ADVANCE UNDER DIFFICULTIES

At a presentation dinner held in New York on May 5, the 1946 PROGRESSIVE ARCHITECTURE Awards were made to the designers of four outstanding structures—outstanding not for size or cost, but for fitness, beauty, strength, and purpose appropriate to the times. We congratulate the winners, and present them, their works, and the jury report in this issue. We are extremely grateful to our brilliant jury for the thoughtful attention they gave to their task.

The institution of these annual Awards, “to foster sincere, reasoned progress in architectural design in the United States by citation and recognition of those architects whose efforts to improve contemporary standards are judged the most successful,” seems to us a logical extension of our editorial policy. When we announced the Awards last year, we realized that for that first year our jury would have to select from work done under difficulties, in the face of rising costs and restrictions of various sorts. However, we had faith that enough competent architectural designs would rise above those handicaps to warrant recognition for progress. We think the results justify that confidence; the winners had stiff competition in a surprisingly large field of excellent candidates.

We are very happy about the results. The progress that is here recognized is the same sort that we try to document in the magazine—not stylistism, but sound advance in planning, in technical development, in social usefulness, and in over-all integrated design. We hoped that the work of relatively unknown designers would rise high in such a judgment, and this happened, not by intention, but by objective jury analysis.

The fact that both Awards were split indicates sharply the various emphases in design progress today, and the difficulties in deciding which are most significant. As we have said editorially before, the advance is on many fronts. Technical progress and progress in human values move together; we applaud those designers who move forward most surely and most sensibly, looking toward an ultimate integration which will fully express our times.
Here, for the first time in the history of Finishing Hardware, is a completely simplified specification manual. Now you can write one simple Unit Set Number to specify all the hardware required for each door. For example, the Unit Number UJA137 will specify the Lockset, Doorstop, Kick Plate, Door Closer and Hinges required for a specific door. You get it at a glance, in tabular form, yet with full opportunity for selection of design and finish.

The streamlining of hardware specifications has always been a serious problem for the architectural profession ... and to this end Lockwood has been working closely with architects for many years. Lockwood Simplified Specifications cover SEVEN PROJECT SECTIONS (as shown at the right), in each of which the unit specifications have been brought together in tabular form, located adjacent to the functional type of door. ADDITIONAL SECTIONS feature wrought
of Finishing Hardware
for all types of Buildings

TABULAR FINISHING HARDWARE SPECIFICATIONS FOR TYPICAL DOORS

For Complete Hardware For Door Opening - Specify by Set Number. Note: Other changes from Section I may be accommodated for All or Most Homes here by changing the design.

EXTERIOR DOORS

1. INDIVIDUAL SHOP & SHOP ENTRANCE DOORS
   Set No. AL137—Lock No. 67268
   Operation: By thumb latch from either side except when inside thumb latch is locked by key in outside cylinder. The inside cylinder locks and unlocks the outside thumb latch. Tum: Handle AL236
   Alternate
   Set No. MD137—Lock No. 67268
   Operation: See above. Tum: Handle MD248

2. OTHER ENTRANCE DOORS
   Set No. AL139—Lock No. 50005
   Operation: By knob from either side and by key from outside cylinder. Outside thumb latch is locked by key in face. Auxiliary lock automatically deadlocks the latch bolt and stops so that they cannot be forced back when door is closed but does not prevent operation by key. Tum: Knobs AL203 x Esc. AL219 x AL229
   Alternate
   Set No. MD139—Lock No. T50005
   See Alternate No. 2 on opposite page.

and cast designs, handle sets, miscellaneous hardware and closers — thus providing full opportunity within the one 24-page Manual to select and specify complete hardware for each project.

Reprints of LOCKWOOD FINISHING HARDWARE Simplified Specifications are available to Architects and their staffs without charge. Please request a copy on your letterhead.

Lockwood HARDWARE MANUFACTURING COMPANY
DIVISION OF INDEPENDENT LOCK COMPANY • FITCHBURG, MASSACHUSETTS

JUNE, 1947 3
GIVE YOUR CLIENTS Double-

OUTSIDE: Specify double-duty Insulite Sheathing and get two things for the price of one —

(1st) Sheathing  (2nd) Insulation

One material—double usage! That's double for the money—something your clients will appreciate. By certified test, Insulite Sheathing provides bracing strength superior to wood sheathing horizontally applied. Water proofed throughout, excellent weather resistance.

All this, PLUS insulation, so you can tell a client "Here's where your money buys double usage."
FOR THEIR MONEY!

INSIDE: Specify double-duty Insulite Lok-Joint Lath and get two things for the price of one —

(1st) *Plaster base*  
(2nd) *Insulation*

One material—double usage! No spreading of joints—no "snap-back" of lath when troweling. Surface stays firm and level. Insulite Lok-Joint Lath, with vapor barrier, guards against condensation problems.
Perhaps in no other type of building are such widely different floor requirements encountered as in hospitals. For example, floors in entrance lobbies and corridors should combine attractive appearance, quietness, and durability. In contrast, kitchens, laboratories, and certain other areas should have floors with special characteristics to withstand the attacks of greases and oils or chemicals and acids. All floors in hospitals, however, must have a smooth surface that is easy to keep sanitary.

Linoleum seems to be the most popular hospital flooring, with asphalt tile a close second in popularity. While linoleum is limited to suspended floors, asphalt tile can be used in basement and ground level areas as well as on suspended floors. Beyond the generally satisfactory performance of linoleum and standard asphalt tile as flooring materials for hospitals, there are specific advantages to be gained through the use of such other resilient floorings as Linotile, rubber tile, and greaseproof and conductive asphalt tile. The following recommendations are based on the continuing studies made by Armstrong's Research Laboratories and on Armstrong's long experience with a wide variety of applications.

Entrance lobbies and corridors—Because these floors bear the brunt of more foot traffic than any other areas in the hospital, it is of first importance that they have exceptional resistance to wear. In many instances Linotile has been selected for these areas. It is the most durable resilient floor and is quiet and rich in appearance.

For these same areas, rubber tile also is recommended. Rubber tile is not only beautiful but also exceptionally quiet and comfortable to walk on. However, if economy is important, linoleum or asphalt tile can be specified with good results.

Private rooms and wards—Since floors in private rooms and wards are not usually subjected to the same high degree of wear as corridors, linoleum or asphalt tile is recommended. Both of these floors provide excellent wearing qualities and, in addition, meet the need for economy in flooring such large areas. Linoleum has greater resistance to indentation from bed casters, and it minimizes the noise of foot traffic and mobile equipment. Occasionally, flexibility of partition arrangement is a factor. In such instances, asphalt tile has a special advantage because alterations can be made, economically and quickly without a “patched up” look.

Kitchens—Many kitchens are located in the basement where the concrete subfloor is in direct contact with the ground. Here, in addition to moisture from the ground, the splashing of grease and oil is a problem. This can be solved with grease-
Both Linotile and rubber tile are highly satisfactory materials for floors in hospital entrance lobbies and corridors. While Linotile offers greater resistance to wear, there is often a preference for the high sheen and clear coloring which are distinctive characteristics of rubber tile. Insets, such as pictured above, are readily cut in rubber tile.

proof asphalt tile. It resists not only grease and oil but alkali and moisture, too. Greaseproof asphalt tile, heavy gauge linoleum, and Linotile can be considered for above-grade kitchen floors. Greases and oils spilled accidentally on these floors will not injure them and can be easily wiped off.

Laboratories—Laboratory floors are in constant danger of injury from spilled chemicals. It is difficult, indeed impossible, to recommend any floor that can completely withstand attacks from concentrated solutions of nitric, hydrochloric, and sulphuric acids. Among the resilient floors, however, standard asphalt tile has proved itself best for installation in laboratories. The dark shades, group A or B, resist most acid attacks and do not show stain readily. If concentrated acid does deface this floor, the scar can usually be removed easily with ordinary steel wool. Such repairs are scarcely noticeable because the color goes all the way through the tile. If damage is unusually severe, repairs can be made quickly and easily by replacing only the damaged tiles. In the case of laboratories which may also be subject to the spillage of organic oils and greases, greaseproof asphalt tile is recommended.

Operating rooms—Since the danger of ether explosions caused by static electricity is a problem in operating rooms, conductive asphalt tile is a recommended floor. This flooring effectively carries off static electricity and eliminates its dangers. With many of the advantages of standard asphalt tile, it can be installed on grade-level concrete subfloors.

Cleaning—maintenance—Cleaning and maintenance are about equal for all the resilient floors recommended for hospitals. Their smooth, nonporous surfaces do not catch and hold dust and dirt or permit bacteria to breed. Simple sweeping or use of a dry mop, plus occasional washing and waxing, will preserve the luster of all Armstrong's resilient floors.

If you have a specific problem in recommending floors for a hospital, or wish further information on any Armstrong flooring material, write to Armstrong Cork Company, 8906 Duke Street, Lancaster, Pa.

LINO is a REGISTERED TRADE-MARK.

* * *

For wards and private rooms, linoleum floors are highly favored. For a fully sanitary floor installation, linoleum can be flashed up the wall to eliminate dirt-catching joints and corners where the floor meets the walls. Top-set asphalt cove base is also recommended for this purpose. It is used in particular with resilient tile floors.

Greaseproof asphalt tile is the only resilient flooring recommended for use in basement kitchens. However, for diet or general kitchens which may be located on floors above grade, linoleum or Linotile is often specified. Splashed greases and fats do not harm these materials.

Floors in X-ray and developing rooms and in laboratories often must withstand unusual conditions. While the dark colors of standard and greaseproof asphalt tile are less susceptible to damage from spilled acids and chemicals, linoleum and Linotile will also give satisfactory service.
fending too many of your subscribers. I trust that you may be able to continue it without offending too many of your subscribers. It is very strange that we have never had intelligent, informed criticism of architecture as we have in the case of painting, sculpture, and music. Surely we architects should be able to take criticism if the others can. I recollect only too well when the New York Public Library was completed; no one had for nothing. All modern operating rooms are arranged for air conditioning and operating by artificial illumination; but it is certainly uneconomical to use current to light a room when it is being cleaned up between operations, if natural light is available.

Charles Butler
New York, N.Y.

SERENATA MEXICANA

Dear Editor: Let us sincerely congratulate you, for your magnific labor in Progressive Architecture.

Our company has made in this city two important residential colonies. For them we have a very vast housing plan. Now we are beginning to build the first series of home-houses. We are really surprised to see the excellent quality of your modern magazine. We are sure that each issue of Progressive Architecture will give us some valuable and useful ideas and good help to know the firms of U.S.A. industry.

Arnaldo Xavier Miramontes, Ing.
Fraccionadera del Pacifico, S.A. de C.V.
Culiacan, Sinaloa, Mexico

WE CAN, OUGHT WE?

Dear Editor: The industrialized house is a very clever piece of engineering—so is the atom bomb. The same question arises in relation to both—now that we can make them, ought we to make them? In both cases there are moral issues involved, questions of meaning and of values that transcend the opportunities and the imagined efficiencies of the moment.

The industrialized house is a gesture of despair. It is a desperate attempt to force a solution of the housing problem within the confines of our present socioeconomic framework. It will do no such thing!

What is wrong with the present supply of housing?

A. The individual units are poorly planned and in poor physical condition. 

B. The manner of placing the houses on the land has been determined by ease of real estate operation and by the necessity for profit rather than by the biological and social needs of the people.

C. The housing bears no significant relation to the centers of work, shopping, recreation, etc.

D. Present housing is too expensive.

Of the above difficulties, the industrialized house can in the long run affect only the first one—reasonably—that is, it can improve the design and structure of the individual unit.

Altho the proponents of the industrialized house stress the possibility of lower cost, I doubt very much that the average wage earner will find that he can allot a significantly smaller proportion of his income to shelter than he does now. In the beginning, the landowners and the lenders will take good care to see that the cost of the industrialized house, plus land, does not go low enough to endanger the value of existing mortgages. Suppose, however, that industrialized housing actually manages to show a continuing price advantage, even though slight, so that in 25 or 30 years the total population is re-housed in such housing. What would be the final outcome? Why simply this—Mr. Fuller (or someone) would be enormously wealthy, real wages would have fallen enough to wipe out the advantage of the lower cost of shelter, and our cities would be atomized, expanded, and disintegrated to the nth degree—and fantastically broke!

No—the real solution is city planning, and the actual physical reconstruction of our cities must await the coming of a social system in which the motive force is something other than profit.

If cities were planned, then the neighborhoods need not, as now, wear out faster than the houses in them. Then there would be no need for early obsolescence. Comparisons between houses and automobiles are false and misleading. A house isn't in motion, its parts aren't in motion, and consequently it wears out very slowly.

Continued on page 10
SCOPE OF RAYMOND'S ACTIVITIES
includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements, borings for soil investigation.

DRIVING 150 FOOT PIPE PILE to rock on 5 to 12 batter was a challenge that the Raymond organization met and solved. The experience and technical knowledge gained in this achievement, combined with Raymond's improvements and special types of land and water equipment, provide a background of great value to anyone confronted with an unusual foundation problem.

Today approximately 70 of our complete pile driving rigs are located in different parts of the country and are available at a saving in time and shipping charges for jobs in these sections. Raymond engineers will gladly welcome an opportunity of assisting you in any way.
A well built house in a stable neighborhood should provide excellent living facilities for at least a hundred years—and for even longer periods. Within historical periods, people don’t change biologically—the same trees, sun, breeze, and views that benefit us now will benefit our remote descendants.

If we don’t plan, we can, and we will, live in a claustrophobic environment of identical rabbit hutch prizes, sans dignity, sans beauty, sans communal life, and even, sad to relate, sans efficiency!

Jack Albert
Cleveland, Ohio

VIEWS
(Continued from page 8)

ROTO-WAITER
by Sedgwick
A new kind of fully automatic electric dumb waiter that never overtravels

The endless chain drive of the new Sedgwick Roto-Waiter makes it the perfect dumb waiter for stores, hospitals, hotels, restaurants, libraries, clubs, schools, banks, factories, residences, etc.—especially for two-stop installations.

The single direction motor helps cut costs by eliminating the need for special control equipment normally required when reversing motors are used—and, by reducing starting torque, it cuts current consumption. And Sedgwick Roto-Waiters...

1. Never overtravel
2. Are completely factory-assembled-and-tested
3. Require only minimum clearances
4. Have an overload safety device for safe operation
5. Require no heavy load-bearing supports except at the bottom
6. Are easy to install

The table of dimensions shown below lists three standard counterweighted Roto-Waiters. In addition, Sedgwick makes an uncounterweighted Roto-Waiter—capacity 150 lbs., car size 24” x 24” x 36”—which is ideal when a dumb waiter is to be installed in limited space as for undercounter use.

<table>
<thead>
<tr>
<th>Size No.</th>
<th>2C</th>
<th>3C</th>
<th>5C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity, lbs.</td>
<td>200</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>Car width, in.</td>
<td>24”</td>
<td>30”</td>
<td>36”</td>
</tr>
<tr>
<td>Car depth, in.</td>
<td>24”</td>
<td>30”</td>
<td>36”</td>
</tr>
<tr>
<td>Hoistway width, in.</td>
<td>23”</td>
<td>33”</td>
<td>45”</td>
</tr>
<tr>
<td>Hoistway depth, in.</td>
<td>27”</td>
<td>33”</td>
<td>39”</td>
</tr>
<tr>
<td>Hoistway depth, including doors, in.</td>
<td>29”</td>
<td>35”</td>
<td>41”</td>
</tr>
</tbody>
</table>

So if you are stymied by perplexing lifting and lowering problems involving the vertical movement of material and merchandise—tell us about them. And write for complete details and specifications of the new electric dumb waiter that cannot overtravels—the Sedgwick Roto-Waiter.

EXCELLENT AND TIMELY
Dear Editor: I was very pleased with your last number (PROGRESSIVE ARCHITECTURE, April 1947). I had just been in Brazil as it happened and was as intrigued as everyone is with the work. I hadn’t, however, seen anything outside of Rio. You did an excellent and timely job.

John W. Root
Holabird & Root
Chicago, Illinois

NOTICES

SCHOLARSHIPS, FELLOWSHIPS

The George G. Booth Travelling Fellowship in Architecture, offered by the College of Architecture and Design, University of Michigan, was awarded this year to Linn C. Smith, Class of 1942. The jury consisted of prominent Michigan architects and members of the faculty in architecture. The prize is $1,000, and the winner is expected to follow a planned itinerary of travel and study in this country or abroad.

