The NEW Chase-Erskine copper radiator catalog of 20 pages, fully illustrated and showing installation details, appears in the 1934 issue of Sweet's Architectural Catalog just recently published. If you would like a separate copy of this radiator catalog for your office files, write to Chase-Erskine.

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INCORPORATED
Erskine Radiator Division
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THE NEW ELECTRIC STAIRWAY
developed by Westinghouse

INFLUENCES THE TREND OF MODERN TRANSPORTATION

Arrangement of Electric Stairways for Store Installations Similar to Those Being Installed in the Retail Store of Marshall Field & Company, Chicago.

Westinghouse electric stairways now being installed in Marshall Field & Company's retail store will present a number of unusual features including newly developed safety devices. Broad and inviting stairways will operate with such quietness that the comfortable speed with which one is carried either up or down will be scarcely noticeable. Such refinements as are apparent in the Westinghouse electric stairways made it possible for Marshall Field & Company, a leader in finer merchandising, to include this type of transportation in its modernization program for offering the best in service.

Westinghouse Electric Elevator Company

Westinghouse Elevators are the logical highways of modern architecture
COLOUR
IN INTERIOR DECORATION

BY JOHN M. HOLMES
Lecturer in Decoration at the Architectural Association School of Architecture, London

HERE at last is a book on colour which recognizes the fact that the colour of the physicist—the beam of light broken by a prism—is an entirely different matter from colour as used by the painter and decorator in pigment form. For instance, there is no separate colour purple, nor blue-green, in the solar spectrum. Then too, the spectrum colours are colours in the raw, not colours with which to work.

Here is an abandonment of the solar spectrum primaries for a new series of twelve pigment primaries, which make easily understandable an intelligent use of colour.

Moreover, the twelve colours which form the pigment primaries are not theoretical, but are colours that may be bought “in the tube.”

Nor is the author satisfied with making clear the various relationships between these pigment colours. He connects them up with the colours of woods, marbles, fabrics and the other materials used by the decorator, bringing them all on one palette. In all the literature of colour, there has been no such book as this, sound in theory, but also practicable in making easy a proper use of colour.

The volume consists of 92 pages, 8¾ by 12½ inches, profusely illustrated in full colour. There are supplementary illustrations of colour schemes by well-known architects and decorators for various interiors.

$7.50

CHARLES SCRIBNER’S SONS, New York

ARCHITECTURE AND ARCHITECTURAL BOOKS
A New Way
TO FIGURE MODERN BAR SPECIFICATIONS QUICKLY

An eighty foot horseshoe bar with a T-shaped back bar of ebony finish with chrome metal strips and a specially designed counterstep. Schlitz Winter Garden, Chicago. Brunswick planned and installed throughout.

YOU will find that a modern bar with its various units is subject to a few general measurements. To aid you in your bar planning and design a typical bar is reproduced here with the measurements indicated to guide your layout. On special bar equipment Brunswick maintains an Architectural Service Department whose resources are available at all times. The architect usually designs his own counter and back bar from which Brunswick builds equipment in the spirit of the architectural style indicated. There are sixteen Brunswick architectural service bureaus - one of them near you.

THE BRUNSWICK-BALKE-COLLENDER CO.
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BRANCHES AND DISTRIBUTORS IN PRINCIPAL CITIES OF THE UNITED STATES
New York Society of Architects

Colonel Louis E. Jallade was installed as president of the New York Society of Architects on the occasion of its annual dinner. Other officers inducted into office were: Alfred E. Eccles, George J. Cavalieri, and Maxwell A. Cantor, vice-presidents; Henry S. Lion, treasurer; Gregory B. Webb, secretary; J. J. Carroll, assistant secretary; and John T. Briggs, financial secretary.

The policy of the society under the new officers will include a close cooperation in the municipal efforts to eliminate slum areas, and with the Federal Government on public-works programmes. President Jallade took occasion to remark upon the need for improvement in the architectural schools. "At the present time," he said, "only a small minority upon graduation are qualified to pass the State requirements and get a registration to practice architecture. It is dishonesty to take not only the money, but four years of a boy's life to teach him, and then turn him out in the world with a certificate and let him believe that he is an architect, without any knowledge as to what the profession means."

Stockholm City Planning Competition

Instead of awarding a first prize of 20,000 kroner (about $5,000), a second of 15,000 and a third of 10,000, judges awarded three first prizes of 15,000 kroner each, as no solution seemed pre-eminent.

The judges consisted of three members of the Stockholm City Council; three Stockholm architects (Ragnar Östberg, E. G. Asplund, and Carl Bergsten); the official Stockholm City Planner, Albert Lillienberg; and two foreign members, Professor Hermann Jansen of Berlin and George L. Pepler, city planner for Great Britain and Wales.

The winning designs were: that submitted by Hans Luebke, Ett Rieger, Willy Wagener, and Willy Schoene of Berlin; the second, by H. Reissinger of Duesseldorf; and the third, by Paul Wolf and Hans Richter of Dresden.

The next step will be the preparation of an official plan in which ideas from various sources will be included. The judges called the English design plan the most daring; the American, the most monumental; and the Swedish, the most practical. Once the official plan is made up, all new buildings will have to conform to it. Only gradually, therefore, will the physiognomy of the city be changed.

New York State Roosevelt Memorial Commission

Governor Lehman recently announced the appointment of Aymar Embury II, architect of New York City, as a member of the State Roosevelt Memorial Commission, to fill the vacancy caused by the resignation of George Gordon Battle.

A. S. T. M.

The headquarters for the American Society for Testing Materials have been moved from the Engineers' Club Building in Philadelphia to more spacious offices in the Atlantic Building, 260 South Broad Street, in the same city. A large and more attractive board room has been planned, and an adequate reception room and members lounge greatly improve facilities for meetings of administrative committees.

Forthcoming meetings of importance are:


1934 Group Meetings of A. S. T. M. Committees, Wardman Park Hotel, Washington, March 5 to 9 inclusive.

Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, June 25 to 29 inclusive.

The technical feature of the Regional Meeting will be a symposium on Outdoor Weathering of Metals and Metallic Coatings, sponsored jointly by our Committees A-5 on Corrosion of Iron and Steel and B-5 on Corrosion of Non-Ferrous Metals and Alloys. A statement listing the papers and giving other details regarding participation will be sent in the near future.

New Courses at Columbia

Columbia University, in its University Extension Department of Architecture, announces an evening course in Urbanism. Instruction will be given by Carol Aronovici, Ph.D., and the course will deal with the creation, history, organization, equipment, conservation, and control of urban communities. The scientific study of community planning in their relation to social economy, public health, legislation, taxation, and planning organization will be analyzed from the point of view of recent achievements in both the United States and such European countries as Germany, France, England, Italy, and Belgium.

The course is designed to meet the needs of persons receiving training or already in practice in architecture, engineering, law, real estate, public administration, city planning, and housing.

There is also announced an evening course in Industrial Design, given by Mr. Harrison Gill—a course intended to familiarize the student with modern materials and processes in industrial design. The characteristics of materials, such as steel, alloys, glass, clay products, wood, and composition materials, are described, and the processes of the artisan and shop technician in selecting and shaping these materials are analyzed. The discussions are supplemented by inspection tours so that the student may observe, at first hand, the characteristics of materials and such processes as casting, moulding, pressing, cutting, and the electrical, chemical, and pneumatic operations.

There are also to be afternoon courses in Water-Color Painting, Drawing, and Design, under the instruction of Joseph Lauber, mural painter.

For further details, write the Director of University Extension, 49 West 116th Street, New York, N. Y.

(Continued on page 10)
This recent development by Otis, pioneers in stage-lifting equipment, provides new flexibility and speed of stage setting hitherto not possible.

The platforms are electrically operated, and the controlling devices can be pre-set so that the platforms will travel to any level or difference in levels. They will then operate synchronously and automatically. This electric operation eliminates all gearing previously required to accomplish this result. Any lift may also be operated individually at the will of the operator.

Full details of this apparatus as well as the new Otis orchestra and console lift (as installed in this theater) are available on application to the general office at 260 Eleventh Avenue, New York City.

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CHARLES Z. KLAUDER
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consideration to mechanical specifica-
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tions will it again be specified. Thus,
where wrought iron has served faith-
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records and experiences back up the
selection.

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gineers, we call "Pipe Prescription." Illustrated on this page are examples
of how Charles Z. Klauder has put this
engineering practice into effect.

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CONTENTS

FEBRUARY, 1934

Frontispiece: The Opera, Paris — 6:30 A.M.
   From the drawing in pencil by Malcolm P. Cameron

New Products . . . . . 65
   The second of our periodic surveys of building materials, methods, and accessories. Here are 268 items representing recent or immediately forthcoming contributions to the technique of building. These have been arranged and classified in accordance with The American Institute of Architects' filing system.

Ponte Vecchio, Florence . . . 90
   From the drawing in pencil by Malcolm P. Cameron

Chapel of Trinity College, Hartford, Conn. . . . . . . . 91
   Frohman, Robb & Little design a structure, the plan of which is based upon the English college chapels, where the students occupy the choir, and the nave is subordinated.

Zwaanendael House, Lewes, Del. . . 95
   "The Dale of the Swans" was the Dutch settlers' name for their new home in Delaware, established in 1631. E. William Martin, architect, has followed rather closely the architecture of the old Town Hall of Hoorn in designing this commemorative library and museum.

House of Vernon H. Brown, Southampton, N. Y. . . . . 97
   A long low house of shingles on the sand dunes, as designed by Polhemus & Coffin.

The Editor's Diary . . . . . 101

Alois Lang, Woodcarver . . . . . 103
   Coming from Oberammergau at the age of nineteen, Mr. Lang has carved ecclesiastical sculpture in wood for forty years.

Better Practice . . . . . 107
   W. F. Bartels continues his series of contributions prepared with the aim of bringing our detailing and specification writing abreast of advances in the crafts. This month it is brickwork; next month, plastering.

Architecture's Portfolio of Church Doors . . . . . . . . . 111
   A collection of sixty photographs.
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IS THE FOURTH DIMENSION

Sixty feet long—30 feet wide—average depth 4 feet—and chlorinated. The fourth dimension that assures safe, sterile water. The swimmer is never away from the protection of residual chlorine. It is everywhere in the pool. Into every corner—and from top to bottom—chlorine carries a residual disinfectant—lasting protection against every source of contamination. That is why leading sanitarians and health authorities call chlorination . . . "by the use of proper apparatus . . . the most satisfactory method of pool disinfection."

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NEWARK
NEW JERSEY
THE OPERA, PARIS—6:30 A.M.
From the drawing in pencil by Malcolm P. Cameron

ARCHITECTURE
New Products

Once again, as in September, 1932, we have sought to bring together the contributions recently made to the science of building. In this period when construction volume has fallen far below normal, the research and inventiveness of the industry has not flagged, as these pages witness. Here, then, are new tools put into the hands of the profession, for the creation of better architecture. The arrangement is in accordance with the filing system devised by the A. I. A.—Editors.

3. Masonry Materials

“SUPER HY-TEST” MASON’S CEMENT. In conjunction with Super Cement Co., a development and marketing of a cement which imparts qualities in masonry cement for brickwork such as are produced by Super Portland cement in concrete. Hy-Test Cement Co., Inc., 1616 Walnut Street, Philadelphia, Pa. 1

NEW INSULATING BRICK. A pulverized shale brick having top-to-bottom openings for pocketing dead air. Stands crushing test of 110 tons; made in smooth or texture face in range of colors. Cost low enough so that it can be used for backers as one would use commons. Old Virginia Brick Co., Salem, Va. 2

B. & W. “80 JUNIOR” FIREBRICK. Developed to meet conditions existing between the moderate service economically met by fireclay refractories and the severe conditions met by B. & W. “80” Firebrick—fields in which special bricks of the alumina-silica class are now used but which prove costly under conditions near their upper service limits. The Babcock & Wilcox Co., 85 Liberty Street, New York, N. Y. 3

EMULSIFIED CARBON BLACK. An integral pigment for dark colored concretes and mortars; produces any desired shade between white and intense black. Design is heightened, discolorations eliminated. Drives and walks become non-glaring. The color is permanent, uniform, safe and economical. Binney and Smith Co., 41 E. 42d Street, makers of “Hiblak,” Godfrey L. Cabot, Inc., 440 Old South Blvd., Boston, makers of “Charon.” 4

“STONE MASON’S BRIXMENT.” A non-staining, waterproofed cement for setting limestone and other building stone. It has all the advantages of Brixment for masonry—extreme plasticity, freedom from efflorescence and fading, great strength and uniformity. It is mixed with sand and water only—no lime is needed. Approved by the Indiana Limestone Association, Louisville Cement Co., Louisville, Ky. 5

4. Concrete and Monolithic Construction

STEEL BEAM AND LIGHTWEIGHT PORETE FILL FLOOR SYSTEM. A lightweight cellular concrete of about 50 pounds per cubic foot is poured around a system of steel joists on close centres, resulting in a lightweight fireproof floor with flat ceiling and excellent sound and heat insulation. Can be erected by any contractor under Porete Company supervision. Porete Mfg. Co., North Arlington, N. J. 6

PERFORETE SLABS. A lightweight floor and roof slab made of dense vibrated concrete with longitudinal hollow spaces, reinforced with steel rods up to 8’ lengths. Has been used extensively in Europe. Provides a smooth ceiling and good heat-insulation. Porete Mfg. Co., North Arlington, N. J. 7

PORETE LONG-SPAN FLOOR SYSTEM. Using a precast dense concrete hollow filler unit in long-span flat-ceiling floor and roof construction. Unit length, 6’ (also 4’ and 5’), reinforced to carry temporary floor loads before T-beam is poured. Spans 10’ to 25’; floor loads, 40-125 pounds per square foot. Porete Mfg. Co., North Arlington, N. J. 8

GYPSTEEL CEILING PLANK. A companion product to the floor and roof plank, designed to provide flat ceilings under, and to furnish full fire protection for, steel members. Also used beneath trusses in theatres, hangars, garages. 2” x 12” x 6’, shiplapped sides and ends. Structural Gypsum Corp., 535 Fifth Avenue, New York, N. Y. 9

“STONEHARD RESURFACER.” Floor repair material, mixed with sand and cement, laid cold, 3/8” thick. Chipping, roughing or acid-washing unnecessary. Handyman can bond it to concrete, wood, brick, wood block, asphalt, or composition floors. Ready for traffic in 36 hours. Will not dust. Resilient and quiet. Stonehard Co., 401 No. Broad Street, Philadelphia, Pa. 10
5. Brickwork

LOCK BRICK CONSTRUCTION. A kiln-burned brick veneer for old and new work. Total thickness, applied to wall, 13/4"; weight per sq. ft., 6 lbs. Wall covered with waterproof building paper; nail on the special steel field sheets and corner sheets; apply waterproof cement mortar; key on the lock brick. Tub-Hill, Inc., Pittsburgh, Pa.

8. Stone Work

MOUNT AIRY SAWED-BED ASHLAR. Cheaper to produce, transport, and set than rubble and ashlar. May be used as a veneer. Rises are in accordance with specifications, lengths random up to 10'. Suitable for coursed or broken range work. Sold by the face foot. J. D. Sargent Granite Co., Mount Airy, N. C.

"OTTER CREEK" FLAGSTONE AND RUBBLE. A natural metamorphosed sandstone or quartzite formation, harder than marble. Quarried in flat, smooth-face strata, varying from 1/2" to 20" in thickness. Colors: pastel shades of gray, buff, pink, and lavender. For interior floors, wainscot, steps, terrace, and garden. Cumberland Stone Co., Inc., Crab Orchard, Tenn.

"ROSTONE." A new synthetic stone made in a very wide range of permanent colors and color effects. It contains no stone colors, with a surface that is easily cleaned with soap and water. Economically set by experienced bricklayers. Federal Seaboard Terra Cotta Corp., 10 East 40th Street, New York, N. Y.

MACOTTA. A new lightweight masonry unit surfaced with porcelain-enamedelled iron of non-fading colors. Can be formed to design in units up to 20 square surface feet and from 1" to any desired thickness. Its color treatment, beauty, and ease of cleaning make it an ideal material for remodeling purposes. Freedenburg & Lounsbery, 101 Park Avenue, New York, N. Y.

10. Block Construction

STEEL JOIST AND ARCH BLOCK FLOOR SYSTEM. Two exceedingly light precast concrete arch blocks are set between lightweight steel joists on 30" centres; a cement grout is poured between the blocks, resulting in a light floor with flat ceiling. Columbia University tests show this floor to resist a four-hour fire. Porete Mfg. Co., North Arlington, N. J.

12. Roofing, Sheet Metal and Skylights

"GENASCO RESATURATOR." To resaturate roofing felts which have become dry and lifeless though not disintegrated. To be used only on portions where felt has become exposed. Not a final protective coating. The Barber Asphalt Co., 1600 Arch Street, Philadelphia, Pa.

"GENASCO RESURFACER." A combination of soft and relatively non-hardening asphalt boiled up with asbestos fibres. Provides a tough yet plastic film 3/6" thick, flowing into cracks and adjusting itself to stresses without breaking open even in cold weather. The Barber Asphalt Co., 1600 Arch Street, Philadelphia, Pa.

"SOLKA." A cellulose base to replace rag felt for asphalt shingles and roofings. Absorbs 30-60 percent more asphalt. Stronger, tougher, more pliable. The Brown Co., Portland, Me.

ANACONDA "ELECTRO-SHEET" COPPER. The perfection of a method for producing wide, thin copper sheets by electro-deposition has led to a new
development in built-up roofing—alternate layers of "Electro-Sheet" Copper and asphalt. Such a roof is easily applied and low in cost. Because the non-porous copper protects the asphalt indefinitely, exceptional durability is provided. Anaconda Copper Mining Co., 25 Broadway, New York, N. Y.

BIRD "PROSLATE" ROOFING. A roll 37' long contains 111 sq. ft. Has a strip 3" wide along one edge from which the slate surfacing is omitted. This is nailed down, overlapped by nextrow, and the joint cemented with a special quick-setting cement. Bird & Son, East Walpole, Mass.


EDWARDS STANDING CAP SEAM. For direct application of corrugated metal to steel purlins. Useful in construction of steel buildings, such as warehouses, where metal is held by cleats. Can be applied by one man as against the two required for laying ordinary corrugated. The Edwards Mfg. Co., Eggleston Avenue and Fourth Street, Cincinnati, Ohio.

ALLEN ELECTRO-WIND TURBINE VENTILATOR. An exhauster designed on the free-wheeling principle; wind-driven, it handles the ordinary air, rain, sleet, snow, salt air, smoke, gases. Wind-driven in any air speed down to two miles per hour. U. S. Ventilator and Power Corp., 184 Summer Street, Boston, Mass.

SWARTWOUT IMPROVED ROTARY BALL-BEARING VENTILATORS. Revolve on special bronze bearings; wind-driven; of marked sensitiveness. Louver dampers easily controlled from inside of building. The Swartwout Co., 1851 Euclid Avenue, Cleveland, Ohio.

