The best "advertising" for function-minded architects, engineers and contractors is the excellence of their own craftsmanship . . . represented by modern structures that make living and working more pleasant. That is why they invariably regard an air-conditioning installation with Anemostat draftless air-diffusion as a job well done. A job that advertises them. A job to be proud of!

Anemostat takes the "raw materials" of air-conditioning and actually "processes" them into COMFORT. There are no draft-producing grilles or registers, for Anemostat air-diffusers distribute the conditioned air in pre-determined, controlled patterns. Result: there are no drafts . . . no dead air pockets . . . room temperature and humidity are equalized throughout.

Because Anemostat wall or ceiling diffusers permit employment of stepped-up duct velocities and greater temperature differentials, duct sizes and duct outlets may be reduced — an important economy feature. Because Anemostats have no moving parts to wear out, maintenance cost is nil.

Thousands of Anemostat installations throughout the country — in virtually every industry — are putting new comfort into air-conditioning. So, remember to specify Anemostat draftless air-diffusion for an air-conditioning job you'll be proud of!

Write for information.

ANEMOSTAT CORPORATION OF AMERICA
10 East 39th Street, New York 16, N. Y.
REPRESENTATIVES IN PRINCIPAL CITIES
Ingenious use of compactly designed Case vitreous china plumbing fixtures

turns "problem" space into a powder room—one of the most convenient
rooms in a house and one valued highly by owners and buyers. With its 19" overall
height, the one-piece Case T/N* water closet offers the flexibility of placement required.
This is a quiet free-standing fixture with positive non-overflow. The Cosmette Lavatory, in overall size
as small as 20"x13½", is a perfect companion to the T/N*. Wall hung or with chrome legs,
it features an extra large basin, handy shelf space and concealed front overflow. Case plumbing
fixtures are distributed nationally—see your Classified Telephone Directory or

Case Vitreous China Plumbing Fixtures
Selected for the new ADMINISTRATION BUILDING at CORNELL UNIVERSITY

Before the war PERMATITE windows, made in either aluminum or bronze, were the choice of many leading architects. They were selected for use in schools, hospitals, apartments, public and commercial buildings.

Today, the preference for these fine quality windows is even greater than ever before. Architects, contractors and owners alike are demanding them for their finest post-war jobs in every field.

Selected for their beauty, ease of operation, freedom from periodic painting and other maintenance expense, PERMATITE aluminum windows are being used in the new administration building at Cornell University, Ithaca, New York.

For complete information, full size details, etc., on PERMATITE windows and other General Bronze building products, consult Sweet’s or write for catalogs.

GENERAL BRONZE CORPORATION
43-19 TENTH STREET LONG ISLAND CITY 1, N. Y.

Architectural Metal Work, Windows, Revolving Doors
This 80 ft. clear span fireproof garage is a typical example of how Lith-I-Bar Concrete Joists eliminates supporting columns.

Lith-I-Bar Joists produced in New York State by

GRAVEL PRODUCTS CORPORATION

BUFFALO, NEW YORK
Both of these rooms owe much of their attractiveness and functional fitness to the American-Standard products they contain. Their modern styling and exceptional efficiency are two good reasons why more American homes have heating equipment and plumbing fixtures by American-Standard than by any other single manufacturer. Why not use these finer products in the homes you design, build or remodel? For complete information contact your Heating & Plumbing Contractor.

American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.
As seen in Color in... THE SATURDAY EVENING POST

• ANOTHER ad in the Gold Bond Campaign. Designed to rekindle the desire that should be first in the hearts of every American family...to own their own home. Judging from previous ads, hundreds of folks will request plans of this house and as usual the answer will be “Consult your local architect!”
National Gypsum Company, Buffalo 2, New York.

You'll build or remodel better with Gold Bond

You can start building sooner if you start planning now. See your local Gold Bond Dealer!

We call it "Outside Inn"

What! Build an open ranch house in cold Vermont! It sounded scary until our architect suggested this clever idea. Now we just slide a panel and presto! We have a living room open to the summer breeze. Yet in winter we have a house as snug and easy to heat as any home in all New England...

There are a lot of good ideas for you here if you're planning to build or remodel. But some of the best ones aren't visible in this picture. For example, under the outside finish are wide panels of fireproof Gold Bond Gypsum Sheathing. They give the house greater structural strength and weather-protection because there are fewer joints. And thanks to modern building research, this better Gold Bond sheathing costs even less than old-style inflammable sheathing.

Inside the sheathing, in between the wall studs, is another big idea for you. It's fireproof Gold Bond Rock Wool insulation that keeps the house warmer in winter and cooler in summer. Cuts heating bills by as much as 40%. Can be "blown" right into the walls and top ceiling of the house you're living in now.

Whether you're building a ranch house or a Cape Cod cottage, the inside walls will be stronger and better-looking if they're built of Gold Bond Gypsum Lath and Plaster, and painted with Gold Bond Simflex. This wonderful new one-hour wall paint comes in eleven fresh new colors that help to make any home bright and gay all year round.

Your Gold Bond lumber and building material dealer can now offer you over 150 Gold Bond building products all designed and engineered to help you build or remodel better. Each product is the best you can buy...and it will cost you no more than other materials. The surest way to have these finer, long-lasting materials used in your new home is to ask your architect to specify Gold Bond by name. Your local Gold Bond dealer will be glad to discuss your plans with you. See him first!
NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Over 150 tested Gold Bond Building Products for new construction or remodeling add greater permanency, beauty and fire protection. These include wallboard, plaster, lime, sheathing, wall paint, insulation, metal and sound control products.

DEMAND THESE SIX GOLD BOND FEATURES IN YOUR NEW HOUSE

GOLD BOND FIREPROOF GYPSUM SHEATHING
GOLD BOND FIREPROOF GYPSUM LATH
GOLD BOND FIREPROOF GYPSUM PLASTER
GOLD BOND FIREPROOF GYPSUM FINISH LINE
GOLD BOND FIREPROOF ROCK WOOL INSULATION
GOLD BOND SIMPLEX 1-HOUR WALL PAINTS

EMPIRE STATE ARCHITECT
Building cost reduced with
CONCRETE FRAME AND FLOORS

Use of concrete frame and floors with wide, shallow beams effected substantial economies in materials and formwork in four 11- and 12-story low rental apartment buildings erected by the New York City Housing Authority.

Designing a multi-story building with this type of concrete construction permits reduction of the total height of the structure without reducing ceiling heights—gives the architect maximum freedom in placing columns. Columns can be located in bathrooms and closets thus providing more clear space for rooms.

Reinforced concrete construction offers architects and engineers many opportunities to reduce construction costs and still provide attractive, fire-safe buildings with the strength and rigidity to resist all static and dynamic loads. Such construction is ideally adapted to apartment buildings, hotels, hospitals and schools.

Our technical staff, backed by experience on hundreds of projects will gladly assist architects and engineers in obtaining maximum economies of concrete for apartment buildings or any project involving the use of concrete.

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete... through scientific research and engineering field work
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GELLAR HOUSE

Ed. Note: E.S.A. Editors failed to give “Progressive Architecture” credit for the original publication of photos, plans and other material in connection with Gellar House, designed by Marcel Breuer, Our sincere apologies to the Editors of “Progressive Architecture.”
1. Flexicore ceiling in the receiving room of the Sterling-Amherst Dairy.

2. Angular Flexicore ceiling, leading to gable window in receiving room.

3. Flexicore ceiling in bottle washing room.

4. Flexicore ceilings in bottle washing and bottle filling and capping rooms. Pitched ceilings leading to high glass brick windows. Note angle of pitch on sidewalls.
Architects who have included Flexicore in the design and specifications of all types of building construction find their clients so well pleased that they specify Flexicore repeatedly. A typical case is the Sterling-Amherst Dairy, Inc., for whom Architect G. Morton Wolfe has specified Flexicore on four separate building additions. The first Flexicore ceiling was installed in the receiving room; the second in the bottle washing room; the third (a multiple order) in the transformer room, superintendent’s office and men’s lavatory. The contractor on all three of the above jobs was Kempf Sons, Inc. The fourth reorder of Flexicore precast concrete floor and roof slabs was an addition to the receiving room. Truckenbrod & Co., Inc., was the contractor.

The rounded edges and table top smooth underside of Flexicore precast concrete floor and roof slabs make an attractive ceiling for any type of building construction, be it industrial, residential, farm or public building.

If you have a job that requires spans as long as 22 ft., . . . speed of erection . . . reduced labor cost . . . permanence . . . shallow floor and roof depth . . . fire resistance . . . sound absorption . . . low cost hot air radiant heating . . . freedom from shrinkage . . . overall economy and other desirable features . . . then specify Flexicore precast concrete floor and roof slabs.

Our engineers will be glad to cooperate with you in applying the economies of concrete masonry in your planning.

Do More With flexicore!

ANCHOR CONCRETE PRODUCTS, INC.

Wabash Avenue at 2450 William Street
BUFFALO 6, NEW YORK

EMPIRE STATE ARCHITECT
Modern Blending of Color and Design

with VERMONT MARBLE

Central High School, East Greenbush, N.Y.; Russell White, Architect, Albany, N.Y.; D. A. Lanzetta, Marble Contractor, Albany, N.Y.
Radio Clock base, Napoleon Gray wall ashlar, Grand Isle Fleuri pilasters.

This reads the slogan of marble, and the architect may place the emphasis where he wishes and select his marble accordingly.

For the extensive school building program faced by our country there is a crying need for not only a high degree of permanence, but also a touch of color and character to attract the eye and stimulate the higher senses.

Dignified in design, conservative in color-tone, and certainly durable and economical, the treatment employed in the Central High School Building, East Greenbush, N.Y., attains its goal in the use of marble.

June 30, 1947

Empire State Architect,
Gentlemen:

I am enclosing a picture of the bookstore for Skidmore College at Saratoga Springs. This bookstore is going in the middle of the campus. The days are short and the nights are long for some of the students and we thought we should have a building that would sparkle with lights at night.

Very truly yours
(signed) LOUIS E. JALLADE

Editor's Note: Mr. Jallade, whose office is at 507 Fifth Avenue, New York, was, until June 2, 1947, Colonel of the Twelfth Regiment, New York Guard. On that date he was promoted to the rank of Brigadier General. Our sincere congratulations.

MORE ABOUT PROFESSIONAL CHARGES

By HENRY S. LION
Associate Editor of Communications

In the last issue of this magazine I had an article—"To Charge and What to Charge—That is the Question."

Throughout the profession in this State there must be many who have thoughts on this subject and the belief that the previously published scale is not in harmony with present requirements.

Is there any reason why this scale should be different for the same class of structure in the larger cities than in the smaller ones and in the suburbs?

Should not the architect try to insist that he cannot be responsible for the final results unless he is permitted to include the supervision of the building?

And of what services should supervision consist? How closely should the architect be tied to the details of the construction?

How many sets of plans and specifications should an architect furnish for estimating and construction purposes before charging for additional copies?

Surely every architect must have an opinion! Why not air it; let's discuss it together! In fact why not discuss all your problems through the pages of the E.S.A.? We await your replies.

Editor's Note: On the subject of charges, readers are referred to the article on page 44 of this issue by Myron S. Matthews of Dow Service Inc.
Over the past 20 years, thousands of commercial and industrial installations have utilized millions of feet of Anaconda 85 Red Brass Pipe which, today, continues to give dependable, rust-free service.

This service record justifies the faith of The American Brass Company's engineers who recommended this pipe in 1927 (after ten years of exhaustive experiments) as the highest quality corrosion-resistant pipe obtainable at a reasonable price.

Today this same pipe, containing 85 percent of copper, sets new records for continuing high quality, uniformity of grain structure and proved dependability. It is furnished through wholesale distributors.
The Most Modern Projects Employ BEREA SANDSTONE for Permanence and Beauty . . .

BEREA SANDSTONE was the natural choice for the John Hancock Mutual Life Insurance Building, now being constructed in Boston. Here, as in hundreds of other projects, this modern stone finds ready acceptance as the most logical medium for architectural expression.

The appeal of Berea Sandstone as used on the John Hancock Building is a suggestion for its application to the projects—large or small—which you may be planning.

Our facilities are yours for the asking.

THE CLEVELAND QUARRIES COMPANY
CUT STONE DEPARTMENT
1740 EAST TWELFTH STREET
CLEVELAND 14, OHIO
ATTENTION

ARCHITECTS

THE 1947 CONVENTION is just around the corner

OCTOBER 22-25

at the

HOTEL COMMODORE

New York City

All New York State Registered Architects

are cordially invited

A very enlightening and Educational Program has

been prepared by

The Convention Committee

THOSE ATTENDING A
RECENT COMMITTEE MEETING

---

ERIE
ARCHITECTURAL
PORCELAIN ENAMEL

NEW CONSTRUCTION or MODERNIZATION
Service Stations
Store Fronts
Restaurants
Food Stores
Office Buildings
Factory Buildings

Versatility of Porcelain Enamel
1. All colors and textures
2. Multitone colors
3. Any shapes or form
4. Light in weight
5. Weather resisting indefinitely
6. Applied to masonry or to steel
7. Easily cleaned
8. Everlasting

Our services to the architect and to the contractor include any or all of the following:
• The designing of the porcelain enameled panels.
• Obtaining accurate measurements and layouts in the field.
• Detailing the enameled panels.
• Fabricating and enameling the panels according to approved designs and colors.
• Complete erection of the porcelain enameled panels by trained erectors.

Complete Engineering, Manufacturing
and Erecting Service

Member of the Architectural Division of the Porcelain Enamel Institute.

THE ERIE ENAMELING COMPANY
ERIE, PENNSYLVANIA

Top Row, left to right: Nathan Ginsburg; Matthew Del Gaudio; Ward Fenn; Sidney L. Strauss. Bottom Row, left to right: Simeon Heller; Irving Seelig; Samuel A. Hertz; George J. Cavaliere.

EMPIRE STATE ARCHITECT 13
MEET THE HUGE DEMAND for FINE WELDWOOD HARDWOOD PLYWOODS

For the first time since before the war, Weldwood Plywood is available in large supply... in a wide variety of fine cabinet hardwoods!

And you'll find eager acceptance for Weldwood all through your clientele.

Why? Because... even in the face of serious shortages... we've carried on a vigorous national advertising campaign to sell Weldwood to home-minded Americans. As a direct result of this advertising, almost half-a-million prospective users have written for more complete information.

We've told them all the entire Weldwood story. They know, for instance, that Weldwood has striking decorative beauty plus high structural strength. They know, too, that Weldwood can be installed easily and economically... either for remodeling or new construction.

And your clients know this: Weldwood's first cost is the last. It's guaranteed against splitting, cracking or warping for the life of the building in which it's installed.

Take advantage of this knowledge... and the acceptance that comes with it. Specify Weldwood. It's a modern material of proved quality and demand.

You can get detailed information on the wide variety of sizes and veneers now available from your nearest USP office or representative.

WELDWOOD Plywood

Weldwood Plywood and Mengel Flush Doors are products of

UNITED STATES PLYWOOD CORPORATION
THE MENGEL COMPANY
New York 18, N. Y.

FOR REAL HEATING COMFORT

THE COLONNADES... Overlooking New York Harbor and the Atlantic Ocean from its beautiful location in the Borough of Brooklyn, has long been noted for its attractive charm... for gracious and comfortable living.

The answer to constant and uniform heating for these spacious apartments was found more than ten years ago when two ENTERPRISE Oil Burners were installed. Poret & Posner, owners and operators of The Colonnades, have this to say about these ENTERPRISE BURNERS: "... have been operating all these years very efficiently and to our entire satisfaction, in this building as well as in others we own and operate."

ENTERPRISE ENGINE CO., INC.
782 UNION ST., BROOKLYN 15, NEW YORK

This is but one of thousands of installations which continue to support the evidence of exceptional ENTERPRISE burner service and performance. Whether your requirements call for economical heating of apartment houses, hotels, commercial buildings, theaters, hospitals—or for production processes in industrial plants—plan now to investigate ENTERPRISE Oil Burners. Furnished in Manual, Semi-Automatic and Fully-Automatic Models in combinations to meet your specific requirements.