Carroll L. V. Meeks, Professor of Fine Arts, Yale University, has been awarded a Guggenheim Fellowship and will work on the preparation of a book on the historical development of railroad stations as examples of architectural solutions to meet new needs.

NEW PARTNERSHIPS, PRACTICES

Career Builders, a new agency specializing in the placement of interior decorators, industrial designers, and sales personnel for the allied fields, has opened offices at 35 W. 53rd St., New York, N. Y.


Brother Cajetan J. B. Baumann has opened an office for architecture for the Franciscan Order at 44 Whitehall St., New York 4, N. Y.


Roy Papenthien, formerly with the Engineers Corps, has resumed his practice of architecture and engineering at 720 N. Jefferson St., Milwaukee, Wis.

Elwyn E. Seelye, Albert L. Stevenson, and Burnside R. Valje announce the formation of a partnership to continue the engineering practice of Elwyn E. Seelye & Co., consulting engineers. Offices are at 101 Park Ave., New York, N. Y.

Schulman & Soloway have formed an architectural and engineering partnership with offices at 4 Court Square, Brooklyn 2, N. Y.

(Continued on page 12)
Drama in Lighting

UNDER FINGERTIP CONTROL

The simple trick of lighting that gives the same plaster cast so many different countenances illustrates—in an elemental way—the function of good lighting control in the creation of dramatic effects.

Given a knowledge of the impressions you wish to create, Ward Leonard’s “result-engineering” can help you, not only by recommending the most suitable dimmer and mechanical details, but also by working out psychological effects through dramatic lighting.


*Your A.I.A. File should contain Bulletins 71 on Non-Interlocking Dimmers, 72 on Interlocking Dimmers, 74 on Reactance Dimmers, 75 on Astralstat Dimmers, 76 on Cycle Dimmers.

WARD LEONARD ELECTRIC CO.

Where Basic Designs in Electric Controls are Result-Engineered for You
NOTICES

(Continued from page 10)

The firms of B. F. Hunt Associates and R. H. Hunt Company were dissolved recently and a new firm formed under the name of Hunt, Caton & Associates, with offices in the James Bldg., Chattanooga, Tenn.

Kenneth White announces the opening of his firm, Ken White Associates, at 516 Fifth Ave., New York, N. Y. His office specializes in retail planning, development, and design.

Richard L. Tully, Frederick H. Hobbs, Jr., and Walter C. Hansen announce the formation of an architectural partnership with offices at 582 Oak St., Columbus, Ohio.

Wayman & Steuerm, architects and engineers, have opened a new practice at 37 S. Wabash Ave., Chicago 3, Ill.

Katy and Paul Steinmetz, landscape architects, have opened a new office at R. F. D. Box 710, San Rafael, Calif.

Leon Gordon Miller has opened an industrial design office at 511 Prospect Ave., Cleveland, Ohio.

Peter J. Trolio and Jay T. Liddle, Jr., have formed a partnership with offices in Jackson, Miss.

Joseph A. McGinniss has opened an office for the preparation of architectural specifications at 67 E. 59th St., New York 22, N. Y.

Emerson C. Scholer has opened an architectural office at 41 W. Alameda, Tucson, Ariz.

Edward B. Kirk, consulting illuminating engineer, has opened an office at 2 Park Ave., New York, N. Y.

Robert H. Fraser announces the opening of his consulting engineer's office at 154 Nassau St., New York 7, N. Y.

L. G. Sherburne Associates, specialists in store planning and design, have reopened the practice known for years as R. B. Sherburne, Inc. Offices of the firm are at 171 E. 33rd St., New York 16, N. Y.

Leo H. Rich, industrial consultant, has opened an office at 1 Wall St., New York, N. Y.

Charles F. Owlesley, John H. Samuels, and John F. Wehrell have announced a partnership in architecture and related structural and mechanical engineering with offices at 211 N. Champion St., Youngstown, Ohio.

William M. Rich has opened an office at 1607 W. Howard St., Chicago 26, Ill.

Richard Garrison, architectural photographer, has reopened his studio at 532 E. 85th St., New York 28, N. Y.

George J. Cavaleri has resigned from government service to resume his practice of architecture in association with Anthony M. DeRose, with offices at 370 E. 149th St., New York 58, N. Y.

Zeb Rike has opened a new architectural practice with offices in the Nelson Bldg., McAllen, Tex.

Arthur Bassin, David B. Cheskin, and Barney G. Tokarsky have associated in a firm of architecture, engineering, and planning, with offices at 407 S. Dearborn St., Chicago, Ill.

David and Adelaide Wurster have formed a partnership specializing in the design and manufacture of lamps and household accessories, with offices at 406 Waverly Ave., Brooklyn, N. Y.

Clepper & Clepper have taken Walter H. Mallorie into partnership and have renamed the firm Clepper & Mallorie. Offices are located at 72 Vine Ave., Sharon, Pa.

Page Associates have announced the opening of offices at 53 W. Jackson Blvd., Chicago 4, Ill.

Abraham Waronoff has opened an office for the general practice of architecture at 1017 12th St., N.W., Washington, D. C.

Conner & Pojezny have opened new architectural offices at 200 Kerr-McGee Bldg., Oklahoma City, Okla.

C. Hardy Oliver and Alex A. Dickson have formed a partnership for the practice of architecture with offices at 1205 Hampton St., Columbia 29, S. C.

(Continued on page 18)
Q. What is the proper way to mount an attic ventilating fan?
A. See Balsam-Wool Data Sheet Section F No. 2.

Q. What are the advantages of the eleven ways of preventing excessive condensation within a house?
A. See Balsam-Wool Data Sheet Section A No. 6.

Q. What is an efficient but inexpensive way of reducing sound transmission through walls and floor?
A. See Balsam-Wool Data Sheet Section G No. 2.

Keep the right answers handy with Balsam-Wool Data Sheets

Balsam-Wool Data Sheets—sized for your A. I. A. file—provide many answers to a thousand questions on insulation. A complete set of these sheets is yours for the asking—mail the coupon!

Wood Conversion Company
Dept. 117-67 First National Bank Building
St. Paul 1, Minnesota
Please send me set of Balsam-Wool Application Data Sheets.

Name: ...........................................
Address: ...........................................
City: ........................................... State: ............................
A report of the exhibit, "Pittsburgh in Progress," presenting the master plan for that city proposed by Mitchell & Ritchey, architect planners of Pittsburgh, follows the announcement in this issue of the winners of the Progressive Architecture Awards for 1946 (for photographs of the winners and biographical notes see p. 20). The firm of Mitchell & Ritchey is the result of many years of close friendship, started when J. A. Mitchell and Dahlen K. Ritchey attended Carnegie Institute of Technology, both graduating with B. Arch. degrees. As recipients of graduate scholarships, Mitchell then went on to Columbia University for his M.S., and Ritchey to Harvard for his M. Arch. The next two years, since both won traveling scholarships, were spent studying the modern trends in architecture throughout Europe. In 1938 they opened their office and have been practicing together since that time, except for the war years, when they both served as officers in the Navy. It was a desire to contribute professionally as much as possible to the rehabilitation of Pittsburgh which brought them back to that industrial city at the end of the war.

The drive-in restaurant, Waddle's Coffee Shop, presented on page 61, is from the office of architect Pietro Belluschi of Portland, Oregon, whose work is known to our readers. (For biographical note see May 1946 Progressive Architecture.)

From A. Hays Town, architect of Baton Rouge, Louisiana, comes the second restaurant in this issue, James Steak House (p. 64). Following two years of engineering study at Southwestern Louisiana Institute, Town entered Tulane University, where he received his B. Arch. in 1926. He started his practice in the office of N. W. Overstreet, of Jackson, Mississippi, which led in 1932 to formation of the partnership of Overstreet & Town. He has since opened his own office in Baton Rouge, designing many public and private structures in Louisiana and Mississippi.

The Klamath County and City Jail, Klamath Falls, Oregon (p. 73), is the work of Sheldon Brumbaugh, who has been practicing architecture in the small city of Klamath Falls for almost four years. His work there has ranged from city planning to small house design. A knowledge of Brumbaugh's background explains his adeptness in these various fields; as he studied landscape design at Oregon State College and Columbia University, architecture at University of Oregon, and city planning under Eliel Saarinen, at Cranbrook. His previous practice included work in various offices throughout the country and in his own office in McCook, Nebraska. The photograph at left is of Brumbaugh and his office staff, all of whom collaborated with him in the design of the jail. They include (left to right) James Conn; W. J. Alexander (responsible for the structural engineering); Clifford Jay; Frank Roberts (working drawings); L. R. Swansen (color rendering); Sheldon Brumbaugh.

David Fried, of Boston, Massachusetts, is the architect of a Cape Cod house that is really what its name implies—a house for the Cape (p. 75). A Cornell University graduate in architecture, Fried spent his first three years out of school designing state park buildings in Vermont and New Hampshire for the National Park Service, U. S. Depart-
specify Tile-Tex
Asphalt Tile for hospital floors!

In hospitals, every unclean or hard-to-clean surface is a potential staging area for dangerous germ carriers. A sanitary surface that can be cleaned readily is consequently a paramount factor in the selection of floors.

One important reason why Tile-Tex Asphalt Tile is commonly specified by hospital architects is because of its outstanding cleanliness. This top-quality asphalt tile has a smooth, closely textured surface which does not harbor dirt and is extremely stain-resistant. Normal maintenance methods keep Tile-Tex floors clean and bright at minimum cost.

Important, too, is the tough, asphalt-asbestos composition of Tile-Tex. It means you'll get extra years of wear under heavy traffic conditions. Your staff will enjoy walking and working on this resilient, easy-tread flooring.

All of these factors, plus the decorative possibilities in the wide range of Tile-Tex colors and sizes, have made it a favorite for hospital floors. The approved Tile-Tex contractor in your city will be glad to give you any additional data you may need. Write today for his name and a copy of "Tile-Tex Products for Today's Hospital."

THE TILE-TEX CO., INC., CHICAGO HEIGHTS, ILL.
Sales Offices: Chicago, New York, Los Angeles and New Orleans
THIS MONTH

(Continued from page 14)

ment of Interior. He started his own practice in New Hampshire in 1937, moving to Boston in 1939. He still maintains an office in Boston, although he is at present an assistant professor of architecture at University of Florida.

The feature article in the Materials and Methods section this month is titled "Welding: Its Implications and Applications," written by Paul Weidlinger, of New York, N. Y., consulting engineer, whose technical discussions are known to our readers. (For biographical note see June 1946 PROGRESSIVE ARCHITECTURE.) We believe it will be of interest to our readers to learn that since this biographical data appeared last year, Weidlinger has left the National Housing Administration. He is now a research engineer with United Industrial Association, Inc., of Washington, D. C., an engineering and research organization. This important and timely article, Part I of which appears in this issue, will be concluded in the July PROGRESSIVE ARCHITECTURE.

---

EVER THINK OF OPENING YOUR GARAGE DOOR BY SIMPLY PUSHING A BUTTON IN THE CAR?

BARBER-COLMAN RADIO CONTROL for GARAGE DOOR OPERATORS

The elegant Mrs. Giltrox has a button to buzz for her butler, and the wealthy Mr. Giltrox has a battery of them for his staff of glamorous secretaries—but here is a button that plain Mrs. Bill Jones (and thousands of other Mrs. Joneses and Smiths and Browns) can have. It will bring these charming, hard-working, family-raising folks a sensational service and convenience—and at surprising low cost. It is the button in their car that they push to open the garage doors!

TIME-PROVED—DEPENDABLE

Barber-Colman developed the original model of the Radio Control for Garage Doors over twenty years ago. Through an important period of redesign, simplification, and improvement, the current Model C was evolved and introduced about ten years ago. Hundreds of satisfactory installations have been made, and further refinements added from time to time. Today you can buy this reliable, time-proved, trouble-free unit and count on it to perform properly and accurately for you through many years of satisfactory service.

UNDIVIDED RESPONSIBILITY—SINGLE SOURCE FOR DOORS AND OPERATORS

Another important feature—Barber-Colman makes not only the Radio Control, but also the doors (Barcol OVERdoors) and the Electric Door Operators. So, when planning a garage installation, you can get all the necessary elements from a single source. This means that one well-established firm will assume responsibility for proper construction, installation, operation, and service—a vital factor in the solution of today's homebuilding problems.

See our Catalog in Sweet's.

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

100 MILL ST. • ROCKFORD, ILL.

NEXT MONTH

• Full presentation of the house Gordon Drake designed for himself in Los Angeles, California (p. 54) will be a pictorial feature of the next issue—intended to convey to our readers the charm and skillful use of simple materials which won admiration of the Jury conferring the first annual PROGRESSIVE ARCHITECTURE Awards. This is the first of the Award buildings to be given complete presentation in the magazine.

• Principal subject of the July issue will be another Critique—Multiple Housing—consisting of photographs or sketches of plans and details of projects in California, Washington, Illinois, and District of Columbia. “Housing Campus” for Illinois Institute of Technology in Chicago, Illinois, is the work of Skidmore, Owings & Merrill, architects-engineers, of Chicago, and includes buildings of ten, four, and three stories. From Seattle, Washington, the editors and consulting critics—Simon Breines, John Dean, and George Brown—selected a six-family duplex group by Paul Hayden Kirk, of Chiarelli & Kirk. Two garden projects by Gregory Ain, Los Angeles, California, and two Washington, D. C., apartment houses by Berla & Abel of that city, complete the Critique material.

• Closely related to these projects is a row housing study by Charles Bauer and Herbert Swinburne of Newark, New Jersey, who have investigated all the factors which can be turned to advantage in reducing the cost of group housing, while maintaining independent living units. This seems an approach to thoroughly rational use of new and readily available materials—which at the same time achieves a pleasant result.
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NOTICES

(Continued from page 12)

APPOINTMENTS

North Carolina State College of Agriculture and Engineering of the University of North Carolina announces the appointment of Edwin Gilbert Thurlow as Professor of Landscape Architecture and head of the Department of Landscape Architecture.

Leon Brown has been appointed as Assistant Professor of Architecture at Howard University, Washington, D. C.

The T-Square Club of Philadelphia, Pa., has appointed Arthur F. Deam, now with the Department of Architecture in the School of Fine Arts at the University of Pennsylvania, as Patron of the group.

Matthews M. Simpson, of Summit, N. J., has been appointed by the mayor to serve a five-year term as a member of the Planning Board of the City of Summit.

William G. Kaelber, Rochester, N. Y., has been appointed president of New York’s State Board of Examiners of Architects. Mr. Kaelber succeeds Charles Butler.

NEW PARTNERSHIPS, PRACTICES

Arthur J. Dupre has opened an architectural office at 1595 W. Fifth Ave., Columbus 8, Ohio.

Andre Merle Associates have located new offices of design and architecture at the Southern Bldg., Washington, D. C.

Curtis & Davis, architects and associated engineers, have opened a new office at 720 Union St., New Orleans 12, La.

Maxwell E. Wright has opened a new architectural practice at 805 Kales Bldg., 75 W. Adams St., Detroit 26, Mich.

Victor A. Frid and T. Merrill Prentice have formed an architectural partnership with offices at 882 Asylum Ave., Hartford, Conn.

George Nemeny has associated with A. W. Geller in a new practice with offices at 14 E. 39th St., New York 16, N. Y.

Dominic E. Campanela is a new partner in the firm of Telchin and Campanela, architects, 22 W. 48th St., New York, N. Y.

NEW ADDRESSES

Frederick Hodgdon, 3300 Temple St., Los Angeles 26, Calif.

Toombs & Creighton, 127 Walton St., N. W., Atlanta, Ga.

Isadore H. Braun, 173 W. Madison St., Chicago 2, Ill.

Ernest J. Kump Co., 9 Main St., San Francisco, Calif.

Walter Gordon, Mead Bldg., Portland, Ore.

Louis Fromm, 207 E. 32nd St., New York 16, N. Y.

Virgil A. Davis, 106½ W. 2nd St., Odessa, Tex.


Benjamin F. Cook, consulting engineer, 1221 Baltimore Ave., Kansas City 6, Mo.

Elmer F. Steigelman, civil engineer, 577 14th St., Oakland, Calif.

A. C. Wolf, Frederick Bldg., 2063 E. Fourth St., Cleveland 15, Ohio.

Leslie M. Dennis, 400 Westfield Ave., Elizabeth, N. J.

