

(PENCIL POINTS)

January 1949

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Newsletter

Other A.I.A. news is that both <u>Ralph Walker</u>, N. Y. architect, and <u>William Wilson Wurster</u>, Calif. architect and M.I.T. architectural Dean, <u>have been nominated for A.I.A. presidency</u>. Thus for the first time in memory of many members there will be a contest for this office.

University of Cincinnati is sponsoring <u>research in reflective</u> <u>radiation</u> for heating and year-round conditioning. Studies will be in house whose walls and ceilings are embossed aluminum foil, reflecting indirectly electric radiant heat, cooling coil sources, and fluorescent light installed in cove.

Dept.of Commerce predicts <u>\$18,750,000 of construction in 1949</u>. Producers' Council promises ample materials for this total. (For P/A's analysis of materials supply see this month's PROGRESS REPORT.)

Guesses are that <u>residential construction will decline</u> in 1948 (housing starts are now predicted at somewhat less than 1948's 925,000) as will industrial work and amusement buildings. <u>Increases are expected in commercial categories</u>, in utility structures, and in public buildings of various sorts. Guesses differ on trends in private religious, educational, and health building.

Release of State surveys under Federal Hospital Act shows <u>need</u> for double present number of acceptable beds—about 900,000 exist, about 900,000 more are needed for adequate care.

Model State legislation, empowering municipalities to adopt standard up-to-date <u>building codes or code sections "by refer-</u> <u>ence"</u> has been drafted by HHFA with assistance of other agencies. Such state enabling acts would save excessive publishing costs standing in way of local code revision in many places.

First FHA loan under new housing act for prefabricated houses went to house <u>designed by architect William Lescaze</u> for Reliance Homes. 230 of the houses will be erected near Philadelphia. Second such loan was for 100 poured concrete prefabs to go up in N. J.

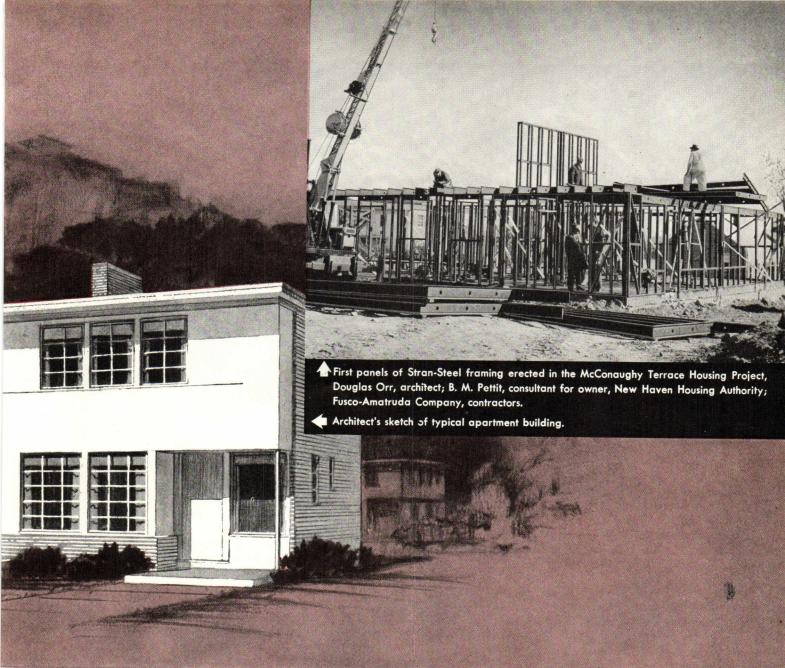
Several <u>new board products</u> promise useful application to construction problems. For example, Stramit, heat-pressed dry straw, will be <u>low in price</u>, fire-resistant, various thicknesses, 4' x 8, 10 or 12'. Coston & Frankfort are designing a handsome plant for the manufacturing company in Oklahoma City, using the material for construction.

STRAN STEEL '

selected for

Use of Stran-Steel framing throughout the fiftynine buildings of the \$2,752,000, 300-family McConaughy Terrace garden-type apartments, now under construction in New Haven, Connecticut, is providing fire-resistant, long-life buildings with real economy.

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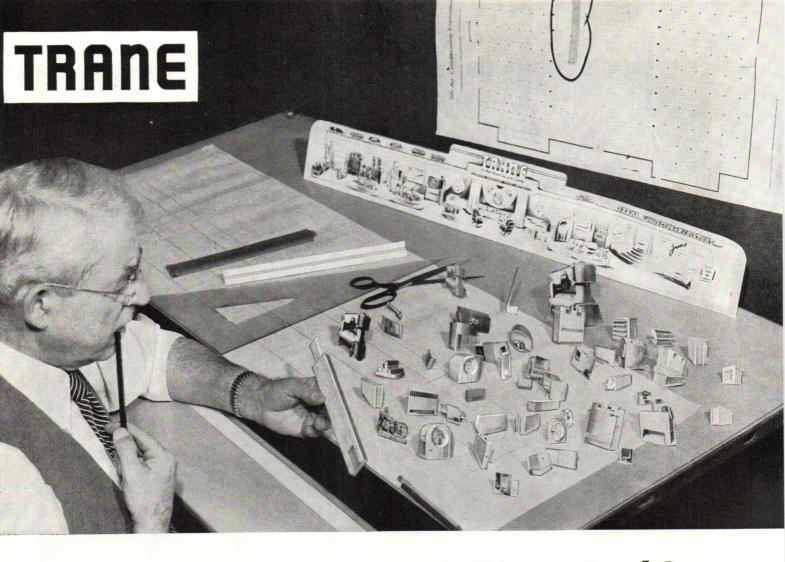


LOUISIANA. "We are very much satisfied with our investment in a Servel All-Year Air Conditioner," states Clay W.Beckner, 5 Newcomb Boulevard, New Orleans.

put in the plans

TEXAS. "We keep our home cool all summer and warm all winter with Servel *All-Year* Air Conditioning," comments Mr. Nelson Waggener, 7700 Mockingbird Lane, Dallas. 1-

AIR CONDITIONER



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THE ILLUSTRATION: Mr. O. T. Jackson, Trane Art Director, puzzles over scale models of Trane products and a sketch of the 134-foot Trane exhibit to be displayed at the Heating and Air Conditioning Exposition which opens in Chicago January 24.

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The huge booth will be manned by a dozen specialists, aided and abetted by 75 to 100 other Trane engineers attending the show. Come see us!

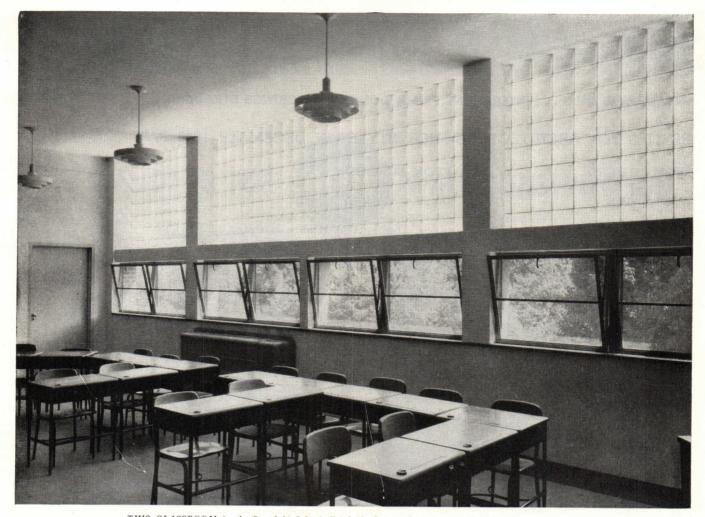
THE TRANE COMPANY...LA CROSSE, WIS.

Manufacturing Engineers of Heating, Ventilating and Air Conditioning Equipment—Unit Heaters, Convector-radiators, Heating and Cooling Coils, Fans, Compressors, Air Conditioners, Unit Ventilators, Special Heat Exchange Equipment, Steam and Hot Water Heating Specialties . . . IN CANADA, TRANE COMPANY OF CANADA, LTD., TORONTO.

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WATER CHILLERS SC AIR CONDITIONERS WALL-FIN HEATERS ROOF VENTILATORS RADIATOR VALVES THERMOSTATIC TRAPS BUCKET TRAPS STRAINERS QUICK VENTS FLOAT VENTS MULTIPLE-ZONE AIR CONDITIONERS APARTMENT AIR CONDITIONERS UNITRANE AIR CONDITIONING CUSTOM-AIR CONDITIONING S & T HEAT EXCHANGERS SPECIAL HEAT EXCHANGERS DIRECT RETURN TRAPS HOT WATER FLO YALVES HOT WATER FLO FITTINGS FEED AND RELIEF VALVES TEMPERATURE CONTROL VALVES



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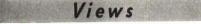
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JANUARY, 1949 7

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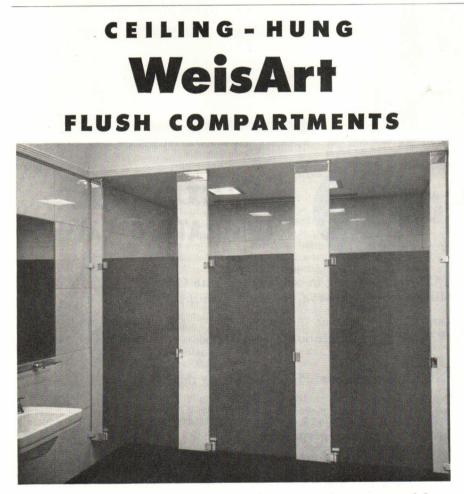
WALLBOARD ... INTERIOR FINISH PRODUCTS ... CEMESTO ... FLEXCELL ... ROCK WOOL ... CELO-SIDING ... CELO-BRIC ... CELO-STONE ... CELO-SHINGLE ... CELO-BLOCK



(Continued from page 8)

schools the cornerstone of, to me, a most disturbing and destructive philosophy. We have had some of these men in our office and have found their ideas not only personally disturbing, but an actual detriment to efficient office procedures. They have behaved identically in three basic ways. First, as "artists," they cannot work with any happiness on a building not in one of the international style modes. They are chained to their style and thus, even when working on such a building, cannot exercise any real creativeness. Second, they can only work out a problem in terms of taste. The discipline, in fact the whole concept of working out a problem in terms of its own merits and of its materials, has to be learned in the office. Third, they meet all aspects of architecture not already integrated into the international style framework (including clients) with constant and corrosive criticism.

This absolutist philosophy is in part based, without question, on the work and writings of the several men mentioned in your editorial. And this, I believe, is a grave, if understandable,



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error. The absolutist type seems to be overinfluenced by the specialties of these very strong men and to ignore the message which-collectively-they have to offer. For my own part, I think of these architects and historians as the teachers from whom I have learned most, as the men who continue to stimulate and point up first one aspect and then another of the architecture of our time. I do not wish to imply that I agree with all of them all of the time. In fact, the article you quote from. by Philip Johnson and Peter Blake, was written as a vehement attack on one of mine preceding it in the Magazine of Art. Nevertheless, I believe that as a group, each one contributing in his respective, special, and sometimes narrow way, explores the whole field. Col-lectively, their work and writing seem to me to indicate that the proper studies of the architect are:

History (including art). Materials (including research). People (including sociology).

All three of these complexes make architecture. No one can be ignored or put above the others. But the fact remains that architecture is for people. not other architects, nor historians, nor critics, nor Museums of Modern Art. Buildings are for men, women, and children with colds in their heads, hernias. flat feet, and the chicken pox. They are where miserable humanity trips on the stairs, falls in the bathtub, where legs are removed, and where personal tragedies occur. Buildings are also for triumphant humanity, where courage and freedom are fostered, where knowledge is increased and handed on, where the need for beauty and love is most often satisfied. Buildings, above all. must respect people's weaknesses-reflect their strengths.

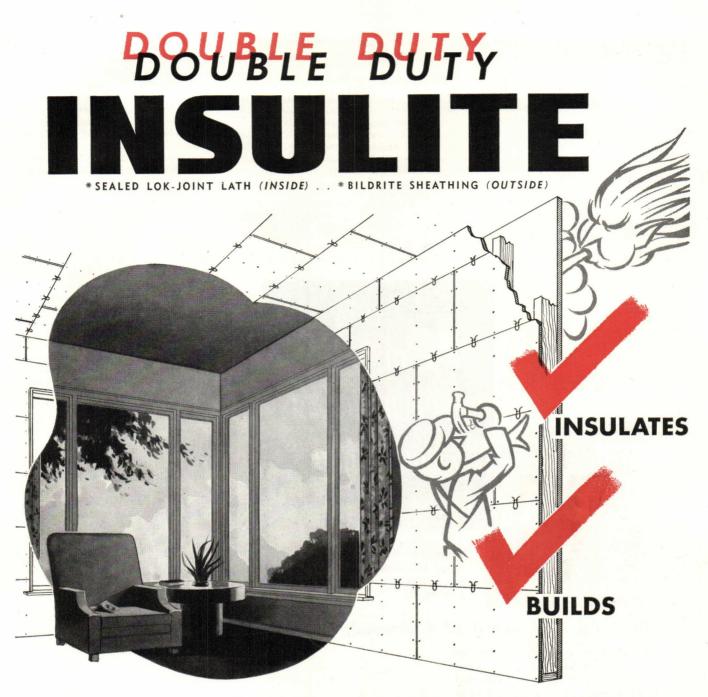
It is, perhaps, the utter obviousness. the vague inclusiveness of all this which results in its being so often forgotten, even by the practicing architect. To remember people, to perceive buildings as the framework in which ugly, passionate, cold, and beautiful human beings live, is to be incapable of style. monumentality, and authoritarianism. We need more creativity and less style. more workmanship and less taste, more appreciation and less criticism. Your editorial, if it helps only one architect to a sense of the reality of architecture, will have been well worthwhile.

> ROBERT WOODS KENNEDY Kennedy & Smith Boston, Mass.

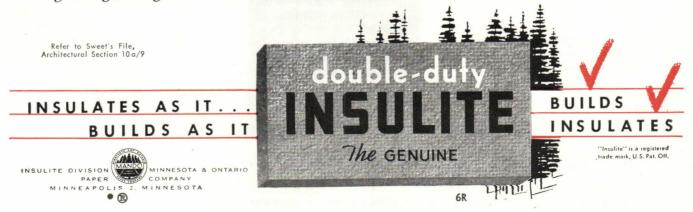
EXCELLENT START

Dear Editor: Your message on the overbearing nonsense of style and esthetics has been long overdue. I believe it is going to do a great deal of good—and more discussion would be desirable. I congratulate you on an excellent start.

> ISADORE ROSENFIELD New York, N. Y.



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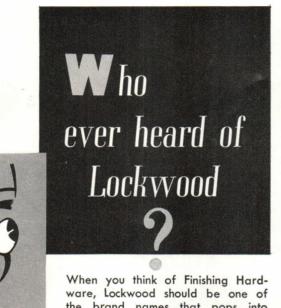
(Continued from page 8)

Wright's work is "Architectural fingerpainting," there can't be much tolerance with the younger men who are only working around the periphery of the understanding enjoyed by the great. The ones who are pulling all the hair will be the last ones to admit they are pulling apart their contemporaries' architecture "because it is, or isn't, one style or another, monumental or not. cottagy or internationally, or what have you." Modern Architecture is still hav-

ing growing pains and while it is, there will be lots of nonsense written and said about it; lots of brickbats thrown and lots of buildings built.

Too many private architects have tried to be characters with windsor ties, strange clothing, flowing hair, and a cape. But they become prima donnas. The new architects coming out of the best schools today should learn the team spirit and the ability to collaborate while acquiring a sense of tolerance.

> HENRY L. KAMPHOEFNER, Dean School of Design North Carolina State College Raleigh, N. C.



the brand names that pops into your head.

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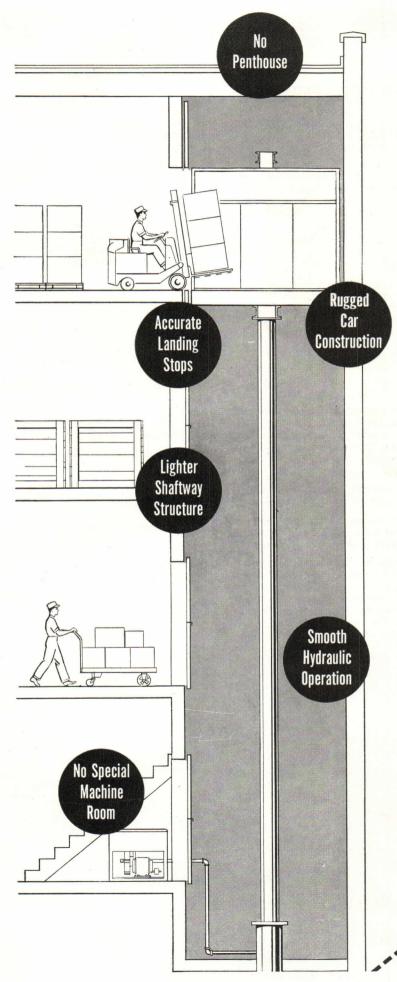
Dear Editor: Thank you for sending me proofs of the editorial in the December 1948 issue of P/A. I find your quotations from my remarks at last winter's symposium somewhat confusingly used. The juxtaposition of my name with those of members of the staff of the Architecture Department suggests that I am connected with the Museum, which is not the case. But it may be merely a matter of accident that the quotations from myself follow immediately upon the quotation from the Johnson-Blake article in the Magazine of Art.

I judge that you're using the quotations from me as instances of comment about architecture of which you do not approve. This seems to me somewhat unjust considering the context in which these remarks were first made, for my purpose was certainly very close to your own: I was stressing, as you are, the fact that we need "thousands of schoolrooms, hundreds of thousands of hospital beds, and millions of homes." As to the final quotation, it should be ex-tended to read that "the *architect*-*designed* small individual house, although of consequence statistically in the United States because of our lack of an adequate public housing program and the immaturity of the prefabrication industry, is in the world at large of little statistical consequence." For example, I note that Summerson at the conclusion of his history of the English Architectural Association remarks (with some exaggeration) that the private practice of architecture has become illegal in Britain because of the restrictions on the building of individual houses and Cripps' rigid control of capital investment.

I am sorry that you feel that discussion of various aspects of architecture is in any way inhibiting production. Though I was hardly in agreement with either side, I thought it worthwhile for the editor, Goldwater, to include in successive numbers of the Magazine of Art the Kennedy and the Johnson-Blake articles. For one reason or another, American professional journals have been hesitant to encourage the discussion of general architectural issues.

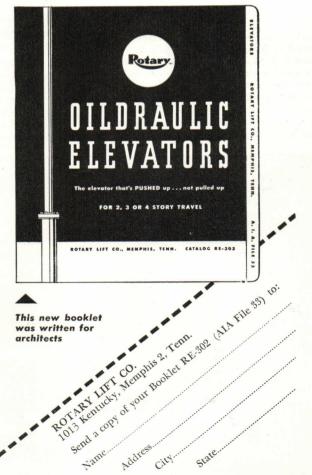
I entirely agree with you that it is wiser to speak of "modern architecture" and not of this or that portion of total contemporary production under one or another stylistic label. Indeed, that was perhaps the major point of my remarks at the symposium last winter. But I am sorry to see that you seem to imply that there is no profit in talking about modern architecture. For I feel that what is needed is wide and free discussion of issues both among members of the profession and those outside the profession who are interested in architecture as a major manifestation of American culture.

HENRY-RUSSELL HITCHCOCK School of Architecture and Planning Massachusetts Institute of Technology Cambridge, Mass.



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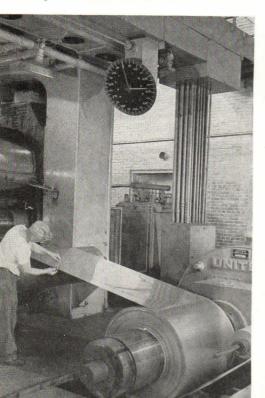
Availability Increasing; Prices Advancing,

But not Enough to Account for Tremendous

Increase in Building Costs

Forecasting trends has been the fashion around the close of one year and the beginning of another. Obviously forecasts, polls, and predictions have about as much acceptance today as medieval witchcraft. Yet all of us benefit from careful consideration of the future; by studying past performance and inquiring into manufacturers' plans, we as editors can give you, our subscribers, a useful report on the building materials industry's progress. So here are factual records of the availability and cost of architectural products during 1948. The report contains a few prognostications which, space permitting, are direct quotations from statements made by responsible manufacturers.

Formerly an armor plate plant, these buildings at Massilon, Ohio, have been virtually reconstructed by Republic Steel Corp. for manufacturing stainless steel sheet. The new facilities substantially increase Republic's capacity for producing this one product. In addition to remodeling buildings, extensive production equipment was installed, such as the gager shown measuring thickness of stainless sheet.



In assembling this month's issue the editors of P/A asked materials and equipment manufacturers two questions:

A. Has the PRICE of your finished products, compared to last year's, changed substantially? What about your costs for raw materials? For labor? For distribution?

B. What about AVAILABILITY? Of your finished products? Of raw materials, to you?

While some replies were definitely offthe-record, most were not. We wish to thank all who contributed information. Their generosity enables us to substantiate some conclusions to which you, in practice in various portions of the country, have probably also come. If it is any comfort, you may discover that yours has not been an isolated experience. In general, during 1948:

1. While manufacturers' selling prices have risen, the percentage of rise is quite a bit smaller than the percent by which costs of raw materials, labor, and distribution have increased.

2. Part of the higher production cost has been absorbed (not through altruism but simply as good business).

3. The tremendous rise in total cost of construction, then, can't be laid wholly at the product manufacturers' door.

4. Production vs. demand: A surprisingly great portion of the many types of building materials and equipment is available in sufficient quantity to meet demand, deliveries ranging from immediate to a few weeks (compare with 1947's several months). Production has had to be phenomenally increased to cope with a demand which remains extremely high.

Progress Report

5. Serious shortages still exist. For example, there is great difficulty in obtaining steel; sheet and strip are the most deficient; there are some instances of shortages of ferrous castings. Difficulty in obtaining sheet steel affects construction at many points. We received enough reports of difficulty in obtaining satisfactory supplies of wood to indicate some continuing trouble, but not as many as might be expected. (We received from Portland cement manufacturers almost no direct answers to our questions; but personal experience in various parts of the country, plus authoritative reports published elsewhere, indicate a continuing short supply.)

6. In a few cases government stockpiling of raw materials is stated to be responsible for mild, serious, or anticipated shortages; for instance, in products requiring aluminum.

7. Many components which a year ago were unobtainable had by 1948's end become relatively satisfactory; examples are small electric motors and, among metals, copper and brass.

Rise in Product Prices

Time after time, in tabulating replies, we have come across statements such as this: "Costs up 21%; selling prices up $14\frac{1}{2}\%$ "; or "costs increased about 32%; average increase in selling price 5%." If there had been any chance for collusion, such unanimity might have

(Continued on page 16)



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Associate Architect, W. Emil Forman Architects, Holgbird & Root & Burgee .



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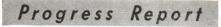
(Chicago Suburb)

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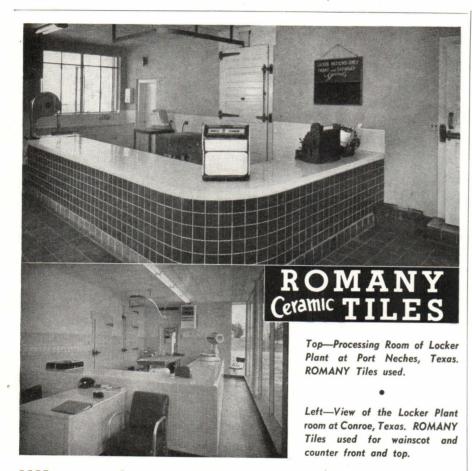


(Continued from page 14)

been suspicious. But there had been no opportunity for getting together; we sent out our inquiries "cold," and we allowed a very short time for their return. And each reply considered is signed by a responsible member of the manufacturing firm.

It wouldn't be fair to strike a general average across so diversified a set of industries. Even in normal times their problems vary tremendously; almost the only common denominator is the total

volume of construction. Since construction has continued at a high rate, all types of products continue to be in great demand; as much as production has been increased, supply has only rarely caught up. Selling prices have been held down, according to manufacturers, by two principal means: by increasing efficiency of production (meaning improvements in manufacturing methods and machinery); and by expanding the volume of production, so that a manufacturer's total profit remains satisfactory although profit per unit of production is lower (in some cases this has meant actual plant expansion, in others it follows naturally from the first).



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Except in a few isolated instances, distribution costs appear to have risen the least; raw materials and labor share the greatest part of higher production costs about equally. It is worth noting especially that in just the past 12 months, most manufacturers reported costs as having risen from 10 to 20% (increases ranged from zero to 37%). A single large producer, Johns-Manville, has publicly announced that its costs have risen 43 to 102% over prewar figures. If J-M's seven-year increase-1941 to 1948-is indicative of the general picture, this means that costs rose much more rapidly during 1948 than in previous years. On the other hand, consider aluminum, whose production was expanded tremendously in the sevenyear period. Aluminum's base price has dropped 20% compared to prewar figures, even though there was a 2-cent per lb increase in mid-1948.

There's some disparity between the price rise percentages quoted here and those published by the U.S. Department of Commerce. Ours are manufacturers' selling prices, quoted to us by the manufacturers. Department of Commerce figures are wholesale price indexes, possibly more reliable as far as the ultimate consumer-the building clientis concerned. Most building materials pass through a complex distribution system—jobber, wholesaler, and retailer at least-before they arrive on the building site. In this multiple handling probably lies responsibility for the composite price increase shown in the Department's monthly reports: in September 1948, for instance, the Department index for all building material prices was 220.3 using 1939 prices as a base of 100, which means an increase of 120.3%. On the same basis, construction costs then were 216, an increase of 116%. See how the materials price picture changes between manufacturer and construction site!

Production Increases

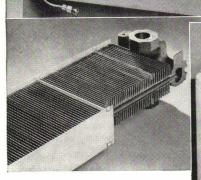
When you consider availability, it's almost a question of "which paper 'dja read?" The Producers' Council, national building product manufacturers' or-ganization, says, "The supply of building materials and equipment is expected to be sufficient for the 18.1 billion dollars of new construction, and 7 billion dollars of repair and maintenance esti-mated for 1949." But it admits difficul-ties with steel, iron, Portland cement. The Construction Industry Information Committee has issued statements throughout 1948, optimistically pointing at high production rates. The Department of Commerce report, again for September 1948, showed an over-all production index of 153.7 (1939-100) -the index would probably be higher now. Only 20 materials were surveyed to obtain the Department's index, and of these 9 showed declines in production ranging from 3 to 23% less than the preceding month. The more substantial decreases were in cast-iron soil pipe,

Hes enting a new line of Type F **Convector-Radiators**

Showing location of heating element.

Note convenient piping, adjustment for pitch, and air vent.

Men who design, specify, sell, install and service household and commercial heating systems will welcome Fedders Type F Convector-Radiators. They are built in a complete range of standardized sizes and capacities for free-standing and semi-recessed installations. Heating element design is a result of over 50 years of Fedders heat transfer experience and skill. They combine thermal and aerodynamic efficiency with consequent comfort and fuel economy. Write for catalog and price list. Representatives in principal cities, see your classified telephone directory.

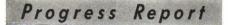


Cutaway view showing arrangement of fins, tubes and headers.





7.



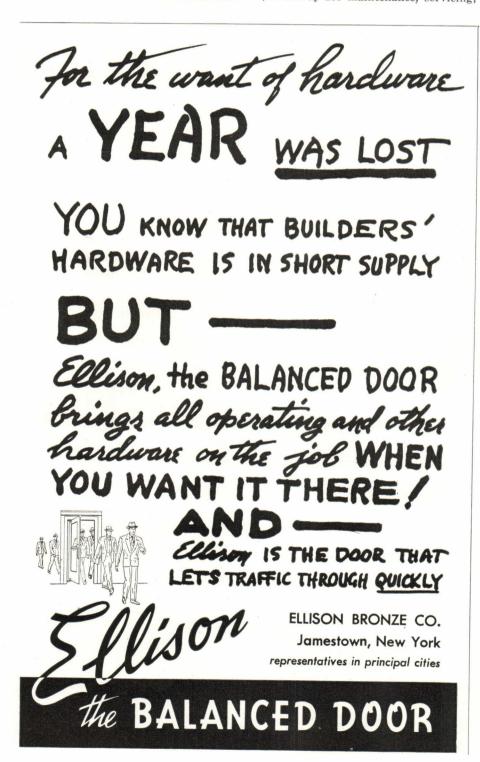
(Continued from page 16)

softwood plywood, wire nails, structural steel, and asphalt roofing.

While neither of these types of sources offers fully practical assistance to the practicing architect, the Department of Commerce data comes closer to the mark. But even that misses, in taking for the most part basic materials rather than products as they are used.

The Portland cement situation is a special case. There's been much talk

about the "basing-point" price ruling, which meant essentially that the consumer has now to buy cement F.O.B. the plant rather than delivered, and that unequal distribution costs are no longer hidden in uniform delivered prices, to be shared equally by all buyers. An article in September's Engineering News-Record, signed by its editor, Waldo Bowman, assigned additional reasons, probably more important, for the current cement situation. Increased construction activity, an increasing percentage of concrete construction, an industry producing so close to 100% capacity as to be actually dangerous (no leeway for maintenance, servicing,



breakdowns; and overtaxing of facilities), increased exports, and an unwillingness to enlarge production facilities due to the great expense involved and the expectation that demand will eventually level off or actually reduce these, Mr. Bowman asserts, are the real reasons we can expect to find cement less available than usual for some time.

All in all, however, we cannot help marveling at the tremendous increase in production which, though the demand still outstrips it, appears to be catching up. A few manufacturers estimate that by mid-1949, they will be caught up enough for comfort. For a few specifics:

Glass. "Prices up 9 to 10% F.O.B. factory; availability better than any time since the war" (Pittsburgh Plate Glass Co.; other companies approximately the same).

Electrical equipment, lamps, etc. Lamp prices up slightly; availability good. Equipment and wiring prices increased averaging roughly 10%; availability fair, though off schedule due to steel shortage in respect to some items.

Hardware. Prices up $1\frac{1}{4}$ to 10%. Availability fair, though troubled by steel shortage; some apprehension as to future availability.

Wallboard. Prices up slightly. One manufacturer expects to "catch up" in 2 years.

Heating equipment, controls, etc. Situation mixed; some furnace manufacturers have raised prices slightly, others have not; one reports "lowest prices in 6 years." Prices of outlets, controls, etc., increased during 1948 from 6 to 20%. Availability: manufacturers report fairly good deliveries, although steel and pig iron, as well as scrap, are in many cases acutely short; to offset this, many are building up large inventories to shorten delivery delays.

Wood, plywood, etc. Prices up generally from 1 to 25%. Availability improving substantially; though some manufacturers of assemblies incorporating wood report difficulty with quality.

Paint, coatings, etc. Prices up only slightly if at all. Availability generally excellent due to production peak limited only by raw materials; only 1 or 2 types unavailable.

Nonferrous metals. Aluminum prices up 2 cents lb during year but still below prewar; brass, copper, bronze prices up some. Availability of aluminum spotty; of brass, copper, bronze, slightly better (much better than 1947); all four metals may be less available due to government stockpiling.

Doors, windows. Millwork situation much improved. Steel: prices up slightly; availability somewhat limited.

Special equipment. Any type incorporating sheet steel (includes elevators, cabinets, kitchen equipment, etc.): prices up 8 to 10%; deliveries variable, ranging from immediate to 30 days, even to 12 or 16 weeks.

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Where noise control must be achieved at low cost, Armstrong's Cushiontone provides an ideal solution. This fiberboard acoustical material has many of the refined features found in materials of much higher cost—cleanly drilled holes, high efficiency, light weight, and factory-painted bevels that are ironed on for smoothness. Cushiontone is quickly and easily installed and can be cleaned or repainted again and again without noticeably affecting its high noise-absorption value.

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strong Cork Co., Acoustical Dept., 1401 Stevens St., Lancaster, Pa.



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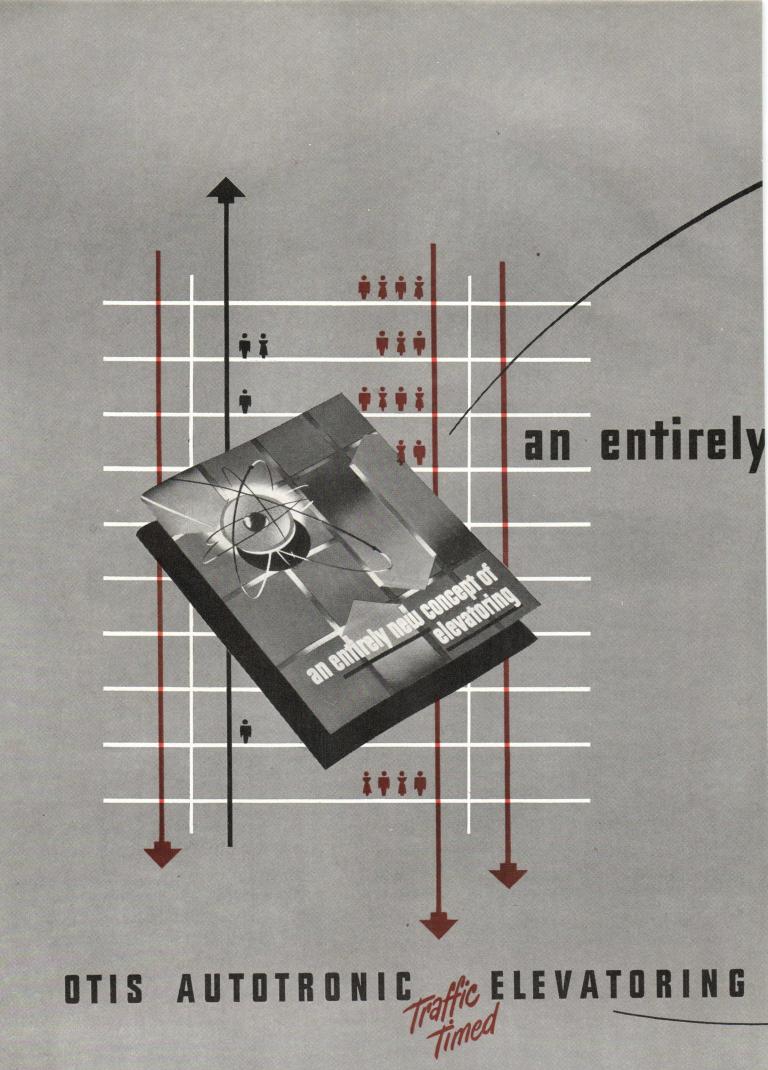
efficient beautiful
ARRESTONE® TRAVERTONE*

moisture-resistant CORKOUSTIC®

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Cushiontone installed in offices reduces errors and absenteeism, provides more comfort. Sound conditioning is the mark of a modern building. Your local Armstrong Acoustical Contractor is a specialist in the control of sound in every type of structure. He will be glad to assist you with any plans which you are developing.



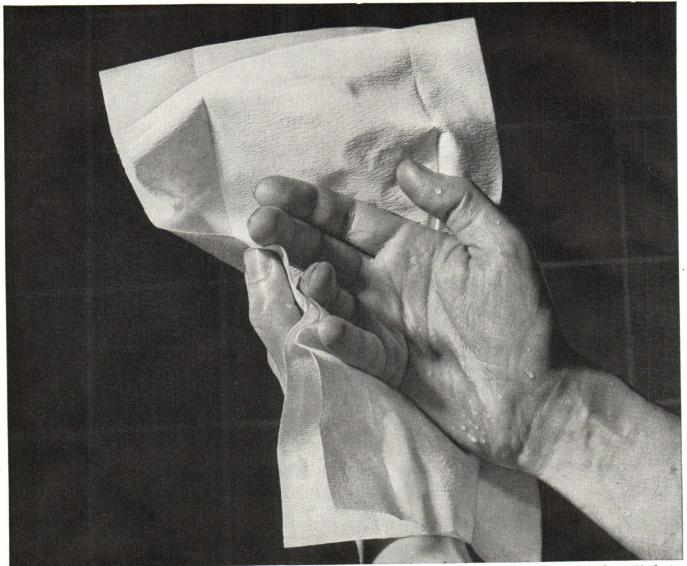
lew concept of elevatoring

We've studied the American business day—your day! You're always in a hurry for an elevator. You're in a hurry to get UP to work in the morning...DOWN to lunch...UP from lunch...DOWN and UP for morning and afternoon appointments or snacks...DOWN at five. Hurry, hurry, hurry.

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Washrooms rank as one of the four most important factors in good working conditions-according to a survey of workers from 400 plants.

In these hands... practical public relations at work

The impression a company makes on employees (and the public, too) is often determined by its washrooms. Aren't you annoyed, even insulted when you enter a washroom that isn't right?

Clean, modern, *carefully planned* washrooms, do a *practical* public relations job. You're doing your client a real service by making sure his washrooms *are* right.

ScotTissue Towels are a symbol of the right kind of washroom. Include ScotTissue Towel cabinets in your washroom planning. Send for our free booklet that's filled with helpful suggestions, well-tested plans and diagrams (by an architect specializing in this field) for large and small washrooms, locker rooms, etc. Write to the Scott Washroom Advisory Service, Chester, Pa. Trade Marks "ScotTissue," "Washroom Advisory Service," Reg. U. S. Pat. Off.



SCOTTISSUE TOWELS Symbol of the right kind of washroom At I. Magnin & Co.'s new San Francisco store, standard extruded shapes of Anaconda Nickel Silver are used in the main entrance, show windows, stairway handrail and balustrade. The base molding for the entrance is of nickel silver sheet. Standard architectural bronze shapes form frames for display cases, inside doorways and trim.

Luxury and Simplicity

with Bronze and Nickel Silver Standard Extruded Shapes



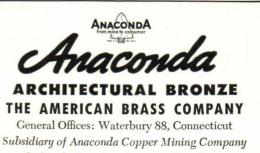
A modern treatment of architectural bronze and nickel silver adds luxury, simple dignity and a strong note of permanence to the attractive new I. Magnin & Co. store in San Francisco.

In creating this effect, economical, easily fabricated Anaconda Architectural Shapes were utilized by the late Timothy L. Pfleuger, architect, F. Kern & Sons Iron Works, San Francisco, fabricators of the interior metal work, and the A. J. Bayer Co. of Los Angeles, who did the exterior nickel silver work, including entrance doors.

