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Office Buildings by Ely Jacques Kahn
A Farm Group by Alfred Hopkins
Portfolio: Marquises

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ARCHITECTURAL LEAGUE EXHIBITION

THE forty-eighth annual exhibition of the Architectural League will be held in the 57th Street Galleries, Friday, February 17, to Saturday, March 11. The date for the reception of exhibits is February 6; for the submission of photographs, November 24. This advance submission of exhibits by photographs may be in any color or finish, but not less than 7 by 10 inches. To facilitate recording and handling, they must be in duplicate or each photograph must be so clearly marked by name or number that the League may hold the Exhibit photographs and notify the exhibitors of what has been accepted. In the exhibition itself, photographs will be 16 by 20 inches and 24 by 30 inches only, either horizontal or vertical. Passepartouts are to be ½-inch wide, except that the bottom may be wider, not to exceed 1 inch, for purposes of lettering. Arthur Loomis Harmon is chairman of the Exhibition Committee.

A NEW MEMORIAL FELLOWSHIP

To promote advanced study in the fine arts, the Kate Neal Kinley Memorial Fellowship has been established at the University of Illinois in memory of the wife of a former president of the university. The value of the Fellowship is $1,000, to be used by the recipient toward the expenses of a year’s advanced study in America or abroad. The Fellowship is open to graduates of the College of Fine and Applied Arts, University of Illinois, and to graduates of similar institutions of equal educational standing whose principal or major studies have been in music, art, or architecture. The first appointment is being made this year.

Miss Dorothy DeLancy of Lancaster, Ohio, has been appointed by the Board of Trustees of the University of Illinois as the first Kate Neal Kinley Memorial Fellow, and Miss Evelyn Swarthout of Lawrence, Kan., has been named as alternate.

N. Y. U. GRADUATE SCHOOL

The Department of Architecture, School of Fine Arts, New York University, announces the result of a competition for the selection of the student of unusual ability to pursue graduate work leading to a degree of Master of Architecture during the academic year 1932-33. The competition called for the design of a swimming pool building on the grounds of a wealthy country club.

The Jury, consisting of James Gamble Rogers, Kenneth Murchison, Burnham Hoyt, Will Rice Amon, and Albert C. Schweizer, awarded first place to Emanuel Weisfield of Brooklyn, N. Y.; first alternate to Peter Copeland of New York City.

JOHN GALEN HOWARD MEMORIAL FELLOWSHIP

DONALD P. SMITH, the first holder of the John Galen Howard Memorial Fellowship is now in Europe. A fund sustaining this Fellowship was begun several years ago by the alumni of the School of Architecture, University of California. On Professor Howard’s death in 1931, the Fellowship was given his name as part of a memorial to one who had been largely responsible for the origin and development of this School of Architecture.

Mr. Smith, born in Modesto, Calif., in 1908, was graduated in 1931 with highest honors. During the past year he has served as a Teaching Fellow in Architecture, and was awarded his Master of Arts degree in June.

SMALL-HOUSE COMPETITION

HOUSE BEAUTIFUL will hold its sixth annual competition this year, divided as last year into two general classifications: houses of from six to twelve rooms, inclusive, east of the Mississippi; and houses of the same size west of the Mississippi. There are three prizes in each case: $500, $300, and $200. In addition, a special prize of $500 is offered for the best house of from five to seven rooms, built either east or west of the Mississippi, and costing less than $10,000. Details as to the submission of photographs and plans may be had from HOUSE BEAUTIFUL, 8 Arlington Street, Boston, Mass.

BURNHAM AND A CENTURY OF PROGRESS

ELECTION of Daniel H. Burnham, Chicago architect, as vice-president and member of the architectural commission of A Century of Progress was announced recently by Rufus C. Dawes, president of the exposition.

Since 1929, Mr. Burnham has acted as director of works of the exposition, and has had direct charge of construction activities. Election as vice-president will permit a broadening of his activities with the exposition.

MILTON B. MEDARY MEMORIAL SCHOLARSHIP

The Milton B. Medary Memorial Scholarship for graduate study in architecture has been awarded by the American Institute of Architects for 1932-33 to Frederick S. Webster of the Department of Architecture of Syracuse University, it is announced by Charles Butler of New York, chairman of the Committee of Award. Other members of this Committee were Ellis F. Lawrence of Portland, Ore., and Ely Jacques Kahn of New York City.

Architectural schools in all parts of the country were represented in the competition. The following received honorable mention:


The scholarship, awarded for the first time this year, was founded by the Georgia Marble Company in honor of the late Milton B. Medary of Philadelphia.

QUALIFICATIONS FOR COMPETENT CHURCH ARCHITECTS

The Bureau of Architecture of the Methodist Episcopal Church is interested in assembling a list of architects to be suggested for consideration for church work. A request addressed to the director of this bureau, Rev. E. M. Conover, 1701 Arch Street, Philadelphia, or 740 Rush Street, Chicago, will secure a blank that may be

(Continued on page 8)
1818 HOPE'S LEADWORK 1932

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used by architects, who wish their names on a such a list, in representing their qualifications for modern church planning and designing. Ten cents should be enclosed with the request for the blank, and only architects who have practised at least five years should apply.

Among the questions on the application blank are the following:

1. Name and locations of churches for which you have rendered the architectural service.
2. What questions or unusual conditions were encountered in any case where the results in completed buildings were not, in your opinion, of the best?
3. Enclose photograph and copy of the preliminary plans or working drawings of what you consider your best church accomplishment.
4. What religious ideals do you undertake to express in church architecture?
5. Are you a member of the American Institute of Architects?
6. Of what church are you a member?
7. In what active church work have you participated?
8. Mention activities you have engaged in or studies made to indicate your knowledge of the programme, activities, and objectives of the modern Protestant church?
9. Data regarding your architectural education and your travels.

Mr. Conover makes it clear that the Methodist Episcopal Bureau has no authority to appoint architects (although the Methodist Episcopal Church is a connected organization rather than a group of independent organizations) for local churches, but his office is called upon to recommend architects. This denomination has 25,000 church buildings in the U. S. A. and many in forty foreign countries. This does not include the Methodist Episcopal Church South nor other Methodist groups. Mr. Conover says that not five per cent of the Methodist Episcopal Church buildings are suited to the programme of work to which the church is now committed.

SURVEYS OF HISTORICAL MONUMENTS BY UNEMPLOYED DRAFTSMEN

KNOWN for a century as Washington's headquarters, but now shown to have been the headquar ters of the rival generals, Lee and Gates, the Miller House at North White Plains, N. Y., will be meas-

ured and drawn by unemployed architects, to make restoration possible in case of destruction.

Along with the Miller House, the dingy frame tenement in the heart of White Plains called the Jacob Purdy House, and hailed to-day as the actual headquarters occupied by the first president at the time of the Battle of White Plains, and again in 1778, may also be guaranteed against oblivion.

Architectural draftsmen, under the auspices of the Westchester County Park Commission, which is financing the enterprise at the suggestion of the Architects Emergency Committee for the Region of New York, will make drawings of the Miller House and of others of historical interest in the county, including probably the Purdy House.

OIL BURNER CONVENTION

The tenth annual convention and show of the oil burner industry will be held in Chicago at the Hotel Stevens during the week of June 11 in conjunction with the opening of the Century of Progress Exposition.

ARCHITECTS' EMERGENCY COMMITTEE AWARDS

The competition for a small library instituted by the Architects' Emergency Committee in the New York metropolitan district was won by Leon H. Hoag, of East Orange. Second prize went to Paul Trapani, Bronx; third prize to Carl J. Jensen, Brooklyn. Thirty-three awards in all, amounting to about $1,000 in cash, were made by the Committee's jury under the chairmanship of Chester H. Aldrich.

DONALD OMAR DUNN, 1892-1932

DONALD OMAR DUNN, architect, of Cleveland, Ohio, died on June 17, last—a distinguished architect and a man who had won for himself an unusually large circle of social and professional friends. His death was the result of a heart attack while he was suffering from influenza at the Lakeside Hospital.

Mr. Dunn was born in New York City, was graduated from the Massachusetts Institute of Technology in 1916, and went to Cleveland the following year to enter active practice. After serving in the offices of Franz Warner, and Hubbell & Benes, he joined the firm of Walker & Weeks, of which he became a junior partner. In 1926 he became associated with Munroe Walker Copper, Jr., establishing the firm of Dunn & Copper, a firm which has produced outstanding architectural work in northeastern Ohio, particularly in the Shaker Heights district. Mr. Dunn was a member of the Friese and Cornice Honorary Architectural Society and the American Institute of Architects.

HENRY B. KECKELEY, 1880-1932

HENRY B. KECKELEY, architect, of New York City, died July 18, at the Neurological Hospital where he had been a patient for more than two months.

Mr. Keckeley was born in Charleston, S. C., studied at Union College and Cornell University, and served in the army during the war. His early work was done in the office of Cass Gilbert, and later in those of Raymond Hood and Schulz & Weaver. Mr. Keckeley is credited with the design, while with Warren & Wetmore, of the overhead roadways which border Grand Central Terminal on Vanderbilt Avenue and Depew Place, which work he also supervised.

PERSONAL

Announcement is made by the firm of Pruitt & Brown, 742 Madison Avenue, New York City, architects, of the opening of a Charlottesville, Va., branch office for effective handling of contracts recently awarded the firm in the South. Louis I. Scribner of Charlottesville will be in charge of the new office with headquarters in the National Bank Building.

Thomas K. Hendryx, architect, announces the removal of his offices to the I. O. O. F. Building, Bradford, Pa.

M. Micknovitz, architect, who has recently moved his office to 1700 Fountain Square Building, Cincinnati, Ohio, requests that manufacturers' catalogues be sent to him at the new address.

Thomas C. Stapleton and Leo I. Walker, both for many years associated with Andrew J. Thomas, have established their own office and will practise under the firm name of Stapleton & Walker, architects, at 2 West 46th Street, New York City.
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Sunken Meadows,
Long Island

H. A. Magoon,
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Commission, Architect

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Mr. D. W. Barber of the firm of Barber & McMurry, Architects of Knoxville, Tennessee, made a special trip to our plant and personally supervised the selection and arrangement of the color scheme of the "Old Europe" Antique Shingle Tile. He selected a blend from velvety blacks at the eaves to the clearer natural salmon at the ridge with moss-tone tiles incidentally distributed among the blacks and browns.

* * *

Where it is not possible for the Architect to do this, we shall take keen interest in collaborating by submitting full rafter length panels of actual tiles in miniature. Your roofs and floors of Hood Tiles can be as individual as the clothes you wear.

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*Inquiries are invited. Address Department "A", if you please.*
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"Swim in Drinking Water"
The Spire of Notre Dame, Paris

From the etching by Philip H. Giddens
New Products of 1932

By the Editor

The education of an architect, contrary to the belief of some, does not end when he receives his degree from an architectural school. The education of an architect never ends. Possibly it might be divided into two parallel lines: a slowly increasing consciousness of form and color—design in general; and second, a rapidly increasing acquaintance with the tools of the profession. With the first of these we are not here concerned.

Up to within the last fifty years or so, as we now look back, it must have been a comparatively simple matter for an architect to know the materials with which he worked. With a sure grasp of masonry, wood construction, roofs, walls, doors and windows, he was practically equipped to cope with the problems that came his way.

Today the situation has changed so widely that it may be regarded as a fair question whether any one man can assimilate the whole fund of technical knowledge that would seem to be required in architectural practice. If the time does come, or if it has already come, when one mind cannot spread itself efficiently over this growing field, a development along the lines of specialization and delegated responsibilities would seem to be the inevitable development.

The fruits of invention and more skillful manufacture have unquestionably come more rapidly to the front in the recent period of economic depression. When a factory is working overtime to fill its orders its research department is likely to be neglected, or put to work in production. When the orders begin to slacken, all the ingenuity of the organization is brought to play to devise better materials, more efficient manufacturing processes, new uses for old materials, and new accessories.

If it was difficult for the architect to acquaint himself with the new materials and methods of his craft a few years ago, it is vastly more so today, with the flood of new invention that is upon us.

We wrote, a month or so ago, to about eleven hundred manufacturers connected with the building industry, asking them to tell us, in fifty words or so, of any new product or method or service first made available, or to be made available, in the calendar year 1932. The net results of that letter appear on the following pages. Naturally the presentation cannot be complete. Some manufacturers of new products may be unknown to us, other information reached us too late to be included. It has been our effort to give, as nearly as may be, the basic facts, without sales talk or the use of unnecessary superlatives, showing, where desirable, an illustration. It has seemed advisable to group these items according to the A. I. A. System of Filing. This allocation to the various divisions of the system has been done necessarily by the Editorial Department on the basis of the facts at hand. It is quite possible that this allocation may be debatable in some instances, or even mistaken, but it will at least serve to give the reader a more orderly presentation.

The stream of new materials brings its details to the attention of the architect all too slowly and uncertainly. He learns of some items in the advertising pages of his professional journals; he becomes acquainted with a few others through seeing them used in the work of fellow practitioners. Familiarity with, and confidence in, many of these new things must inevitably come to the architect slowly or not at all. It is with the purpose of bridging this gap in the diffusion of architectural knowledge that this effort of ours is made. We hold no brief for any of the items here set forth; some of them may never reach a wide use before they are displaced by better things; a few, perhaps, may be permanent and important contributions to the science of building. Here are 1932's new ideas.
1. Preparation of Site

2. Excavation

3. Masonry Materials

GOLDEN Gate Tan Portland Cement, unadulterated, its tan color being basic and permanent. Facilitates mixing stucco on the job. Water-proof. Can be used alone as a color or as a base for other colors. In same price range as gray cements. Pacific Portland Cement Company, San Francisco.

CEIL Sealed Aggregate is an improved burned clay aggregate for making strong light-weight concrete. The rounded pellets have a tough, dark-brown sur-

face shell, while the firm interior is filled with air cells. Concrete made from this new product, with natural sand for the fine aggregate, is said to possess a most unusual combination of workability, strength, and light weight, together with highly efficient insulating qualities. W. F. MacGlashan Associates, Alhambra, Calif.

COLDURA A is a non-fading, non-slip colored floor hardener, for use wherever non-slip colored floors are specified or desired. Through the selection of materials and subsequent manufacturing process, Coldura A results in a balanced compound insuring positive evenness of color texture, protection against slippery floors, dust-proof and durable surfaces. It is a dry powder composed of colored oxides and non-slip aggregates and is used integrally. L. Sonneborn Sons, Inc., New York City.