Weston Holt Blake, 210 Pennsylvania Bldg., Wilmington 50, Del.

J. Lloyd Conrich, 593 Market St., San Francisco 5, Calif.

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Four buildings chosen by a professional jury as “best exemplifying sound progress in design” among those constructed in the United States during 1946, recently won for the architects shown here the first annual PROGRESSIVE ARCHITECTURE Awards and Citations. The Award for non-residential buildings was shared by the architects shown above: Mr. and Mrs. E. H. Hunter, of Hanover, N. H., designers of Dewey Retail Shop, Quechee, Vt. (p. 58), and Ernest J. Kump, of San Francisco, designer of White Oaks Elementary School, San Carlos, Calif. (p. 58). A Citation in this classification went to Wayne County Health Clinic, Michigan (p. 60), designed by Eberle M. Smith (right) and Associates, of Detroit. Members of the Jury of Award (p. 55) spent two days evaluating the structures submitted for two classifications—non-residential and residential—and in finally choosing two buildings for each Award explained that “this equality represents with great exactness the temper of the Jury.”

The Award for residences was shared by two Los Angeles, Calif., architects (right), Kenneth N. Lind, for design of California Cabins for Production Line Structures, and Gordon Drake, for design of his own home. Citations in this classification went to the four architects below: Whitney R. Smith, of South Pasadena, Calif., for the Leo Zwell house (p. 56); Marcel Breuer, of New York, for the Bertram Geller house (p. 57); J. R. Davidson, of Los Angeles, for a suburban house there (p. 57). Dean William W. Wurster of the School of Architecture and Planning, M.I.T., was chairman and prepared the report on the Jury’s deliberations presented on page 53.
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MORE people want MORE aluminum for MORE uses than ever
Fifty projects were submitted for the consideration of the Jury in selecting the winners of PROGRESSIVE ARCHITECTURE's first annual Awards for works of architecture, completed during the preceding year, that best exemplify sound progress in design. Two classifications of work were judged separately—the private residence, and a building or group of buildings other than the private residence. There were 20 submissions in the former group and 30 in the latter classification. To view this work and select the winners, the Jury met on March 20 and 21, 1947, in Gallery A of the Architectural League, 115 East 40th Street, New York. Preceding analysis of the projects themselves, the Jury elected as their Chairman, William Wilson Wurster, Dean of the School of Architecture and Planning at the Massachusetts Institute of Technology. Mr. Wurster's account of the Jury's deliberations follows immediately.

REPORT OF THE JURY

The major portion of the first day was spent in viewing and analyzing the 20 submissions in the private residence classification. In general, the quality and ingenuity, even in this last year of shortages and restrictions, were remarkably high.

Six projects have been singled out of the 20 for attention. Let us here repeat the avowed purpose of the citation: "These awards are intended to foster sincere, reasoned progress in architectural design in the United States by citation and recognition of those architects whose efforts to improve contemporary standards are judged the most successful."

The first citation is made equally to the house designed by Gordon Drake and the Production Line Structures designed by Kenneth N. Lind.

This equality represents with great exactness the temper of the jury. The beauty and charm of the Drake house represent a triumph of individual effort. The beautiful, sparing use of materials in the Lind design is a real contribution; its possible use as a help in solving our housing problem and its true economy do overcome in some measure the necessarily restricted space. Eliel Saarinen felt the Drake house to be an architectural contribution—a real home, and he commented that he saw no reason why mass production methods could not be applied to produce architecture in the direction of this design. Dr. C.-E. A. Winslow questioned the apparent lack of windows in the kitchen and bathroom in the Drake house, though it was recognized that a set of drawings or more photographs might clarify this point. Kenneth Reid applauded the economy and merit of the prefabricated approach; commenting on the Drake house, he felt that the unpretentious expression of human individuality was an important contribution to society. The rest of the jury, I think, had feelings which varied in enthusiasm first for one project and then for the other. We all recognized the beauty of the Drake house—perhaps we wished it had fewer dust-inviting shelves near the ceiling—and recognized the brilliance of the plan. We all felt the limitations of space imposed by the rigid 16-foot width of the Lind concept. Yet, as we saw it used in various forms, we felt its direction might show us a way out of the present price blockade. Mr. Severud particularly emphasized the significant contribution of the Lind house in recognizing the structure of wall and roof as one continuous unit and in expressing this unity in a form that changes the stress flow, without being too drastic a departure from what

(Continued on page 60)
KENNETH N. LIND, Architect

"CALIFORNIA CABINS"—TRUSS MODULAR SYSTEM

The "California Cabins" shared top honors in the residential group with the Drake house shown below. Produced by Production Line Structures of Los Angeles (C. Henning Vagtborg, President), they are built of a series of prebuilt trusses and floor, wall, and roof panels. The economical system was admired not only for its ingenuity, sparing use of materials, and advance toward the goal of wall and roof as a continuous unit, but also for its possible use in helping to solve the housing problem—particularly since its finished design is not a drastic departure from what the public is willing to accept. The "Cabins" may be erected as single houses, row houses, or in any of a number of combinations on one or more levels.


GORDON DRAKE, Designer

OWN HOME, LOS ANGELES, CALIFORNIA

Determined to produce a house that would be pleasant for his own use and that would also offer a possible solution to many returned G.I.s establishing their first homes, Mr. Drake began thinking about this charming design when he was still in the Marines. The Jury found the house a real architectural contribution and a nice expression of human individuality.

The plan scheme, providing so much in so little space, "without getting into tricky planning," was termed brilliant. Mr. Drake feels that the house might be improved in livability if the sleeping-dressing area were enlarged somewhat. In our July issue, we shall present this prize-winning house in detail and also show the extended scheme.
or a group of houses on different levels.

Interiors frankly express the structure.

A simple one-bedroom scheme.

More units, another bedroom.

FRONT DOOR: the street is at left; right-hand wall screens terrace.

AN OPEN-SHELF ARRANGEMENT separates kitchen from dining space.
WHITNEY R. SMITH, Architect
HOUSE, PASADENA, CALIFORNIA

The plan of this house was greatly admired—"could be said to be the best floor plan in all submissions, really near-perfection." The economy of the plan, with the entrance door placed so that communication is direct to all parts of the house, was especially noted. Indeed, this house might well have reached even a higher level in the Award judgment, if the documentation had been somewhat more inclusive—a point worth remembering in submitting work for jury consideration. Lack of a plot plan was particularly regretted.


ARTHUR T. BROWN, Architect
HOUSE, TUCSON, ARIZONA

The particular element that placed this unusual house in the Special Mention class was the serious attempt to design the house "to use the solar heat in a part of the world where the usual stress is to combat it." To accomplish this, a barrier wall, in effect, is constructed down the center of the house, inside of the glass corridor wall. This enables the owner to be in or out of the sun as the weather—or his pleasure—may dictate. The side toward the sun acts as a "heat storage" area. The architect points out that "it has not been necessary to use the furnace at night, after a clear day, or in the morning, after nine o'clock."
J. R. DAVIDSON, Designer
HOUSE, LOS ANGELES, CALIFORNIA

One of the "Case Study" houses promoted by the West Coast magazine, Arts and Architecture, this house rose high in the Jury's estimation chiefly for its protected space for outdoor living, through the sliding windows of the living area. The plan was also considerably praised, though some felt that the circulation to the southwest bedroom was a little tedious. Other jury comments: "The entry really works in that plan." "That is a very practical kitchen." "Something very nice on a small lot."


MARCEL BREUER, Architect
HOUSE, LAWRENCE, LONG ISLAND, N. Y.

A remarkable plan, boldly dividing the sleeping and day-living rooms, distinguished use of materials, and beautiful detailing placed this house, presented fully in PROGRESSIVE ARCHITECTURE, February 1947, in the special citation group. The unused height of the garage was questioned, and some felt that the maid's quarters were rather isolated and restricted. Other comments: "Tremendous imagination." "In the plan, he has considered all the facts of happy living."
E. H. and M. K. HUNTER, Architects
HIGHWAY SHOWROOM-RESTAURANT, QUECHEE, VERMONT

One of the first-prize winners in the “buildings other than private residences” classification, this combined-use structure for the A. G. Dewey Co., woolen cloth manufacturers, will be fully presented in PROGRESSIVE ARCHITECTURE in a forthcoming issue. For now, suffice it to say that all jurors agreed that this was a nice, clean-cut job—“a wonderful contrast to the usual commercial venture when placed out of the usual shopping area.” The design is worked out on a modular base—4” x 4” posts, at 4’ intervals; practically the whole south wall is of glass, opening up the interior to view of passing motorists and cutting down heating requirements on sunny winter days. The building includes a shop for the retail sale of wool products, as well as a restaurant along a highway where few eating places exist.

ERNEST J. KUMP, Architect  MARK FALK, Structural Engineer
ELEMENTARY SCHOOL, SAN CARLOS, CALIFORNIA

To use the words of the Jury Report, “the development of schools in separate wings, the use of outdoor space, the beauty and appropriate use of materials, are all combined” in this first-prize winner in the non-residential classification. The entire school consists of two single-storied classroom wings, with all classrooms arranged to face the most-favored orientation, and, through the device of the one-room-deep plan, well cross-lighted and ventilated. Some felt that the fence enclosing the outdoor classrooms was out of scale with the design of the building, but it was pointed out that the photograph that emphasized this (directly across page) was taken from a very peculiar angle—practically at ground level—and presumably distorted the relationship. The Jury commented that, while this is a California school, its excellent principles are adaptable to other regions.

Originally published in Architectural Record, March 1946.
The only Special Mention in the non-residential group, this new health center, to appear in PROGRESSIVE ARCHITECTURE in detail at some later date, rose above the non-premiated buildings because of its fresh, workmanlike solution—"far ahead of the usual building for this purpose." A key to the efficiency of operation is the central location of the information desk, providing control of the entire first floor.

REPORT OF THE JURY

On the second day, decisions were made on buildings other than the private residence. There was a feeling that the submissions in this group lacked the excellence of the private dwellings. This was felt by Eliel Saarinen to represent actual conditions in the field; he noted that domestic architecture is more highly developed than commercial and industrial, which is so often overly influenced by advertisement and styling. This same difference was further realized when we felt there were only three designs for real mention out of 30 submissions, while there were six out of 20 submissions of private residences.

The first citation is made equally to the Hunter project in Vermont and the school by Kump in California. As with the residential classification, this represents with great exactness the feeling of the jury. The simple conception of the Vermont showroom by E. H. and M. K. Hunter provides a wonderful contrast to the usual commercial venture when located outside a shopping area. This is a development which we as a group hope may continue, and thus we were delighted to have this submission. Some discussion developed over the size of the chimney. Eliel Saarinen and William W. Wurster felt that the masonry mass was over-scaled, both in relation to the project as a whole and from the viewpoint of function.

The development of schools in separate wings—the use of out-of-door space—the beauty and appropriate use of materials are all combined in the San Carlos school by Ernest Kump and Mark Falk. Eliel Saarinen felt a certain disharmony in character between the rough redwood fence and the building itself. Morris Ketchum suggested that things might have worked out even better if the end glaze bay window of the kindergarten had been placed off center toward the darker side of the room—a location that he felt might also have helped with the method of placing the redwood fence at the building. Mr. Saarinen and Mr. Wurster agreed. Lest this wing plan might be thought to be too regional in character, it was mentioned that schools in several central and eastern states have been advantageously done in the same manner.

Dr. Winslow thought it appropriate to mention the Wayne County Health Center by Eberle Smith as being a fresh, workmanlike solution far ahead of the usual building for this purpose. Mr. Wurster, joined by others, found the modernity a trifle stylistic, however. As an instance, they noted that the continuous, recessed front window suggested its extent from wall to wall of the waiting room, while the plan illustrates that this is not actually the case.

By WILLIAM W. WURSTER, Chairman
DRIVE-IN RESTAURANT
NEAR JANTZEN BEACH, OREGON

PIETRO BELLUSCHI, Architect

Located on Highway 99, near the south approach to the Interstate Bridge spanning the Columbia River, Waddle's Coffee Shop is planned to handle fast meal-serving to travelers. For those who prefer to leave their cars, ample parking is provided, and there is counter and booth service within the building.

The site is the crown of a pleasant slope, bordered by cottonwood trees, above an inlet of the Columbia. The centrally located restaurant building, with parking provided on the three sides toward the view, is reached by a broad drive in from the Portland-Vancouver Highway.

The huge billboard-type sign (which is floodlighted at night) is visible for a great distance from both main approaches. It also serves to conceal the kitchen stacks. Car service is provided both immediately adjacent to the building and along the covered walkway that projects into the parking area. Exterior walls of the wood-stud-frame building are finished with vertical tongue-and-groove cedar boarding.
At peak hours, an enormous amount of food has to be served quickly. Therefore, circulation in and out of the kitchen, both to the parking area and the interior restaurant, was the basic planning problem. To solve this, the "assembly-line" food preparation area is located in the heart of the building, with broad, unobstructed corridors leading to serving areas. The building is fully air-conditioned.

Booths in the restaurant border the continuous window strips, affording good natural daylighting and a view of outside activities and beyond, to the river. The building is framed with both pipe columns and wood studding; interior walls are of plaster, sheet aluminum, or corrugated glass. Acoustic ceilings occur in all major areas.
AT NIGHT, the big sign is floodlighted; downlights illumine the walk.

THE SERVICE ENTRANCE (shielded by the sign).

Asphalt tile floor; aluminum walls in service space. Corrugated glass defines the corridor to the toilets.
HIGHWAY RESTAURANT, BATON ROUGE, LA.

A. HAYS TOWN, Architect

Located but three miles from the city's downtown business district, but on the main highway between Baton Rouge and New Orleans, this restaurant is used equally by transient and city patrons. Service is entirely at tables, whether in the main dining room, cocktail lounge, or patio.

Facing south along the highway and entrance driveway, the building is angled back to gain a secluded outlook toward the walled patio, bordering the cocktail lounge. Placement of the kitchen and service pantry at the rear angle facilitates serving to the main dining room, private dining rooms, bar, cocktail lounge, and patio. From the entrance lobby, all of these public areas are visible through the wall-height window walls.

Brick bearing walls are the chief structural element, though rear walls are wood stud construction, surfaced with asbestos board. Roof framing is entirely of wood. Provision has been made for later installation of year-round air conditioning.

Patio, with barbecue fireplace in the corner; cocktail lounge at left.
MAIN DINING ROOM. Curtaining controls the sunlight along the southern window wall.

HIGHWAY RESTAURANT
BATON ROUGE, LA.

A. HAYS TOWN, Architect

Continuous windows line the south wall of the main dining room. In back of this room is a space, 16 feet deep, running the full length of the main room, which may be used either as a single private dining room, or (by closing patented folding partitioning) divided into two or three smaller dining rooms. Private entrances into this space are provided at the rear of the building. The floor of the main room is surfaced with terrazzo; the ceiling is acoustically treated.
PITTSBURGH in PROGRESS

TOWARD A MASTER PLAN

Sponsored by Kaufmann's Department Store
MITCHELL & RITCHEY, Architect Planners
Wallace Richards and Park H. Martin, Consultants

A bold attack on the unplanned growth, congestion, dirt, and deterioration which confronts Pittsburgh (as it does so many other cities), the plan constitutes an exciting educational venture. But it is not fantastic; its elements are based on sound research, and the grand esquisse integrates within the larger potential a number of actually scheduled municipal projects.

In developing a brilliant future for their city, the architect planners lift their sights to include an area 38 miles in diameter, with the river triangle as the center. In place of the do-nothing or defeatist attitude, the approach is positive and realistic, taking into account the vast commercial investments found in the core, the great industrial installations, and the plentiful labor market available and housed in this area. Recognizing the commercial core as the city's major source of revenue, the plan for gradual improvement of surrounding areas looks to the enhancement and permanent security of this economic base. A continuous, though gradual, process would eventually relocate major heavy industry in rings of less density toward the southeast; the lighter industrial belt would move out along the Ohio toward the northwest. Most elements of the city seem aware of the need for major improvements and reclamation. Attacks on the smoke nuisance and river pollution are already under way. Numerous traffic and housing schemes are beyond the proposal stage. But, while the drawings shown here are most painstakingly worked out, the architect planners are the first to admit that no static plan is here proposed, but rather "a pattern in broad strokes indicating a direction and philosophy for further study and articulation." In the words of Walter Gropius, these proposals "keep the imagination spinning ... They constitute the first forward step in converting the nation's industrial centers into a place where people may both work and play in a comfortable atmosphere."