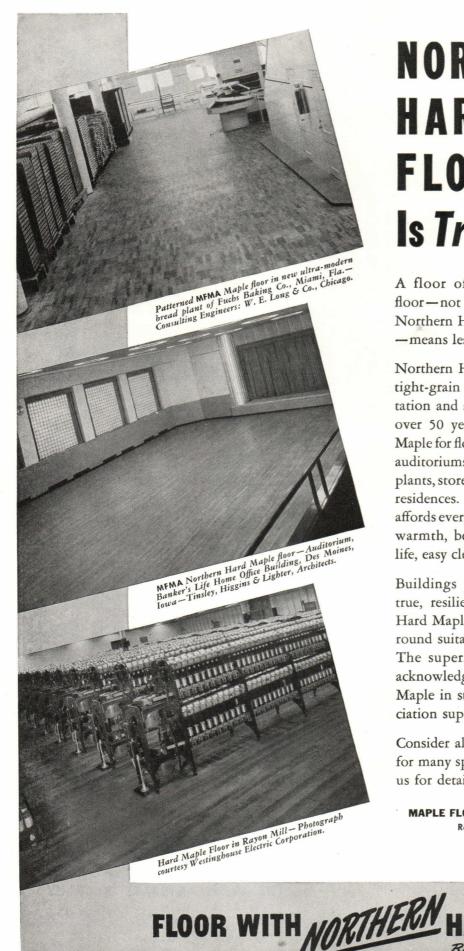
This inviting new store is one of three recently completed for I. Magnin in California. In both the Los Angeles and Beverly Hills stores, bronze and nickel silver are used in much the same manner.

The American Brass Company possesses an extensive and constantly growing collection of dies from which a wide variety of extruded shapes may be obtained. You are invited to make use of these shapes and the almost infinite possibilities they offer for ornamental work in various copper alloys.





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A floor of Northern Hard Maple is a true floor—not a floor covering. And, *truly resilient*. Northern Hard Maple's resilience absorbs shock —means less fatigue and real comfort underfoot.

Northern Hard Maple, with its tough-fibre and tight-grain has remarkable resistance to indentation and abrasion. Yet, it is *truly resilient*. For over 50 years, architects have specified **MFMA** Maple for floors in school classrooms, gymnasiums, auditoriums, bakeries, textile mills, industrial plants, stores, warehouses, roller skating rinks and residences. They know Northern Hard Maple affords everything these floors require—resiliency, warmth, beauty, smoothness, sanitation, long life, easy cleaning and inexpensive maintenance.

Buildings planned for permanence deserve a true, resilient and permanent floor. Northern Hard Maple welcomes close comparison for allround suitability, for cost, for investment value. The superiority of Northern Hard Maple is acknowledged. Consider **MFMA** (trademarked) Maple in strips or patterned designs. It is association supervised and guaranteed.

Consider also, Northern Hard Beech and Birch for many spaces in your building projects. Write us for details—See Sweet's for catalog data.

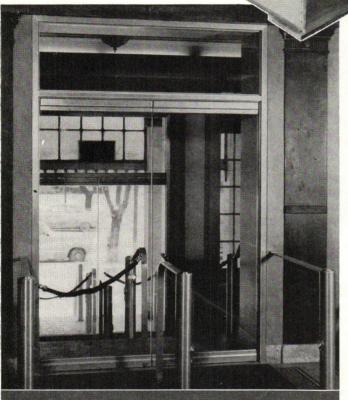
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HARD MAPLE

"Pittsburgh's" <u>factory-assembled</u> door-frame EASY TO SPECIFY

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This door-frame assembly comes to the job complete in one case. It's another example of "Pittsburgh" research — aimed at developing products and installation methods which will result in better jobs in the field.



HERCULITE DOOR-FRAME ASSEMBLY HERE is an outstanding example of the results obtained by extensive "Pittsburgh" research, aimed at helping to solve architectural and building problems actually encountered in the field. This doorframe is factory-built of special shapes and of heavy extruded aluminum, reinforced with structural steel. And metal craftsmen fabricate it to high quality standards, using special checking gauges to assure accuracy of all dimensions.

In ordering this frame, all you do is specify: "Herculite Door-Frame Assembly" and give the style number and size. There are twelve standard designs available, permitting a variety of combinations.

Pittsburgh's Herculite Door-Frame Assemblies come complete with moldings for transom glass, supports for sidelights, strikes for locks, sockets for bolts... everything. No assembly is required on the job. No timeconsuming calculations and other irksome details are involved. And they are supplied with the famous Pittco Checking Floor Hinge, a marvel of modern engineering. Only $6\frac{1}{4}$ " x $6\frac{1}{4}$ ", this hinge has remarkable operating characteristics. It provides positive door speed control, a separate checking control, and a built-in hold-open feature.

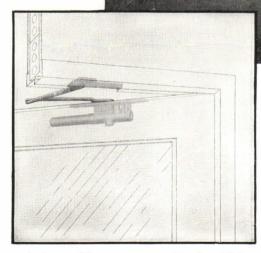
But why not get the *full* story? It's told in our illustrated booklet which will be sent to you without charge upon receipt of the coupon below. Mail it now.

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Here's New Low-cost Concealed Control for Hollow Metal Interior Doors



• As door and frame are prepared by door fabricator to template details, the LCN 304 Closer is quickly secured in place with machine screws. On-the-job work is reduced to a minimum, total cost cut accordingly. **The LCN "304" Door Closer** supplies a practical answer to the old problem: how to provide effective control for the many ordinary hollow metal doors specified for a modern building and still keep them free of bulky machinery.

It's simple now. The powerful closing mechanism of the LCN 304 is entirely hidden within the door itself. Only the arm is exposed. It handles easily any interior door up to $3'6'' \ge 7' \ge 134''$ in size, and operates efficiently under common conditions of internal draft and heavy traffic. Thoroughly tested and proved in two years of actual service. Incorporates back-check action; also hold-open if desired, yet costs little more than an LCN exposed closer of similar capacity. Folder 304-b promptly sent on request. LCN Closers, Inc., 466 W. Superior St., Chicago 10, Ill.



OVERHEAD CONCEALED, FLOOR CONCEALED AND EXPOSED TYPE DOOR CLOSERS

How to Please All Your Clients... specify WELDWOOD PLYWOOD for commercial installations



OFFICES. Birch Weldwood combined with wallpaper. Valance is decorative and practical - it conceals drape and blind attachments, and provides space for indirect lighting fixtures at the same time.



BARS & RESTAURANTS. This beautiful Claro Walnut Weldwood bar front was made for the Cardinal Richelieu Hotel, San Francisco. Walls and columns were covered with the same paneling.



INSTITUTIONS. Mengel Flush Doors and trim of Ribbon Grain Walnut Weldwood set off the diamondmatched bleached Walnut walls and railing. Recessed panels over doors are of Stump Claro Walnut.



HOTELS. Your first impression of the Ottaray Hotel lobby, Greenville, S. C., is one of richness and good taste. Guinea Wood Weldwood in a handsome treatment of walls, columns and stair-rail.



STORES. Window-dress the whole store! Graceful curves and smoothflowing lines provide an eye catching background for display in this I. Miller shoe salon, New York. The wood is oak Weldwood.



BANKS. Dignity and stability are the keynotes of this luxurious installation of Figured Mahogany paneling in the Conference Room of the Long Island City Savings Bank, L. I. City, N. Y.

WELDWOOD Plywood Weldwood Plywood and Mengel Flush Doors are products of UNITED STATES PLYWOOD CORPORATION New York 18, N. Y. THE MENGEL COMPANY Louisville 1, Ky.

Distributing units in Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, Fresno, High Point, Los Angeles, Milwaukee, Newark, New York, Oakland, Philadelphia, Pittsburgh, Rochester, San Francisco, Seattle. Also U.S.-Mengel Plywoods, Inc., distributing units in Atlanta, Dallas, Jacksonville, Louisville, New Orleans, Houston, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

Most commercial installations present essentially the same requirements for an interior wall surface. Appearance, durability, ease of maintenance and finished cost . . . these are the major questions.

And here are Weldwood's answers:

APPEARANCE. Man's old-time, all-time structuraldecorative favorite . . . wood. Choose from the very finest domestic and imported hardwoods . . . because only selected flitches go into Weldwood panels. Create traditional or modern interiors. You have a wide latitude for numerous effects . . . because Weldwood's lustrous beauty is a perfect complement to any style.

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FINISHED COST. Because Weldwood panels combine high structural strength with great decorative beauty, you can specify many short cuts that save both material and labor. Your finished costs will look good, compared to the striking appearance of the finished job.

So look into Weldwood for all your commercial clients. Take your choice from fine woods like oak, birch, korina, maple, walnut, gum, mahogany, zebrawood, avodire, rosewood and teak. Make everybody happy . . . store-owners, restaurants, bankers, businessmen, hotel-owners and operators of institutions. Specify Weldwood for their interior walls.

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"100" SERIES. Smart and compact for small home installation in kitchens, basements or utility rooms. "200" SERIES. Big boiler performance for homes of medium size and some commercial installations.





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Their economy of first cost . . . installation . . . operation . . . and upkeep offers outstanding value for residential and commercial heating. Construction and performance meet or exceed all requirements of recognized authorities and codes.



18" and 23" Series Steel Boilers are available in 5 sizes with oil or gas firing for small and medium size residential installations.

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And for still larger heating jobs, 16 sizes of Commercial Steel Boilers, designed for hand, stoker or oil firing, and ranging to 35,000 square feet of steam radiation, carry on the tradition of National engineering excellence.



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For complete information call your nearest NRC district office or write to The National Radiator Company, 221 Central Avenue, Johnstown, Pa.



THE NATIONAL RADIATOR COMPANY

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How can we give youfor they act as canopies over openings.High-Quality Windows ... at such Low Cost?

It's a matter of design, size and standardization. Fenestra* is the largest manufacturer of steel windows in America—only volume production makes it possible to standardize a *large variety* of windows and keep quality at a maximum... cost at a minimum.

Fenestra Fencraft Intermediate Windows are made of high-quality casement sections of advanced design-fabricated into 51 different Projected Windows, 14 Casement Windows and 36 Combination Windows. Each is good looking, finely made . . . and *economical*.

A comfortable study room at Gilmour Academy, Gates Mills, Ohio. Notice the smooth all-over daylighting provided by the Fencraft Projected Windows. Controlled ventilation, too. In-tilting sill vents are

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All 3 types offer permanently-easy operation in any weather ... weather-tightness ... firesafety ... low maintenance ... cleaning and screening from inside.

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Coca-Cola Bottling Co., Jamestown, N. Y.

1818

Laymen as well as architects and builders have remarked that the newer industrial buildings are notable for beauty as well as usefulness. Much of this pleasing appearance is due to modern window design ... and when HOPE'S LOK'D BAR Factory Sash are used the owner is assured of extra satisfaction, with maintenance cost savings added to architectural fitness and superior weathertightness.

HOPE'S LOK'D BAR Factory Sash do the job of a window superlatively well. Ventilator sections are rolled in one piece with their weathering flanges, which close tightly on smooth contact surfaces. Operating the ventilators, either mechanically or by hand, is permanently convenient and trouble-free; wind infiltration is less than one cubic foot per minute at 25 miles per hour. Pivoted ventilators are mounted on bronze cups; projected ventilators,

Sherrill F. Lindquist, Arch't

balanced on strong steel arms, move on brass guides. Both types are solid welded at the corners, forming a one-piece unit which reinforces the sash.

The exclusive design of the complete sash gives it twice the strength (by actual test) of conventional factory sash. Vertical sash bars are rolled in a bulb tee section, giving greater strength for their weight of metal and in the Lok'd Bar joint the flat tee horizontal muntins are threaded thru the vertical members, achieving a firm mechanical union with less loss of strength by cutting.

The added strength and resistance to wear and tear and corrosion afforded by these features assures for Lok'd Bar Factory Sash a life of service equal to that of the building. Write for the Lok'd Bar Catalog. Details are shown in full scale drawings.

HOPE'S WINDOWS, INC., Jamestown, N.Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS





Yes, you really do save by using Thorn Aluminum windows.

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Thorn Windows in Aluminum and Steel are built for the finest but priced for the most modest homes.

Here's a high-strength, non-rusting tie that links cavity

Thick copper covering prevents rust.



Alloy steel core provides strength.

The Copperweld Molten-Welding Process makes the two metals inseparable. nearly 2 tons. Its thick copper covering—inseparably molten-welded to a strong alloy steel core—permanently protects the tie against the corrosive action of moisture, lime and mortar. Copperweld can't rust—can't weaken.

walls safely and permanently. The Copperweld Wall Tie always retains its original breaking strength of

WALL TIES

DRIP LOOP

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USE THIS PERMANENT TIE

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This practical combination of copper and steel makes Copperweld Ties the choice of wise architects and builders. Play safe! Guard your reputation by using them. Copperweld Wall Ties are available for immediate shipment. They are made in two sizes --6" and 8" stems, both with 2" legs --packed 500 of one size to a box.

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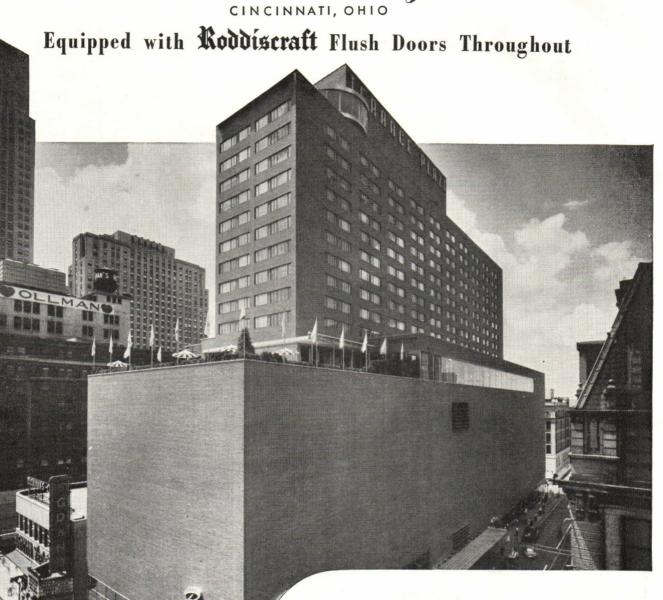
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DEALERS IN ALL PRINCIPAL CITIES



For more than a half-century, the name Roddis has been associated with the finest quality doors. A recent testimonial to their quality was the selection of Roddiscraft Solid Core Flush Doors by the builders of the new Terrace Plaza Hotel in Cincinnati, Ohio.

Glance at the hinge rail on the door as you enter your room when next you stop at this beautiful hotel. You will see the built-in red-white-and-blue dowel . . . symbol of Roddiscraft Solid Core Flush Doors. The designer of this modern hotel selected Roddiscraft Flush Doors not only to carry out the modern design but because of their combination of beauty and rugged ability to stand up under heavy hotel traffic.

> Roddis Plywood Corporation Formerly Roddis Lumber & Veneer Co. MARSHFIELD, WISCONSIN





Why are so many older hospitals grim, colorless places? Tradition, or inertia, or whatever it was that caused this unhappy situation is fast being overcome by architectural designers who recognize the actual therapeutic value of color and beauty to the sick ... and to those who serve the sick.

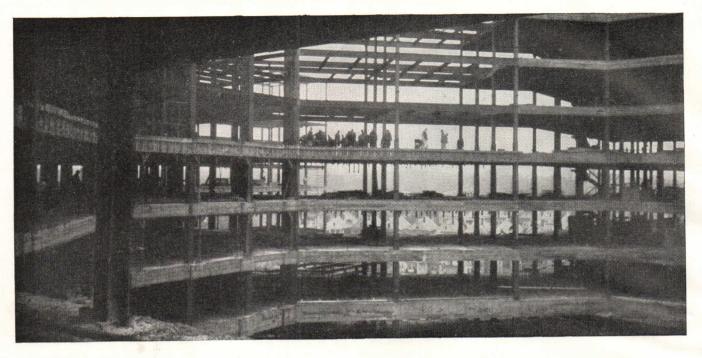
Today, architects the world over are using Formica* to prove that a cheerful material can be more sanitary and less costly to maintain than the drab, uninteresting interiors of the past.

For instance, here in the Good Samaritan in Cincinnati, Formica is on walls and window stools in training wards, corridors and nurses' dormitory rooms. Formica's smooth, tough, longwearing surface actually repels dirt . . . what dirt might adhere to its non-porous surface wipes clean with the swish of a damp cloth.

Formica is unharmed by alcohol, mild acids, alkalies and boiling water.

See 1949 Sweet's Architectural File (section 13i, catalog 4) for more Formica information . . . and for availability of actual Formica color and pattern samples of your own selection. Copyright 1949, The Formica Co., 4633 Spring Grove Ave., Cincinnati 32, Ohio.





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VETERANS ADMINISTRATION HOSPITAL, Albany, N. Y. Direction: CORPS OF ENGINEERS, NEW YORK DISTRICT, COL. W. W. WANAMAKER, DISTRICT ENGINEER Architects-Engineers: EGGERS & HIGGINS, New York City GREEN, JAMES & MEADOWS, Buffalo, N.Y.

General Contractor: RING CONSTRUCTION COMPANY, Minneapolis, Minn. Lone Star and 'Incor' Concrete supplied by: READY MIX & SUPPLY CORP., Albany, N. Y. Concrete Contractor: FOSS-HALLORAN-NARR, INC., Long Island City, N.Y.

LONE STA

Speeds Cold-Weather Concreting on Great New Veterans Hospital

NE of the nation's most modern hospitals is being pushed to completion for the Veterans Administration at Albany, N. Y. This 14-story, 1000-bed hospital, on a 25-acre site, is part of a nationwide hospital construction program designed to provide adequate care for disabled veterans.

The fireproof structure, with its nearly 17 acres of floor space, employs the cruciform plan of a central core with four wings.

In concreting the floors, Foss-Halloran-Narr, Inc., Concrete Contractors, switched from Lone Star Cement to 'Incor' 24-Hour Cement last Fall, as soon as cold weather threatened to slow down schedules. By providing maximum strength-gaining efficiency, 'Incor' made it possible to strip forms a week sooner - keeping the

job on schedule and offsetting risk of freezing. Result, three wings and the core were concreted by December 1, instead of only one wing.

Use 'Incor'* for either concrete frame, or steel skeleton with concrete floors and fireproofing ... keep job speed up and job costs down...flatten out that curve of rising building costs. *Reg. U.S. Pat. Off.

• BOSTON • CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS • JACKSON, MISS.

KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK • PHILADELPHIA • ST. LOUIS • WASHINGTON, D. C

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 15 MODERN MILLS, 27,000,000 BARRELS ANNUAL CAPACITY



Effect of structural materials on design:

SHOP, COMPTON, CALIFORNIA Stiles clements Assoc. Architects & Engineers





Wall framing was shopwelded in 30- to 40-ftlong panels; so were roof joists. In field, wall sections were clamped together and buttwelded, joists welded to them, creating a series of rigid frames. Shop fabrication, 90% of steel work, took three weeks, field erection, two weeks more.

Expanded steel studs and joists were selected because they were available, strong, could be erected quickly, and had the appropriate lightness of character.



Stiles Clements, born in 1883 in Maryland, was educated in Wilmington Conference Academy, Drexel Institute, Massachusetts Institute of Technology, and by study abroad. He worked in New York City until 1909, and has played an impressive part in the phenomenal development of Los Angeles since 1911. Joined Morgan, Walls & Morgan in 1922; member of firm, 1923, name changed to Morgan, Walls & Clements. In 1937 took over firm under name of Stiles Clements Associated Architects & Engineers.

Architectural photography, Julius Shulman; Construction photos, Lincoln Electric Co. The Garden Shop of Sears Roebuck in Compton, Calif., is an appendage of the main store. Its long axis runs north and south, excellent for this type of building. For selling plants and gardening equipment, it had to be built quickly and economically in 1947, a year of rising building costs, and to comply with the California "earthquake" building code.

Light steel framing and considerable steel surfacing, all welded, were chosen for this job. Between 18 and 20 tons of structural steel were employed. Estimated cost of conventional bolted construction was \$30,000; actual cost of welding, according to Steyer-Weisbrod of Huntington Park, Calif., the fabricators, was \$20,000. Contributing to the saving in materials and erection was a unique glazing device. A 1" x $\frac{1}{8}$ " flat steel strip was stitch-welded, on edge, to the outside flange of the expanded steel stud sections. This provided a glazing recess; glass was applied, and the few transom sash inserted, directly into the framing. The steel strip was prestressed by stretching it mechanically to assure straightness after welding, when the tension was relieved.

Welding, employed throughout the structure, thus resulted in rigid frame construction which met code requirements for earthquake resistance yet presented a clean, airy appearance. In addition, the technique reduced the amount of detailing required, and reduced steel tonnage by 30% over bolted construction using conventional angles and hotrolled steel members.

Plan shows floor space of two types, half for "wet" merchandise, half for "dry." Of the central wet area, about 60% has an aluminum lattice roof; remainder is insulated built-up roofing over metal decking welded to the joists. locker units, etc. Improved products: Flur-Dry; Fluretex: Fluresit Paste: Lapidensin: Tricoseal; Quick-Set. Immediate delivery in general. American Fluresit Co., 605 Rockdale, Cincinnati, Ohio.

Miracle Adhesive #90 White Tile Cement: for surfaces to be tiled. #19 Wood-Glu: wood adhesive. Miracle Adhesives Corp., 214 E. 53rd St., New York 22, N. Y.

Plastic Headed Nails: for Sheetrock wallboard application. U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

jointing materials

Caulking Compound: natural-colored, for inside wall cracks, other caulking requirements. Abesto Mig. Corp., Wabash & Second Ave., Michigan City, Ind.

Ceramite: to seal joints of metal, plastic, and ceramic wall tile. Claimed not to crack or draw away from tile edges through shrinkage. Pure white, will set hard in few hours. Armstrong Cork Co., Lancaster, Pa.

Rubber Bevels and Grooves: rubber strips used in new method of forming bevels and decorative grooves on concrete surfaces. U. S. Rubber Co., Rockefeller Center, New York 20, N. Y.

Tub-Kove: strip of flexible, plastic-base material, for sealing cracks at junction of bathtub and walls. Keller Products, Inc., 1880 Roxbury Rd., East Cleveland 12, Ohio.

masonry coatings, additives

Agraseal: water resistant coating for concrete and cinder blocks; 13 colors. Tamms Silica Co., 228 N. La Salle St., Chicago 1, Ill.

Kay-Tite: Portland cement-based coating which curbs water and moisture penetration in porous masonry structures; in range of colors. Other new products: **Asbesto-Lite: Hydroxin.** No price increase; available. Kay-Tite Co., W. Orange, N. J.

Marb-L-Cote: complete line of dry powder materials, including spackling putty, Portland cement paint, patching plaster, joint tape cement, etc. National Chemical & Mig. Co., 3617 S. May St., Chicago 9, Ill.

Marva-Seal: waterproof permanent sealer, oil base with pigment and asbestos fiber. For cement, concrete, brick, stucco, stone wall surfaces; claimed not to peel, discolor, or flake. American Asbestos Products Co., 8001 Franklin, Cleveland, Ohio.

Oncrete for Concrete: heavy-duty paint that protects concrete surfaces with abrasion-resisting coating. Also applicable to porous masonry surfaces. Lowebco, Inc., 1525 E. 53rd St., Chicago 15, Ill.

Parge Coat Dampproofing: application service for exclusive use of firm's own personnel on their own contracting projects; material not for sale. Dilato Expanding Mortar improved during previous year. No substantial price increase. Western Waterproofing Co. of Missouri, Syndicate Trust Bldg., St. Louis 1, Mo.

Portland Cement Paint: decorative, for masonry walls. White Utility Paint: preserves surfaces from water-rot, fungus decay. Master Quality Outside White Paint: top-grade, for fine surfaces. Floor Coating: for heavy traffic punishment. Abesto Mig. Corp., Wabash & Second Aves., Michigan City, Ind.

Rainchek: masonry water repellent. No change in price; prompt delivery. Protection Products Mfg. Co., 2305 Superior St., Kalamazoo, Mich.

Rubber-Coat Coater: fills, seals, primes, finishes all types of porous masonry. Wilbur & Williams Co., Greenleaf & Leon Sts., Boston 15, Mass.

Sika Rfc: coating for masonry or concrete. Sika Rfc: coating to delay setting of concrete or cement. Improved products: Transparent water repellent applied to masonry; wax emulsionr gum grade caulking. Vinyl Coating: acid, alkali, abrasion, oil resistant coating; to be produced soon. No price increases; unlimited quantities. Sika Chemical Corp., 35 Gregory Ave., Passaic, N. J.

Tremco's new products: Colorfloor XX: Swet-Pruf Wrap-Around: Tremcure Concrete Curing Compound: Tremco Under-Coat; Quick-Drying Chromated Metal Primers. Tremco I01 Mastic Waterprocfing: spraying consistency improved. Tremco Mig. Co., 8701 Kinsman Rd., Cleveland 4, Ohio.

metals

Aluminum Building Materials: .004" Built-up roofing. .032 industrial corrugated painted siding. Improved standard corrugated and 5-V crimp roofing sheet, embossed. New and improved aluminum wall tile, ceiling panel, seam roofing. Base price for aluminum 20% below prewar. Reynolds Metals Co., 2000 S. Ninth St., Louisville, Ky.

Aluminum Roofing and Siding: available in 5V-Crimped or corrugated sheets, in variety of sizes and thicknesses. Two styles of aluminum shingles, weather-board, and textured siding. New Holland Metals Co., Leola, Pa.

Aluminum Shingles: interlocking, for leakproof roof construction. Interlocking eave starter strips, valleys, gable and ridge caps. Aluma-Lock Corp., Equitable Bldg., Portland 5, Ore.

Porcelain: conditions permitting, firm will reenter architectural porcelain enameling field at later date. Ingram-Richardson Mfg. Co., Beaver Falls, Pa.

Pyroply: fire-resistant paneling claimed to protect human flesh within one inch of a 2200° fire. Du Pont "Strux" cellulose acetate plastic core between thin carbon-steel sheets. Panels 1/4" thick, weigh less than one lb per sq ft. Skydyne Corp., Port Jervis, N. Y.

Shaped Architectural Building Panels: new matte finishes. Improved production for higher quality products. Research developments for new commercial uses of **Seaporcel**. Seaporcel Metals, Inc., 28-20 Borden Ave., Long Island City 1, N. Y.

Stainless Steel Sheets: improved by 100 Grit Finish, a hot-rolled, annealed, pickled, and ground finish. 10% price increases; availability considerably better. Eastern Stainless Steel Corp., Rolling Mill Ave., Baltimore, Md.

Steel Roof Deck and Side Wall: limited availability. Steel rolling doors available. Approximately 20% price increase. R. C. Mahon Co., 8650 Mt. Elliott Ave., Detroit 1, Mich.

paints, varnishes, sealers

Bakelie and Vinylite Sealer: for application under paint coating on economy lumber. Sealer forms film over 'live'' knots; impervious to pitch extract and volatile substances. Bakelite Corp., 30 E. 42nd St., New York, N. Y.

Cellolyn: synthetic resin for bleached wood finishes. Self-plasticizing; may be used with ordinary lacquer solvent and diluent combinations. Hercules Powder Co., Delaware Trust Bldg., Wilmington 99, Del.

Deep Toner Decorative Colors: for interior walls; wide variety of tints when mixed with base whites. Raw material and labor cost increases absorbed so far. Prompt shipments. Craftint Mfg. Co., 1615 Collamer Ave., Cleveland, Ohio.

Deoxidine: phosphoric acid metal cleaner and rust remover; will etch iron, steel, aluminum, etc., for painting. American Chemical Paint Co., Ambler, Pa.

Dutch Boy Wonsover: one-coat paint, oil base, claimed excellent hiding qualities, interiors; washable. National Lead Co., 111 Broadway, New York 6, N. Y.

Huntington Wax: alcohol resistant. Gla-San: cleans all types of glass, mirrors, etc. One slight price adjustment; immediate delivery. Huntington Laboratories, Inc., Huntington, Ind.

Luminall: quick-drying paint; casein binder gives high light-reflective qualities and opacity of film. National Chemical & Mfg. Co., 3617 S. May St., Chicago 9, Ill.

Metrolin No. 6: especially processed oil for flat paints; said to be uniform, non-penetrating. Can be applied over calcimine in good condition. Brown Oil & Chemical Corp., 70 Pine St., New York, N. Y.

Mirrofilm: new plastic gloss finish protects metal surfaces, linoleum, painted wood. Applied easily, dries quickly. Wype Corp., 2214 Dolman St., St. Louis, Mo.

One-coat House Paint: white, exterior; only one coat necessary; extreme opacity; dries six to eight hours. Devoe & Raynolds Co., Inc., 44th St. & lst Ave., New York, N. Y.

Reardon's New Products: tile cement; Dramex. Improved Firex. Products containing cement increased about 3% in price; generally good availability. Reardon Co., 2200 N. 2nd St., St. Louis 6, Mo.

Stain Wax: finish for all interior woodwork, in wide range of colors. Concrete Sealer Finish: for use on all masonry surfaces. Additional new colors in Gloss Collopakes. Restored prewar shades in shingle stains. No price rise since 1946. Products available but behind on orders due to great demand. Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

Roberts' New Products: Hy-Toner Satin Topseal; Pentung Sealer Clear: Pentung Pigmented Primer and Sealer; Hydall White King Enamel; Hy-Toner Base White Enamel; Hydall T-I-M Enamel; Hydall Interior Flat; Hydall Interior Semi-Gloss and All-Gloss. Improved Hydall Enamel Undercoater and One Coat Flat. Roberts

surfacing materials (continued)

New Knot-Sealer formula developed by Western Pine Association, Portland, Ore., makes it possible to paint satisfactorily over economy grades of wood—important in these days of high wood costs. Formula, designated WP-578 Knot-Sealer, is manufactured by several paint companies.



Plaster containing a new lightweight aggregate, Dantore, possesses insulating and fire-resistive qualities as well, does not interfere with plasticity or change plastering methods.

surfacing materials

fire-retardant coatings

Fyr-Kote: fire-resistant finishes which may be used over old paint. Available in three finishes. Also Flame Proofer Clear: transparent solution for drapes, rugs, or any waterfast fabric. Fyr-Kote Co., 1823 Washington Ave., St. Louis, Mo.

Resistall: fire retardant paint for interior or exterior use; both high gloss enamel and flat finish. New shingle and barn paint. Improved formulas on regular line of paints. Prices remain same; one week for deliveries. Resistall Paint Mfg. Co., 114-116 Fulton St., New York, N. Y.

"RX" Fire Retardant and Heat Insulating Coating: for metallic surfaces such as aluminum and magnesium alloys in aircraft construction. "Clear": varnish type coating for plywood, wood. Also special coating for fiberboard and plywood: both products fire retardant. Improved Albi "R." Albi Mfg. Co., Inc., 29 Bartholomew Ave., Hartford 6, Conn.

Wood-Rem: wood preservative paint. Heat-Rem: heat-resisting paint. Chem-Rem: acid and alkali-resisting paint. Rustrem: anti-rust paint in black, aluminum, and clear, colorless form. No change in prices; immediate deliveries. Speco, Inc., 3142 Superior Ave., Cleveland, Ohio.

flooring

Castle-Square Flooring: parquet flooring; hardwood boards 1" wide, l_2 " thick, insulated by latex-filled fibrous material. 6", 9", or 12" squares. Can be glued to any base without nails. Newcastle Industries, Inc., 300 W. 56th St., New York 19, N. Y.

Floor Coverings: new styles, colors, patterns, of inlaid linoleum, resilient enamel coverings, rugs, asphalt tile, Koroseal tile, and cove base. Sloan-Blabon Corp., 295 Fifth Ave., New York, N. Y.

Floor Tile: made of Vinylite, said to be unaffected by water, oils, greases, or fruit acids. Various patterns. Synthetic Products, Inc., 15091 La Salle Blvd., Detroit 21, Mich.

Kentile Asphalt Tile: "Rouge Acajou," new color added to tile line. Another color addition, "Cardinal Red," to feature strip line. Kenbase: improved flexibility and attractiveness. Improved grease-proof asphalt tile. No price increase; prompt deliveries. David E. Kennedy, Inc., 58 Second Ave., Brooklyn 15, N. Y.

Linoleum: 35 new patterns; ''decorator'' designs highlighted by multiplane embossing. Armstrong Cork Co., Lancaster, Pa.

Oaktred: flooring, substitute for hardwood, for low cost houses. Komposeal: wear-resistant compound for mastic floors. Resistocrete: resurfacing material unaffected by oils and greases, for areas such as machine shops. Products available. Kompolite Co., Inc., 111 Clay St., Brooklyn 22, N. Y.

Plastile: laminated plastic floor tile with cork base; resistant to alkalis, oil, grease, alcohol, acids; noise-, shock-absorbing; can be laid over wood, steel, concrete. Wide range of solid colors and marbleized patterns. U. S. Stoneware Co., 60 E. 42nd St., New York, N. Y.

Rubber Tile: floor tile in wide variety of patterns; grease, fire resistant. Fremont Rubber Co., 128 McPherson Highway, Fremont, Ohio.

Color, 120 McFrierson Highway, Fremont, Onio. Terraflex: plastic asbestos floor tile, in bright colors, for heavy service. Quinterra: asbestosbase, completely inorganic, insulating sheet, from 1.5 mils to 20 mils thick, for electrical wire and layer insulation. Improved Giant Strip asphalt shingles. Despite higher costs, prices kept to minimum increases. Johns-Manville Corp., 22 E. 40th St., New York 16, N. Y.

Wavedge: rubber tile flooring; diagonally curved halves of 6" or 9" squares, applied in variety of patterns. Danbury Rubber Co., Inc., Danbury, Conn.

Wood Flooring Materials: northern hard maple, beech, and birch flooring available in all sizes, grades, thicknesses. Maple Flooring Mfrs. Assn., 46 Washington Blvd., Oskosh, Wis.

glass

Glass: new transparent mirrors. **Electrapane:** mirror with electrical conducting coating. 1/4" **Golden Plate Glass.** New **Vitrolite** colors. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo, Ohio.

Murapane: structural glass with colors and design imitating marble or alabaster; durable, impervious to weather. Appleman Art Glass Works, Bergenfield, N. J.

heavy-duty coatings

All-Strike Bowling Alley Finish: also new primer and thinner. Hil-Tex: seal for asphalt tile, terrazzo, magnesite. Kurl-Off: non-inflammable varnish remover. No price increase; normal availability. Hillyard Chemical Co., St. Joseph, Mo.

Alpaste Aluminum Paint: bars corrosion and moisture. For finishing and as primer. Aluminum Import Corp., 620 Fifth Avenue, New York 20, N. Y.

Aluminum Roof Coating: tough, weather-resisting film; reflects up to 75% of light and heat. Philip Carey Mfg. Co., Lockland Station, Cleveland 15, Ohio.

Amercoat No. 88: pigmented vinyl resin dispersed in water; resists salts, mineral oils, acids, alkalis. Amercoat No. 40: combines properties of synthetic rubber with chemical resistance of vinyl resins; produces tough, flexible film that resists water. Amercoat Div., American Pipe & Construction Co., 4809 Firestone Blvd., South Gate, Calif.

Carbo-Kote: corrosion and moisture resisting coating for rubber, wood, fiberglas, and miscellaneous surfaces. One brush coat from eight to thirty times the thickness of one coat of paint. Carboline Co., 502 N. Taylor St., St. Louis 8, Mo.

Corrosite: new coating, combining thermosetting and thermoplastic resins. Protects almost any surface—wood, metal, concrete, old paint. Will not oxidize, resists acids, alkalies, alcohol; no prime coat needed. Applied like paint. Seven colors, also ready-mixed aluminum. Improved formulas. Corrosite Corp., Chrysler Bldg., New York 17, N. Y.

Perma-Dri: heat-processed aluminum silicate and an adhesive binder. Blocks heat and sound transmission, retards moisture condensation. Applied to walls, ceilings. Stephenson Air Brush Paint Co., 190 MacArthur Blvd., Oakland 10, Calif.

San Finish: wall coating, exceptionally tough, durable, flexible, for interior, exterior; no prime coat. Alton Laboratories, Inc., 207 S. Green, Chicago, Ill.

Shingle-Seal: decorative, weatherproof finish for asbestos siding and shingles. Bright white, oyster white, stone gray. Spray or brush. Dewatex Mig. Co., 424 W. 42nd St. New York, N. Y.

Silicated Traffic Marking Paint: for safety, storage, traffic areas. Frigid-Coat: plasticized enamel, designed especially for food locker plants. Rubber-Coat Coater: fills, seals, finishes all types of porous masonry. Dripless Pipe Coating: for use wherever condensation on pipes and tank exteriors results in dripping moisture. Wilbur & Williams Co., 43 Greenleaf, Boston 15, Mass.

installation materials

Armstrong's F-1402: new adhesive for metal and plastic wall tile installation over plaster, plywood, other bases. Will not bleed through joints or permit tile to loosen. Armstrong Cork Co., Lancaster, Pa.

Klee Sealant: for mortar joints between glass block. Flor-Etcher: cement floor cleaner and etcher. Tub-Tite: resin-based plastic caulking recommended for sealing cracks in washstands, shower stalls, showcases, refrigeration and



Glass fibers and plastics combined in a sheet material, rigid in one direction, reasonably flexible in the other. Prest-Glass, manufactured by Prest-Glass Corp., 8 E. 12th St., New York, N. Y.

Corrosite, a heavy-duty coating which can be applied like paint, is a solution of plastics designed to protect surfaces against all types of atmospheric conditions. Right, tested as a waterproofer—not its original purpose—applied clear to outside of left-hand wing of a New York building; in over 18 mos. no moisture has penetrated. Below, applied to a steel building in a chemical plant for protection against chlorine fumes. Corrosite Corp., New York, N. Y.