HARCOL is a quality, dust-proof, colored, metallic hardener which insures floors of even color, texture, and maximum hardness. It is not just rou-

tine mixing metallic fillings with color, that guarantees the durability or character. For Harcol the manufacturers have selected a metallic hardener that is extremely fine and uniformly graded, free from foreign metals, oils, grease, and corrosive substances. L. Sonneborn Sons, Inc., New York City.

GRANDEUR Face Brick for interior or exterior use—a distinct innovation in decorative quality, resulting from a patented process. Manganese grays, buffs, tans, graded browns, desert grays; available with or without salt glaze. Particularly adaptable to church, library, school, and public works locations, and for half-timber nogging. The Finzer Brothers Clay Company, Sugar Creek, Ohio.


NEW Hanley Packing-house Floor Brick measures 8' x 4' x 1 3/4"; is extremely dense because of finely ground shale raw material. Top surface smooth to resist acid, bottom surface grooved. Not affected by temperature variation and is resistant to acids, chemicals, salts, fats, and oils. Durable for heavy trucking and unusual wear. Absorption, 1/2 to 1 per cent. Compression strength, 9434 lbs. per sq. in. Hanley Company, Bradford, Pa.

LACLEDE Mullite, a new refractory material, combining for the first time super-refractory qualities with low cost. A fire brick which will stand rapid temperature changes, and is highly refractory. Laclede Mullite is non-spalling, non-shrinking, will resist coal slag and oil impingement, and will lay up perfectly because it is made on power presses and burned in tunnel kilns. Laclede-Chryst Clay Products Company, St. Louis, Mo.

DOUGLAS Fir Plywood Form Lumber offers many significant advantages: panel sizes up to 4' by 8'; speed in carpentry; smooth, unblemished surfaces, saving rubbing or plastering; split-proofness and warp-resistance; ideal for reverse molds; ease of striping; 3/8" thickness for use as combined liner and liner; 3/4" thickness for use as liner only; adaptability of 3/4" thickness for curved forms, such as columns and entrances; 7 to 10 re-uses. Douglas Fir Plywood Manufacturers, Seattle, Wash.

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WARNER Vermiculite Flooring (product of Warner Laboratories) is a dry, non-metallic mineral compound.
All colors. Mixed with water, is laid like cement, setting in approximately four hours. Ranges from resilient to granite hardness. Fire-proof, vermin-proof; impervious to elements, commercial acids, temperature; a non-conductor. Chemical Corporation of America, Minneapolis, Minn.

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Length, 8"; each block displacing two bricks in the wall. Mitred blocks for inside or outside corner. Similar Flash-Lok forms of galvanized iron for poured walls. W. S. Dickey Clay Mfg. Company, Kansas City, Mo.

WATER Bar for terra-cotta copings and other exposed courses. A thin copper strip projects from one piece and fits into a slot on the adjoining piece, making the joints really waterproof. Federal Seaboard Terra Cotta Company, New York City.
of unusual interest, something different, yet restrained. Colors range from silver gray to cream buff and may be selected within limits. Indiana Limestone Company, Bedford, Ind.

TLCO Select Cream Vein Indiana Limestone. A special grade whose characteristic effect is obtained by placing the stone in the wall on the natural bed, a requirement not observed with any other grade of Indiana Limestone ashlar. Should be fine-carborundum or dull-hone finished, when it shows an interesting homogeneous banding and very light veining. Indiana Limestone Company, Bedford, Ind.

PYRAMID Slate Spandrels, affording the architect a natural, everlasting material of deep black even color, resisting all thermal variations. Inexpensive, yet extremely rich in appearance, easy to carve or sand-blast when decorative treatment is desired. Illustration shows Cardozo Building, St. Paul, Minn. by Ellerbe & Co., architects. The Structural Slate Company, Pen Argyl, Pa.

9. Architectural Terra Cotta

10. Block Construction

DU-BRICK Double Brick Unit. Permanent masonry construction at no greater cost than first-class frame construction is said to be made possible with the use of this kiln-burned, hollow-brick unit. Offers the insulation and fireproof advantages of hollow tile; has the external appearance of face brick; effects savings in labor, in time, and in the amount of mortar required. The Metropolitan Paving Brick Company, Canton, Ohio.

11. Paving, Curbs, Gutters, Vault Lights, etc.

REDSTONE is red slate rock crushed to just the right size of granule for walks and drives. One ton covers 180 sq. ft. of surface 3/16" deep. Rake it on and the job is done. Will not crush into fines or cut tires or shoes. Resilient under foot. Washington County, New York, only source of supply in America. F. C. Sheldon Slate Company, Granville, N. Y.

12. Roofing, Sheet Metal and Skylights

MILCOR Steel Roof Decks. Formed with ribs 1 1/2" deep, spaced on 6" and 9" centres; furnished in 18" width of plate. Ribs depressed at one end to permit easy nesting at lap, where plates are clip-locked to purlin. Milcor Steel Company, Milwaukee, Wis.

TILE SHAKES. A new type of shingle tile especially adapted to Colonial architecture. Made in three different widths: 6", 7", and 8"; length, 18"; and 3/16" in thickness, having the grain and roughness of a split wooden shake. Blended colors of brown and green give, both in texture and color, an accurate simulation of old weathered roofs of wooden shakes. Ludowici-Celadon Company, Chicago.

THE "Gothic" Eternit Asbestos Shingle has a rugged rocklike texture, random widths, heavy butts, and mellow colors. Shingle is 13 1/2" wide by 16' high, and tapered with approximately 1 3/8" butts. Double sets of nail holes permit laying irregular courses. The Ruberoid Company, New York City.

CHENEY Type 12 Interlocking Thru-Wall Flashing. Copper flashing combined with a strong, durable flexible counterflashing face. Allows the use of a felt-base flashing and eliminates all soldering or nailing. Standard strips 40" long and in wall widths up to 34'. The Cheney Company, Winchester, Mass.

MILCOR Counter-flashing Receiver, due to its design and construction, interlocks securely with the mortar or cement in which it is embedded. After flashing is inserted the upper lip is hammered down, providing an effective seal. Furnished in copper or other metals. Milcor Steel Company, Milwaukee, Wis.
nates expensive electrical duct systems (each cell being a potential electrical conduit or raceway); speeds up construction; has a high salvage value; provides flexibility for alterations in case of occupancy changes; cuts down amount of forms and structural steel necessary for construction. H. H. Robertson Company, Pittsburgh, Pa.

**NEW Welded Truss Design**, developed by J. E. Webster. An expansion of the king-post principle, with about one-third saving in weight by designing the truss so that all members have uniform stress. Diagonal tension members and bottom chord (also in tension) are made from steel straps. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

**VENTILIGHTER** for skylights in art galleries, motor-operated and controlled by photo-electric cells to maintain constancy of natural illumination. Cell is located in gallery wall and a rheostat adjusts the foot-candles of illumination desired; electric motor equipment opens and closes the Ventilighers, responding to the desired intensity of light. Simon Ventiligher Co., Inc., New York City.

**13. Structural Steel and Iron**

**Robertson Keystone Beam Steel Floor.** A cellular floor structure in the form of keystone-shaped beams, made by pre-forming two steel plates and welding them together above the plane of the neutral axis. It is light in weight; provides the maximum load-carrying efficiency of the steel; eliminates expensive electrical duct systems (each cell being a potential electrical conduit or raceway); speeds up construction; has a high salvage value; provides flexibility for alterations in case of occupancy changes; cuts down amount of forms and structural steel necessary for construction. H. H. Robertson Company, Pittsburgh, Pa.

**NEW Welded Truss Design**, developed by J. E. Webster. An expansion of the king-post principle, with about one-third saving in weight by designing the truss so that all members have uniform stress. Diagonal tension members and bottom chord (also in tension) are made from steel straps. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

**14. Miscellaneous Steel and Iron**

**FLOATOVER** Steel Door, for garage and warehouse use. All-steel construction, sliding overhead from vertical to horizontal position under the ceiling.

Frames of galvanized cold-rolled copper-bearing tubing, the panels of galvanized sheets. Inexpensive, durable, fire-proof, and without warp or sag. Cornell Iron Works, Inc., Long Island City, N. Y.

STEEL and Enamel Construction, suitable for gas-station or other work when dismantling may become neces-

sary. Standard units with verticals and caps, and horizontals, are of stainless steel; panel plates of vitreous enamel in colors. The F. F. Hauserman Company, Cleveland, Ohio.

RAWL-ANCHOR, a one-piece, heavy-duty, double-expanding masonry anchor for bolts. It departs from usual construction in that a double inverted cone body of aluminum is employed as the expanding factor, which, it is said, gives it the greatest holding power of any bolt anchor. The Rawlplug Company, Inc., New York City.

SHUR-LOC Window Guard: portable steel grille for beneath upper window sash, working like collapsible window screen. Expansion bars locked with key. No bolts, screws, nails; no damage to paint or woodwork. Keep out intruders; keep children from falling out. Shur-loc Window Guard Corporation, New York City.

ARCHITECTURE

15. Ornamental Metal Work and Physical Properties of Metals

METALLIZER. Any metal that can be drawn into wire form can be fed into the Metallizer where it is melted and sprayed under high pressure upon any object—stone, brick, wood, metal, cement, glass—bonding firmly with these materials. Branches now located to service the entire country. Metallizing Company of America, Los Angeles.

PORCELAIN-ENAMEL Shingle, made of a form of glass fused upon metal. Coating is in three applications, sprayed on and fired. The shingle is claimed to be rust-proof, fire-proof, and unfadable in all colors. Can be cleaned with soap and water. Being used on roof and side walls of exhibition house in South Euclid, Ohio. Ferro Enamel Corporation, Cleveland, Ohio.

MILCOR Metal Base with Expansion Wing. Provides a positive bond between plaster wall and base, eliminating possibility of cleavage cracks here.

Expanded metal wing at top is attached firmly to wall. Four different base types and sizes. Milcor Steel Company, Milwaukee, Wis.

16. Fire-Resisting Doors, Windows and Trim

THORN Metal Casements, as improved, contain five important new features: 1. Flexible metal weather-stripping, shop applied. 2. Insect-proof screen application. 3. Geared operation neatly applied entirely to the casement frame, defying wind pressure. 4. Automatic latching without opening screen; and 5. Double glazing that is inexpensive, for cold climates and air condition-ing. J. S. Thorn Company, Philadelphia, Pa.

MILCOR Curved Metal Window Trim and Stool. Provides sanitation, fire safety, and attractive appear-
ance, with expansion wing protecting against cracks and cleavage. Two sizes: 3/4" and 1 1/2" radius. Stools, flat, rounded, or splayed. Stool lengths, from 2' up, in multiples of 6", or to order. Milcor Steel Company, Milwaukee, Wis.

KAWNEER "Sealair" Weight-hung Window. Interlocking weathering at top, sides, sill, and meeting-rail. Weathering members prevent sticking and rattling and afford smooth operation. Joints coped and welded. Sash may be removed without disturbing jamb proper. Sections increased proportionately for large windows. May be equipped with special automatic locking. The Kawneer Company, Niles, Mich.

HOLLOW-METAL Interior Doors now in stock sizes, for jobs on which quantity does not warrant special designs. One and two panel, with or without glass, 2' 8", 3', and 3 4" by 7'; standard Underwriters' construction: combination buck and jamb. Illustration shows one of many applications. Art Metal Construction Company, Jamestown, N. Y.

BAYLEY In-swinging Casement, for hospitals, apartments, office buildings, hotels. Acts as windshield ventilator. Washed from inside. Integral scaffolding boxes, awning hoods, etc. Sash has a new fulcrum principle which insures a safe and positive grip on any thickness of glass. Mouldings have caulking provision where necessary. Davis Extruded Sash Company, Lincoln, Neb.


17. Special Doors and Windows

IMPROVED Extruded Store Front Mouldings. These sections, of aluminum and bronze, have been designed to

18. Vaults and Safes

THE Tellers' Safety Locker provides protection against holdup attack and the mysterious disappearance of money. When equipped with electrical...
control, all lockers in the bank or office can be immediately closed and dead-locked from any one of many control stations. Provides cashiers and tellers with protection balanced with their responsibility. Diebold Safe and Lock Company, Canton, Ohio.

Diebold Receding Door Safes save one-third the floor space required for swinging-door safes. The doors, when open, are entirely out of the way. They make it possible to bring certified fire protection to records where they are used in locations too small for swinging-door safes—corners, beside columns, between doors, under counters, etc. Diebold Safe and Lock Company, Canton, Ohio.

Diebold Electric Rekordesk Safe is the last word in convenience; one button opens it, another closes it. It is designed to bring certified two-hour fire protection to vertical card records where they are used, twenty-four hours a day. It saves about half the floor space required for using a card desk by day and a safe or vault for night fire protection. Diebold Safe and Lock Company, Canton, Ohio.

PHEMAI0ID Compound Lumber, a cross-laminated product of wood electrically processed with a new phenol-formaldehyde colloidal resin, which binder is water-proof, fire resistant, proof against mold and fungi. Size of panels limited only by shipping limitations. Pre-finished with same resin in combination with fabric, or finished on job with paint or varnish made with this resin. Haskelite Mfg. Corporation, Chicago.

ENTERLOCKING™ System of ready-cut lumber, particularly adapted to dwelling construction.

Joist header and stud plate in 2" x 4", to 2" x 12"; lengths, 16' to 20'; self-centring; dovetailed on 16" centres.

Joists for floors and ceilings in 2" x 4", to 2" x 12"; nine lengths, 9' 4" to 20'; multiples of 16" dovetailed.

Studs for walls and partitions in 2" x 4" and 2" x 6" for 8', 9', and 10' ceiling heights. Door and window headers in 2" x 4" and 2" x 6"; four lengths, 4' to 8', multiples of 16".

Gable studs in 2" x 4"; nine lengths, 7' 3/4" to 6' 10 1/8" for 7:12 pitch. Braced bridging; compound bevel fits all widths joist or stud up to 12" on 16" centres. Long-Bell Lumber Company, Longview, Wash.

WADDINGTON Wood Bowstring Trusses have a parabolic upper chord built of laminated members, well spiked at close intervals, with solid sections in the lower chord, fillers, and web members. Ornamental Waddington steel U straps are used at the ends to take the thrust, and ornamental steel plates at all splices. Spans are 30' to 150'. Height at centre one-eighth of length of truss. American Roof Truss Company, Chicago.