THE TRIANGLE: Monongahela at left; Allegheny, right; Ohio, straight ahead.
Point Park, the site of the original Fort Duquesne, is described today as "a dingy freight yard squeezed between two rivers." The scheme proposes a park development around the fort, bridges joining the Point with both north and south banks (the one nearest the Point being carried underground through a tunnel); the cleared site is used for a park, a geological and historical museum, and a civic plaza suitable for major ceremonies. To the east, office buildings and apartment houses are arranged around landscaped areas. The round building beside the big traffic circle on the bank of the Monongahela is an office structure, with helicopter landing platform on the roof. Beyond the area shown in the rendering immediately across page are blocks of the existing downtown area, with major buildings left intact.

Beyond this area again is the so-called Lower Hill, for which the planned development is indicated at top of this page. Note the existing tall buildings at left of the rendering. At present, one of the worst substandard areas in the city, the Lower Hill emerges in the new proposals as Pittsburgh's major cultural center, including a huge circular convention hall, a symphony hall, and an open-air amphitheater. Alongside and beyond this cultural center are various apartment and housing developments, all organized around sweeping parks and highways. Light and sun and air replace dirt and gloom.
The proposed development of the North Side, across the Allegheny from the Point Park (lower left corner of the rendering, above), includes a civic plaza directly across from the park (with circular landing field in the center) backed up by an impressive group of civic and governmental buildings behind, on what is known as Monument Hill. To the east, accessible across several bridges from the triangle area, is the North Side commercial area, with stores and towering apartment buildings. In the center of this area is one of the stations for a monorail system, the transportation system recommended for the city by the architect planners "because of the extremely hilly nature of the terrain."

Across the Monongahela from Point Park are the precipitous slopes of Mount Washington. Here, in place of the present barren hills and traffic snarls, the plan suggests an ordered series of roadways leading to hanging-garden apartments, which would enjoy a breathtaking view of the city and rivers below. Near the river level, two traffic tunnels burrow under the hills to speed traffic flow.

Ordered development of three planned neighborhoods, each worked out in accord with the actual terrain conditions that exist, are shown in the drawings on the facing page. Apartments are widely spaced in green areas; through and local traffic are separated and interrelated, and each of the neighborhoods includes its own community and shopping center.
PITTSBURGH in PROGRESS
MITCHELL & RITCHEY, Architect Planners

The plan has the backing of the Allegheny Conference on Community Development and the Pittsburgh Regional Planning Association. The Mayor and City Council have voiced general approval. Local club groups are much enthused. Financing has been arranged for development of the park at the Point. Mitchell & Ritchey have been retained to develop specific studies for part of the Lower Hill district. Other cities may well consider their laurels.

SPACIOUSNESS, light, and air—hallmarks of the new Pittsburgh.
COUNTY AND CITY JAIL
KLAMATH FALLS, OREGON

SHELDON BRUMBAUGH, Architect

Mr. Brumbaugh has been notably successful in conducting a contemporary practice in one of our smaller cities. His work has ranged all the way from major city planning projects down to the individual small house. In a forthcoming issue, we plan to explore the opportunities that the small city offers the architect, using Mr. Brumbaugh's experience as an encouraging reference point. Herewith is one of his latest buildings, planned in relation to an evolving Civic Center.

The site is a full city block adjoining the County Court House and the area allocated for Klamath Falls' new Civic Center and Park. The building is oriented so that all interior rooms receive sunlight, and a plan has been worked out for enlightened jail administration after consultation over a two-year period with authorities throughout the country. Joining the needs of both city and county (and thereby obtaining a better building than either could afford alone), the building is planned in conjunction with a complete program of work, recreation, rehabilitation, and medical care. In place of a full-time jailer, the city Chief of Police and the County Sheriff assume the joint responsibility of managing the jail.
COUNTY AND CITY JAIL
KLAMATH FALLS, OREGON

SHELDON BRUMBAUGH, Architect

Both jail-block and service wings may be readily extended in the future. Two main types of custody are used—individual cells and dormitories; drunk cells are provided for sobering up, and there are separate quarters for boys.

A prisoner enters from the rear with an officer, is booked, given a shower, deloused, and issued jail clothing; next come a physical exam, fingerprinting, photographing, and placement in cell. Sentenced prisoners not requiring individual custody are assigned to dormitories. While relation of dormitory bunks, eating table, and toilet facilities seems crude, the program required that all prisoners be in view of all others at all times, and the prison guards preferred that toilets be located near the entrance.

Organization of the front porch and door skillfully centralizes control of all public access—to the Chief of Police, Sheriff, Judge's chamber, visiting room, rest rooms, and booking office. Structure is reinforced concrete with brick facing; partitions are tile in office areas and steel or concrete in prisoners' space. In general, floor and roof construction is a one-way slab system. The building is heated by forced hot air, supplemented by radiation in exterior offices.
In the latter eighteenth and early nineteenth centuries, few regions could surpass Cape Cod for its architectural modernity and inventiveness. In more recent years, this vitality has been largely replaced by copybookism and banality. It is pleasant, therefore, to present a sparkling new house on the Cape which, like its predecessors, employs the techniques and materials of its day to produce a home designed around the needs and pleasures of its occupants.

The site is a typical bit of the Cape, a scrub-pine grove, separated from a magnificent beach by a quarter mile of marshland. On the view side (east) and on the south, walls of the house are largely of glass, welcoming both the outlook and the sunlight. Here, too, are the paved living terraces, shielded from the road by the house itself. Designed primarily as a summer home, the house has a heating system for use on occasional holidays throughout the year.
CAPE COD COTTAGE, WEST DENNIS, MASS.

The house faces the road toward the west; window areas on this side are restricted to a high band opening into the master bedroom and toilet and shower rooms. The utility room, accessible from the outside, has walls of terra cotta blocks which reduce the fire hazard, form the fireplace wall of the living room, and produce an important exterior design element. Otherwise, the house is frame, on a modular basis, with 3" x 3" posts spaced 2 ft. on centers; ceiling joists line with these members. Two-foot-wide glazed doors run from floor to ceiling, and fixed doors are screwed to the posts with rubber weatherstripping between; alternate doors are hung on the fixed doors, eliminating all frames and trim.

DAVID FRIED, Architect

THE 2-FT. FRAMING MODULE is exposed on both the interior and big windows of the opposite wall, providing excellent cross ven-2-ft. squares; ceiling is of acoustic tile.
HIGH WINDOWS at the end of the master bedroom occur above storage units and produce a venturi effect, in conjunction with the big windows of the opposite wall, providing excellent cross ventilation.

THE DINING-SPACE BAY WINDOW faces south. Sash, like the wall height glazed doors, are worked out on the 2-ft. module.
THE FIREPLACE WALL of the living room is made up of the terra cotta blocks that enclose the utility room. The dining bay, toward the south, occurs just beyond the shelf case behind the sofa at left. Photo at right shows fixed panel of glass at the corner of the living room, facing the entrance.

CAPE COD COTTAGE, WEST DENNIS, MASS.
DAVID FRIED, Architect

The warm-air heating system is simply schemed, with the ceiling of the bedroom corridor furred down to form a heat duct to these rooms. The corridor itself serves as the return duct. A supply duct is brought around into the living room by a louvered ceiling duct.

ONE OF THE BEDROOMS is equipped with double bunks; all bedrooms open out to the living terrace.
PART I. The second portion of this important article will appear next month.

The adoption of welding in steel building construction—a development of the last two decades—is a definite advance in building technique. Along with certain benefits, however, it brings to some bewildered designers and builders added confusion, which, though it cannot be blamed entirely on any complexity of the basic concept, cannot be denied. Yet the welded steel structure has actual practical advantages—simplicity and economy—which make it decidedly worthwhile to investigate the process.

Even if it were possible, it is not necessary for the practicing architect (or for that matter, the practicing engineer) to comprehend fully all aspects of the welding process in order to grasp at least those qualities of welded steel structures which set them apart from others. That some confusion should exist is understandable; the excellent Welding Handbook opens with this significant explanation: "Welding involves more sciences and variables than any other industrial process, which may explain why most of those concerned are satisfied with a very crude understanding of its problems."

Nor are these technological matters the sole difficult ones; when and where should a steel structure employ welding? The answer to this question, which is important to the architect, can be derived from the same considerations and knowledge which will help to decide whether a given building shall be built of stone, brick, lumber, concrete, or riveted structural steel. No architectural cook book can provide a recipe which will be a satisfactory substitute for factual knowledge of construction methods. However, familiarity with the characteristics of welded structures, coupled with intelligent reasoning, should indicate the place of this method in contemporary architecture. Lack of familiarity is at least a partial explanation of the fact that, so far, only a very limited architectural expression of welding can be found in contemporary work. Reinforced concrete and riveted steel have found their particular architectural forms; is it too much to expect the same for welded structures?
The Welded Structure: Rigid Frames vs. Column-Beam Frames

Welding may be so employed that the resulting structure is either rigidly or flexibly framed.

The typical welded structure is a rigid frame, a homogeneous unit in which columns, beams, and girders are rigidly connected. In this sense it has more than a superficial similarity to reinforced concrete construction. The so-called difficulties of rigid frame analysis which in the past have almost prevented general acceptance of reinforced concrete, now appear again. The Welding Handbook, in discussing the advantages of rigid frame construction in welded structures, makes the following interesting confession: "... the work involved in rigid frame analysis to determine the maximum stresses, occurring at the joints under all reasonable conditions of loading, has discouraged any general use of this type of construction except where the framing system is relatively simple. This condition continues in spite of the fact that savings of material can be achieved through the utilization of continuity and in spite of the simplification that has been brought about in the mathematics of rigid frame solutions. ..." What a sad comment this is on the structural engineer in our brave new atomic age!

The analysis of rigid frames was for a considerable time, and probably still is, a controversial issue, although the controversy is somewhat one-sided, centering around the larger amount of work which has to be put into the analysis of such structures as compared to the simplified calculations which are considered satisfactory for "column-girder" construction. This latter type of analysis is used in riveted steel structures, where the connections between column and girder are assumed to be flexible enough to permit the column to be designed for compression alone, and the girder as a simple beam. In such an analysis each member can be designed independently, disregarding loading conditions of other members.

The rigid frame requires a more refined approach: loading on any one member of the frame will influence other girders and columns. Columns are subjected to bending as well as compression; girders cannot be considered "simply supported." These characteristics do not make the design of such frames more difficult, merely more complex; they require more accurate strength evaluation and hence better balanced design. Rigid frame design requires somewhat different, unfamiliar methods, and somewhat more time. The practicing engineer usually will not invest additional time either in acquiring new knowledge or in more complex analysis without financial recompense. Advantages gained by welding will offset the additional cost of the design work; but if the savings have to be demonstrated by alternate designs, you have what sounds very much like a vicious circle.

The architect, on the other hand, is in a strategic position to eliminate this deadlock, provided he is familiar with the advantages of the welded frame and appreciates the complexity of the design procedure. The recent wider use of reinforced concrete has probably familiarized a great number of engineers and architects with this type of design procedure. Welding should benefit from this; but the analogy between the design of reinforced concrete and of welded structures is only partial: while welding results in greatly simplified forms, which is the method's chief merit, The completely welded structure, in contrast to riveted, is not an assembly of independent structural elements, joined together with intermediate connecting pieces, but is a homogeneous, organic unit. This, its major characteristic, sets it apart from riveted or bolted construction. To be fully exploited this quality requires different design methods and will result in structures having unique characteristics.

There are four fundamental types of non-pressure welds: bead, fillet, groove, and plug; and there are five basic forms of joints: butt, corner, edge, lap, and tee. Welded structures can always be reduced to these elements. Basic advice to designer-engineers is set forth in the Welding Handbook: "... foremost of the precepts which could be laid down is the rule that the simplest and most straightforward treatments of the problem will produce the most satisfactory results with the least cost (although) curved work at joints may be justified on esthetic grounds, it usually tends to increase the fabricating costs ... it is better to keep the number of component parts in a joint at a minimum, using comparatively heavy material if necessary, to avoid the introduction of reinforcing plates and elaborate stiffener systems. ..."

Although this advice is directed to structural engineers, it agrees curiously with some basic concepts of contemporary architecture, disregarding the methods and materials used. The principles, however, have a very particular importance for welded structures, in which are emphasized the benefits to be achieved by carrying simplicity of design to the utmost.
Photos above and on preceding page show the all-welded rigid frame of an industrial building, and details at typical joints. Curved work was shop-welded; straight members, joints with latticed struts, etc., field-welded to the shaped members. (Photos courtesy Lincoln Electric Co.) The Manual of Design for Arc-Welded Steel Structures (see page 82) shows standardized connections and methods of stress calculation which simplify welding design and erection.

The Welding Process and Its Testing

To understand fully the implications of welded steel structures one must have a clear conception of the welding process, not only of the physical laws involved, but also of the actual manual process, of supervision, and of testing.

Welding is usually defined as the joining of two or more pieces of metal by the application of heat and (sometimes) pressure. The accompanying chart of welding processes gives an over-all view of the somewhat bewildering maze of processes now available to those who design for welded fabrication. In welded steel structures, at present, only two of these are in general use—metal arc and gas welding, and metal arc is by far the more common.

Metal arc welding employs heat obtained from the electric arc formed between the electrode and the parts to be welded, in which the electrode melts and unites with the base metal. The operation itself is easy to understand. One terminal of a generator is clamped to the steel to be welded; the other is connected by insulated cable to a mild steel electrode (rod or wire). The electric circuit is closed for a fraction of a second by bringing the electrode into contact with the steel parts to be welded, then the electrode is withdrawn, opening a short gap between it and the steel. First this establishes a short-circuited current flow, then the opening of the gap draws an arc. Usually direct current is used, although A-C welding has increased rapidly in the last four or five years. The operator must maintain a nearly constant gap between electrode and base metal, although the electrode's tip melts away continuously. The gap is determined by the arc length, which is in turn influenced by the voltage used. Simultaneously, a second motion is necessary along the line of the weld. Therefore, besides depending on choice of electrode and welding current, the quality of the work depends on a number of other variables.

In gas welding, heat is obtained from a gas flame, usually from the combustion of acetylene and oxygen. The base metal is brought up to proper temperature, after which the welding rod is introduced into the flame. In this case the operator manipulates torch and welding rod so as to fuse the base metal to a desired depth simultaneously with the
rods. The motion of the operator is continuous, the molten metal from the rod flows against the fused surface and merges with it. The gas supply valves have to be adjusted to produce a suitable flame, which, together with choice of welding rod, will greatly influence the quality of the weld.

Although it is not the purpose here to give a comprehensive explanation of welding processes and equipment, this short description should convey a basic fact about welding: considerable skill is required to perform either of the above described operations. Nor is this all; in addition to the skill of the operator the laws of chemistry, metallurgy, and physics govern the results of welding operations. While it is not essential for the operator or designer to comprehend them fully, such branches of physics as heat, elasticity, plasticity, electricity, magnetics, optics, X-rays, and crystal theory are involved in the complete understanding, control, and testing of welding. The paradoxical (but not necessarily unusual) combination of highly complex exact sciences and almost medieval handicraft skill is striking. The simultaneous existence of these factors might explain the air of mystery which too often surrounds the welding process. In view of this, testing of welded joints and of the weld itself becomes quite important, if for no other than psychological reasons; of course for research and development good testing methods are an absolute necessity.

Mechanical tests for welds are similar to those used for the base metal. Although there is agreement as to properties to be determined and procedure to be employed, there is still, particularly among local building codes, wide disagreement as to shape and size of test specimens and certain procedural details, even though at higher technological levels agreement is quite general. Standardization of the various code requirements would certainly increase usefulness and decrease cost of routine tests. Mechanical testing includes examination of soundness and tensile strength of both the weld metal and the joint.

Non-destructive examination of welds is also employed; the visual inspection method is the simplest. Certain flaws in welds can thus be detected immediately. Reference works usually describe the appearance of sound welds in great detail and call attention to common mistakes. One most important function of visual inspection is to ascertain whether the operator has actually executed all the required welds. Other non-destructive methods, while they give excellent results, are usually expensive and cumbersome for building construction, although two may have wider application in the future.