MODERNISTIC STEEL CEILING. Adapting the stamped ceiling to the progress of interior and exterior decoration and architecture. Lends itself to schemes in three or four colors. Furnished with re-pressed beads and die-cut nail holes. The Edwards Mfg. Co., Eggleston Avenue and Fourth Street, Cincinnati, Ohio.

13. Structural Steel and Iron

"ROSTONE-AND-STEEL" SYSTEM OF CONSTRUCTION. A new method of combining a light steel frame of pre-fabricated members with standardized exterior wall slabs of "Rostone," the new colored synthetic stone. First shown at the Chicago Fair, it offers fire-proof, earthquake-proof and termite-proof construction at very low cost. Rostone, Inc., 308 Main Street, Lafayette, Ind.

REVOCON SYSTEM. Utilizes strong aluminum-alloy extruded shapes, applied directly to skeleton-steel superstructure on outside building walls, on which preformed metal sheets are sprung and hooked. A metallic pointing compound provides a weather-proof joint. Insulation can be attached to rear. Glass can be fitted snugly. Aluminum Co. of America, Pittsburgh, Pa.

14. Miscellaneous Steel and Iron

VON DUPRIN WIND- AND WATER-RESISTING THRESHOLD. Useful and fuel-saving on panic-bolt equipped doors and on others where independent action of each door is necessary. Vonne-gut Hardware Co., Indianapolis, Ind. 37

MODERNISTIC DAYLIGHT SERVICE STATIONS, SERIES 33-E. Of steel and glass, shop-fabricated. Available in nine series, from smallest station up. Easy to decorate by following trademark color scheme. The Edwards Mfg. Co., Eggleston Avenue and Fourth Street, Cincinnati, Ohio. 38

15. Ornamental Metal Work and Physical Properties of Metals

ALUMINUM INLAY IN MICARTA. A wide range of colors has been developed for the aluminized inlay used in decorating Micarta panels. Any decorative design can be incorporated at slight cost, and this new phenol-resin material lends itself well to the embellishment of bathroom, kitchen walls, store fronts, and related uses. Aluminum Co. of America, Pittsburgh, Pa. 39

NEW ALUMINUM WINDOW ALLOY. A new alloy has been developed for window frames and sash, having a high corrosion resistance and higher tensile strength. It is more easily finished and machined. Can be obtained in all forms with the exception of castings. Aluminum Co. of America, Pittsburgh, Pa. 40

NEW PATTERN METALS. To offer a pleasing decorative variation from the usual chrome metals, there have been perfected four striking surface patterns: diamond, square, horizontal, and diagonal. Available in bright or satin finish, and in any gauge. Readily workable. American Nickeloid Co., Peru, Ill. 41

PROCESS FOR DECORATING STAINLESS STEEL. Polished 18-8 stainless sheets are glued to plywood and then etched by a process permitting three depths of cutting, and three distinct shadings. United States Plywood Co., Inc., New York, N. Y. 42

ROBERTSON BONDED METAL. Sheet steel to which fibrous layers (felt, cellulose paper, etc.) are attached with metal adhesives, producing close union. Bond is unaffected by moisture, temperature, or forming operations. Adaptable to wide variety of uses. H. H. Robertson Co., Grant Bldg., Pittsburgh, Pa. 43

CLEANERS FOR ARCHITECTURAL ALUMINUM. A complete line of cleaners and protective coatings for architectural aluminum—cleaners, protective waxes, and refinishing compounds for every type of aluminum finish. The Skybryte Co., 1919 E. 19th Street, Cleveland, Ohio. 44

16. Fire-Resisting Doors, Windows and Trim

ANDERSEN CASEMENT WINDOW. Combines the weathertight advantages of wood construction with the modern narrow-line beauty of metal. Tests show 16.2 per cent less air leakage than average weather-stripped double-hung window. Comes complete, ready to install; frame primed with aluminum paint; muntins of aluminum or wood; screen-fitted; removable double glazing. (Illustration at right.) Andersen Frame Corp., Bayport, Minn. 45

17. Special Doors and Windows

LUNKEN SINGLE-HUNG SPANDREL WINDOW WITH SCREEN AND SCREEN STORAGE. A metal window adaptable to modern wall-bearing construction, with screens that slide down back of spandrel, sash that slide down over spandrel. Sash operated without opening screen. Window washing done from inside the room. Corry-Jamestown Mfg. Corp., Corry, Pa. 46
ENTERLOCK FABRICATED BUILDING LUMBER, a system of providing a fixed-quality, kiln-dried product, constant as to size and shape, 75 per cent of which is pre-cut ready to place. Does not limit architectural expression. Framing members go together with Enterlock (patented) wedge-shaped dovetailed joint. Long-Bell Lumber Sales Corp., Kansas City, Mo.

ANDERSEN "NARROLINE" DOUBLE-HUNG WINDOW. Combines modern narrow mullions and narrow trim with the time-tested principle of counterbalancing. Single flat weight with pulley replaces two ordinary weights. Bronze weatherstripping is standard equipment. A special "Heavy Duty Narroline" is also made for large windows. Andersen Frame Corp., Bayport, Minn.

KAWNEER "SEALAIR" CASEMENT WINDOW. Adapted for use in buildings where air-conditioning systems are installed. These windows can be built as continuous units from floor to floor, and glazed with structural glass at floor-level spandrels. Any combination of single and double glazing, with operating or fixed sash. The Kawneer Co., Niles, Mich.

HARBORD SAG-NOTT DOOR. Locked at each corner joint with a cotter-keyed joint that cannot give. Prevents sagging from sprung joints. Joint is built in under pressure, the pins locked through the dowels. Panels of Harbord plywood. Harbord Plywood Corp., Hoquiam, Wash.

FORMICA DOORS. Flush-type, complete except for hardware. Doors are dark red and black, the exterior veneer being a grade of Formica known as refinishing stock. Can be refinished by sanding lightly if marred or injured. The Formica Insulation Co., Cincinnati, Ohio.

"UNIPAK" WINDOWS AND FRAMES. Consist of two separate sections: outer frame for nailing to studding, and a factory-assembled inner frame with sash hung, weatherstripped and fitted with spring balances, all waterproofed against building moisture. Farley & Loebischer Mfg. Co., Dubuque, Iowa.

"ARMORPLY." Thin electrolytic copper sheets produced by American Brass Co. mounted on plywood. The combination of one, two or three-ounce copper with plywood produces a panel of minimum weight, great stiffness and durability. United States Plywood Co., Inc., New York, N. Y.

FIFIELD "IN-A-WALL" TABLE. Built in between studding. Lowers from wall space somewhat like ironing-board, but with leg support and hinged brackets for side-extension folding leaves. Furnished complete with cabinet. In-a-Wall of Painesville, Ohio.

FIFIELD "IN-A-WALL" BED. Electrically operated to lower from ceiling panel. Does not fold, and may be put away made up. Full-size bed, with bottom panelled to match ceiling. In-a-Wall of Painesville, Ohio.

"CHARTER OAK" PRE-FINISHED FLOORING. Completely finished at the factory with penetrating varnish and wax. A durable and long-wearing finish. Maintained at minimum of expense. Made in 1/4" width only, and in a single grade that combines both Clear and...
Select. Lengths unusually good. The Cromar Co., Williamsport, Pa. 56

"BLOXONEND" FLOORING. 13/4". Yellow pine blocks dovetailed endwise on to long base boards, for use in gymnasiums, shops, corridors, store aisles, etc., where maximum strength is not needed. Carter Bloxonend Flooring Co., 902 Walnut Street, Kansas City, Mo. 57

RU-BER-OID "NEWMARBLE." Made from asbestos and cement in panel form, with a lustrous finish that simulates marble. Eight marble colors—an integral part of each panel. Approximate weight 2 lbs. per sq. ft. Panel size, 32" x 48". Thickness, 1/4". Cap moulding and base made in all "Newmarble" finishes. Ruberoid Co. 58

BUILDING-PAPER TO RESIST DRY ROT. A recent development in Sisalkraft, the sisal-reinforced building-paper, is a treatment of the sheet to make it resistant to dry rot, mildew, and other fungi. Every one familiar with the damage done by dry rot in concealed portions of a building will appreciate the advantage of eliminating this possibility of damage to a material whose service depends on its remaining intact. The Sisalkraft Co., 203 W. Wacker Drive, Chicago, Ill. 59

COPPER-ARMORED SISALKRAFT. A new combination of electro-deposit copper and the tough sisal reinforced building-paper, Sisalkraft, offers the advantages of flashing in an economical and easily workable form. This new product is made with copper of either one or two oz. (per sq. ft.) weight. For applications around door and window openings, for spandrel waterproofing and for basement waterproofing. The Sisalkraft Co., 203 W. Wacker Drive, Chicago, Ill. 60

"TUFXLEX." A combination of patented creped paper cemented to a heavy plain sheet with asphalt. A flexible building paper, sufficiently stiff for easy handling. Does not become brittle in cold weather, nor limp on hot days. Rough and smooth waterproof surfaces adapt it to conditioning concrete. Wrotek Conversion Co., Cloquet, Minn. 61

20. Furring and Lathing

JUNIOR LATH. A small diamond mesh lath made in standard weights and types of steel. Mesh is about 3/5 less than usual diamond mesh lath. More keys to the sheet, saving plaster and labor. When corrugated it forms a self-furring base. United States Gypsum Co., 300 W. Adams Street, Chicago, Ill. 62

"LATITHE." A painted and baked diamond lath, "Meshtex," attached to Prime Kraft Board as backing. Size of sheets, 27" x 96". The Kraft Board has proper absorption for correct plaster bond and wiring. Weights, 3, 3.3, 3.8, and 4.2 lbs. per sq. yd. For stucco, galv. lath with waterproof backing is furnished; weights, 3.4 and 4.5 lbs. per sq. yd. Penn Metal Co., 60 E. 42d Street, New York, N. Y. 63

SHEETROCK ARMORED JOINT. A system of strengthening and concealing joints, consisting of a perforated strip of metal alloy and a special cement. Cement is buttered over joint (and nailholes), strip laid on, and broad knife drawn down, forcing cement up through holes to embed the metal. United States Gypsum Co., 300 W. Adams Street, Chicago, Ill. 64

SIMP-L-ON SYSTEM OF WALL FURRING. An exterior wall furring made of galvanized copper-bearing steel which provides a minimum air space of 1", but is adjustable for any depth required. Metal sleeve built in masonry, adjustable bracket arm and V-shaped horizontal furring strips clipped to arm. Simplon Products Corp., 551 Fifth Avenue, New York, N. Y. 65

21. Plastering

"STONE VENEER." Quartz bonded with waterproof gums to a 5-ply rope-stock paper, then baked. Durable, waterproof, washable. Applied over plaster or merely over insulating board. In two sizes: 7/8" x 16" and 3/8" x 16"; also in rolls 24" wide. In 3 Indiana limestone shades. Minnesota Mining & Mfg. Co., St. Paul, Minn. 66

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

GLASS BLOCK. Hollow, non-load-bearing material for exterior or interior use. Units, 3/8" x 8" x 3/8". Laid up in mortar, requiring no new technique or special skill. Clear or colors. Used in Owens-Illinois Building, Chicago Fair. Owens-Illinois Glass Co., Toledo, Ohio. 67

23. Floor and Wall Tile and Accessories

HOOD'S ALLUVIAL CLAY TILES. Made by hand in any Old Country authentic patterns. Soft and restful in color and texture. Some mixtures when waxed will take on an antique heather-brown appearance. A Bourbon blend of several deposits of superior washed-in clays, opposite in effects to metallic shales. They will last more than a lifetime. B. Mifflin Hood Co., Daisy, Hamilton County, Tenn. 68

INDIVIDUAL TILE DESIGN. Through medium of colored ceramic pencils, special tile and group designs may be created from own drawings. Fireplace facings, murals, bar decorations, etc. Artist draws directly on the tile before it is fired. Arnold & North, Inc., 203 E. 43d Street, New York, N. Y. 69

SPARTA "SAFETY-TRED" FLOOR TILE. In these vitreous ceramic mosaic tile for walls and floors, a new shape is the stair nosing, to complete the floor tile line. Nosing itself almost square, so that end return fits well into wall designs. Non-slip ribs project 3/4" above face. The Sparta Ceramic Co., 110 E. 42d Street, New York, N. Y. 70

"HERMOSA" TILE. A porcelain-like tile in white and colored glazes, "Bright" and "Matt" surfaces. In all standard sizes, including trim. Production formulas improved so that guarantee against crazing is now extended to 3 yrs. For all wall surfaces where a perfectly sanitary non-crazing tile is required. American Encaustic Tiling Co., Ltd., 16 E. 41st Street, New York, N. Y. 71

NON-ABSORBENT TERRA-COTTA TILE. Developed for use in subway, traffic tunnels, exterior swimming-pools, where moisture-resisting clay body and glazed surface are necessary. An installation is the new Vehicular Traffic Tunnel now being constructed in Boston. Atlantic Terra Cotta Co., 19 W. 44th Street, New York, N. Y. 72

TUBRIC FACE TILE. For interior wall-finishing units. Load-bearing, with
cement, finished with a hard, highly characteristics as their other thickness, slip when wet; unaffected by weather.


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slip, even at nosing. Flat, level surface, either gloss or eggshell ceramic surface. For face size of 8" x 4 1/2" there are three thicknesses: 3/8" for load-bearing, 3/4" for wainscot, 1 1/2" for light veneering. Machine-ground to accurate size and angles. Colors: white, black, twenty-five pastel shades; gloss, eggshell, or textured. Usual line of shapes. American Enameded Brick Corp., Graybar Bldg., New York, N. Y.

73

STEDMAN REINFORCED RUBBER TILE. New available in 3/8" thickness. Except for gauge, it has exactly the same characteristics as their other thicknesses, and is installed over concrete or wood floors with the same guarantee. Stedman Rubber Flooring Co., South Braintree, Mass.

75

INLAID MICARTA. Micarta inlaid with richly colored anodized aluminum is especially adaptable to wall paneling and murals. Any design may be cut to shape with suitable dyed inlays and moulded in the gleaming surface of the micarta. The finished panel is noted for its richness and durability. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

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RU-BER-OID "NEWTILE." Base is a strong, rigid sheet of asbestos-cement, finished with a hard, highly polished surface scored at 4" intervals, closely resembling ceramic tile. Obtainable in white, red, black, and three pastel shades. Sheets, 22" x 48", 1 1/4" thick. Base and cap moulding 4" and 2" respectively, in 48" lengths, 3/8" thick. Ruberoid Co., 95 Madison Ave., New York, N. Y.

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"NU-WOOD" BEVEL-LAP TILE.

Wall and ceiling covering, combining sound absorption, heat insulation and permanent decoration. In two textures—rough mat and smooth surface; and in uniform or variegated colors: 1/2" and 1" thickness in many sizes. Wood Conversion Co., Cloquet, Minn.

78

TYPE A ACOUSTIC-CELOTEX. Cane-fibre tile for noise quieting and acoustical correction. Thickness, 3/8", in regular sizes of 6" x 12", 12" x 12", and 12" x 24". Lower in price than other three types, and especially adapted for large areas of moderately efficient absorption material—school and hospital corridors, classrooms, cafeterias, etc. The Celotex Co., 919 No. Michigan Avenue, Chicago, Ill.

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SEALED JOINT GLASS WALLS. Component parts are vertical steel studding, horizontal metal purlins, glass wall units, metal anchors, waterproof mastic. May be used for new walls or facing old ones; applicable to both exterior and interior construction. Glass units transparent or translucent, clear or colored, smooth or textured. Sealed Joint Products Co., Inc., 60 E. 42d Street, New York, N. Y.

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24. Plastic Flooring

"EMULMASTIC." A new native lake emulsified asphalt which when mixed with Portland cement and aggregate forms a mortar for patching or resurfacing factory floors, trucking lanes, stair treads, etc. Applied cold; ordinary masonry resurfacing over week-end. Black; can be painted. The Barber Asphalt Co., 1600 Arch Street, Philadelphia, Pa.

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SYNTHETIC RESIN FOR ANTI-CORROSIVE COATINGS. Bakelite XR-1329, a synthetic resin, 100 per cent phenolic, of special value in the production of oleo-resin varnishes; employed directly or as the vehicle of highly corrosion-resistant primers and paints. These varnishes are exceptionally moisture-proof and alkali-resistant. Bakelite Corp., River Road, Bound Brook, N. J.

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SYNTHETIC RESIN FOR LIGHT COLORED PAINTS, VARNISHES AND ENAMELS. Bakelite XR-4036, a synthetic resin yielding light colored oleo-resin varnishes which remain clear although thinned entirely with petroleum solvents. These varnishes, and the paints and enamels made from them, are exceptionally free from skinning, show little or no after-yellowing, and possess marked resistance to weathering. Bake-lite Corp., River Road, Bound Brook, N. J.

83

"DUTCH BOY" LIQUID DRIER. This is a properly balanced drier, especially designed for use as a production agent in white-lead paint. It is uniform, strong, and efficient. Sold in half-pint, pint, quart, and gallon sealed cans. National Lead Co., 111 Broadway, New York, N. Y.

84

"DUTCH BOY" ALL-PURPOSE SOFT PASTE WHITE-LEAD. A new-type soft paste white-lead which, in addition to being quick-mixing, can be used for inside flat or eggshell as well as outside gloss painting. Contains pure white-lead, pure linseed oil and a little turpentine—nothing else. 12 1/2, 25, 50 and 100 lb. steel packages. National Lead Co., 111 Broadway, New York, N. Y.

85

"DUTCH BOY" COLORS-IN-OIL. The new paste colors that can be added to paint without thinning. True in color tone. High in tinting strength. Easy to use. Especially suited for tinting white-lead paint. Line includes all colors in common use. Half pint, quart, and gallon cans; also tubes. National Lead Co., 111 Broadway, New York, N. Y.

86

"TONE-PHLEX" PENETRATING VARNISH. Penetrates the wood, binds fibres together and increases the wood's resistance to wear. Contains no waxes or non-drying oils and will not raise the grain. Will not show an overlap when a worn spot is refinished. Can be applied

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with cloth, brush, or mop. Any color available. The Cromar Co., Williamsport, Pa.

COLORED "MASTERSEAL" WATER PAINT. Using a bituminous emulsion, with colors as a base. May be applied on damp or dry masonry surfaces, including fresh lime plaster or Keene's cement as soon as set up—either by brush or spraying. Will not discolor or rub off; may be washed. Although a water paint, it produces a waterproof surface. The Master Builders Co., 7016 Euclid Avenue, Cleveland, Ohio.

DEGRACO SYNTHORIZED PROCESS. Produces a paint film that is absolutely lime proof, with high resistance to acid fumes, acid water and other destructive agencies. It is also used in "Duralum," an aluminum finish. Detroit Graphite Co., Detroit, Mich.