Handmade Wooden Shingles ("Blue Jay" brand)—an old, old idea, but now made available for restoration and period work. Hand split (not sawn) and shaved, clear, all-heart cypress. James Lumber Company, Boston, Mass.
SILENTITE, a new double-hung wood window in which the weight of the sashes is balanced by coiled springs inserted in the edges of the sash, thus effecting great reduction in the width of casings and mullions. Complete, double, metal-to-metal weather-stripping built-in at the factory; all parts of sash and frame are pre-fit. Pre-fit screens and storm sash (with new type ventilator) are included with this unit. The Curtis Companies, Clinton, Iowa.

UPLYCO Insulated Prefinished Flooring, Patented. (Illustration B.) Similar to above but with insulating fibre board back to facilitate temperature and sound control. Its physical characteristics are same as the above. Designed especially for steel-frame, factory-fabricated buildings, with a minimum of erection cost. Can be made with segmental faces, in large sections up to 24' wide and 16' long. Adapted to laying in mastic, conventional nailing, or screwing through from the bottom. United Plywood Sales Corporation, New Albany, Ind.

SOUND-PROOF Telephone Booth, patented. (Illustration C.) Interior consists of double layer of acoustic fibre board, with necessary reinforcing at corners to provide structural strength. Exterior is hard fibre board, flush or panelled, that can be finished natural, enamelled in colors, or the flush design overlaid with wood veneers. Can be made in complete booths or designed to build into residences. Allen A. Wilkinson Lumber Company, Indianapolis, Ind.

A COUSTI Plywood Radio Cabinets, patented. (Illustration D.) Interior lined with layer of acoustic fibre board—usually with exterior veneer and centre of hard fibre board. Panels are framed as in usual cabinet construction. Exhaustive tests have demonstrated the acoustic value of this construction, which mellowes the lower tones and reduces the shrillness of the upper tones. This same material is available for house panelling where temperature control is desired or for of-
DUREZ resin bonded plywood gives absolutely water-proof glue lines of unusual strength. The shear strength determination of 400 pounds is obtained on the dry basis and is unaffected when the wood is wet. These glue lines are unaffected by fungus or bacterial growth and are therefore permanent. General Plastics, Inc., North Tonawanda, N. Y.

INSULITE Hardboard. For the hundreds of uses for which products of its nature are indicated. This new product, 1/4" thick, is adapted also for concrete form work. Due to its light color, it is useful for panelling, window decorating, home-craft work, toys, shelving, automobile and truck body construction, etc. The Insulite Company, Minneapolis, Minn.

CONVERTA1 Partition—removable and interchangeable wood and glass units. No nails; tie-rod connected; receives conduit wire; easily altered without destruction of parts or finish; adaptable to ceiling height variations; stocked in American walnut, mahogany, quartered oak, and birch. Wad-bas, Inc., Long Island City, N. Y.

U-NITE-IT Shelving and Cabinets. Economical form of knocked-down, packaged, standardized parts from which almost limitless number of cabinets can be made. Only fixed dimensions, height and width of sections and distance between shelves. Shelf and vertical parts fit together with unique U-Nite-It spring joint (patent pending). Pigeonhole, large and small drawer, and door parts also available in packages. Long-Bell Lumber Sales Corporation, Kansas City, Mo.

IMPROVED Hamlin's Evanston Sound-proof Door and Folding Partition. Composed of two sections with 1/2" space between occupied by insulating material plus mechanism whose function it is to hermetically seal the four cracks about the door. The internal insulator now is asbestos millboard and sheet steel. Irving Hamlin, Evanston, Ill.


KEELOOTE Flexible-strip End-grain Southern Yellow Pin Wood Block Flooring. Virtually an edge-grain wood plank with end grain wood blocks running the full depth of the plank. Each strip bound together with metal splines. Treated with colorless, odorless preservative. Lay over concrete, flat wood, laminated, or steel sub-base. The Jen-nison-Wright Company, Toledo, Ohio.

THE Ferox Process is now being used in the manufacture of all Celotex cane fibre products. Individual fibres, in the wet state, before compression, are coated with a chemical complex, toxic to fungi, termites and other cellulose-destroying organisms. Chemical com-

FURRING AND LATHE:

INNSULITE Wall Board. A light, structural insulation material, 1/4" thick, with dual surface finish of heavy kraft paper, one side white, the other side oatmeal finish. This new wall board is excellently adapted for re-modelling and modernizing work, and, in addition to serving as an efficient wall board, confers the benefit of insulation and sound deadening. The Insulite Company, Minneapolis, Minn.

INSULITE Fire-proofed Wall Board. This new product, 1/4" thick, combines every advantage of an efficient wall board with insulation, sound deadening, and is fire-proofed. When properly erected, the wall of Insulite Fire-proofed Wall Board presents an unbroken fire-resistant front. The Insulite Company, Minneapolis, Minn.

ARMSTRONG'S Temlock Insulating Panels provide a new product for wall and ceiling finish. Series 100, four sizes, 16" x 32" to 24" x 72", has quarterinch bevel on four sides, long edges shiplapped. Series 200, 6" x 12" to 24" x 24", bevelled 1/4" all sides, not shiplapped. Both available in regular texture or sanded finish. Armstrong Cork and Insulation Company, Lancaster, Pa.

BEST BROTHERS Fast Finish Keene's Cement assures the same hard, durable finish as regular Keene's Cement, with a remarkable saving in time and labor. "Fast Finish" will set up fast enough for finish trowelling without waiting. The plasterer need not leave the scaffolding before the job is completely finished. Best Brothers Keene's Cement Company, Medicine Lodge, Kan.
ARCHITECTURE

22. Marble, Slate, Soapstone, Structural Glass, Terrazzo

VITROLITE in new colors. In addition to the established plain colors, a new process enables Vitrolite to be produced in a number of agate colors. Orchid agate and jade agate consist of agate effects on a white ground—particularly effective for bathrooms and kitchens. Emerald agate, walnut agate, and golden agate in four shades, have a black background. The Vitrolite Company, Chicago.

TONGUE-AND-GROOVE Terrazzo, combining the advantages of ordinary terrazzo with the pleasing tread and resiliency of wood or linoleum. Applied in patented brass strip, nailed to wood underflooring, in tile patterns, 1" thick. Information from National Terrazzo Assn., Portland Cement Assn., or from strip manufacturer, A.C. Horn Company, Long Island City, N.Y.

VITROLITE counter and table tops have been improved by cementing Vitrolite with a special asphaltum cement to an under slab of Preswood and trimming the edges with a stainless steel trim. This prevents the chipping of edges and makes the top virtually noiseless. The Vitrolite Company, Chicago.

VACUUM Glass Block, a translucent wall material for inside or outside use. Standard sizes, 9¼" x 5½" x 2½".

23. Floor and Wall Tile and Accessories

NEW Hanley Red Quarry Tile. Sets a new standard for length of wear in quarry tile. Guaranteed average absorption of 9½% per cent results in 50 per cent more wear. New shallow bottom scoring will save about 5 per cent in the cost of laying and absolutely eliminates hollow floors. Made in all sizes. Hanley Company, Bradford, Pa.

RHOMBID and Diamond Shapes in ceramic mosaic tiles make it possible to create designs that cannot be made with standard square and oblong units. Diamond is 1¼" x 1¾" over all; rhomboid is 2⅛" and 1⅝" along edges. The Mosaic Tile Company, Zanesville, Ohio.

ARMSTRONG'S new Corkoustic, Type C, in the 1½-inch thickness, has a sound-absorption coefficient of 61 per cent at a frequency of 512 (U.S. Bureau of Standards). This new product has the light color of natural cork and an attractive texture. It possesses a high light-reflection factor. Armstrong Cork and Insulation Company, Lancaster, Pa.

ARMSTRONG'S Rubber Tile. Twenty marbleized colors plus plain black are offered. The scientifically selected color range makes for a true harmony of colors in this addition to the resilient tile floor line of the company. The line is thoroughly tried and tested. Armstrong Cork and Insulation Company, Lancaster, Pa.

ARMSTRONG'S Ceramacoustic is a new fire-proof acoustic tile of inorganic matter. In the 1½-inch thickness it has a sound absorption coefficient of 82 per cent at a frequency of 512. Left unpainted, it has a high light-reflection value. It has beveled edges and can be painted to secure a decorative effect. Armstrong Cork and Insulation Company, Lancaster, Pa.


MUTETILE, an acoustical tile with absorption of 94 per cent in the middle register and 53 per cent at pitch 128 d.v. Attractive, subject to repainting at will, over 70 per cent light reflecting, fire-proof, non-corrosive, spring suspended, high thermal efficiency. Acoustical Corporation of America, New York City.

MURATILE is a new decorative wall tile that has many possibilities for distinctive treatments. Designs and
ARCHITECTURE

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24. Plastic Flooring

25. Paint, Painting and Finishing

HEAT-RESISTING Aluminum Vehicle V.683 is a perfected heat-resisting aluminum vehicle designed for use on interior and exterior metal surfaces. Although there is no aluminum vehicle which combines both heat and weather resistance to an equally satisfactory degree, we have formulated this vehicle especially so that when used for exterior work it will be weather resistant, as well as heat resistant to a very appreciable extent. When used inside will withstand higher temperatures than when used outside. Use for interior and exterior metal surfaces such as condensers, scrubbers, boiler breathings, boiler fronts, furnaces, stacks. L. Sonneborn Sons, Inc., New York City.

BRUCE Floor Finish differs from varnish and shellac in that it penetrates into the wood and seals the cells against dirt and grime, having a tendency to toughen the fibres. It wears down only as the wood wears. Gives a natural wood color, but oil stain may be added. E. L. Bruce Company, Memphis, Tenn.

FLOORLIFE No. 59 is a preservative and finish suitable for all kinds of wood floors. Composed of treated gums and oils so that it produces an extremely hard film. Particularly recommended because: (1) It is paler in color than other varnishes offered for the same purpose; (2) Has better penetrating properties; (3) Imparts decorative gloss finish; (4) Imparts non-slippery surface, is water-proof, and will not scratch white. L. Sonneborn Sons, Inc., New York City.

GLIDDENSPAR, a bakelite and synthetic-base varnish. This product is claimed to have more resistance to extreme exposure, water, and acid conditions than any other varnish made, to possess most filling properties than any other product, and is recommended for all exterior surfaces, as well as on those places on the interior of homes subject to water and exposure, such as windowsills. The Glidden Company, Cleveland, Ohio.

ARMSTRONG'S Linogloss, a new water-emulsion type wax, is recommended by the company for Linotile, linoleum, asphalt-type tile, rubber tile, etc. Linogloss dries with a dull lustre and takes a high gloss after light polishing. Repeated applications build up a durable finish on residential and commercial floors. Armstrong Cork and Insulation Company, Lancaster, Pa.

SPEEDWAX, a new water-base colloidal wax for the maintenance of linoleums, hardwood, cork, rubber, asphalt tile, and mosaic floors. Dries with a pleasing lustre in fifteen minutes after application without rubbing or polishing. Speedwax is approved by Congoleum-Nairn, Inc.; Johns-Manville Co.; Kleystone Rubber Company, American Rubber Products Co., for their products. Speedwax Sales Corporation, Newark, N. J.

WARNER Liquid Stone Wall Coating (product of Warner Laboratories). A dry, non-metallic mineral compound, mixed with water and sprayed or brushed on walls and ceilings. Hardens quickly, forming permanent granite-like coating not affected by temperature, elements, commercial acids and oils; fire-proof, vermin-proof. Will not scale nor chip. Snow white, or all colors. Chemical Corporation of America, Minneapolis, Minn.

D. RIPOLIN, a recent addition to the line of Ripolin enamels. Quick-Drying Ripolin sets up dust-free inside of twelve hours and hard enough to recoat in twenty-four hours. It possesses an ease of brushing unknown heretofore to enamels of this type. It has extreme whiteness and retains its depth of gloss throughout its many years of life, inside and out. Made in Gloss and Semi-Gloss, White. The Glidden Company, Cleveland, Ohio.

ARMSTRONG'S Acoustical Paint does not impair acoustical efficiency of sound-absorbing materials. This washable and durable oil-base paint is available in ivory, white, buff, and special colors. It may be brushed or sprayed at the factory or on the job. Armstrong Cork and Insulation Company, Lancaster, Pa.

BASE-COAT, a scientifically correct primer. Base-Coat is a new development in the house paint line, which, when used as a first-coater, insures a satisfactory job for the years that follow. It is unusually water-proof, maintains its elasticity at all times, and both its vehicle and pigment insure close adhesion to the surface at all times. The Glidden Company, Cleveland, Ohio.

DURAWALL Washable Interior Finish is now made in flat as well as the former eggshell gloss. It consists of two parts, body and reducer, which when mixed and applied to interior wall or ceiling surfaces, according to directions, stops suction, seals the wall, and produces, without primers, a tough leather-like finish from which nearly all spots and stains can be removed with soap and water without damage to the surface. John Lucas & Company, Inc., Philadelphia, Pa.

EMPIRE Wall Primer is a pigmented sealer that primes and seals at the same time, thus eliminating one painting operation. It stops suction, has a tendency to neutralize free lime in plaster, and builds up a solid foundation for finishing paint coats. John Lucas & Company, Inc., Philadelphia, Pa.

SILVER King Ready-Mixed Aluminum Paint is a perfectly balanced mixture ready for use. Specially designed vehicle, combined with aluminum particles of extreme fineness, form, by molecular attraction, a perfect sheath of metal protection—water-proof, fume, acid, and alkali resistant. Suitable for any surface, interior or exterior—100 per cent leafing, 25 per cent additional coverage, and extreme durability are claimed. The Billings-Chapin Co., Cleveland, Ohio.

SPEED-WALL, a semi-gloss finish that dries in four hours. A new type of wall finish embodying quick-setting wall properties without sacrificing any of the easy working and flowing qualities essential to a perfect job. It dries with a beautiful semi-gloss and is satisfactory...
27. Hardware

**BALL-BEARING Butt Hinges with Non-rising Pin.** Two rows of inwardly projecting beads in the bushing (which fastens the bearings permanently to the centre knuckle) engage with grooves in the pin. A slight pressure on the top of the pin forces it down into position. The pin can be easily removed but is non-rising under action of the door. The Stanley Works, New Britain, Conn.

