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WOOD FLOORING

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HEAT PUMPS
HVC TERMINAL UNITS
LIQUID WASTE EQUIPMENT
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MECHANICAL INSULATION
MECHANICAL SUPPORTING DEVICES
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PRODUCT REPORTS 73: BEST NEW AND IMPROVED PRODUCTS, ALL ILLUSTRATED

THE MANUFACTURER AND THE ARCHITECT: FORCES BEHIND PRODUCT DEVELOPMENT
ARCHITECTURAL ENGINEERING: PRODUCT SPIN-OFFS FROM SYSTEMS BUILDING
ARCHITECTURAL BUSINESS: GETTING OUT OF THE INFORMATION JUNGLE
FULL CONTENTS ON PAGE 3

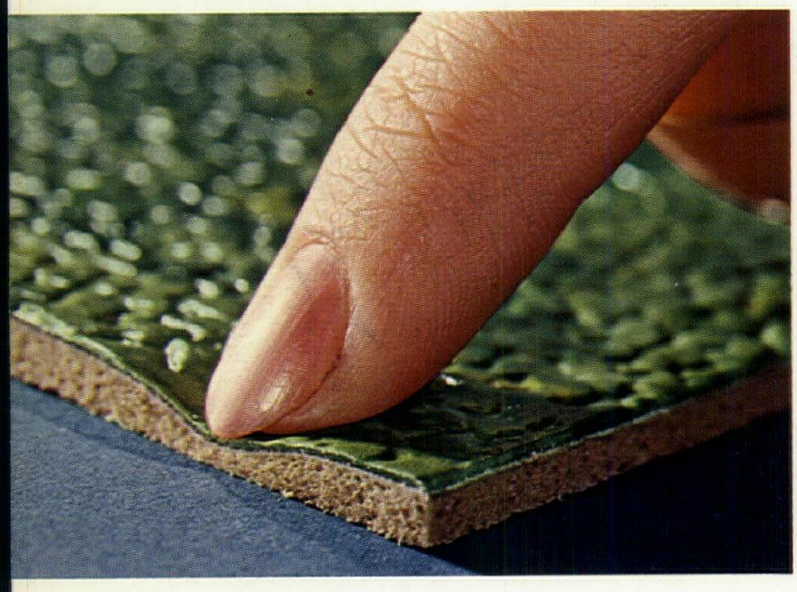
ARCHITECTURAL RECORD

MID-OCTOBER 1972 A McGRAW-HILL PUBLICATION THREE DOLLARS PER COPY

Introducing

A soft step forward

COMFORT



This is Quiet Zone™ Vinyl Corlon® flooring. Quiet, beauty, durability, and easy maintenance—all in one new floor. But softness and comfort are the first things you notice about it.

A 125-mil-thick layer of Cushioncord® foam vinyl bonded to the back makes walking and standing a pleasure—and makes Quiet Zone truly different from traditional types of commercial vinyl flooring.

QUIET

Another feature of Quiet Zone's Cushioncord backing is the way it muffles noise from footsteps and falling objects. This provides a great advantage in offices, schools, and public buildings where a little noise goes a long way.

Yet Quiet Zone™ isn't "mushy." Wheels on carts and furniture roll over it easily, and seams stay sealed. Six decorator colors coordinate with just about any interior styles.

Quiet Zone™

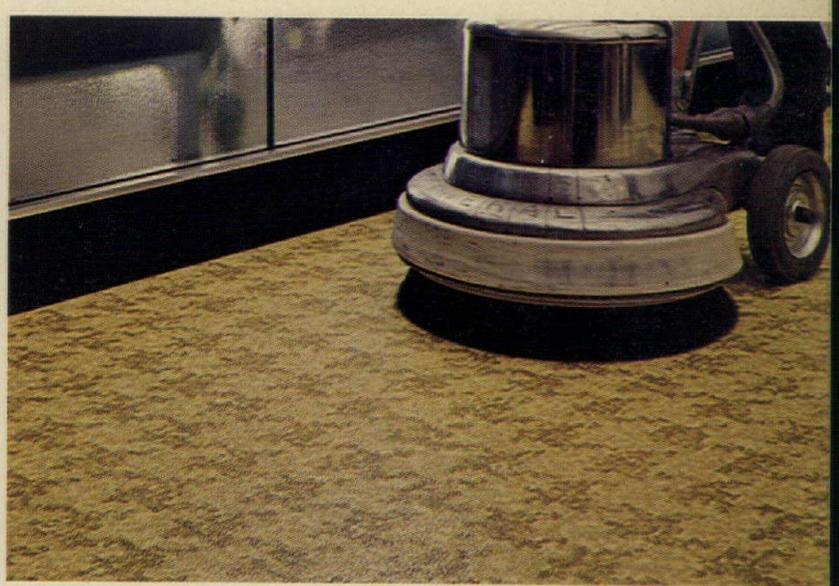
in modern vinyl flooring

DURABILITY

Quiet Zone™ also gives you the kind of toughness you expect in vinyl flooring. It's reinforced with a tough layer of fiberglass-reinforced vinyl. This adds dimensional stability plus resistance to impact damage.

Quiet Zone has excellent flame-spread resistance also. It has a flame-spread rating of 75 or less in the ASTM E-84 Tunnel Test and has a rating of less than 4.0 in the UL-992 Chamber Test.

EASY CARE



One of the most important things a floor can be is practical. This is where Quiet Zone™ vinyl really shines. Its virtually nonporous surface provides stain resistance. Spills wipe right up. And its richly textured, subdued pattern not only blends with every decor but also helps disguise dirt and traffic marks, seams, and subfloor irregularities.

Quiet Zone™ flooring is everything you need in a modern floor. Armstrong will send you everything you need to know about it. Mail coupon to Armstrong, 310 Rock St., Lancaster, PA 17604.

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ STATE_____ ZIP_____

Armstrong

For more data, write A1 on inquiry card

Seventy-two new walls for '72.

Here's the biggest, boldest step ahead in the young line of CDT vinyl wall coverings. Seventy-two new combinations of Color/Design/Texture to give you the greatest freedom yet in creating imaginative interiors. This complete selection is cross-referenced to hundreds of fashionable Devoe interior paint colors. So you've got a head start in selecting the just-right combination of wall covering and paint. For further information, just jot a note on your letterhead to: H. J. Smith, Devoe Paint, 224 East Broadway, Louisville, Ky. 40202.

CDT® Vinyl Wall Coverings
By Devoe, A Division of Celanese Coatings Co.

For more data, write A2 on inquiry card

Vinyl wall covering is new *Raja-Sari* with Devoe *Burnt Orange* and *Pink Feather* paint colors.

ARCHITECTURAL RECORD

Mid-October 1972

Cover: The 16-division format of the Uniform Construction Index provides the basis of organization of new products in this issue.

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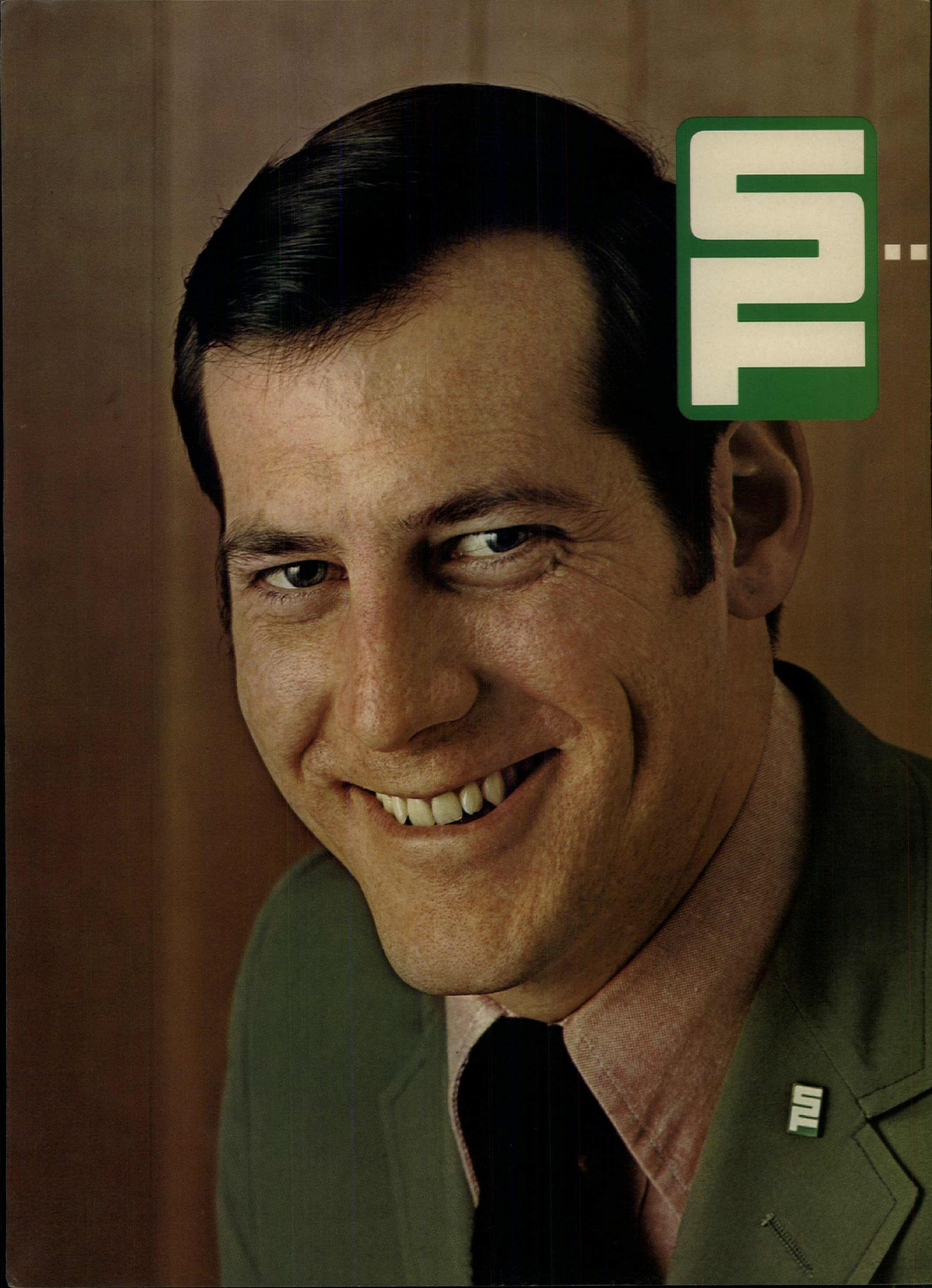

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Calling up fieldman John Zinn and getting straight answers about how southern pine can help your building needs.

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This mark stands for a lot of things. Quality housing, timber resource development, increasing wildlife population through managed forests, improving the environment. And service.

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Our member mills, who hired John and other fieldmen to help you, are progressive manufacturers dedicated to technological and product improvement. That's just one reason why you should buy or specify lumber bearing this mark. There are many more. But we'll tell you about them later.

SOUTHERN FOREST PRODUCTS ASSOCIATION
POST OFFICE BOX 52468, NEW ORLEANS, LOUISIANA 70152

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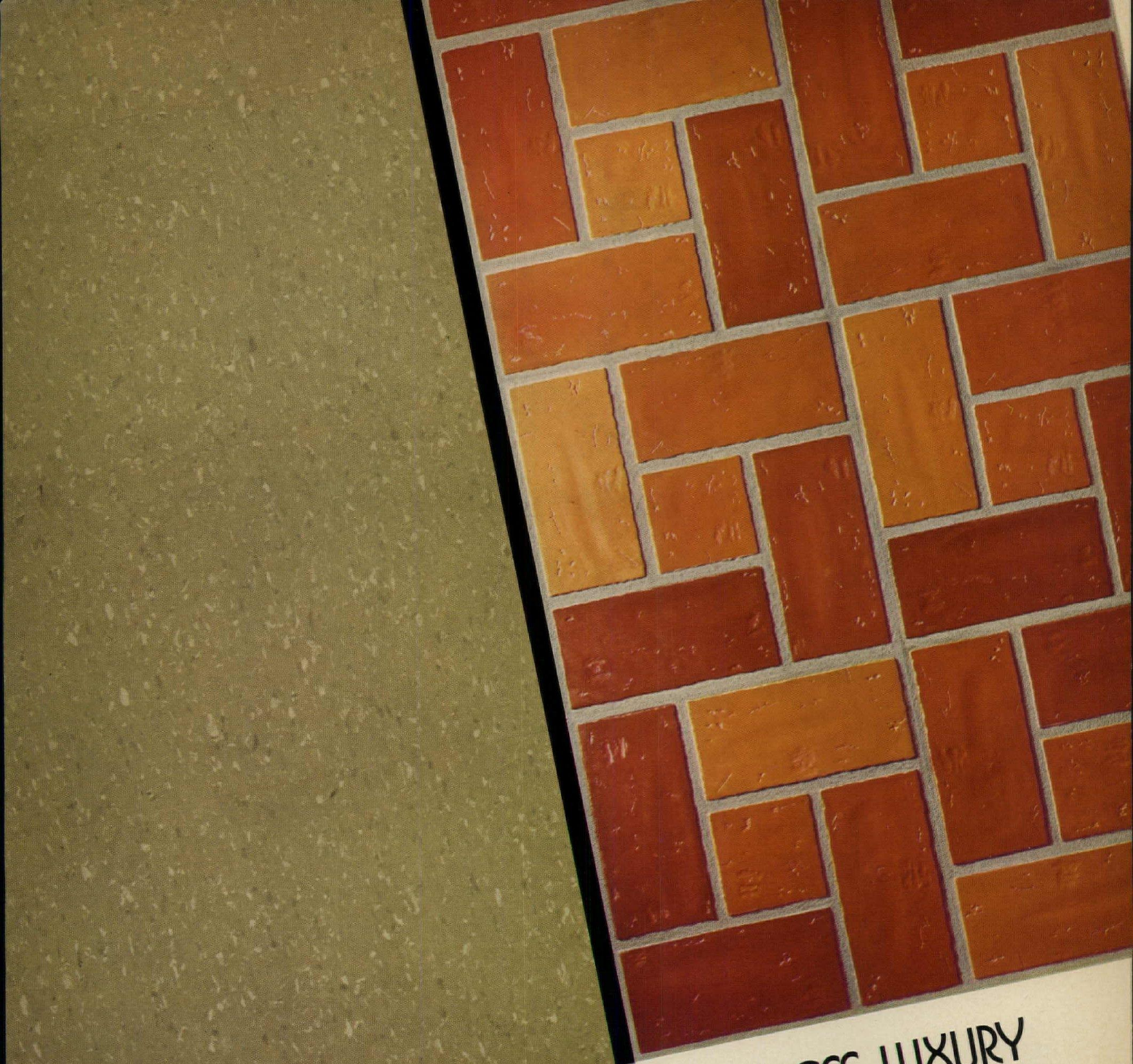


TIMELESS CLASSIC...

CLASSIC™ ELITE...

Timeless in every way, this rich new floor lends itself to any decor—classic to modern. Its delicate deep-veined marbling is worked all the way through the tile by a double manufacturing process. This gives Classic Elite a smooth, tight, easy-to-clean surface that stands up under the most heavy commercial traffic. And when used with a no-wax maintenance system, the serviceability for schools, offices and factories as well as homes is incomparable.

SIZE: 12″ x 12″ in 1/8″ and 3/32″ thicknesses

FLOORS BY

TIMELESS LUXURY

RUTHERFORD™ BRICK...

A proud new tile whose time has come. Rutherford Brick from Flintkote's Vinylcraft II series is so realistic, you'd think it was natural kiln-fired brick instead of easy-care reinforced vinyl. Its authentic three-dimensional pattern is actually fused into each tile to give it all the subtle variations of texture and color found in real brick. In short, the look of luxurious handcrafted quality that designers look for today.

SIZE: 12″ x 12″ in 1/8″ thicknesses

FLINTKOTE®

FLOORING PRODUCTS
480 Central Avenue, E. Rutherford, N.J. 07073

For more data, write A4 on inquiry card

The building that couldn't be built 10 years ago

When I was a young assistant editor—back during the Punic Wars—I remember attending a staff meeting at which the editor (a really old guy about 45) opened by standing up, taking off his shoes and belt, plunking them down on the conference table, and making a point: "These shoes and this belt are leather—and the only pieces of clothing I'm wearing that could have been manufactured 10 years ago." His shirt, for example, was one of those new-fangled nylon wash-and-wear jobs (long since, of course, in turn, made obsolete).

If you look around your office—as I've done here in the new McGraw-Hill World Headquarters—chances are you'll find many products around you that weren't available—or at least were still experimental—10 years ago. I haven't made a Federal case out of the research, but I know that the one-inch-slat blinds at the windows have been available only two years and are still in the introductory stage. The lighting fixtures overhead use U-tubes that were introduced only a few years ago, and the air supply and return system working through the fixture would not have been available 10 years ago. While post-and-panel partition systems were available 10 years ago, I'm pretty sure the panel-and-panel system with the hidden posts was not; the reflective/heat absorbent glass installed in the building is a far cry from the glass available 10 years ago in both efficiency and sizes; the sealants around the glass were surely not available 10 years ago, and so on, and on, and on.

To belabor the obvious: the continuous and continuing outpouring of new and better and more efficient and more flexible and more colorful products—often interrelated with other new products in "packages" or sometimes even "systems"—has a continuous and continuing impact on efficient and economical building design. And so architects and engineers need to know about new products—and as quickly as possible.

Thus, this issue of RECORD—Product Reports 73—the first of a series which will be repeated each year in mid-October.

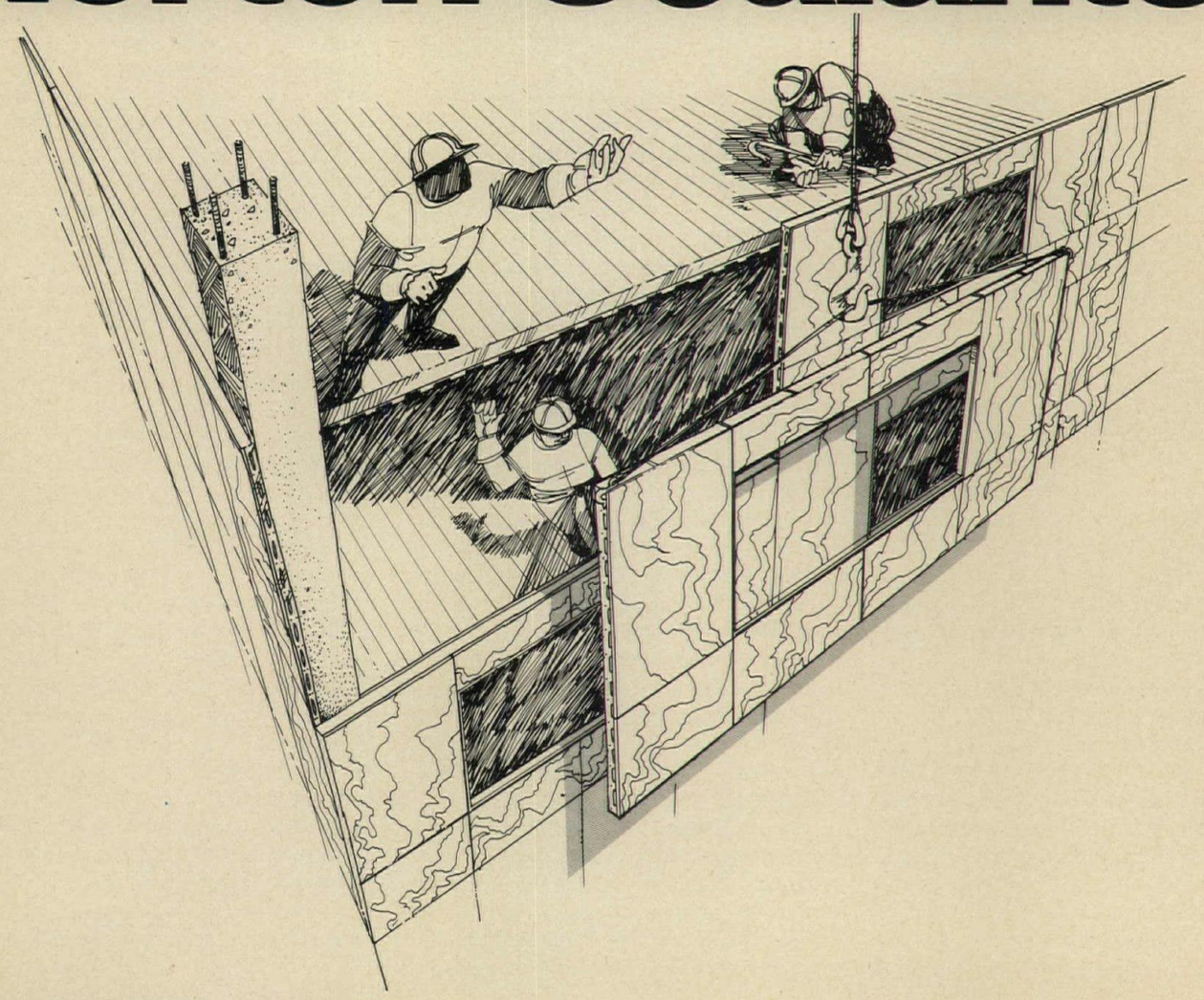
We feel—as editors and as publishers—a very special responsibility to make new products known to our readers as quickly as possible because we are, research tells us, the prime source for new product information. In a survey made by the RECORD to research the need for this issue we asked: "In general, how do new and improved building products *first* come to your attention?" Eighty-one per cent mentioned "advertising in professional magazines," 31.4 per cent mentioned direct mail, 31.1 per cent mentioned Sweet's Catalogs; 26.3 per cent mentioned salesmen, 18.1 per cent mentioned editorial content of professional magazines (a figure which I trust goes up drastically as a result of this issue); 11.1 per cent mentioned trade shows. This measure of the effectiveness among architects and engineers of the professional press is a reason for this issue—an attempt to strengthen our coverage in an area where we clearly have a major responsibility.

As we worked in developing this issue, corresponding and talking with literally thousands of people in manufacturing and producing companies across the country, we got continuous and continuing reaffirmation of a point that Senior Editor Robert Fischer made six years ago in our 75th Anniversary Issue. He wrote: "Improvement in the physical performance of building components can advance much faster if the communication between architects and engineers and product manufacturers is more intense and their collaboration more effective. The interaction of the vast array of new systems, equipment and materials poses at once a host of new opportunities, but also unresolved problems. It is apparent that a greatly increased exchange of ideas and information is called for on the merits of existing products and on future needs. . . . This kind of research . . . requires a new kind of collaboration: not just architect, and engineer, but architect, engineer, and the highest level of technical skill available in the industry." We see the need and the growing acceptance for this collaboration in many of the product areas represented in this issue. To pick a few: the work being done by professionals and manufacturers of glass, insulation, air conditioning equipment, and lighting in the area of energy conservation; the work being done by manufacturers with architects to "redevelop" access flooring as not just a flexible system for computer and other special rooms, but as a flexible and competitive alternate to the well established integrated ceiling system; and to the continuing effort of manufacturers and architect-engineers working together to "package" more and more pieces of the air-handling and lighting, partitions and ceiling systems, wall panels and structure, into "systems" that—in an evolutionary (not revolutionary) way are drastically changing the way we design and build—and effectively (though again in an evolutionary way) reducing building costs by cutting down on-site labor and substituting in-plant labor.

There is, of course, still much to be done to improve the dialogue between architect and engineer, and the manufacturer. We hope this issue—and the others that follow it each year—are an effective help in that dialogue.—*Walter F. Wagner, Jr.*

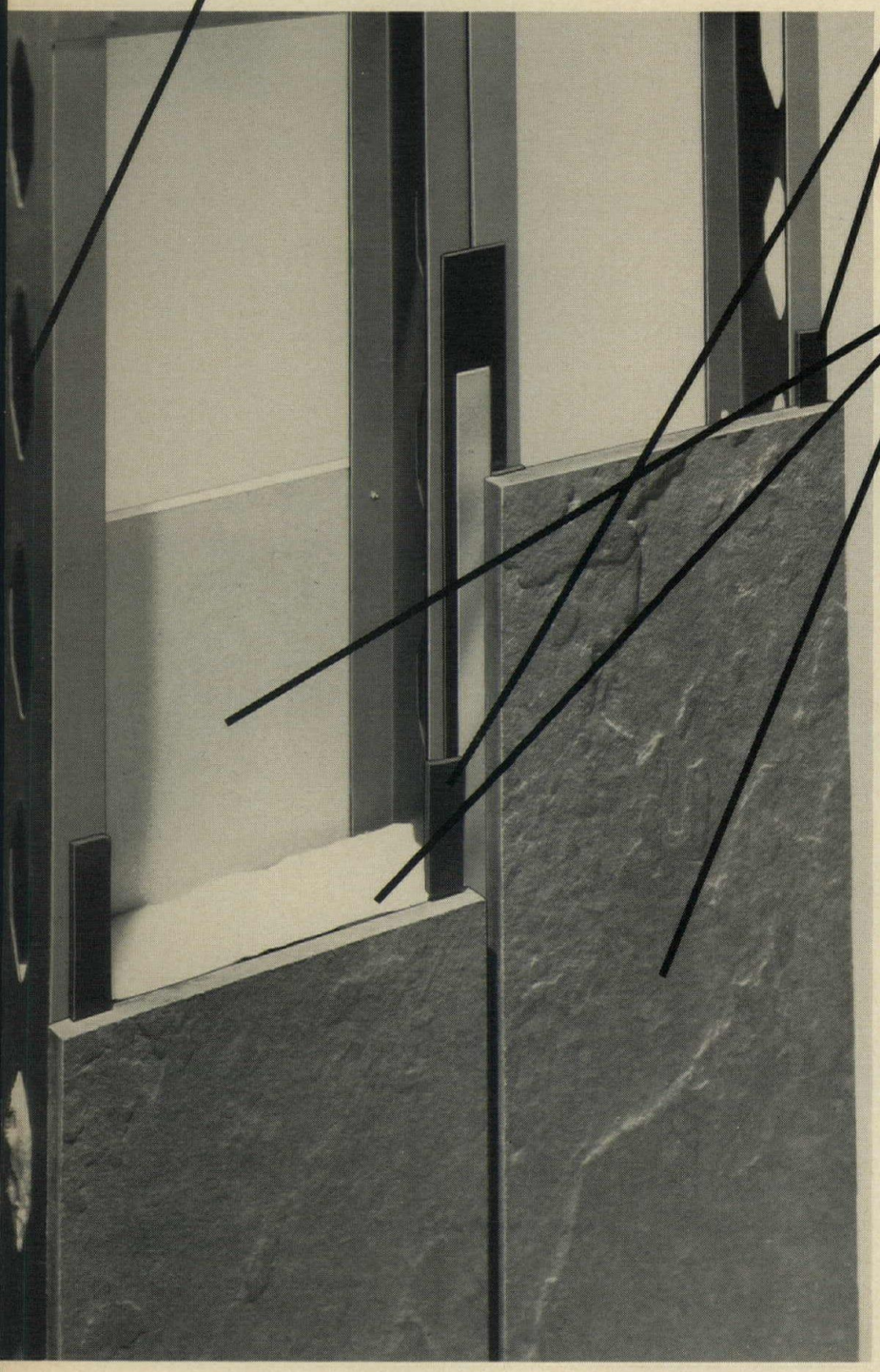
Three great names join to bring you a
total wall concept that provides...
Fast enclosure...Design freedom...
Economy...Versatility...Positive Sealing of joints

Johns-Manville.
Inryco™ Milcor®.
Norton Sealants.



Milcor Steel Studs

manufactured by Milcor Division of Inland-Ryerson Construction Products Co., provide practical, quickly erected, economical framing systems for exterior walls. Open channel configuration and punched openings (6" o.c.) reduce wall weight, provide cavity for location of mechanical services and give flexibility in placement of horizontal runs of pipe or conduit. Both exterior and interior surface facings are easily attached using self-drilling, self-tapping screws.

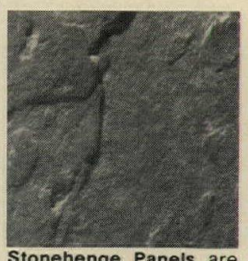


Norton Norseal Sealant

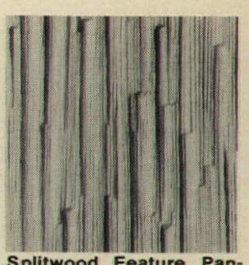
is manufactured by the Norton Co. It is a closed cell PVC foam product with a pressure-sensitive adhesive on one side to speed application. Used between studs and facing panels, Norseal provides an effective, weather-tight, permanent seal that stops water, gases and dust, and offers life-of-the-building performance.

Johns-Manville Building Products

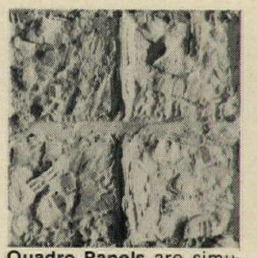
include fiberglass insulation, gypsum board interior panels and a wide variety of mineral fiber-cement exterior architectural panels, giving the architect and owner the freedom and flexibility to select surface finishes to meet specific functional and esthetic needs. All panels are fastened with positive mechanical attachment of the mineral fiber sheet to the steel stud framework.



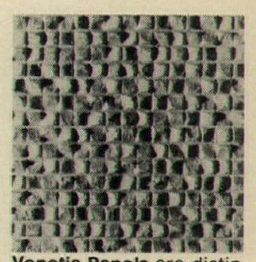
Stonehenge Panels are dense, monolithic panels, integrally colored and structurally strong, easy to fabricate and erect. They have deep cleavage and the coloration and texture of quarried stone, enabling the architect to give a dressed stone appearance to a building at a lower cost and at a much lower weight.



Splitwood Feature Panels add a new dimension in facings for exterior construction. They are deep textured units, non-combustible and durable requiring a minimum of care. They feature a deeply embossed linear directional design which blends smoothly with most architectural styles.



Quadro Panels are simulated stone panels with the rich, elegant texture of dressed natural stone. Molded into a block design, the panels provide an esthetically harmonious visual relationship to many traditional materials.



Venetia Panels are distinguished and versatile new building panels at an economical price. Available in a natural gray color, they feature a bold mosaic design with handsome embossing. Venetia is extremely durable—resists fire, wear and weather.

Colorlith® architectural panels are unusually strong, durable, handsome smooth finishes. Weigh 1/3 less than real stone, are integrally colored and as resistant to extremes of weather and wear as stone itself. They are completely inorganic, won't burn, rot, chip or rust.

This new concept in exterior panel systems offers the architect and builder new latitude and versatility, while providing economies through shop fabrication and panelization, faster enclosure, lower construction costs and savings in weight. It also provides for a variety of panel fastening systems. The total wall concept is recommended for middle and high rise apartments as well as commercial buildings. It permits almost endless design possibilities—and is particularly suited to exterior treatments combining the appearance and beauty of natural stone in a simulated product with the accent of reverse batten or feature joints. Full information is yours for the asking. Contact Johns-Manville, Box 5108, Denver, Colorado 80217.

Johns-Manville JM

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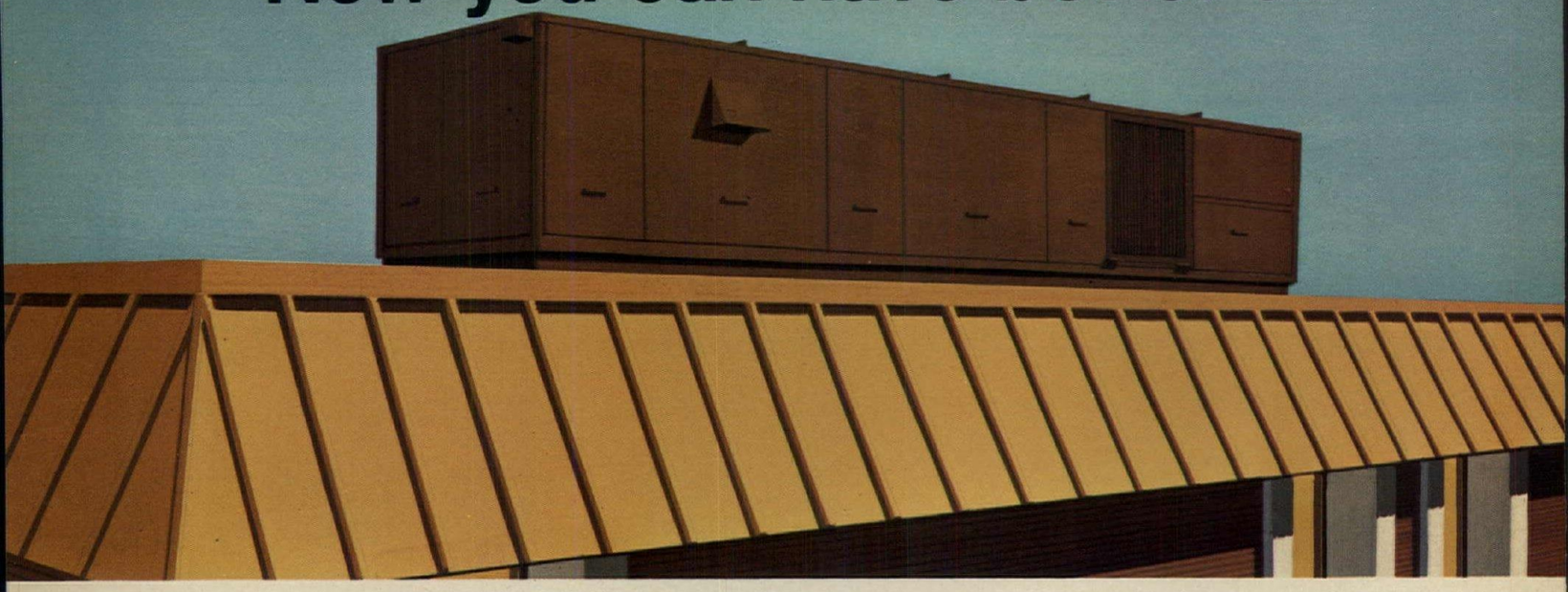
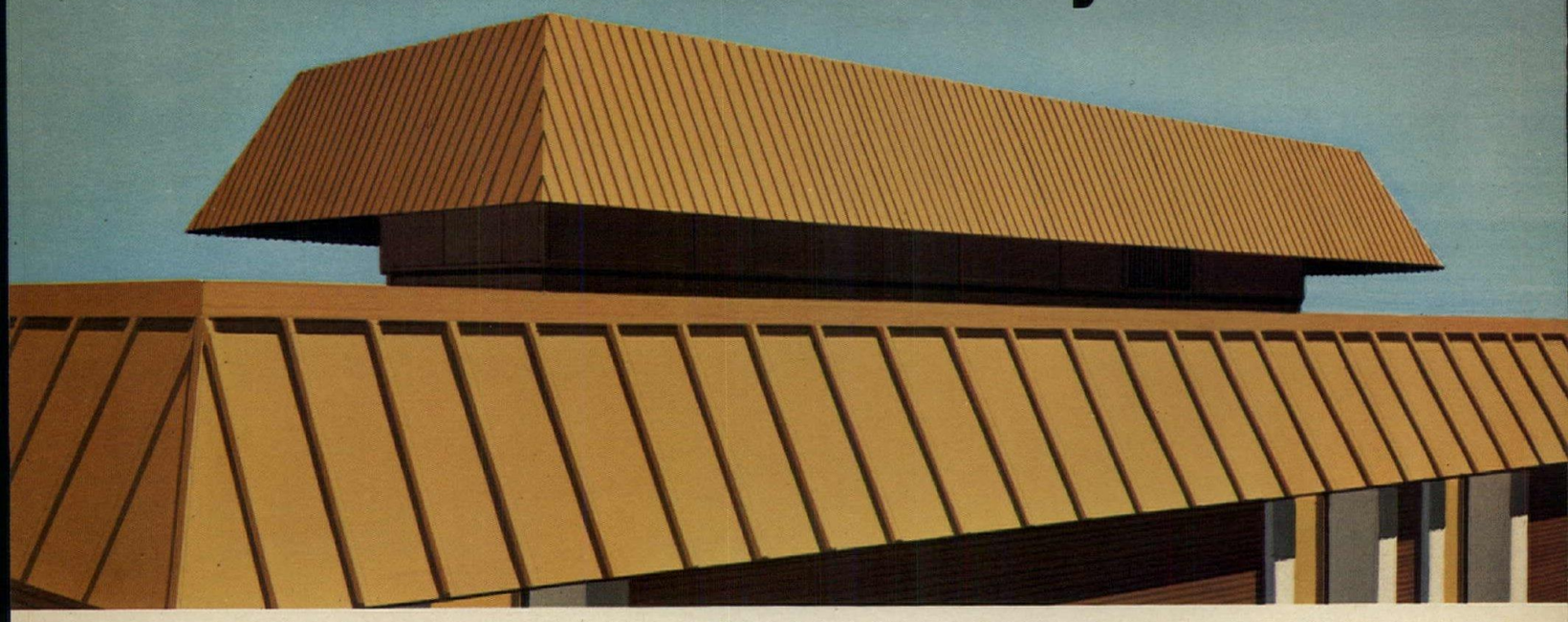


with a better look by AAF



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If our standard corrugated aluminum facade, which is available in ten colors, doesn't meet your needs, you can do it yourself. Use our unique facade frame with a facia material of your own choice and design.

Choose from a mansard type slope design, or a straight-line look. And, servicing the units is no problem either. There's plenty of room for routine service without removing the facia.

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The Manufacturer and the Architect: forces behind product development

By Allen E. Salowe, Management Consultant

Consider the relationships among the key participants in the construction process—architects, contractors, manufacturers.

The architect in the process of planning and design must evaluate and choose among an increasing number of offerings of manufacturers—elements, components, sub-systems, and systems.

The contractor must cope with products and labor, and their direct and indirect costs. Influencing his considerations of products are the hidden technical and design demands of the project on new and unproven products.

The manufacturer must cope with changing demands as products move through various stages of their life cycle. Risks are high in the development of a new product; marketing is costly.

Although architects and manufacturers occupy commanding heights over the systems-highway of construction, they view the flow of traffic from different perspectives. From his perspective the architect, observing the developmental activities of the manufacturer, may better evaluate new products, while the manufacturer, grasping the needs of the architect, may better guide product introduction and marketing.

Of significance is the search, analysis, conceptualization and design, testing and commercialization of building products. Not everything coming down the highway is a "new product," a term that deserves careful attention. For example, over forty years ago Buckminster Fuller pointed out that a bathroom was made up of five hundred different bits and pieces of pipe and tile and hardware, assembled by a number of people over a period of three to four days, yet the whole bathroom done in one single molding of one material, in five percent of the time, could eliminate most of the labor and be a superior product without joints. The bathrooms used in Montreal's Habitat were a belated realization of Fuller's statement.

Our example of the single molded bathroom was selected to illustrate several points. First, a development is not a new product. A new product must be demonstrably applicable to a practical problem that exists within the time frame of the needs of the user. Safdie's need in Habitat was to introduce more than industrialized building; it was to prefabricate cells, then assemble them on site with simple connections. At the time he was forced to stretch the state of the building art far beyond its accepted capabilities. Clearly, the time had come to bring Fuller's conceptualization to an early development stage.

Secondly, the eventual "products" to be derived from Habitat were certain to be new, but virtually every related component or system to be used with this project would also have to be "new." Precasting methods, wiring, assembly and much more were necessary to achieve ultimate commercialization. In a way the entire cost of design and construction, twenty million dollars, could be considered building research.

We must further distinguish between a *new product,* and a *product modification.* From the manufacturer's point of view, a new product is one that does not relate to a product currently being marketed by the company or one in which the new form changes the basic concept of an existing product. On the other hand, a product modification can be defined as a refinement to a current product in which the new form does not change the basic concept. When Detroit decided to compete aggressively with European and Japanese imported cars, the American sub-compact car was clearly a new product, while the annual model change that tilts the tail lights from vertical to horizontal and back again is a product modification.

We suggest that most "new" building products are, in fact, evolutionary, and that our understanding of the product life cycle and the development and commercialization process should be supplemented by an understanding of how one perceives product value. Ultimately, the extent to which a new product meets the architect's needs for timely solutions to design and construction problems will be determined by a complex system of individual and group decisions.

Perception of Product Value

The usefulness of any particular product varies over time. Prior to some point in time, there is little or no need for a particular product, whether it be single molded bathrooms or precast concrete "space cells" as Safdie called them. This need may increase as costs or technical demands in other areas begin to increase and may decrease as the product's usefulness begins to diminish. The gradual rise in demand and the period of relatively unchanging mature value followed by decline is characteristic of all product life cycles. See Figure 1.

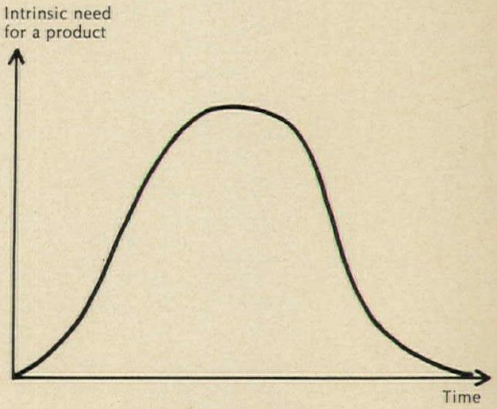

Figure 1: Time path of the underlying need for a product

Mr. Salowe was former Director, Architectural Marketing for U. S. Plywood, and Market Development Manager for W. R. Grace & Co. He is a member of the American Marketing Association and Society for General Systems Research.

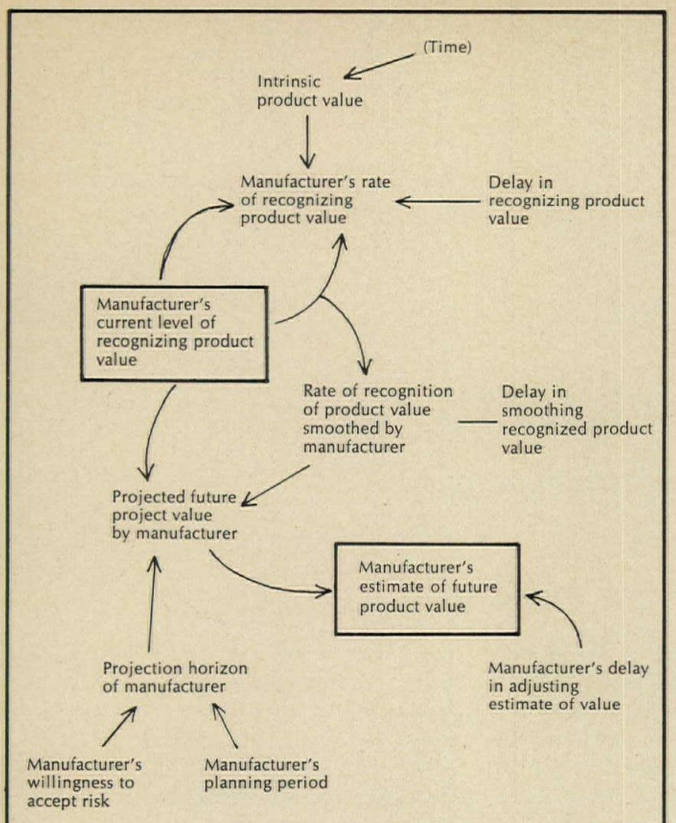

Figure 2: Perception of product value by manufacturers

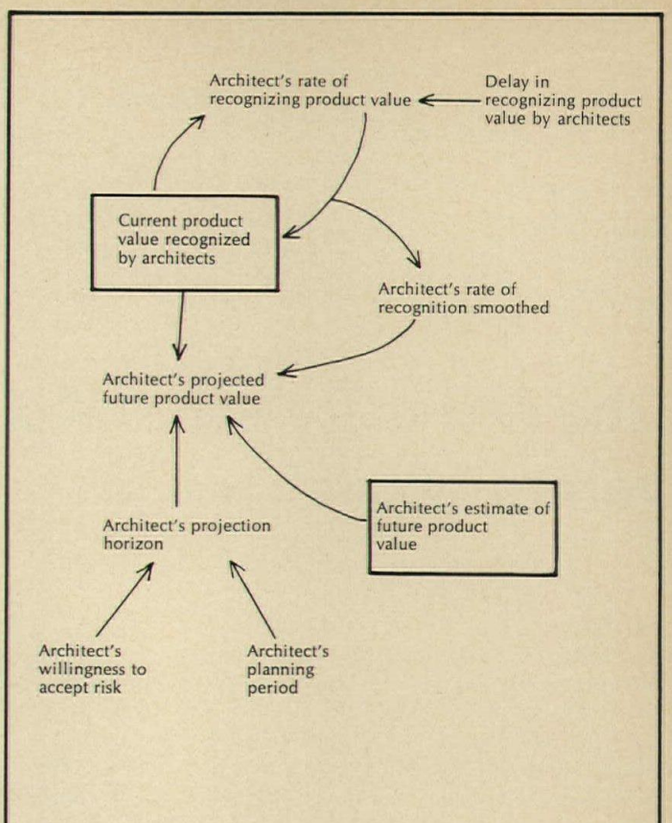

Figure 3: Perception of product value by architects

Different products will obviously have different inherent capabilities of satisfying the needs of the architect. We shall refer to this basic characteristic of the product, its built-in ability to satisfy the user's needs, as the *intrinsic product value*. The user's need for a product and the product's intrinsic value are obviously related; the existence of the need creates value in a product that satisfies the need.

Architects and manufacturers are far from all-knowing. They are not fully sensitive to information regarding potential products within their environment.

More than one hundred years ago Michael Faraday was demonstrating his electromagnetic equipment to a British government committee in the hope of obtaining government support. One member admitted he was fascinated, but asked Faraday, "What practical benefits can we expect ?" "I can't answer that question," Faraday replied, "but I can tell you that one hundred years from now you will be taxing something like this."

One can easily find examples of faulty value estimation in the generally poor performance of market forecasts for new products. Ford's marketing of the Edsel is a well publicized example of one forecasting fiasco. All market forecasts are attempts to estimate the product value that will be perceived by potential customers. Volume and price considerations enter more explicitly, but not more importantly.

The future is often perceived by observing how rapidly the present is changing and then statistically or qualitatively projecting this rate of situation change. When the Soviet Union orbited Sputnik in 1957, news of this progress led to frantic response and efforts in the United States; and the news of these efforts led to fresh exertions by the Russians. Any significant shift in opinion as to the value of a product causes a positive feedback effect more commonly known as "climbing on the bandwagon." This phenomenon acts to induce heightened anticipation of still further changes in the future. Thus the rate of change of an organization's current estimate of product value is a strong determinant of its estimate of the future value of the product.

One might contemplate whether a product has intrinsic value merely because a number of manufacturers begin supplying similar products. Likewise, architects may perceive intrinsic product value merely because of application of a product to prestigious work.

A critical influence on the manufacturer's estimates of future value is the time duration over which the organization looks ahead. The farther the organization projects, the less reliable the estimates. Thus the length of the time horizon used depends on the willingness of the manufacturer to take chances. Here we use time horizon to define the period of time over which the manufacturer, as investor, is willing to wait for a "fair" return on his capital employed.

Figures 2 and 3 describe the perception of product value by the manufacturer and the architect. The diagrams give focus to the major variables in the process of perception, common to both the architect and the manufacturer.

Product Value Perceived by Manufacturers

Figure 2 shows how changing objective considerations define the changes in product value. As new information is assimilated, it alters the estimate of future product value. The rate of change in the estimate thus depends on the degree of difference between the existing accepted projection and the projection based on the latest information. The gap between the two is the source of influence to revise the estimate.

In the mid-60's educators began recognizing the need for individual study carrels to support new methods that had been developed for individual student work. The delay in recognizing the rate at which the mode of study was changing caused a delay in the estimate of future product value of study carrels. As information regarding the product's applicability and usefulness was recognized—the result of assimilation of new knowledge—manufacturers began to project the needs for the product in greater quantities.

Perception of Product Value by Architects

Often a manufacturer will serve an architectural office for several years with technical and specification services only to find the long time-horizon of architectural projects stretching beyond their own expectations for sales results. Conversely, the professional office in need of "architectural prod-

ucts" often finds manufacturers promoting "stylized" products rather than providing creative solutions to specific technical and design problems. The result of this mismatch has been the architect's continuous filtering of those firms or products deserving little more than a classification of "or equal".

Figure 3 shows how the architect's estimate of future product value depends on the period of time over which he plans and, coincidentally, on his willingness to accept risk. Manufacturers that accommodate the extended planning period of the architect, of course, are relegating more cautious manufacturers to secondary and commodity-supplier positions.

The Evolution of New Products

During its life-cycle a product passes through three phases — growth, maturity, and stagnation/decline. Many new products do not provide adequate returns to their manufacturers until sales are well into the growth stage, sometimes frustratingly close to maturity. A second product may remain in the mature mode for many years returning handsomely to manufacturers as initial investments are written off and the cost of production falls. Likewise, examples can be found of mature and stagnant products that remain on the market with only marginal contributions to profit. Technological obsolescence, shifting market needs, and the "pirating" of original ideas by competitors each take their toll, making the early developmental decisions critical since this is when options are most open and flexible.

Although the "eureka" fingersnap, the dramatic breakthrough, is readily publicized, the typical new product introduced to the construction market in the last five to ten years has undergone an extensive and evolutionary evaluation and development. In this process there are six steps that most firms take to identify, develop, and introduce a new product:

1) Search: market analyses, research and development, and acquisition studies— all designed to locate potentially profitable additions to a firm's product line or its production capabilities.
2) Preliminary Economic Analysis: rapid, low-cost studies to eliminate weak proposals and to assess informally the relative desirability of promising proposals.
3) Formal Economic Analysis: careful, detailed studies to clarify, improve, and appraise the proposals that pass through Preliminary Analysis, in order to prepare a recommendation to abandon, defer, or proceed with a new product proposal.
4) Development: creation of a new product from the proposal.
5) Product Testing: use tests and market tests to discern the reactions of resellers and final buyers.
6) Commercialization: full-scale manufacturing and marketing operations to establish the product in the firm's product line.

Of the proposals generated by the Search process, most are dropped during Preliminary Economic Analysis with little attention consumed by any one suggestion. Of the proposals that survive the initial screening, more than half are eliminated by Formal Economic Analysis. Again, the abandoned proposals consume relatively small allocations of resources. Once a decision for Development has been made, however, pre-introductory costs rise sharply until the marketing program is completed. Figure 4 illustrates the search time and survival time for one hundred new product proposals.

The six-step process assures that new products are not whimsically introduced. A four-year Search process might generate some sixty proposals worthy of serious consideration. A four-year Proposal process is likely to see only two or three projects out of ninety survive to Commercialization. Only with Commercialization will the measure of value be most rigorously tested; in the market place, as the architect begins his critical evaluation of product value.