Write today for Catalog No. 47
FATHER FLANAGAN SEES
THE REALIZATION OF
A THIRTY-YEAR DREAM

Boys Town designs, a few of
which are shown here, are
the work of Leo A. Daly Co.,
Omaha, Nebr., architect.

Buildings, living quarters completely Bryant Winter Air-Conditioned

Boys Town A dream that began thirty years ago with a young priest and five homeless boys is nearing reality with the construction of a three-million-dollar addition at Boys Town, ten miles from Omaha, Nebraska.

When completed, Father Flanagan's Boys Town will be able to provide accommodations for one thousand boys, more than twice the number now being cared for. The new addition includes twenty-five cottages of the type shown in the larger illustrations above, each of which will house twenty boys of high school age; a grade school and a high school, both completely equipped with motion picture apparatus for visual education; a fully-equipped trade school; a field house, athletic fields and swimming pool; an administration building and all other facilities necessary to the proper care of destitute boys of every race and creed.

Besides these living and educational facilities, Boys Town's nine hundred acres include great farm lands and its own herds of dairy and feeder cattle, as well as sixty acres of vegetable gardens. Here farm and dairy training are provided for boys who are so inclined.

All buildings and living quarters at Boys Town are equipped with Bryant BA-88 Winter Air Conditioners. The BA-88 is made in seven sizes with outputs up to 200,000 BTU per hour. Bryant Heater Company, 17825 St. Clair Avenue, Cleveland 10, Ohio...One of the Dresser Industries.

bryant

GAS HEATING

LET THE PUP BE FURNACE MAN

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• BRYANT GAS EQUIPMENT CO., 158 Fellows, Syracuse • BRYANT-McCOY CO., P. O. Box 65, Jamestown

EMPIRE STATE ARCHITECT
TO THE ARCHITECTS OF THE EMPIRE STATE:

Wm. L. Blanchard Co. is at your service from the very start of your creative designs. In an advisory capacity we will gladly assist you on costs and endeavor to prevent expensive revisions of drawings.

We are not design builders; we believe that architecture and construction are two entirely separate phases of building, thus we feel that an owner receives the best services when a qualified architect and a competent contractor are individually engaged.

In our home state, New Jersey, we are particularly familiar with labor conditions, materials and costs. In addition, one of our associates is a consulting architect and a member of the American Institute of Architects, and is ready to assist you at all times.

Our Own Who's Who will be sent on request

We are prepared to serve you in this area

55 POINIER STREET, NEWARK 5, NEW JERSEY
TELEPHONE BIGELOW 8-2121—EXT. 30
FOR the finest in auditorium seating, specify American Bodiform Chairs. No other auditorium chairs give you so much in beauty, comfort, service, and maintenance economy.

American Bodiform Chairs feature sleek, modern design that lends distinction and prestige to the architecture of any auditorium, new or remodeled. They’re scientifically contoured for roomy, restful comfort. When unoccupied, chair seats quietly and automatically fold up out of the way. Allow greater room for passing, make housekeeping far easier, more economical. American Bodiform Chairs are rugged and durable—built to provide years of trouble-free service with minimum maintenance, despite hardest use.

So always specify American Bodiform Chairs. Our Seating Engineers will be glad to consult with you on your auditorium seating plans. Write for complete information today.

World’s Leader in Public Seating

American Seating Company
GRAND RAPIDS 2, MICHIGAN . . . Branch Offices and Distributors in Principal Cities

MANUFACTURERS OF AUDITORIUM, THEATRE, SCHOOL, CHURCH, TRANSPORTATION AND STADIUM SEATING

1776 Broadway, New York 19, N. Y. . . . 935 Genessee St., W., Syracuse 4, N. Y.
This consumer advertising faces the challenge squarely—appearing in the September 13th "Saturday Evening Post" and September "Better Homes & Gardens." Remember, the base price of aluminum is 30% below pre-war!

"Better Homes & Gardens" popular house No. 705

...with brick siding and wood shingles, as originally presented. This Five Star House has 7 rooms, 4 bedrooms. Design copyrighted. Reynolds has available a limited quantity of a special "BETTER HOMES & GARDENS" folder, showing floor plans and featuring aluminum in the list of materials. Write today to address below.

NOW...build it better at less cost with

REYNOLDS Lifetime ALUMINUM CLAPBOARD SIDING AND SHINGLES

Get these advantages for no more money:

Fire-Proof...Rust-Proof...Rot-Proof...Termite-Proof

...plus Radiant Heat Insulation

According to national averages compiled by a recognized authority,* it would actually cost you less to build this house with Reynolds Lifetime Aluminum Shingles and painted Clapboard Siding than it would with stained wood shingles and the original brick siding. And look at all the advantages you get with aluminum!

Lifetime permanence...protection against fire, rust, rot and termites. And greater comfort...because aluminum reflects radiant heat. In summer this roofing and siding throw off the sun load...won't store up heat...so your house stays cooler. In winter it reflects interior heat back from the roof and walls...so you keep warmer, with less fuel.

Note that the cost comparison made here includes painting your aluminum clapboard...cleaning, then primer coat and second coat. But you can eliminate this if you like...and save more money. Aluminum needs paint. It weathers naturally to an attractive grey-white...looks better year after year without any maintenance.

This modern roofing and siding is immediately available, in any quantity you need. So talk to your architect, your builder. They will like the way both clapboards and shingles fit together, self-aligning, weathertight, handsome. Show them this ad. Write for your booklet on House No. 705, as well as for detailed product literature. Address: Reynolds Metals Company, Building Products Division, Louisville 1, Kentucky.

CONSULT YOUR LOCAL BUILDING SUPPLIES DEALER FOR IMMEDIATE DELIVERY

REYNOLDS Lifetime ALUMINUM BUILDING PRODUCTS

For 100% performance use only the nails recommended by the manufacturer.
Identified with architects for 50 years

Roddiscraft quality has been recognized by the architectural profession for more than fifty years. The Roddiscraft hardwood doors and plywood installed in buildings from coast to coast in accordance with architects specifications is a testimony to the reputation of Roddiscraft.

Roddiscraft has earned its reputation — by putting quality first — by never permitting production needs to become paramount.

Today's Roddiscraft solid core flush veneer doors and hardwood plywood are still a craftsman's product — a blending of fine workmanship and fine materials.

Remember — Roddiscraft beauty is more than veneer deep.
QUESTION: Where can you get data on any phase of sheet copper construction?

ANSWER: From the Revere Technical Advisory Service, Architectural.

In order to help you provide the finest sheet copper construction, Revere Research takes nothing for granted. The whole subject is constantly under study in the Revere Research Laboratories; and important new facts are available which enable you to design or install copper gutter linings, flashings and roofs that give extra years of service.

An example of the thoroughness of this work is a recent investigation of the holding power of various types of nails. Revere is interested not only in seeing to it that the right specifications of copper are used, but also in every factor, large or small, that will help your jobs give lasting satisfaction.

Whenever you are faced with a problem concerning the design or installation of copper, look first to the Revere manual; and if you do not find the complete answer there, the Revere Technical Advisory Service, Architectural, will be glad to help you. The chances are that they have already had experience with a similar problem. In any case, they'll do their best to help solve yours.

There is no charge or other obligation for this service. Simply call your Revere Distributor or the Revere office nearest to you.
Now - Prompt delivery on Truscon "O-T" Open Truss Steel Joists!

Truscon Open Truss Steel Joists are again available for your use. Their outstanding features of adaptability, economy, fire-resistance, safety and permanence can once more be incorporated into your building plans to provide maximum value in building construction. Contact your nearest Truscon representative for cooperation in completing your building plans now.

• FIRE-RESISTANT
Open Truss Steel Joist Construction is built entirely of incombustible materials. The reinforced concrete slab and metal lath ceiling are fire resistant materials and have proved their worth under the most severe conditions.

• VERMIN-RESISTANT
All members of the Truscon "O-T" Open Truss Steel Joist are steel and impregnable to the attacks of insects.

• ECONOMICAL
Light weight effects savings in supporting framework and foundations. Speedily erected. Lowers insurance cost and maintenance expense.

• ALL-WEATHER BUILDING
Construction is carried on as readily in winter as in summer. Not wholly dependent upon the setting of cement, which is seriously retarded by cold weather.

• SOUND-RESISTANT
The greatly increased use of Truscon "O-T" Open Truss Steel Joist Construction in larger and more expensive types of buildings and its acceptance by Architects and Engineers in all parts of the country prove that this construction fully meets the essentials of soundproofness.

• PIPES AND CONDUIT
The open web of the joists permits the passage of pipes and electric conduits, within the depth of the floor, thereby making such installations very economical.

• RADIANT HEATING
The open web of these joists will permit unobstructed flow of air current in any direction and this feature is of important consideration when planning a radiant heating system.

• LIGHT WEIGHT
Scientific design and welded construction permit great strength without excessive weight. Easily handled and rapidly erected.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO  •  Subsidiary of Republic Steel Corporation
Modern design in apartment house planning demands the functional beauty of Lupton Metal Windows. Narrow frames and mullions assure maximum daylight, lending a feeling of spaciousness and luxury to each dwelling unit. Lupton Metal Windows offer controlled, draft-free ventilation. Outswinging ventilators catch and gently deflect air currents into the room. Extended hinges permit cleaning all glass from the inside. Metal frame screens for Lupton Metal Casements are easily attached on the inside of the window. There is a Lupton Metal Window for every type of building. Write for our Catalog or see it in Sweet's.

MICHAEL FLYNN MANUFACTURING CO
51 E. 42nd Street, New York 17, N. Y.

Member of the Metal Window Institute

LUPTON METAL WINDOWS

EMPIRE STATE ARCHITECT
WHERE PLAN and EXECUTION GET TOGETHER—

It's as strong a part of the Siegfried policy as swift, enduring construction: the contractor must "get together" and REMAIN TOGETHER with the architect—from plan approval until building occupancy.

The hundreds of Siegfried projects added to the Niagara Frontier scene in the past thirteen years are ample testimony to this practice.

Strict adherence to the letter and intent of all specifications—close cooperation with the architect—have gone into every Siegfried project.

Another side of the Siegfried picture is the tremendous job of coordinating manpower, material procurement, construction equipment, thousands of vital details. Of timing every phase. Of executing the project to the complete satisfaction of planner and client alike.

It has been our privilege to work with some of New York State's most distinguished architects. Call on us at any time—for this kind of plan execution!
The MAGIC MIRROR DOOR DETECTIVE is the most important door safety device to reach the consumer market since the invention of the lock. A National Home Safety Award winner, it has ably demonstrated its ability to effectively safeguard the home against intrusion by persons of criminal intent. Easily installed in any wood or metal door, of any thickness, the MAGIC MIRROR DOOR DETECTIVE permits private home owners or apartment or hotel residents to see through the door and observe all callers clearly — without being seen! The caller sees only his own reflection in a shiny mirror. Incorporating the new, exclusive, patented DOME VIEW-ADJUSTING BACK, with BUILT IN SPEAKER and automatic SAFETY LOCK, the MAGIC MIRROR DOOR DETECTIVE offers:

- ABSOLUTE HOME SAFETY
- FINEST TRANSPARENT MIRROR MADE
- EASY INSTALLATION
- COMPLETE WEATHER RESISTANCE
- EVERLASTING METAL CONSTRUCTION
- FACTORY GUARANTEE

Attractive Styles in Special Door Knocker, Apartment and Hotel Models

THE MAGIC MIRROR FOR PEACETIME USAGE

The MAGIC MIRROR is also available by the sq. foot. This glass is one piece and is not laminated or silvered. The new process will not deteriorate under any normal conditions and it is even salt water proof. It was invented during World War II and was used for police and espionage work.

Write for details concerning its varied uses in theatres, hospitals, prisons, retail stores, factories as well as for display, advertising, industrial, store fixture and innumerable other purposes.
How to Install
Thermopane

Because Thermopane is being used more and more in buildings of all types, you will welcome this step-by-step explanation of Thermopane installation. It requires no special skills or special tools. For more complete glazing details than illustrated below, check your Sweet's File or write us.

IN WOOD SASH

1. Be sure opening is square so unit will not bind. Bed sash with high-grade glazing compound free of corrosive agents before the Thermopane is inserted.

2. Place unit on approved setting blocks located in from each corner and centered 1/4 the length of the unit. Press in evenly. Allow equal clearance between edges of glass and sash.

3. Fill voids on all edges with glazing compound to prevent air infiltration and water leakage. Do not use blocks at sides or top of Thermopane.

4. Cover perimeter with glazing compound before applying face stops. To avoid point pressure, do not toenail unless sash is rabbed to receive stop.

IN STEEL SASH

Specially-designed L-O-F phosphor bronze clips are now available from L-O-F Distributors for installation in steel sash.

2. Insert Thermopane unit.
3. Put clip on end of putty knife.
4. Insert clip between edge of Thermopane unit and steel section until clip lug snaps into hole.
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We all join together as your hosts, pledging to you our full support and cooperation.

We have tried to make this convention very interesting and have arranged, what we feel to be, a very full program. We do hope, therefore, that this convention will be well attended by all our friends, and especially by our members. We welcome all our associates in the building industry to our meetings.

To the ladies, who have accompanied you, we extend our greetings and we hope they will feel free to attend our meetings. We are in great need of their fresh viewpoint and their frank criticisms.

New York's traditional autumn weather has been promised to us and we hope that we can have some time off for a visit to the surrounding country which is in its glory during the month of October.

THE CONVENTION COMMITTEE

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Martyn Weston
Samuel J. Kessler
Program of Events

TUESDAY, OCTOBER 21

A. M. Meeting—Board of Directors
2:00 P. M. Meeting—Board of Directors
2:00 P. M. Registration begins—Foyer of Grand Ball Room, Commodore Hotel

WEDNESDAY, OCTOBER 22

9:00 A. M. Registration continues—Foyer
9:30 A. M.-12:00 M Welcome—Grand Ball Room
First Business Session—Report of Committees
Nomination of Officers
12:30 P. M. Luncheon—Grand Ball Room—Speaker, Max Abramovitz, Deputy Director of Planning, U. N.
2:00 P. M.-3:00 P. M. Second Business Session—Grand Ball Room
Report of Committees
3:00 P. M.-4:00 P. M. Program by Producers Council, A. B. Meyer, President
Speaker: J. C. Thompson, Assistant General Paint Manager,
Pittsburgh Plate Glass Company
Subject: “Color and its Constructive Applications.”
4:00 P. M.-5:00 P. M. Program by Architects—Kenneth K. Stowell, Chairman
After Dinner
7:30 P. M.-9:00 P. M. Third Business Session—Grand Ball Room
9:00 P. M. Registration closes.

THURSDAY, OCTOBER 23

9:30 A. M.-10:15 A. M. Fourth Business Session—East Ball Room—Resolutions
Panel Discussions—C. Dale Badgeley, Chairman
10:15 A. M.-11:15 A. M. Schools—Regiland E. Marsh, Chairman
11:15 A. M.-12-15 P. M. Hospitals—Aaron N. Kiff, Chairman
THURSDAY, OCTOBER 23

12:30 P. M. Luncheon—East Ball Room—Speaker, Arthur C. Holden
          Subject—"Who Decides What’s to be Built?"
          Panel Discussions continue—East Ball Room

2:15 P. M.—3:30 P. M. City Planning—George Bain Cummings, Chairman

3:30 P. M.—4:45 P. M. Housing—C. Storrs Barrows

6:30 P. M. President’s Reception

7:30 P. M. Annual Banquet—Toastmaster, Roger Allen
          Speakers—Official, City of New York
          Douglas William Orr, President, A.I.A.
          Music—Eli Dantzig
          Dress Optional—Persons on dais in formal dress

FRIDAY, OCTOBER 24

9:30 A. M.—10:30 A. M. Fifth Business Session—Grand Ball Room
          Resolutions, Exhibits and Election of Officers

          International Business Machines Corp.


