DISTRICT
 C. Hughes, FAIA
 TES DISTRICT
 Pritchard
 ATLANTIC DISTRICT
 ell
 GLAND DISTRICT
 S. Eisenberg
 K DISTRICT
 R. Ellis
 ENTRAL STATES DISTRICT
 l C. Ovresat
 EST DISTRICT
 Gould
 FLANTIC DISTRICT
 E. Willner
 STRICT
 wers
 Y MOUNTAIN DISTRICT
 P. Kidder

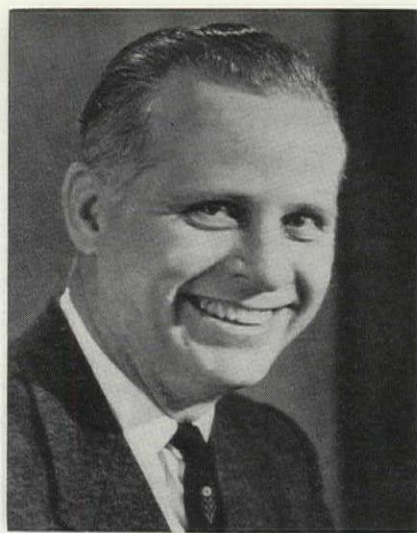


OLYMPIA

PHOTO BY POLLY SHACKLETON

FEBRUARY 195

Today Science — Tomorrow the Arts



BY JOHN STEWART DETLIE

AMERICA'S REACTION to Sputnik "I" was in characteristic form. The first waves of shock, dismay and alarm set off the usual profusion of relieving gags, jokes, quips and anecdotes. With the second wave of reaction the entire missile program was drastically revised, command streamlined, research and development accelerated and a barrage of available missiles were frantically fired or fizzled on their launching pads. The third wave, beginning as a ground swell of indignation that our civilization has been gravely challenged, is mounting to a tidal force of demand that our system of education produce engineers, mathematicians and scientists in greater quantity and quality. A battle for men's minds is commencing at all educational levels. Incentives, scholarships, fellowships, grants-in-aid, aptitude tests, vocational guidance, etc., are being ingested to lure the student from the softer ways of what is called education to the hard course of the dedicated scientist. Long ignored as a "long hair" the student of theoretical and creative science is being hailed as the hope of the future.

Characteristically again, America is experiencing a vociferous opposition to this movement. From all sides, the press, educator, clergy, pundit, seer and prophets forewarn that we are going too far toward the mechanistic and the material—that we are endangering the "balance" of society in overly emphasizing the sciences. In centers of education those in the arts and humanities resist and resent the public attitude toward those in the sciences.

Opposition is growing to such an extent that the

drive to quicken and deepen our educational processes in order to produce creative geniuses in the sciences and to recognize their eminence may be dissipated into a state of ineffectiveness. Rather than encourage one branch of learning to advance as a stimulus to the revitalization of education many are insisting that education be left as it is. It would seem that in a democracy the law "To every action there is an equal and opposite reaction" needs to have the words appended, "so that a state of lethargy is attained."

America is surely in a crisis—a crisis arising from a challenge to every phase of our way of life. The immediate need is for a rededication in spiritual objectives, in the arts of statesmanship and diplomacy, and also in all the sciences. In the face of this challenge nothing less than a basic shift in values from the superficialities of society to the fundamentals of civilization will suffice. Our educational system, its objectives and effectiveness and our attitude towards it must undergo a thorough re-appraisal and re-orientation.

Beyond the immediate challenge lies another area of conflict embracing all of the peaceful arts. In this vital competition those in the arts, the musician and composer, the artist, the writer, sculptor and architect will, like the scientist, at long last rise in public respect and esteem.

We, the architects, might well lend our support, strength and enthusiasm to the advance of the engineer, mathematician and scientist for as creative men we are being summoned to meet the next challenge.

The author, architectural director of the Festival of Britain in 1951, praises our buildings but reports that we live in a mess. This article was adapted from a talk he gave over the BBC, and is reprinted from the New York Times Magazine. It should give us something to think about—and maybe something to talk about.



Critique of Our Expanding "Subtopia"

BY SIR HUGH CASSON, FRIBA

GOING TO AMERICA is rather like being involved in a road accident or an air raid. When it's all over there's the same exhaustion, the same exhilaration, the same urge to tell everybody what happened.

Being an architect, I went to America primarily to see architecture. The United States has become for architects the twentieth-century equivalent of the eighteenth-century Grand Tour, and I was lucky enough to see some of the most handsome, exciting and technically inventive buildings that you could hope to see anywhere. Since the war America has been possessed by a passion—I nearly said panic—for building, which in the ten years of its booming, clattering life has transformed the appearance of every city, and has stimulated architects and engineers into individual and adventurous effort.

Unfortunately, however, it takes more than beautiful buildings to make a beautiful city. No building is an island, and in a city the spaces between buildings and the relationship of one building to another are just as important as the quality of each individual building. It is just this problem that the Americans, it seems to me, have so far failed to solve, and failed so badly that you could almost say that

while they now possess the most beautiful buildings in the world they also possess, with some notable exceptions, the ugliest towns.

If, in other words, you want to see that sort of man-made ugliness that has been called and named answers to the name of "Subtopia" in its most widespread and virulent form, you will find it today on Main Street, U. S. A., and its approaches—endless hopeless miles of suburban housing draped in wires and cables, shacks and billboards, rotting car cemeteries, and decayed building lots. And what makes all so disheartening is that practically nobody seems to be doing anything about it, or even to be aware that something should be done about it.

Now I don't expect that remark to go unchallenged. Most Americans would perhaps justifiably claim that they were doing more than most people if not to master the automobile-dominated environment of our times, at least to come to terms with it.

They point at their parkways and cloverleaf intersections, their elaborate systems of traffic circulation, their multi-story parking garages, suburban shopping centers, drive-in churches, banks and cinemas—and very ingenious and efficient these devices

re. It is true, too, that some of the beautifully landscaped, beautifully kept and painted suburbs, oh, that miraculous, shining white paint everywhere!) could hardly be bettered. The admirably planned and run National Parks, and such imaginative large-scale building projects as Lake Shore Drive, Chicago, or Rockefeller Center, or the Tennessee Valley Authority, are rightly regarded as wonders of the modern world. Even the famous gridiron plan of so many American towns has visual as well as functional virtues. To stand in the center of a city and see its streets run right and left straight to the horizon is an unforgettable experience.

And, if these past achievements were not enough, they could claim that most thinking Americans are now agreed that the policy of visual *laissez-faire* is out of date; that here and there attempts are being made to fight suburban blight and downtown decay and to create city centers that really are centers and not just street corners; that more and more schools of architecture and planning are studying seriously the problems of townscape and civic environment.

All this is true enough, but meanwhile the mess goes on growing, and not enough people seem to care. Now why is this? Obviously, there are many reasons—not least among them the pressure of the post-war building boom and the terrifying demand of the automobile, a modern monster as insatiable as any medieval dragon, that daily gobbles up for its needs more and more land and leaves everywhere behind it a trail of squalor and litter of every size and description.

But there are other reasons more fundamental even than these—among them the resistance of a highly competitive society to any sort of planning or control, the faith that economics determines our environment and is too sacred to be questioned, the belief that land is a source of speculation and that whatever promises wealth is therefore good, that advertising and exploitation and industrialization are barometers of prosperity and therefore of human happiness, and finally, and perhaps most powerful of all, the old pioneering attitude that there is always plenty of room over the hill and if you do make a mess, well, move on and leave it to somebody else to clear up, because America is smart enough and rich enough to lick any problem when in due course it gets around to it.

Now some of these points of view may be less admirable than others, but at least they are active, definite, passionate reasons so much better than that foggy, nerveless acquiescence which so often in Europe masquerades as intelligent detachment. But even if we accept the *reasons* for the mess, must we

accept the mess itself? Nobody asked you to accept it, you will say. Who am I, a self-confessed superficial tourist, to criticize? And why are we Europeans always more uneasy about what goes on in America than the Americans?

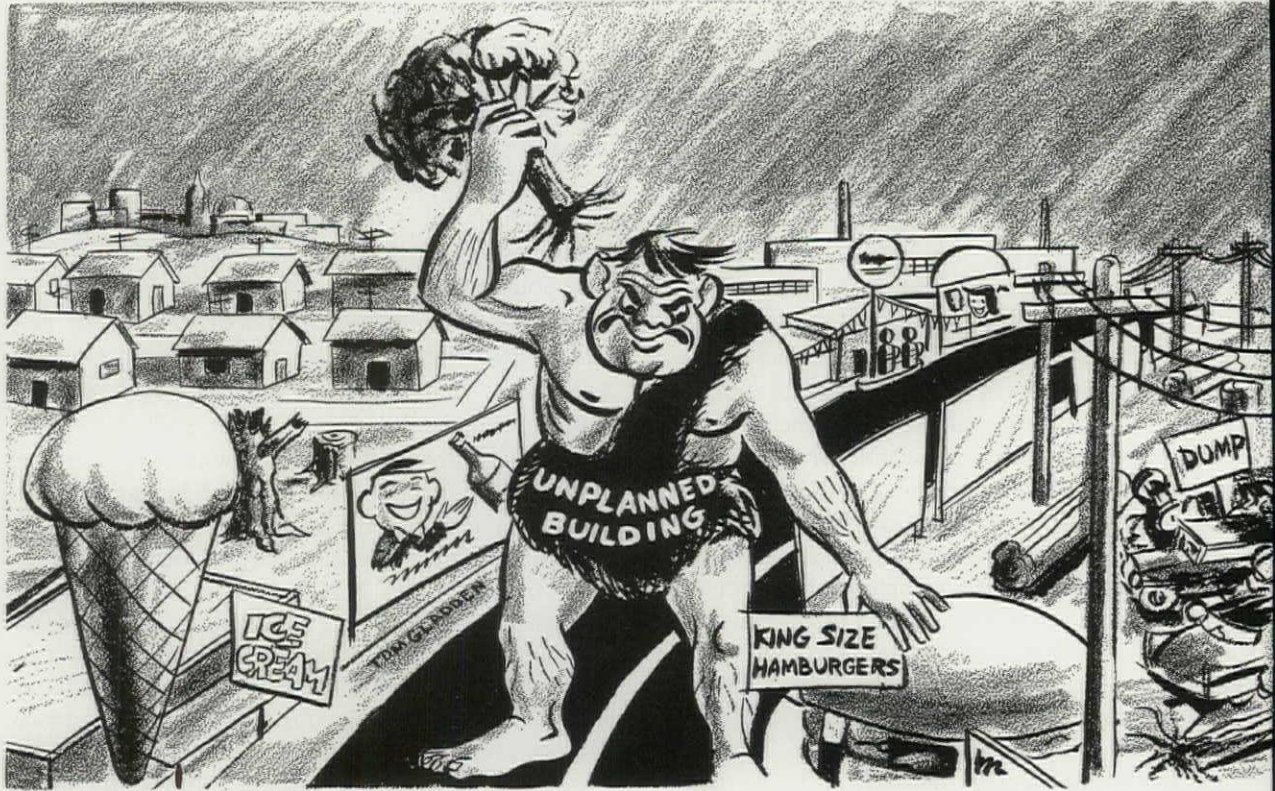
To these questions the answer must be that to Europe America is not just a New World, it is *our* New World, and if it fails or disappoints, then the disappointment is personal to us. And some of us (is it only the middle-aged and over?) cannot help feeling that what makes the ugliness of, say, Los Angeles or Indianapolis or Detroit so alarming is not so much its hopeless, hapless endlessness, nor even the apathy of the citizens who endure it, but the suspicion that here—like it or lump it—is for *all* of us, the city of the future.

Indeed, the American way of life, its clothes, food, language and habits, is now so well-known throughout the world, so attractive in its dynamism and high spirits, so easily imitable—as many of its best features should rightly be—that it is hard to see how American Subtopia, thriving upon indifference, will not eventually conquer the world.

All the more reason, some will say, for giving up the battle. To fight Subtopia, so runs this argument, is merely a refusal to face facts, to indulge in daydreaming for the past. It is a harmless hobby for graybeards. Some people even defend Subtopia as a type of vigorous folk art—or “pop art”—to be fostered, or at least not frustrated, in its growth. There are those, too, who support it as a sort of three-dimensional action painting, part of the present very natural reaction to be found in contemporary painting, writing, acting, and even dress, against the daintiness, charm and artificial elegance of periods immediately past.

There is some fragment of truth in these arguments, perverse and oversophisticated as they are. A jukebox, flashing and blaring by itself in a corner like some odious television personality, is in its vulgar vitality perhaps a genuine piece of mid-century “pop art,” and to have it beautifully and elegantly designed would be ludicrous. A vulgar thing should look vulgar. But a suburban street draped with wires and billboards, dumps and shacks, with blown paper and rusty fencing, is, I submit, not folk art. It is not even “spiv” art. It is a symptom of mediocrity, of passivity, of couldn’t-care-lessitude, as degrading as it is repellent.

I found it encouraging to note that this “folk art” defense for Subtopia was never used in America. When I asked my friends and colleagues there how it was that they could see their splendid, shining buildings put up in surroundings that would make a Balkan sanitary inspector blench, they would reply



HOW LONG ARE WE GOING TO PERMIT THIS MONSTER TO ROAM?

Cartoon by Tom Gladden

that it was surprising what you could get used to, and anyway they were so busy doing architecture they had not yet had the time to worry about the spaces between their architecture.

Americans don't defend Subtopia, nor sit down under it. They just haven't yet got around to noticing it. If and when they do, such is the ruthless enthusiasm of America when launched upon any project in which it believes, that it is possible that even Los Angeles may one day be decently and tidily rebuilt. But how long can they and we afford to wait? Already the ugliness of American cities is getting to the point where it will be beyond correction, and generations are growing up who have known and will expect nothing better.

What really does matter, it seems to me—in England as well as in America—is that everybody should realize there is no virtue, not even vitality, in the nastier forms of Subtopia. It should be realized that this ugliness, disorder, call it what you will, can't be let to spread until you're ready to deal with it, and that the best ways of destroying it are the constructive and not the repressive ways.

Take two examples—wirescape and billboards. If, as seems to be the case in America, there is no prospect of getting wires and cables under ground because, it is alleged, nobody will pay the cost and the local authority is too nervous to enforce any law about them, need they be accepted in such

droopy and such casual form? Why not take them over and use them as an element in townscape? With a little skill and imagination a whole new and interesting sky pattern could be evolved, weaving thirty feet above the standardized roof lines and giving architects new opportunities in a new dimension.

Then there are the billboards and neon signs—obviously out of place in the country but welcome in the town center to give sparkle and color and interest. Need they be left to the haphazard siting of separated advertisers? Why not follow the example of the new town of Stevenage, England, and make them work attractively for their living? Place and design them so that by night zones of darkness and half-light contrast with sudden bursts of brilliance and by day the lettering and colors are related directly to the buildings on which they are placed. Best of all, there is always the short-term, quick-result treatment of camouflage—tree planting and paint—devices in which the Americans excel.

There is no need to throw up one's hands in despair or surrender. Somehow or other, we have got to get hold of this self-created environment and shake it into shape. This is not a matter of taste—it is a matter of believing that there is a value in lucidity and order and the passionate pursuit of standards of beauty, and that to ignore them or to stifle them is to condemn ourselves, in the Old World and in the New, to lasting mediocrity.

George Washington

Architect

BY AGNES ADDISON GILCHRIST

Mrs. Gilchrist was president of the Society of Architectural Historians in 1954, and is at present Architectural Historian for the National Park Service. The drawings accompanying this article were loaned by Mr. C. C. Wall, Director of the Mount Vernon Ladies Association of the Union.

WASHINGTON WOULD BE THE FIRST PERSON to disclaim the title of architect, for the profession of architecture was unknown to him until the last few years of his life when the establishment of the Federal City brought English, Irish and French architects from abroad to try their fortunes in the newly formed United States.

As The American Institute of Architects has recently celebrated its centenary, our interest in the history of American architecture is intensified. Professional architects have been organized for a hundred years, but durable buildings have been erected in this country for three hundred years. Our curiosity is aroused to know how edifices were designed before the architectural profession was recognized.

The architectural activities of George Washington give us an insight into the building practices of the second half of the eighteenth century. His letters, drawings, diaries and notes show that in actual practice, he fulfilled the duties which are now those of the architect.

There have been many references to the "Gentleman Builder" and the "Amateur Architect" in writings on eighteenth century England. George Washington offers an example of an English gentleman so engaged in the colony of Virginia.

From the time that Washington inherited his half-brother's house of Mount Vernon on the Potomac in 1756, he was always engaged with some building operation. As Washington was primarily a farmer whose wealth came from the land, most of the buildings which he designed were farm buildings.

Some of the earliest entries in his account books deal with carpenters and materials. On February 15, 1756 (Ledger A, No. 382, fol. 49), Washington paid Mrs. Francis Thornton twenty pounds for hire of her carpenter James. Later in his ledger, (fol. 54) he notes under "John Winter, Painter, July 14, 1759. Painting. Brushes, Linseed Oyl—Note Jno Winter before he had near finished Painting my House Stole a good deal of my Paint & Oyl and apprehensive of Justice ran off—therefore he is credited by Painting 8/16/—"

When the Washington account books have been fully studied, we shall have a much clearer notion of the eighteenth-century ways of employing architectural workers and purchasing materials. What is already evident is that Washington acted as contractor for all his buildings making the contracts for labor and supplies.

Washington also made the plans for the buildings which he had erected. His training as a surveyor made him well able to use drawing instruments. His plans were simple line drawings of which a small number have been preserved.

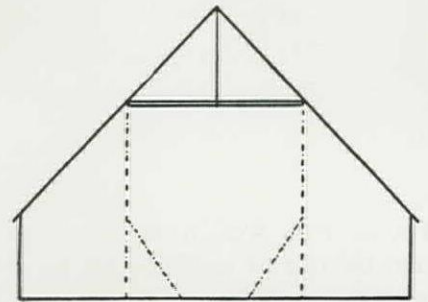
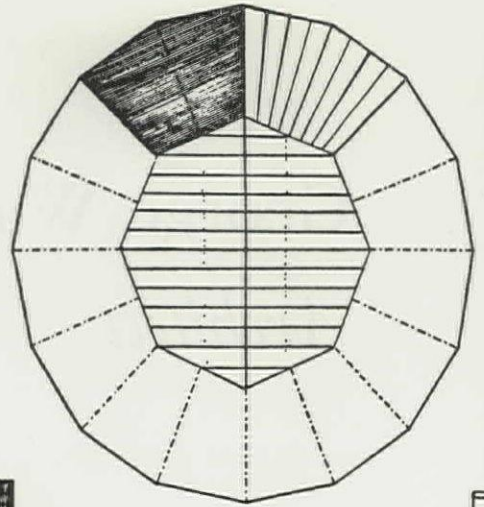
Some of these architectural drawings by Washington were shown in the exhibition of prints and drawings illustrating the architectural history of Mount Vernon which was held last May at Mount Vernon under the joint offices of The Mount Vernon Ladies Association of the Union and the Virginia Chapter of The American Institute of Architects, Milton L. Grigg, FAIA, Preservation Officer.

In the early years, Washington never drew his

plans to scale. He either wrote in a letter or gave verbally the dimensions desired. In the exhibit, there was a sketch by Washington of the plan of a bedchamber fireplace. It was probably sent from Philadelphia, while Washington was president and so would be during the years 1790-97. This sketch bears the notation "This plan is laid down by a scale of a foot to an Inch, by which every part of it may be exactly measured and perfectly understood by any workman."

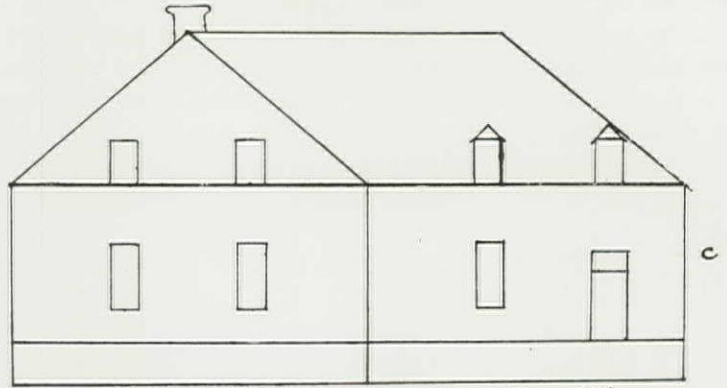
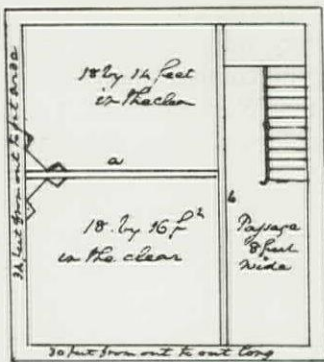
An architectural drawing made to scale was an important step towards the formation of architecture as a profession. Washington had been making surveys to scale for fifty years. It was well recognized that surveys were to be used by ignorant strangers. Building, to Washington, was a different, more personal matter. It was not until the last decade of his life that he realized that workmen unknown to the planner might carry out the plan.

Of the Washington architectural drawings displayed last May at Mount Vernon, the most important is the sketch for the west facade of Mount Vernon made about 1773. This design was put into effect during the remodelling of Mount Vernon which was completed in 1787. These features added to Mount Vernon, the porch, the cupola, and the pediment, and have become the motifs which occur most frequently in mid-twentieth-century roadside architecture. Gas stations, chain restaurants, stores,



BUILDING INSTRUCTIONS FOR A BARN, 1792

This Plan was designed for a house at my Mill and Distillery for my messenger to live in and the Scantling and Plank was got for it in the summer of 1798. but afterward I relinquished the building might have been enlarged at the end C



Bricks

For Collar 7 feet deep and 2 brick thick	19264
For the walls above door near floor 3 feet above the 2 ^d floor is all 15 ^{ft} and a brick and half thick	30960
For partition walls as a 2 b.	8640
Required	58864
allow for waste 1/4	14716
To be made	73580

Plank 1 1/2 Inch

For the Roofs above & below To be 18 feet full men long	1200
For the walls above & below 8, 12, or 16 feet in length	800
Cornices, Chain & Wash R.	750
Doors	250
Cornice with iron l.	150
Required	3150
allowance for waste	787
To be bought	3937

Scantling

Plates - 3.36 ft long - 9 inch by 6	60
Batts - 2.30 - 8 - 9	27
Beams 12 - 17 long - 10	120
Joists - 12 - 15 - 2 - 10	120
18 - 9 - 2 - 10	180
12 - 17 - 2 - 9	108
12 - 15 - 2 - 9	108
18 - 9 - 2 - 9	162
10 - 11 - 2 - 6	60
25 - 10 - 2 - 6	150
Plating - 30 - 22 - 2 - 6 by 4 & 4 by 4	120
Chairs - 15 - 21 - 2 - 5 by - 4	150

WASHINGTON'S WORKING DRAWING AND QUANTITY SURVEY FOR A HOUSE.

opping centers and motels are often adorned with Mount Vernon decoration modified to suit the building. Banks and residences also borrow from Mount Vernon. The simple ink elevation which Washington carefully drew one hundred and eighty-five years ago has many and varied progeny.

The most complete architectural drawing in the exhibition was made by Washington in 1798. On one sheet of paper is a perspective view of a dwelling house showing both front and end, the ground plan with dimensions and an estimate of the materials needed to build this 34 x 30 foot 1½ story dwelling. Washington estimated that 73,580 bricks were to be made, and hired a brickmaker to build kilns sufficient for the bricks needed on the site of the new building and to make the bricks with the help of his own slaves. For this house, Washington estimated that 3,937 feet of 1¼-inch plank should be bought and 12,000 18-inch shingles. He also noted 171 items of scantling, many of which could be procured from his own timber and hewn by his own slaves who worked as carpenters.

Another of Washington's architectural sketches of 1798 was shown in photostat at the exhibition.* It was of the plan which he made of the double houses that he had built in the Federal City to the north of the Capitol building. (The site of these houses is now recorded by a bronze marker.) The sketch was originally sent to Alexander White, one

of the Commissioners for Laying out the Federal City, with a letter from Mount Vernon, dated September 12, 1798.

This letter gives Washington's view of himself as architect. He had been making architectural plans for almost fifty years. At the end of his life he realized that the century of the amateur architect was at an end and the new era of the professional architect was coming. He wrote:

"I am not skilled in Architecture, and perhaps know as little of planning but as the houses I mean to build will be plain, and (if placed on lot 16 in sqr. 634) will be adapted to the front of the lot leaving Allies or entries to the back buildings, I enclose a sketch, to convey my ideas of the size of the houses, rooms and manner of building them; to enable you to enter into the Contract.

"This sketch exhibits a view of the ground floor; the second, and third, if the walls should be run up three flush stories will be the same, and the Cellars may have a partition in them at the Chimnies. My plan when it comes to be examined may be radically wrong, if so, I persuade myself that Doctr. Thornton, (who understanding these matters well) will have the goodness to suggest alterations."