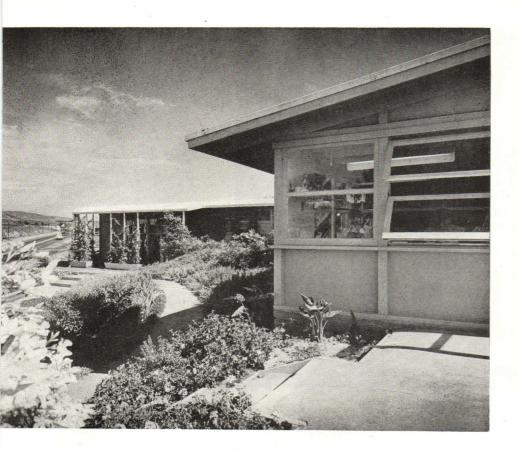
surfacing:

The Toronto, Canada, Transportation Commission, through its Rapid Transit Department, is preparing plans for four and one-half miles of subway to replace an existing car line. The Commission decided to build a full-scale model of one station to examine operating features and to study surfacing materials and details. Finish materials for the mock-up were chosen for availability; resistance to moisture, soiling, and public abuse; appearance and ease of maintenance. Floor and base are terrazzo throughout; suspended ceiling is of acoustical asbestoscement panels with a plastic, dirt-resisting finish. Walls are also terrazzo, with glass-faced masonry in corridors where crowding is likely to cause excessive abuse. Handrails and similar trim are stainless steel. SUBWAY STATION, TORONTO, CANADA A. G. KEITH, ARCHITECT A. S. MATHERS & J. B. PARKIN CONSULTING ARCHITECTS

> Since the area is symmetrical, only half was built for the mock-up and a mirror was placed on the center line (top of page). Below, left to right, exit turnstiles (this area has cast-in-place terrazzo walls); entrance corridor with glass-faced masonry walls; public lockers set in wall surfaced with precast terrazzo in units which facilitate locker installation.







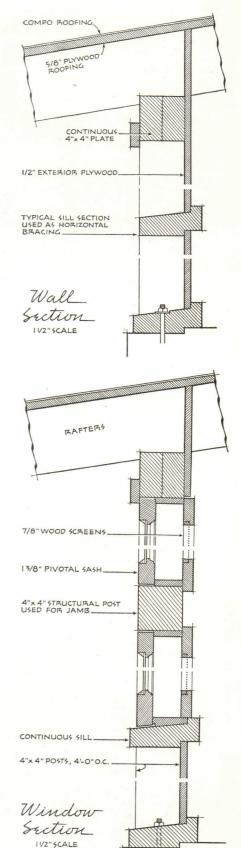


CONSTRUCTION. Foundations: concrete. Frame: wood, 4" x 4" Douglas Fir posts 4 ft o.c. Sills, redwood. Floor: reinf. concrete slab. Walls: ½" exterior grade Douglas Fir plywood. Roof: wood framing; plywood sheathing; built-up surfacing topped with crushed white ceramic tile. Surfacing: Walls, interior: textured plywood in sales and office spaces, exposed exterior plywood elsewhere. Floors: asphalt tile in public spaces, carpet in offices, stained concrete in studio. Sash: special, wood top-hung. Glass: B, double strength. Doors: sugar pine, stock.

EQUIPMENT. Electrical: incandescent lighting, lumiline and reflector lamps in display areas; circuit-breaker wiring system. Heating: electric space heaters. Kilns, etc.: special, by owner.



Frank Gruys. Graduated, U. of S. Calif., 1939. Designer with W. L. Pereira, 1939-1942. U. S. Navy, 1943-1946. Associated with W. L. Pereira and L. E. McConville, 1946.



INFLUENCE OF SURFACING MATERIALS

ON DESIGN

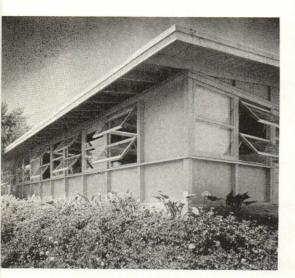
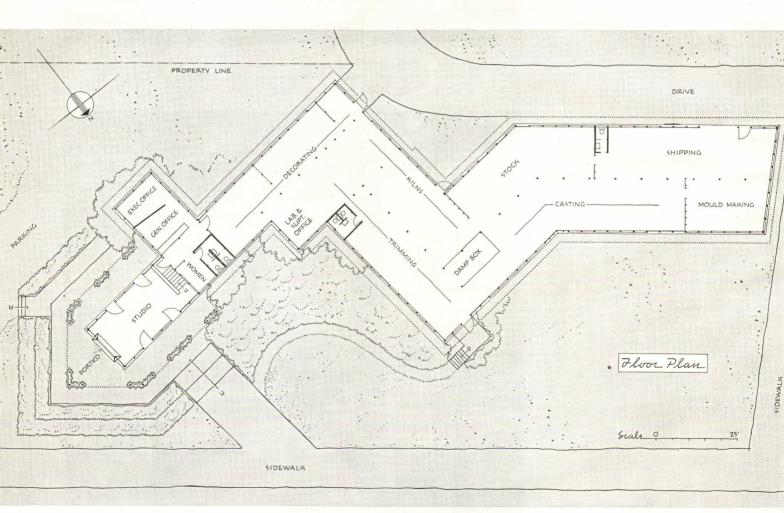
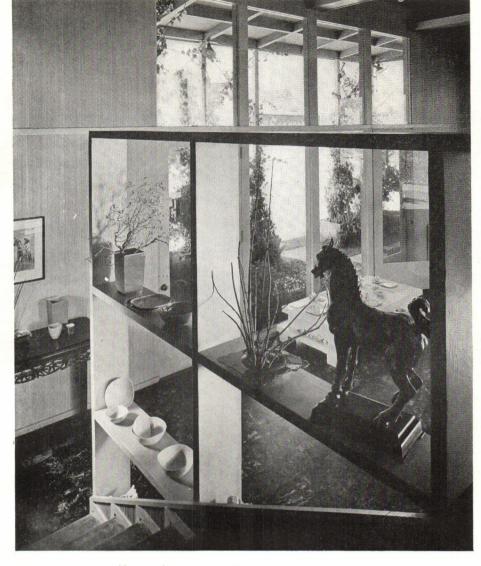




Photo at far left; closeup of construction, showing top-pivoted sash selected because they were extremely easy for women studio workers to operate. Left, office interior.





Above, sales space; walls surfaced with textured plywood spot glued to exterior plywood and to framing. Below, studio interior, as pleasant as the sales space.



Photos: Julius Shulman





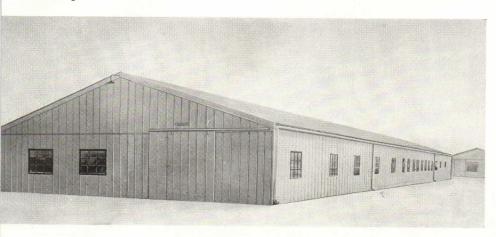
STUDIO AND SALESROOMS Corona del Mar, California Frank Gruys, Architect

Influence of surfacing materials on design

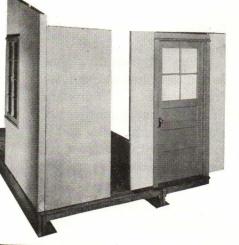
This studio and shop, several times extensively added to, houses the manufacture as well as wholesale and considerable retail sales of Kay Finch ceramics. Heavy highway traffic in both directions led to placement of the original building diagonally on the site to attract automobile trade. For the same reason, planting and terraces are important; and the exterior is painted white, roof overhangs a pink which is almost a Kay Finch trademark, and facia boards sage green.

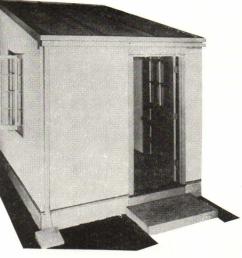
The structure is entirely of wood above the concrete floor slab. Exposed posts, 4" x 4" and 4 ft o.c., frame the walls; 1/2" exterior grade Douglas Fir plywood is secured to the inner faces of the posts to provide a smooth interior surface. Southern California's mild climate made more complex wall materials unnecessary; this plywood skin forms the entire wall thickness. (For discussion of a similar structure in a more severe climate see the house by Ramey, Himes & Buchner in this issue.) Walls are about half top-hung or fixed sash mounted directly on the structural posts, eliminating complicated trim or frames. The low pitched roof, with wide overhangs which effectively reduce sky glare yet admit ample light, is surfaced with built-up roofing topped with crushed white ceramic tile to serve as reflective heat insulation.

Such a direct solution of the design problems, however they may have been simplified by the uncomplicated demands of local climate, has produced a most attractive building. At the same time it is economical, though not parsimonious, of materials. Prefab building 50 ft wide, clear span; Steelcraft Mfg. Co., Rossmoyne, Ohio; steel frame for masonry walling, or with aluminum siding.



Below, models of prefab house using K-Veneer, wood sheet scored to impart dimensional stability, as surfacing; Howard T. Fisher & Assoc., architects, of Chicago. The same firm is promoting Metal-Clad Insulating Wall Panels for curtain wall construction of multistory buildings. Introduced in 1947, Metal-Clad panels bid fair to become generally available in 1949.





Builders Bldg., Chicago 1, Ill. Roofing Felt: perforated. Philip Carey Mfg. Co., Lockland Station, Cincinnati 15, Ohio.

prefabrication

Aluminum Home: experimental six-room house utilizing more than 7,000 lbs. of aluminum for exterior wall panels, rooting, window frames, doors, piping, insulation, wiring, kitchen cabinets, partitions, radiant heating system, etc. Aluminum Corp. of America, 801 Gulf Bldg., Pittsburgh 19, Pa.

Clear Span Trussed Rafters: requiring no load bearing partitions; easily assembled on site. Timber Engineering Co., 1319 18th St. N. W., Washington 6, D. C.

Kaul Cottage: factory-built vacation house; four rooms, 14 windows; extra strong fire resistant plywood walls, rigid aluminum studs set outside walls for "paneled" appearance. Twolayer aluminum roof, can be painted any color. Erection by owner. United Industrial Associates, 611 Washington Bldg., Washington 5, D. C.

Precision-Built Houses: again being produced in low and medium price brackets. Each unit constructed from company's plans, available to buyers, or from designs of purchaser's own architect (supervised by Precision-Built technicians). Houses will be marketed through local real estate brokers. Homasote, Trenton, N. J.

Steelcraft Model 50 Building: 50 ft clear span; for expanding manufacturing facilities, storage space, display rooms, or recreational buildings; roof, side walls of ribbed aluminum panels. Steelcraft Mfg. Co., 9017 Blue Ash Rd., Cincinnati, Ohio.

Timberib: 40 standard utility buildings. Swingup outdoor theater screen towers. Low cost Tee-arch bowstring roof trusses. Glue laminated beams for school buildings. Additional Timberib packaged buildings. Improved 75' clear span ratters for gyms; 14' garage ratters for garages. Improved portable bleachers. Products readily available. Timber Structures, Inc., P. O. Box 3782, Portland 8, Ore.

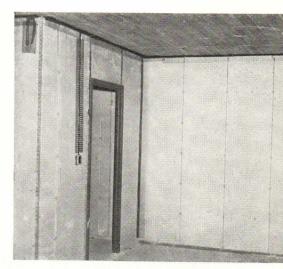
protective materials

Copper and Copper Alloy Products: general improvement in production facilities. American Brass Co., 25 Broadway, New York 7, N. Y.

Galvo-Line: magnesium ribbon anode to protect buried metal structures from corrosion. For high resistivity soils, or in conjunction with cast anodes, to increase efficiency of cathodic protection installations. Standard lengths: 1,000, 2,000, and 5,000 ft. Dow Chemical Co., Midland, Mich.

Home Flashing System: packaged weatherproofing unit consists of 10 flexible, non-rusting copper sheets, 200 bronze nails, instruction book. Two packages will flash average five- or sixroom house. Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Hydrocide 700: emulsified mastic compound for protecting exterior surfaces below grade against dampness. L. Sonneborn Sons, Inc., 88 Lexing-



Partition wall built with Clip-Grip Steel Studs and Gypsum Lath Clips; Neslo Mfg. Corp., New York, N. Y.

ton Ave., New York 16, N. Y.

Klee Sealant: for mortar between glass blocks. Coats exterior mortar joints, forms tight, flexible bond to the glass; quart and gallon containers; available in limited quantities. American Fluresit Co., 635 Rockdale Ave., Cincinnati, Ohio.

Marsh C-100 Caulking: permanent caulking for wood, steel, masonry, glass joints; may also be used between masonry and wood, around window frames; 5-oz applicator tubes. Marsh Wall Products, Inc., N. Main St., Dover, Ohio.

Perfection Joint Cover: for weather protection of masonry joints. No change in price; immediate delivery. Dusing & Hunt, Inc., 1927 Elmwood Ave., Buffalo, N. Y.

Termite Sprinkler Control System: to safeguard buildings from termites; can be installed only in new construction. Hill Termite Control Systems, Messick Bldg., Memphis 3, Tenn.

store fronts

Safety-Set Store Fronts: heavy-gage rolled construction; full visibility fronts; available stainless steel, anodized aluminum. Improved glass setting for insulating glass units; also flush glazing sash, entrance doors, frames. Brasco Mig. Co., 152nd & Commercial Aves., Harvey, Ill.

Store Fronts: flush-glazing assemblies. Corner Bar Series: with angles varying from 88° to 188°; can be also used as division bars. Corner Moulding: for pilaster. Jamb: for double action glass or metal doors. Structural Glass Hanger Moulding: for easy replacement of structural glass. Wide Face Sash: for use without sill, side, or head jamb coverings. Natcor Store Fronts, Providence 9, R. I.

wall construction

Clip-Grip Steel Stud: clip-stud combination for erecting dry wall partition. Gypsum Lath Clip: resilient, requires no nails; for use especially where reduction of sound transmission is factor. Prices substantially same; products available. Neslo Mfg. Corp., 516 Fifth Ave., New York, N. Y.

Metlwall: simplified system of metal wall partitioning and paneling providing all-flush surface from floor to ceiling. Units standard, interchangeable. Variety of enamel colors, wood-grain finishes. Martin-Parry Corp., Fisher Bldg., Detroit 2, Mich.

Partition System: fire resistant, two-inch solid plaster partition members, especially designed to meet varying building requirements. Light weight. Inland Steel Products Co., P. O. Box 391, Milwaukee 1, Wis.

Spandrel Panels: light sheet metal with fireresistant insulation core. Finishes and textures permit marked variations in appearance of building. Panels, 3" to 4" thick, increase net floor space within building line. Fisher & Associates, Inc., 322 W. Washington, Chicago, Ill.

structural materials

composite materials

Durisol: insulated roof plank, reinforced and coated topside with cement. Modular Building Slabs: for exterior walls, interior parititions, sheathing, plaster base, acoustical tile. Durisol, Inc., 420 Lexington Ave., New York 17, N. Y.

Fibron: cold-setting plastic composition, con-sists largely of wood-waste fibers; high insula-tion and fire resisting qualities, load-bearing strength. Expect to produce wall-thick slab 16" x 32" with inner and outer finish, glued joints; also highly insulative floors, ground-slab type. Corwill Corp., 318 Welch Blvd., Flint 4, Mich type. Mich.

Prest-Glass Porous Panel: corrugated glass fiber and plastic laminate for structural and decorat-ing uses. Non-Porous Prest-Glass Panel. Prest-Glass Corp., 8 E. 12th St., New York, N. Y.

glass, plastics

Plexiglas Sheets: red and green fluorescent colors. Super-size Plexiglas Sheets: 100" x 120", acrylic resin, largest cast plastic sheets ever manufactured, made commercially available. Rohm & Haas Co., Washington Sq., Philadel-phia 5, Pa.

PC Soft-Lite Prism B Glass Block: for light con-PC Soft-Life First & Class Biotcoluce: for full con-trol on sunlit exposures. Reintroduced: three PC glass block patterns, **Vue, Bristol LX-75**, and **Druid LX-75**. Latter two have fibrous glass in-sert for better light diffusion. Immediate avail-ability. Pittsburgh Corning Corp., 632 Duquesne Way, Pittsburgh 22, Pa.

Plastic Blocks: of transparent polystyrene, weighing about 1/5 as much as glass. Blocks interlock; no need of adhesives, clamps, or wood strips. Primarily for interior use. Colum-bia Protektosite Co., Carlstadt, N. J.

Set-in-Wood: prefabricated, mortarless system for installing Insulux glass block; wedges, hori-zontal and vertical strips; can be painted for striking color effects. American Structural Products Co., Ohio Bank Bldg., Toledo 1, Ohio.

Temprex Duo-Pane: blocks consisting of metal frames and tempered glass panels, assembled without cementing agent, to form picture win-dows, inside walls, partitions. Interlocking devices join blocks together vertically and horizontally. Frame permits floodlighting of a complete wall or lighting of separate units. Appleman Art Glass Works, Bergenfield, N. J.

installation materials

Rivweld: new rivet stud secures corrugated metal roofing material to steel purlins; no lastening devices to mar appearance or to interfere with painting. Nelson Sales Corp., Toledo Ave. & E. 28th St., Lorain, Ohio.

Trip-L-Grip Framing Anchors: replace old style joist hangers; eliminate uneven joists, cost of ledger strips and notching. Timber Engineering Co., 1319 18th St. N. W., Washington 6, D. C.

Weatherproofing Roofing Nails: neoprene washer which forms a seal around nail holes in metal roofs and sidings to prevent corrosion. Neoprene rubber said to bear up under all types of weathering. Nicholas Wire and Steel Co., Davenport, Iowa; also Independent Nail and Packing Co., Bridgewater, Mass.

iron, steel

Forging: aid to quick erection of welded struc-tures. Prompt deliveries. J. H. Williams & Co., 225 Lafayette St., New York 12, N. Y.

Shield-Arc LH-70: arc welding electrode, for welding of structural steels and reinforcing bars. Price increase; deliveries somewhat slower. Lincoln Electric Co., 12818 Coit Rd., Cleveland, Ohio.

Top-Speed: method of attaching Galbestos RPM roofing and siding climits **Top-Speed:** method of attaching **Galbestos** to **RPM** roofing and siding; eliminates strap fast-ener, bucker-up, and scaffolding on under side of roof. Working operations on top of roof; greater safety, speedier installation. Prices in-creased. Favorable delivery schedules. H. H. Robertson Co., Farmers Bank Bldg., Pittsburgh, Pa Pa

masonry materials

Ayr Trap: air entraining agent for concrete and cement mortar. Horn-O-Kote: finishing and pro-tective material for cement asbestos shingle. Horn A E Dispersed Black: coloring to make concrete black without reducing air entraining factor in concrete and cement mortar. Several other new products upon completion of field tests. A. C. Horn Co., Inc., 10th St. & 44th Ave., Long Island City, N. Y.

Brickettes: Roman brick type veneer. Modular coordinated Roman brick. New glaze finishes in modular coordinated structural wall units. New shapes in swimming pool overflow gutter. Improved cored face brick. Prices up 15%; deliveries on 30-day basis. Kraftile Co., Niles, Calif Calif.

Cemenstone: precast reinforced concrete structural shapes in any size required. Cemenstone Corp., Neville Island, Pittsburgh 25, Pa.

Feather-Weight Building Aggregate: raw perlite, a glasseous, volcanic rock, processed to give insulating and lightening qualities to cement and plaster. Also used as filler in paint and plastics. Perlite Co. of Carnegie, Carnegie, Pa.

Gibraita: pumice concrete aggregate with high weight-to-strength ratio; chemical analysis same as granite; for monolithic, structural, insulating applications. Price reduced; unlimited supply. General Pumice Corp., 7 Laughlin Bldg., Santa Fe, N. Mex.

Highly Colored Granites: imported. Standard-ized granite curb. Prices slightly lower; stock materials immediately available; dimension granite, from 30 to 60 days upon receipt of approved working drawings. H. E. Fletcher Co., W. Chelmsford, Mass.

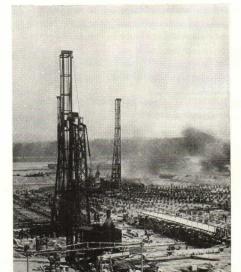
Zonolite Brand Vermiculite: number of new ap-plications, such as weight-saving floor fill for upper stories in large buildings, improved fire-proofing material for structural steel columns, beams, etc. Zonolite Co., 135 S. La Salle St., Chicago 3, Ill.

paper, felt

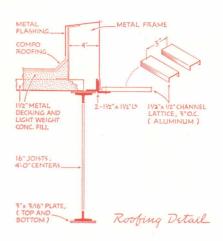
Richkraft Plasticized Medium: low-cost, waternichtraft Plastaizea Meanum inw-cost, water-proof, reinforced, shrink-resistant paper, in five width rolls. **Duplex 30A:** low-priced paper meeting Class A requirements of UU-P-147. All Duplex paper improved with edgestring rein-forcement. Products available. Richkraft Co.,



Corrosion of H-beam piles due to ground-water has been a major headache. Western Foundation Co. of Chicago has encased the upper 10 to 30 ft of steel piles in protective concrete. Above, protected 12"-53 Ib H-beam pile; below, driving piles for General Electric Turbine Plant, Schenectady, N. Y.







Above, roofing details; below, wall construction. Note that steel studs carry down through the Roman brick lower wall, which is merely a solid "curtain." Above the marquise the wall is formed of the same steel decking employed for the solid part of the roof. All welding details were so made that no overhead welding was required.

MATERIALS AND METHODS

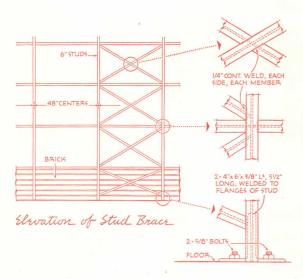
CONSTRUCTION: Foundations, concrete. Floor, concrete slab. Walls: expanded steel studs. Roof, expanded steel joists, stock steel decking. All framing shopwelded in panels, field-welded after panels were erected. Surfacing: floors, colored concrete; walls, wainscot of Roman brick, double-strength A glass above to marquise, steel decking above; roof, built-up over board insulation on steel decking on solid portions, ½" aluminum channels where latticed. Sash: stock steel.

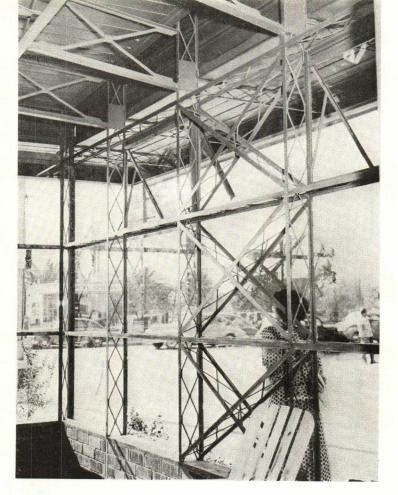
EQUIPMENT: Stock hardware, plumbing, and **electrical** equipment. Special **elevator** connecting to basement of main store.



EFFECT OF STRUCTURAL MATERIALS

ON DESIGN

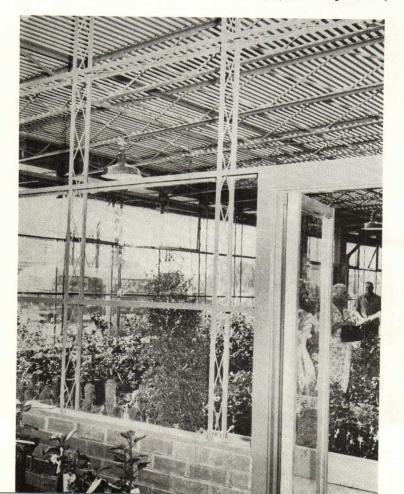


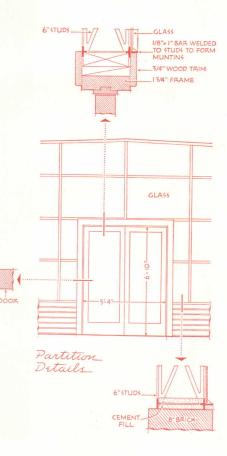


Above, details of diagonal bracing; below, of door. Identical sections of expanded steel joist were used for horizontal and diagonal bracing. Note the simplicity of connections and of glazing-bar detail. One reason for using expanded steel members was the light, lattice-like appearance, appropriate to a garden shop.

GLASS

1/8"x 1" BAR

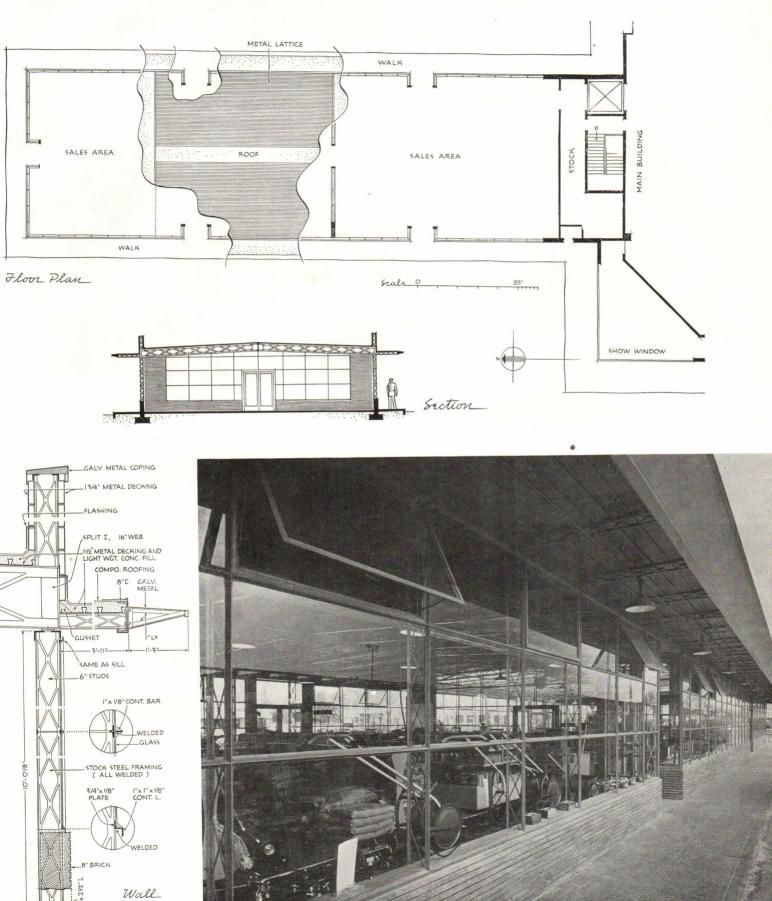




EFFECT OF STRUCTURAL MATERIALS

ON DESIGN

Section_ 1/2"SCALE









Why are so many older hospitals grim, colorless places? Tradition, or inertia, or whatever it was that caused this unhappy situation is fast being overcome by architectural designers who recognize the actual therapeutic value of color and beauty to the sick ... and to those who serve the sick.

Today, architects the world over are using Formica* to prove that a cheerful material can be more sanitary and less costly to maintain than the drab, uninteresting interiors of the past.

For instance, here in the Good Samaritan in Cincinnati, Formica is on walls and window stools in training wards, corridors and nurses' dormitory rooms. Formica's smooth, tough, longwearing surface actually repels dirt... what dirt might adhere to its non-porous surface wipes clean with the swish of a damp cloth.

Formica is unharmed by alcohol, mild acids, alkalies and boiling water.

See 1949 Sweet's Architectural File (section 13i, catalog 4) for more Formica information . . . and for availability of actual Formica color and pattern samples of your own selection. Copyright 1949, The Formica Co., 4633 Spring Grove Ave., Cincinnati 32, Ohio.





Worthington Pump & Machinery Corporation, Harrison, New Jersey

NEW EVAPORATIVE CONDENSER SAVES MANY COSTS

Where water for use in refrigerating condensers is expensive, high in temperature or difficult to secure and dispose of, the Worthington ECZ Evaporative Condenser saves water, equipment, space and money.

Water consumption is reduced 90% or more—only enough new water is added to make up for evaporation and keep the circulated water sweet and clean. No long line losses; and pumping costs are reduced proportionately.

Equipment such as cooling towers, water service and disposal facilities is not needed, saving investment cost, maintenance cost and space.

Prime surface coils are staggered to permit air deflection and wetting of the entire surface. Smooth surface makes washing easy and helps prevent scale accumulation.

Installation of this compact unit can be made inside or outside, in basement or on roof. Two types-Freon and Ammonia. Other features: Worthington Monobloc



Worthington ECZ Evaporative Condenser. Unit contains condenser coils, water spray nozzles, integral refrigerant piping, pump, eliminator, fan, drive, etc.

Pump, anti-corrosion fans (at slight extra cost), receivers available for Freon unit.

Write us for new Bulletin C-1100-B28, giving complete information. Worthington Pump and Machinery Corporation, Harrison, N. J. Specialists in air conditioning and refrigeration for more than 50 years. 48.33



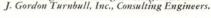




Higbee Is Ahead On Air Conditioning, Too

One of the country's greatest department stores, considered throughout the retail business as a pace-setter, is Higbee's in Cleveland. 17 years ago, a Worthington 1,000-ton carbon dioxide refrigeration plant was in-stalled to provide air conditioning. When it recently became necessary to enlarge the in-stallation, the success of the original equipment suggested having Worthington provide the new machinery.

new machinery. The new installation provides for 2,000 tons of Worthington centrifugal refrigeration. J. Gordon Turnbull, Inc., Consulting Engineers.





North American Mfg. Co. plant, Cleveland, Ohio.

Another Modern Plant Selects Modern Air Conditioning

When North American Manufacturing Company—manufacturer of oil and gas-fired fur-naces—built its new plant in Cuyahoga Heights, Cleveland, it decided first, to install air condi-

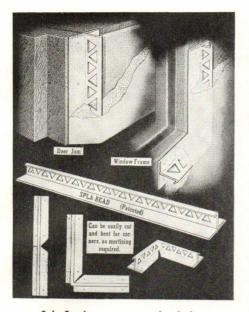
Cleveland, it decided first, to install air condi-tioning in its offices and, second, to install the most modern air conditioning equipment. These decisions led to the selection of a 30-ton Worthington 4-HF-6 air conditioning unit. This is the 6-cylinder W type, operating on Freon-12, with water-cooled condenser and full force-feed lubrication. full force-feed lubrication.

Vincent Eaton, Consulting Engineer.

Why "Balanced Air"? Why Worthington?

The ideal air conditioning or refrigeration system consists of machinery all manufactured -not just assembled—by one company. This makes more possible a perfect *balance* among

makes more possible a perfect balance among all interrelated machinery. Worthington is the company that manufac-tures all the vital "innards"—compressors, condensers, engines, turbines, pumps. The result is a completely integrated system—for more efficient, more economical operation. That's why there's more worth in Worthington. See your nearby Worthington distributor—in the Classified Telephone Book.



Spla-Bead, new corner bead for use at openings, etc., permits elimination of trim. Plasterbead Corp., Los Angeles, Calif.

One of the many new types of wall tile which are coming on the market: Atlas Styron Wall Tile, of plastic in wide range of solid colors; Atlas Tile Engineering Co., Chicago, III.



Paint Corp., 515 Bryant Ave., New York 59, N. Y.

Sun-Proof Titanic Outside Paint: entirely leadfree; fume-resistant; claimed superior to leadand-oil paints. Availability better than any time since war. Pittsburgh Plate Glass Co., Pittsburgh 22, Pa.

Velvet Flow: interior flat paint, high covering properties. Currently available white only, but tints can be made with addition of manufacturer's oil colors. M. J. Merkin Paint Co., Inc., 1441 Broadway, New York 18, N. Y.

Wesco's New Products: Clear & White Resin Sealers: Pli-Tec Interior and Exterior Stipple Paints, and Joint Filler; Casein Sealer; Wesco-Seal; Vivid Decorators' Colors: Overall One-Coat Paint; Roof Paint. Improved products: Flite Wall Paint; Smoothawal Spachtling Compound; Durasite Exterior Massonry Paint; Rocktite Stucco & Masonry Paint. Price increase in isolated territories; availability "good." Wesco Waterpaints, Inc., 343 S. Dearborn St., Chicago, Ill.

plaster

Nu-Wall Bonding Plaster: new, improved methods of application. New Patch Plaster in handy packages for domestic use, to be produced in near future. No price increase; available so far. Nu-Wall Mfg. Co., 923 N. 19th St., Milwaukee 3, Wis.

Red Top Cover Coat Plaster: gypsum finish, for application over old work. Brace-Tite System of Rocklath Plasterbase: for suspended ceiling construction. Textolite: semi-gloss water-thinned paint. Knotty pine wood-grained Sheetrock gypsum wallboard. Laminated Sheetrock gypsum wallboard partitions. Double thick-butt asphalt shingles. Textolite: stipple paint. U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

Spla-Bead: plasterbead, 28-ga galvanized steel, to replace conventional cover mold at doors and windows. Plasterbead Corp., 333 E. 2nd St., Los Angeles 12, Calif.

White Autoclaved Hydrated Finishing Lime: production method improved for greater plasticity and good hodability. Very little change in price; two weeks behind on shipment but expect to double capacity shortly. Ohio Hydrate & Supply Co., Woodville, Ohio.

plastics

Catalin: available from a new division, **Plastic Interiors Division**, Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

Krylon: spray-on, transparent plastic coating; adheres to any surface; useful to protect tracings, blueprints, pastels, wash drawings, etc.; washes off with soap and water. Foster & Kester Co., Inc., Philadelphia 32, Pa.

Moonglo: laminated plastic sheet of great density and hardness, for sink tops, other working surfaces. Formica Co., 4620 Spring Grove Ave., Cincinnati, Ohio.

Polyplastex Synspun: spun glass fiber plastic; new medium for direct or indirect lighting; wide range of colors; washable. Polyplastex Laminate: glass fiber plastic laminated in shatterproof glass; for table tops, wall panels, accessories; plain or various colors; yard good lengths, widths up to 42". 1948 prices same as previous year; deliveries within two weeks of order. Polyplastex United, Inc., 9235 Horace Harding Blvd., Elmhurst, N. Y.

slate-surfaced

Super Strip Shingle: extra thickness; double coating of asphalt and mineral granules over entire surface for weather protection; 10 shades. Bricsulate, Stonesulate, Thatchsulate: slate-surfaced sidings. Philip Carey Mfg. Co., Lockland Station, Cleveland 15, Ohio.

stairs

Duracite: slip-proof resurfacing material for stairs and floors. Improved materials for matching and patching spalled marble floors and for resurfacing wood flooring. Prices held firm in face of cost rises; good availability. Duracite Sales Co., 388 South St., Newark, N. J.

Safety Treads: especially molded; marbleized in five different colors. New Vinyl safety mats and matting. Improved Vinyl flooring and runner material. Availability fairly good. Melflex Products Co., Inc., 410 S. Broadway, Akron 8, Ohio.

Stair Treads: made of especially compounded rubber, bonded to steps with cement. Reinforced rounded nosing overlaps lip of stair tread for added safety. U. S. Rubber Co., 1230 Sixth Ave., New York, N. Y.

wall board

High Baked Plastic Coated Wall and Ceiling Panel Board: with hard, durable finish. Prices substantially same as pre-war. One month behind on orders. Tylac Co., Monticello, Ill.

Ormalite: plastic faced wallboard; may also be used for counters, table tops, drainboards. Block Flooring: now 12" x 12" x 3_6 ", formerly 9" x 9" x 1/2"; northern oak; construction, three plies of 1/6" vener. Latter immediately available. Haskelite Mig. Corp., 701 Ann St., N. W., Grand Rapids, Mich.

Patterned Presdwood: embossed hardboard simulating Spanish grain leather. Smooth-Two-Sides Tempered Presdwood: 3/16'' and 1/4'' thick. Producing 3/16'' wallboard again. Small price increases; availability good, but still on allocation. Masonite Corp., 111 Washington St., Chicago 2, 111.

Wal-lite: decorative, non-ceramic tileboard. Decoply: embossed plywood in leather grain patterns. Consoweld: low cost, plastic laminated sheets. Plywood Panels: improved with waterproof glue. Southern Pine plywood grades standardized as per their association. Readily available. Aetna Plywood & Veneer Co., 1731 Elston Ave., Chicago 22, Ill.

wall covering

Wall-Tex: improved wall covering of strong, flexible canvas; variety of patterns and solid colors. Slight price rise; available. Columbus Coated Fabrics Corp., East 7th Ave. & Big 4 R. R., Columbus, Ohio.

wall tile

Crys-Glas: all glass wall tile for kitchens, bathrooms, dressing rooms; applied to any surface; 15 fired colors. Dearborn Glass Co., 2414-2444 W. 21st St., Chicago 8, Ill.

Interlocking Tile: plastic wall covering. New and standardized tile colors. Jones & Brown, Inc., 439 Sixth Ave., Pittsburgh 19, Pa.

Lockback: plastic wall tile with patented ribs across tile back; provides automatic lock—and permanent installation—between mastic and tile. 20 colors, marbleizations, trims. Wilson Plastics, Inc., 131 Arthur St., Sandusky, Ohio.

Stainless Steel Tile: for commercial kitchens, hospital operating rooms, or wherever wall surfacess are subjected to rugged working conditions. Decorated Tile Inserts: for installation on shower walls and other wall areas to enhance appearance of room. Prices to be increased about 5%. Present outlets can still be supplied. Vikon Tile Corp., Washington, N. J.

Vikon file Corp., Washington, N. J. **Tile-O-Chrome:** aluminum wall tile anodized in colors (gold, silver, black, royal blue, sage green). Chromium-plated zinc tile in chromium finishes, striped or checked design. Another **new color series** of aluminum wall tile, in lettuce green, delft blue, rose, orchid, lemon yellow. Prices 30% lower during year; no change in costs. Immediate delivery. Tile-O-Chrome Corp., 4421 N. Clark St., Chicago 40, Ill.

wood, plywood

Amerwood: new pre-finished, low cost paneling. Special manufacturing process removes portion of spring growth and increases surface tension of hard summer growth. Boards are then sanded, pigment and protective coating applied, followed by a wax and buff. Pine, oak, chestnut, and other woods used; available in convenient sizes. Lehwood Corp., 1003 Ironwood Dr., South Bend, Ind.

K-Veneer: new, lightweight building board for prefabricated construction. Distention of wood at short intervals through a stretching operation provides space within a wood sheet for expansion and contraction. Product is bonded to wood framing; no nails used. Elmendorf Corp., 322 W. Washington St., Chicago 6, Ill.

Prespine: natural wood product used in manufacture of Curtis Woodwork products, including doors and kitchen cabinet units. Curtis Co., Inc., Clinton, Iowa.

Random-width Oak Panels: manufacture resumed. E. L. Bruce Co., Memphis, Tenn.