12:30 P. M. Ladies Luncheon—All delegates invited—Grand Ball Room
          Presiding Officer—Mrs. Harold Sleeper

2:00 P. M.—3:30 P. M. Sixth Business Session—Grand Ball Room

3:30 P. M.—5:00 P. M. Program by Producers Council
          After Dinner

7:30 P. M.—9:00 P. M. Speaker: Charles I. Brady, Jr., Commercial Engineer in Charge of Lamps,
          Sylvania Electric Products, Inc.
          Subject “Lighting Trends.”

SATURDAY, OCTOBER 25

9:00 A. M.—11:00 A. M. Program by Producers’ Council,
          Speaker: L. C. Hart, Vice President for Relationships, Johns-Manville Corp.
          Subject: Cooperation
RICHMOND HAROLD SHREVE
RICHMOND HAROLD SHREVE

Much has been said and written about R. H. Shreve, and his ability and standing as an architect. Many who knew him well, speak of his ability as an executive and his remarkable gift of assembling groups of men with diverse opinions, and have them work together as a well balanced team. He was a tireless worker for the profession ever since he joined the New York Chapter, A.I.A. He was an associate in 1916, and became a corporate member of the A.I.A., in 1920 and up to 1941, was engaged in activities for the Chapter, as follows:

1919-20—Member Committee on Bldg. Dept. & Fire Prevention Surveys
1920-21—Chairman, Committee on Bldg. Dept. & Fire Prevention Surveys
1920-21—Member Committee on Membership
1920-21—Secretary of the Chapter
1924-24—Member Audit & Budget Committee
1924-26—Member of Executive Committee
1926-27—Member of Executive Committee
1926-28—Member Committee on Legislation
1933-34—Chairman, Special Committee on Survey of Needed Construction
1934-35—Member of Special Committee on Real Property Economics
1939-42—Member of Special Committee to Study Low-cost Housing Fees

He was elected a fellow of the A.I.A. in 1932, with the following citation:

"Richmond H. Shreve, for the distinguished work in which he has collaborated, and his devotion to the welfare of the Building Industry."

He served the Institute as a member of committees up to 1943, as follows:

1937-38—Member of Free Sketches
1938-39—Document on Free Sketches
1935-37—Building
1935-36—Chairman, Housing Committee
1936-38—Member, Executive Comm., of Comm. on Housing
1936—Member, Subcommittee on Large-Scale Housing
1937-38—Member, Subcommittee on Study of Basic Principles for National Housing Movement
1937-38—Member, Subcommittee on Relations of Labor and Industry to Housing
1937—Chairman on State Organization, Vice-president
1938—Chairman on State Organization, Exec. Comm.
1937-39—The Executive Committee of The Institute
1938—International Congress of Architects, Chairman
1939—Delegate to 12th International Congress of Architects
1940—Pan American Congress of Architects
1942—Div. of Pan Amer. Affairs of Comm. on Foreign Relations ex-Officio
1940—Preparedness Committee, Vice-Chairman

For the Building Industry, in general, his activities are well known, because of his connection with the New York Building Congress:

The New York Building Congress was formed by a group of progressive men to supply the need for better cooperation among the various branches of the building industry. Shreve was one of this group and its second president, serving for 1927-28 and -29. As Robert D. Kohn, prominent architect, says "These were the early days in the life of the Congress and he worked long and hard to iron out the kinks that arise in such a formative period and to establish an efficient, smooth-running organization." Since then he has served as Committee Chairman. The office library has a fine Chippendale chair bearing a small bronze plate testifying to the appreciation of the men with whom he served.

Today it would be inconceivable to manufacturer, contractor or architect how the industry could function without it as it would be generally conceded that the present excellent relation between employer and unions emanates from the work of the Congress.

Ralph Walker, eminent architect, remarked one day after some committee meeting which both he and Shreve had attended—"You know, Harold loves to move people about like men on a chessboard." He did, and if the "man" were unaware of the pressure, so much the better. If he recognized it, he was not apt to object. Shreve, like Gilbert and Sullivan's character "did it so politely, politely". However, if politeness was not enough (to paraphrase this) "He was the mildest mannered chairman that ever scuffled a motion or cut a member short."

And finally in a situation where he thought his idea in danger, or accomplishment delayed or obstructed, his natural instincts would scuttle a motion or cut a member short.

After his work with the Building Congress, Shreve was recognized as one of those few men to be sought for difficult jobs, and in 1933 was asked to be Director of the Slum Clearance Committee.

Robert D. Kohn, famous architect already mentioned, then Director of Housing, for P.W.A., had suggested a New York Citizens Committee to create Municipal Housing Authority, to use Federal funds for Low Cost Housing and Slum Clearance. It consisted of thirteen citizens, all interested in these matters. Richard S. Childs was Chairman, and Shreve, Director.

Preparation required legislation to create the Authority, the allocation of funds for construction and the gathering of data valuable to the Authority for the determination of selection of sites. After research, consultation with various departments and associations, fourteen study areas were selected. With the enabling legislation enacted, the Housing Authority was appointed, funds approved and the process of gathering material and preparing charts proceeded. From these charts, which covered every possible economic and human consideration, the Authority determined the worst areas.

Starting with population trends, work location, rents, transit and traffic; through accidents, crimes, infant mortality, the three most fatal diseases and social and welfare agency reports and ending with valuation, land use, building conditions and zoning, these studies comprised for Manhattan some twenty-three charts and for all boroughs one hundred thirty-seven. The general method of presentation was by a series of dots, each representing one or perhaps a thousand cases of the subject under consideration, values, disease, crime, etc. The more spots, the blacker the area in that part of the chart. Superimposed upon another, they gave irrefutable proof of the relation between such troubles as run-down properties, disease, crime, infant mortality and rents. The worst location received the blackest mark on the charts.

Quoting John Lowry, prominent builder—"In 1928, at the request of former Mayor Walker, the revision of the Building Code of New York City was undertaken by the Merchants' Association. The subjects of the Building Code were divided into six different Committees, one of which was the Subcommittee on Materials, Loads and Stresses. R. H. Shreve was Chairman of this
Committee. He guided this Committee through the many years of work on the revision of the Building Code, which was finally adopted and signed by former Mayor F. H. LaGuardia in August of 1937. Mr. Shreve also served on the Committee on Building Laws & regulations of the Merchants' Association during this same period."

Shreve was a member of the Board of Design for the New York World Fair. His insistence upon granting recognition to the young architect brought out the abilities of many very talented men. He insisted on carrying out ideas of any architect which he thought were deserving. Quoting Robert D. Kohn—"Harold was essentially a fighter for what he thought was right and he was most valuable on the Board in difficult situations when exceptional executive ability coupled with determination was necessary to get things done."

His contribution to housing was considerable. The first project of the New York Housing Authority was Williamsburg. After Shreve's work on the Slum Clearance Committee, it was natural that he should be Chief Architect for this as he was also for Vladeck Houses on the lower East Side, Manhattan.

When the Metropolitan Life Insurance Company considered the erection of Parkchester in the Bronx, Mr. Andrew Eken, of Starrett Bros. & Eken, the builder, suggested to Mr. Shreve that he place Mr. Shreve in charge of this project and at Shreve's suggestion, the Board of Design was formed, of which he became the Director. This Board represented Owner, Contractor, Architect, Realty and all Engineering Experts.

The success of Parkchester led to other projects in Manhattan by the same Company, namely, Stuyvesant Town and Peter Cooper Houses at East River, north of 14th Street, and Riverton on the East River at 133rd Street. Shreve was Director of these projects at the time of his death and they are now in process of erection.

Gilmore D. Clarke, famous city planner and landscape architect, was an associate of Harold Shreve for many years, and worked with him on numerous projects. He writes:

"It was my privilege to know Richmond Harold Shreve for about twenty years. I knew him in his home; in his office; on the campus of Cornell University; his alma mater to which he was deeply devoted. I knew him in a professional capacity as a fellow member of the Board of Design of the Metropolitan Life Insurance Company's housing projects; Parkchester, Stuyvesant Town, Peter Cooper Village, and Riverton; as a colleague of the Architect-Engineer organizations which designed the Sampson Naval Training Station on Seneca Lake and Army Bases in Newfoundland in the early days of World War II and as a collaborator in the design of several other projects. In each of these enterprises, Harold Shreve was an acknowledged leader. Whether in the chairman of the group or a member of the board he gave his best to every task with which he was connected and his best was without doubt a thoroughly sterling brand of professional competence which always resulted in bringing forth an eminently satisfactory product on scheduled time. He was a delight to work with if one was willing to try to keep pace with him. He had no use for shirkers and laggards, for careless workmanship, or for a "just-get-by" attitude. Every time he undertook an assignment, once assured it would be well done and completed on schedule. He was a driver but he forced himself to work harder than anyone who served under him.

Harold Shreve was an outstanding collaborator. When he undertook a task of broad scope, calling for talent beyond the field of architecture, he sought others outside of his firm, in whom he placed full confidence, to help him. He always took the advice of these collaborators and saw to it that everyone in his organization cooperated in order to insure a satisfactory and unified result. This ability to inspire those under him to work together was probably his strongest characteristic, the one which brought him the reputation he deservedly earned and enjoyed as one of the outstanding leaders in his profession.

I was in his charming home in Hastings-on-the-Hudson on the evening he received word that William F. Lamb and his firm, Shreve, Lamb and Harmon, had been awarded the Gold Medal in Architecture of the Architectural League of New York for the Empire State Building. That acknowledgment of a singularly notable accomplishment was in 1934. I visited his home many times subsequently and I cherish the memories of a warm friendship with this sometimes misunderstood human dynamo of a man who lived to witness the completion of a larger number of works in which he had a major part in planning, than do most men."

Perhaps Harold Shreve's talents can best be stated by quoting from a letter from Frederic H. Ecker, Chairman of the Board of the Metropolitan Life Insurance Company:

"Harold Shreve was a great architect. He was more than that—he was a gifted, dynamic executive. He was not a specialist in any one type of architectural problem, but a resourceful solver of all problems connected with the planning and bringing into existence of man's structures on earth. No problem was too large for his capacity or too small for his enthusiastic, effective, personal attention. He threw himself into each new project with the thought of non-stop performance and the sheer joy—the fun—of accomplishment. His ability through earnest, skillful and diplomatic persuasion to reconcile conflicting points of view and to gain the wholehearted cooperation of all engaged upon any project in purposeful, united, productive action toward a common goal with no limits set by man's imagination. He was a loyal and trusted associate and friend. Those of us who knew him will always think of him with respect—and with real love and affection."

His good humor and his modesty were not so well known, except to some of his intimates. A group of architects met some fifteen years ago, in order to carry out a project for the Federal Government. The selection of a chief architect for the group was in order, and R. H. Shreve was nominated. One of those present stated that he did not know R. H. Shreve, had never heard of his ability, and, therefore, in the absence of such information, would be prepared to nominate one who was known to him. However, he stated that if he was convinced that R. H. Shreve possessed the ability to lead, as had been stated by the nominator, he would approve. He asked Shreve to meet him to answer some questions. Shreve modestly agreed and answered some very pointed questions as to his standing, ability, etc., all to the satisfaction of the skeptic, who was finally convinced, and who endorsed Shreve as the chief architect of the group. It is a tribute to R. H. Shreve that he always admired his questioner for his sincerity and principles in demanding information. The two became very fast friends, and Shreve always delighted in telling the story of the origin of the friendship.

In 1944, the American Institute of Architects sought as a new president, a man who could lead the profession with dignity and understanding in times of uncertainty, strife, and general misunderstanding. The membership of the Institute was about 50,000, or only about 20% of the architects in the United States. The membership claimed that the methods of accounting of the Institute, was not understandable, except to a person with accounting experience, and demanded a simplified system. The Institute had just completed a new building, at great cost, but which the Institute could occupy only at a tremendous expense. Sums had been borrowed from special funds to pay expenses. In the opinion of the writer, the affairs of the Institute appeared to require a thorough review and overhaul.

Richard H. Shreve was chosen as the president, and the membership looked to him as a Messiah, to lead them to light, understanding and prosperity. Shreve proved more than that. At the first directors' meeting, the evening of his election, he made known the fact that (Continued on page 85)
OVERALL PLAN FOR REDEMPTION
OF SLUM AREAS

By CHARLES C. PLATT

The realities have overtaken our slum policies and procedures. Filled-up buildings preclude displacement and that, together with high building costs, arrests new building or even remodeling. The situation calls for an immediate change of approach, since the slums get worse all the while.

It would take at best very many years to clean up these areas with new or even remodeled buildings and it will take infinitely longer unless present building conditions greatly improve. Realistic measures must therefore be devised, and the great self-help welfare movements against delinquency and moral retrogression, must without delay be implemented with improved physical surroundings.

ALLEVIATION COMES FIRST

We can and must alleviate without delay the more distressing conditions throughout these entire slum areas and we can do so on three available fronts:—

1. Provide parks and play spaces for all, outdoors and indoors;
2. See that all buildings are cleaned up, repaired and so maintained;
3. Provide community supervision.

Of these the first and foremost is the installation of parks and play spaces in order to open up and relieve these areas of street and neighborhood congestion, one of the worst slum factors. But the problem arises of housing the tenants to be removed from the dwellings to be demolished. This can only be done by building public housing on vacant land outside the slum area, since there are no vacant lands or buildings available within the slum or contiguous areas. This runs counter to the original idea that every new public housing project should displace that much slum housing, but this limited departure, for the purposes stated, seems essential and justifiable.

Let us start by dividing up the entire slums into units of possibly nine blocks each, and assign in each such area a specific site for clearance for parks and play spaces sufficient for that nine-block neighborhood. Next we select and plot out on a large parcel of vacant land as near the slum areas as possible, new buildings sufficient to accommodate the tenants to be removed for the proposed parks and playgrounds. As soon as the new buildings are completed, the tenants to be displaced will be moved into the new buildings and we then proceed with demolition and installation of the parks and playgrounds in the nine-block units.

When this is done progressively, every neighborhood and every family living in all the slum areas will be provided with adequate parks and play spaces without undue delay and inconvenience. Repairs and maintenance of the old buildings and community supervision of the neighborhood must proceed apace, and with these two additional factors attended to we have achieved the first stage of slum clearance.

The areas thus cleaned up are no longer slums,—tis true, they are old-fashioned and antiquated, but still neither unsafe, unclean nor unsound. We might call them, if this comes to pass, “Little Old New York.”

The living conditions will not be ideal, but they recall the old City as it was without the opprobrium of the present wretched surroundings. Furthermore, the situation is temporary and the improvements tangible and realistic.

This plan avoids the criticism of perpetuating slum buildings with costly improvements, as no radical alterations are intended. These buildings in the main are not boarded-up but are mostly occupied, and repairs and minor improvements will involve no large cost and no displacement of tenants on that account.
When enough buildings are thus demolished in these several units to provide parks and play spaces throughout the entire slum area, and the entire area refurbished and supervised, we can then and then only, wisely and realistically address ourselves to the problem of new buildings or remodeled buildings in the slums themselves. We again proceed with additional buildings on selected vacant land, sufficient for the removal of the remaining tenants from the whole of a nine-block unit and when this is done remodeling of existing buildings or demolition for new buildings may proceed. The parks already created will simply be that much to the good. When the new or remodeled buildings are ready in that former slum unit, we transfer back to them the tenants originally displaced and repeat the process till the whole of the slum area is re-housed. We thus do not disperse established neighborhoods and even the earlier tenants displaced for parks and playgrounds may be brought back to familiar environments.

**ENTER PRIVATE ENTERPRISE:**

With low rent housing thus proceeding on an organized scale, the new or remodeled buildings need not wait for public agencies alone. Private agencies, operating on a scale large enough for cost advantages, both with and without a landlord or a tenant subsidy equal to that which public housing requires, would help speed up the program enormously. Bringing the "subsidy" out into the open, as actually a relief item, is nothing to be afraid of, and it will speed up public understanding and support for all gradation of housing from the minimum up to the point where no subsidies, cash or otherwise, will be required.

The public agencies most involved by this plan are the State Housing Commission, the New York City Housing Authority, the Department of Parks, the Department of Housing and Buildings, the Department of Health, the Department of Welfare, the Police Department, and the various Welfare and Civic societies throughout the City. Under their efforts, combined with the efforts of private enterprise, and operating on a systematized plan, the results must be certain of success.