* The sketch was sold at auction. Its present whereabouts is unknown to me. There are many references in Washington's letters to sketches which are not now in the Library of Congress or at Mount Vernon. Any information about these missing architectural drawings by George Washington, would be much appreciated. Mrs. John M. Gilchrist, 120 South Third Street, Philadelphia, Pa.



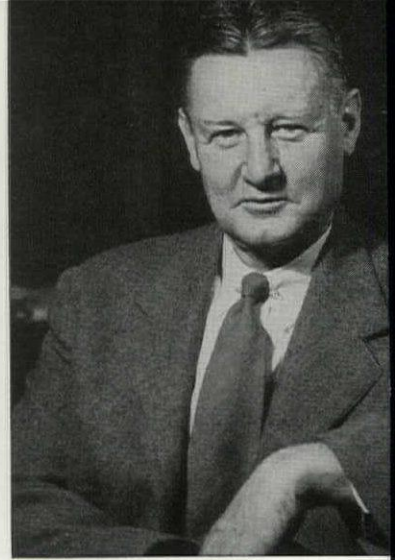
A. EDWIN KENDREW, FAIA, Vice President and Director of Architecture, Construction and Maintenance for Colonial Williamsburg, has been appointed Senior Vice President of Colonial Williamsburg, Inc., and Williamsburg Restoration, Inc., it has been announced by Winthrop Rockefeller, Chairman of the Boards of both corporations.

Mr. Kendrew has been associated with the restoration of the 18th-century Virginia capital since its inception in 1926, first as a member of the staff of Perry, Shaw and Hepburn, the original architects for the project, and since 1943 as Resident Architect. In 1943 he was elected a Vice President, responsible for architectural construction and maintenance of the restoration.

A UNIQUE CEREMONY took place in Detroit on September 18, 1957, when a tablet was unveiled dedicated to George DeWitt Mason, FAIA. The tablet is placed on the Masonic Temple, which was designed by Mr. Mason—the second one from his plans. In practice from 1878 until his death in 1948 at the age of 92, Mr. Mason designed many of Detroit's well-known buildings, and many of the city's well-known architects had their start in his office.

Past President Clair W. Ditchy, FAIA, delivered an address at the unveiling ceremony, outlining Mr. Mason's long career and listing many of the buildings which he created, as well as his accomplishments in civic affairs and in the Institute.

From the Executive Director's Desk:



Photograph by Van Tassel

AN EXECUTIVE DIRECTOR finds himself attending many meetings—Institute, non-Institute, large, small, formal, informal, interesting, boring—productive and unproductive. The meetings of the Institute at which I usually find myself are those of the Board of Directors, the Executive Committee of the Board, the convention itself, student forums and innumerable committee meetings. The non-AIA meetings run a gamut of size and formality. Many of the non-AIA meetings are held by the many organizations that go to make up the construction industry. I also attend meetings called by governmental agencies, hearings of committees of Congress which are something between a town meeting and a court, run with order and discipline if not always with precision. Governmental meetings may be varied, some of them quite informal, others very formal and highly organized. They too can be large or small, just a handful of men sitting around the table discussing a problem or a well prepared meeting presided over by a cabinet officer or administrator, and for which meticulous agenda have been prepared. One of the most delightful of informal meetings I ever attended was held in the cabinet room of the President of the United States during the Truman administration. It was an impromptu meeting called to discuss the physical condition of the White House. The meeting was honored for a while by the President himself, who showed a keen and intelligent interest in the problem and enlivened the occasion with his pungent wit.

64 After something of a lifetime spent in attending meetings, I find that it is only a rare impromptu meeting that is successful, and usually that is successful only if the participants are men experienced in the art of dealing with their fellows and are skilled in the conduct of meetings. The practiced horseman can master the mustang, the amateur can be thrown by the hack.

Within the last several weeks I attended, among others, two meetings of considerable contrast, each

an illustration in its own way. It was announced at one that it was to be a "fluid" meeting, a word common enough in our language but one which seems singularly ill adapted as a criterion for orderly conduct. In this instance it was genuinely descriptive of what ensued. The meeting flowed all over the place and at times threatened to vanish down the scuppers. Apparently preparation for a fluid meeting is not an exacting task. Unless one is in the proper mood, a fluid meeting offers little in the way of amusement. By this time you may have gathered that I am not an advocate of fluid meetings.

A proper meeting dedicated to accomplishment calls for arduous preparation, a well organized agenda, objectives and experienced conduct.

The other meeting I attended was of the best in organization and production. The participants had been very carefully selected, each of whom was an authoritative spokesman for his organization or vocation. In all there were some thirty or so hand-picked participants; weeks had gone into the preparation; its objectives were clear and succinctly stated; and it was obvious from the time it started that as it proceeded through its orderly, disciplined and expeditious course, that it would culminate in the accomplishment determined at its conception.

The agenda had been studied and was geared perfectly to the occasion. The subject with which it was concerned was possibly the most interesting and important subject that confronts the construction industry, in fact which confronts the economic body—in fact the whole United States today. The purpose of the meeting was to stimulate local programs to attain objectives, the objectives being urban renewal and the betterment of the American community. No time was lost, the meeting started when the roll was called, and each participant had found his assigned place in front of which was his name. The participants, who came from all parts of the United States, were quickly made known to each other; they were grouped around tables on which were

ound the agenda, background information, supplemental literature and an electric recorder for the benefit of those who wished to have their remarks recorded for posterity. The chairman opened the meeting with a two-minute statement and then introduced the president of a large and powerful national organization under whose auspices the meeting was held. He was followed by the chief executive officer of that organization who outlined briefly the scope of the meeting, and then by another executive who was slated to act as staff man for the project under consideration. There were four keynote speakers, each of whom spoke for five to eight minutes, so that by the time they were through the audience had an excellent and comprehensive grasp of the basic problems. The chairman then stated the objectives of the meeting. An hour was allowed for free discussion, a sort of acclimatization. The staff assistants wrote down the salient observations on large blackboards on the platform. We then adjourned for lunch with people from other tables in order to broaden the knowledge of all and to further understanding. Immediately after lunch we went

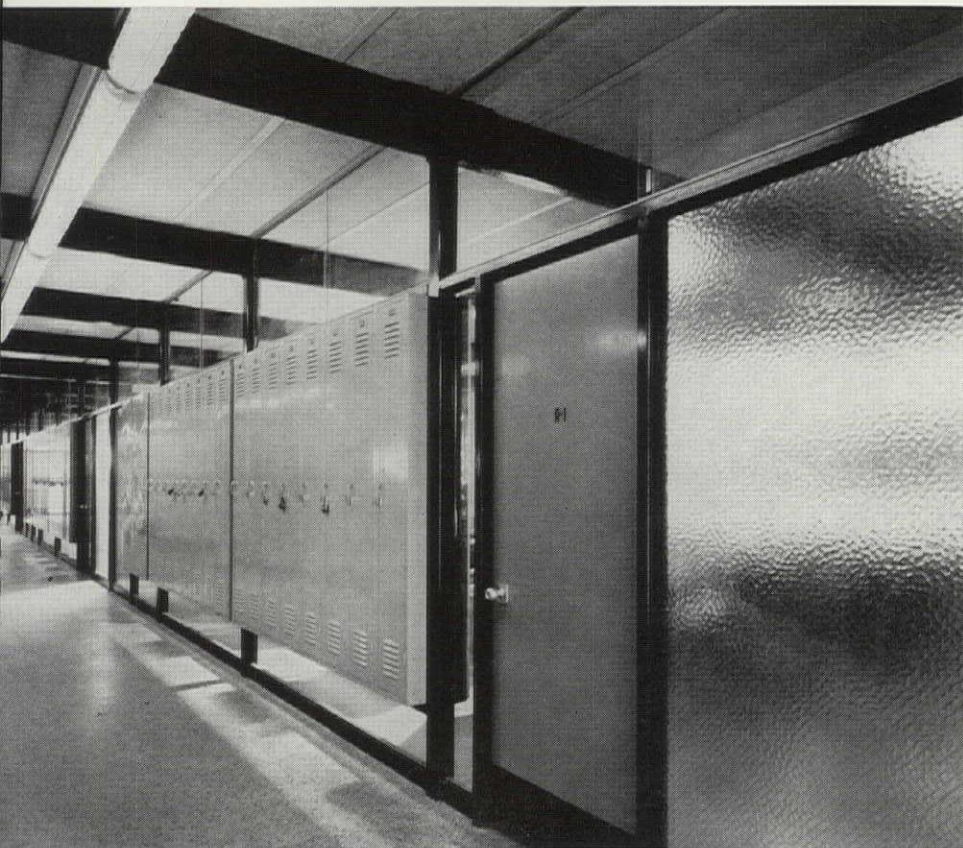
back to the roundtables again. The chairman then stated an important and provocative question. The tables were given fifteen minutes to arrive at their answers to the question; each table had its chairman and a recorder. At the end of fifteen minutes each table gave its answer to the question. The answers were written on the blackboards. And so it went for two hours. The questions were pertinent and important; the answers were intelligent and led to the establishment of a program at the end of the day—the purpose for which the meeting had been called.

It was a pleasure to sit in such a meeting, to be thrown on the "qui vive." It was stimulating to work with skilled management.

The contrast between the two meetings could not have been greater. I leave it to the reader to draw his own conclusions.

Edmund D. Thomas

FAVORITE FEATURES OF RECENTLY ELECTED FELLOWS



A. G. ODELL, JR.,
FAIA

CLASSROOM CORRIDOR
INTERIOR
Wilson Junior High
School
Charlotte, North
Carolina
A. G. Odell, Jr. and
Associates, Architects

THE TREE OF PICTURESQUE SECESSIONISM

BY HENRY HOPE REED, JR.

Mr. Reed is an architectural writer and historian who thrives on controversy, as those who read his "The Next Step Beyond 'Modern'" in the May Harper's know. He puts forth the following hypothesis, not with his tongue in his cheek, for he is completely serious, but anticipating comment and criticism.

WITH THE APPROACHING DEMISE of the so-called Modern, it is not without value to discuss its origins and examine its historical outline. To this end we have devised the Tree of Picturesque Secessionism as a handy instrument of study.

First, a word about the phrase, Picturesque Secessionism. The term "Modern" is hardly satisfactory as a label for a movement over a hundred years old. In its stead we have chosen the other because it explains and defines. The rational or functional architecture of today is an attempted secession from historical styles with emphasis on the mechanics of construction. Secondly, its dominating goal is to be original, hence picturesque. The originality is not one of differing from one's contemporaries, but of being completely free of the past or "to be of our time" as the cliché goes.

The binding element of the men listed is not that they have built alike, although a good many have, but rather that they all move from the same theoretical position. They have common denominators, such as the functional outlook, the emphasis on construction and a rebellious attitude to the past—and for most of them, Viollet-le-Duc is the conscious or unconscious source of light. A few have openly acknowledged his inspiration, namely Frank Lloyd Wright, Baron Victor Horta, J. P. H. Cuyper and Anatole Baudot; the others since his day reveal it in their writings or manner of building. Lewis Mumford, for example, is the outstanding Picturesque Secessionist of today among writers, yet he makes note of the Frenchman only in passing.

A second Picturesque Secessionist current might be termed Beaux-Arts rationalism because it was incubated in the famous school independently of Viollet-le-Duc. The Ecole des Beaux Arts taught both the classical in the traditional sense and the classical in the rational sense, as it still does, and

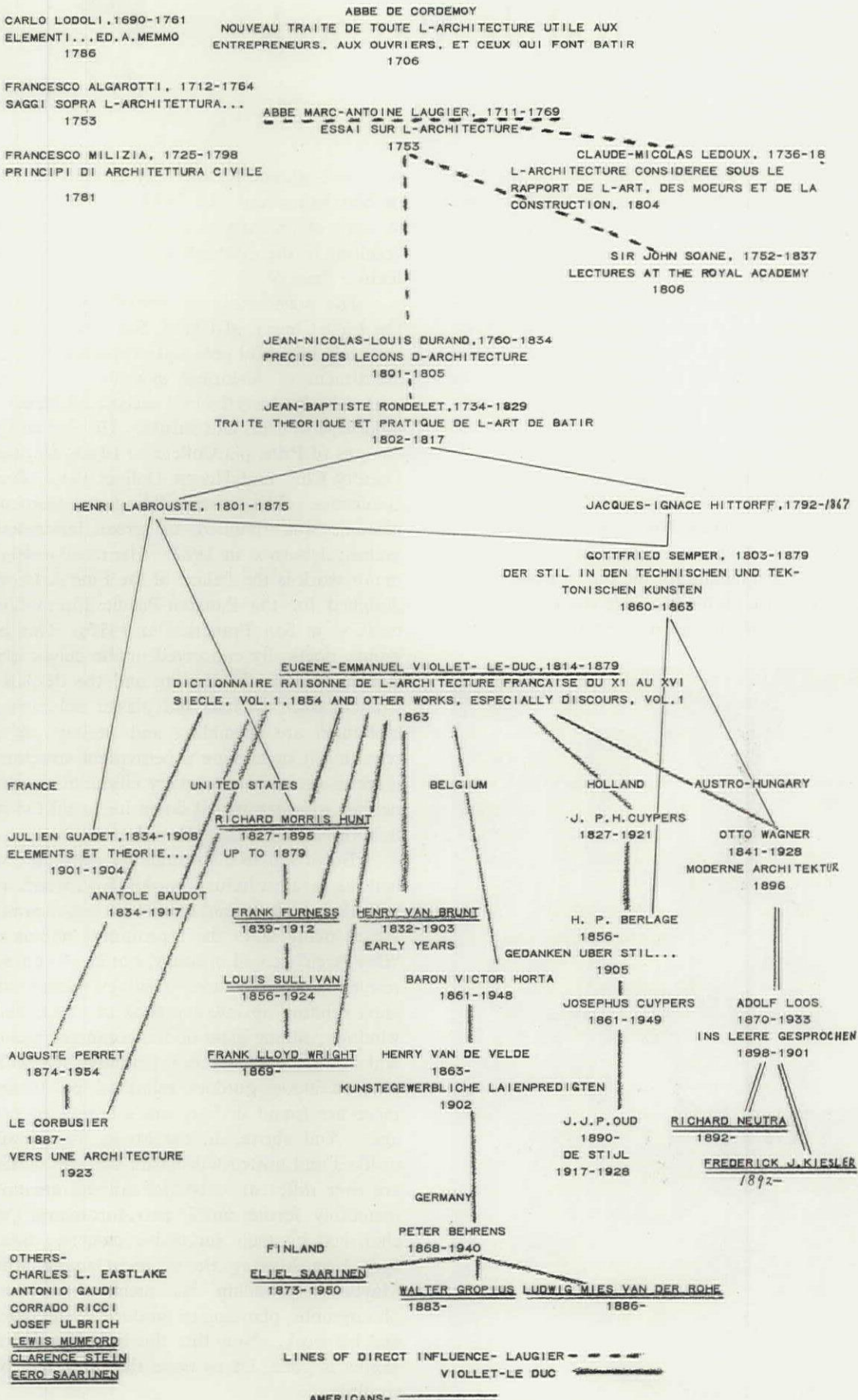
so did American architectural schools prior to the war. Yet, a third, closely allied to the second, is the Austrian which sprang from the writings, not the architecture, of Gottfried Semper who had studied in Paris under Gau and Hittorff. His rationalist heirs founded the Wiener Sezession. (Note the use of the word, secession, in German.)

By its very nature the Tree of Picturesque Secessionism offers only an outline. This does not excuse the omission of William Morris who, like Eastlake, belongs in the bottom left. The fact is that many Picturesque Secessionists point to Morris as their guiding star while their writings and work reflect Viollet-le-Duc. Evidently the latter's ideas had become so much a part of architecture by 1900 that men such as Louis Sullivan were unaware of their source.

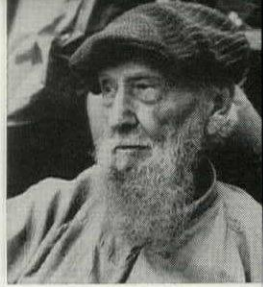
As to the Italians listed on the top left, they belong to the periphery. Their writings, it would seem, had little influence and they are put there as a matter of historical record. Italy's marriage with Picturesque Secessionism began by a flirtation with Art Nouveau around 1900. Not until 1935 did it invade the peninsula, when Mussolini decided in favor of the design for the present railroad station in Florence, declaring at the time that the Modern was the architecture of Fascism.

Art historians are beginning to examine the roots of Picturesque Secessionism far more boldly than ten years ago. Lately Edgar Kaufmann Jr. has told us about the Art Nouveau in several important articles and, as the curtain of history is pushed back, we will probably have some definitive articles on Viollet-le-Duc and his part in Art Nouveau.

Hoping that many will find the subject of Picturesque Secessionism as fascinating as he does, the author welcomes suggestions and improvements for his Tree.

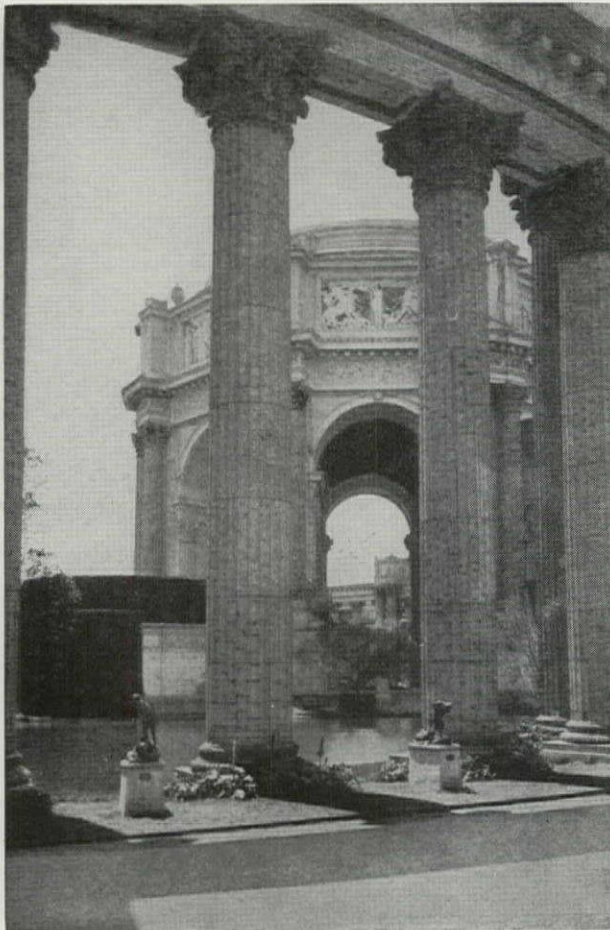


Bernard Ralph Maybeck



BERNARD RALPH MAYBECK, one of the true originals in American architecture, died in his home in Berkeley, California, on October third at the age of ninety-five. One of the first architects to make use of many forms which have become accepted features of contemporary architecture, his pioneering lies so far back that many architects of today are not aware of his place in American architectural history. Not that he ever lacked either commissions or honors—in his active days he was showered with both, culminating in the Gold Medal of the Institute in 1951.

He was born in New York City and grew up in Greenwich Village when it was still a quiet community of Colonial houses. His father was a German woodcarver and Maybeck learned the trade in his shop, resulting in a feeling for the use of wood which influenced his work all his life. He studied architecture at the Ecole des Beaux Arts, and after working



PALACE OF THE FINE ARTS

in New York and Kansas City he married and settled in San Francisco. In 1894 he was appointed instructor in drawing at the University of California, resulting in the establishment of the school of architecture there.

His masterpiece is generally considered to be the First Church of Christ, Scientist, in Berkeley, a strangely beautiful personal expression employing an assortment of historical motives and a roof supported by laminated wood arches, all blended into a landscape of trees and shrubs. He also designed the campus of Principia College at Elmhurst, Ill., the Men's Faculty Club and Hearst Hall at the University of California. The latter building, the women's gymnasium, was spanned by great laminated wood arches; it burned in 1922. His most widely known major work is the Palace of the Fine Arts, which he designed for the Panama-Pacific International Exposition in San Francisco in 1915. This beautiful group, poetically conceived in the classic style, stands, at once the darling and the despair of San Franciscans. Its lath and plaster columns and entablatures are crumbling and peeling; the cost of repairing it or making a permanent structure out of it seems prohibitive to every city administration, but neither will they tear it down for to all the people it is both beautiful and beloved.

But it was in his residential work that Maybeck had the greatest influence. His low, wooden houses with their wide-spread eaves and large areas of glass are in many ways the forerunners of not only the "Bay Area" school of today, but of all contemporary residential architecture. Ceilings open to the roof, glass running up into the peak of the gable, picture windows, sliding glass doors, laminated wood beams and arches, open interior planning and a definitely planned indoor-outdoor relationship—all these are more or less found in Maybeck's houses of fifty years ago. And above all, the loving use of wood—his disliking and mistrusting plaster surfaces. His houses are ever different, each the original creation of an incredibly fertile mind, and fortunately, they are cherished by their successive owners. Some years ago, Jean Murray Bangs spent many hours with Maybeck, prodding his memory and collecting photographs, planning to produce a book on the man and his work. Now that this little bearded five-foot genius is gone, let us hope the book will be forthcoming.

J. W.

Public Relations —

a chapter speakers' bureau

This is the fifth of a series of articles by ROBERT R. DENNY

MOVIELAND HAS A TREMENDOUS technological advantage over the legitimate theater. Through highly refined uses of the camera, color, film editing, and sound, the movie producer can create something close to the perfect illusion. Yet the ancient art form of the play, in which living actors perform on a few yards of boards against a simple and often crude backdrop, flourishes as never before.

The theater has no competition in the movies, because the former contains an element which the latter cannot duplicate—the priceless quality of personal contact.

There is an obvious moral here for the AIA chapter. It is generally conceded, although seldom publicized, that the successful architect usually is also a successful salesman. How many times has a school board been sold on a good plan or diverted from a bad one when the architect was given the chance to exert the force of his personality in a face-to-face meeting? The people who know an architect personally—especially those who know him informally—usually understand the profession and are sympathetic to it. But the individual architect reaches comparatively few people.

Public relations is, in a nutshell, competence and communication. In the subject at hand, we are concerned with communication; specifically, with communications media. We communicate by the use of words in newspapers, magazines, diverse community publications, direct-mail literature, radio, television, and by word-of-mouth.

The individual architect quite properly speaks for himself in his professional dealings—although his conduct and words, of course, are regarded as a reflection of the profession's thinking.

In the chapter, the profession has its best-organized unit through which to make personal contact with the community. This, ideally, is operated via an established speaking program, usually known by the rather forbidding title of "speakers' bureau."

A speakers' bureau is an important element in the community chapter public relations program. It demands not only the interest and effort of the public relations chairman and his committee, but the whole-hearted support and participation of the chapter membership. Let us look at a few case histories of chapter participation:

Robert Adair Parker, public relations chairman of the Southwest Washington Chapter of AIA, writes as follows: "Our bureau actually resulted from suggestions in the Centennial (public relations) kit. We requested members through our monthly bulletin to sign up for the bureau, but received limited replies. As chairman, I then personally interviewed the chapter members and found that the majority were willing to speak informally to small groups.

"A portion of good public relations is a matter of education and we felt that a good place to start our speaking engagements would be in the schools and colleges," Mr. Parker said. "We recently have had speakers in 27 classes which included drawing, art, craft, shops, and engineering, in 13 schools and colleges.

"We found the reluctant speaker enjoyed the assignment and wishes a return engagement. We also received gratifying telephone calls from school instructors . . . In most cases, the questions of the students reflected their keen interest in the profession."

Architect Robert Taylor, speaking for the Chicago chapter's speakers' bureau, made these comments in the Chicago Chapter Bulletin several months ago:

". . . The speaking assignments . . . have fallen into two general categories. The first is in the field of vocational guidance and counseling with groups of students, and the second is the broader of the two, encompassing service clubs, professional organizations, churches, and such. During the past two years, I have met with approximately nine stu-

dent groups in several schools, including the Oak Park Elementary schools, von Steuben high school, and Wilson and Wright junior colleges. I estimate that the total number of students to whom I have spoken during the period is about 440."

Mr. Taylor said that, during this same period, he also appeared as chapter representative before 12 service groups involving 585 persons. They expressed interest in city planning, community conservation, and relationships between the profession and specific local problems. In his talks, he said, he always managed to "work in" a discussion of the "duties, responsibilities, and advantages offered by the architect."

". . . It should be understood," Mr. Taylor said, "that this is not recommended either as a method of making money or of securing commissions . . . immediately upon completion of a talk. However, believing that what helps architects generally will eventually benefit all architects individually, it seems to me that this is an extremely worthwhile project . . ."

Mr. Taylor adjured the speaker to give adequate time to necessary research and preparation, plus taking the trouble to "prepare properly edited press releases and carefully choose the media to which they are to be sent."