**TRIPLE-WEIGHT Ball-bearing Hinges, for penitentiaries, jails, etc.** Wrought steel, 3/8" thick, size 5" x 6" or wider. Can be furnished of machine steel carbonized. Two concealed ball bearings, each containing sixteen 7/64" hardened steel balls. Case-hardened pin, grooved for lubricant. Ends of barrel are welded, making it impossible to extract pin. Can be assembled for any application. The Stanley Works, New Britain, Conn.

**YALE Concealed Door Closer.** A door-closing mechanism silently closing a door, yet concealed from view, by being mortised at proper fulcrum position into the top rail of a metal or wood door. It accomplishes what has been heretofore possible with a visible overhead door closer, without the checking mechanism being visible. The Yale & Towne Mfg. Company, Stamford, Conn.

**SELF-LUBRICATING Latch Bolt for Locks.** Friction of latch bolt against lock strike is eliminated by the insertion of a piece of oil-impregnated hardwood in the latch bolt head of all Yale pin tumbler cylinder locks. Easy retraction of latch bolt is thus obtained. Tests have proven long life and permanent satisfaction. The Yale & Towne Mfg. Company, Stamford, Conn.
VON DUPRIN Astragal Compensator permits adjustment of a swelling or shrinking door to normal position with a wrench. Useful and fuel-saving on panic-bolt doors and others where independent action of each door is necessary. Janitor attention replaces skilled labor. Vonnegut Hardware Company, Indianapolis, Ind.

THE Newton Pivot Check is the original checking pivot specifically designed for lavatory stall doors. It closes and opens and checks the door, bringing it quietly to the arrested position. It eliminates all noise and does not contribute in any way to the wear and tear on partitions or frontals. C. H. Newton & Company, Boston, Mass.

STANLEY "Swing-up" Door Hardware, for garage and similar type doors up to 9' wide and 8' high, 13 3/4" to 23 3/4" thick. Also furnished for 16-foot opening. Doors swing up into open position through use of coil springs, resting when open on tracks. Hardware contains wall-weakening strips. Lengths as desired up to 8'. Usual depth of nailing pocket, 1 1/2". Milcor Steel Company, Milwaukee, Wis.


LOCKSROBE—a complete steel assembly, accommodating 8 to 52 pupils, with single locking control. Recessed or non-recessed, ventilated or not. Standard colors: School Furniture Brown and Olive Green. Saves floor space, reduces cubic contents of buildings. With or without blackboards. All parts interchangeable. Fred Medart Mfg. Company, St. Louis, Mo.

HAUSERMAN Movable Steel Partitions—a horizontal assembly or finished interchangeable units, glazed or solid, sound insulated, 3" thick. Ac-

28. Furnishings

TELKEE Wall Cabinet, for the storage and protection of reserve pattern keys from which accurate duplicates are made. The locks of a building are worthless unless the original keys are easily accessible for use or for duplication—a duplicate from a duplicate may not work. Swinging index panel; key lock. Thayer Telkee Corporation, Los Angeles, Calif.

MILCOR Continuous Nailing Strip. The innumerable irregularly staggered bosses grip the nails or other fasteners driven in. An obvious improvement on lath in the joints or other...
cessible chaseway in hinged base. All material salvagable. Finish in colors, rough or smooth, or photographically duplicating wood grains. The E. F. Hauserman Company, Cleveland, Ohio.

CLEMCO Achievement Desk is equipped with "Clemcoid" top made by patented formula. Top is molded in one piece and covers edges and bed top. Has a firm yet soft texture which is restful to the touch. It reduces glare, resists cigarette and cigar burns and acid marks. Will not scuff or crack. Drawers operate on noiseless ball-bearing rollers. The Clemetsen Company, Chicago.

TYPE H School Wardrobe. Entire weight of doors taken on overhead rollers; side fixture arms keep doors in alignment; doors hinged together, giving strict alignment for blackboard; locked from central control; blackboard writing protected when doors are open; decreased amount of floor space required. The J. G. Wilson Corporation, Norfolk, Va.

SYNCRO-FIT Construction Method of Portable Sound-insulated Partitions, also applicable to display cabinets, interior trim, and other construction requiring walls and posts. With less than two dozen standardized rolled sections practically any combination of partition or wainscot, 1½" thick, or 3/8" laminated or single sheet construction is obtainable. The Mills Company, Cleveland, Ohio.

PATRICIAN Book Shelving, of sectional construction in steel, enamel baked on and lacquered. Available in three styles: back-to-back, single face, and for recessing. In three lengths: 66", 78", and 90". In various colors. Sections, 10" x 36". Also 12" deep for store shelving. All-Steel-Equip Company, Inc., Aurora, Ill.

AUSTRAL Multi-Unit School Wardrobe, featured by accuracy, great strength and durability. Constructed of heavy-gauge steel, assembled on the job as a unit. Thoroughly ventilated, conserves space; metal doors finished in a neutral color. The Austral Window Company, New York City.

STAINLESS Steel Plymet—a stiff plywood panel to which is firmly cemented monel metal or stainless steel face and a copper-bearing zinc-coated steel back. Edges turned and soldered in factory. Adapted for counters, table tops, wall paneling in restaurants, hospitals, etc. Haskelite Mfg. Corporation, Chicago.

A NEW group of designs that rounds out the Saluba line—faithful recreations and adaptations of the choicest examples of eighteenth and early nineteenth century wall decorations, particularly suited to the American Colonial home. True period colorings. Like all Saluba—"oil paint-by-the-roll"—they are guaranteed fadeless, washable, sanitary. Frederic Blank & Company, New York City.

WALWORTH Company offers a complete line of flat-band red brass fittings. Sizes range from ½" to 8". The flat-band fittings afford greater
purchase for a wrench and tend also to eliminate scarring of the fittings. For use with brass pipe throughout the building construction field. Walworth Company, Boston, Mass.


BOOSEY Grease Separator. Waste from fixture is discharged into a removable scupper above water line of trap seal. Flow reduced, grease guided upwards by skimmer deflectors into grease storage section. Furnished with or without water cooler or removable grease retainer. Norman Booey Mfg. Company, Detroit, Mich.

COMBINATION Lead Bend and Brass Ferrule. No joint to be wiped. Smooth on the inner face and lapped in direction of flow. Bonded inside as well as out. Made in standard weight and heavy weight lead. Withstands 100-lb. water pressure test. Meets building code requirements. National Lead Company, New York City.

TAYLOR Forge Fittings for Welding are available in a complete line, which includes standard-radius and long-radius elbows, full-branch and reducing tees, reducing nipples, welding caps and welding neck flanges. Particularly important is the fact that all items are seamless. Elbows have tangents, locating the weld in the straight pipe rather than on the curve, and permitting rapid and accurate lining up preparatory to welding. Selectively reinforced by thickening in the regions of maximum stress, without encroaching on the inside diameter, and all ends are machine-tool bevelled. Taylor Forge & Pipe Works, Chicago.

ARTYLE Magic Chef Gas Stove. Though only 38" wide, it has ample capacity for a large family. Has a folding cover for cooking top which, when range is in use, folds at rear. Smooth, rounded, sanitary oven linings. Red Wheel Lorain oven control. Right or left oven. American Stove Company, Cleveland, Ohio.

KOHLLER "Protek" Powder-Paste, that will not etch or injure the high glaze of Kohler enamel, but will protect such surfaces from mars and scratches while building is under way. For use in applying a thick coating of ordinary newspapers over enamelled surfaces. Mixed by adding water and stirring.
Applied with common paint brush. Hard covering that withstands all common abuses. Removed by soaking with water and peeling off. Kohler Company, Kohler, Wis.

Boosey Yard Fountain Drain. Body of drain cast iron, painted or galvanized, with flange anchor and hub outlet with 3-inch threaded extension to floor line. Extension from floor line to overflow head may be galvanized or brass pipe fitted with cast-iron or bronze overflow head with opening in top for water-supply pipe and brass spray head. Norman Boosey Mfg. Company, Detroit, Mich.

Kohler "Avertor" Bath Bracket. A simple, practical device that supports the built-in bathtub and ties it to the walls, preventing tubs from pulling away from plaster or tile. Made of tough, stamped metal, and each capable of supporting more than 750 pounds. Enables the plumbing contractor to level and "set" baths easily, quickly, and accurately. Kohler Company, Kohler, Wis.

The Whitehead Automatic Storage Water Heater. A monel metal tank guaranteed to last for twenty years without rusting or corroding is an exclusive feature of a new hot-water heater produced by this company. The tank has been tested to withstand a 400-lb. pressure test and will deliver rust-free hot water, even in region where alkalies and other corrosive agents in the water are ordinarily destructive of most metals. The action of the heater is automatic and is equipped with a safety pilot and a device to prevent overheating. Whitehead Metal Products Company of New York, Inc., New York City.

Boosey Seepage Shower Drain. The lead pan connects to the trap by caulking into raglet around waste inlet. Where intermittent use of drains may evaporate trap seal the drain may be equipped with automatic back-pressure valve. Norman Boosey Mfg. Company, Detroit, Mich.

Kohler "Dalcross" Ledge Sink with two compartments. A new low-priced ledge sink which provides not circulating drinking-water systems. They eliminate the possibility of condensation dripping to the floor because the trap housing is completely closed with a removable metal plate, and all pipe connections are insulated. Century Brass Works, Inc., Belleville, Ill.
only the usual drainboard area, but also an additional closed compartment under the drainboard. Chromium-plated metal drainboard fits either compartment or hangs at side, out of the way. Three-inch ledge. Kohler Company, Kohler, Wis.

LADY Luxury Vanadoir,” a combination dressing-table, lavatory and mirror, for boudoir, bathroom, ladies’ dressing-rooms. Faucet and drain handles on front of apron. Wired for electric lighting and accessories. Cabinet of steel in several color combinations. Excelso Products Corporation, Buffalo, N. Y.

Russell Integral Trap Lavatory, eliminating all unsightly brass, cumbersome brackets, and housings from beneath the slab. Lavatory, 24” x 21”; bowl, 19½” x 12½”. Extended shelf utilizes waste space between fixture and wall. Trap has cleanout plug at bottom of the vitreous china. The Trenton Pottery Company, Trenton, N. J.

Peerless Watertight Saddle for shower doors. Made from drawn brass, having a deep slotted section to accommodate a specially molded piece of rubber. Acts as a cushion seal against same metal as the more expensive models but its price range is about half. The International Nickel Company, Inc., New York City.

Bradley Shower-Dressing Room Combination is a self-contained circular unit having five shower compartments and ten dressing-rooms. Requires only three plumbing connections: two supplies and one drain. Ideal for schools, clubs, gymnasiums, institutions, and industry. Popular for women’s quarters. Bradley Washfountain Company, Milwaukee, Wis.

Muehler Positive-cleaning Shower Head. Has fifty-four stainless steel tapered pins in a plate operated by yoke and lever handle. Keeps holes free and permits shower streams ranging from rain to stinging needle. Pins not rigid, so float to center, producing even, unbroken streams. Mueller Company, Decatur, Ill.

The monel metal “Straitline” kitchen sink has been placed on the market as a companion product to more expensive models introduced by this company within the past year. Designed primarily to meet the needs of the lower-cost field, it is available as a self-supporting fixture or as a cabinet sink without splashback or apron. It is made of the
boiler with heavy plates. Combustion chamber entirely surrounded by water walls to take up the radiant heat. Provides for the most efficient and smokeless combustion of high volatile heat fuels, and meets the requirements of all municipal or other ordinances. Spencer Heater Company, Williamsport, Pa.

MAXIM Silencer and Campbell Air Conditioner, accomplishing any one or all of the seven elements of air conditioning: elimination of noise, ventilation, air cleaning, humidification, heating, de-humidification, and cooling.

Air drawn from outside in controllable amounts. Campbell Metal Window Corporation, a division of American Radiator and Standard Sanitary Corporation, New York City.

AUTOMATIC Gas-fired Heating and Air Conditioning System for winter use. Completely automatic, compact design, all controls furnished as standard equipment, all controls inside of casing, exceptional quietness of operation, beautiful enough to install anywhere, unit shipped ready to install, burners are patented special two-stage type, greater air volume provided at lower temperatures, unit approved by American Gas Association. Surface Combustion Corporation, Toledo, Ohio.

GENERAL Electric new oil furnace comprises a co-ordinated boiler, burner, and control, designed and manufactured as one unit. It will automatically maintain an even temperature in the home in winter, and will heat water for domestic use the year round, without manual supervision. It is, according to the manufacturers, quiet, clean, and presenting a finished appearance which permits the furnace room to be transformed into another living-room. General Electric Company, Schenectady, N. Y.

ON THE LEVEL Perkheater permits placing boiler for heating one or more floors on same level as ground-floor radiators, doing away with necessity of cellar. Principle of coffee percolator, utilizing same force to cause a constant circulation of hot water in radiators. A simple accompanying part of the boiler. For bungalows, greenhouses, conservatories. No moving parts. No electric current. Hitchings & Company, Elizabeth, N. J.

TITUSVILLE Welded Steel Boiler, for residential service. Electrically welded into a single, self-contained unit. Rounded type crown sheet prevents sediment from lodging over firebox. Completely covered with a heavy cellular asbestos insulation with aluminum-finished steel jacket. Three-pass heat travel assures full delivery of the fuel heat to the spacious water jacket; extra large combustion chamber. Made in twelve sizes for all types of residences; maximum width only 34 1/4 inches. Titusville Iron Works Company, Titusville, Pa.

ELECTROL Automatic Boiler, a complete oil-burning and steam-making unit. Features are: fire-tube boiler of high efficiency, low heat loss, insulated against noise, employs induced draft, low water line, clean operation, provides domestic hot water quickly and economically, mechanical atomization, electric ignition, high-voltage controls, safety controls of Electrol design, quick steaming. Electrol, Inc., New York City.

FITZGIBBONS "Oil-Eighty Automatic" Boiler. Fitzgibbons copper-steel tubular construction combined with an enamelled steel insulated casing, both adapted for rotary or gun type oil burning. Larger combustion volume; many small tubes to extract high proportion of heat units; low draft resistance. Fitzgibbons Boiler Company, Inc., New York City.

MCDONNELL 37 Safety Feeder for boilers under 2500 ft. Automatically controls the boiler water level, completing the convenience of automatic firing and protecting the boiler against cracking or burning. Proof against sticking with lime or scale. Low-water cutoff switch or cutoff and pressure control can be combined with it. McDonnell & Miller, Chicago.

CONVECTORFIN, a heating element with headers of one-piece cast construction connected by finned tubes. Enclosed in a steel cabinet. Cabinet has
an inlet and outlet air grille. Piping connection can be made entirely within the space of the cabinet. Many combinations and designs of cabinets and heating elements are available. Commodore Heaters Corporation, New York City.