The magnafux or magnetic powder method is based on a property of ferromagnetic powder, which assumes, near abrupt discontinuities in magnetized materials, a position which outlines the shape of such discontinuities or cracks. Radiography (with either X-rays or gamma rays) also affords valuable information as to soundness of the weld and adjacent material, revealing sub-surface defects such as gas cavities, non-metallic inclusions, lack of complete penetration, imperfect fusion, and cracks.

Often, there are conditions "on the job" which may make it difficult to employ present-day types of X-ray equipment; and in any case the inspector has to be technically competent in reading the photographs. Radiographic examinations are at present required only for boilers and pressure vessels; however, their advantages in examining more important joints in welded structures are obvious—and the method is also cheaper than removing and replacing portions of welds.

The widespread use of "exographs" or "gammmagrams" might completely remove uncertainty from welded structures. When such scientific certainty is accompanied by equal architectural sureness of touch, welding will have gained a place beside other structural systems as a fully independent method with its own individual characteristics.

Advantages and Savings

In view of the complexity of design procedure for rigid framing and the skills and equipment required to execute welding, the question, can welding be justified economically and technologically, is natural. The answer, based on both theoretical considerations and practical experience, is usually yes; welded structures are in most respects superior to riveted ones. Such a statement needs qualification, but only to emphasize that welding is not a cure-all process which can make an otherwise unsatisfactory structure acceptable. Nor should it be employed indiscriminately; to repeat, its application will depend on over-all considerations of the type which determine the selection of any construction method.

The most striking characteristic of all welded structures is the saving in quantity of structural steel which can be obtained through welding. The Manual of Design for Arc Welded Steel Structures gives the following percentages in saving of structural steel

Left, mechanical test conducted by The Austin Co. on prefabricated welded trusses formed of H sections. Failure occurred by buckling of a member at 240,000 lbs., 253% of the design load; all welds remained intact at failure despite distortions. Center and right-hand photos (courtesy Lincoln Electric Co.) show improved lighting and head room obtained in rigid-framed, welded industrial buildings, an advantage when cranes or other high equipment must be accommodated, etc.
material, reported for various classes of work properly designed for welding:

Class of Structure

| Rigid-frame or arched-roof large mill buildings, auditoriums, hangars, etc. | 20-26% |
| Mill buildings, etc., with roof trusses | 10-15% |
| Industrial handling equipment | 15-30% |
| Girder and arch bridges | 15-30% |
| Truss bridges | 10-20% |
| Continuous rolled beam bridges, with coverplates, splices, stiffeners, etc. | 10-15%  
Conventional tier buildings | 5-10% |

Class of Member or Unit

| Truss-type bents for mill buildings | 20-10% |
| Built-up plate girders | 20-35% |
| Trusses | 15-28% |

Savings are due not only to the characteristics of the rigid frame and reducing midspan moments of girders, but also, in both rigid and column-beam framing, to the simplicity of welded connections, which, furthermore, contributes to reduction of handling and fabricating costs. The reduced quantity of steel has indicated the attractiveness of additional savings of other materials and corollary advantages—the lesser weight of the structure can be reflected in lighter foundations and other load-bearing members.

The lightness of the structure results in reduced height of framing members; girders, beams, floor construction. This may mean a considerable saving in outside walls of tall buildings as well as in total cubage for a given area. The actual reduction in height of girders is influenced by too many variables to permit any generalization to be wholly accurate, but a simple calculation gives convincing proof of the proportionate savings involved. The reduction is due mainly to the lower moments to which continuous beams are subject, as compared to simply supported beams. The depth of the beam is proportional approximately to the square root of the bending moment; hence the reduction in height can be calculated from \( \sqrt{8/10} = 0.9 \), which is the square root of the ratio of the midspan moment of simple beams to the average maximum moment of continuous beams. It is therefore logical to expect that, with the continuous beams made more economical by welding, thickness of the over-all floor construction can be reduced by approximately 10 percent in comparison with simply supported beam construction.  

To make a simple riveted connection three pieces have to be handled: the two pieces to be connected and the connecting element, usually an angle or plate. A welded connection can be made with only two pieces. In riveted connections holes must be punched in all these members; three separate operations and two different machines are required. The welded connection can be done with two operations and one type of equipment. These are the factors which contribute to the economy of welded construction; but that economy can be fully realized only when the simplicity of welding is completely, ingenuously exploited.

Besides these tangible advantages, there are others no less important. Erection of welded structures is noiseless, which is an advantage not only to occupants of nearby buildings, but also to the workmen. Some field cutting may be required; use of the cutting torch will eliminate the noise of shearing and clipping in both shop and field. Noise elimination is especially important in remodeling work (for which welding is well suited since extra members can be added by welding without drilling—and thereby weakening—existing parts of the structure). Welded structures are more resistant to corrosion than riveted ones due to the smooth surfaces which can be obtained at joints through welding. In riveted steelwork, corrosion usually starts at the rivets, where corrosive matter can accumulate, while welds done with coated electrodes are more resistant to corrosion than the base metal. This advantage is especially important in exposed welded steel structures, which make capital of the attractively smooth surface and lack of small detail.  

As to disadvantages, we have mentioned the great degree to which the quality of the work depends on the skill of the individual operator. This can be reduced by designing the structure to permit fabrication of large portions in the shop, under favorable, well controlled conditions. Shop-welding is also more economical than field-welding. Too, there is the previously reported difficulty of inspection. Except for certain errors which are visible or can be detected by gauges, no suitable, positive, inexpensive, non-destructive method exists for checking of the soundness of structural welds. This, of course, is not unique with welding; it is true of reinforced concrete and, to a degree, of riveted or bolted structures; but the fact remains that flaws in welded construction are difficult to detect. For this reason inspection and supervision are important, perhaps more than in other construction methods. The exacting requirements for inspection and testing also affect psychological factors: the operator has to know that his work, especially the important welds, will be inspected, supervised, and possibly tested. (On the other hand, the exacting requirements and conservative specifications of current welding codes could be also justified on the basis of general unfamiliarity with welding procedures.)

(Concluded next month)

Comparison of arc-welded and riveted design: top sketches show an advantage of a simple welded connection, which does not require any additional member to make the joint. Lower sketches, comparing truss joints, show elimination of gussets in welded work.
The household "Precipitron" (Westinghouse) is about the size of a gas furnace.

AIR CLEANING
BY ELECTRONIC PRECIPITATION

Briefly, electronic air cleaning, known back to 1900 when Dr. H. G. Sittell...
the air stream, giving them a positive surface charge. To operate efficiently, the ionizer of an electronic precipitator must produce ions in sufficient quantity to make certain that all the dust and smoke particles receive a positive charge of optimum intensity. Ionizers operate at 12,000 or 13,000 volts.

The actual ionizing element consists of fine tungsten wires. Free electrons (liberated by many existing forces, including ultraviolet light, radioactive materials, cosmic rays, temperature changes, etc.) are attracted to the ionizing wire; their acceleration as they approach it increases so rapidly that they collide with gas molecules, causing displacement of electrons from the molecules. The resulting molecular ions are those which are attracted to the negative collecting surfaces. The number of free electrons and ions multiplies rapidly, due to repeated collisions, until the space between the wires and electrodes is said to be "ionized."

An individual with normal eyesight can see a dust particle of about 10 microns in size. The micron, a unit of microscopic measurement, is approximately 1/25,000 of an inch. Tobacco smoke, which the electronic precipitator can remove from atmosphere, is made up of individual particles which are about 1/2 micron in size. This comparison indicates not only the relative possibility of the ions hitting molecules of atmospheric impurities; it also indicates why the process is so effective in removing impurities consisting of extremely small particles.

Upon leaving the ionizer, the air stream, whose impurities have now become electrically charged, enters the collecting element. For efficiency the charged collecting surfaces are relatively large. Once the impurities have collected they must be disposed of. In some types of equipment this is accomplished with a water spray, in others by submersion of the collector surfaces; in still others, disposable collectors are discarded and replaced with new ones.

Types of Equipment

All electronic precipitators consist essentially of a power-pack, which steps up the voltage and converts AC to direct current; an ionizer made of hair-thin tungsten wires suspended between electrodes; and a collector usually made...
of parallel metal plates, alternately charged positive and negative, and set edgewise to the direction of air flow.

For residential use there is a cabinet-enclosed Precipitron (Westinghouse) which is also suitable for small stores. In size it is comparable to a modern gas furnace (52" high, 27" wide, 34" deep); it can be connected to the ductwork of a forced air heating system. Installation requires a hot water supply and drainage outlet, an electrical connection to standard 115-V, AC supply, and whatever ductwork is necessary. The collector is cleaned, about as often as a mechanical refrigerator requires defrosting, by turning a handle which operates five warm water sprays. This flushing operation lasts about three minutes, depending on water pressure and amount of dirt collected. Cost of the household Precipitron is currently less than $500, plus installation charges.

For ordinary large commercial and industrial uses, where no special machines are to be serviced by precipitators, there are both "packaged" models and assemblies of stock parts to meet individual needs. Westinghouse Precipitrons of this type are assembled units. The American Air Filter Co. manufactures several types, each in a wide range of capacities. Their Electro-Matic precipitator incorporates automatic cleaning of the collector plates, which are mounted on endless chains which rotate, passing the negative plates through an oil bath. The stationary (positive) plates, cleaned by special wipers, collect little dirt, since most of the dust molecules are attracted by the negative plates. 115-V, AC is required. American Air Filter's Electro-Airmat operates on a somewhat different principle. Instead of metal plates, a disposable cellulose sheet forms the collecting surface; the dirty cellulose sheet is discarded and a new collector surface is inserted either manually or by a special mechanical loader. Spare collector cells loaded with clean cellulose can be kept on hand for convenience in servicing. The cellulose tissue is porous; when electrostatically charged the plies tend to separate, with each fiber becoming a collecting electrode. The cellulose sheet is also an effective mechanical filter. This type of unit, weighing 40% less than electronic filters having metal plate collectors, requires less floor area and operates on 110-V, 60 cycle, single phase current.

For high-speed cutting tools, welding fumes, etc., both companies manufacture special units to remove metallic dust, oil mist, etc., from the atmosphere. Exhaust from the machine hood directs the air, first, through a mechanical filter which removes metallic dust and large oil droplets, then through an electronic unit in which the collector plates are mounted vertically. The remaining oil mist accumulates on the collectors, drips down through the mechanical filter, and can be salvaged if desired.

Installation

Water, sewage, and electrical connections required have previously been noted. Within the air distribution system, the precipitator is located between the air intake (outside, return, or both) and the heating and humidifying or cooling mechanisms. A perforated plate is installed in front of the precipitator unit to insure even air distribution over its entire face. A preheater, located between the air intake and the precipitator, may be required in regions where snow or heavy fogs are prevalent, in order to keep free moisture from entering the filter, possibly to keep out rain when space is limited.

It should be remembered that electronic precipitators, in general, are designed to remove impurities from normal atmospheric air, and that heavy dust concentrations, excessively high temperatures, or atmospheric pressures substantially varying from normal may demand special installations, such as combination with mechanical filters, etc. Access doors, preceding and following the precipitator, and ample space inside the air duct are necessary for servicing and inspection. Usually there are furnished with the precipitator automatic devices with which, when desired, cut off the electrical supply and ground any portion of the unit which may hold a static charge. In large systems, there should be a manual device for the same purpose so that, if a maintenance man enters the duct, inadvertent closing of an access door will not close the electrical circuit. In cabinet models, removal of an access panel for servicing automatically disconnects the current supply and grounds any charged sections when necessary.

Typical Applications

Precipitators have been found advantageous in many types of manufacturing, including steel mills, electrolytic plating plants, precision instrument, parts, and motor plants, equipment industries, etc.; in several kinds of commercial establishments, including laboratories, stores, banks, etc.; in food processing; chemical plants; spinning, weaving, and dyeing operations; printing plants; in hospitals, where their value in increasing sanitation is obvious; and in hotels, restaurants, night clubs, etc. When it has been necessary to remove odors as well as impurities, as for instance in railroad coaches, activated carbon or other adsorptive odor filters have been used in conjunction with precipitators.

There are numerous case histories which illustrate the advantages. Electronic precipitators have been used to remove wild yeast spores entirely from the air in yeast culture rooms. In manufacturing photographic film, warm air used in drying the emulsion has been successfully treated with electronic precipitators. Super-clean air is essential in textile manufacturing; for instance, in the spinning process high-speed spindles literally whip any atmospheric dust into the yarn, creating permanent discoloration; electronic air filtration has helped master this problem. Installation of similar equipment in a large department store, located in a city noted for its atmospheric pollution, eliminated the necessity for maintaining a dry-cleaning establishment for the store's soiled merchandise; in the same store, the installation drastically reduced the number of paint jobs spent in covering merchandise and in cleaning displays of gifts, china, etc. In addition, the period between renovations and repaintings due to accumulations of grime was substantially lengthened. In another store, where delicate pastel shades were used in decoration, the last advantage is even more appreciated.

Two types of American Air Filter precipitators: left, "Electro-Cell," showing hinged ionizer, collector plate assembly, and, beneath, collector plate unit removable for cleaning; above, "Electro-Airmat," showing ionizer, collector (disposable cellulose fiber sheet which is also a mechanical filter), and frame. Both types can be assembled into precipitators of desired capacity.
PRODUCTS

BRITAIN'S NEW STRUCTURAL PLASTIC

Holoplast, pictured below, is made by the British firm of Holoplast, Ltd., New Hythe, Kent, England. It is an advance over many familiar products in rigidity, dimensional stability, impact strength, strength-weight ratio, and thermal and acoustical properties. Essentially Holoplast consists of a core of resin-impregnated paper tubes, rectangular in section, with surfacing sheets (of laminated, impregnated paper or wood veneer) resin-bonded to the core. Half-cells at the edges of sheets are filled with densified wood strips to facilitate fixing and joining. The sturdy, homogeneous product is a war development, first used in aircraft and shipbuilding, now being applied to the vast British construction program.

Small photos show manufacture of Holoplast (see text): tubes of spiral-wound, resin-impregnated paper are cold-formed into rectangular section, assembled between surfacing sheets, and cured in a 3500-ton hydraulic press. Large photo shows table, paneling, doors made of Holoplast.

Holoplast boards are 4 ft wide by either 8 or 8 1/2 ft long and 1 in. thick. Final thickness of both surface layers and webs is 3/8 in.; webs are 2 in. on centers (see photos). Surfaces may be obtained sprayed smooth in any color or rough in a finish resembling plaster; with wood veneer integrally bonded; or with special patterns reproduced on them. For curved surfaces (when needed) the company supplies more conventional laminated products with matching surface. For flooring, a special paper surface, embossed, non-slip, and wear-resistant, is provided. Holoplast has been used successfully as partitioning, either single or double; its cells have been filled with acoustic absorbent to increase its already-high acoustic properties; it can be obtained with some interior cells filled with densified wood to facilitate cutting to size. Its cells have been used as raceways for BX cable. The product has been used for concrete forms. Holoplast resists most solvents, oils, organic acids, and dilute mineral acids; is impervious to vermin, including termites; and—of great importance—will not support combustion.

INTERESTING ITEMS

American Type Founders, Inc., of Elizabeth, N. J., have been recommended to the Reconstruction Finance Corp. (by NHA) for a guaranteed market contract to produce a precast concrete wall panel for residential construction. The panels, called Fabricon, are 8 x 4 ft, 4 in. thick, made of two lightweight concrete surfaces separated by a light steel frame or “cage” between. Panels are joined with metal fasteners; joints are sealed with mastic. We've heard of this and similar developments, unofficially, for some time.

One other is a system of concrete house construction using road building equipment, under investigation for many months by NHA; at one time it might have been an answer to a prayer but so many obstacles were put in its way that now, experiments at last having been successfully concluded, materials bottlenecks have loosened sufficiently so that it is of merely academic interest.

Then there's Robert Moses (currently leading New York into the building wilderness under a new title, that of "City Construction Co-ordinator"). The newspapers tell us he has discovered the precast concrete slab, and expects to see to it that precast slabs are used for walls, floors, and ceilings of housing projects for U.N. personnel. Progress, it would seem, has donned a technical disguise and infiltrated Mr. Moses.