Here is an excerpt from such a press release, in this case referring to a Denver speakers' program: "Paul Rader, AIA, from Denver, will be heard at 7:30 p.m. Monday, October 10, as the second speaker in the current 'You and Your Home' series held at Knight School, E. Exposition Ave. at S. Steele St. The informal program, presented by the Denver Chapter of The American Institute of Architects and the Emily Griffith Opportunity School trades and industry division, will highlight the question of where and how to build your home . . . Topics to be covered by the speaker include consideration of convenience and accessibility when building your home, protections and limitations involved, facts to know when purchasing, and services provided by the architect . . . The entire eight-week series is open to the public without charge."

As in the case of appearing on radio and television (which we covered in the last issue of the *Journal*) visual materials add a great deal of interest to speeches. Sometimes, the preparation of such materials—if they are good enough—may furnish the basic reason for soliciting speaking engagements. Take the case of Kansas City.

There, the chapter has had enormous and continuing success with a home-made slide show, entirely drawn from the files of Kansas City area architects, and accompanied by a taped commentary

with spliced-in music and title slides. The show is called "Architecture Kansas City."

The chapter public relations committee said: "reviewed some 2,000 color slides from the office of Kansas City architects. Of these, 20 per cent were accepted on the basis of clarity, continuity and possible adaptability to script. The 400 slide (35 mm.) so prepared were then pared to 175 for the final show to give a 27-minute run."

"Certain film was expanded in mood requirements and also for title work and shots of general interest relating to the show," the committee disclosed, "The tape recording was accomplished by retaining the sound engineers of one of the local broadcasting studios and selecting background music from the studio files. The commentator (a professional from the studio) spent more time than the fee indicated . . ."

The total cost of production was \$250, the chapter stated. The initial presentation was made before the Chamber of Commerce. It went over, observers said, "with a bang." Since that time, the show has been presented before a large number of community groups, sometimes to turn-away crowds.

These are just a few examples which are cited to illustrate what can be done to reach community audiences. The memberships of these groups comprise your community leaders, the people who take the extra time and trouble to interest themselves in civic affairs, and so become spokesmen for an influencers of community opinion.

What are these groups? We can easily mention several, adding the caution that the chapter should not ignore a group because it doesn't appear, at first glance, to have a direct influence upon architectural practice. It is well to keep in mind that the Girl Scout leader, housewife, and garden club member of today may be the school board or church-building committee member of tomorrow. Here are a few groups for your consideration:

The parent-teacher federation, parent-teacher associations, school board, city council, legislative delegation, Chamber of Commerce, Board of Trade, church groups, League of Women Voters, Democratic and Republican clubs, historical and/or arts societies, Kiwanis, Rotary, Lions, Elks, Moose, Eagles, Optimists, Oddfellows, American Legion, Veterans of Foreign Wars, AMVETS, bar association, medical association, civic improvement committees, engineering society, high school assemblies, college assemblies, college alumni clubs, Boy and Girl Scouts, civil defense units.

What should you talk about? Anything which provides a connection between architecture and the obvious interests of the specific group you address.

sometimes, one subject may have many possible audiences. Obviously, to cite schools again, a discussion of how the community can save money through long-range planning, early site selection, competitive bidding, contemporary design, first-class materials, and sound construction methods will be of interest not only to the PTA but to the Chamber of Commerce or any group whose membership includes taxpayers and parents.

In some cases, of course, selectivity is called for. A talk about Renaissance church architecture may be of great interest to an art group or historical society, but it may be deadly dull to Rotary. Conversely, the latter organization may listen avidly to a discussion of better store merchandising through architecture, which recital would have all the charm of a lead balloon to the art devotees and historians. In other words, you must call your shots. How can the public relations chairman set up a speakers' bureau? Tell your chapter that you're going to do it. Make a check-list of target groups, such as we have listed. Arbitrarily, or through volunteering, make specific speech assignments. If one architect does a great deal of school architecture, perhaps he and several others with equal experience should assume the burden of such talks. This, however, is a detail.

The important thing is to sell the idea *within* the chapter as a beginning. Pick the target groups. Get the names of their leaders and their addresses.

The Chamber of Commerce can probably furnish such a list. In its absence, the telephone book is a reliable guide. Write personal letters, offering speakers for their programs and mentioning several speech possibilities. If correspondence doesn't produce what you consider to be an adequate response, follow up by appointing a small chapter task force to make personal telephone calls. As soon as the dates are lined up, make specific assignments and so inform the speakers.

Make sure they are reminded again before the engagement. Have your committee offer help in preparation of subject matter and visuals, at least to the extent of informal conferences designed to produce speech ideas. Get advance texts and have them mimeographed and/or dittoed. Send them to the local newspapers and radio-TV stations on a timed, hold-for-release basis. Send them several days' prior to the meeting. At the meeting itself, if possible, ask the speaker to distribute your chapter brochure (if you have one) which describes the standards and range of architectural services. When you have half-a-dozen successful engagements behind you, you'll be surprised how much attention the chapter begins to get.

It's like growing algae or wooing a lady friend. One thing leads to another.

(Next month: You and Your Legislator)

Two Sonnets—BY ARTHUR C. HOLDEN, FAIA

Freedom in Design

Men who design a building need the skill
Their fathers taught them, reckoning strength of span,

Arranging space, contriving walls which will
Divide yet show the purpose of the plan.

So Architects imagine and arrange,
"Ten thousand windows in a wall required!"
No past forms fit, so what is seen must change.
Thus modern factories grow as if inspired.

From steel and concrete longer spans evolve,
And thus for homes new aspects come to pass,
For as forms change, so changing needs involve
The use of new materials, steel and glass.

Still small men copy aspects near and far
While great men think and seek a guiding star.

Canons of Proportion

Vignola and Vitruvius are dead.
Their treatises were filled with rules and caution,
But youth to-day belittles what they said
About the classic orders and proportion.

The Greeks used marble columns for support.
Their well-trained eyes could judge what best
appears;
They shaped proportions to the long or short;
Their forms passed on to Rome's great engineers.

Renascent culture unearthed Roman forms
After a period of great ignorance;
No wonder there was need t'establish norms,
When new wealth called a lost art to advance.

All rules may hurt, no matter bad or good,
When purpose is not rightly understood.

Library Notes

THE CENTRAL NEW YORK CHAPTER as part of its Centennial tribute has presented to the Institute a portrait and some papers of Arthur Delevan Gilman, FAIA, who was admitted to membership early in 1857. The presentation was made at a Centennial banquet held by the Syracuse Society of Architects November 6, when George Bain Cummings, FAIA, past president, received it for the Institute from J. Murray Hueber, chapter president.

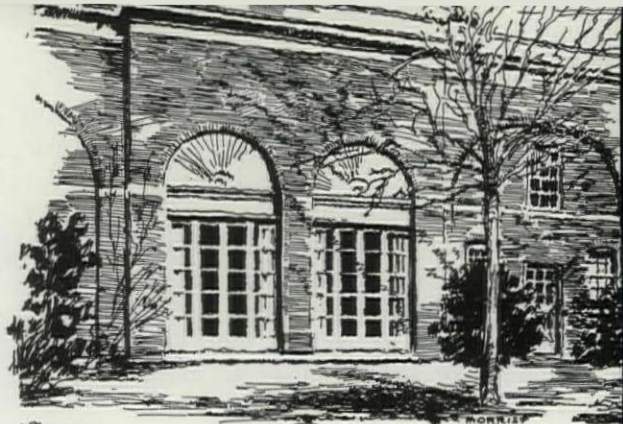
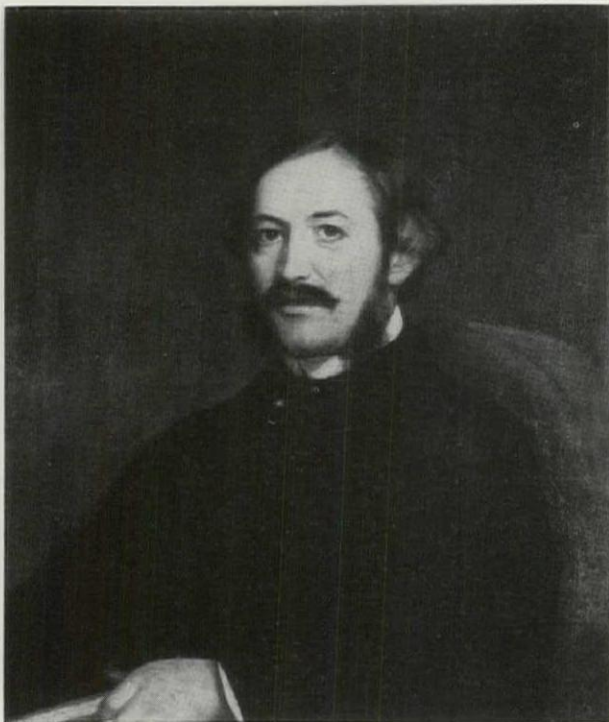
Gilman was born in Newburyport, Mass. on November 5, 1821. His classical education at Washington (now Trinity) College in Hartford, Conn., set him apart from many architects of his generation who entered the profession by way of trade-apprenticeship.

As a young man Gilman gained prominence through publication of an article on "Architecture in the United States" in a leading periodical of that day, *The North American Review*. The same year, 1844, he twice delivered the Lowell Lectures on architecture to overflow audiences.

Among Gilman's works are Arlington Street Unitarian Church, Boston, 1861; Boston City Hall, with Gridley J. F. Bryant, 1862-65; Equitable Life Assurance Society, New York, with E. H. Kendall, 1868-70, and consulting architect, George B. Post. He died in Syracuse, N.Y., July 1882.

In the papers received, the outstanding item is a seven-page letter by Gilman, identified as sent to

Photo by Amato



Andrew D. White, about 1860. In part, it reads:

"You may be surprised to hear that I have removed to New York, having at last gained the summit of my wishes, and secured a very decided and satisfactory foothold in the *metropolis*. I came here two months ago to make the plans for the Grand Central Park Hotel . . . The facade is 420 ft. long—modern Imperial French in design with Pavilions with high roofs, crested with iron, and with all the full stops of Mansart's, Jean Goujon's and Philibert de l'Orme's Renaissance let out. The 'idiotic and feeble-minded youth' who compose the American Architectural Mutual Admiration Society have retired from the competition in disgust,—and betaken themselves for solace to the Pre-Raphaelite stripes and fizzes and peaks—poppies on the end of long sticks, and black letter legends cut on forty different-colored stones—in short the exaggerated ecclesiastics-gingerbread-horse-with-a-gilt-tail-style, in which Mr. Wight and Mr. Wrey Mould are such proficient . . . My own 'luxurious and licentious' design was the only one that met with the least favour, and has been fully adopted."

Letters to Gilman are from Whitelaw Reid editor of the *N. Y. Tribune*, soliciting an article "about the present dangerous forms of building in New York, and about what constitutes a really fire proof building"; from John A. Sturgis, Boston architect, who asks about another Arthur Gilman and suggests he may be trading on the architect's name (probably a cousin, 1837-1909, author and educator, prominent in his own right); and a letter of recommendation from H. B. Hyde, president of the Equitable Life Assurance Society.

The clippings include Gilman's letter outlining his plan for Boston's Back Bay improvement; his letter objecting to reporting of his testimony in the new Capitol investigation; an account of a suit he won over misuse of his designs; obituary notice; and five clippings about his lecture "Characteristics of New England humor;" and two minor pieces.

The Library is pleased that these few but interesting Gilman papers have been entrusted to its care, and appreciates the interest of Harley J. McKee, AIA, mainly responsible for this donation.

GEORGE E. PETTENGILL

BOOK REVIEWS

THE MODERN CHURCH. By Edward D. Mills, F.R.I.B.A. 190 pp. 7¼" x 9½". New York: 1956: Frederick A. Praeger. \$9.75

The author is an architect whose practice in England has included a number of church projects. Basil Spence, FRIBA, defines the challenge of the church to the twentieth century architect: "Important principles in church design have been handed down to us through our great churches and cathedrals, and while traditional requirements have changed very little for the older communions, architects should be encouraged to be inventive and to breathe a contemporary vitality into the various parts of the building. The Gothic churches, the Renaissance cathedrals and the Georgian Nonconformist preaching houses were all contemporary in their time.

"The architect of today must fully understand the true meaning of the traditions of the Christian church and with a thoughtful inventiveness design the elements which make the church, in a sensitive and contemporary manner.

"Modern architecture can give us a great many things, large spans, new and beautiful materials, mechanical equipment and efficient services. Should not these be put to the service of the church, which has never hesitated in the past to employ the best human talent of every age to the greater glory of God?"

This book shows how the architects have handled the problem of designing to meet present-day needs, and in terms of modern building methods and materials—a building type with a very long historical tradition.

About 200 halftones and line drawings describe graphically 37 church buildings, Roman Catholic and Protestant, in 10 countries: 16 in England, 6 in United States, one or two each in Canada, Brazil, Finland, France, Germany, Sweden, Switzerland and Venezuela.

In addition there are 40 illustrations by sketch dimensional diagram or photograph of essential details of

church equipment and examples of sculpture, glass and murals.

The sections of the text devoted to planning considerations and to heating equipment and building materials written for English readers, may have limited application in America. However the material on liturgical provisions, optimum dimensions, acoustics and illumination are more nearly universal. There is a wealth of useful material in a compact book.

F.A.P.

NATIVE GENIUS IN ANONYMOUS ARCHITECTURE. By Sibyl Moholy-Nagy. 224 pp., 126 illustrations. 8½" x 10¼". New York: 1957: Horizon Press, Inc. \$7.50

The author is unusually well qualified for the task she has undertaken. She is the daughter of an eminent German professor of the History of Architecture and the wife of the late Laszlo Moholy-Nagy who founded the Institute of Design in Chicago. She published his "Vision in Motion" and wrote his biography "Moholy-Nagy, Experiment in Totality." Mrs. Moholy-Nagy is now Associate Professor of Architectural History and Three Dimensional Design at Pratt Institute.

Chapter one, bearing the same title as the book, is a comprehensive and penetrating analysis of unselfconscious architecture, which she describes as "not the official but the private history of a culture"—"Indigenous buildings speak the vernacular of the people."

Regarding our own evaluation of these significant structures the author notes "The romantic glow of the ancient and the far-away has dimmed for us the achievements of our own untutored and intuitive architectural geniuses." Regarding the architectural equipment of the pioneer builders, the author observes that "the tyranny of traditional ideas was to a large extent cast off by the migrants who left Europe for the New World"—"Spontaneous building cannot be separated with a precise dividing line from technological and academic de-

sign." The author notes that such elements, simplified, do occur in anonymous architecture but the reason assigned may be questioned "after thought of a younger generation." Is it not the deliberate and conscious or subconscious evoking, by the immigrant himself, of that which symbolizes cultivated security of the old world, sustaining his morale in the new world's chaotic wilderness?

The four remaining chapters consist of extensive descriptions and commentaries of the 126 photographs and drawings under the titles "Site and Climate," "Form and Function," "Materials and Skills," and "A Sense of Quality." The author seems to have a special genius for taking or selecting photographs which exemplify pertinently or dramatically the import of the text.

It seems ironic that whereas the modern movement in architecture was a battle for freedom from academicism and eclecticism it seems to be becoming another kind of eclecticism and a copying of the clichés of the various cult heroes, perhaps because we have too many books and periodicals. Therefore this book is one which should be read as an antidote to too many books of other kinds.

W.A.T.

INDIANAPOLIS HOME SHOW ARCHITECTURAL COMPETITION. 50 selected house designs, vols. 5-6. 8½" x 11". Indianapolis: 1957: Indianapolis Home Show, 1456 North Delaware Street. \$1.00

These pamphlets present a selection from the entries submitted in the Indianapolis Home Show Architectural Competition for two successive years. The Competition for 1956 was for a suburban house for a family of six with not more than 1800 square feet floor area. That for 1957 was for a couple, the husband being retired and in his early sixties. The floor area in this instance was not to exceed 2000 square feet. A variety of solutions are presented for each problem.

ARCHITECTURE FOR ADULT EDUCATION. By Commission on Architecture: Adult Education Association of U.S.A., John W. Becker, A.I.A., Chairman-Editor. Chicago: 1957: Adult Education Association, 743 Wabash Avenue, Chicago 11, Illinois. \$2.00

This useful book outlines programming and planning principles for adult education in eleven types of buildings: health centers, religious, industrial, elementary, high school and college, "looking and listening," libraries, recreational, community centers, and buildings specially for adult education. Most of the 69 examples are illustrated by the 92 plans and 68 photographs of completed buildings. It is accurately described as "a graphic guide for those who are planning physical facilities for adult education."

The concise text includes in addition to general trends and problems, sections on each major building type and one on financing and management. So much useful data for the modest price would not have been possible without much volunteer labor by the Commission, and a foundation subsidy.

W.A.T.

STAINED GLASS OF THE MIDDLE AGES IN ENGLAND AND FRANCE.

By Hugh Arnold, with fifty color plates by Lawrence B. Saint. 290 pp. 6¾" x 9¼". New York: 1956: The MacMillan Company. \$8.50

This famous book, beloved by all devotees of the crafts of the Middle Ages, first appeared in 1913, and was reprinted again in 1925 and 1939. It now appears again, no doubt in response to the awakening interest in the art of stained glass.

Both author and illustrator were workers in the art, and their book traces the development of stained glass from its earliest beginnings in the two countries in which it achieved its greatest triumphs. The text is scholarly and fascinating, and the illustrations, from water colors by Mr. Saint, are among the best color reproductions of stained glass ever made. The book is a "must."

J.W.

RECOMMENDED READING

THERE HAS BEEN MUCH in the magazines of interest to architects since this column last appeared, so we must go back a few months, in case some *Journal* readers missed something important:

The *New Yorker* for September 28th, October 5th, October 12th and November 2nd contains, under Lewis Mumford's banner "The Sky Line," his observations after four months in Europe. In the first article he discusses the confusion that has come into architecture since the break-up of the machine-minded formulations of the 1920s, and points out certain new buildings in which a new approach is evident, in which "the past has been neither externally imitated nor crassly rejected but inwardly absorbed and re-created." He also discusses the effect of the adoption of the skyscraper and the multiplication of automobiles on European planning, creating problems which the planners have not yet come to grip with.

The second Mumford article is devoted to the "Marseille Folly." Corbu's *Maison d'Unité d'Habitation* is given a pretty thorough going over. He finds that its "atrocious plan corrupts all its superficial esthetic vitality." Despite its force as architectural sculpture, its apartments are little improvement over Third Avenue flats—the human being has been forgotten.

In the October 12th issue, Mr. Mumford tells of the profound impression that Rotterdam made upon him—"the one city in Europe that has turned the disasters of war and occupation into a triumph." The replanning and rebuilding has been designed to the human scale with a happy intermingling of residence and business buildings.

The fourth article tells of four impressive monuments of architectural sculpture in three cities: The Cave Ardeatine in Rome, by a group of five architects and landscapists; two monuments in Rotterdam dedicated to the citizens killed in the

bombing, one by Gabo and the other by Zadkine; and the Epstein "Virgin and Child" in London's Cavendish Square. Each of these represents a close collaboration between architect and sculptor, and each is filled with the intensity of feeling which prompted their erection, yet lacking in the ugly stark realism which characterizes so many war memorials.

In the October *Harper's Magazine* is an article entitled "Lee of New Haven, and his Political Jackpot." It is the story of a courageous young mayor who made urban renewal his platform, with a full account of the Oak Street project, telling how Lee gradually persuaded the bigwigs of the city to back his project—and him, and how the problems of the opposition and relocation of the residents were overcome. It could inspire and point the way to other cities—and to other politically ambitious young men.

In the December *Atlantic Monthly* our own Al Bendiner holds forth in his inimitable style on pages 176 to 179—all about a search for a solo csimbalom player.

On the preceding page of the same magazine is a discussion of the apparent eclecticism of contemporary architecture and a question or two regarding the appropriateness of some contemporary solutions, implying that sometimes a traditional house design might fill the bill better.

Life, *Time* and *Fortune* have been giving a great deal of space to architecture and planning lately. The most notable is the "Exploding Metropolis" series which has been appearing in *Fortune* since the September issue. It is a study of paramount importance.

It is hard to keep up with *Life*, being a weekly, but in the December 23rd issue there are beautiful color illustrations of five of our new embassies, and on the pages preceding is a picture story about the American Academy in Rome—still apparently an architectural haven.

Letters to the Editor . . .

EDITOR, *Journal of the AIA*

As one of the older members of the profession, may I presume to put on record a few thoughts which occur to me when I read or hear disparaging references to the Architecture and Architects of the past. I am somewhat disturbed by the attitude of disrespect and even contempt shown by many of the younger men who in recent years have graduated from our Schools of Architecture.

I make bold to say that this attitude of disrespect indicates a shocking lack of, or a misdirection in the education they have received in school or office. Evidently they have not been properly informed as to what the profession today owes to those who were its guiding lights in the past. As I am sure is the opinion of most reputable Architects, I have always held the belief that Architecture is one of the highest and noblest of all Professions. It is certainly one of the oldest, if not the oldest. The long history of Architecture is a vital and essential part of the cultural progress of the civilization we enjoy today. As such, it has the right to demand intelligent and respectful recognition of the work of Architects who have gone before.

Is it too much to ask that an Architect should at least be a cultured man? Only a truly cultured man can be expected to appreciate and generously evaluate the contribution his profession has made throughout the years to our present day civilization. I could, but I won't mention the numerous outstanding names of our famous predecessors in Architecture. Suffice to say, their name is legion.

May I point to the example set by other professions which I think we can well emulate. Let us take a look at the value with which the Medical and Legal Professions regard their past history and progressive accomplishments.

The development of medicine from the days of Hippocrates is acclaimed by all doctors as a treasured and important element in the history

of progress. So highly do they evaluate the contribution to Medical Science that every physician is proud to take what is referred to as the Hippocratic oath, and display it prominently in his office.

Likewise, the Legal Profession takes equal pride in the progressive development of our laws and gives full credit to those who wrote them beginning with the laws of Moses, the Magna Carta, the Declaration of Independence and the Statutes which have been added from time to time, and which now form the laws of many lands.

Is it asking too much of the young and old of our profession and especially those by whom they are trained to follow the good example set by these equally important and cultural professions? Is it too much to ask that we show a proper and intelligent respect for the work of those Architects who have adorned the past and inspired the continual development of our profession? I urge in all justice that we use our good offices with the schools and the young men we train or employ to correct this uncalled for display of ignorance, arrogance and contempt of the past which we meet with far too often.

LEONARD H. BAILEY, FAIA
Oklahoma City, Okla.

EDITOR, *Journal of the AIA*:

Out of the centennial convention came a feeling that architecture was important stuff and that as architects we were doing all right. Magazine editors told us about the facts of life—the meaning of change. Psychologists analyzed the ways of the world; we were introduced to the problems of philosophy and world concepts of human attitudes; educators and a leader of the cinema world discussed relations between government and the arts; labor and management aired their problems. We were allowed to have a peep into the future of architecture by seeing examples of great American works of today—all picked by the human

hand. And on top of it all the preview of part of a movie. The architects who spoke their parts were in need of training and their diction could be improved, but there it was, "Architecture 1977" in all its home-spun bi-lingual simplicity for the world to contemplate and try to understand. It was all stimulating and exciting.

One of the important objectives of the AIA is to make people think about and talk about architecture. Perhaps we are on the track with such goings on as we had at the last convention. But I do not think we played it up strong enough. There was a moderate collection of press clippings but I, for one, saw little to make me believe that the publicity we architects got was even encouraging. It would be worth our while to look around to see what others are doing. It has just been announced that another 100 Grand has been appropriated by the Teamsters' Union for PR. We should be interested to see the form the campaign takes.

We architects could take a leaf from the book that explains the "Green Tag" to the nation. Why not a jingle for architecture and a little device with a pink T square to go for free with each new architectural unit? Imagine hundreds of kids asking their parents, "What's the pink T square for Daddy?" And, "What is a T square?" etc., etc. Are we really sharp?

Now I know I am not funny. I couldn't be funny if I tried and I am not trying. I just haven't been able to swallow the gobble-de-gook that comes out of the plush offices and highly paid executives that handle public relations of any kind. And I shudder to think of how architecture could—I do not say it necessarily will—be degraded if the profession puts itself and its purse in the hands of people who think in terms of whoop-la and a fast buck for architects, as they do for the manufacturers of soap or paper napkins.

What's the matter with us?

Haven't we the courage to go to our City Councils and tell them they are a lot of morons—when the term fits, instead of pulling some one's sleeve trying to get a job; or to challenge the so-called practical man who will sell out a legacy of handsomeness in his city to make way for a factory in the wrong place—and then help him change the zoning laws if we get the job? Haven't we the courage to talk up to the bank president and tell him our architecture is more important than his miserable bank roll?

I say we too often act like pussy-footin' mollycoddles instead of men and women of convictions dedicated to one of the finest and most needed professions in the world.