**PILOT PROJECT IS THE ANSWER:**

Realizing the difficulty of starting with so many agencies involved, it is suggested that the City Housing Authority with the cooperation of the State Housing Commission carry out a pilot project by condemning buildings for park space in a selected nine-block unit sufficient for the recreational requirement for that area and its population. Then let them select a parcel of vacant land or a group of vacant buildings sufficient to house the persons thus to be displaced. Proceed with the new buildings on the vacant land or remodel the vacant buildings, and move the displaced tenants in. Then proceed with parks and playgrounds in the space thus vacated, close streets as feasibility dictates, repair and maintain the existing buildings, and install community supervision.

From the experience and data thus gathered, all agencies, public, private and civic, may intelligently enter into the field, and building-by-building, block-by-block, neighborhood-by-neighborhood, these whole areas will be systematically redeemed.

The nine-block unit has been selected for purposes of illustration and ready reference. The plan fits into most any numerical quota that may seem preferable. Furthermore, the process suggested may be accelerated by multiplying the quotas to the extent that time and money permits. The principal thing is to get a pilot project accomplished without delay and draw from that experience for an intelligent, systematic, and sustained attack on the entire slum problem.
**MUST AMERICA BE A CHURCH MUSEUM?**

By FRANKLIN D. ELMER, JR.

Editor's Note: This article is reprinted in full from the July 30 issue of the "Christian Century." Interested in the author's architectonic viewpoint, E.S.A.'s managing editor wrote to him to ascertain his architectural antecedents, and received the following reply:

"I am not an architect, but only a minister who has been studying the problem of church buildings with increasing interest for a number of years. I am much disappointed at the failure of churches to accept progressive trends in architecture—hence the article."

With something over $700,000,000 earmarked for new buildings, American Protestants face a dilemma which is both revealing and challenging. What kind of churches shall we build? The question sounds simple, but when a local church committee has conscientiously struggled with the problem for months, running into years, it begins to assume alarming proportions.

In the past century the new church buildings that were not patterned after the local depot were largely designed to resemble, at least in a vague way, traditional styles from European culture. Gothic has been popular. Classic and Romanesque have been widely used. They were readily accepted in a day when the umbilical cord which nourished us on European culture was still intact. Today that culture lies in tragic decay and America emerges as the nation with the opportunity to set new cultural patterns for tomorrow. Is the American church to play its part in this? Will we have a voice in determining the new, or are we to go on in blind reaction, building Christian museum pieces which identify our faith with a dead past? The issue involves much more than buildings; it involves the place of the church in the new world.

New Wine in Old Skins

Many church committees are finding it a sore temptation to put new wine into the old wineskins. The advocates of Gothic stoutly contend that this is the true Christian expression of devotion in architecture. Certainly Gothic can be beautiful in its way. But those who commend it seem to forget that, for all its beauty, it is the architecture of an age that is gone. When Gothic was the rage, all manner of buildings were constructed along the same lines. Have we not seen the beer halls, town halls, college halls and dining halls built in the same style, in the same time? Can we ignore the fact that such a pile of stone as the Washington Cathedral will be in truth partly a mammoth monument to a feudal culture and a frank assertion of the sterility of our own?

If we turn to classic styles, we find ourselves copying the edifices of the Acropolis which belonged to a pagan world. Of course the classicists will say that Christianity has long since put new content into the old forms, and that in out Colonial and Georgian we have styles that have become almost American through the fact of their wide use in our country and the consequent relationship they have to American tradition. No one will deny that some beautiful churches of New England express the finest in American faith. Many are simple and charming in their settings. But the tall white columns are no longer needed structurally, and the infinite number of small panes of glass in the wood-framed windows find their chief historical meaning in the fact that originally small panes of glass were all that could be made and transported. Today they are a janitor's headache, and involve large costs in upkeep.

These styles were the natural products of their times. The materials available, the engineering possible and the functions conceived for the buildings were beautifully combined. But now, under the compulsion of these three standards for construction—materials, engineering and function—American institutions are departing rapidly from the old styles to construct buildings far more expressive of our time.

Architecture That Fits the Times

General Motors has just completed a sixteen million dollar factory at Flint, Michigan, which is considered to be the best in modern plant construction. The lines are simple, the building is obviously a factory, and the total result is pleasing and suggestive of the efficiency and power of American industry. When the new General Motors Research development on the edge of Detroit is completed, it will look just like what it is supposed to be—a modern research center. Twenty years ago the University of Chicago had plans for a heavy old Gothic administration building which would match the heavy old Gothic of most of the campus. But now the plans have been changed, and the edifice is being constructed with clean-cut modern efficient lines which will make a far more roomy and effective building for the future. At Brown University a classroom building was recently completed along simple functional lines of greatest efficiency. Plans for the new Smithsonian Institution in Washington call for a strictly functional type of building, with its beauty in proportion and arrangement rather than in exterior decoration or traditional lines.

Popular magazines are full of plans for houses designed for modern living, in which lighting, heating, insulation and mechanical efficiency are given the engineering freedom they deserve. Many are beautiful in their simplicity, and certainly are designed for comfortable and harmonious living. But pretty largely, to the vexation of creatively minded architects, church committees are bound by a nostalgia for traditional styles which pervert modern engineering, are expensive to construct and maintain, have a minimum of efficiency, and hold back the artist-architects from the creative expression in modern forms to which they feel they are entitled. Church committees want something that "looks like a church." There is evident among churches a determination to build monuments rather than bright, airy, efficient, functional church homes.

Typical Church Plans

I have before me plans for three churches which may soon be constructed. They are worth a look.

The first is Gothic, a large and massive pile with buttresses, pinnacles, rose windows, heavy oak doors with huge iron hinges, and a tall stone spire holding what appears to be a weather-vane high above the trees. There are even flying buttresses bracing the tower. When I showed it to one man, he said, "That would fit beautifully into the story of Medieval Man published in Life." But it "looks like a church." To be sure, no other institution would ever construct a building like that!

Function Defied

The plan calls for 23 separate outside entrances. How
would a person hungering for the ministry of the church know where to enter this building to find a minister? There is no obvious main entrance for use seven days a week. And it will take the janitor half the night to be sure all the doors are locked securely. Inside there are so many long corridors, stairways, wings going off here and there, and remote corners, that seventeen separate toilet rooms have been included to service the building adequately. How many of them will be clean and a credit to the church after two years? Will the trustees have plenty of funds to service all that plumbing adequately? The dining hall is submerged in the basement, and has a low ceiling and no outside windows, and there are other large basement rooms without adequate ventilation. The church school is spread far and wide all over the place, and there are four separate chapels for four church school departments, mostly poorly lighted and obviously to be used for but a few minutes each week. The chapel interiors are done in different styles—Colonial, Romanesque, Byzantine and Gothic.

Total cost of this structure will certainly be far above a million dollars (if workmen can be found to do the stone-cutting). The committee states this will be one of the most complete, usable, beautiful churches in America. There is a television broadcasting control room included in the plan as a magnificent gesture to the future! It is proclaimed that all materials used in the educational program, all office equipment and fittings will be of the most modern types available—everything but the building itself, which will be thoroughly traditional, rigid and inflexible.

Back to 1776?

The second plan calls for a Colonial structure, much better lighted and rather more efficient than the Gothic, but still looking as though it might be a transplant from 1776. It has the tall white columns set off from the stone exterior of the “meeting house” and a square tower amidships with a rather pathetic little spire rising braily above its balconyed summit. Much less pretentious, over-all, than the Gothic exhibit, this building still has eight outside entrances. There is no obvious way of determining the week-day entrance for the purpose of finding the minister or his office except to try all the doors and wander along the corridors and up and down the stairways, if one happens to find a door unlocked. Three long dark corridors on the three floors have called for eleven separate toilet rooms. There is a lovely chapel, handy to the offices, but it must be entered, from the interior of the building, right in the middle of one side. The dining hall, below the “meeting house,” is full of posts to support the floor above. Again, the building is quite inflexible, and except for a few of the classrooms there is no obvious way to rearrange the interior partitions to meet the demands of a new generation.

There are lovely features in both these churches. They have a strong and substantial look about them. But, doubtless, their most commendable virtue to the people planning to build them is that they “look like churches.”

The third plan before me is a strictly functional design, done by one of America’s leading functional architects who has created a host of buildings for schools, museums, libraries and other public institutions, but who has seldom been called on by churches. The exterior is utterly plain, with all its beauty in freshness of line and proportion. There is one entrance that is obviously to be used seven days a week for all purposes, though there are three other entrances for emergencies and to service the boiler room, kitchens and chapel when desired. Designed for a church of a thousand members, all rooms are on two floors, all are adequately lighted from outside, and there is no inaccessible space in the entire building.

Economy of space is secured through the introduction of a central lobby or narthex on each floor, so arranged as to be useful for the expansion of the dining hall, parlors, sanctuary and the chapel. Two main toilet rooms are inconspicuously placed off the lower lobby, yet so located that they are easily reached from any point in the building. (There is a small lavatory for the kitchen, another for the main offices, and one for young children contiguous to the nursery and beginners’ departments.)

Functional Design

The sanctuary is designed to have proper proportions and the best possible acoustics and visibility. The chancel is arranged so the choirs do not face the congregation, yet all singers are able to see the pulpit without turning their heads. The social hall is free of posts and also designed for the best acoustics. The chapel is arranged to be available for use by church school departments, yet is so set in a wing off the main lobby that it can function independently of the rest of the building for funerals and weddings.

The church offices are directly accessible to the main entrance, and so located that a secretary would have control of all traffic entering or leaving the building. The main parlor has full length windows opening on a beautiful terrace. The only corridor in the building runs through the space planned for educational purposes, space so designed that partitions can easily be relocated to change the size of rooms as dictated by future program developments.

There is not an unnecessary brick or stone in the entire building, all storage space is conveniently located, and there are no dark rooms or corners to become cluttered with discarded trivia. The only tower is a thin shaft rising across the driveway from the main entrance, lifting the cross high over the neighborhood and identifying the whole area with church in the tradition of the campanile. Functionally, the building is the answer to a churchman’s dreams. But there is one feature which condemns it in the eyes of some committee members—from the outside it does not “look like a church.”

Therein lies the story of the tragedy in many of the building programs now afoot. We American Christians are ready to have everything in a church thoroughly modern in materials, furnishings and equipment—except the building itself! At that point our tastes are still dictated by an emotional fixation toward a lot of masonry we knew in our youth, much of which never should have been erected in the first place.

Give the Architects a Chance!

In Europe, whose peoples have lived under the shadow of the traditional buildings for generations, many modern church structures are now being erected. The Roman Church is taking the lead in this, and from the Pontine marshes to the hills of Ireland their new churches are using modern expressions in architecture. Why should we in America continue to cherish our longing for styles now repudiated by the very people out of whose past they came? Europe will never return to Gothic. Are we to be the museum in which it will be preserved?

(Continued on page 95)
If, as von Schelling stated, "Architecture is Frozen Music," the "music" which accompanied the following words should really be something. We quote from a catalog of plans for Colonial Houses issued by the National Architects Union of Philadelphia and New York in the early 1880's. (The date is estimated from the typographical style of the book itself.)

"That which best fills all the needs of life is the most beautiful, and the broadened culture of modern days leads us to realize that our forefathers knew how to build homes which could be handed down to their children and their children's children, and which these could be able to point to with pride as showing 'Grandfather's taste and judgement.'

"In this volume we offer a collection of designs for Colonial houses which we believe will be found to exemplify the best models of their kind and to be correct and harmonious in style and detail. Our endeavor has been to follow in their purity the inimitable designs of Bullfinch and other masters of their profession, for a house partly Colonial and partly Romanesque or Gothic or embellished with Nuremberg turrest is a house spoiled for the lover of the beautiful and simple lines of Colonial Architecture."

"The details furnished with the designs will be strictly harmonious and very complete. The old style mantels, lintels, stair details, etc., will be given varying in ornamentation with the price of the house. An attempt to build Colonial houses without carefully prepared plans will result necessarily in failure and dissatisfaction, as their beauty arises from the consistency of their details and no builders and few architects have given the subject the attention to make these drawings correctly."

Are you ready for the music? Then above note a perspective drawing and floor plans for "Colonial Design No. 101." This is one of 19 designs offered in this interesting old book. Quite as amusing as the designs of some of these old "masterpieces" are the estimates of cost, ranging from $2,400.00 for a 6-room house with a dining room 25' x 12' to the $11,500 mansion pictured in this issue!
BROOKLYN CHAPTER

The 1947 Convention of the New York State Association of Architects is expected to demonstrate that the problems of the architect are deeply reflected in the general economy and social welfare of the public. The subjects of Housing, City Planning, Technological Development of Building Materials and the United Nations Capitol are among the convention subjects of equal interest to the public and profession alike.

The Brooklyn Chapter, A.I.A. is in accord with this viewpoint. By direction of President E. James Gambaro, Chapter committees have been instructed to alert the public, civic leaders, and public officials, within the Borough of Brooklyn, the territory of the Chapter, to the necessity for the architect's leadership in co-ordinating and integrating all efforts in these fields. The Chapter also will endeavor to stimulate its membership to its full obligation required and contribution to these problems.

Discussions held with the Editor of Brooklyn's leading newspaper have brought wholehearted and enthusiastic support in publicizing the steps to be taken by the Chapter in these fields. In addition, arrangements have been completed for the Editor to address the membership on the architect's position in the community.

It is planned to enlist the co-operation of the Chapter's fifty six student associate members, and of Pratt Institute, in the presentation of civic problems in planning and their improvement. It is hoped to enlist the business interests of the community to underwrite the expenses required to sponsor the work of the student associate members. With the support of the public, of civic leaders, and of public officials, many civic improvements are expected.

In Housing, President Gambaro will call on Chapter members, who by the following in the leader's attitude and practice, to be thorough and to give enthusiastic support in publicizing the steps to be taken, steering its course over the years. Both the leaders and the practitioners are required to proceed with the work of the Institute by devoting its efforts to help solve these immediate problems. The progress in this field will be explored and carefully followed. New Developments will be made known to all Chapter members.

BROOKLYN SOCIETY

Any organized group of individuals, to be of value, must have a bona fide reason for existence. That an independent architectural society can successfully function in these times when the trend is toward National Unification is an anomaly, true.

Yet the Brooklyn Society of Architects, with more than fifty percent of its roster also members of the American Institute of Architects, does have a niche, and does serve its members who turn out in large numbers at every meeting.

Organized over twenty years ago, it served in its early years as a fine medium for transforming Brooklyn's architects from competitors who walked on opposite sides of the street, into colleagues. It grew from a small handful to its present membership of over 100 active architects.

The unusual success of this independent body can be attributed to the many problems besetting the small practitioner in a large metropolitan city like New York. The society has over the years attempted to smooth out the wrinkles confronting its members. Problems arising from the many laws governing the construction, alteration and occupancy of buildings in this complex City of New York.

Every structure is subject to the Building Code and one or more of the supplementary laws—Multiple Dwelling, Fire prevention, Labor law, and the Zoning Resolution. It is easy to understand that the small practitioner is a bit more concerned over these restrictive measures that confront him every day of the week than he might be over the general matters of the architectural profession. Noble as the purpose of the National organization may be, it's a little too far away from the local practitioner to command his immediate interest.

Not that he is unsympathetic to it, is evidenced by the large number who have joined the A.I.A. in recent years.

However the feeling exists that an organization like the Brooklyn Society of Architects can well supplement the larger scope of the Institute by devoting its efforts to help solve these immediate problems. The progress of this work has been constant and with good results under the leadership of the many able men who have steered its course over the years—Men who are leaders in the architectural profession in Brooklyn. If any names are to be mentioned, one will suffice as symbolic of them all. He was one of the organizers of the society and while extending the greatest efforts in pushing it forward, he never aspired to be president. Harry Finkenstein of the firm of Seelig & Finkenstein, preferred to remain in the background. The stamp of Harry Finkenstein is permanently engraved on the work of the Brooklyn Society.