CONDUCTIVE RUBBER FOR HEATING

The newest wrinkle in electric radiant heating is a conductive rubber blanket adapted for use as ceiling surfacing, where it becomes a heat source. The U. S. Rubber Co., Rockefeller Center, New York, N. Y., developed the system, which has been in operation in an experimental house in Knoxville, Tenn., during the past heating season. The house, designed and built by the Fonde Construction Co., of Knoxville, contains living room, bedroom, hall, combined kitchen-dining room, enclosed porch,
and hall, all rubber-ceiling heated. The attached garage is not heated. On the basis of their limited experience and other available data, the Fonde Co. estimates a year's heating costs for this house would average $72. With proper design and insulation, they believe the system practical for any part of the country, basing their belief on the fact that the Knoxville house consumed 1900 kw in 24 days in March. (TVA power for this purpose costs $4 for the first 50 kw per month, then descending on a sliding scale to 3¢ when consumption exceeds 1400 kw.)

Special features of construction of the house are cinder block walls (hollows filled with insulation), 8 in. of mineral wool above the heated ceilings, and large glass areas facing south. Insulation is considered to reduce heat loss 60 to 65 percent. The house has no basement; its concrete slab floor has a special integral surface. Surface temperature of the ceiling when in operation is 110°F, which maintains a room temperature of 69 or 70°F; during a test for maximum capacity of the system, room temperature was temporarily raised to 80°F when the outdoor temperature was 5°F. To operate the system, the householder simply snaps a switch at the beginning and end of the heating season. Individual room thermostats regulate the flow of current to the ceiling panels automatically.

The conductive rubber ceiling surfacing, like some other products now being adapted to construction, is a “war baby.” Developed for aviation, the conductive material consists of a layer of rubber to which a high percentage of carbon black has been added. This layer is sandwiched between two coverings of resin-imregnated fabric. U. S. Rubber is contemplating its use in decorative screens (for use as portable heaters) as well as ceiling panels. Production on a commercial scale, not yet under way, will not be possible for several months.

### AIR AND TEMPERATURE CONTROL

**Agitair Type R Air Diffusers.** Air distributor with a diffusion pattern control for almost any type or shape of ceiling. This unit agitates the supply air stream by forcing it to be deflected from various vases at different angles; air is discharged at a uniform velocity. Air Devices, Inc., Dept. TR, 17 E. 42nd St., New York 17, N. Y.

**Drovo Counterflo Heater.** Oil or gas burning direct-fired heater with stainless steel combustion chamber. Need for a refractory lining within combustion chamber is eliminated because of high temperature capacity of stainless steel. For commercial and industrial buildings, Drovo Corp., 300 Penn Ave., Pittsburgh 22, Pa.

### DOORS AND WINDOWS

**Copco Commercial Projected Steel Windows.** Ventilators swing outward from bottom and slide down from top. Available in six sizes. Copco Steel and Engineering Co., Detroit 27, Mich.

"Draft-Bloc." Draft-eliminating door seal to prevent drafts and infiltration of dust, noise, insects, etc. Metal; molded rubber sealing blade automatically pressed against floor when door closes, snaps up as door is opened. Fits standard doors. V & L Home Utilities Corp., Rockford, Ill.

**Plymouth Fire-Guard Fabrics.** Noncombustible Fiberglas yarns and flame-proofed cotton combined to provide fire-resistant fabrics. Available in variety of colors, designs; can be cut, sewed, and trimmed, will not stretch, can be dry-cleaned without losing their fire-resistant qualities. Plymouth Fabrics, Fall River, Mass.

**Para-Plastic Joint Sealing Compound.** A "Hot Poured Rubber Seal" used to seal expansion joints in all types of concrete construction; available in green, red, gray, cream, and yellow. Servicised Products Corp., 6051 W. 65th St., Chicago 38, Ill.

### INSULATION (THERMAL, ACOUSTIC)

**Presstitte Barrier Paper.** Moisture and vapor-resisting Kraft paper saturated and coated with Gilsonite, asphalt, and wax compound for protecting insulation. For frame and masonry construction, cold storage areas, and locker plants. Presstitte Engineering Co., St. Louis, Mo.

**Hi-Production Concrete Block Machine.** Automatic concrete block machine that produces over 20,000 concrete 8x18x8" blocks in three shifts. Blocks of varying densities can be produced. Constructed of welded steel. Henry & Hutchinson, Inc., Blair Blvd., Decatur, Ga.

**Aluminum Prefabricated House.** Basementless, one-story, prefab aluminum house erected on a concrete slab foundation. Stucco-like appearance due to asbestos-impregnated plastic-paper finish. Not available at present but may be after further experimentation. Goodyear Aircraft Corp., Akron, Ohio.

### SANITARY EQUIPMENT

**Aquatemp.** Pressure controlled valve which balances hot and cold water volume, prevents scalding or chilling due to sudden water pressure changes. For any type of shower fitting. The Milton-Griffith Co., 8619 Mock Ave., Detroit 14, Mich.

**Table-Top Water Heater.** Electric water heating unit resembles a 24-in. base cabinet in kitchen, has a 4-sq ft work top. Immersion type heating element; Fiberglas insulation. Westinghouse Electric Corp., Appliance Div., Mansfield, Ohio.

### SPECIALIZED EQUIPMENT


**Sano-Wall.** Wall covering of plastic-treated sheets bonded to a cellulose fiber back. Surface is impregnated with resin and colored, then coated with a clear resin. Said to be fadeproof, washable with soap and water; cellophane and metal roofs, non-porous masonry and outside metal work. United Gilsonite Laboratories, Scranton, Pa.

**Gilsalume.** An aluminum roof paint that provides year-'round weatherproofing and summer cooling. Deflects 85% of sun's heat rays, can be applied to asphalt shingles, smooth or slate roof covering, built-up slags or metal roofs. Portland Products Co., Inc., Philadelphia 3, Pa.

**Ford-V-Neer.** New siding material using Fiberglas as the base material. Weather, fire, and vermin-resistant. Available in either brick or stone pattern, wide variety of colors, large sheets. Ford Building Products Co., Chicago 2, Ill.

**Gilsa-Val.** Wall covering of plastic-treated sheets bonded to a cellulose fiber back. Surface is impregnated with resin and colored, then coated with a clear resin. Said to be fadeproof, washable with soap and water; cellophane and metal roofs, non-porous masonry and outside metal work. United Gilsonite Laboratories, Scranton, Pa.

### TRAFFIC EQUIPMENT

**Multiple Stroke Hydraulic Pallet Truck.** Equipped with plastic wheels and "Spring-Lift" booster rollers mounted in back of rear wheeler. Truck is built in capacities from 1000 to 6000 lbs and is adaptable to either single or double, 2- or 4-way pallets. Lewis-Shipyard Products, Inc., Watertown 72, Mass.

**Hydraulic Elevators.** Standard-sized hydraulic elevators; plunger construction; freight or passenger service; travel limited to 36 ft. Construction, pressure and friction reduced; pit stays dry without a drip pan. Montgomery Elevator Co., Hydraulic Div., Moline, Ill.
Air and Temperature Control

1-111. World's Economy Champion (PE-10), Anchor Fence Post Co., Fluid Heat Div. Reviewed May

1-112. Hydro-Flo Heating (E-246), Bell & Gossett Co. Reviewed May

1-115. Open for Inspection (Bul. AE-247), 4-p. illus. booklet on “hydro-flo” heating system that heats house and hot water at the same time. For residential, commercial, industrial, or apartment heating units. Bell & Gossett Co.

1-116. Dravo Counterflow, AIA 30-C-43 (Bul. 571), 12-p. illus. booklet on oil or gas burning direct-fired heaters with stainless steel combustion chambers, for industrial and commercial buildings. Operating data and prices. Dravo Corp.

1-117. Radiant ‘Sun Warmth’ in Every Room (Form 3089), 20-p. illus. booklet on “Panelaire” system of radiant ceiling panel heating with warm air for new houses with any automatically fired heater. Operating and installation details and data. International Heater Co. (25 cents per copy—may check or money order payable to International Heater Co.)


1-114. Automatic Control, 4-p. illus. booklet on selection of controls for heating and air conditioning systems. Operating characteristics. White-Rodgers Electric Co.

Doors and Windows

4-93. How To Make The Most of Your Cellar, 16-p. illus. booklet of suggestions for fixing up basements as extra playrooms, laundry, etc. Suggests use of steel cellar doors and stair units. Construction features and installation data on these units. The Bilco Co.

4-88. Prestomatic Industrial Doors, 4-p. illus. pamphlet on “prestomatic” complete units that automatically open and close doors. Advantages, operating details. Clark Door Co., Inc.

4-94. Space-Saver Kennetrack for Interior Sliding Doors, 4-p. illus. booklet on the advantages of sliding vs. hinged doors in residences. Installation details. Jay G. McKenna, Inc.

4-89. Dexter Tubular Locks and Latches, National Brass Co. Reviewed May.

4-90. Practical Beauty for Homes (Cat. TI6-B), AIA 16-M, New Castle Products. Reviewed May.

From J. S. Thorn Co. Reviewed May:

4-91. Aluminum Windows (Cat. A-46).

4-92. Metal Windows (Cat. SA-47).

Electronic Equipment and Lighting

5-73. The Story of Certified Ballasts, 6-p. illus. booklet discussing certified ballasts built to specifications for quiet operation, heating, rated wattage, current, and voltage. Ballasts are tested, then rechecked under operating conditions. Lists of manufacturers. Certified Ballast Mfrs.

5-74. Processing Cold-Cathode Fluorescent Tubes, 4-p. illus. bulletin written by Paul Kober on “proper tube processing.” Reasons for tube impurities, general procedure of processing. Also Fluorescent Lighting Association Membership List, December 1946. Fluorescent Lighting Assn.

5-69. Home!, General Electric Co. Reviewed May. (10 cents per copy—may check or money order payable to General Electric Co.)


5-70. Tymsit—Miracle Switch, T. J. Mudon Co., Inc. Reviewed May.

—Four booklets on sound systems for commercial, industrial, and institutional buildings. Application, advantages, operating data. Accessories and models of equipment available. Stromberg-Carlson:

5-76. Sound Systems for Churches.

5-77. Sound Systems for Hospitals.

5-78. Sound Systems for Industrial Plants.

5-79. Sound Equipment for Schools.

5-71. Sylvania Indirect Bolite (EN-163), Sylvania Electric Products, Inc. Reviewed May.

5-72. Planning The Kitchen Electrically, Manual No. 1, Westinghouse Electric Corp., Better Homes Dept. Reviewed May. ($1.00 per copy—may check or money order payable to Westinghouse Electric Corp.)

Finishers and Protectors


2 booklets on color in industrial and residential buildings, to combat body fatigue, ease eye strain, and as a safety precaution. In industry color should be applied to machines as well as walls, ceilings, and floors, to break tension on eyes and nerves. Suggestions for color schemes for both interior and exterior painting. Pittsburgh Plate Glass Co.: 6-94. Pittsburgh Color Dynamics for the Home.

6-95. Pittsburgh Color Dynamics in Industry.

6-96. Hydrocide Colorless (BP-3007), 4-p. illus. booklet on a water-repellent treatment for exterior concrete and masonry walls above grade. Coverage figures and application data. L. Sonneborn Sons, Inc.


Insulation (Thermal, Acoustic)


Load-Bearing Structures

12-110. Calcium Chloride for Concrete and Cinder Blocks (No CE-1), Calcium Chloride Assn. Reviewed May.

12-112. Glued Prefabricated Houses, 6-p. illus. booklet to guide prefabrica-
Manufacturers' Literature


12-114. Production Line Structures, 8-p. illus. booklet on FHA approved prefab houses based on a "trussed, modular system." One-story, well-designed, modern houses with large window areas, sizeable rooms, and large closet space. Shipped from factory in one or two basically priced, layouts of some available models, and prices. Production Line Structures.


Materials of Installation

12-112. Glued Prefabricated Houses, Casein Co. of America, Div. of The Borden Co. (See No. 12-112 under "Load-Bearing Structures.")


13-54. Lignotite Casein Glues, No. 1063 and No. 4156, 2 pp. on the advantages of using lignotite casein glues which are highly water-resistant and can be used anywhere as long as temperature is above freezing. Physical properties; mixing and application data. List prices. Paisley Products, Inc.


Non-Load-Bearing Structures


14-30. Aluminum Alloy and Mill Products Data Book, Reynolds Metals Co., Inc. Reviewed May. ($2.00 per copy—make check or money order payable to Reynolds Metals Co., Inc.)

14-31. Finishes for Aluminum, Section I and II, on combinations of surface finishes of aluminum. Section I discusses characteristics, applications, and types of finishes. Section II supplements material data on materials, equipment, and procedure. Standard Process Bulletins sent to those filling out Registration Card supplied with Section I. Reynolds Metals Co. ($2.00 for both Sections—make check or money order payable to Reynolds Metals Co., Inc.)

14-32. Finishes for Aluminum, Section II.

14-33. The Vermont Marble Front, AIA 8-B-1 (Producers’ Council Bul. 50), 4-p. illus. pamphlet giving construction data on marble veneer. Characteristics, applications, and types of finishes. Section I summarizes physical properties; details Vermont Marble Co.

Sanitary Equipment, Water Supply & Drainage


19-122. B. J. Hydropress Pump (Bul. 46-600C), 12-p. illus. booklet on double-volute centrifugal pumps for efficiency at low volume and high pressure (up to 500 psi. Capacity: 20 to 300 gpm; head, 55 to 250 ft. Technical data, drawings, outline dimensions. Byron Jackson Co.

19-111. B. J. Submersible Pumps (Bul. 46-500H), Byron Jackson Co. Reviewed May.

19-123. Delany Flush Valves, 4-p. illus. booklet on line of diaphragm type valves; a vacuum breaker type that protects against back syphonage. Roadmens inspection data; drawing showing installation of the vacuum breaker unit. Coyne & Delany Co.


Specialized Equipment

19-113. Furniture for Your Church, American Seating Co. Reviewed May.

19-114. 1947 School Seating (Form 6037), American Seating Co. Reviewed May.


19-128. Portable Tile Saw (Model CR), 4-p. illus. booklet on a portable diamond blade machine which can be operated at 1/2 hp. for cutting tile. Self-contained flushing system. Specifications. Hyatt Lapidary Equipment Co.


Surfacing Materials

From Atlas Mineral Products Co. Reviewed May:

19-117. Floors for the Food Industries.


19-120. How To Make Your Floors Important (46-D-1), David E. Kennedy, Inc. Reviewed May.

19-130. Concrete Floors Designed for Comfort, Research Study 13, 12-p. illus. booklet describing "Comfort Concrete," a resilient type of concrete which absorbs about 90% of the energy of impact; asphalt emulsion replaces most of the mixing water. Application and construction data, mixtures, and physical properties. John B. Pierce Foundation. (35 cents per copy—make check or money order payable to John B. Pierce Foundation.)

19-131. Plasteel Roofing and Siding, 4-p. illus. booklet on roofing and siding made of "Plasteel" (a combination sheet of steel, asphaltum, and mineral mica), which resists rust, corrosion, etc. Available in corrugated sheet, also flashings and accessories. Standard forms available, application data. Protected Steel Products.


Traffic Equipment


If a red light flashed the instant a leak started in a water or heating line, the cost of repairs might be minor. But the first sign of a leak is usually wet plaster, soaked furniture, ruined decoration. And leaks are only one kind of trouble. Rusty tap water, inadequate flow, faulty circulation due to rust-filled lines... these call for major repairs.

The way to avoid such troubles is to specify Revere Copper Water Tube. Completely installed, it costs little or no more in the first place, and much less in the long run.

Made for heating, water supply, air conditioning and other services in all types and sizes of buildings, Revere Copper Water Tube is rust-proof and has a smooth gun-barrel interior finish that insures an unrestricted flow of water through the lines. Joints made with either soldered or compression fittings help further to cut down friction loss. The Revere name and the type, stamped on this tube at regular intervals, insure full wall thickness and the close gauge tolerances so essential for tight sweated joints.

You can also specify such long-lived Revere materials as Red-Brass Pipe; Sheet Copper and Herculoy for tanks, ducts, pans and trays; Copper Tube... and, of course, Sheet Copper for roofing, flashing and other sheet metal construction. Revere materials are handled by leading distributors in all parts of the country. The Revere Technical Advisory Service, Architectural, is always ready to serve you.

Trouble always costs more than REVERE COPPER WATER TUBE
PRE-FIT

Douglas fir stock doors are pre-fit to exact size. No on-the-job fitting or cutting is necessary. Doors are scuff-stripped for protection in shipping.

PRE-SEALED

Douglas fir stock doors are pre-sealed—a feature which improves dimensional stability, reduces moisture absorption, and eliminates the need for one prime coat.