We do ourselves little honor to sit back and buy a lot of trite advertising stuff because it seems to be the current fad. We can, of course, listen to the professional promoter, but if we believe in the importance of architecture, let us get out and do our share ourselves.

EDGAR I. WILLIAMS, FAIA
New York City

EDITOR, *Journal of the AIA*

Your November issue seemed to me to be a model of what this periodical should be.

Charles Stotz' convention comments were clear and graphic, and lacked only suggestions for the solution of the quantitative problem. I'm sure he'll go in to fill this in. At least the committee could issue the sheets ruled off as to hours and places for the members to fill in.

Robert Denny's notes on ethics were very well organized, and helped me out with a question currently before our State committee on that subject.

Ernest Kump really made me study! He articulated what many of us vaguely feel when we take time out to think about the fundamentals of our work. I must admit he left me way behind at times.

Austin Mather's remarks on zoning and planning (and the dearth of same) of residential neighborhoods should be reprinted and sent to municipal governments all over the country.

Purvis', Taylor's, Heckscher's, Pawley's, and your own "Asides," not to mention Richards' delightful sketches, all contributed toward making this a thoroughly inclusive and outstanding issue, the best I can remember.

GERSON T. HIRSCH
Pleasantville, N.Y.

EDITOR, *Journal of the AIA*

After a long month of stewing about Robert R. Denny's (October) article, "Public Relations—a Problem in Design," I find myself more and more fascinated by the following remark, to wit: "Being practitioners of a burgeoning but youthful craft, we have not yet agreed among ourselves upon common terms,—". . .

"Burgeoning but youthful" would seem to infer that old bushes are more apt to burgeon than young bushes. At my age, I find that comfortable reading.

The reference is, of course, to the PR craft and its practitioners. A good old word, *craft*,—a durable, well-seasoned word usually applied to wood-carving, leather-tooling and similar gentle pastimes. So, now we know! The PR craft is no longer to be confused with the ancient profession of public relations, whose "common terms" were long ago agreed upon.

As a starter toward getting out of Mr. Denny's "semantical swamp," may I suggest the English language (or plain but pure American) as a workable source for "common terms"? The glib phrase "public relations," like its illegitimate sisters, "air-conditioning" and "radiant heating," is neither good English, good American, nor good, plain alley talk,—except, of course, in its true and ancient sense.

"Public relations is the practice of evaluating the profession's policies in terms of the public interest;—" . . . What, in the name of Noah Webster, is "public interest"? What the public is interested in? What the public is "intrigued" with? Or what benefits the public? Who, by the way, is the public? And who cares? This, as Churchill said, is the sort of language up with which I will not put! And, as the Commodore said (in

pure American): "The public be damned!"

"To talk without having anything to say is a waste of time." I doubt, somehow, that Mr. Denny really has his heart in this one. It is, at least, a notable accomplishment and among the social graces. To talk entertainingly without having anything to say is a fine art, brings good fees, makes PR men burgeon, and may eventually surpass architecture both as a fine art and money maker.

Yours for universal burgeoning by all and sundry old men and maidens . . .

ALLEN G. SIPLE
Beverly Hills, Calif.

EDITOR, *Journal of the AIA*:

In the last issue of our handsome *Journal*, I was surprised to see that we have a "Peripetic" (sic) President, and a Peripatatic Executive Director!

When I was in practice, I gave part of my time for fifteen years to editing an architectural magazine, so it is second nature for me to notice things.

Also, it seemed somewhat remarkable for the first article to be a vitriolic and pessimistic attack on our profession by one Meeks (An architect—No?) and on the very next page a very optimistic commentary on the present and future of the profession, by one Morris (an architect—yes?)

And in your own "Asides" I was pleased to see that you re-evaluated the service of Palladio to the world. Probably I am prejudiced about this, for some time ago I gave to the Institute Library, with considerable self-sacrifice, my own beautiful edition of Palladio, Printed in London (I think) in 1739.

With my regards and compliments to yourself and the *Journal*, I am

HARRIS C. ALLEN, FAIA
San Francisco, Calif.

THE FOLLOWING LETTER was received by the Editor, en route to William Dickey Merrill:

My Dear, Dear Mr. Merrill:

I have some things to say.

While sorting through the mail

stack, the *Journal* I did spy
And there I found "Archcrotic"
and so gave it a try.

I figured out "Entasis," "Eye-
tooth" and then "Ahoy."

I even got "Vitruvius"—now there
was quite a boy.

But when it came to "Shotsawed,"
"Retempered" and "ITO"

'Twas then I started mumbling,
"This guy will have to go."

I held a consultation with the
draftsmen and the boss.

Results, although not staggering,
were not a total loss.

They came up with "Longhena,"
"Keystone" and "Hexastyle,"

But not the "Newgateprison"—they
missed that one a mile.

The "Lavatory" fitted and then I
got "Who's Who."

By then my brain was weary, so
what was I to do?

With "Webster" I consulted—
leafed through the old "Handbook."

Read reams of "Specs" and "His-
tory" and from the shelves I took

Most every book e'er written about
the building trade—

And after hours of searching I got
the "Allheartgrade."

But "Noteboth" and "Lance-
arched" produced such agitation

I couldn't even calm myself by get-
ting "Registration."

I never heard of "Belzoni"—
French I cannot speak;

But that "Orapprovedequal" I got in
just a week.

"Ontheway" I "Hedged-a-bet," a
"Newthought" came to me

The AIA 177 should read "Mini-
mumfee"!

The happy group as "Draftsmen"
I did identify,

But not Egyptian Kings yet, no mat-
ter how I try.

Of course, we hear a great deal
nowadays about the right

Of freedom of expressions and etc.
through the night.

But please, dear Mr. Merrill, on
bended knee I plea,

Would you please come to Naples
and intercede for me?

Because of your old puzzle my
boss is in a rage.

My future now is shaky because of
that one page.

I haven't filed a paper, nor typed
a single "Spec";

In fact my whole darned office is
now a total wreck.

If you can't come to Naples, then
please, sir, send for me

And we will do Archcrotics
throughout eternity.

Archcrotically yours,

MRS. VERA ZWICKER

Secretary

Office of William G. Tracy

Naples, Florida

EDITOR, *Journal of the AIA*:

Replying to the editorial "Vicious
Vernaculars" in the December 1957
issue of the *Journal*, may I question
how Mr. Meeks arrived at that
"ninety eight per cent" figure—how
he defines "good building" and
"taste"—how, specifically, the AIA
could "Create good taste at the grass
roots level"?

Why not demand that the Ameri-
can Bar Association acquaint one
hundred per cent "of the American
populace" with the fascinating and
subtle shades of all meanings in all
laws? Or charge the American
Medical Association with creating
full appreciations of all medical sci-
ence, at the grass roots level?

Lets face it—all doctors, lawyers,
engineers and architects are not
fabulous geniuses. Nothing ever
seems quite perfect in this not too
perfect world. Not every client is
willing and able to provide the archi-
tect with a limitless budget—or to
impose no design concepts of his
own. It seems almost logical to ask
Mr. Meeks to provide the facts prov-
ing that every architect is *not* trying
to do the best possible job for every
client in line with the realistic con-
ditions surrounding each job—or that
the architects and the AIA are *not*
gradually raising the levels of design
in the public mind.

As for creating "taste"—why not
get down to brass tacks and talk
about overhauling our entire educa-
tional system, from kindergarten
thru college, to include the intelli-
gent indoctrination of cultural ap-
preciations of all the arts? How else
is "taste" to be created, in a democ-
racy? And, incidentally, why
shouldn't one man's taste be another

man's poison? Should we not avoid
standardization of "taste"—at all
costs—if only to avoid standardiza-
tion of mentalities?

Does it not seem reasonable to
state that just about every fault in
our national life would benefit by a
periodic and generous dose of good
old fashioned hoss sense—combined
with a consistent elimination of un-
necessary emotionalisms? Who
knows, we might be able to develop
better "taste"—better architecture,
poetry, music, critics, foreign policy,
and space platforms.

RALPH M. KARGER

Boothbay Harbor, Maine

EDITOR, *Journal of the AIA*:

Just completed the reading of the
Centennial Convention issue of June
'57. Since I operate a small office
my time for reading is short, so it
has been slow going but every ad-
dress and every article was read line
by line and am very much impressed
with the wonderful work you have
done in assembling it in this manner.
It is a prize possession in my library.

RALPH J. BISHOP

Spokane, Washington

EDITOR, *Journal of the AIA*:

Your magazine was the best ever
—though I wondered why Carroll
Meeks could not write more clearly,
and less bombastically, and why he
forgot that he is part of an institu-
tion which is supposed to teach the
qualities which distinguish architec-
ture. It certainly is not the Insti-
tute's field to teach—only to keep
high the standards and to honor the
gifted. This you do well.

CARINA EAGLESFIELD MILLIGAN

New Canaan, Conn.

EDITOR, *Journal of the AIA*:

Your Youngstown Sheet and Tube
advertisement in the December issue
listing "The Austin Company" as
the designer and builder of the Day-
ton *Daily News* Building appears to
be out of focus with "Sharp Focus."

Just where do you stand on this
problem of the package dealer, and
does advertising sales compromise
editorial policy?

JAMES J. FOLEY

Columbus, Ohio



“The Time Has Co

78

THERE APPEARS TO BE A CLOSE ANALOGY between the laws of physics and the laws of oratory. We know, in physics, that a large volume of matter in a gaseous state, when compressed, with the release of heat, produces a small amount of solid matter. Similarly, it seems that the achievement of solid results in civic accomplishment requires the prior production of vast amounts of verbal gaseous material. The conversational contributions to planning in Syracuse over the past forty years have been prodigious. However, if the actual accomplishments during that period were listed all together they would undoubtedly bulk much greater than is generally recognized; there should be no minimizing of the community good that has flowed from devoted public service through the years. But the total of accomplishment must inevitably shrink in relative size and in importance at this time when the community is faced with a realization that it is moving well into the second half of the Twentieth Century without a clear sense of direction—almost with a feeling of frustration—as it is confronted by problems of different composition and of vaster magnitude than ever before. Second only to this recognition is an evident conviction that these problems are of such a nature that they can no longer be

ignored and that an effective program for their solution can no longer be postponed. There could certainly be no other reason than this for the lively community interest that has been aroused or for the gathering of a representation of community intelligence, community leadership, and community energy that has potentialities for accomplishment that can be limited only by the limitations that you may place on yourselves.

It is long past the time for post mortems. The job before you is so great and so compelling that all the energy that you have must be devoted to charting the course ahead and more importantly, to moving ahead. I refer to the past only for historical perspective when I recall that I was one of the group of consultants brought in by *Fortune Magazine* to work for the Post War Planning Council, now nearly fifteen years ago. That was an amazing effort in the teaming up of official, institutional, and civic leadership with mobilized citizen participation.

What has happened during the intervening period? It is a period of time that is only a moment in the history of cities and only a fraction of the life of the buildings that you build and the major utilities that you install. Yet it is as a lifetime in the moving and changing panorama of the forces

Action''

BY HUGH R. POMEROY

Mr. Pomeroy was a member of the Assembly of the California Legislature, and has been in Urban Development Planning for 35 years.

He served as Director of the Los Angeles County Regional Planning Commission and of the Virginia State Planning Board and as Executive Director of the National Association of Housing Officials before accepting his present position of Director of the Westchester County (N.Y.) Department of Planning.

The following article as adapted from an address he delivered at the Centennial Banquet of the Syracuse Society of Architects.

We print it in the Journal because what he says about Syracuse (pop. 225,000) can be applied to almost any city.

that affect and shape community development. Within that time the Seaway has become an assured reality. The possibility of a deep-water channel would, in effect, move the Syracuse community to the Atlantic margin of the seven seas. The world's greatest vehicular thoroughfare, the New York State Thruway, has revitalized that fabulous corridor of development, of which the Syracuse community is a strategic focal point, that was first given effective reality by Governor Clinton a century and a quarter ago. By means of the Thruway, both ends of the state and all in between have been pulled from minutes to hours closer to the Syracuse community. The strategic position of the Syracuse community in that great corridor of development is now being raised to a greatly higher level of economic potentiality by means of the north-south expressway. Far-flung redistribution of economic activity, with an evolution in the techniques and methods of industrial production as profound as the Industrial Revolution itself, is offering the opportunity for realization of the potentiality. This had begun fifteen years ago, but the cloud that was then no larger than a shadow of a man's hand has now grown to a golden canopy of opportunity.

Other things may be reported of that period

of fifteen years ago. Within that time, with growing population and with increasing economic activity, no major new commercial structure has been built in the Syracuse central business district, and obsolescent marginal structures have economically deteriorated at an accelerated rate. New retail business development has all gone elsewhere than the central business district. The compelling triple need of convenient and adequate access, convenient and adequate circulation, and convenient and adequate automobile parking space—without which the central district faces certain economic decline and decay—has been met by sporadic and ineffectual provision of additional parking space, no improvement of internal circulation, and such uncertainty as to the location of arterial access routes that no one is sure how to plan at least some of the city's obviously needed urban renewal projects, or where to put public buildings.

Within that same fifteen-year period notable public buildings have been erected without much relation to one another, except possibly that of expediency, and others have been talked of without any certainty as to where they really should be located, taking all things into account. The new buildings themselves have been built as if no one had yet dis-

covered that the automobile had been invented, for its needs were ignored. Within the recent part of that same period, the city's thoughtful public housing and urban renewal proposals, with vigorous municipal leadership, have been thwarted by red tape dispensed from on high and by lack of sufficient civic support to override obstacles that in the long run of the city's development are of ephemeral importance; so that, in fact, the city has been moving backward in its fight on slums, for deterioration of blighted areas has been outrunning remedial measures. Was the city over-supplied with parks? With the exception of a few acres along the creek, very much worth-while but relatively very meager, no park land has been added to the city's supply, while the need has been increasing.

SO MUCH FOR THE CITY ITSELF. What of the other parts of the Syracuse community during this period that we are talking about—the towns and the villages that together with the city make up the greater community? Devoted efforts have brought about the creation of the Planning Federation of Onondaga County Municipalities and its work has led to some measures of planning and land-use regulation in suburban areas. What has been done offers some hope of more, although it is a most meager beginning. But the Federation, of itself, is not able to deal with the over-all problem adequately. Have adequate lands in suburban areas been reserved for needed arterial routes—or acquired for them, as it must be for routes of the only scale that will satisfy the need? Actually, is it known where future arterial routes should be located? Or even secondary routes? What guiding street plan is available to the Syracuse City Planning Commission in passing on subdivision plats within its three-mile belt of extra-territorial jurisdiction? Have adequate lands been acquired for needed parks and other open spaces—out where open space is still available? Is there an over-all land use plan? Is there a metropolitan area plan at all? I am not criticizing worthy effort; I am simply trying to emphasize the magnitude of the problem.

If these things are not being done, what assurance is there that the outer parts of the over-all community are not building into their development many of the inadequacies that are now recognized as existing in the central city—are not sowing into new development as it takes place the very seeds of its ultimate deterioration and decay?

There is not time within the scope of this discussion to analyze the effects of the three major forces that within less than half the forty years since the City of Syracuse first undertook planning, as it

was then known, have become the principal influences in the dynamics of urbanism. These are (1) the rise of the motor vehicle to a position of dominance in both local and an ever-widening range of transportation; (2) higher levels of family income and consequent higher levels of desire and of effective demand for goods and services, with accompanying increased leisure time; and (3) vastly advanced technology of industrial production and of building. The temptation is great to discuss the components of these forces, especially the second and third, and to trace their influence in patterns of community building. Suffice it to say that among their results are (1) the outmoding of every business district of the traditional pattern of streets and of functional and spatial relationships that served the pre-automobile community; (2) the outmoding of "strip frontage" land-use development of every kind; (3) the outmoding of every major traffic thoroughfare of the frontage-access type; (4) the outmoding of every industrial district of the vertical factory type; (5) the outmoding of patterns of subdivision design that characterize most older city areas and that are being perpetuated, to the assurance of their own deterioration, in much subdividing going on today; (6) the demand for much more land area per family, both as appurtenant to individual or grouped dwellings and as a part of the neighborhood composite; (7) the need for large open spaces in the metropolitan land-use pattern—far more ample than we may easily be capable of recognizing; (8) the need for greatly increased per capita water supply and resultant sewage disposal capacity; (9) the need for greater skill in over-all neighborhood and community design and design of buildings in new functional and spatial grouping; (10) the need for greater attention to community appearance in general, with the desire for, and the marketability of, higher esthetic quality in all aspects of community building. The very recital of this list indicates its incompleteness, but your own awareness can supplement it, and fill in the details of the framework.

It is obvious that all these things have likewise outmoded earlier planning concepts, not only those of forty years ago, but those of just yesterday. Zoning is now undergoing an evolution as profound as that that marked its emergence forty years ago from the fragmentary avoidance of nuisance regulations that had preceded it. Principles of subdivision design have undergone a partial revolution, with more to come. FHA, by linking quality to financing risk, probably did more than any other one thing to bring about widespread recognition of the need for effective land development controls, and then, by reflecting the predominant demand of the current market—

necessarily so by the nature of its operations—effectively slowed down further advance and tended to ossify patterns and designs that are being outmoded by advancing technology and evolving sensitivity of demand.

Principals of thoroughfare design have been basically revised to bring us thruways and expressways and freeways, until a vast nationwide system of thoroughfares is being undertaken entirely according to the new concepts. The one almost irremediable deficiency in the standards for these modern thoroughfares, at least in metropolitan areas, is with respect to the widths of the strips of land provided for them. The pavements should be built without on-ramp access, to be sure, but more than this is required: The pavements should be flanked by broad insulating belts, never less than one hundred feet wide except by necessity in already closely developed areas and preferably much more in open territory.

A remediable deficiency in the Interstate System that Congress has thus far refused to do anything about is with respect to visual access. The system is being built to provide means for expeditious travel. It should also be pleasant travel. The erection of outdoor advertising structures adjacent to the thoroughfares of the Interstate System—or any other thoroughfare for that matter—is a private seizure of a public facility, for such structures are essentially a use of the thoroughfares. All that is needed to indicate this is to suggest that the signs be turned around and faced in the opposite direction.

WE HAVE BEEN DISCUSSING some of the individual elements of community building. Planning calls for considering all these elements as parts of a composite. We know—or should know—that buildings that are individually of worthy design may be less worthy in the aggregate. (Here I interrupt myself to say, emphatically, that I am not advocating identity of type or style of building design but harmonious quality of over-all design.) Even more strongly must all the various and diverse elements of the physical community “hang together,” for the composite of the community must be functionally coordinated in order to be economically sound and socially beneficial. No one element of the physical community can be planned effectively except either in direct relationship to, or with consideration of, the other elements.

Let us now consider the approach to effective planning. A basic aspect of the approach must recognize that an over-riding result of the forces that today shape the form of community building is the erasure, in the effect of these forces and therefore

for planning purposes, of the political boundaries that compartmentalize municipal jurisdictions. Generally speaking, these jurisdictional patterns may be expected to persist. But the powerful economic forces that are surging in a vibrant community can no more be compartmentalized than can the movement of the atmosphere. In this sense the “community” that we are talking about is more, even, than the community of numerous municipalities, plus the county, that is contained within the limits of the county. Whatever instrumentalities are used for the administration of planning in the area and for whatever part of it, there must be some general framework of understanding of what is happening in the entire area. This must be more than knowledge of the physical characteristics of the area. It must be an understanding of the economic forces impinging on it, an understanding of the economic, and social, and cultural characteristics of the population, an understanding of the interaction of economic forces and population potentials and of their reflection in broad patterns of land-use.

I hasten to declare that I am not advocating long years of research, while uncoordinated development renders that research results obsolete more rapidly than they can be produced. There are readily obtainable facts that are virtually at hand as a coordinated planning effort is undertaken. There are things that need to be done without further delay. Perhaps the most effective thing to do is just to get them going, but to start out by writing down—and I mean just that, in black and white—(1) the facts that ought to be known in order to make an effective job of the specific things that are to be undertaken and (2) what other elements of the physical community are related to these things. The first essential of an action program is, simply enough, just action. But it must be informed action, and it must be action with a sense of direction.

This brings us right to the foundation of direction—which is planning, and that is policy. We all know, or we all should know, that zoning must be more than merely preventing obvious abuses in land use, that it must be more than merely inducing a superficial orderliness in what is happening anyway, that it must be a means, with others, of implementing a basic land-use plan. But there we are in danger of stopping—even if we do not make the grievous mistake of stopping at municipal boundary lines. We frequently stumble in our basic land-use planning and end up by merely rationalizing the obvious. Perhaps that is why so much so-called land-use planning lacks vitality. No land-use plan can be formulated by starting backward from zoning. It must precede sound zoning—fundamentally. The key

question is that of what the land-use plan expresses. And that calls for policy determinations.

There should be determinations as to such matters as: the services to be rendered by arterial routes in relation to the entire community composite, especially the relation of intra-community routes to through routes; the types and locations of desired industrial, or other large scale plus-side-of-the-municipal-balance sheet development, tax wise; locations, character, and density of residential development; open space policy; business development policies; and a host of others; the foregoing list is only a beginning.

Let me take a moment, however, to indicate the nature of some of the choices that can be made, by referring to business development. Does a quiet residential village wish to limit its business development to that which will serve primarily its own people, or does it wish to strive to become a regional trading center? Given the possibility of making a feasible choice, such a policy is subject to implementation by the measures of planning—not zoning alone; for the general design of community development and its street and highway planning will also have much to do with the result.

There is another kind of choice available with respect to the central business district. Here the choice is now between drastic remedial measures, with a considerable degree of rebuilding and rehabilitation, including elements of the basic pattern, and permitting obsolescence to spiral downward into economic decay. There is no longer any middle ground. What of the alleged conflict between the central business district and outlying business development? In the long run, there should be none. It is not a case of downtown *versus* the suburbs, so far as economic activity is concerned, but downtown *and* the suburbs, as related parts of an economic composite. To be sure, changes are taking place, and various commercial activities are changing locations. But properly handled, the process is one of vitality, not of decay. What is widely under way throughout the country is a redistribution of certain kinds of economic activity, motivated by considerations of functionally appropriate locational factors and spatial relationships. What planning should seek to do is to facilitate the soundest realization of economic potentials.

WE ARE TALKING about determination of developmental policy. So far as the general pattern of the community is concerned, there are choices available in the making of such determinations. Can it be that all the facts about a community can add up to only one answer? Obviously not, for we can't

possibly know *all* the facts that should determine the community's future—not even all the facts as to existing conditions, let alone those that depend on estimate and prediction. So far as prediction is concerned, the variables that crowd into the picture over very short distance out in time are so numerous and so wide-ranging in their effects that judgment soon becomes the most important determinant of the choices to be made. That is, it should; because choices *will* be made. The very failure to make a choice is the making of a choice by default. On the answers are not likely to be very good.

There are limits, of course, to the choices available to developmental policy that we can make, imposed by a variety of physical, economic, and social factors. But the range is still wide. The making of selections must be conditioned by the consequences, especially in required public facilities and public expenditures, and there is thus a feed-back in the process.

The policy decisions that are made must find reflection in plans and proposals. If the decision have been arrived at thoughtfully and wisely—which means both prudently and courageously, they can give the resulting plans a realism that invests their delineation on paper with a vibrant vitality that will shout for translation into action. The process is never complete. It must be said, however, that the often heard declaration that our plans should be flexible may be only a rationalization for ineptness and indecision. I prefer to declare the necessity for adaptability. Why? Because our conclusions are based on premises of prediction that are subject to change. We can not be infallible in our predictions. Unpredictable things can happen. Part of our prediction is that of what private enterprise may do within the range available to it for the making of choices, including the right to make mistakes—which, incidentally is one of the most valuable and productive rights in a democracy. We must adapt our premises to changes in predicted occurrences and adjust our plans accordingly.

Why talk thus when, if planning means anything, we must act on our plans and build things and crystallize amorphous acreage into urban patterns and then live with the results for a long time? Because there is no other way. The alternative is developmental disorder and governmental inefficiency. Certainly we can not now claim that we suddenly are able to know all that we should know about how to build communities. We can only do the best that we can—and then do one thing more. That is to recognize the certainty of some degree of fallibility in our planning, the probability that we shall be impracticable by trying to be too practical in confining

ourselves to known facts and rejecting some degree of imagination, and the likelihood, consequently, that we shall sell the future short. That recognition flows to another—that of realization that our hope of an escape from too constricting results of calculated short-sightedness is to lean in the direction of the future and plan at a scale that is beyond estimates of need that are statistically derived alone. Any thoroughfare that is designed to a scale based on statistical projections of traffic volumes will be obsolete almost from the moment of its completion.

WHEN IT COMES TO OPEN SPACE, we need to move our thinking into this part of the Twentieth century. For the life of me I can not understand why so many communities are so niggardly in their provision of public open space. Is it because people are deluded by the arrant nonsense that the community cannot afford to take land off the tax rolls for park and open space purposes? What is it that makes it possible for a community to achieve its potential for values on the tax rolls, of land and of buildings on the land, beyond their value for agriculture or some other natural productive use? It is the land that is off the tax rolls for the public purposes that make the community an urban community at all.