**KEWANEEL Round Type R Heating Boiler**, built of steel welded in one piece, with base complete. Two-pass tube arrangement, for oil or gas (also a similar type for coal). Fitted with domestic hot-water heater. Two sizes: 860 and 1090 ft. of water radiation, or for domestic supply only. Kewanee Boiler Company, Kewanee, Ill.

**DURIRON Acid-proof Exhaust Fans**, for ventilation of laboratory hoods and wherever corrosive fumes are encountered. All parts contacting fumes are acid-proof. One-piece housing—no joints to leak. Impeller removable without disturbing pipe connections; dynamically balanced, mounted directly on motor shaft. Direction of discharge variable. The Duriron Company, Inc., Dayton, Ohio.

**THE "Ventor," made in four distinct types, is a new fan development for supplying forced draft to plastered range canopies or recesses. For venting through 3-inch or larger conductors to flue or directly outside. Capacities: 100 to 600 c.f.m. Provides efficient "over the range" ventilation at very low cost. Universal Blower Company, Birmingham, Mich.**

**THE Range Canopy Ventor—a range canopy with an electric ventilator—is ideal for providing kitchen ventilation in existing residences. May be vented into furnace or incinerator flues, or directly outside. Protects the walls and removes heat and cooking odors at their source. Enamelled finish, in various sizes. Universal Blower Company, Birmingham, Mich.**

**THE Bath-O-Ventor, primarily a bathroom ventilator, has a variety of uses—for inside rooms; first-floor lavatories; shower-rooms, etc. Designed for venting through pipes or ducts. Free capacity of 600 c.f.m. Controlled by automatic cutoff interval switch. Outside automatic damper optional. Universal Blower Company, Birmingham, Mich.**

**SIROCCO Conditioner, Series "O." For cooling and heating restaurants, shops, hospitals, offices, etc., connected to hot-water boiler for heat in winter—uses ice-cooled or refrigerated water for summer cooling. Equipped with a Sirocco electrical control for regulation of temperature and humidity. American Blower Corporation, Detroit, Mich.**

**WEBSTER Moderator Control—a central control for improved Webster systems of steam heating. An outdoor or roof thermostat automatically varies steam supply to each radiator in accordance with outside temperature. A Variator provides supplementary manual control for heating-up, etc. Results include substantial reduction in steam or fuel consumption and increased comfort because excesses of overheating and underheating are prevented. Warren Webster & Company, Camden, N.J.**

**CONTROL-AIRE Humidifier—a compact (12" x 17") portable unit which needs only to be filled with water and connected to any electric outlet. Evaporates 1 gal. of water in 23½ hours. Contains heating element to heat water**
while vaporizing it. Automatic cut-off when water is exhausted. Hexcel Radiator Company, Milwaukee, Wis.

Hess Air Conditioner is a combined blower, air filter, humidifier, and air washer in one cabinet with enamel finish, for use in conjunction with furnace, hot water, or steam in residences, etc., up to 40,000 cu. ft. Provides a positive circulation of clean, humidified air for year-round comfort. Water consumption consistent with humidity requirements, without waste. Filter removes about 95 per cent of the dust and dirt in the air. Hess Warming and Ventilating Company, Chicago.

Bryant Air Conditioning Unit—gas-fired. Large-capacity, low-speed blower provides air circulation. Removable filters are placed in blower box for cleaning air. Cast-iron sections, designed to provide large area of heat-absorbing surface. Bryant's gas-actuated controls, automatic humidifier, and quiet, spring-mounted motor are standard equipment. The Bryant Mfg. Company, Cleveland, Ohio.

Program Furnace Control, built to meet the new conditions imposed on the warm-air heating industry by the close control needed on installations employing air conditioning, and involves the use of fans for moving the air, filters for cleaning and, in some cases, air washing and humidification equipment. Can be set to provide a sequence of fan operation in accordance with demands of room and heating plant temperature. Minneapolis Honeywell Regulator Company, Minneapolis, Minn.

Webster Hylo Steam Variator Control—a central control for improved Webster systems of steam heating. Includes a manually adjusted valve permitting continuous steam delivery to radiators from about 30 per cent to maximum. During mild weather when less than 30 per cent delivery is required (or should adjusting weights be incorrectly set) an automatic Overheat Limit Control prevents overheating. Permits regulation of steam to demand with resultant economies and comfort. Warren Webster & Company, Camden, N. J.

THE Zephyr 25 Air Conditioning System. Provides room heating, replacing one radiator; correct humidity in space up to 40,000 cu. ft.; pure washed air the year 'round; constant forced circulation of air; room cooling and dehumidifying in summer with one-ton refrigerating machine (capacity for cooling, 4000 to 6000 cu. ft.). Air-Conditioning Systems, Inc., Chicago.


Spencer Rotary Ash Receiver consists of six standard ash cans on revolving sturdy steel frame, sunk in water-tight steel tank, level with the basement floor, out of sight and out of the way. Eliminates dust from shoveling ashes into exposed cans. Installed with any kind of heating plant using solid fuels. Spencer Heater Company, Williamsport, Pa.

31. Electrical Work

Permaflexor Knock-out Strip, 1½" square in section, to provide a time and money saving method of installing the wiring of a show window. Avoids the "tailor-made" disadvantages by enabling quick fabrication on the job by the electrician. Applicable to case lighting, cove lighting, and similar problems requiring close centring of lamps and reflectors. Pittsburgh Reflector Company, Pittsburgh, Pa.

Fan Hanger Outlet, simple and easy to install. It fits standard 4-inch square boxes and has the strength of a four-point suspension capable of sustaining a weight many times greater than that of a fan. The Bakelite receptacle with heavy metal plate presents a most attractive appearance. The Arrow-Hart & Hegeman Electric Company, Hartford, Conn.
OUTDOOR Flush Receptacle. Provides a permanent place for outdoor lighting connections or appliances. Saves the nuisance of temporary wiring from the inside. Desirable for holiday lighting of trees, lawn parties, veranda lights, garage, or outdoor appliances. Designed to withstand the weather, and when not in use a metal cap screws over the receptacle opening. The Arrow-Hart & Hegeman Electric Company, Hartford, Conn.

A new improved floor box consists of a galvanized drawn steel box, a cadmium plated adjusting ring, and a three-inch diameter brass-finish plate and receptacle if required. The adjusting ring is held in position by a round rubber gasket which holds the ring in any desired position during installation. This assures a perfectly level setting of the finish plate with the finished floor. Frank Adams Electric Company, St. Louis, Mo.

TYPE "C" Switches for gas-filled lamps, specially built to handle the smashing initial current surge of cold Type "C" gas-filled lamps. The special current-carrying parts are much heavier than for ordinary switches to successfully carry this abnormal load, frequently seventeen times greater than for ordinary lamps. Switch base and insulation is Bakelite. The Arrow-Hart & Hegeman Electric Company, Hartford, Conn.

CLOCK Hanger Outlet. This device gets rid of unsightly cords running from clocks to receptacles. It gives both mechanical support and electrical connection. The receptacle part is recessed, so that the plug cap is sunk flush with the wall. This allows the clock to hang flat over the outlet with all wiring and receptacle wholly concealed. The Arrow-Hart & Hegeman Electric Company, Hartford, Conn.

DOUBLE Break Switch, of unit construction, is intended for use on feeder switchboards and panel-boards, or as an individual externally operated switch. It is of the knife-blade contact type, double break, quick make and quick break, assuring minimum arcing. The fused door is interlocked with a switch handle, making it full safety type. It has new patented fuse terminals, assuring minimum contact heating. Frank Adams Electric Company, St. Louis, Mo.

T H I S new Sequence Meter Service and Range Switch was developed in conformity with the latest requirements of the National Electric Code. It presents the new sequence "S.M.F." symbolizing the scheme of wiring, switch, meter, fuses. Consists of a cabinet having an upper and lower compartment, each with a separate cover. Upper compartment contains the fusible main switch, and the lower compartment the fusible range circuit and 2, 4, or 6 branch lighting circuits. The Trumbull Electric Mfg. Company, Plainville, Conn.

S A U T E R Time Switch of new type used with the Minneapolis-Honeywell Control for oil-burner operation in private homes where the oil burner operates on pressure during the day and by thermostat in the evening. Cuts in thermostat in the evening and off in the morning. R. W. Cramer & Company, Inc., New York City.

T R U M B U L L "Range Panels," manufactured for flush mounting, finished in gray, as would be the most acceptable for installation in the kitchen of a home or apartment. It is also made for surface mounting, finished in black for installation in the basement; both types are manufactured with a fusible range circuit and 2, 4, or 6 branch lighting circuits. Blown fuses cannot be replaced without first disconnecting the circuit. The Trumbull Electric Mfg. Company, Plainville, Conn.

T H E Violite Dual-purpose Luminaires make it possible to obtain a combination of general interior illumination plus ultra-violet irradiation. Adapter consists of a socket for a 200-watt ballast lamp and an aluminum reflector and socket for a type G-1 Ultra-violite Glow-lamp. Latter is in series with

A "De-ion" Circuit Breaker has several advantages over fuses and carbon circuit breakers. Nothing to be replaced or renewed. Reclosed as easily as a switch. Opens a short circuit without flash or undue noise. Interchangeable tripping units for capacities from 55 to 225 amperes. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

Holophane semi-direct lighting unit, for monumental interiors, for large lamps with the characteristic Holophane distribution and unusually wide spread on ceiling. Consists of internal reflector surrounded by twenty-five lenses assembled in an octagonal polyhedron with metal framework suitable for treatment in any architectural period. Holophane Company, Inc., New York City.

Kliegl Disappearing Footlights may be closed down flush with the stage floor, leaving an unobstructed platform. Furnished completely assembled, and wired, in standard 5-foot lengths; lamp receptacles and other electrical parts are a self-contained unit completely encased, well ventilated in an all-metal fireproof housing, having pivoted supports on the ends, and a suitable hardwood floor panel attached. Kliegl Brothers, New York City.

Kliegl Program Lights provide local illumination by pressing a button, enabling theatre patrons to read their programmes when the house is dark. Each is a self-contained unit: aluminum face-plate, push-button, light-guarded miniature lamp socket, and battery holder (or a low-voltage terminal block) fitting into a recess in back of the chair. Kliegl Brothers, New York City.

Lighting Fixtures of Porcelain. Illustrations show ceiling light and wall bracket, of white porcelain. The porcelain is translucent, passing about 15 per cent of the light and reflecting a light toward the ceiling. Furnished either with chain or tubing. Dust-proof and bug-proof globe. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

A line of General Electric gear-motors, readily adaptable for application to machinery of widely various designs. Underlying principle consists of a normal speed motor in combination with a built-in, internal-helical planetary-gear speed-reducer. Since this permits a wide choice of speeds on the output shaft, it is possible to adapt a gear-motor to almost every type of low-speed drive. Compact construction, high efficiency, full horsepower rating of the motor at the output shaft, economy of installation and operation because of the self-contained unit; available in either flanged or vertical mountings. General Electric Company, Schenectady, N. Y.

Colt Autosan Dishwashing Machines are announced in four new models. Distinctive features are: 1.
The new type Colt Autosan pump, fitted with special front plates to make possible inside inspection and cleaning. 2. A new type of spray arm, radically different in inside design from the standard type of spray arm and operating on an "intercepting" principle. 3. Every possible bend has been eliminated from manifold and feed lines, cutting down resistance and increasing power. Colt Patent Fire Arms Mfg. Company, Hartford, Conn.

STANLEY Automatic or Controlled Operation of Doors, through use of photo-electric cell. Speeds restaurant service, movement of goods in shipping.

STROMBERG - CARLSON direct paging system, consisting of close-speaking microphone, amplifying equipment, and loudspeakers for factories, stores, hotels, schools, airports, etc. With the microphone at the telephone switchboard or door, the operator or the watchman can reach any one in the building with any message. May be used where buzzers, bells, and telephones would be a fire hazard, as there are no contact sparks at loudspeaker positions. Stromberg-Carlson Telephone Mfg. Company, Rochester, N. Y.

THE new Junior Dictograph consists of a loud-speaking instrument and several desk sets. It takes care of interior communication requirements of the home, professional and smaller business offices. The appearance and compact design of the instruments harmonize with the finest environment. They require less space on the desk top than that taken up by a letterhead and cost less than a portable typewriter. Dictograph Products Company, Inc., New York City.
control for a radio receiver, record-changing phonograph, and remote loudspeakers. Push-button control boxes, portable or flush in the wall. System can start with a Telektor-type radio receiver alone, and expand at will. Wiring in walls, where used, is of intercommunicating telephone cable, to baseboard outlets on standard switch boxes. Stromberg-Carlson Telephone Mfg. Company, Rochester, N. Y.

Hoffman Thermador: an electric heating unit, available as wall insert (illustrated) or portable. Fan-circulated warmth. For heaters of 2000 watts capacity or larger, thermostatic control. Fan used for cooling in summer.

Hoffman Kitchen Electric Heater. Fan type, used as cool fan in summer or hot fan in winter, with swivel joint for directing air. Plugs into range receptacle. Rating, 1650 watts, 115 volts, A. C. or D. C. Has three chromium reflectors and flue with 9 sq. ft. of convection surface, 240-degree spread of heat, and 150-feet-per-minute velocity at top—a radiant heater which will comfortably heat four people. Hoffman Specialty Company of California, Ltd., Pasadena, Calif.

Radiant Electric Screens, a new form of low-temperature panel heating. Based upon the knowledge that 40 to 50 per cent of body heat is radiated toward cold walls. Such screens, placed around or near desks or chairs maintain a comfort range in mild weather without other heat. Reinforce regular heat in extremely cold weather. Illustration shows one of 750 watts—larger than ordinarily needed. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.


Hoffman Convection Radiant Portable Heater—1650 watts, 110 volts, A. C. or D. C. Has three chromium reflectors and flue with 9 sq. ft. of convection surface, 240-degree spread of heat, and 150-feet-per-minute velocity at top—a radiant heater which will comfortably heat four people. Hoffman Specialty Company of California, Ltd., Pasadena, Calif.