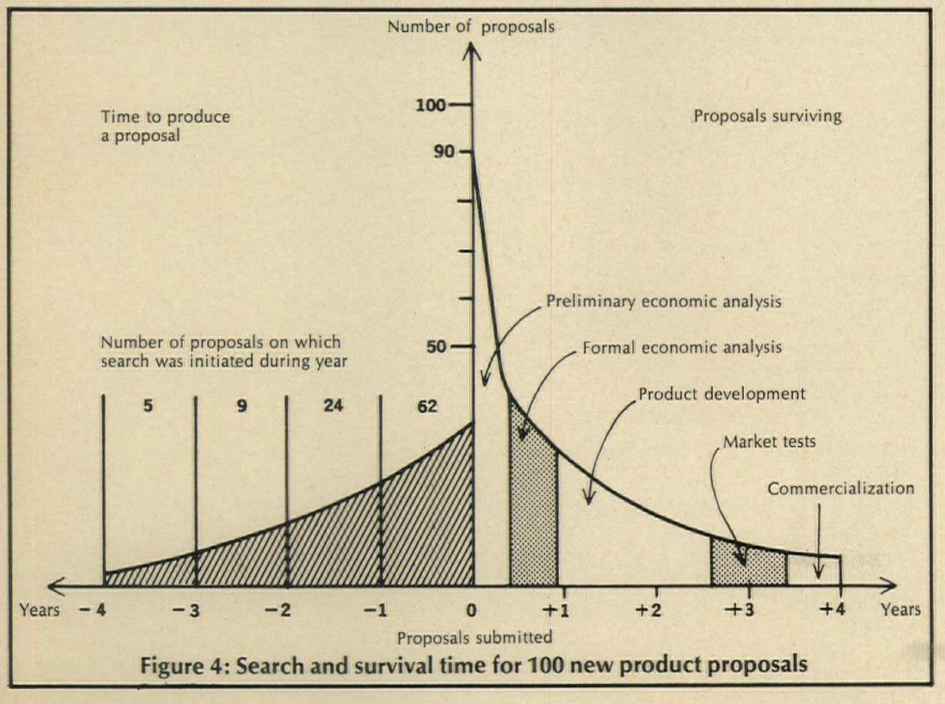

Figure 4: Search and survival time for 100 new product proposals

Propensity to Specify and Buy New Products

"Architecture is the art which so disposes and adorns the edifices raised by man, that the sight of them may contribute to his mental health, power and pleasure." *John Ruskin.*

But not surprisingly, estheticians have nothing to say about specifications, ordinances, drawings, legal obligations, delivery time, contractors, subs, and tradesmen. For a new product to satisfy, or contribute to satisfaction, it must continue along the bumpy systems-highway from manufacturer's introduction to architect's specification as mapped in Figure 5, *The Architect's Propensity to Specify a Product.*

The manufacturer's hope of early first-phase acceptance for his product can be realized with a sweep of a spec writer's secretary's typewriter, but an architect is seldom easily persuaded that a new and unknown product meets all his specifications. Although advertising and promotional literature may attract his attention, he will want to know how well the product has been utilized in a practical situation and under what design and technical demands. The jobs on which the product has been used need not have been monumental to demonstrate applicability, but they must be relevant to the architect's specific requirements. In many marketing situations he can clarify the technical capabilities of a product simply by telephoning another architect who has previously used it. In such a circumstance the manufacturer is better served by a satisfied customer than by his own salesman.

Although a representative of the manufacturing organization, the salesman's role extends into the workings of the architectural organization. Less persuasive as the advocate of a new product than a satisfied customer, the salesman is nevertheless essential to the architect as a guide toward appropriate products to fit specific needs and specifications, and in reinforcing the architect's awareness of his new choices among new products.

Owing to rapidly increasing marketing costs some manufacturers have acted to cut back on direct sales-service calls to architects. Many have acted in the belief that the architect's specification influence is waning; others have established strategies trying to bypass the specification stage and appealing to contractors for "or equal" support. Both tactical plans falter because of blocks in perceiving the appropriateness of products to specific needs and in appreciating the importance of professional reinforcement of awareness. It is unrealistic to expect to achieve successful marketing of a new building product without strong reinforcement from effective salesmanship.

A further influence on product selec-

tion is the owner, who remains for the most part in the background but whose budget, timing, and qualitative needs determine the job requirements. It is at the point of convergence of the manufacturer's product line and the owner's requirements that the architect exercises his perception of relative product value, whether for a mature product or a new one.

For example, the owner's role in product selection depends on the purpose for which the building is being constructed. If it is a new warehouse with a railroad siding and easy access to interstate highway systems, it is unlikely to feature prestigious hardware, lighting or fascias. On the other hand, if the nature of the client's business is one where public image is continually important, i.e., a cosmetics firm, then even a warehouse represents a sales tool for the client. The architect remains continuously sensitive to these subtleties; the manufacturer must too.

Contractor's Propensity to Buy a Product

The new product is tested almost immediately, and critically, at the construction site. Will it, under the scrutiny of the contractor and the building trades, seem worth the price? Often the contractor's awareness of a new product begins with the architect's specification, and his off-hand first reaction, like the tradesman's is likely to be negative. Thus, in the system of introducing new products, a critical junction is where the design and technical requirements of the product converge with the contractor's expectations and previous experience, which incorporate the expectations and experience of his sub-contractors and tradesmen as well as his knowledge of the sales and service of the manufacturer. The process is determined by the influences traced in Figure 6.

Finally, the product specification enters the moment of truth. Can it withstand the contractor's propensity to shift? Not only is the contractor's profit rate (a ratio of contract price to costs) important, but equally critical is the contractor's perception of total costs. As an amalgam coalesces of owner's needs, architect's needs, the nature of the product specification, and pricing, the contractor develops a perception of total costs. Operating under a difference between perceived and actual costs caused by time delay and experience, the contractor decides whether to try to shift or buy. As tensions mount, there is constant pressure to change things in a building; to omit a specially designed mechanical or electrical system, to reduce the lighting fixtures or the accoutrements in public areas, to shift to cheaper materials. At some point will a memorandum arrive to dictate that the whole elaborate landscape work be eliminated? Such pressures can yield quite a lot of controversy. Yet the architect and manufacturer can generally prevail because of technical reasons, for it is in the design and technical requirements of the building that intrinsic product value ultimately meets its test.

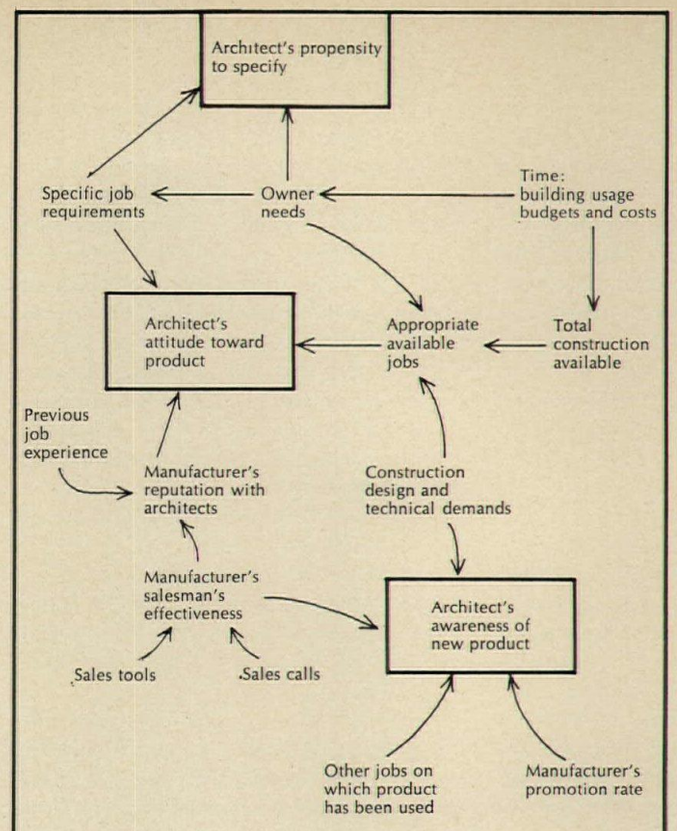

Figure 5: The propensity to specify a product by architects

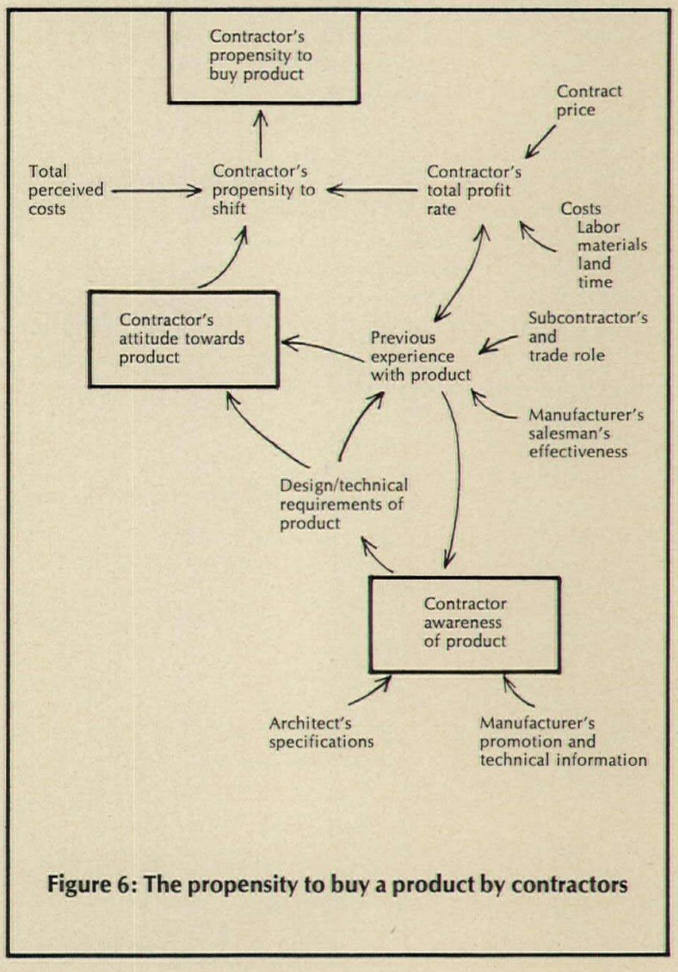

Figure 6: The propensity to buy a product by contractors

Efficient building idea: Recent report tells how to solve the acoustical problems of open offices.

Good news for architects who like the design freedom of open offices—but don't like the acoustics.

Tests by Geiger & Hamme, an independent acoustical testing agency, show you can get excellent open office acoustics by using these three things (with the help of an acoustical consultant):

1) An acoustically non-reflective ceiling—so the sound won't bounce off to other areas. (Of all the ceilings tested—including expensive coffered and baffled systems—the best, they say, is Owens-Corning's Nubby II Fiberglas* Ceiling Board in a standard grid suspension system.)

2) Sound-controlling screens—to stop the sound from going directly from one work area to another. (Either directly or by reflection.)

3) A masking sound system—technically designed to fill the sound voids without increasing the overall ambient noise level. This makes it possible to hold personal conversations in a normal voice—without being overheard.

If you'd like the whole story, send for our free design guide, "Achieving Acoustical Privacy in the Open Office." Write to Mr. A. A. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

*T.M. Reg. O.-C.F.

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IRMA
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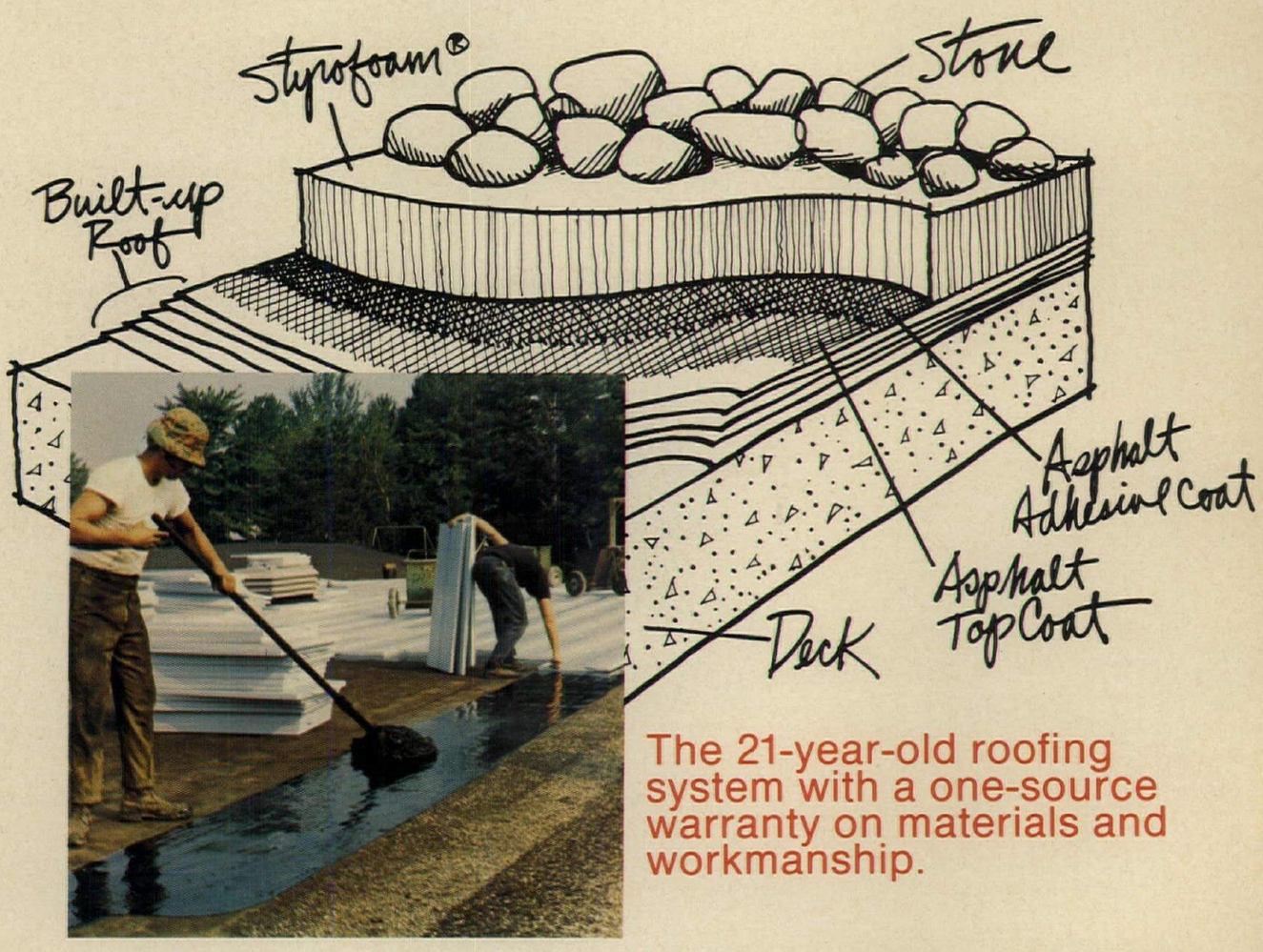

The 21-year-old roofing system with a one-source warranty on materials and workmanship.

With the IRMA roof, Amspec offers a patented* roofing system that is the result of a 20-year research and development effort. It's a system that provides the designer and the owner greater reliability, and a system supported by Amspec's nationwide network of technically-trained roofing specialists.

In the IRMA system, conventional roofing materials are used in a different way to substantially reduce, often totally eliminate, built-up roof failure. A conventional three-ply, 15-pound asphalt-saturated membrane is put down directly onto the roof deck, covered with STYROFOAM® RM brand plastic foam and finished with crushed stone or other types of top covering.

Advantages of the IRMA system

- Does two vital jobs no other system does. Protects the membrane, and insulates the building.
- Uses only conventional roofing materials readily available from regular sources.
- Allows better use of labor, quicker closing-in, better scheduling of sub-contracted inside work.
- Makes it easier to reroof, add on a floor or add insulation to an existing building.
- Based on technology developed by The Dow Chemical Company, supported by 20 years of testing.
- Installation by licensed roofing contractors, with materials specified, and design assistance provided, by Amspec.

Total responsibility from one source

IRMA is a total roofing system. Design, design assistance, material specifications and installation are provided by one source—Amspec. There is no divided responsibility. Every IRMA roof carries a warranty that:

- Directs complaints to Amspec—not the architect.
- Gives the owner a contractual agreement only with Amspec, eliminates divided responsibility.
- Assures the roofer of training and technical assistance, allowing him to bid a superior roof system at a competitive price.

*U.S. Patent No. 3,411,256
® Registered trademark of The Dow Chemical Company

AMSPEC

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Columbus, Ohio 43220

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PRODUCT SPIN-OFFS AND MODIFICATIONS STEM FROM APPLICATIONS OF SYSTEMS BUILDING

As systems building applications have grown in number, so has the list of products that comprise them. The stimuli have been, on the one hand, developments in industrialized housing in Europe; and, on the other hand, the several school systems projects in California and Canada.

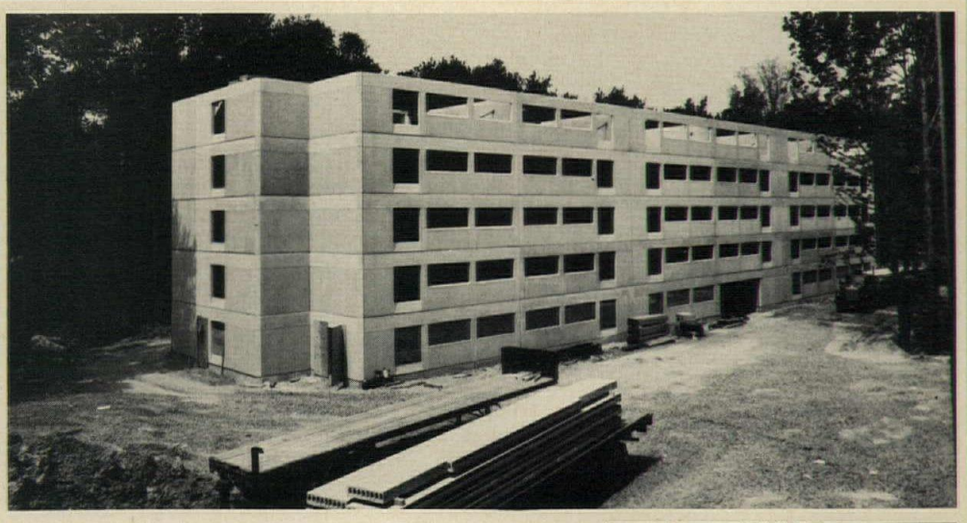
For the most part, industrialized housing systems of Europe are based on the use of precast concrete elements, detailed so that they fit together as an integral system. Generally these precast parts have been produced in off-site factories to facilitate speed of production and quality control. Several of these systems have been made available recently in the U.S., with some modifications to accommodate the systems to larger room sizes, code requirements, etc., and to achieve upgrading in finished appearance.

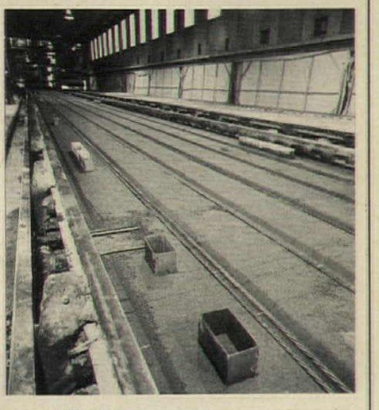
Even prior to the introduction of these systems, however, a number of plants had been in production here making long-span prestressed plank; and it was natural that some companies having these facilities expanded their plants for the production of wall panels, in some cases being based on the proprietary European systems. The wall panel systems are, in some cases, highly sophisticated in their design for thermal movement and for weatherproofing. Another company, long active in precast product manufacture has used the prestressed plank, but developed its wall panels.

Variety in the facades is possible with the fenestration, and with different types of textures as determined by the types of forms available in the factory.

A French system in steel is improved to meet cost disciplines of U.S. market

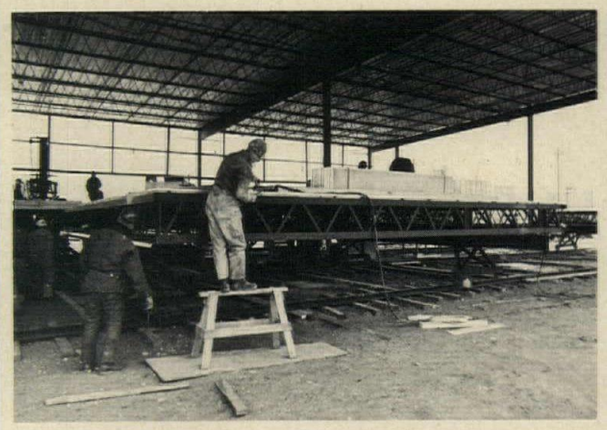
Industrialized housing is also available here in a system that is entirely steel. It originated in France, but has been refined in a number of respects for U.S. application: the structure was simplified for economy. Steel wall panels with newly-detailed joinery also were developed. The structural floor system incorporated a U.S. made steel-edged gypsum plank that helps simplify on-site assembly of the prefabricated floor panels. Conventional steel-stud gypsum partitions

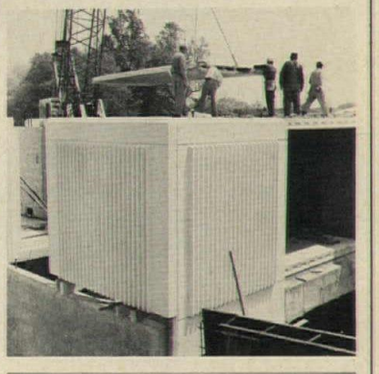


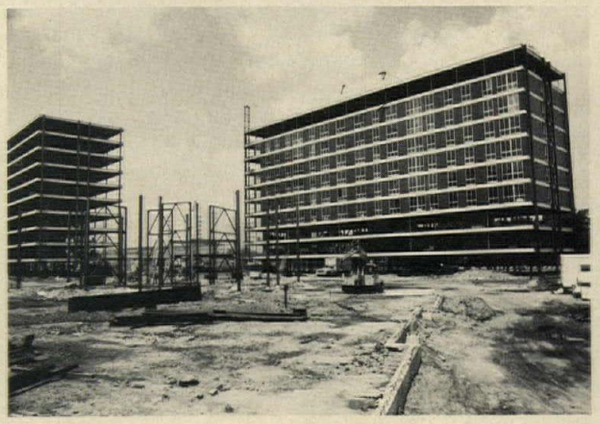


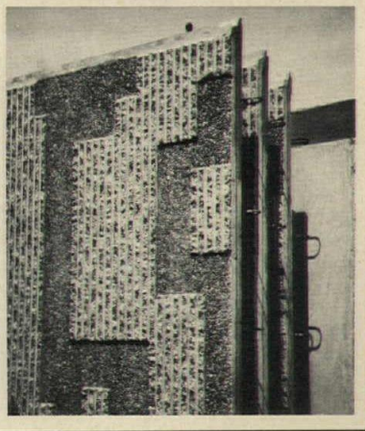
INDUSTRIALIZED HOUSING COMPONENTS

Factory-made precast panels form the basis of many industrialized housing systems now in the U.S. market. New manufacturing facilities complement existing ones that have been producing prestressed plank for a variety of building types. Both European and American-bred systems are being used for apartment buildings and dormitories. A new industrialized steel system, using many stock materials, was recently introduced in Chicago.









simplified the interior space division and electrical wiring. A vermiculite-based ceiling tile from France is being used for the finished ceiling.

School systems projects: an incentive to product improvement and innovation

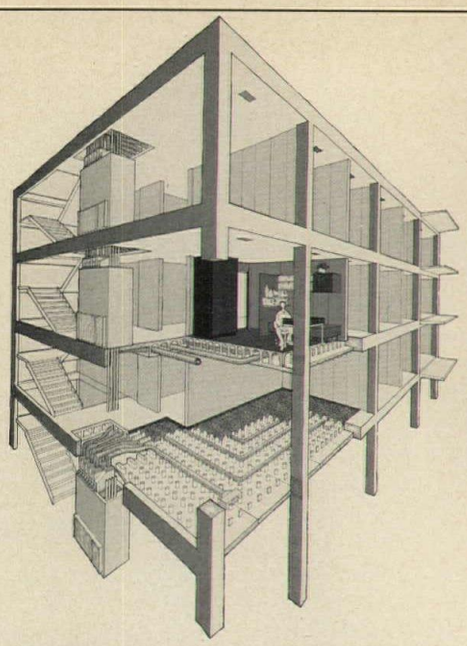
California's School Construction Systems Development project set in motion a number of product modifications to suit the open-plan concept of the 13 schools in the project; and it encouraged one hvac manufacturer to develop a new low-profile rooftop multi-zone heating and air-conditioning unit. The structure originally developed is no longer available, but a different one that achieves the same objectives was later developed based on an adaptation of an existing, standard, quick-assembly system well known to architects and engineers. Neither is the original lighting system available, but others on the market similar in appearance and function have taken its place. S.C.S.D.-type schools have been built in many parts of the country, including a large number in Florida.

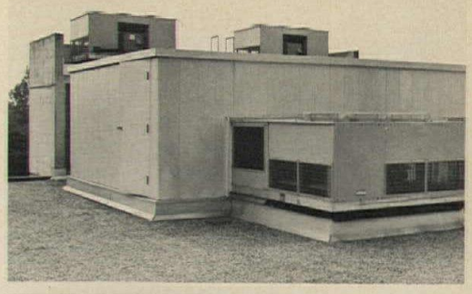
A different structural system submitted —but not selected—for the S.C.S.D. program that uses a space-grid principle has since found application in many schools outside the S.C.S.D. program.

In California's University Residential Building System project—which used an open performance specification approach, as did S.C.S.D.—the bid-winning hvac manufacturer developed a new interior, multi-zone air-handling unit that provides individual temperature control for apartment areas. Following on the heels of S.C.S.D., was Toronto's Study of Educational Facilities (S.E.F.) project, in which one of the most innovative new developments was the electrical and communications distribution system that allows for flexibility in location of lighting fixtures, (via cord-type wiring) and power outlets for telephones, intercom, etc. (via in-space electrical "columns.") A highly successful product in the program, because of its versatility as well as its bright colors, is the modularized school furniture sub-system that allows a wide variety of configurations of modular units for desks, shelves, storage units, etc.

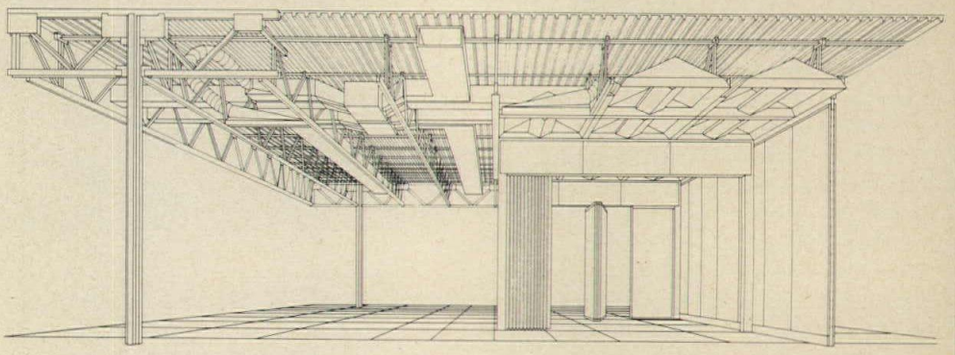
S.E.F. also came forth with a novel lighting-air-distribution system, in which the sloped ends of the lighting troffer serve as a boot for air supply and return. To meet stringent fire codes, the boot incorporates a heat-degenerative element to shut off the air slot in case of fire.

One of the fundamental requirements of the sub-systems developed for S.C.S.D. and S.E.F. was that they be dimensionally compatible—or to use a systems' term, that they inter-face with each other. Because the sub-systems idea has caught on in the school field, other manufacturers are seeking to tap the potential market, and manufacturers with products in several disciplines obviously can stress interfacing capability.



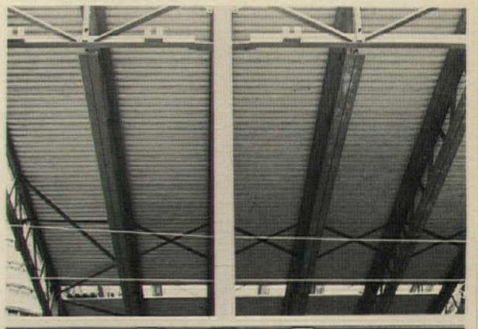


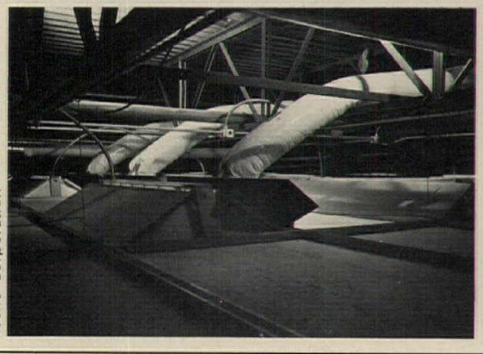
Educational Facilities Laboratories

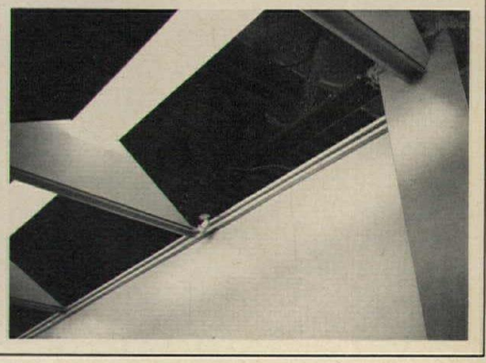


COMPONENTS FOR SYSTEMS SCHOOLS

Unitary air-conditioners and air-handlers gave the flexibility specified in systems schools and college dormitory performance specifications. Easily assembled structural systems with long spans and modular flexibility were another response. Combination lighting and air-handling fixtures were a result of the search for functional and dimensional compatibility of sub-systems. The modular approach also fostered a new furniture concept.





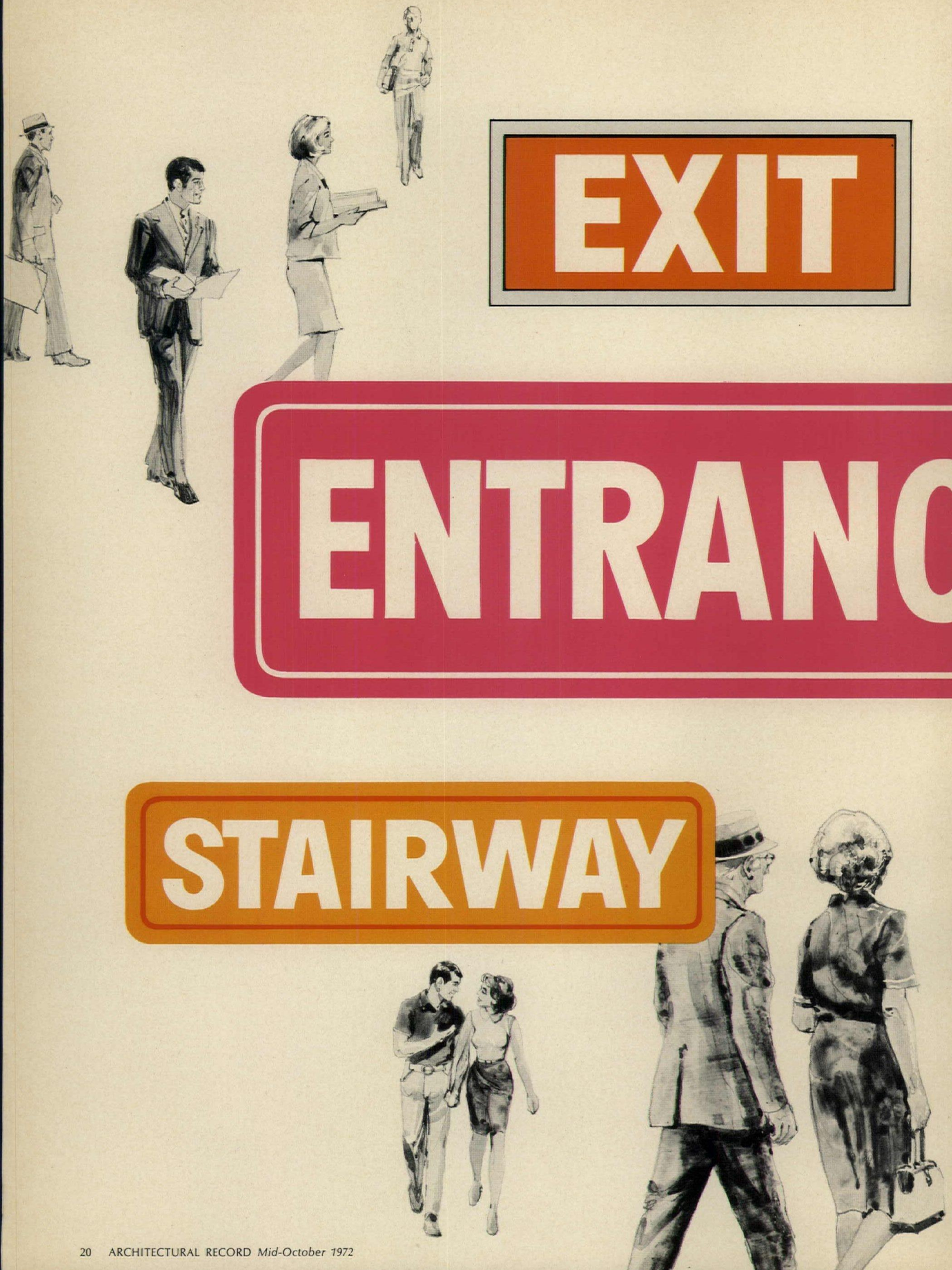


Keene Corporation

Hager Introduces

ECO

(Electronic Control of Openings)


EXIT
ENTRANC
STAIRWAY

ECO

The new simplistic system for security and traffic control

With today's growing concern for greater security, building designers find that openings must be increasingly involved with the closing.

A new system for controlling traffic and monitoring access areas brings the entire program within bounds for both effectiveness and budgetary considerations.

Hager introduces ECO, the electronic control of openings. Basically it is rather a simple package. Yet it can monitor an entire building, with silent signal or audible alarms to alert the central station that a door or area is being violated.

The ECO system is compact. A complete unit is little larger than an attache case. Yet it is highly sophisticated in operation; provides all and more of the essential functions of much more complex installations.

The comparatively low cost is further benefitted because the system is designed to become an inherent part of the building specifications. Wiring for ECO is part of the regular electrical installation. The control module merely plugs in at any designated location. Hager electric hinge components make it possible to completely monitor and control any number of individual openings remotely.

Five openings or 100 or more are monitored and/or controlled at a single station. The number of openings controlled can be increased merely by adding plug-in modules, so the system fits in a practical way to exact building needs without overages.

ECO can be set to signal when a door is violated; can be lock-integrated to show whether a door is secured; and can activate the door lock from the central station.

Hager

It all started with the Hager ELECTRIC HINGE

Three years ago Hager introduced the electric hinge, a unique hinge (now patented) incorporating electric contacts.

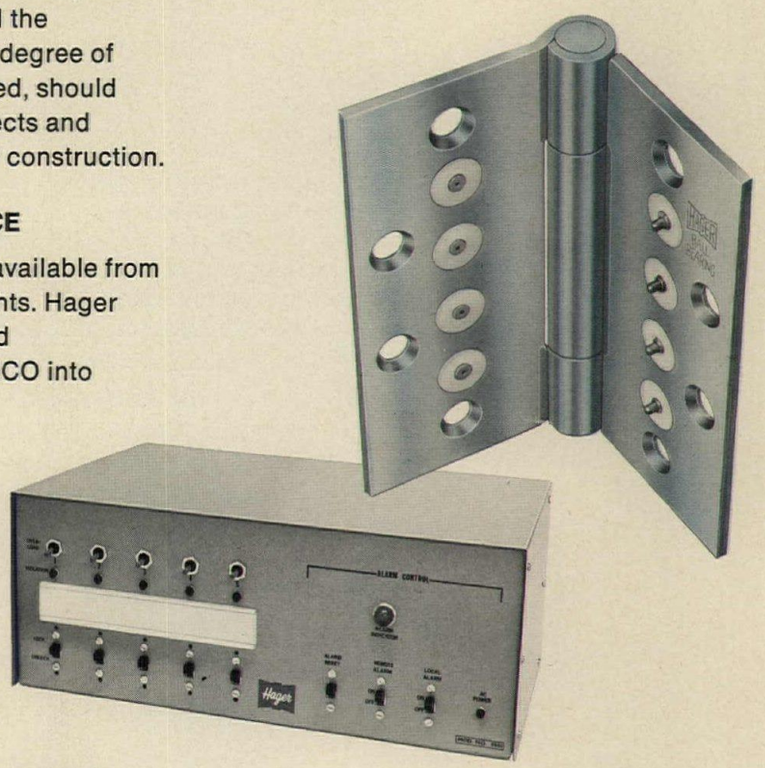
This hinge made remote openings control possible for the first time . . . using standard hardware products.

The potential for this new development was quickly recognized by architects and building owners. Hager engineers then set about to create a central control system that could make best use of this hinge signaling innovation. The result is here in ECO, electronic control of openings.

ECO is unlike the various methods you may have worked with in the past. The compact size, the ease of installation, and the adaptability of ECO to most any degree of security and traffic control wanted, should warrant consideration by architects and builders now contemplating new construction.

HAGER CONSULTANT SERVICE

Detailed information on ECO is available from architectural hardware consultants. Hager engineers provide schematic and specifications that incorporate ECO into the general wiring plans.



Patent No. 3,659,063

HAGER HINGE COMPANY
139 Victor St., St. Louis, Mo. 63104

"Everything Hinges on Hager!"

Printed in U.S.A.

For more data, write A9 on inquiry card

Getting Out of the Information Jungle

Anna M. Halpin, AIA, Manager, Classification Policy, Sweet's Division—McGraw-Hill Information Systems Company

The architect over the years has been enjoying a free ride in the information services area. Because manufacturers have been willing to distribute catalogs free of charge to promote their products, the user has been content to wade through the literature to sift out what he needs. But, up to now, the problem has not been so great as to motivate the user to do something about it.

Despite the fact that computer technology has advanced greatly and is available to help solve storage and retrieval problems, no solution is yet in sight for the architect and the construction industry. The real problem is the *quality of information* that provides input to any system. The content of literature must be improved to provide information that is comprehensive and contains adequate data for the decision-making process. This problem must first be solved for the present hard copy (paper and ink) communication system. Once the quality of information has been improved, then the use of new technology can be considered. Of course, employment of a computer or other technological developments, introduces another consideration, that of economics and willingness to pay for such an information system.

All of which leads to additional questions: What steps can and are being taken to improve information retrieval? Who is going to pay the bill? And where does the responsibility lie for improving the quality of input data? With the manufacturer? The information services? The architect?

The manufacturer

The manufacturer's promotional advertising is an attractive means of creating interest in products, but his product literature rarely provides the depth or quality of information that will be necessary for each user requirement. He has been reluctant to provide technical data which would allow direct comparison of his products with those of his competitors, documentation of his claims by demonstrating compliance with recognized reference standards, and other categories of information needed for evaluation and judgment.

Once all manufacturers agree to provide such documentation in a consistent and comprehensive way, then the information requirement will be satisfied and there will also be the basis for some kind of automated retrieval system. The user, in the past, has not been insistent or critical of the quality of information provided. Hence, the manufacturer has little motivation to provide such documentation. That motivation must come from the user, the architect.

The information services

The oldest form of user service on building product information is the catalog file. The Sweet's Catalog Files have been distributed without charge annually for more than 70 years to all design, specifying and purchasing offices that carry out a significant volume of activity in the construction industry. The catalogs are provided by manufacturers who pay for the service, which also includes organization of the information into bound volumes, classification and indexing to facilitate user retrieval. Similar catalog services exist in other countries: Sweet's Canadian Catalog File, The Architects Standard Catalogues in England, Schweizer Baudokumentation of Germany, Svensk Byggkatalog of Sweden and others.

Film services, microfilm and microfiche, have been available in this country for several years from organizations such as Instant Data Access Control (IDAC), Information Handling Services—IHS (Spec Data II) and Showcase. Each of these organizations has also utilized other developments in technology as a part of its retrieval service, such as computerized printout of indexes and special color processing. The film services depend on manufacturers' product literature for the information source. Charges for the services are either user-paid or manufacturer and user-paid.

The Department of Industry, Trade and Commerce of Canada has a current project to establish a national information system called the BEAM PROGRAM for the construction industry. The first effort is the development of a Thesaurus of Canadian construction terminology, to provide an authoritative, controlled vocabulary reference for the preparation of information documents. Initially, the service will be user-paid and ultimately charge the manufacturer as well.

All of these varied services are evidence of progress and attempts to solve the information storage and retrieval problem. However sophisticated the service or the technology, the result is no better than available product literature.

Programs to improve information quality

Two projects in existence for several years have been developed to improve communications in the construction industry in general, and product information in particular.

The Sweet's GuideLines program was begun two years ago by the McGraw-Hill Information Systems Company. The program has been developed in cooperation with AIA, ASLA and CEC to encourage the manufacturers to provide precise, comprehensive and well organized product literature. The documents recommend that data be provided in a format to allow easier comparative evaluation with other manufacturers' literature, list applicable reference standards for product selection and specification based on performance criteria. Further, they provide direction for required installation details, instructions, and other detailed information required for each product to increase the depth and uniformity of content in product literature.

The American Institute of Architects has recently updated its Document E101, "Technical Literature for the Construction Industry." This document is designed to provide the basis for preparation and identification of construction product literature by generally defining the requirements for content and organization.

The architect

Detailed product information is no longer a mere convenience. It is a necessity. The time has come for the architect to participate actively in solving the information problem. The architect, and all participants in the construction industry, must become involved directly to provide the motivation for improving the quality of information being generated.

This can be done in a number of ways. The obvious approach, and perhaps the most effective as well, is to work through, and be supportive of, projects endorsed by professional and technical organizations. If the professionals insist upon good product literature by making the manufacturers aware of documents such as Sweet's GuideLines and AIA document E101, the manufacturers will undoubtedly comply. Without this first essential step, nothing can be done to solve the information problem, let alone lead to any automated system of data retrieval.

season-all®

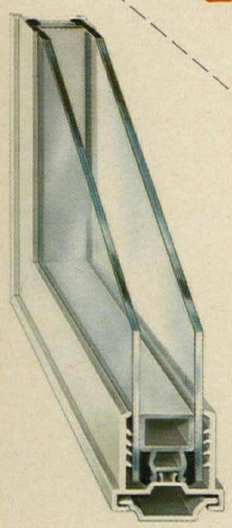
introduces a revolutionary window

→ better than aluminum windows • better than vinyl windows better than wood windows

Here's why—Aluminum windows are strong and durable, but the metal conducts heat and cold. Vinyl windows have excellent insulating properties and need little maintenance, but are structurally weak and distort easily. Wood windows are strong and non-conducting, but the sash warp and stick and require scraping, puttying and painting to prevent deterioration. Season-all's revolutionary new windows are engineered to combine all of the desirable qualities of aluminum, vinyl and wood, with none of the drawbacks.

Here's how—Season-all takes heavy-gauge aluminum extrusions and encases them in pure white (or bronze) rigid vinyl extrusions to eliminate metal-to-metal contact, minimize condensation, and create a window of unparalleled strength, beauty and operational ease that needs virtually no maintenance. Both inserts are glazed with inch-thick insulating glass units to reduce intrusion of outside noise and cut costs of winter heating and summer cooling, eliminating the need for storm windows. Both sash glide quietly and smoothly with dual vertical balances, double-lock for security, and tilt in (on exclusive heavy-duty pivot-lock shoes) for easy indoor cleaning.

And that's not all—Season-all windows are custom-built for every opening, allowing you freedom of design for new construction and significant savings of time and money in rehabilitation. A skilled workman can replace old units with Season-all windows in as little as thirty minutes per unit . . . from inside and with no replastering, redecorating or structural changes.



These new windows will be available in early 1973. Manufactured with automated assembly under rigid quality control and → backed with Season-all's twenty-five years of window technology, they will surely revolutionize the market.

Patents pending.

Season-all is the world's largest manufacturer of replacement windows and storm-screen windows and doors. For more details, mail this coupon to

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Indiana, Pa. 15701

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building products by season-all

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For more data, write A10 on inquiry card

product reports 73

On the 201 pages that follow are the results of a new effort by the editors of the RECORD—an attempt to show in an organized, easy-to-use-for-reference fashion the most important new products introduced in 1972 or to be introduced early in 1973.

To develop the material for the issue, we wrote to over 1500 manufacturers across the country asking them to submit their products for consideration for the issue. As they arrived, they were reviewed by the editors, the selections made, (we had far more than it was physically possible to publish), the products categorized according to the Uniform Construction Index—a 16-division format for specification, data filing, cost analysis, and project filing now adopted by all industry groups (including CSI, AIA, AGC and their counterparts in Canada, as well as Sweet's Catalogs), and then went into production—a task which ultimately involved much of the RECORD staff though the issue was under the direction of—and largely produced by—a new member of the staff, Chuck Hamlin.

How to use the issue

The cover of the issue serves as a listing of the 16 Uniform Construction Index (UCI) Divisions, and related product categories or "sections" are grouped under these divisions. The page number for each Division can be found on the Contents page, page 3.

With the pages that follow, the products are grouped under the appropriate section of each division, each with an inquiry number at the start of the text item and under the related picture.

If you wish to obtain more information about any of the products, simply write the number of the item in a space on one of the two inquiry cards on the inside back cover. They fold out so that you can keep a card in front of you as you go through the issue. If both cards have been used, you'll find extra coupons on page 182.

Any product which has been pre-filed in 1973 Sweet's Catalogs is so marked in the text, with an A (Architectural File), I (Industrial Construction File), L (Light Construction File), or D (Interior Design File).

If you know the name of a manufacturer whose product you are interested in, you can check directly in the Manufacturers' Index, page 235.

Of course, there is no rule against browsing—and we hope you will; and hope you find this issue as valuable as we think it can be. —W.W.

Here's an idea as fresh as a daisy.

New odorless convenience copier for fast engineering check prints.

Now your entire drafting department can breathe easier! That's what Bruning's PD-80 can do for your drafting and check print operations. No ammonia, no venting problem. That's the beauty of the remarkable Bruning PD Process.

That—plus the PD-80's compact design (64″ x 13½″ high) — means you can put it anywhere. Make quick check prints right where you make your drawings. No long walks, no long waits. Whether you make just a few prints a day, or dozens, the PD-80 will really pay off in the valuable time it saves your busy draftsmen.

The fast, high-quality PD-80 is the only odorless convenience engineering copier. Turn it on, feed tracings at once, get finished prints in seconds.

Your local Bruning man is ready to show you the remarkable PD-80 in action in your drafting room, using your tracings. And to show you how easy it is to put this cost-cutting machine to work for you on an attractive rental plan. With no capital investment, no long-term commitment.

Call our office nearest you. Or contact us at 1555 Times Drive, Des Plaines, Ill. 60018.

Once you've had a whiff of this great new idea in check printing, you'll want a PD-80 in your drafting room as soon as possible.

BRUNING DIVISION

ADDRESSOGRAPH MULTIGRAPH CORPORATION

75 YEARS OF LEADERSHIP IN ENGINEERING GRAPHICS • 1897–1972

For more data, write A11 on inquiry card

office supplies and equipment

uci 1

If you read the products in this Division as a unit, the message is clear: time is money. Products that range from pencil sharpeners to computers are offering the improved technology that can, as the companies claim, make office procedures less difficult, less time-consuming, more economical.

For example, reproduction equipment boasts high-speed operation and can even lend a hand in the rapid distribution of drawings. Office machines, including a range of calculators, are designed specifically for the needs of architects and engineers, with capabilities that aid designing functions and estimating. Plan filing and drafting operations are approached by manufacturers offering a range of tables and files that help organize work and make it easier at the touch of a pedal—automated drafting tables are very much in evidence.

Clearly products representing the most potential—and the greatest dollar outlay—for the architectural office are computers and related devices. The building professions will see the advance of computer usage to the extent that by 1975, experts feel, most of the medium-to-large firms will be using computers in some way.

Already, the computer can be used in nearly every phase of the architectural-engineering process. Uses include: market research, site selection, financial analysis, space planning, perspective graphics, drafting, automated text processing, cost estimating, business data analysis and engineering applications.

To interface with the computer, an architect or engineer has several options. Obviously, he can install one in the office, using an economical desk-top model for such uses as drafting or cost estimating. The time needed to train a user is minimal.

Another approach is through the use of time-sharing, using a terminal unit, with card reader and high-speed printer attached. Medium-to-large firms find this mode satisfactory, and less expensive than installing all the hardware in the office. If a firm wishes to develop computer capability, this is a reasonable way to begin, employing one of the computer service bureaus that sell time.

Finally, the advice of a computer consultant can be beneficial in the early stages, if you select a consultant experienced in architectural applications. Many are not and this could lead to an improperly sized and priced computer system.

Prepared with the help of William R. Miller Design Methods, Los Angeles.

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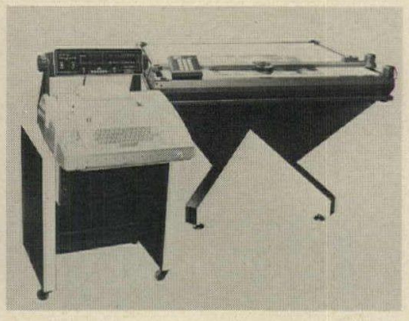

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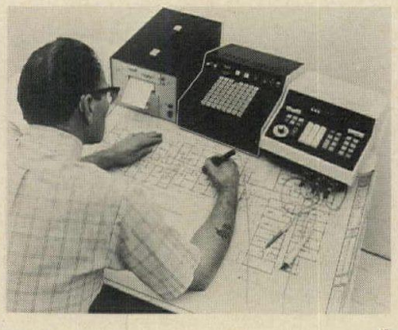

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COMPUTERS

1 COMPUTER DRAWINGS / Aimed at publication and drafting departments with large quantities of technical drawings to produce, this system transforms rough sketches into reproducible printed diagrams. Storage capabilities are also offered. / Systems Engineering Laboratories, Inc.

2 COMPUTER DRAFTING / This British hardware/software digitizing system features programs for cartographic applications, schematic and logic diagrams and others. It is said to offer a general-purpose engineering drafting package for all types of graphic representations. / Ferranti Electric Inc.

3 GRAPHIC COMPUTER / A computerized graphical design and drafting system for printed circuit boards, integrated circuits and schematic drawings is offered. / Applicon Inc.

4 DIGITIZER / Recommended for use in urban design and mechanical design, this unit provides a tool for digitizing basic information. / Computervision Corp.

5 GRAPHIC DIGITIZER / Anything graphic or printed circuit artwork can be converted to digital form with this semi-automatic graphic terminal. The 36 in. by 42 in. unit also provides real-time measurement, useful in land planning and similar projects. / H. Dell Foster Co.

6 ESTIMATING SYSTEM / This system is available with two optional plug-in units, one a paper-tape verifier and the other a memory unit with 30, 60, or 120 take-off item storage capability. Combining all units gives architects time-saving ability to handle area, volume, pricing and scale conversion problems. / Diversified Electronics Co., Inc.

7 COMPUTER GRAPHICS / A complete line of graphics terminals and applications software is offered with programs for architecture, mechanical drawings and more. The *Interact* unit permits rapid and precise interaction between the computer and the operator. / Computervision Corp.

INFORMATION SYSTEMS

8 COMPUTER TERMINAL / The *Model 74 Batch Terminal* provides communications capabilities with a variety of central processors, including IBM, Control Data and Univac. The terminal features line printing at rates up to 400 LPM, card reading at 300 CPM and transmission speeds up to 4,800 bits per second. / DATA 100 Corp.

9 AUTOMATED DRAFTING / The *SketchPrep* system features computer-aided conversion of sketches to finished drawings. All entered data are available for recall in the form of bills of material lists and material cost estimates. Instant recall of repetitive drafting elements is also offered. / Dimensional Systems, Inc.

10 DATA ENTRY TERMINAL / This unit provides keypunch data entry and features an IBM *Selectric* typewriter and transmission rates up to 2,400 bits persecond. Up to 600 card images can be stored. / DATA 100 Corp.

MAINTENANCE/ OPERATIONAL

11 DRAFTING TABLE / The *Designer II* adjusts to nine pre-set positions with angles from 0 degrees to 60 degrees. Model can be

For more data, use inquiry card.

raised from 30 in. to 37 in., with spring action. Sheet and tool storage is provided. / Plan Hold Corp.

12 PLAN FILE / Ease of retrieval and extra storage are achieved with this unit, capable of storing up to 2,700 prints. The *Century I* has front-loading binders, each with its own index. Tubular steel construction with baked enamel finish, accented with walnut. / Plan Hold Corp.

13 STUDENT DRAFTING UNIT / A four-post steel art and drawing table, the basic unit is equipped with storage, including room for six boards up to 20 in. by 26 in. Choice of four board sizes from 24 in. by 30 in. to 36 in. by 48 in. Plastic laminate top. / Stacor Corp.