"MIRA-LITH" One-coat paint for Celotex, Insulite, Nu-Wood, etc. It bridges matted fibres instead of filtering in as do ordinary paints. Seals smoothly, washable and waterproof, in one application without sizing. Mitchell-Rand Mfg. Co., 51 Murray Street, New York, N. Y.

NEW BAKE LITE FLEXIBLE COATING RESINOID. A phenolic resinoid of great flexibility, highly resistant to oils, common solvents, and mild alkalis and acids. It is produced in a wide range of colors, and may be applied by calendering to fabric for a great variety of uses—from ladies' evening slippers to shower curtains and wall covering. First employed for waterproof surgical adhesive. (Developed in collaboration with the Revolite Corporation.) Bake lite Corp., River Road, Bound Brook, N. J.

ALUMILITE PROCESS. This anodic treatment of aluminum, giving the metal a most durable surface, is recommended for store fronts. It requires less maintenance than most other types of store-front materials. Aluminum Co. of America, Pittsburgh, Pa.

CHEMICALLY RESISTANT INTERIOR COATINGS. Employing, over the maker's rust-inhibiting primer, a finishing coat of aluminum bronze or other suitable pigment in a 25-gallon varnish based on Bakelite XR-1329 (or, for lighter colors, XR-4026), there is provided exceptional protection to machinery and equipment subjected to corrosive influences, as in a chemical factory. Bake lite Corp., River Road, Bound Brook, N. J.

CORROSION-RESISTANT EXTERIOR COATING. By employing, over the below described primer, a finishing coat of aluminum bronze in either a 50-gallon or 12½-gallon varnish based on Bakelite XR-1329 resin as vehicle, exceptionz protective is afforded structural steel. Of particular value as a coating for bridges over railroads, or for steel exposed to salt-laden air. Bake lite Corp., River Road, Bound Brook, N. J.

RUST-RESISTING PAINTS. Freshly made-to-order paints, for industrial, marine, railroad, buildings (exterior and interior), bridges, etc. Vehicle is a high-grade gum. Made to suit individual conditions. Artic Chemical & Combustion Engineering Corp., 209 King Street, Brooklyn, N. Y.

26. Glass and Glazing

"AKLO" GLASS. Of special chemical composition which has the property of absorbing heat. Transparent with slight blue-green tint that is unobjectionable. Absorbs the infra-red rays excluding summer heat. Is more resistant to sudden temperature changes than ordinary glass. For many places where heat from sun or from electric lights should be excluded. Formula by Corning Glass Works. Libbey-Owens-Ford Glass Co., Toledo, Ohio.

27. Hardware

MODERN TIMBER CONNECTORS are inexpensive devices for increasing efficiency of timber framing by increasing joint strength. The illustration shows but one type of several that were introduced in 1933 in America through the U. S. Department of Commerce, and thoroughly tested by U. S. Forest Products Laboratory. Timber Engineering Co., 1337 Connecticut Avenue, N. W., Washington, D. C.

Caldwell Type S Sash Balance. A new style pressed-steel balance designed for residential sash used with plank frames and narrow millions.

"UNIQUE" WINDOW BALANCE. Fits in ploughed side rails of sash, eliminating weight-boxes, pulleys, cord, and pulley-holes. Installed after all trimming and incidental work for windows has been finished. Affords narrow millions and narrow trim. S. H. Pomeroy Co., Inc., 134 E. 134 Street, New York, N. Y. (in association with Unique Balance Co.).

"DUOFOLD" PARTITIONS. Under A. C. F.-Fairhurst patent, partitions are divided into a given number of doors of specified type and thickness. Sections are hinged in pairs, with invisible hinges. Partitions roll on ball-bearing casters on small track flush with floor. Top guides in steel groove. Top and bottom vertical adjustment. American Car and Engineering Corp., Inc., 134 E. 134 Street, New York, N. Y.
RAWL-ANCHOR. An improved one-piece, double-ended double-expanding anchor. Will hold any size bolt from 1/4" to 1" in masonry. Double aluminum alloy cones when caulked force lead out to grip. The Rawlplug Co., Inc., 98 Lafayette Street, New York, N. Y.

CONCEALED OVERHEAD DOOR HOLDER, G-J-100. For single and double acting doors, 26" to 48". Mechanism mortised in top, showing only flat bar to pivot in head, when open. Engages and holds door at 90°. Safety release and encased shock-absorber. Not affected by door sagging. Glynn-Johnson Corp., La Porte, Ind.

LORD LEICESTER HARDWARE DESIGN. Cast of hard white-bronze, reminiscent of the craftsmanship of the iron worker of olden days. Each piece individually hand-finished. The illustrations show only a few of the available pieces. Sargent & Co., New Haven, Conn.

Caldwell SAFETY DOOR GUARD. A combination safety guard and ventilator for residential doors. May be locked in the open position to permit ventilation and prevent slamming or rattling. Made in polished bronze. Will fit any door. The Caldwell Mfg. Co., Rochester, N. Y.

Rixson CHECKING PIVOT HINGE. On lavatory doors, toilet stalls, office rail gates, a patented pressure-equalizing valve opens if excessive strain is exerted and produces a uniform predetermined pressure. Prevents slamming and saves damage to partitions. Mounts either to open or close the door. The Oscar C. Rixson Co., Chicago, Ill.


FRENCH MORTISE LOCK. Doing away with the necessity of major excavations in door woodwork, weakening its structure. One cut with an auger is all that is needed. Catches flush with woodwork and always in line with the strike. For inside and outside doors. French-Mortise Lock Co., 551 University Avenue, St. Paul, Minn.

LOK-CROWNER. A two-piece device which seals and conceals exposed screw and bolt heads, and also locks the screw, bolt or nut so that it cannot come off from vibration or shrinkage. Rustproof. Bakelite caps for insulating on electrical assemblies. The Rawlplug Co., Inc., 98 Lafayette Street, New York, N. Y.

THE CROWNER. A simple one-piece device which seals and conceals exposed screw and bolt heads. Rustproof and made to match any desired finish. Prevents tampering with bolts or screws. Prevents loosening or tightening by hand. Economical compromise between hand operation and full motor-driven control. Barber-Colman Co., Rockford, Ill.

WESTINGHOUSE CENTRE OPENING DOOR HANGER. For use on power-operated and manually operated doors. The drive from one door to the opposite is accomplished by a rubber-covered steel cable operating over a pair of sheaves, one placed at each extremity of door to form a continuous loop, with one door attached to upper cable, one to lower. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

SASH OPERATING APPARATUS. As an improvement, simplifying and protecting concealed parts, system provides for concealing these in wall chases, enclosed in steel casings, with adjustable brackets for support, and with access plates. Avoids collecting dirt and plaster in actuating parts after installation. Lord & Burnham Co., Irvington, N. Y.

WHITCO TRANSOM AND AWNING SASH HARDWARE. Designed for schools, gymnasiums, industrial and public buildings, for sash ranging from 18" to 54" in height. Sash can be held open at any angle; friction adjustable to meet operating conditions. Carpenter can install. Vincent Whitney Co., 130 Tenth Street, San Francisco, Calif.

ALERT ELECTRIC DOOR CONTROL. All-electric, for opening, closing, locking; sliding, swinging or overhead doors. Particularly for garage and warehouse, but adaptable for outside gates, etc. Switches may be push-button, lock, or tread. The Alert Electric Door Control Co., 1948 So. Los Angeles Street, Los Angeles, Calif.

ELECTRIC OPENER FOR "BAR-COL" OVERDOORS. Key switch in driveway post releases magnetic latch, doors being raised by counterbalancing spring, quietly braked. Doors closed by hand. Economical compromise between hand operation and full motor-driven control. Barber-Colman Co., Rockford, Ill.

"GARAGE BOY" AUTOMATIC DOOR OPERATOR. Mode of power from weights on wall, for hinged doors opening out. On going out, doors are opened by hand; car depresses runway contact to close them. On entering, car opens doors by runway contact; operator closes them by hand. No slamming. Purity Door-Operator Co., Inc., 381 Fourth Avenue, New York, N. Y.

"MIGHTY MIDGET" ELECTRIC GARAGE DOOR OPERATOR. For
28. Furnishings

METAL FOLDING CHAIRS. For various auxiliary seating purposes. All bracing connections securely riveted. Will not tip or collapse even with pressure at extreme outer edge of seat. Variety of finishes and upholstery. The Stewart Iron Works Co., Cincinnati, Ohio. 121

METAL CABINETS. For hospital use, free-standing or recessed, made of Allegheny steel. A recessed wall cabinet with glass doors; a free-standing cabinet for hospital and laboratory use; a recessed tall cabinet with glass doors above, steel below, for medical supplies, etc. Watson Mfg. Co., Jamestown, N. Y. 122

SHAW-WALKER DOUBLE-PURPOSE COUNTERS. Recessed to include box-drawer sections, coin and currency trays, swinging gates, four styles of tops, continuous backs of two grades, foot rails, screens, base moulding. The Shaw-Walker Co., Muskegon, Mich. 123

STORE DISPLAY EQUIPMENT IN METAL. A designing and planning service to architects on store and display equipment. Each problem individual, with stock or special cases, such as in John Wanamaker’s Men’s Store in Philadelphia. The W. S. Tyler Co., Cleveland, Ohio. 124

“WALL-TEX.” A strong fabric impregnated with the highest quality oils and pigments. Printed patterns in variety of color and design. Repeated washings over years will not harm them. Plain colors eliminate painting over canvases. Columbus Coated Fabrics Corp., Columbus, Ohio. 125

WATER-FAST WALL PAPERS. No amount of water applied to the surface will affect the brilliancy of the colors. Spots removed by sponge and soap-suds. Impossible to detect, without testing, any difference between it and regular wall papers. M. H. Birge & Sons Co., Niagara and Maryland Streets, Buffalo, N. Y. 126

COLUMBIA AUTOMATIC STOP FOR VENETIAN BLINDS. Will stop the blind at any height without the necessity of fastening the lifting cords. Stop is furnished with Imperial blinds as regular equipment. The Columbia Mills, Inc., 225 Fifth Avenue, New York, N. Y. 127

29. Plumbing

“AIRCROWELDING.” A new and simplified welding technique for pipe-line construction. Makes puddling unnecessary; saves welding time; saves in gas and rod consumption; welds stronger than base or parent metal; learned in a few hours by field welders. Air Reduction Sales Co., Lincoln Bldg., New York, N. Y. 128

ARCO CAST-IRON THREADED PIPE. Can be cut and threaded with standard tools; selling on same general price level as standard galvanized steel pipe. Cast vertically in dry-sand molds with dry-sand cores, it is without seams or gate marks. Provided in 6’, 12’ or longer lengths, and 1½", 2", 2½", 3", 4", 5" and 6" sizes. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 129

NEW UNION NAILER CEILING INSERT. For use with suspended ceilings below concrete slab. Drives into forms like a nail, and when forms are removed the driven blade with hole is exposed to which to fasten wire or 3/4” (also 1", 1½", size) rod. Permits flat lath instead of high-rib. Union Steel Products Co., Albion, Mich. 119

“UNIT-FOLD” PARTITIONS. Under A. C. F.-Fairhurst patent, partitions are divided into door sections without visible hardware except end-door operating handle. Doors mounted on single heavy ball-bearings, two casters to each door. Top and bottom locking device, top guide having automatic vertical adjustment. American Car and Foundry Co., 30 Church Street, New York, N. Y. 120

ARCO CAST-IRON THREADED PIPE. Can be cut and threaded with standard tools; selling on same general price level as standard galvanized steel pipe. Cast vertically in dry-sand molds with dry-sand cores, it is without seams or gate marks. Provided in 6’, 12’ or longer lengths, and 1½", 2", 2½", 3", 4", 5" and 6" sizes. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 129

STEEL FITTINGS FOR LIGHT WALL PIPE. For hydraulic pressures of 200 pounds per square inch (more on smaller sizes), made from 10-gauge steel by welding. Half the weight of cast-iron, lower erection costs, lighter supports, are claimed, with minimum flow resistance. Plain end, flanged, or flanged one end. Taylor Forge & Pipe Works, P. O. Box 485, Chicago, Ill. 130

LUNKENHEIMER “N-M-D” VALVE. A non-metallic disc bronze valve embodying new and also established features of design. Discs available for steam, for hot water, and for cold water, gas, and air. For 150 lbs. steam pressure and 300 lbs. gas-liquid pressure. The Lunkenheimer Co., Cincinnati, Ohio. 131

WROUGHT COPPER FITTINGS. To make possible the elimination of cast metal at vital points in copper piping installations there is being added to the “Arco” line: wrought copper integral tee; threaded wrought copper elbow; red brass gate valve, in sizes up to 4”. Elbow provided for male, female, and most standard reduction connections. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 132

NEW LEAD REDUCING BEND Four-inch diam. at one end, 3” at other, for use when codes permit 3” soil lines. Eliminates sanitary T and regular bend and costs less than these two with ferrule. The Eagle-Picher Lead Co., Cincinnati, Ohio. 133

SELF-CLOSING METERING FAUCET. Metering faucets are usually either too cumbersome in appearance or—to avoid this—have working parts too small to give service. This new model puts all working parts under the lavatory slab. Has a wide range of regulation, without taking faucet apart. Push-button type, sturdily built. The John Douglas Co., Cincinnati, Ohio. 134

HIGH-PRESSURE NEEDLE VALVES, newly designed to be as small and compact as possible, for service in industries where measuring pressures or volume of flow of fluids or gases is done, and where a very gradual re-

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lease of pressure is necessary to prevent damage to pressure gauges and meters. Crane Co., 836 S. Michigan Avenue, Chicago, Ill.

TAYLOR SPIRAL WELDED PIPE. Made from 14 to 24-gauge steel or Armco Ingot Iron, with spiral lap weld. Seams reinforce pipe and are its strongest parts, with bursting strength limited only by strength of materials, not welds. Smooth, full-flow interior. Taylor Forge & Pipe Works, P. O. Box 485, Chicago, Ill.

NEW RUUD AUTOMATIC STORAGE WATER HEATER. In three sizes: 20, 30, 45-gal. tank capacities. Gas flow thermostatically controlled; of "all-on or all-off" type; with safety pilot. Tanks of gal. i. or copper, and replaceable. Rock-wool insulation. Ruud Mfg. Co., Pittsburgh, Pa.

INDUSTRIAL CHEMICALS. A line of chemicals for use in power plant equipment of all types: boiler compounds, rust preventives, de-scalers, etc. Artic Chemical & Combustion Engineering Corp., 209 King Street, Brooklyn, N. Y.

NEW BUFFALO SINGLE SUCTION SELF-PRIMING PUMP. A very compact, husky, and economical unit. Two types of impellers are available: the open type for sump service, and the enclosed type for clear liquids. Furnished complete with all necessary fittings; built in several sizes in capacities up to 450 g.p.m. and for heads up to 150 ft. Buffalo Pumps, Inc., Buffalo, N. Y.

WESTCO TURBINE-TYPE CEL-LAR DRAINER AND SUMP PUMP. Horizontal design and self-priming system permit mounting at top of sump, high and dry and open to inspection. Lifts water 25-28 ft. Capacities, 5, 10, 15, 20, 25 g.p.m. Westco Pump Corp., Davenport, Iowa.

KEWANEE STEEL WELDED TANKS. For storage water. This line is in addition to the Kewanee riveted tanks, and is made in 14 sizes: 66-525 gals., "Standard" and "Extra Heavy." Have particularly neat tapping with inside welding collars. Aluminum painted. Kewanee Boiler Corp., Kewanee, Ill.

NEW DENTRIX," a new dental lavatory of vitreous china, 12" x 12", with integral open strainer and compact hot and cold supply fixture. It seems likely that the time is near when people will no longer use the same lavatory for the washing of hands and mouth. Crane Co., 836 S. Michigan Avenue, Chicago, Ill.

ARCO PANEL UNITS. Provide bathroom fixtures backed by soundproof and waterproof metal panels to contain all piping, so that fixtures can be installed without disturbing existing walls. Each panel contains all necessary accessories, such as medicine cabinet with the lavatory, and special interlocking panels are made to furnish complete prefabricated bathroom in a variety of finishes. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y.

LADY LUXURY VANADOIR, MODERNE MODEL. Combination dressing-table and lavatory. Cabinet work is of galvanenealed water-repellent furniture steel, in plain colors and wood grains. Hot and cold piping and drain concealed by removable panel. For dressing-rooms lacking both facilities.