Prometheus Electrically Heated Food Conveyor, of medium size with enclosed chassis. This conveyor is used extensively in hospitals and has many new and exclusive features, including a disappearing door and a heated meat draw. The Prometheus Electric Corporation, New York City.
Foster Wheeler Vacuum Refrigeration System—steam-operated "flash evaporation" for continuous supply of cold water in manufacturing processes, air cooling, de-humidifying, etc. Water to be cooled is piped into a high vacuum chamber; change of pressure evaporates a portion taking heat from remainder. Foster Wheeler Corporation, New York City.

MODINE Ice-fan Room Cooler. Fully encased unit with 30-watt motor, ice storage, and blower. Furnishes ice-cooled air and removes excess humidity by condensation. Plugs into nearest electric outlet. One pound of ice per sq. ft. of floor space per 8-hr. day will appreciably lower temperature and humidity. Modine Mfg. Company, Racine, Wis.

Baker Fan Cooling Unit. Used for rapid cooling of air and products in insulated rooms and particularly adapted for refrigerants or brine below the frost point. Employs a special header alone for summer; hot air in winter. Thermostat built on heater, no extra wiring. Surface can be decorated with ordinary paint. Hoffman Specialty Company of California, Ltd., Pasadena, Calif.
FRIGIDAIRE Refrigerated Air Systems. Frigidaire air conditioners are of the unit type and especially desirable for installations in homes, offices, hotels, hospitals, or retail establishments where flexibility is necessary. Conditioners are available in three sizes: horizontal (see illustration), vertical, and suspension or cube. Condensers are in two sizes, 1 1/2 horsepower and 3 horsepower. Frigidaire Corporation, Dayton, Ohio.

A NEW modern water cooler of rich, black micarta, with chromium-plated brass and inlaid strips of aluminum. Made in both the pressure and bottle type with quiet motor and compressor. Some models provide storage space for beverages and fruit, conveniently placed under lock and key, making it ideal for private offices, hospitals, clubs, etc. Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

33. Elevators, Dumbwaiters and Accessories

WARNER Elevator Door Safety, a simple mechanical switch connected to a vertical contact bar of aluminum on the front edge of the door. Impact of this light bar with the body causes no injury, and reverses the door so promptly that impact of the heavy car and enclosure door is avoided. The Warner Elevator Mfg. Company, Cincinnati, Ohio.

WARNER Electric Car Door Operator. An electric motor and shaft with vertical worm gearing mounted on the car. Connected by a full 180 degrees of crank motion to the arms. This harmonic motion gives a simple graduated movement. Automatic switches limit the throw of this crank to 180 degrees and the speed of the motor is regulated by resistance that can be altered. The Warner Elevator Mfg. Company, Cincinnati, Ohio.

DOUBLE-DECK Elevators, such as those installed in the Cities Service Building, New York, call for an attendant in each compartment, but all operation, except initial starting, is taken out of the attendants' hands but is under immediate control if required. When the upper compartment is at one of the odd-numbered floors the lower one opens upon an even-numbered floor. A double ramp at the ground level leads the passenger up or down to the car reaching the floor he seeks. Otis Elevator Company, New York City.

SEDGWICK Correspondence Lift, designed to meet the present-day demand for an efficient and economical "between-floor service" in the handling of mail, telegrams, vouchers, checks, etc.
34. Power Plant

ECONOMIZER Type Water Heater— utilizing waste heat from boiler, incinerator, or other source of hot gases.

Heater has cast-iron rings shrunk on steel tubes, protecting against external corrosion. Protected inside by non-ferrous tubes drawn inside the steel tubes and Van Stoned over ends. Re-turn bends made of brass or non-ferrous alloys. Foster Wheeler Corporation, New York City.

35. Equipment

SULOC Glass Blackboards— plate glass with which is incorporated in the molten state a fine abrasive throughout. Can never wear smooth nor lose its velvety tooth. Available in lengths up to 6' and widths 3', 3\(\frac{1}{2}\)', 4'. Weight and first cost, same as slate. Easy to erase and wash. N. Y. Silicate Book Slate Company, New York City.

THERMO-DRYER, a steel, dust-proof clothes-drying cabinet built as a unit with any standard R. & B. equipment which occupies hardly more space than the ordinary chimney breast. Frequently installed as a basement-fed unit where a hopper door cannot be installed in the flue upstairs. Kerner Incinerator Company, Milwaukee, Wis.

MODEL T Kernerator. As a result of the discovery of a new and revolutionary principle of incineration, Kernerator engineers have developed a flue-fed incinerator within the reach of the owners of small, inexpensive residences. The cost of the completed unit, including the masonry, will not exceed $80. Kerner Incinerator Company, Milwaukee, Wis.

THE A-1 Kernerator—to meet the demand for a self-contained completely assembled flue-fed incinerator, which can be bricked in as received. It is a steel-encased, compact unit fed incinerator within the reach of the owners of small, inexpensive residences. The cost of the completed unit, including the masonry, will not exceed $80. Kerner Incinerator Company, Milwaukee, Wis.

THE S5 Kernerator Hopper Door. An incinerator hopper door of generous proportions, practically flush with...
ARCHITECTURE

A NEW half-length Rolscreen for installation on the outside of double-hung windows. Installed in a few minutes the wall, self-closing and silent in operation. Finished in all-polished aluminum castings or with painted trim and aluminum door (as in illustration). Kerner Incinerator Company, Milwau­kee, Wis.

VENTILIGHTER, a vertical window blind, made of aluminum or other material. Vanes may be folded back against the side jambs, and, since by attaching mountings for supporting guides and housing, onto the blind stops. Rolscreen Model 50 is neat, does not detract from window appearance, does not reduce light or ventilating area, and incorporates all of the exclusive Rolscreen patented features. No screen storage; a convenience in window washing, watering flower-boxes and operating awnings. Rolscreen Company, Pella, Iowa.

COLUMBIA Residential Venetian Blind for a maximum area of 65 sq. ft. Slats are 13/4" x 3/4". Thirteen standard colors. Fully operated. Pat­ented snap-lock bracket, enabling installation or removal without the use of tools. Columbia Mills, New York City.

AWNINGS of Asbestos. An asbestos fabric that was perfected in 1932, especially for awnings, has introduced a new texture for that product—a pronounced twill. It presents a surface of asbestos and has an interior reinforcement of cotton, combining fire resistance and great strength. The mineral surface is practically immune from weather deterioration and it cannot be ignited by sparks, cigarettes, etc. General Asbestos and Rubber Division of Raybestos - Manhattan, Inc., North Charleston, S. C.

36. Construction Plant

37. Insulation

CANEC, an insulating board (also lath and tile), 1/2" x 4' x 6' to 12', made from Hawaiian cane bagasse. One surface satin-like finish, the other a burlap finish. Coefficient of thermal conductivity, .33 B.t.u. Modulus of rupture, over 500. Plaster bond, over 1600 lbs. resistance per sq. ft. with 1 1/4" coat. Hawaiian Cane Products, Ltd., San Francisco.

ARMSTRONG'S Super-Service Corkboard. Fifteen per cent greater insulating efficiency than standard corkboard is assured by elimination of air and moisture infiltration. It is double coated at factory with special mastic compound. B.t.u. rating by U. S. Bureau of Standards .269. Armstrong Cork and Insulation Company, Lan­caster, Pa.

Unclassified

VERMICULITE, derivative of mica, hitherto regarded as a natural waste product, is now, through the application of certain binders, converted to scores of practical uses. Unusual thermal resistance; fire, acid, vermin, rust, and sound proof. High non-conductivity. Mastic, plastic, ceramic. Low cost. Adapted, among scores of applications, to synthetic board, roofing, flooring, tiling, paints. Chemical Cor­poration of America, Minneapolis, Minn.
Chancel Window, Unitarian Church, Germantown, Pa.

This memorial window, built for Mr. and Mrs. Cyrus H. K. Curtis, is developed in a combination of mosaic and stained glass, uniting two ancient crafts.

Edmund B. Gilchrist, architect
The D'Ascenzo Studios, craftsmen
ELEVATION

SECTION A

PLAN

DETAIL

DETAIL OF SHOWER BATH

A Series of Working Drawings
By Jack G. Stewart

PLATE № 28
BOOK REVIEWS


The sixty-second annual review of British architecture, a publication founded in 1889, which puts into the permanent record the more notable buildings designed by our English professional brethren. A complete file of Academy Architecture over the years would form a condensed and closely typical review of architectural progress in England.


Whether he realizes it or not, the architect is becoming more deeply involved year by year with the financial set-up of the buildings he designs. More and more frequently it is his knowledge of economic factors which brings to an architect his practice in commercial work. The author, being an architect, realizes what the architect should know and what, on the other hand, is irrelevant in this broad subject.


The author, who, with Rutherford Boyd and others, worked very closely with Jay Hambidge in the development of his theories regarding dynamic symmetry, applies in this book the principles involved in the creation of new patterns. The work parallels very closely the investigations of Mr. Boyd, some of the results of which were published in Architecture in August, 1929, and in April, 1930.


A volume setting forth illustrations and comment upon material presented in the recent exhibition of the so-called "International Architecture" at the Museum of Modern Art, New York City, and later in other museums throughout the country. The title is justified by the fact that the authors, while holding that the manifestations observed in the exhibition constitute an international movement, ascribe to various individual architects the contributions of thought and impulse following along approximately parallel lines. The exhibition and this volume are based upon the assumption that the architectural convictions of the past forty years or more may shortly come to an end.


Mr. Bragdon's essays on matters architectural and otherwise, some of which have appeared in the professional journals and general magazines, are here brought together in a beautifully designed book. As the author says, the book deals largely with matters about which he has already written, and sometimes it even represents these matters merely in a different form of words. Nevertheless, each one of Mr. Bragdon's books is a definite and welcome contribution as an expression of his steadily developing and steadily clarifying thought on the fundamental philosophy of design.


If Frank Lloyd Wright had not decided to be an architect he might have become as well known as a writer, as a poet, as a musician, or in almost any other activity to which he might have devoted his tremendous energies. If there is one fault in the book it is that belonging to any autobiography written when a man looks backward—the unconscious rationalization of events long gone by with conclusions and philosophies that must necessarily have been cumulative, reaching their final form in the present. Nevertheless, this is an intimate life story of one whom most of us yearn to know better.


Here is a marvellously comprehensive compendium of information for the draftsman in graphic form. It is compiled from various sources, all of them dependable, and represents approved practice in architectural detailing. The index is unusually elaborate. It is difficult to see why any architectural office should shoulder the burden of time and effort required in assembling from other scattered sources the wide information herein provided.
Two buildings on Broadway at 38th and 39th Streets as seen from Bryant Park

A GROUP OF NEW YORK OFFICE BUILDINGS

THE FIRM OF ELY JACQUES KAHN, ARCHITECTS
The block on Broadway between 38th and 39th Streets, as seen looking east
Lexington Avenue and 57th Street

The Firm of Ely Jacques Kahn, architects

Building at the southeast corner of

On the facing page, detail at the top of the building at southeast corner of
Broadway and 39th Street
Entrance detail, Building at Broadway and 38th Street

The Firm of Ely Jacques Kahn, architects

Elevator doors, main lobby, Building at Broadway and 38th Street

Detail at base of Building at Broadway and 39th Street

Detail in main lobby, Building at Broadway and 38th Street
Main lobby, Building at Broadway and 39th Street
The Firm of Ely Jacques Kahn, architects
Detail of main lobby, Building at Lexington Avenue and 57th Street
The Firm of Ely Jacques Kahn, architects
Some Pitfalls in Supervision

By W. F. Bartels

The Electrical Code states that "a run of conduit... shall contain not more than the equivalent of four quarter bends, including those at the outlet or fitting." This provision is made for the purpose of preventing the wire covering from being damaged by being pulled around too many bends. There is another provision in the code which limits the size and numbers of wires in conduits of certain sizes.

On a large job it is well for the superintendent to get the permanent switchboard up as soon as possible in order to save as much temporary wiring as possible. The latter is a costly
item. The switchboard room should be arranged so that there is plenty of room for men to move about without the possibility of touching live parts and being "frozen" to them. Great care should be exercised, because the highly charged bars seldom give their victims a second chance. It should be required to have all panel boards clearly labelled, and a chart furnished to the owner upon the completion of the board. All railings must be properly installed where called for, particularly where they are used as guards for the protection from machinery and live electrical work.

Care should be used in checking the installation of fixtures. The best height for switches is generally 4 feet above the floor to the centre of the box. Convenience outlets should be the same height, and should be of the duplex type. Their original installation cost is a negligible amount above that of the single type, and it avoids the trashy look of having two- and three-way adapters projecting from every outlet. The type of sidewall brackets should be previously determined so that they may be located at the proper height. This height is advisedly 5 feet 6 inches to the light bulb. The latter may not appear important on first thought, but when one considers that the bulbs may turn down, i.e., have the fixture above them, it will be seen in such a case that if the outlet were 5 feet 6 inches the fixture would appear to be too low. If the fixture turns upward instead it might give the room a stilted appearance, and the outlet may better be lower than 5 feet 6 inches. In the case of gooseneck type of fixtures over medicine cabinets in bathrooms, it is necessary to make sure that the door of the cabinet will clear the fixture. So also, where there are high doors in foyers, it is well to be certain that hanging fixtures will not be so low as to interfere with the door. Radio outlets are now obtainable with dual outlets—one for power and the other for a polarized plug for the antenna and ground. They are a great convenience, particularly with the modern midget sets, allowing the latter to be moved from room to room wherever there is an outlet. All plates and other finished parts should receive a coat of vaseline as soon as they are installed, to prevent paint and varnish from adhering.

Then again, a more liberal supply of baseplug outlets will eliminate a good deal of loose wire about the living-room in particular. The kitchen should have at least one double outlet where most convenient for service. Unless these items are taken care of, all sorts of makeshift contrivances will be invented. A case is on record where a beautiful and costly rug was seared by a wire run under it across the room to a percolator. The fuse was too large and the wires too small: the rubber insulation was soon burned off, and a damaged rug resulted.

A floor outlet should be left in the dining-room slightly off the centre, because a central pedestal of the table may occupy the exact centre. From this outlet a flexible cord can be run to the underside of the table, where a modern flat adapter allows the toaster to work at the same time that the coffee is being percolated. Then, too, a plug on or near the mantel must not be forgotten for the electric clock, and a small light of perhaps 6 volts should be provided to allow modern decorative effects to be utilized in ornaments on the mantelshelf or a candle on the cupboard. The standard flexible cord being 8 feet long, it is advisable to have the base plugs not more than 15 feet apart.