14 DRAFTING TABLE / The *Auto-Shift* model consists of a front table, basic table with sliding reference and a reference desk. An integral counterbalancing device provides height adjustment from 34¼ in. to 42¼ in. and full tilt from horizontal to 90 degrees vertical. / Hamilton Mfg. Co.

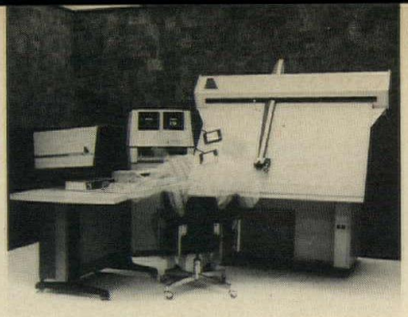
15 DESK STORAGE / The *Officemaker*, 59 in. long, 30 in. high and 14¾ in. deep, can be added to a standard desk. Both vertical and horizontal dividers are available and the unit can be finished to match office decor. / Kwik-File.

16 TRAINING UNIT / This model is made for schools, with a board that goes from full vertical to complete horizontal. Multi-student storage is provided with individual locks for six to eight students. Units can be positioned in a room in an L-shape or in any way desired. / Stacor Corp.

17 DRAFTING UNIT / Designed for the person who requires extensive reference area and storage, this automatic drafting table is available in any combination of six drafting board sizes and three reference desk sizes. The table features toe-touch pedals for control of board height and angle. / Stacor Corp.

18 TENSION DRAFTING TABLE / Added to the line of solid steel in-line drafting tables are two radius tension models. The entire line is offered with left or right detachable reference cabinets, freestanding on a closed base. / Huey Co.

19 DRAFTING TABLE / A pedestal-type unit, the *Radial 1* features 3-way positioning including full circle swivel. The table tilts a full 90 degrees, horizontal to vertical and a gas spring counterbalance system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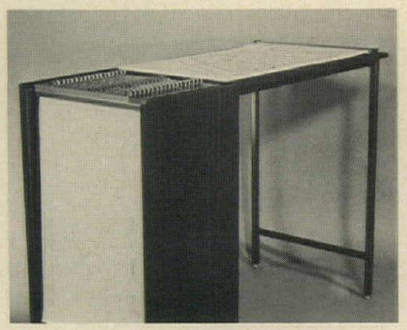
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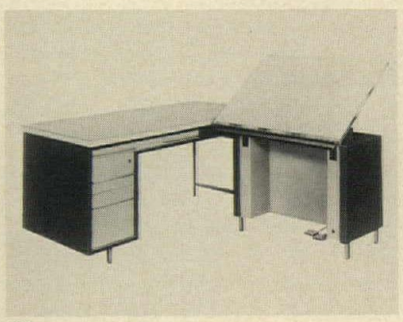
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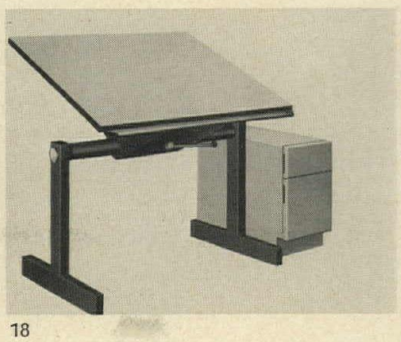
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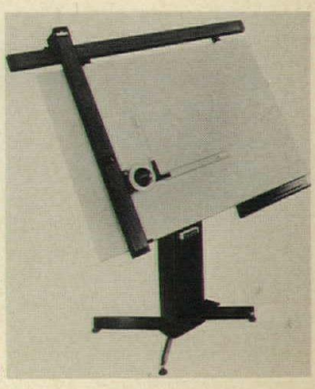
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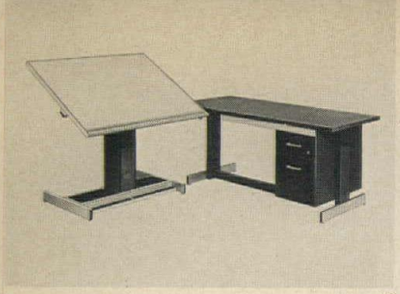
*Included in 1973 Sweet's Catalog File(s).



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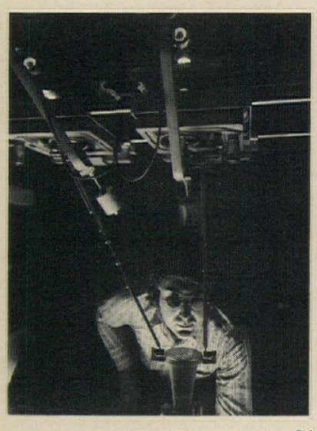

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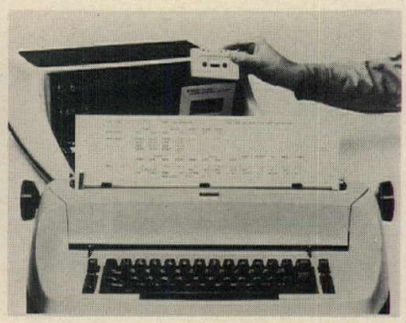

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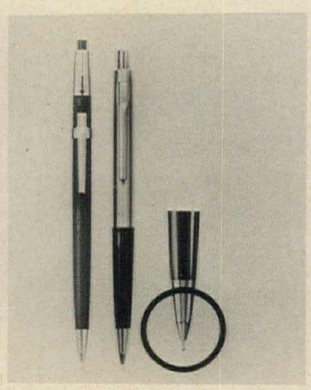

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makes adjustments easy. Pineblock drawing board with polyvinylchloride coating. / Dietzgen Corp.

20 POWER DRAFTING TABLE / Electrically-powered vertical travel is one feature of this model with reference storage components. Solid steel construction is featured, with color selection and brushed-chrome outrigger legs. / Hamilton Mfg. Co.

21 PEN CLEANER / Rated 50 per cent more powerful than other units, this ultrasonic, solid-state cleaner uses minute bubbles to clean pens, air brushes and sable hair brushes, in 20 to 30 seconds. / A. W. Faber-Castell Pencil Co.

22 PIVOT FILING CABINET / Designed for filing of plans and prints, this steel cabinet can be opened from the top and front. The hanging binders can be easily spread for quick filing and retrieval. Unit will hold up to 2,400 sheets, up to 60 in. long. / Plan Hold Corp.

OFFICE MACHINES

23 CUTTING MACHINE / This product is recommended for accurately reproducing contour lines from maps for use in topographical models. Permits detailed model construction as well, making precise cuts and patterns. For use with a full range of sheet materials, including light metals, wood, plastics, cardboard, cloth. / The Cutawl Co.

24 STEREO PLOTTING / This compilation equipment is used to prepare topographical maps from aerial photos. Operator can view terrain in three dimensions in this two-color system. / Raytheon Co.

25 CALCULATOR / This 15-lb unit features silent printing at a speed of three lines per second. It has a 12-digit capacity with decimal settings of 0-2-3-5. Adds, multiplies, subtracts and divides. / Olympia USA, Inc.

26 CALCULATOR / Using simple algebraic language, this unit stores an entire expression with a single keystroke. Information is displayed on a solid-state printer. The basic model solves 17 simultaneous linear equations with 17 unknowns, with capabilities for up to 36 equations. / Hewlett - Packard.

27 PROGRAMMED CALCULATION / Consisting of calculator, an output writer and a complete heating, ventilating and air conditioning software package, this system provides broad problem-solving techniques to architects and engineers. No experience is needed to write other programs. / Wang Laboratories, Inc.

28 CALCULATOR / Designed for engineering and statistical applications, the unit features full-sized keyboard and display. Sixty-four steps of learn mode programming or 8 additional storage registers are standard and each unit in the *400* series has 16 keys with dual operations providing instant answers to up to 32 functions. / Wang Laboratories, Inc.

OFFICE SUPPLIES

29 LEAD PENCIL / The lead of this product never needs sharpening and is said to be virtually unbreakable. Extra leads, stored in the barrel, automatically feed out and when the instrument is not in use, lead retracts completely. / Yasutomo & Co.

30 COLOR LEAD HOLDER / A different color for each of the 18 degrees of hardness is offered with this pushbutton lead holder. / J. S. Staedtler, Inc.

31 FRENCH CURVE/Adjustable, this drafting curve can be shaped with the fingers to form any desired shape. It is 12 in. long, with 12-layered construction to ensure a nonrippled curved line during use. / Hoyle Engineering Co.

32 TRANSFER LETTERS / Dry transfer letters are available on a mini-size 3-in. by 7-in. sheets. Twelve styles of type faces and numerals are offered / C-Thru Ruler Co.

33 RENDERING AIDS / To help speed architectural renderings, the company has developed transfer sheets of trees, shrubs, vehicles, people and other items. / Instant Landscape.

34 ADJUSTABLE CURVE / The *Acu-Arc* can be quickly adjusted to form any circular curve with a radius between 6¾ in. and 200 in. The curve is made of transparent *Lexan*. / Hoyle Engineering Co.

35 OFFICE PLANNER / A template designed to help develop complete floor plans is made of flexible, transparent plastic, showing cutouts for exact scaled sizes of standard office furniture. The template is offered in scales of ¼ in. and ⅛ in. / Space Control Div., Conwed Corp.

36 INDIA INK MARKER / An all-purpose cartridge-filled ballpoint marker for use with India Ink is offered in a medium-width line. Fade-proof, waterproof, this marker reproduces sharply on all copying devices. / A. W. Faber-Castell Pencil Co.

37 SLIDE RULE / An extensive line of more than 50 slide rules has been introduced with graduations and eye-ease color coding that will not fade or rub off. Full-view cursor has three hairline markings for flexibility in making calculations. Student and professional models are offered. / A. W. Faber-Castell Pencil Co.

38 DRAWING PEN / This technical drawing pen offers ease of cleaning, constant ink flow and constant starts due to moisture retention. Cylindrical shanks permit use in most popular lettering scribers. / A. W. Faber-Castell Pencil Co.

39 LEAD POINTER / The product uses flexible tungsten carbide blades that automatically adjust to the position of the lead. All retractable lead holders using leads up to 2 mm in diameter can be used with this product. / A. W. Faber-Castell Pencil Co.

40 POWER ERASER / This battery-powered eraser permits pinpoint erasure of individual letters and other errors in typing, ink or pencil. Powered by two penlight batteries. / Hitachi Sales Corp. of America.

REPRODUCTION

41 ENGINEERING COPIER / Diazo printing without ammonia fumes or chemical mixes is featured on this model. It is dry, odorless and needs no venting, according to the manufacturer. Delivers an 18 in. by 24 in. print in 10 seconds. Also available on a rental basis. / Bruning Div., A-M Corp.

42 ENGINEERING PRINT SYSTEM / Automatically reproduces bulky drawings and other technical information directly from originals, reduces them in size and folds and sorts them into packages ready for distribution. High-speed operation, up to 40 prints per minute. Drawings up to 24 in. by 36 in. can be reproduced in two smaller sizes. Folder can be bypassed. / Xerox Corp.

43 WHITEPRINTER / It is said that this model reduces the odor from the diazo developing process, using a deodorized ammonia vapor developer. Venting problems are eliminated. / Welcor, Inc.

44 PHOTO RENDERING / Photography and architectural rendering are combined to present a visual representation of a proposed building in the actual site it will occupy. The same technique can be used to show alterations to an existing structure. / Eastman Kodak Co.

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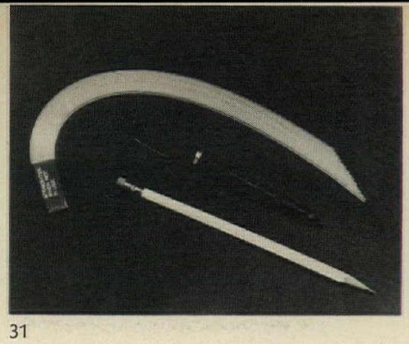
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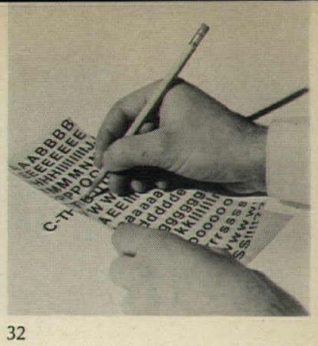
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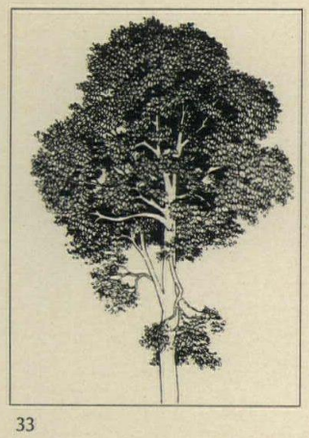
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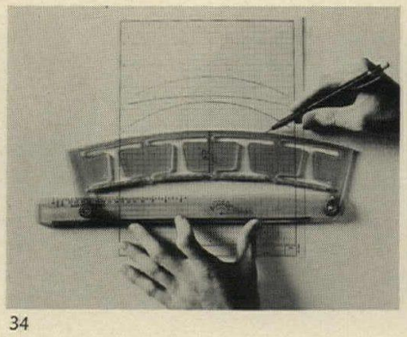
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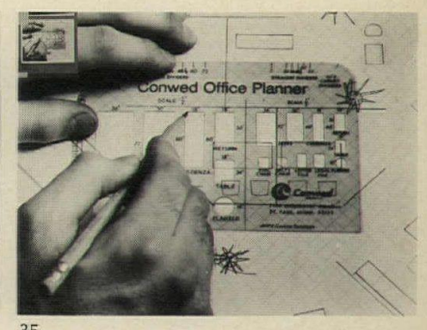

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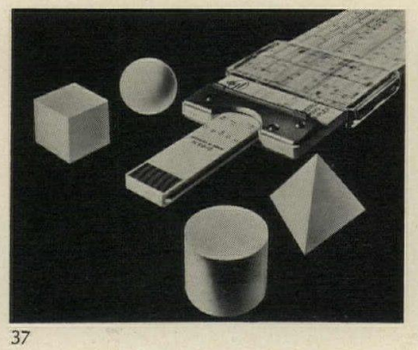
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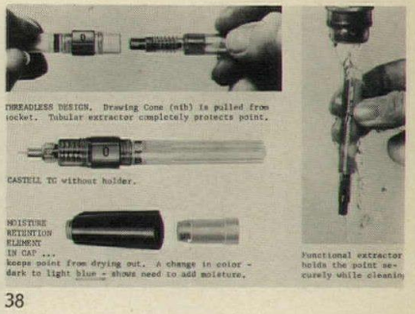

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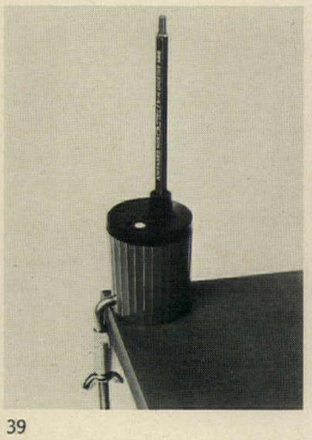
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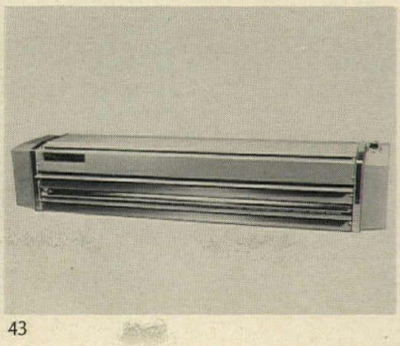
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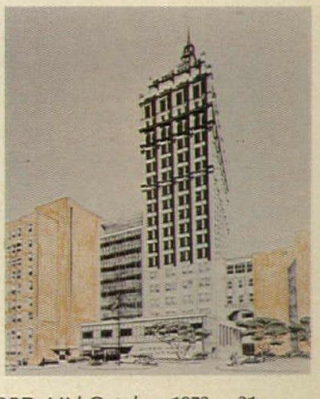
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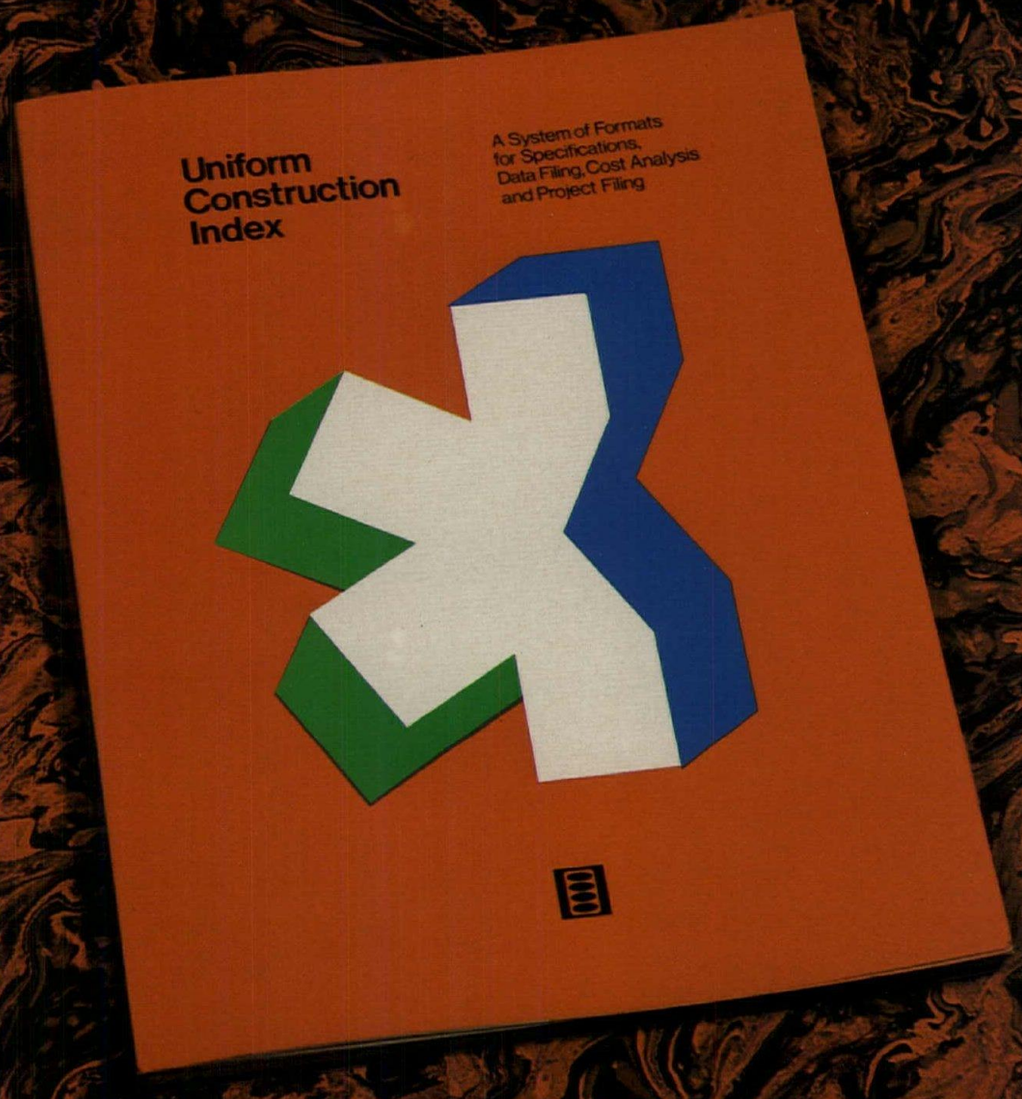
*Included in 1973 Sweet's Catalog File(s).



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site work

uci 2

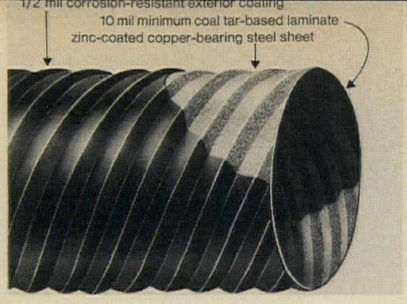
As more and more emphasis is placed on open space and its need to serve so many activities, the mass production of well-designed site elements is increasing. Elements that are conceived as part of the over-all landscape will offer the basic building blocks to the designer who needs everything from fountains to card tables, at mass-produced costs.

The products in these pages show only a portion of the options available now and increasingly offered. Systems of flexible elements allow architects the opportunity to interpret the product line in a unique way, to arrive at a cohesive, customized scheme. Using more off-the-shelf items, designers can be confident of the results thanks to this increasing interest on the part of manufacturers in site elements. No limits are imposed as to materials, with concrete, plastics, wood and steel used. Treated wood appears to be a preferred material, with not as much experimentation in plastics as might be expected.

Plastics do figure strongly in protective coatings on many sitework products, and in the athletic surfacings offered.

Concrete piling is redesigned to eliminate problems of leakage between joints and products now incorporate some labor-saving features that speed up the process of connecting multiple lengths.

Prepared with the help of
M. Paul Friedberg & Associates, New York.



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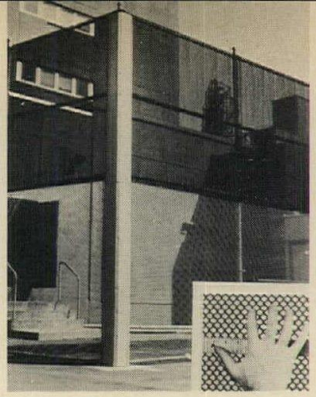

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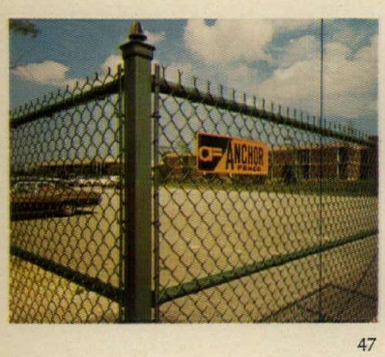

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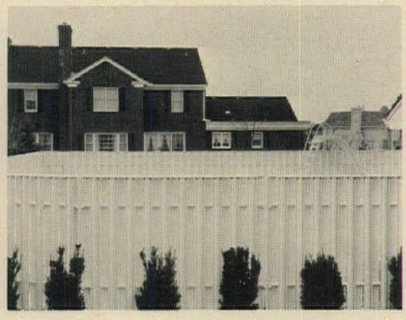

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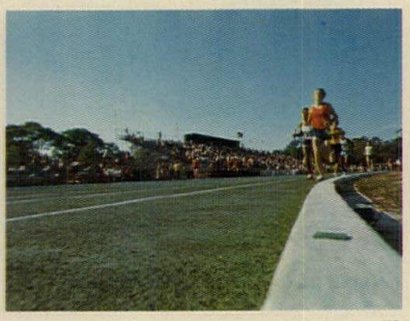

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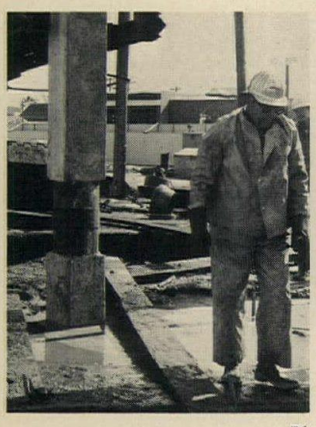

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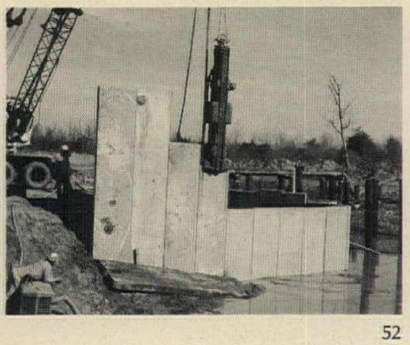

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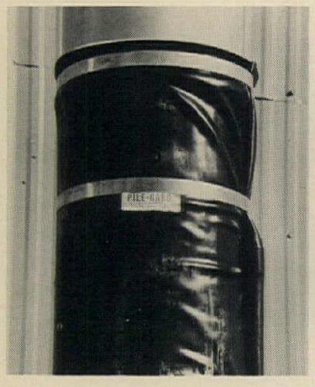

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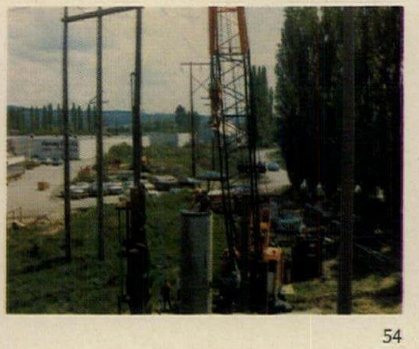

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EARTHWORK

45 CULVERT SHEET / Base material of *USS Nexon* is copper-bearing steel sheet, coated with zinc. The stream side receives a pressure-bonded coating of coal tar-based thermoplastic resin. The soil side is coated in a modified epoxy. / U. S. Steel Corp.

FENCES & GATES

46 SECURITY FENCE / Designed for maximum security, this non-climbable fence is chain-link fabric, made of corrosion-proof, resin-clad, galvanized steel. This 40-ton tensile strength barrier carries a 10-year factory warranty against rust and corrosion. / Colorguard Corp. A, I*

47 VINYL-CLAD FENCE / Vinyl-clad steel fabric and framework are featured on this fencing, recommended for industrial applications where maximum strength and minimum maintenance are required. / Anchor Fence Div., Anchor Post Products, Inc.

48 STEEL PANELING / The color-coated galvanized steel panels offer privacy, without blocking ventilation. No maintenance is required. Available in various heights and widths, with corrosion-resistant fasteners. / Rohn-Spauling, Inc. A,I*

PAVING & SURFACING

49 ATHLETIC SURFACING / A synthetic surfacing for tennis and outdoor track is being offered in an economy price range. *Highland* surfacing is a layered composite construction, consisting of 2 ft by 3 ft-tiles of rubber particles in a resinous binder. One-quarter inch thick, they are adhered to asphalt. / 3M Co.

50 SYNTHETIC TRACK / The *440* track has high-impact resilience and provides a soft, comfortable feeling for running athletes. The hardness of the surface is designed for maximum use in training with fewer injuries and problems of soreness. The track is colorful and durable. / Chevron Asphalt Co.

PILE FOUNDATIONS

51 CONCRETE PILE SPLICE / *Brunspile* uses a driving fit, wedge connector of steel and a short section of standard steel pipe embedded in the end of the concrete pile. The connection provides a simple, fast method of splicing multiple lengths. / Belden Concrete Products.

52 CONCRETE SHEET PILING / Interlocking sheets eliminate leakage through the joints, according to the producer. A neoprene interlock is embedded in the sheet pile to give a leak-free joint. / Belden Concrete Products.

53 PILING GUARD / *Pile-Guard* is an economical method for stopping corrosion in steel piling and is also an effective barrier against decay and attack of marine borers in wood piling. The product may be applied to new or in-place piles, to round, H- or I-beams. / Osmose.

54 CONCRETE PILING / Spun, pre-stressed, hollow pilings can be specified for buildings, bridges, docks, breakwaters and foundations. Outside diameters range from 12 ft to 48 ft, in lengths from 16 ft to 50 ft. The piling can be welded together on the site, using the steel end plats. / Centrecon, Inc.

RECREATIONAL FACILITIES

55 PLAY SYSTEM / Constructed of pressure-treated southern pine, this recreation equipment is available in a variety of arrangements, for children from infancy up. Architectural services are available from the firm to aid in the design of playgrounds. / Playtimber Co.

56 PLAY MODULES / Constructed of 1-in. plywood, the basic unit is a six-sided panel with cut-outs for various arrangements. / TimberForm Div., Niedermeyer-Martin Co.

57 PLAY FURNISHINGS / Constructed of Douglas Fir or Malaysian hardwood, wood members are fabricated from 3 by 4 in. or 4 by 6 in. timbers surfaced to a smooth finish. Holes are pre-drilled and each wood member is keyed to the erection drawing. Wood is pressure-treated. Members can be arranged in any configuration. / TimberForm Div., Niedermeyer-Martin Co.

58 POLE & DOWEL / This playground system is a large version of tinker toys for use in any configuration. Drop-in colored panels supply platforms, windows and other surfaces. / TimberForm Div., Niedermeyer-Martin Co.

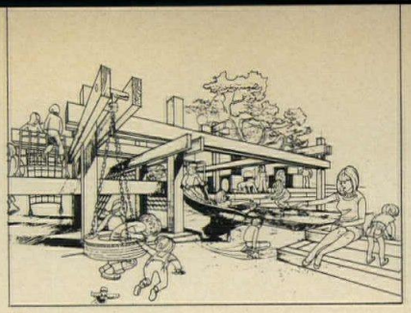
59 STEPPING COLUMNS / The finished size of the pressure-treated wood members is 11½ by 11½ in. Edges are rounded. These architect-designed systems can be equipped with tire swings, chin-up bars and many play items. / TimberForm Div., Niedermeyer-Martin Co.

SHORING

60 STEEL TRENCH SHORING / Designed primarily for sewer and

For more data, use inquiry card.

water line excavations, this reusable all-steel system consists of non-interlocking, cold-formed sheeting, a removable guide frame and bracing frame. Few cross struts are needed, allowing more room for equipment. / Bethlehem Steel Corp.



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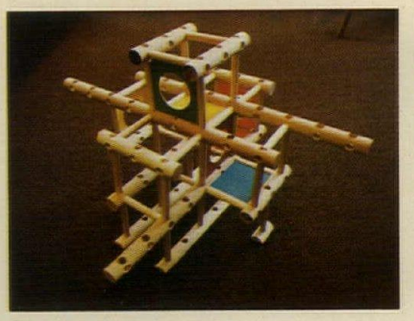
SITE FURNISHINGS

61 STREET FURNITURE / *700 Series* uses a stackable 30- by 30-in. concrete module as anchor for a furniture system including seats, tables, planters, display cases. Designed by Muller-Stewart Ltd. / Ambiant Systems Ltd.



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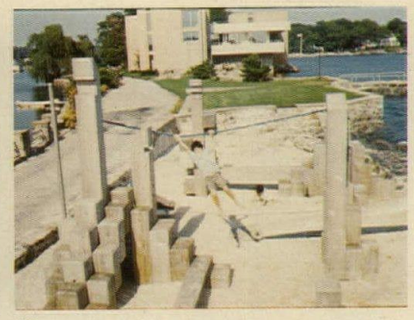

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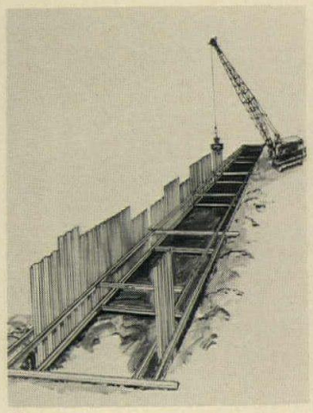
62 WOODEN SITE FORMS / Along with planters, six basic bench designs are offered on a choice of ten styles of fiberglass pedestals, or two styles of metal pedestals. Seventy-eight seating forms can be created, in a choice of woods, finishes and fascia trim. Table tops are slate-textured and offered in colors. / Landscape Forms, Inc.

63 LITTER BASKET / The receptacle is constructed of 16-gauge perforated steel and is available in 18 colors, with redwood slats or natural cypress. Unit can be free-standing or pole- or wall-mounted. A locking device discourages vandals. The receptacle stands 35 in. high. / Howard Div., Rodale Mfg. Co., Inc.



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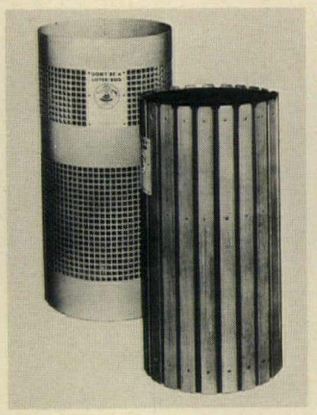
64 LITTER RECEPTACLE / Pole-mounted or free standing, the product is designed to minimize vandalism. Unit can be attached to almost any pole or metal stanchion and is removed with a key to discard litter. Perforated steel or wood slats in variety of finishes. / Samuel Furiness Mat Co., Inc.

65 WOODEN BENCH / Part of a standard line made of pressure treated wood, this bench can also be used singly, in addition to the back-to-back ganged unit shown. Available with complementing components, in a variety of sizes. / TimberForm Div., Niedermeyer-Martin Co.



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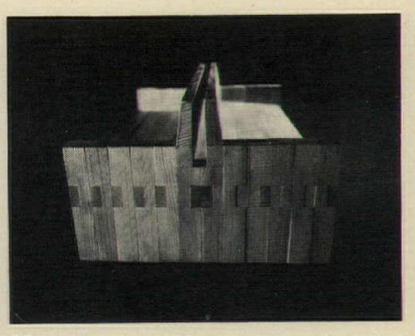

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66 PLASTIC SEATING / A complete line of fiberglass-reinforced site furnishings, including benches, planters, planter-benches, and ash and waste receptacles, is offered to relate to current architectural and urban needs. Some benches come with concrete supports. / Reinforced Plastic Industries, Inc. A, D*

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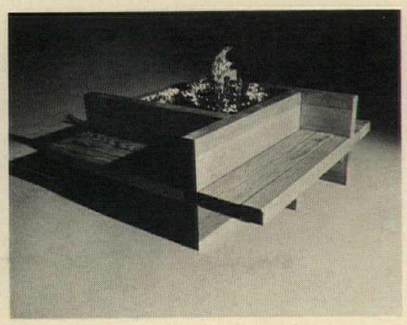

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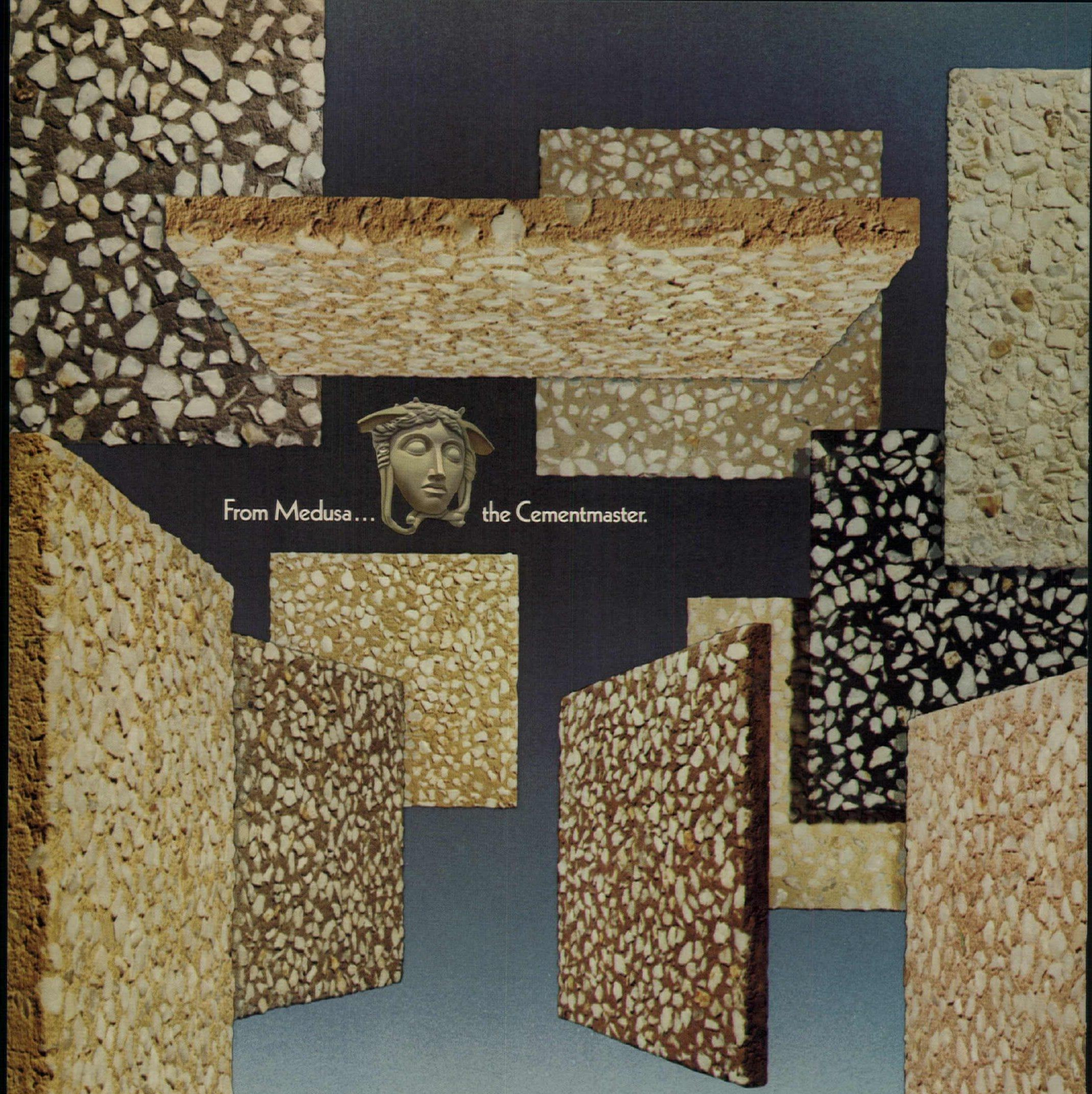
67 SITE COMPONENTS / Shown is a combination bench-planter of 4 in. by 4 in., steel-reinforced timber. Additional units in the series are trash receptacles, lighting, fountains and kiosks. / TimberForm Div., Niedermeyer-Martin Co.

*Included in 1973 Sweet's Catalog File(s).



NOW... FULL COLOR CONTROL IN ARCHITECTURAL CONCRETES

Let your imagination soar with the wide range of color designs now possible with Medusa's new colored portland cements. They offer creative freedom with assurance of color and strength uniformity to the architect and precast producer.

Medusa, the only manufacturer of colored portland cements, invites you to take advantage of the greater design flexibility offered by these ten new colors, plus white. All are pigmented, intermilled white cement base products manufactured under a strict scientific process for maximum color control. Eliminate job site mixing. Select the color you want and know that it will be uniform from start to finish.

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Write for our new Colored Portland Cements brochure. Medusa Cement Company, P. O. Box 5668, Cleveland, Ohio 44101.

MEDUSA

MEDUSA CEMENT COMPANY Division of Medusa Corporation

For more data, write A13 on inquiry card

concrete

uci 3

The products in this Division reflect continuing trends to make concrete more readily available at competitve prices nationally, and more economical due to factory-finishing and simplified field procedures.

Improvements in admixtures, for instance, permit more all-weather construction, as well as greater strengths in concrete. Improved attachment products for concrete are simplifying such procedures as curtain wall installation—many fasteners are self-tapping which brings further economies to field operations.

As more concrete is being used in exposed situations, surface finishings have been given careful consideration by manufacturers, especially in formwork. Constant small improvements have resulted in improved erection and stripping of forms. In some cases, forms are so inexpensive they remain in place. Others are made of new materials and incorporate a wide variety of patterns and textures.

The varieties of pre-cast concrete continue to grow in proportion to systems building, resulting in more coordinated concrete products. A number of efficient precast or prestressed concrete systems are fully proven and accepted, especially in multi-family housing. With its economical long span capability, precast concrete provides interior flexibility, permitting the updating of a structure with relative ease and economy. This factor is proving significant in the construction of schools, low-rise office buildings and sometimes, in industrial buildings.

Prepared with the help of W. Burr Bennett, Jr.
Prestressed Concrete Institute, Chicago, Ill.

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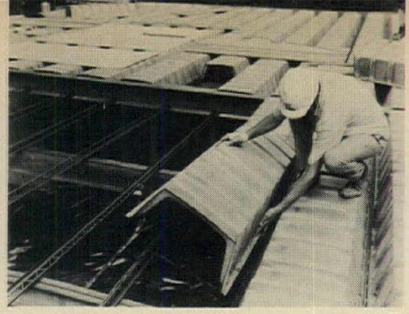

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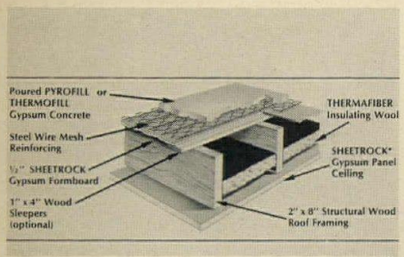

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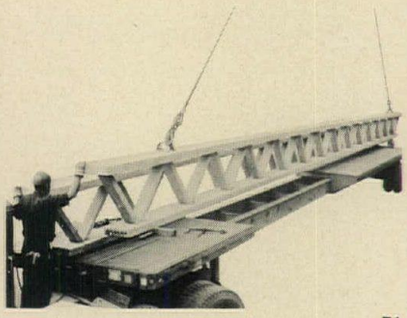

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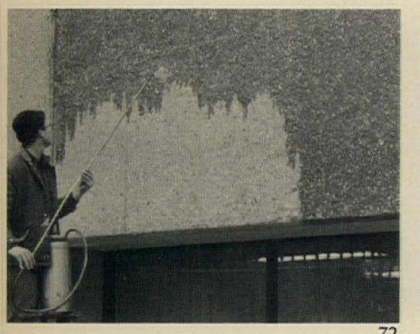

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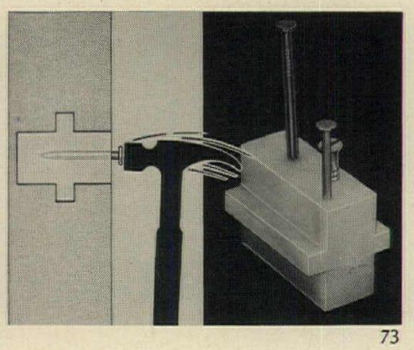

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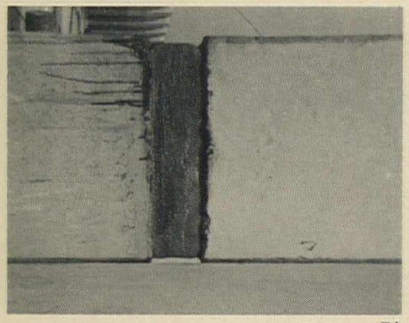

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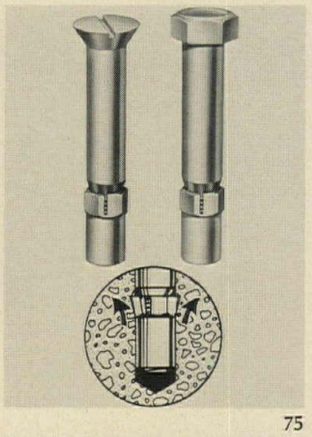

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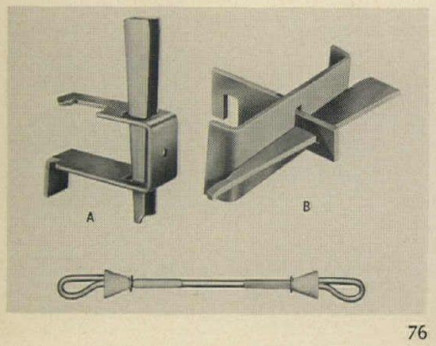

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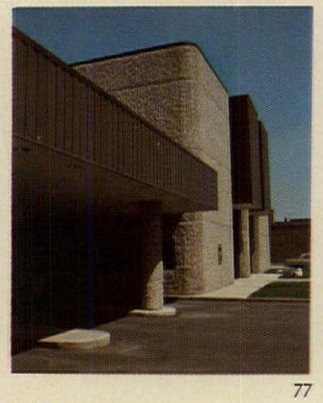

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CAST-IN-PLACE CONCRETE

68 CONCRETE PUMPING AID / The manufacturer claims this water-soluble organic polymer is specially formulated to facilitate the pumping of concrete through standard pumping equipment. In lightweight and normal weight mixes, it increases the rate of delivery of all commercially available concrete pumps and extends the height and length through which concrete can be pumped. / W. R. Grace & Co.

69 FLOOR AND ROOF SYSTEM / Designed for low-rise apartments and single family homes, *I/D* includes cast-in-place concrete, steel truss tees and leave-in-place fiberboard forms. System can span 24 ft. The forms rest on the steel truss tees which reinforce the concrete floor. Cavity spaces carry the mechanical systems. Floor-to-ceiling depth of the concrete system is 12 in. / Portland Cement Assoc. A, L *

CEMENTITIOUS DECKS

70 ROOF DECK FILL / *Pyrofill Gypsum Concrete* provides high strength and fire resistance, quickly setting up into a smooth monolithic slab ready for roofing. *Thermofill* duplicates the characteristics with the additional features of lighter weight and higher insulation value. / United States Gypsum Co. A,I*

71 CONCRETE ROOF TRUSS / The product can be incorporated into a precast roof system. It is available in a 24-in. depth capable of spanning up to 64 ft. The 36-in. depth can span up to 80 ft. / Federal Cement Products, Inc. A,I*

CONCRETE ACCESSORIES

72 CONCRETE CLEANER / Two formulas are available. One is for gray, colored and architectural-white concrete in smooth textures, and the other is for rough-form finishes and exposed aggregate surfaces. Both cleaners are concentrated solutions containing a blend of mild acids and wetting systems. / Process Solvent Co., Inc.

73 NAIL-SCREW BLOCK / The *Berinsert* is a plastic fixing block for concrete construction. It is set in precast or cast-in-place concrete during casting, to provide a surface that will receive nails or screws. / Roné Co.

74 GROUT / *Masterflow 713* grout is a flowable, high-strength, non-shrink material which has a claimed strength of 6,800 psi at 28 days. Does not require vertical or horizontal confinement. / Master Builders. A,I*

75 HORSE ANCHOR / For quick, secure fastening in concrete and masonry, this product, installed in a pre-drilled hole, can be removed and re-installed in the same hole with no loss of holding power. No threaded studs protrude from the surface. / Buildex Div., Illinois Tool Works Inc.

CONCRETE FORMWORK

76 FORM TIE HOLDER / This system designed for fast jobsite building of formwork on residential and light construction projects features a combination tie holder, waler bracket and breakback tool. *Speed Brackets* used in tandem allow setting of single vertical walers. / Symons Corp.

77 PLASTIC FORM LINERS / Ten different stock designs of ABS plastic are offered for use on standard, tilt-up and precast formwork. Patterns include trapezoidal rib, striated, aged board, grooved and random board, rustic brick, striated brick and small crushed stone. / Symons Mfg. Co. A,L,I*

78 FORM RELEASE / *Debond* is a chemical form release that leaves concrete free of stains. It strips all types of forms clean without build-up and allows the proper bonding of any type of topping. / L & M Construction Chemicals, Inc.

79 FORM RELEASE / This concrete form, release coated, is a high performance plywood. It offers low cost per pour, and edges are treated with a heavy coat of bronze pigmented sealer. Better concrete appearance is claimed, with lower deflections between supports. / Weyerhaeuser Co.

CONCRETE MATERIALS

80 TAN-COLORED CEMENT / *Warmtone* produces a tan color without any tinge of gray and contains no added color pigments. Color is uniform and lasting, according to the manufacturer. Recommended for exposed concrete surfaces ranging from sidewalks to commercial buildings. / Trinity Div., General Portland Inc.

81 CONCRETE CURING AGENT / *Deepgard* offers superior protection for newly poured concrete structures. It is applied to newly finished concrete while water sheen is still present, reducing water loss and retarding drying; penetrates up to one-eighth inch into the surface. / PPG Industries Inc.

82 HIGH-STRENGTH CEMENT / It is claimed this pre-mixed masonry cement provides bonding

For more data, use inquiry card.

strength three times stronger than conventional types. Recommended for use with the *Stress-Wall* system that employs pre-tensioned vertical wires which extend through several stories. *Type M* mortar is sprayed into the wire and mesh, building up the wall panels. / Huron Cement.

83 CURING COMPOUND / A curing and sealing compound for non-colored concrete, the product meets all ASTM requirements. *Masterseal* is compatible with most adhesives used for tile installation and thus eliminates the time-consuming and costly stripping operation. / Master Builders.

84 EXPANSION CEMENT / This high-strength, fast-setting, all-purpose cement is immune to water erosion and tested to withstand over 3,000 psi after only an hour of set time. *Instarok* is recommended for indoor and outdoor work requiring anchoring, patching, plugging or repair. / Metalcrete Mfg. Co.

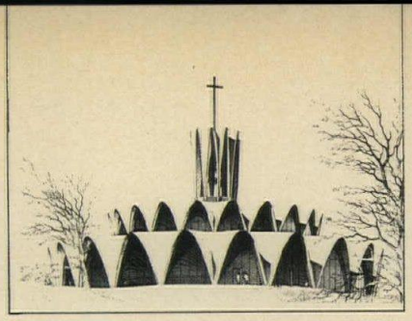
85 CURE AND SEAL / *Promulsion 50* is an emulsified linseed oil cure and seal to protect against spalling of concrete receiving deicing materials and exposed to freeze-thaw cycling. Recommended for parking garages, sidewalks. / Protex Industries Inc. A*

86 CONCRETE TREATMENT / *Acrychlor* is a curing, sealing, dustproofing, and hardening agent for new or old concrete. Available as a clear or with gray flatting base, it imparts color uniformity. May also be used on aggregate panels, terrazzo or stucco. / Protex Industries Inc. A*

87 GROUT / *Propak* is a high-strength non-metallic expansive grout with high flow characteristics permitting pumping for long distances. Non-staining, it can be used in any area exposed to moisture or public view. / Protex Industries Inc. A*

88 BOND BREAKER / *Protex T-370* bond breaker and curing compound is a clear liquid that prohibits the natural bonding between two layers of concrete for stack-cast and tilt-up slabs. Non-yellowing, provides a positive release consistently for all types of finishes. / Protex Industries Inc. A*

89 CLEAR CURING / The product is a non-staining, non-residual cure that allows the proper bonding of any type of topping. It contains no waxes or oils and will not stain concrete. Offers twice the coverage of regular cures, states the company. / L & M Construction Chemicals, Inc.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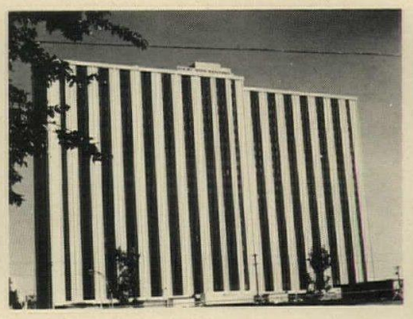
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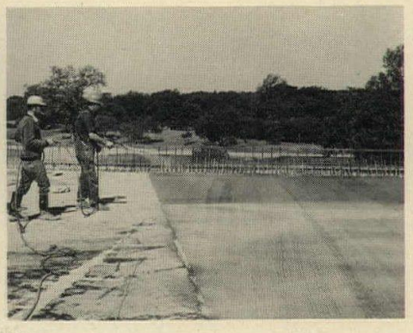
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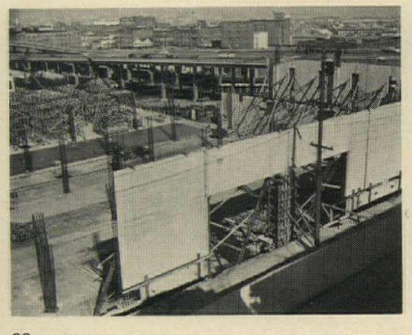
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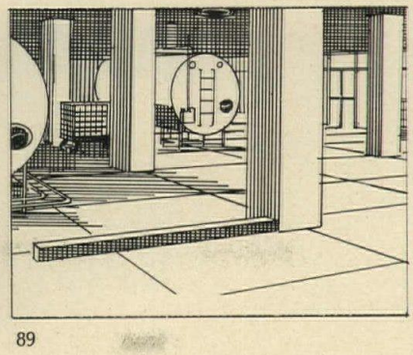
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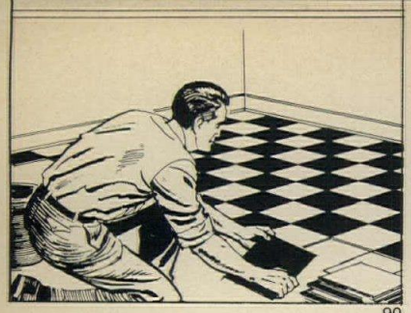

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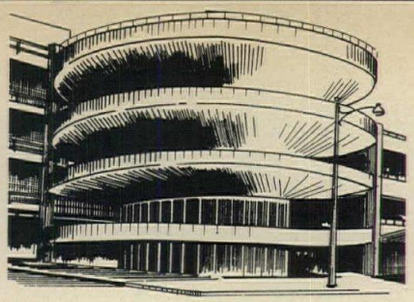

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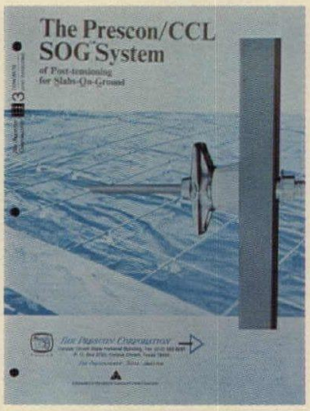

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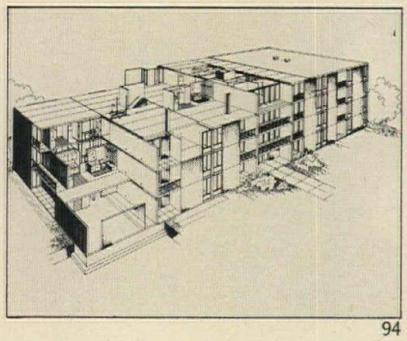

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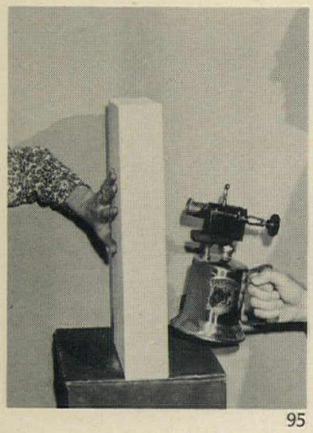

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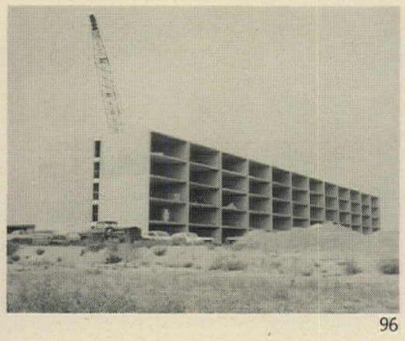

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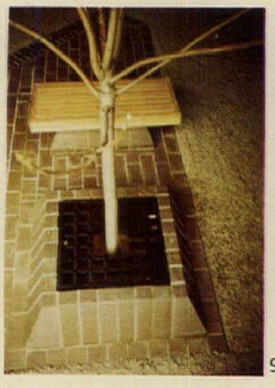

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3E10

90 CURING COMPOUND / *Dress and Seal* cures, seals and dustproofs concrete with a non-yellowing impervious acrylic film. It allows proper bonding of resilient tiles, gives positive sealing against contaminants and conforms to all government specifications. / L & M Construction Chemicals, Inc.