Red Diamond Hardwood Plywood Panels: in wide range of colors or natural finishes. New Redwood plywood. Improved Red Diamond doors and Deluxe Resnprest marine plywood. M & M Wood Working Co., 2301 N. Columbia Blvd., Portland 3, Ore.

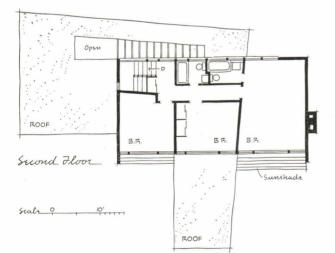
U. S. Plywood Corp: new products include Weldwood moldings; Weldwood fire door; Korina plywood; Weldwood standard flush door; Kalistron Vinyl sheeting; Weldwood California pine plywood. U. S. Plywood Corp., 55 W. 44th St., New York 18, N. Y.

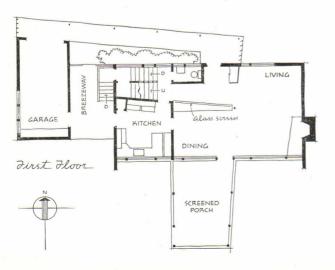


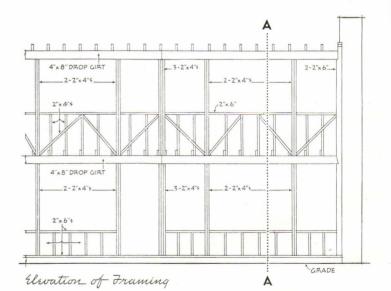
Influence of openings on design:

HOUSE, GARY, INDIANA R. Delos Peterson, Designer

SANTIAGO RICAURTE, COLLABORATOR

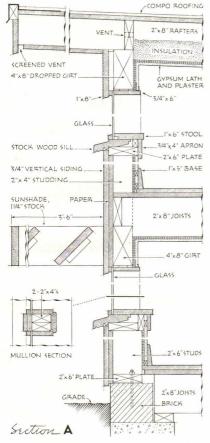












MATERIALS AND METHODS

CONSTRUCTION. Framing: Douglas fir. Walls: balloon framing to accommodate fenestration. Floors: plywood. Surfacing: floors: wood parquet, rubber, linoleum, carpeting; Walls, exterior, red cedar, painted white, interior, Philippine mahogany plywood, plaster, linoleum. Openings: stock steel sash, ¼" plate glass. Thermal insulation: 4" mineral wool in top floor ceiling only; roof vented. Doors: birch, flush panel; some accordion folding.

EQUIPMENT. Plumbing: "package" kitchen sink; vitreous china fixtures. **Electrical:** recessed lens lighting fixtures, wiring in conduit, kitchen exhaust fan. **Heating:** hot water system, oil-fired, with recessed convectors and automatic controls.

The site of this house, for Mr. and Mrs. H. M. Johnson, is an irregular inside lot, $75 \ge 167$ ft, with the street to the north—ideal for solar orientation. It is a typical residential setting in a conservative neighborhood. The designer knew his clients well; the plan was developed to fit their needs exactly. Because the lot is narrow, windows on the east and west sides of the house facing the lot lines, as well as the northerly street side, are kept to the absolute minimum.

The south side, toward the yard, is almost entirely glass; along this side all important rooms open. To a family with children playing outdoors it is a decided advantage that the entire yard can be seen from almost anywhere in the house. Utilization of solar heat has worked well; the heating plant seldom operates after nine a.m. except on cloudy or extremely cold days. The fenestration makes such use of prevailing breezes that an exhaust fan originally installed has never been turned on. Projection of side walls and roof past the window-wall serves effectively as a shade against hot, high summer sun; screened porch protects living room windows from low western sun, and a trellis, hidden in the photograph, protects from sun overhead. Framing diagram shows effect of fenestration on structure.

> RALPH DELOS PETERSON, educated at U. of Michigan and Harvard Graduate School; while he was at Harvard this house was designed. U. S. Navy until 1946; then a job in Denver, Colo.

> SANTIAGO RICAURTE, native of Bogotà, Colombia; U. of Michigan, 1940; Harvard Graduate School. He has now returned to his home.

Photos on facing page; Hedrich-Blessing



openings

awnings, canopies, louvers

Aluminum Louvers: for installation in roofs and walls. No substantial increase in price. Leslie Welding Co., 2943 W. Carroll Ave., Chicago 12, Ill.

Lumi-Shade: all weather aluminum awning.and canopy for door or window; baked enamel surface, choice of colors. Thabet Mfg. Co., 628 Huron St., Toledo, Ohio.

Aluminum Awning: fire-, wind-, and rust-proof aluminum venetian year-round awning for domestic, office, institutional use. Has inside fingertip shade control. J. E. Baker Co., 1325 E. 152nd St., E. Cleveland 12, Ohio.

doors

All-Lite Overhead Doors: for service stations, deluxe markets, etc.; full-width glass panels, steel-back wood construction, welded hinges. Narro-Line Doors: unusually thin muntins. Both have concealed hardware. Clark Door Co., Inc., 515 Hunterdon St., Newark 8, N. J.

All-steel Garage Doors: all welded, door leaf in one piece; canopy and track doors. Strand Building Products Co., Dept. P-155, 1710 Buhl Bldg., Detroit 26, Mich.

Aluminum Overhead Sectional Garage Doors: for residential use; 8' x 7' size only. Wood "Wedge Tight" Overhead Sectional Doors: residential, commercial applications; many sizes. Two-Section "Zero-headroom" Overhead Garage Door. "W/T" hardware for overhead sectional garage doors, improved design, several exclusive features. Availability: favorable. Calder Mig. Co., 628 N. Prince St., Lancaster, Pa.

Combination Storm and Screen Door: all aluminum, weighing 36 lbs. Screen panels interchangeable with glass panels. Eagle-Picher Co., American Bldg., Cincinnati, Ohio.

Garage Door: new and improved; aluminum; overhead type. Reynolds Metals Co., 2000 S. Ninth St., Louisville Ky.

Glass Door: 3%" tempered glass (Temprex), claimed to be live to seven times stronger than ordinary glass; aluminum frame. Appleman Art Glass Works, Bergenfield, N. J.

Hangar Doors: new type avoids present tailgate difficulties in operating hangar doors. Improved hangar doors. Prices same as last year; more prompt deliveries. Arch Roof Construction Co., Inc., 113 W. 42nd St., New York, N. Y.

Overhead Garage Door Hardware Kit: everything necessary for simplified installation, either one-piece door or two doors fastened together. Richards-Wilcox Mfg. Co., Aurora, Ill.

"Over-The-Top" Door Equipment: one-piece garage door which rises to full overhead position; cotnterbalancing springs, roller-bearing hangers; steel weatherstripping; 19 sizes, all wood or aluminum. Frantz Mfg. Co., Sterling, Ill.

Roddiscraft Door: flush design, lightweight, hollow core construction; veneer strips form accordion core; three-ply hardwood face panels and rails. Stock sizes available. Roddis Lumber & Veneer Co., Marshfield, Wis.

Storage Doors: for sub-freezing and sharp freezing operations; patented features insure uniformly tight sealing. Jamison Cold Storage Door Co., Hagerstown, Md.

door operators, closers

Brake-O-Matic: door closer, aluminum and stainless steel construction; two models for medium and heavy weight doors; both serve right and left, inside and outside doors. Mitchell White & Co., Inc., 12 E. 22nd St., New York 10, N. Y.

Commercial Operator: commercial or industrial heavy-duty overhead door openers. Improved underground controls and key switch controls. Federal Industries, Inc., 19720 W. Eight Mile Rd., Detroit 19, Mich.

Conceeled-in-Door Closer: for all standard size interior metal swing doors; incorporates holdopen and back-check features in closer. Improved line of products. L C N Closers, Inc., 466 Superior St., Chicago 10, Ill.

Door Control: steel or cadmium-plated door control claimed to require no periodic oiling or servicing. For domestic, industrial, and office use; standard and heavy duty sizes. Mallory Co., 1201 E. Eight Mile Road, Hazel Park, Mich.

Door Hardware: new door closer. New line of standardized cylinder and bit key locks. General improvement on entire line of builders' hardware. Increased costs have affected product prices. Norwalk Lock Co., 395 Broadway, New York 13, N. Y.

Model K Electric Operators: with Model C radio control, for residential garage overhead doors. Small price increase; shipment four to eight weeks. Barber-Colman Co., Rockford, Ill.

Model 44 Screen Door Closer: silent operation; controls storm doors as well. Norton Door Closer Co., 2900 N. Western Ave., Chicago 18, III

Y-M Electric Door Operators: improved; will open every type of commercial or residential door; safety feature automatically stops heaviest door on contact. Yoder-Morris, Inc., 5914 Merrill Ave., Cleveland 2, Ohio.

glass, glazing

Glass: plate and window glass increased in price. Availability normal. Pittsburgh Plate Glass Co., Pittsburgh 22, Pa.

Setting Blocks: made of pine, providing accurate method of assuring proper spacing of glazing in picture windows. Boxes of 100, with complete glazing instructions. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 1, Ohio.

Thermopane: three additional widths of standard 66'' height window-561'2'', 641'2'', and 721'2'. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 1, Ohio.

Tremglaze: mastic glazing compound requiring no painting; in aluminum color or pigmented with aluminum powder; waterproof, weatherproof. Tremco Mig. Co., 8701 Kinsman Rd., Cleveland, Ohio.

hardware

Cabinet Hardware: matched sets made, brass or bronze, several finishes. American Cabinet Hardware Corp., 416 S. Main St., Rockford, Ill.

Door and Cabinet Hardware: cabinet hinges of all types, latches, pulls, catches, hasps, door holders, etc. The Stanley Works, New Britain, Conn.

DuaLocks and Stainless Steel Shackle Padlocks: new products; also improved line of door and window hardware. Raw materials, labor, distribution costs up; products prices increased slightly. Availability: good. Sargent & Co., New Haven, Conn.

Gang Type Remote Control Operator #3007: improved; used in classroom construction for operation of clerestory windows. Universal Window Co., 950 Parker St., Berkeley, Calif.

Hardware Equipment for Doors: latches, locks, pulls, modernized, with new designs; also sound retardant liner for folding doors. Reasonable quantities available within 30-day period. New Castle Products, New Castle, Ind.

Heavy and Standard Duty Tubular Locks: keyin-knob type, for residential and institutional applications. Improved compact door closer and "one arm" spring latch. Yale & Towne Mig. Co., 200 Henry St., Stamford, Conn.

Integralock: cylinder in knob. Quarter-turn of key releases both latch and dead bolt, opens door. Self-lubricating; several finishes. Sargent & Co., New Haven 9, Conn.

Interlocking Sash Lock: with sash socket and pull hook for double hung windows. Detroit Hardware Mfg. Co., 1320 Mt. Elliott, Detroit 7, Mich.

Locking Hardware: new, solid bronze window locking handle with concealed latch and keeper, for open-in ventilators: operates by hand or window pole. Michael Flynn Mfg. Co., 700 E. Godfrey Ave., Philadelphia 20, Pa.

E. Godiney Ave., Finitoderpind 20, Fd. Lockwood Door Hardware: all steel mortise lock; improved Cape Cod handle sets, Polyflex knobs: new, all steel tubular lock. Cost increase for raw materials, labor, distribution. Production good at present, but bad prospects particularly on pig iron and steel. Lockwood Hardware Mig. Co., Fitchburg, Mass.

Magic Mirror Door Detective: safety device in metal frame, installed in door, to permit view of outside caller; speaking slots. Magic Mirror Associates, Inc., 687 Third Ave., New York 17, N. Y.

Master No-Draft Sash Balance: replaces weights, pulleys; provides for easy raising and lowering as well as complete weather stripping. Fits any size sash. Master Metal Strip Service, 1720 N. Kilbourn Ave., Chicago 39, Ill.

Operating Hardware for Jalousies: factory assembled unit with weatherstripped brackets for wood or glass slats. Exposed parts nonferrous materials. Casement Hardware Co., 406 N. Wood St., Chicago 22, Ill.

Plywood Door Hanger: improved. No price increases; Har-Vey hardware available for immediate shipment. Metal Products Corp., 807 N. W. 20th St., Miami, Fla.

Rite-Lock Series 500: new unit lock for sliding door, adjustable to various thicknesses and installed without mortising. Exposed parts of solid brass, four standard finishes. Adams-Rite Mfg. Co., 540 W. Chevy Chase Dr., Los Angeles, Calif.

Tubular Locksets and Latchsets: three types for every interior use; solid bronze bolts and hubs, working parts of cadmium plated steel. Barrows Lock Works, North Chicago, Ill.

Tutch-Latch: concealed latch eliminates bulky hardware; touch on door panel releases catch to permit button type compression spring to swing open door. Easily installed on doors, cabinets, drawers. Phillips Tutch Latch Co., 40 Exchange Pl., New York, N. Y.

Window Sash Spiral Balance: employing new high-carbon flat wire spring; full production expected early 1949. Improved balances for sash from 50 to 75 lbs and 59 to 105 lbs; cast aluminum housing instead of cast iron. Prices substantially same, increased availability. Caldwell Mig. Co., 56 Industrial St., Rochester, N. Y.

Wood Casement Window Operators: with internal, external, horizontal gearing. Redesigned Model 4703: solid bronze housing, simplified installation. Model 4700: interchangeable for right- or left-hand casements. Extruded Metal Butt Hinges: for builders' hardware trade. H. S. Getty & Co., Inc., 3348 N. 10th St., Philadelphia 40, Pa.

screens, shades

Durall Tension Screen: all aluminum; installed from inside; for all double-hung windows. New York Wire Cloth Co., 445 Park Ave., New York, N. Y.

Lumite: woven plastic screening for windows, doors, and porches, and also as upholstery material. Will not rust or stain, can be washed with soap and water. Lumite Div., Chicopee Mig. Corp., 47 Worth St., New York 13, N. Y.

Vinylite Window Shades: fire resistant, sunproof and waterproof, washable. Stewart Hartshorn Co., 250 Fifth Ave., New York, N. Y.

windows, surrounds, trim

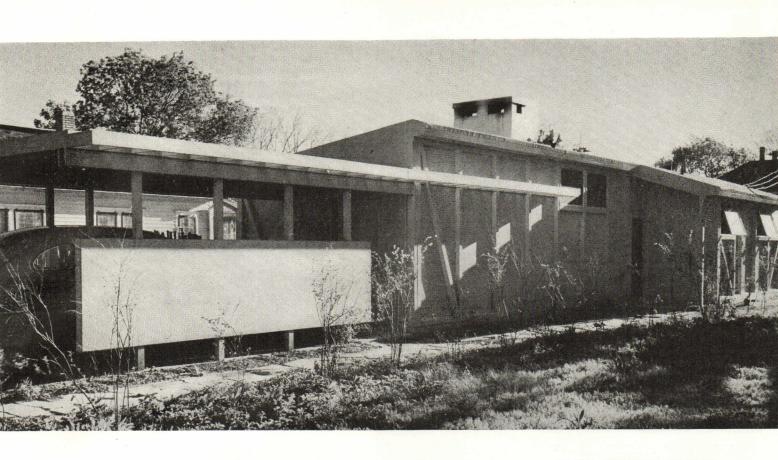
All Aluminum Combination Screen and Storm Sash: for residences, commercial, and industrial buildings; self-contained storage for storm pamel. Cincinnati Fly Screen Co., 6400 Herman Ave., Cleveland 2, Ohio.

Aluminum Windows: frame members have glazing compound-retaining grooves deep enough to permit double glazing if desired. Reynolds Metals Co., Louisville 1, Ky.

(Continued on page 98)

Fire tests, stock wood and fireretardant door with core of Kaylo (expanded glass insulation, American Structural Products Co.). Door marketed by U. S. Plywood Corp., New York, N. Y.

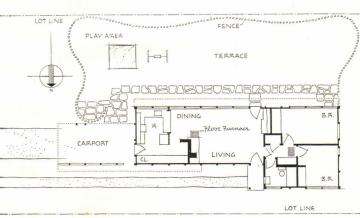




HOUSE, WINFIELD, KANSAS

Influence of insulating materials on design: RAMEY, HIMES & BUCHNER

ARCHITECTS



Floor Plan

Scalz 0 10'



A multipurpose material fully exploited: exterior walls consist of a single sheet, 1-9/16" thick, of cement-surfaced fiberboard on an exposed frame; insulation is integral with construction.

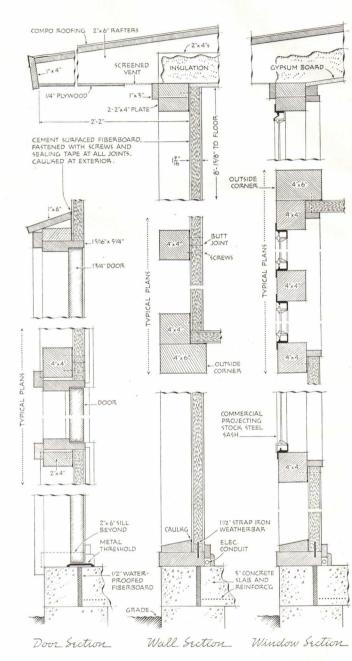
Photos: Fred Gund







Interiors (above, dining corner; below, built-in cabinets and shelves) show smooth wall surfaces obtained by placing cementsurfaced fiberboard and plasterboard on room side of framing. Note, in upper photo, floor register. Heat is supplied by two floor units, gas-fired, one here, other in bedroom entry. Both are in concrete-lined floor recesses; there is no basement.



Structural details were based on experience with comparable methods at FPHA. Premise, logical and economical, is full exploitation of material, using stock sizes throughout. Note the ingenious solution of such details as the electrical raceway.

INFLUENCE OF INSULATING MATERIALS

ON DESIGN



This house, for Harold Himes, one of the architects, is a recent adaptation of the curtain-wall principle to small-building design. Comparable to three Snake Hill houses by Koch, Jackson, and Kennedy (October, 1946 P/A) and the California studio by Gruys in this issue, its walls consist of a thin membrane, intended solely to exclude the elements, applied to the inside of the load-bearing frame. As in the Snake Hill houses, the membrane here is one thickness of cement-surfaced fiberboard, which has sufficient insulating value to permit two floor furnaces (35,000 Btu output) to heat the house effectively. Use of the space heaters determined both openness of kitchen-dining-living space and grouping of bedrooms; thus insulation, construction, equipment, and planning are thoroughly integrated. Satisfied that the construction withstands age and weather-the house went through an 80-mile gale and rain storm-the architects have completed two more like it. Cost, approximately \$8,000 including land, was financed by an FHAinsured Prudential mortgage; local banks would not participate. Public comment on the house ranges from, "It's swell" to, "It's crazy."

Ramey, Himes & Buchner: organized February, 1948. Harold W. Himes (left) U. of Michigan; Smith, Hinchman & Grylls; FPHA; Loree & Sirrine; U. S. Navy; associated with Ramey. Uel C. Ramey (center) Kansas State; Neville & Sharp; Panhandle Eastern; J. F. Pritchard; established practice Winfield, Kansas, 1945. Robert E. Buchner (right) U. of Michigan; Loewy; Skidmore, Owings & Merrill; Glaser; Nemeny; U. S. Navy.



MATERIALS and **METHODS**

CONSTRUCTION. Foundations: concrete. **Walls:** 4" x 4" wood posts 4 ft o.c., single thickness of cement-surfaced fiberboard. **Floors:** cement, asphalt tile surfacing. **Roof:** built-up, with 4" mineral wool insulation. **Partitions:** 2" x 4" studs, $\frac{1}{2}$ " plasterboard. **Fenestration:** stock steel sash, some fixed glass.

EQUIPMENT. Heating: gas space heaters (floor). **Lighting:** incandescent. **Kitchen:** sink incorporates dishwasher and washing machine.

insulation, sound control



Roof slabs of Durisol (chemically stabilized wood waste bonded with Portland cement); one of several forms of this versatile material, the roof slab affords structural strength, lightness, dry construction, heat insulation, sound absorption, nailability. New to this country, Durisol has been satisfactorily used in Europe for 10 years. Durisol, Inc., 420 Lexington Ave., New York, N. Y.

cork

Corkoustic: resilient acoustical material, entirely composed of cork particles, again available. Glareless white paint finish reflects 80% of light. Thermal conductivity 0.18 Bu per sq ft per hour per degree temperature difference. Building Materials Div., Armstrong Cork Co., Lancaster Pa Lancaster, Pa.

Cork Products: thermal, acoustic, insulation, surfacing, etc. Raw materials cost same; no price change in products. Available for prompt shipment. Cork Import Corp., 330 W. 42nd St., New York 18, N. Y.

construction

Insulating Siding: panel type, new design. Jones & Brown, Inc., 439 Sixth Ave., Pittsburgh 19, Pa.

Monel and Almet Stainless Steel Wire and Bands: for holding thermal insulation. Alloy Metal Wire Co., Prospect Park, Pa.

glass

Fiberglas Insulation Materials: lightweight, board form, for hot and cold ducts. Uncoated Duct Insulation: for application on concealed ducts where finish is not required. Fiberglas Blankets: for quieting self-contained air condi-tioning units. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio.

Foamglas: pipe insulation of cellular glass for hot and cold lines, indoors and outdoors. Un-affected by humidity; resists fumes, acid at-mospheres, other corrosive elements. Comes in sections 18" long, for all sizes of pipe. Pitts-burgh Corning Corp., 632 Duquesne Way, Pittsburgh, Pa.

Kaylo Block: for heat insulation. Insulation Roof Tile. Fireproof Doors: with Kaylo insulation cores. Glass block up about 15%; availability of products good. American Structural Products Co., Ohio Blank Bldg., Toledo 1, Ohio.

PC Foamglas Pipe Insulation: for hot and cold piping. Immediately available. Pittsburgh Corn-ing Corp., 632 Duquesne Way, Pittsburgh 22, Pa.

reflective metal

Alumiseal Insulation and Vapor Barrier Ma-terials: sheet aluminum reflective insulation. Improved sheet aluminum reflective insulation and lead-faced vapor-proof tape. Prompt de-liveries. C. T. Hogan & Co., Inc., 383 Madison Ave., New York, N. Y.

Cellulite-Silvercote: new building insulation that reflects heat. Reflective surfaces will not cor-rode or oxidize; reinforced nailing flanges simplify installation. Gilman Bros. Co., Gilman, Conn.

Type 4K Accordion "Resistive" Insulation: alu-minum foil said to be 6 to 17 times tougher than ordinary insulations; impervious to water-vapor, convection currents, cold, etc. No price increase; available. Infra Insulation, Inc., 10 Murray St., New York, N. Y.

Types III and IV Alfol Building Blanket Insula-tion: one- and two-layer aluminum foil attached to vapor-proof paper liner; both types for stud spaces 16", 20", and 24" centers. Price up slightly; available. Alfol Insulation Div., Re-flectal Corp., 155 E. 44th St., New York, N. Y.

rubber

U.S. Flotofoam: lightweight insulating material with low thermal conductivity; noncorrosive, nontoxic, self-extinguishing. Applied in commercial and home refrigeration units: Available in shredded or block form, various sizes to fill cavities. U.S. Rubber Co., 1230 Sixth Ave., New York, N. Y.

sound isolation

Elasto-Rib: laminated rubber-cork material for vibration and noise control. Available in one in. thick sheets up to 24" x 36" in size. Recom-mended loading between 7 and 21 lbs psi. Korfund Co., Inc., 48-15 32nd Pl., Long Island City J., N. Y.

Rigidized Metal: exceptional sound-deadening qualities. Rigidizing process produces clear-through geometric pattern which conceals scratches, dents, fingermarks; eliminates bulg-

ing problems. Rigid-Tex Corp., 658 Ohio St., Buffalo 3, N. Y.

Twin Rail Base: fan and motor base to provide vibration and noise isolation. Rubber-spring Vibration Mounting: load capacity ranges from 25 to 125 lbs per unit. Improved Elasto-Rib: combination cork and rubber, laminated, for low-cost vibration control. The Korfund Co., 48-47 32nd Pl., Long Island City 1, N. Y.

telephone booth

Acoustical Booth: new, stainless steel phone booth, modern design; walls, ceilings surfaced with laminated plastic panels. Outside sounds eliminated by sound-absorbing cells of plastic. Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn, N. Y.

tile, acoustic

Acoustic Diaphragm Tile: featherweight, sound absorbent tile. Price: approximately same. Prompt shipments. Heerwagen Acoustic Dec-oration Co., Fayetteville, Ark.

Cemex: noncombustible acoustic tile. Improved quality and general appearance of all Cemex varieties. Prices increased; availability gener-ally good. Cemex Corp., Quincy, Ill.

Perfatone: acoustical tile, reintroduced first time rematone: acoustican the, reintroduced first time since war. **Rocklath Plasterbase:** long length, ceiling height, with foil back. **Weatherwood:** insulation board with V-joints for **Pyrofill** roof decks. U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

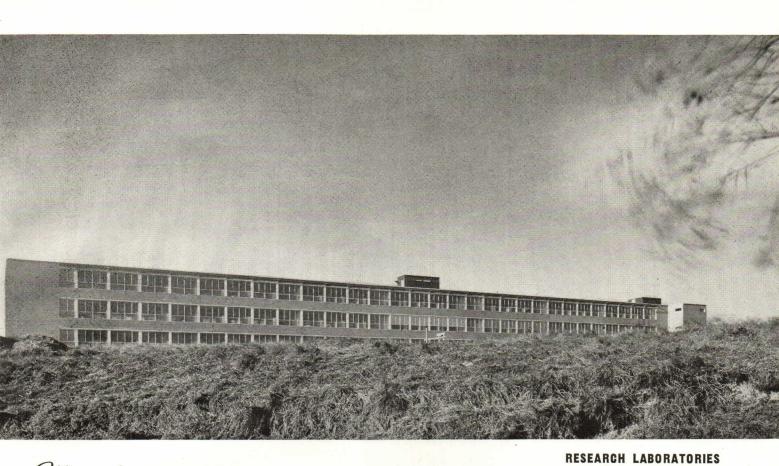
Travertone: mineral wool fissured acoustic tile. Perforated Asbestos Board: new addition to acoustic line. Corkoustic: reintroduced; acous-tic tile of cork particles. Temlok: insulating building board. Armstrong Cork Co., Lancaster, Pa.

wool

Insulation Wool: line of mineral wool blankets and batts, granulated and pouring wool, and loose material. K. B. S. Mineral Wool Co., 3rd & Pierce Sts., Omaha, Neb.

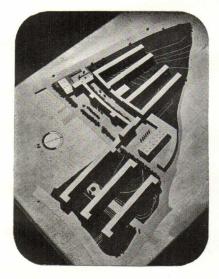
Fiberglas Acoustical Tile (Owens-Corning Fiberglas Corp., Toledo, Ohio) will not burn, is installed with adhesive or by nailing, etc.



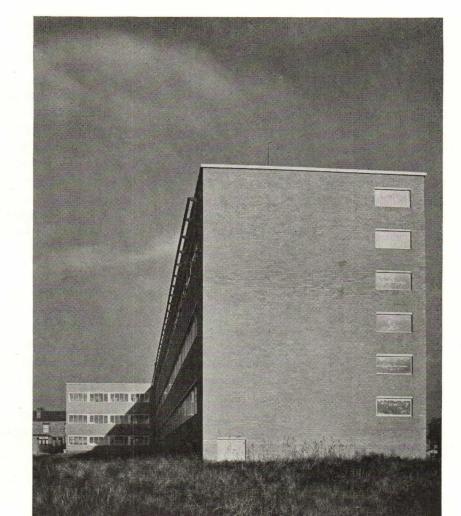


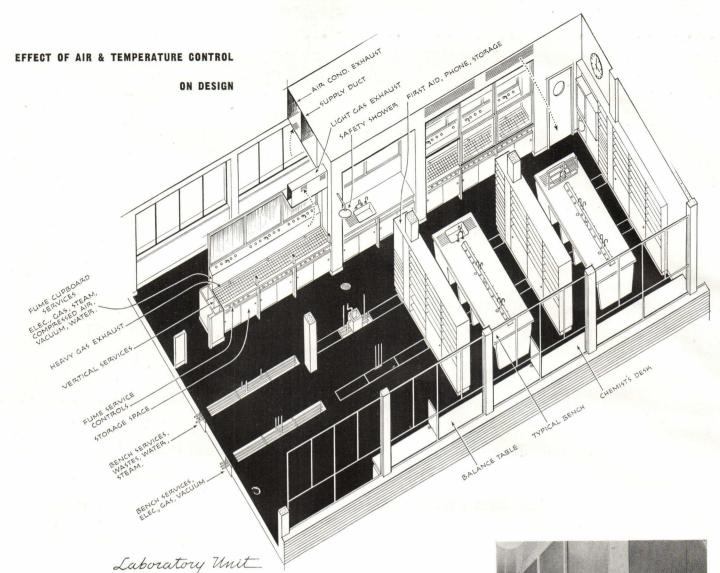
Effect of air & temperature control on design:

BLACKLEY, MANCHESTER, ENGLAND SERGE CHERMAYEFF, ARCHITECT



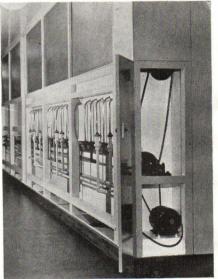
Ultimate development of research laboratory group, designed and first unit built before World War II; second unit about completed now; approximate north-south orientation desirable for site utilization and to allow sun to penetrate between units so courts could be used for gardens for testing fungicides, insecticides, etc. Orientation could not be decided until internal problems of building organization and equipment—notably air conditioning —had been resolved.



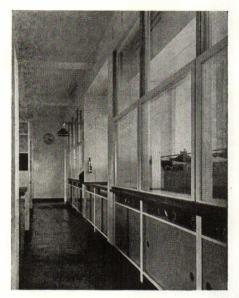


In this research laboratory, organization of air conditioning and gas exhaust systems was carefully studied for efficiency, compactness, and future expansibility. It is possible to add stories by extending air trunks and other services vertically. Yet such refinement of the air and temperature control system could not have been attained without solving other problems involved, which affect the structure's esthetic as well as its technical excellence. The building is a superior example of the blending of contemporary technics, materials, and equipment by an able designer. The certainty with which all its elements are handled builds up into a satisfying whole both visually and practically—which can scarcely be said of American research laboratories published to date.

The nub of the scheme is the laboratory unit, a three-dimensional planning module portrayed on these two pages. Decision to place windows on east and west walls in solid banks was made only after months of inquiry into actual requirements. At first "north" light was mandatory; only after much discussion did the architect get this modified to a demand for the best possible natural light. East-west fenestration was demonstrated to provide a more satisfactory lighting level as well as site-planning advantages. There remained the problem of controlling afternoon sun. Placement of the corridor along the west wall, and of fume cupboards between corridor and laboratory as described in accompanying captions, met this need.

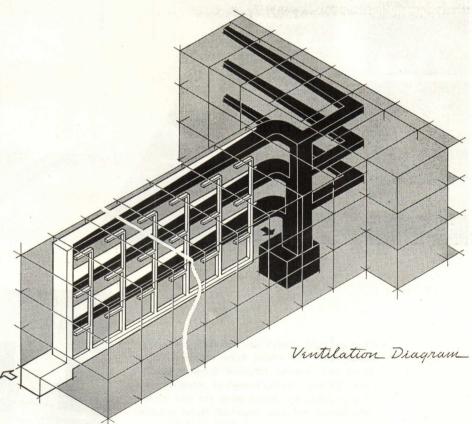


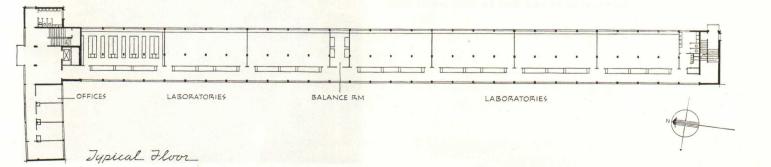
Within the laboratory module fume cupboards were the principal plan determinant. Not only are services to each cupboard complex (electricity, gas, steam, compressed air, vacuum, water); exhausts are provided for both heavy and volatile gases, and conditioned air is supplied to laboratories over tops of cupboards, exhausted at corridor floor line. Photo shows corridor side of cupboards, access panels removed; motors in each cupboard unit power individual gas exhausts. Laboratory side of fume cupboards demonstrates another advantage. With east-west fenestration of the laboratories, control of western sun is afforded by corridor along west wall. Fume cupboards, glazed front and back (patterned glass on corridor side) transmit daylight to laboratories and illuminate cupboards naturally.

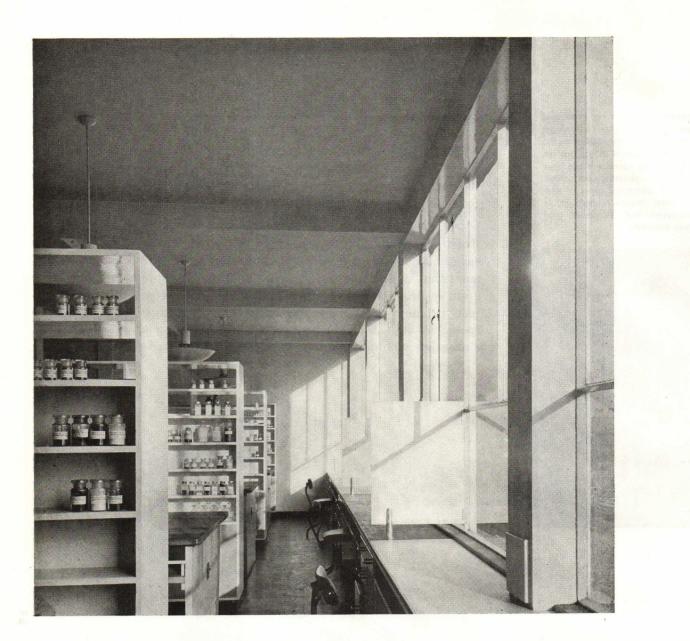


Air conditioning is essential in this type of research to insure a constantly controlled air supply regardless of weather and of atmospheric impurities in an industrial district. The air is cleaned, warmed, or cooled automatically according to outside conditions, and conveyed to each work space by ducts contained in corridor ceilings. Used air is extracted below the fume cupboards partly by an exhaust duct and partly by displacement under pressure from the incoming fresh supply. There are also independent duct systems for extracting gases from the fume cupboards. These operate at high velocity, with low inlets for heavy gases and high intakes for volatile fumes.

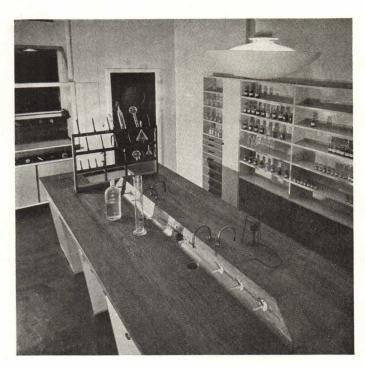
Other services are carried in floor channels with removable covers, which extend the full length of the laboratory block, whence they are easily extended to lab tables and cupboards. With mechanical equipment thus organized, the laboratories themselves might have been set up in several ways. The scheme chosen is a compromise between complete privacy—a lab for each chemist—and housing 30 or 40 in a large room. As built, the structure contains 21 laboratories, each shared by 4 chemists who may work either semi-privately or in a group.

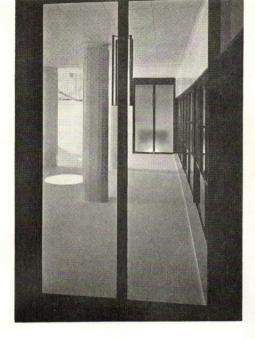






Above and right: window wall; lab table and storage shelves; and view toward fume cupboards, of a typical unit, Imperial Chemical Research Laboratories. Chemists' desks, instead of occupying dark left-over space, are ranged along the east window wall. Almost the only important layout criticism concerns location of balance table, which interrupts the row of desks, subjecting balances to varying solar temperatures. However, there is a central balance room on each floor for more precise work.





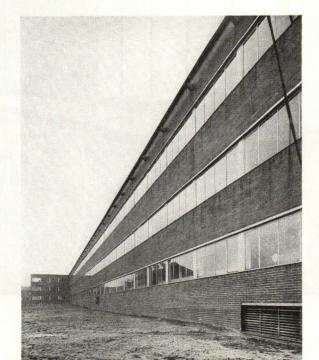
EFFECT OF AIR & TEMPERATURE CONTROL

ON DESIGN



Above, stair hall; right, laboratory wing corridor. Solid wall surfaces, requiring more maintenance than glass, are kept to a minimum. Where paint is used it is acid- and steam-resisting. Each floor is decorated in a different color; variations of the base color against a white background are employed to create pleasant working surroundings. Flooring is cork tile.

> West side, laboratory wing; office block in distance. Structure is simple reinforced concrete frame.





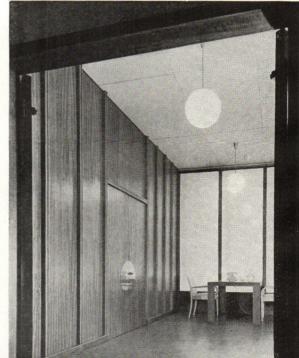


Office block, Imperial Chemical Research Laboratories.

Boardroom and anteroom, below, serve also for lectures and exhibitions. End wall is specially treated for projection. Cupboards (closed and open at right below) have adjustable display shelves and independent top lighting. Metal trim, all copper, includes a continuous hanging rail for charts, etc. False windows (left below) are for displaying photographs and transparencies. Tables have reversible tops, also for displays. Ceiling is untreated fiberboard, for acoustic correction; floor, cork with brick-red carpet; walls, Australian walnut veneer on fiberboard core.







EFFECT OF AIR & TEMPERATURE CONTROL

ON DESIGN

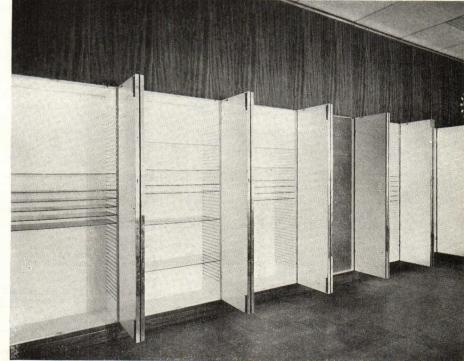
Serge Chermayeff, born in Russia, educated in England where he took numerous prizes in fine arts. Honors entrance to Cambridge interrupted by World War I. Practiced in England, starting 1930; partnership with Eric Mendelsohn 1933-36; member MARS group and CIAM as well as British and U. S. professional societies. Has written and lectured extensively in U. S. and Europe. Since coming to U. S. in late thirties, has practiced here (now a citizen); Prof. Architecture and Chm., Dept. Design, Brooklyn College, N. Y., 1942; President and Director, Institute of Design, Chicago, 1947.