Lady Luxury Division, Excelsior Products Corp., 1807 Elmwood Avenue, Buffalo, N. Y.
CRANE "RIVAL" LINE BRASS, for lavatory, bath, and shower, includes the staple trimmings made of the same quality of materials as the regular Crane brass goods, but to smaller specifications, lighter, and lower-priced, to enable contractors to meet cost demands. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 148

STANDARD VITREOUS CHINA "COMPANION" LAVATORY. Modern in its straight-line design. Compact, offering ample washing space and coming cross connection and therefore back siphonage. The John Douglas Co., Cincinnati, Ohio. 154

STANDARD "COMPACT" CLOSET. Has vitreous china tank and bowl bolted together into one compact unit, eliminating the customary flush connection. This model saves space, does not require wall support. Has deep seal, ample water area, strong flush with less than usual amount of water. Standard Sanitary Mfg. Co., P. O. Box 1226, Pittsburgh, Pa. 152

LEXEL," a one-piece compact water-closet, particularly for remodelling, but also for new work. Overall depth, only 26". Back and all exposed surfaces glazed, making possible free-standing, corner, or wall installation. Action, siphonic with jet. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 153

"STANDARD" ONE-PIECE CLOSET. Quiet enough to be inaudible outside the bathroom. Compact, easily cleaned, all in one piece of vitreous china. Height, 33". Matches design of Companion lavatory. Standard Sanitary Mfg. Co., P. O. Box 1226, Pittsburgh, Pa. 155

SPEAKMAN "SI-FLO" CLOSET COMBINATION. A flush valve and closet bowl in which every effort has been made to reduce noise. In any standard color, with seat matching, or other variations. Valve chromium plated, in straight stop to wall or angle stop for r. or l. Speakman Co., Wilmington, Del. 154

"STANDARD" NO. 1 LINE FITTINGS. Plumbing fixture fittings of modern design that will not break or chip—a complete line of modern brass fittings with a chromard finish, to be used wherever desired instead of china fittings. Standard Sanitary Mfg. Co., P. O. Box 1226, Pittsburgh, Pa. 161

CUSTOM-MADE RESIDENCE SINK OF STAINLESS METAL. With rounded corners and all welded construction with joints ground and polished. Fixture apparently one piece of metal with permanent satin-like finish. Chromium plated wastes. In one or two compartments. Drainboards ribbed and pitched. The Edwards Mfg. Co., Eggleston Avenue and Fourth Street, Cincinnati, Ohio. 162

"EDGE-LITE," BATHROOM CABINET. Replacing several sizes of ordinary shower curtain and rod combinations. No overhead rail, no sliding parts. Pivoted rods like towel rack spread curtain, end of which hooks on wall to complete enclosure. One size, one style. Scovill Mfg. Co., Waterville, Conn. 158

POWERS THERMOSTATIC WATER MIXER. Thermostatically mixes water for showers, tub baths, hydrotherapy. Delivery temperature remains constant regardless of pressure or temperature in supply. Both top and bottom outlet, for tub and shower over, replacing usual supplies. The Powers Regulator Co., 2720 Greenview Avenue, Chicago, Ill. 159

"STANDARD" NO. 1 LINE FITTINGS. Plumbing fixture fittings of modern design that will not break or chip—a complete line of modern brass fittings with a chromard finish, to be used wherever desired instead of china fittings. Standard Sanitary Mfg. Co., P. O. Box 1226, Pittsburgh, Pa. 161

GARDINER-VAIL BATHROOM ACCESSORIES. Intended for use on structural glass wall surfaces, but may be used on tile or other similar material. Made in brass, chromium-plated over nickel-plating. Each piece equipped with anchors for rigid mounting in plaster of Paris. Gardiner-Vail, Inc., 230 No. Jefferson Street, Chicago, Ill. 164
MIAMI COMBINATION DESK AND DRESSING-TABLE. Recessed into wall, as a bathroom cabinet, or mounted on wall with a super buck. Made of steel with writing-table top of plate glass. The economical solution of the hotel room, saving more expensive furniture and valuable space. Overall, 23 3/4" high, 32 3/4" wide, 45 3/4" deep. Miami Cabinet Division, The Philip Carey Co., Middletown, Ohio. 165

MODEL G LAWCO "MIRROR-LITE" CABINET. Mirrors held on doors of recessed cabinet by chrome studs. Completely wired for pair of completely automatic operation. Filters, warms, humidifies, and circulating the air. Oilly steel-wool filter; evaporating pan humidification; integral burner, all in balanced design. Perfection Stove Co., Inc., Cleveland, Ohio. 168

DAILIAIRE COAL FURNACE, SERIES 200. Built in two sizes, following Dailaire principle of flue design on each side, wedge-shaped combustion dome, telescoping tube assembly, welded parts. An efficient coal-burning system from which one can shift to oil with little loss of the efficiency of Dailaire oil-burning unit. Dail Steel Products Co., Lansing, Mich. 169

"HEATMASTER" MODEL K AIR CONDITIONING UNIT. Completely automatic operation. All controls and blower motor inside of compact casing. Greater air volume at lower temperatures. Burners are special two-stage patented "Surface Combustion" type. Approved by American Gas Assn. Surface Combustion Corp., Toledo, Ohio. 170

"IDEALFLUIDHEAT" OIL-BURNING BOILER. A combination of cast-iron sectional boiler and "Fluid Heat" rotary wall-flame oil-burner, in attractive rectangular casing. Up to 800 sq. ft. of steam or 1350 sq. ft. of hot-water radiation. Built-in coil of 60-gal. capacity for domestic hot water. Fluid Heat Division, Anchor Post Fence Co., Baltimore, Md. 171

ARCOLA HEATER. Provides a popular-priced and practical radiator heating plant for small homes and buildings, particularly without basements. Used on same level as radiators, heater itself used to heat one room. Burns coal, oil, or gas. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 172

BIG COIL WATER HEATER AND SPINNER BLADES. In Kewanee round type "R" boilers. The big coil gives extra capacity for the domestic hot water supply, and the spinner blades give extra efficiency by forcing the gases into more intimate contact with the two-pass tubes. Kewanee Boiler Corp., Kewanee, III. 173

GENERAL ELECTRIC NEW SMALL OIL FURNACE. Similar and additional to large unit announced last year. Rated at maximum of 13,000 B. t. u. per hr., equivalent to 555 sq. ft. steam or 885 sq. ft. hot-water radiation, for steam, vapor or hot water systems. With G. E. warm air conditioner; can be used with air-duct systems. Size, 62" high, 20" diam. over jacket. Built-in hot-water coil. General Electric Co., 570 Lexington Avenue, New York, N. Y. 174

"IDEAL" MAGAZINE BOILER NO. 13. Providing a new moderate-size boiler for solid fuel that needs firing only at long intervals. For jobs requiring 200 to 1350 sq. ft. steam or 320 to 2160 sq. ft. hot-water radiation. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 175

IDEAL OIL BURNING BOILER NO. 12. All doors and internal parts are hidden in its rectangular enamelled steel casing. For use with either rotary or gun-type burners. Constructed to force gas travel four times the boiler's length. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 176

KEWANEE INDIRECT HOT WATER HEATING COILS. Kewanee square type "R" boilers are now fitted with indirect coils if desired, for heating domestic hot water. May be used for gravity circulation with storage tank or for instantaneous tankless performance. Capacities from 150-750 gals. Kewanee Boiler Corp., Kewanee, Ill. 177

"OIL HEAT SERVANT." A combination hot-water or steam boiler and domestic water heater fired by a Johnson Oil Burner using No. 3 furnace oil. Normal rating of 150,000 B. t. u. output per hr. for homes requiring 625 sq. ft. steam radiation or 1,000 sq. ft. hot water. S. T. Johnson Co., 940 Arlington Avenue, Oakland, Calif. 178

"PETROLA." The "Arcola" heater equipped with an adaptation of the "Petro" Model W oil-burner. Latter is motor-fan type. For the small installation, particularly where there is no basement. Burner available also for Arcolas now in service. Petroleum Heat & Power Co., Stamford, Conn. 179

THATCHER "OIL MASTER" BOILER. Burns oil, for which it was designed. Five-way fire travel, large combustion chamber, heavy insulation, brick-lined and gasket-tight service doors, gray or green crystalline finish, motor-fan type. For small installation, particularly where there is no basement. Burner available also for Arcolas now in service. United States Radiator Corp., Detroit, Mich. 180

"TORIDHEET" OIL-BURNING BOILER. A product of this company and American Radiator Co. "Toridheet" oil burner has high and low limit controls, low-water cut-out and feeders, built-in coil for domestic hot-water. All controls completely concealed by attractive jacket. Capacity, 750 sq. ft. of connected load. Cleveland Steel Products Corp., Madison at 74th Street, Cleveland, Ohio. 181


30. Heating and Ventilating

SUPERFEX OIL-BURNING AIR-CONDITIONING HEATING PLANT. Produces conditioned air by side lighting panels using four standard bulbs; wall switch. Furnished in standard white lacquer or colors to specifications. Chrome piano hinges. The F. H. Lawson Co., Cincinnati, Ohio. 166

MODEL H LAWCO "MIRROR-LITE" CABINET. Similar to Model G, described above, except that mirrors are in chromium-plated frames and are a trifle smaller. Centre mirror, 21" x 35 1/2"; side wings, 10 1/2" x 31 1/2"; wall opening, 21 1/4" x 28 3/8" x 4 1/2". The F. H. Lawson Co., Cincinnati, Ohio. 167
INDIVIDUAL RADIATOR VALVE WITH TWO RANGES, AUTOMATIC AND MANUAL. For places where completely automatic operation is not desirable, such as hotel rooms, hospitals, etc. The "Modustat" has been improved by the addition of a manual operating range. One lever, standard, also types for concealed radiation or key setting. All for 2-pipe steam systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 183

ARCO "RADIOTHERM." Replaces hand-operated valve on a radiator in 2-pipe steam, vapor, or vacuum system, providing a temperature control for individual radiators. Set at any desired temperature it will valve the radiator accordingly. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 184

515 IDEAL VACUUM VALVE. Designed with a powerful bellows seal and special diaphragm action to vent radiators quickly, hold heat in them and prevent "sputtering." Can be used to convert a one-pipe steam into a vacuum system after system has been tightened against air leaks. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 185

"MODUSTAT." New design of self-contained automatic room-temperature control valve for individual radiators. For use only with two-pipe (direct, indirect or cabinet type) steam, vapor or vapor-vacuum heating systems operating on less than 10 lb. pressure or 10\(^2\) vacuum. Automatically modulates flow of steam to radiator in accordance with the temperature requirements of room. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 186

VACUUM FORM. Functions as a condensation and a vacuum pump without moving parts. Steam entering the vacuum form operates a damper admitting cold air from flues connected to the chimney. The steam condenses, forming a vacuum which draws the condensation into the condensing chamber, and then into the boiler. United States Radiator Corp., Detroit, Mich. 187

ARCO CONVECTOR. Utilizing fan-type radiation to provide a space-saving, cast-iron radiator that can be concealed without loss of heating efficiency. Available in 4 widths for either free-standing or recessed installation. American Radiator & Standard Sanitary Corp., 40 W. 40th St., New York, N. Y. 188

CRANE INVISIBLE RADIATOR SHIELD, for the tubular cast-iron type in all heights, widths, and assembly lengths. The pressed steel shield is slipped between the rear tubes, serving to direct the heated air out into the room instead of towards the ceiling, and lessening the streaking of walls from dust-laden air. Crane Co., 836 So. Michigan Avenue, Chicago, Ill. 189

FINCAST RADIATOR. Applying the fin principle to cast-iron radiator design. In one piece without joints of any kind.

There is available a supplementary line of enclosures and front panels. United States Radiator Corp., Detroit, Mich. 190

EMERSON EXHAUST FANS. New design, new blade. Two-speed, installed in walls or windows, for horizontal or vertical discharge. Sizes 12" to 32". Ball-bearing motor. Lubrication once yearly. The Emerson Electric Mfg. Co., 202 Washington Avenue, St. Louis, Mo. 191

EMERSON VENTILATING FANS. For the home kitchen. Electrically reversible, for exhausting superheated air or cooking fumes, and for drawing in cool outdoor air. With adjustable mounting panels that do not interfere with window, or wall boxes with aluminum louvers. Various sizes and mountings. The Emerson Electric Mfg. Co., 202 Washington Street, St. Louis, Mo. 192


"PROTECT-OVENT" WINDOW VENTILATOR. Combines fan, motor, and air filter. Slips under lower sash rail and plugs into electric outlet. Deflector adjustment. Closes tightly without removal. Widths, 20\(\frac{1}{2}\)" to 43\(\frac{3}{4}\)", latter with two fans. Staynew Filter Corp., Rochester, N. Y. 194

ROYAL FAN ELECTRIC VENTILATOR. For positive removal of large volumes of heated air, fumes, smoke, gases, steam, etc. Head with inverted cone similar to Royal Double Cone Ventilator. Drained of rain and condensation. Functions as gravity type with motor shut off. Stack sizes, 12" to 48". Royal Ventilator Co., 415 Locust Street, Philadelphia, Pa. 195

ALLEN EXHAUST FANS deliver a solid shaft of air with uniform velocity from centre of hub to tip of blade, the equalization resulting from air cups at the centre. The sharp angle of the blades diminishes toward the tips. This means a smaller propeller, slower speed, smaller motor. Frames are one-piece cast aluminum. The Allen Corporation, 14th Avenue at Howard Street, Detroit, Mich. 196

VICTOR VENTILATOR, MODEL VT-28 IN-BILT. With 12" motor-driven fan, for residential use. Cylindrical telescopic sleeve fits any wall thickness, with square outside louvered panel. Chain pull operates fan and louvers. Brushed aluminum circular grille.
UNIVERSAL "STOV-DOME." Insures proper ventilation for domestic kitchens from directly over range. Built of dustproof enameled steel; carried by hinged, inside. Easily cleaned. Victor Electric Products, Inc., 712 Reading Road, Cincinnati, Ohio. 197

"COMFORT CONDITIONER." A new unit for room cooling and heating. Designed chiefly for restaurant and office use, but used for stores, small theatres and auditoriums. Provides an inexpensive method of dispensing cool and warm air. Neat in appearance and very quiet in operation. Casing is non-sweating, sound-absorbing insulating board. Requires only 20" headroom. Buffalo Forge Co., Buffalo, N. Y. 199

NEW MODINE UNIT HEATER. Improved structurally in its copper and copper alloy condenser, with more efficient velocity generators, deflectors, fans, motors, and general performance. Eleven models in graded capacities. Modine Mfg. Co., Racine, Wis. 200

WESTINGHOUSE UNIT AIR CONDITIONER. Cools and dehumidifies air in summer, heats and humidifies it in winter, and filters and circulates it at all times. These units are designed for installation under windows or along the wall and, where space is limited, a special unit is available for wall or ceiling mounting. Such a unit is especially applicable for lunchrooms and small shops. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 201

YORK AIR WASHERS. All ranges are adapted to jobs where relatively large volume of air is to be conditioned within an enclosure and distributed through ducts. Spray-type air washers necessary for close regulation of the humidity within conditioned enclosure. York Ice Machinery Corp., York, Pa. 202

COPPUS AIR FILTERS. A line of dry-type air filters for ventilating systems and for air compression and internal combustion engines. Compact, constantly efficient, easily cleaned without removal or shutting down system. Coppus Engineering Corp., 344 Park Avenue, Worcester, Mass. 203

"MULTI-V-TYPE" AIR FILTER. A series of separate and distinct formations of V's, so that active filtering surface equals 27 times its face area. Dry cotton fabric type. Can be cleaned by ordinary portable vacuum cleaner. Wide variation in possible arrangements without centralization, such as in branch ducts. Staynew Filter Corp., Rochester, N. Y. 204

VICTOR VENT. Made of cast iron in one piece, with arch bar and bottom lugs extended for mortar joint insertion. Will support necessary brickwork above.

39f. Temperature Regulation

"CLIMATE CHANGER." A compact unit, completely enclosed, for air conditioning with single unit control. Humid warm air in winter. Circulates, cools, and cleans the air in summer. With built-in burner for oil or gas. The Trane Co., La Crosse, Wis. 205

"ACCUROTHEMETER." A scientifically made instrument for metering thermo degrees to within 5/16' along entire scale. Each individually made for a particular instrument with special readings. Instrument Service Co., Inc., Division of Condenser Service & Engineering Co., Inc., Muboken, N. J. 207

ARCO AIR MIXER. Convection-type enclosure incorporating special diffusion nozzles to introduce a minimum of very low-temperature air into a room, mixing this with the room air without perceptible drafts in summer air conditioning. For winter use the Mixer contains a Murray radiator for heating, and humidified air may be introduced through the unit for ventilation. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 208

G. E. PORTABLE UNIT COOLER. Combines condensing machine, evaporator, and fan in a cabinet provided with wheels to facilitate moving from room to room. Flexible connections for water and drain. Rating 4000 B. t. u. per hr.—sufficient capacity for average bedroom. General Electric Co., Schenectady, N. Y. 209

YORK CENTRAL SYSTEM AIR CONDITIONER, BASEMENT TYPE. For basement installation. Supply and return air ducts, connected to the conditioner, terminate in unobtrusive grilles. Operation same principle as that of large installations made by York. Combines in a single unit the fan, heating and cooling surface, mist-type humidifier, air filter and a complete refrigerating unit. York Ice Machinery Corp., York, Pa. 210

YORK COIL TYPE UNITS. Coil type air conditioner, used primarily where conventional bunker coil installation for vegetable, milk, meat and vegetable cold storage rooms. Adaptable to brine, ammonia, methyl chloride or freon. York Ice Machinery Corp., York, Pa. 211

YORK UNIT AIR CONDITIONER, FLOOR TYPE. A compact year-round unit air conditioner. Within its rugged, corrosion-proof metal casing are compactly arranged all the elements of a complete air conditioning system: low-speed, quiet-operating fan and motor, duplex cooling and heating surface, mist-type humidifier and air filter. York Ice Machinery Corp., York, Pa. 212

ARCHITECTURE
YORK UNIT AIR CONDITIONER, CEILING TYPE. For comfort air-cooling and heating. Adapted for ceiling or wall mounting, or for concealed installation where space does not permit the location of equipment within the conditioned area. Duplex cooling and heating surface. Low-speed, quiet-operating fan and motor. Single-screw controlled louvers for directing air flow. York Ice Machinery Corp., York, Pa. 214

ARCO HUMIDIFIER A. A humidifying attachment for either steam or hot-water radiators. Heating medium from radiator flows through a coil in cylindrical casing at return end. This coil is immersed in water, manually supplied, causing constant vaporization. Electrical booster is plugged in for auxiliary heat for vaporization when needed. American Radiator & Standard Sanitary Corp., 40 W. 40th Street, New York, N. Y. 215

CHASE-ERSKINE "THERMOIST" HUMIDIFIER. A combination of an Erskine copper radiator and a humidifying device for use with steam-heating systems. Eliminates wasteful sprays and insures proper amount of moisture for a given temperature. In cabinet, recessed, or below floor. Chase Brass & Copper Co., Erskine Radiator Division, Waterbury, Conn. 216

NEW MODEL C CAMPBELL AIR CONDITIONER WITH MAXIM SILENCER. Includes within under-window cabinet a t. h. p. cooling unit as well as all the necessary apparatus to perform the seven essentials of air-conditioning: cooling, dehumidifying, heating, humidifying, ventilation, air-cleaning, and noise elimination. Campbell Metal Window Corp., Pershing Square Bldg., New York, N. Y. 217

GENERAL ELECTRIC AIR CONDITIONER. For winter use in connection with the G. E. Oil Furnace. Compact assembly of controls, motor, fan, filter, steam-heated humidifier, with solenoid valve water control. All in enamelled steel case. General Electric Co., 570 Lexington Avenue, New York, N. Y. 218


HITCHINGS HOME AIR MOISTENER. A humidifying unit which can easily be installed in old work, providing a vaporizer in the cellar with an outlet flue masked by one of the radiators. Entirely automatic. Hitchings & Co., Elizabeth, N. J. 220

WESTINGHOUSE AIR CONDITIONER. Teats and dehumidifies in summer, heats and humidifies in winter; filters and circulates the air at all times. In several cabinet patterns for under windows, along wall, or for ceiling mounting. Especially adaptable for restaurants, small shops. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 221

30g. Fuel and Fuel Feeds

B. & W. CIRCULAR MULTIFUELS BURNER. Suited to needs of small and moderate size industrial boiler plants. Horizontal turbulent type. Liquid, gaseous or solid (pulverized) fuels may be injected through a common throat opening. The Babcock & Wilcox Co., 85 Liberty Street, New York, N. Y. 222

B. & W. OIL-AND-GAS BURNER. Combining features of the Mechanical Atomizing Oil Burner with an efficient method of burning gas. Heat liberation capacities up to 70,000,000 B. t. u. per hr., using natural gas. The Babcock & Wilcox Co., 85 Liberty Street, New York, N. Y. 223

B. & W. WIDE-RANGE MECHANICAL ATOMIZING OIL BURNER. Quickly adjustable to operate efficiently over wide range of capacities. Utilizes two-passage system for oil, meeting at nozzle and sprayer plate. The Babcock & Wilcox Co., 85 Liberty Street, New York, N. Y. 224

RAY BURNER, SIZE 000. In three types: AG-10, manually controlled; AG-200, fully automatic with gas-electric ignition; and AG-250, fully automatic with straight electric ignition. Basically identical with Ray Standards plus some important refinements. Ray Burner Co., 401 Bernal Avenue, San Francisco, Calif. 225

RAY VISCOSITY VALVE SYSTEM. Utilizing an automatic burner for heavy fuel oils such as C. S. G. No. 5 or No. 6 (Bunker C and Bunker B). Particularly adaptable in large sizes for heating plants of hotels, theatres, apartment-houses, hospitals, etc. Ray Burner Co., 401 Bernal Avenue, San Francisco, Calif. 226

"TORIDHEET" AUTOMATIC OIL BURNER. Wall-wiping flame type, for use in residential steam, vapor, hot-water or warm air systems. Improved features include the "Ropeller," which permits an exclusive method of fuel oil and lubrication distribution. Cleveland Steel Products Corp., Madison at W. 74th Street, Cleveland, Ohio. 227

TIMKEN SILENT AUTOMATIC OIL FURNACE. Greater economy and better vaporization of cheap oil are claimed through the introduction of the
31. Electrical Work

EXIDE-KEEPALITE is a new emergency lighting battery system designed to protect limited areas up to 10,000 square feet. Operates automatically and instantaneously on failure of regular current. Costs less than 20 cents per month to operate.