91 MOISTUREPROOFING / *Hydro Pel* is a blend of vinyl, copolymer stearates in an aromatic solvent that provides an invisible surface film to repel water, dirt and airborne contaminants. It forms an in-depth moisture barrier to capillary action. / L & M Construction Chemicals, Inc.

92 PLASTIC CONCRETE / Small gravel in two shades of brown is applied over cement-concrete in the *Prairie-Film* system. The pebbles are permanently bonded together with the thermoset plastic bonding agent, also used to seal the surface, which will resist chemicals, acids and alkalis, and extreme temperatures. / Prairie Co.

REINFORCEMENT

93 POST-TENSIONING / The *SOG* system allows jobsite prestressing of slab-on-grade foundations. For single- and multi-family housing, pre-stressed slaps are said to require less time to install, cost less, and counteract damaging effects of expansive soils. / The Prescon Corp.

PRECAST CONCRETE

94 PRECAST BUILDING SYSTEM / Center-corridor *Vista-space* apartments are designed for low-rise walk-up or multi-story elevator buildings. Units range in size from 400-sq ft studios to 1,500-sq ft three-bedroom apartments. Suitable for hotel, dormitory and nursing home designs. Apartment mix and layouts may be altered to fit various needs. / Precast Systems, Inc.

95 PRECAST PANEL / Called *Siporex*, this three-inch panel is fire-retardant, with a two-hour high-temperature fire strength. The room-side of the panel is treated with a two-coat plaster finish and can be painted. The product is structural material of aerated concrete. / Cellular Concrete Products, Inc.

96 FLOOR-WALL SYSTEM / *Stack-Wall* consists of hollow core floor slabs and wall panels, erected on grade foundations or on special pre-cast post and beam construction. Wall panels are plumbed and temporarily braced until the next floor is in position. / Formigli Corp.

97 COLORED CEMENT / This colored portland cement is available in 10 standard colors (rose is shown). Can be used in place of gray portland cement Type I for any purpose except masonry mortar, cement paint applications, or high-pressure autoclaves. / Medusa Cement Co.

98 PANEL SYSTEM / *Metromodule* system combines precast concrete technology and specialty masonry fininishes. Face brick and pavers can be precast in large, factory-produced panels for wall and paving applications. Compatible street furniture using the same system is available. / Metropolitan Industries, Inc.

99 WIDE SLABS / This system utilizes embedded trusses to accomplish composite action between the precast concrete wide elements slab and the cast-in-place concrete. System contains all required bottom reinforcing steel and is applicable to one-way and two-way plate construction. / United Filigree Corp.

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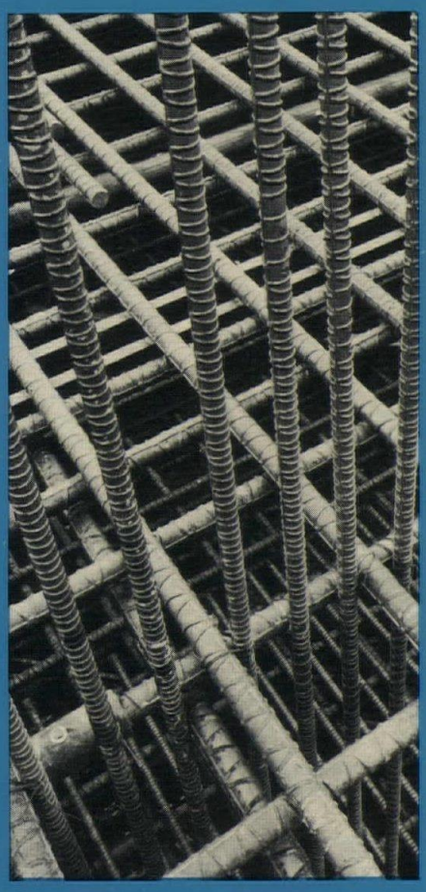
GRADE 60 REBAR



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Plan for slimmer columns, more usable floor space, more free-flowing working or living areas. Grade 60's 50% greater yield strength makes it all happen. And also gives you appreciable savings in steel for every square foot of floor space.

Count on earlier, faster construction starts and on-the-dot completion dates, too. Grade 60 rebar is immediately available, eliminates fabrication delays. Add it all up: lower construction and material costs plus resultant savings in rent and depreciation are Grade 60's economic strong points.

And a design realized in Grade-60-reinforced lightweight concrete consistently wins the highest fire ratings and the most attractive insurance rates.

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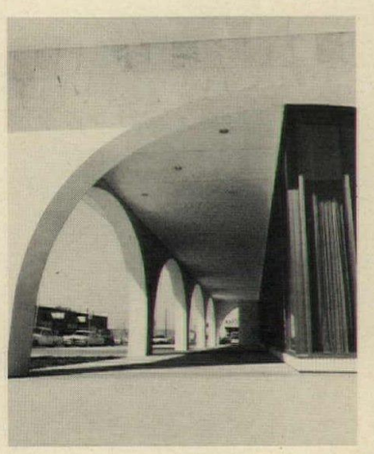

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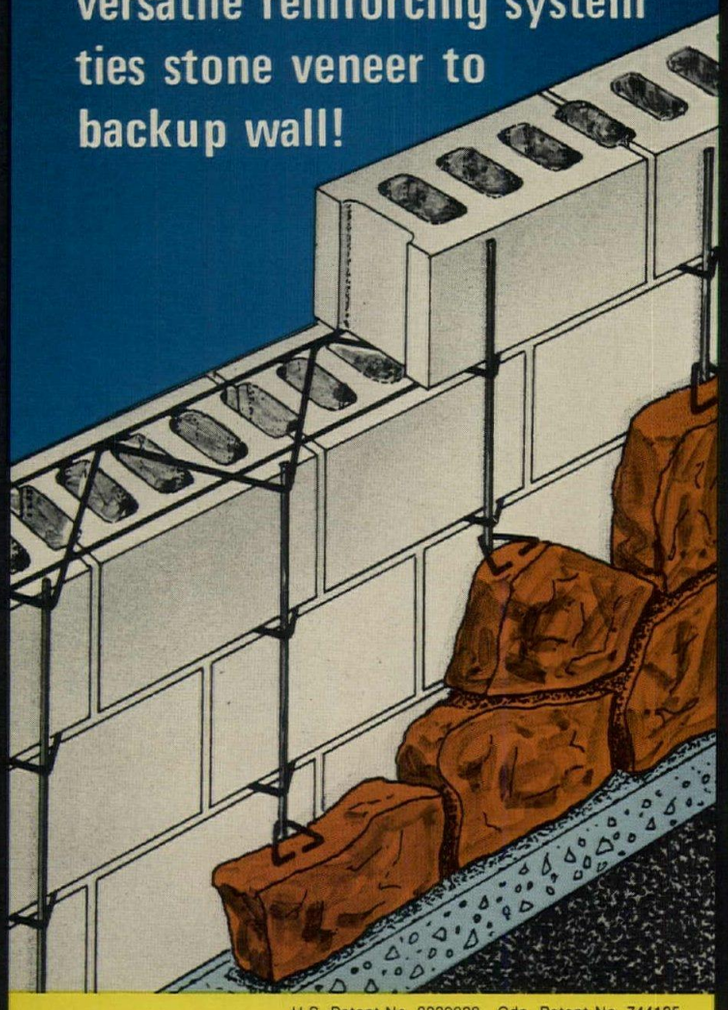

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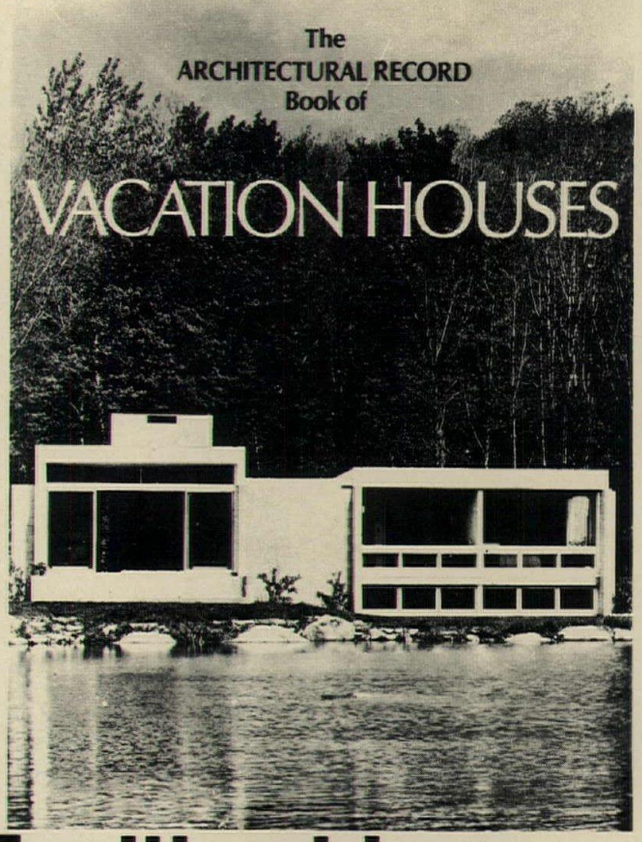
by the editors of Architectural Record



Exciting ideas from 60 different dream hideaways

A sparkling collection of architect-designed vacation houses for all climates and terrains—from a mountain-top chalet in British Columbia to a beach house in Florida.
Selected by Architectural Record editors, these houses range in price from less than $5,000 for a very small two-room cottage to more than $100.000 for large structures. Each house is fully described with floor plans, site plans, photographs and construction details.
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masonry uci 4

Though masonry products date back to the Biblical City of Jericho, today an increasing number of new masonry products, construction methods, and building systems are still being developed.

For example, some brick manufacturers are now producing through-the-wall fired face brick in 8-square modules adaptable to the load-bearing or curtain wall systems. The jumbo units speed construction, cut costs, and provide esthetically pleasing, low-maintenance interior and exterior walls of exposed brick. Structural tiles, with new, durable, glaze-textured finish, are also available in 8-square and 12-square units 2 or 4-in. thick for load-bearing or veneer construction.

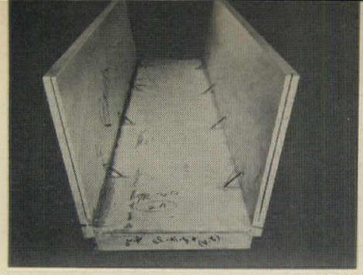
Many concrete block plants, recognizing the growing need for a variety of shapes and face designs, are beginning to produce new products. Split block, which several years ago brought concrete masonry out into the open, is now being joined by customized units. These provide architects with new means to execute more lineage and better scale into their walls, as well as the unique opportunity to design their own units.

Now available are 8- by 8- by 18-in. block with single or eight scores, block with four extended face "ears," screen block with selected motif, veneer block with six sculptured faces, fluted units with six curved reliefs of one-inch rise, split ribbed block for the maximum in wall texture, and others.

Building systems, using masonry with new innovations, are proving increasingly popular. The loadbearing masonry system, for example, enables other trades to finish lower floors while masons lay walls overhead. A benefit, in addition to speed, is exposed exterior and interior masonry for a quality image and lower maintenance. And several masonry panel systems have recently gone into successful operation, with assembly line, on-site production techniques using customized equipment in all-weather enclosures.

Whether made on site or in a plant, the fabrication of masonry panels can now be done in all types of weather. Brick and block back-up can be combined in one panel or panelized separately. The panels can be produced in many architectural designs and can be made for loadbearing or curtain wall installation. And —as you'll see on the next pages—there's much more.

Prepared with the help of Neal English, Executive Director, International Masonry Institute, Washington, D.C.



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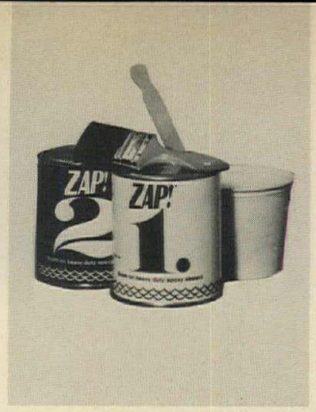

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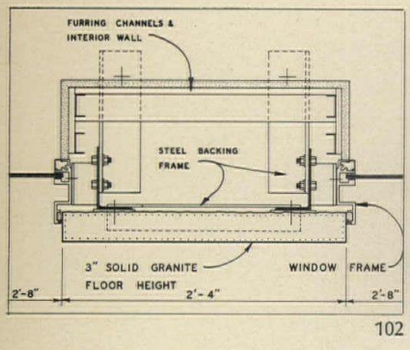

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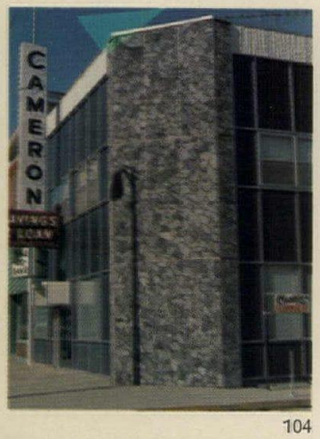

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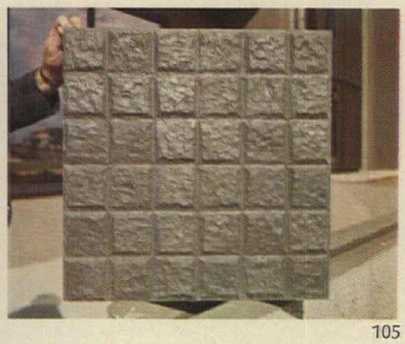

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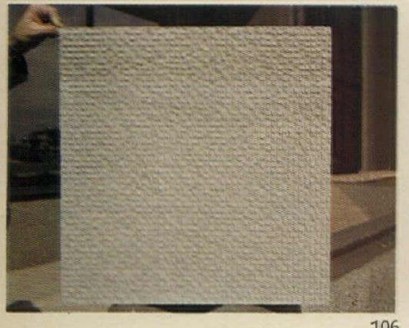

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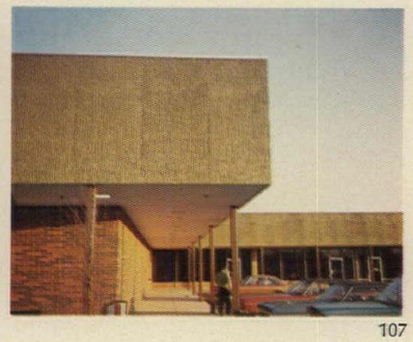

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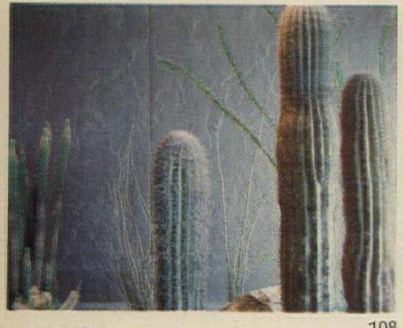

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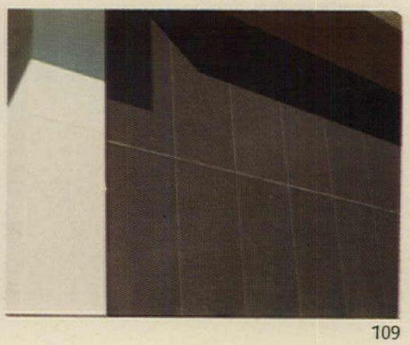

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MASONRY ACCESSORIES

100 MARBLE BONDING SYSTEM / A shop-bonding process for assembling prefabricated natural stone units economically is offered under the name *Marfix-bonding*. The process uses a polyester bonding agent in combination with stainless steel anchors to assemble large stone units off-site. Column enclosures and other thin veneer units are suggested uses. / Vermont Marble Co.

101 WATERPROOFING / A waterproofing epoxy to seal cracks in any masonry surface is offered. *Zap* is also an effective adhesive when used with masonry, wood or metals. It works on damp masonry and is unaffected by heat, cold or corrosion. / Construction Chemicals Corp.

102 STEEL-BACKED GRANITE / Fast erection is one of the advantages of using floor-length granite panels with factory-attached steel backing frames. At the site, the unit is fastened to the spandrel beam with four bolted connections. / Cold Spring Granite Co. A*

SIMULATED MASONRY

103 CONCRETE BRICK / Rough and used-looking, this strong and durable masonry is available in a large variety of non-fade color blends and several sizes. The product exceeds FHA and HUD requirements. / Rus-tique Brik International, Div. of Miami Stone, Inc. A*

104 LIGHTWEIGHT STONE / *Featherock* has natural face or smooth sawed face on ⅜-in hardboard panelized as one unit up to 4 by 8 ft. 3½ to 4½ lbs per sq ft. Easily erected, requires no special footings. / Featherock, Inc.

105 MOSAIC PANELS / *Quadro* architectural panels feature a 4-in. square repeat pattern in a texture of man-made stone blocks. The 4 ft by 8 ft panels can be used on interior or exterior surfaces. / Johns-Manville.

106 STONE PANELS / *Venetia* "natural stone" building panels are suitable for entire structures or accent paneling. The panels feature a mosaic design with embossing. Formed under pressure from portland cement fortified with mineral fibers, the material is free from stratification. Available in 4 ft by 8 ft panels in natural gray color. / Johns-Manville.

107 EMBOSSED PANELS / *Splitwood* is recommended for interior and exterior use and can be used for entire walls, fascias, spandrels, soffits, and other surfaces. Panels measure 4 ft by 8 ft, 4 ft by 10 ft, and 4 ft by 12 ft. Available in four colors. / Johns-Manville. A,D*

108 CULTURED STONE / *Stonehenge* is a textured panel that is a mixture of synthetic calcium aluminum silicate binder and finely dispersed asbestos fibers, pigments and fillers, formed under great pressure. Panels will not burn and are wear- and weather-resistant. The 4 ft by 8 ft panels are for interior or exterior use. / Johns-Manville. A,D*

STONE

109 BLACK GRANITE / This is a dense, medium-grained black granite that can be used with any type of available finish. Available in slabs up to 14 ft by 6 ft, it offers sizing and design freedom not commonly offered in black granites. / John Swenson Granite Co., Inc. A*

110 BLUE GRANITE / Product consists of medium-to-large, light blue crystals blended with a field of gray elements. Quarried in Australia, it is available in panel size up to 9 ft by 3 ft. / John Swenson Granite Co., Inc. A*

111 COMPOSITE WALL / The system combines granite facing with an isolation sheet, insulation, concrete backing, heating elements and an interior wall. When anchored to the structural frame, it becomes the entire wall. It is 8 in. thick. / John Swenson Granite Co., Inc. A*

112 GRANITE PAVERS / Granite paving blocks are available in three colors. The modular paver is produced in 4-in., 8-in. and 12-in. squares with a flame finish and split edges. / Cold Spring Granite Co. A*

113 LIMESTONE PANELS / Indiana limestone textured panels are offered in a rapid enclosure system that requires no masonry back-up wall. Rigid insulation is glued to the back of the panel, and the interior drywall is fastened either to the stud or the insulation to complete the total wall. / Harding & Cogswell, Inc. A*

UNIT MASONRY

114 INTERIOR-EXTERIOR BRICK / *Panelbrik* units are made of kiln-fired clays and shales in standard sizes 4 in. by 8 in. by 8 in. and 4 in. by 12 in. by 12 in. Large-core arrangement contributes to light weight and provides access for utility lines, reinforcement and insulation. Earth tone colors. / Glen-Gery Corp.

115 CONCRETE MASONRY / Customized concrete masonry lets the architect create his own design which can be produced in high-

For more data, use inquiry card.

speed mass production. Wide selection of textures, colors and unit sizes, for exterior or interior load-bearing or non-loadbearing walls. / National Concrete Masonry Assoc.

116 GLASS BLOCK / *Vistabrik* solid glass units are 3 in. thick and offered in 8-in. and 5-in. squares. There is also a 4-in. by 8-in. shape. They are furnished with the standard bond coating and can be cast into concrete aggregate panels. / Pittsburgh Corning Corp.

117 CONCRETE BLOCK FINISH / *Spectra-Wal* units are lightweight or normal weight concrete block for interior or exterior use. The facing is integrally bonded to the unit and is available in a range of colors, with or without burnishing or antique finish. Available in 4 in. by 16 in. and 8 in. by 16 in. face sizes, in all standard bed depths and shapes. / The Burns & Russell Co.

118 BRICK PANELS / *Econobrick* is a clay-face brick panel 1 in. thick, weighing 4.75 psf, available 96 by 21½ in. or 4 by 8 ft. Applies directly to stud or masonry walls with adhesive and mechanical fasteners. Six colors, several antique ranges. / Merry Companies, Inc.

119 BUILDING UNIT / *Brik-Blok* is a patented building unit with ⅜-in. clay face brick mounted with mortar-like joints to any thickness of cement block. Brick joints match block joints for hand laid appearance. Corners and jamb units available. / Merry Companies, Inc.

120 CERAMIC WALL / A series of indoor-outdoor metallic glazes has been introduced, including matt charcoal with bronze highlights and a coal-black gunmetal finish. A third finish in a glossy brown-gold. / Design-Technics Ceramics Inc. A*

121 BRICK / Three new sizes of through-the-wall units are offered. They are particularly adaptable to on-site panelization for load-bearing construction. All the brick are produced in three different blends or straight shades of gray, buff and brown, plus an Aberdeen blend for the 8 in. by 8 in. unit. / Belden Brick Co.

122 ROUGH STONE BRICK / Practically impossible to distinguish from a clay brick, this dense aggregate product features consistent coloring. / Rus-tique Brik, International.

123 MASONRY PANELS / Panels of masonry and glass are pre-assembled, permitting the use of mortar as the only binder in 6 ft by 4 ft panels. The glass in these panels is the brick-shaped *Vistabrik* offered by Pittsburgh Corning Corp. / Royer Masonry Systems, Inc.

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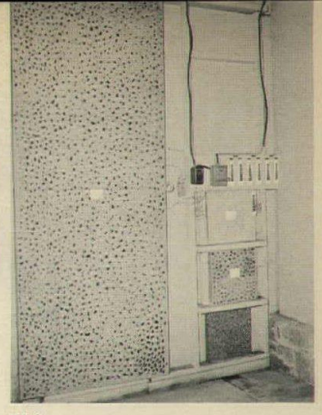
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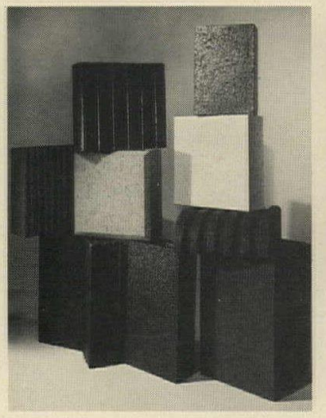
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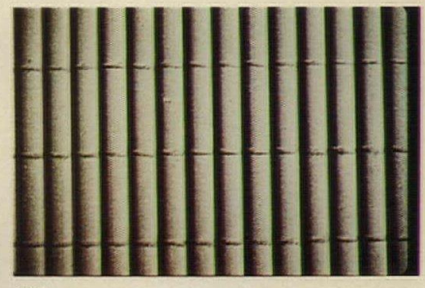
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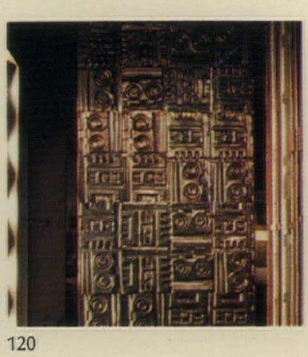
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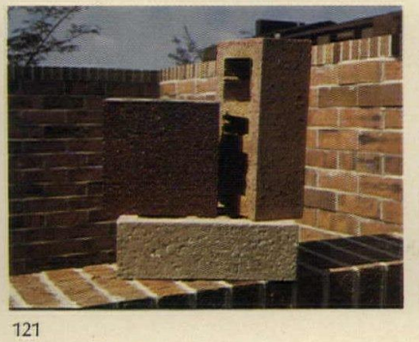
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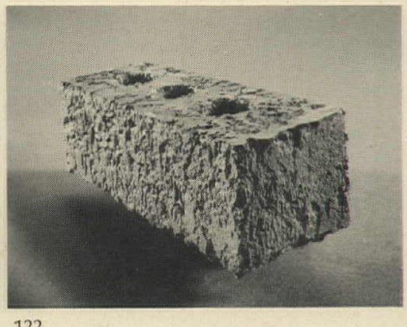
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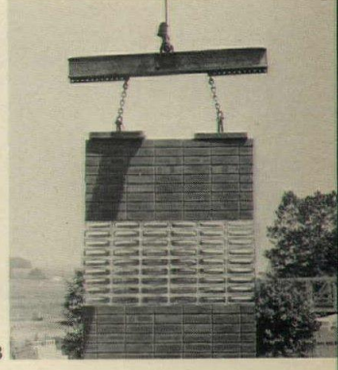
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*Included in 1973 Sweet's Catalog File(s).

TECHNICAL KNOCKOUT.

World Trade Center's seven gleaming stories of matched stainless panels . . . without a ripple or fastener show-through!

Sheer beauty . . . leaping 70 feet straight up. Bright #8 mirror finish. Bold. Spectacular.

They're walls of stainless steel—35,500 square feet of matched panels—created by architect Minoru Yamasaki for the lobbies of the Port of New York—New Jersey's twin-tower World Trade Center.

The stainless specified? Republic ENDURO Type 304. All furnished stretcher leveled and with squared corners.

To achieve the desired flatness and uniformity over these spectacular walls, the fabricator-erector, Craft Architectural Metals, Inc., elected to laminate the 1,000-plus stainless panels by a method never before attempted: attach plywood sheets to galvanized steel, then bond the stainless panels over this with special epoxy cements.

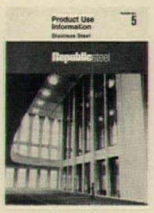
A team effort was called for because of the repetitive handling and coordination necessary between mill, steel service center, polishing company, and fabricator-erector. Mr. Charles Senzel, president, Craft Architectural Metals, states: "Republic was a good supplier. Deliveries were made on time. Panel flatness and squareness were excellent, demonstrating good quality control. They worked well with us, the service center, the polisher—and they cooperated on the stronger-than-normal reusable crating required. What more could you ask?"

Other elements of the building interior utilizing Republic stainless include curved floor gratings, flashing, curved railings, and revolving doors.

A technical knockout, from mill to monumental architectural achievement!

Looking for equally memorable achievements? Consider Republic ENDURO® stainless steels in sheet, strip, bar, billet, special sections, tubing, pipe, wire, plate. Your choice of chemistries, sizes, finishes, tempers, from Steel Service Centers countrywide.

For the complete story of this technical knockout, write for Product Use Information Bulletin No. 5. Address Republic Steel Corporation, Cleveland OH 44101.



MATERIAL: Republic ENDURO Stainless Steel DISTRIBUTOR: K.&S. Metal Supply, Inc., Long Island City, N. Y. ARCHITECTS: Minoru Yamasaki & Associates, Troy, Mich. and Emery Roth & Sons, N. Y. POLISHING: MPC Industries, Delair, N. J. FABRICATOR-ERECTOR: Craft Architectural Metals, Inc., Huntington, N. Y. OWNER: Port of New York Authority.

Member Steel Service Center Institute

Republicsteel

For more data, write A16 on inquiry card

metals

uci 5

The applications for steel in buildings are, of course, wide-ranging: foundation piling, structural and plate steels for framing, cable-support systems, floor deck and ceiling systems, interior walls and partitions, doors, windows, curtainwalls, fascia, roofing, ductwork, trim, sprinkler systems for fire protection, signs, lighting fixtures. It extends to blinds, furniture—and even as a component in carpets to eliminate static electricity.

Generally, steels used to make these products have undergone improvement. Buildings continue to grow lighter and stronger because of higher strength structural steel as well as the increased use of lightweight systems, such as floor deck. Improved framing designs make structural and plate steels work more efficiently. Engineering development is also underway to add strength to buildings through steel curtain walls —using steel as a structural element instead of merely a hang-on facing.

In the mechanical systems area, there are more steel floor and ceiling systems to choose from—providing ingenious built-in air chambers, electrical and plumbing raceways, etc.

In roofing or roof systems, galvanized and terne steel is being augmented by aluminized steel and a new product which is a combination galvanized-aluminized. Aluminized steel offers the surface and qualities of aluminum at a cost about halfway between galvanized steel and aluminum.

Some of the greatest strides in steel components have been made in the coatings. These show up most strikingly in curtain walls and interior partitions with a choice of porcelain-on-steel or precoated steels with factory baked-on enamels. Coating technology now includes such premium finishes as fluorocarbons for curtain walls and residential siding.

Steel is now competing head to head with dimension lumber—perhaps most commonly in apartment constructionized steel studs and joists, formed from cold rolled steel, and now widely available in a host of sizes including 2 x 4, 2 x 6 and 2 x 8, for load- and non load-bearing applications.

Prepared with the help of the
American Institute of Steel Construction, Inc., New York.

Ambassador College Office Facilities Building

Freedom in design... Flexibility in use

New designs and materials—at costs 60% below the old "computer floors"—make Liskey Elaflor competitive with the less flexible raceway systems.

Details can be obtained promptly by calling for "Design Assistance" (301) 796-3300.

For more data, write A17 on inquiry card

only access flooring

can be utilized with "any" type of building structure.

accommodates all services, not just electrical

offers complete freedom of interior design without the restriction of modular service layouts

allows future service changes at a fraction of raceway system costs.

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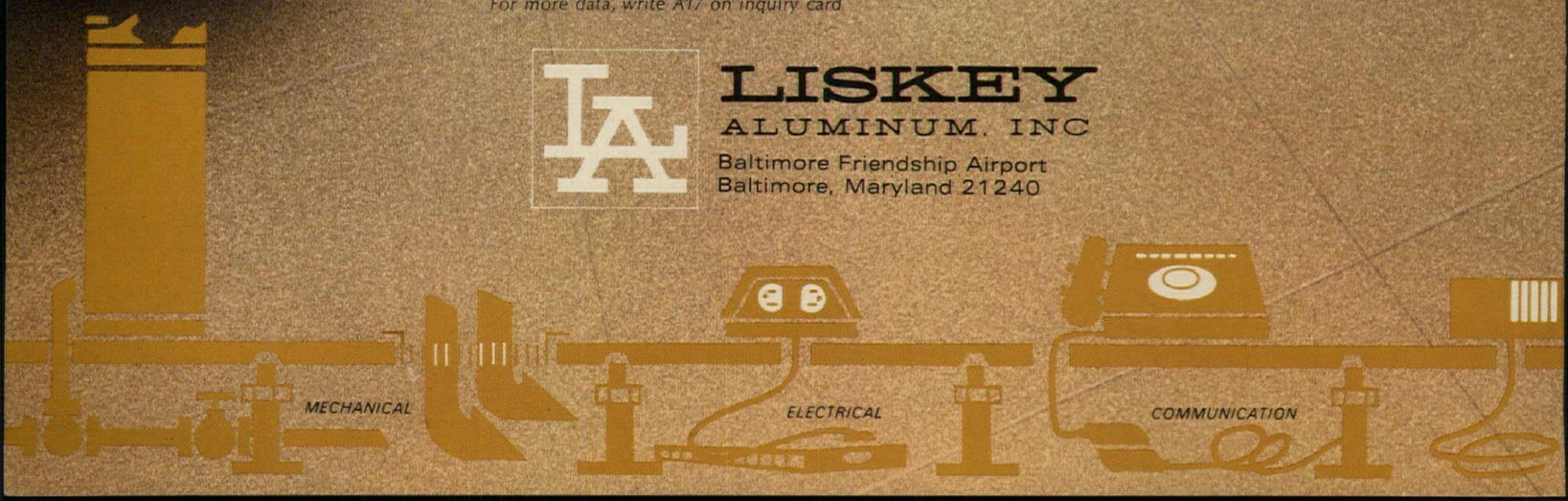
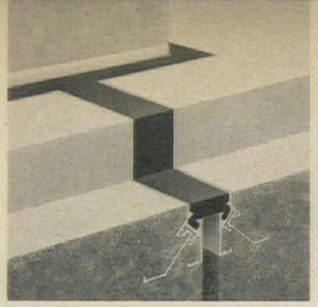


EXPANSION CONTROL

125 EXPANSION JOINT / Providing a sealed joint that moves in all directions, and is watertight and dustproof, *Elastalum* is available in a range of colors. The product is a polyurethane elastomer, factory-bonded and mechanically secured to pretreated, continuous aluminum retainers. / Construction Specialties, Inc. A*



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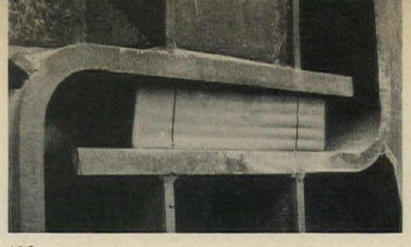

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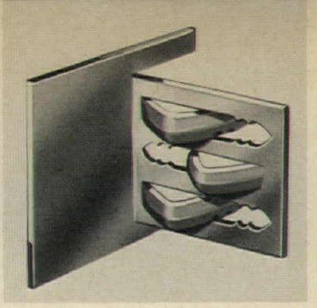

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126 ELASTOMERIC BEARING / For expansion and contraction of beams, either in steel or concrete structures, the product will accommodate movement in vertical, horizontal and rotational directions. Recommended for bridges, ramps, parking garages and high rise buildings. / Fel-Pro Building Products, Inc.

FASTENERS & SUPPORTS

127 DRY WALL CLIPS / The product eliminates any need for installation of back-up framing. Clips are made from 18-gauge zine-coated steel with a nailing tab that projects from the center of the clip. / Panel-Clip Co. L*

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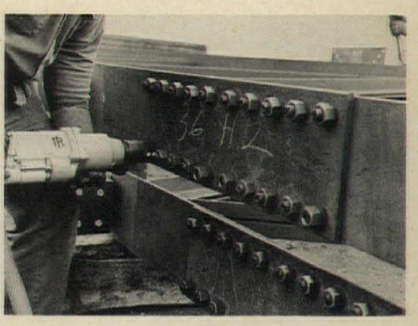

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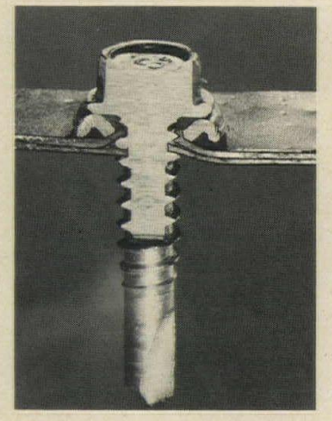
128 METAL PINS / Used for fastening components to metal, concrete and masonry, these pins have a heavy-walled aluminum eyelet positioned on the tip to give better cushioning than ordinary steel eyelets. Available in lengths up to 1½ in. / USM Corp.



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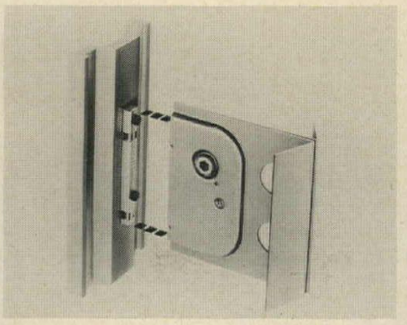

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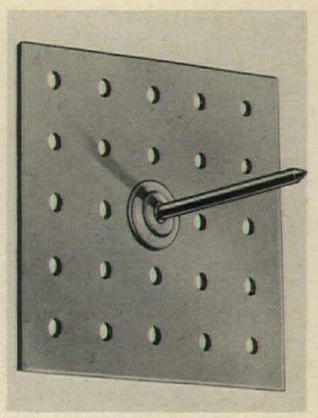

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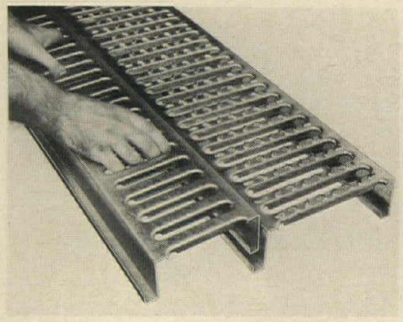
129 BUILDING ADHESIVE / For indoor and outdoor applications, this adhesive reduces fastener requirements and contributes unified structural rigidity to plywood panels, wallboard, drywall and underlayment. The product meets the requirements of the American Plywood Association and HUD. / USM Corp.

130 FASTENING SYSTEM / In the *Posi-Load* system, a two-piece threaded fastener, consisting of a suitable bolt and a cylindrical nut with a hex-wrenching section, is provided. This special nut is turned onto the bolt, then crimped, developing a positive, known tension in the bolt. / Bethlehem Steel Corp.



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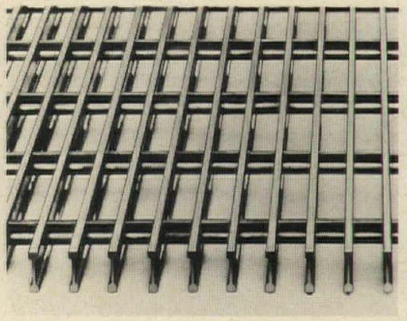

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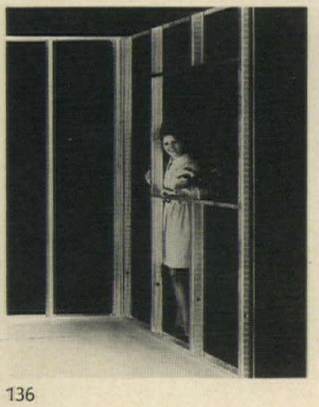
131 SELF-DRILL FASTENER / This product drills and fastens metal sheet, as well as stitches sidelaps. High threads under the head of the fastener make both jobs possible. / Buildex Div., Illinois Tool Works, Inc.

132 PANEL FASTENER / Designed especially for connecting wall panels used in modular housing, office partitioning and other types of buildings, these fasteners are made of high-quality steel according to precise engineering specifications.



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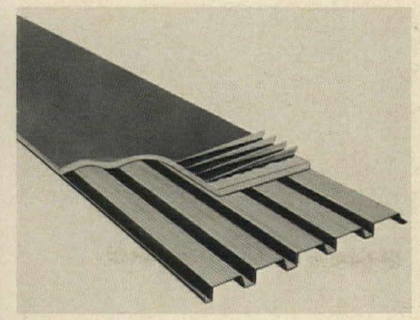

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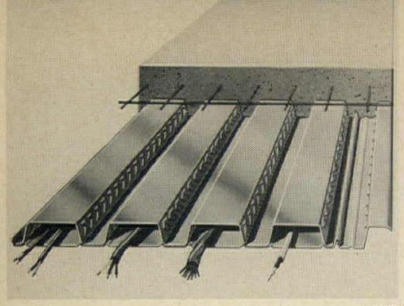

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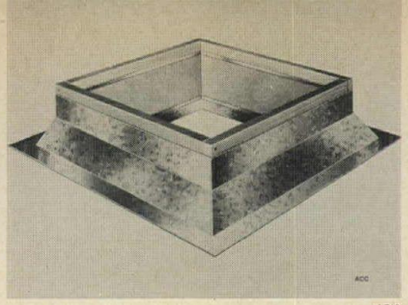
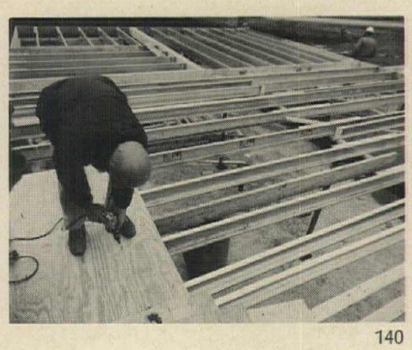


139

A turn of a hexagonal wrench engages the latch and locks panels securely in place. / Kason Hardware Corp.

133 SURFACE ANCHORS / *Stuk-Ups* are 2 in. by 2 in. perforated steel zinc-coated plates which are attached to metal, concrete or masonry with a neoprene adhesive. Various types of attachments are welded to the plate, designed to receive various surfaces. / Miracle Adhesives Corp. L*

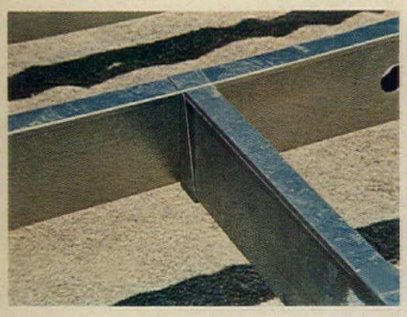
GRATINGS



140

134 INTERLOCKING GRATING / In 6 in. widths, this unit can combine with previously existing 9 in. width units to form locking units in any width with increments of 3 in. Anti-skid surface. Grating is available in galvanized, stainless steel or aluminum, in lengths up to 40 ft. / United Interlock Grating Div., United McGill Corp. A, I *

135 ALUMINUM GRATING / This line of I-beam grating offers high strength and light weight, with low cost. It features grooved bearing bars and cross bars for a nonslip surface in both directions. Available in four configurations to meet most grating requirements. Bar sizes from 1 in. to 2½ in. / Borden Metal Products, Co. A,I*



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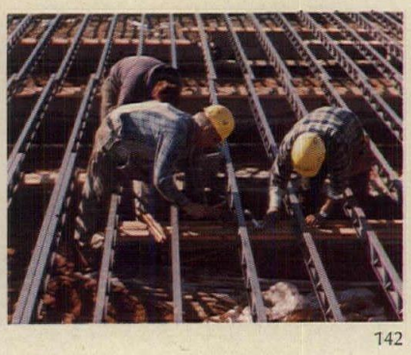
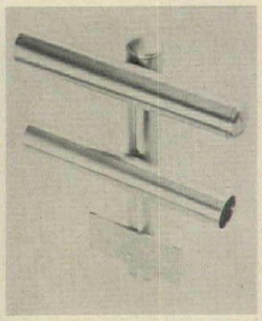


142

LIGHTGAGE FRAMING

136 STEEL THERMAL STUD / Designed for framing residential, institutional and light commercial structures. This steel stud's ability to resist heat flow allows inside and outside wall surfaces to stay free of "ghost marking." Product offers fire safety, high strength-to-weight ratio, and meets HUD and FHA requirements for impact and wind loads for load-bearing members. / United States Steel Corp.

143



144

METAL DECKING

137 RIGID ROOF DECK / The added stiffness of this product is due to small, ripple-like ribs rolled into both top and bottom flanges. The product offers more resistance to denting during construction. / Inland-Ryerson Construction Products Co. A*

138 CELLULAR FLOOR DECK / *Wireway* features the stiffening rib-type construction that permits longer spans, fewer floor beams. Available in 1½-in. and 3-in. depths. / Reeves-Bowman Div., Cyclops Corp. A*

METAL FABRICATIONS

139 ROOF CURBS / Prefabricated in galvanized steel, these curbs are constructed in two types: for non-insulated roof decks and insulated roof decks. Both have a 3-in. cant and are fully mitered. / ILG Industries, Inc.

METAL JOISTS

140 STEEL JOIST SYSTEM / Developed for the residential market, these joists are delivered to the site cut to exact lengths required. Galvanized, the product is lighter and stronger than wood, according to the producer. Available in 2 in. by 8 in. and 2 in. by 10 in. nominal sizes. Joists with 7½-in. and 9½-in. depths are available to match old lumber standards. / United States Steel Corp.

141 STEEL FLOOR JOISTS / Designed for one- and two-story buildings, floor joist sections are nominal 2 in. by 7¼ in. deep and may be ordered to precise thickness and length. They can be installed by two men with conventional power tools. Zinc-coated steel prevents corrosion. / Teledyne Metal Forming.

142 STEEL TRUSS / This lightweight structural truss for residential and light commercial and industrial applications, features low cost. Sizes are 2 in. by 8 in. and 2 in. by 10 in., in lengths up to 50 ft. / C/O Inc.

METALS & ALLOYS

143 SHEET STEEL / *Galvalume* offers the properties of aluminum and galvanized finishes, along with the strength, formability and dent resistance of steel. The alloy coating offers the durability in marine and industrial atmospheres and is high-heat resistant. / Bethlehem Steel Corp.

RAILINGS & HANDRAILS

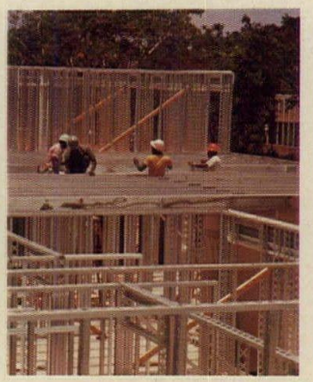
144 PIPE RAILING / Low cost, due to manufacturing innovations, is the main feature of this product, available in carbon steel or stainless steel with 180 grit finish. Resist-O-Rail meets O.S.H.A. requirements and all codes. / Tubular Products, Inc.

STRUCTURAL FRAMING

145 STEEL PANELS / *Speed-Steel Rapidwall* panels are light-weight, the basic 17½-ft tall, 6-ft wide panel weighing 120 lbs. Engineered to the architect's specifications, panels are shipped to the job site ready for erection, with all necessary openings. / Keene Corp.

146 ALUMINUM FRAMING / With the *Alumiframe* system, extrusions are used for structural framing and related components. The extrusions are pre-engineered, forming floor beams, joists, wall studs, plates and integral door and window components. Fast framing is claimed. / Aluminum Co. of America. A,L*

145



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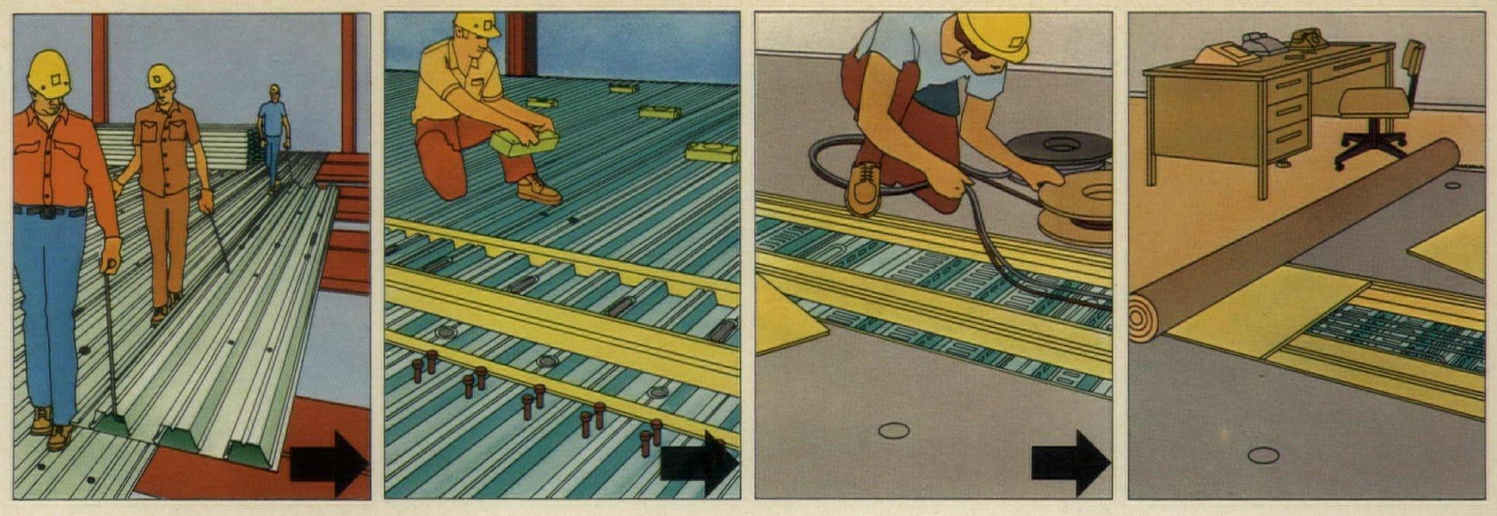
For more data, use inquiry card.



Now, a complete floor/electrical system under one contract.

It's the new Robertson Q-Floor® Taproute® system, including electrification, plus total installation. All under a single-responsibility contract.
Robertson Q-Floor Taproute systems contract offers many advantages to the architect, builder and client. Among them:

➡ The significant cost savings that are inherent when you work with only one contractor. Instead of dealing with up to four, you deal with only one—Robertson.

➡ Every stage of the project, from design assistance through product engineering, from fabrication through installation, is controlled and coordinated by Robertson.

➡ This concept-to-completion coordination also means we can quote you a firm price based on your current design drawings and firm installation dates for your CPM.

With the new Robertson Q-Floor Taproute system, you save money and get an up-to-date building that defies obsolescence. There's ample capacity for future expansion of electrical and communication wiring, so the building's life cycle cost is lower. This, then, is Robertson Q-Floor Taproute: a complete floor/electrical system, engineered, fabricated and installed, under one contract, by one supplier with one responsibility. For complete details on its many money-saving features, please turn the page.

Robertson

An inside look at the cost savings and increased efficiency of the new Robertson Q-Floor Taproute system.