Entrance hall (extreme left) is paved with terrazzo; stair wall fin and columns are tiled. All stairhall doors and windows are dark brown with old bronze metal work. Elevator cab has scarlet interior. Construction photo shows reinforced concrete framing; laboratory wing, two bays wide, has exterior columns set just behind the brick facing.





air and temperature control

air cleaning

Electro-PL: filter using electrostatically charged Airmat paper in place of ionizing unit for dust removal. American Air Filter Co., Inc., First & Central Aves., Louisville &, Ky.

Industrial Precipitator: with semi-automatic washer; removes 90% of air-borne dirt when installed in duct work. Improved electronic air cleaner with semi- or fully automatic washer. Raytheon Mfg. Co., Waltham 54, Mass.

Trion Electric Air Filter: electrostatic precipitator, for residential, commercial, and industrial applications. New Electronic gas cleaner. Improved units for cleaning air in commercial and industrial establishments. Prices stabilized; products available. Trion, Inc., McKees Rocks, Pa.

air conditioners

Air Conditioning: five and three tone packaged units; room conditioners, central systems. Frigidaire Div., General Motors Corp., Dayton 1, Ohio.

Console Room Air Conditioner: water-cooled type in mahogany cabinet Modu-Aire Units: cooling and heating, for multiple room installations. Window refrigeration room air conditioners. usAirco store conditioners and refrigerated Kooler-Aire units being improved for 1949. U. S. Air Conditioning Corp., Como Ave. S. E., at 33rd, Minneapolis, Minn.

Heating Coils: wide range of models and sizes, for heating, ventilating, air conditioning, and specialized drying applications. Modine Mfg. Co., Racine, Wis.

Small Air Conditioning Unit: protects crane operators against excessive heat, dust, fumes, gases in factories or foundries; maintains cab temperatures at 80° to 85° in summer, 68° to 72° in winter. Dravo Corp., Fifth & Liberty Aves., Pittsburgh 22, Pa.

Pittsburgh ZZ, PG. Unitrane: ductless multi-room air conditioner giving independent moisture and temperature control to separate rooms. Multiple-Zone Climate Changer: single air conditioning unit; handles from one to six separately controlled zones. SD Coil with Kinetic Orifice: tubewithin-tube coil; protects against freezing without loss of normal capacity by directing steam in direction of flow of condensate. Trane Co., La Crosse, Wis.

air distribution

Air Conditioning Registers and Intakes: both new and improved. Price increases; availability depending upon scarcity of raw materials. Rock Island Register Co., 2435 5th Ave., Rock Island, Ill.

Anti-smudge Cone: when fitted to Kno-Draft Air diffuser: prevents ceiling smudge in sooty, dusty, smoky room areas. W. B. Connor Engineering Corp., 114 E. 32nd St., New York 16, N. Y.

Bulator: combined ornamental grille and deflecting vane grille for attractive appearance and proper air throw; wide variety of patterns. Price increase. Hendrick Mig. Co., 61 Dundaff St., Carbondale, Pa.

Combination Air Diffuser-Lighting Unit: square or rectangular in design; available in 75w and 200w lamps. Air Devices, Inc., 17 E. 42nd St., New York, N. Y.

Grilles and Registers: all types for heating, ventilating, air conditioning, etc. Air Control Products, Inc., Coopersville, Mich.

Multi-Vent: ceiling panel with perforated distribution plate to give uniform spread of conditioned air; for heating, ventilating, air conditioning. Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.

Registers and Grilles: all costs up from 3% to 10%; shipment from one week to 30 days, depending on item. Standard Steel Cabinet Co., 3701 Milwaukee Ave., Chicago, Ill.

Thermo-Matic Register: individual room temperature control device for forced warm air heated residences. Warm air input from register is regulated automatically in relationship to heat loss from room. Dole Valve Co., 1933 Carroll Ave., Chicago 12, Ill.

Universal Type C-1 Air Diffuser: adjustable. Anemotherm: air meter. Turning vane damper. Price increases. Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.

boilers, furnaces

Airtemp Gas-fired Winter Air Conditioner: controls and operating units enclosed in insulated cabinet of bonderized steel; motor and slowspeed blower mounted on rubber for extra quiet operation. Airtemp Div., Chrysler Corp., 1119 Leo St., Dayton, Ohio.

Anthratube: automatic anthracite heating plant with rapid heat generation; coal consumption cut from 25 to 38%. Price schedule maintained; available for immediate delivery. Axeman-Anderson Co., 233 West St., Williamsport 3, Pa.; also Bethlehem Foundry and Machine Co., Bethlehem, Pa.

Beiler-burner Unit: Model ORU; fired by Toridheet rotary burner. Boiler-burner Unit: fired by pressure burner. Gas Conversion Burner: Model G. Model L: 6 gph pressure-diomizing conversion oil burner. Prices up on most items; difficulty in supplying. Toridheet Div., Cleveland Steel Products Corp., 7306 Madison Ave., Cleveland 2, Ohio.

Comfortaire: winter air conditioner, minimum floor space, low overall height; cast iron venturi type burner; summer ventilating provided for by switch; four sizes, ranging from 75,000 to 150,000 Btu input. Hammel Radiator Engineering Co., 3348 Motor Ave., Los Angeles 34, Calif.

Commercial Gas Burners: five sizes from 150,000 to 2,000,000 Btu for steam and hot water supply boilers, hot air furnaces, and special heat applications. B. P. Lientz & Co., Box 2275, Kansas City, Mo.

Cushion-Cradled Century Oil Burner: with Neoprene rubber cushioning Lo-Hiboy: warm dir oil fired furnace. Also a new adjustable firing head on all oil burners for greater efficiency and cleaner burning. Some new additions to furnace line. Century Engineering Corp., Cedar Rapids, Iowa.

napus, 10wa.
Dual Heat Burner: combination gas and oil.
Automatic oil-fired air conditioning furnaces.
Gas-O-Matic combination gas or oil burner
with electronic controls.
Oil-fired air conditioning furnaces from 70,000 Btu to 1,000,000 Btu capacities; all factory assembled. Improved line of oil burners: sizes made to flange on any make of oil furnace. Prices reduced; immediate deliveries.
Quiet Automatic Burner Corp., Newark 4, N. J.

Duo-Burner Unit: new oil- or coal-burning heating system; two separate combustion chambers; electric control shuts off one unit when converting to other fuel. Diesel Oil Burner Corp., 105-20 New York Blvd., Jamaica 5, N. Y.

Econolux: larger sized automatic steam or hot water boilers, oil or gas. Econolux Boiler Burner Units: simplified, improved, sizes from 100 to 600 MBH; commercial and industrial installations. No price change; reasonably prompt shipment. S. T. Johnson Co., 940 Arlington Ave., Oakland, Calif.

Fuel Oil Filters: for household and industrial oil burners. Price increase; prompt shipments. Sparkler Mfg. Co., Mundelein, Ill.

R-9 Gas Furnace: for basementless houses. **Other furnaces** for houses with basements, 50,000 and 75,000 Btu models. Improvements made on **R-9**, **R-50**, **R-75 furnaces**. International Oil Burner Co., 3800 Park Ave., St. Louis, Mo.

Gravity and Fired-air Furnaces: extra large combustion chamber and fire door; welded steel construction; air-tight, smoke-tight operation. Oil-fired Floor Furnace: minimum space; 10" high-low vaporizing burner without moving parts or wicks. Available with automatic thermostatic controls. Rheem Mig. Co., 570 Lexington Ave., New York, N. Y.

Janitrol: gas warm-air winter air conditioner; maintains temperature, moisture content, movement, quality of air. Triple Service Hot Water Heating System: hot water for heating, kitchen and laundry, bath. Improved gas heating equipment for rural and small town use. Surface Combustion Corp., 2375 Dorr, Toledo, Ohio.

Jetronic Burner: new oil burner; converts any type of oil into gas in special firing head before combustion. Claimed better than 90% efficiency in laboratory. Expected to reduce oil consumption. Adaptable to hot air, steam, water. Consolidated Industries, Inc., Lafayette, Ind.

Ko-Z-Aire Series 80 Conditioning Unit: oil-fired, warm air. Warm air central heating unit. New, more streamlined jacket on all models. Jones & Brown, Inc., 439 Sixth Ave., Pittsburgh 19, Pa.

Midget Powerhouse: hot water boilers. Century Engineering Corp., Cedar Rapids, Iowa.

Minute Furnace: smokeless, semi-automatic; any type of coal; no shaking of grates or ash scooping. Worsham Co., Inc., 7329 Lohmeyer Ave., St. Louis 17, Mo.

Model 308 Winter Air Conditioner: oil-fired. Model 576 Summer-Winter Air Conditioner: gasfired. Bryant Heater Co., 17825 St. Clair Ave., Cleveland, Ohio.

Model ORA Air Conditioning Furnace: fired by Toridheet rotary burner. Price increase on most items; difficulty in supplying. Toridheet Div., Cleveland Steel Products Corp., 7306 Madison Ave., Cleveland 2, Ohio.

Multi-fuel Furnace: hand-fired, stoker-fired, or conversion oil or gas burners; blower may be installed either side; several sizes for residential use. Stokol Stoker Co., Inc., 1145 E. 22nd St., Indianapolis 7, Ind.

Oil Furnace: steel construction. Substantial change in cost of material, labor, distribution; availability improved. Rudy Mfg. Co., Dowagiac, Mich.

Packaged Boiler Unit: for use with radiant heating installations; also provides high-temperature water for domestic use; built-in expansion chamber. York-Shipley, Inc., York, Pa.

Perfection and Ivanhoe Heaters: complete new oil-burning line includes three console models and two radiating heaters; equipped with thermostatic control and Midget pilot. Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

Powermaster: improved automatic steam generator; operates with gas, light or heavy oil. Orr & Sembower, Inc., Reading, Pa.

Sentry: newly redesigned forced air gas furnace for non-basement installation. Zoneair: similar model, for basement buildings; both have motors and blowers vibration-insulated for quiet operation; automatic control. Payne Furnace Co., Beverly Hills, Calif.

Series 481 Coal-Fired Winter Air Conditioning Furnaces: forced air circulation; oversized radiator; welded construction; three sizes. Gas-Fired Gravity Hi-Boy and Oil-Fired Hi-Boy. GA Series Improved Gas-Fired Confortmaster Units. Price advances; shipment two to four weeks after order receipt. Thatcher Furnace Co., Garwood, N. J.

Smith-Mills "1500" Boiler: for residential heating; integral tankless domestic hot water unit. Reliance Boiler: for automatic firing but with emergency hand fired equipment. The H. B. Smith Co., Inc., Westfield, Mass.

Smith Co., Inc., Westheid, Mass. Smokeless Furnace: new process burns and destroys smoke-producing combustion gases; uses low-grade soft coal. Vaporizing Oil-burning Winter Air Conditioner: smoke-free fire with oil pilot consuming less than 1/2 gal. oil in 24 hours; capacities of 55,000 and 80,000 Btu. Lennox Furnace Co., 400 N. Midler St., Syracuse, N. Y.

Suspended Oil-fired Furnace: 100,000 Btu's. Vertical oil-fired winter air conditioning unit, same capacity. Improved suspended oil-fired furnace, 200,000 Btu's, and cabinet winter air conditioner, 80,000 Btu's. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Thermaflow Furnace: oil-burning, gravity-type; for residential basement installation. Model 84 Winter Air-conditioning Furnace: oil-fired; three stages of fire, two-stage blower, to give effect of two furnaces in one. Suspended Oil-fired Furnace: for large, open-space heating such as stores, garages, schools, churches, etc. Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

Three-Fuel Steam Generating Unit: gas, light or heavy oil; 10 minute change-over from one fuel to another. Modulated flame-volume control maintains constant steam pressure. Safety shut-offs. Orr & Sembower, Inc., P. O. Box 1138, Reading, Pa.

Three New Home Heating Units: gas boilers with built-in hot water coil; completely assembled horizontal gas winter air conditioners; oil winter air conditioners. All finished in white enamel. Richmond Radiator Co., 19 E. 47th St., New York 17, N. Y.

Two New Furnaces: Model SGF362 Warm Air, and GH-57 Gravity Warm Air; both gas fired. Model VC 426 gas-fired circulator. Bryant Heater Co., 17825 St. Clair Ave., Cleveland, Ohio.

Vertical Oil-fired Winter Air Conditioning Unit: occupies only three and a half sq ft; 100,000 Btu's; for domestic installation. Improved Cabinet Winter Air Conditioner: 80,000 Btu's. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Winter Air Conditioners: gas, oil-fired; filtered, humidified, and blower-circulated air. Rheem Mfg. Co., 570 Lexington Ave., New York, N. Y.

chimneys, fireplaces

Circulator Fireplace: standard model with a number of improvements and changes. 10% price increase; unable to make prompt delivery due to steel shortage. Majestic Co., Huntington, Ind.

Fireplace Equipment: entire line re-engineered, though general features remain same. Bennett-Ireland, Inc., Norwich, N. Y.

Karol-Air Ever Pull: new, patented vent cap; sets nearly flush with root, disposes of un-sightly long pipe and A-vent. Cap maintains an even pull regardless of unusual draft or high winds. Hammel Radiator Engineering Co., 8980 Santa Monica Blvd., Los Angeles, Calif.

Metalbestos: lightweight gas vent and flue. Pipe-within-a-pipe construction. Aluminum inner pipe heats rapidly; cold air entering at bottom is heated where flue gases are at highest tem-perature assures a hot stack throughout entire length. Outside pipe of galvanized steel. Pro-duced in 3', 5', and 10' lengths, round and oval. Williams-Wallace Co., 160 Hooper, San Francisco, Calif.

Packaged Chimney: supported entirely from ceiling and roof, requiring no brick work; easily installed. Condensation Engineering Corp., 122 S. Michigan Ave., Chicago 3, Ill.

Twin-Ring Chimney Crown: utilizes force of air currents from every angle to improve chimney draft. All parts (tube, two outer bands, chimney proper, top disk) continuously extruded, quickly assembled by cementing. Coleman Co., Inc., 2nd & St. Francis Sts., Wichita 1, Kansas.

Type B Chimney: for gas. Revised roof housing and chimney housing plate. Prices reduced approximately 5%. Van-Packer Corp., 135 S. La Salle St., Chicago 3, Ill.

controls, pumps

Air Eliminator: new design for low pressure steam heating system. Other new air elimi-nators for hot water convection or radiant heating systems. Sarco Co., Inc., 350 Fifth Ave., New York 1, N. Y.

Automatic Air Valve: eliminates air from radia-tors and convectors, hot water heating systems. Dole Valve Co., 1933 Carroll Ave., Chicago 12, Ill.

B & G Airtrol System: boiler and tank unit **b** G Airfrol System: boller and tank unit eliminates air accumulation in hot water radia-tor system. Boiler tube extends supply main into boller water, preventing air from rising into piping and heating units. Bell & Gossett Co., 8200 N. Austin Ave., Norton Grove, Ill.

Circulating Pump: can be mounted horizontal or vertical. Oilite bearings; vibration reducing mountings. Available with either $11_4^{\prime\prime}$ or $11_2^{\prime\prime}$ pipe; 1/6 hp motor. James P. Marsh Corp., Skokie, Ill.

Class "T" Temperature Regulator: single-seated Class 1 temperature regulator for steam pressure to 125 psi (175 psi liquid) and temperatures to 450F. Has packless main valve stem and hard-faced seating surface. 1/2'' to 4''. Leslie Co., 58 Delafield Ave., Lyndhurst, N. J.

Electronic Moduflow: for domestic heating con-trol. Plug-in Chronotherm: automatic clock thermostat for domestic installation. Electronic Air Conditioning Control System: for commercial and industrial buildings. Several new domestic and commercial heating controls and control systems. Minneapolis-Honeywell Regulator Co., 2753 4th Ave., Minneapolis, Minn.

Heat Regulator Set: includes thermostat (sensitive to 1°F temperature changes), damper regulator, warm air, steam, and hot water limit controls; also accessory kit. Automatic Products Co., 2450 N. 32nd St., Milwaukee, Wis.

Instrument Cabinet for Air Conditioning Control: packaged unit, steel construction, access doors at back; dual-range indicator gives dry bulb and dew point temperature readings. Foxboro Co., Foxboro, Mass.

Magnetic Gas Valve: hermetically sealed; elimi-nates possibility of foreign matter forming in solenoid and restricting plunger operation. General Controls Co., 801 Allen Ave., Glendale 1, Calif.

500 M.V.B-60 Control System: self-contained and SUU M.V.B-60 Control System: self-contained and self-operating; for domestic, commercial, indus-trial applications. T-70 flush thermostat. K-3H hermetically sealed magnetic valve. V-200 Series thermostatic expansion valve with adjustable orifice cartridge. MR-2-5 gas safety cock. Im-proved A-100 Series Thermopilot relays, Hydramotor valves, V-110 manual reset safety valves. General Controls Co., 801 Allen Ave., Glendale, Calif.

Plug-in Thermostat: electric clock, automatically lowers temperature at night, raises it in morn-ing; 115 v. easily installed. Minneapolis-Honey-well Regulator Co., 2753 Fourth Ave. S., Min-neapolis, Minn.

RAC Control: automatically regulates volume of cold air intake in proportion to temperature of warmed air ready for distribution, for old or new forced warm air equipment. Jones & Brown, Inc., 439 Sixth Ave., Pittsburgh, Pa.

Thermostatic Air Control: for forced warm air systems; turn of dial provides individual room temperature control. Prompt deliveries. Dole Valve Co., 1933 Carroll Ave., Chicago 12, Ill.

Thermostatic Traps: single union, vertical. V Series 600 valve, single union, vertical. Unit heater control. These are improved products Webster CF-2 Continuous Flow Control: for hot water heating. Price increases; availability very good. Warren Webster & Co., Camden, N. J.

3-Point Controller: for weather-compensated con-trol of heating in residential and small com-mercial buildings. Improved master and sub-master thermostats, with capillary or rigid-stem elements for control of air conditioning appli-cations. Deliveries on short notice. Johnson Service Co., 507 E. Michigan St., Milwaukee 2, Wis.

Wis. Weather-Man Regulator, Model CO-115-30: im-proved heating control of buildings from out-doors where frequent cycling is required in warm air, convector radiator, or baseboard radiator installations. Automatic Day-Night Time Switch: changes time of outdoor 'night' and ''day'' thermostat; eliminates heating when temperature rises above 65F. Prices increased somewhat; ready availability. Automatic De-vices Co., 53 W. Jackson Blvd., Chicago 4, Ill.

convectors, radiators, radiant panels

Air Guide Convectors: wall panel type, for steam or hot water; for commercial, industrial use, where space is at premium. Improved Air-Guide Baffles: for fin coils. Defrost Attach-ment: for blowers. 15% price increase. Rempe Co., 340 N. Sacramento Blvd., Chicago, Ill.

Baseboard Heating Unit: copper tubing with aluminum fins; unit covered by steel grilled warm air outlet and deflector; heating capacity 600 Btu per lin ft. Rittling Corp., 1292 Niagara St., Buffalo 13, N. Y.

Convector Radiators: available in four standard and three heavy duty enclosure models; tem-perature control damper, adjustable, completely conceals grille when closed; front panel easily removed for installation, cleaning. Modine Mfg. Co., Racine, Wis.

Even-Ray: prefab radiant heat coils, hard cop-per tubing, save over 75% labor costs now required to install job-made coils. Even-Ray Co., 879 Broadway, Newark 4, N. J.

Fin-Ray Baseboard Convector: fin-type steel radiator in grilled steel covering plate. Auto-matic Oil Burner: for use with warm air furnace, steam or hot water boiler; flange and pedestal models. Comfort Cub: combination oil boiler-burner unit for hot water heating system; com-pletely automatic. U. S. Radiator Corp., 300 Buhl Bldg., Detroit, Mich.

Radiant Glass Heat Panels: electric, heat with-out dust, soot, fumes; thermostatically con-trolled. Continental Radiant Glass Heat Corp., 521 Fifth Ave., New York, N. Y.

Webster Type WI Convector Radiator: 4" fins. Price increase; availability very good. Warren Webster & Co., Camden, N. J.

humidification, cooling

Coils: redesigned heating and cooling coils with new plate type ripple-fins; strong, versatile coil castings. McQuay, Inc., 1600 Broadway N. E., Minneapolis 13, Minn.

CoolerAire: new, improved evaporative air cooler with Fiberglas filter; seven sizes for commercial and residential installations. Payne Furnace Co., Beverly Hills, Calif.

Humidry: unit applying refrigeration principle to reduce humidity content of air. Completely new line of "customized" reciprocating com-pressors adaptable to all kinds of refrigeration and air conditioning applications. Few small

price increases; prompt shipment. Carrier Corp., 300 S. Geddes St., Syracuse 1, N. Y.

Hytsaver: flat cooling unit for refrigerating room; suspends from ceiling; six sizes available. Tenney Engineering, Inc., 26 Avenue B, Newark 6, N. J.

Industrial Humidifier: requires no steam, pumps, or compressors: connects directly with any water line. Entire unit of heavy-gauge copper or other non-ferrous material. Abbeon Supply Co., 58-10 41st Dr., Woodside, N. Y.

space heaters

Built-in Electric Wall Heater: radiant convec-tion, exposed surfaces finished in gray; corru-gated aluminum reflector; 1320w, 115v, a-c or d-c. General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.

Chromalox: electric recessed wall heater: built-Chromatox: electric recessed with header; built in thermostat, pressure-type fan, tubular heating units; fan can be operated independent of heater elements for summer comfort. Edwin L. Weigand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa.

Circulaire: complete line of circulating wall heaters; 5 sizes, designed to fit standard 4'' walls; fully vented; no open flame. Hammel Radiator Engineering Co., 3348 Motor Ave., Los Angeles 34, Calif.

Down-Flo Heater: with built-in thermostat. Bilt-in Wall Heater, Model WJ-13: chrome finish; for small rooms. New gray hammertone finish on products. Electramode Corp., 45 Crouch St., Rochester 3, N. Y.

Electric Wall Heater: for rooms not adequately heated by heating system. Portable Electric Heater: safety features protect against burns. No price increase; production curtailed. The Firan Co., 1735-39 Berkeley St., Santa Monica, Calif.

Evenheat: new oil-burning floor furnace, com-pact, rated output of 72,850 Btu, fully automatic. Kresky Mfg. Co., Inc., Petaluma, Calif.

Floor Furnace: all controls accessible from top; stainless steel combustion chamber; thermostatic control. Ward Heater Co., 1800 W. Washington Blvd., Los Angeles, Calif.

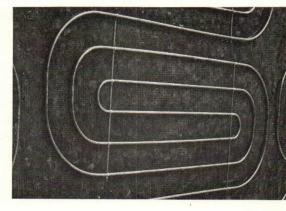
Floor Model Electric Heater: built-in thermostat. Heats by radiation and convection. 2,000, 3,000 and 4,000w capacities. All units are 19" high and operate on 230 AC. Electric Heating Dept., Westinghouse Electric Corp., Emeryville 8, Calif

Gas-fired Forced Air Wall Heater: for non-basement houses; fully or partly recessed in wall; floor-level warm air discharge. Payne Furnace Co., Beverly Hills, Calif.

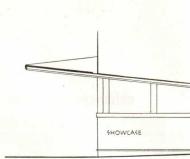
Lo-Boy Furnace: gas for residential or commer-cial buildings without basements; 26¹/₂" overall depth; dual-wall model with new register head eliminates floor grille, also floor model; heating element in both is welded to prevent gas leak-age. Fraser & Johnston Co., 725 Potrero Ave., San Francisco, Calif.

(Continued on page 100)

Even-Ray prefab heating coils, hard copper tubing on stiff metal spreaders, for floor or ceiling panels; claimed to reduce installation costs substantially. Even-Ray Co., Newark, N. J.



GRAYSONS



Longitudinal Section

2	
2	SHOWCASE .
4	- Sale
1	SHOWCASE
1	
	SHOWCASE

Plan of Lighting

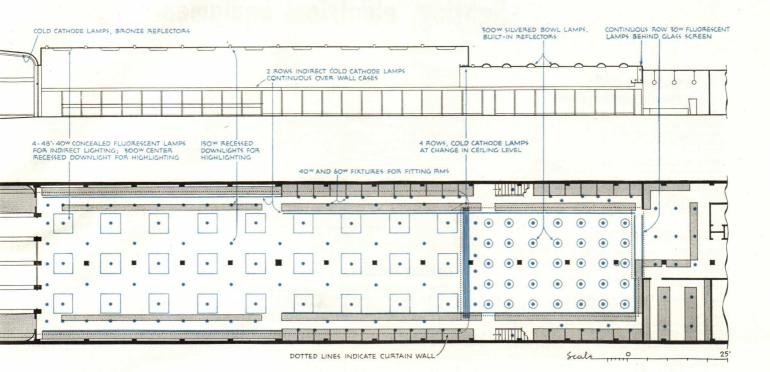
SPECIALTY SHOP San Francisco, California Gruen & Krummeck, Designers

A good location for a chain store—this one is on busy Market Street in San Francisco—increases the difficulty of solving its lighting problems, which are difficult enough in themselves. Here foot and auto traffic are heavy. The passerby must be attracted strongly if the store is to be successful financially. And in this type of store, selling women's ready-to-wear clothing and accessories, it is common practice to display as much merchandise as possible. Lighting has to make this display glitter in competition with neighboring stores, each intent on doing the same thing.

Influence of lighting equipment on design:

Shown is a second remodeling; the first was temporary, during the past war. Later the store was reduced one-third in size, and lighting had to help counteract the reduction. Starting with the marquise, lines of cold cathode light following the structural steel, set behind bronze reflector channels, direct attention inside. Within there are two ceiling heights. In the higher area, toward the front, fixtures are coffers containing concealed fluorescent lamps for indirect lighting, plus incandescent downlights centered in each coffer to highlight merchandise. There are additional downlights between coffers.





MATERIALS AND METHODS

CONSTRUCTION. (Existing building had brick bearing walls and wood floors.) **Flooring:** terrazzo at entrance; interior carpet and asphalt tile. **Walls:** exterior surfacing, marble; interior partitions, corrugated cast plaster. **Ceiling:** metal lath and plaster. **Entrance sash:** aluminum. **Entrance doors:** tempered glass. **Glazing:** ¹/4" plate glass; some ribbed glass.

EQUIPMENT. Electrical: special fixtures, specially designed. Cold cathode, fluorescent, and incandescent lamps. **Showcases:** specially designed for flexibility; wall cases can be used for hanging, double hanging, or shelving.



Left, marquise; above, high-ceilinged portion of store; right, lower-ceilinged rear area, where simpler fixtures were used. Details of marquise were published in April 1948 **P/A**.



lighting, electrical equipment

emergency and self-contained systems

Minuteman: automatic emergency lighting sys-tem; new model now has Underwriters Labora-tory approval. No price increase; able to supply demand. Electric Cord Co., 30 Church St., New York 18, N. Y.

Model 205DSP: 2500w Diesel electric plant, air-, water-cooled; one-cylinder, four-cycle engine; for users who must supply their own electric power. Model 03AE-IE: lightweight (77 lbs) electric plant. Model 5CE-IISP: improved; new streamlined hood and recoil starter. D. W. Onan & Sons, Inc., 43 Royalston Ave. N., Minneapolis, Minn. Minn.

lamps, accessories

Allied Fluorescent Lampholders: lampholders featuring spring-action prongs which grip lamp pins and hold securely; also procure positive contact. Allied Fluorescent Products, 77 Cort St., Irvington, N. J.

St., Irvington, N. J. Cold Cathode Fluorescent Lamps: with clover leaf bases; similar to 9678 slimline lamps. Line Lighters: individual ceiling mounted boxes con-taining ballasts and lampholders, for direct mounting on ceiling. Two-lamp Cold Cathode Radiance Luminaire: 45° louver cut-off length-wise and crosswise; available for school light-ing. Prices about same; shipments within rea-sonable time. Catho-Lite Co., Inc., 4122 W. Belvedere Ave., Baltimore, Md.

Fixture Socket: one-piece, ivory Bakelite con-struction; single screw mounting facilitates in-stallation. Slater Electric & Mig. Co., Woodside, N. Y.

Floodlights: improved, weatherproof. Each alu-minum unit complete with silvered-glass Perma-flector and convex heat-resisting glass lens. 200 to 1,000w lamp sizes. Pittsburgh Reflector Co., 410 Oliver Bldg., Pittsburgh 22, Pa.

Fluorescent Lamp: use of Krypton. a rare at-mospheric gas, gives 25w lamp 50% increase in light output over standard fluorescent lamps; lower starting voltage; transformers eliminated. Duro Test Corp., North Bergen, N. J.

Fluorescent Lamps and Fixtures: glass shielded, single lamp. Warmtone: lamp with high yellow content, approximating incandescent color. Com-mercial lighting fixtures. Slimline fluorescent lamps and fixtures. All available. Sylvania Electric Products, Inc., 500 Fifth Ave., New York, N. Y.

Germicidal Lamp: 36-in. slimline type, operating at four different germ-killing intensities; rated life between 2,500 to over 6,000 hours. Limited quantities for time being. General Electric Co., Nela Park, Cleveland, Ohio.

Heavy Duty Industrial Lamps: Hi-Flood R40 floodlights for indoor and outdoor use; Hi-Heat R40 infra-red lamps for drying service; Spatter-proof lamps to withstand hot spatter, rough handling, in welding; weatherproof lamps for outdoor illumination: standard lamps for general lighting. Radiant Lamp Corp., 300 Jelliff Ave., Newark 8, N. J.

Midget Photoflash Lamp No. 6: Bll bulb filled with shredded foil, single contact bayonet base, light output at 16,000 to 18,000 lumen seconds. Improved 400w mercury lamp for street lighting. Fluorescent lamp improvements. Yellow enam-eled lamps for outdoor lighting. Lamps from 15w to 60w increased one cent in list price. General Electric Co., Nela Park, Cleveland 12, Obio. Ohio.

One-Watt Night Light: walnut-sized, for dark hallways, steps, etc. 110-125v a-c. Average life one year. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

Portable Aviation or Highway Marker Lights: two types, one for night use, the other for both day and night; coiled neon-tube lamps powered by standard, dry-type battery. Bidirectional, High-Intensity Runway Light: for airports; ex-ceeds every requirement of CAA Specification 1-810 and Army Air Force Specification 32957: 200w, 6.6 amp aviation lamp, with medium pre-focus base. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

Reflector Flood and Spot Lamps: two new 75w flood and spot lamps with internal reflectors, to supplement standard 150 and 300w. R-30 bulb lamp claimed to be smallest ever offered in standard voltage ratings of 115, 120, and 125. Westinghouse Electric Corp., Box 1017, 306 4th Ave., Pittsburgh 30, Pa. Slimline Germicidal Sterilamp: claimed to give more than twice as much ultraviolet radiation as any lamp heretofore available. Internal Re-flector Lamps: flood and spot types, inconspicu-ous, 75w. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh, 30, Pa.

Triple Turret: fluorescent lampholder. Other Triple Turret: fluorescent lampholder. Other new products: Trigger-Ring lampholder; non-metallic cable; cil-immersed selenium rectifiers; remote control wiring system; time-delay re-newable fuses; fluorescent starter for direct current. Improved items; mercury switch with 10 amp rating at 125v; triple tap and extension cord set; sectional switch boxes; Twin Turret lampholder with five in. spacing. General Electric Co., Bridgeport, Conn.

lighting fixtures

Adjusta-Lite: fluorescent fixture for installation over windows and doors, easily attached by three screws, then plugged to nearest outlet; all-metal, egg-shell finish. Adjusta-Post Mfg. Co., Akron, Ohio.

Circlarc Fixture: based on Circlarc lamp. Two fixtures, one based on 8" Circline, the other on combination of 8" and 12" Circline lamp. Im-proved recessed holders on the Circline. Re-duced prices; delivery 30 days. Homecraft Electronic Products, 1208 S. Kedzie Ave., Chi-cago, Ill.

Combination Air Diffuser-Lighting Unit: square or rectangular in design; available in 75w and 200w lamps. Air Devices, Inc., 17 E. 42nd St., New York, N. Y.

Combination Lighting Unit: for hospital rooms, with extreme versatility; drastic reductions in wiring costs. Noiseless commercial lighting fix-ture. Improved indirect lighting fixtures using silver-bowl lamps. Kurt Versen Co., 4 Slocum Ave., Englewood, N. J.

Domelite: ceiling lighting fixture; reflecting sur-face of silvered bowl lamp sealed against deterioration; dome in baked egg-shell finish. Gotham Lighting Corp., 548 W. 22nd St., New York, N. Y.

Formlite: lighting fixture of modern design with numerous mounting arrangements; easy instal-lation on standard outlet boxes. Gotham Light-ing Corp., 548 W. 22nd St., New York, N. Y.

Ing Corp., 348 W. Zind St., New York, N. I. Four-Lamp Fluorescent: luminaire for schools and offices. Two-Lamp Fluorescent Luminaire: with single incandescent lamps, installed in-dividually or in continuous rows, for locations where lower illumination levels are needed. Two-Lamp Fluorescent Light: direct-indirect with steel lowered bottom, or semi-indirect with translucent plastic bottom. Westinghouse Elec-tric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

Fluorescent Lighting Fixture: for library, living room, hall, etc.; modern contour, end pieces of Burgundy red and gold or chrome; 31" and 55" lengths, two lights, 20 or 40w. Globe Lighting Products, Inc., 397 Seventh Ave., Brooklyn, N. Y.

Gibson 6200-6400 Louvered Light Fixture: com-bines louver assembly with two- or four-light fixture, into one lighting unit; satin aluminum construction, white enamel louvers. Gibson Mfg. Co., Atlanta, Ga.

Guth-Lite: fluorescent lighting fixture featuring "Jacknife" hinge and maintenance rod to make possible all work of replacing, cleaning from the floor. Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.

Kitchen Counter Lights: 8w, 15w fluorescent fixtures for installation under wood or steel kitchen cabinets; heavy-gage steel construction, baked white enamel finish. Guardian Light Co., 301 Lake St., Oak Park, Ill.

La-Va-Lier: fluorescent lighting, consisting of strip and hardware for plug-in (or permanent windows. Commercial slimine fluorescent fix-tures. Circlelier fluorescent fixtures utilizing flat and bent glass shields; available without shielding with fixtures in white enamel, polished glass, and chromium. Spotlights: for use with commercial fluorescent line. Price increase; immediate delivery. Moe-Bridges Corp., She-boygan, Wis.

Lennox 2 and 4: two new commercial fluo-rescent fixtures; low brightness ratios and simple installation. All-metal, press welded, in-

terlocking louvers; '`A-J'' hangers in two stand-ard lengths supplied on suspension-mounted continuous installations. Day-Brite Lighting, Inc., 5411 Bulwer, St. Louis, Mo.

Lighting Fixtures: designed by new firm for kitchens, game rooms, dinettes, bedrooms, also commercial. Complete line portable lamps. Lightcraft Corp., Subsid. of J. H. Millstein Co., Jeannette, Pa.

New Executive Luminaires: fluorescent and slim-New Executive Luminaries: inderscent and slim-line lighting fixtures; water-thin depth, louvered or glass bottoms; available in two- and four-lamp units, for standard 40w fluorescent and 51w slimine sizes. All-bright Electric Products Co., 3917 N. Kedzie, Chicago 18, Ill.

#151 Night Light: contains switch and adjust-able shutter to regulate light intensity from 7½ w lamp. **#158 Automatic Closet Light**: op-erates by trip lever similar to refrigerator light. Illuminated House Number: glass digits; bronze, brass, aluminum finishes. Pryne & Co., Inc., 140 N. Towne Ave., Pomona, Calif.

Pathfinder Light: for steps, walks, driveways, parks, gardens, etc.; cylindrical housing, alumi-num dome top, white or colored prism lens directing beams downward; low voltage or standard 115v. Cannon Electric Development Co., 3209 Humboldt St., Los Angeles, Calif.

Pendant-Type Electric Fixture: pendant set de-signed to blend with other Sylvania commercial fluorescent fixtures. Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.

Prescolite: recessed lighting fixtures. Spread-lites: recessed lighting fixtures with drop opal heat-resisting glass. Price rise average 5%; deliveries unpredictable. Pressteel Co., 800 Bancroft Way, Berkeley 2, Calif.

Recessed Lighting Fixture: incandescent, with clear center in lens, for jewelry stores, over dining tables, etc. Fluorescent lighting fixture with hinged glass door. Improved rust-proof frames and doors to recessed incandescent fix-tures for outdoor use. Prices reduced 10%. Immediate shipments. The Kirlin Co., 3435 E. Jefferson Ave., Detroit 7, Mich.

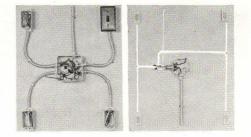
Recessed Troffer Downlight: for stores, offices, or wherever concentrated light is desirable; individual, end, corner, cross-over, and in-line mounting; standard width fluorescent troffers. Pittsburgh Reflector Co., Oliver Bldg., Pitts-burgh 22, Pa.

Seminar: two-lamp fluorescent light unit for classroom installation. Recessed Fluorescent Fixtures: curved lens. Prices substantially same; deliveries from two to three weeks. R. & W. Wiley, Inc., 119 Dearborn St., Buffalo, N. Y.

Slimline Fluorescent Fixtures: 96" long; instant starting, for cove lighting as well as architec-tural patterns with continuous linear lighting. Newly designed fluorescent and incandescent fixtures for commercial and residential use. Prices essentially same; available for almost immediate delivery. Lightmore Appliance Corp., 738 Broadway, New York 3, N. Y.

(Continued on page 104)

Remote Control Wiring System (General Electric, Bridgeport, Conn.) uses low-voltage lines from small switches to relay which controls line voltage at outlet box; eliminates heavier wiring between switches and outlets; most valuable when substituted for conventional multiple-switch wiring.