IRON FIREMAN FEED STOKER. A large machine to utilize the coal bin as the hopper. Available in lengths from 6' up to 25' in steps of 1'. With special hopper form of coal bin, this stoker makes coal firing automatic. Available in all R, RA, and B series stokers. Iron Fireman Mfg. Co., Portland, Ore.

IRON FIREMAN MODELS R AND RA STOKERS. Bituminous and non-asphalt removing anthracite burners. Motor, fan, driving mechanism and relay located on the case, to give correct volume for one condition, it will maintain this volume for any type of fuel bed. Available for 4A, 5A, and 5A standard stokers, as well as the CD models. Iron Fireman Mfg. Co., Portland, Ore.


RUBBER HANDLE SWITCHES. On account of the rough usage to which switches are subjected in factories there always has been more or less trouble due to the breakage of bakelite or composition handles. To overcome this difficulty we have produced a line of switches equipped with live rubber handles. The rubber used is 40 per cent Para and they will maintain their resiliency indefinitely. Harvey Hubbell, Inc., Bridgeport, Conn.

AB DE-ION CIRCUIT BREAKER. For circuit protection, a flashless device performing the function heretofore left to carbon circuit breakers or fuses. Nothing to be replaced or renewed; it is simply reclosed, though this cannot be done against an abnormal overload or short. Has a time lag preventing unnecessary tripping on slight, momentary loads. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

HAYES TREADLESS ROAD SWITCH. A magnetically operated element placed in pathway of vehicle, performing same duty as a pushbutton, without physical contact. Performance depends on magnetic influence of the iron or steel in vehicle. For danger signals, approach of customer, etc. Tiffin Electro-Mechanical Co., Tiffin, Ohio.

BUSS SUPER-LAG FUSE. Designed to carry without blowing many harmless overloads. Does not increase am-
perage of fuse, but the attached lagplates give greater heat capacity and slow down blowing time, giving harm-
less overloads a chance to clear. Protection is not sacrificed. Prevents needless shut-downs. Bussman Mfg. Co., Uni-
versity at Jefferson, St. Louis, Mo. 243

BUSS "FUSETRON." A device to protect small motors against burn-out due to overloading. Looks like a fuse but is a thermal cut-out to which a fuse is added. Fits standard fuse clips. Made in 125, 250, and 600 volt sizes and in amperages from 1/4 to 10 amps. Listed as standard by Underwriters. Bussman Mfg. Co., St. Louis, Mo. 244

G. E. AF-1 CIRCUIT BREAKERS. To replace fuses for industrial machines, house service entrance, branch circuits, refrigerators, ranges, etc. Uses a new principle of arc interruption. Cannot be held in closed position under overload. All sizes fit service entrance box. General Electric Co., Schenectady, N. Y. 245

AIR CONDITIONING "FURNACE-
STAT." A unit assembly combining control functions necessary for domestic air-conditioning systems. Available in four models, each designed to provide fully automatic operation of heat source in relation to operation of circulating fan, water valve and other accessory units. Provision is made for automatic control of summer cooling. Furnace temperature over-run safety feature standard on all models. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 246

AQUASTAT. New type immersion limit control, for use in hot-water heating system to prevent generation of excessive temperature of water in boiler. Also used in connection with summer-winter hot water supply from oil-burner regularly used for heating. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 247

"GENUINE DETROIT" AIR CON-
DITIONING CONTROLS. This line includes controls of moisture content, temperature controls, fan controls, electrically operated valves, gas valves, etc. No. 640 electric water valve operates on the thermal motor principle, eliminating all hum frequently encountered with solenoid valves. Detroit Lubricator Company, Detroit, Mich. 248

"GENUINE DETROIT" CABINET THERMOSTAT. For use with room coolers or electric cabinet heaters. The instrument is assembled inside the cabinet, the thermal element being attached by means of flexible tube so that it may be located in the path of the incoming air from the room. Installation and wiring may be accomplished at factory so that the control may be shipped as an integral part of the unit. Outside adjust-

ment button and dial for quick setting of the desired temperature. For 110 or 220 volts up to 1 h.p. Detroit Lubri-
cator Company, Detroit, Mich. 249

"GENUINE DETROIT" CONTROL SWITCH, NO. 250. This line covers controls for temperature and pressure, for use as boiler or furnace limit controls with oil burners, air conditioners, stokers, etc. Models also available for "hold-
fire." Controls in connection with domes-
tic stokers. Will carry either 110 or 220 volt current with ratings up to 1 h.p. Quickly adjusted for either operating range or differential. Detroit Lubricator Company, Detroit, Mich. 250

"GENUINE DETROIT" LOW WATER FUEL CUT-OFF, NO. 257. For steam boilers fired by oil, gas or stokers. Such installations are so com-
pletely automatic that operators may fail to give attention to the waterline, with resultant damage to the boiler. The No. 257 positive safeguard and stops the burner when the water level falls to the danger point. For 110 or 220 volt current up to 1 h.p. Detroit Lubricator Company, Detroit, Mich. 251

"GENUINE DETROIT" TEMPERA-
TURE REGULATOR, NO. 425. For dampier control on coal-fired boilers and furnaces; a simple, accurate and inex-
pensive combination of room thermo-
stat and motor unit, employing a simpli-
fied two-wire electric system which pro-
vides easy installation, and can be sup-
plied with clock switch for night and day
control. Noiseless in operation. Detroit
Lubricator Company, Detroit, Mich. 252

"GENUINE DETROIT" ZONE HEATING CONTROLS. For forced air or air conditioning systems. Each zone is controlled by an independent thermostat and the complete system is so wired that the heat supply is "on" so long as any one zone requires heat. When all zones are satisfied, the heat supply is closed off. Applicable to oil, gas, or coal-fired heaters or stokers. Detroit Lubricator Company, Detroit, Mich. 253

HUMIDITY CONTROL. A compact room-type instrument actuated by changes in relative humidity of sur-
rounding atmosphere. Human-hair ele-
ment expanding and contracting oper-
ates mercury switch which controls humidifying equipment. Obtainable with or without relative humidity indi-
cator. Differential approximately 2 per-
cent. Minneapolis-Honeywell Regulator
Co., Minneapolis, Minn. 254

LOW WATER CUT-OFF—DUPEX
SWITCH—AUTOMATIC WATER FEEDER. Automatically prevents firing boiler when water is dangerously low. Duplex switch combines functions of low-water cutoff and automatic control of pressure or vacuum. Either low-water cutoff or duplex switch may be combined with high-pressure solenoid water valve which automatically feeds water when necessary. Available for line or low voltage. Can be installed ac-

ording to A. S. M. boiler code or in the gauge glass fittings of boiler. Minne-
apolis-Honeywell Regulator Co., Minne-
apolis, Minn. 255

MODULATING TYPE THERMO-
STAT. A new and improved room ther-
mostat used with the "Modutrol" Sys-
tem to obtain true and accurate modu-
lation or proportioning electrical control of valves or dampers which control the flow of steam, water, air or refrigerant.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 256

THE "THERMOCHRON." Successor to the thermostat. It combines the functions of an electric-clock thermostat with the timing mechanism which tests the trend of temperature every half hour and if the temperature is dropping (but only then) it turns on the heat, but only long enough to replace the amount of heat which has been lost. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 257

"ELECTROTEMP." A simple multi-
point temperature indicator for use at a central regulating point. Measures the temperatures of as many as eight remote points, utilizing the Wheatstone bridge principle. Ordinary bell wire connects the instrument with its re-


JOHNSON REMOTE READJUST-
ABLE THERMOSTAT. Designed for automatic variation of temperature setting at the command of a pilot thermo-
stat or manually operated switch at a remote point. Makes it possible to ad-
just temperature of incoming air to meet demands of conditioned space. Johnson Service Co., 1355 Washington Blvd., Chicago, Ill. 259

31f. Illumination

GENERAL ELECTRIC SUNLAMP.
"THE BIG MASTER." Utilizing, as ultra-violet source, the Type S-S Sun-
light Mazda. Plated bronze finish adjust-
table standard or rubber-tired rollers. Includes necessary transformer, auto-

matic timer, new reflector and two watts. Also lighter model, "The Big Standard." General Electric Co., Schenectady, N. Y. 260

NEW WESTINGHOUSE NEON LAMPS. Glow lamps for low power consumption, long life, and low brill-

iance. Available in 2 watts for 110 volts and 2 watts for 110-120 volts with med.
screw bases. The ½ watt operates only

GENERAL ELECTRIC SUNLAMP. Provides both ordinary room illumination (indirect) and ultra-violet radiation from Sunlight Mazda Lamp. Illustration shows dual purpose ceiling form; also made in dual purpose suspension form for higher ceilings. 20" diam. General Electric Co., 1285 Boston Avenue, Bridgeport, Conn. 262

NIGHT LIGHT. A new form of night light has a 10-volt, 0.25 amp. ivory-coated bulb and miniature screw base. Socket is in series with resistance of 3400 ohms, making possible a connection to regular outlet. Total energy consumption 3 watts. For bedrooms, nurseries, bathrooms. General Electric Co., Schenectady, N. Y. 263

THREE-LIGHT MAZDA LAMP. To fill need for greater flexibility of artificial lighting, particularly in commercial establishments. Requires special socket and special means of control. In two sizes: 150, 200, 250 watts, and 200, 300, 500 watts. General Electric Co., Schenectady, N. Y. 264


FIXTURE FOR THREE-LIGHT LAMPS. Stem hangers and close-up ceiling units, chromium plated or statuary bronze. The three-light control switch (chain-pull) is inherent in the canopy, leaving but two wires available for connection to lead-ins, and eliminating confusion and expense in mounting. F. W. Wakefield Brass Co., Vermilion, Ohio. 266

GUTH DUAL SUPER-ILLUMINATOR. An indirect unit made of spun aluminum with interchangeable small color cap inserted between reflectors. Exterior surface of upper cone-shaped reflector is lighted in soft tone color by reflection from lower smaller reflector. Edwin F. Guth Co., Jefferson and Washington Blvd., St. Louis, Mo. 267

“MODERNE” LIGHTING FIXTURES. A complete new line, available in aluminum, other metals, and in washable finishes. Some of louvered construction, with white indirect and color-lighted louvers. Many forms adaptable to channel, recessed and shuttered effects. Curtis Lighting, Inc., 1135 W. Jackson Boulevard, Chicago, Ill. 268

SIDEWALL POCKET FOR “DOMINO” INSTALLATIONS. For accessory lighting with “Domino” ceiling-pattern, making possible built-in lighting effects with standardized ceiling fixtures susceptible of infinite variety of pattern arrangements. Particularly suited to store remodelling. F. W. Wakefield Brass Co., Vermilion, Ohio. 269

SQUARE-SHAPED “DOMINO” LIGHTING UNIT. To increase the flexibility and pattern scope of the “Domino” built-on lighting system, a square unit is now available. Used in connection with the pointed oblong units, or provides a conservative unit for small spaces. F. W. Wakefield Brass Co., Vermilion, Ohio. 270

"KLIEGLIGHT” NO. 1166B. Incandescent spot-floodlight, entirely new in design principle. Adapted for permanent installations, such as stage lighting from balcony front. Adjustable framing shutters. Takes 1000 or 1500 watt biplane filament lamp. Projects up to 250 ft. Kliegl Bros., 321 W. 50th Street, New York, N. Y. 271

WESTINGHOUSE FOUNTAIN LIGHTS. Underwater “Aqualux” units for illuminating fountains. One will not only illuminate the water in varied colors, but the beams passing through the water and spray may be used to light a canopy suspended above the basin. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 272

WORLD’S LARGEST INCANDESCENT SEARCHLIGHTS. Many novel and spectacular lighting features for playing streamers of light on buildings and grounds may be achieved with 36" Westinghouse searchlights. Equipped with 76" precision-ground silvered-glass reflectors, they are the largest ever made for use with incandescent electric lamps. Each searchlight is operated with a specially designed 3-kw. incandescent lamp, producing over 21,500,000 candle power in the beam. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 273


31g. Motors and Controllers

“THERMOGUARD” MOTORS. With built-in disc thermostat as protection against overheating in industrial use. Will disconnect from power or give visible or audible signal when unsafe temperature is approached. Can be arranged to restart when cool enough. In standard types. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 275
"MODUTROL" MOTOR. One of the essential elements of the "Modutrol" System. Operates valves or dampers which control flow of steam, water, air or refrigerant. Obtainable in several types, depending on work to be done. Modulating (i.e., proportioning) type or "off and on" type. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

SELF-PROTECTING CAPACITOR MOTOR. Equipped with resilient mounted single phase capacitor motors. Extreme quietness. Especially applicable to automatically controlled devices such as air conditioners and refrigerators. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

DUAL VENTILATION FOR TOTALLY ENCLOSED MOTORS. Makes possible enclosed motors up to 200 h.p. Internal and external air circulated by fans, transferring heat from internal air to frame and from frame to external air. Suitable for refineries, agitators, hot-oil pumps, gasoline pumps, and other Class I Group D hazardous locations. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.


GENERAL ELECTRIC DISHWASHER-SINK COMBINATION. Central sink, flanked by top-opening dishwasher one side, drainboard other side; whole space below closed by doors for storage cabinets, which can be built, if desired, of millwork to match adjoining work. General Electric Co., Schenectady, N. Y.

MODEL F-4 CONOVER PORTABLE ELECTRIC DISHWASHER. Steel cabinet with flat chrome top. Fills from faucet; empties electrically into sink. Capacity, 55 pieces china and glassware plus silver. Self-cleaning porcelain enameled dishtank. Size, 23 1/2" square, 35 1/2" high. Use for completing electric kitchen which already has modern sink. The Conover Co., 3123 Carroll Avenue, Chicago, Ill.

MODEL KC-4 CONOVER ELECTRIC DISHWASHER. Combination electric dishwasher, sink, worktop in 48" steel cabinet. Monel sink and linoleum, monel, or stainless steel worktop. Watertight door on front, no opening through worktop. Installed with top flush with cabinet front or overhanging. Base unit can be installed under almost any worktop. The Conover Co., 3123 Carroll Avenue, Chicago, Ill.

TIME FLASHER. Indicates time in electric lights (any color) with changing figures instead of hands and dial. In sizes from 7" to 20" high. For interior use only—not easily readable in full daylight. Operates on impulse principle from master clock. International Business Machines Corp., 270 Broadway, New York, N. Y.

WORLD CLOCK. Indicates the time in all zones. Consists of a stationary outer dial with various city names placed according to their time distances from each other. 12 A.M. and 12 P.M. hours are positioned on an inner dial revolving counter-clockwise. International Business Machines Corp., 270 Broadway, New York, N. Y.

A D T GENERAL FIRE ALARM AND PRE-SIGNAL SYSTEMS. New systems designed to sound a coded alarm on local bells throughout the building. New de luxe type fire-alarm box conforms with fine interiors. All equipment listed as standard by Underwriters. American District Telegraph Co., 155 Sixth Avenue, New York, N. Y.

GAMEWELL "VITALARM" SIGNAL. A new automatic fire-alarm unit that can be plugged into any standard electric light outlet on A. C. Used as a fire alarm in itself, or can be hooked up in system form. Functions on the rate of rise, whether temperature is low or high. The Gamewell Co., Newton, Mass.

ARCHITECTURE

they are suitable for any installation regardless of size. Tone not affected by climatic conditions. International Business Machines Corp., 270 Broadway, New York, N. Y.
for use in conjunction with interlocking bolts or doors and windows. "Protectolock" cannot be locked until all means of entrance are bolted. Electrically operated. Smaller than conventional lock.

RCA VICTOR CENTRALIZED RADIO PANEL, MODEL ER-1240-A2
Designed for use with RCA Victor centralized radio distribution system, to operate a number of loud-speakers located throughout buildings such as hotels, schools, hospitals. Four different volume levels. Transfers from radio program to phonograph or microphone input. Jack strip of 24 jacks for monitoring and load segregation.

RCA Victor Co., Inc., Camden, N. J. 301

TWO-PROGRAM RCA VICTOR CENTRALIZED RADIO PANEL, MODEL AF-6722. Provides for complete control and operation of a four-program system. Two receivers, two 10-watt power amplifiers, controls and monitoring loud-speaker are mounted on each panel. Transfers from radio to microphone or phonograph input. Height 69.5", width 20.6", depth 17.5". RCA Victor Co., Inc., Camden, N. J. 302

WALLMOUNTING LOUDSPEAKER PLAQUE, MODEL AF-6134. For use with RCA Victor centralized radio distribution system, in homes, hotels, schools, hospitals, etc. Equipped with lock switch. Dark walnut faced with Oriental walnut veneer. Steel wall box, 10" x 12" x 4". RCA Victor Co., Inc., Camden, N. J. 303

31k. Electric Heating and Cooking Apparatus

CHASE-ERSKINE ELECTRIC RADIATORS. Portable heating unit. Electric heating unit sealed in a copper tube, radiating through copper fins. In four sizes, each contained in a neat attractive cabinet. Plug into electric outlet. Chase Brass & Copper Co., Erskine Radiator Division, Waterbury, Conn. 305

GENERAL ELECTRIC "MODERNETTE" RANGE. Occupies floor space of 18" x 22"; height, 467/8". Approved by Underwriters for built-in construction. Originally designed for G. E. 65" kitchenette, it is available for separate installation. Oven, 14" x 14" x 16". Three plate.