The Robertson Q-Floor Taproute system is a combination of cellular steel subfloor and electrical distribution. It gives you the versatility and flexibility of the new Robertson pre-punched cellular steel floor, Tapway trench header and Tapmate outlets, offering increased structural and electrical capability at considerable cost savings.

Electrical savings and advantages

Flexibility, expandability and accessibility are the prime advantages of the Robertson Q-Floor Taproute components. New Tapmate outlet wiring capacity is increased up to 500%, and there are more provisions for connections or changes in connections. And the changes are much easier and faster to accomplish, because of the 100% accessibility of the Tapway trench header access plates. Tapmate outlets are located with such frequency that no work station is more than two feet away. When wiring changes have to be made, the Tapway is easy to locate and open, so no wire fishing is needed. No other electrical distribution method offers you the capacity, accessibility and flexibility for future work. It is a coordinated system, under a single-responsibility contract, systems-engineered to give your building a lower life cycle cost by minimizing the cost of electrical change.

Structural savings and advantages

The Robertson Q-Floor Taproute, when using composite construction, gives you added structural and economic advantages. It is the most efficient use of metal for any known composite steel floor. This efficiency permits lighter gauges and longer spans. You also get better structural steel efficiency when you use composite beam design, because shear studs are fully effective in the improved "cone of influence" provided by the new QL-99 steel floor configuration.

Installation costs are reduced, too. The shape of the QL-99 cell has been refined to make better nesting for easier handling, shipping and stacking, and makes hoisting faster and easier. Our crews lay it in faster now because the new units are 3 feet wide instead of the two-foot widths of conventional units. The side lap has been redesigned for faster, easier welding.

The new Robertson Q-Floor Taproute system "puts it all together" in one package: a complete floor/electrical system, engineered, fabricated and installed by one company, under one contract, and one responsibility. For complete information, write for technical literature, or call your local Robertson representative. H. H. Robertson Company, Dept. 7204, Two Gateway Center, Pittsburgh, Pennsylvania 15222.

100% electrical service flexibility is achieved by using a 40% cellular blend floor, with Tapmate units on a 5'-0" double-staggered module layout.

30% extra capacity for future wiring needs is provided by the Tapway compartments. And the removable cover plate and pre-punched holes provide 100% accessibility for future wiring.

60%-90% savings in pre-punched holes as compared to field cutting costs.

20% reduction in the cost of the total floor assembly is possible with the new Composite-Floor/Composite-Beam construction.

15% reduction in structural steel cost is possible with Composite-Beam construction. That has the advantage of the new cone of influence around the shear stud, resulting from new QL-99 steel floor profile.

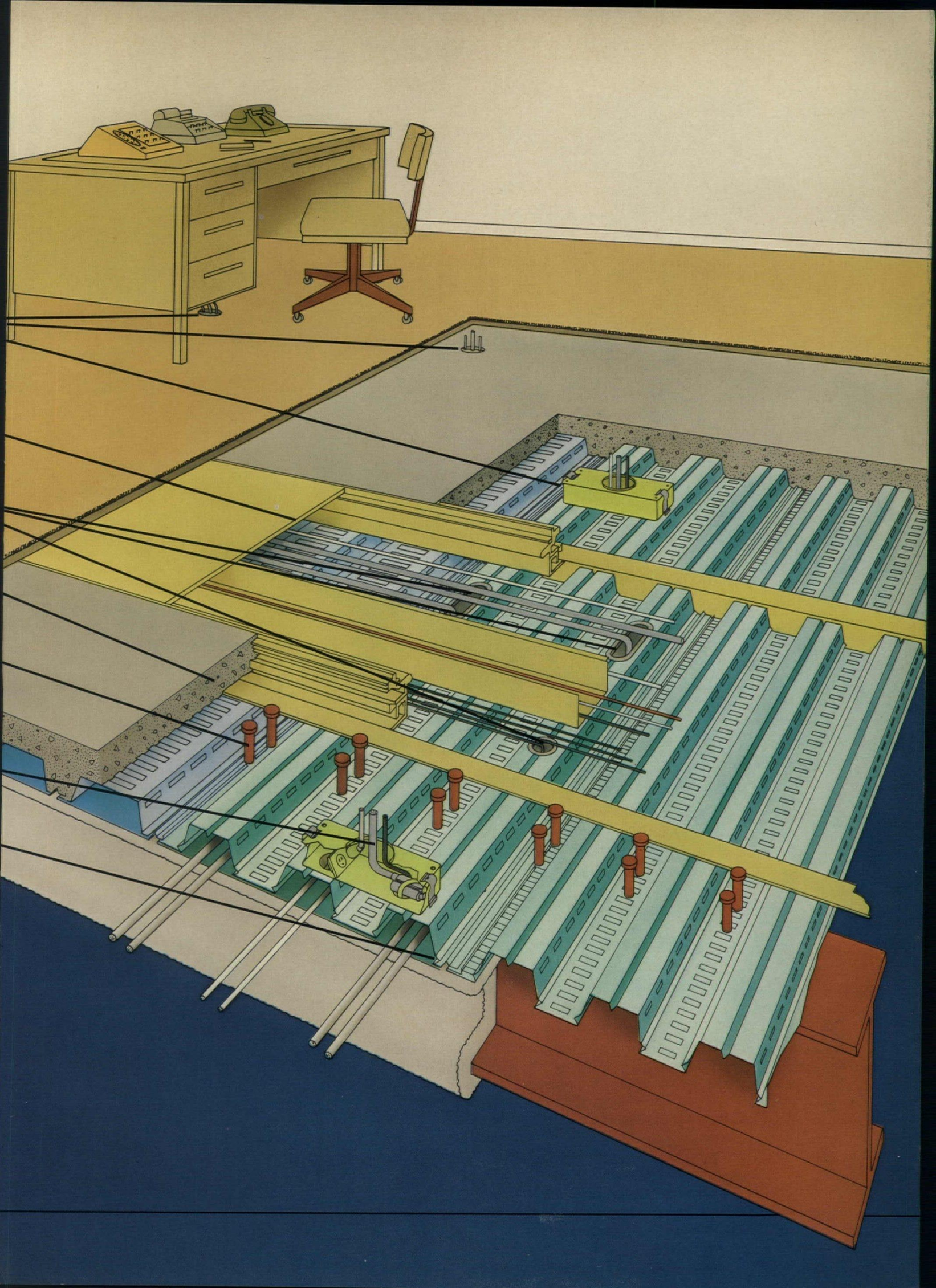
200%-500% more capacity than 2 conventional outlets is provided by the Tapmate 3-service unit.

5%-8% reduction in installation labor costs results from the new side lap, which is easier and faster to engage and weld.

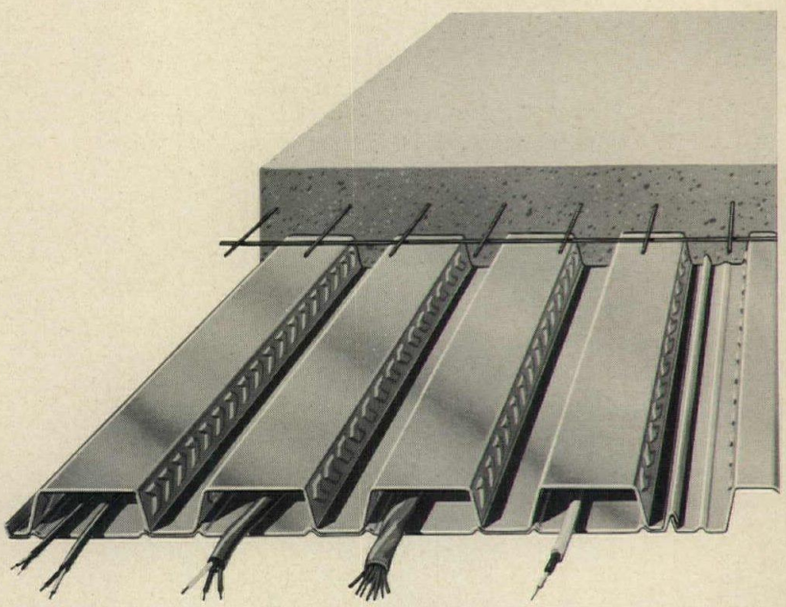
Fire resistance is UL-rated up to 2 hours.

Robertson

For more data, write A18 on inquiry card



introducing WireWay*: a new concept in cellular floor deck with many built-in advantages



Bowman WireWay takes a proven structural concept — the stiffening rib — and applies it to cellular steel floor deck. And what a difference it makes.

Bowman WireWay saves material costs, saves labor costs, and that's not all. Because of its extra strength, Bowman WireWay provides extra safety to work crews and future building occupants.

How does all this happen?

The stiffening ribs. They make the composite section stronger and stiffer so you can have longer spans with fewer supporting floor beams. They also do away with sharp interior cell corners that can snag phone and power lines during installation.

WireWay. In 1½" and 3" depths. Totally compatible with Bowman V-Grip composite deck for blend systems. Call 412/923-2300 for all the facts. We'll show you we mean to live up to our name.

*patent pending

Call Reeves-Bowman. The Simplifiers.

REEVES-BOWMAN DIVISION

cyclops CORPORATION

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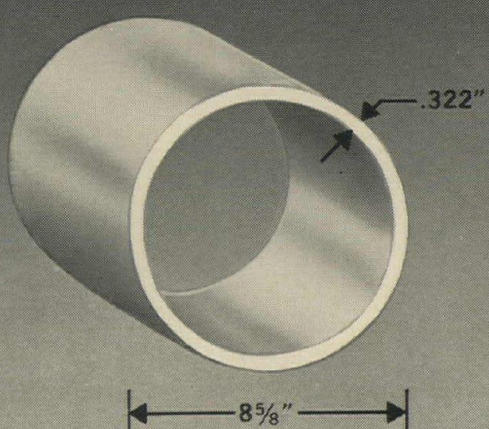
DIVISION EXECUTIVE OFFICES: DOVER, OHIO 44622 • 216/343-3371

For more data, write A19 on inquiry card

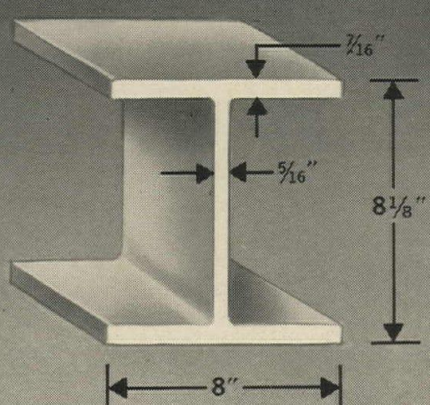
All 3 of these structural columns do the same job. Which one would you specify?

PIPE
$3.52 per foot



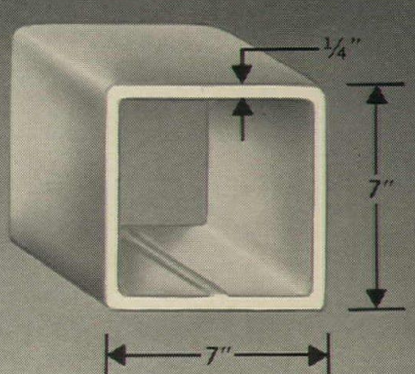
29 lb/ft

WIDE FLANGE BEAM
$3.03 per foot



35 lb/ft

WELDED SQUARE TUBE
$2.57 per foot



22 lb/ft

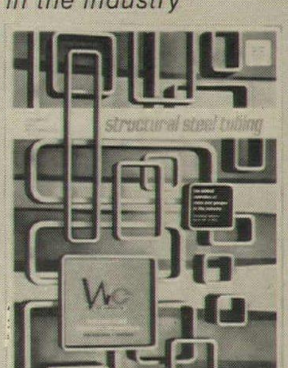
compare these price/weight advantages of square tubing over wide flange and pipe sections! Ask us for further facts and figures!

MINIMUM YIELD STRENGTH

PIPE	36,000 psi
WIDE FLANGE BEAM	36,000 psi
WELDED SQUARE TUBE	**46,000** psi or **50,000** psi

the widest selection of sizes and gauges in the industry

ask for our new brochure



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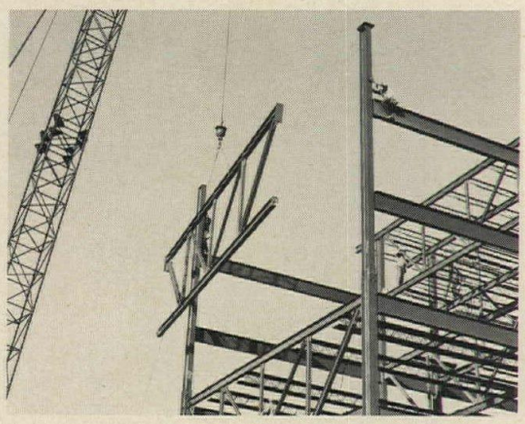
For more data, write A20 on inquiry card

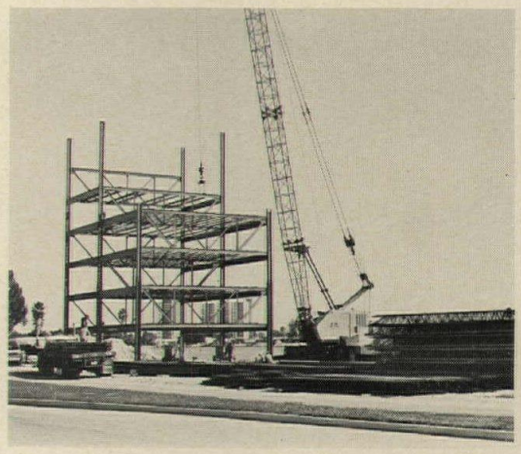
W-105 a

Treasure Island, Florida: another builder cuts costs in today's competitive market with Staggered Steel Truss.

Staggered Steel Truss is a new structural design concept for multi-story structures. It's been proven across the country to compete with and often beat other framing systems. And it can compete on a number of counts.

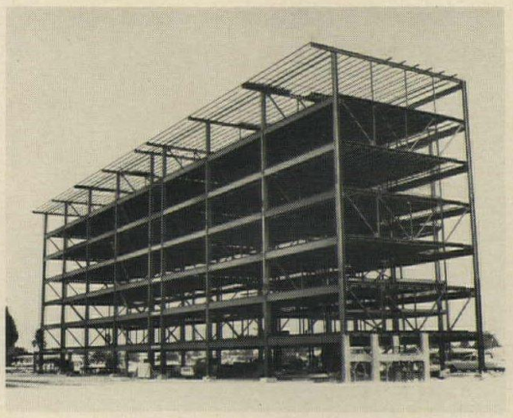
For instance, Green Feathers, Inc., owner and builder of St. James Apartments, Treasure Island, Florida, chose Staggered Truss for construction speed. They wanted faster occupancy for a quicker return on their investment. The main body of the building, which utilizes the Staggered Truss design is a rectangle, 207 ft. x 40 ft. and 7 stories high. It was erected in just 5 working days. (a 68 ft. x 46 ft. wing in the rear of the structure was erected with the conventional braced steel frame method.)



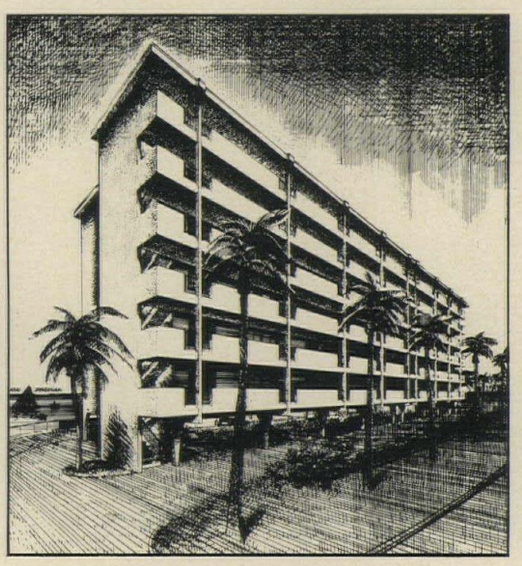


The Staggered Truss design also provided an ideal solution to off-street parking requirements by making possible a column-free 207 ft. x 40 ft. ground level parking area under the building. Additional benefits were realized in a relatively light weight steel frame and less costly foundations.

Essentially, the Staggered Steel Truss system is made up of one-story high trusses that span transversely between exterior steel columns and occur in a staggered pattern from floor to floor. Trusses at a given floor are placed midway between those of the floors below and above. Each floor rests on the top chord of the trusses below and is supported, alternately, from the bottom chord of the adjacent trusses.



Staggered Truss concept was developed for U. S. Steel by the Massachusetts Institute of Technology. The St. James Apartments is just the latest of many buildings around the country to use it effectively—and profitably.



We'll gladly send you a complete structural report (ADUSS 27-5588-01), which describes how Staggered Truss was used on this building. Also a free 26-page booklet on Staggered Truss, that shows a design for a typical 20-story apartment building in full detail. Write U. S. Steel, P. O. Box 86, Pittsburgh, Pa. 15230.

Construction Details

Description: A 7-story apartment building with penthouse atop. The main unit is a rectangle 207 ft. x 40 ft., to which a short wing 68 ft. x 46 ft. is appended. The latter is conventionally steel framed and cross-braced. 53 apartments, of which 8 are one-bedroom, 40 two-bedroom, and 5 three-bedroom. The entire main unit is set on pedestals, providing a 207 ft. x 40 ft. column-free parking space on the ground floor.
Design live loads: 40# psf in apartments/100# psf in corridors/20# psf on roof/Wind loading as per code.
Applicable Code: Southern Standard Building Code, Coastal Region.
Structural Steel: Total steel frame weight, 206 tons. Weight of other structural steel, 121 tons. Field connections are high-strength bolts.
Floor System: 16″ joists on 2′6″ centers. 9/16″ formed metal deck with 2½″ poured concrete.
Roof Construction: 28 gage galvanized steel formed decking; 3″ lightweight concrete slab; built-up roofing with tar and gravel.
Foundations: augered caissons.
Interior Walls and Partitions: Partitions ½″ drywall on 3⅝″ metal studs. Party walls without truss: ⅝″ Fireguard X Gypsum wallboard on each side of 8″ lightweight concrete blocks. Party walls with truss: ⅝″ Fireguard X Gypsum wallboard plus 1″ soundboard on 3⅝″ steel studs.
Exterior Wall: 8″ concrete block, sprayed with stucco.
Elevators: 1 bank, 2 elevators.
Fire Resistance: 1 hour for floor/ceiling. 2 hours for columns, spandrels & trusses (dry-wall).
Steel Erection Time: For the main unit of the building, 5 working days. Total steel erection time: 12 working days.
Gross Area: 90,098
Floor-to-Floor Height: 9′8″
Floor-to-Ceiling Height: 8′ (7′ in bathrooms and corridors).

Owner: Green Feathers, Inc., Treasure Island, Florida
Architects: Edward W. Hanson, Architect, Inc., Clearwater, Florida
Structural Engineers: O. E. Olsen & Associates, St. Petersburg, Florida
General Contractor: Green Feathers, Inc., Treasure Island, Florida
Structural Fabricator: Musselman Steel Fabricators, Inc., Tampa, Florida
Structural Erector: West Coast Steel Erectors, Inc., Tampa, Florida

United States Steel USS TRADEMARK

For more data, write A21 on inquiry card

Project Sponsors: American Wood Preservers Institute, National Forest Products Association, U.S.D.A.—Forest Service

Wolmanized® pressure-treated wood foundations mean easier, faster all-weather installation.

In 1969 a test program was initiated to study the installation and weatherability of pressure-treated wood foundations. In Lexington Park, Maryland, three test houses were built using Wolman® CCA-salt treated wood foundations, and a fourth home with conventional concrete blocks.

Time records show that the wood foundations installed faster, saving sixty man hours of construction time. In addition, total construction time was saved because the preassembled wood foundations were installed during weather that would have prevented concrete block construction.

Since they were built, these wood foundation homes have stayed snug and dry through rain, snow and even hurricanes. The homeowners are pleased. The foundations will continue to be protected against moisture and termites for the life of the homes without additional treatment or future maintenance.

Over 300 similar homes have been built around the country. The foundations have earned the AWPI endorsement and code approvals from BOCA, ICBO and the Southern Building Code Congress. They are eligible under any of the FHA's regular home mortgage insurance programs, plus the Farmers Home Administration Mortgage Programs.

For additional information, write Koppers Company, Inc., Forest Products Division, 750 Koppers Building, Pittsburgh, Pa. 15219. 72-16

Support ASTRO:
a sound railroad transportation plan
to meet tomorrow's needs

KOPPERS
Architectural and
Construction Materials

 For more data, write A22 on inquiry card

wood and plastics uci 6

Of special significance in the wood portion of this Division is the all-weather wood foundation system, the result of four years of research to test the feasibility, technology and economy of pressure-treated wood foundations for residential construction. Demonstrated advantages of the system include reduction in construction delays due to inclement weather, cost savings in erection time, and more comfortable below-grade living areas.

Although this Division is also reserved for plastics, the innovations in plastics uses are illustrated throughout the issue, in almost all the product categories.

About 25 per cent of all plastics production ends up in the building and construction market. However, only about 3 per cent of the building market is accounted for by plastics. Yet there is now little doubt that plastics will become a fully accepted material in construction.

Some areas are already saturated: vinyl flooring, sealants, light fixtures, wall coverings. Others in the rapid growth phase are: pipe, bathrooms, thermal insulation, safety glazing. But most applications are still in the specialty area: plumbing fixtures, window frames, doors, curtain walls, roofing.

The contributions plastics will be making to the building field will not be so much in terms of new materials, but in terms of modifications of existing ones, plus ingenuity in design. More plastics will be nonflammable; they will weather better and be tougher. In the design area, the big push will be in "unifying"; the one-piece bathroom, and the pipe tree with preassembled connections for one-man installation are examples. Plastics as a tool for construction should not be overlooked. Fiberglass forming pans serve as reusable molds for concrete waffle slab ceilings.

Prepared with the help of Sid Gross, Modern Plastics, *New York; Joseph S. McDermott, Plastics in Construction Council, New York; and A. M. Camarano, American Wood Preservers Institute, McLean, Va.*

Cimmerian Leather, 773

Bronze Tableau, 797

Dimensionals!

Formica does them with feeling.

This is Formica '72 — a vintage year. And these are two of the exciting new dimensionals that help make it so. Run your fingers over Bronze Tableau. Feel the ripples and peaks of the rough-troweled texture. Observe how the highlights and shadows of the raised surface enhance the rich, varigated colorings. And Cimmerian Leather. Its dimensional "grain" gives off a soft, warm feeling that appeals to your sense of touch. Gives it a natural texture that enlivens the colors.

And the real beauty of it all is — when you specify one of our 13 exciting dimensionals — you're specifying a FORMICA® brand laminate that never needs refinishing — stays bright and new looking for years. Select from more than 130 Standard and Designer Collection colors, patterns and woodgrains.

Let it be a vintage year for you, too. Consult your Sweets Architectural File 6.14/Fo, or write us today for more information, **Dept. AR-01A**

Leadership by design

FORMICA® BRAND laminated plastic

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For more data, write A23 on inquiry card

WOODWORK

147 ROSEWOOD / Prefinished hardwood-faced plywood panels are "mis-matched" with shadow-line V-grooves and satin finish. Available in 3/16 in. or ¼ in. by 4 ft by 8 ft panels. / Potlatch Forests, Inc.

148 TEAK PANELING / Architectural hardwood paneling is recommended for walls, book shelves, cabinet work and dividers. Available unfinished, in book-matched and sequence-numbered sets. The teak comes in ¼ in. by 4 ft by 8 ft or 10 ft, and in ¾ in. by 4 ft by 8 ft or 10 ft. / Bangkok Industries.

149 BURLED ELM PANEL / Carpathian Elm with irregular, knotted swirls is featured in this paneling in tan and auburn. The panels are waxed to a high gloss. / J. H. Monteath Co.

150 CARVED WOOD GRILL / Special carving techniques develop holes in these ¾-in. thick solid hardwood panels, producing see-through grilles that are strong, decorative, and completely reversible. Unlimited selection of stock or custom sizes in walnut, maple, ash, red oak or poplar / Customwood Mfg. Co.

151 VENEERED PLYWOOD / An architectural grade of hardwood veneered plywood is available with a special rayon cloth applied under the face veneer to prevent checking and warping. Random-matched panels are made from eight different logs, used in a single panel. Available in the West only. / Tech Sales Co.

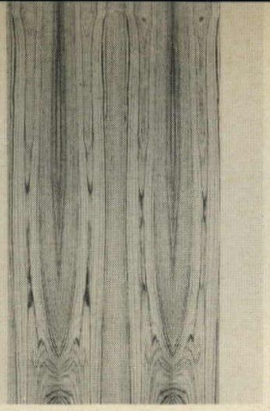
CONNECTORS & SUPPORTS

152 JOIST BRIDGING / Stamped from 16- and 18-gauge galvanized steel with center ridge and flat ends, this crossbridging is available for 2 by 8 joists on 12-in. centers up to 3½ by 24 on 48-in. centers. Ends have several nail holes to cover various joist sizes and center distances. / Cleveland Steel Specialty Co. A*

153 JOIST HANGER / Large hanger for laminated beams, nominal sizes and built-up beams where heavy loads are involved. Custom made to match size and design load requirements. Special heavy nails are available to ensure proper capacity and reduce installation time. / Cleveland Steel Specialty Co. A*

154 SILL PLATE ANCHOR / Designed for anchoring wood sills to either concrete or masonry, this product is made from 16-gauge, zinc-coated steel. It is 18⅝ in.

147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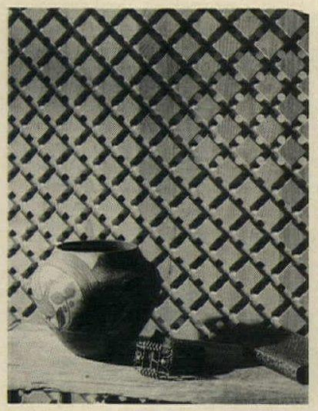
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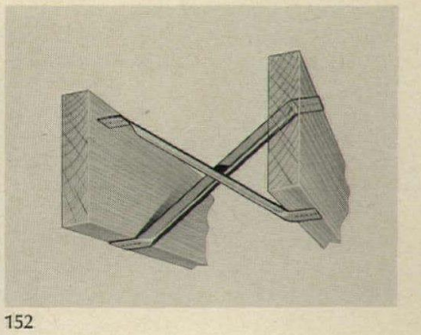
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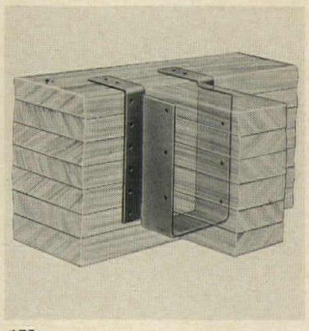
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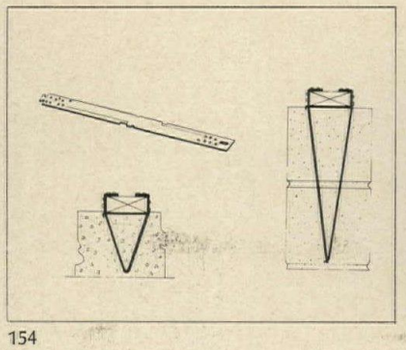
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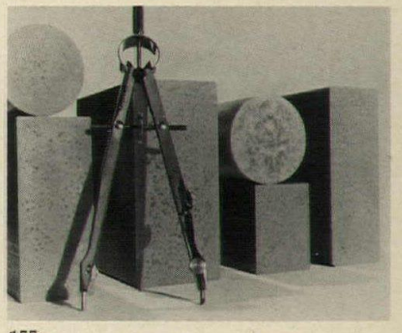
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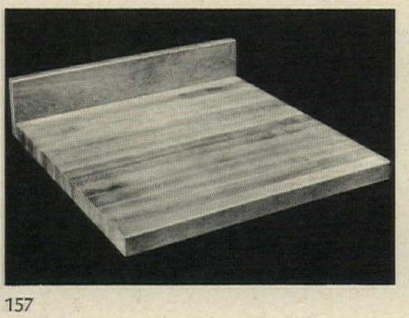
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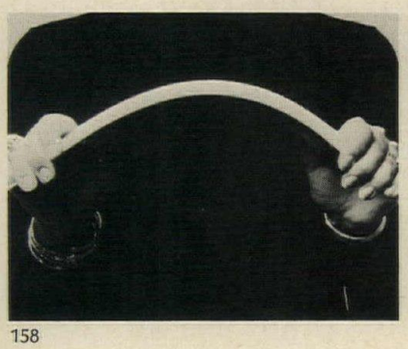
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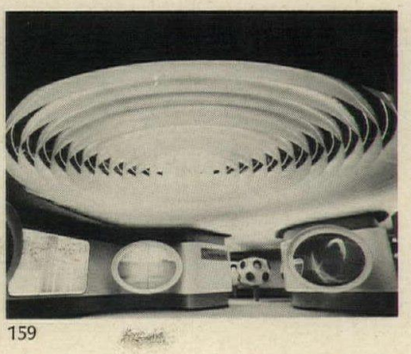
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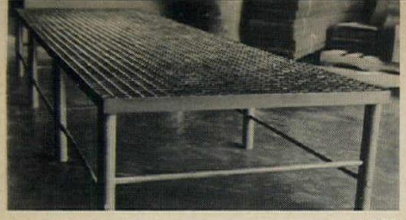

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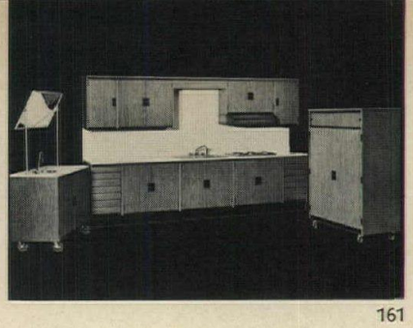

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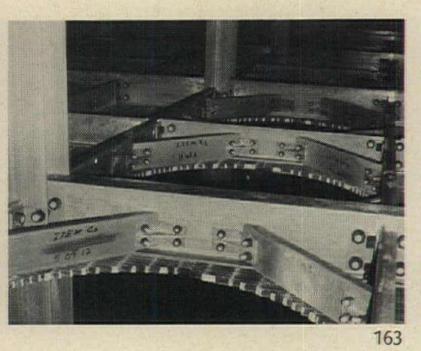

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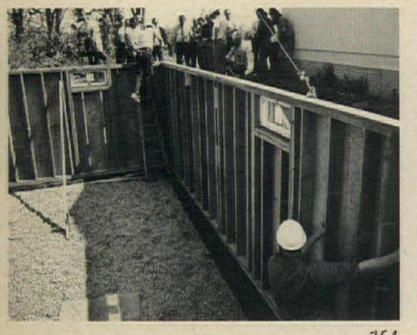

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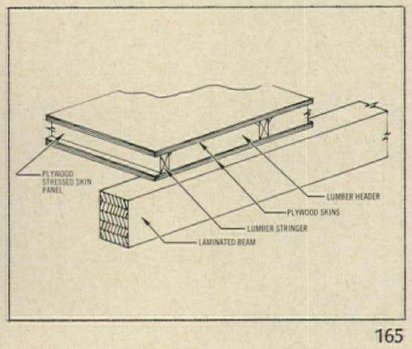

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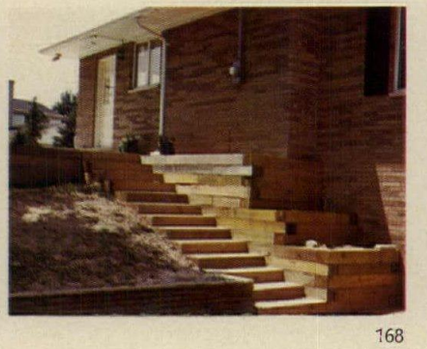

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long and 1 in. wide. Eliminates pre-drilling sill plates for anchor bolts. / Timber Engineering Co. A*

155 PLASTIC BEAMS / Reinforced polyester resins can now be made into structural shapes with larger cross sections than previously possible. With cross sections measuring 2 in. by 4¼ in. and larger, these structural parts are recommended for applications where metal cannot be used. / Industrial Plastics Div., Westinghouse Electric Corp.

LUMBER

156 FRAMING SYSTEM / *Mod 24* uses plywood over lumber framing spaced 24 in. on center for floors, walls and roofs. A savings of up to $200 is claimed for a 1,600-sq. ft. house. Single-layer plywood is recommended in all areas. Accepted by major building codes. / American Plywood Assoc.

157 HARDWOOD COUNTER / Made from selected northern hardwood with edge grain surface, the wood is kiln-dried and moisture-resistant. Counter tops are 1½ in. thick and available in lengths from 12 in. to 120 in. / Sensenich Corp.

PLASTIC FABRICATIONS

158 PLASTIC MOLDINGS / These moldings are unaffected by humidity, will not shrink, warp or twist and are rodent- and vermin-proof. Severe shock will not damage them. Moldings are easily cut and will take any finish, including stains and paints. / Glass Laboratories, Inc.

159 ACRYLIC SHEETING / Continuous-cast acrylic is available in unlimited lengths, clear or tinted. Typical applications of the seamless product are for uninterrupted display windows, or in lighting, as shown in the concentric rings. / Swedlow, Inc.

160 ELEVATED FLOORING / Made of fiberglass reinforced plastic, this corrosion-resistant "dry floor" system is available with fixed legs for even base floors, and adjustable legs for use on floors sloped for drainage. / Fibergrate Corp.

PLASTIC LAMINATES

161 PLASTIC CABINETRY / High pressure laminate on all work surfaces and plastic polyester finish on side and door panels characterize the *PL Steelcore* line of cabinets for institutional applications. Available in two wood finishes and several colors. / Vecta Educational Co.

162 METALLIC LAMINATE / *Fired Copper* is designed for vertical and light-duty horizontal surfacing. Available in *Cast Copper* and *Fired Pewter*. Real metallic surfaces finished in three-dimensional textures. / Formica Corp. A, L, D*

STRUCTURAL PLASTICS

163 POLYESTER I-BEAM / Low installed cost and long service life with minimum maintenance are claimed for these glass reinforced polyester I-beams and structurals. It is one-fourth as heavy as steel and two-thirds the weight of aluminum. It resists most acids and alkalis over a wide temperature range. / Morrison Molded Fiber Glass Co.

STRUCTURAL WOOD

164 ALL-WOOD FOUNDATION / Pressure-treated wood is recommended for all exterior uses, especially foundations which can be constructed in any weather, any time of the year. Preservative will not leach out. It is said this system can save 12 per cent on foundation costs, be erected in one-sixth the time of conventional foundations and provide comfortable living space below grade. / Osmose Wood Preserving Co. of America, Inc.

165 LAMINATED BEAMS / Douglas Fir, Larch and Southern Pine are used to produce structural laminated timber with the grains running approximately parallel longitudinally. A variety of structures can be created using components such as the stressed skin panels on a laminated beam, the system shown. / Laminated Wood Products Co. I*

166 WOOD FRAMING / A lightweight framing system is composed of dimensional lumber parallel chords with adhesive-bonded plywood bussets, staggered to create rectangular openings. Depths vary from 11½ in. with span and loading. Custom designed and fabricated. / Wood Fabricators, Inc. A,L*

167 WOOD FOUNDATION / All-weather wood foundation systems utilizing lumber and plywood, pressure treated, are suitable for construction and erection during winter months. Building code approval has been obtained in several states. / Koppers Co. A*

WOOD TREATMENT

168 PRESERVED WOOD / Wood treated with *Weathershield* resists decay and attack by insects. It also is water-repellent, which aids in retaining the surface integrity of the wood. Shown are steps and decking treated. / Osmose.

For more data, use inquiry card.

7230

Another special place for Marlite: where walls have to take a beating.

When an interior design problem calls for high style *and* low upkeep, you need a special kind of wall: soilproof Marlite paneling.

In the bar shown above, the solution is textured Marlite Barnside Planks. This rugged new wall looks enough like real barn siding to fool a farm boy. Weathered, craggy, full of knots.

But the real beauty of Marlite is the way it stays good-looking in spite of rough treatment. Resists scuffs and stains, comes clean with a damp cloth once-over. So your client's maintenance costs are practically zero.

And Barnside is just one bright idea in Marlite's great collection. You'll find dozens of interesting textures, fresh colors, distinctive designs. For accent walls, wet areas, food preparation areas, heavy traffic zones and other special places.

Get up-to-date on Marlite by writing for color literature and a professional sample of new Barnside. Marlite Division of Masonite Corporation, Dept. 1094, Dover, Ohio 44622.

Marlite®

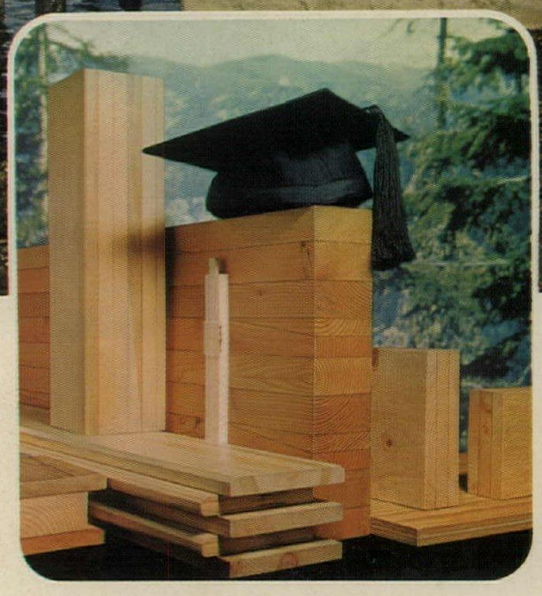
We make walls for special places.

For a professional sample of Barnside, write Marlite, Dover, Ohio 44622.

Marlite paneling is hardboard with man-made finish.

For more data, write A24 on inquiry card

Architects: Buckley & Sazevich, San Francisco



Engineered wood products that can match your imagination

This dramatic waterfront house uses Cedar Lock-Deck laminated decking to form both structural and finished wall and roof surfaces in one imaginative application.

Potlatch manufactures wood in countless forms, as strong and versatile as they are beautiful. They open the door to a whole new world of warm, natural designs that once had to compromise beauty for practicality.

The remarkable durability of Inland Red Cedar boards and decking gives interiors and exteriors a beauty that grows with passing years. Lock-Deck decking and laminated beams of superb Southern Pine combine outstanding strength with a unique clarity of appearance. The wonderful workability of Idaho White Pine gives charm and permanence in countless solid and laminated forms, and solid hardwood panelings and floorings give durable, dramatic beauty. The wonderful world of wood is engineered to match your needs at Potlatch Forests, Inc., P.O. Box 3591, San Francisco, 94119.

Potlatch

For more data, write A25 on inquiry card

Potlatch, the forests where innovations grow... in wood products and building materials, in paperboard and packaging, in business and printing papers.

How does Ruf-Sawn 316 stack up against raw wood or composition siding?

As good as both and better than either.

Ruf-Sawn 316 is an entirely new plywood siding product. It has a resin-impregnated fiber surface designed for painting.

You paint it quicker, with less paint.

You will paint it less often.

Ruf-Sawn 316 gives you the superior structural advantages of plywood—higher strength-to-weight ratio, and greater racking strength without sheathing or corner bracing.

And, being 3/8" plywood, one man can easily apply it.

Ruf-Sawn 316 offers the paintability of a smooth overlay, the lightness and strength of plywood, and a natural, saw textured grain developed from real wood patterns.

In actual testing, it has extended paint life up to three times longer than raw wood.

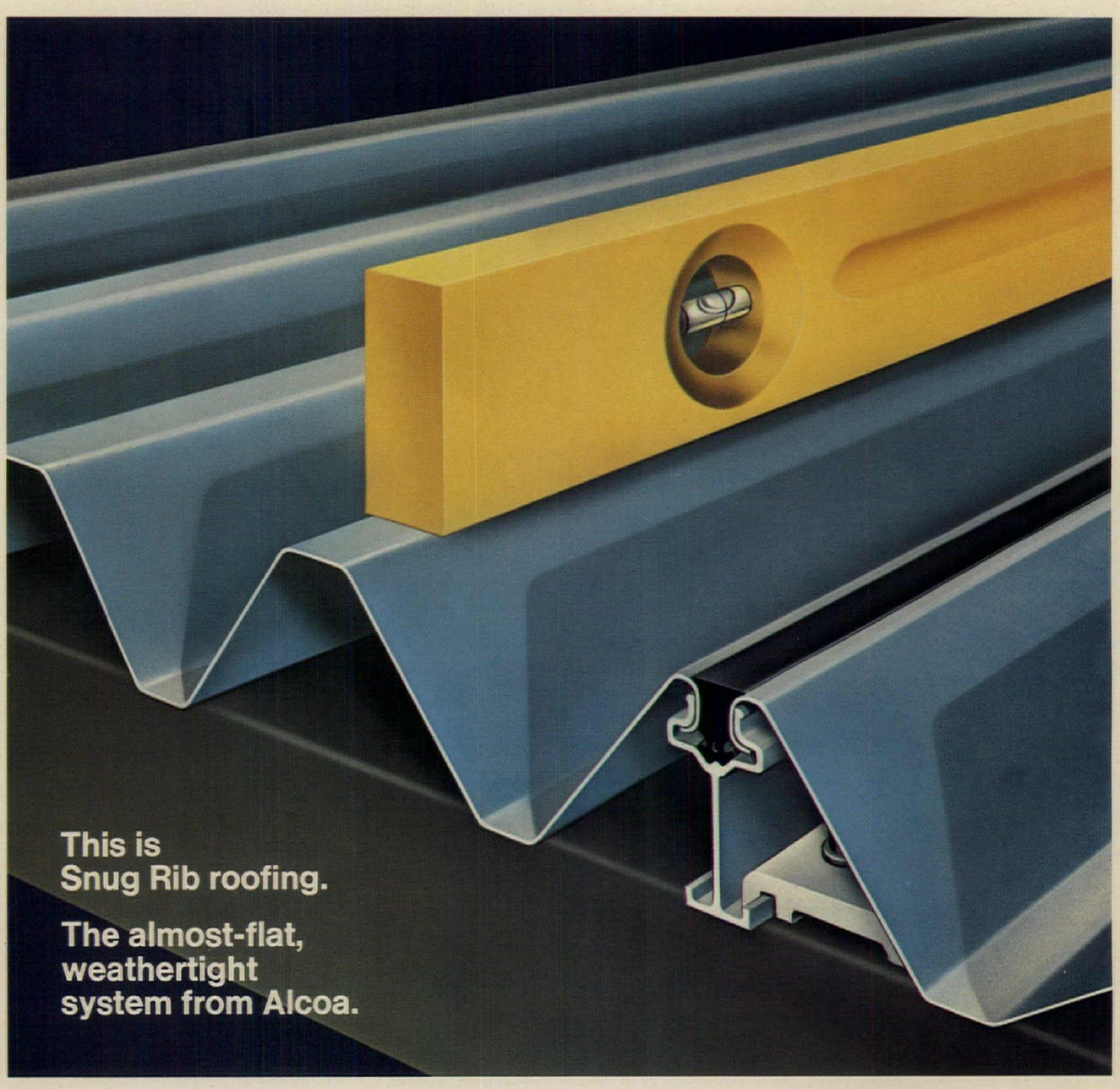
The cost? Only slightly higher than standard paint-grade plywood. Use it once and you'll be a convert on the spot.

Ruf-Sawn 316 is available only from Simpson. If you have a Simpson supplier, ask him about it. If you don't, write us:

Simpson Timber Company
2000 Washington Building
Seattle, Washington 98101.

For more data, write A26 on inquiry card

Simpson
Ruf-Sawn 316



The Alcoa® Snug Rib roofing system gives you all the advantages of a low-pitch roof, plus excellent leak resistance, long-term maintenance savings and attractive appearance. Slopes as low as ¼ in. in 12 ft are possible, so there's less dead space to heat or air-condition. Snug Rib roofing is a floating, weathertight system. Because it floats, it is free to move under thermal cycling, so locked-up thermal stresses are eliminated. The patented Snug Seam® joint holds panel edges securely in place to create a weathertight seal. No through-fasteners penetrate the weathering membrane. On most buildings, end laps can be eliminated because lengths are limited only by shipping conditions.

Snug Rib roofing saves you money several ways compared to conventional metal roofs. Less roofing material is required in relation to floor space. Steel trusses can be lighter. Fast erection cuts construction costs and completion time. And long-term maintenance costs are reduced because aluminum takes care of itself. For manufacturing plants, port warehouses, airport facilities, recreational buildings, grandstands and sports complexes, Alcoa Snug Rib roofing is handsome, weathertight and economical. For more information, write Aluminum Company of America, 1236 Alcoa Building, Pittsburgh, Pa. 15219.

recyclable aluminum

Change for the better with Alcoa Aluminum

ALCOA

For more data, write A27 on inquiry card

thermal and moisture protection uci 7

It seems that never in the history of construction has there been so much effort put into techniques and products to keep the rain out. Everything from fasteners to entire wall panels can claim, justly, an important moisture-proof feature. Some of the improvements are due to new materials, while others are the result of innovative applications of existing materials.

With the increasing popularity of precast and cast-in-place concrete, wider expansion joints have become necessary to accommodate greater movement. Answering the need for sealants that have enough body to fill wide joints without sagging, manufacturers now offer sealants with adhesive properties that will produce a strong bond to keep the joint sealed throughout repeated expansion and contraction cycles. Of equal importance are the good color ranges now available and the ease of application. Some sealants require no priming and little amounts are needed to do the job.

To overcome the vulnerability to leaks and the deterioration of appearance in roof edging, several manufacturers have designed free-floating systems to take movement in any direction without exerting strain on any one component. Over-all appearance is improved since these products produce clean lines.

The waterproofing of plazas and other traffic bearing surfaces is being approached by some manufacturers with systems for water management rather than all-out water repelling. These systems are based on new liquid polymers of the tar- or asphalt-modified type used in combination with other building materials. In one such system, a drain removes water at several levels of protection before it reaches the structural slab.

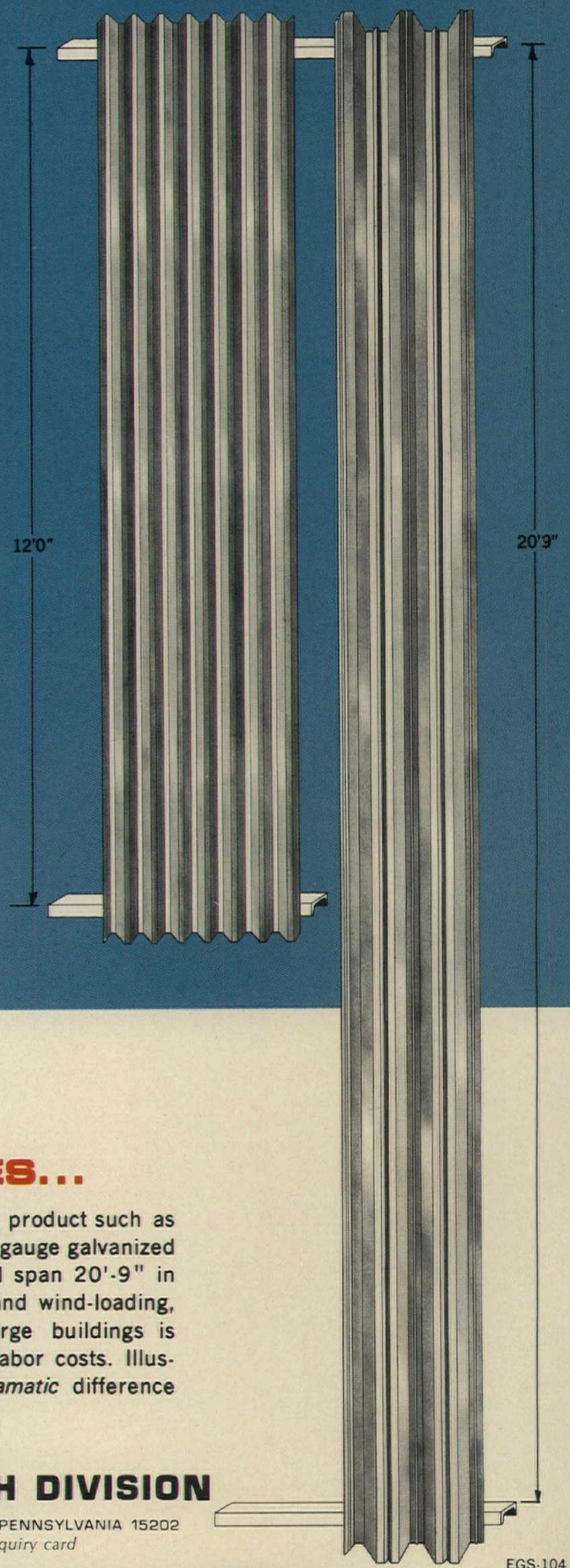
Urethane foam continues high on the list of breakthroughs in insulation and its forms are many, including pre-formed panels for sheathing and built-up roofing. Mineral insulations are being marketed for their high temperature resistances.

Prepared with the help of the Tremco Mfg. Co., Cleveland, O.; and the General Electric Co., Waterford, N.Y.

New SMITH DYNA SPAN

- MASSIVE PROFILE FOR MASSIVE BUILDINGS
- SPANS LONGER DISTANCES
- SAVES STRUCTURAL GIRT COSTS
- SAVES ON ERECTION COSTS

DYNA SPAN is super strong . . . bold in profile. Its deep profile casts strong shadows giving a more aesthetic appearance to tall structures, while at the same time affording more structural rigidity. DYNA SPAN can be erected as an insulated panel system, or an uninsulated exterior sheet. Double-cell profile is standard, but a DYNA SPAN single-cell sheet is available for roofing applications or to serve as an accent rib with other metal wall profiles. For full details, span data and specifications, write for Bulletin 72W1.



HOW IT COMPARES...

Compare DYNA SPAN with a comparable type product such as the industry standard, V-BEAM. Based on 22 gauge galvanized steel at 20 psf wind loading, DYNA SPAN will span 20'-9" in a single span. V-BEAM, with the same gauge and wind-loading, will only span 12'-0". The savings on large buildings is *dramatic* both in structural steel and field labor costs. Illustration at right is in scale and shows the *dramatic* difference possible with DYNA SPAN.

cyclops CORPORATION

ELWIN G. SMITH DIVISION

100 WALLS STREET, PITTSBURGH, PENNSYLVANIA 15202

For more data, write A28 on inquiry card

EGS-104

CLADDING/SIDING

170 TEXTURED PLYWOOD SIDING / Deep texture, natural wood that has been rough-sawn and impregnated with a material that eliminates fuzzy grain raise. Suitable for painting or solid-color staining. The product meets FHA requirements for racking strength, yet weighs less than comparable composition sidings, according to the producer. Low cost, low maintenance are claimed. / Simpson Timber Co. A, L *

171 STONE AGGREGATE SIDING / Meeting the requirements of the American Plywood Association for weather resistance, integrity and color fidelity, the product offers three standard aggregate sizes in green, tan, brown, red, two whites, grey and black. Aggregate sizes average ⅛ in., ¼ in. and ½ in. A choice of standard substrates is offered, and panels are made in 4-ft or 5-ft widths, up to 12 ft long. / Modular Materials, Inc.

172 CEILING PANEL / The look of individual boards is available in redwood or fir panels. The rough sawn face of *Cloverdeck* has no wood plugs or patches, and is suited for a stained or natural finish. The product is 1⅛ in. thick and features 9-ply construction, with tongue and groove joints. / Clear Fir Sales Co.

173 SELF-DRILL FASTENER / For metal siding, these fasteners have nylon heads that match long life panels in color and longevity. The double-square configuration of the head casts a smaller shadow. Colored throughout to match any panel. Non-corrosive. / Buildex Div., Illinois Tool Works, Inc.

174 SEALING WASHER / *Twin-Seal* provides long-lasting seals at fastening points. It is a separate, but interlocking metal and sealing washer that is an effective moisture barrier. / Buildex Div., Illinois Tool Works, Inc.