There is another aspect to this question of land or open space that is far beyond mere nonsense and that becomes dangerous stupidity. That is the incredible idea, looked at objectively, that park land—because it is there, in public ownership—should be considered as available for sites for public buildings, or for automobile parking, or for thoroughfare rights

of way. Better that buildings be torn down to obtain the land for such purposes than that park land be erased for them. The buildings can be replaced elsewhere; the park land probably will not be. Does any city, with a meager supply of park land, think that it will need less as its population increases and more of outdoors is put indoors? Suppose the park land is not being “used” now, in the sense of being “developed”?—and what a destructive term that can be. Will it never be used intensively? And perhaps—nay, certainly—the best use of some park land is not to be used at all, so far as intensive development is concerned.

I have left important problems untouched, such as the need for effective coordination of state and local thoroughfare planning and programming, or the problem of a broader financing base for certain undertakings of regional importance, or the even more complex one of making possible the achievement of land-use plans on a regional basis without warping them because of limitations imposed by too stringent a necessity of balancing municipal income and costs within compartments that are irrational for that purpose, even though not necessarily so for normal local governmental purposes.

This community is an area of vitality and of promise. Its economic potentialities are capable of the production of great and satisfying community good. The full realization of the capability lies largely within your own volition. Within a broader range of feasibility than may be generally recognized, the only limits on your accomplishments are those that you yourselves may impose. The time has come for *action*.

NECROLOGY

According to notices received at *The Octagon* between November 27, 1957 and December 30, 1957

BOSWORTH, HARRY I., Fort Worth, Tex.

CHATTEN, MELVILLE C., FAIA, Atlanta, Ga.

CHEESMAN, ROY W., Santa Barbara, Calif.

COURLAND, MAURICE, New York, N. Y.

MCQUADE, WALTER P., New York, New York

SCHIRMER, WILLIAM E., Oakland, Calif.

SHIELDS, EDWARD J., Quincy, Mass.

WACHENDORFF, EUGENE C., Atlanta, Ga.

WAGNER, CHARLES, Volusia County, Fla.

WILBY, ERNEST, FAIA, Ontario, Canada

SHARP FOCUS

THE ESSENCE OF THE PROBLEM of advertising by individual architects is that advertising, which has become an established and valuable part of the American type of economy, is basically related to mass production. The more of a mass produced article can be sold, the lower the cost and hence more of the population can have the benefit of the desired article at the lower cost.

The essence of professional service by physician, lawyer and architect is that it is personal attention

to the client's problem. No amount of advertising can increase the productivity of the professional man, and the cost of such useless advertising must ultimately be borne by the client. The cost of the service and product is therefore increased, not decreased as in the case of mass production commodities. Group advertising by the AIA, national or chapter, of an educational nature to enhance the utilization of architectural services, is in the public interest.

W.A.T.

LIFE IN A MARTINI GLASS



THIS COLUMN STARTED OUT as a relief for the members of the second oldest profession in the world, and an outlet for my gall. Now, people are finding hidden meanings and philosophies in what is pure hogwash and drivel. And more, they are giving me the hotfoot, which I do not like.

Yesterday I met my old colleague and friend Ted White. Mr. White, who looks like an individual, was wearing for the occasion a derby hat, a British regimental sergeant-major's Christmas moustache, a Renoir complexion, a red tie, a hefty green Irish tweed suit, an Indian print yellow vest, heavy multi-colored plaid socks, and a pair of gamboge and burnt orange boots. We were having a farewell nip after a funeral and White was feeling fine because the funeral director had told him that he brought a great sense of relief to the bereaved.

"Bendiner," said White, "now that you have asked me, frankly I believe your AIA columns are bitter. You have no right to be bitter. You have had a fine career, and frankly, Bendiner, you have no right to be bitter. You should always write as sweetly as you did in your article in *The Atlantic Monthly*, December 1957, titled 'The Csimbalom.'"

"I am not bitter, White," said I, "I am only a lost soul wandering from Lally column to Lally column trying to find a place to carve an acanthus leaf."

The other night I was sitting in a deep chair with a number of other old gentlemen, each holding a glass of alcohol in one hand and a box of pills in the other hand. After looking around and making sure there weren't any ordinary AIA members around, we all started working on the joys of being Fellows of The American Institute of Architects—particularly as members of the College of Fellows.

I will probably have my new school tie taken away from me and my medal ripped from my neck for revealing the handgrasp, but it is mostly a qualifying ague.

What seemed to scare these Fellows was that before Ralph gave us Dignity we were just simple Fellows of the AIA, allowed to pontificate and be appreciated. Now we are in a College of Fellows and that takes on such heady matters as Duties to the Profession, Active Participation, and other extraneous matters which were all things which we had done to be made Fellows in the first place. Now late in life, the old Committee Meetings, spell-binding of public officials, or finger-pointing at the unappreciative hoi polloi were again expected just when Fellows want to relax and let their earned laurels start paying dividends.

In simpler terms, instead of doing Good like Fellows should, some wanted to quit College. A Fellow in Design thought Fellows for Service to the Institute should be abolished. A Service to the Institute Fellow thought Design Fellows were all right as Longhairs decorating a business.

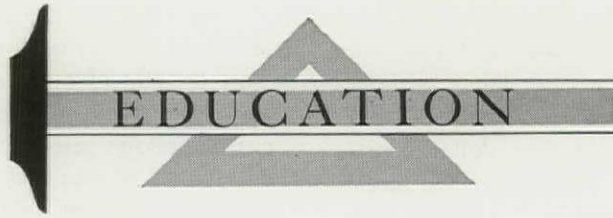
With these schools of thought ravaging my little brain I drank my nightcap, took my Serpasil, Preludin and Benadryl and added a chaser of Armagnac which made me a boy again, just for tonight.

After serious and mature deliberation, and sleeping on it, I have the perfect solution to an active and useful College of Fellows.

We should have our own Convention.

Before Ned Purves and his overworked staff slug me with the original T-square used by Thomas Ustick Walter in designing the Nation's Capitol, let me state my premise and then fold my tent.

At the One Hundredth Anniversary of the Profession, right in the middle of the only business meeting, which was embroiled in a feud over free sketches for Foggy Bottom or somewhere, the Chairman suddenly interrupted the proceedings to announce that buses and wheel chairs were waiting to take the Fel-



EDUCATION

THE DEPARTMENT OF Architecture of the University of Michigan has announced the establishment of the Walter Anicka Prize Sketch-Problems in Architecture. Walter Anicka, Ann Arbor, Michigan, architect, has provided for four sketch-problem prizes, each worth \$150. Two prizes will be awarded each semester of the academic year 1957-58. One problem each semester will be open to students in the intermediate architectural design courses, and one to students in the advanced courses. Awards will be in the form of credit toward tuition expenses at the University of Michigan.

THE ILLINOIS INSTITUTE of Technology, in Chicago, has announced the appointment of Howard B. Dearstyne, authority on 18th century colonial architecture, lecturer in architecture, teaching architectural design and the history and analysis of art. Mr. Dearstyne is co-author of several books on colonial Williamsburg and for a number of years was an editor in the Colonial Williamsburg architectural records office.

DEAN ALLEN S. WELLER of the University of Illinois College of Fine and Applied Arts has announced that applications are now being received for the 27th Kate Neal Kinley memorial fellowship in fine arts. The award for 1958-59 will carry a stipend of \$1,500 for a year of advanced study in any area of art or music or in architectural history or design, and may be used in this country or abroad. Graduates of the University of Illinois and institutions of equal academic standing are eligible. At the conclusion of the year of study, the recipient is expected to present a concert or exhibition at the University. The deadline for filing applications is May 15, 1958.

VIRGINIA POLYTECHNIC INSTITUTE has announced that in order to provide a center for education and research in city and regional planning, a graduate program has been established. The program requires two years for its completion and, at present, is being administered by the Department of Architecture. The Professor-in-charge is T. William Pat-

erson, formerly of the University of Florida.

HARVARD UNIVERSITY HAS announced that William A. Doebele, Jr., Philadelphia zoning analyst and lecturer at the University of Pennsylvania Law School, will join the Harvard faculty on February 1. Mr. Doebele is trained in both city planning and law, and in addition to his Philadelphia studies on the revision of the city zoning ordinances, has worked as a city planner in the San Francisco Bay region.

The University has also announced that a gift of \$1,500,000 from Mr. and Mrs. Alfred St. Vrain Carpenter of Medford, Ore., will provide a Center for Visual Arts at Harvard.

The new center will make the practice of the visual arts a lively activity for undergraduates and will house a design workshop where students of architectural science will practice under the guidance of an artist. It will also provide studios for visiting artists whose work will provide a stimulus to student creative activity.

New Subscription Rates for Associates

It is the wish of the Board of Directors of the Institute that the *Journal* be made available at low cost to Associate Members of Chapters, and that they, as well as students, be encouraged to subscribe to the *Journal*.

Therefore, beginning with the January 1958 issue, the subscription rate to Chapter Associate Members is \$2.00 a year.

Many chapters pay for *Journal* subscriptions for their Associate Members—a laudable

practice. The presidents or secretaries of those Chapters who do *not* do this are requested to announce the new rate for Associates at the next Chapter meeting, and furthermore to send the Editor the names and addresses of all Associate Members so that they may be contacted directly by mail.

The rate for *all* students, whether they are affiliated with a Chapter or a Student Chapter or not, is \$1.50 a year.

MODULAR MEASURE IN THE HOUSING LAW

ANOTHER SIGNIFICANT ADVANCE in the rapidly increasing adoption of modular principles is the enactment of amendments to the Housing Act recently passed by the 85th Congress. "An Act—To extend and amend laws relating to the provision and improvement of housing, to improve the availability of mortgage credit, and for other purposes.

TITLE IV—PUBLIC HOUSING

Low Rent Housing

Sec. 401

(c) Section 15(5) of the United States Housing Act of 1937 is amended by adding at the end thereof a new sentence as follows:

"Every contract made pursuant to this Act for loans, annual contributions, or capital grants, with respect to a project for which the preparation of plans, drawings, and specifications has not been started or contracted for prior to the date of en-

actment of the Housing Act of 1957, shall require that such plans, drawings, and specifications follow the principle of modular measure in every case deemed feasible by the public housing agency, in order that the housing may be built by conventional construction, on-site fabrication, factory pre-cutting, factory fabrication, or any combination of these construction methods."

The above section applies to public housing. While there was no change affecting military housing, the report of the Committee on Banking and Currency says with reference to Title V—Military Housing:

"Principle of Modular Measure

In the Housing Amendments of 1956, section 405 of the Housing Amendments of 1955 was amended to require that plans and specifications prepared for military housing follow the principle of modular

measure. The amendment requires that plans be drawn so that military housing can be built by conventional construction, site fabrication, or factory fabrication, whichever the successful bidder may elect. That amendment reaffirmed the committee's intent that builders of prefabricated homes should have equal consideration in bidding on these military housing projects. The committee wishes to state again that the segments of the construction industry that use other than conventional methods, such as factory prefabrication, should be treated on a parity with other segments of the building industry."

The above applications are not strictly limited to the use of the 4" module and multiples thereof but the intent is clearly to utilize the economic benefits to all concerned inherent in the modular system of designing and building. W.A.T.

C A L E N D A R

January 30-March 9: Exhibition of Architectural Archives, The Octagon, Washington, D.C.

February 4-6: The Society of the Plastics Industry, Inc., 13th Conference of the Reinforced Plastics Division, Edgewater Beach Hotel, Chicago, Ill.

February 11-12: Building Research Advisory Board, Washington, D.C.

February 11-12: Ninth Annual Convention, Wisconsin Chapter, Madison, Wis.

February 24-27: Annual Convention of The American Concrete Institute, Morrison Hotel, Chicago, Ill.

March 25-April 29: Exhibition of New Buildings Designed for the Office of Foreign Buildings, Department of State, The Octagon, Washington, D.C.

April 17-19: South Atlantic Regional Conference, Sarasota, Fla.

April 17-October 19: Brussels World's Fair, Brussels, Belgium.

April 18-19: Great Lakes Regional Conference, Morris Inn, Notre Dame, Ind.

April 28-May 2: Board of Directors Meeting, The Octagon, Washington, D.C.

April 29-May 11: Annual Maryland House and Garden Pilgrimage.

May 9-June 15: Exhibition of School Architecture, The Octagon, Washington, D.C.

May 18-21: American Institute of Decorators' 27th Annual Conference, Sheraton-Plaza Hotel, Boston, Mass.

June 11-14: Annual Assembly of The Royal Architectural Institute of Canada, Ottawa, Canada.

June 22-27: Annual Meeting, American Society for Testing Materials, Hotel Statler, Boston, Mass.

June 27 thru summer: Exhibition of Contemporary Danish Architecture, The Octagon, Washington, D.C.

July 7-11: AIA Convention, Hotel Cleveland, Cleveland, O.

July 20-28: Fifth Congress of the International Union of Architects, Moscow, Russia.

October 2-4: North Central Regional Conference, St. Paul, Minn.

October 8-10: Gulf States Regional Conference, Biloxi, Miss.

October 9-12: Northwest Regional Conference, Harrison Hot Springs, British Columbia, Canada.

October 15: New York District Regional Conference, Rochester, N.Y.

October 15-19: California Council, AIA, annual convention, Monterey, Calif. California-Nevada-Hawaii Regional Conference will be held as a part of this convention and will meet on October 17.

Mid-October: Western Mountain District Regional Conference, Denver, Colo. Date to be established later.

The Editor's Asides

THERE SEEM TO BE evidences of a growing desire for more richness, a greater elegance, in architecture for tomorrow. Those older hotels and restaurants which are fortunate enough to have retained some of their mirrored gilt and plush interiors find them increasing in popularity—if the food is good. Rudolph Bing, the meteoric director of the Metropolitan Opera, for whom a new opera house is at last to be built in New York's Lincoln Square "cultural center," said in an interview the other day that although he realizes that the exterior of the new opera house must be in the modern mode—and he wants it so, he hopes the interior can be designed in the red and gold 19th century manner. He feels that not only do people like the old style but that it is more appropriate for an opera house, since most of the operas performed today are of 19th century vintage.

Let's hope the architects for the opera house don't take Mr. Bing too literally, but let's also hope that they do pay attention to his words. It is not necessary to reproduce the old Diamond Horseshoe to retain its plush elegance. Contemporary design, using contemporary materials, can reproduce the atmosphere without copying the forms. It will be a very real challenge to the designer.

The Waldorf Astoria is the epitome of the stuffy and ornate "Modernism" of the 1920s, yet even then, Ed Stone showed that true elegance and richness could be achieved without reliance on any previous plushy styles, including 1920 Art Nouveau, in the "Starlight Roof" which he designed in the Waldorf for Schultze and Weaver. He and other architects are showing it today, principally in the new embassies they are designing around the world.

This is by no means an original observation of mine. Many architects have the problem on their minds. Paul Rudolph, writing in "Perspecta 4," annual publication of Yale's architectural students, says:

"Many of us are not very pleased with our current output; indeed, the average is probably lower than man has ever seen. I fear that we have forgotten many of the basic principles of architecture such as scale, proportion, the relationship between parts, and most important of all, how to create living, breathing dynamic spaces of varying character, capable of helping man forget some of his troubles. With brilliant exceptions, we seem to be content with merely making it work and meeting the budget . . . *Regionalism is one way toward that richness in architecture which other movements have enjoyed and which is so lacking today.*" (Italics are Mr. Rudolph's.)

Of course, Mr. Rudolph is not just talking about fancy interiors for bars and opera houses. He is talking in a very broad sense, and in particular about the embellishment of the exterior of buildings in southern climates with some of the very logical regional and historical appurtenances such as verandas, patios, balconies, grilles, sun shades, louvres, etc. But the need is the same—for a greater richness in our architecture.

AND, WHILE SPEAKING of regional architecture, the current *Bulletin* from the Architectural League of New York tells of a talk given by Betty Pepis on current European interior design. She says that "once upon a time each and every European country had a distinctive flavor of its own (so much so that Danish work could never be mistaken for Swedish or Norwegian or Finnish. All really very different). Now they are all indistinguishable, French, Romanian or whatnot, and all bear a kind of MADE IN USA label." Miss Pepis doesn't think this is good, and I'm very much inclined to agree with her—especially the Americanization of everything.

MRS. MOHOLY NAGY'S recent book, "Native Genius in Anonymous

Architecture" illustrates in a fascinating way the wide and rich range of forms of purely regional and indigenous architecture—the Shaker barn, the New Hampshire corn crib, the Mexican granary. (Probably the roadside stand in the form of a hot dog belongs there too!) The universalization of building materials and techniques should not be enough to stamp all architecture as though it came out of the same mould—should I say, machine? Regionalism has been one of the sources of the great variety and vitality of architecture throughout history, and a natural love for ornamentation has also contributed to its richness and exuberance. Maybe that last word sums it up pretty well: So much of today's architecture lacks exuberance, and exuberance is a natural outward expression of an inner vitality.

WE WERE SADDENED to see in the *New York Times* the other day an announcement of the death of Frederick Law Olmsted, at the age of 87. One of the great modern landscape architects, Mr. Olmsted was the son of Frederick Law Olmsted who, with Calvert Vaux, designed New York City's Central Park. Mr. Olmsted, Jr., cut his teeth on such great works as "Biltmore," the fabulous Vanderbilt estate at Asheville, N. C. In 1901 he was appointed to the Senate Park Commission, charged with preparing plans for the parks and the landscaping of the central buildings of Washington. Until 1932 he was closely tied in with the development of Washington, having his hand in the design of Rock Creek Park, Anacostia Park, the Mall, the White House grounds, and many other projects. His was one of the greatest names in landscape architecture.

Modern Wood Structures

BY FRANK J. HANRAHAN

The author is Executive Vice President of the American Institute of Timber Construction, Washington, D.C. This article is adapted from a paper prepared for the Symposium on Cost Reduction through Creative Engineering, October 29-31, at the U.S. Naval Construction Battalion Center, Port Hueneme, California

Photographs used in this article courtesy the American Institute of Timber Construction.

WOOD HAS ALWAYS BEEN one of man's most important construction materials. Archaeologists have uncovered ruins of ancient civilizations in the near East which date back to earlier than 5000 BC. Many of these ruins contain examples of post-and-beam constructions using native woods. The Bible makes many references to timber construction. When Solomon built the temple in 1012 BC, there were none with "skill to hew timber like unto the Sidonians." The roof and walls were paneled with cedar. The floors were of fir or cypress wood inlaid with gold. The doors were of olive wood carved and inlaid like the walls with gold. The folding temple door was of cypress on posts of olive wood, likewise carved and gold inlaid.

Unique Properties

Why has wood remained a primary construction material for thousands of years? The reason is simply that no competitive material has all the advantages of wood.

If wood were discovered today, it would startle the world. Mankind has lived with this "discovery" so long his appreciation of it has dulled. Assume for a moment that wood had never existed. Plenty of stone and clay products, plenty of metal, plenty

Author's note: The author expresses his appreciation for assistance given in preparation of the paper by engineered timber fabricating firms, their technical men, and his engineering assistant, William R. Ganser, Jr.

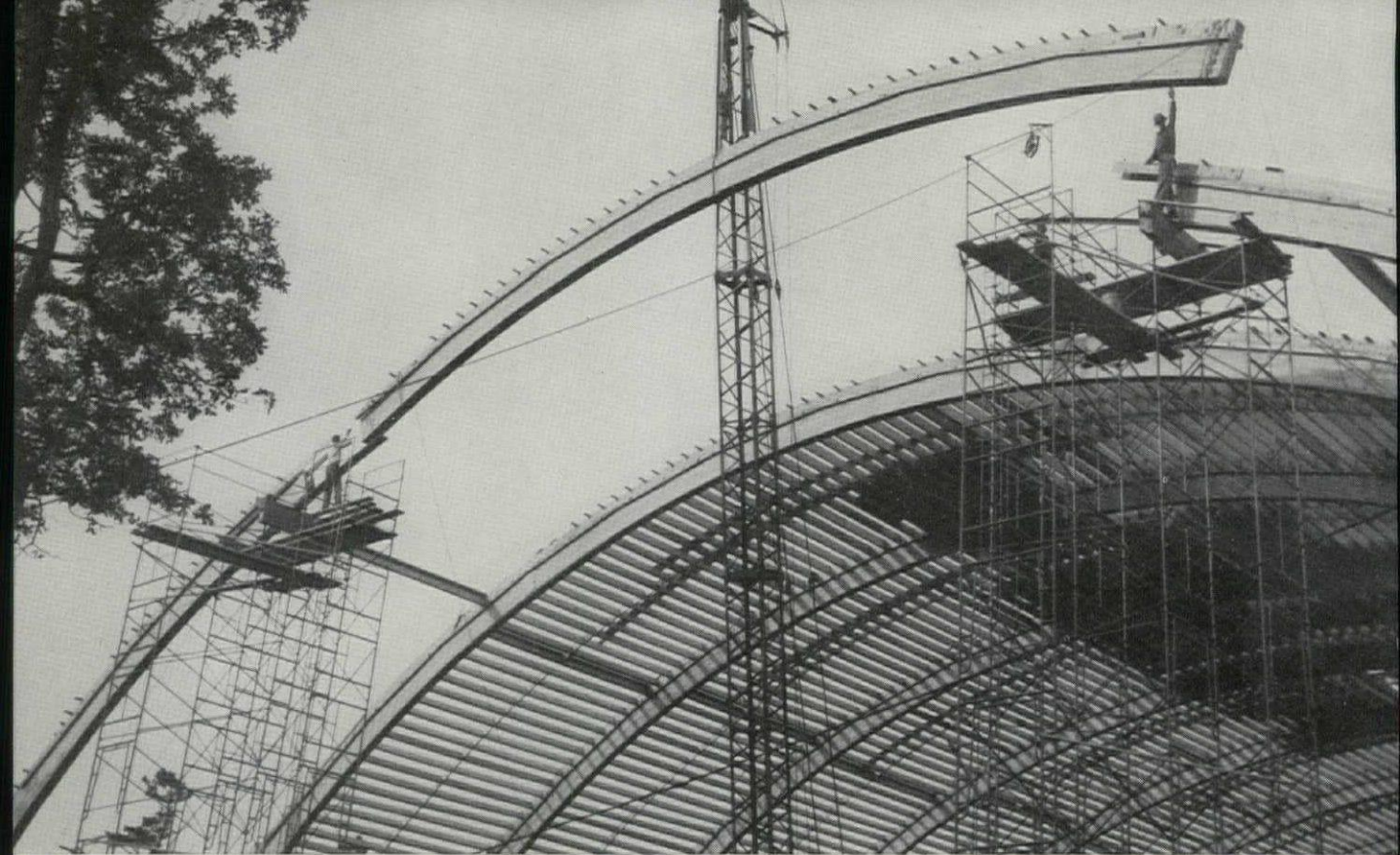


FIG. 1. WHEN GLUED LAMINATED MEMBERS ARE TOO LARGE TO BE SHIPPED IN ONE PIECE, MOMENT SPLICES ARE DESIGNED WHICH FACILITATE RAPID FIELD ERECTION, AS IN THE CASE OF THE UNION COLLEGE FIELD HOUSE IN SCHENECTADY, N. Y.

of glass—but no wood. Suddenly, out of the research laboratories comes this amazing new product.

This “new” material is available in vast quantities. The supply renews itself so the product will always be available. It is strongly competitive in cost. It will not shatter when struck; its resilience permits it to absorb shocks that would rupture or break other materials. It has fine natural insulating qualities. It can be produced in large sizes and in any shape; it can readily be worked into items of exceptional delicacy. It stands up ruggedly under abuse. When properly used, it will last indefinitely. Left in its natural state, it offers an infinite variety of beautiful patterns. Painted, it presents a smooth, attractive, enduring surface. It is readily machined, even with the simplest of tools. It is relatively light in weight, yet possesses great strength. Yes, if discovered today, wood would be hailed as the practically perfect building material.

Engineering Advances

During the last generation wood has become a true engineering material as well as one of craftsmanship. Reliable structural grading, improved fastenings, efficient design, fabrication and erection, and glued laminating have all contributed to making wood a truly modern and versatile engineering, as well as architectural, material.

Figures 1 through 6 illustrate some of the versatile uses of this material. To indicate herein

all of the many types of structures for which wood could be used economically is impractical but, with the exception of certain structures such as sky scrapers, wood is a structural engineering material of practically unlimited economic usefulness.

Ample Supply

Wood is in ample supply and is our only renewable resource. While, in the United States, we cut annually almost 40 billion board feet of lumber of which three-fourths is used in construction, there is still plenty for the future. The American Forest Products Industries, Inc, recently reported: “For the first time in many years, our forests are growing more wood than we are using.” They pointed out that total annual growth of our forest-growing stock exceeds total removal—harvest plus mortality—by 25%!