Under the guidance of its present president, Irving Seelig, the society is proving its right to the niche it claims. Mr. Seelig has led the society in many endeavors designed to help the small architect and has also brought the society to a leading participation in state wide affairs through the New York State Association.

ARCHITECT'S REFRESHER

We are advised that the Institute of Design and Construction is now located in larger quarters at 26 Court St., Brooklyn. The staff includes V. P. Battista, A.I.A., M.A., Director and a distinguished group of experts in Architecture, Engineering and Law.

The purpose of the Institute is to give review or refresher courses in Architecture, Engineering and related subjects which are expected to be of greatest benefit to professional men from Architects', Engineers' and Building Contractors' offices. Applicants should be University graduates or have had several years of practical experience. Registration in most courses is limited to twenty students.

Fall classes commenced September 22. Returning veterans who were formerly architectural or engineering draftsmen are taking advanced review courses at the Institute under the G.I. Bill of Rights.

The Institute welcomes suggestions from practicing Architects and Engineers relative to improving present courses or adding others which may be of value to the professions.
THREE HOURS IN A BLAST FURNACE

By GUY H. BALDWIN

The sinews of building and bridge are formed in aggregations of huge machines that contrive to make steel available at approximately one twentieth of the cost, pound for pound, of butter! Docks, traveling bridges, ovens, furnaces, and mills, laid out in generous scale for storage and expansion, appear isolated and somber from the public road but each at its appointed hour serves its turn to refine and shape this common aid to daily life. There are 17,000 pounds of steel for every man, woman and child in this country!

In four hours a 13,000-ton Lake ore carrier is unloaded by electric cranes whose controller rides in the bucket leg.

The capacity of these cranes is such that one of them could well lift a half-carload container full of ore from the hold and empty it bodily over the stock piles, much as dockside loaders now pick up railroad coal cars and empty them into a chute.

A ton of finished steel requires an average of 21 man-hours, 700 horse power hours of energy, principally electric, ½ ton of steel scrap, lime, flourspar, ferromanganese, and ½ ton of pig iron. One ton of pig iron requires one ton of coke, 2 tons of iron ore, ½ ton of limestone and about 4 tons of air. The steelmaking produces ½ ton of slag and 6 tons of gas. Up to 30,000 gallons of water are used in the processing of each ton of finished steel.

The blast furnace is about 100 feet tall with satellite air heaters, ducts, supply cars and chutes. From it cars take the hot pig iron to the steel furnaces for refining. The gas created in the process is used for heating and power. The slag may become concrete aggregate, or mineral wool insulation, or be used in the manufacture of Portland cement.

In the open-hearth furnace the pig iron and scrap are heated to about 3000 degrees F. It is difficult to believe that this simmering liquid is steel. Where a bessemer converter requires about 20 minutes for its charge of 15 to 25 tons, an open-hearth furnace requires about 10 to 12 hours for 100 to 175 tons. Thick brick walls are in places incandescent with the heat, and it's a great show of activity when the white hot metal is tapped out of the furnace into the ladle and then "teemed." into the ingot molds.

"Soaking Pits" maintain the ingots at a temperature uniform throughout the mass and suitable for rolling. In the blooming mill the hot ingots are then reduced to blooms or slabs. The blooms, in turn, are rolled down to billets in which form they go to smaller mills which convert them into various products.

Structural sections are produced by mill rolls which have grooves cast or cut to shape the steel. After rolling the shapes are cooled, marked, sheared, inspected and made ready for shipment. In a continuous strip mill the steel slab is hot-rolled through successive rolls which decrease its thickness and proportionately increase the length and speed of the strip. Coming out of the last stand at about 25 miles per hour, it travels along a conveyor table until it is diverted into a huge cooler through a trap door, wound in a coil and dropped beside a conveyor. Gages below 0.05 inch require further rolling in a cold mill.

A continuous rod mill takes a billet 30 ft. long and from 1¾" to 3" square, heats it and sends it through sixteen to twenty roll passes of different shapes—oval, square, diamond and round—until it has been lengthened to nearly a mile and is traveling at a speed of 40 to 50 miles per hour. Switching devices direct the rod from first one reel to another without delay. If the rod is to become wire it is later cold-drawn through smaller and smaller dies until it reaches the desired diameter.

Pipe is made by various methods. Butt-welded pipe is formed by running flat, hot skelp through a series of six roll-passes which bend the edges around until they meet and are welded to form a tight seam.

The scale and distances in a steel plant are impressive. In a large building there may seem to be little activity, but when its time in the sequence of steel-making comes, there is plenty of alert action.
ARCHITECTURAL SERVICE PROVIDES GREATEST DOLLAR VALUE

By MYRON L. MATTHEWS

Executive Vice-President, The Dow Service, Inc.

Ed. Note: The following digest is printed through the courtesy of The Blue Print, published by the Westchester Chapter, A.I.A. Reprints of the complete article may be secured from The Dow Service, Inc.

The cost of architectural and engineering services in the design of buildings, and their supervision while under construction, together with the management of the erection process by a reputable building contractor, is today the best low-cost insurance to the owner of getting quality building for his money. Too often, to the owner's later sorrow, one or the other, or both the services of these professional and practical construction experts are dispensed with in the name of economy. Immediate saving of a small fraction of the full cost of buildings usually turns out eventually to have been a false, temporary economy interfering with rentability, resale and refinancing at a future date.

The money the architect can get from his customary 6% designing commission is hard earned. It amounts to what the lender of mortgage money used to get for the use of money. Many banks today will not lend a nickel unless a competent architect is employed. Owners omitting architectural services today may tomorrow find serious refinancing troubles as a result.

Now what does the architect have to do to earn his 6% designing and supervision fee and what does he do with the money thus earned? He must provide an adequate office, maintain a sufficient staff, originate and produce sound plans and attractive designs, maintain contact with clients on work under construction, perform a complicated buying function and an equally complex superintendence function, keep informed of new trends in design, construction, materials and treatments, squeeze out time somewhere to influence new assignments into his office and continuously keep an eagle eye on his costs. To accomplish all the foregoing within the fixed and narrow margin of 6% of the total cost is a big league problem in business management. In some large metropolitan architectural offices, various functions are divided and allotted to specific individuals, but, of the approximately 6000 to 8000 active architectural offices in the United States only a few rank in this classification. The great bulk, in point of numbers, is made up of those in which the principals are active in all phases of the work.

Take the progress of a small project through a one-man office. The job, we will say, is an office building for a factory, to cost $40,000. The architect's gross income is $2,400. Here is what he does to earn it. First it costs him something in personal time to get the business, and perhaps something more in the way of club dues, civic or social activity, entertainment, or other form of "selling overhead." Thereafter he must familiarize himself with all the requirements of his assignment. He must draw up initial plans and elevations and get them approved by the owner, maybe in the face of a building committee representing as many conflicting opinions as it has members. Then he must prepare complete specifications and detail drawings, call in contractors, supply them with copies of the blueprints and specifications, and, after a few days, receive their bids. All through the construction period he must supervise and scrutinize the various contractors' performances. He must keep a running check-up of costs in order to be able to approve the contractors' "estimates" for his client to pay. In addition, he may need to hold two or three conferences a week with his client. If the preliminary period is covered in two months and erection is accomplished in four more, he receives the munificent remuneration of $92,000 a week for his services, most of which goes to meet his fixed overhead and organization expenses.

The above is for a commercial building. If, however, the $40,000 job represents a residence, the proposition looks even less alluring because it quite probably entails working for a client who cannot read blueprints, who desires impossible accomplishments, and fusses and frets about the progress of construction from day to day. He writes his architect, telephones him, visits him personally—and expects his architect to sit idly by while he talks away valuable time which the latter cannot charge on his bill.

Most good builders prefer working with architects and engineers and actually are anxious to share the responsibility for final results with a supervising technician. Some owners and builders have felt that architects and engineers sometimes cramp the style of a contractor to an extent affecting the pocketbook of the owner adversely and unnecessarily. This view is wrong and is rapidly giving way to intelligent enlightenment. More and more, greater reliance is being placed upon the architect by both owner and contractor.

To a growing degree, banks are taking direct interest in buildings under construction in which they are financially interested. This may bring up a material question in the owner's mind: With bank supervision, or FHA supervision, or supervision of a reputable builder, why do I need architectural supervision? The answer lies in the fact that the supervision of a bank or FHA is primarily in their own interest and is seldom more than superficial. Contractors prefer to work with an architect because their two separate functions are not competitive. One does not encroach upon the other. They go together like twins. The architect is the owner's expert designer, supervisor and general arbitrator and coordinator. The 6% he gets may well be the most value per dollar an owner receives.
Office Practice

Eggers and Higgins Manual Presented

Your editors are indebted to Eggers & Higgins of 542 Fifth Avenue, for permission to reprint, almost verbatim, relevant sections of their carefully compiled office manual.

This is not a theoretical plan of procedure, but rather the codification of practices found to be most desirable over a period of years. We heartily recommend it to our constituents for comparison with their own office practice manuals or as the basis for the preparation of new manuals. Suggestions for improvements or coverage of special situations will be welcomed.

The first three installments were printed in the March-April, May-June, and July-August issues. "Technical Procedure" and the "Construction Division" are completed in this issue of the E.S.A.

Guy H. Baldwin, Associate Editor.

Technical Procedure

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2-20. Subcontractors—The fixed policy is to deal only with the General Contractor.

It is recognized though that at Job Meetings or during visits to the site, occasions arise wherein it is expedient to answer questions raised by subcontractors. In such cases the situation should be covered by either the Minutes of the Job Meeting or a letter of confirmation sent to the General Contractor.

It is anticipated that during visitations to the site inspection will be made accompanied by the Contractor's representative plus the Owner's representative, if available.

Whenever it is specifically requested for sound reasons that the Architect communicate directly with a subcontractor a copy of such communication should be sent simultaneously to the General Contractor.

2-21 Shop Drawings—At job meetings General Contractors often claim that work is delayed because shop drawings have not been returned. Experience indicates that such claims are both right and wrong.

Shop drawings are to be returned quickly. A fixed procedure is established but the handling must be organized by the Project Manager so that no criticism can be directed at the Architect for delays.

Each Project Manager must maintain or have maintained with his Section a system to:

Check in all shop drawings—date of receipt, etc.
Apply Architect's Project Number
Make record of action taken
Use Transmittal form when drawings are sent out and have it recorded in Section
Systematically file all drawings. Filing to be worked out with Clerk.

The General Conditions of the Specifications must include the following:

"Shop drawings prepared by subcontractors shall be checked for accuracy and contract requirements by the General Contractor before being forwarded to the Architect. Shop drawings not so checked and noted will be returned to the General Contractor without being examined by the Architect."

Shop drawings received in the proper manner shall be checked—really checked—and stamped according to findings as follows:

(a) Resubmit
(b) Approved as noted
(c) Approved

and a record of action taken placed in Shop Drawing file in the Project Section.

One copy of the Shop Drawing is retained and all other copies are to be returned with letter of transmittal clearly identifying the particular drawing returned.

When convenient and economical to do so, Shop drawings are to be returned by messenger.

All Shop Drawings are to bear the large stamp:

"Contractor shall check all shop drawings for dimensions and contract requirements, also verify all measurements at the site."

2-22. Personnel Relationships—In the course of a project, particularly those engaged in inspection or those who come to know well the personnel of another office, as the General Contractor, etc., there is a temptation to "talk shop," and out of this oftentimes "personalities," etc., become objects of criticism or unfavorable remarks.

It is most important to remember that there is no such thing as a "confidential" remark. They are bound to come back and at times prove very embarrassing. Our relationships with contractors and subcontractors must be most discreet and courteous, in keeping with the dignity of the office.

"Anyone representing this office is advised to make no remark or statement to anyone which he would not care to have repeated."

2-23. Drafting Room Order—Each Project Manager is charged with the responsibility of keeping his Section and all boards clean and in order. Everything but the absolute necessities for conducting work is to be turned over to the Clerk and kept on file.

All loose papers, pamphlets, books, blueprints, etc., present a fire hazard in addition to being untidy; (clients may be brought through the Drafting Room unexpectedly).

(Continued on page 84)
ARCHITECTS' RELATIONS WITH MUNICIPAL BUILDING DEPARTMENTS

Mr. Paul Gerhardt, Jr., A.I.A., City Architect of Chicago, in an address delivered before the 33rd convention of the Michigan Society of Architects, expressed the conviction that architects generally pay too little attention to building codes. They maintain a "Let George do it" attitude until they come up against a problem which is made difficult by some code regulation. Then they gripe. They should rather, said Mr. Gerhardt, actively interest themselves in code formulation and observance.

A review of the records of the Building Department of Chicago for two months shows that 43 out of 676 applications for new building permits had to be rejected because of serious errors or incomplete handling of important structural details, particularly plumbing layout. An analysis of the most common errors in permit applications, prepared and distributed through the Chicago Chapter of the A.I.A., showed that the most common errors or omissions were, in order of occurrence:

1. Lack of or incomplete ventilation schedules.
2. Lack of plot plan showing location of building on lot.
3. Omission of dimensions, window sizes, etc.
4. Incomplete or entirely lacking plumbing diagrams.
5. "Rule of Thumb" determination of joist sizes.
6. Improper swing of exit doors.
7. Omission of lintel sizes.

Quoting from a paper read before a convention of the American Society of Sanitary Engineers in Boston, Mr. Gerhardt read the following comment into his speech:

"Many building inspectors, plumbing contractors and journeymen will agree that there is much to be desired in many architects' and engineers' plans and specifications and that, in many instances, the plumber and inspector, exhausted by crystal ball gazung, design the work on the spot in conformity with good practice and code requirements."

Probably not more than ten percent of architects and engineers submit adequate plans for ventilation, sanitary work and plumbing. Reasons for these inadequacies are:

1. A great many architects do not possess the necessary basic knowledge of plumbing to design same.
2. Code requirements do not clearly specify the details which should be included in the plumbing plan.
3. Competition forces those who would normally include adequate plumbing design to reduce their standards to the level of those who disregard good practices and code requirements.

Some architects in the State of Washington have seriously suggested that, as an experiment, building inspectors be dispensed with and that the responsibility for conformance with local building codes and regulations be placed fully with the architect. Actually they have now that responsibility but the record shows that too many of them are unable or unwilling carefully to check their own plans and specifications against the established codes.

Mr. Gerhardt urged that architects as individuals actively participate in as many as possible phases of public affairs—selfishly, for greater ease in practicing their profession, and altruistically, for a more satisfying life as citizens. Such activities as Urban Planning or Plan Commission activities, Park and Recreational Developments, Airports, Zoning and the like are well within the scope of architects' abilities to serve. All are pertinent to the better functioning of a community and are the means of establishing cordial relationships between architects and municipal agencies.

"Your opportunities and your duties," said Mr. Gerhardt, "lie in that direction."

THAT EXTRA DRAFTSMAN

Digest of a paper by H. H. Sullivan at the 1936 Convention in Buffalo, N. Y.

My theme is—don't redraw anything! I am not an architect, but my years of association with the profession indicate that one of the most tedious procedures is the retracing of basic floor plans for buildings of more than one story. There is now no necessity for doing this by hand since the photographic industry has produced light-sensitive papers, cloths, films and other materials suitable for the faithful reproduction of the original work on any medium. The "originals" may be in the form of pencil or ink work or may even be photographic images such as Vandykes, Blueprints, Blue-lines, Black-and-Whites or Photostats. The original may be copied in whole or in part by deleting unwanted detail. Change of scale may be introduced, providing enlargement or reduction from the original.

Let us assume that it is required to create plans for a ten-storied structure in which the floor plans are to be similar. Ten or more copies of the basic floor plan may be made on tracing cloth or paper. These copies may be of full line density or faint, depending upon the effect desired. They serve as the originals into which may be incorporated details which are unique for each floor. Phantom plans (those reproduced to give a faint image of the original) may be used for the addition of mechanical systems or installation diagrams or any detail for which emphasis from the basic building lines is desired.

It is often found on remodeling projects that blueprints are the only source of reference material. In this instance, photocopying can serve to advantage by providing a workable set of basisc tracings. Renderings and perspectives, often required in quantities, may be simply and easily reproduced in enlarged or reduced size on practically any type of material.