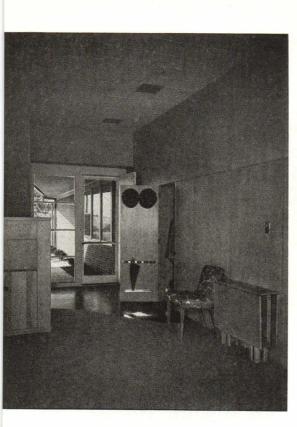


Situated in the Allegheny River valley about 40 miles north of Pittsburgh, this house affords its owners the amenities of a suburban dwelling in an open rural setting. To a great extent these comforts depend upon ample water supply, which is always a problem of the house beyond the city's limits.

Influence of water supply on design:

HOUSE, KITTANNING, PENNSYLVANIA Caleb Hornbostel, Architect Ruth Hornbostel, Decorator

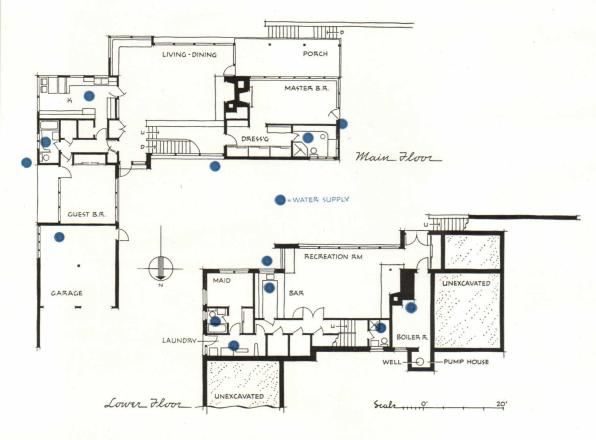




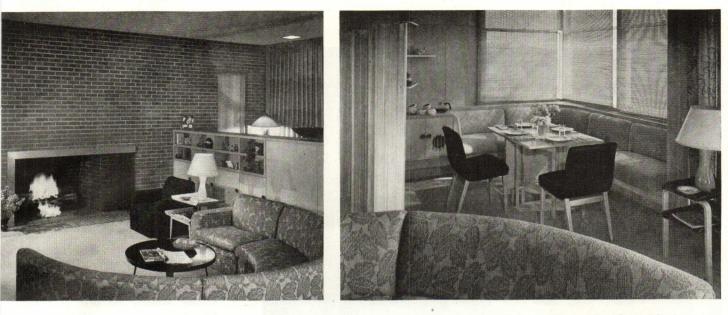
The urbanity of this semi-rural house is evident in its principal living area. Above, main entrance. Right, large windows comfortably exploit the rural setting.



In this house of Hornbostel's, on the outskirts of Kittanning, Pa., is realized a popular desire: to live in the "country" yet retain city comforts. Not so many years ago difficulties with electricity, heating, and water supply were obstacles to its achievement; today extension of electric service and ease of fuel transport have eliminated the first two in much of the country. Water supply remains a local problem. Here, in a house not unduly large, modern water-using facilities are required at seven principal locations: three baths, kitchen, recreation room,

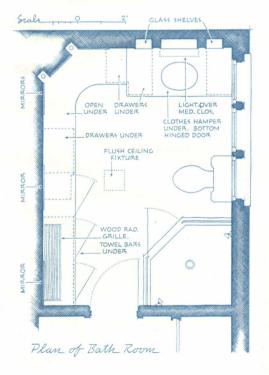


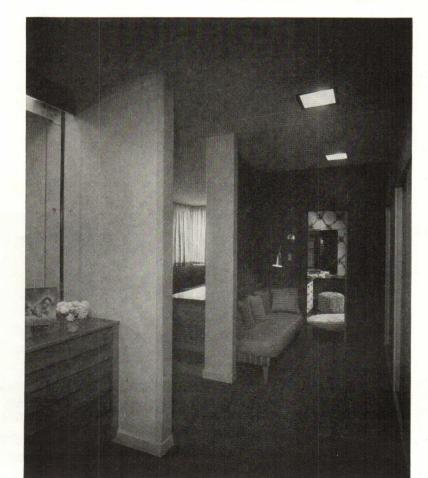
INFLUENCE OF WATER SUPPLY



laundry, boiler room; and there are hose bibbs, etc. All these are supplied from a private deep-well pump. The water's quality necessitated softening apparatus, and there is a septic tank sewage disposal system. The architect's skill is evident in the way such complex requirements are fitted into, without dominating, the design. Less fortunate are the suburbanesque landscaping—which does not follow the architect's scheme as drawn—and the somewhat unintegrated downhill facade. Nevertheless the house belongs in its calm civilized country setting. Left, spaciousness is enhanced by treating end wall and ceiling of the gallery (at higher level behind cabinets) uniformly with the living area. Above, dining corner, less formal yet most dignified.

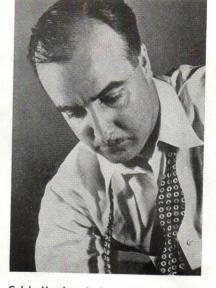
Below, dressing space, master bath visible at end. Provisions for utmost comfort in living are complete to an unusual degree; so competently and unobtrusively are such matters as water supply handled that one is scarcely conscious of their existence.



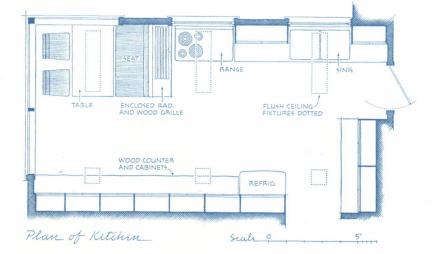


ON DESIGN





Caleb Hornbostel, born 1905. Educated Carnegie Inst. Technology, 1929; Ecole des Beaux Arts, France, 1933. Experience with Peabody, Wilson & Brown, N. Y. C. Housing Authority and Dept. of Parks; Associated Architects (Harlem Place Housing); E. A. Dennison; Norman Bel Geddes. Associated at various times with Richard Bennett, Felheimer & Wagner, James Gordon Carr. Practice in own office, New York. Instructor at Cooper Union, Pratt Institute, N. Y. University. Has won or placed highly in many competitions here and abroad.



Recreation room bar: soft drinks for teen-agers, also serves for adult entertainment.



GLASS SHELVES AND

CUPBOARD UNDER

Plan of Bar

SINK

CUPBOARD UNDER

SOFFIT OVER

CONTINUOUS GROUND GLASS LIGHT PANEL

MATERIALS AND METHODS

CONSTRUCTION. Foundations, concrete. Frame, wood. Walls, brick veneer. Roof, wood; asbestos surfacing. Floors, concrete and wood; asphalt tile, oak, linoleum, and carpet. Interior partitions, wood faced with tile, plaster, plywood; brick. Openings: sash, special wood; glass, double insulating. Insulation: mineral wool (thermal); tile (acoustic). Doors: flush, birch. Hardware: brass.

EQUIPMENT. Kitchen and laundry: electric range, dishwasher, garbage disposal, laundry machinery. Built-in incinerator. Plumbing: vitreous china and porcelain fixtures; copper water tubing; deep-well pump; water softener; electric water heater. Heating: gas-fired hot water boiler; convectors in basement, baseboard units on main floor; automatic controls. Electrical: BX cable; stock lighting fixtures.



Telehome: used with room speaker; provides call-initiation at both master and room speaker, reply from all speaker stations without manual operation; master unit and door speaker flushmounted; for houses. Webster Electric, Racine, Wis.

13 Tube AM-FM Chassis: custom-built features at line production prices. AM and FM RF stages arranged into integral subchassis tuning unit; improved radio detector circuit. Two ranges of audio response (normal, high-fidelity). Capitol Radio Corp., 100 Metropolitan Ave., Brooklyn, N. Y.

kitchen, bath equipment

Aluminum Kitchen Cabinets: easily assembled wall, base, and sink types; adjustable shelves, ball bearing rolling slides. Combination Refrigerator-Freezer: overall storage capacity of 8.2 cu ft. Hotpoint Inc., 5600 W. Taylor St., Chicago, Ill.

Base Island Server: mobile end table for kitchen use; three glass shelves, hinged extension top. Desk Pedestal: three-drawer kitchen unit; with linoleum or Formica top becomes planning desk. Improved base units with new chrome handles, improved door catches. Refuse Container: stainless steel; attaches to sink front door. Miller Metal Products Co., 2215 Russell St., Baltimore 30, Md.

Bathroom Accessories: new line: glass shelves and brackets, towel bars, tumbler holders, tooth brush holders, robe hooks, combination scap holder and grab rail; die-cast from nonrusting metal, finished in chrome. Marsh Wall Products, Inc., N. Main St., Dover, Ohio.

Crestlyn Lifetime Stainless Steel Sink Tops: fit most undersink cabinets; seamless bowl; positive draining. Unlimited quantities available. Prices far below pre-war on comparable product. Douglas Distributing Corp., 901 Girard St., N. E., Washington 17, D. C.

De-Frost Automatic Defrosters: for domestic refrigerators. No price increase; good deliveries. Detjen Corp., 303 W. 42nd St., New York 18, N. Y.

De-frost-it: automatic nightly defrosting in less than a minute. Easy to install. Paragon Electric Co., Two Rivers, Wis.

1949 Earle Unit Kitchen: guality improved by use of more stainless steel. Prices advanced proportionately less than costs of materials and labor. No units available before Spring, 1949. Earle Unit Kitchen, Forest Hills, N. Y.

Economy Model Home Incinerator: no fuel needed; requires less than two sq ft of space; connects to any flue, six in. or larger. Price increase about 10%; immediate shipment. Majestic Co., Huntington, Ind.

1948 Electric Ranges: six models for small apartments or large houses; three Radiantube surface cooking units, five degrees of heat; electric coils top and bottom of oven; many redesigned, improved, labor saving features. Frigidaire Div., General Motors Corp., Dayton, Ohio.

Onio. "Family Hospitality": bathroom cabinet to hold magazines, ashtrays, newspapers, cigarettes, matches, toilet tissues. Heavy steel construction: "Family Hospitality Jr." identical except absence of magazine compartment. House of Hospitality, Box 254, Dept. A-12, N. Hollywood, Calif.

Flush Wall Clocks: for kitchens, offices; four models. Harley's Clock Shops, Altman Bldg., Kansas City 6, Mo.

Frigidaire Refrigerators: three new lines, nine models, some have 50% more storage space than previous units occupying same space. Cold-Wall Imperial: two-door combination refrigerator, freezer, 10 cu ft storage space. Lowtemperature cabinets include 18 cu ft farm Voice and Vision, Inc., a new Chicago firm, was formed to market radio, phonograph, and television equipment in simply connected units for building into furniture or construction. Left, units installed in shelving; right, office interior and equipment showroom. Equipment is from top-flight manufacturers; quality of reproduction stated to be excellent; company will install, or will supply packaged systems for own installation; consulting service available.

freezer. Frigidaire Div., General Motors Corp., Dayton 1, Ohio.

Garbage Disposal Incinerator: portable, for houses; operates by gas or electricity; can be installed in kitchen, basement, or utility room. Electrocap Mold Co., 115 E. Carson St., Pittsburgh, Pa.

Gas Range: uses natural, manufactured, and L.P. Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

Improved Kitchen Appliances: including home freezer, automatic washer, automatic dryer, electric ironer. Frigidaire Div., General Motors Corp., Dayton 1, Ohio.

Improved Liquid Wall Type Soap Dispenser: new foot pedal pump. Immediate delivery. Huntington Laboratories, Inc., Huntington, Ind.

Kaiser "Timesaver" Sink: dishwasher, disposal unit, sink in one achinet. Kaiser Disposal Unit: single item. Kaiser Fleetwings, Inc., 1924 Broadway, Oakland 12, Calif.

Kitchen Sinks: stainless steel, radically new designs. Available. W. D. O'Morrow Co., 4509 Firestone Blvd., South Gate, Calif.

Kustomized Kitchen Counter Top: for Kitchen-Kraft steel sinks and floor cabinets. Broom and linen cabinets added to line of stainless steel kitchen cabinets. Midwest Mfg. Co., Galesburg, Ill.

Lathurshelf: combination shelf and liquid scap dispenser for commercial, institutional lavatories. 18-8 stainless steel. Large capacity. Gage indicates liquid level. American Dispenser Co., Inc., 215 Fourth Ave., New York 3, N. Y.

Lo-Boy Electric Refrigerator: 341/2" high, designed to form continuous level with sink, stove, other appliances; porcelain interior, automatic light. Net capacity: 3.5 cu ft. Moss Atlas Corp., 244 Herkimer St., Brooklyn, N. Y.

Magic Chef Super-Size Range: one-piece turrettop gas range, enameled interior. Four regular burners, two "giant super-duty"; automatic clock control, bell-ringing timer, and heat regulator. Insulated with Fiberglas. Oven 18" wide, 20" deep, 14" high. American Stove Co., 4301 Perkins Ave., Cleveland, Ohio.

Medicine Cabinets: stainless steel framed mirrors. Other medicine cabinets with indirect fluorescent lighting fixtures. Costs up from 3% to 10% for materials, labor, distribution; shipment from one week to 30 days depending on item. Standard Steel Cabinet Co., 3701 Milwaukee Ave., Chicago, Ill.

Miami-Carey Bathroom Cabinets: with fluorescent light fixtures; wide choice of mirror designs and cabinet styles. Philip Carey Mig. Co., Lockland Station, Cincinnati 15, Ohio.

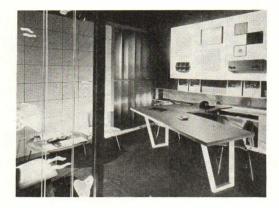
No. 2 Majestic Incinerator: for domestic installation. Majestic Co., Huntington, Ind.

Murphy Cabranette Kitchen No. 39: compact unit providing full kitchen facilities, including refrigerator; all steel, exposed surfaces porcelain. Dwyer Products Corp., Michigan City, Ind.

Park Wing Bathroom Cabinet: two adjustable mirrors, fluorescent lighting changeable to spot illumination for shaving or make-up; bonderized steel, chrome trim. Faries Mfg. Co., Decatur, Ill.

Push-Button Electric Ranges: two deluxe models with button controls that switch directly to desired speed; full-width ovens; five-speed Calrod surface units; non-stain oven vent; other advantages. General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.

SGE Gas Ranges: new line featuring Magic-Mirror oven door, one-piece turret-top; automatic, electric oven; range sizes 36" and 40". Standard Gas Equipment Corp., Hamburg & Bayard, Baltimore 30, Md.



Super Clipper Type K Ventilator: for kitchen installations; adjustable hood picks up smoke and grease; 1/6 hp motor. Trade-Wind Motor Fans, Inc., 5725 S. Main St., Los Angeles 37, Calif.

Tenney Automatic Defrost System: for low temperature evaporators; simplified controls for variations in capacity and speed of defrosting; unnecessary to connect into discharge side of compressor. Tenney Engineering Co., 26 Avenue B, Newark 5, N. J.

entre B, Newark 5, N. J. Thermador Bilt-in Electric Range and Oven: stainless steel; large work areas; maximum storage space; two heating unit arrangements; eye-level no-stoop oven. Improved fan type electric heater and conventional ranges with stainless steel tops. Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.

Tracy Customized Kitchens: including complete line of steel kitchen cabinets with sinks, stainless steel and porcelain. Available for immediate delivery. Tracy Mfg. Co., 3125 Preble Ave., Pittsburgh 12, Pa.

office, drafting equipment

Ammo-Fume Dry Developer: ammonia type dry process reproductions; improved version. High Speed Printer: develops blueprints and direct process prints at speeds up to 12 ft pm. Prices slightly higher; products usually readily available. Peck & Harvey, 5736 N. Western Ave., Chicago 45, Ill.

Boston Everhandy Pencil Sharpener: twin milling cutters; small, neat, low cost. Redesigned pencil sharpeners, improved by added metal strength, streamlined appearance. Price increase; completely available. C. Howard Hunt Pen Co., 7th & State, Camden, N. J.

Circ-L-Scale: 4" instrument of Vinylite, combining compass, protractor, ruler, T-square. Danat Co., 315 W. Van Buren St., Chicago 7, Ill.

Drafting Equipment: four-post drafting table; E-Z Grip Parallel Ruling Straightedge. Improved products: wood base and metal base tables; drawing kit; posture chairs; steel stools; metal tool tray; Parallel Ruling Straightedges. Engineering Mfg. Co., Sheboygan, Wis.

Fixture Indicator No. 101: for 1/4'' scale architectural indications of building fixtures and symbols. Handy Indicator No. 105: 1/4'' scale architectural indications. Both translucent plastic. Same models for 1/8'' scale. Graphic Indicator Co., 1154 S. Western Ave., Los Angeles 6, Calif.

Flex-O-Pic: new cadmium-plated tool for hardto-reach parts; cable in flexible shaft; expanding and retracting fingers work around corners or S-turns, will hold firm to anything. Emco Enterprises, 6750 Stony Island Ave., Chicago 49, Ill.

Infinarc: adjustable curve ruler for draftsmen, architects, etc. Prices reduced; immediate shipment. Cook Specialty Co., Green Lane, Pa.

Modular Scales: for use under tracing paper, grids on which modular design can be done directly; grid lines disappear after blueprint is made. 32" wide paper; 16", 1/4" scales; rolls 10, 20, 50 yds long. New grid paper laminated for permanent protection. No change in price; plenty available. Palmer Mig. Co., 4310 N. Pershing Dr., Arlington, Va.

Porter Masking and Transfer Cement: synthetic cement with extra adhesive strength. Porter Mfg. & Supply Co., 2500 W. Sixth St., Los Angeles 5, Calif.

Rubber Bands: four brilliant colors. Gray rubber bands, pure natural rubber. Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn, N. Y.

(Continued on page 108)



Manufacturers' Literature

Editors' Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is- preuct, or to some other factor which makes them especially valuable.

AIR AND TEMPERATURE CONTROL

1-220. Sunbeam Saginaw (Form 678), 4-p. folder on gas-fired floor furnaces; may be equipped with electric automatic controls. Features, table of capacities, dimensions and data. American Radiator & Standard Sanitary Corp.

1-221. Air Purification and Deodorization by Use of Activated Carbon (Application Data 42), 8-p. manual on control of odors in air conditioning, selection of suitable air purifier or deodorizer, economy in air recovery, installations, computations, etc. American Society of Refrigerating Engineers. (45 cents per copy; make check or money order payable to American Society of Refrigerating Engineers.)

1-222. Are You Planning to Build, Remodel, Improve?, 9-p. illus. booklet on hard coal-burning equipment. Advantages. Anthracite Institute.

1-223. Cold Diffusers, AIA 30-F-2 (CR-241), 16-p. illus. bulletin on cold diffusing units providing forced cold air flow, eliminating dead spots and pockets in the refrigerated space. Dimensions, data. Carrier Corp.

★ 1-224. I-B-R Ratings for Cast Iron Boilers (Aug. 1947), 48-p. booklet giving ratings for low pressure, cast iron heating boilers currently sold by manufacturers. Index. Institute of Boiler & Radiator Manufacturers. (50 cents per copy; make check or money order payable to Institute of Boiler & Radiator Manufacturers.)

1-225. Sarcotherm Weather Control, AIA 30-C-25 (No. 500), 20p. illus. booklet on indoor and outdoor controls for hot water and radiant heating. Typical installation and hook-up diagrams, valve capacities, roughing-in dimensions, list prices and net weights, accessories for control systems, typical specification forms. Sarcotherm Controls, Inc.

1-226. Axiflo (B-3804), 8-p. illus. booklet on elbow inlet box with streamlined fan; low resistance cone housing supports bearings, isolating them from outside air stream. Description. Sturtevant Div., Westinghouse Electric Corp.

CONSTRUCTION

3-35. Bilt-Well Woodwork, AIA 19-E-12, 198-p. catalog listing comprehensive line of cabinets, doors, entrances, windows, louvers, screens, stair parts, etc. Drawings, photos, descriptions, practical applications, sizes, specifications, index. Carr, Adams & Collier Co.

3-36. Specify Calcium Chloride, AIA 3-B-2 (Bul. 47), 4-p. folder on a concrete curer. Description, general information, comparison charts. Calcium Chloride Ass'n.

3-37. About Cork, AIA 23B (SPD-31), 16-p. manual on cork flooring and walls. Physical characteristics, installation data, maintenance, suggested design treatments, specifications, miscellany. David E. Kennedy, Inc.

Two bulletins on tentative specifications for ready-mixed concrete and recommended practice for design of concrete mix, adopted as standard of the American Concrete Institute:

3-38. Tentative Specifications for Ready-Mixed Concrete (C94-47 T). National Ready Mixed Concrete Ass'n.

3-39. ACI Standard Recommended Practice for the Design of Concrete Mixes (ACI-613-44). American Concrete Institute. (50 cents per copy; make check or money order payable to the American Concrete Institute.)

3-40. Mesker Steel (Cat. E), 24-p. catalog on structural steel products, including roof trusses, bar joists, prefabricated hangars and materials; also ornamental metal work and other miscellany. Descriptions, photos, typical installations, index. George L. Mesker Steel Corp.

Brochure and bulletin describing purpose and use of modular facing tile, glazed and unglazed. General, detailed data, drawings, plans, elevations, procedure layouts, specifications, coursing tables, index. Stark Brick Co.:

★ 3-41. New Measure for All Masonry, AIA 3-F-21 (3rd edition).

3-42. Modular Facing Tile.

3-43. For Users of Wood and Forest Products, 8-p. illus. bulletin listing services to architects, engineers, builders, etc., in fields such as timber engineering and designing, technical and consulting services, educational work, research and product development. Photos. Timber Engineering Co.

3-44. Build With Steel, AIA 13-G-2 (Form GB-1), folder with 7 loose sheets describing new method of all-metal frame construction; no drilling or welding necessary. Also roller pipe supports, bar and tubing storage racks, continuous concrete inserts, cable and pipe clamps. Technical, general data, photos, prices. Unistrut Products Co.

DOORS AND WINDOWS

Folder and circular on spiral sash balance and weatherstrip unit making use of spring tension and metal tension to achieve stable sash in runway. Installation instructions, sections, general data. Allmetal Weatherstrip Co.:

4-156. Allmetal Sash Balance & Weatherstrip Unit.

4-157. Easy Up, Easy Down, Weather Out.

4-158. Revolving Doors (Cat. 148), 4-p. folder on revolving doors made of aluminum, bronze, and stainless steel. General details, plans, dimension tables, specifications. General Bronze Corp.

4-159. Architectural Hardware, 9 loose sheets describing variety of door, window, and furniture hardware in many patterns and sizes, contemporary as well as traditional; special hardware designed to specifications for particular requirements. Photos. Charles A. McCarthy.

Pamphlet and loose sheet on aluminum screens for double-hung windows. Description, installation directions, typical detail. Rudiger-Lang Co.:

4-160. The Easy Way to Fly-Proof Your Home Permanently.

4-161. Tension-Tite Screens.

ELECTRICAL EQUIPMENT AND LIGHTING

5-158. FA Trademark, 8-p. illus. booklet briefly describing line of electrical equipment, including switchboards, panelboards, busduct, wire and cable duct, safety switches, load centers, service equipment, etc. Photos. Frank Adam Electric Co.

Catalog, 2 brochures, and single sheet on incandescent and fluorescent lighting equipment. Descriptions, installation data, wattage and beam distribution, diagrams, illustrations. Gotham Lighting Corp.:

5-159. Lighting.

5-160. Gotham (GLC-10)

Materials and Methods

5-161. A Contemporary Design for Liv-

ing (GLC-11)

5-162. First in '48 (GLC-12)

5-163. Presenting the Neo-Ray Louvred Ceilings, AIA 31-F-2 (Cat. 648), illus. folder on louvered ceiling sections; louvers locked in rigid alignment, interchangeable when spot lighting is desired. Computed illumination values, typical installations. Neo-Ray Products, Inc.

5-164. Planet Fluorescent Troffers, 4-p. illus. folder on steel troffer with glass or louver panel, constructed so as to throw light upward as well as downward. Description, suggested installation methods. Planet Products, Inc.

5-165. Contemporary Lighting (KV 204A) (KV 236), two price lists of lighting fixtures. Kurt Versen Co.

INSULATION (THERMAL, ACOUSTIC)

9-106. Armstrong's Roof Insulation (RI-S-48 A), 8-p. illus. bulletin on use and advantages of Temlok and Corkboard roof insulation. Descriptions, specifications, condensation chart, roof resistance table, general data. Other building materials. Armstrong Cork Co.

PLASTICS

16-118. Plexiglas for Store Modernization (15748), 16-p. booklet showing various applications of acrylic plastic, including partitions, showcases, lighting fixtures, facades, signs, transparent drawers for stock, etc. Photos. Rohm & Haas Co.

SANITARY EQUIPMENT, WATER SUPPLY, DRAINAGE

19-300. Goodbye Garbage Can (3214), 8-p. booklet on an automatic waste-disposer for installation under cabinet sink. Description, specifications, general information. Mullins Mfg. Corp.

Three loose sheets describing electric water coolers and a water heater. Dimensions, specifications, features. Norge Div., Borg-Warner Corp.:

19-301. Water Boy Portable Electric Water Cooler (CW-4 48-8)

19-302. Electric Water Cooler (CP-448 -8A)

19-303. Table-Top Electric Water Heaters (ES-648-8 B)

SPECIALIZED EQUIPMENT

19-304. The Sign of Speaker Design, 6-p. illus. folder describing line of general purpose speakers. Descriptions, general, detailed data, specifications, photos. Altec Lansing Corp.

19-305. Autocall, 8-p. illus. booklet covering line of fire-alarm equipment. Descriptions, illustrations, wiring diagrams, recommendations for specific installations in industrial and commercial establishments. Autocall Co.

19-306. Fairchild Copy-Roll, 4-p. pamphlet on portable photo-copying unit with complete processing facilities and self-contained darkroom arranged in carrying case. Description, photos, general information. Copy-Roll Div., Fairchild Aerial Surveys, Inc.

19-307. Ideas in Plaster (Cat. 1), 12-p. illus. catalog on plaster decorations lamps, sconces, wall paneling, mirror frames, etc.—for domestic and commercial interiors. Descriptions, wholesale price list. The House of Peter de Guard.



19-308. School Equipment (Cat. 60, 1948-1949), 35-p. illus. catalog listing entire line of school

equipment: furniture, filing and storage cabinets, playground equipment, blackboards, bulletin boards, flame-proof window shades, other items. Descriptions, photos, prices, index. E. W. A. Rowles Co.

19-309. Standard Steel Equipment Co., Inc., folder on all-steel commercial and industrial storage equipment: wardrobe cabinets, lockers, shelving, filing cabinets, etc. General data, photos. Standard Steel Equipment Co., Inc.

Two loose sheet catalogs showing wide variety of hand forged and wrought metal ornamental products: gates, railing, lanterns, andirons, fire screens, etc.; also memorial tablets, statues, and plaques. Photos. Ralph Watkins Metalcrafts:

19-310. Hand Forged and Wrought Metals.

19-311. Ralph Watkins Metalcrafts.

SURFACING MATERIALS

19-312. Floors of the Future, folder describing line of rubber tile in marbleized patterns. Descriptions, colored photos. American Tile & Rubber Co.

19-313. Architectural Metal Work (Cat. 248), 4-p. illus. booklet showing metal work installations, such as doors, grilles,

entrances, stairways, commemorative tablets, etc. Photos. General Bronze Corp.

Three 4-p. folders on Colorundum, a powdered nonslip aggregate used to color and darken cement or concrete floors and sidewalks. Description, typical installations, specifications, photos. A. C. Horn Co., Inc.:

19-314. Colorundum (461002310).

19-315. Horn AE Dispersed Black.

19-316. Colored Sidewalks.

19-317. Murphy Color-Scheme Paints, 22-p. catalog on complete Murphy line—paints, varnishes, sealers, etc. Includes description new paint buying and specifying method: pigments in accurately sized tubes plus ready-mixed base white, with color chips showing tint obtained; method devised to cut costs and provide control over color. Index. Murphy Paint Div., Interchemical Corp.

19-318. Alumination, 22-p. pamphlet on use of aluminum in building construction. Answers questions on detailed designs, structural methods, service conditions, etc. Comparative gage numbers and weights, selected aluminum alloys for building applications. Permanente Products Co.

TRAFFIC EQUIPMENT

20-237. General Elevator Company, Incorporated, 12-p. bulletin on elevator machines, controllers, and variable voltage selector, which includes all floor relays, slow down and timing relays, and all signal actuation. Descriptions, approximate duty range, maximum motor rating, class of service; photos. General Elevator Co., Inc.

(To obtain literature coupon must be used by 3/1/49)

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5-159	5-160	5-161	5-162	5-163	5-164	5-165	9-106
3-44	4-156	4-157	4-158	4-159	4-160	4-161	5-158
3-36	3-37	3-38	3-39	3-40	3-41	3-42	3-43
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Terrace Plaza Hotel, Cincinnati, Ohio, in which some 135,000 pounds of Revere Copper Water Tube were installed.

IN BUILDINGS LARGE OR SMALL REVERE PRODUCTS INSURE QUALITY



TROUBLE always costs more than Revere Copper. That's why—in every type of building—it pays to let *lasting* Revere Copper guard those vital points where water will cause other materials to rust, rot or corrode.

ROOFING, GUTTERS, FLASHING. Copper is the most enduring of all the commonly used sheet metals when exposed to the elements. In addition, the Revere Research Laboratories have developed engineered specifications that help you combine quality and economy in every type of sheet metal construction. This data is in the files of most of the leading architectural offices.

PIPING. Used as piping for heating systems, water supply and waste lines, Revere Copper Water Tube provides a lifetime of trouble-free service. The interiors of this tube do not become clogged by corrosion; and remaining permanently smooth, they reduce frictional resistance to a minimum. In addition, because Revere Copper Water Tube bends readily, and joints are made quickly with solder fittings, this tube is easier to install. Copper Flashing, Water Tube and Downspouts were used in this Revere Quality House at Parma Heights (Cleveland) Ohio.

ORNAMENTAL AND STRUCTURAL METALS. You can achieve unusual decorative effects—combined with sound, lasting construction—through the use of Revere panel sheets and extruded shapes. Revere panel sheets are made in architectural bronze, nickel silver and copper; extruded shapes in architectural bronze, nickel silver and aluminum.

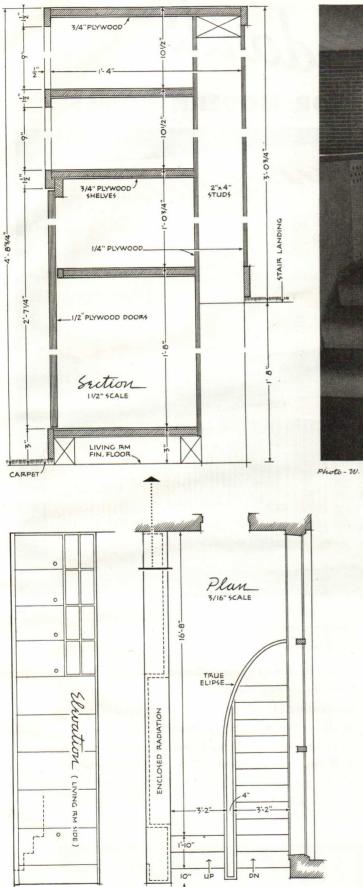
The products above and other Revere products of copper, brass and bronze are available from leading distributors throughout the United States. A Revere Technical Advisor will always be glad to consult with you, without obligation.



Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities, Distributors Everywhere.

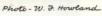
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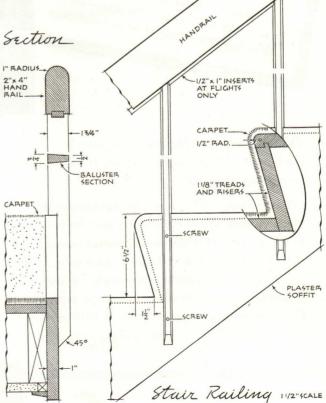




PAINTER RESIDENCE Kittanning, Pennsylvania







CALEB HORNBOSTEL Architect



ALWAYS specify *Honeywell* to provide the homes of your clients with the latest features in heating comfort.

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For all forced air installations, the handsome new Honeywell Register puts an end to discomforting blasts of air. Instead, an even blanket of air is diffused to every corner of the room. Cold spots are eliminated—so are unsightly wall and ceiling streaks. And installation costs are drastically reduced. Minneapolis-Honeywell, Minneapolis 8, Minnesota . . . In Canada: Leaside, Toronto 17, Ontario.

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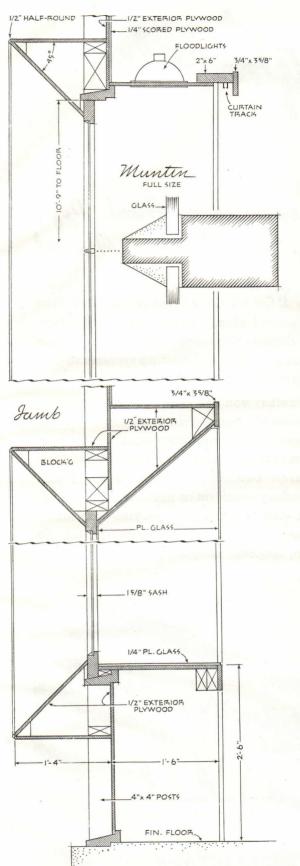
Remember. month after month, powerful national advertising keeps right on building overwhelming acceptance for Honeywell

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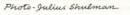


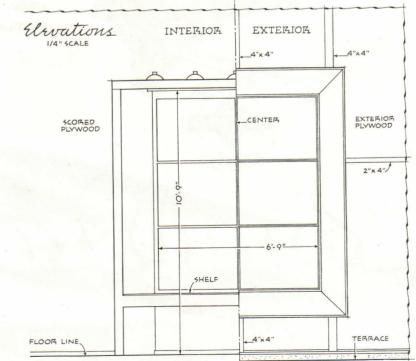




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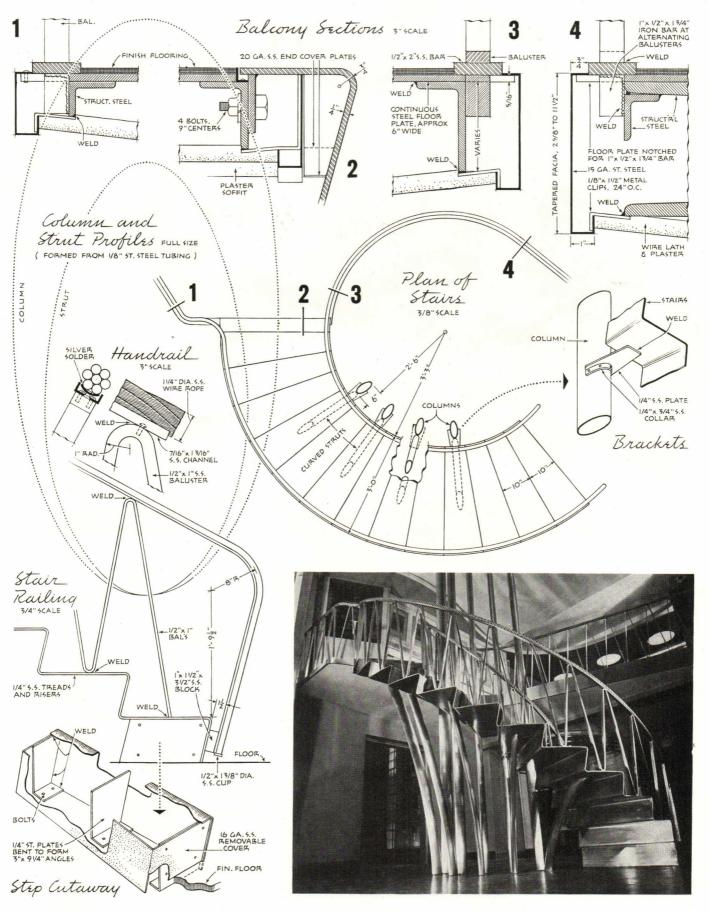
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AMERICAN IRON AND STEEL INSTITUTE New York, New York KAHN & JACOBS Architects

Brothers under

This is the story of two brothers.

日日

It has its beginning in a Northern province of Czechoslovakia. Two small boys were sprawled on the banks of the broad Elbe River. This afternoon was not unlike many others. For often they sat by the river and talked, sometimes until sundown.

"I'm going to be rich when I grow up," Karol would vow. "I'll own much land . . . and everyone will point to me and say, "There is Karol Mahacek. He is the richest man in all Czechoslovakia.""

Then Jan would watch for that familiar look of determination he had seen so many times on his brother's face. He would see his dark eyes growing larger and brighter, shining already with the happiness the future promised. And he would nod at his brother. Yes, Jan thought, Karol is smart. Yes, Karol will be rich some day.

But Jan, too, had dreams . . . dreams he dare not even tell. For Karol would surely think them strange. So he said nothing. He just sat there and looked out into the horizon. Somewhere beyond the Elbe there was an ocean . . . and beyond that? Well, some day he would know.

Old Eduard Mahacek considered his sons what the future held for them. He even prophesied it many times.

"Jan is a dreamer. He is the one with imagination, but he is not as ambitious as Karol."

Yes, even at an early age, Karol was marked for success.

As for Jan, well, maybe it was an accident that he happened to be on the village dock when a river boat stopped for cargo. Maybe it was fate when on an impulse he took a job on the boat and found his way to the sea, to a different way of life—for Jan came to America.

It wasn't easy for him, at first, this new world. He used to write home about the strange American ways. Yet, there was always something wonderful to tell. He was making progress. He had a good job—good pay.

But Karol's letters were different—filled with uncertainty. He couldn't save to buy the land he promised himself he'd one day own.

What does the story of these two brothers mean—and why are their lives so different today? For Jan Mahacek faces the future with confidence—owns his own home—a car—his family is well fed, well clothed.

While Karol is a man without hope—his family ill clothed, ill fed—no home of their own.

The answer is simple, for both are symbols of America and Europe. Actually, there is no difference in the people here and there. We are all brothers under the skin. Like Jan and Karol, we are Czechs, or we're English, French, German, Spanish, Finnish, Norwegian, Polish, Italian . . . just as people are there. We are the same people, with the same blood, the same native ability. But there is one essential difference...