With the electric refrigerator, dish-washing machine, ironer, mangle, washing machine, oil burner, and vacuum cleaner as accepted amenities, and the electric range fast gaining in popularity, it oftentimes may pay to put in a separate wiring system for power. Such a scheme has many features to justify it. First of all, many towns may have a special rate for such service. This will bring these maximum-comfort products to the owner at a minimum price. When a fuse is blown it will not be necessary to grope with a candle or flashlight while a new fuse is being inserted. Then, too, when the refrigerator clicks on there will be no dimming of lights, as is often the case when the lights are on the same circuit.

If the owner is paying for current consumption as, during the construction, he generally does, it behooves the superintendent to see that the contractors pay for their share, or else have a separate meter provided for them. The amount used for drills, grinders, floor scrapers, etc., on the ordinary job will be considerable, while on the large jobs it runs into real money. Lighting, too, is an item, and often left-hand bulbs are used to reduce the number which are lost. If this is not effective, then wire guard cages should be obtained, or lock sockets, the latter necessitating breaking the bulb before the socket can be removed.
The photograph at the top of the page shows the group as seen from the east—the top of the plan as here shown. The two houses at the right, connected by the loggia, are employees' quarters.
If binder block has been used for the walls, trimmed with cast stone, a still further variation being given by the fieldstone court walls. The cinder block are in several shades of gray, surface treated, and in several heights. The doors and gate are of oak, roughly finished and dark in color.

A corner of the wagon court with one end of the feed barn in the foreground. Behind the low wall at right is one of the two ramps.
The wagon court, with the cow barn in the middle, its adjoining silo beyond. The roofs are of slate in grays, greens, and purple.

The silo in its rectangular tower at left. Changes in level gave the architect opportunities of which full advantage has been taken.
Passageway in the horse stable. Stall floors are of wood blocks; sheathing and stall work of oak.

The shifts in block heights, the slate roof, and the cast-stone chimneys and trim give a rather close approximation of the Cotswold district flavor.
The Editor's Diary

Friday, July 1.—The new Fourth Wing of the United States Senate Office Building, now under construction, is to have a refrigeration and air-conditioning system costing $13,000. Like the installation in the Halls of Congress and the Executive Office Building, the system will provide on the hottest days of summer a temperature of seventy-five degrees and relative humidity of 50 per cent. The refrigerating unit to cool and dehumidify the air uses the new refrigerant, dichloro-difluoro-methane, a gas which is colorless, odorless, non-combustible, and non-toxic.

Saturday, July 2.—Ely Kahn has been rapping the Beaux-Arts students for their carelessness and lack of real study in competition work. Possibly he might with advantage take a few juries apart for a personal talk. For instance: The Architects' Emergency Committee of New York held a competition recently for a small library in a suburban village. The programme explained that the available lot measured seventy-five by seventy-five feet, facing the Village Green. In almost any solution the building would work out nearly fifty feet in length, which means an exceedingly limited space at the side with the possibility of a neighboring building abutting the building line. It would seem rather obvious, therefore, that for a pleasant outlook and assured light, the main reading-room should occupy the front, or as much of it as possible. The jury, consisting of such eminent men as Chester A. Aldrich, Louis Ayres, Archibald M. Brown, Eric Gugler, Frederic R. King, and George A. Licht, awarded first prize to a design which put its main reading-room along the side, and faced the Village Green with a few small toilets. Query: Is there a way to make competition juries read the programme?

Sunday, July 3.—Arthur Hawley Scribner, president of Charles Scribner's Sons since 1928, passed quietly away in his sleep early this morning. He was seventy-three years old, and, since his retirement from Princeton in 1927 until 1929 was president of the Princeton Club of New York. If Mr. Arthur Scribner ever in his life had an enemy, his associates never knew it; suave, kindly, patient, and efficient, he walked through life in great contentment with his work and passed out of it in the painless, peaceful manner that seems a fitting end to work well done.

Monday, July 6.—Walt Whitman was a good deal of a modernist. In one of his editorials in The Brooklyn Daily Times, of June 5, 1857, he said: "The Savings Bank in Bleecker street just east of Broadway is Grecian, of the most ornamental and florid order. It is a wonderful and lovely edifice. But the surroundings (the Greeks always had reference to these) are enough to spoil it—let alone the discordance in the idea of a Greek temple (very likely of Venus) for a modern Savings Bank!" Such considerations as these make one laugh at the architecture of the New York Custom House, with its white sides and its mighty fluted pillars. Iron and glass are going to enter more largely into the composition of buildings. So far, iron used in large edifices is a perfect success—for instance the huge store on the northeast corner of Broome street and Broadway—also several other downtown stores. "We must not conclude this article without an allusion to the Crystal Palace, an edifice certainly unsurpassed anywhere for beauty and all the other requisites of a perfect edifice. At present, few persons pay any attention to architecture in its higher planes, its philosophy, its reference to all the other things, few have any profound idea of beauty in a building. We suppose it must be for that reason that the New York City Crystal Palace is not universally confessed to be what it certainly is—an original, esthetic, perfectly proportioned American edifice—one of the few that put modern times not beneath old times, but on an equality with the best of them."

Tuesday, July 7.—Alexander B. Trowbridge, as a member of a new Cathedral Council of thirty men, a consultative body limited to the Washington Cathedral, has gone abroad to study certain phases of cathedral architecture.

Wednesday, July 8.—The considerable extension of the Federal Building programme seems to be just in the offing. Unquestionably here is, under normal conditions, one way of starting the wheels turning so that the building trades and the many manufacturers dependent thereon may have the work to do. Here is one large fly in the ointment: a post-office, let us say, is to be built with an appropriation of $100,000 in Terre haute, Ind. Some one gets the job of designing it, the working drawings finally go out for bids, and, due to the desperate hunger of the bidder, and the law which says that the lowest bidder must have the job, the contract is finally signed at, say, $60,000. Thereafter starts an almost endless series of losses. The contractor loses money. Each sub-contractor loses money. The material men sell their goods at less than cost. Apparently the larger the Federal Building programme, the more people lose money. If the programme could be undertaken on a large enough scale to fill the deep hole in the building industry, prices and bidding would right themselves to normal. Under the present conditions it is manifestly impossible to create a building programme of sufficient extent to fill this hole. The only hope, apparently, is that the movement toward filling the hole, thus started, may induce enough further outside building activity to bring the almost forgotten habit of doing business at a profit back among us.

Thursday, July 9.—Lunched with William F. Lockhardt who gave me an ingenious little instrument by which one turns a few disks and establishes the proper measure for concrete of a desired quality. The instrument takes into account the strength desired, the sand and coarse aggregate, the consistency desired, and it will tell you on the basis of these the relative quantities of cement, sand, stone, and water to be used on the water-cement ratio basis.

Saturday, July 11.—Sidney K. Wolf told the American Philosophical Society in Philadelphia recently that, since the present age owes much of its noise to the engineer, the engineer should find...
ways to ameliorate conditions in our squalor of noises. The architect's part of the job, he says, is to supply soundproof buildings.

Monday, July 17.—One among many of the indications of our rapidly increasing technological skill lies in the fact that a comparatively few years ago four and a half pounds of coal were required an hour to maintain a kilowatt of electric energy. Today we maintain the same amount of energy with a coal consumption of one and three-tenths pounds.

Tuesday, July 12.—Ezra Winter is painting for Rockefeller Centre, to hang in the International Music Hall, what is possibly the largest mural painting ever attempted. His studio above the Grand Central Station was far too small, so he is working with a corps of assistants in a building out in Long Island City, erected for the purpose of indoor tennis. In an adjoining set of tennis courts Winter is working also upon the seven murals, twenty-eight feet high and sixteen feet wide, for Fred Hiron's George Rogers Clark Memorial at Vincennes, Ind.

Wednesday, July 17.—David Coyle, speaking before a luncheon of the American Statistical Association today, brought out a particularly interesting speculation—that the machines, having carried us far away from handicrafts, may in itself bring us directly back to them.

Thursday, July 14.—R. W. Sexton, whose name is frequently seen as an author in the architectural journals, was telling me today of a plan which seems to have great possibilities. He proposes to establish a Bureau of Architectural Relations, which would be a sort of clearing-house for information to the public on matters concerned with architecture and the allied arts. The Bureau would be able to supply lecturers from the profession on particular phases of the subject, and would also supply syndicated or special newspaper articles, signed or approved by well-known architects, painters, sculptors, and landscape architects. If such a bureau were to become a real clearing-house for such services, it is likely that the dissemination of the right sort of information to the public would be greatly facilitated.

Friday, July 15.—There is a tremendous amount of talk these days about prefabrication of houses. Apparently we are on the verge of a whole new series of efforts through which it will be possible to produce in unlimited quantities standardized sections with which a house may be erected in a minimum of time. It is the old story, however, of technological progress outrunning our system of distribution. Tomorrow we shall be able to make the houses at lower costs than ever before, and in one hundredth, perhaps, of the time, but there is no immediate prospect of a market. Those who should have these houses are out of a job and cannot buy them. The interdependence of productive ability and purchasing ability is becoming more and more evident. We can make more easily than ever before the things that we want, but since it is taking less and less man hours to produce these things, we are facing a growth in the number of persons unable to find work enough to earn money to buy what we produce.

Monday, July 18.—Arthur J. Horton, whose firm controls a large number of apartments in Brooklyn, has figured out how each dollar of the tenant's rent is spent:

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage</th>
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<tr>
<td>Taxes</td>
<td>88</td>
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<td>Water</td>
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<td>Insurance</td>
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<td>Heating</td>
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<td>Electricity</td>
<td>04</td>
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<td>Management</td>
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<td>Superintendent</td>
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<td>Repairs and decorating</td>
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<td>Vacancies and bad collections</td>
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<td>First mortgage interest</td>
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Monday, July 15.—Arthur J. Horton, whose firm controls a large number of apartments in Brooklyn, has figured out how each dollar of the tenant's rent is spent:

Interesting speculation—that the machines, having carried us far away from handicrafts, may in itself bring us directly back to them.

Tuesday, July 19.—Western Electric and Bell Telephone engineers have finally worked out a cure for the apartment-house roof which bleeds with private antennas. A system has been devised by which as many as three thousand radio-receiving sets may be operated independently on the same antenna without any interference. Incidentally, the receiving system is protected from man-made static, those interferences which the ordinary lead-in wire commonly picks up from such sources as elevator motors and other electrical devices. Every receiving set, too, is electrically isolated so that it cannot any noise back into the system.

Wednesday, July 20.—William Dewey Foster, architect, who is even better known in the profession as editor of The Question which architects generally are in for a farewell on his way to the steamer which is to carry him to the island of Majorca, where he may spend six months measuring everything that interests him architecturally.

Thursday, July 21.—The Rockefeller Centre is going to have a sort of international flavor about it. President Hoover has signed a bill authorizing the entrance under bond of foreign goods to be exhibited in the Centre without payment of customs duty. It is expected that the British, French, Italian, and German units on the Fifth Avenue frontage will afford us an opportunity to see what these countries are making. Any goods sold while on exhibit will, of course, call for the payment of duty, and any articles remaining on display for two years will be subject to the regular customs charges. Rockefeller Centre comes in this way something of a "free port."
THE SEVENTY-FIRST IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

Architecture's Portfolio of

MARQUISES

Subjects of Previous Portfolios Are Listed at Left

Forthcoming Portfolios will be devoted to the following subjects: Wall Sheathing (October), French Stonework (November), Over-mantel Treatments (December), Bank Screens (January), Interior Doors (February), and Metal Stair Railings (March). Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up about six weeks in advance of publication date.
Warren & Wetmore

Executed by Republic Structural Iron Works

Morgan, Walls & Clements

Warren & Wetmore
Schultze & Weaver

McKim, Mead & White

Claude Beelman

J. Schofield
Shreve, Lamb & Harmon

On Fifth Avenue, New York

Sloan & Robertson

H. J. Hardenbergh

ARCHITECTURE

September, 1932
On Fifth Avenue, New York
Tooker & Marsh

On East 80th Street, New York
Fred Wesley Wentworth
On Fifth Avenue, New York

On a florist's shop

The Firm of Ely Jacques Kahn
Hubbell & Benes

Warren & Wetmore

On East 89th Street, New York

Arthur P. Hess
September, 1932

ARCHITECTURE

On Fifth Avenue, New York

On East 75th Street, New York

Roger H. Bullard

On East 63rd Street, New York
Warren & Wetmore

Eric J. Reeves

On Park Avenue,
New York

Ritter & Shay
Holabird & Root

A shop in Rouen

Charles A. Platt

Albert Kahn
CONSIDER TOMORROW’S TELEPHONE NEEDS
IN PLANNING FOR TODAY’S

The residence of William H. St. Clair, 1666 Shenandoah Drive, Broadmoor, Seattle, Washington, is equipped for telephone convenience with built-in conduit serving eight outlets. William J. Bain and Lionel H. Fries, Architects, Seattle.

The telephone needs of any given residence change with the years—and the occupants. Proper planning in advance assures telephone arrangements that are flexible enough to meet almost any demands that may be made.

By specifying telephone conduit within walls and floors, outlets can be located at strategic points throughout the house. Then there are sure to be enough, and the owner can use any or all, exactly as they’re needed. In addition, wiring is concealed and there is greater freedom from most types of service interruptions.

Let the local telephone company help you choose the right type of telephone equipment and installation for your residence projects. They’ll do it gladly, without charge. Just call the Business Office and ask for “Architects’ and Builders’ Service.”
C. C.

The Ruud Manufacturing Co., of Pittsburgh, Pa., claims for the Customer Control Burner that it is "the "only water heater that will convert the vast tank-heater market to automatic hot-water service." A recent broadside lists ten pertinent questions concerning automatic hot water, and C. C. equipment in particular, and gives the answers. Low cost and maximum efficiency of operation give the owner control of his hot-water service and his gas bill.

PHEMALOID COMPOUND LUMBER

Maybe it was to the "Phemaloid Compound Lumberman" that the humorist sent his client who wanted just a small order of lumber, "enough for a bridge for his violin"—because the pamphlet from the Haskelite Manufacturing Corp., of 120 South LaSalle Street, Chicago, producers of Phemaloid Compound Lumber, tells us that you can get a panel "as large as a house," or "as small as a postage stamp.

It is easy to visualize a myriad of applications of this electrically processed panel, with its waterproof, fire-resistant, antiseptic binder, and cross-laminated of real wood.