Because of the many different techniques available, it is unlikely that more than one or two persons in any photocopying organization will be thoroughly conversant with all of them. Be sure, therefore, that your requirements are understood and that you receive an authoritative opinion on the work to be done.

In closing, let me point out that the increased work output of "That Extra Draftsman" may well be supplied by greater utilization of existing photocopying services.
THAT NECESSARY EVIL,
THE ARCHITECTURAL ENGINEER

By THOMAS H. McKAIG

How many of your clients are going to get their plans under way "when building prices come back to normal?" Just when is that going to take place and what is normal? Let's analyze some of the conditions which contribute to the high costs on today's building market, and on the basis of this analysis, do a little guessing as to what is ahead.

In the first place, building construction as the contractor buys it, is about fifty percent material and fifty percent labor. In the last analysis, however, even that material is mostly labor cost back in someone's plant, mine or woodlot. The question of when building costs will go back to normal then becomes basically "when will labor costs go back to normal?" Let's consider past history of union wage scales. This history indicates that this scale never recedes materially, and then only temporarily in a time of extreme slump. True, the efficiency of labor may vary to some extent, but over a long period, the general trend of efficiency has been downward instead of upward. With the shortage of every kind of construction, there is no reason to look for any slump which will be great enough to upset the applecart of current union scales, and with the cry of "higher wages—shorter hours" and an upward spiral all along the line, can we hope for any material reduction in labor costs?

Having agreed (or have we?) upon the principle that wages are not coming down—let's look at the immediate prospect. John Lewis' coal miners have raised the price of coal, a basic fuel for the manufacture of steel, brick, tile, cement, sanitary ware, lime and power. Already steel costs have started upward, and the various products made of steel will certainly not decrease in cost as a result. Moreover, with the rise in price of coal, the railroad freight rates will go up and this will not reduce the price of anything, including lumber from the deep south or the far west.

Aside from all the material and labor increases, what about the slice of profits that Uncle Sam or the State or a County Sales Tax takes away or the cost it adds on—costs which were not there ten years ago "when times were normal." When are all these extra costs coming off? What about the extra overhead the contractor has in bookkeeping costs to take care of Social Security, Withholding Tax, Unemployment Insurance and the multiplicity of other items he didn't have a few years ago? Have these added to building costs? It is my guess that they have,—each one of them.

It seems to me that we must realize that we have a new "normal". Any reductions due to greater efficiency of labor will be offset by price rises elsewhere. Moreover, the "average" building of today, whether it be house, school or office building is a better building than its brother of yesterday. We have reached a new normal in what we demand. In the last analysis, wages and costs are proportional. If a man earning $1.00 per hour in 1936 could afford to build an $8,000 house, he can build a $12,000 house at $1.50 an hour. Each house represents 8,000 man hours of labor.

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THE APARTMENT BUILDING OF THE FUTURE

Condensed from an article by H. I. Feldman, Architect,
in Real Estate News, November 1946

The apartment building of the future will continue the onward march of progress made possible by technological advances, improved planning techniques, changes in building codes and changes in social and economic trends.

Fireproof and fire-resistive methods of construction will be on the increase for buildings six stories and less in height. Apartment units will contain fewer but larger rooms and will be more luxuriously planned, with more attractive entrance galleries and better closet space. Glass areas will be expanded to break down the barrier between indoor and outdoor space relationships.

Buildings in general will be divested of superfluous ornamentation. Interiors will be simplified and streamlined, depending upon space arrangement and color for decorative effect. Emphasis will be placed upon greater efficiency of the plan, increased utility of the elements and a harmony between the architecture and the apartment dweller.

Kitchens and bathrooms will receive much more attention from the architectural designer. Streamlined, scientifically planned kitchens will be designed with step-saving convenience, with built-in appurtenances to lighten the housewife’s burdens. Refrigerators will be more attractive in appearance and more efficiently designed with individual cold control and better arranged storage spaces. Bathrooms will be designed for increased comfort and convenience, even to the installation of book-shelves in simple recognition of the bathroom as an auxiliary library.

Heating advances will permit apartments to be individually controlled at temperatures desired by the occupants. Low base-type radiators will become increasingly popular. The tremendous shortage of living accommodations has a tendency to postpone the refinement of air-conditioning until such time as space will be competing for tenants.

There will be increasingly larger developments providing for self-contained park areas, parking and garage facilities and general community services.

Luxury apartments, commanding the highest prices will be produced first. As the supply increases, prices will taper off to an even keel to permit lower-priced rental space. The removal of politics from the building industry will be productive of housing and will set in motion the greatest prosperity known in the history of our country.

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EMPIRE STATE ARCHITECT
THE RELATION OF THE ARCHITECT-ENGINEER
TO INDUSTRIAL AND COMMERCIAL CONSTRUCTION

"The Architect-Engineer," said Mr. George H. Meihl, in his address at the 1946 Convention in Buffalo, "must become part of his client's plant engineering organization. He cannot possibly be an expert in the layout of equipment and production procedures for all the industries he serves; but he can, indeed must, acquaint himself with his client's problems—problems of delivery and handling of materials, methods of manufacture and disposal of the finished products."

"Manufacturing facilities," said Mr. Meihl, "must stress flexibility in plant layout, and provision must be made in the design to insure flexibility to accommodate the constant alterations of layout and processes which competitive production will always demand."

While he is not committed to one-story, continuous line production layout, he noted a general trend in that direction. He observed that the clothing industry is beginning to adopt it and that even the meat-packing industry, traditionally bound to the multi-story, gravity flow layout is now seriously considering the horizontal-flow design preferred by other mass-production industries.

Service and utilities layout, according to Mr. Meihl, deserve much study. The Architect-Engineer's plans should anticipate major service requirements so that connections in new locations can later be made without undue cost or unnecessary interruption of manufacturing operations.

The question of monitor-type construction, with the maximum of natural ventilation and daylight, versus flat-roof design with controlled lighting and ventilation is a moot one, with much to be said on both sides. Mr. Meihl finds virtues on both systems and suggests the following points to be considered in making the proper choice in any particular instance.

1. The monitor type permits greater air movement but is subject to fluctuations with changes in the velocity and direction of the wind.
2. Mechanical ventilation involves greater capital cost and operating expense, but provides superior control.
3. Monitor-type daylight illumination will not usually save enough in lighting current expense to amortize the investment in its construction.
4. Where manufacturing processes produce a great amount of heat, smoke or vapor, they can usually be exhausted more efficiently through monitors.
5. Normally, a flat-roofed building without monitors will require a smaller heating plant investment which will operate at lower cost.

Insulation of roof areas represents a considerable extra investment, but it is an investment which is usually recovered in a few years through lowered cost of heating plant equipment and its operation. Physical characteristics of available types of insulation should be investigated and the provision of a vapor seal to keep water vapor out of the insulating material should be considered in relation to the continued efficient function of the insulation.

Labor-management relations are a proper concern of the Architect-Engineer. The Personnel Department with its equipment for photography, finger-printing, X-ray and physical examinations and hospital facilities should be so located that present and prospective employees will be most efficiently served. The provision of suitable, properly located parking areas is important. Locker rooms, lunch rooms, toilet facilities, etc., should be readily accessible from working stations to reduce the need for travel time. Interior painting should be prescribed with full consideration of safety and working efficiency and the psychological values involved.

The whole design of a modern production facility will be enveloped in an exterior which expresses the function of the building. The design will be rational, expressing in artistic proportions the romance of the industry. Its aesthetic as well as its functional design will possess the intangible values which a well planned building exerts upon the efficiency and morale of those who manage and man it.
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Kapra, Francis A. 296 Amherst Ave., New York 67, N. Y.
Katz, Charles M. 85 Highland Ave., Yonkers 5, N. Y.
Keller, William A. 101 Park Ave., New York 17, N. Y.
Kelly, Joseph E. 13 Halcyon Place, Yonkers 2, N. Y.
Kohn, Robert New York 45th St., New York, N. Y.
Kronfeld, Frank 45 Prospect Ave., Mt. Vernon, N. Y.
Laubrie, Kenneth G. 28 Fifteenth Road, Scarsdale, N. Y.
Levi, Julian Clarence 102 West 45th St., New York 18, N. Y.
Levine, Louis 323 Sheridan Blvd., Mt. Vernon, N. Y.
Loeb, Lawrence M. 95 Mamaroneck Ave., White Plains, N. Y.
Lundin, Earl H. 50 Rockefeller Plaza, New York 20, N. Y.
Lutz, Charles P. 132 Washington Ave., Pleasantville, N. Y.
McConnell, Harry W. 6 Randolph Road, White Plains, N. Y.
Mager, John G. 128 Webster Road, Scarsdale, N. Y.
Matson, Nat. O. 97 Nepperan Road, Tarrytown, N. Y.
Nichols, Phillips Brooks 45 Hathaway Lane, White Plains, N. Y.
O’Connor, Robert B. 101 Park Ave., New York 17, N. Y.
Palau, Julio 130 The Towers, Bronxville 8, N. Y.
Pau, R. F. 5 Allen Ave., Tuckahoe 7, N. Y.
Paul, James W. 92 West Hartsdale Road, Hartsdale, N. Y.
Paul, John M. 79 Wayne Ave., White Plains, N. Y.
Pennington, Francis W. 140 Hillside Ave., Mt. Vernon, N. Y.

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EMPIRE STATE ARCHITECT
MEMBERS NOT AFFILIATED

Austera, Louis E. 304 E. 77th St., New York, N. Y.
Burt, John C. 15 Park Row, New York, N. Y.
Coe, Theodore L. 4000 Cathedral Ave., N. W., Washington, D. C.
Coclin, Claude C. 215 North Ocean Ave., Patchogue, N. Y.
Cunningham, Bertram 214 East 49th St., New York
Delaney, J. 27-11 33rd St., Jackson Heights, N. Y.
Durang, Ferdinand Summit, N. J.
Elton, Herbert Charles 1188 Main St., Bridgeport, Conn.
Feingersch Samuel 41 Union Square, New York
Firestone, S. 59-61 South Ave., Rochester, N. Y.
Hacker, Glenn A. Fort Lee Trust Co., Bldg., Fort Lee, N. J.
Hacker, Ralph E. Fort Lee Trust Co., Bldg., Fort Lee, N. J.
Haig, Quentin F. Address unknown
Howe, L. B. 820 Irving Ave., Syracuse, N. Y.
Kendall, H. B. 13 Stewart Ave., Glens Falls, N. Y.
Kupatt, C. F. 1575 Metropolitn Ave., New York, N. Y.
Lieberson, S. A. 1947 Ocean Ave., Brooklyn, N. Y.
Lobejagger, C. M. 5926 Woodside Ave., Woodside, L. I., N. Y.
Lowinson, Oscar 145 West 70th St., New York 24, N. Y.
Ludorf, Henry F. 100 Pearl St., Hartford 3, Conn.

Philips, W. Stanwood 521 Fifth Ave., New York, N. Y.
Pleuthner, Walter K. 233 Heathcote Road, Scarsdale, N. Y.
Porter, Frederick L. 30 Wildwood Road, Scarsdale, N. Y.
Purdy, Earl 29 Watkins Place, New Rochelle, N. Y.
Rabin, Harry H. 20 S. Broadway, Yonkers 2, N. Y.
Rausch, Henry 35 Lafayette St., White Plains, N. Y.
Riccio, Angelo 88 Webster Ave., Harrison, N. Y.
Richards, Theodore 31 Mamaroncke Ave., White Plains, N. Y.
Rogers, Harold B. 346 Westchester Ave., Mt. Vernon, N. Y.
Scheiner, James M. 59 Cliffon Ave., Harrison, N. Y.
Shih, Lee Ly 35.I5t St., New York 12, N. Y.
Scannell, Robert H. 50 Parkway West, Mt. Vernon, N. Y.
Scheiner, James M. 20 Wiltwyck Road, Scarsdale, N. Y.
Schoen, Lincoln 29 Watkins Place, New Rochelle, N. Y.
Rabin, Harry H. 20 S. Broadway, Yonkers 2, N. Y.

Please notify your secretary at once of any change in address. The E. S. A. will then reach you promptly.
The use of Nailock Steel Channels simplifies and speeds suspended ceiling construction and the installation of acoustical materials. It averts many of the effects that come from shrinkage, settlement, vibration or other causes. The Nailock Method securely fastens every unit in place, assuring permanency of installation that is otherwise unobtainable. The Nailock Method of suspended ceiling construction permits the use of the widest variety of materials. It is also adaptable for furred slab concrete construction and furred pan type concrete construction. Write for Catalog N-1, giving complete data on Nailock Steel Channels, their uses, detailed installation drawings and additional advantages.

See NAILOCK EXHIBIT AT BOOTH NO. 22
1947 CONVENTION NEW YORK STATE ASSOCIATION OF ARCHITECTS
October 22-25 • Commodore Hotel

Nailock Steel Division
THE Sanymetal PRODUCTS CO., INC.

1678 URBANA RD., CLEVELAND 12, O.
RICHMOND HAROLD SHREVE
(Continued from page 36)

the Institute would be run on a strictly business basis, and he demanded the full and complete co-operation of the directors. He insisted that the budget be balanced, sums borrowed from certain funds for use by other funds, be replaced to the appropriate funds, that the Institute do everything possible to advance the interest of the architects before government bureaus (which architects complained of continually), and that the Institute, if it was to justify its position, should be the organization of all architects of good character in the United States of America.

Needless to say, his enthusiasm and sincerity fired the directors and his program was approved unanimously.

Shreve tackled the problems, one after the other. In fact, he took over the most difficult and unpleasant tasks at once. He first undertook to clear the good name of the members of the Institute, by investigating the complaints and charges then being made against individuals. Much was taken out of Shreve, because of the differences and nature of these problems, but he never flinched from his duty, no matter how difficult. The records of the Institute show the disposition of these cases, and the public declaration of confidence in those men against whom innuendos were not justified.

Shreve then began to adjust the financial affairs. He instigated a drive for collection of back dues. He encouraged a membership campaign among the chapters. He reduced expenses by eliminating useless committees and amalgamated others. He leased the new building in Washington to the United States Government at a fair, but substantial, rental. He appropriated funds only to those committees whose worth and performances justified such funds. Before the end of the fiscal year, the budget had been balanced, sums restored to appropriate funds, and membership increased.

Shreve next tackled the problems of having the A.I.A. recognized by the United States Government. He spent much of his time in setting up qualifications for a worthy representative of the Institute to the government bureaus. His selection was justified by the results. The Institute is now fully informed about governmental policies and prospects, and each architect in the United States can feel that he has a sponsor in Washington if he has business with the government.

He was greatly concerned over the education of the architect. Shreve, although a lover of mankind, insisted that each person be fully qualified to tackle any task he set out to perform, and could not tolerate incompetence. He insisted upon the proper education of the architect. To that end, he founded the American Architectural Foundation, whose purpose is education and research for the profession. His enthusiasm and sincerity were contagious and many men followed him. One very prominent architect was so impressed by Shreve's sincerity that he made the first contribution of $10,000,000 to the foundation. We may expect much from the American Architectural Foundation in the not too distant future.

Shreve also insisted upon the architectural schools giving to the young architect the proper mental equipment to meet his problem. His suggestions to the architectural schools were based upon his own experience and his own practice. Generally, the schools became interested in his suggestions as coming from a man whose devotion to the profession was then well known. Many of his suggestions have been accepted. We hope for a more practical and well-balanced education in the future architect.

His most important accomplishment was to really unify the profession. The policy of the Institute, up to that time, was rather vague and undecided. Shreve insisted upon an unequivocal statement of policy as to membership, and finally was rewarded with the enunciation, by the Institute, at the 1942 convention, to the effect that membership in the American Institute of Architects be open to all qualified architects, of good character.

The results of his inspiration have crowned the efforts of the A.I.A., with success. The membership of the Institute is over 7,500 with more and more men being admitted at each chapter meeting, and the profession is almost fully united, with complete uniformity within sight. It is now a powerful, influential, youthful organization, with a most promising future.