1952: total new growth of forest-growing stock was 1.25 x removal.

1952: removal of saw timber was 1.02 x new growth to saw timber sizes.

1929: removal was 5.10 x new growth.

Both supply pictures are constantly improving due to better forest practices of industry, government and other forest owners.

With full realization that there will be an ample, continued supply of our most versatile building material, let us explore how we can effect cost reductions through creative design and engineering.

TABLE 1. Standard Widths of Laminated Members

Nominal	3"	4"	5"	6"	8"	10"	12"	14"	16"
Net Finished	2¼"	3¼"	4¼"	5" or 5¼"	7"	9"	11"	12½"	14½"

ECONOMY THRU ENGINEERING

First, let's consider how economies are possible through engineering. For the purposes of this paper we shall assume that engineering embodies the following categories:

- structural design and detailing;
- preparation of specifications;
- advertising of the job for bids;
- construction and supervision;
- recognition of effect of service conditions on maintenance.

Economy thru Design

The economic success or failure of a project may be determined by design. The designer must recognize that the entire building, not just one component such as a beam or a truss, must be properly designed and engineered to obtain maximum economy. Each structure must be analyzed so as to satisfy its own requirements for utility and economy and not be forced arbitrarily to conform to a stereotyped structural framework design.

This is not to say that standard components do not have their place in economic structures. On the contrary, it is obviously less expensive to call for a standard glued laminated arch, beam, or truss pattern, for which the fabricator has patterns and jigs, than to have him custom build from the "ground up." Standardized structural parts have their place when used in designs where all components are

designed with an eye to economy. It has been the experience and belief of many timber fabricators that when the use of the building is fully understood, a custom design in timber will invariably be superior to a standard prefabricated building of another material.

Quoting of specific costs is always dangerous because exceptions can always be found where an error was made in a bid; the bid was made at a loss to prevent a competing material from getting the job; or there was some unusual circumstance which penalized use of the material. It is believed that the cost data given herein may be regarded as typical. In any case, they are based on actual bids and not assumptions.

Standard Sizes

Along with overall engineering and intelligent use of available commercial materials, the use of standard sizes helps to attain maximum economy. For example, for glued laminated members, standard width given in Table 1 are the finished widths of members obtainable from use of standard widths of boards for laminations.

Depth of the member is varied to fulfill requirements for section modulus and moment of inertia. However, depths which are multiples of lamination thickness, generally 1½" or ¾", are preferable.

For sawn lumber, American Lumber Standards sizes, rather than special sizes, and special lengths, are more economical. Normally, economy is best served when building widths and ceiling heights are set to take best advantage of standard lengths of materials.

Standard Details

Because wood is such a versatile material and so easily worked, many different connection details have been developed and used. Each builder may have his own particular way of framing a certain joint, but economy is best served when standard connections are used. Standard details provide simple, economical rather than complex, costly solutions. While not all timber fabricators use exactly the same standard connection details, the basic principles of each connection are essentially the same and have been proven through experience. The designer will profit, therefore, by letting the fabricators specializing in engineered timber construction use their standard connections to carry a given load.



FIG. 2. ANOTHER OF THE ENDLESS VARIETY OF SHAPES AND FORMS POSSIBLE WITH GLUED LAMINATED TIMBER CONSTRUCTION IS ILLUSTRATED BY THE BANDSTAND IN TORRINGTON, WYO.

Design, fabrication and erection costs can be reduced thereby. The Standards Committee of the American Institute of Timber Construction is currently working on a manual of standard details. Figure 1 illustrates one detail being used today.

Various Framing Systems

A wide variety of engineered timber framing systems are available. When the design requires large clear-span areas, normally timber trusses are likely to offer the most economical framing method, but, where appearance is an important factor, beam and arch construction may be more economical. Consideration of the overall building plays an important part because the shape desired may not lend itself to the most efficient load-carrying system. Some types of trusses require additional wall heights because of their depth at the walls. The relative economy of various types of trusses will vary from type to type and with specific applications.

Although there are no fixed rules to determine relative costs of various truss types, one method is to compare them by theoretical efficiencies. The principal purpose of any structural member, including trusses, is to transfer imposed loads to the earth. For balanced loads, the theoretically most efficient shape would be a parabola, because all loads would be transferred as direct stress with no bending moment. Few timber structures, except for some glued laminated arches, are constructed to parabolic shapes. Since the arc of a circle closely approximates a parabola and is much simpler to fabricate, and since most structures must be designed for moment from unbalanced loading as well as for axial loading, the arc of a circle is commonly used.

Theoretically bowstring trusses would be the most efficient truss type. The imposed loads are carried almost directly along the top chord to the supports. Web stresses are lowest of any truss type and thus permit simpler, more economical web member connections. There are many variations of bowstring trusses—from glued laminated chords to segmental bowstring trusses with straight sawn chords. Some are single or monochord sections with strap-and-pin or gusset plate connections; others are multi-leaf chords with web members framing between the leaves. Some use bolts; others use timber connectors for joint fastenings.

Some designers have found substantial cost savings by using bow-string trusses for roof shapes other than curved. Flat or pitched roof shapes can be obtained by building up to the desired shape. The designer again should consider the overall cost picture because these built-up portions generally require special lateral bracing for the top chord of the truss.

Normally, the top chord is braced by the roof joist or decking.

In order of relative efficiency, pitched trusses are likely to follow bowstring trusses. Here again imposed loads are carried almost directly through the pitched top chords. Web stresses are higher than for bowstring trusses but generally of a magnitude to permit simple and economical connections. Here again there are many framing and web systems possible. Possibly the most economical web system for pitched trusses is the Belgian.

Following pitched trusses in order of theoretical efficiency are flat trusses. Imposed loads are transferred from chords through web members to supports. Web member stresses are higher than in pitched or bowstring trusses and with some framing systems require rather complicated joint details. Glued laminated chords with glued-on bearing blocks eliminate bolt-tightening subsequent to that at erection.

Fabricators in certain areas find that the single plane, sawn, strap-and-pin flat truss with broached ends has proven to be more economical than bowstring trusses on some jobs. Unseasoned lumber can be used since design bolt values are computed for loose bolts and thus do not require bolt tightening as the lumber seasons. The broached end reduces exterior wall height with resulting savings.

From this brief discussion in which many special truss types, such as cantilevered, saw-tooth, scissors, crescent and others, were not considered, it will be noted that, while trusses may be rated on theoretical design efficiency in carrying loads, actual job experience which also includes fabrication and erection may show costs which vary considerably from such assumptions. In general, it would be expected that the special truss types mentioned above would not be most economical, but they may be so in certain cases. In other words, each job should be investigated and designed for its own particular requirements and resulting economies.

What is true for trusses is also true for glued laminated beams, arches and frames. Some designers claim that tied arches are most economical for spans from 60' to 80'. Ties may be wood members or metal rods. Arches, including lamella, can be economical in long spans through elimination of side wall framing. See Figure 3. Here again the designer is cautioned not to accept generalities but to analyze each job for its own merits and is urged to call in engineered-timber fabricators for their money-saving suggestions. There are many shapes and forms of beams, arches and domes to choose from.

Some factors which the designer must take into consideration when selecting a particular framing

TABLE 2. Depth-to-Span Ratios for Trusses

Bowstring	1/6 to 1/8
Pitched	1/6
Flat	1/8 to 1/10

system are: span-depth ratios for trusses, most economic spacing of framing members, and most economic span for framing system selected. Several rules of thumb have been established through years of experience in the field. If the designer will keep these rules in mind, more economical structures are likely to result.

One reason for difficulties experienced with timber structures constructed during World War II was that relatively few designers were familiar with timber construction. Most had experience in concrete or steel construction, and it was natural for them to apply criteria for steel trusses to timber. This did not take into account the difference in properties of the two materials.

Span-Depth Ratios

Among criteria recommended by the American Institute of Timber Construction are the following approximate span-depth ratios in Table 2 above.

Normally, bowstring trusses have top chord radii which are about equal to the span in spans up to 40 or 100 feet and radii somewhat greater than the span in longer spans. For longer spans, larger depths should be specified. Shallower trusses can be built but are in general more costly and may require special detailing due to relatively larger deflections and joint loads.

Spacing of Trusses, Arches, Beams, etc.

Generally speaking, the largest practical spacing consistent with the covering material and loading will be the lowest cost system. Table 3 tabulates some commonly used roof spans of various secondary framing systems which in turn determine spacing of primary structural frame or bents.

A beam system is frequently used where a flat or low-pitched roof surface is desired, but other beam shapes such as pitched or cambered are also available. Timber beams over 40' in span are built

TABLE 3. Spans

4" Roof deck applied directly	16'
Joist system	20'
Purlins	26'
Beams	40'
Carrying trusses	Up to 60' or more



FIG. 3. A GYMNASIUM AT ST. CHARLES, MO., WITH AN 85-FT. CLEAR-SPAN LAMELLA ROOF IS A GOOD EXAMPLE OF LOW-COST ENGINEERED TIMBER CONSTRUCTION.

every day and are common in spans of 100 feet or more. Their economy is dependent on the particular requirements of the specific job. Size for size, curved members cost more than straight members but their greater load carrying efficiency, appearance, or other advantages frequently make them preferable. Straight glued laminated beams having a clear span of 135' have been used.

Maximum Spans

The maximum economical span for any given type of timber truss will vary with the material available, loading conditions, spacing, type of truss, ratio of labor to material cost, and fabrication method. Some designers claim pitched and flat trusses for average loadings and spacings are less economical on over 80' spans. Bowstring trusses have been constructed economically with spans up to 250'.

Practically, the size and span of individual glued laminated members is limited only by transportation facilities. When longer spans are required than available transportation facilities permit, splices are used. The practical limit of clear span for glued laminated members is not known. The longest to date is 300' see Figure 4.

Other Cost-Reducing Design Considerations

Listed below are a few important factors which, when applied to timber designs, tend to reduce costs:

- Detail as simple and as few joints as practicable, placing splices so as to minimize design, fabrication and erection problems.
- Avoid unnecessary variations in members; i.e., use the identical member design repetitively where practical and keep the number of different parts to a minimum.
- Provide adequate roof drainage slopes and require

realistic camber in trusses and in glued laminated beams. In this regard, special attention should be given to continuous spans, with respect to both positive and negative deflections, to provide proper and adequate roof drainage.

- Select proper adhesive to fit job conditions—requiring waterproof when water resistant adhesives will serve satisfactorily is expensive.
- For glued laminated members, lumber grade combinations resulting in fiber stresses in the neighborhood of 2400 psi are generally most economical for average work. This permits lower grade interior laminations and higher grade exterior laminations. Thereby both are used to best advantage. Also, better economy results from specifying allowable design stresses required rather than combinations of lumber grades to be used.



FIG. 4. THESE THREE-HINGED ARCHES SPANNING 248 FT. IN THE JAI ALAI FRONTON AT RIVERIA BEACH, FLA., ILLUSTRATE THE MASSIVE SIZES AND LARGE CLEAR SPANS POSSIBLE WITH ENGINEERED TIMBER CONSTRUCTION.

- When using curved shapes, select those which follow as closely as practicable theoretical load lines in order to reduce moment stresses.
- Modification of cross-section by tapering or building up local areas can be an economical way to control stresses.
- Judicious use of multiple, cantilever, and suspended spans in beams tend to balance positive and negative moments and can result in lower costs.

ECONOMY THRU USE OF STANDARDS

A factor, not previously discussed, which is a design consideration is that of appearance. Figure 5 illustrates the decorative effect of glued laminated structural members. Not all jobs would require glued members to be finished in this fashion. There are three standard appearance grades of glued laminated members which have been developed by AITC. These grades in no way affect strength. Naturally, it is most economical to specify finish or

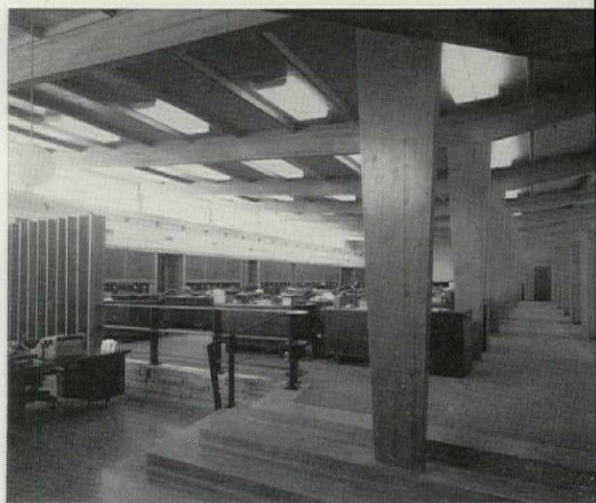


FIG. 5. GLUED LAMINATED COLUMNS, BEAMS, AND PLANK ROOF DECK USED IN THIS MODERN OFFICE, PROVIDE, IN ADDITION TO AN EFFICIENT STRUCTURAL SYSTEM, WARMTH AND BEAUTY AS AN ADDITIONAL BONUS, WHEN USING SUCH ENGINEERED TIMBER CONSTRUCTION.

appearance grade best suited for a given job rather than to require "premium" appearance grade for all jobs.

What holds true for appearance grades is also true for all other aspects of construction with timber. That is, the use of standards, specifications, and code of standard practice developed by the industry bring about more economical structures than do special requirements. The designer is urged to follow and adhere to these documents. Basic among these are the AITC "Timber Construction Standards." The following standards are included therein:

- Construction and Service Classification
- Specifications for Design of Structural Timber Framing
- Minimum Standards for Fabrication of Structural Timber
- Minimum Standards for Erection of Fabricated Timber
- Outline Specifications for Structural Timber Framing
- Code of Standard Practice
- Reference Specifications and Codes

The latter documents include all recognized standards or specifications necessary for economical engineered timber construction, including "National Design Specification for Stress-Grade Lumber and Its Fastenings," and various regional grading rules for sawn and glued laminated lumber.

In addition, the Standards Committee AITC which is composed principally of chief engineers of member fabricators, consulting engineers, government officials, professors and others with a technical interest in engineered timber construction, is continually working toward perfecting and expanding these standards. Currently they have some twenty

jects, in various stages of completion, which will materially increase technological knowledge and result in even better timber structures.

ECONOMY IN BID PROCEDURES

Alternate estimates on bids are controversial. Alternate estimates from bidders may increase overhead costs slightly, but the closing of bids to certain competitive materials invites inflated costs for the materials permitted and does not take advantage of, or encourage, technical and production advancements and economies in materials and constructions affected thereby. Ruling out timber construction by the military is particularly unrealistic because during wartime the bulk of the construction must of necessity be in wood because of unavailability of metals.

The following three actual examples will illustrate this point:

"To help in determination of school costs, the Santa Monica Board of Education commissioned architect Pierre Claeysens to design an identical school of three construction types: wood frame, steel frame, and reinforced concrete. The drawings were put out simultaneously and bids ran, respectively: \$114,000, \$130,700 and \$145,988. The wood building was built."⁽¹⁾* The concrete bid was 37 per cent higher, and the steel bid was 15 per cent higher than the wood bid.

In Memphis, Tennessee, a lamella wood roof covering a 10,340 sf gymnasium was bid and built as an alternate. Savings were \$15,000 against the next lowest alternate, and the bid was just half the cost of the next lowest construction material.

At Keltys, Texas, the Angelina County Lumber Company built two new buildings totaling 69,000 sf

with timber roof trusses. One structure is 150' x 160' and the other is 150' x 300'. The total cost for the two units was \$136,000, while the lowest estimate of cost on two steel frame buildings of like size was \$195,600. The steel alternate would have cost 44 % more than the wood.

It is not in the best interest of the Government, and therefore the taxpayer, to close the door on any one material or group of materials. Many timber structures have been built as alternates to the original design at substantial savings to the owner. These savings have not been limited only to initial or first costs but to overall long-term cost of the building to the owner. A designer who will not permit alternates, unless the structure is for some highly specialized occupancy in which only one material has proved satisfactory by actual experience, such as wood in a corrosive atmosphere, is not giving his client a fair opportunity to obtain lowest costs. We advocate that alternates be permitted and contracts be awarded to low bids.

ECONOMY IN CONSTRUCTION METHODS

Up to this point we have been discussing economies that are influenced primarily by the designer. Other economies of timber construction are not necessarily influenced by him. The fact that timber structures generally have lighter dead loads than other materials results in a less massive and, therefore, less costly structure. Construction time is generally shorter with timber construction than with other materials. This fact alone can be a substantial cost-reducing factor.

Figure 6 shows a 120' span modified bowstring truss being erected over the warehouse section of the new American Can Company plant at Salem, Oregon. These trusses, spaced 20' on centers on 30' glued laminated columns, are used in tandem to span the 240' x 380' warehouse. The 161' x 200' manufacturing wing, separated from the warehouse by a tilt-up concrete wall, is framed with glued laminated cantilevered beams. Cost of the new building averaged about \$5.10 per sf, including sprinkler system, lighting, heating in the manufacturing department and office, railroad sidings, yard paving and contractors' fees. In spite of adverse weather conditions, the facility was completed in four and a half months.

Engineered-Timber Specialists

For maximum economy in both initial and long-time cost of construction, it is recommended that experienced specialists in timber design, fabrication and erection be brought into the picture early in the

* Numbers in parentheses refer to bibliography at end of paper

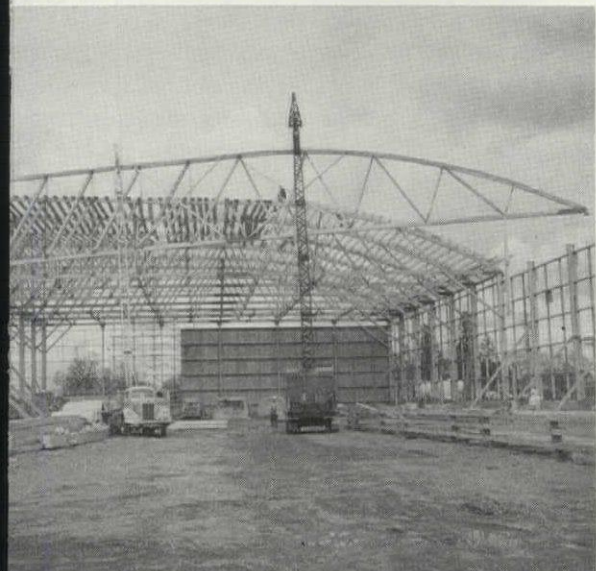


FIG. 6. THESE 120 FT. SPAN MODIFIED BOWSTRING TRUSSES IN AMERICAN CAN CO. WAREHOUSE, PERMIT MULTIPLE SPANS WITHOUT BUILT-UP VALLEYS.

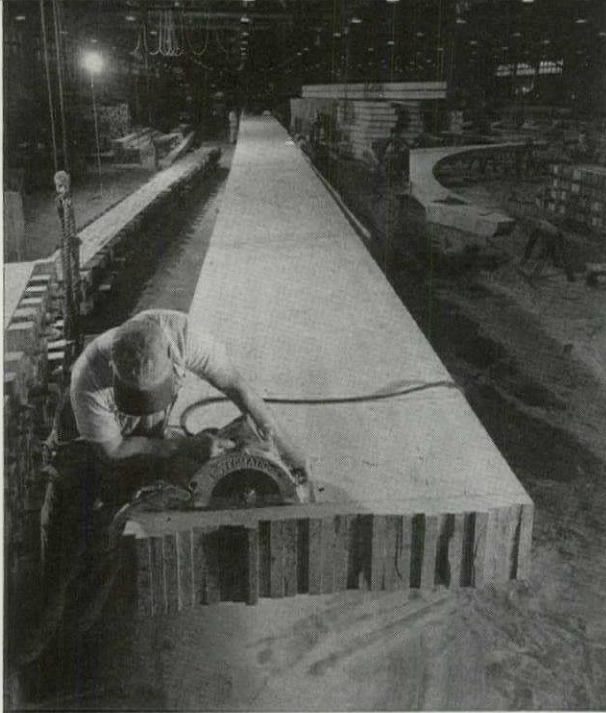


FIG. 7. PHOTO SHOWS PLANT FABRICATION OF A 100 FT. GLUED LAMINATED BEAM. NOTE THE BUILT-IN CAMBER.

planning. Today there is a substantial engineered-timber fabricating industry equipped with structural engineers to advise and assist architects and engineers on design, with efficient fabricating equipment and experienced fabricating personnel to insure accurate and economical fabrication, and with know-how for speedy, accurate, economical erection. Upon request, AITC will be pleased to send you a list of such firms.

The equipment, precision, experience, and quality control necessary for manufacture of a long-lasting, quality, glued laminated product make shop-fabrication mandatory. On occasion, a fabricator will do a minor amount of careful field-gluing in an assembly process. However, even this is avoided whenever possible. Attempting to do glued laminating in the field by the inexperienced would be a costly mistake on any contractor's part. Figure 7 shows views inside a typical laminating plant.

Formwork and Centering

The American Concrete Institute (2) recently published a summary of answers to a questionnaire on formwork received from a selected group of contractors in the United States and Canada. Seventy-four per cent of the contractors said that reuse of forms for large areas that call for a number of similar placements was their dominant practice. Sixty per cent said forms are usually power handled where feasible. One hundred per cent of them feel that architects and structural engineers could give more thought to simplifying concrete designs to facilitate reuse of forms without revamping. Wood, because of its ability to carry very large loads for short periods of time, plus its relative light weight and

ease of fabrication, makes an ideal material for concrete formwork and centering.

A mistake commonly made by form designers is not to take into sufficient account standard lumber and plywood sizes. This requires undue cutting and fitting on the job with associated increase in cost. Use of large, reusable panels, capable of being power handled and constructed from standard sizes, reduces costs. Also, demolition and salvage values are increased because much material will have reuse or resale value. Attention should be paid to deflection and cambering to avoid producing sagged appearance in finished surfaces and an increase in the amount of concrete required.

Composite Timber-Concrete Construction

This construction combines use of concrete and lumber in such a way that concrete is in compression and lumber is in tension. The lumber also provides the additional function of supporting the poured concrete during construction. When continuous spans are used, lumber is in compression over the supports and tension steel must be provided in concrete. Temperature steel is used in both directions in the concrete. The lumber in such structures, which are mostly used for highway bridges, is usually preservative treated by a pressure process to assure long service life.

Longer service life and greater economy, including reduction of concrete framework, have been prime reasons for development of this structural system. The concrete provides a safe and enduring wearing surface for today's highway loads, and the lumber provides an easily-fabricated structural component which can be prefabricated and panelized in the shop to save on-site labor costs.

Moreover, once in place, lumber components are generally capable of carrying not only dead loads of the entire structure but also the construction loads. Sometimes temporary intermediate supports are necessary on long spans, but, in general, framework and supports are minimized.

There are two principal types of composite timber-concrete construction in use today: one is a composite T-beam type using either sawn lumber or glued laminated stem with concrete slab. The other type consists of a laminated deck usually of 2" or 3" lumber on edge with a concrete wearing surface. There are several different methods of obtaining necessary shear and bond between timber and concrete. These constructions carry heavy loads with little deflection. The designer should not overlook the economic possibilities of these and other engineered timber constructions for bridges and similar applications.



FIG. 8. 4" ROOF DECKING IS COMMONLY USED DIRECTLY ON TOP OF GLUED LAMINATED ARCHES BECAUSE OF ITS DECORATIVE APPEARANCE ON THE UNDERSIDE, ITS STRUCTURAL RIGIDITY, HIGH INSULATING VALUE AND ITS LOW COST. THIS TYPE OF CONSTRUCTION ALSO SAVES LATERAL BRACING.

Plank-and-Beam Construction

With the advent of 4" roof deck or planking as illustrated in Figure 8, the modern adaptation of the old familiar plank-and-beam construction is becoming an extremely popular and economical system of construction. This decking can be applied directly and simply on top of glued laminated arches, trusses or beams. Table 4 shows comparative insulation effect of this type of deck construction and compared with other deck constructions.

Substantial cost savings can result from using such 4" plank because this one item serves simultaneously as a load-carrying structural member, lateral bracing for principal framing members, a solid deck for application of roofing, insulation, and a very attractive interior finished ceiling. Also, it spans 2 to 8 times the distance which other deck constructions shown in Table 4 will span, and thereby reduces framing costs. Such construction

with glued laminated framing members or ornamental wood trusses is commonly used for churches, homes, offices, clubs, assembly buildings, and other structures where a very attractive interior finish is desired.

Economy thru Long Service Life and Proper Maintenance

A complete discussion of cost reduction for buildings and structures must include service life and maintenance. The military has long been one to recognize these facts. Unfortunately, a resistance to use of timber construction, based primarily on experience with structures built during World War II, has been built up in some quarters among those not familiar with conditions under which these structures were built.

Because of the non-homogeneous properties of wood, proper design in timber calls for a better knowledge of engineering fundamentals than design in most other materials.