175 TEXTURED HARDBOARD / This siding with embossed wood grain and cross scoring provides a weathered appearance and is dent- and abrasion-resistant. It is offered in 12-in. lap siding for batten application and comes in ½-in. thick panels. Unprimed. / U. S. Plywood Div., Champion International. L*

176 BARNWALL SIDING / Suitable for both exterior and interior use, this product features 8-in.-on-center grooving in a plank pattern. The ⅝-in. thick panels are offered in a uniform grade, free of knots, while the rustic grade contains solid knots. / U. S. Plywood Div., Champion International. L*

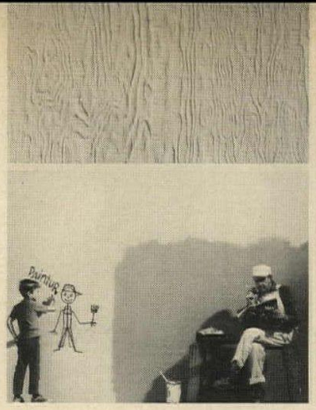
COMPOSITE PANELS

177 WALL UNITS / Available in a variety of finishes, the system includes panels with windows, doors, trim and hardware and permits total building design flexibility. / Atlas Minerals & Chemicals Div., ESB Inc.

178 ALUMINUM WALL MODULE / Factory-assembled modules feature bronze duranodic finish on the exterior and have an interior of prime-coated aluminum sheet. Each extends from floor to floor and is bolted in place. A weatherproof seal is provided on all four edges of the module. / Aluminum Company of America. A*

FLASHING

179 COPPER FLASHING / A lightweight, high-strength sheet, this is ideal for exposed and concealed flashing. Available in two standard sizes: 36 in. by 96 in. and 36 in. by 120 in. The product can save the user up to 25 per cent on the weight of metal needed, without sacrificing performance. / Copper Development Assoc., Inc.



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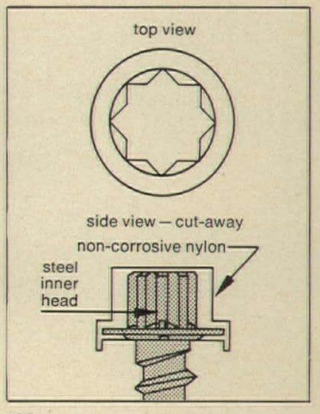

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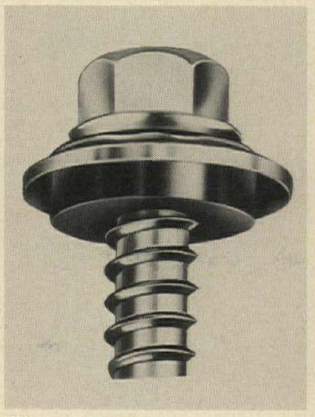

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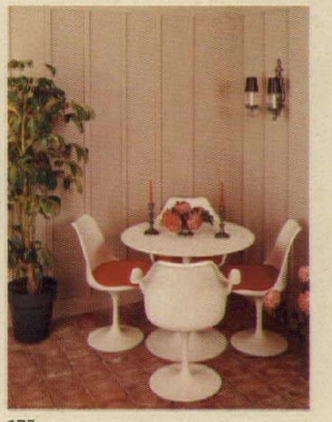

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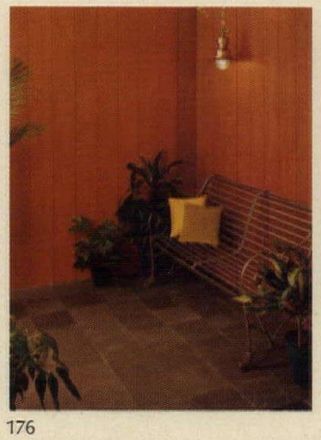

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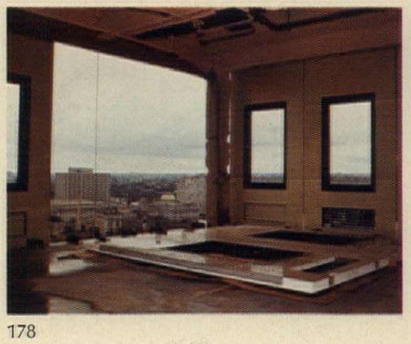

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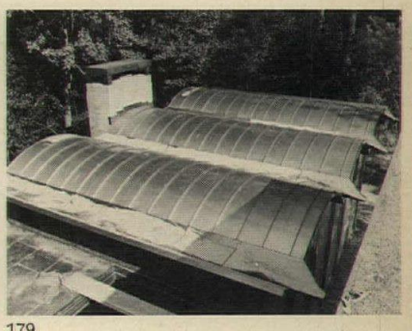

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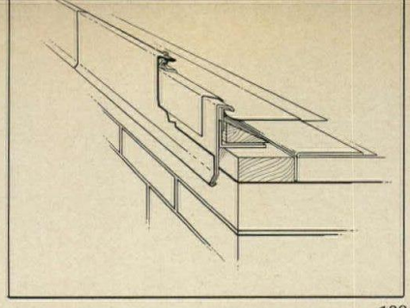

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180 FASCIA SYSTEM / The *Fascia-line* system allows for horizontal and vertical adjustment during installation. Horizontal and vertical movement after installation will not break bond between fascia and roofing materials. All finishes are available. / Miscellaneous Mfg. Co.

INSULATION

181 FOAM INSULATION / A thermal and acoustical material, this product can be applied in walls, ceilings, floors, partitions, pipe chases and other building cavities. There is no further expansion after the material leaves the applicator gun. *U.F.C.-Foam* is cold-setting and forms a low-density, resilient plastic form. Fire-protective and moisture-resistant, the product is non-toxic. / U.F. Chemical Corp. A, I *

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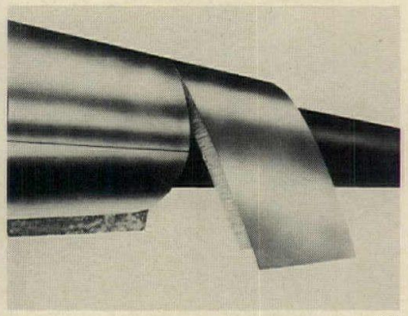

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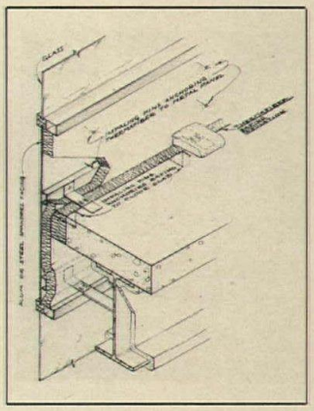

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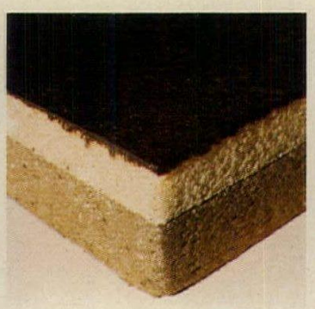
182 SHEATHING-INSULATION / A new combination sheathing-insulation board, *STYROFOAM TG*, is available in very lightweight, white, 2- by 8-ft rigid sheets to serve as non-structural sheathing or underbase for siding, insulation and vapor barriers. Each edge of the boards is either tongued or grooved. / Amspec Inc.

185



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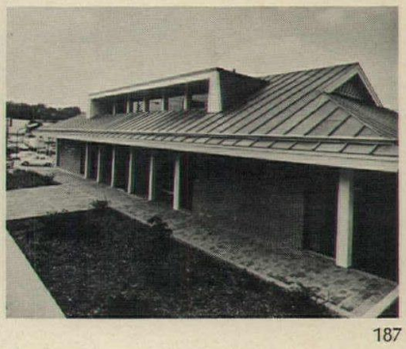

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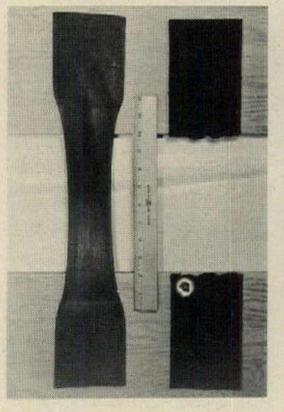
183 MINERAL WOOL / A one-step insulation for smaller diameter pipes is available in diameters from 6 in. to 24 in., in thicknesses ranging from 1 in. to 5 in. Contains no asbestos, is low in chlorides and can withstand temperatures up to 1,200 degrees F. / Ceiling & Insulation Div., Keene Corp.

184 FIRE BARRIER / *Thermafiber* insulation is a preformed mineral fiber semi-rigid felt designed for use as a fire stop in the safe-off area of curtain-wall, high-rise construction. A high melt point in excess of 2,000 degrees F is offered. / United States Gypsum Co. A*



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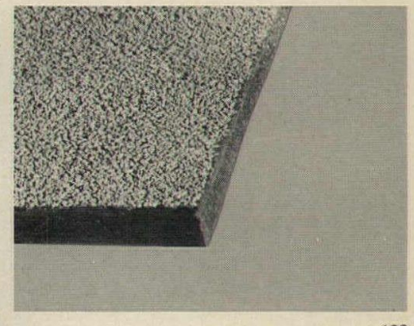

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185 DECK SLOPING / The *Dri-Deck* system provides positive slope to drains using only those materials normally used to install the company's *Fesco Board* in ¾-in. or 1-in. layers. Installed in layers, the board is trimmed with a knife until the board is built up in steps, and the steps honed. / Johns-Manville.

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191

186 ROOF INSULATION / A built-up roof insulation, this is a rigid, board-type employing polyurethane foam as a core with facings of *Fesco Board* and asphalt-saturated felt. Fire and water-resistant. Suitable for insulating metal decks. / Johns-Manville.

MEMBRANE ROOFING

187 TITANIUM ALLOY / *Microzinc 70* is a pre-weathered, non-rusting zinc-copper-titanium alloy suitable for batten and standing

For more data, use inquiry card.

seam roofs, fascias and gravel stops, flashings and gutters. Gray surface coloring. Offered in standard lengths, widths and gauges. / Ball Metal & Chemical. A*

188 ROOFING / A modified elastomeric roofing material for the repair of existing roofs or for use on new roofs, this product avoids splitting and cracking from freeze-thaw cycles. It can be applied directly over existing roofing. *Roof-Flex* bonds tightly to both tar and asphalt. Photo shows the stretching ability of the product compared to felt. / Carboline Co. A*

189 ROOF SYSTEM / *Roofwalk* is a five-ply slab with an asphaltic core, two binders of felt, and a weathercoating in which ceramic granules have been embedded; provides protection from roof traffic. / J. & P. Petroleum Products, Inc. A*

190 DECK ROOF ASSEMBLY / This system places insulation above the waterproof membrane, protecting it from thermal cycling and roof traffic. The system depends on use of *Styrofoam* plastic foam insulation, with top finish of pavers, crushed stone or cement. / Amspec, Inc. A,L*

METAL ROOFING

191 ALL-PURPOSE METAL / *Titanaloy A* is used for roofing, flashing, termite shields, coping covers, control joints, stone anchors and cavity wall ties. It is pre-weathered and is not back coated for ease of soldering. Available in sheets or coils up to 36 in. wide. / Matthiessen & Hegler Zinc Co. A,L*

WALL & ROOF PANELS

192 USDA-APPROVED PANELS / Porcelain-on-steel panels for ceiling and walls are vermin- and rodent-proof. The panels require virtually no maintenance and are guaranteed for 50 years. / AllianceWall Corp. A,I*

193 BRONZE-TONE PANELS / Various shades of bronze are offered on porcelain-on-steel in 111 standard colors. The colors are stable and do not vary even when exposed to light reflections. / AllianceWall Corp. A,I*

194 MODULAR WALL / *Verti-Kal* is a translucent wall system for enclosing buildings in part or wholly. A sandwich panel formed by fiberglass sheets bonded to a grid core of extruded aluminum beams forms a finished panel with structural strength, insulation value and light transmission. / Kalwall Corp. A*

195 ROOF PANEL SYSTEM / To eliminate fasteners between panels, this system uses a sealing machine that automatically seals the factory-caulked panel ribs. The panels do not have to be screwed down or held in place. A three-man crew only is needed for most panel lengths. / Walker/Parkersburg.

ROOF ACCESSORIES

196 ROOF EDGING, FASCIA / Modular, extruded aluminum *Tremline* components and an elastomeric membrane snap together to form a free-floating roof edging that can accommodate varying movements that occur where roof-deck systems adjoin walls. Available in a range of colors, the edgings eliminate special drawings and many on-site fabrication steps. / The Tremco Mfg. Co. A*

197 ACRYLIC SKYLIGHTS / Available in a variety of shapes and sizes, *ASTRODOME SKYLIGHTS* are available in a wide selection of densities, in clear or white acrylic, and —for special effects—any density can be specified in any desired color. Curbs are one-piece extruded aluminum, and have 1-in. styrofoam insulation. / Decker-Mohn, Inc. A*

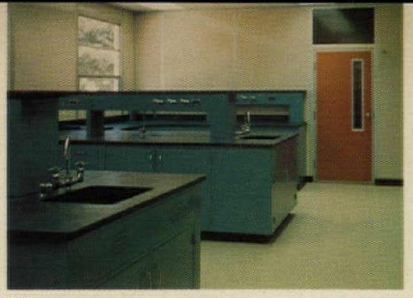
ROOFING SPECIALTIES

198 EXPANSION JOINT COVER / The product is made of extruded vinyl and recommended for roof expansion joints. It forms a vapor seal and, if stepped on, springs back to the proper position. One-piece construction. / B. F. Goodrich Building Products. A*

199 ROOF EXPANSION JOINT/A new, low-profile, completely prefabricated, roof expansion joint, *LEXSPAND*, consists of a flexible neoprene foam insulating center strip, rigid vinyl nailing strips, and an outer cover of flexible vinyl. The joint is reportedly strong, long-lasting and watertight. / Lexsuco Inc.

200 RIGID ROOF INSULATION / *Permalite* meets the requirements of UL roof deck construction for Class 1 insulated steel decks. It combines fire resistance and insulation in 3-ft by 4-ft sheets, from 1¼-in. to 3-in. thick. / Grefco, Inc. A,I*

201 EXPANSION JOINT / This joint cover is seamlessly extruded with embedded nailing strips and heat-laminated bellows insulation. Self-adhering splices make the job weather-tight. For joint openings of 1 in. to 4 in. Straight flange in 50-ft and 100-ft rolls. / Grefco, Inc. A,I*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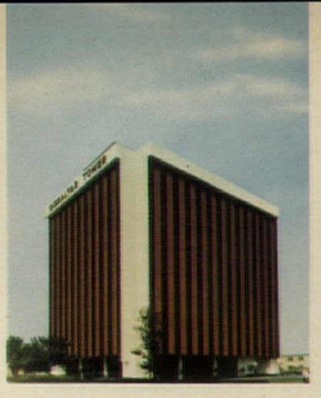
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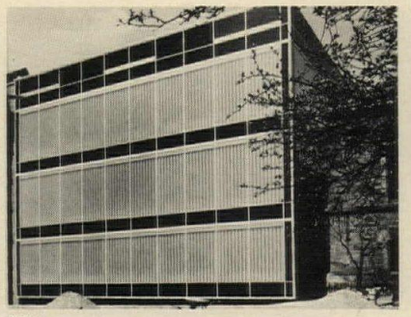
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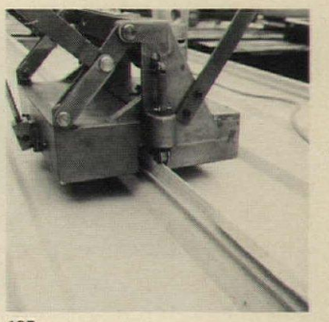
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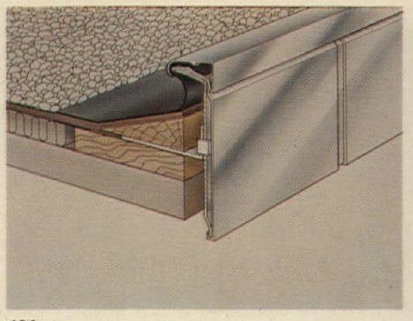
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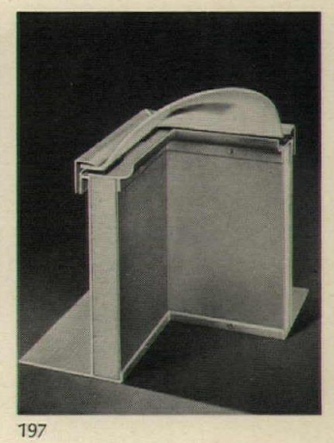
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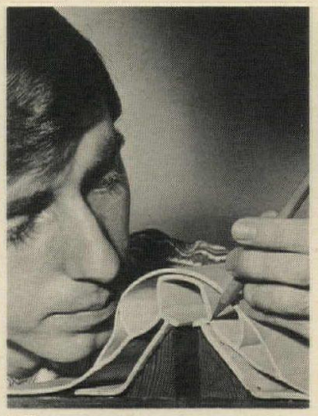
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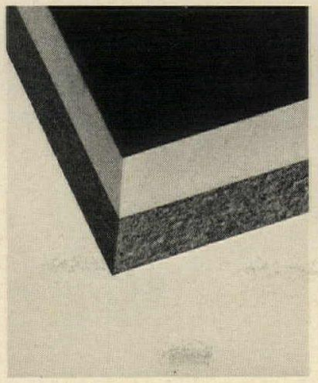
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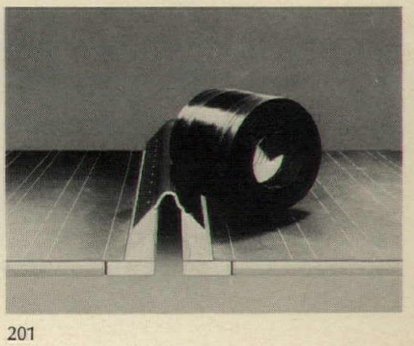
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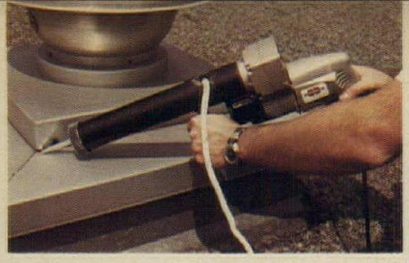
*Included in 1973 Sweet's Catalog File(s).



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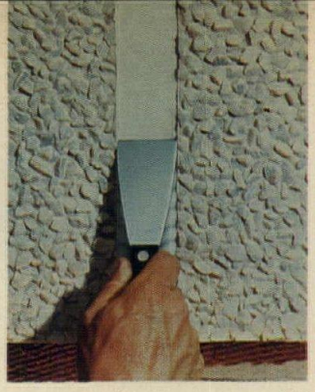

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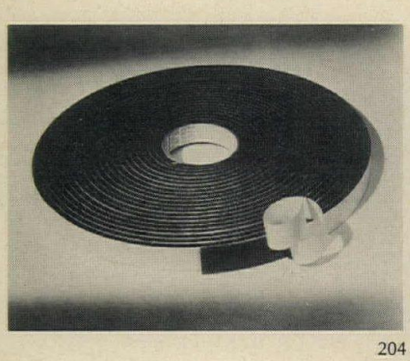

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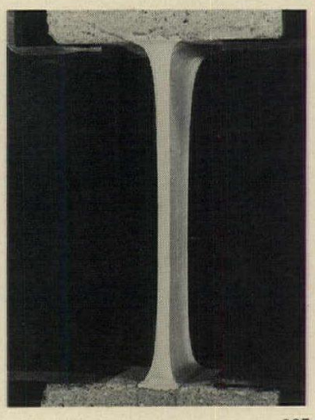

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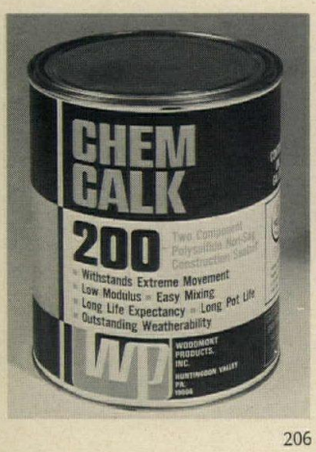

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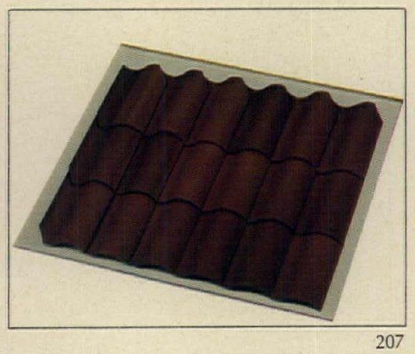

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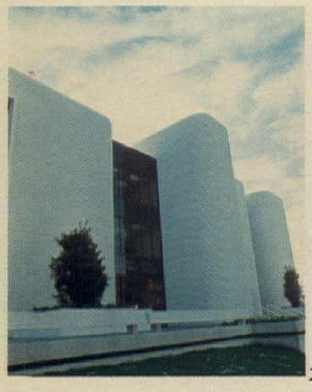

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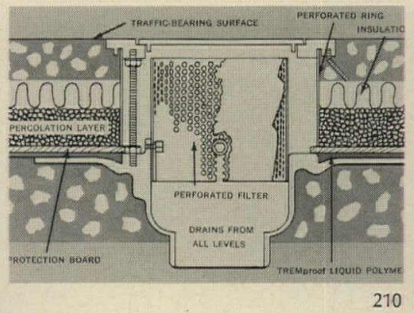

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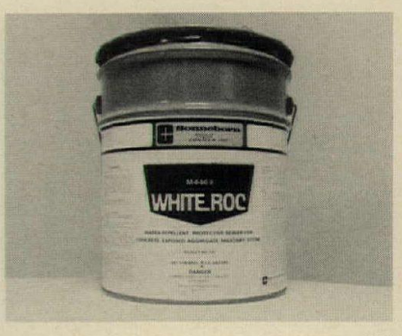

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SEALANTS

202 SEALANT / Using a special applicator, hot butyl tape and other rubber-based, hot-melt sealants can be extruded in a variety of shapes and applications. It is said that this application concept lowers the cost of the sealant. / Triplematic Machine Div., Hardman Inc.

203 JOINT SEALANT / A general purpose two-part polymer sealant, *Dymeric*, is said to withstand movement in construction joints being extended as much as 40 per cent and compressed 25 per cent. An inherent adhesive quality eliminates need for a primer to achieve positive bond to most construction materials. / The Tremco Mfg. Co. A*

204 ACOUSTICAL SEALANT / Specially formulated to stop perimeter sound leaks in wall partitions, *Norseal V-730* is a pressure-sensitive foam with two- to four-times the life span of other acoustical sealants. It will not dry out or deteriorate. / Norton Co. A*

205 SILICONE SEALANT / *Sealant 1600* offers low cost, competing in the polysulfide price range. It can expand eight to ten times its contracted size. All-weather application is claimed and the product needs no primer on concrete and other materials. / Silicone Products Dept., General Electric Co.

206 COLORED SEALANTS / Polysulfide base sealants can be colored to match adjacent building substrates. *Chem-Calk 200* can be color computer-matched precisely in any color, in quantities from 1½ gallons up to several thousand gallons, at no extra charge. / Woodmont Products, Inc.

SHINGLES & ROOFING TILES

207 ROOFING TILE / *Casa Rancho* one-piece Mission tiles is made large to create added emphasis on pattern's flowing lines and reduce the number of pieces per square (to 93) for lower installation costs. Light or Granada red. / Ludowici-Celadon Co. A*

208 ROOFING SHINGLES / A self-sealing, asphalt roofing shingle called *Glasstex* combines earth-toned coloration with a UL Class A fire resistance rating. Fiberglass base mat. Product carries a 25-year warranty. / Certain-Teed Products Corp.

VAPOR BARRIERS

209 CONCRETE FINISHING / A method of waterproofing and finishing concrete is offered in a variety of textured finishes. *Thorseal Plaster Mix* and *Acryl 60* can be applied in thin coats for direct application to any clean concrete surface, either on interiors or exteriors. Eliminates the need to rub concrete. / Standard Dry Wall Products, Inc. A*

WATERPROOFING

210 WATERPROOFING / Developed for areas under plaza decks, roof terraces and concourses, the system includes a liquid polymer that cures to an impervious, monolithic membrane. Also included is technical assistance from the start of design. An all-level, plug-proof drain is included with the system, called *Tremproof*. / The Tremco Mfg. Co. A*

211 ROOF WATERPROOFING / *Roof-Tite*, a waterproof asphalt-shingle sealer, has been developed to help prevent interior water damage from roof leaks created by ice build-up. The transparent, two-coat process also adheres to metal, to further insure leak protection at roof and gutter junctures. / Molar Enterprises, Inc.

212 WATERPROOFING / Formulated for a wide range of architectural concrete, masonry and stone applications, *White Roc M-6-50* is a non-silicone, clear, water-repelling system that will not yellow, water blotch or wet out. / Sonneborn-Contech. A*

For more data, use inquiry card.

Another step towards a perfectly dry Manhattan.

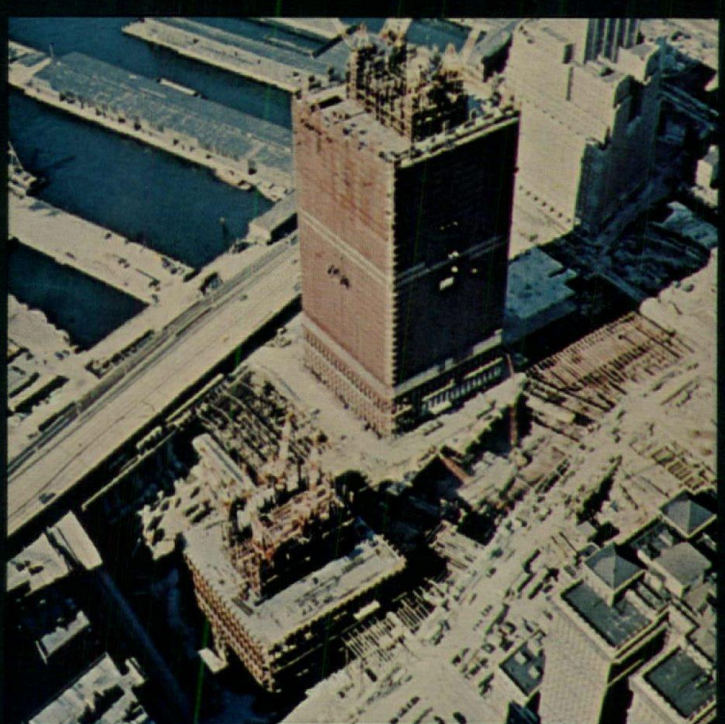


Photo Courtesy of the Port of New York Authority

New York City's World Trade Center, which will cover thirteen city blocks, will be one of the largest building complexes in the world.

And it'll also be one of the driest because Tremco sealants and glazing systems are used in the right places.

Take the two 110-story twin tower buildings. They are being sealed with Tremco's Polysulfide Lasto-Meric, the non-oxidizing, non-shrinking sealant. It's ideally suited to situations that anticipate dynamic movement of the joint. And provides excellent adhesion to metal without priming.

The towers also rely on Tremco Acoustical Sealant to reduce sound transmission. And Tremco Curtain Wall Sealant on unexposed joints.

The glazing system — for the plaza buildings surrounding the skyscrapers, includes Preshimmed 440 Tape and Lasto-Meric. And there are good reasons why: Weathertightness. No pressure points, and neat sight lines.

The World Trade Center plaza is being waterproofed with Tremco's liquid polymer Tremproof, to give it a self-adhering, flexible, seamless blanket of protection.

So, inside and outside the World Trade Center, we live up to our name — The water stoppers.

Total Tremco Weatherproofing should be part of your next project, too.

To be sure you get the right systems for caulking and glazing, deck waterproofing and even the right roof edging and flashing systems (our free-floating extruded aluminum Tremline) — call in your Tremco Representative. He goes with our products every step of the way — from drawing board to instructing crews to job completion.

The Tremco Manufacturing Company, Cleveland, Ohio 44104. Toronto 17, Ontario.

TREMCO
The water stoppers

CPR urethane provides more insulation, seals any shape, fights fire, resists chemicals, adds strength, absorbs sound.

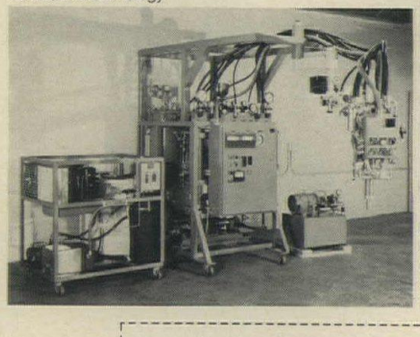
Great stuff. But if I specify, who will apply it?

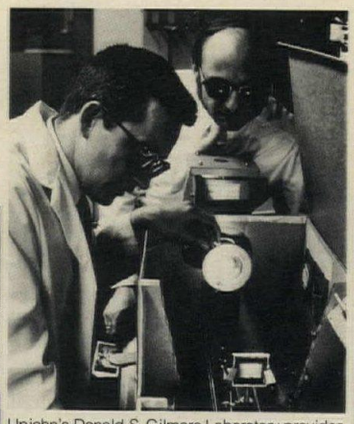
There's a network of applicators and fabricators across the nation, trained and equipped by CPR. They have the skilled personnel and the right equipment to pour, spray-in-place, or supply board stock.

They make use of the wide range of dimensionally stable CPR materials, such as the UL-classified isocyanurates: KODE 25™ and CPR 421 spray, both having low smoke-emission properties and high temperature tolerance.

So specify urethane insulation wherever you feel it's right for the job. There's a qualified CPR applicator or fabricator in your area, ready to help.

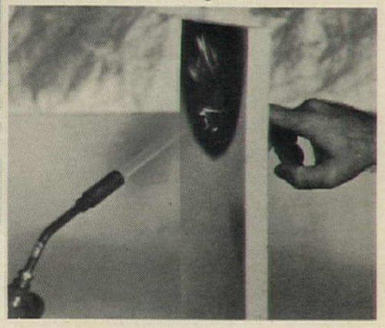
The Upjohn-owned Admiral Equipment Company, manufacturer of urethane application equipment, makes CPR the first and only urethane systems supplier offering a complete urethane capability through equipment, materials, and technology.





Upjohn's Donald S. Gilmore Laboratory provides CPR customers with the support of one of the world's most extensive facilities devoted to urethane product development and new applications technology.

KODE 25 is a new, urethane-type rigid isocyanurate foam insulation material, classified by Underwriters' Laboratories, Inc., with a Fire Hazard Classification Flame Spread Rating of 25, according to UL 723 and ASTM E-84 test method (UL Tunnel Test). This means higher fire retardance and a temperature tolerance to 300°F. It passes most building codes.



CPR is your single source for the most up-to-date data and information on urethane applications. Ask us what you want to know.

CPR DIVISION THE UPJOHN COMPANY, Dept. A
555 Alaska Avenue, Torrance, Calif. 90503

☐ Please send me more information on CPR insulation.
☐ Please send the name of your representative in my area.
☐ I would like a CPR sales engineer to call.

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Name_____ Position_____

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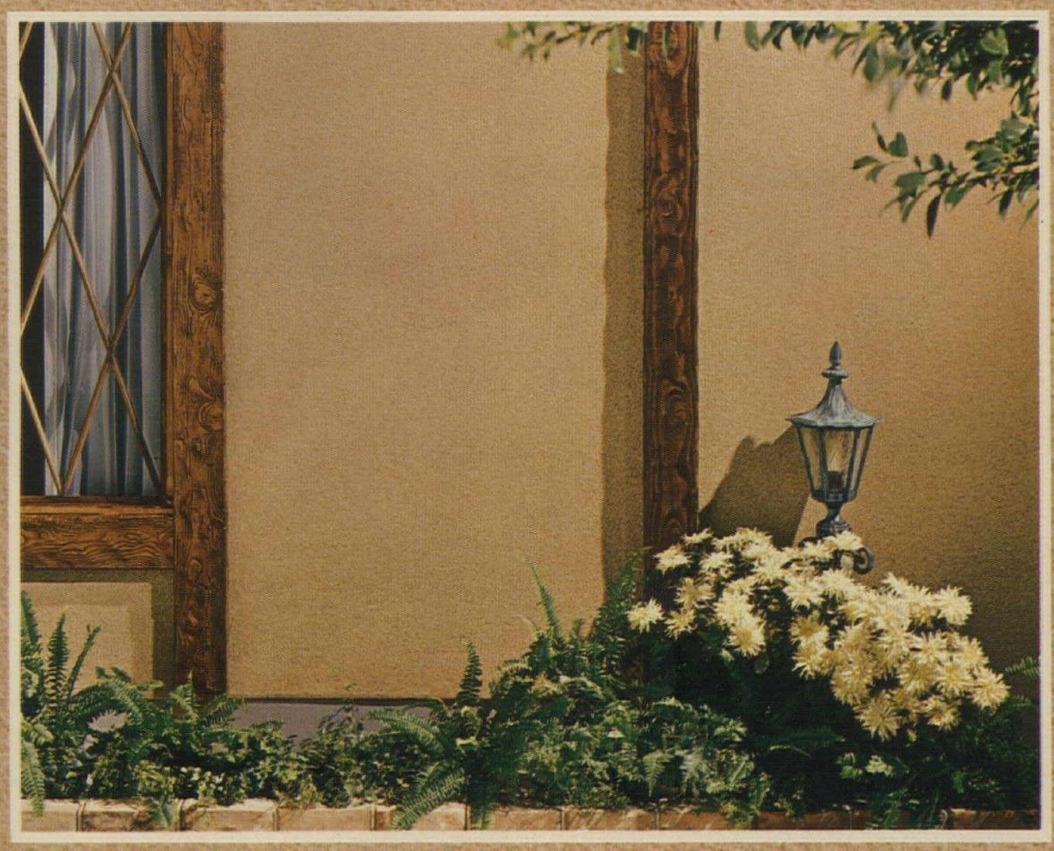
sand-a-sote



Structural siding for apartments, commercial buildings, modulars and prefabs.

Always looks magnificent, rain or shine.

TECHNICAL DATA

CONTAINS RECYCLED MATERIALS ONE HUNDRED PERCENT!

surface: SILICA SAND
colors: MIST WHITE, MESA TAN (others on special order)
substrate: HOMASOTE 460 DST STRUCT-A-SOTE MADE FROM 100% RECYCLED MATERIAL
matrix: U/V STABLE POLYESTER RESIN
25-30 MILS THICK
R-value: 1.10 U-value: 0.54 K-factor: 0.50
expansion: 0.025% @ 50 — 90% HUMIDITY
moisture absorption, 24 hr immersion: 6.7% by volume
modulus of elasticity, bending: 142,000 LB./SQ. IN.
modulus of elasticity, compression: 230,000 P.S.I.
modulus of rupture: 1,750 LB./SQ. IN.
tensile strength: 950 LB./SQ. IN.
weight: 1.5 LB./SQ. FT.
standard sizes: 4′ x 8′, 10′ and 12′ x 1/2″
protected against termites, rot and fungi

from the family of code-approved products by **homasote**

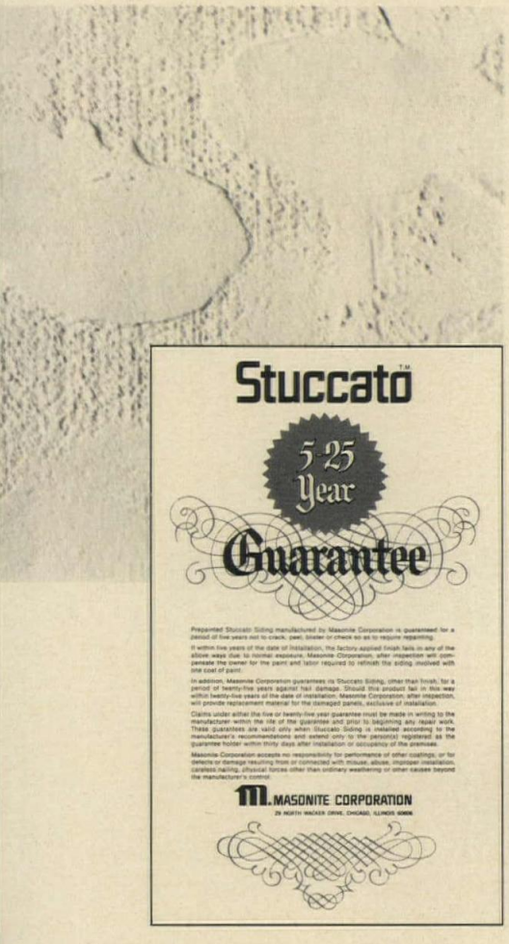
homasote company, West Trenton, N.J. 08628

For more data, write A31 on inquiry card

2–079

STUCCATO™ PANEL SIDING. The realistic appearance of skip-troweled stucco makes this truly unique hardboard panel an ideal siding for English Tudor construction or for accent areas. The prefinished white surface adds to its convenience and further lowers the total installed cost. Available sizes: 4′ x 8′ and 4′ x 9′.

For the first time... a Stucco finish you nail down



No trowel ever touched *this* wall! It's new *Stuccato Panel Siding*—from Masonite Corporation.

This latest addition to the X-90 siding line gives you walls with the look of skip-troweled stucco plus the many practical advantages of hardboard siding.

Just nail the pre-finished panels in place as you would any Masonite Brand Siding—then nail on contrasting wood members if you want a half-timber effect—and the job is done.

For more information on Stuccato or the many other X-90 sidings, in lap or panel form with smooth and textured surfaces, contact your local Masonite representative or supplier, or write Masonite Corporation, Dept. AR10, Box 777, Chicago, Illinois 60690.

build with the brand in demand.

MASONITE CORPORATION

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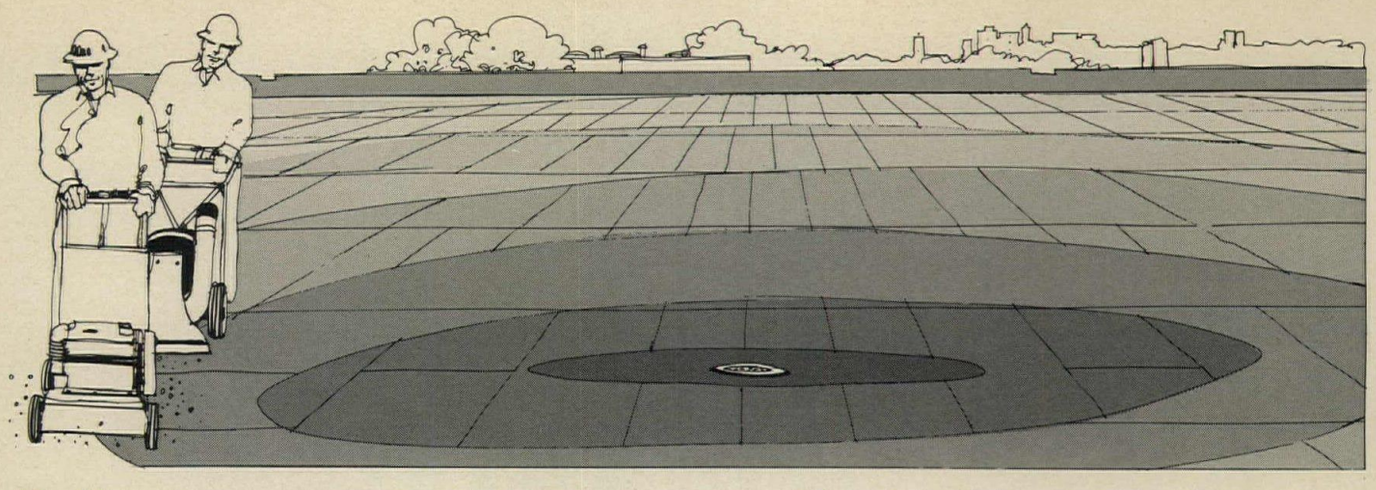

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*Trademark of Johns-Manville Corporation.

Flat roofs often present serious drainage problems that cause roof damage. Heretofore, the only solution was to contour a suitable fill material on the structural deck to provide suitable slope and drainage. It was a good process, but costly, time-consuming and added a lot of extra weight.

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Johns-Manville JM

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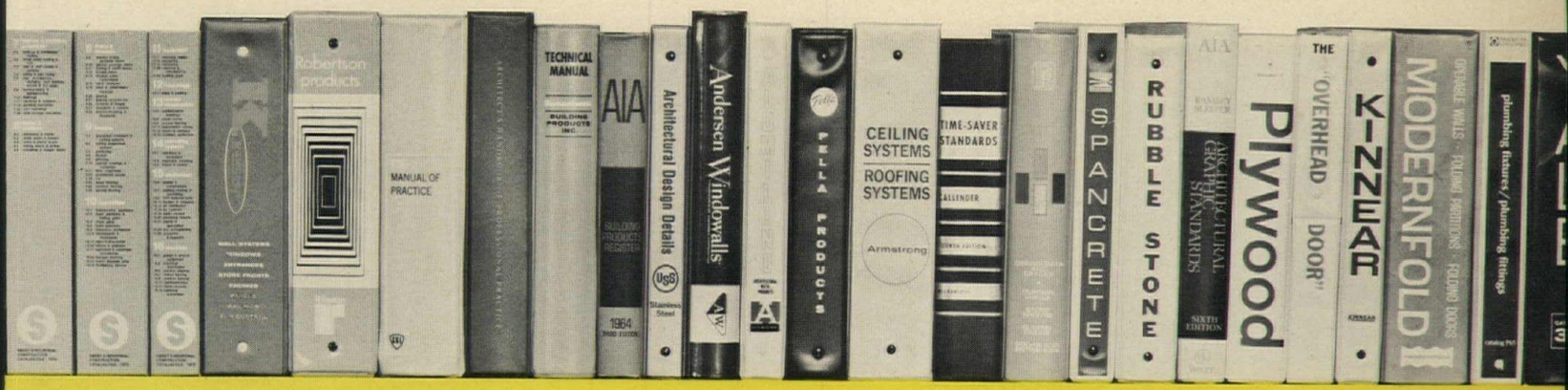

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The entire December issue will be devoted to an examination and appraisal of what the younger practitioners are doing, aspiring to do — and what that portends for building design, for larger scale planning, for the practice of architecture and for the future of the profession.

The issue will be a voyage of discovery and recognition — and as such will be read with intense interest by the largest architect and engineer audience ever assembled by any architectural magazine.

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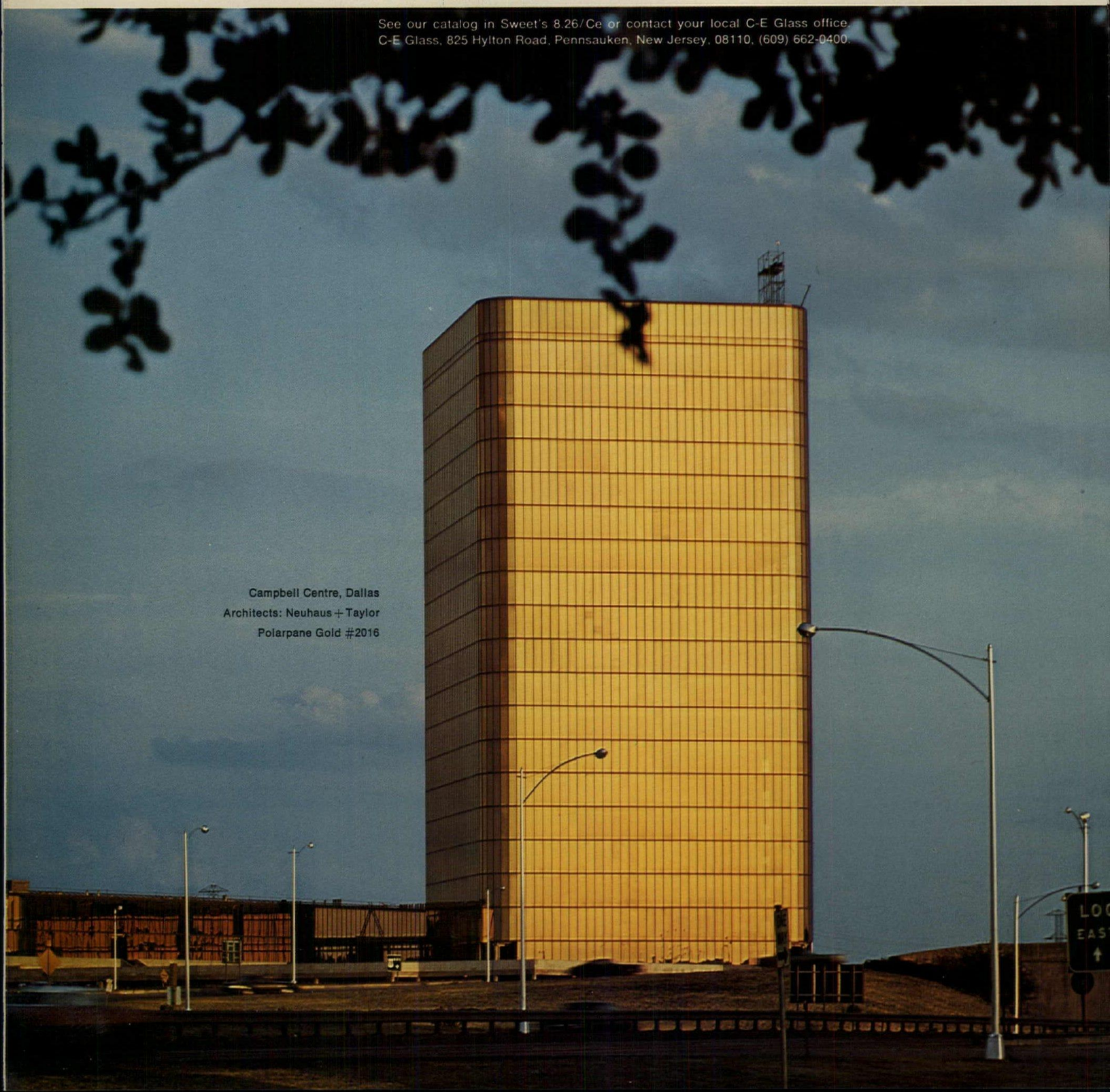

Campbell Centre, Dallas
Architects: Neuhaus + Taylor
Polarpane Gold #2016

doors and windows uci 8

Looking at major trends and improvements in the field of doors and windows, the apparent emphasis is on vandal-proof products, with almost equal attention given to safety features. This is especially true of hardware, with dominating features being fire protection, controlled access and plain convenience.

Other developments include glass holding systems that reduce the amount of required support to offer increased glass area. Glazing materials, both glass and plastics, claim greater strengths and respond to the mounting need for thermal control caused by the possibility of wide-spread energy shortages. More effective control is suggested by either equipping prime windows with combination storm-and-screen windows or installing prime windows constructed with a thermal barrier in the framing members and glazed with sealed insulated glass units.

Reflective glass appears to be firmly established in commercial construction, with the inevitable next step being expanded use in residential construction.

Various legislative and building code provisions requiring safety glazing materials in hazardous locations are now effective in 26 states, with the total likely to reach 31 by the end of 1972.

The increased popularity of stick system curtainwall has increased the need for compressible glazing tapes. To overcome the problems of pressure on the inside and wind load from the outside, manufacturers have developed a compressible tape with a continuous, imbedded, reinforcing shim of specified hardness. It ensures proper spacing around the entire perimeter of the window and the even transfer of wind load from the glass to the sash.

Prepared with the help of Lawrence M. Dunn, Architectural Aluminum Manufacturers Assoc., Chicago.

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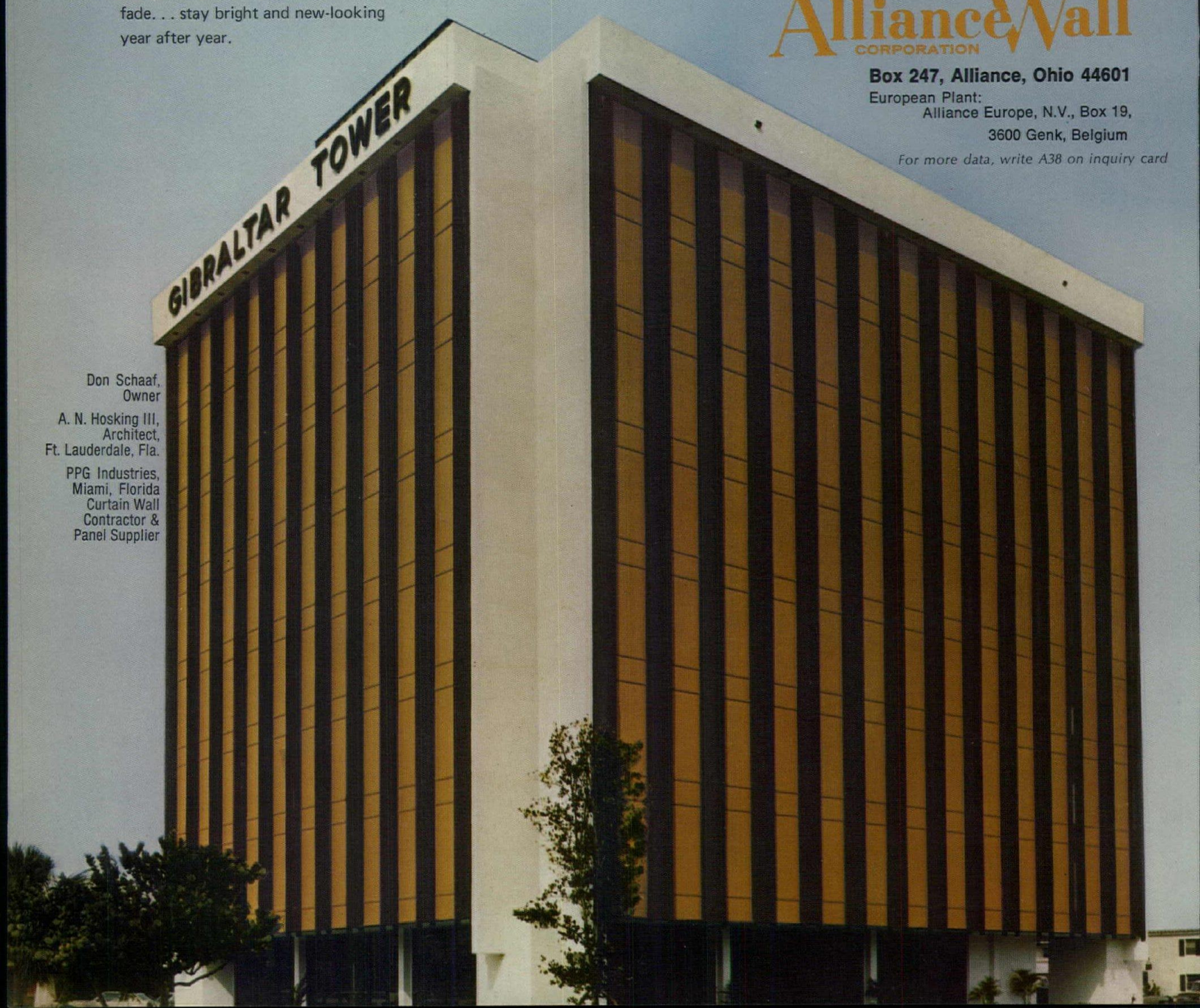

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PPG Industries, Miami, Florida Curtain Wall Contractor & Panel Supplier

ENTRANCES & STOREFRONTS

215 LIFE SAFETY VENT / This product has been developed expressly to clear heat and smoke from high rise buildings. It is an aluminum-framed exterior wall vent which can be manually or electrically released from an adjacent floor. Subject to review by code authorities. / Wasco Products, Inc.

216 GLASS HOLDING SYSTEM / The *HPS-610* aluminum glass holding system is designed for storefront construction. A variety of mullion depths, plus concealed fastenings, permits design flexibility. The system receives ¼-in. single glazing or 1-in. insulating glass. / Amarlite/Anaconda.