Schenectady, N. Y. 306
GENERAL ELECTRIC 60-IN. KITCHENETTE. Designed for apartment-house efficiency kitchens; 22½" deep. Has Model HE-3K G. E. refrigerator, 3 net cu. ft. capacity; 6.8 sq. ft. shelf area. Range is Model Gio B8 as described above. Sink and storage space. Illustration shows it recessed, as described above. Sink and storage compartments heavily cork-insulated. Stainless steel top deck with front oak serving board, rear Monel metal serving board. A 2-burner hot plate or steel top griddle may be inserted for small special orders. The Prometheus Electric Corp., 401 W. 13th Street, New York, N. Y. 309

“TOLEDOAN” ELECTRIC STOVE. 45" x 23", 33½" high. Four full-size burners; recessed switch panel; appliance receptacle; clock plug. Oven 16½" x 17½" x 14" with upper and lower burners. Ivory porcelain enamel or marbleized finish. The Standard Electric Stove Co., Toledo, Ohio. 310

MODEL 765 ELECTRIC STOVE. For larger homes. Choice of plate equipment, with gas burners or all electric. Monel-lined oven, 24" x 21½" x 14"; small aluminum-lined oven, 18" x 18" x 7½". Temperature control. Timer plug. Floor space, 59½" x 14¾", 52½" high, 3½" to cooking top. The Standard Electric Stove Co., Toledo, Ohio. 311

WESTINGHOUSE ELECTRIC STEAM GENERATORS. Useful where steam is wanted in limited quantities and where it has been found too costly to run steam lines to remote places where steam is desired. A complete line of generators with ratings ranging from 2 to 240 kw. are available. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 312

32. Refrigeration

GENERAL ELECTRIC MODEL HE-5 REFRIGERATOR. Flat-top type, with 9½ sq. ft. shelf area. Baked Glyptol enamel exterior, porcelain interior. Ice-making capacity, 654 lbs. or 60 ice cubes. Semi-concealed hardware chrome finish. Open latch with slight push of elbow or side. General Electric Co., Schenectady, N. Y. 313

GENERAL ELECTRIC MODEL HT-70 REFRIGERATOR. Monitor top, porcelain exterior and interior; 12.3 sq. ft. shelf area; ice-making capacity, 4 trays, or 9 lbs., 84 ice cubes. Door opened by foot pedal, lighting interior. Highly polished chrome trim. General Electric Co., Schenectady, N. Y. 314

YORK UTILITY AIR COOLER. Used for either human comfort or industrial air cooling. Adapted to small tonnage requirements, applicable to small offices and small cold storage rooms. Unit adapted to ammonia brine or water as refrigerant. Casing constructed of die-pressed steel. Front air outlet fitted with adjustable louvres which remove moisture from air leaving cooling coils. York Ice Machinery Corp., York, Pa. 315

“DECALORATOR.” A steam vacuum refrigeration unit. Operation is based upon the fact that water under high vacuum will vaporize at low temperatures. A range of capacity, measured in thousands of B. t. u. per hour of cooling capacity from 24 to 4800. Can be furnished in either vertical or horizontal design. American Blower Corp., 6000 Russell Street, Detroit, Mich. 316

33. Elevators, Dumbwaiters and Accessories

WARNER ELECTRIC RESIDENCE ELEVATOR. Hydraulic plunger type, for one-floor rise. Driving mechanism in basement operating a vertical threaded steel column. No ropes, chains or cables. Car travels on regular elevator side guides. A loaded car will not coast, even should the brake fail. The Warner Elevator Mfg. Co., Cincinnati, Ohio. 317

KIMBALL STRAIGHTLINE DRIVE. Motor and elevator machinery designed to bolt together on machined faces. Secures factory precision alignment instead of the field mechanic’s version of alignment. After field repairs the precise alignment is automatically restored. Eliminates vibration and human fallibility. Kimball Bros. Co., Council Bluffs, Iowa. 318

WESTINGHOUSE SIDEWALK LIFT. Of unit construction of the worm-gear type, driving, through a spur gear reduction, a drum shaft mounted on bearings supported from the rails. The drum shaft carries two drums, one adjacent to each rail. The motor is flange-mounted to the machine. Westinghouse Electric Elevator Co., 1500 No. Branch Street, Chicago, Ill. 319

SEDGWICK “ROTO-WAITER.” For full automatic electric dumbwaiter service between two floors. No space needed above top of car at upper landing. Simplified and low-cost mechanism through steel roller chain operating in one direction only. Sedwick Machine Works, 150 W. 15th Street, New York, N. Y. 320
SHEPARD HOMELIFT. Completely automatic safety elevator, operating from the regular lighting circuit. Easily installed in existing homes. Requires only an opening, cabin size, between first and second floors; above, is enclosed in its own closet. Standard model, 30" x 30" platform, lift of over 300 pounds. Special model, 36" x 36". The Shepard Elevator Co., Inc., 2413 Colerain Avenue, Cincinnati, Ohio. 321

WESTINGHOUSE DUMBWAITER. Dumbwaiter machine is of the traction type, with worm of forged steel and gear of phosphor bronze, which run in an oil-tight housing, the thrust being taken up by self-aligning bearings. The gear shaft is mounted in roller bearings. Motor is flanged-mounted to the machine. Westinghouse Electric Elevator Co., 1500 No. Branch Street, Chicago, Ill. 324

WHITCO SIDEWALK ELEVATORS. Counterbalanced type, weight of car and, if desired, portion of load compensated for. Hand power, saving installation and maintenance costs. All sizes and capacities to suit various conditions. Vincent Whitney Co., 130 Tenth Street, San Francisco, Calif. 325

WESTINGHOUSE ELECTRIC STAIRWAY. Thoroughly modern, yet based on experience in design, manufacture, and installation, and with safety of paramount importance and quietness a feature not to be overlooked. Westinghouse Electric Elevator Co., 1500 No. Branch Street, Chicago, Ill. 326

WESTINGHOUSE FAN AND LIGHT FIXTURE. Especially designed for elevator cars. The light fixture is of cast bronze or aluminum, suitably combined with the fan, which will displace 900 cu. ft. of air per minute, is mounted on resilient rubber mountings, and is noiseless. Westinghouse Electric Elevator Co., 1500 No. Branch Street, Chicago, III. 327

MODIFIED COLLECTIVE CONTROL FOR PUSH-BUTTON ELEVATORS. One pressure of a hall button assures tenant of service in his turn. Elevator, instead of answering but one call each trip, responds promptly to each registered call. Change from old system made in a few hours. Otis Elevator Co., New York, N. Y. 328

WESTINGHOUSE CABLE EQUALIZER. Consists of a system of levers to which the cables are attached, the ratio of the levers being such that there is an equal distribution of load on each cable. The pivot points have bronze bushings which increase the efficiency. Westinghouse Electric Elevator Co., 1500 No. Branch Street, Chicago, III. 329

34. Power Plant

HIGH-SPEED AIR-CONDITIONING COMPRESSOR. Advancing beyond the belt and gear driving at 100-500 r. p. m. to a reciprocating type operated at two or three times this speed. Gain in compactness; light weight; quiet action; smaller and cheaper bearings, crankshaft and other parts. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. 330

35. Equipment

EMPIRE STATE MODEL PASSIMETER. Four-arm horizontal pivoted type in two forms: “Auto-Lock” and “Speed-o-Matic.” First requires operator release by foot treadle; second is unloaded by pressure of patron but can be instantly locked by treadle. Hydraulic silencing. Tamper-proof registration. Aluminum arms and head. Perry Turnstile Co., 101 Park Avenue, New York, N. Y. 331

“KOMPAK” PASSIMETER. For space saving where entrance and exit space is limited. Used throughout Century of Progress Exposition. Lessens space needed for revolving arms; no need to cut into wall of ticket booth. Hung on wall or on its own pedestal. Perry Turnstile Co., 101 Park Avenue, New York, N. Y. 332

WEBCO SWINGING-LEAF BLACKBOARD. Has four leaves of double-surfaced “Old Reliable Hyloplate Blackboard,” 3' x 3½"—84 sq. ft. of writing surface in a very compact space. Patented features provide removability of each leaf, or entire unit for use in other rooms—also patented locking device. Weber Costello Co., Chicago Heights, Ill. 333

“SMALL HOUSE” UNITS, KITCHEN CABINETS. New additions to The White House Line, of furniture steel joints, electrically welded, baked enamel finish, chromium knobs and hinges, counters of monel metal, stainless steel, or linoleum. Colors, white, ivory, apricot, lime green, jade green, and gray. Janes & Kirland, Inc., 101 Park Avenue, New York, N. Y. 334
LIQUID-ZAHM BEER COOLING AND CONTROLLING SYSTEM. Instead of beer passing through an iced copper coil, it is lifted by gas pressure from barrel into a silver-lined vertical 3-gal. tank, in which a silver-plated ball float holds pressure to uniform 8 lbs. Every draw has same body and collar. Economy of time and beer. Liquid Carbonic Corp., Chicago, Ill.

STAINLESS METAL WORK BAR. In standard 6', 8' and 10' lengths, as well as specials to order. Stainless shelf for pony glasses secured to splash back above sink and drainboard. Insulated cabinet for milk, lemon, lime storage, and uninsulated storage space for additional bottle goods. The Edwards Mfg. Co., Eggleston Avenue and Fourth Street, Cincinnati, Ohio.

GENERAL ELECTRIC HOTPLATE IRONER, MODEL F. Frictionless type, with even pressure and regulated heat. Easier to operate than hand iron or rotary ironer. Folds up easily into a useful kitchen table. Thermostatic heat control on each half of shoe. Presses coats, suits, dresses, does pleating. Draws 1320 watts. General Electric Co., Schenectady, N. Y.

GENERAL ELECTRIC LAUNDRY CABINET DRYER. Entire contents of an 8-lb. washer can be dried ready for ironing in 60 min. A compact cabinet with rod hangers, using fresh warm air, not baking-hot heat. General Electric Co., Schenectady, N. Y.

J.-M. UNIT OFFICE CONSTRUCTION. Asphalt tile floors, sound-absorbing ceilings, and fireproof Transite partitions provide permanence in appearance; ready accessibility to wiring and ducts; quick, cleanly, and economical erection; and relocation with full salvage. Johns-Manville, 22 E. 40th Street, New York, N. Y.

DINSPEL AUTOMATIC DAMPER FOR TUBE LINES. A power-saving device which automatically opens when carriers are inserted, and closes when carriers arrive at receiving terminal. No intricate parts; adjustment simple—a direct-action damper controlled by air flow. Peter Clark, Inc., 534 W. 30th Street, New York, N. Y.

LAMSON CASH CARRIER FOR RETAIL TUBE SYSTEMS. Somewhat longer than old-style, with opening much larger, permitting insertion of average sales checks without cross-folding or crumpling. Four colors to speed action. With recessed head (YD-5710) and with solid head (YD-5700). The Lamson Co., Syracuse, N. Y.

TASCO SLIDE RULE. Disc-type, 2 3/4" diam. for vest pocket. Scales etched with black lines on a nickel silver plate. Length of multiplication-division scale, 6.3" as against 5" on "A" scale of the regular 10" slide rule. Reading is never off end of scale. Tavella Sales Co., 25 W. Broadway, New York, N. Y.

STEELBEAM TRACK SYSTEM Track and car for the safe and economically washing of factory windows where there is a large area to be kept clean.

BRUNSWICK TEMPRITE TAP-COOLER STAND. An 18" dispensing unit for lunchrooms, restaurants, small clubs. Draws from storage compartment in basement. Also over-counter type. Used where a proper size compressor is now in use. Tank in stand keeps compressor from starting and stopping at short intervals. The Brunswick Balke-Collender Co., 623 So. Wabash Avenue, Chicago, Ill.


MARCO FOLDING STAIRWAY, MODEL 48. A compact attic stairway, requiring no rafter clearance, no resting space on attic floor. Folds over the panel within ceiling opening. Straight coil springs hold balance in any position. Panel size, 28" x 60", for ceiling heights up to 9 10'. (Model 66 for heights up to 12'.) The Marschke Co., 551 University Avenue, St. Paul, Minn.

HARTSHORN WASHABLE DIANA CLOTH FOR WINDOW SHADES. Manufactured on a high-count fabric, impregnated with pyroxylin. It is sunproof, waterproof, washable. Surface is smooth, glossy, satiny-like, preserving the cloth against drying effect of the sun. Stewart Hartshorn Co., 250 Fifth Avenue, New York, N. Y.

HARTSHORN NEW SELF-ACTING SPRING WINDOW SHADE ROLLERS. These are made from seasoned, straight-grained American white pine. New patented mechanical features make it smooth-running, quiet, and durable. Stewart Hartshorn Co., 250 Fifth Avenue, New York, N. Y.

WILSON VENETIAN AWNING NO. 7. Wooden slats, lacquered, supported on either cloth tape or aluminum tape. Made for any size opening up to 40 sq. ft. in area. Stock sizes, finished dark
AIRCO PIPE CUTTING AND BEVELLING MACHINE. Portable equipment for cutting off and beveling pipe to desired angle for welding. Designed for oxyacetylene cutting of wrought iron, steel, and galvanized pipe from 4” to 30”. Cuts and bevels in one operation. Air Reduction Sales Co., Lincoln Bldg., New York, N. Y. 353


37. Insulation

BAR-RAY X-RAY PROTECTIVE BUILDING SPECIALTIES. Materials and methods for construction where X-ray equipment or radium is used: lead-insulated partition blocks, lead-insulated lath, lead-insulated wainscot, lead-insulated doors, lead-covered nails, prepared barium plaster, operators’ window frames of lead, X-ray resisting glass, X-ray resisting paint, lead-insulated film transfer cabinets, and other special devices. Bar-Ray Products, Inc., 209 25th Street, Brooklyn, N. Y. 355

INSULATING SHEETROCK. A 3/8” gypsum board with same surface for decoration as the standard 1/2” sheetrock, but backed up with a thin sheet of bright metal. Insulation against summer heat through the newly recognized principle of reflection; retains winter heat by reducing its flow. United States Gypsum Co., 300 W. Adams Street, Chicago, Ill. 356


MASONITE INSULATING BATTs. A wood product built up of 70 layers to a thickness of 3/8”. Weighs 1.16 lbs. per cu. ft. Highly fire and water resistant. Batts fill spaces between studs, with conductivity of 2.76. Masonite Corp., 111 W. Washington Street, Chicago, Ill. 358

IMPROVED BALSAM-WOOL. This product has been improved by sealing edges to keep out moisture, and flanging edges for faster application. Now made also in “Wall-thick” form—2 heavy layers of Balsam-Wool with 4 sheets waterproof asphalt paper—flanged. Meets rigid requirements of air conditioning equipment. Wood Conversion Co., Cloquet, Minn. 359

EAGLE HOME INSULATION. A lightweight fluffy fireproof material for between-studs or between-rafters use. Four inches thickness keeps interiors as much as 15° below outside temperature on hottest days, and reduces heat loss and fuel bills in winter. The Eagle-Picher Lead Co., Temple Bar Bldg., Cincinnati, Ohio. 360

“EAGLE 66” INSULATION. Plastic insulation of the asbestos cement type, overall material. It has the advantage of higher insulating value for same thickness. The Eagle-Picher Lead Co., Temple Bar Bldg., Cincinnati, Ohio. 361

SOUND-INSULATING BASE FOR MOTORS. Floating members are suspended on special insulating material, so enclosed and mounted that long life and freedom from damage result. Motor is mounted as on standard sliding base, and belt tension and motor alignment maintained in the ordinary manner. General Electric Co., Schenectady, N. Y. 362

“TREM-BAR” RESILIENT MACHINE MOUNTING. To prevent transmission of noise and vibration from machines. A rigid platform supported on steel springs. Mounted on wall, floor or ceiling. May be used also to isolate sensitive and delicate apparatus. Lasting effectiveness. United States Gypsum Co., 300 W. Adams Street, Chicago, Ill. 363

39. Acoustics

“AKOUSTOLITH.” A masonry material of high sound absorption. This material, as backed up with Guastavino construction, forms a shell-like masonry dome of flexibility and freedom from shrinkage cracks generally found when artificial stone is set against metal lath, or used with a hung ceiling of steel. R. Guastavino Co., 500 Fifth Avenue, New York, N. Y. 364

“ROCKWALL” ACOUSTICAL PLASTER. Smooth-working, easily applied, hard, durable. Requires no stippling or other surface manipulation. Gray-white and several tints. U. S. Bureau of Standards test, 47 per cent absorption at 512 cycles for 3/4” application over gypsum plaster. Atlantic Gypsum Products Co., Acoustical Division, 60 E. 42d Street, New York, N. Y. 365
GYPSTEEL ACOUSTICAL PLANK
A modification of the original Gypsteel Senior Plank, embodying a structural roof deck with a ceiling surface having high sound-absorbing properties. Steel bound, t & g, 2" x 15' x 10'. Laid with random joints, for spans up to 7'. Choice of colors. Structural Gypsum Corp., 535 Fifth Avenue, New York, N. Y.

“NU-WOOD” BEVEL-LAP PLANK
Companion product to the “Nu-Wood” Bevel-lap Tile. Beaded bevel, and plain bevel, in uniform or random widths in standard color or in variegated shades from light tan to rich wood brown. Has high acoustical and heat insulation efficiency. Wood Conversion Co., Cloquet, Minn.

U. S. G. SOUND CONTROL SERVICE
A consulting and design service covering the whole range of architectural acoustics. Results obtained by installing part of or all the U. S. G. System of Sound Insulation, with either tile or plaster, depending upon requirements. United States Gypsum Co., 300 W. Adams Street, Chicago, Ill.

PONTE VECCHIO, FLORENCE
From the drawing (actual size) in pencil by Malcolm P. Cameron

ARCHITECTURE
Indiana limestone has been used for the chapel, with a roof of slate. There will be noticed, at the base of the tower, an outdoor pulpit.

FROHMAN, ROBB & LITTLE, ARCHITECTS

Chapel of Trinity College, Hartford, Conn.
The plan is based upon that of the English college chapels, where the students sit facing each other across the choir. To the west of this is a space, here called the nave, to be occupied by neighbors attending services, and by relatives and friends at commencement time. The little chapel to the north of the nave is for smaller services, and there is still another chapel in the crypt below the sanctuary.
There are a few stained-glass windows already in place, which have been made by Earl E. Sanborn. The unfinished brickwork wall on the lower part of the west front indicates provision for a porte cochère which some day will give an entrance to the campus lying to the south. To the west of this is one wing of an existing college building in which is located the office of the president and those of other executives.
A drawing by E. Donald Robb, made to show the choir as seen from the nave. Of the choir stalls, only a few of the ends have been carved at the present time.
This building has been erected to commemorate DeVries’s Dutch settlement of Delaware in 1631. Zwaanendael, which means dale of the swans, was the Dutch name for their settlement. Many of the details of this building are adapted from the old Town Hall in Hoorn, Holland, which was built in 1613, and consequently was in existence when DeVries left his native land to come to Delaware. The architect measured the work on the old Town Hall, but, finding that some details had been incorrectly restored, had to go back to the old drawings now treasured in the Museum of Hoorn.

E. WILLIAM MARTIN, Architect

Zwaanendael House, Lewes, Del.
The brickwork is laid up with small units, 3/8 x 3/8 x 3/8 inches, specially made to match bricks in the old Town Hall in Hoorn. Trim is of limestone. Shutters are painted red and white, the town colors of Hoorn, while the window frames and doors are painted a deep Holland blue. A great deal of the ornament and the entire front entrance are taken from the original Town Hall.

ARCHITECTURE
House of Vernon H. Brown, Southampton, N. Y.