FACTR-FIT

Douglas fir doors may also be ordered completely machined—not only pre-fit, but gained for hinges and mortised for locks as well. All work is done at the factory by modern, high-speed precision tools.

GRADE-MARKED, TOO!

Douglas fir stock doors are plainly grade-marked for ease in identification, ordering and specifying. You know the grade you get—you get the grade you want.

"I'm sure of cleaner more attractive installations when I specify modern

PRECISION-MADE

Douglas Fir Doors"

ARCHITECTS AND BUILDERS agree that durable, attractive, precision-made Douglas fir stock doors offer real advantages. Pre-fit and pre-sealed Douglas fir stock doors save time and money on the job. Factri-fit features offer still greater savings—and assure a trim, clean-cut installation every time. Machining is done at the factory—and that means far less danger of on-the-job marring or "butcher ing" due to unskilled help or improper tools. Savings in time and labor more than offset the slight additional cost of pre-machining.

More Doors Soon!

It is a fact that the supply of Douglas fir doors will continue critical for a number of months. Two factors make this true: the present overwhelming demand—and the shortage of shop lumber. But production is stepping up. Warehouse and dealer stocks should soon reflect this increased production. We suggest that you keep in touch with your regular source of supply.

Douglas Fir
DOORS

FIR DOOR INSTITUTE—Tacoma 2, Washington
The National Association of Fir Door Manufacturers
CONTROLLED SUNSHINE...
for year-round comfort and beauty

In this attractive house of Mr. and Mrs. H. M. Sloan of Glenview, Illinois, Architect David S. Barrow added the beauty and spaciousness of the outdoors to indoor living. He provided the extra comfort and economy of solar heating with window walls of Thermopane, the complete multiple-pane insulating unit.

All year the beauty of the landscape is enjoyed with indoor comfort. In summer, the Thermopane units, shaded from the direct rays of the high sun, help keep the house cooler. In winter, sunshine floods the room, warming the walls, floors and furnishings. Thermopane helps keep this heat in, for between its two panes there's a sealed-in air space that provides effective insulation.

Large house or small—modern or conventional... Thermopane can help make it more enjoyable, more comfortable and easier to sell. Write for further information on Thermopane, including data on standard sizes. Libbey Owens Ford Glass Company, 2767 Nicholas Building, Toledo 3, Ohio.

• The overhang is carefully calculated to admit sunshine in winter and keep it out in summer. Notice how the shadow falls along the sill in this summer picture—a shorter overhang being used for the bedroom windows with higher sills at the right. The canvas portion of the overhang is removed in winter to permit the heat-giving rays of the low winter sun to enter.
Johns-Manville Acoustical Materials can be combined with J-M Walls and Floors for UNIT CONSTRUCTION

Using these J-M products together in a system of Unit Construction, you can provide your interiors with such important advantages as structural flexibility to meet changing needs... greater architectural beauty... increased comfort.

J-M Unit Construction combines demountable Acoustical Ceilings, movable Transite Walls, and resilient Asphalt Tile Floors—in other words, the complete interior, under one specification, one manufacturer's responsibility.

Write for colorful brochure, "J-M Unit Construction."

J-M Asphalt Tile Floors

J-M FIBRACOUSTIC UNITS—inexpensive, light in weight. Available in several sizes and colors.
"J-M acoustical materials installed by Johns-Manville." That's the undivided responsibility—the all-inclusive service Johns-Manville gives your acoustical project... large or small... simple or complex.

There's a Johns-Manville acoustical material to give you the best in sound control, no matter what the type of interior, whether it's a school or a hospital, an office or a restaurant, a large auditorium or a noisy factory.

To assure you the maximum in noise-quieting and sound control, Johns-Manville not only provides the correct acoustical material for each specific condition, but follows through by installing the material properly.

J-M construction crews are trained in the correct methods of application, assuring you the greatest possible benefit.

That's what we mean by undivided responsibility for the complete job. It's one of many reasons you can rely on Johns-Manville for effective sound control. For the complete story that tells how to "put a ceiling on noise," write for brochure, "Sound Control," Johns-Manville, Box 290, New York 16, N. Y.
In this utility room there's only one possible place for a modern cabinet-type ironing board—next to the door. The conventional cabinet board would be impractical; would block the entrance, could be used from only one side.

The secret’s in the swivel! Eubank patented cast aluminum support gives this improved cabinet board the important advantage of flexibility. Holds board firmly upright in cabinet, keeps it steady when in use. Eliminates sagging. Built to last, too. Not one has ever failed under normal use conditions!

Even The Smallest Home Can Have The Convenience of a

SWIVEL-TYPE CABINET IRONING BOARD

Planning small homes—the kind today’s market demands? Planning to modernize older, larger homes? Planning apartments, bungalow courts, duplexes? Then this Eubank Swivel-Type Cabinet Ironing Board will answer one of your biggest problems—the problem of getting modern conveniences into smaller, more compact space. The Eubank board—because of its patented cast-aluminum swivel support—can be installed and used where the conventional cabinet board would be utterly impractical. The installation illustrated above is just one of scores of examples.

In your current construction— in your future planning— make full use of Eubank’s many advantages. See your lumber dealer!

CHECK THESE FEATURES!

*Swings through wide arc; ideal where space is limited— in hall, kitchen, small utility room.
*Attractive cabinet requires a rough opening only 14” x 57 1/4” x 3 1/4”; recesses in wall.
*For old or new homes, apartments, courts. Easily installed before or after plastering.
*No projecting parts to tear fabric; firesafe iron storage with aluminum door ventila-
*Patented cast aluminum support; strong, sturdy. Not one has ever failed in normal use.
*Available NOW for immediate delivery. Contact your nearest distributor.

The Furnace that brought Beauty to the Basement.....

Architects must be practical. Dream castles are all right on paper... but Home, Sweet Home needs a heating system... a healthful and automatic heating system.

And there's no law against it being beautiful too. In fact, what with rumpus rooms and basement bars, a thing of beauty in a heating system can be a joy forever!

And that means the MOR-SUN... the winter air-conditioning furnace that gives Beauty as well as BTU's!

MOR-SUN... the pressed steel factory-assembled packaged furnace that heats, conditions, circulates, filters, humidifies and continuously renews the air... and brings beauty to the basement!

MORRISON STEEL PRODUCTS, Inc., BUFFALO 7, N. Y. Morrison's nationwide dealer organization is at your Service. Write us for the address of our representative nearest you.
REVIEWS

FROM THE TECHNICAL PRESS

HANDBOOKS, PAMPHLETS, MANUALS


This loose-leaf collection of technical data has the sort of information that hospital architects crave for detailing all the sterilizer rooms, utility rooms, laboratories, and such in a big hospital project. The prints are mostly roughing diagrams—the sort of invaluable information that so frequently comes in too late and results in "extras" because it wasn't taken into account in the first place. The collection is entirely lacking in information which would organize the data for architects not fully conversant with hospital work.


A brief text with good discussion of how to plan. A check list of 70-odd specific uses, containing equipment ratings and average energy consumption, serves as a guide in selecting the proper wiring. A similar tabulation gives locations of electric outlets for the various buildings. The text and illustrations are clear and lively.


Concise information gathered from producers of six types of lightweight aggregates: expanded shale or clay (Haydite), expanded slag, pumice, diatomite, perlite, and vermiculite. U. S. map showing distribution and a tabulation of data from producers are given for each type.


Non-technical discussion of audio instructional devices and their place in the school program, with general specifications of equipment to be included in the various standard types of systems. Engineering standards are being developed and will be made available as they are released by the Radio Manufacturers Assn.

Specification for the Design of Light Gage Steel Structural Members. American Iron and Steel Institute, 350 Fifth Ave., New York 1, N. Y.

This specification establishes design standards to govern the use of light gage steel members for structural purposes. The basic design principles are the same as those employed for the heavier hot-rolled shapes. However, the uniform thickness (or thinness) of the sections necessitates consideration of buckling stresses. These are taken into account by eliminating (for design purposes) certain areas from the cross-section of the member in question. In other words an "effective cross section" is used.


Westinghouse flatters the architects—this is strictly engineering data (but data organized as the architect wants it).

All the way from stokers, generators, and switchgear to commercial and industrial lighting equipment, and residential electric planning, the data for each piece of equipment is arranged in terms of application, features, how to select, dimensions, typical specifications, and engineering data. This information is generally supplied to the architect by his electrical engineer but it's time the architect had much of it at his own fingertips.

FROM OTHER PUBLICATIONS


This paper, in dealing with the "rela-
Thanks to scientific resin sealing, Wheeler Osgood Doors reach you in top-notch condition... ready to do a better job on the job! Just look at these advantages over non-sealed doors—

★ ASSURES SMOOTHER PAINT JOB!
★ INCREASES SCUFF RESISTANCE!
★ REDUCES HAIR CHECKING!
★ PROTECTS AGAINST DIRT!
★ REPELS MOISTURE!
★ COMPLETELY PRIME COATED—INCLUDING TOP AND BOTTOM!

Wheeler Osgood's resin sealing helps doors retain EXACT NET SIZE of original machining... controls grain raising and PROTECTS FACTORY-SANDED SURFACE... PROTECTS AGAINST DIRT, DUST AND SMUDGES... MINIMIZES HAIR CHECKING of panels and assures a uniform surface resulting in a BETTER, SMOOTHER PAINT OR STAIN JOB... imports SCUFF RESISTANCE to protect door in handling... plus added advantage of having top and bottom of door sealed.

Automatic sprays, as pictured above, put a protective prime coating at high-quality tested resin sealer over every inch—top, bottom, ends and sides—of Wheeler Osgood Tru-sized Doors.

THE WHEELER, OSGOOD COMPANY
Plants and General Office: Tacoma 1, Washington

NEW YORK OFFICE ............ 1326 Empire State Building, New York 1, New York .......... Phone: Penn 6-2954
CHICAGO OFFICE ............ 134 So. LaSalle Street, Chicago 3, Illinois .......... Phone: State 5335-6-7
SAN FRANCISCO OFFICE .... 3045 19th Street, San Francisco, California .......... Phone: Valencia 2241
LOS ANGELES OFFICE ....... P. O. Box 7685 Del Valle Station, Los Angeles 15, California .......... Phone: Vandike 6526
TACOMA OFFICE ............ 1216 St. Paul Avenue, Tacoma 1, Washington .......... Phone: Main 8101
ance of five different systems for controlling the energy supply to the panels (ceiling panels in this case). The house is built with four independent systems of sinuous-coil hot-water panels: floor; ceiling; exterior walls; interior walls. It is not occupied. The glass areas are moderate. The results of these and subsequent experiments should add considerably to the engineer’s knowledge of the control problems in panel heating systems.

**LIGHTING**


Tables for determining brightness distribution were developed for six types of lighting: indirect, trough, wall, direct, combined wall and ceiling, diffusing globes. These tables allow the illuminating engineer for the first time to predetermine in what shapes of rooms and for what reflectances a given type of lighting will be satisfactory.


This highly technical paper is followed by an interesting discussion which shows how the illuminating engineers are at last coming to grips with the complex problems of “comfortable” lighting.


An example of what can be accomplished by relighting and redecorating a typical classroom, this report proves again that the whole visual environment must be considered for successful results. The fixtures used are standard fluorescents placed at right angles to the windows and modified by replacing the glass on one side with a denser glass with a reflecting coating on the inside. This gave about half as much brightness on the pupil side as on the front side of the room, maintaining a high foot-candle level without glare. For controlling the lighting an indicator was developed which shows by a pointer when the daylight diminishes or increases enough to warrant turning the lights “on” or “off.” Daylight was controlled by fixed louvers at right angles to the windows. Experiments with plywood mock-ups proved that adjustment is unnecessary. The whole assembly swings up for window washing.

Colors were chosen (light shades of “coral” and “peach”) which look about the same under daylight and fluorescent. To achieve a comfortable brightness pattern, blackboards were replaced with white glass chalkboards on the front wall and tackboards on the other walls. Light gray asphalt tile floors and light finished desk-chair units help keep the brightness ratios within proper limits.

Educational results were not analyzed...
In residential design Insulux Glass Block panels open the way to new and flexible plans. Usually dark and gloomy spots are cheerfully lighted with Insulux. One example, the hallway of this San Francisco home is flooded with softly diffused daylight—and full privacy is maintained.

How about daylight and privacy for an apartment lobby? A gracefully curved floor-to-ceiling panel of Insulux was the answer in the Croydon Apartments, Washington, D.C. An occasional washing keeps Insulux fresh, sparkling. Architects: Berla and Abel.

Answer to the call for private daylight

There's a definite demand for lighter, brighter living—in residences, in apartments.

A blessing to architects meeting this demand is the ability of Insulux Glass Block to transmit and diffuse daylight while barring vision. Panels of Insulux are easily installed in a manner similar to ordinary brick. Once in place these panels are permanent, high in insulating value, and remarkably easy to maintain. There's nothing to rot, rust or corrode and no painting is needed.

In residences, commercial and industrial buildings, architects are solving problems with Insulux. For complete technical data, specifications and installation details on this versatile, modern material, see the "Glass" Section of Sweet's Architectural Catalog, or address Dept. D-30, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.

Insulux Glass Block is a functional building material, designed to do many things other materials cannot do. It is manufactured in three sizes, many functional and attractive face patterns. Investigate!
as a controlled situation was lacking. However, the pupils did maintain a high degree of interest and took excellent care of their novel surroundings so that the light finishes did not prove costly in maintenance.


A survey of improvements noted in all fields of lighting, especially the development of new equipment and indication of trends.


This paper (despite its title) is mainly a well-detailed study of an executive office with ideal lighting on one desk, achieved by perimeter lighting plus a large panel over the desk. It contains a good discussion of seeing comfort in terms of Zone 1, “the task,” Zone 2, “the immediate surroundings,” and Zone 3, “the general surroundings.” Available tools for achieving desired results are analyzed: slimline fluorescents in parabolic reflectors for wall or ceiling lighting; direct-lighting down-lights and portable lamps for increasing illumination in Zone 1, etc.

BOOKS

THERMAL INSULATION OF BUILDINGS

Paul D. Close. Reinhold Publishing Corp., 330 W. 42nd St., New York, N. Y., 1947. 104 pp., illus. $1.75

Insulation Made Easy would have been an appropriate title to this 104-page, highly fact-charged treatise on the principles of thermal building insulation for dwellings and farm buildings. Busy architects and those concerned with construction problems will find its two-hour reading time a worthy investment in insulation know-how. With pedagogic skill the author lucidly guides the reader through 35 excellent reference tables and ordinarily stuffy formulae pertaining to fuel savings, estimating insulation requirements, calculating heat losses.

The book is generously sprinkled with well illustrated, non-technical definitions of unit of heat, heat content of fuels, heat transfer by conduction, convection and radiation, radiation transfer across air spaces (for cavity wall addicts, no doubt), thermal conductivity and conductance, relative humidity, and many others.

A thoughtful study of Chapter 6 (“Preventing Surface Condensation”) and Chapter 7 (“Preventing Condensation Within Walls and Ceilings”) should do much toward the elimination of this construction cancer. Consideration might have been given to thermal capacities of dense plasters. In spite of the figured “U” value in properly designed structures, it is seldom possible to get enough heat into either plaster or concrete to raise the temperature to within that degree F where the surface is above the dew point. This means that while water may not be running down a wall, there is sufficient moisture co-
Smoke was stealing selling space from Sibley, Lindsay & Curr Company, of Rochester, N. Y., until this progressive institution began obtaining all power and steam from the central distribution system of the Rochester Gas & Electric Corp. Now it is a cleaner, lighter department store, now a new economy of space has been achieved.

When expansion proved too much for the store’s own power plant, the changeover to central heating, made without interference to store operation, resulted in many advantages of interest to architects. Comparing favorably in dollar cost, purchased service eliminated a source of noise and dirt, freed valuable space for further use. To meet increased demands upon its system by other companies recognizing these benefits, the Rochester Gas & Electric Corporation has constructed a tie-line which provides the city’s business district with 200,000 lbs. additional steam per hour. In this tie-line, as in hundreds of other major central heating systems, the steam travels underground through Ric-wiL prefabricated insulated conduit, specified for economy, for thermal efficiency.