During the war, government agencies concerned with the use of materials took what we would consider in normal times very drastic action in lowering safety factors to accomplish national objectives. Although probably an extreme case, a large number of war buildings in wood were designed and built as follows:

Designs were made on the basis of a roof load of 15 lb. psf. These buildings were built in the same areas where building codes require that designs be based on roof loads of 20, 30 or more pounds psf. Designs were based on the assumption that a 1,200 lb. stress grade of lumber would be used. However, design stresses used for this grade were increased from 1,200 to 1,800 psi.

Lumber was purchased by auction and certain quantities had to be bought to satisfy requirements. All of the 1,200 lb stress grade material offered was purchased, but this was but a fraction of the requirements, so lumber of other grades was purchased until the desired quantity was obtained. This included a considerable quantity of No. 1, No. 2 and even No. 3 grades of non-structural timber—yard lumber not graded for strength.

The haste with which the war job had to be done, together with its size, made necessary the use of many personnel with limited or no experience with design, fabrication and erection of wood structures. There was little time for refinement and checking. Errors were made. Such things are inherent in an emergency undertaking, but the important thing is that the job was done and that it was done on time.

In some cases problems have been exaggerated

TABLE 4. Heat Loss Transmission* (3)

	No additional insulation	With 1" Rigid insulation added
Western Red Cedar	.16	.11
Spruce	.17	.12
4" Douglas fir	.19	.12
Poured gypsum on 1" insulation board	.19	.12
1 1/2" Calcium-silicate tile	.19	.13
Lightweight concrete plank	.54	.20
Lightweight concrete on metal lath	.69	.22
Reinforced concrete	.72	.23
Steel roof deck	.95	.25

* U-Value Factor, Btu/hr/sf/1°F. difference in temperature, indoors and outdoors, roof membrane included, but not ceiling.

and troubles have been compounded by improper, or lack of, maintenance. However, in view of aforementioned circumstances, the most amazing thing is that there have been very few failures and that these wartime timber structures have given such remarkable service. As a matter of fact, a principal reason for organizing the American Institute of Timber Construction was to set up proper standards and practices to prevent such troubles as showed up in these war structures.

AITC hopes to get architects and engineers better acquainted with good timber design. In event of another national emergency, timber will again become the most available building material, and all designers should learn how to use it properly. The training should begin now by using it during peacetime.

Improper use of unseasoned lumber increased maintenance in these war structures. However, unseasoned lumber can be and is successfully used to construct long-lasting, maintenance-free, timber structures. The trick is in knowing how to use it. The designer must be familiar with the results of wood losing moisture so that he may predict what will happen to various structural components and provide for these changes in the original design.

For most applications, use of seasoned lumber would be preferable to use of unseasoned lumber if the latter were available at the same prices. Much progress has been made in economic drying of small sizes of sawn lumber, but large sizes of sawn lumber are more difficult to dry and considerably more costly.

Since the gluing process requires a low moisture content of individual laminations for quality glue-lines, laminated members are glued up at moisture contents which approach moisture content expected in service. This minimizes or eliminates most problems associated with seasoning. However, in time of war there will not be sufficient quantities of seasoned and glued laminated lumber, and unseasoned lumber must be used. Also, economies obtained by its use in peacetime should be considered.

Often, in World War II structures, insufficient allowances for deflection of unseasoned roof framing, or designs inviting excessive deflections, were used. Experience has shown that under long-time loading, the resulting total deflection is likely to greatly exceed the initial deflection. Therefore, some designers, when computing deflection, use about $1\frac{1}{2}$ to 2 times the dead load; others use an "E" value of $\frac{1}{2}$ published value for the species.

Also, as lumber seasons, members shrink in size and there is a tendency for joints in some designs to become loose—making it desirable to re-

tighten bolts after seasoning to maintain structural efficiency of connectors and bolts and avoid excessive deflection.

Use of properly seasoned sawn lumber, of glued laminated lumber, or of simple joints such as strap and-pin joints and minimum thickness of unseasoned material, such as in monochords, with allowance for any looseness in design load values for fastening makes such retightening of bolts unnecessary.

With proper design, fabrication and erection procedures and a program of intelligent and practical maintenance, timber structures are permanent. Numerous examples of timber structures over 100 years old are prevalent under practically all service and climatic conditions all over the world.

Fire Resistance of Timber Construction

One reason frequently offered for not using timber construction, even though more economical, is that "wood burns" and is "too much of a fire hazard." There is no intent here to suggest that wood won't burn or is not a combustible material. "Combustible" is a relative term; many materials which will burn under one set of conditions will not burn under others; e.g., structural steel is noncombustible, but fine steel wool is combustible. The term combustible is not related to any specific ignition temperature (4)

Such words as combustible, noncombustible, fire-proof are misleading when referring to fire safety of any structure or building. Freitag in speaking of the catastrophe of the Iroquois Theater fire, Chicago, Ill., (1903) said: "The results constituted the saddest and the most forcible demonstration we had had yet . . . of the folly of relying upon fire-resisting construction *per se* for safety of human life. It demonstrated that construction bears little relation to the possible loss of life unless the construction is supplemented by fire-preventive design and precautions and by fire-protective appliances and devices (5) He might also have added that this applies to loss of content and structure as well as human life.

Cothron states: "There simply is no such thing as a fire-proof building, especially with respect to human life, as witness the tragic Cleveland loss some years ago when X-ray films stored in the basement of a fire-proof structure burned. A number of patients were asphyxiated when fumes were blown through the building. This one occurrence is ample evidence that the word 'fire-proof' when considering life is a misnomer. The proper term is 'fire-resistive' . . . You will find abundant proof in the loss department of any fire insurance company that so-called fire-proof buildings, are subject to huge damage from fire (6)

In the minds of some, the term noncombustible, which merely means not combustible, has somehow come to be regarded as a synonym for fire safety. The General Motors Livonia Plant fire did much to dispel this myth and bring thinking back to fundamentals. The Factory Insurance Association stated: "Therefore, before 3:40 pm on August 12, nobody even suspected that a fire like this could happen. The FIA considered the Livonia plant a low-rated risk. It was a *noncombustible building* with *noncombustible machinery* using *noncombustible materials*, and the end product was *noncombustible*." (7)

The foregoing testimony leads to the conclusion that regardless of the degree of combustibility of materials used in a structure, there are other more important factors which determine the fire safety of the structure. In an analysis of 316 large loss fires in the United States and Canada in 1955, the National Fire Protection Association concluded that: "Past studies of fires have shown that large losses usually can be prevented by structurally limiting the area through which a fire may spread. Construction weaknesses have always played a prominent role in large-loss fire experience and the 1955 experience was no exception. Of the 225 fires that occurred in buildings, structural fire protection weaknesses played a significant part in the extent of damage in 100 instances." (8)

The most common weaknesses were enumerated as absence of a division wall, substandard division walls (e.g., did not extend through roof, etc.), and unprotected doorways in division walls. In buildings of more than one story, where fire spread beyond the story of origin, it did so because of open elevator shafts, non-firestopped walls, and openings around pipes.

Also, installation of a sprinkler system is a good precaution to protect contents and reduce loss from fire in buildings of any construction. Col. C. G. Richmond, Chief, Fire Protection Branch, War Department, Washington, D. C., reported on an analysis of 7,464 fires during 1939-1942 in sprinklered industrial buildings having masonry walls as follows: "If but five of these fires are eliminated from the analysis because of special conditions and the remaining 7,459 fires are analyzed, the average loss respectively in reinforced concrete, standard mill and brick-joisted construction amounted to \$348, \$330, and \$339. These figures give strong backing to the commonly made claim that automatic sprinkler protection properly installed and maintained over combustible occupancy reduces to a common level the probable extent of loss by fire in industrial buildings having masonry walls whether or not interior construction is combustible or noncombustible." (9)

Currently the value of warehouse contents lost in fires is now averaging three times the value of the building itself.

There are two important criteria for fire safety of life and property.

Most important is proper engineering design, recognizing the importance of division walls, enclosed stairways and shafts, fire-stopping, roof venting, adequate exits, and other common-sense fire fighting and fire prevention precautions dictated by use and contents of the structure.

How well the structure performs in a fire, rather than whether the materials of which it is composed will burn, is another important criterion. The contents (which are the important fuel factor) will burn in a building of any construction, but avoidance of collapse will permit evacuation, fire fighting, and salvage.

The fact that engineered-timber structures do perform extremely well in a fire and have good fire resistance when modern building code provisions are followed has not received wide enough recognition.

The US Forest Products Laboratory states ("Wood Handbook"): "Heavy timber construction is fire resistant because of the slow rate of burning of wood in massive form." After a fire there is considerable salvage value left in wood structures. There have been many cases where char from heavy timbers has been removed and the member has remained in service.

In a large chemical plant in the South, chemical waste from various processes is pumped into a large earth basin and is then carried away by a stream flowing through the basin. The roads over this basin, all on plant property, cross on timber bridges or trestles. Frequently, some metallic sodium is inadvertently mixed with the chemical waste which creates extremely hot flash fires when it hits the stream and often ignites other chemical waste products. The plant engineer stated that while they had tried bridges of all types over this area, timber bridges were the only ones which could withstand these severe fires and still remain in service.

Although any loss is to be deplored, it would appear that compared with other pertinent factors, too often a disproportionate emphasis is placed on fire losses. Fire loss is not the main threat to property owners, according to "Building Science News," published by the Building Research Institute. Loss from corrosion of metals is more than six times as much. The publication says: "Statistics provided by the National Board of Fire Underwriters show annual property loss due to fire as amounting to roughly \$885 million. On the corrosion side, H. H. Uhlig of MIT's Corrosion Laboratory estimated in

1950 that the annual economic and material loss in this country due to corrosion of metals amounted to \$5½ billion."

ECONOMY THRU CREATIVE DESIGN

For the purpose of this paper, creative design is defined as creative application of the fundamentals and principles just discussed to design of a given structure resulting in a new, unusual, or unique solution. In other words, using established procedures of design in a new or combination of new ways to solve a design problem in an unconventional way. It would be difficult, if not impossible, to tell one how to design creatively. However, reviewing a few examples of what others have done may be helpful.

Recently there appeared in the *Washington Evening Star* a photograph of an Army bandstand at Fort Meade. Unfortunately, we were not able to get a good print of this picture, but the caption read: "Here is a new band shell at Fort Meade, Md., built for summer concerts by military musical organizations. Made of wood, the hyperbolic paraboloid rises 25' from the ground in front and 15' in the rear and weighs roughly 10 psf. The lightness, according to Army Engineers, cuts construction costs . . ." This is an excellent example of cost reduction through creative design.

Figure 9 is a construction shot of the dome at Montana State College in Bozeman, Montana. This 300' clear-span dome with a center height of 92' was constructed of radial glued laminated arches. The completed structure including heat ventilation, sound and lighting systems with a total of 138,080 sf of floor area, cost \$11.10 psf.

Figure 10 is a construction photo taken during erection of glued laminated arches, at West Hempstead, Long Island, New York. These are 250' from center-to-center of bearing and rise 70' at the peak. This is ideal construction for any building requiring large seating areas and large open space, such as armories, drill halls, etc. This type of construction runs about \$3.00 psf of floor area including arches, purlins, roof deck, endwall framing, and endwall covering.

A large timber-framed warehouse for chemical storage was recently completed for the Potash Company of America at Carlsbad, New Mexico. The structure, measuring 580' by 180' is constructed of glued laminated buttresses which support three hinged glued laminated arches, and was built over and around an 80,000 ton pile of potash that has been in open storage. Use of buttressed arch design made it possible to build a large post-free structure at lower cost and with shorter main arches. The framing was erected at a saving of \$60,000 over cost

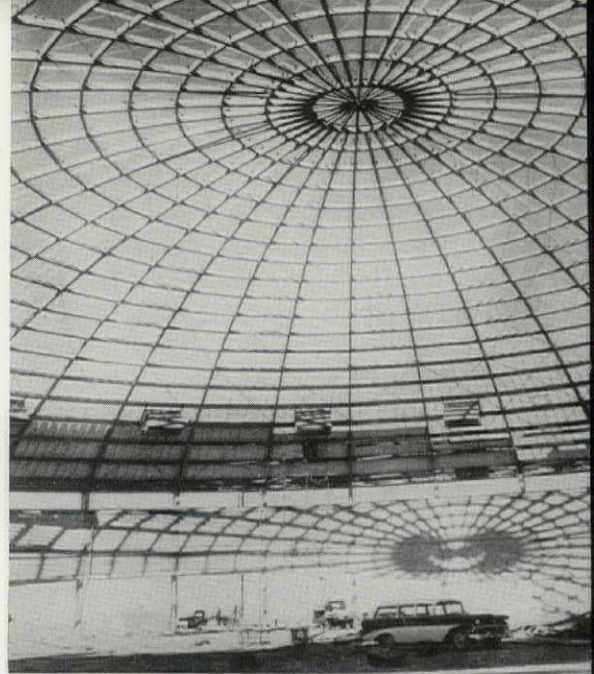


FIG. 9. THIS RECORD-BREAKING 300 FT. DIAMETER DOME MONTANA STATE COLLEGE IS AN EXCELLENT EXAMPLE OF COST REDUCTION THROUGH CREATIVE DESIGN AND ENGINEERING.



FIG. 10. THIS SHOWS THE 250 FT. SPAN GLUED LAMINATED ARCHES IN ISLAND GARDEN ARENA, WEST HEMPSTEAD, N. Y. THE COST ON THIS JOB WAS APPROXIMATELY \$3.00 PER SQUARE FOOT OF FLOOR AREA, INCLUDING THE ARCHES, PURLINS, ROOF DECK, ENDWALL FRAMING AND ENDWALL COVERING.

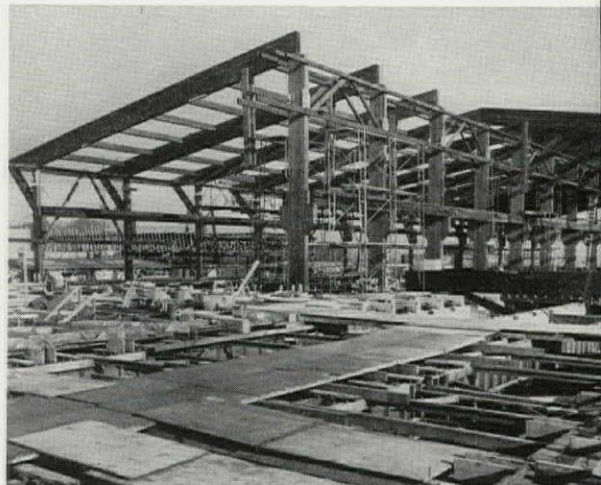


FIG. 11. WOOD IS AN EXCELLENT STRUCTURAL MATERIAL FOR USE IN CORROSIVE ATMOSPHERES. THESE GLUED LAMINATED BEAMS, COLUMNS AND CRANE BEAMS ARE BEING ERECTED FOR A CHLORINE PLANT.

steel framing and required only 6 weeks to complete. In addition to low cost and fast erection time, timber arches are inert to chemical action and need not have protective painting and maintenance. Figure 1 illustrates laminated columns and beams being used in a chemical plant.

These examples demonstrate that wood is a versatile building material, and that it can be used creatively to produce economical, efficient, attractive, and serviceable structures. Through application of established engineering principles which apply to timber construction, by conforming to established standards and specifications, and by making use of engineered-timber specialists, more economical timber structures can be built. As more architects and engineers become familiar with the advantages and possibilities of engineered timber construction, further cost reductions through creative design and engineering will be made.

In their attempt to reduce construction costs, we respectfully suggest to the military that they give more consideration to economies that can be produced through use of modern engineered-timber construction.

REFERENCES QUOTED

- (1) From an address delivered at meeting of National Lumber Manufacturers Association, Washington, D. C., May 13-15, 1957, by W. Jeter Eason.
- (2) *Journal of the American Concrete Institute*, June 1957, pages 1105 to 1118.
- (3) Adapted from a table in "Structural Engineering Techniques," 4th edition, published by *Progressive Architecture*.
- (4) "National Fire Protection Association Handbook of Fire Protection," by Crosby-Fiske-Corster, NFPA, Boston, Mass., 11th edition, 1954, page 21.
- (5) "Fire Protection & Fire Prevention," J. K. Kreitag, John Wiley, New York, N. Y., 1921.
- (6) Paper before the 78th Conference of the International Association of Fire Chiefs, Perrin C. Krothron, August, 1951.
- (7) "G. M.'s Livonia Fire—The Roof Fell In," *The Spectator*, The Factory Insurance Association, October, 1953.
- (8) "Large Loss Fires of 1955—Summary," NFPA Staff Study, *Quarterly of the National Fire Protection Association*, Vol. 49, No. 4, April, 1956, pages 286-287.
- (9) "Lessons From Major Industrial Fires," by C. G. Richmond, Education Committee, International Association of Fire Chiefs, Arlington, Mass., 1944.

SELECTED ENGINEERED TIMBER CONSTRUCTION REFERENCES

1. "Timber Construction Standards" (\$2.00) American Institute of Timber Construction, 1757 K St., N.W., Washington 6, D.C.
2. "Inspection Manual for Structural Glued Laminated Lumber" (\$2.00) American Institute of Timber Construction.
3. "National Design Specification for Stress-Grade Lumber and Its Fastenings" (\$0.50) National Lumber Manufacturers Association, 1319 18th St., N.W., Washington 6, D.C.
4. Various regional specifications for sawn and glued laminated lumber. (See "Timber Construction Standards" for detailed list.)
5. "Wood Handbook," USDA Handbook No. 72, by US Forest Products Laboratory (\$2.00) US Superintendent of Documents, Washington 25, D.C.
6. "Fabrication and Design of Glued Laminated Wood Structural Members" by US Forest Products Laboratory, USDA Technical Bulletin No. 1069 (\$0.60) US Superintendent of Documents.
7. "Douglas Fir Use Book," West Coast Lumbermen's Association, 1410 S.W. Morrison St., Portland, Oregon.
8. "Modern Timber Engineering" (\$2.00) Southern Pine Association, New Orleans, Louisiana.
9. "Southern Pine Manual" (\$1.50) Southern Pine Association.
10. "Wood Structural Design Data," National Lumber Manufacturers Association.
11. "Timber Design and Construction Handbook" (\$12.75) by Timber Engineering Co., available from F. W. Dodge Corporation.
12. "Our Growing Wood Supply," 1957 Edition, published by American Forest Products Industries, 1816 N St., N.W., Washington, 6, D.C.
13. "Fact or Fiction!" by Verne Ketchum, published by Timber Structures, Inc., P.O. Box 3782, Portland 8, Oregon.
14. "Fire Safety in Commercial & Industrial Space" by Frank J. Hanrahan, published in *Bulletin of The American Institute of Architects*, Jan.-Feb, 1954. Reprints available from AITC.
15. "Heavy Timber Construction for Fire Safety" by Frank J. Hanrahan, a paper delivered at the 59th Annual Meeting of the National Fire Protection Association. See also *NFPA Quarterly*, January, 1957.
16. "Fire Safety of Engineered Timber Construction" by Frank J. Hanrahan, Paper No. 56-A-137 delivered at the American Society of Mechanical Engineers Annual Meeting, 1956. See also *Mechanical Engineering*, April, 1957.

TECHNICAL NEWS

when is an architect liable?

A recent decision of the Supreme Court involving the responsibility of the architect for a waiver of a portion of the retained percentage, is worthy of careful consideration.

The contractor for a school job having a balance due on the original contract of \$15,347.38 requested the architect to approve a payment of \$11,000 of the retained percentage, in order that he might meet a pressing obligation not related to his contract, in addition to his regular payment of \$1,544.09.

The architect in a letter to the Board of Trustees stated, "If the Board wishes to make this advance, this office approves."

Four days before this letter was written the architect had written the Board of Trustees advising that the auditorium and cafeteria building had been substantially completed but noting five important items to be done before acceptance.

Armed with the architect's letter, the contractor obtained, from a Deputy in the office of the Superintendent of Education, a warrant for his payment of \$1,544.09 and the \$11,000 retainage.

After collecting on the warrant, the contractor notified his surety that he was in default and for it to finish the building and complete the contract, which included the payment of \$17,000 outstanding material bills.

After completing the contract and the payment of the bills, the surety brought action against the architect, the Superintendent of Education, for breach of his faithful performance obligation, and the surety of the Superintendent of Education for breach of his statutory bond.

The Court in its decision held that where the contract provides for progress payments not to exceed 85% of the contract price and 15% retainage, this said 15% retainage is for the mutual benefit and protection of the owner and surety and where the surety is required to pay bills for labor and materials going into the construction it may assert a claim

to the retainage under the equitable doctrine of subrogation.

The Court further held the surety's rights of subrogation began on the date of the execution of its bond and was therefore vested in the surety at the time the retained funds were released to the contractor.

The Court further held the architect, by his contract with the Trustees, assumed the obligation to supervise performance of the contract and his failure to exercise due care and diligence to ascertain if there were outstanding bills for labor and materials before releasing the retainage might result in loss to the surety by depriving it of its rights under the doctrine of equitable subrogation. So the architect undertook the performance of an act, which it was apparent, if negligently done would result in loss to the surety. Therefore the law imposes upon the architect a duty to exercise due care to avoid such loss.

specifying of sprinkler work

Representatives of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, and the National Automatic Sprinkler & Fire Control Association are agreed in recommending that all sprinkler and underground fire control work should be specified separately as the work of the Sprinkler Contractor to avoid questions of jurisdiction.

committee appointment:

Justin Henshell, AIA, of the New York Chapter, AIA, has been appointed as the Institute's Representative on the newly organized ASA Sectional Committee A115: Standard for Mounting Dimensions of Door Locks & Flush Bolts.

new member of producers' council

Ador Sales, Inc.
2345 W. Commonwealth Avenue
Fullerton, California

C. E. Munson, Vice President
National Representative

acceptability of products

Federal Housing Administration
(see previous lists in *AIA Bulletin & Journals*)

Sisalkraft Moistop

American Sisalkraft Corporation
Attleboro, Mass.

E-Z Ply Shake Siding

Heintz Lumber Company
211 NE Columbia Boulevard
Portland 11, Oregon

Ruberoid Crawl Space Cover and
Concrete Slab Waterproofing

The Ruberoid Company
500 Fifth Avenue
New York 35, NY

Old American Crawl Space Cover
and Concrete Slab Waterproofing

The Old American Roofing Material
Division of the Ruberoid Company
500 Fifth Avenue
New York 35, NY

Gramwood Parkraft Flooring
Jasper Wood Products Company

Jasper, Indiana

Ply-Shed Flashing

Glas-Kraft Incorporated
Mill Street
Lonsdale, Rhode Island

Wood Particle Board
Pope & Talbot, Inc
3070 NW Front Avenue
Portland 10, Oregon

G-B Duct

Gustin-Bacon Manufacturing
Company

210 W Tenth Street
Kansas City 5, Missouri

Insulite Primed Siding

Insulite Division, Minnesota and
Ontario Paper Company

500 Investors Building
Minneapolis 2, Minnesota

PAR-WOOD Particle Board

Pacific Plywood Company
P O Box 78

Dillard, Oregon

"Tyton" Joint Rubber Gasket
U S Pipe and Foundry Company

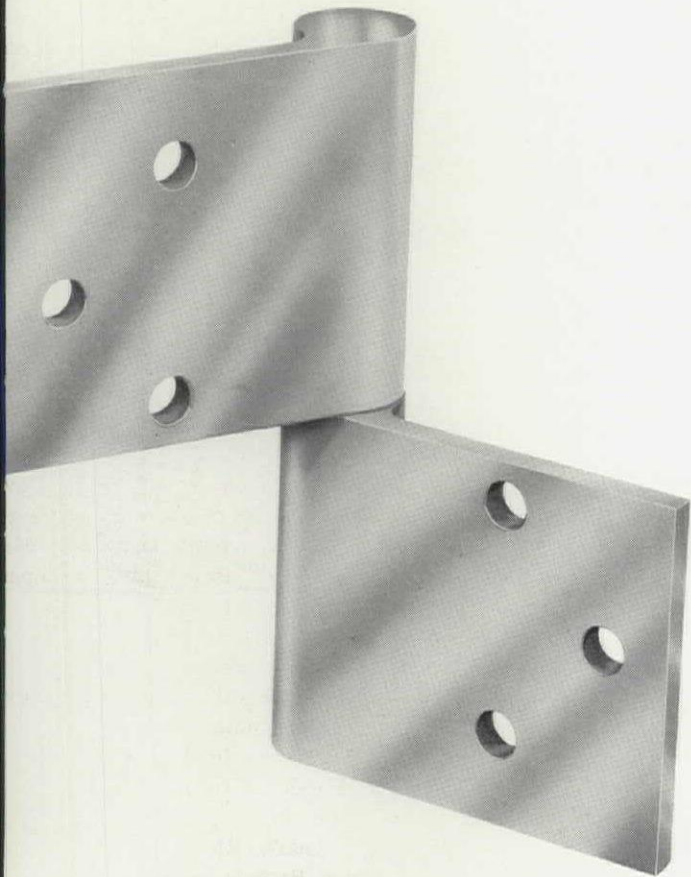
Burlington, N J

Silvara Stone

Kingston Lumber Company
171 Union Street

Kingston, Pa

Chase Brass & Copper Company
Waterbury 20, Conn



This hinge has just been

removed from a door that
was opened and closed one million
times. *Even microscopically,*
there is no evidence of wear.