Shreve did not spare himself where service to the profession was concerned. Always ready to appear before groups and committees, he represented the profession to its credit. His good humor and sincerity, at these gatherings, gave pleasure and inspiration even to those not connected with our profession. His addresses to the conventions of the A.I.A., at Detroit, Michigan, on June 23, 1942, and at Cincinnati, Ohio, on May 26, 1943, were masterpieces of information and filled with expressions of appreciation to those members of the A.I.A. who helped Shreve re-organize the Institute. They were published in the succeeding issues of The Octagon, and make informative and interesting reading.

His was a full life of unselfish devotion to and service for the architect. The appreciation and affection of the members of the A.I.A., were fully exemplified at Cincinnati, Ohio, on May 27, 1943, when a prominent member of our profession read—

"RICHMOND HAROLD SHREVE
You have done great things for us, and we are glad.

Through your loyalty, your vigilance, your wisdom and your courage you have led The Institute from shadow to sunshine, from strength to strength, to new heights of usefulness.

You have widened our horizons, you have kindled our imagination and imbued us with your eager spirit to press forward to greater service to our profession.

The Officers, The Board and members of The Institute take a reluctant and affectionate farewell of you as President. Wherever you go you will always be with us, warm and alive in our hearts.

Ave Atque Vale."

The citation was feelingly and dramatically acclaimed and the fervor and enthusiasm displayed by the membership will remain permanently in the memory of those privileged to have been present. It is a permanent and lasting tribute of the American Institute of Architects to a great leader.

May his influence and splendid example forever guide us.

M. W. DEL GAUDIO

EMPIRE STATE ARCHITECT 83
The Clerk must keep all jobs in separate files and keep the Drafting Room free from all miscellaneous material not in actual use. “Actual use” is to be defined on a reasonable basis and not a liberal one.

2-24. Expediting—At times it is necessary to institute our own “expediting” in order to help bring a job to a successful conclusion on time.

This is not a general practice nor can it be instituted without specific authority.

Project Managers must be aware of the problem and alert as to the efficiency or otherwise of measures undertaken by the General Contractor. Expediting, where necessary, should be suggested as a phase of the contractor’s operation, but no mention of it is to be made or measures instituted until general policies surrounding it are discussed and decisions made.

2-25. Meetings—The keynote of all meetings of whatever nature is prior preparedness to achieve accord and efficiency.

(a) Client—As far as possible a meeting with the Owner or his representative is held once a week or every two weeks. This is usually necessary for “cost plus” jobs. The most essential element of such meetings is avoidance of discord or friction. In order to achieve harmony and efficiency a meeting must be arranged with the General Contractor prior to the Owner’s meetings and an agenda prepared consisting of all items on which an agreement has been reached. Items on which there are disagreements are to be withheld for further investigation.

The Architect, through the Project Manager, is to maintain and distribute all minutes of such meetings.

The advance agenda is to be distributed by the Project Manager to all representatives of the Architect who are to attend the meeting.

Careful preparation plus a complete knowledge of subjects to be discussed, presented in an orderly, restrained but confident manner builds confidence and respect for the personnel of the Firm.

Project Managers can and should introduce others in the meetings such as the Specification Writer, the Project Manager’s assistant, or others wherein such individuals have a contribution to make.

(b) Project—The Architect shall require the General Contractor to conduct Job Meetings weekly at the site to which meetings all subcontractors at the time engaged at the site are to have a representative present.

The Project Manager for the Architect or his Assistant, and the Architect’s construction supervisor of the project, are to attend such meetings.

The Contractor shall conduct these meetings, hear reports of progress or difficulties presented by the subcontractors, and co-ordinate all phases of operation.

The Contractor shall keep minutes and deliver two copies to the Architect, one of which shall be forwarded to the Owner.

(c) Firm—Normally the members of the Firm hold a meeting weekly for the discussion of current problems, policies, and other phases of the Firm’s business.

These meetings can and should be a clearing house for all individuals within the Organization. Project Managers with special problems can present them for general discussion and decision; all individuals can and are invited to process, through their respective Project Managers, all criticisms, suggestions or points of interest which might well be a matter for Firm consideration.

Changes to or additions to this Manual grow out of
I'm Meetings, and the door is open to anyone to be a factor in such changes or additions.

2-26. Qualifications of Contractors and Subcontractors—Prepared forms are available to be distributed to Contractors and subcontractors when required. These forms cover work experience, personnel and financial status. The execution of such forms, their analysis and subsequent recommendations is a matter for the Project Manager and the Firm to handle jointly.

2-27. Fiscal Year—The close of the Fiscal Year is (specify date). As of this date each Project Manager shall compute and report in a written memorandum:
(a) the percentage completion of his project.
(b) if the project was initiated prior to the close of the previous year the memorandum shall include also the percentage completed as of the previous (specify date) and the current fiscal year, and this routine shall be followed until the termination of the Project.

2-28. Termination of Project—Routine—With the approach and closing of a project certain fixed items of procedure are involved.
(a) Cube and Cube Cost—The Architect must prepare his own computation of the cubage of the project and check it against that of the General Contractors. With the issuance of the final requisition or when the final cost is determined the Project Manager must submit a memorandum covering the cubage and cube cost to be recorded in an office book which includes such figures for all previous jobs. Include project number also.
(b) Letter of Commendation to General Contractor—When a project has been finally concluded successfully and it is certain there are no loose ends still pending or litigation possibly involved, the Firm forwards to the General Contractor a letter of felicitation. Project Managers will clear this with the Firm and specific instructions will be issued for specific cases.
(c) Filing of Plans—In the course of a project many details and blueprints are accumulated which, after the project has been completed, have no value. In collaboration with a member of the Firm each Project Manager will review all drawings to determine what shall be discarded and what saved.
Under the supervision of Project Manager, Clerk shall properly wrap plans, number with file number and project number and indicate contents. They shall be divided into separate bundles as follows:
(a) Working drawings with structural and mechanical
(b) Scale details
(c) Full size details
(d) Shop Drawings
Typewritten transcripts of drawing number cards shall be made and filed in letter file. Drawing number cards shall then be destroyed.
(d) Number of drawings—When the final and complete number of all drawings is available it shall be reported. Such figures are desired to compute the final cost per drawing for each project. Project managers can know from time to time the fair average cost per drawing as a guide in the operation of their own project.
(e) Budget Analysis—As the project proceeds, cost figures are accumulated and applied weekly against the project budget prepared by the Project Manager.
The final figures as related to the Budget are to be analyzed and a report submitted by the Project Manager so that experience gained in relating costs to a given project may be utilized on subsequent projects.
(f) Maintenance Manual—At the initiation of the Project the Project Manager shall advise the Contractor that at the termination of the Project, with the occupancy by the Owner, the Contractor shall submit
to the Architect three copies of a manual presenting full details for the care and maintenance of all visible surfaces and equipment.

This Manual, when checked by the Project Manager and Construction Supervisor shall be delivered to the Owner (2 copies) and one copy retained by the Office.

(g) Final Inspection—At a point some time prior to occupancy by the Owner the Project Manager shall arrange a "Final" inspection tour of the Project. On such a tour shall be present the Owner, Architect, Firm Members, Project Manager, Construction Supervisor, and Contractor's representatives.

Such an inspection should be made when it is anticipated that such inspection will be the "inspection to end inspections" except for perhaps friendly annual visits thereafter.

A final report shall conclude the project.

(h) Architectural Release—Inasmuch as the Architect has a Contract some provision can be found whereby the Architect can be legally released from continuing responsibility.

Example—Such releases as are provided on Army and Navy Contracts to Architect-Engineers.

This question shall be raised by the Project Manager but its execution will be a matter of Firm Procedure.

(i) Samples—The accumulated samples shall be reviewed and a determination made as to what must be retained and what can be returned.

(j) Review of Manual—Throughout the Project and in retrospect at the conclusion of the Project, each Project Manager shall examine this manual with the objective of submitting recommendations for new material, changes, omissions, etc., etc.

(k) Complete Set of All Drawings—Project Managers will arrange that the final drawings when filed include all drawings and specifications which have been prepared for the Project. Included shall be the work of the structural, mechanical or hydraulic engineers, landscaping, sanitary, etc., etc.

(l) Transmittal Letters and Office Memoranda—Carbon copies of all longhand transmittal letters and office memoranda shall be sent to clerk for filing with general correspondence.

2-29. Facilities for Architect on Site.

Before the General Contractor erects his shack at the site it must be determined whether or not the Architect will require space in such a shack, space in a separate shack or in some other area provided by the Owner.

As part of such consideration, the question of organization of the Project throughout must be analyzed as to whether the entire project will be handled in the New York Office, at a site office or part in the New York Office and part at the site.

Dependent on the determination of these questions, the question will be discussed with the Owner and General Contractor and wherein applicable shall be included in the specifications.

2-30. Addenda—After the drawings and specifications have been issued, and before the contract has been let, any additional specification information is to be termed an "addendum". Each addendum shall be numbered and dated and shall refer specifically wherein it may be related to the original specifications and shall include the Project Number. Wherein the addendum is a drawing the original drawing shall have the stamp "ADDENDUM" placed on the original drawing so affected.

2-31. Supplements—After a construction contract is actually let, any further change or additional information is called a "Supplement."

The procedure covering Supplements is exactly as outlined in Item 30, Addenda.
This new Wade exhibit is now on display on the first floor of the Architects Samples Building, 101 Park Avenue, New York City. Drop in and see:

1. Our Sealed Air Chamber in operation. Turn on the water, read the pressure gauge and see at first hand how violent pressure surges are cushioned in the Sealed Air Chamber, the modern effective answer to destructive water hammer.

2. The new Wade HydraFilter grease interceptor, featuring hydraulic filtering of grease by grease. Part of the top has been removed so that you can see the route of waste flow, the filtering unit and the many other outstanding features.

3. Two Wade drains, installed but cut away so that you can see their excellent construction. The roof drain is installed in a concrete promenade roof deck; the shower drain in a terrazo receptor.

For additional information on any Wade product see our New York representative, Agnew & Tomlinson, 10-26 Jackson Avenue, Long Island City, N.Y. (Telephone Ironsides 6-9246) or write direct to us.

WADE PRODUCTS WILL ALSO BE ON DISPLAY AT BOOTH 21 AT THE N. Y. STATE ASS'N OF ARCHITECTS CONVENTION, HOTEL COMMODORE, OCT. 22-25, 1947. WE INVITE YOU TO VISIT US.
2-32. **Project Number**—The use of the numbers applied to respective projects is to be all inclusive.

When a charge is to be recorded on our books for the first time on an actual or prospective project, one which is actually anticipated as differentiated from New Business generally, the Office will establish the actual numbers in consecutive order and notify all concerned and arrange at once to add the project and number to the established number list.

When the number for a project is established, it is to be used in connection with all items concerning the project, in addition to other methods now in use:
- Ledger sheets and other bookkeeping forms
- Time Cards
- Statements to clients
- Files and file folders
- Correspondence—upper right hand corner (except wherein letters are somewhat personal and strict business technique would be out of order)
- Specifications
- Memoranda
- Blue Prints
- Renderings
- Photographs—progress photos and final Engineering contracts
- Inter-departmental memo forms

When dictating or preparing longhand copy, please indicate which Project Number is to be applied.

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**Progress Data**

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**Work Schedule**

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To be submitted on the first of each month by Project Manager.

Proj. Mgr. ____________________________

2-33. **Progress Data**—The form (Figure 9) is to be used not less than monthly for all projects in the office. It will be used twice monthly wherein the activity of a project warrants such use.
Office memoranda and reports do not give a comprehensive picture of the status of respective projects and this form will fill that need.

Reports are to be made out in duplicate and numbered consecutively for each project. The Project Manager will retain one copy and forward the other copy for distribution.

All such reports are to be ready for distribution on the first of each month.

2. Estimation—Preliminary estimates are generally required in conjunction with preliminary sketches. It is the practice of the office to have these estimates made by an outside firm or person qualified in that field after consultation with the Administrative Department.

Final estimates are generally made by bidding contractors after working drawings have been completed, and are to be delivered to our office for tabulation and presentation to the Owner.

All estimates, preliminary or final, should be cleared through Administrative Department before presentation to the Owner.

CONSTRUCTION DIVISION

The function of the Construction Division is to administer the construction of projects in accordance with established firm policies to the end that the designs of the Technical Division are carried out in accordance with plans and specifications and in an economical manner to the complete satisfaction of the Owner.

The duties and responsibilities of this Division are by their nature such as to require close cooperation and coordination with the Technical and Administration Divisions.

The Manager of the Construction Division shall be responsible for the administration of the Division and its personnel.

This Division shall be responsible for all matters and duties hereinafter described. Instructions to the contrary now contained in other sections of this Manual are hereby superseded. General instructions contained in other sections of this Manual apply equally to this section.

1. Construction Conditions arising at completed projects.

2. Establishment of policy relative to construction methods.

3. Estimates

This division shall be responsible for the securing of both preliminary and final estimates. It is recognized that Preliminary Estimates and their analysis are essential to the Project Manager and to this end close cooperation between this Division and the Project Manager will be required.

After final estimates have been secured and analyzed, recommendations for the work of the contract will be made after consultation with the Technical and the Administration Divisions.

The presentation of all estimates shall be cleared through the Administration Division.

4. Qualifications of Contractors and Subcontractors

In the execution of contractors’ questionnaires, their analysis and subsequent recommendations, the comments of the Construction Division shall be considered.
5. **Notice to Proceed**  
After proper authorization, this Division shall issue “Notice to Proceed” to the Contractor.

6. **Approval of Subcontractors**  
When approval of subcontractors by the Architect is required by a construction contract, such approval shall be granted by this Division.

7. **Supervision of Construction**  
This Division shall be responsible for supervisory control of all jobs under construction in accordance with the firm’s obligation.

8. **Owner-Architect Meetings**  
A representative of this Division shall attend all Owner-Architect meetings of jobs under construction.

9. **Contractors’ Job Meetings**  
A representative of this Division shall attend all Contractors’ job meetings.

10. **Schedule of Dates by Contractor, Budget and Reports**  
This Division shall be responsible for the securing from the Contractor schedule of plans and specifications, budget of cost, periodic cost reports, and progress reports. The Contractor’s schedule of plans and specifications shall be accepted only after approval of the Project Manager.

11. **Certificate of Payment**  
This Division shall check all contractors’ requisitions for payment and supporting vouchers and sign all Certificates of Payment.

12. **Change Orders**  
This Division shall review all contractors’ proposals for change orders and shall approve the same on behalf of the Architect.

13. **Progress Photographs**  
This Division shall be responsible for the securing and distribution of progress photographs of jobs under construction.

14. **Guarantees**  
This Division shall be responsible for the securing and distribution of all appropriate guarantees.

15. **As-Built Drawings by Contractor**  
This Division shall secure from the contractor a completely revised set of drawings as of the completion of the job as required by the specifications. The Contractor shall be required to maintain an adequate up-to-date record of revisions and compliance with this requirement shall be periodically verified. The As-Built drawings shall be delivered to the Project Manager for transmitter to the Owner for his records.

16. **Correspondence**  
All correspondence addressed to contractors relative to policy or procedure in construction matters or relative to other responsibilities of this Division shall be signed by a representative of the Division. Copies of letters written by this Division will be made available to all concerned and the Construction Division must have likewise copies of letters written by other Divisions in order to follow the jobs intelligently.

17. **Maintenance Manual**  
This Division shall be responsible for securing and, after review by the Project Manager, the distribution of the Maintenance Manual described in Paragraph 28 (f) of Section II.

18. **Final Inspection**  
This Division shall be responsible for arranging the “Final” inspection tour of the project.

19. **Architect’s Sign at Sites**  
This Division shall be responsible for the erection of approved Architect’s sign at job sites.

20. **Facilities for Architect at Sites**  
This Division shall be responsible for appropriate facilities for the Architect at construction sites in accordance with the policy set forth in Paragraph 29 of Section III.