217 FRAMING AND ENTRANCES / *I-Line* glass framing features flush-glazed one-inch-wide, sightlines, reducing by nearly half the usual aluminum framing profile with no reduction in wind-load strength. Horizontal members in 1-, 1¾-, and 4¾-in. heights offer design variation. / Kawneer/Amax. A*

218 TEMPERED GLASS DOOR / This ¼-in. door is offered in sizes up to 3 ft by 7 ft. The light weight of this product means easy swinging. Glass is available in solargray, bronze or clear. Aluminum can be furnished in various duranodic shades. Interior locking mechanism. / Blumcraft of Pittsburgh. A*

219 REVOLVING DOOR / The *Slim-line* eliminates the traditional corner notch required to house the emergency collapsing mechanism. The strength of the shaft, collapsing discs and tension adjustment was not affected by the new design. Increased glass area is achieved. / International Steel Co. A*

GLAZING

220 WEBBED ACRYLIC SHEET / *Thermo-Glaze*, an extruded, two-sided, webbed acrylic sheet has high insulating properties, strength, and adapts to such uses as greenhouses, hot-bed covers and swimming pool roofs. / Cadillac Plastic and Chemical Co.

221 INSULATED GLASS / These units are available in all sizes and tints and carry a warranty of 5 or 20 years. Recommended for high-rise construction. / Globe-Amerada Glass Co. A,I*

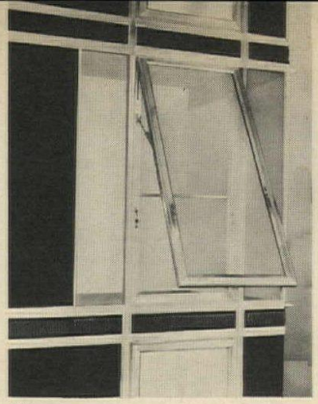
222 SOLAR GLASS / *Solarcool* glasses are designed to reduce solar heat build-up within buildings. The product is annealed and may be cut in the field. The reflective coating can be applied to clear, bronze or gray *Float* glass. / PPG Industries, Inc. A*

223 POLYCARBONATE GLAZING / The product is offered as a polycarbonate that resists scratching and weathering. No loss of impact strength or clarity results from the coating called *Rowlex*. / Rowland Products, Inc.

HARDWARE & SPECIALTIES

224 ROLLING DOOR OPERATOR / This prewired power operator incorporates a completely wired control panel to facilitate field connection from the power source to push button stations, radio control or other operating device. The operator can be mounted on the wall beside the door. UL listed. / Kinnear Corp. A*

225 THRESHOLD ANCHOR / A set-in-concrete threshold anchor that accepts any threshold, this product allows readjustment of the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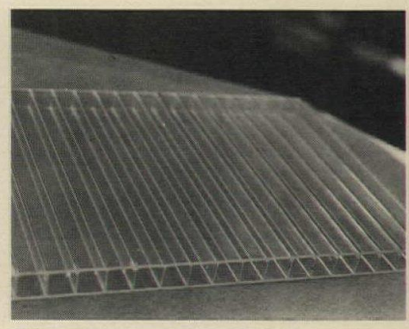
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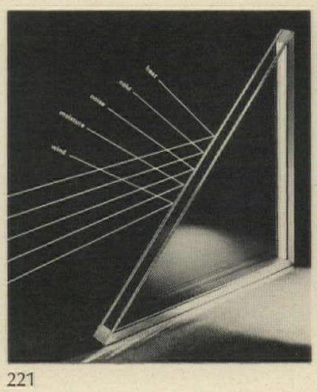

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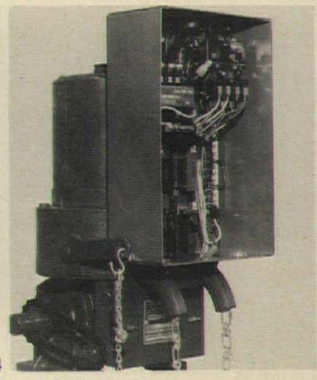
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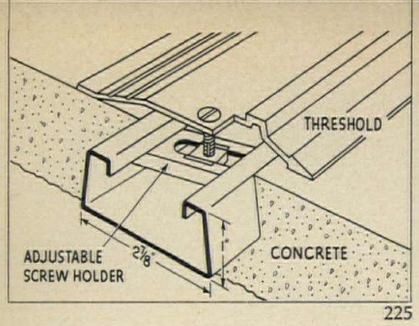
*Included in 1973 Sweet's Catalog File(s).



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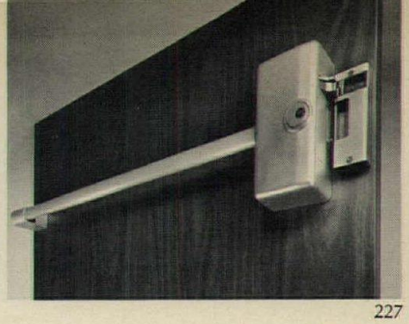

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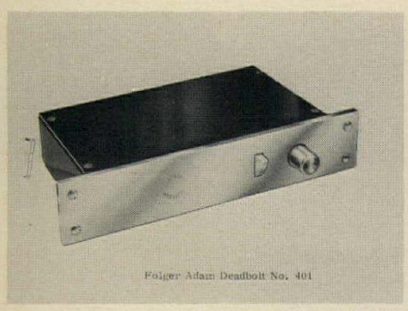
threshold at any time, up to ½ in. on either side of the center line. Anchor is galvanized steel, with danger of rusting reduced by cadmium-plated anchoring cam. Slight variations with floors do not interfere with setting the threshold, according to the producer. / Pemko Mfg. Co. A*

226 EXIT INDICATOR / Automatically-actuated by the lock's deadbolt, a horizontal-reading indicator signals "Locked" in red letters or "Open" in black. / Adams Rite Mfg. Co. A *



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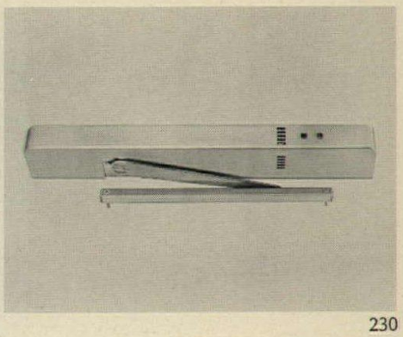

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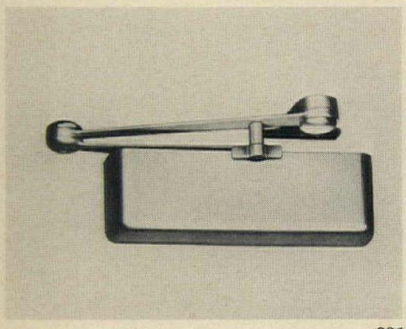
227 ALARM PANIC DEVICE / UL-listed, the product releases with less than 45 lbs pressure on the crossbar. A built-in alarm deters unwanted use of exits. All-aluminum and brass. / Alarm Lock Corp.

228 ELECTRIC DEADBOLT / For use with swinging, sliding and motor-operated doors, the product is designed for mortise mounting in the door frame header. Low-voltage operation and tamperproof. / Folger Adam Co.



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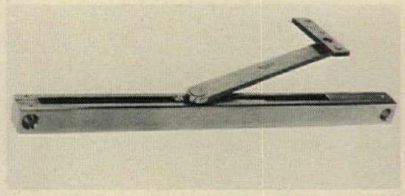

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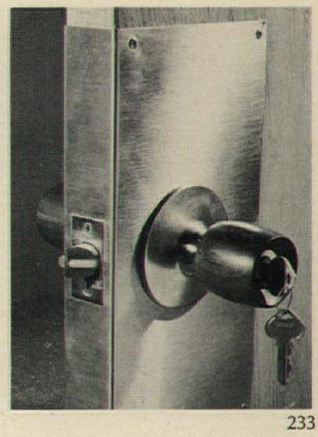

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229 DOOR OPERATOR / *Astro-slide* is a fully-concealed overhead automatic door operator for sliding doors. The system is instant-reversing and features variable speed control. For single or bi-parting doors up to 8 ft wide. / Dor-O-Matic Div., Republic Industries, Inc.

230 FIRE DOOR CLOSER / A fire detector-door release that is mounted on the door frame provides early-warning smoke detection, automatic release and door closing for fire and smoke barrier doors. Self-contained and UL listed, the product eliminates the need for two separate detectors, electromagnetic door releases and closers. / Rixson-Firemark, Inc. A*

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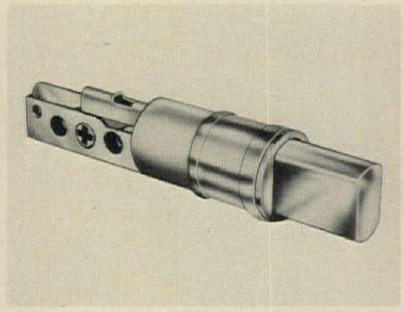

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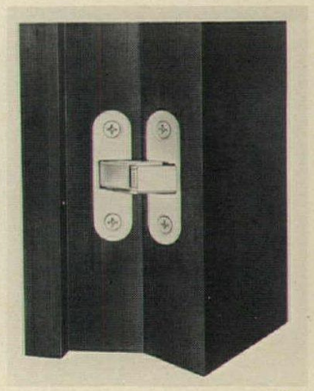

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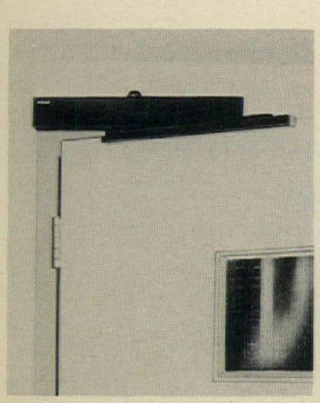
231 DOOR CONTROL / This unit incorporates a door closer with hydraulic checking and a built-in stop to limit door travel at selected points. Optional hold-open feature. / LCN Closers. A*

232 DOOR HOLDER / Aluminum construction is featured on this unit which is designed for single-acting interior or exterior doors. No mortising is required. Hold-open is controlled by a small, serrated knob projecting slightly from the bottom of the channel. / Glynn-Johnson Corp.



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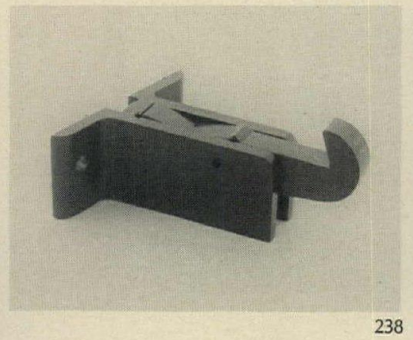

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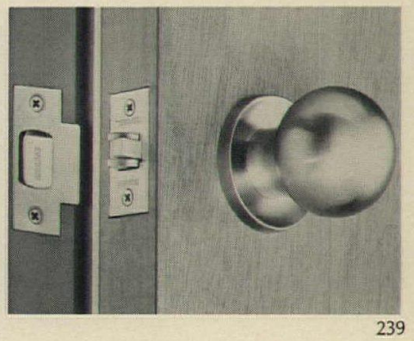

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233 ONE-PIECE SHIELD / *Door-shield* lends additional strength and protection to locks and doors. Unitized U-shaped construction covers the face or edge of the door sur-

For more data, use inquiry card.

rounding the bolt area. Product is made of 16-gauge stainless steel. / Key Control Systems, Inc.

234 PRESENCE SENSOR / Automatic sliding door actuator that requires no mats, grids, plates or wiring in floor. Scanning device covers 7' x 5' oval zones on each side of door. / Republic Industries, Inc.

235 DRIVE LATCH / A round faceplate latch permits the installation of inch-throw, maximum security deadbolts in any existing metal door. No mortising of the faceplate is needed. A solid brass cylinder is featured. / Dexter Lock Div., Kysor Industrial Corp.

236 CONCEALED HINGE / When the door is closed, this hinge is completely out of sight. It is recommended for offices, laboratories and dormitories. Available for doors up to 36 in. wide and 1¼ in. or more thick. Provides 180 degree swing and available in stainless steel or bronze. / The Stanley Works.

237 SMOKE DOOR CONTROL / Overhead, surface mounted fire and smoke door control for public buildings. The *Fire Eye* features independent hydraulic closing and latching speed adjustments. Nonhanded for application to any swinging door. / Republic Industries, Inc.

238 PIVOT WINDOW HARDWARE / Holds window open to 4" for ventilation with security. Only authorized personnel may release window for full 180 degree rotation. / The Adams & Westlake Co.

239 MAGNETIC LATCH / In a sensitive area where noise must be kept to a minimum, the product makes it possible to close a door silently. Operation is by magnet, which draws the latch into the strike, eliminating the need for a protruding lip. / Schlage Lock Co. A,L*

240 PANIC BAR / The *505 Exit Bolt* is available in a choice of cylinder and handle combinations. Specifically designed for doors where entrance from the outside is required, this model may be ordered with a knob handle or pull. Choice of aluminum and dull bronze enamel finishes. / S. Parker Hardware Mfg. Corp.

241 ELECTRIC HINGE / A concealed conductor design has been added to the company's line of electric hinges. No electrical parts are visible after installation. Hinges are tamperproof and weatherproof. Available in four or eight conductor models. / Stanley Hardware. A*

242 DEAD LOCK / The maximum security lock for glass doors comes with two solid brass chrome-plated, fully broached cylinders, cylinder collars, strike plate and dust-proof strike. This 1-1/7 in.-back set lock will fit most glass doors and is used for replacement work. / S. Parker Hardware Mfg. Corp.

243 LOCKSET / *Fortune 1400* cylindrical lockset, designed for commercial, institutional, and apartment markets, is available in a wide range of finishes, with heavy quality knob and rosette decor. / P & F Corbin Hardware.

244 TUBULAR DEADLOCK / Featuring intruder-proof construction, this product is low priced and offers a bolt which is double reinforced with a hardened roller pin inside. Suitable for prehung door applications. / Arrow Lock Corp.

245 THRESHOLD / This is a heavy-duty abrasive-filled threshold designed for extreme traffic conditions. Dovetails are filled with aluminum oxide and silicon carbide. Epoxy-bonded and oven-cured. Offered in lengths up to 15 ft. / A. Nitt & Son. A*

246 PUSH-PULL HARDWARE / A complete line of door hardware can be selected for use on wood and metal doors, in addition to ½-in. tempered glass doors. / Blumcraft of Pittsburgh. A*

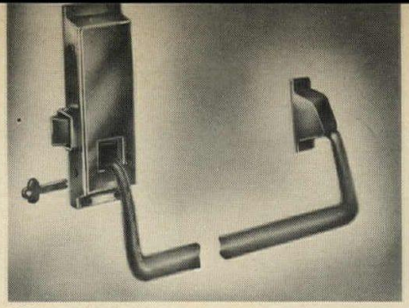
247 SLIDING DOOR RUNNER / Designed for single, bi-parting and by-passing sliding doors from 1⅜ in. to 1¾ in. thick and weighing up to 150 lbs., the hardware features a trolley unit with three large *Zytel* wheels that roll effortlessly and quietly in a jump-proof, aluminum track. / Stanley Hardware. L*

METAL DOORS & FRAMES

248 STEEL DUTCH DOOR / This door is listed by Underwriters' Laboratories and permits both leaves to close and latch simultaneously. Typical uses are book storage rooms, equipment rooms and ticket booths. Models are available in single swing sizes up to 4 ft wide and 7 ft 2 in. high, with a Class "A" three-hour rating. / Steelcraft Mfg. Co. A*

249 SLIDING GLASS DOOR / The *Vega* line of sliding glass doors and windows includes competitively-priced models in extruded aluminum, according to the manufacturer. / AA Metal Fabricators, Inc.

250 STEEL DOOR FRAME / Designed to accommodate light commercial, multi-family and heavy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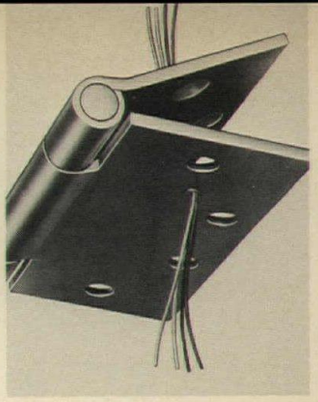
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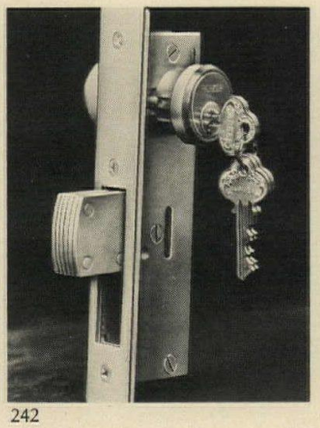
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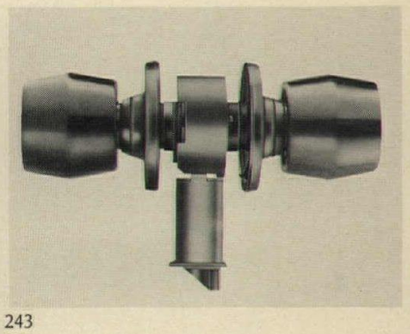
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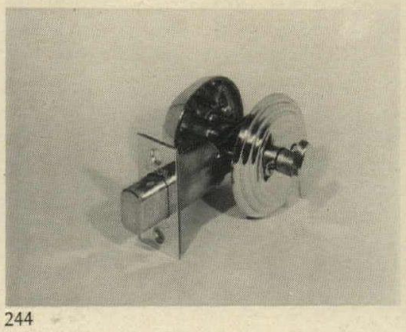
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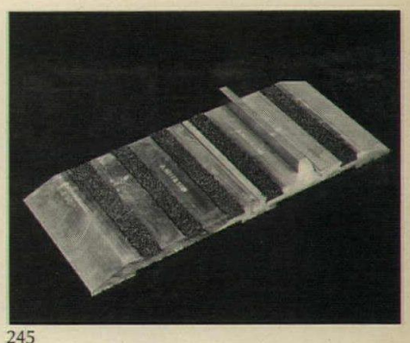
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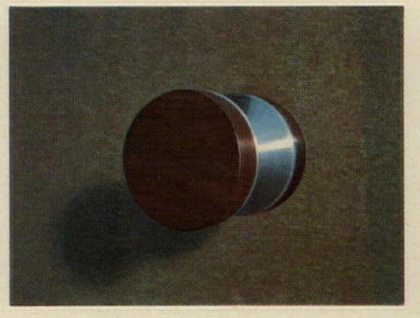
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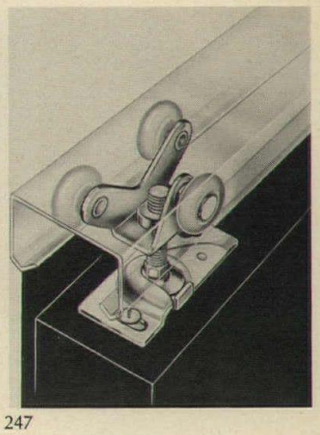
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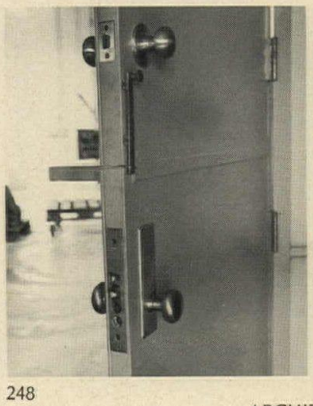
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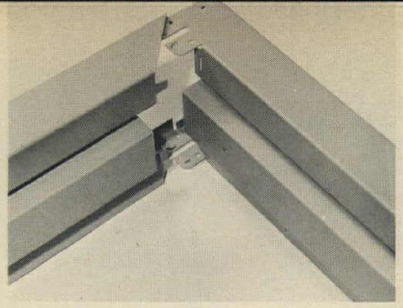
*Included in 1973 Sweet's Catalog File(s).



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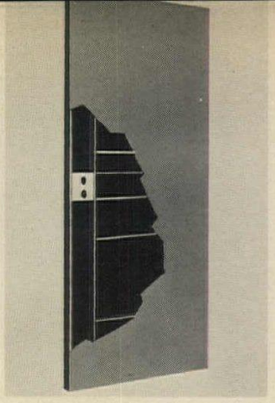

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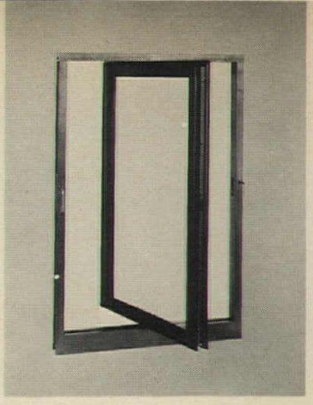


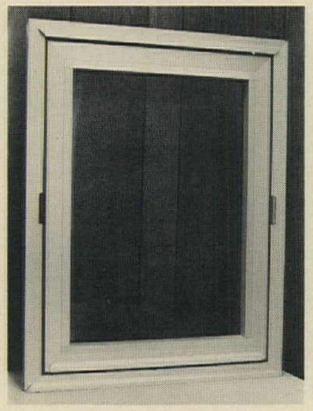
252

traffic area where stronger than wood frame is required. Magnetic weather stripping incorporated into frame. / Ever-Strait Div., Pease Co.

251 ALL-STEEL DOOR / A 10-year warranted door is offered, featuring a grid structure, plus a perimeter edge treatment to provide added strength. The doors offer fire protection with both recognized label agencies. / Fenestra. A,I*

METAL WINDOWS

252 STEEL REVERSIBLE WINDOW / Solid welded heavy steel construction characterizes this window which allows the ventilator to rotate 180 degrees. The producer states that generous window sizes, with space for insulating glass up to 1 in. thick, are possible with this model. Factory-applied finish is poly-vinyl-chloride. / Hope's Windows. A*



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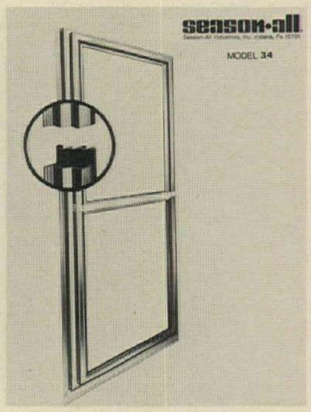

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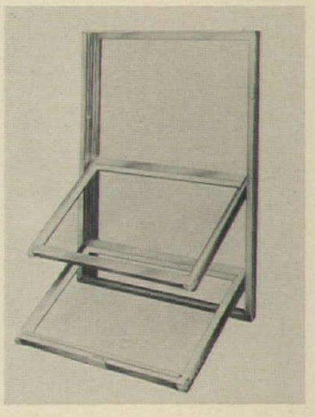

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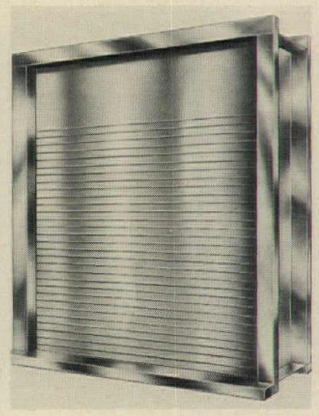
253 PIVOTED WINDOW / This product is available up to 5 ft by 8 ft with mechanically welded and reinforced corners. Can be used individually or as part of the company's curtain wall system. Both interior and exterior weatherstripping. Units lock at 180 degrees. / EPI Architectural Systems, Inc.

254 REPLACEMENT WINDOW / Available in anodized or electrocote white finishes, the *Model 34* is a custom-fitted, three track, triple tilt aluminum storm screen window with interlocking aluminum inserts for glazing and insect screening. / Season-all Industries, Inc.

256



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255 ALUMINUM WINDOWS / A provision for adding tilt-style operating advantages to the established *Neva-Leak* line of removable sash aluminum windows is being offered. The new feature uses block and tackle balances as part of the window's basic configuration. / Metalume Mfg. Co., Inc.

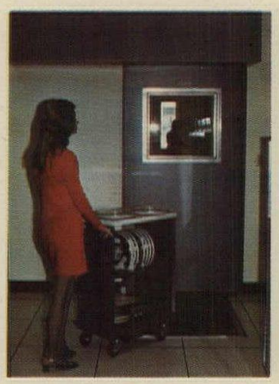
256 SINGLE-HUNG WINDOW / This aluminum window is available in its standard mill finish or optional architectural finishes. It features cam latch, full weatherstripping, take-out sash and single or dual glazing in the same frame. / Majestic Building Products Co., Inc. A*

259

260

SPECIAL DOORS

257 ROLLING FIRE SHUTTER / A labeled fire door and frame assembly for service counter openings, the *Fyr-Pac* unit carries the "B" UL Classification for 1½ hrs. Unit comes ready to set into the roughed-in opening, and consists of #4 finish stainless steel. A torsion spring provides counterbalance weight. Sill suits the specified wall thickness. / The Kinnear Corp. A, I *



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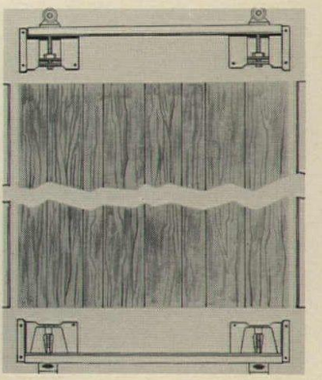

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For more data, use inquiry card.

258 PATIO DOOR / This swinging door features a heavy center astragal member and a fixed panel to allow installation of a sliding, self-storing screen. A 1-in. security deadbolt is virtually tamper-proof. The *Chadeau* is glazed with fully-tempered *Safety-Guard* glass, in either single-lite or two-lite insulating glass. Frame is wood. / Peachtree Doors Inc.

259 FIRE DOOR / A Class "A," three-hour door, this product opens and closes at the rate of 2 ft per second. Its core is non-combustible minerals in steel-braced sections 3 ft wide. The track is of 10 gauge steel to prevent sagging and the electric operator is a heavy-duty "1000 operations a day" unit. / Clark Door Co., Inc. A, I*

260 PRE-PAINTED STEEL DOOR / The all-welded *Steelmaster Uprising Sectional Door* is fabricated from galvanized base steel to accept a finish coat of white acrylic baked enamel on the outside and an off-white protective coating inside. One-piece hinge and adjustable upper roller bracket. / Crawford Door Co. A, I*

261 AUTOMATIC SLIDING DOOR / Designed for interior openings, this fast open-close door with perimeter seals is recommended for computer rooms, industrial and food plants, clean rooms, laboratory and hospital applications. Available in both single- and double-door models, paneled in GE plastic *Textolite* in 117 colors. A variety of operating controls is available. / Clark Door Co., Inc. A, I *

262 FOLDING DOOR / A rigid vinyl closet door, *Plasticdor,* is lightweight, flame-proof and never needs painting. Color is extruded throughout. Simplified installation and 3-year guarantee are offered. / Panelfold Doors, Inc. A,L*

263 BY-PASS DOOR SYSTEM / *Panel Jacket* is a complete hardware package for making a pre-finished door out of ⅛- through ¼-in. panel board, vinyl board or plyboard. All parts are pre-assembled, featuring balanced nylon wheels on convex rails. No painting is needed. / L. E. Johnson Products, Inc.

264 ENTRANCE DOORS / *Entara-XD Educational Entrance System* designed to withstand extra abuse encountered in schools and colleges. Frames made from heavy aluminum extrusions and resist vandalism. / Kawneer/Amax.

265 CEILING ACCESS / An access door, recessed for acoustical tile, eliminates the need to bevel tile adjacent to the hinge. The frame also fits modular tile openings. A concealed pivoting bar hinge operates completely out of sight. / Karp Associates, Inc. A*

266 ENTRANCE DOORS / Manual balanced entrances available in narrow, medium or wide styles. Doors feature dual moment corner construction, self-aligning pivots and adjustable pile weathering on all sides. / Kawneer/Amax.

267 VINYL FOLDING DOOR / Covered with a 4-mil thickness of vinyl, this door is available in various heights and finishes. Spring-hinging maintains panels at uniform angle and gives live-action operation. / Pella Rolscreen Co.

268 WOOD PATIO DOOR / *PF-Plus* door has white factory finish outside, natural wood finish inside. Unit has tempered insulating glass in vinyl glazing, woven-pile "finned" weatherstripping, jump-proof screen; solid walnut handle. Two- and three-door models. / Caradco Window & Door Div., Scovell Mfg. Co. L*

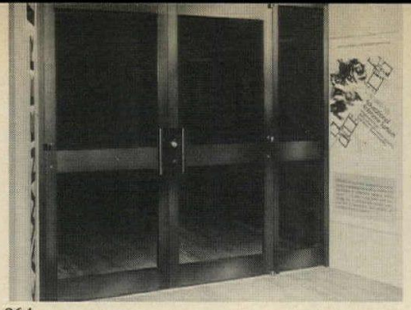
269 PATIO DOOR / This extrusion forms a solid thermal barrier to virtually eliminate condensation on the inside of the frame. The product is called *Climate Guard.* / Reynolds Metals Co. A*

270 ELEVATOR DOORS / Sculptured bonded bronze panels are suited to elevator doors, elevator interiors and lobby walls. Panels are lightweight and sculpted in low relief to meet standard elevator door requirements. Thickness varies from ⅛ in. to ⅝ in. / Forms & Surfaces.

271 SLIDING FIRE DOOR / This door is UL- and FM-labeled and offers hooded weight closing pulleys, a weight box, adjustable binders and guide rollers, separate malleable iron front stop, full flush construction and a compact labeled reel closer. Weighs 6 lbs per sq ft. / F. L. Saino Mfg. Co. A,I*

272 FIRE DOOR / The *Fire-Away* door is an 85-lb door which offers a core of mineral and fiberboard with UL approval. Rails and stiles are chemically-impregnated soft maple with UL approval also. Recommended for apartment building stair shafts. / Walled Lake Door Co.

273 ROLLING STEEL DOOR / *Thermaguard* insulated doors have a factory-spray-bonded application of rigid urethane foam insulation on the inner side of each door slat. The foam has a flame spread rating of 25. / Cornell Iron Works, Inc. A, I*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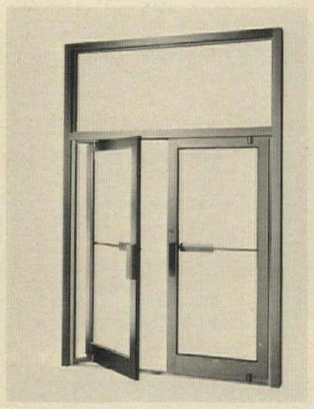
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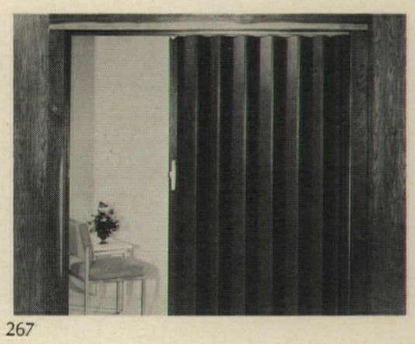
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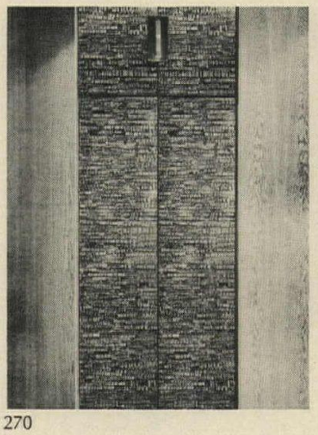
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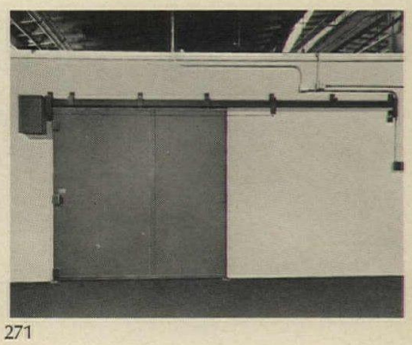
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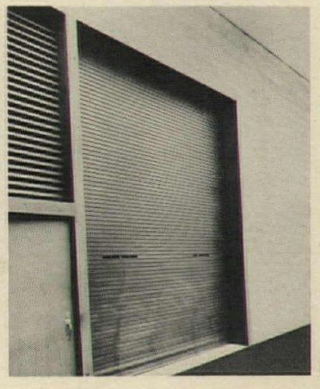
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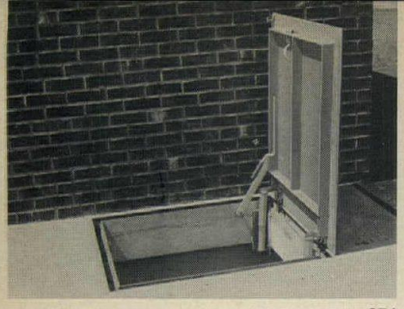

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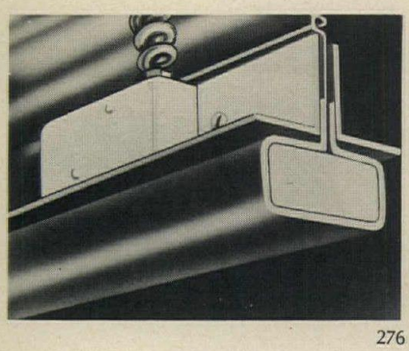
274 PIT ACCESS DOOR / Available in single and double leaf sizes, this door has a ¼-in. diamond pattern plate surface, extruded gutter frame, and can withstand highly corrosive atmospheres. All hardware is stainless steel. Easy opening and closing, automatic lock-open device. / The Bilco Co. A*

275 GARAGE DOOR / Offered in many sizes and styles, this door features aluminum rails, with adjustable bottom rail and astragal for weather sealing. The door sections incorporate wooden stiles and are pre-drilled to assure accurate hinge alignment. / Raynor Mfg. Co.



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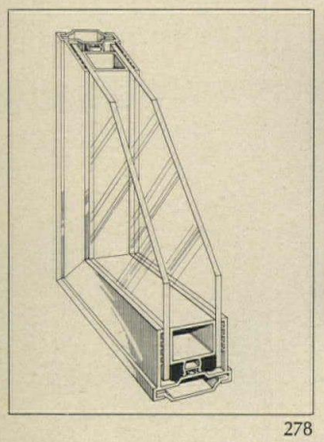
276 DOOR SAFETY EDGE / This safety edge for rolling steel doors is UL-approved for motor-operated doors made by the company. The device is attached to the bottom of the door and electrically stops or reverses the door upon touching an obstruction. / Cornell Iron Works, Inc. A,I*

SPECIAL WINDOWS

277 SPECIAL WINDOW / The *Flex-Pac* is a hinged, operating window that can be installed as an awning or casement. Factory applied prefinish. / Andersen Corp.



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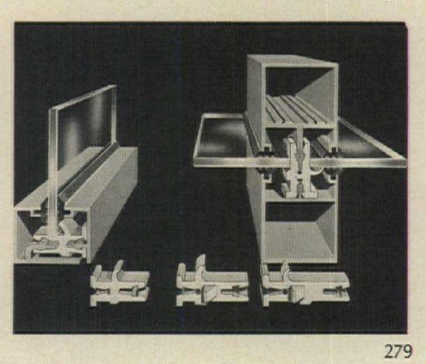

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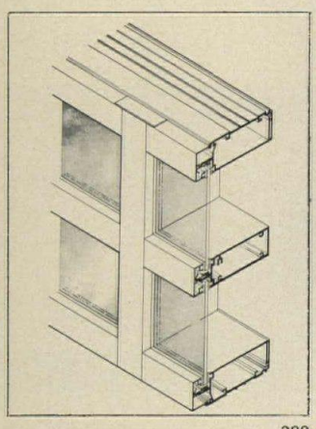
278 REPLACEMENT WINDOW / Available for commercial and residential replacement, the window is heavy-gauge aluminum extrusion, clad in pure white or bronze rigid vinyl. Both inserts are glazed with inch-thick insulating glass. Units are custom-built for every opening. / Season-all Industries, Inc.



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279 THERMAL WINDOW WALL / *CTS Thermo Barrier Window Wall* uses aluminum face and gutter members and has no metal-to-metal contact between exterior and interior. The same members are used for virtually all glazing thicknesses. / Cronco-Lite Division of Controms Mfg., Inc.

WINDOW WALLS

280 MULLION SYSTEM / *Core-Wall* aluminum framing utilizes 2"x 6" mullion assemblies and can accommodate large lites in one-and two-story application. Several options to suit varied building conditions. / Kawneer/Amax.

WOOD & PLASTIC DOORS

281 FIRE DOOR / A 30-minute fire door, UL-listed and guaranteed for the life of the interior installation, features smooth, uniform solid cores, top and bottom banded with 1¼-in. rails. The door can be faced with hardwood veneer or medium density overlays for paint. / Weyerhaeuser Co. A*

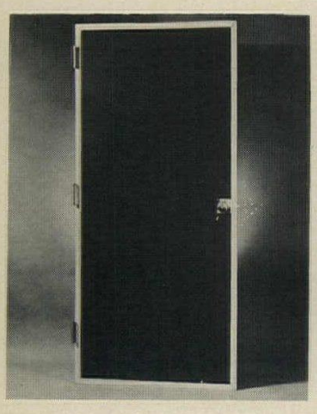
282 URETHANE DOOR / Combining plastic, structural steel and a foamed-in-place urethane core produces this door which will not dent, puncture or scratch. The urethane core provides effective temperature and sound control. The door is easy to maintain and color will not fade. / Mesker Industries, Inc.

WOOD, PLASTIC WINDOWS

283 PRE-FINISHED WINDOWS / Interior pre-hung doors, entrance units, moldings and trim have been added to the line offered by the company. Finishes are walnut, fruitwood and white. The exterior finish is a tough white polyurea coating. Windows are available without lattice-work. / Marvin Windows.

284 WINDOW SYSTEM / Double-hung, casement or awning windows of wood, clad in acrylic color-coated aluminum. Double glazing or insulating glass available. / Pella Rolscreen Co.

285 GLIDING WINDOW / *Perma-Shield* gliding window employs rigid vinyl cladding over wood sash and frame. Double and triple units have one fixed sash. / Andersen Corp.



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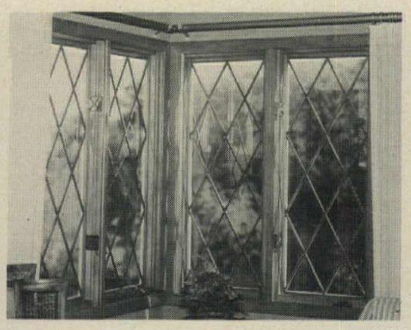

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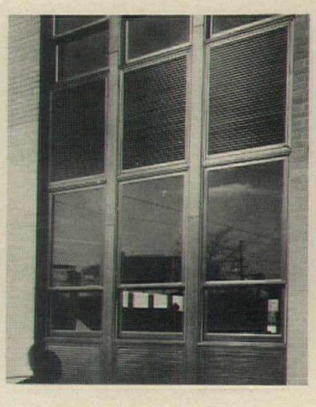

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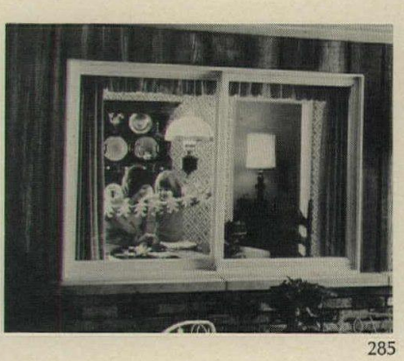

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Solarcool Glass is, perhaps, the architect's most happy medium.

Presently available on clear glass . . . and soon to be available on gray and bronze substrate glasses as well . . . the *Solarcool* coating offers you the design flexibility, beauty, and drama that can be achieved only with reflective glass.

Yet *Solarcool* coated glass costs very little more than conventional clear or tinted glasses. It is, in fact, the lowest priced light- and heat-reflective glass available.

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And *Solarcool* Glass is annealed. So it is one of the few reflective glasses that can be field cut or fabricated. (PPG can also supply *Solarcool* in heat-strengthened and tempered conditions.)

Matching spandrel treatments, in Harmony *Solarcool Spandrelite*® Glass, are also available.

Look into *Solarcool* Glass for your next building. Early in the design stages.

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PPG: a Concern for the Future

PPG INDUSTRIES

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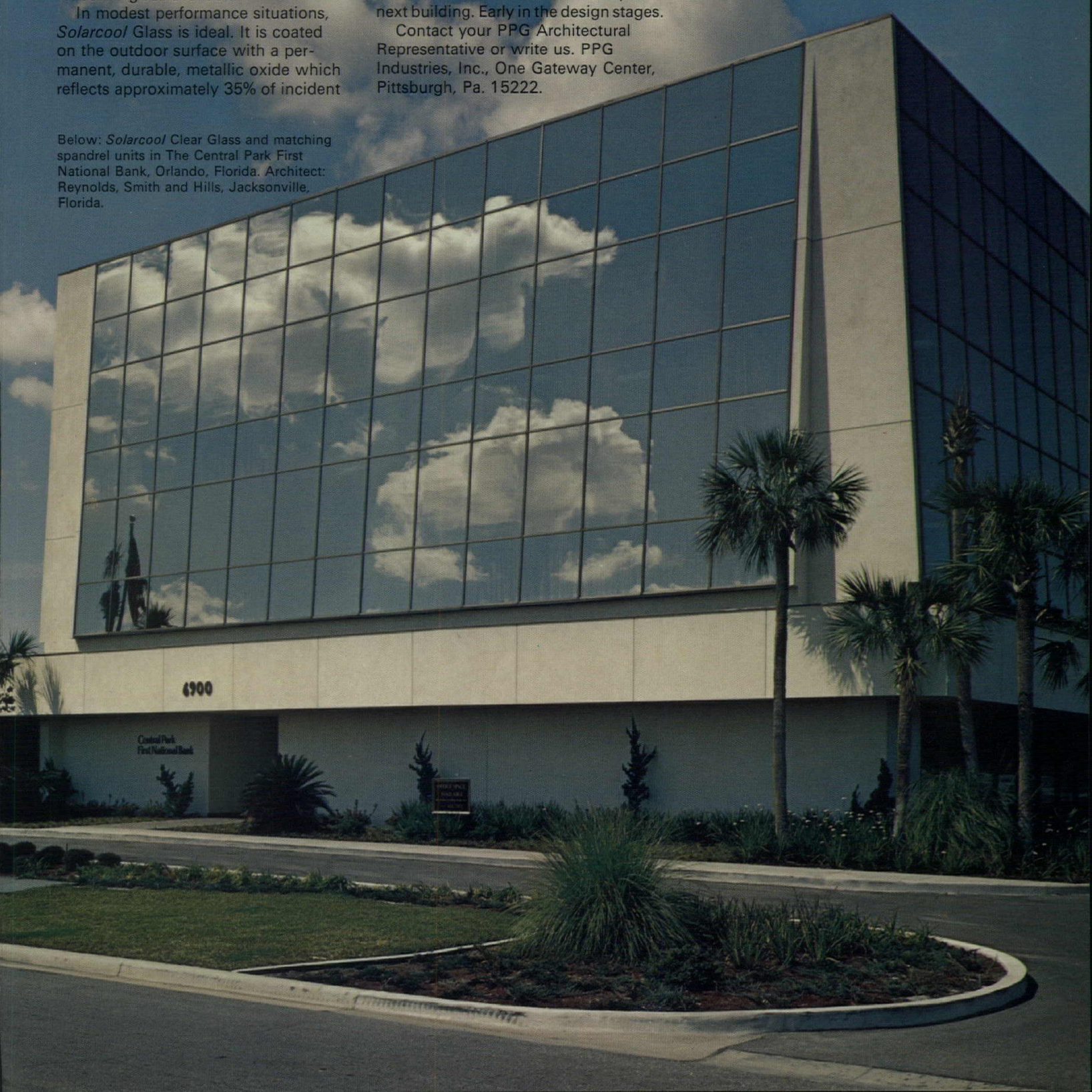
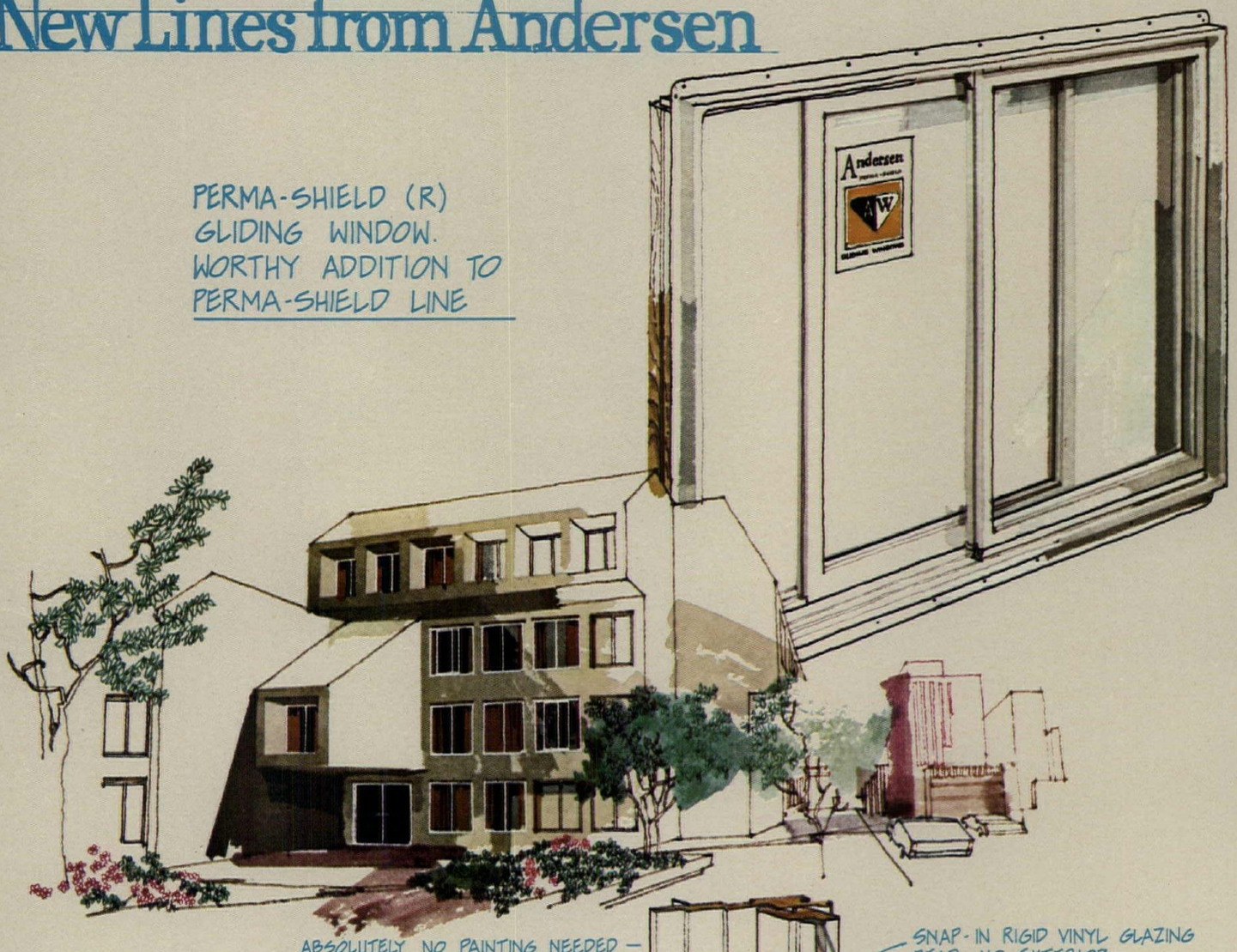
Below: *Solarcool* Clear Glass and matching spandrel units in The Central Park First National Bank, Orlando, Florida. Architect: Reynolds, Smith and Hills, Jacksonville, Florida.

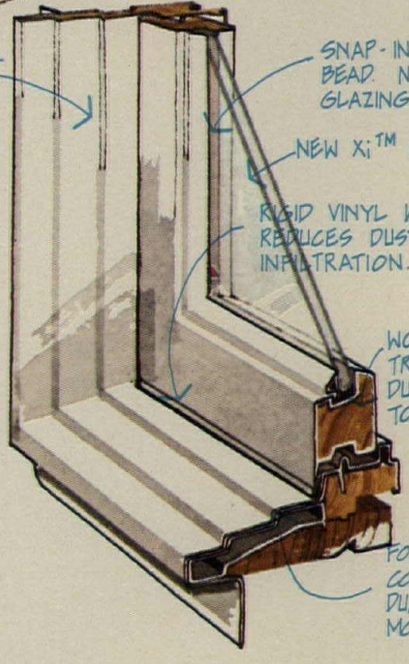


New Lines from Andersen

PERMA-SHIELD (R)
GLIDING WINDOW.
WORTHY ADDITION TO
PERMA-SHIELD LINE



ABSOLUTELY NO PAINTING NEEDED — FRAME AND SASH BOTH VINYL SHEATHED. BIG DOLLAR SAVING ON MAINTENANCE.



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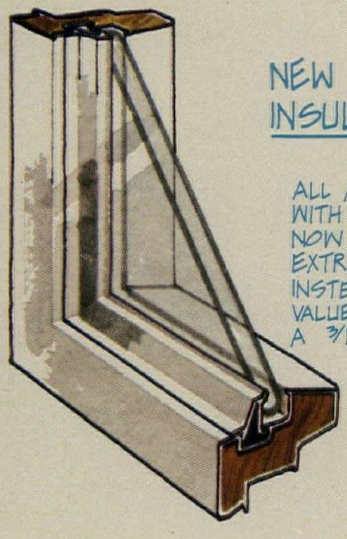
NEW Xi™ WELDED INSULATING GLASS

RIGID VINYL WEATHERSTRIPPING REDUCES DUST, AIR, NOISE INFILTRATION. CUTS HEAT LOSS, TOO.

WOOD CORE FACTORY TREATED FOR STABILITY, DURABILITY, RESISTANCE TO DECAY AND INSECTS

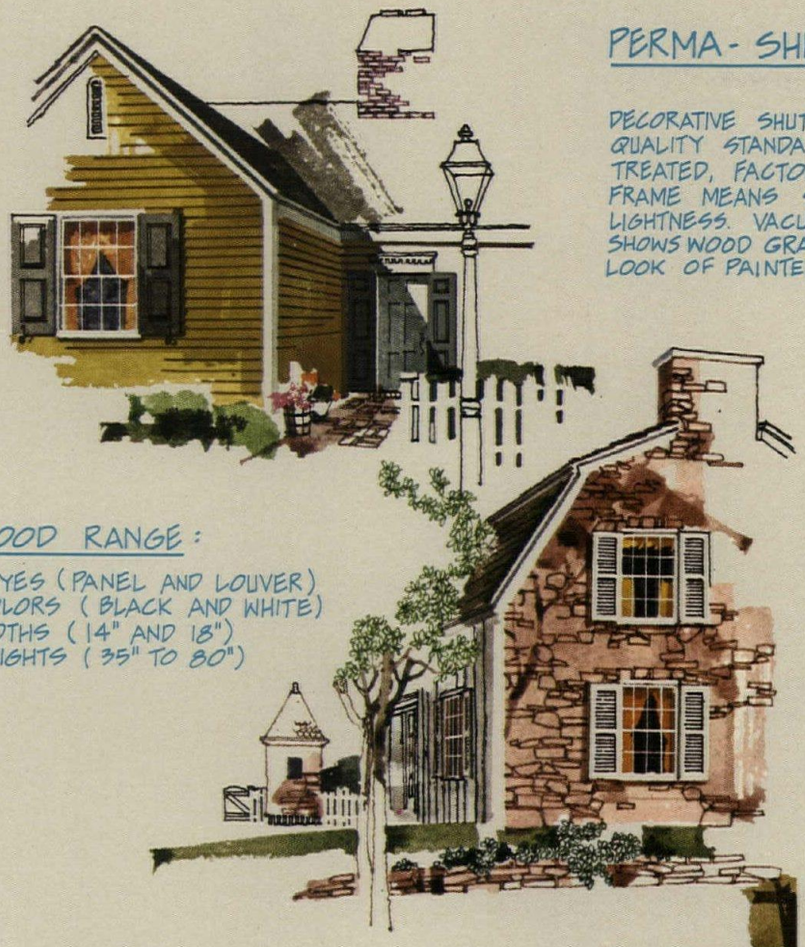
FOR SEVERE WEATHER CONDITIONS, INTEGRAL DUAL SILL DRAINS ANY MOISTURE TO EXTERIOR



NEW Xi™ WELDED INSULATING GLASS

ALL ANDERSEN WINDOWS AVAILABLE WITH WELDED INSULATING GLASS NOW HAVE Xi. Xi STANDS FOR EXTRA INSULATION. INERT GAS INSTEAD OF AIR GIVES INSULATION VALUE OF 3/8" AIR SPACE IN A 3/16" AIR SPACE

NOTE:
BOTH SASH EASILY REMOVABLE FOR CLEANING. SAFETY FEATURE: CAN'T BE DONE ACCIDENTALLY.