POLHEMUS & COFFIN, ARCHITECTS

Photographs by Robert Tebbs
The terrace side of the house. There is a somewhat unusual feature in the shelter for tools and toys, adjoining the garage at the far end of the terrace.

A detail showing the front entrance and the little picket fence which forms the dooryard enclosure.

ARCHITECTURE
The living-room, which is paneled in pine. At the right is the doorway leading to the guest wing, isolated at one end of the ground floor.

Entrance from the terrace to the flower-room, or solarium, with its two curved bays of fixed glass.
Above, the solarium, upon the wood floor of which have been painted the fret border and a decorative star indicating the points of the compass. Below, a corner of the hallway, also panelled in pine, with the door to the living-room at the right.
The Editor's Diary

Part of the reason is the fact that they have built more substantially. Sir Raymond says that "practically no wooden houses have been built in England for several hundred years."

Monday, December 4—John M. Lyle, architect, in from Toronto. He has been one of the pioneers in establishing the theory that there is no peculiar need for us to use, today, architectural ornament based on the lotus or the acanthus leaf. We have flora and fauna of our own which are just as significant. Mr. Lyle's firm has produced a surprising amount of work, largely in Canadian banks and other public or semi-public buildings, in which the building itself has a clean, businesslike austerity, such as we associate with modern work, but depending upon concentrated bits of ornament, usually carved in the stone but sometimes cast in metal grilles or modelled in plaster, which recall the birds, beasts, flowers, and grains of the North American continent, and particularly of his own Canada. He has shown a remarkable ability to conventionalize these elements, seeking always for a pleasing rhythm and flow of line—usually extremely flat in projection—full of appeal for the man in the street. The latter may be very hazy as to what a guilloche is, but recognizes and respects the Canadian goose, a sheaf of wheat, or a beaver.

Tuesday, December 5—This day and date can have no greater significance in history than by reason of the fact that it marks the end of a little experiment—an experiment in which the Constitution of the United States was debased to the level of a police regulation.

Thursday, December 7—Dean Joseph W. Barker, of the Columbia University School of Engineering, says that we are using our eyes for severe visual tasks to the extent of about 70 per cent more than was common a generation ago, and many times more than a century ago. The Dean is pleading for better lighting in libraries. He says that it takes three times as much light to read a newspaper with the same ease as the pages of a well printed book.

Saturday, December 9—A decision of Judge John T. Loughran, of the Supreme Court of New York State, may have some significance in connection with the architectural profession. Judge Loughran denied application for an injunction against the enforcement of Rule 8 of the State Board of Regents respecting advertising by dentists. The State seeks to regulate, through its Board of Regents, what has been termed unethical or misleading advertising. Forbidden forms of that advertising are described in the Rule as: "The employment of letters, handbills, posters, circulars, cards, stereotyper slides, motion pictures, radio, newspapers, or other advertising devices for the purpose of solicitating patronage, except that a dentist may use personal professional cards of a modest type announcing his name, title, address, telephone number and office hours."

The Attorney-General, John J. Bennett, Jr., in an opinion upholding the constitutionality of the Regents' Rule said: "The practice of dentistry should not be allowed to degenerate into a scramble for patients in which the advantage will be with the unscrupulous."

The tide seems to be turning rather definitely against advertising by members of various professions.

Wednesday, December 12—Secretary Ickes has appointed a National Advisory Committee to co-operate in formulating the plans and directing the project of a national survey of strictly American buildings, which will be carried out under the Civil Works program. Doctor Lecester B. Holland is to be chairman, the other members being John Gav Meem, Santa Fé; William G. Perry, Boston; Albert Simons, Charleston; Herbert E. Bolton, University of California; Miss Harlean James, Washington; and Doctor Waldo G. Leland, Washington.

Thursday, December 14—Lunched with Alfred Hopkins, who finds his chief recreation from architectural practice in music. At the moment he is studying the whole theory of musical composition, and is much impressed by similarity between music and architecture, in that each depends so much for its esthetic appeal upon rhythmical repetition. Another thing that a full and active life has taught him is that no country house is completely satisfying without pigeons. Upon his own place in Princeton they have their own home above the garage, and brighten the garden and terrace with their flights, strutting, tumbling, and other activities.

Saturday, December 16—We sometimes pride ourselves upon the elaboration and grandeur of our advertising projects in this country, but W. Buchanan-Taylor has just sent me one from London which rather outshines anything I have seen for some years.
It is a copy of a limited edition of a book issued upon the opening of the Cumberland Hotel on December 12, for which F. J. Wills was the architect, and Oliver P. Bernard, architect-designer for the public rooms. The book contains a foreword by John Drinkwater, a historical sketch of the site by Philip Page, and a brief impression of the hotel itself by "Cosmopolis," and a frontispiece by William Walcott. Moreover, the authors all inscribe the book, which is printed by the Golden Cockrel Press, and bound in Welsh Mountain sheepskin.

Sunday, December 17.—William Sloane Coffin, president of the Metropolitan Museum of Art, died very suddenly yesterday—a really serious loss to a widespread community. Mr. Coffin, like too many men of this day, burned the candle at both ends through his tremendous energy and his constant desire to be of service to his fellow men. Just as an indication of the breadth of that interest, besides being president of the Museum, Mr. Coffin was vice-president of the W. & J. Sloane Company; president, City Mission Society; founder of the Arts-in-Trade Clubs; trustee of the Provident Loan Society, in addition to his activities in the Home Thrift Association, the National Academy of Design, the Presbyterian City Missions, the St. Andrew's Society of the State of New York, and the Brick Presbyterian Church, of which he was an elder.

Monday, December 18.—Spent the evening rewiring the humidity control for my house. Two faults were finally rectified. One was a constant hum of the solenoid valve when the valve is being held open. This I found easily remedied by changing the alternating current actuating it to direct current, through the insertion of a plate rectifier. The second difficulty was that when the humidistat called for more moisture in the air, it turned on the water flow over the humidifying unit which, however, might or might not be hot enough to vaporize it. By taking the trouble for the humidistat circuit from the power supplying the oil burner motor—beyond all the various controls—the solenoid valve will open only when the oil burner is working, and will close when it stops. We are surrounding ourselves apparently, in this stage of civilization, with a complexity of electrical controls which are fascinating if one takes the trouble to understand them, and probably very annoying when they get out of order and one does not know how to fix them.

Wednesday, December 20.—At a building congress luncheon today Mr. Travis H. Whitney, New York City's Civil Works Administrator, outlined to us his conception of the C.W.A. function. It is designed to bridge the gap between the ending of local work relief and the start of federal public works here. Julian Levi seems to think that it may help to solve some of the difficulties of the Architects' Emergency Committee, which has already placed some three hundred men at useful work for a fair wage.

Langdon W. Page, recently appointed Tenement House Commissioner for the incoming administration, warned us not to expect Utopia soon after the first of the year. When asked by a reporter whether his work would change the face of Manhattan, he replied that he would be well pleased if his work could remove from that face one small pimple. With the best intentions and efforts now available, he thinks it will take fifty years to clean up New York City of its slums.

Saturday, December 23.—The news that unemployed artists are to be set at work in government buildings throughout the country arouses a mixture of conflicting thoughts. It is good news that the painters are to have something to occupy them and to be paid for their time, but, on the other hand, it is disturbing to think that we may be letting ourselves in for a flood of murals, some of which may be very good, but most of which are sure to be very bad. After all, there are not more than half a dozen painters in the United States who can conceive and create a mural with which most of us are glad to live. What the others will do to us now that the lid seems to be off, makes the chill run up one's back.

Thursday, December 21.—The rumor that unemployed artists are to be set at work in government buildings throughout the country arouses a mixture of conflicting thoughts. It is good news that the painters are to have something to occupy them and to be paid for their time, but, on the other hand, it is disturbing to think that we may be letting ourselves in for a flood of murals, some of which may be very good, but most of which are sure to be very bad. After all, there are not more than half a dozen painters in the United States who can conceive and create a mural with which most of us are glad to live. What the others will do to us now that the lid seems to be off, makes the chill run up one's back.

Tuesday, December 26.—The P. W. A. allotment of $3,000,000 for making a series of real property inventories in urban areas is a fine thing, but one wishes that it could have been done several years ago. The scheme calls for employment of white-collar workers to assemble and analyze facts upon which the national government and local groups can build projects involving housing, social centers, utilities, etc. The trouble is that we should have known long ago what we really need in the way of rational community planning. It would seem that we should have known long ago that we were building ourselves into a hopeless tangle, and should have at least made a start at working our way out. Now that public works money is available, we do not know how to spend it intelligently.

One of the most disheartening phases of the whole matter is that we may make a plan for a slum area, for example, in some city, only to find that such a plan is no good unless it is properly related to the plan of the whole city, the country, the state, and the nation.

Tuesday, December 28.—The news that Sir Raymond Unwin would address real estate, architectural, and building representatives at a luncheon today, brought out a crowd of several hundreds. His experience of over a century of experience in city planning commands the respect and keen attention of all of us. Sir Ray­mond made the point once again that the situation in England is quite different from that in America in that over there they think of investment in property wholly on the basis of income production over a long period. Here, on the other hand, we think of capital appreciation in the frequent turnover of the property. Naturally the latter cannot go on forever, pyramiding prices to the point of ruin. The dramatic point of Raymond's theme is emphasizing the desirability of utilizing more land for our building purposes: why do we keep herding ourselves into crowded quarters when land is available? The present population of the world, including the many millions of China and India, could be housed, on a basis of ten houses to the acre, in a portion of the earth's surface just about the size of the State of Kansas.
Alois Lang, Wood Carver

Despite the dominance of the machine in this age, there has grown an increasing recognition of the art of wood carving, particularly in ecclesiastical work.

Among the most prolific of those who are carving wood today in America is a sculptor by the name of Alois Lang. For more than forty years he has been turning out ecclesiastical figures and other subjects until the number has grown to such a total that Mr. Lang himself does not know how many he has carved. It is quite probably in the neighborhood of two thousand pieces.

Alois Lang was born in Oberammergau, a cousin of Anton Lang who played Christus in recent performances of the Passion Play. Trained in the wood-carving school of that mountain village, Alois Lang came to America as a youth of nineteen. For a time he worked with an architect in Boston, then went to Manitowoc, Wis., where ever since he has been carving wood for the church division of the American Seating Company. A true sculptor, he likes to work in clay as a preliminary to the actual carving. For material he uses oaks and the softer limewood, and like other craftsmen of this day, he uses the fumes of ammonia to color the woods to the proper hue rather than have time do it.

A list of churches in which Mr. Lang's wood carvings appear would be a long one indeed. Girard College Chapel, Philadelphia; Christ Church, Boston; Trinity Cathedral, Cleveland; Temple Emanu El, New York City; St. Charles Borromeo Seminary, Overbrook, Pa.; First Unitarian Church, Buffalo; All Saints, Pasadena; Shrine of the Little Flower, Detroit; and Christ Church, Cranbrook, Mich., are but a few of the settings in which Alois Lang's wood carvings may be found.
From University of Chicago Chapel, in which, under the direction of Mayers, Murray & Phillip, Alois Lang supervised the work of many wood carvers.

At top right-hand corner of the page, a panel for the balcony front, University of Chicago Chapel.

At right, figure carved for the Church of the Little Flower, Detroit, of which Henry J. McGill is the architect.
In the upper left-hand corner, "Nativity," a plaque in St. John's Church, Detroit, Mich., of which Nettleton & Weaver were the architects.

"Suffer Little Children," a bas-relief in St. John's Church, Buffalo, N. Y., of which the architects were Bertram G. Goodhue and B. G. Goodhue Associates.

Lower terminal of a group of organ pipes, University of Chicago Chapel.
"The Supper at Emmaus," in St. Mark's Lutheran Church, Washington, Ill., designed by Mr. Lang

"Jeanne D'Arc," executed by Alois Lang originally for Neil J. Convery, architect, of Newark, N. J.

"Sending Out the Twelve," in St. Joseph's Episcopal Church, Detroit, of which Nettleton & Weaver were the architects
Better Practice

By W. F. Bartels

1—SELECTION OF BRICK

In specifying brick the architect should have in mind the best quality product produced in the locality where his job will be. He should be well informed as to the other bricks of inferior quality used locally and so word his specifications as to exclude them. Often it is advisable to limit the choice to certain well-known brands. Once chosen for certain uses, the brick should be used exclusively for that work, and no brick of different brands or compositions allowed. Nothing looks worse on an exposed wall than bricks of inferior quality spotted throughout. This is likely to occur despite any assurance that such odd ones will be used on the inside of the wall only. In general the brick should run true to form, with square edges, be well burned, and produce a good ring when struck. They should not absorb too much water.

2—MORTARS

The cement the architect specifies for use in his brickwork will, of course, depend upon a number of conditions. It may be desired to use a non-staining type because of stonework, a quick-setting cement, or one containing a waterproofing compound. Often an architect will allow two different brands of cement to be used on the same job by different contractors, so that their bags of cement will not become "mixed." In other words, one contractor's men might get in early and "inadvertently" use some of the other's cement where his job will be. He might get in early and "inadvertently" use some of the other's cement where his job will be. He might get in early and "inadvertently" use some of the other's cement where his job will be. He might get in early and "inadvertently" use some of the other's cement where his job will be.

Sand is often called for to be "free of loam, grit, or vegetable matter." Grit in this instance does not mean sharp sand, but sand with particles large enough to prevent a smooth application of the mortar by the trowel. Grit is easily detected. In good times the bricklayers will just refuse to use it, or if they do use it, the number of brick they will lay per day will be adversely reflected in the contractor's loss. Then too, the specification may call for a sand from a particular pit, or have qualifying clauses in the specification means that either a great amount of trouble will be incurred in obtaining such sand, or else it probably will be used on the job regardless of its loam content. White or beach sand for use with face brick should not contain too much salt.

Too often on a job there are disputes as to the amount of lime to be used. Some specifications designate 10 per cent, others a shovelful to each bag of cement. Then it simmers down to whether it is 10 per cent by weight or volume, and "how much is a shovelful." Whichever it may be, every one will agree that if lump lime is used it should be slaked at least two weeks before it is used. Any unslaked particles will swell or blister, causing subsequent damage to the brickwork. The more fatty the putty is, the better it will be for the masons, because it will "slide" more easily.

Too often the colored joints of brickwork assume all shades and hues after exposure to the weather. This could be eliminated if the architect were to specify that the mortar colors to be used must be on the job well in advance of the time they are needed, so that when the mason is ready to use them he could not purchase any questionable substitutes with the excuse that the work will otherwise be held up. The proper mixing of mortar for brickwork is important. The architect generally specifies this clearly and distinctly. But the contractor often does not take this part of the specification very seriously. While visiting a six-story apartment in the course of erection, in a section of New York, I watched the man running the mixture. He was putting in 27 heaping shovels of sand, 4 of lime and 2 or 3 small shovels of cement. The specification called for a 1 to 3 mix, with 10 per cent lime. I called this to the attention of the contractor's superintendent. He showed the workman with all the non-dictionary words known to any northern European. We climbed the stairs to the roof of the building. Looking over the edge of the roof I saw the mixer up to his old proportions again. With his fog-horn voice the superintendent shouted down that he was "fired." When we got back to the first floor he was packed up ready to go. Passing by another of this contractor's jobs in a different section of town, one in which my firm was not interested, I chanced to look at the man at the mixer. It was my friend of yesterday. Not "fired," but just promoted to another job.

3—METHODS

It is inexplicable that any one knowing the damage and discomfort caused by wet walls (resulting from poor brickwork), should be careless in writing specifications for such work, or fail to have the specifications enforced. Bricks of poor quality may crack and cause leaks, for which neither bricklayer nor mortar may be culpable. But there are a number of defects due to the human factor which are inexcusable.

The specification should call for full-bed joints, all bricks to be laid by shoveling (Fig. 3A), and all cross joints to be filled solid, and not merely buttered on the edges (Fig. 3B). With all joints solidly filled, a solid wall naturally results. In many localities bricklayers groove the mortar on the horizontal beds of their brickwork. The Common Brick Manufacturers' Association publishes a booklet (which should be digested by every architect) in which a full flat bed of mortar for strength
and weather tightness is recommended (Fig. 3C). Some contractors advance what at first seems a plausible, scientific argument: "To fill the joints solid means that capillary attraction results in damp infilling the joints. A little moisture present rather than having the wind blow the rain right through the wall. If the bricklayer is told to leave a little space between the mortar edges, it will not be long before he will instead be leaving just a little mortar between the spaces. The joints around the chimney are especially vulnerable points and through the wall. If the bricklayer is condemned by direct comparison. That all bricks should be thoroughly wet except in freezing weather, is always good advice. In the matter of broken bricks, or bats, it would seem that, rather than calling for whole bricks only to be used, with bats for filling out, it would be better to put a limit on the proportion of bats to be used under any conditions. Thus, by limiting them to 10 per cent the architect does not encourage a barrage of contractor's arguments or excuses later. In order to be certain that the client (and architect) will know exactly how the brickwork will look, it is advisable to have a good sized panel laid up with the approved shade of mortar, and the joints struck as specified. This will also serve as a guide for the work as it progresses, and any departure can be condemned by direct comparison. Otherwise the superintendent will be able only to guess at what was actually desired, particularly when bricks of several shades are to be mixed. Laying up several contrasting panels is the only sure way of determining the best effect. It is virtually impossible to visualize a pier of brickwork from seeing only a few sample bricks brought into the office by salesmen, showing wads of paper to simulate mortar.

Having taken precautions to see that he does get a good job on his walls, the architect should not allow chasing and cutting so to thin his walls that they will be materially weakened. Most building codes forbid or limit the chasing and cutting. That all bricks should be thoroughly wet except in freezing weather, is always good advice. In the matter of broken bricks, or bats, it would seem that, rather than calling for whole bricks only to be used, with bats for filling out, it would be better to put a limit on the proportion of bats to be used under any conditions. Thus, by limiting them to 10 per cent the architect does not encourage a barrage of contractor's arguments or excuses later. In order to be certain that the client (and architect) will know exactly how the brickwork will look, it is advisable to have a good sized panel laid up with the approved shade of mortar, and the joints struck as specified. This will also serve as a guide for the work as it progresses, and any departure can be condemned by direct comparison. Otherwise the superintendent will be able only to guess at what was actually desired, particularly when bricks of several shades are to be mixed. Laying up several contrasting panels is the only sure way of determining the best effect. It is virtually impossible to visualize a pier of brickwork from seeing only a few sample bricks brought into the office by salesmen, showing wads of paper to simulate mortar.

When a graduated color effect is desired the architect should visit the job daily. Otherwise the contractor or the superintendent will exercise his own judgment, and the finished result may be disappointing to both client and architect. The architect will specify, or choose from a sample built for the particular job, the kind of bond and joint that he desires. The joints should be moderate in size. If they are too thin the bricklayer is slowed up in his work. If they are too thick the work is likely to slide and give very poor results. With wide joints, not too many courses at any one place should be permitted, in order to give the mortar a chance to set.