21. **Visits to Construction Sites**  
Visits to jobs by members of this Division shall be made insofar as possible, at regularly scheduled times. The Contractor shall be advised of the schedule and of any change therein. Written reports of all periodic visits shall be made. These narrative reports should be so prepared to present a clear picture of the stage of construction. All oral decisions or interpretations given the contractor should be recorded in the report. Visits to sites should, if feasible, include a visit to the Owner or Owner’s representative. In the case of jobs at which a full-time representative is assigned or jobs where visits are more frequent than once a week, a single weekly report will be sufficient.

22. **Construction Problems Related to Working Drawings**  
The Construction Division is responsible for advice relative to construction problems arising during the preparation of working drawings and or specifications. Collaboration of this nature is extremely necessary and will result in the reduction of the number of changes necessary during construction and in close bids.
Designed and Precision-Manufactured for

PLUS PERFORMANCE, SAFETY AND ECONOMY

WATSON engineered ELEVATORS

Behind the harmonious styling and designing that meets the eye in WATSON engineered ELEVATORS, there are many years of specialization in the precision manufacture of the vital unseen heart of WATSON elevators—the Machine, Motor and Controls. They have provided many years of interruption-free, quiet, efficient elevator service that is notable for economy of operation and low-cost maintenance.

Other features of WATSON engineered ELEVATORS are the use of larger and more durable parts, improved gear and sheave construction and arrangement, superior worm and gear unit assembly—all better performing and money-saving advantages that exceed accepted trade standards.

These factors merit your consideration of WATSON engineered ELEVATORS when building or modernizing apartment, plant or office buildings.

WATSON ELEVATOR COMPANY, INC.

407 West 36th Street
New York 18, N. Y.

Factory:
Englewood, N. J.

Manufacturers of all Types, Speeds and Capacities

Passenger, Freight and Home Elevators

In Peace . . . As in War . . . the Watson Elevator Company manufactures precision instruments for the underseas and surface ships of the U.S. Navy.
Notes from a Technical Committee Meeting of the New York Chapter, A.I.A., Max Abramowitz, Chairman

SUN CONTROL

The heat received by surfaces perpendicular to the sun’s rays is 350 btu’s per sq. ft. per hour, 50% more than the output of a steam radiator! Clear, unshaded window glass may admit about 100 btu’s per sq. ft. per hour, and skylights about twice as much. Roof surfaces may attain temperatures of 130° to 150° F. during a clear, sunny day.

Mr. Alfred J. Larios, Jr., lecturer on air conditioning at N.Y.U. says exterior awnings or louvres are better suited to keep out the effects of the sun than anything one may do on the inside of the structure. With exterior devices, he pointed out, the net heat from the sun may be reduced by 2/3 to 3/4 as compared with a reduction of 1/3 with interior devices.

Heating and cooling systems of today should be zoned under controlled conditions. Automatic thermostats, placed on the exterior of a structure and arranged to respond to sunshine and wind as well as temperature, are a great aid in such control.

Mr. Howard M. Sharp, Illuminating Engineer and assistant professor of Engineering at the University of Buffalo, discussed the effect of Sun Control on illumination problems. Lighting, he said, has two principal yardsticks: Quantity, in terms of foot candles, and Quality, in terms of contrast between brightness and density of shadows.

In lighting design, the object one is working on should be somewhat, but not more than three times brighter than its surroundings. Illumination in shadows should not be less than one-fifth of that in the surrounding area.

Mr. Sharp discussed the psychological effect of light on human beings and the hygienic value of sunlight through its lethal effect on bacteria.

WHEN IS A CODE NOT A CODE?

"Even the experts disagreed," reported Frank G. Lopes, Jr. in his summary of a Technical Committee meeting of the New York Chapter, A.I.A.


Mr. Wood, in proposing corrective measures, suggested that the degree of fire resistivity required could reasonably be determined by balancing the degree of protection needed against the actual risk prevailing due to the type of occupancy of a building. This, he said, could easily be arrived at from existing tests, surveys and studies.

Mr. Thompson argued against the common, easy characterization of codes as "antiquated" and "restrictive" and the cynical attitude that "nothing is ever done about bad codes." Something is being done, he contended, and supported his statement by listing five separate activities, all using the same sources of information, but producing four different recommendations for local codes. He ended his part of the discussion with the question, "Wouldn't it be better to have one basic code recommendation rather than four or five, or more? The almost unanimous answer to that question was "Yes," but the fundamental question of how to achieve that objective remained unanswered.

B.O.C.A.'s Code, said Mr. Savage, was formulated without the participation of any architect. It merely sets performance standards, putting it squarely up to the architect to meet those standards without limiting him to inflexible specifications of construction methods and materials.

TALKING CATALOGS

In reading over a report of a Technical Committee meeting where the subject was, "Metal Double Hung Windows," we could not escape the feeling that those who were lucky enough (or wise enough) to attend that meeting know what a boon the talking catalog of the future will be.

Clement V. Tillion first introduced Mr. A. B. Meyer, manager of the Steel Door and Window Department of Truscon Steel Company. Mr. Meyer told of Truscon's acquisition of Campbell Metal Windows' patents and production and went on to give his audience basic information about Truscon's steel residential windows and heavy steel windows for commercial and industrial buildings. He told of processes used to make them rust resistant, of their 100% weather stripping, of accessories such as screens, storm sash and hardware. Sizes, he said were exact and modular. Prices compare with those of wood sash.

Mr. Thomas F. Harkings, Sales Manager of Window Division of General Bronze Corporation, told of his company's aluminum and bronze double-hung windows. He stressed the importance of figuring air change and natural light requirements when planning window areas. Double-hung metal windows may be operated to ventilate 50% of their area, he said. Provisions for draft elimination were explained. Operating mechanisms were described.

The merits of double-glazing versus storm sash were discussed, also the implications of changing window proportions from vertical to horizontal. The reasons for width limits were explained. High cost of the metal, said Mr. Harkings, precludes the possibility of having dealers stock standard sizes. It is more economical to custom build bronze windows to fit architects' layouts.

The big thought left as a result of this meeting is that there's a lot of interesting information in the new metal window catalogs. Look them over carefully.

DRY WALL CONSTRUCTION

The Technical Committee's meeting covering Exterior Dry Wall Construction brought out a wealth of information on Celotex Corporation's Cemesto Board, a structural insulating material of cane fibre, surfaced on both sides with 1/8" asbestos-cement board. It is available in three thicknesses, one width and lengths from 4'-0" to 12'-0". Special methods of erection were explained by Mr. Green of the Celotex Corporation.

Various aluminum products for sidewalls and roofs were described by Mr. Pollack of the Reynolds Company. Builders are to be cautioned not to use copper or steel in contact with aluminum because of the electrolytic action. Aluminum or hot-dipped zinc-coated nails were recommended. Aluminum soldering, it was explained, is impractical for flashing, gutters, etc.

The Reynolds Company is interested in hearing from architects who would like them to develop new building products of aluminum.

(Continued on page 95)
THE BEAUTY OF BRICK

The Face Brick used in this imposing structure are of a rich golden hue in variegated shades ranging from a light tan to a brown and lends untold character to the building.

Upwards of 75% of all structures on Manhattan are faced with brick. There must be a reason.

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BINGHAMTON BRICK CO., INC., BINGHAMTON, N. Y.
JOHN H. BLACK CO., BUFFALO, N. Y.
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Mr. Lovelaml of Truscon Steel Company demonstrated Kerroglas construction with a sound movie, showing construction of the Marietta Aircraft Assembly Plant at Marietta, Ga. Standard steel framework is used in connection with Fiberglass insulation boards and mats. Methods in erection were shown in detail—much too much to be reported fully here.

"CORES" ARE IN PRODUCTION

There's no doubt about it, mechanical cores embracing all heating, plumbing, cooking and refrigerating facilities for pre-fabricated and other low cost housing are here to stay. Several models are available for homes with and without basements. Average savings of 25% and more are expected as compared with conventional heating and plumbing installations. Present prices for more or less complete "cores" range from $1200 to $3000 at factory.

FLAT SLAB ROOF INSULATION

Should flat roof insulation be over, under or in the roof slab? Should it be of structural, fill or sprayed-on type or should it be furred away from the ceiling surface? These questions and others were fully discussed at a recent Technical Committee Meeting.

Insulating materials considered included Vermiculite, Foam Glass, Fibre Board, Mineral Wood and Cork Board. The importance of vapor seals and ventilation to keep out or dissipate water vapor was discussed at length. The need for expansion joints in roof slabs seems to have been eliminated in some instances by the reduction in temperature ranges provided by adequate insulation. The whole subject of roof insulation is a live one that merits thorough study.

MODULAR CO-ORDINATION

Referring to Modular Service Association's monthly publication, "Grid Lines," Gordon Lorimer gave a detailed account by territories of the conversion to modular sizes taking place in the structural clay products industry! Modular sizes are now more generally available than the old standards in many other construction materials, he said.

It is up to the building industry, he asserted, to explain the merits of modular co-ordination to small builders. An association study to find common denominators for small house construction resulted in a 16' x 24' basic home unit. It was found that 16' joists are the most economical length for saw mills to produce. He used photostat blow-ups of perspectives and plans to show how modular basic home units can be combined to form two-story or ell-shaped houses.

Modular co-ordination, he claimed, will tend to reduce home construction costs, because the dealer can assemble all of the modular-sized units, and the builder can more accurately figure his costs before starting the work.

M.S.A. plans to issue a guide for all builders, designers and dealers as well as for manufacturers to follow in applying their products to modular co-ordination.

ANNOUNCEMENT

E. M. Fleming, District Manager of the New York District of the Portland Cement Association has announced the appointment of Thomas L. Kelly, as structural field engineer for Western New York with headquarters in Buffalo, effective September 1st.

Mr. Kelly is a graduate of the New York University College of Engineering where he specialized in structural engineering and served for two and a half years with the U.S. Navy "Seabees" in the Pacific as Engineering Officer and Company Commander with a construction battalion.

Prior to the war he was associated with several New York consulting engineering firms on structural design. Mr. Kelly has been with the Portland Cement Association since December 1946.

MUST AMERICA BE A CHURCH MUSEUM?

(Continued from page 40)

We deplore the fact that modern art and architecture lacks a religious note. Perhaps it is because whereas formerly the church subsidized creative artists and directed their expressions toward religious subjects, today we leave the artists out on a limb and force them to find their support in purely secular interpretation. The result is theaters, music halls, art museums, even bars, on which the artists are lavishing their skills, while the church languishes in its struggle to hang onto something dead. At a recent meeting of church architects and laymen in New York, an architect declared that "most of the younger architects I know, if they had their choice of designing an addition to a Gothic church or selling apples, would sell apples." If the church is to recapture the interest of the creative architects and artists of our time and enlist them in the endeavor to express through art forms the great and universal faith that Christianity now is, we must give them some opportunity to do for us what their predecessors did for previous ages. We have even to change our conception of what "looks like a church!"
Design and engineering ingenuity entered into the construction of General Motors "Train of Tomorrow," now making an inspection trip throughout the country.

Architectural and construction ingenuity and creative thinking are showing a marked tendency toward utilization of materials that will help offset ever increasing building costs. Light-weight concrete masonry is a typical example. A material that accomplishes a multiple job and substantially aids the architect and contractor in meeting the demands of clients... lightweight concrete masonry units... serve as a structural back-up, provide finished interior walls and furnish excellent sound absorption.

To state, in more detail, a few of the outstanding characteristics of lightweight concrete masonry units, the attention of architects is called to the following:

1. Structural Properties. Under A.S.T.M. specifications on 8" x 8" x 16" Grade "A" block most carry a compression load of 1000 pounds per square inch.

2. Economical. Every 8" x 8" x 16" block, with its mortar joint, lays approximately .6 of a cubic foot of wall, the equivalent of 12 bricks. Light in weight, they are easy and fast to handle.
3. Attractive Appearance. Uniform in texture and size, today's concrete masonry units have clean, sharp edges. Used exposed they save money by eliminating expensive finishes.

4. Insulating Properties. Thousands of small air cells in lightweight concrete masonry units give them high insulating properties.

5. Acoustical Properties. Lightweight concrete masonry units exposed literally drown noise and reverberation. Their sound-absorbing properties compare with any acoustical plasters.

6. Nailable. The cellular structure of lightweight concrete masonry units receives and holds nails. If heavy loads require toggle bolts, concrete masonry units are easy to drill.

Convention time means listening to discussions on how architects can hasten the arrival of "tomorrow's" building. To date they have done an outstanding job and will continue to improve building design and construction so that this country will be a still better place within which to live, work, study, play and worship. Any member of the National Concrete Masonry Association listed below will be glad to cooperate with architects and contractors in reaching that goal.

Concrete Units Inc., Bronx 59, N. Y.
Dinaburg Block Co., Inc., Binghamton, N. Y.
Domino Builders Supply Co., Inc., Rochester 10, N. Y.
Elmira Building Units, Inc., Elmira, N. Y.
Forest Hills Concrete Block Co., Forest Hills, N. Y.
Linton Concrete Products, Tonawanda, N. Y.
Nailable Cinder Block Co., Brooklyn, N. Y.
Paragon Supply, Inc., Syracuse, N. Y.
Picone Bros., Brooklyn, N. Y.
Plasticrete Corp., Hamden 14, Conn.
Ramlock Stone Co., Albany, N. Y.
Rockland Concrete Sales Co., Inc., Ridgefield, N. J.
Air Curtain Cools Cafe de la Paix

By ROBERT W. DANA.

The Cafe de la Paix of the Hotel St. Moritz, 50 Central Park S., has come up with an amazing innovation in air conditioning. The sidewalk cafe, hitherto on the same level as the baking pavement trod by sweltering New Yorkers, is now 15 to 20 degrees cooler, thanks to an air curtain released from the ceiling edge nearest the sidewalk.

S. Gregory Taylor, president-owner of the hotel, long had sought a way of providing the cool comfort of an air-conditioned room while retaining the Continental atmosphere of a sidewalk cafe. After research, he had the idea of an air curtain that would insulate the room from the hot street air while remaining open.

With this in mind, he contacted the Armo Cooling Engineers, who developed the idea and made the curtain an actuality. A series of narrow vents, placed side by side in the ceiling, pour a curtain of cool air perpendicularly downward to head off the street air and allow the room to be cool in the regular manner.
Large view shows battery of MOTORSTAIR units in operation at The Golden Rule Store, St. Paul.

Insert illustrates MOTORSTAIR in use in the service section of the Fairmont Hotel, San Francisco.

Write for detailed information regarding the above and other MOTORSTAIR installations.

You are cordially invited to inspect an operating model of this latest development in floor to floor travel equipment. Ideal for installations where many persons have to be transported quickly and safely in busy places. MOTORSTAIR is a simplified, standardized, economically priced newly perfected moving stairs unit worthy of investigation by those interested in stores, banks, railway stations and other public buildings.

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<td>Vermont Marble Co.</td>
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<td>Viking Automatic Sprinklers, Inc.</td>
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<td>Wade Mfg. Co.</td>
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<td>Watson Elevator Co.</td>
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<td>Wiley, R. &amp; W., Inc.</td>
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<td>Williamsburg Fireproof Products, Inc.</td>
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Radiant heating has taken a firm grip on the interest of both home and industrial builders. More freedom in planning room arrangements—more comfort at lower air temperatures—greater cleanliness—lower operating cost... these are a few of the reasons people are asking questions about this completely concealed heating.

Successful radiant panel heating depends upon the use of comparatively large heating surfaces at low temperatures! What other heating method can satisfy these requirements as easily, accurately and economically as B&G Hydro-Flo Heat—a forced hot water system?

The simple, dependable equipment of a B&G Hydro-Flo Heating System positively controls the flow of water through the panels. It smoothly varies the water temperature to meet changes in the weather so that room temperature is maintained constantly at the comfort level. The system circulates water at any level, either above or below the boiler.

Year 'round hot water an added feature
The B&G Hydro-Flo Heating System provides an all year 'round supply of low-cost hot water for every household use. Remember that automatic clothes washers, dish washers and showers call for liberal quantities of hot water... that's why the economy of B&G water heating is a big selling feature! No separate heater needed—the same boiler that heats the house also heats the water for kitchen, laundry and bath.

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