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REVIEWS

(Continued from page 102)

densed on the surface to shorten the life of paint and act as a repository for dust. It is the latter which causes fresh paint to acquire a dirty look quickly. Vermiculite plaster either as a surface insulation or as a fire retardant may have been worthy of mention. It has an extremely low thermal capacity, giving its surface a rapid response to room temperature changes. For this reason plaster sweating is obviated. Since the temperature of the surface is so close to room temperature, a feeling of bodily warmth at lower ambient temperatures may be achieved.

The architect will be more than gratified with the book's many installation drawings and photographs as will the specification writer with its excellent "what is it and who makes it" glossary. It would have been helpful to have had the moisture, fire, and vermin characteristics of insulating media added to the glossary.

Paul Close's generic analysis of some 30-odd types of insulation materials alone makes this treatise a worthy addition to any technical library. I wish we had a "Technical Book-of-the-Month Club." This would be it.

BEN JOHN SMALL

LIBRARY FUNDAMENTALS


A reprint of the original treatise on the principles of library planning which first appeared in 1941, this book contains floor plans and photographs which have already proven valuable to librarians and architects planning new buildings or remodeling.

The fundamentals of the modern library building, the elements and their relationships, analyses of recent library plans, and the building structure and equipment are some of the pertinent subjects discussed. Distribution of the book is scheduled for August.

PANEL HEATING AND COOLING ANALYSIS


Four chapters of "non-technical" descriptive material are followed by a detailed treatment of theory and analysis. The first section discusses the history, types of installations, advantages, and disadvantages of panel heating and cooling. The following seven chapters provide sufficiently detailed and exact understanding of rational procedures to permit the physicist-engineer or advanced student to carry out a completely rational design or to examine critically and evaluate the various simplified methods in use. The last two chapters present simplifications of the rational design procedure, particularly a method based on "equivalent conductance" which is simple and accurate.

JOHN RANNELLS

PROTECTION BY PLANNING


(Continued on page 106)
Shown here are only a few of the many commercial and industrial buildings built better and faster with Celotex Cemesto Board.

Cemesto is perfect for speedy, low-cost construction of insulated buildings. It offers thermal insulation, weather resistance inside and out, structural strength and siding... all at one low cost. In addition, Cemesto core is Ferox-treated to resist dry rot, fungus growth and termites.

Cemesto comes in standard size sheets in 1 5/8", 1-9/16" and 2" thicknesses; can be easily cut to fit job conditions; can be attached by nailing to wood, by bolts or clips to steel.

Thus Cemesto is an ideal material for use in exterior walls, roof decks or interior partitions. It does not require painting, so maintenance costs are low.

Write the Architectural Sales Service Department for complete details illustrating several methods for applying Cemesto for roof decks, exterior walls or interior partitions.

If you wish to furnish plans to us, we will be glad to prepare shop erection drawings showing the exact size of Cemesto panels required, together with estimate on cost of material pre-cut to fit.
of Health. Reinhold Publishing Corp., 330 W. 42 St., New York 18, N. Y., 1946. 16 pp., illus. 25 cents per copy; $15.00 for 100 copies.

Accident Facts (1946 Ed.). National Safety Council, Inc., 20 N. Wacker Drive, Chicago 6, Ill., 1946. 96 pp. 50 cents each for 1-99 copies; 40 cents each for 100 or more copies.

Design for Safe Living was prepared under the sponsorship of the New York State Department of Health to assist the architect in making the home as accident-free as possible. Responsibility for reducing the appalling number of accidents and deaths from accidents in the home devolves especially upon the architect and requires him to design safety into the home. In this booklet eight articles by different authors consider from the viewpoint of safety the design of rooms, interior equipment, stairs, closets, lighting and electrical fixtures, landscaping, and the elimination of possible fire hazards. Its comprehensive check list for safety in residence design is useful for drafting room reference.

The booklet, Accident Facts, ranges over a wider field and tabulates data about accidents and deaths from accidents in the home, on the farm, in occupations, in schools, from motor vehicles, in transportation, and from other causes. The annual peacetime toll of 96,000 accidental deaths in the United States equals the population of a city the size of Lynn, Massachusetts, or El Paso, Texas. Practically all these deaths and the annual ten million accidental injuries are unnecessary and avoidable, as this booklet points out. To promote the study of safety measures, facts and figures are classified according to types of accidents, causes, locations, occupations, ages, sexes, time, seasons, etc. Architects, city planners, industrial designers, here offered much helpful material.

LAWRENCE E. MAWN

ARQUITECTURA PERUANA
Héctor Velarde. Fondo de Cultura Económica, Panuco, 63, Mexico, 1946. 182 pp., illus. $3.95

Senor Velarde offers in these interesting pages an historical and artistic survey of Peruvian architecture from the Pre-Inca period down to the present. He is a Paris-trained architect, professor, author of several architectural treatises, president of the Society of Architects of Peru. Obviously the limitations of the work did not permit a complete study of the subject. However, the development of Peruvian architecture appears to be adequately presented. A generous allotment of photographs supplements the Spanish text and compensates the non-Spanish reader with a graphic abridgment. Some of the illustrated Pre-Inca, Inca, and Hispanic details are excellent examples of stonework and sculptural carving.

Three architectural epochs—Pre-Hispanic, Spanish Colonial, Republican—are studiously considered. The work of the middle period, principally the art and architecture of churches, convents, and monasteries, is segregated as to geographical location. The rich ornamentation may seem alien to modern Americans, but as a product of its era, great merit attaches to it. The modern buildings which are shown are not impressive.

The typography and design of this paper-bound book are in good taste; pen illustrations at the chapter headings lighten and effectively enrich the page. A bibliography and index add to the book's value and usefulness.

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Designed and engineered to harmonize with new trends in finest buildings, WEISART Flush Compartments are thoroughly field tested, and have won wide acceptance. The rigid, flush stile construction eliminates posts and head rails. Weis cut-out type top gravity hinge permits doors and stiles to line up at top.

Doors, stiles and partitions are of highest class flush construction of bonderized, zinc-coated steel, with edges locked and sealed. Synthetic baked enamel finish is easily cleaned, available in any solid colors selected for desired color treatment. Partitions and stiles are supported clear of walls, eliminating dirt-catching corners.

Write today for your copy of Catalog No. 19 containing detailed information on WEISART and WEISTEEL compartments.


(Continued from page 108)
Maximum efficiency is the fundamental engineering principle of the improved High Efficiency, Ventilated Type Feeder @ Busduct.

Designed and built to meet today's requirements for maximum plant efficiency and productivity, Feeder @ Busduct is unexcelled for the transfer of heavy current from service entrance to distribution center, from generators to switchboards or from switchboards to distribution centers. Of even greater importance is the fact that voltage loss is reduced to less than 2 volts per 100 feet at 80% power factor.

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BATTLE FOR CHICAGO

Wayne Andrews. Harcourt, Brace & Co., 383 Madison Ave., New York, N. Y., 1946. 358 pp., illus. $3.75

Chicago has seen many encounters in its history—first with swamp and mud for its very site, later with the tides of a rising economic and social life which it encouraged, and now, Mr. Andrews would have us believe, for the influence of its press.

Mr. Andrews' concern is for the people who made great fortunes in the course of the prolonged battle, of the dynasties which were founded but in general have not survived. He has, as needs be, devoted his energies to presenting the methods by which money was accumulated, from the sound merchandising of Marshall Field to the paper pyramid manipulations of Samuel Insull. Money has been accumulated by men in Chicago; their names and their methods are here given. Battle for Chicago deals with the men who, with initiative, vision, and manipulating acumen, both economic and political, built Chicago to her present place in the world.

Men striving to build fortunes incidentally built a city. From the year 1837, when John Mills Van Osdel designed a home for William Butler Ogden, to the present noticeably feeble attempts to provide housing, the battlefield of Chicago has been built upon and rebuilt. Architects of the stature of Burnham, Root, Sullivan, McKim, Platt, Hood, Van der Rohe, and a multitude of their lesser imitators have substantially assembled wood, brick, stone, concrete, and steel in the sometimes questionable improvement of Chicago real estate. An architect of today cannot but regret that so much construction was achieved in the era following the great Chicago fire—an era that produced buildings of such ostentation, bad taste, and unfortunate solidity that much of it remains. It has become obsolete by the technical development which it encouraged, obsolete by the tempo of living and the social pattern which Chicago has been instrumental in moulding. Yet many of these buildings stand, involved in the estates of the founders, blighted by their failure to realize the necessity of zoning, of a forward looking, nonpolitical building code, and of a realistic evaluation of land.

Chicago is a city to which people have come for the avowed purpose of making money. If you would know who the titans of this group were, how they did it, how much they made, and who has it now, this is a book for you.

JOHN C. SEWARD
It "FLOATS"
YET IS ALWAYS
WEATHER SEALED

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Design a window so easy to operate that it actually seems to "float"... yet which is constantly sealed against air infiltration... far more weathertight than ever before.

That is the problem which Curtis engineers solved in the new self-fitting Silentite. Famous Silentite spring suspension creates a window that even a child can easily open. Yet the full length double-Z type bronze weather-strips in the jambs press sliding bars against the edges of the sash, providing a constantly tight fit. This new type weather-stripping, plus improved weather-stripping at head, sill and meeting rail, makes the new self-fitting Silentite fully 20% more weathertight even than the original Silentite window introduced by Curtis in 1932.

Silentite windows are made of wood—because Curtis has found wood to be the most completely satisfactory of all window materials. Yet Silentite windows have the streamlined appearance that fits today's idea of window beauty. Let us tell you all about the new self-fitting Silentite and its new achievements in window design.

When in New York, visit the Curtis Woodwork display at Architects' Samples Corporation, 101 Park Avenue.
THE HOUSING MARKET IN NEW YORK CITY

by HERBERT S. SWAN

A Study Made for the Institute of Public Administration

204 Pages, 41 Tables, 16 Charts. Price $2.00

This is a thorough, factual, and realistic study of the market for both rental and individually owned housing in New York City. It is full of meat for everyone who is concerned with the reclamation of real estate values in the residential areas of American cities. This includes architects, builders, developers, operators, financial agencies, public officials, and planners. While it deals particularly with New York its analysis of the problems can be applied profitably to the situation in which all large cities find themselves today. It is one of the most important documents of its kind that have been published in recent years and represents the findings of a long and serious study made by the author for the Institute of Public Administration.

CONTENTS

The Housing Market and Residence Neighborhoods

The Demand for Housing; Impact of Depression Upon Rentals and Home Values; What Causes Blight? Housing in Postwar Period; Housing Market an Instrument of Community Progress; The Housing Market and the Maintenance of Residence Neighborhoods.

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REVIEWS

(Continued from page 108)

MORE PREFABS COMING

Prefabricators and Prefabricating Systems. The Housing Institute, Inc., 330 Fifth Ave., New York, N. Y., 1947. $1.00

As a helpful guide for those interested in establishing a working familiarity with the prefabricated house, the Housing Institute has just released Prefabricators and Prefabricating Systems. The book is written by the staff of the Institute and covers units by 94 of the country's leading fabricators.

Name and address of each manufacturer, description of the house and type of construction put out by each, and in many cases the specific size, price, and number of rooms included. Readers will find especially interesting the rate of production of each unit and the states in which it is marketed. Names and addresses of some distributors of various types of prefabricated units are listed.

In connection with the book, Housing Institute comments: "In 1946, prefabs constituted as much as 9% of all permanent dwelling units completed. This year an even greater percentage is predicted. Production of 100,000 prefabs is expected. Therefore, if the most optimistic forecast for permanent homes to be begun in 1947 is realized—750,000 units—prefabs will account for almost 14% of the total. And should the conservative estimate of 500,000 permanent units be achieved, one in every five would be prefabricated units."

NOTICES

COMPETITIONS

Isadore Rosenfield, architect and hospital consultant of New York, N. Y., and Velez, Posada Y Rodriguez, Ltd., architects of the Republic of Colombia, have been awarded first prize in the competition for the 300-bed industrial hospital at Medellin, Colombia, sponsored by the National Association of Industrialists.

The Sylvania Electric's Third Annual Fluorescent Fixture Design Competition, devoted this year to improve schoolroom lighting, was won this year by Lynn L. Sweetland, Jr., of the New York State Electric & Gas Co., Binghamton, N. Y. Second prize went to Gerald E. Parks of the Metropolitan Edison Co., Reading, Pa.; third to Robert M. Francis, Public Service Co. of Northern Illinois; and fourth to Warren E. Weiss, Pacific Gas & Electric Co. of San Francisco, Calif.

The National Board of Trustees of the American Designers' Institute has an-
Architects are using them—not only because Q- Panels actually are available now —but also because their efficiency overcomes many everyday problems.

You can get Robertson Q-Panels in aluminum, steel, stainless or Galbestos on either or both of the flat or fluted surfaces. The panels are fabricated 2' wide and up to 25' long. Between the fluted and flat elements is 1 1/2" of insulation. Q-Panels surpass in thermal value a 12" dry masonry wall. They weigh less than 5 pounds per sq. ft., and can be erected so fast that a crew of only 25 men has often erected a wall area equal to 1/4 acre in just one day.

It's a lot easier to hang a wall than to pile it up.

This efficiency recommends Q-Panels wherever conventional, heavy masonry walls have been used in commercial and industrial buildings.

With flat and fluted surfaces to vary, architects are achieving effects in shadow and light of noteworthy beauty. Typical of important Q-Panel structures now in construction are:

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J. S. Dillon & Sons Food Stores Co., Hutchinson, Kan.
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Freuhauf Trailer Co., Avon Lake, Ohio
Engineers, J. Gordon Turnbull, Cleveland, Ohio

Duplan Corp., Winston-Salem, N. C.
Architects, Lacey, Atherton, Wilson and Davis, Harrisburg, Penna.

Doubleday Doran Country Life Press, Garden City, L. I. and Hanover Press, Hanover, Pa.
Architect, H. T. Lindeberg, New York City

General Electric Research Laboratories, Schenectady, N. Y.
Architects, Voorhees, Walker, Foley & Smith, New York City

For information please call your Robertson representative or write:

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JUNE, 1947
Scrub Happy!

- Somebody changed his mind a few times, or maybe the tracer was having a bad day. Just why isn't important. The point is the tracing had to be done over, because erasing had given it a distinctly "scrub happy" look. Arkwright would have saved all this. Erasures mean little to Arkwright. It takes erasure after erasure without wearing through, without line feathering when you re-ink.

Why not check Arkwright's advantages yourself, in your own drawing room, at our expense. Send for generous working samples, free. Arkwright Finishing Company, Providence, R. I.

All Arkwright Tracing Cloths have these 6 important advantages
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AMERICA'S STANDARD FOR OVER 25 YEARS

NOTICES
(Continued from page 110)

nounced Fellow Memberships for distinguished service to the industrial designing profession and to the Institute have been conferred on the following: Alfonso Bach, New York; Ann Franke, New York; Ruth Gerth, San Francisco; Marie Kirkpatrick, Grand Rapids; Belle Kogan, New York; Alexander Kostelow, New York; Ben Nash, New York; Gordon Obrig, New York; Ernest Swarts, Rockford, Ill.; and John Vassos, Scott Wilson, and Edward J. Wormley, New York.

Grand prize of $2,000 for a study tour in Charm magazine's annual traveling fellowship awards has been won by Betty Jane Crisp, Benton, Ill., a graduate of Washington University at St. Louis, Mo. Second and third prizes in the competition for original fashion design were awarded to Rhoda Miller, Brooklyn, N. Y., and Mary Beth Stine, Henrietta, Tex.

STORE SHOW IN JULY
The First Annual Store Modernization Show will be held at Grand Central Palace, New York, N. Y., the week of July 7th. The show will present a full panorama of store interiors and exteriors including store fronts, lighting fixtures, floorings, wall coverings, show cases, display equipment, escalators, business machines, air conditioning and merchandise-handling equipment.

The New York Chapter of the A.I.A. will have an exhibit at the show. Advisory committee for the show includes executives of a dozen national retail trade associations, editors of architectural and retail trade magazines, store planning executives, and Deans of Columbia and New York Universities. Under the sponsorship of the show management a number of architectural schools are conducting special programs in store modernization, the best of which will be exhibited at the show.

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JOBS AND MEN

NOTICE: Advertisements for this section must be addressed to Jobs and Men, C/O PROGRESSIVE ARCHITECTURE, 330 West 42nd St., New York 18, N. Y. Legible copy, accompanied by check or money order for $3.00, will be accepted not later than the 5th of month preceding publication. Insertions may not exceed 50 words.

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