The finish or striking of the joints should be described and "full sized" also, and it must be insisted on that this be carried out according to the approved sample, description or drawing. Some bricklayers get careless about the finishing work and are willing, as they say, to "let the lighting strike the joints." Various types of joints are illustrated in Fig. 3D, but it might be mentioned in passing that although the weathered joint is the most practical from a lasting point of view, it is also one of the most difficult properly to execute.

The bond used should be fully drawn, explained, and described, because the middle course in a 12-inch wall is susceptible to rather poor work, and becomes too often a dumping space for bats or rubbish.

4—SUPPORT

Bricks can form very good and substantial arches, but when used they should be properly detailed. However, it is probably cheaper in most cases to carry brickwork on other supports, such as steel lintels. The architect should not hesitate to call for lintels over even the smallest openings to eliminate the possibility of sagging (Fig. 4A). It is true that once set a brick arch probably will be satisfactory, as witnessed by work as old as the Roman. Cracks and leaks often develop because the masonry was overloaded when it was fresh or green. Too often lintels are not specified as to weight or thickness. In some parts of New York it is common practice to put in steel lintels ¾" in thickness where ¾" is understood or even specified. With the price of steel at its present figure there is no excuse for skimping on lintels—in fact, there is none at any time, for permitting the installation of inadequate ones. Moreover, the length of the lintel is too often slighted. Merely to provide for a scant bearing is not good practice. The lintel should be long enough so that each side has at least 5" bearing on one complete stretcher.

5—CONSTRUCTION

In the masonry specification too much can hardly be said about the necessity for walls being plumb. Many worries on the job are traceable to the simple fact that the masonry was out of plumb. Interior
chunks in particular seem generally to be built without plum b bobs. On the exterior seldom are the vertical joints kept as rigidly perpendicular as they should be. Often an architect wants a bond in which the brick headers are supposed to line up vertically, but on the job they form only a crazy-quilt pattern. Such experiences are discouraging, but may be traced partly to the fact that the specification was not sufficiently emphatic, and no approved sample had been laid up. The bricklayer should be responsible for all window frames being built in plumb and being set in the same plane. If this is not done he will blame the carpenter for their not being straight.

In solid brick walls it is well to have a wooden strip left between the window frame and the outside course of brick. This will provide a stop so that the mortar may be slashed up around the frame and so provide a space for the calking. If a staff bead is used this will, of course, not be put on until after the calking is done (Fig. 5A). A large building opera-

tion was recently stopped but no one knew why. It remained for a bricklayer to volunteer the reason to the client's interest in this case if the installation of the supports were left out of the brick mason's specification, and the burden of the anchoring put upon the plumber, or to whom ever the equipment happened to belong.

Likewise with cutting and patching—a masonry contractor cannot be expected to do any more than is shown by the plans and specifications. He cannot be expected to go back and cut out for a line that the
The architect has failed to show on his drawings. If the contractor does this without argument you may be sure he has anticipated this in his bid. Every architect's oversight is always paid for, usually by the owner. The contractors in any locality have the architects "catalogued," and will often do the same work for one cheaper than another, because they know that under the former they will not be made to do work not covered by plans and specifications.

Many brick veneer jobs are being done today over defective stucco walls. They are also being done over other kinds of exteriors, such as wood siding or shingles. All too often these jobs give evidence of work done without the architect's supervision. Many are flimsy and will themselves be the cause of regret in a few years. Proper flashing is not furnished. The architect would see to this. He would see that proper footings for the brick veneer were provided, and proper support given where the brick goes over a window opening. He would see that the work fitted snugly against the window frame, and that the frame was properly called. Non-corrosive ties should be specified and used. They should be fastened to the building with the same type of non-corrosive nails. The proper weight of saturated paper must be used. Whether or not a job has an architect can often be ascertained by the paper used under the brick veneer: 24-pound paper, or heavier, indicates an architect on the job; 15-pound paper indicates that the contractor has had a free hand. The difference between the cost of these papers is so slight on a small job that it seems a shame to use the lighter one.

If any special features in brick veneer work are included, or if the work is different from the general run of work done by the contractors estimating on this job, they should be fully apprised of all differences and given full details. If the brick veneer is to be built a certain distance away from the wall, or if the arrangements are made to vent between it and the sheathing this information should be given to the contractors. They must emphatically be informed that they will be expected to live up to all requirements of the work.

7—CLEANING

The architect should include cleaning under his brickwork specification. The method to be used should be fully described, because otherwise the bricklayer will probably either forget to do it, or do it his own way.
THE EIGHTY-EIGHTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF

CHURCH DOORS

Subjects of previous portfolios are listed below at left and right of page

Below are the subjects of forthcoming Portfolios

Fountains
MARCH

Modern Ornament
APRIL

Rustication
MAY

Organ Cases
JUNE

Garden Furniture
JULY

Window Heads, Exterior
AUGUST

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.
Church of Our Lady of Sorrows, South Orange, N. J. Maginnis & Walsh

Church of St. Peter and St. Paul, The Bronx, N. Y. Robert J. Reiley

South door, Pont de L'Arche, Normandy

Park Avenue Baptist Church, New York City Henry C. Pelton; Allen & Collens
North door to narthex, Princeton Chapel
Cram & Ferguson

Chapel of the Intercession, New York City
Bertram G. Goodhue

South door (c. 1495) Notre Dame, Louviers,
Normandy
Blanchard Chapel, First Presbyterian Church,
Passaic, N. J.  Harry Leslie Walker
Main entrance, west front, St. Patrick's Cathedral, New York City. James Renwick

Chapel of the Intercession, New York City
Bertram G. Goodhue

Fourth Presbyterian Church, Chicago
Cram, Goodhue & Ferguson; Howard Shaw

Park Avenue Baptist Church, New York City
Henry C. Pelton; Allen & Collens
Chapel of the Cross, Chapel Hill, N. C.
Hobart Upjohn

Church of the Heavenly Rest, New York City
Mayers, Murray & Phillip

Grace Church, New York City
James Renwick

Henry D. Dagit & Sons
Holy Name of Jesus Church, East Orange, N. J.
Maginnis & Walsh

Chapel entrance, Church of the Heavenly Rest, New York City. Mayers, Murray & Phillip

St. John's Church, Lattingtown, Long Island
H. W. Rowe & Associates

Our Lady of Angels Church, Brooklyn, N. Y.
Robert J. Reiley
Chapel at Westbury, Long Island
Office of John Russell Pope

Chapel entrance, First M. E. Church, German-town, Pa. Sundt & Wenner; Walter H. Thomas

St. Vincent de Paul's, Bayonne, N. J.
Maginnis & Walsh

Church of the Heavenly Rest, New York City
Mayers, Murray & Phillip
Church of the Immaculate Conception, Fall River, Mass. Maginnis & Walsh

Church of the Immaculate Conception, Astoria, Long Island. Robert J. Retley

Hellenic Eastern Orthodox Cathedral, New York City. Kerr Rainsford; Tilden, Register & Pepper

Church of the Blessed Sacrament, Walpole, Mass. Matthew Sullivan
Chapel of Hamilton College (1825), Clinton, N. Y. Philip Hooker

Village Chapel, Pinehurst, N. C. Hobart Upjohn

Storrs Church and Community House, Storrs, Conn. Delbert K. Perry & Earl K. Bishop

Holy Name of Jesus Church, East Orange, N. J. Maginnis & Walsh
First Church of Christ Scientist, Swarthmore, Pa.
Davis, Dunlap & Barney

Wilshire Boulevard Congregational Church,
Los Angeles, Calif. Allison & Allison

All Souls Unitarian Church, New York City
Hobart Upjohn; Otto F. Langmann, associate

Christian Science Church, Pleasantville, N. Y.
Oscar Vautet
Epworth Euclid Church, Cleveland, Ohio
Bertram G. Goodhue; B. G. Goodhue
Associates; Walker & Weeks

St. Luke's Evangelical Lutheran Church,
New York City. Edward L. Tilton

Cloister to south transept, St. George's Chapel,
Newport, R. I. Cram & Ferguson

First Presbyterian Church, Wilmington, N. C.
Hobart Upjohn
Choir, St. Paul's M.E. Church, Brooklyn, N.Y.
Sundt & Wenner; Walter H. Thomas

First Presbyterian Church, Kalamazoo, Mich.
Charles Z. Klauder

West doorway, Princeton Chapel
Cram & Ferguson

South door (12th century) of Church,
Iffley, England
North door, First Presbyterian Church, Passaic, N. J. Harry Leslie Walker

Church of Our Lady of Sorrows, South Orange, N. J. Maginnis & Walsh

Synod House, Cathedral of St. John the Divine, New York City. Cram & Ferguson

Trinity Church, Moorestown, N. J. Walter T. Karcher and Livingston Smith
Hippach Memorial Chapel, Green Ridge Cemetery, Chicago
Arthur Woltersdorff

Central Methodist Church, Brooklyn, N. Y.
Halsey, McCormack & Helmer, Inc.

Side entrance, Bryn Mawr Presbyterian Church, Bryn Mawr, Pa.
Walter T. Karcher and Livingston Smith

Shrine of the Little Flower, Royal Oak, Mich.
Henry J. McGill
an Adventure in Science," is the title of a
BRI-TEX
guide as possible.

F. 135. "Bri-Tex, Reflecting Insulation,
Adventures in Science," is the title of a
treatise from Creo-Dipt Company, Inc., New
York City, describes Bri-Tex Insulation—which
it is said to usher in a new principle in insulation
treatment. Durability, cleanliness, light weight, and efficiency are a few of the
advantages attributed to this use of successive
layers of aluminum foils spaced approximately
eighths of an inch apart—until the desired or specified thickness of insulation
covering is obtained. The forms of application
are described and illustrated in a folder entitled "The Story of Bri-Tex." Send for them.

F. 137. The Arco Architectural Bulle-
tin No. 12, published by the American Roll-
ing Mill Co., of Middletown, Ohio, discusses
the "Relation of Porcelain Enamelled Iron
to Modern Architecture." It is instructively
complete as well as attractive, showing by
text and illustration how porcelain enamel
leads itself as handsomely to ornament as it
does to utility.

GRADED WIRING SYSTEMS
F. 126. Planned and edited for archi-
tects is the new General Electric Engineer's Manual on Graded Wiring Systems. It
contains, among its many virtues, "Time-Saver"
Specification Tables to facilitate your work,
"Time-Saver Specifications Tables to facilitate your work.
It will save you many an electrical headache. We prescribe it heartily.

F. 127. A folder just issued by the Brown
Instrument Co., Wayne and Roberts Ave-
nue, Philadelphia, illustrates and briefly des-
cribes the Brown Recording CO2 Meter.
The folder contains reproductions of many
letters from plant engineers stressing the ac-
curacy and dependability of this meter to rec-
cord fuel wastage and so enable corrective
measures which have saved enough in oper-
ating expenses to more than pay for the equipment within a year.

NEW KLIEGL CATALOGUE
F. 128. Kliegl Bros., New York City,
manufacturers of footlights, bor-
der lights, and other theatrical lighting equip-
ment, as well as stage floor pockets, cove
lights, etc., have just issued for your con-
venience a 24-page booklet illustrating their
items. The catalogue is indexed and cross-
indexed and made as practicable a working
guide as possible.

RUBEROID
F. 129. Just off the press and free to
architects only, is the new Ruberoid cata-
logue, published by the Ruberoid Co., of 95
Madison Avenue, New York City. It is full of
illustrated evidence concerning the accuracy
and adaptability of Ruberoid Roofing
Products to various type jobs. Your file will
be incomplete without a copy.

COALITOSIS
F. 130. The Wayne Oil Burner Corp.,
Fort Wayne, Ind., has prepared an elaborate
brochure of illustrated evidence concerning
the toll that the demon "Coalitisos" takes of
your life and income. Facts and figures
demonstrate the conservativeness of its
statements and show the economy and cleanliness of Automatic Wayne Mistsol
Heating.
ILEG BLOWERS

F. 140. The ILG Electric Ventilating Company, 1857 W. Crawford Avenue, Chicago, publishes a new catalogue, No. 533, on ILG Universal Blowers. The catalogue is comprehensive, including, besides illustrations of parts and installations, capacity and weight tables and copious dimensional data.

WASHROOM ECONOMY

F. 141. The Bradley Washfountain Co., 2303 Michigan Street, Milwaukee, Wis., has issued a new folder describing the advantages of group-washing fixtures for factories, schools, and institutions. The Bradley line includes a washfountain, " 4-in-a-group," showers, shower-dressing-room combination units, foot-fountains, and drinking fountains, all illustrated in the folder.

THE LOUIS ALLIS MESSENGER

F. 142. The Louis Allis Co., of Milwaukee, Wis., announces what they consider a revolutionary development in plumbing, heating, and air conditioning. It is a complete automatic oil-heating plant, operating either on oil or hot-water systems. Steam radiation, 1050 sq. ft. Hot-water radiation, 1650 sq. ft. These figures are based on total load. It furnishes domestic hot-water control summer and winter. It is entirely encased in furniture-styled cabinet and amply illustrated booklet shows many concrete improvements which have been built around homes, schools, parks, and industrial plants. The National Conference on City Planning feels that this booklet should be widely read.

ELEVATOR SAFETY CODE

F. 143. Sponsored by the Bureau of Standards of Engineers and the American Society of Mechanical Engineers and through the courtesy of the Otis Elevator Co., 260 Eleventh Avenue, New York City, is issued a new "American Standard Safety Code for Elevators—Section 71—Qualifications and Duties of Operators." It is in these days of codes we associate the word with "recognition"—but in this instance it concerns "prevention." Copies may be had from any Otis office.

RED BOOK OF BUILDING MATERIALS

F. 144. Published by United States Gymspan, 209 West Adams Street, Chicago, this is a massive red-covered catalogue of the products sold by that company. Illustrated through it are valuable charts and detailed drawings. Section A deals with plaster bases; B with wallboards; C with thermal insulation; D with wire and heat products; and E and F with fire-proofing products.

ENDURO STEELS

F. 145. The Republic Steel Corporation, Central Alloy Division, Massillon, Ohio, has for your reference file a copy of its new booklet on "Enduro—6% Chromium Steels." It gives authentic information on the adaptation of these steels for a number of applications, particularly in the refining industry. The steels are available in all the usual forms.

WESTINGHOUSE NEWS


CONCRETE

F. 147. The National Conference on City Planning, 190 East 22d Street, New York City, has distributed a monograph entitled "Permanent Improvements," published originally by the Portland Cement Association, 33 West Grand Avenue, Chicago. Copies may be had from either. This well-assembled and amply illustrated booklet shows many concrete improvements which have been built around homes, schools, parks, and industrial plants. The National Conference on City Planning feels that this booklet should be widely read.

AMERICAN ROLLING MILL

F. 148. The American Rolling Mill Co., of Middletown, Ohio, sends us word that it has just published a brochure entitled "What Is a Good Stainless Steel Supposed to Do." Having not seen the publication we cannot say much more about it, but from the title, it can be presumed that the contents will be useful to any one contemplating the use of stainless steels.

SELF-CONTAINED ROOM COOLER

F. 149. Release from the Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., announces and describes their latest invention for providing room comfort. It is a new air-conditioning apparatus in one unit both refrigerating and air-conditioning apparatus. Back of the refrigerator, no lengthy basement to living quarters equipment is required, nor basement space. The three functions of weather making are performed by the new Westinghouse unit, viz., cooling the air, removing it excess moisture or humidity, and circulating it throughout the room.

THE SILVER SWAN

F. 150. The Emerson Electric Co., of 4512 Washington Avenue, St. Louis, announce what they consider a revolutionary design for an electric fan. They are calling it the Silver Swan. Its most unique feature is perhaps the "patented" overlapping blade design. The blades are of sheet aluminum. An Emerson 1934 Induction Motor and fully enclosed oscillating mechanism are features, all providing according to the Emerson manifest, maximum air delivery and practically silent operation. Details on request.
This is the second of a series of pages devoted to the modern treatment of certain interesting details in construction.

The mirror over the dressing table has progressed from the merely practical to an inviting and arresting combination of beauty and utility. This one is a decided asset to the room, giving it a new and attractive individuality of its own.

A circular mirror creates a distinctively different and pleasing atmosphere in this grouping of a modern table, bench and floor lamp.

A most attractive panel over a fireplace, decidedly in the modern manner. The clear, even reflection lengthens the room. The manner of placing the sidelights is an interesting innovation.

- Mirrors have become a definite part of architectural design. In many modern residences they form an important and integral part of the interior decorative motif...placed, shaped and designed skillfully, expertly, by the architect himself. As the use of silvered plate glass continues to broaden, and as its specification and adaptation become more and more a province of architecture, the high quality of L.O.F Polished Plate Glass is recognized by the profession as a splendid ally in achieving the result that is desired.

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Continued

NEW YORK UNIVERSITY COURSES

THE Department of Architecture, New York University College of Fine Arts, will open a series of courses reviewing the fields of architectural design, building construction, and office practice. The courses have been co-ordinated with the requirements of examinations held in the past by the State Board for the architect's license, and have been specially prepared from a viewpoint of practicality. Dean Raymond Hossange said: "It is the intent of these courses to give to those who have had experience in the varied phases of architectural practice, a review and preparation in a particular specialty in which they may feel themselves to be deficient. Many of the candidates of those working in architects' offices have not had the opportunity of broad experience, having devoted their time to specialized work, and have not had the occasion to refresh their memory with the vast amount of material found in the field of building practice. The students' attention will also be called to the numerous matters that form the equipment of a practicing architect, making him better fitted to pass the examinations for architects' licenses and for his later opportunities."

CHARLES T. MATHEWS, 1863-1934

CHARLES THOMPSON MATHEWS, retired architect, died January 11, at his home in New York City. Mr. Mathews was born in Paris, and, after attending schools in that city and in Nice, he came to the United States, attended St. Paul's School, Yale University, and Columbia University, receiving from the last named the degree of Ph.B. in architecture, and still later his A.M.

After extended study in Paris, Mr. Mathews began the practice of his profession in New York. Among his better-known work is the Lady Chapel of St. Patrick's Cathedral, New York City.

Mr. Mathews was known also for his architectural writings, which included "The Renaissance Under the Valois," published in 1893, and "The Story of Architecture," published in 1896.

He had been a Fellow of The American Institute of Architects since 1895, and was a member of The Architectural League of New York. He had retired from active practice some ten years ago.

PERSONAL

Robert S. Arnold and L. Morgan Yost, architects, announce the opening of offices in the First National Bank Building, 1150 Wilmette Avenue, Wilmette, Ill.

The office of William W. Price, architect, will be moved on April 1 from Philadelphia to Moylan, Pa.

Louis E. Jallade, architect, has moved his office to 139 East 79th Street, New York City.

Alexander L. Levy and William J. Klein announce the opening of offices at 179 West Washington Street, Chicago, Ill., for the practice of architecture, including appraisals, modernization, and fire losses. It is requested that catalogues be sent.

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