Reviews

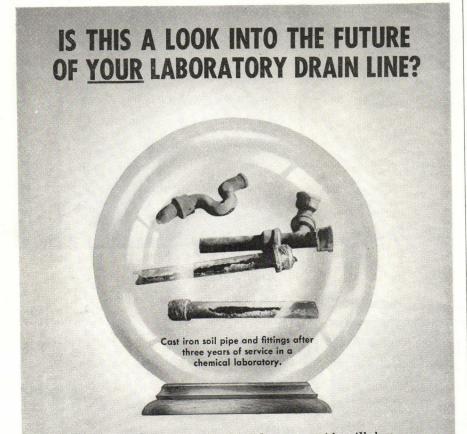
BOOKS

TAKING ART FOR GRANTED

Made In America. John A. Kouwenhoven. Doubleday & Co., 14 W. 49th St., New York 20, N. Y., 1948. 304 pp., illus. \$5.00

If you comfortably assume that all the Art of this country is safely caged in

museums and galleries for inspection by those who may wish to "improve themselves," this is a book to cause you some uneasiness. The objects, machines, and buildings in everyday use by Americans are given a friendly appraisal by Kouwenhoven, for their artistic worth and the ideas of their self-reliant makers. Imported works of art and those among



Here's a good example of what laboratory acids will do to an ordinary drain line.

You can avoid costly replacements by specifying Duriron for the laboratory drain lines in your new building. Duriron corrosion-proof pipe provides a permanent, non-leak installation for practically any corrosive.

Duriron can be hidden in walls or floor and forgotten. It will ordinarily serve as long as the building stands.

The corrosion-resistance of Duriron pipe is uniform through its entire wall thickness-there's no lining to chip, spall or crack. It is abrasion resistant. It will not warp or sag from heat.

For complete details write for Bulletin #703.

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us who have adopted, more self-consciously, the culture of Western Europe are separately described. He assumes that "the elements of creative vitality in American civilization matter a great deal, not only to Americans but to other peoples as well" and cannot be understood unless the distinctively American stamp is recognized.

Traits that the author ascribes to American designers, evident from earliest days of colonial manufacture but more forcibly in the 19th century, include "functional simplicity," "mechanical practicability," "ingenuity and boldness," and the skills and knowledge "to create patterns of clean, organic, and indigenous beauty out of the crude materials of the technological environ-He quotes early American ment." writers and philosophers who perceived, more or less clearly, the importance and esthetic impact of American manufactures. Then Kouwenhoven traces the similar reflection of American forthright ideas in painting and architecture. Realism and "what the artist knows is right" emerge in such a critical evaluation.

Further perception of the author's analysis of the contrast between American and European design intents is gained through perusal of such accounts of activities (approaching the weird) in Victorian ateliers and studios as those contained in Siegfried Giedion's *Mechanization Takes Command* (reviewed in July 1948 P/A), T. H. Robsjohn-Gibbings' Mona Lisa's Mustache (reviewed in December 1947 P/A), or Hugh Casson's just-published Introduction to Victorian Architecture. The implication is strong that Kouwenhoven is exactly right.

C.M.

IMPROVING ENVIRONMENT

Public Health Engineering, Volume I Earle B. Phelps and collaborating authors. John Wiley and Sons, Inc., 440 Fourth Ave., New York 16, N. Y., 1948. 655 pp., illus. \$7.50

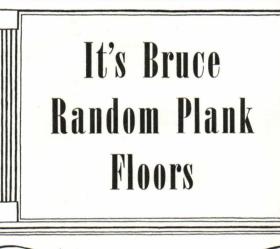
This is a "textbook of the principles of While it environmental sanitation." might seem like a heavy tome for a busy designer to read, it is the factual basis for much of the progress in architecture that concerns itself with a truly improved environment. Two divisions deal with The Air Content and The Water Content. The subject matter of the various chapters ranges from the effect of weather and climate on housing to rural sanitation. The approach is broad enough to have many implications to the architect who really wants to know what scientific advances have been made in this field.

T.H.C.

to advantage in Residences



For Colonial Charm ... 1949 Style



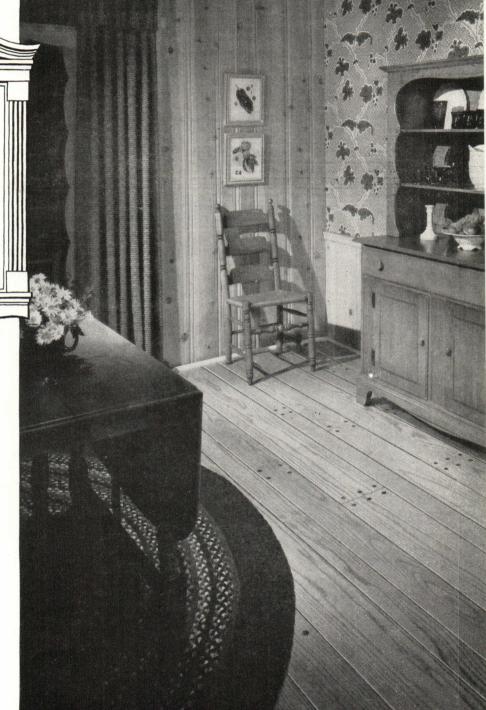
When you seek to create rooms that are strikingly different in style and beauty, specify plank floors in random widths. Bruce Solid Oak Planks retain all the authentic charm and casual effect of historic plank flooring. Yet they are thoroughly modern in construction and are in keeping with present-day refinements in the home.

Ideally suited to the many variations of Colonial architecture, and to the rambling Ranch types, Bruce Plank Floors are decoratively and historically correct for all traditional styles.

The three distinctive grades of Bruce Solid Oak Planks are Mansion, Fireside, Tavern. They possess individual grade characteristics and permit a choice to achieve the effect desired—whether it be formal or informal.

Consult your Sweet's Catalog File for more information on Bruce Plank Floors. Or write E. L. Bruce Co., Memphis, Tenn.

BRUCE ALSO MAKES Strip Flooring, Block Flooring, Hardwood Moulding and Trim, Pine and Hardwood Lumber, Furniture Parts, Ceda'line Closet Lining, Everbond X Mastic, Terminix, Floor Finish and Maintenance Products.





It's the Law

This is the third of the new monthly columns by Bernard Tomson, New York lawyer who has made a special study of the law as it affects architecture, engineering, and building construction. He has previously contributed articles to P/A in the "Office Practice" series and started his regular column in our November issue. Recently architects have been deluged by letters, brochures, and policies of companies offering professional liability insurance. An investigation reveals such a disparity in premium rates as to indicate that a disparity also exists in the coverage of the policies. It is, of course, important for an architect interested in purchasing professional lia-

> To lengthen backset the Schlage way, just add this connecting link.

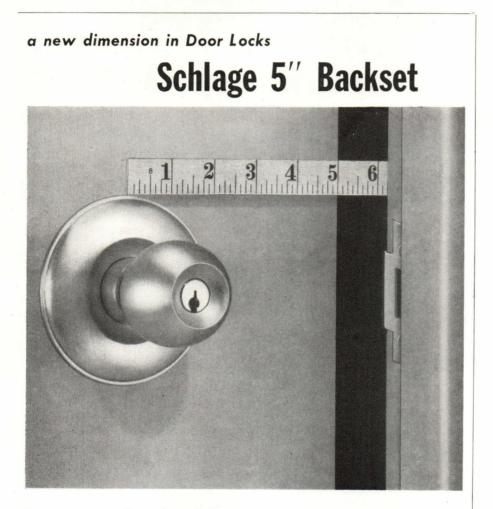
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Prevents barked knuckles

Schlage's 5" backset gives ample clearance between the knob and the door stop. It also provides a new freedom of design for architects.



THE

OF

By BERNARD TOMSON

bility insurance to read the policy itself in order to determine what coverage is actually obtained; for, even careful reading of the literature accompanying the policy may result in a misconception of the protection afforded. We have selected two typical policies for discussion which are designed to protect the architect against his "errors and omissions."

It should be pointed out that "errors and omissions" that may result in liability to the architect may be divided into three arbitrary classifications:*

- Those resulting in physical injuries to persons or property (cracked walls, collapsed roofs, etc.)
 Those resulting in pecuniary loss to
- 2. Those resulting in pecuniary loss to the owner other than that arising out of physical damage (total or partial lack of utility or esthetics of the structure; financial loss to the client as a result of negligent underestimates of cost, etc.)
- 3. Damages to the client as a result of dishonest, fraudulent, criminal, or malicious acts, etc.

The last category is apparently exempted from coverage in *both* policies. Since a substantial number of the claims made would fall into the second as well as the first category, it is incumbent upon the architect to determine whether it is important for him to be covered in both categories. It should be kept in mind, of course, that coverage is directly related to the cost of insurance.

POLICY A

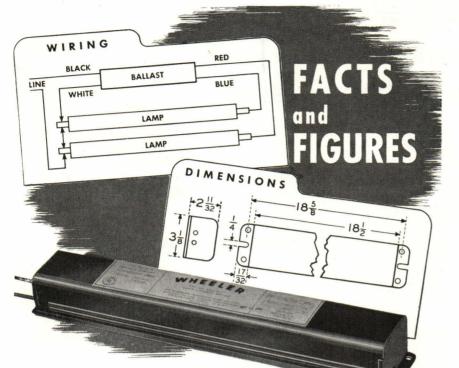
The lowest-cost policy by its terms covers "liability imposed upon him (the architect) by law for damages . . . because of bodily injury . . . sustained by any person or persons; and because of injury to or destruction of property, including the loss of use thereof, in direct consequence of any negligent act, error, or omission of the insured, in performance of professional services for others in the insured's profession as architect." Policy A apparently would furnish insurance only in the first category outlined above.

Reference to the brochure accompanying this policy, however, could very easily lead to an erroneous conclusion as to coverage. (We will not discuss at this time the interesting question as to whether the brochure, by its language, or statements by the broker in any way enlarges the coverage set forth in the policy itself.) If the apparent limitation of the language of the policy is kept in mind, it is difficult to understand statements in the brochure which read:

"The Broadest Professional Liability (Continued on page 94)

* A more detailed discussion of the architect's and engineer's liability for negligence will appear in a later column.

ORIGINATORS



WHEELER BALLASTS FOR SLIMLINE

Next time you work a slimline lighting treatment into your plans for a commercial, educational or industrial installation, check to be sure that the fixtures are equipped with Wheeler ballasts. You'll be doing your client an additional service by specifying ballasts that will give him maximum performance and economy. You'll be doing yourself a service by preventing future complaints of faulty fixture operation due to inferior components. Wheeler ballasts can play an important part in the success of your plans and recommendations.

We believe a fluorescent ballast should — besides operating a lamp — give the user the assurance that he is incorporating into his product the best ballast obtainable. He should feel that he's getting quality materials assembled by experts and tested to rigid specifications before they go into his fixtures.

Wheeler ballasts for slimline lamps meet the most exacting requirements. They're designed to give added lamp life, with a minimum of operating heat and noise. They're rated conservatively, built to uniform standards of dimension and carry the Wheeler guarantee without reservation. All Wheeler ballasts for slimline fluorescent lamps are approved by Underwriters' Laboratories, Inc.

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DIVISION OF THE SPERRY CORPORATION 1601 EAST AURORA ST. WATERBURY 91, CONN. MAGNET WIRE-COILS-COMMUNICATIONS EQUIPMENT

MATERIALS FOR '49

OPENINGS

(Continued from page 98)

walls. Types, sizes for every window. United Steel Fabricators, Inc., Wooster, Ohio.

Picture Window Frame: extruded aluminum alloy, for all standard sizes of double insulating glass panes. Shipped in lightweight knockeddown kit. Hunter Products, Inc., Bristol, Pa.

aown kit. nunter Froquets, Inc., Bristol, Pa. Prefabricated Awning Window: for no-draft ventilation. Movable sash opens by worm and gear mechanism. Interchangeable screen and storm sash installed indoors. Fixed and movable sash may be combined. Unit complete with hardware, glass, and screen. Weather stripping included on jamb sections; available for horizontal joints. Gate City Sash & Door Co., Fort Lauderdale, Fla.

Stainless Steel Window: for use with glass block tubular construction, for rigidity; double weathering on head, jamb, sill. Optional equipment: plastic screen in stainless steel frame. No price increase; available. Modern Electric Laboratory, 6131-33 S. Wentworth Ave., Chicago 21, 111.

Steel Window: measuring 64½" x 63-5/16" overall, featuring twin vents in center panel; vertical mullion bars available for group combinations. Kewanee Mfg. Co., Kewanee, Ill.

AIR AND TEMPERATURE CONTROL (Continued from page 67)

Model 401 Radiant Panel Heater: gas-fired; compact vertical design; fits into wall; three sizes; non-thermal pilot for manual operation or Bryant Model "H" pilot for automatic operation. Bryant Heater Co., 17825 St. Claire Ave., Cleveland, Ohio.

Oil-burning Floor Furnace: automatic; motor and blower attachment furnish steady, controlled draft; height 48"; approximate output 52,500 Btu. J. L. Gillen Co., 204 E. High St., Dowagiac, Mich.

Oil-burning Floor Furnace: with auxiliary cold air return duct system, welded steel construction, baked enamel finish; 50,000 Btu at 30 cc. per min air flow. Oran Co., 2232 S. Third St., Columbus, Ohio.

Oil-burning Space Heaters: also new oil-burning trailer heaters. International Oil Burner Co., 3800 Park Ave., St. Louis, Mo.

Oil Console Heater: welded aluminum alloy finished in baked enamel; manual oil control valve maintains constant even temperature. Rheem Mfg. Co., 570 Lexington Ave., New York, N. Y.

Space Heaters: two new models of oil burners in Sheraton cabinets; require little floor space. Duo-Therm Div., Motor Wheel Corp., Lansing 3, Mich.

Suspended Heater: completely enclosed; 100,000 Btu only. "Shallo" Floor and Dual Furnaces: 25" depth. Vented and Non-Vented Thermolater: console heaters; four capacities, from 27,500 to 45,000 Btu. Prices: same; though materials, labor, distribution costs increased. Naco Mfg. Co., 7631 Roseberry Ave., Huntington Park, Calif.

Temco Floor Furnace: 251/2" overall depth; gasfired; new shallow design eliminates cost of excavation; porcelain enamel heat chamber. Tennessee Enamel Mfg. Co., Nashville 9, Tenn.

Vented Heater: wall-installed for heating on both sides of partition; available with inputs of 37,000 and 45,000 Btu for natural, manufactured, or LP gas. Holly Mig. Co., 875 S. Arroyo Parkway, Pasadena 2, Calif.

Wall-Type Auxiliary Electric Heater: model B-1.25A, flush-to-wall unit. Rustproof grille of satin-finished aluminum. Measures 10%/" x 20". Capacity 1250w, operates AC or DC on 115v. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

Warm Air Space Heater: coal-fired, convertible gas or oil; stainless steel combustion chamber; for factories, foundries, garages, other industrial, commercial uses. Dravo Corp., Fifth & Liberty Aves., Pittsburgh 22, Pa.

Warmolator 20: wall type circulating heater to fit between 2 x 4 studs on 16" centers without furring or special framing; for apartments, hotel rooms, offices, guest cottages. Williams Radiator Co., 1821 Flower St., Glendale 1, Calif.

Suspended Oil-fired Furnace: 100,000 Btu. Improved model, 200,000 Btu. Gilbert & Barker Míg. Co., West Springfield, Mass.

(Continued on page 102)

Radiant Heating Systems Can Lose 60% Heat—and More thru Improper Insulation

RADIANT HEATING VIA CEILINGS

Adiant heating from above is intended to warm the 90% emissive ceiling below, which in turn radiates heat to the room. But without proper controls, like Infra, less than 50% of the heat from the panel ever reaches the ceiling since heat flows by radiation and conduction in every direction. Furthermore, when the area above the panel is colder than the ceiling below, then, since heat flows to cold in radiation and conduction, only a fraction of panel heat reaches the ceiling. ALL convected heat, since it flows up, is also lost.

Putting Infra Insulation above the panel reflects 97% of the upward flow of radiant heat down again to heat the ceiling. Upward flowing conducted and convected heat are blocked. No more than 3% of ALL heat reaching the surface of Infra away from the heat source is emitted.

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Where radiant heating operates upward from the floor, heat losses by conduction through solids are great. Heat flows by conduction in every direction. It also follows the law that heat flows to cold.

Naturally, there is a greater flow of heat to the colder, greater mass of earth below than to the floor above. Properly installed with air spaces under the heating panel, Infra saves most of the heat otherwise dissipated.

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Architects and engineers use it as a handbook, and colleges as a text, on Heat Transfer, Condensation, Vapor, Mold, etc. Contains master chart of k, C, R, and U factors of all insulations, of all thick-

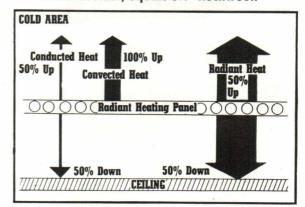
nesses, densities, weights, etc.

INFRA Accordion Aluminum Insulation controls heat flow and saves heat.

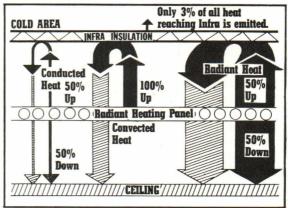
Infra thermal factors stamped on every carton

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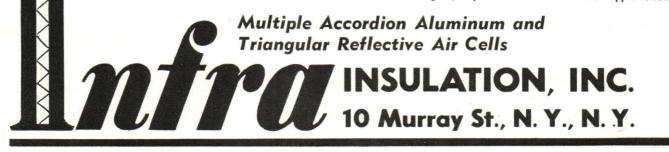
C .052 Heat Flow Down, equals 6" Rockwool. C .083 Heat Flow Up, equals 3.97" Rockwool. C .10 Lateral Heat, equals 3½" Rockwool.



HEAT FLOW IN AIR SPACES WITH IMPROPER INSULATION By Conduction, 5% to 7%; Convection, 15% to 28%; Radiation, 65% to 85%.

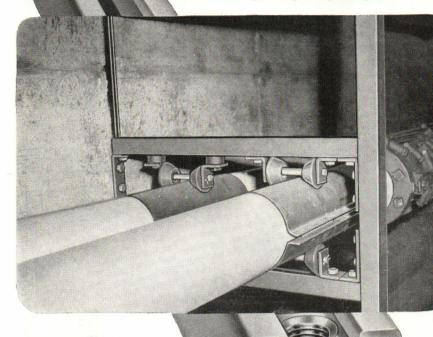


HEAT FLOW WITH INFRA INSULATION CONTROL Of ALL heat, radiant, conducted and convected, wastefully flowing UP, only 3% is emitted from Infra's upper surface.



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MATERIALS FOR '49

OPENINGS

(Continued from page 54)

Alwintite Windows: number of stock sizes increased from 12 to 25. Added 4/4 windows to line. Auxiliary trim or siding stop for brick-in or build-in of windows during construction progress; eliminates exterior wood casing, subsill. Aluminum Window Corp., Stewart Ave., Garden City, N. Y.

Basement Window: completely redesigned, heavy duty steel; "bonderizing" improves shop finish on all products. Crittall-Federal, Inc., P. O. Box 60, Waukesha, Wis.

Double-Hung Sash: for double-insulating glass windows; adaptable to conventional frames; volume production and quick installation. Black Millwork & Lumber Co., Inc., Midland Park, N. J.

Formed Steel Surrounds: for residential casements or where wider and molded frame appearance is desired. 18-gage electrogalvanized steel, bonderized, baked-on primer. Truscon Steel Co., Youngstown 1, Ohio.

Gliding Window Unit: improved, with plastic sill track; heavier jambs, narrower over-all jamb width for greater installation flexibility; stock sizes further standardized. Small price increase. Andersen Corp., Bayport, Minn.

Inside Casing: for residence casements. Outside metal trim. Improved inside metal storm windows for residence casements. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.

Inside Storm Window: open-in sill ventilator, steel frame, for Fenestra steel casement windows and screens, as complete window unit. Detroit Steel Products Co., 3209 Griffin St., Detroit 11, Mich.

Lok'd Bar Sash: with ventilators for use with standard interior screening in industrial plants; may be operated manually or electrically. Hope's Windows, Inc., Jamestown, N. Y.

Ludwig Snap Fastener: permits quick change from screen to storm window; spring steel, cadmium plated; attached with single screw. Ludwig Mfg. Co., Inc., 2401 Durant Ave., Racine, Wis.

Super-Vent Awning Type Windows: single handle operates all vents which open to 80°; both sides of vents cleaned from inside. Super-Vent Co., 303 W. Monroe St., Chicago 6, Ill.

Metal Window Well: heavy galvanized copper steel with flanges for attachment to masonry

(Continued on page 100)

NOTICES

SCHOLARSHIP

Applications for the 1949 LEBRUN TRA-VELING SCHOLARSHIP, which provides \$2800 to be used for six months' travel and study of architecture outside the U. S., are being accepted until January 21. Details may be obtained from the LeBrun Scholarship Committee, N. Y. Chapter, A. I. A., 115 E. 40 St., N. Y. 16, N. Y.

CASH PRIZES

Award Committees of the Architectural League of New York have announced two \$200 prizes to be awarded this year. The BIRCH BURDETTE LONG MEMORIAL PRIZE is offered for architectural renderings, by renderers under 40, that "best bring out the beauty of modern design." The HENRY O. AVERY PRIZE is offered for the best piece of sculpture submitted. Results of both competitions will be exhibited at the League, February 11-23.



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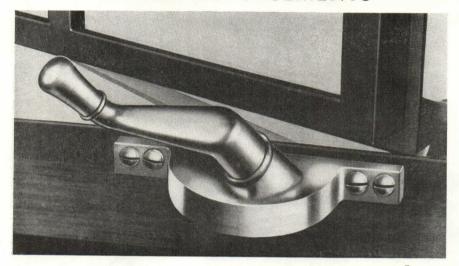


Write to us for our Catalogue No. 146 or consult Sweet's Architectural File for further details.

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- working parts
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Cut-away view shows the casehardened steel worm, integral with operating arm, fully engaged at all times with the accurately-machined internalgear teeth. This exclusive feature, pioneered by Getty, is responsible for the strength and dependability of these operators.

> WRITE FOR CATALOG E

Exclusive internal gear construction Used without screens, or with wood, metal or roll screens

Made of solid Bronze or Zinc diecast alloy (Zamak)

Available in all standard finishes



Getty manufactures operators for all types of casements for both metal and wood. Also a complete line of high-quality accessory hardware for casement windows.

Over Twenty-five Years Service to the Building Industry



It's the Law

(Continued from page 94)

POLICY B

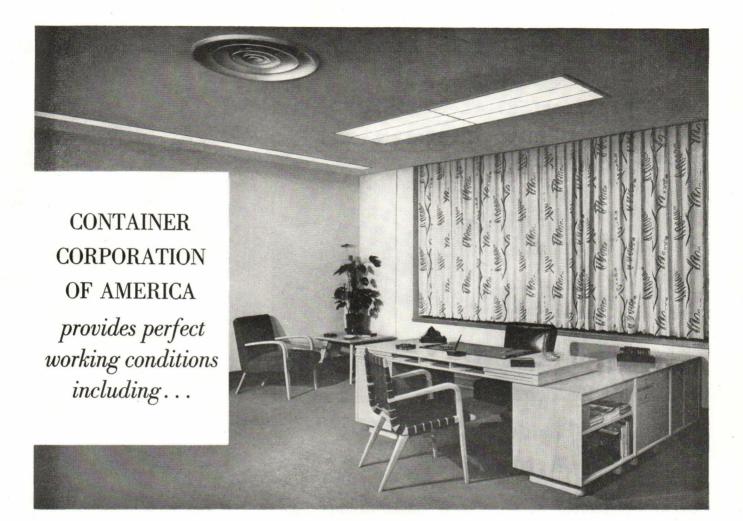
This policy agrees to indemnify the insured against any claim which may be made "by reason of any negligent act, error, or omission in or about the conduct of any business conducted by or on behalf of the firm in their professional capacity." This language, of course, is much broader in scope than the language of Policy A. There is no limitation of liability to errors or omissions which result in injury to person or property.

This language is broad enough to include the second as well as the first category heretofore discussed. However. by the terms of Policy B fraud, libel. slander, and other torts of this nature are specifically excluded.

Policy B was not drawn to be specifically applicable to architects. It is a policy that is used by lawyers, doctors, and other professional men. Thus, the language contained therein affords a greater coverage and protection to the architect than a policy such as Policy A, which was specifically designed for architectural liability. However, once again, it must be emphasized that Policy A is a low-cost policy presented as part of a planned group program. Policy B, on the other hand, calls for a much greater premium for its wider coverage.

There are, however, even under Policy B, certain provisions which weaken the protection of the architect. There is, for example, a deductible clause of \$250.00 whereunder the insured bears the risk of any claim which does not exceed \$250.00. Policy B may be cancelled by either party on giving ten days' notice of his intention to do so. Further, the company will be liable only for claims which are made against the insured during the subsistance of the policy. Under the terms of this policy, therefore, the insured architect might be prejudiced by the failure of the injured party to make a prompt claim.

It is important to the practicing architect in considering the purchase of professional liability insurance that he know exactly what he is buying and the extent of his protection. There should be no reliance upon the literature which is distributed to sell the various types of policies offered, although such literature may serve to emphasize the need and desirability of professional liability insurance. The only safe and sensible procedure is to study the policy itself to determine its exact coverage. It may well be that more than one type of policy may have to be purchased in order to afford the architect the extent of protection desired.



ANEMOSTAT Draftless Air Diffusers

To insure draftless distribution of conditioned air in their Chicago offices, Container Corporation of America specified Anemostat Air Diffusers.

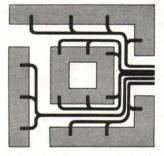
Because of their aspiration effect, Anemostats eliminate stale air pockets, equalize temperature and humidity. These devices permit a high number of air changes per hour with complete freedom from drafts. These comfortable working conditions mean fewer colds, less absenteeism, greater personnel efficiency.

By using Anemostat Air Diffusers in heating, ventilating or air conditioning systems, you can give your clients draftless comfort ...a healthful, more profitable environment. Use Anemostats to correct faulty existing systems. Be sure to specify Anemostats for new installations. Write today for full information.



DRAFTLESS Aspirating AIR DIFFUSERS ANEMOSTAT CORPORATION OF AMERICA 10 EAST 39th STREET, NEW YORK 16, N. Y. REPRESENTATIVES IN PRINCIPAL CITIES

"No Air Conditioning System is Better Than Its Air Distribution"



Schematic layout of duct work in the Chicago offices of Container Corporation of America MORTON L. PEREIRA & ASSOCIATES — Architects & Engineers



The Anemostat Air Diffuser is distinguished by the exclusive feature of aspiration...drawing room air into the device where it is mixed, within the unit, with the supply air before it is discharged in a multiplicity of planes.

It's the Law

(Continued from page 92)

Form Obtainable."

"The Insurance Company agrees to pay on behalf of any insured architect all sums which he might be obliged to pay by law for loss to persons or property which is a consequence of negligence in performance of professional service."

"An architect who substantially underestimates, through lack of skill and care, the cost of a proposed structure, which representation is relied upon by the employer in entering in the contract and proceeding with construction, may not only forfeit his right to compensation, but may become liable to his employer for damages."

Policy A is not the "broadest form" obtainable, it does not agree to pay all sums, and it does not cover underestimates of cost.

In the same brochure, under the heading "Typical Court Cases Relating to Liability of Architects" six court cases



Here's just about the most complete section on roof drains anywhere pictures, drawings, dimensions, weights and prices—plus—how many, what size and where to put roof leaders! Tables based on a scientific U.S. rainfall map tell just what area can be drained by each size leader.

In fact, the whole Wade Catalog W-55 is designed to solve as many problems as possible, about floor or roof or pool drains, backwater valves, grease interceptors, water hammer or sump pumps! If you haven't a copy, drop us a line today.



Makers of Fine Drains and Plumbing Specialties Since 1865 Methods 81 NORTH STATE STREET, ELGIN, ILLINOIS are referred to. But the language of the policy seems to cover only three of the six cases as digested. These cases involve the collapse of a roof, a cracked wall and the death of a workman resulting from the collapse of the building. The other three cases, which are used to illustrate the possible and potential liability of an architect, as digested, are apparently not covered by the terms of Policy A concerning which the brochure was written. The purpose, therefore, of including them in the brochure is inexplicable.

One of the cases referred to in this brochure refers to the liability of an architect for fraud. By the express terms of Policy A, however, the company is not liable for fraud. In a second case referred to in the brochure an architect had negligently supervised the construction of a building resulting in a departure from the plans agreed upon. There was a variation in roof projection and construction in the front of the building as compared with the other three sides. This is regarded as an esthetic loss to the owner of the building and would not be covered by Policy A if it offers the architect protection only from injuries to person or property. The digest of a third case referred to in the brochure, which would not seem to be covered by the terms of Policy A, relates the situation in which an architect was held liable for failure to exercise reasonable taste. Once again, this is not an injury to person or property for which the policy would seem to protect the architect. It can readily be seen, therefore, that the statements and cases referred to in the brochure in question which do not limit their frame of reference to those situations where there is actual injury (as distinguished from damage) may cause a misconception as to the extent of coverage of Policy A.

It is also of interest to note under Policy A that the policy only applies to negligent acts, errors or omissions which occur during the period of the policy and that claims for damage must be instituted within five years after the end of such period. Also this policy may be cancelled by either party within five days after written notice.

Policy A also provides that if the insured has other insurance against a loss covered by this policy, the company shall only be liable for a proportionate share of such loss.

An exchange of correspondence between the insurance company writing the policy, the broker offering it, and the writer will serve either to reconcile the apparent discrepancies between the brochure and the policy itself or to indicate a very necessary change in the statements in the brochure or the language of the policy. After the conclusion of such correspondence, a report will be made in this column.

IT'S HERE the new



3-IN-1 Insulated Roof Plank

Combines 1. ROOF DECK 2. THERMAL INSULATION 3. ACOUSTICAL CEILING

in a single fireproof material at one installation cost

SAVES UP TO 20% over equivalent flat roof construction!

The Durisol Insulated Roof Plank combines in one unit all the components needed for the roof deck: structural strength, thermal insulation, and cement surface ... plus an unusually efficient acoustical ceiling. Construction costs are thereby reduced to a minimum.

The Durisol insulated roof deck is complete ready for application of the built-up roofing-after two simple, highspeed operations: attaching planks to the framework, and caulking the joints. And furthermore the underside of the planks becomes the finished Durisol acoustical ceiling.

METAL WEDGE CLIP

The Durisol Insulated Roof Plank is made in 31/4" and 41/4" thicknesses (including 1/4" cement coating) 16" width with sides tongue-and-grooved, and in lengths to span up to 8'. It is incombustible and supports a live load of 40 pounds per square foot with a high safety factor.

WHAT IS DURISOL?

Durisol is made from chemically mineralized wood shavings combined with Portland cement. In addition to the Insulated Roof Plank, Durisol is also moulded into wall slabs, sheathing, hollow blocks, soffit blocks, and other forms to meet a wide range of construction needs.

Durisol is mould-proof, rot-proof, termite-proof, verminproof, and unaffected by moisture. Its high thermal insulating and sound absorbing properties combined with its strength, light weight, and incombustibility make Durisol an outstanding material . . . Durisol opens up unusual possibilities for increasing construction efficiency and reducing construction costs.

Write for full facts today! Illustrated catalog folder and special bulletin on the Durisol Insulated Roof Plank will be sent by return mail.



Durisol



• Reason number one-and a big one, too-is PROVED POPULARITY! Crane is the name your clients prefer . . . as proved time and again in nation-wide surveys.

Reason number two is QUALITY . . . as reflected in the lasting brilliance, the smart styling and the extreme dependability of every Crane fixture. And don't overlook such Crane extras as fingertip Dial-ese controls-in all Crane bathrooms, . kitchens and laundries.

Reason number three? COMPLETENESS! Crane offers a style for every taste-a price for every budget. In heating, too, the Crane line is complete, providing equipment for any system, any fuel.

When making selections, refer to your copy of "Crane Service for Architects," or ask your Crane branch to supply one. Of course, not all fixtures are immediately available everywhere . . . check your requirements with your Crane branch or wholesaler.

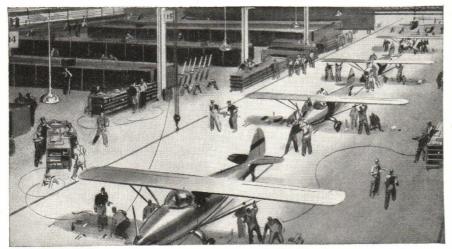
Featured in the Crane Bathroom below are the 1-110 Drexel Lavatory, the 2-83 Criterion Bath, and the 3-120 Drexel Toilet.



NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO 5 PLUMBING AND HEATING VALVES • FITTINGS • PIPE

Seven new planes completed .. at a cost of \$4.30!



New planes can't fly without control cable, and this manufacturer needed some -fast. He got it the same way he regularly gets many supplies and parts-by Air Express. Ordered in A.M., delivered to plant same day. 500 miles, 28 lbs., Air Express charge only \$4.30. So production continued without a break.



\$4.30 included pick-up and delivery at no extra charge-and receipt for shipment. All this, plus the world's fastest shipping service. That's Air Expressused with profit by every business.



Shipments go on all flights of Scheduled Airlines. Speeds up to 5 miles a minute-no waiting around. Direct service to over 1,000 airport cities, airrail for 22,000 off-airline offices.

Facts on low Air Express rates:

22 lbs. of new fashions goes 700 miles for \$4.73. 6-lb. carton of new jewelry line goes 1,000 miles for \$2.24. Same day delivery in both cases if you ship early.

Only Air Express gives you all these advantages: Special pick-up and delivery at no extra cost. You get a receipt for every shipment and delivery is proved by signature of consignee. One-carrier re-sponsibility. Assured protection, too-valuation coverage up to \$50 without extra charge. Practically no limitation on size or weight. For fast shipping action, phone Air Express Division, Railway Express Agency. And specify "Air Express delivery" on orders.



AIR EXPRESS, A SERVICE OF RAILWAY EXPRESS AGENCY AND THE SCHEDULED AIRLINES OF THE U.S.

MATERIALS FOR '49

AIR AND TEMPERATURE CONTROL

(Continued from page 100)

Textile Thermolier; unit heater; maintains heat transfer capacity in textile mills with minimum of cleaning maintenance; new construction claimed to reduce clogging. Grinnell Co., Inc., Providence 1, R. I.

Webster-Nesbitt Unit Heaters: Series R. Price increase; availability very good. Warren Web-ster & Co., Camden, N. J.

unit heaters

Cabinet Unit Heaters: with silent operating re-movable blower assembly and resiliently mounted motor; steam or hot water systems in commercial and industrial buildings. Verti-flow Unit Heaters: improved; "free convection" channel surrounding motor permits cool air flow to pass through, circular core design re-duces weight 35%. Young Radiator Co., 709 S. Marquette St., Racine, Wis.

Force-Flo Unit Heater: quiet operating, belt-driven centrifugal fan; convector-radiator type casing. Model H Unit Heater: compactly de-signed. Both improved models. Trane Co., La Crosse, Wis.

Gas-fired Unit Heater: automatic forced-air gas heating for commercial and industrial applica-tions. Few small price increases; prompt ship-ment. Carrier Corp., 300 S. Geddes St., Syracuse 1, N. Y

Gas-fired Unit Heaters: cast iron; built-in draft hood. Automatic Gas Equipment Co., 301 Brus-ton Ave., Pittsburgh 21, Pa.

Gas-fired Unit Heaters: cast iron or sheet metal heat exchangers. Modu-Aire Units: heating and cooling units for multiple room installations. U. S. Air Conditioning Corp., Como Ave. S. E., at 33rd, Minneapolis, Minn.

Low Outlet Temperature Unit Heater: primarily for use on steam in excess of 30 lbs pressure; widely spaced heater fins help reduce clogging; advantageous in textile mills. Modine Mfg. Co., 1522 Dekoven Ave., Racine, Wis.

Pacific Suspended Heater: contains all heating elements within streamlined body. Fan spreads warm air downward. For commercial and in-dustrial use. Naco Mig. Co., 7631 Roseberry Ave., Huntington Park, Calif.

ventilation

Attic Fan, Type EV: package unit; spring mounted, vertical air discharge; for attics or other locations of low head-room. Chelsea Fan & Blower Co., Inc., 1206 Grove St., Irvington 11, N. J.

#210 Deluxe Blo-Fan: eight speeds, for venti-lating. Atlantic Breeze Sidewall Fan: true axial flow blade, with superior volume and power against head winds. Pryne & Co., Inc., 140 N. Towne Ave., Pomona, Calif.

Dial-O-Vent: underfloor exhaust removal system for garages. The Phantom: complete exhaust removal system featuring disappearing tube. Many sheet metal parts changed to cast alumi-num. Same prices; immediate shipment. Na-tional System of Garage Ventilation, 318 N. Church St., Decatur, Ill.

Foundry Ventilator: high-velocity power unit. Aluminum, galbestos, or galvanized steel con-struction; improved one-piece, cast aluminum fan. Can be equipped with breather duct, which permits use of standard motor and mini-mizes possibility of corrosive fumes. H. H. Robertson Co., Farmer's Bank Bldg., Pittsburgh, Pa.

IIg Self Cooled Motor Propeller Fans: new line of Type "Q"; for kitchen and attic installations. Type "PE" direct connected and belted cen-trifugal fans, for pressure work. 12½%, price increase. All available on reasonable delivery basis. Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Manual Wall Shutters: protect exhaust fans against weather; hand-operated. 24", 26" win-dow fans. Improved home cooling fans, com-mercial and industrial exhaust fans, attic fan packages. American Coolair Corp., Box 2300, Jacksonville 3, Fla.

Reversible 10" Window Fan Model #61: for ventilating and as room cooler. Improved Built-in Kitchen Fans: increased air moving capacity; all concealed parts and shutters cad-mium-plated. Price increase; availability good. National Appliance Co., 4814 W. Vernor High-way, Detroit, Mich.

(Continued on page 104)



1000-home project uses KIMSUL^{*} insulation throughout!



Newton, Iowa





Builders choose KIMSUL for its Low Cost — High Insulating Efficiency

Pictured here are three of the 35 different styles of houses being built at Newton, Iowa, employing streamlined construction methods devised by Chief Engineer J. Buford Jenkins. This is a 100% site-prefabricated project. Leaders of the non-profit organization financing it, say the houses will sell for \$8,000-\$10,000. It is expected that 1000 units will be completed within three years—all of them insulated throughout with KIMSUL. Whether you're building one house or a thousand, investigate first the many advantages of using KIMSUL insulation. For KIMSUL, with a "k" factor of 0.27, is the only many-layer stitched blanket type of insulation—and that means uniform efficiency over every inch of covered area. No thick spots—no thin spots where heat can leak out. What's more, KIMSUL comes in light, handy, compressed rolls, so it's easier and more profitable to install. No need for skilled workmen or expensive machinery. And KiMSUL is the only insulation with the fire-resistant Pyrogard* cover.