HORN T. & G. STRIPS

The A. C. Horn Company, of Long Island City, N. Y., offers descriptive literature on Horn T. & G. Strips—Tongued and Grooved Terrazzo or Grano-lithic. It is claimed as the only method for applying a thin flexible veneer of standard terrazzo or cement topping over wood or concrete and producing a "hard-soft" floor. The folder presents the various applications.

ELECTROL

Electrol Incorporated of New York City offers descriptive literature showing the result assured by the Electrol Quiet All-Electric Oil Burner. It refers finally to an impressive list of satisfied owners and includes specification directions.

ATSCO ROLLER SCREEN

A booklet recently issued by the Automatic Tension Screen Co., Inc., of Los Angeles, Calif., contains such complete file information as will facilitate early planning for screens by architects. General specifications and sectional drawings in full size detail are included.

WIRE CLOTH

Catalog No. 32 from the Newark Wire Cloth Company, of Newark, N. J., is a compact handbook dealing with the selecting and testing of wire cloth products. Architects will be glad to learn that this company markets a particularly fine mesh—160,000 square openings per square inch. This handbook should prove to be of much practical use.

LINOWALL

Hot off the griddle—the Armstrong Cork Co., of Lancaster, Pa., announces as ready for the market at once its latest development, Linowall, a wall covering providing the desirable qualities of linoleum combined with special designs and colorings particularly suited to wall use. Send for details.

AIR-COOLING

Air-Control Systems, Inc., of Chicago, 2240 Racine Avenue, announces a new and patented device, a refrigerating system for space cooling which brings the initial cost of the refrigerating equipment within reach of stores, offices, and home owners. Air-Control adds this 1932 problem-answer to its 1931 announcement of "Zephyr 75," the silent, compact air washer.

DRY AIR FILTER

A bulletin describing the new Coppus Annis "Dry" Air Filter for ventilating systems is now being distributed by the Coppus Engineering Corp., Worcester, Mass., manufacturers of blowers and steam turbines. In addition to installation diagram and other illustrations are reference tables and technical data of importance to the ventilating engineer and contractor.

CARNEGIE STEEL SHEET PILING

Insert A is off the press for inclusion in your copy of Carnegie Steel Sheet Piling Catalogue. It contains interesting illustrations of several recent piling installations, and includes revised pages 37 and 38. From the Carnegie Steel Company, Pittsburgh, Pa.

ATLANTIC TERRA COTTA

The June issue of Atlantic Terra Cotta is a graphic record of worthy installations of Atlantic Terra Cotta, showing the versatility of use of this modern, yet age-old building material. You should be on the mailing list of this trade publication.

VALVE COMPARISON

The Ohio Injector Co., of Wadsworth, Ohio, has prepared for your file a valve comparison chart. Copies sent on request.

GARAGE-DOOR HARDWARE

Word comes from the Thompson Mfg. Co., of Los Angeles, of newly perfected garage-door hardware providing a balanced mechanism. It is suitable for old doors or new. Literature will be sent on request.

GYPSUM LATH

The Gypsum Association, 211 West Wacker Drive, Chicago, has issued a booklet, "Facts About Gypsum Lath," to promote a clearer understanding of Gypsum Lath advantages. Copy is yours for the asking.

VENTILATING FANS

The L. J. Wing Mfg. Co., of 154 West 14th Street, New York City, sends a folder, Bulletin No. E-5, describing in detail Wing-Simplex Safety Ventilating Fans. Capacities and dimensional tables are included, as well as typical installations. (Continued on page 10)
PROTECT YOUR ROOF
WITH
FLASH-LOK

MAKES
THE
PERFECT
FLASHING
EASILY
INSTALLED

Experience shows us that about 95% of the roofing leaks can be traced directly, or indirectly, to the flashings.
FLASH-LOK BLOCKS and FLASH-LOK FORMS are designed to receive and securely hold in place any and all types of roof flashings and counter flashings in common use in the roof construction of today.
Manufactured by
W. S. DICKY CLAY MANUFACTURING CO.
Kansas City, Mo. San Francisco, Calif.

THE CUTLER MAIL CHUTE

TO INSURE standard, dependable equipment installed promptly at moderate cost, the Cutler Mail Chute should be specified by name. If desired, approximate estimates will be furnished in advance.
If preferred, a stated sum may be allowed to cover this item.
Full information, details, specifications and estimates on request.
CUTLER MAIL CHUTE CO.
General Offices and Factory
ROCHESTER, NEW YORK

The latest product of our studio is this life-size statue of St. Francis of Assisi, hammered entirely out of copper, free hand from drawing, thereby not only saving the cost of a model but also unnecessary weight.

Designed and executed for the
THIRD ORDER VILLA
Garrison, N. Y.

by
FERRO STUDIO, INC.
228 E. 150th Street, New York City
GATE VALVE (Continued from page 1)

The Kennedy Valve Mfg. Co., of Elmira, N. Y., has placed on the market a new line of Rising Stem Bronze Gate Valves for 125-pound steam pressure and 175-pound water pressure. Information will be sent on request to the company direct or through this bureau.

WINDOW GUARD

A new home protection device announced by the Shur-Loc Window Guard Corp., associated with Accurate Metal Weather Strip Co., of New York City, is said to do away with all bolts, screws, nails, or rivets. The guard is placed directly below the upper sash, permitting upper sash to open a few inches for ventilation, and in no way interfering with the operation of the lower sash. The guard is held securely and can only be removed on unlocking.

AIR CIRCUIT-BREAKERS

The Roller-Smith Co., of 233 Broadway, New York City, has just published Catalogue No. 5, covering air circuit-breakers, standard, industrial, and enclosed types.

BOILER WATER FEEDERS

The Watts Regulator Co. of Lawrence, Mass., has issued a folder on its new line of Boiler Water Feeders. Boilers with their equipment are in no danger of water running low. The water level is automatically kept above the danger line. They produce a feeder for all types of oil, gas, or coal fired boilers. The Watts Regulator Co. guarantees all its products against defects in material and workmanship.

FOR ELEVATOR SERVICE

General Electric offers for your file a folder on single-speed induction motors for elevator service, squirrel-cage motors, known as Type KE. The folder includes ratings and dimensional tables. The motor design embodies such essential characteristics as low-starting current, quiet operation, and strength to withstand frequent starts and stops.

"AS NEW AS TOMORROW"

Is the recommendation of the Aluminum Industries, Inc., of Cincinnati, Ohio, on Permite Resalum, an aluminum paint for preservative purposes. Send for a working sample.

"MODEL T" KERNERATOR

The Kerncr Incinerator Co., of Milwaukee, Wis., describes in its just published A. I. A. File Folder its new "Model T" which has been especially designed for small houses. Installation drawings and specifications are included.

NEMANGO THRESHOLDS

The motto of the Newman Mfg. Co., of Cincinnati, Ohio, is "Everything from a kick plate to a $500,000.00 installation." Their most lately received folder enumerates many of the styles and illustrates both kick plates and thresholds.

LOK-CROWNER

The Lok-Crowners are the latest development of the Rawplug Co., Inc., of New York City. An outstanding use of the Lok-Crowner, the new device that locks, seals, and conceals bolts, screws, and nuts, is to be seen in the interior of the Observation Room on the top floor of the Empire State Building. The manufacturers advise that samples will be furnished on request to those interested.
SOLVING THE PARKING PROBLEM

The Turner Elevator Co., of Kansas City, has a new solution for this problem which is becoming more complex with the production of each new car. It has obtained a patent on its newly developed Circular Elevator Garage. Equipment includes a rotatable platform with loading, locking, and unloading devices mounted thereon. These devices are electrically driven and controlled by push buttons. Around the elevator hatchway on each floor is space for ten cars with direct right of way to the elevator. The company claims minimum ground space and maximum storage capacity, perfect accessibility, and prompt delivery for its new garage.

CINMANCO

Folders from the Cincinnati Mfg. Co., Gest and Evans Streets, Cincinnati, illustrate the scope of the company's activities in metal craftsmanship from tablets to screens. Cinmanco All-Metal Screens are "made-to-order" for any type of window or door regardless of shape or size.

HAYDITE BUILDING UNITS

The Haydite Manufacturers Association of Kansas City has published a reference catalogue for architects and engineers supplying information on Haydite Building Units, Concrete and Pre-Cast Products. It features the Haydite system of "Multiple-Utility," masonry construction that reduces costs and saves dead loads. A description of the general properties of Haydite, photographs showing its various uses, full construction details, and suggested specifications are given. The subject of fire-resistance, thermal and sound insulation as pertaining to Haydite are discussed.

AERO

Is a nation-wide service for better protection against fire. The American District Telegraph Co., 155 Sixth Avenue, New York City, renderers of this Central Station Fire Alarm Service in all the large cities, has just published a new and practical book on Aero. Some of the interesting sub-titles are: "Science Finds a Remedy," "Insurance Plus," "The First Five Minutes." Operation, adaptability, and reliability are dwelt on. Send for copy.

YORK BOOSTER COMPRESSOR

The York Ice Machinery Corp., of York, Pa., has published a new and complete bulletin on their Booster Compressor. It will be of special interest to those architects who are co-operating on plants for the production of quick frozen foods, oil refineries, and automobile and airplane plants. The new compressor is semi-enclosed, vertical, and single-acting.

PERSONALS

Mr. Ray A. Lackner has been appointed branch manager at Pittsburgh for the E. I. Hauserman Company, of Cleveland, manufacturers of Hauserman Movable Steel Partitions.

Inland Steel Co., of Chicago, has opened offices at 1118 Fisher Building, Detroit. Mr. J. H. Fitch, Jr., is manager in charge.

The Mills Company, of Cleveland, manufacturers of portable and stationary partitions, announces the appointment of R. E. Arnold, 84 State Street, Boston, as New England representative.

SANE ECONOMY IN SCHOOL BUILDINGS...

WILSON'S Type H SCHOOL WARDROBE GIVES...

1—MAXIMUM STORAGE SPACE WITH MINIMUM ROOM AREA.

2—TRUE ALIGNMENT OF DOORS AT ALL TIMES.

3—PROTECTION TO WRITING ON BLACKBOARD AREA.

PERSONALS

The J. G. WILSON CORPORATION NORFOLK VIRGINIA

Comparative Space Requirement for Swing of Wardrobe Doors
NEWTON PIVOT CHECK

For
SINGLE SWING
LAVATORY STALL
DOORS

# 100
Self-Closing

# 101
Self-Opening

SEND FOR DRAWINGS
AND
APPLICATION DETAILS

Smooth, quiet, positive operation eliminates all noise and all possibility of damage to frontals, partitions or doors.
On exhibit at Architects Samples Corporation, 101 Park Avenue, New York.

C. H. NEWTON & CO.
247 ATLANTIC AVE. — BOSTON, MASS.

MAKE SANITATION SURE

BY SPECIFYING No. 2605

• In this fountain, projector is located above overflow line of receptor to meet American Public Health Association regulations—and its patented Halsey Taylor features further guarantee sanitation.

The Halsey W. Taylor Co. • Warren, O.

Distinctive Two-Stream Projector Above Overflow
The stream always uniform, never too high, or never too low; ever sanitary!

HALSEY TAYLOR
DRINKING FOUNTAINS

EVIDENCE

Isn't it so, that the doing of the large things well, bespeaks the small ones having been done with painstaking thoroughness?

Because one of our small houses was satisfactory to the University of Toronto, they asked us to complete the group. Which wouldn't you say, is convincing evidence?

LORD & BURNHAM Co.

FOR FOUR GENERATIONS ... BUILDERS OF GREENHOUSES
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THE OCTOBER

ARCHITECTURE

PRESENTS FOR YOUR USE

Today’s Craftsmanship in Tile
by EUGENE CLUTE

This article bears out our contention that the craftsman of today need make no apologies to that of any other age.

New Dormitories at Princeton University
Designed and executed by that master of the collegiate adaptation, CHARLES Z. KLAUDER.

The Drama of Building
Photographic studies of concrete.

Colonial House at Scarsdale
by LITCHFIELD

Stone Tile House in Los Angeles
by PRICE
and
Stewart - Bartels - Observer - Portfolio

ARCHITECTURE
CHARLES SCRIBNER’S SONS
597 FIFTH AVENUE, NEW YORK CITY
Audley, near Berryville, Va., was inherited by the son of Nellie Custis Lewis, adopted daughter of Washington. Here she came to spend her latter days.

When Old-Time Audley Was Built
Bricks Were Bricks In Old Virginia

HAVING said which you reply: If bricks were bricks, then why was Audley painted?

To which I answer with a tolerable amount of feeling, those smart Yankee salesmen came down here in Virginia and sold their paint to a lot of our unsuspecting folks. Some of them what you might call tolerable hard-headed thinking folks at that.

When I get to turning it over in my mind, seems like boiling those salesmen in oil, was about the right punishment for causing the covering up of the bricks in so many of our fine old homes.

Audley for instance, where Nellie Custis Lewis spent her last days, is one of the few examples in Virginia of the true Southern brick Colonial farm house. Charming in its simplicity, while still reflecting a feeling of plentiful living and a right smart lot of contentments.

Built it was of slave-made bricks. All of them I'll wager made there on the grounds. Soft colorful Virginia hand-made brick they were, painstakingly laid with just the right width joints. A fine piece of work in every way.

And then, there swooped down from the North, the paint plague. And Audley fell. Admittedly pleasing as its painted effect may be, one can but regret the loss of that hidden beauty that is so surely back of that paint.

Reckon, however, you are right. There are a lot of drabish-yellowish no-account brick that have been, and are being made in Virginia, that it is sure enough a kindness to paint.

Furthermore, am not being so bold as to argue against the way some architects use ordinary low cost common brick, and then paint them. It does give a fairish likeable effect. There's a sure enough texture—a word which however, suspect has been used so kind of careless like, it's a bit shiny at the elbows.

One thing certain, none of you send down here for our Old Virginia brick, unless you want to sure enough solve your problem of getting not alone color and texture, but at once secure a time-toned effect. Bricks that are born old.

Seems like try as you will, there's no other brick that has all those attributes. There are a lot of reasons for it. Most of those reasons came to us by way of Mr. Jefferson, who has the reputation of being a more than passably good brick maker.

Whether it's making our hand-mades or mould-mades, we pretty much follow his methods. Even go so far as to call the squarish header size "Jeffersons."

In our next chat am going to keep that promise about Serpentine walls.

HENRY GARDEN
Brick Maker for
OLD VIRGINIA BRICK CO.
with Mr. Jefferson as a Guide.

OLD VIRGINIA BRICK
Old Virginia Brick Company
Salem, Virginia