The special molded nylon
bearings (no lubrication ever
necessary) are as new as
they were the first opening.

When Amarlite makes a
door it's a beauty—and
always as tough as they come.

Amarlite looks better . . . longer



AMERICAN ART
METALS COMPANY



We are pleased
to continue your story
through 1958

The Value of the Architect

No. 25 in this series
of advertisements will appear
in an early 1958 issue
of NEWSWEEK Magazine.

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY



Lobby of the Fontainebleau Hotel • Architect: Maurice Lapidus, AIA, Miami Beach, Fla.

Terrazzo *takes* traffic...stops it too

Neither footsteps nor furniture scrapes faze the beauty of timeless Terrazzo. Create any design your imagination dictates. Versatile Terrazzo translates it into a virtually indestructible traffic-stopper —marble hard and concrete durable.

Terrazzo is easy to walk on and less slippery than waxed floors. Its smooth jointless surface cleans readily, requires no refinishing, no painting, no costly repairs.

With Terrazzo, you can give your imagination free rein. It's available for walls, stairs, and wainscots in an infinite number of colors, in any design you want. For detailed information, write the Association in Washington, D. C. AIA Kit sent upon request. Catalogued in Sweet's.

Member Producers' Council

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION • 711 14th St., N.W., Washington 5, D. C.



New York where the *prestige* word for elevators is **OTIS**

Today, the world's greatest concentration of practically everything is on Manhattan Island, including elevators . . . 30,631 of them. More than half are OTIS. This is a realistic tribute to leadership. Every important elevator development has originated with OTIS. As always, progress is expected of the leader. Outstanding value has made **OTIS** the accepted word for elevator quality in the cities of the world.

Automatic Autotronic® or Attendant-Operated Passenger Elevators • Escalators • Trav-O-Lators
Freight Elevators • Dumbwaiters • Elevator Modernization and Maintenance • Electronic Systems
The Baker-Raulang Company, an Otis subsidiary, is the maker of Baker Gas and Electric Industrial Trucks*



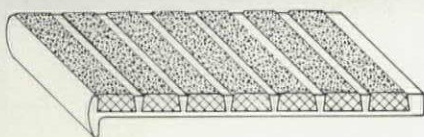
**OTIS ELEVATOR
COMPANY**

260 11th Avenue, New York 1, N. Y.
Offices in 501 cities around the world

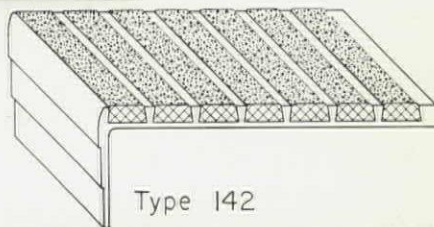
* **Baker**
Industrial Trucks

WOOSTER THE COMPLETE LINE SAFETY TREADS • THRESHOLDS

SUPER-GRIT TREADS

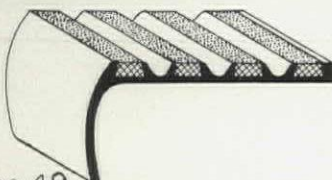


Type 141



Type 142

SAFE GROOVE TREADS

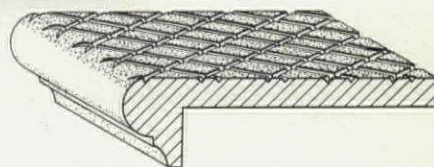


Type 49

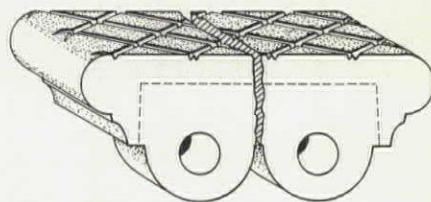


Type 46

ABRASIVE CAST TREADS



Type 103



Type 106

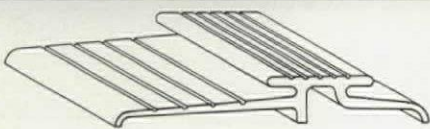
Wooster's superior quality is proven by many years of service and the approval of leading architectural firms, industries and government agencies. You can depend on Wooster for all your requirements in safety treads and thresholds. Shown are just a few typical examples —portfolios of detail plates illustrating 98% of all applications are available. Our engineering department will cooperate in recommendations on special projects.

WOOSTER PRODUCTS INC.

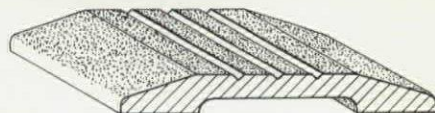
Spruce St.

Wooster, Ohio

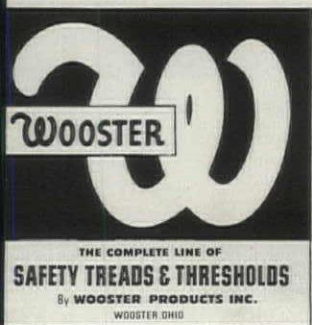
ABRASIVE CAST & EXTRUDED THRESHOLDS



Type 322



Type 115



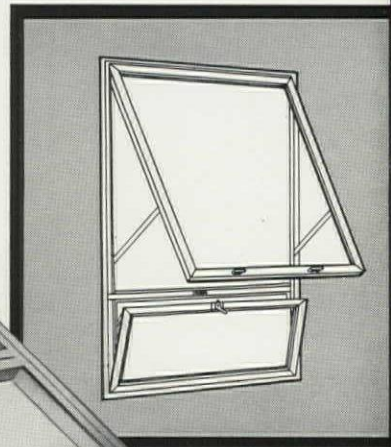
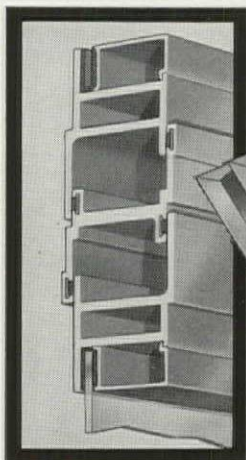
Send for free portfolios of details and specifications

Another New Ware Window...

WARE MONUMENTAL PROJECTED

offers greater strength and rigidity for large operating glass areas

- Tubular ventilators have $\frac{1}{8}$ " minimum thickness, frame and vent depth 2" horizontally, $3\frac{1}{2}$ " vertically (min.), and for even greater strength, corners are mechanically joined by interlocking corner angles and weld.
- Completely weatherstripped by premium wool pile locked in extruded channel. Climate control assured by Key locks at jambs.
- Optional glazing, interior or exterior—channel or snap-on glazing bead available.



top-hinged type eliminates outside cleaning for multi-story buildings

This alternate top-hinged, in-swinging type makes both inside and outside surfaces easily available for rapid *inside* cleaning — saving the cost of cleaning bolts, greatly lowering maintenance costs.

Our engineering department is at your service to help meet your special requirements. For complete details, write Dept. JA-2

Aluminum **WARE** Windows



Jalousie

Econ-O-Wall

Econ-O-Ware
Awning

WareRite and
Ware Awning

Projected

Casements



Member

Ware Laboratories, Inc., 3700 N. W. 25th, St., Miami, Florida

NOW *save* **50%** on

3 HR. (A) label Fire Doors

by specifying

Overline[®]

Savings in dollars:

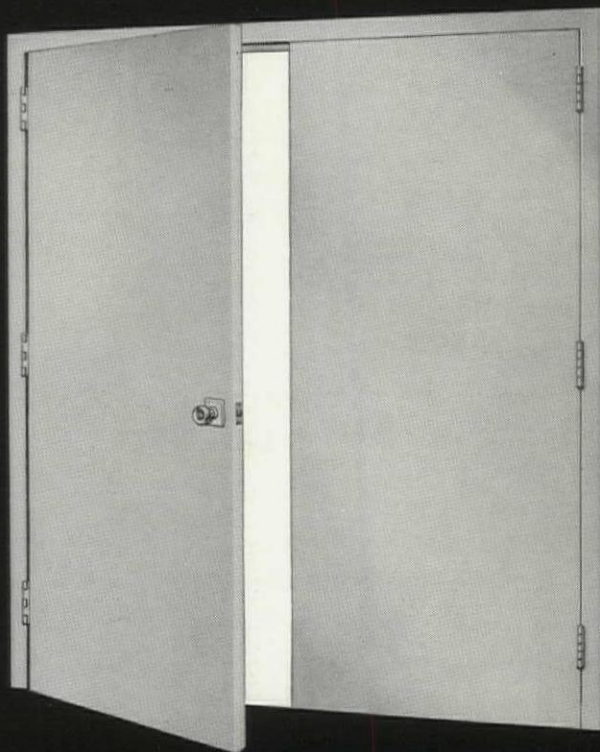
up to

\$400⁰⁰

per pair

(including frame and hardware)

You can now afford to use 3 HR. (A) label Flush Hollow Metal Fire Doors for all openings where maximum fire protection is desired.



Here's why:

We have just developed and obtained Underwriters' Laboratories 3 HR. (A) label approval on a pair of Flush Hollow Metal Fire Doors featuring a simple $\frac{3}{4}$ " throw lockset—mortise or cylindrical type—and flush bolts with standard weight hinges and closer. They are also approved for panic hardware operation. These new doors are the first in the hollow metal industry to eliminate the elaborate and costly 3-point lock and 2-point latch—enabling us to build a lighter weight, less expensive door that retains all the protective qualities of its predecessor. These new doors are also qualified for B, C, D, and E labels. Specify Overline 3 HR. (A) label doors wherever extreme exposure conditions exist. • Get our new TECHNICAL DATA SHEET from your nearest Overly representative, or write us direct—today.

Overly
MANUFACTURING COMPANY

GREENSBURG, PENNSYLVANIA
LOS ANGELES 39, CALIFORNIA

We Will Bind Your Journals...

After a quarter century in its small format, the *Journal* of The American Institute of Architects has yielded to change and progress. It now comes to you in a larger size with more contemporary make-up.

Both the old and the new *Journals* contain much of the significant architectural thinking of our time—thoughts and formulations well worth preserving and referring to in the years to come.

We will bind your *Journals* for you—both sizes—leaving out the advertising pages, and including an index for each volume.

The *old Journal* will cost \$2.25, if you supply the loose copies; \$3.75, if we supply all new copies. Lost or damaged issues can be replaced at a charge of 35 cents a copy.

The *new Journal* will cost \$3.25, if you supply the loose copies; \$5.50, if we supply all new copies. Lost or damaged issues can be replaced at a charge of 50 cents a copy.

The new volumes will be bound in a deep, rich red in the same style as the old.

THE AMERICAN INSTITUTE OF ARCHITECT
1735 New York Avenue, N.W., Washington 6, D. C.



WEIS
VITRE-STEEL
PORCELAIN ENAMEL
TOILET COMPARTMENTS

Handsome is... and more than handsome does!

These compartments are practically indestructible—
finished in vitreous porcelain enamel, fitted with rugged hardware.

Supported from the ceiling, they also speed maintenance,
lower costs. And, they are far easier to install than expensive
marble or glass. Colors (22) are permanent . . . no staining,
breakage or defacement problems either. Weis *Vitre-Steel*
costs less when you install it; goes right on handsomely
saving dollars for years and years.

SPECIFICATIONS: Panels, stiles and doors shall be flush construction, and shall be made of two face plates of not less than 18-gauge enameling iron with formed edges, cemented under pressure to fiberboard core and joined by welding abutting edges at suitable intervals. Edges shall be bound with die-drawn stainless steel moldings interlocked under tension onto formed edges, mitered and welded at corners and welds ground smooth. Partitions and doors shall finish 1" thick; stiles shall finish 1 1/4" thick.

All surfaces, concealed and exposed, shall receive a vitreous porcelain enamel ground coat. All exposed surfaces shall then be given a cover coat, in a color selected from the Weis color chart of decorator colors.

Doors shall be hung on WEIS gravity hinges with upper hinge mounted in recess in edge of door. Doors shall be fitted with slide bar latch, combination keeper and bumper and coat hook with rubber-tipped bumper, all to be brass, chromium plated. Latches and coat hooks shall be attached with theft-resistant screws.

WRITE FOR NEW CATALOG — OR
SEE SWEET'S ARCHITECTURAL FILE, NO. $\frac{22b}{We}$

HENRY WEIS MANUFACTURING COMPANY, INC.
Dept. H-7902 Elkhart, Indiana



SLIDE
BAR
LATCH



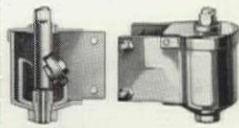
COMBINATION
KEEPER
AND
BUMPER



COMBINATION
COAT HOOK
AND BUMPER



CUTOUT
TYPE TOP
DOOR
HINGE



CUTAWAY

UNIVERSAL
BALL
BEARING
GRAVITY
TYPE
BOTTOM
DOOR
HINGE

University of Michigan's Switching Station Uses Youngstown "Buckeye" Conduit to Protect Electrical Wiring Systems . . . Permanently

University of Michigan's new, up-to-the-minute, West Hospital Switching Station has positive, permanent electrical system protection—thanks to Youngstown's Full Weight Rigid Steel "Buckeye" Conduit. Damaging elements such as water, moisture, vapor, dust and dirt will never cause electrical failure—because "Buckeye" will be on the job around-the-clock for the life of the building.

Electrical systems that fail to function properly are definitely a bad investment—from any standpoint. So to make sure your installations are safe and efficient, always specify Youngstown "Buckeye" Conduit—as so many of our leading owners, architects and contractors have done for years.

Satisfied "Buckeye" users across-the-country report to us, "It's easier to thread and bend—easier to fish wires through—and best of all we get longer service life because it's so thoroughly corrosion resistant."

Leading distributors in all industrial and electrical markets are ready to serve you quickly and efficiently from their ample stocks. They're as near as your phone—why not call today?



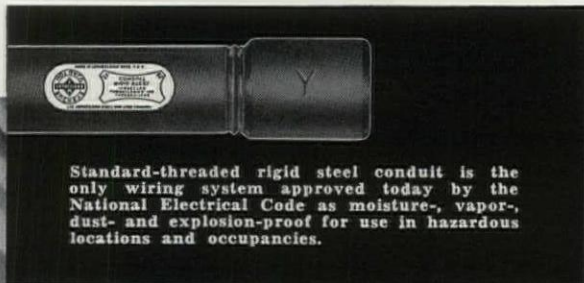
THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon, Alloy and Yalloy Steel

General Offices - Youngstown 1, Ohio

District Sales Offices in Principal Cities

West Hospital Switching Station, University of Michigan, Ann Arbor, Michigan
Engineers: Cummins & Barnard, Inc., Ann Arbor, Michigan
Electrical Contractor: Electric Service Co., Ann Arbor, Michigan



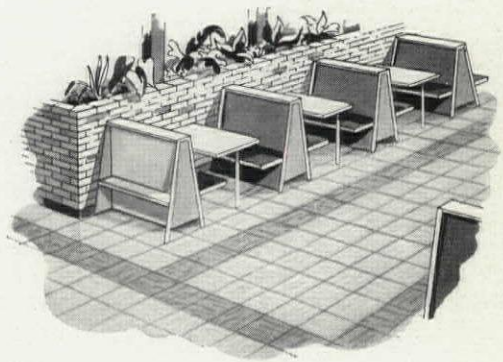
Standard-threaded rigid steel conduit is the only wiring system approved today by the National Electrical Code as moisture-, vapor-, dust- and explosion-proof for use in hazardous locations and occupancies.





find the line of most resistance

The beat, beat, beat of waitresses' feet can drum up trouble for a floor. It takes a smart specification to avoid it! Architects who search for the line with most resistance find it in Matico Tile. It resists stains, shrugs off soil and grease, cleans to a gleam with a wipe. The many leading architects who specify Matico for many different demanding jobs know the right angle on floors. Consider this finely styled floor tile for your next project, too.



MASTIC TILE CORPORATION OF AMERICA
Houston, Tex. • Joliet, Ill. • Long Beach, Cal. • Newburgh, N. Y.

Rubber Tile • Vinyl Tile • Asphalt Tile
Vinyl-Asbestos Tile • Plastic Wall Tile

Quality Controlled by *AccuRay*®



8A497

MAIL COUPON TODAY Mastic Tile Corp. of America, Dept. 12-2, Box 128, Vails Gate, New York
Please send me complete specifications and full details on Matico Tile Flooring.

Name _____ Address _____ City _____ Zone _____ State _____



THE AMERICAN INSTITUTE OF ARCHITECTS

Publications and Documents

Agreement and General Conditions in Cover.....	\$.50
General Conditions without Agreement.....	.35
Agreement without General Conditions.....	.15
Performance Bond; Labor and Material Payment Bond.....	.10
Form of Subcontract.....	.10
Letter of Acceptance of Subcontractor's Proposal.....	.10
Cover (heavy paper with valuable notes).....	.02
Complete set in cover.....	.75

OTHER FORMS

Form of Agreement between Owner and Architect on a Percentage Basis— When Engineers' Fees are reimbursed to the Architect by the Owner (Doc. No. A-102).....	\$.10
When Engineers' Fees are included in the Architect's Fee (Doc. No. B-102).....	.10
Form of Agreement between Owner and Architect on the Fee plus Cost System.....	.10
Short Form for Small Construction Contracts.....	.25
Circular of Information on Fee plus Cost System (Owner-Architect).....	.03
Form of Agreement between Owner and Contractor (Cost plus Fee Basis).....	.10
Circular of Information on Cost plus Fee System (Owner-Contractor).....	.06

BOOKS

Handbook of Architectural Practice (Revised 1953 edition).....	\$4.00
Architect's Specifications—How to Write Them by Goldwin Goldsmith, F.A.I.A.....	5.00
Specification Work Sheets.....	5.00
Standard Filing System and Alphabetical Index—Doc. No. 172.....	2.00
Filing System for Architectural Plates and Articles—Doc. No. 261.....	1.00

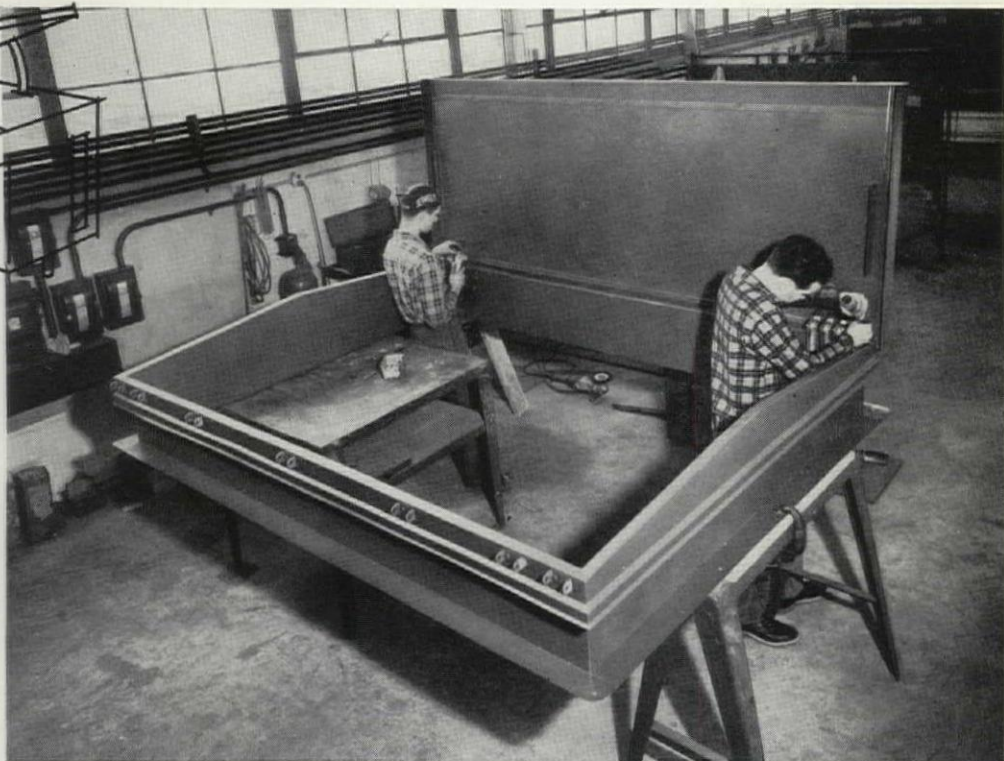
These contract forms have stood the test of time, have reduced to a minimum lawsuits and misunderstandings, have made for good will between Architect, Owner and Contractor. They expedite business. Orders are filled at The Octagon the day after they are received. The Documents can also be purchased from most dealers in architectural supplies.

Transportation prepaid on orders amounting to \$1.00 or more. Communications, orders, and remittances (checks or money orders) should be sent to—

THE AMERICAN INSTITUTE OF ARCHITECTS

1735 New York Avenue, N.W., Washington 6, D. C.

MADE TO ORDER!



To fit your requirements for extra large roof openings

Bilco®

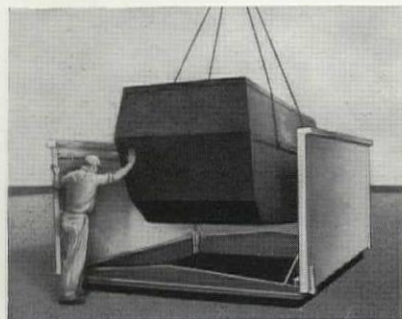
Double Leaf Roof Scuttles

When a building function calls for bringing bulky equipment or materials in or out, Bilco Type D double leaf scuttles do the job best. An aid to your planning, too, by eliminating or reducing the number of extra wide doors required in rooms and corridors below.

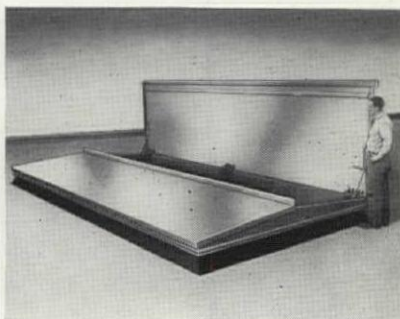
Low and out of the sight line to complement your building design . . . easy to operate . . . economical . . . ruggedly built for long, troublefree service.

Bilco engineers will be happy to assist you in the design and fabrication of the proper scuttle to solve special or unusual roof access problems.

See our catalog
in Sweets Architectural
and Engineering Files
or write for
A.I.A. File No. 12P.



Advanced design, finest materials and careful attention to every detail by experienced craftsmen reflect in the quality of the finished product.



Effortless opening and closing of the huge covers is made possible by the right combination of tubular compression spring operators.

THE BILCO COMPANY, DEPT. 407, NEW HAVEN 5, CONNECTICUT



INVITATION TO ARCHITECTS

TO HELP all interested architects keep up to date on the many new and important architectural glass products, and on the latest methods of glass application, Pittsburgh Plate Glass Company maintains a large staff of Architectural Relations Specialists.

These men—who have complete information on all Pittsburgh Glass Products at their finger

tips—are glad to work with you in your selection and use of architectural glass products . . . whatever the job you are working on, whatever the glass problem involved.

To obtain the services of one of these glass specialists, merely call any Pittsburgh Plate Glass Company branch. This service is understandably confined to architects.

See Sweet's Architectural File—Sections 7a, 13e, 16d, 21.



SYMBOL OF SERVICE FOR SEVENTY-FIVE YEARS
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

THE AMERICAN INSTITUTE OF ARCHITECTS

HEADQUARTERS

1735 New York Avenue, N. W., Washington 6, D. C.

EDMUND R. PURVES, *Executive Director*

Walter A. Taylor
Director of Education and Research

Theodore Irving Coe
Technical Secretary

Frederic Arden Pawley
Research Secretary

Byron C. Bloomfield
Secretary for Professional Development

Theodore W. Dominick
Building Products Registry

Joseph Watterson
Director of Publications

Walter Neil Letson
Editorial Assistant

Henry H. Saylor
Historian

George E. Pettengill
Librarian

John T. Carr Lowe
Legal Counsellor

J. Winfield Rankin
Administrative Secretary

Florence H. Gervais
Membership and Records

Robert L. Eger
Treasurer's Office

Edwin Bateman Morris, Jr.
Assistant to the Executive Director

Polly Shackleton
Editor of the MEMO

Alice Graeme Korff
Curator of Gallery

Arthur B. Holmes
Director of Chapter Activities

Clinton H. Cowgill
Editor of the HANDBOOK

William Stanley Parker
Consultant on Contract Procedure

Official address of The Institute as a N. Y. Corporation, 115 E. 40th St., New York, N. Y.
The Producers' Council affiliated with A.I.A., 2029 K St., N. W., Washington 6, D. C.