For further information, see your distributor, or write for our free booklet covering the latest techniques in the insulation field.

KIMBERLY-CLARK CORPORATION Neenah, Wisconsin

America's Finest New Homes are insulated with Kimsul!

*T. M. REG. U. S. AND CAN. PAT. OFF.

Clark



Long-lasting service . . . a bright, clean appearance. That's the combination Terrazzo brings to floors. Made with a matrix of Atlas White Cement, enduring Terrazzo floors hold their original beauty through years of constant foot traffic.

Because Atlas White Cement is outstanding for both uniformity and whiteness, color pigments and aggregates show up at their best, in either contrast or blend. An infinite variety of color tones and shadings are possible . . . not only in Terrazzo, but in Stucco, Cement Paint and Architectural Concrete Slabs.

Atlas White complies with Federal and ASTM specifications for portland cement. It has the same advantages for concrete and is used in the same way. Concrete made with Atlas White cleans easily. Maintenance costs are low.

For further information on the uses of Atlas White Cement, see SWEET'S CATALOG, Section 4B/2 and 13B/8, or write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.



"THEATRE GUILD ON THE AIR" – Sponsored by U. S. Steel Subsidiaries Sunday Evenings—ABC Network

MATERIALS FOR '49

AIR AND TEMPERATURE CONTROL

(Continued from page 102)

Unit Ventilator: newly designed for heating and ventilating school classrooms. Contains floating heating element with steam distributing tubes, pressure equalizing unit with checking device, and condensate cooling surface. Herman Nelson Corp., Moline, Ill.

man Nelson Corp., House, and Vertical Air Discharge Cooling Units: for largescale cooling of water, oil, gas, as well as steam and vapor condensing in any combination. Three sizes, from 3,000,000 to 15,000,000 Btu per hr. Young Radiator Co., Racine, Wis

Walton Fanlamp: electric floor lamp with builtin exhaust fan. Extra Size Industrial Humidifier: three times previous capacity, for large factory reguirements. Also improved humidifiers for residential, office, and industrial installation Prices held down. Abbeon Supply Co., 58-10 41st Dr., Woodside, N. Y.

Warm Air Blower: for houses up to two bedrooms. 24" and 16' window ventilating fans. International Oil Burner Co., 3800 Park Ave., St. Louis, Mo.

LIGHTING, ELECTRICAL EQUIPMENT

(Continued from page 70)

Solarite Panel Luminaire 12.000 Series: shallow fixture body formed from sheet steel, baked white enamel. Light transmission approximately 65%; installed individually or in continuous rows, flush mounted or suspended Also exit fixtures. Solar Light Mfg. Co., 1357 So. Jefferson St., Chicago 7, Ill.

Spill-Lite: lighting fixture for classroom use; Temprex glass bowl, patented spillway which expels dirt, bugs, debris. Appleman Art Glass Works, Bergenfield, N. J.

Works, bergennield, N. J. **Torpedo Shade Lighting Units:** heavy gage aluminum; lamps adjustable to any angle. Recessed adjustable fixtures. **Converto-Lite:** screwin unit for insertion into rigid recessed fixtures, for conversion to spot or flood lighting. Completely redesigned **Hood Shade line.** No price change; immediate delivery. Swivelier Co., Inc., 30 Irving Pl., New York, N. Y.

Weatherized Fluorescent Fixtures: chemical treatment applied to line of industrial fixtures by means of a plastic finish, to insure resistance to deteriorating influences. Sylvania Electric Products, Inc., Salem, Mass.

louverall ceilings

Allouver: new modular ceiling sections of aluminum, 18" x 48", made up of 3" or 1½" cubes. Modules suspended by hinged-catch mechanism on telescoping rods. General Lighting Co., 32 Union Sq., New York, N. Y.

Aluminum Eggcrate Louvers: new changeover from steel to aluminum construction, resulting in easy maneuverability. Permalux, new satir finish for fluorescent reflectors. Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.

Colling Louver: Vinylite; complete mountings, accessories to cover ceiling; 45° shielding angle Improved fluorescent fixture channel designs better coupling arrangements for continuous row installation; flush-to-ceiling mounting. Fluorescent fixtures of new design and applications. Slight price increase, improved availability. Leader Electric Co., 3500 N. Kedzie Ave., Chicago, Ill.

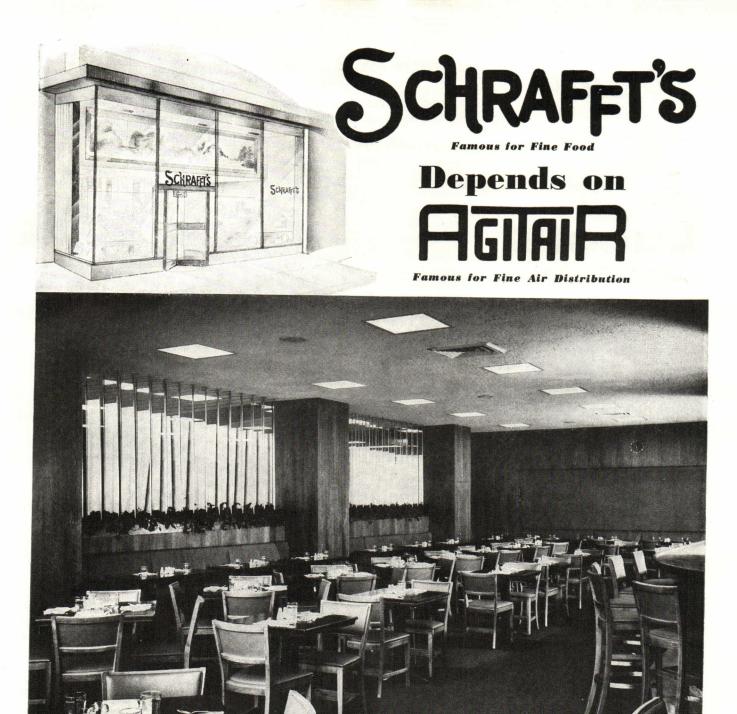
Louverall Vinylite Egg-crate Ceilings: for remodeling or modernizing. Improved Plastic Luminescent Cove: for use with fluorescent lights; low brightness ratio. Available. Louverall Lighting Corp., 1770 W. Berteau Ave., Chicago 13, Ill.

Multiple Louvered Ceiling: requires no construction alteration when installed. Special stock sections, individually hinged to facilitate change of lamps. Neo-Ray Products, Inc., 313 E. 22nd St., New York 10, N. Y.

"Sky-Glo": louverall lighting system. Continuous improvements on all fixture items, including "Shield-Flo" Type II-G fluorescent units. Prices up due to increases in materials, labor, freight. Availability: eight weeks after receipt of order. Benjamin Electric Mig. Co., Des Plaines, Ill.

Skyline Louverall Ceiling: complete assembly with the rods, light strips, reflectors, support brackets, hinged louvers; aluminum in baked white, natural, gray, black, etc. Garden City Plating & Mfg. Co., 1750 N. Ashland Ave., Chicago 22, Ill.

(Continued on page 106)



Versatile Agitair Type R's in Schrafft's Rockefeller Center, New York blend perfectly with surroundings, yet supply 100% air distribution. Other Schrafft's Located in New York, Boston, Syracuse, Philadelphia and Newark.

In the newest of Schrafft's 46 stores, you'll see the latest achievements in modern design. Naturally you'll see Agitair Type R Diffusers providing noiseless, draftless air distribution for complete customer comfort.

Look around-you'll find Agitair Type R's See Our Display at Booth 843, International Heating & Ventilating Exposition, Chicago, Jan. 24 to 28

in the smartest places . . . because no other diffuser offers so many advantages. Write for Complete Data.

AIR DEVICES, INC.

17 East 42nd Street • New York 17, N. Y. Air Diffusers • Air Filters • Roof Exhausters



Natural Beauty of Outside Wood With Cabot's CREOSOTE STAINS



Architect: Ernest Gunnar Peterson

he rich, penetrating colors of Cabot's Creosote Stains bring out and preserve all the natural beauty of wood siding, shingles or clapboards. A wide variety of attractive colors, from clear, brilliant hues to weathering browns and grays, allows you to choose exactly the right stain for any house on any site.

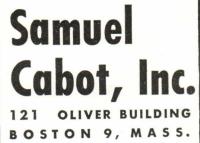
Because Cabot's Stains contain 60% to 90% of pure creosote oil—the best wood preservative known—they repel termites and insure long years of protection from decay.

Only pure pigments are used in Cabot's Stains—colors remain fresh and true even after long exposure to the weather.

Cabot's Creosote Stains are easy to apply—will not peel or blister, even on green wood.

Write Today for free booklet "Stained Houses" and color cards.

WRITE TODAY for free booklet "Stained Houses" and color cards.



MATERIALS FOR '49

LIGHTING, ELECTRICAL EQUIPMENT

(Continued from page 104)

portable lamps

Gooseneck Pin-up Lamp: unusual swivel arrangement and extra-long gooseneck enable user to turn lamp into any required position. Wall socket unnecessary; aluminum, gold Alumilite finish; gooseneck conduit brass-plated. Edgewood Furniture Co., Inc., 208 E. 27th St., New York 16, N. Y.

Polaply: new accessory for fluorescent desk lamps that polarizes light with radial distribution. Colorless, nonglaring, high transmission. Will fit lamps 19'' long, 434'' wide. Polarized Illumination, Inc., Whitestone, Long Island, N. Y.

Synspun: glass fiber and synthetic resins; may be sewn, laced, glued, riveted: applications such as lamp shades and bases, wall paneling, indirect lighting, bar tops, place mats, etc. Poly-Plastex United, Inc., 92-35 Horace Harding Blvd., Elmhurst, N. Y.

Uni-versen Swivel Lamps: floor, portable, and pin-up lamps with flexible elbow shaft adjustable to any position. Kurt Versen Co., Englewood, N. J.

signs

Luminous Safety Signs: phosphorescent signs and markers to point to exits, fire escapes and equipment, first aid stations; serve as ordinary signs in daylight. New Jersey Zinc Co., 160 Front St., New York, N. Y.

wire, wiring devices

Buttin: tin-plated copper alloy connector for all possible combinations of service entrance wire copper to copper, copper to aluminum, aluminum to aluminum, aluminum to copper. Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.

Cable Connector: non-metallic, sheathed, for electrical outlet boxes; high grade spring steel, plated against corrosion. Allied Electrical Mfg. Corp., 1 N. La Salle St., Chicago, Ill.

Con-Tac-Tor Mercury Switches: electrodes immersed in liquid mercury, giving perfect contact; no tiny moving parts; unaffected by atmosphere; average size occupies less than .5 cu in. space. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis 8, Minn.

Durasheath: all purpose cable. Durall farm wiring cable. New improved URC type service entrance cable. All available. Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Enclosed Branch Circuit Breaker: mounted to facilitate removal or capacity changes. Ample wiring space, conveniently located knockouts. Available for flush or surface mounting. Frank Adam Electric Co., 3650 Windsor Pl., St. Louis, Mo.

Fixture Stud: new, heavy duty, for S-type bar hangers, permitting easy attachment of outlet boxes. Two sizes, for spacings between studs or joists up to 16" and 24". General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.

"800" Floor Box: outlet box for floor installation; zinc-coated steel body. Service fittings for light and power, or telephone, signal, bell systems. National Electric Products Corp., 411 Seventh Ave., Pittsburgh, Pa.

Formica YN-25: electrical insulation. No price increase; available. Formica Co., 4620 Spring Grove Ave., Cincinnati, Ohio.

Hazaprene Wire: building wire permanently protected with Neoprene sheathing. Hazaprene Underground Cables Type USE: low cost underground service entrance cables. Improved service entrance cable. Hazard Insulated Wire Works, Div. of Okonite Co., Wilkes-Barre, Pa.

Laytex RUW: insulated electrical wire for use underground and in wet locations; particularly for damp basements, etc. U. S. Rubber Co., Rockefeller Center, New York, N. Y.

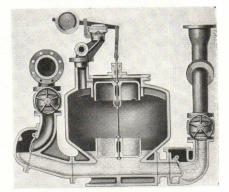
No. 2020 Rededge Flush Device Utility Box: square corner design of pressed steel walls provides more finger room. No. 9049 EZ Connector: pressed steel, electro-galvanized, "rockin" type; connects non-metallic sheathed cable to device and outlet box. Plug-in Strip: provides spread of outlets at either 6" or 18" intervals along baseboard in hotel, hospital rooms. National Electric Products Corp., Chamber of Commerce Bldg., Pittsburgh, Pa.

(Continued on page 108)

When gallonage is limited . . . and solids are not

specify

the **SHONE** Pneumatic SEWAGE EJECTOR



For handling crude sewage and sludge—30 gpm up to 1000 gpm —in municipal systems, industrial plants, institutions and city buildings, the famous Shone Pneumatic Ejector is trusted the world over. Wherever uninterrupted operation is essential and particularly where gallonage is limited but solids are not, the Shone is an efficient, safe, dependable answer.

no screens no sewer gas no shredders no wet well no impellers no danger no complicated piping

Sewage can't get in compressor

Ejector can be operated under water, and from distant compressor—any number of ejectors from one compressor. Special designs for unusual requirements.

For additional information, refer to Sweet's Files—and for complete engineering data write for Bulletins 4004 and 4303. Please use your regular business letterhead.

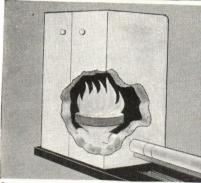


1445 North Dayton St., Chicago 22, Illinois

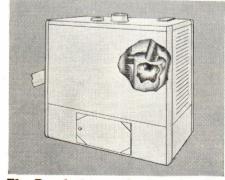


JANUARY, 1949 109

Will owners of your new houses find the kitchen their only warm room?



Automatic Anthracite Stokers Installed in an existing boiler or furnace and in new houses, automatic hard coal stokers deliver plenty of heat quickly . . . save up to 50% on fuel bills . . . eliminate fuel worries.



The Revolutionary Anthratube-The Anthratube saves on fuel bills . . . its proved efficiency is over 80%. This scientifically engineered boiler-burner unit, with "Whirling Heat" and other revolutionary features, produces quicker response and superior performance than units using other types of fuel.

Not if you specify ANTHRACITE Equipment!

There are no Ifs, Ands or Buts when you specify Automatic Anthracite Heating

WNERS of your new houses can have plenty of worry-free heat because there's plenty of hard coal and there is anthracite equipment to fit any heating requirement.

A whole winter's supply of anthracite can be stored easily in advance. Everyone wants this kind of security and convenience. They have just that when you specify automatic anthracite equipment.

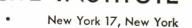
101 Park Avenue

Look over the two types of domestic anthracite equipment shown here. They burn the cheaper sizes of economical hard coal . . . completely automatic from bin feed to ash removal.

Write to us for more detailed information on all types of anthracite heating equipment-domestic and commercial.







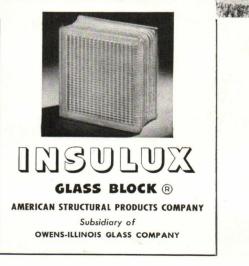
American Stove Company's new home in St. Louis. Lighting problem of south exposure, always difficult, is solved with Insulux Glass Block (No. 351) in combination with clear glass inserts. Insulux bends light rays toward ceiling for maximum penetration into building. Architect: Harris Armstrong: Contractor: Gamble Construction Company.

PHOTOGRAPH BY COURTESY OF ARCHITECTURAL FORUM

"Eminently successful daylighting," declares Architectural Forum in a recent article. "Offices in this building do not rely on artificial daylighting except on exceptionally dull days, but are almost always entirely daylit."

It goes on to say, "as an example of up-to-the-minute application of known daylighting principles, this building would be difficult to surpass."

Insulux Glass Block (No. 351), with its light-directional properties, plays an important part in this superb daylighting. For information on Insulux, consult GLASS section of Sweet's Architectural Catalog, or write Dept. F-51, American Structural Products Company, P.O. Box 1035, Toledo 1, Ohio.



Murgin Chaf



Cincinnati's new Terrace Plaza Hotel selects American-Standard Plumbing Fixtures

• To the long, growing list of the nation's outstanding buildings having American-Standard Plumbing Fixtures, add Cincinnati's newest hotel, the Terrace Plaza.

Here the choice of American-Standard products offered a double advantage.

First, because of the many different styles, sizes and colors offered, the architects had the widest latitude in designing each of the distinctive bathrooms for the 324 luxurious rooms and suites in this ultra modern hotel.

And, secondly, by making it American-Standard "all the way," the owners were assured of uniform quality throughout the entire installation . . . quality that would be reflected not only in the smart styling of the fixtures, but also in their long, troublefree*service.

For details about the complete line of plumbing fixtures, as well as information about American-Standard Heating Equipment, consult your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.



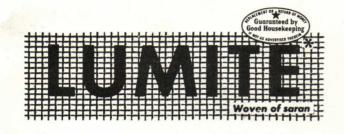
It's no problem to keep this bathroom clean. The roomy MASTER PEMBROKE BATH has a smooth, heavy coating of acid-resisting enamel on durable cast iron. And the quiet AFTON WATER CLOSET is made of genuine vitreous china. Both fixtures harmonize with the hotel's distinctive atmosphere. Skidmore, Owings & Merrill–Architects Jaros, Baum & Bolles–Engineers Frank Messer & Sons, Inc., Cincinnati–General Contractors E. J. Nolan Corporation, Cincinnati–Plumbing & Heating Contractors Mutual Mfg. & Supply Co., Cincinnati–Wholesale Distributor of Plumbing Fixtures

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"No sign of any staining"

Reports manager of Everglades Hotel, Miami



*R

HOTE

December 8, 1948

Mr. W. J. Holman, Vice-President Chicopee Manufacturing Corporation - Lumite Division 47 Worth Street New York, New York

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Dear Mr. Holman:

LKT: 1es

We are very happy to advise that the Lumite screen cloth was installed in all of our screen openings here at the Brærglade last year when the building was completely renovated and the material is standing up wonderfully well. This screen was chosen to prevent staining of the building beneath the doors and windows and there is no sign of any staining more than a year after the material was installed.

The Everglades has approximately 1,800 windows and doors and we used approximately 27,000 square feet of this material.

We are happy to recommend this material for similar use as it is very satisfactory.

Cordially yours, Conad M. Thomas Leonard K. Thomson Manager

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Miami's famous Everglades Hotel chose Lumite because it will

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• NEVER STAIN

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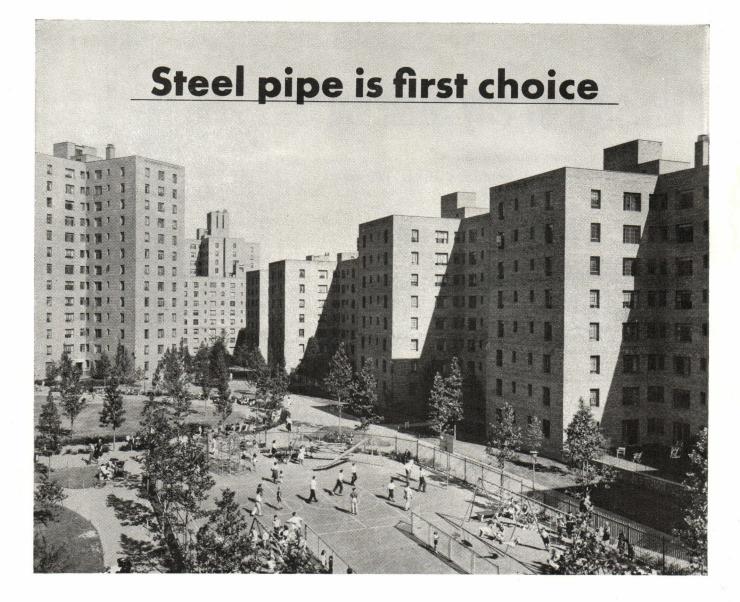
BURNING RATE—None. (Lumite Is Non-Inflammable.) SOFTENING POINT—240°—280° F.

- WATER ABSORPTION—Immersion 24 hours, less than 0.1%.
- TENSILE STRENGTH, ULTIMATE (of filament)—Up to 50,000 lbs. per sq. in.

IMPACT STRENGTH-Greater than metal mesh.

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woven of saran



-for giant housing developments

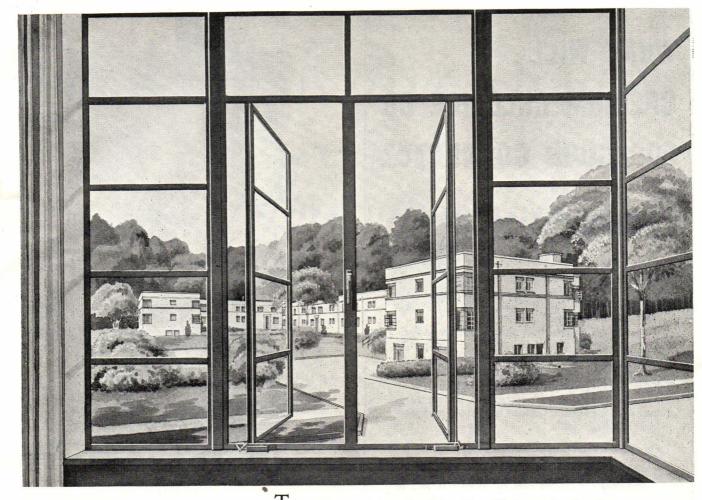
The colossal Parkchester development in New York is one of the great experiments in modern housing. As it commands national attention for its daring conception and modern construction, likewise the materials, products, and equipment which compose it assume national interest.

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The interesting story of "Pipe in American Life" sent upon request.





Greendale Manor Apartments, town of Greenburg, N. Y. Architect: Laurence M. Loeb, White Plains, N. Y. Built by Frank J. Filardi Construction Co., Hartsdale, N. Y. for Healy Central Realty Co. There's bright living ahead for New Yorkers who live in Greendale Manor. In this new garden-type apartment village, large, sun-inviting Lupton Metal Windows provide an abundance of daylight to each dwelling unit. The narrow, graceful frames and smartly-designed operating hardware of Lupton Metal Windows blend perfectly with modern design. Air flow is easily controlled to supply exactly the right amount of ventilation in every room. Economy, a vital feature of large scale building is effected by the long life of Lupton Metal Windows. Lupton Residence Casements can be supplied in a wide range of stock sizes and types. Bronze wire screens are available for all windows. There is a Lupton Metal Window for every type of building. Write for our catalog or see it in Sweet's.

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JANUARY, 1949 117

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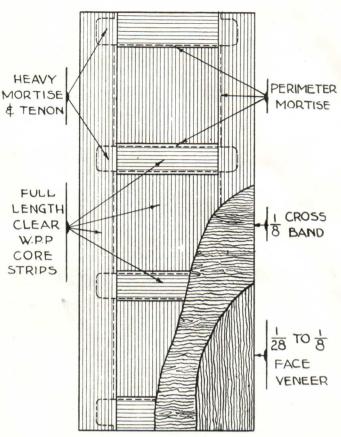
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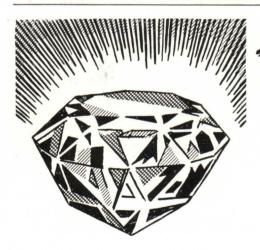
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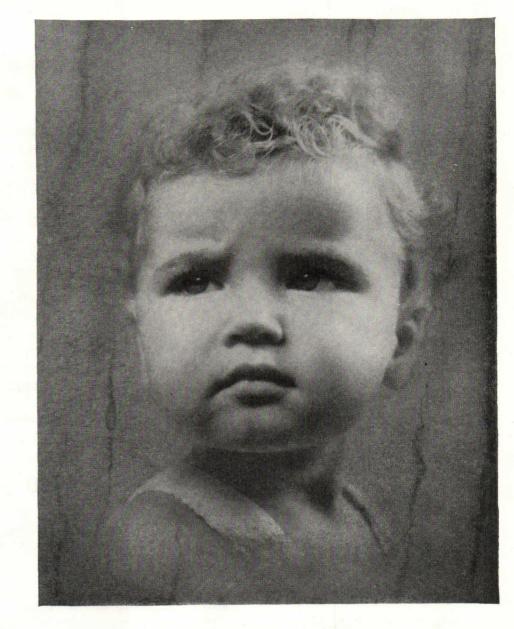
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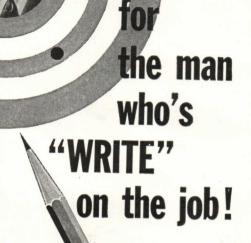
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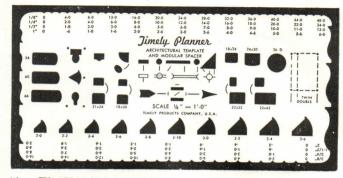
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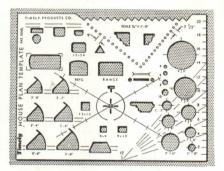
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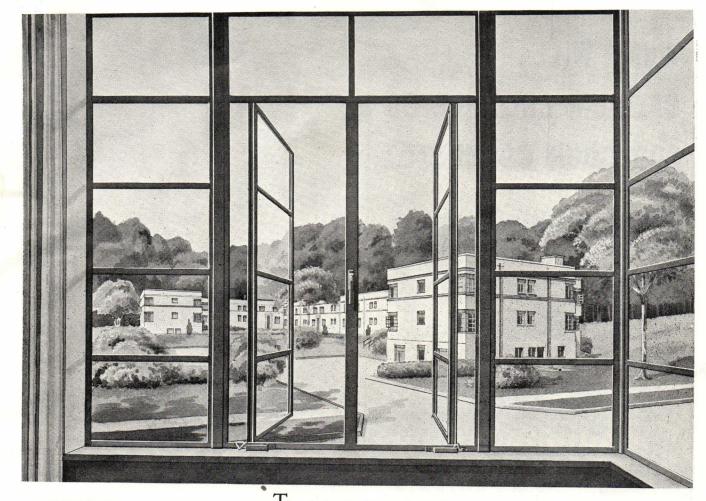
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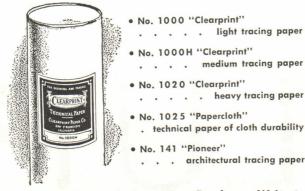
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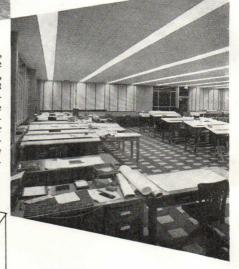
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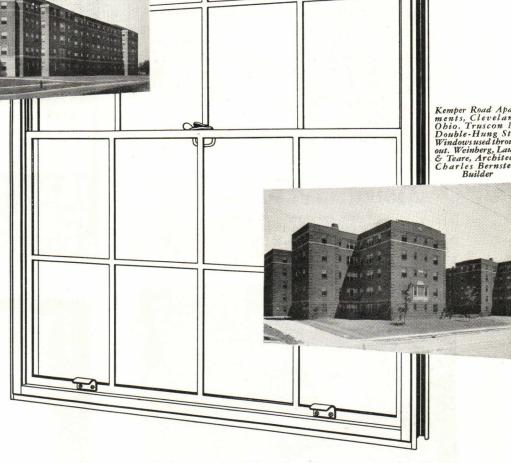
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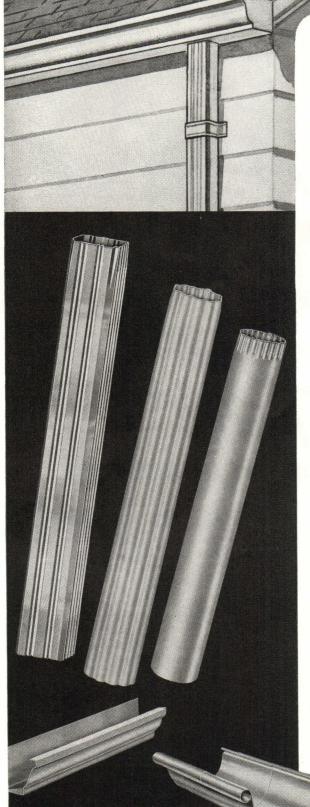
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Product Report . . . January, 1949

A. S. Bennett & Associates, a New York research organization, has just completed a nationwide study to learn how building products get into buildings. In this and subsequent issues, we will discuss the study, giving details and comments about the 24 classes of products which were investigated. By observing the ways in which representative architectural firms specify products, you will have a better idea of how nearly your own operations are geared to those of your contemporaries.

FACTORS IN SPECIFYING AIR DISTRIBUTION OUTLETS

With air conditioning installations the rule rather than the exception in much new construction, it's important that architectural firms approach realistically the problems involved when specifying such equipment. The Bennett survey indicated how other firms are handling the specification of one integral part of such equipment-air distribution outlets. Perhaps from an analysis of the Bennett findings you can draw comparisons between your specifying procedure and the procedure as practiced by the firms who are your contemporaries.

The Bennett field interviewers first investigated the type of outlet being specified-found diffusing outlets outnumbered directional grills 5 to 4, while directional grills, in turn, were specified almost twice as often as regular grills and combination (inlet-outlet) grills combined. Seems to show a definite leaning toward the newest type of outlets-those that not only allow for air movement, but move it in a well-defined flow pattern.

Naturally the interviewers, when talking to architectural firms all over the country about their specifying procedure, wanted to get the reasons behind any important decisions. In other words why was a particular type of air distribution outlet selected? And the interviewers found that architectural firms placed "appearance" at the top of their list of reasons for selecting a particular type of outlet. Running neckand-neck with appearance was recommendation by a consulting engineer. Conclusions: It becomes obvious that the architectural firms who do the best job work closely with consulting engineers, so that they can select an outlet embodying functional and eve-appealing qualities. The results indicated that the architectural firm is not only interested in what the system will do, but is also interested in how the system (and its component parts) fit into the overall design. This means that consulting engineers are called in for highly technical questions, but that for most decisions the architectural firm feels its own staff competent to handle any problems that may arise. Only by knowing a great deal about air conditioning equipment and the problems that arise, can an architectural firm design effectively around such equipment.

There were other reasons, of course, for the selection of a particular type of outlet. Volume of air delivered, the distribution pattern, the locations available for installation, and many other factors, all entered into the picture. Many decisions were based entirely on design problems. When it came to brand decisions, the same general results were

(Continued on next page)







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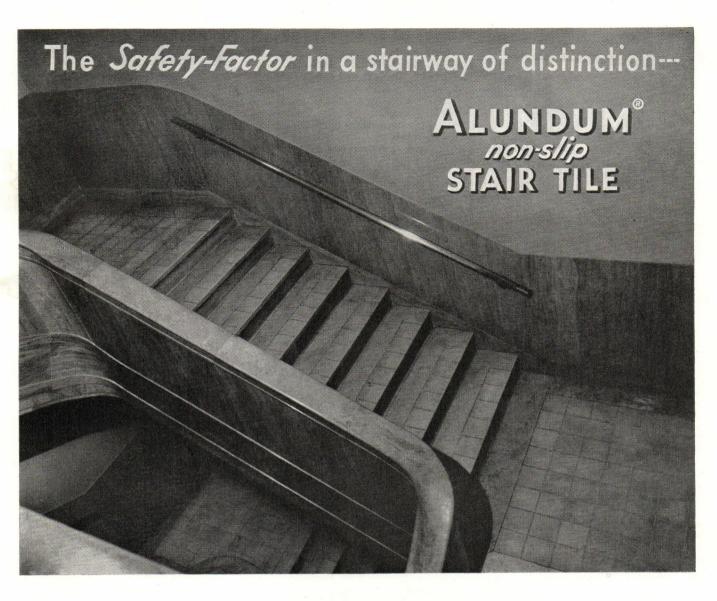
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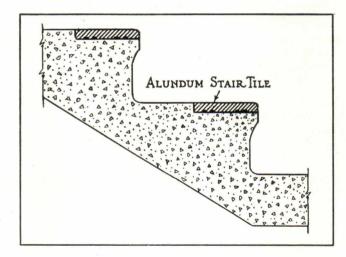
uncovered. Thus, when the respondents were asked to state why they had picked a particular brand, they gave reasons that were hinged very closely to their decisions as to *type* of outlet selected.

You are probably interested in the time factors involved. That is, during what design stages the decisions were made. The answers (for both type of outlet, and specific brand) all fell into one groove-early. Every decision was made before the completion of final drawings and specifications; 50% before the completion of preliminary drawings.

Throughout all discussions and decisions on the selection and specification of air distribution outlets, the architectural offices worked closely with consulting engineers. Because air conditioning is a technical, equipment problem, it is not the exclusive bailiwick of architectural specifiers. In order to de-

sign effectively around (and with) such systems, however, it is important that architectural men have an understanding of the rudiments of such equipment. Only by a full understanding of the equipment involved, the sizes needed, the load expected, etc., can the architectural firm design effectively and specify realistically. It calls for thorough knowledge of the science of moving air masses.





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THERE'S MORE TO THE SOUTH THAN FRIED CHICKEN AND BLACK-EYED PEAS. although I had plenty of them during a recent trip. Deep in Thurmond territory, I attended meetings of progressive-minded, alert, and eager architects, some of whom are producing work as good as any in the country. The most valiant attempt I've seen to produce a really inexpensive house (under \$5,000) with the help and even the guidance of the FHA, taking advantage of modular planning and rational use of materials, was in Columbia, South Carolina. The best small hospital I've seen recently was in Alabama. The best current design in university structures I've seen was at Georgia Tech. The most progressive program for an architectural school I've witnessed this year was at North Carolina State. That's what I like about the South.

My wife went with me on this trip, and she wanted to do the column this month, so that she could thank all the swell people we saw. It was a vacation, but I can't stay away from architecture, and I'm more than ever convinced that architects and their wives are just about the most agreeable people there are.

IN RICHMOND, VIRGINIA, I was delighted to find that Leslie Cheek, himself lately an editor, is functioning happily as director of the Virginia Museum of Fine Arts and cooperating handsomely with the local architectural group guided by Marc Wright, Jr.

IN RALEIGH. NORTH CAROLINA. I was impressed, as I've said, with the work already started in the new architectural school under Dean Henry Kamphoeffner, with a staff which includes the Matthew Nowickis, recently of Warsaw; the Jim Fitzgibbons, recently of Oklahoma; and George Matsumoto, recently of Kansas City. I was also impressed with the work being done by Bill Deitrick's office—so much so that I went out at midnight to see a job under construction. Unfortunately I didn't have time to see the houses Tom Cooper and Albert Haskins are doing for themselves, which look wonderful in renderings.

BILL LYLES AND REID HEARN GAVE ME A QUICK TOUR OF COLUMBIA, where an astonishing amount of FHA work is being done — both small individual houses of unusually high quality and rental housing under Title VI. An 18story apartment planned by Stork & Lyles looks very promising.

I made a quick trip to Clemson, where the only architectural school in South Carolina is functioning under the able guidance of John Gates. The day I was there Clemson was beating Wake Forest at football and the school was nearly deserted, but judging from the work on display there must be a high quality of instruction.

ATHENS, GEORGIA, IS A BEAUTIFUL TOWN with many handsome ante-bellum houses, and an excellent architect— Wilmer Heery. I particularly liked the way he's added an office unit to a mellow, old, brick mill building. It seems to belong, and yet there's no copying.

ATLANTA IS ONE OF THE BUSIEST CITIES I'VE VISITED RECENTLY. Every architect in town seems to be active, and the work is, in general, excellent. We spent a most pleasant evening in Dick Aeck's house, slightly outgrown since we published it because of the arrival of a baby, but still comfortable and handsome. Among other excellent work of his, I think a high school football stadium Aeck has designed is one of the most beautifully simple structural concepts, consistently carried out, that I've seen. I also admired the new Textile Building at Georgia Tech, as well as other college buildings planned to be part of a program of expansion which is being developed by Bush-Brown and Heffernan. I had a quick review of the work of Stevens & Wilkinson, starting from their own attractive office building and ending with the only two car-barns I know of that are thoughtfully planned and consistently designed. John Cherry also showed me some of the work he is doing in a practice which ranges through doctors' clinics and industrial plants to several mighty good houses, including the one he built for himself and his family with his own hands. (Design good; craftsmanship spotty.)

BIRMINGHAM HAS A VERY LOVELY RESI-DENTIAL SECTION, and the night view of the lower city from the adjoining hill is a rare sight, with an occasional burst of flame from a steel mill, and with castiron Vulcan, saved from the Columbian Exposition, lording it over the metropolis. Lawrence Whitten, of Charles McCauley's office, and Mrs. Whitten, were kind hosts and able guides, abetted by William Warren, a man with a greater fund of good stories than anyone else in the profession.

I LIKED HIS TWIST ON AN OLD ONE ... in this case about an architect who had attended a meeting and become confused by the speakers and befuddled by highballs. He left to go home, and on the way tried to remember what the difference was between functionalism and rationalism. It worried him so that he stopped on the way at the preacher's house, because the preacher knew all the answers, and he routed that worthy out of bed and demanded to know the difference between functionalism and rationalism.

"Go home and go to bed, John," the preacher said. "Come back tomorrow and I'll explain the difference to you. Won't that do?"

"No, it won't," John replied. "I must know tonight, because tomorrow I'll be sober, and I won't give a damn."

IN CHATTANOOGA I HAD A NICE VISIT with George Palm, Jr., Mario Bianculli's new partner, and Selmon T. Franklin and Clarence Jones were good enough to give me a quick view of what's going on architecturally in the area.

In Knoxville, Rudy Mock showed me projected designs for several TVA powerhouses and minor structures, one interesting feature of which is an aluminum sandwich wall material being developed in conjunction with H. H. Robertson Co.

HARRY TOUR, TVA ARCHITECT, TOOK US ON A TOUR OF NORRIS DAM before we left the Knoxville area-through the various tunnels and passages and up the interior elevators, in addition to the more usual trip through the powerhouse and across the top of the dam itself. On the way we had also seen Chickamauga and Watts Bar, so we had a fair view of the external aspects of the TVA operation. Enough has been written about it, so I will only remark again that it is powerful, honest, and wonderfully free of pomposity. The scale is overawing, but never frightening and one feels the harnessing of natural power sources for a good, democratic end.

Monas & Ceighta