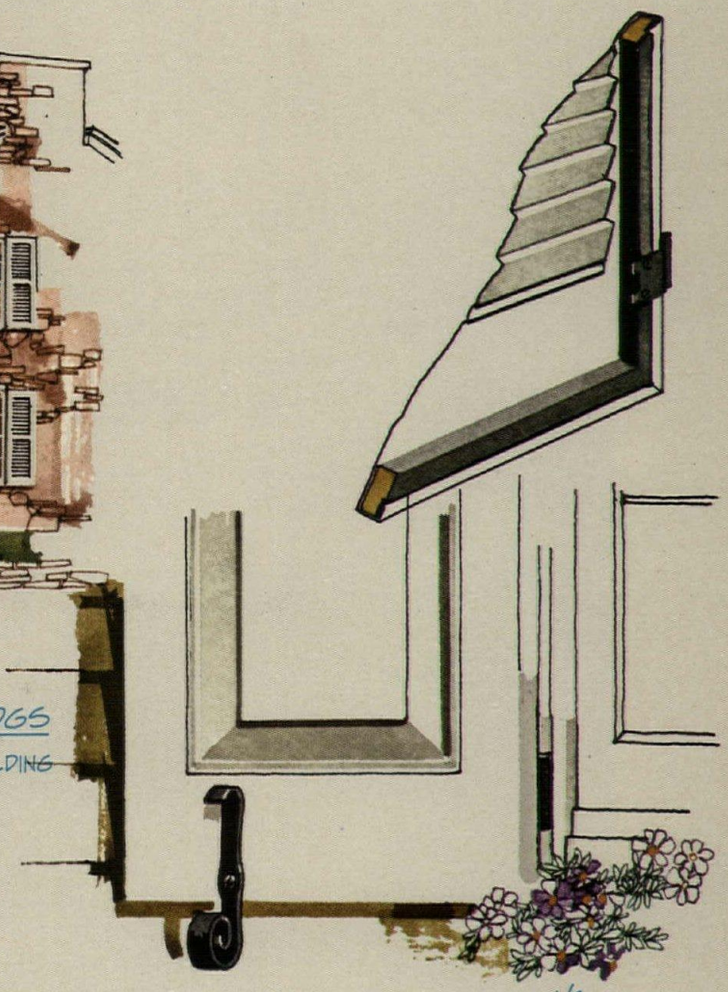


PERMA-SHIELD SHUTTERS

DECORATIVE SHUTTERS BUILT TO ANDERSEN QUALITY STANDARDS. NO PAINTING. TREATED, FACTORY-PAINTED, WOOD FRAME MEANS STURDINESS WITH LIGHTNESS. VACULUM FORMED VINYL SHOWS WOOD GRAIN... HAS LOOK OF PAINTED WOOD.

GOOD RANGE:

2 STYES (PANEL AND LOUVER)
2 COLORS (BLACK AND WHITE)
2 WIDTHS (14" AND 18")
10 HEIGHTS (35" TO 80")

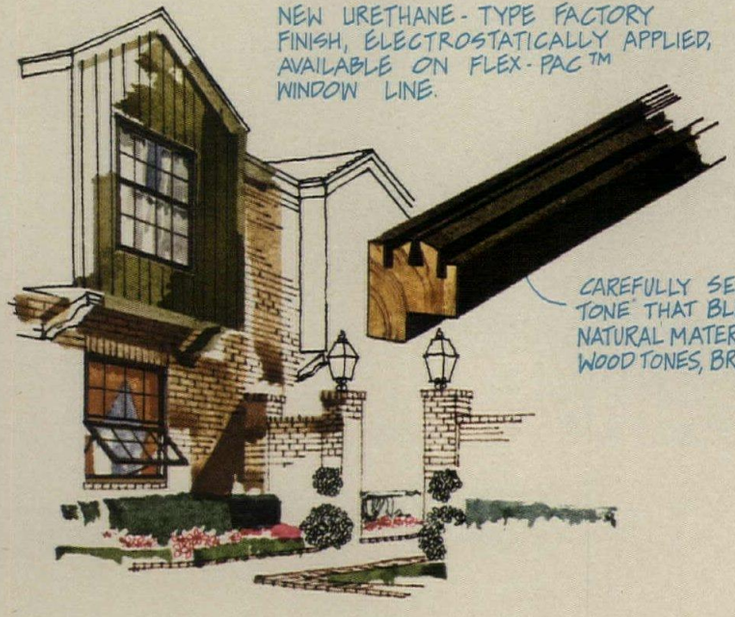


COLONIAL-STYLE SHUTTER DOGS

OPTIONAL - NOT NECESSARY FOR HOLDING SHUTTERS OPEN. BUT NICE TOUCH OF AUTHENTICITY.

TERRATONE

NEW URETHANE-TYPE FACTORY FINISH, ELECTROSTATICALLY APPLIED, AVAILABLE ON FLEX-PAC™ WINDOW LINE.



CAREFULLY SELECTED TONE THAT BLENDS WITH NATURAL MATERIALS, WOOD TONES, BRICK, STONE, ETC.

ANDERSEN LINE KEEPS GROWING

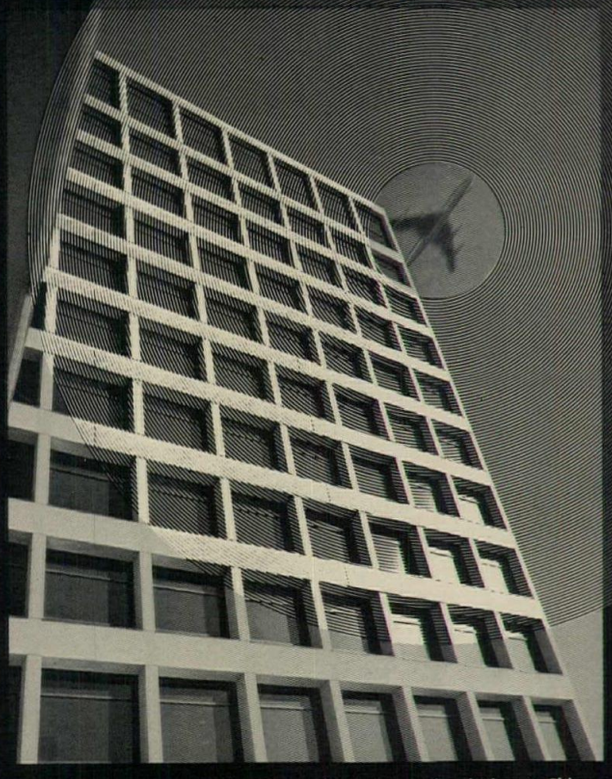
- ABOVE ITEMS ARE IN ADDITION TO:
- PERMA-SHIELD (R) AND ALL WOOD CASEMENTS
- PERMA-SHIELD NARROLINE (R)
- FLEXIVENT (R) AND ALL-WOOD GLIDING DOORS
- FLEX-PAC™, ETC.

INFORMATION IN SWEETS (8.16/An)
OR WRITE:
ANDERSEN WINDOWALLS
ANDERSEN CORPORATION
BAYPORT, MINNESOTA 55003

Andersen Windowalls®
ANDERSEN CORPORATION BAYPORT, MINNESOTA 55003

For more data, write A40 on inquiry card

ENVIRONMENTAL GLASS



O'Hare Plaza, O'Hare International Airport, Chicago

There is a way to control everything!

There's even a better way to control undesirable noise, heat, cold, moisture and sunlight while maintaining safety and security. Laminated Globe-Amerada Glass like Acousta-Pane®, Secur-Lite®, and Twi-Lite® can also be made into an insulated unit.

You specify the conditions to be controlled; we'll engineer and design the product to meet your needs. We can help make your final choice a confident and successful one.

We have some enlightening new facts, figures and specifications to assist you in selecting all of the variables of environmental control by glass...yours for the asking.

Environmental Glass, the functional glass of Globe-Amerada Glass Co. write or phone:

GLOBE AMERADA

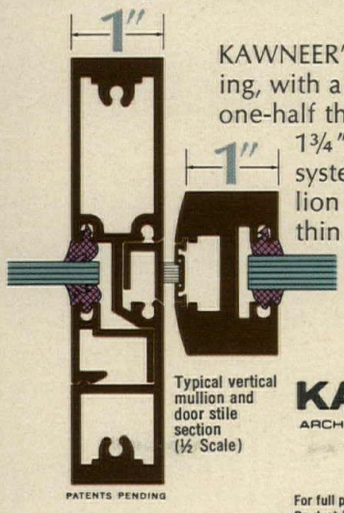
Globe-Amerada Glass Co.
2001 Greenleaf Avenue, Elk Grove Village, Illinois 60007
Phone (312) 439-5200

For more data, write A41 on inquiry card

KAWNEER INTRODUCES . . .

i line

Narrow profile aluminum framing and entrances



PATENTS PENDING

Typical vertical mullion and door stile section (½ Scale)

KAWNEER's new *I-Line* narrow profile framing, with a 1-inch sight line, reduces by nearly one-half the face dimension of the traditional 1¾" framing profile. The flush glazed system, with its many horizontal mullion options, and with complementary thin stile doors, opens new vistas in aesthetic and functional design—and does so without sacrificing other practical considerations.

KAWNEER
ARCHITECTURAL PRODUCTS
AMAX ALUMINUM

For full product information, see your Kawneer representative or contact Kawneer Product Information, 1105 N. Front St., Dept. C, Niles Michigan 49120.

For more data, write A42 on inquiry card

THE CLIENT

A sketch for the front of your client's building . . . if he's a civic institution. If he isn't, ask one of our members for another design.

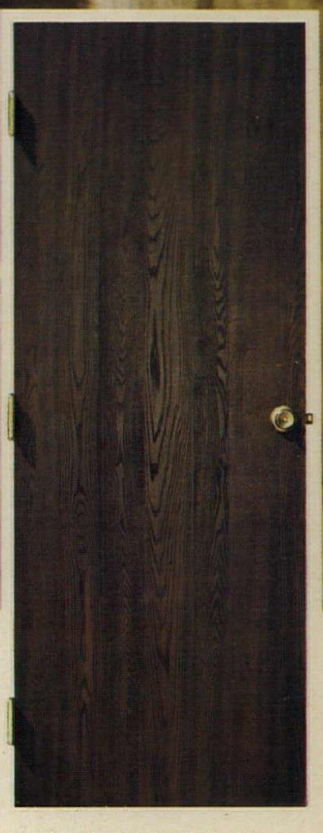
It's a piece of art as original as the Mona Lisa. And it's part of your building. It's a mark of distinction for a client who's tired of everybody else's plain glass fronts. It's functional, maintenance free. It's *dramatic.*

It can turn an office building into a corporate spokesman. As an expression of a city or an area, it becomes an instant civic institution.
And so does the architect who brought it to life. Stained glass is the art that's part of your concept.

Write for *Sketchbook,* an idea folder from
THE STAINED GLASS MARKETING COUNCIL
P.O. Box 23925, St. Louis, Mo. 63119

For more data, write A43 on inquiry card

in nature's image Legacy*



mirroring nature's textures

new embossed prefinished door facings from Masonite Corporation . . . now available from leading door manufacturers

Legacy virtually duplicates the look and feel of natural wood. Born of a unique new technology developed by Masonite, Legacy captures the image of nature in hardboard. The closer you get, the better Legacy looks.

New naturalistic texture. Legacy has the natural texture of wood. And not by accident. The texture embossed into Legacy facings is that of a natural planked wood surface. It won't scratch off.

Deep-rooted durability. Mar-resistant Legacy is superior to prefinished luaun, printed hardboards, and even birch veneers—it won't split, splinter, crack or check. The substrate is original Masonite hardboard, 50% again as dense as natural wood. Which helps explain Legacy's high dimensional stability and great structural strength.

No repetitious pattern. If you lined up five doors made with new Legacy, no two would look alike—just as in nature. Legacy shares this unusual individuality only with natural wood surfaces.

Rich oak and walnut tone finishes. (Walnut is shown at the right above.) Tough, factory applied finishes in beautiful wood tones need no further finishing.

Value: more than you pay for. Legacy offers you a unique new option in selecting residential and commercial doors. Added value your customers will immediately recognize. And the cost is only slightly higher than the common door facings you are currently using.

Send for your free Legacy sample. Write Masonite Corporation, 29 North Wacker Drive, Chicago, Illinois 60606. We'll speed you a sample to see, feel and compare with other door facings. Along with a list of door manufacturers currently offering Legacy.

*Legacy is a trademark of Masonite Corporation.

MASONITE® CORPORATION

For more data, write A44 on inquiry card

O'Hare motel shuts out airport and freeway noise with DeVAC windows.

The Sheraton Inn O'Hare South motel is in a prime location. It's adjacent to Chicago's O'Hare Airport as well as the Tri-State Tollway, Northwest (Kennedy) Expressway and busy, four-lane Mannheim Road. But the location was also proving to be a major problem. Touchdown point on one of O'Hare's busy runways was just three-quarters of a mile away. There was the regular freeway noise too plus that of a freeway oasis with trucks shifting gears at all hours.

In fact, air and roadway noises were so serious in the motel tower section that at times guests had left in the middle of the night. The previous management found that those rooms which should have commanded prime rates could be used only as overflow space.

New management conducted sound tests in evaluating replacement windows. After careful consideration the choice was the DeVAC Model 650 Thermo Barrier window. It features dual glazing with a 2½ inch air space contained in two separate extruded aluminum frames joined together with a non-structural high impact rigid vinyl. Before the old windows were replaced, jet noise produced uncomfortable 70 db. readings inside the rooms. Tests at the motel after DeVAC windows were installed showed jet aircraft noise registering 95 decibels outside was reduced to the low 50s inside the rooms with draperies open. Truck noise recorded at 85 db. outside was no longer discernible inside after the DeVAC windows were installed. Side benefits are reduced dirt infiltration and reduced loss of conditioned air.

Installation was completed at the rate of 10 rooms per day with only a vacuum cleaning needed to put rooms back in service the same day.

Meanwhile at the registration desk, repeat business has been picking up. Much of the motel's former contract business with airline crews and others has been recovered.

If you'd like to bring quiet days and quiet nights — and the benefits they represent — to your operation, talk to the men from DeVAC.

Windows were replaced at the rate of 10 per day with no disruption of service.

DeVAC®

☐ Please send me a reprint of the magazine article "How Airport Motel Keeps Noise Outside," another successful DeVAC installation.

I have a ☐ renovation ☐ new construction project in a:

1 ☐ hotel, motel
2 ☐ hospital
3 ☐ office building
4 ☐ school
☐ 5 other_____

I need:

☐ test data information
☐ on-site sound test
☐ Have salesman call for appointment

Mail to: DeVAC, 10074 Highway #55, Minneapolis, Minn. 55441

NAME_____

FIRM NAME_____

ADDRESS_____

CITY_____ STATE_____ ZIP_____

PHONE (include Area Code)_____

For more data, write A45 on inquiry card

Inherit a fortune.

The new Corbin Fortune 1400 cylindrical lockset.

One look will tell you here's a lockset solidly put together, with no corners cut in design. We were out to produce a beautiful, functional, efficient lockset. And we came home safe with one that increases security.

The Fortune 1400 is a fine tribute to Corbin engineering and craftsmanship. And it means good fortune for specifiers, because we've made their job easier.

From a range of striking, hand-filling knobs and matching rosette decor, to the unmatched quality that Corbin pours into each inside part, the new 1400 makes one superb piece of architectural hardware. New quality that won't cost you a small fortune.

CORBIN

The Security Analysts.

P & F Corbin, Div. of Emhart Corp. Berlin, Conn. 06037.

For more data, write A46 on inquiry card

At last ...a fast-acting double-slide industrial door that's also a Class A 3-Hour rated fire door.

Our new Prest-O-Matic® is the first double horizontal slide Class A, 3-hour rated, FM-labeled door that opens so fast that it's ideal for even the busiest industrial doorway.

Installed-cost is lower than that of conventional fire doors because erection is simpler. Everything is supplied in one package, ready to attach to the wall with all hardware in place and electrical components pre-wired.

Although panels are 40-50% lighter than other fire doors, it provides protection and strength equal to or greater than its heavier competitors.

Heavy duty operator and rugged 10-gauge track assure trouble-free, high-frequency use. This combination has been field tested for "1000 operations a day" over a period of many years without showing undue wear or track sag.

Before you invest in both a conventional door *and* an industrial door, get all the details on the one door that does *both* jobs — the new Clark fire door. Available in both single and double slide models with features you won't find anywhere else.

Doorway specialists since 1878

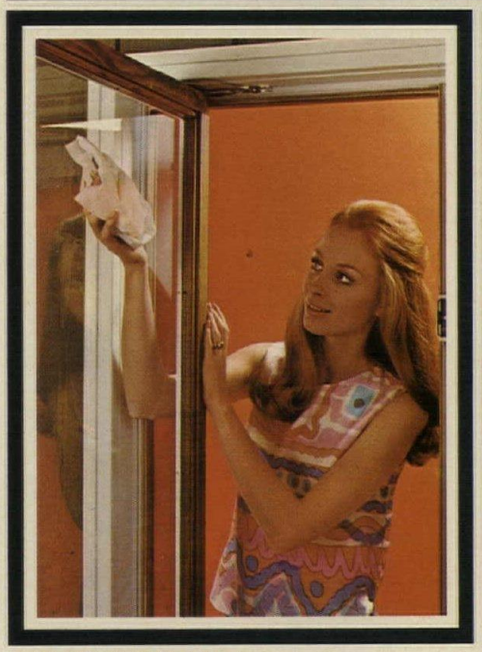
CLARK DOOR

69 Myrtle Street Cranford, N.J. 07016 (201) 272-5100 Telex 13-8268

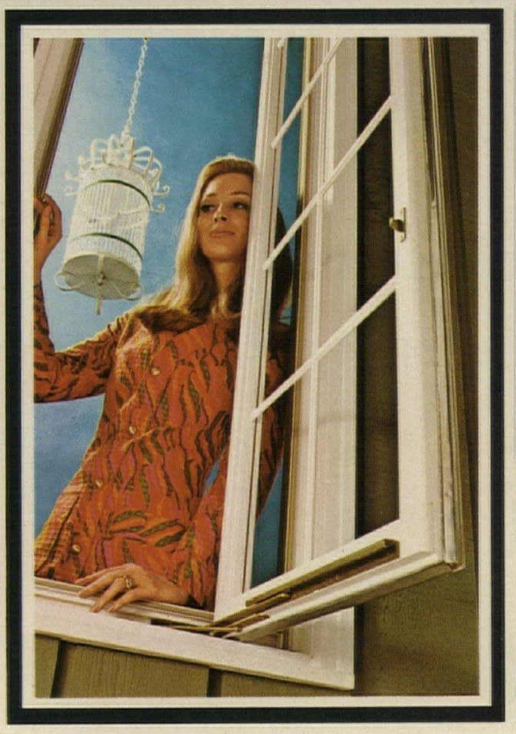
For more data, write A47 on inquiry card

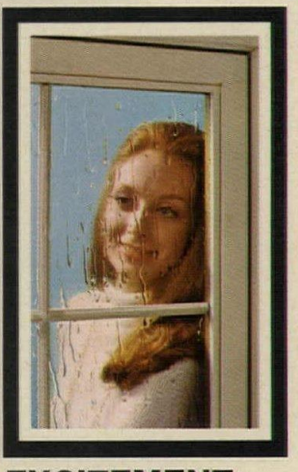
Caradco...
puts buyer excitement in wood casement windows

EXCITEMENT
Unique modular system permits arrangements that complement any exterior.



EXCITEMENT
A full 90° opening for easy inside-outside cleaning.





EXCITEMENT
Double weather-stripping seals out cold, heat, dirt.

EXCITEMENT
Permanent, leak-proof vinyl glazing assures all-weather comfort.

Exciting charm, exciting versatility. You get both in the Caradco C-200′ casement. Plus all these bonus features that make the Caradco package an even better buy: concealed hinges, gold-tone operators, factory-priming outside, screens, grilles (storm panel version). Excitement! To make it happen, see your Caradco dealer.

Caradco
Window and Door Division
Scovill

Main Plant, Dubuque, Iowa 52001/Hainesport Assembly Plant, Hainesport, New Jersey 80836/Ohio Assembly Plant, Columbus, Ohio 43204

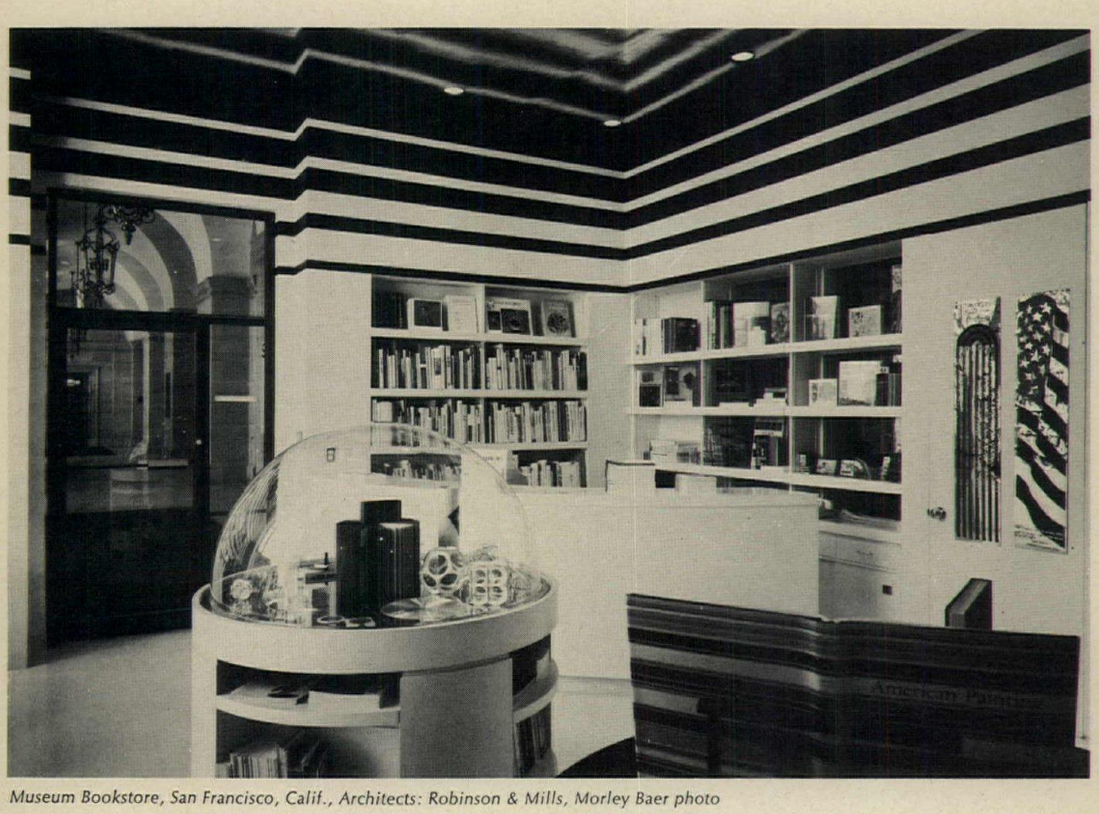
For more data, write A50 on inquiry card

THE EDITORS OF ARCHITECTURAL RECORD INVITE SUBMISSIONS FOR...

1 RECORD INTERIORS

to be featured in the January 1973 issue

. . . a program to recognize outstanding interiors designed by architects



Museum Bookstore, San Francisco, Calif., Architects: Robinson & Mills, Morley Baer photo

In 1970, in response to the upsurge of activity and interest in design of interiors by architects, ARCHITECTURAL RECORD established a new editorial program—RECORD INTERIORS.

Recently completed architect-designed interiors of all building types will be considered—remodelings and renovations as well as new structures—anywhere in the United States. Selections will be made by the editors on the basis of the excellence of the design solution for the particular client's individual program. Submissions from architects of new, unpublished work will be welcomed through November 1, 1972. No formal presentations are required, though materials submitted should include plan, photographs or snapshots, and brief description and program. RECORD INTERIORS of 1973 will be published in the January 1973 issue of ARCHITECTURAL RECORD.

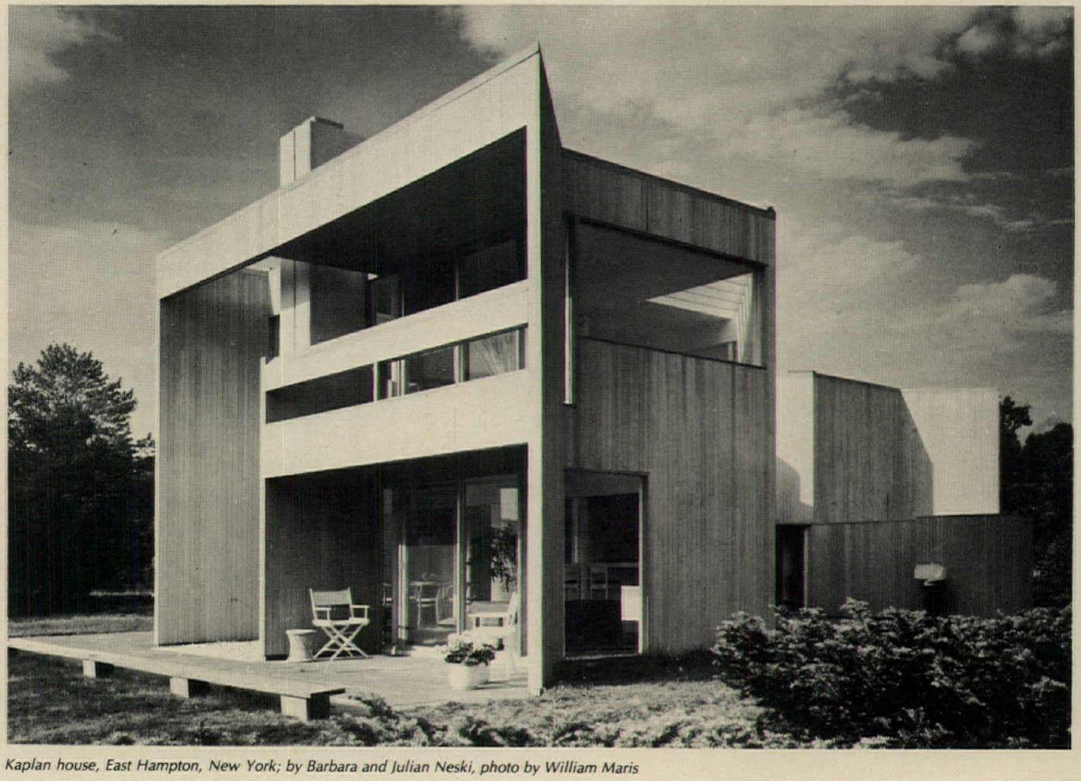
Write or telephone:
Barclay Gordon, Editor-in-Charge
Interior Design Awards Program
ARCHITECTURAL RECORD
1221 Avenue of the Americas
New York, New York 10020
tel: (212) 997-3450

2 RECORD HOUSES AND APARTMENTS

for the 1973 Mid-May issue

Every architect registered in the United States may submit material for consideration in RECORD HOUSES and Apartments of 1973. Single-family houses and multi-family buildings that represent today's wide variety of design approaches will be featured in the eighteenth issue of the magazine. Include the following: 6 to 10 clear informal photographs, black-and-white preferred, fully describing the architectural intent, both on the exterior and the interior (35 mm. slides must be in 8½ x 11 in. clear envelopes); relevant plans and sections (not working drawings); and a descriptive sheet including the architect's name and location of building. Do not send originals or other material which must be returned before the issue appears. The deadline is November 1,1972.

Send material to:
James D. Morgan
ARCHITECTURAL RECORD
1221 Avenue of the Americas
New York City 10020



Kaplan house, East Hampton, New York; by Barbara and Julian Neski, photo by William Maris

SPECIFY CONSOLIDATED'S
revolving doors

for Darkrooms, X-ray Labs, Color Processing, Clean Rooms, Data Centers, Air inflated Structures, and wherever you need a Pass-thru that is **Light Safe, Dust Proof, Air Locked**

Consolidated Revolving doors are all-metal, consisting of an inner cylinder with one single door opening revolving inside of a close-fitting outer chamber with the required number of door openings. A light touch on the handles in the inner cylinder moves it from one opening to the next with no possibility of jamming or light leaks.

There are seven standard door sizes from 29" diameter on the 2-way Slim—Slim line to 66" diameter on the 4-way Jumbo door. Accomodating from 1 to 4 rooms these doors are available in the color of your choice, wood grain or the standard black.

The Consolidated Revolving doors are easy to install. Also obtainable in knock-down kits for do it yourself assembly.

Easy egress safety revolving doors are made for classroom groups, moving equipment and to meet every safety requirement.

2-WAY STANDARD can accomodate 2 or 3 people

3-WAY STANDARD takes place of 3 light traps for 2 darkrooms and outer room

2-WAY "SLIM" SLIMLINE for smaller than standard 36" doorways

The Consolidated Revolving Doors will solve your DARKROOM layout problems and give your clients the most efficient low cost safe darkroom light trap. No more risk of fogged film, temperature change, dust storms or interrupted production.

For DATA CENTERS the revolving doors provide the perfect Pass-thrus, dust proof and air locked, proven by numerous installations in the most sophisticated centers and laboratories.

The Consolidated Revolving Doors have also proven their advantages in CLEAN ROOM installations where any possibility of drafts or air currents have to be eliminated.

There are unlimited possibilities for you to solve your problem now by specifying the Consolidated Revolving doors.

Write for a Consolidated 8 page color brochure or see it in Sweet's catalog No. 8.10/Co.

CONSOLIDATED INTERNATIONAL CORPORATION
4501 SOUTH WESTERN BOULEVARD, CHICAGO, ILLINOIS 60609
TELEPHONE (312) 376-5600 / CABLE ADDRESS: COPEECO / TELEX NO. 25-3205

For more data, write A51 on inquiry card

Your Tile Floor Is Only As Good As The Epoxy Grout You Specify

It's less than 10% of the total floor cost, but the grout you specify either makes or breaks the whole job. It determines how long that tile floor will last and how it will stand up to punishment. That's why Atlas epoxy grouts are specified by architects who demand long-lasting, durable, trouble-free tile floors.

Atlas epoxies have proven their ability to resist acids, alkalies, cleaning agents, salts and greases, while exhibiting low absorption and resistance to freeze-thaw cycles. Atlas epoxy grouts consist of three components—resin, hardener and filler—to assure proper curing, easy workability and consistent, high-strengh quality. So on your next job, be 100% sure . . . specify Atlas epoxy grouts.

ESB | Atlas

ATLAS MINERALS & CHEMICALS DIVISION
ESB INCORPORATED
Mertztown, Pennsylvania 19539 (215) 682-7171

For more data, write A52 on inquiry card

finishes

uci 9

Wide-spread use of carpeting in almost every type of application can be partially attributed to the continuing development of products that improve the basic requirements of durability, easy maintenance and comfort. From the esthetic standpoint, technology is being concentrated by some makers on perfecting the printing of carpet made of synthetic fibers. This promises greater design freedom for the architect who wants an inexpensive custom design. Further into the area of appearance is the development of a synthetic fiber configuration that closely approximates the look of spun yarn. This, plus the economical advantages of the fiber, will probably make it a strong contender in the contract field.

New backings, primarily foam, are being developed as directly applied backings or separate underlayment. Based on the success of previous products of this type, these new entrants in the field should be carefully considered for all applications.

Resilient flooring and special surfacings share significant improvements in abuse-resistance and maintenance ease due to new and improved resins. Antistatic properties and non-slip surfaces, along with the chemical resistance qualities, suggest that manufacturers now are turning much attention to the flooring of industrial and special purpose areas.

Ceramics used more obviously on interior and exterior surfaces is suggested by the increased products of high decorative value. Larger sections are now available, in lighter weights, to make installation easy. Designs reflect the handcrafted esthetic that can be had at more economical costs.

5.5 acres of lofty cover for jumbo jets

Long-lasting PPG coating on prefinished aluminum roof system assures minimum maintenance

Designing a gigantic, column-free service hangar capable of accommodating four 747 jumbo jets required careful consideration of building maintainability as well as structural engineering. Aluminum roofing panels prefinished with DURACRON® Super 800 coating were selected. This silicone-copolymer acrylic finish offers color stability with outstanding resistance to extreme weather conditions, yet its cost per square foot is only in the medium range.

Whatever type metal building you plan, there's a PPG coil coating designed to deliver the performance, beauty and protection you require. See Sweet's Architectural or Industrial Construction Files 9.10/PPG for more information. The panel manufacturer of your choice can help, too. Or contact PPG INDUSTRIES, Inc., Dept. 16W, One Gateway Center, Pittsburgh, Pa. 15222.

PPG: a Concern for the Future

Coil Coatings PPG INDUSTRIES

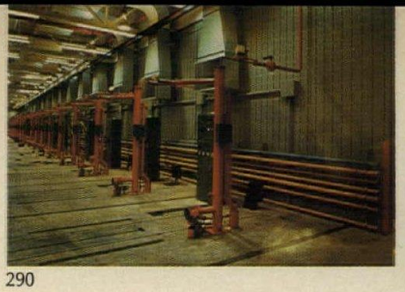
For more data, write A53 on inquiry card

AMERICAN AIRLINES hangar,
San Francisco International Airport

Structural engineers:
Lev Zetlin Associates, New York

Architects:
Conklin & Rossant, New York

Roof panel supplier:
Kaiser Aluminum & Chemical Corporation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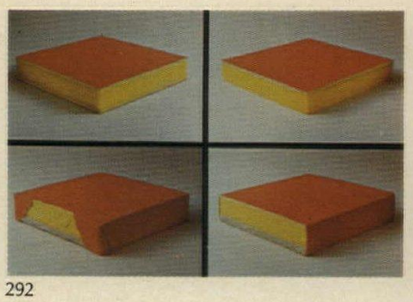
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ACOUSTICAL TREATMENT

290 ACOUSTICAL BLOCK / *Soundblox* is a load-bearing masonry structural block that combines sound-absorption with decorative features. Slotted faces and closed tops comprise damped resonators. Product can be used indoors or out, wherever ordinary hollow concrete masonry units are permitted. / The Proudfoot Co., Inc. A, I*

291 CEILING PANELS / Three-dimensional molded fiberglass panels with smoothly concave interiors and sharply revealed edges are offered as lay-in units. They are moisture-resistant and have high light-reflectance. / Johns-Manville. D*

292 ACOUSTICAL WALL PANEL / *Vicracoustic* wall panels have a perforated facing of vinyl bonded to a ⅛-in. molded fiberglass sheet for sound absorbency. Many colors and 85 patterns are offered on one or both sides, with or without covered edges. / L. E. Carpenter & Co.

ADHESIVES

293 MASTIC / A high-strength mastic for permanent adhesion of stone, aggregate and other materials to any surface is available in white, or it can be tinted. It is non-toxic, non-flammable and can be applied over almost any surface. Moisture-proof, it will not chip, peel, crack or flake. / Coatings & Adhesives Corp.

294 WOOD BONDING / *Adhesive 3556* is applied with two-part metering and mixing equipment to wood members of factory-assembled houses, can also be used to bond interior facing to studs. Mix ratio can be adjusted for desired work life. / Adhesive Coatings and Sealers Div., 3 M Co.

295 EPOXY MORTAR / For buttering or pointing brick, cove base, or structural glazed facing tile, *Rezklad* mortar has a hard, dense surface that can be hosed, steam-cleaned and scrubbed. / Atlas Minerals & Chemical Div., ESB, Inc.

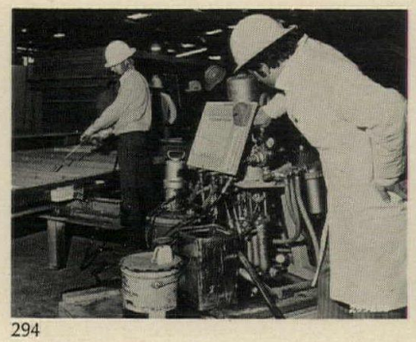
CARPETING

296 FIRE-RETARDANT CARPET / The manufacturer states that this is the first rubber-backed carpet with Class A flame-spread rating—25 or less in the Steiner Tunnel Test. The product is *Anso* nylon with a five-year wear guarantee. Called *Naturalweave*, the product contains static control. / Commercial Carpet Corp.

297 EXECUTIVE CARPET / The Menlo Park line is a *Wool Six* carpet from the manufacturer, with a 60-oz. face weight in loop pile construction. Available in natural colorations, it has an integral fire-retardant sponge rubber cushion and meets the fire safety requirements of ASTM-E-84. / Commercial Carpet Corp.

298 CARPET / Tufted of 100 per cent acrylic pile, *Contract XIV* has a striped effect, is available in 12 colors, is on a bonded jute back, and meets FHA requirements for heavy traffic. / Columbus Mills, Inc.

299 ANTRON NYLON CARPET / This *Scotchgard* product also exhibits soil-hiding properties, according to the maker. The backing is chemically treated to reduce static shocks below the level of sensitivity. The carpet is called Wall Street. / Wunda Weve Carpet Co.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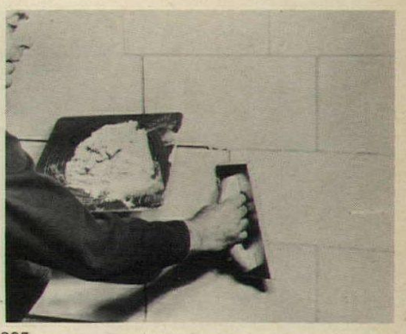
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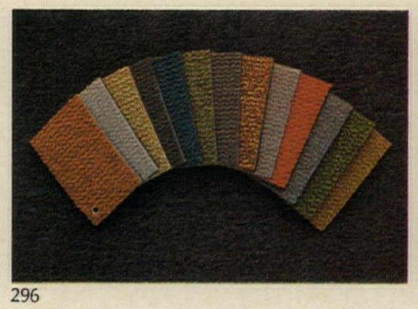
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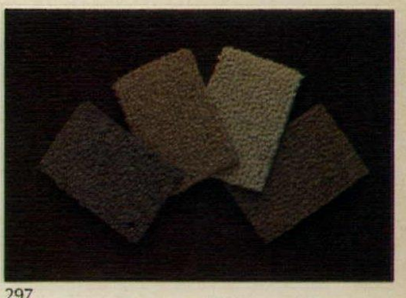
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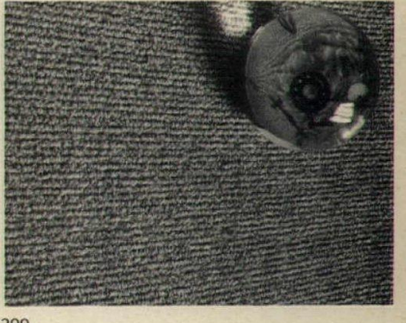
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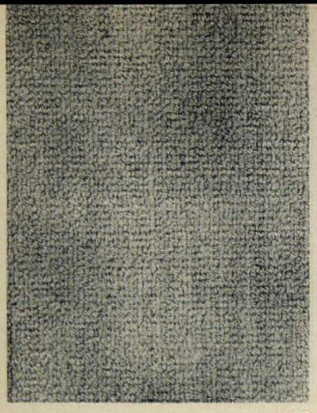

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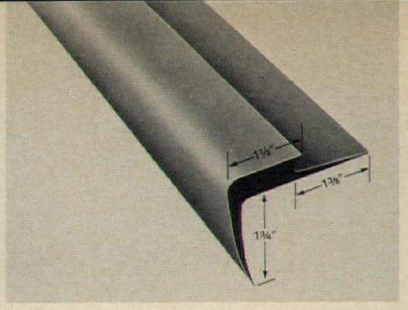
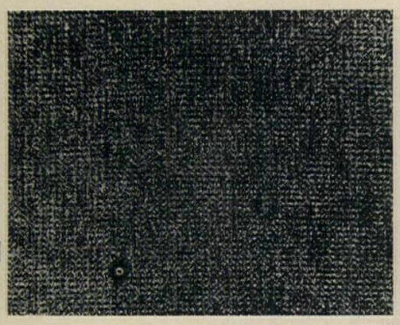


302

300 NYLON CARPET FIBER / Natural heathered tones are highlighted in Vernon Carpet Mills' carpet of *Anso* nylon staple fiber, with a 5-year wear guarantee. Level-loop, tenth-gauge fabric is offered in eight colors. / Allied Chemical Corp. A, D*

301 PRINTED CARPET / A six-color printed carpet with embossed pattern and level-loop construction of acrylic fiber is offered with latex foam backing. Resists static electricity build-up. / Armstrong Cork Co. A*

302 CARPET STAIR NOSING / Designed for sponge-backed carpets, the nosing incorporates a 1¾-in. front lip to cover the entire depth of the stair cap. Available in 12-ft sections, in five colors. / Mercer Plastics Co., Inc.



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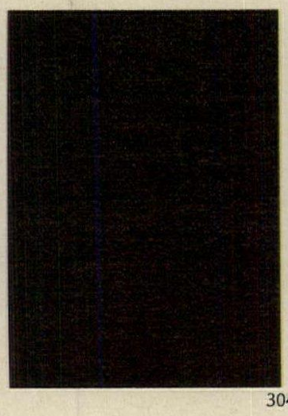

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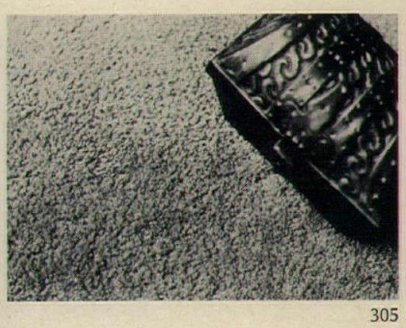

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303 CONTRACT CARPET / Available in 12 colors, the *Design VI* line is made of *Antron II* pile yarns, with a metal element added to reduce static electricity. Cut and uncut pile yarns alternate to create a hopsack look. / Lees Carpets. D*

304 NYLON CARPET / Natural heathered tones in eight colors are available with *Ansall*, a Vernon Carpet Mill offering made of *Anso* nylon fiber. Available with jute, rubber or vinyl backing. / Allied Chemical Corp.

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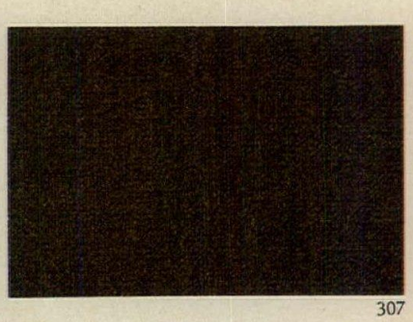

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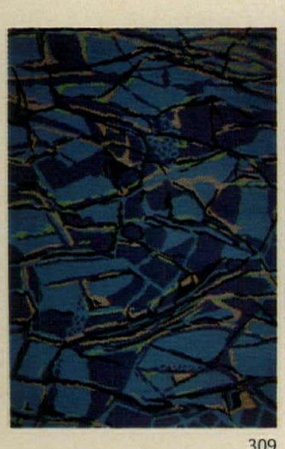
305 SHAG CARPET / Designed for residential and commercial use, the deep-pile carpet is available in 19 colors and is 100 per cent nylon fiber. The line is FHA-certified and meets federal flammability standards. / Burke Carpet Mills.



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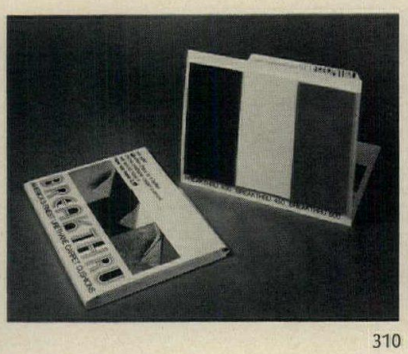

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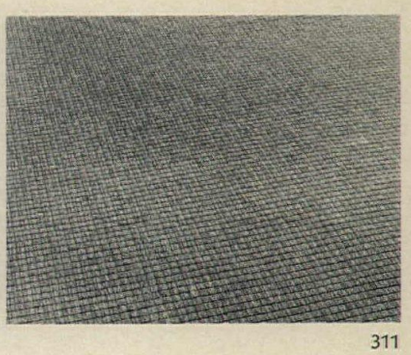

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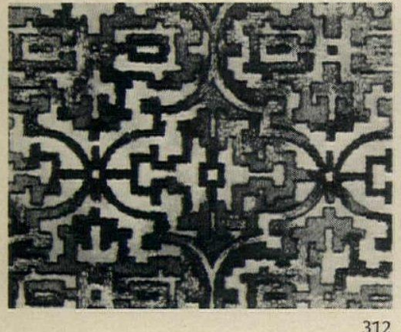
306 APARTMENT CARPET / Designed to cut labor costs by nearly one half, this carpeting system includes a nylon shag in seven colors, with foam backing. Carpet is precut to specified size. Available in 12-ft. widths, *Apartment One* can be laid without creeping. / Armstrong Cork Co.



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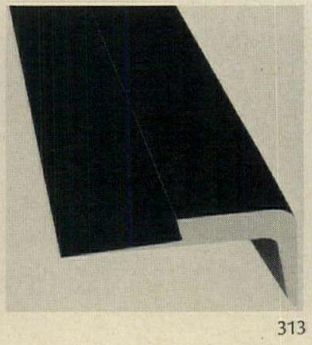

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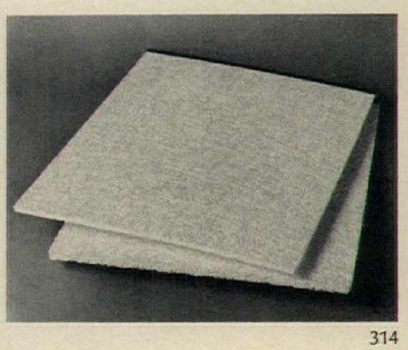


314

307 HEAVY-TRAFFIC CARPET / The *Capitol Line* is available in eight colors and is made of *Antron* nylon. The 28-oz carpet has a polypropylene back and features antistatic and soil-hiding properties. / Burke Carpet Mills.

308 NYLON SHAG / Recommended for home and apartment use, the shag lines will show less dirt and can be easily maintained, according to the manufacturer. A formal saxony shag, the product is offered in a wide range of colors. / Burke Carpet Mills.

309 CUSTOM CARPET / Custom

Wilton contract carpet weaving service offers unlimited design and color flexibility even in limited yardage. Original designs, even with initials or logotypes, can be woven in pure wool and wool-nylon blend. / Philadelphia Carpet Co.

310 URETHANE CUSHION / A prime urethane carpet cushion in three grades designed for heavy traffic is available. The product will not rot or mildew and has a top skin for moisture protection. / General Felt Industries, Inc.

311 ANTI-STATIC CARPET / Stati-Chek is a grid pattern level-loop tweed of Antron II nylon with a small percentage of other fibers for static reduction. 12 colors, in 12 ft width. / Bigelow-Sanford, Inc.

312 CARPETING / *College Park* is a new cut pile contract quality, tufted of DuPont 501 nylon, with *Loktuft* backing. Available in red, blue, and green-turquoise; 12 ft widths. / E. T. Barwick Mills.

313 CARPET NOSING / This rubber stair carpet nosing is for installations requiring only carpeting on the stair tread. Riser side is tapered for finished appearance where non-carpeted risers are required. Black, brown, tan, and grey; in 12 ft lengths. / Johnsonite Flooring Accessories.

314 CARPET UNDERLAY / *Pneumacel* is a carpet underlay composed of billions of tiny gas-inflated cells in a bonded batt. It is offered in two thicknesses: the thinner for heavy-traffic contract installations; the thicker for residential installations where deeper sink-in is desired. / DuPont Textile Fibers.

315 ANTI-STATIC CARPET / A static control system is employed in *Guardsman II*, a nylon carpet developed especially for kitchens. *Zefstat* control has also been added to maker's heavy-duty *Guardsman* line. Both available in eight colors. / Robertson Carpet Corp.

316 CARPET SQUARES / Tufted carpet squares are offered in 18-in. sizes, featuring textured loop pile with non-woven polypropylene primary and secondary backing. Available in 13 stock colors, in nylon. / Heugatile Corp.

317 DACRON CARPET FIBER / Designed for the contract market, *Dacron III* offers a combination of high bulk, luster and soil-hiding properties, plus a look of spun-yarn. Its high crimp provides resilience under heavy traffic. Available through Coronet. / Du Pont Textile Fibers.

318 CARPETING / Styled especially for commercial interiors, *Mastery* is an all-weather densely-woven velvet of the new 2000-plus *Acrilan*. Inert to mildew, easy to maintain with all-synthetic backing, available in 14 colors. / Bigelow-Sanford, Inc.

CEILING SUSPENSION

319 CEILING PANEL / A fiberglas ceiling board, *Nubby II*, is available in 2-in. thick panels, in sizes of 24 by 24 in., 24 by 48 in. and 48 by 48 in. Guaranteed for 10 years, the product has acoustical properties, and is UL-listed. / Owens-Corning Fiberglas Corp.

320 CEILING GRIDS / *Donn Pre-Notched Shadow Molding* is designed for use with exposed grid systems and lay-in acoustical panels, and features a flattened hem at 2- or 4-ft O.C. The moldings are formed from commercial quality cold-rolled steel, electro-zinc coated, with pre-painted white flanges and a black reveal. / Donn Products. Inc. A*

321 CEILING SYSTEM / *Planar* aluminum ceiling is an interior and exterior, low-maintenance system practical for lobbies, corridors, pools, restaurants and dining rooms; or as soffits. Choice of standard or custom baked-on finishes. / Alcan Building Products. A*

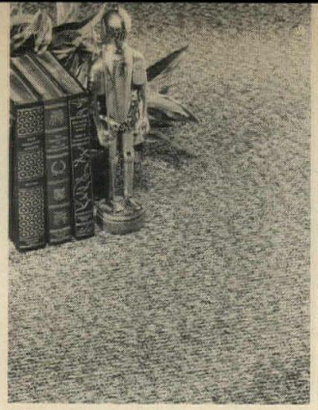
322 CEILING PANEL / Designed to be installed in a standard 1-in. T-grid ceiling support system, *Conceil Grid* panels are 2 in. by 4 in. decorative lattice panels with the look of natural walnut. Support system is hidden, yet accessibility is retained. / Acoustical Products Div., Koller-Craft Plastic Products.

323 DRYWALL CEILING / This suspended drywall ceiling system needs only one trade for installation. Assembles like a suspended ceiling grid, is direct-hung, forms level rigid interlocking, allows screwing all around board and cross direction to eliminate buckling. / Chicago Metallic Corp. A*

GYPSUM WALLBOARD

324 ELEVATOR SHAFT SYSTEM / Two-hour fire-rated elevator shaft wall system, *KW-620*, is built from the corridor side, requiring no scaffolding in the shaft, and provides a smooth inside wall. Stud is available in 2¼-, 4-, 6-in. sizes, 20- and 24-gauge steel. / Kaiser Gypsum Co.

325 SHAFT LINER / A solid gypsum board partition is offered for enclosing elevator shafts, stairwells and other vertical shafts in multi-story buildings. Basic pre-laminated core units, 1⅝ in. thick and 24 in.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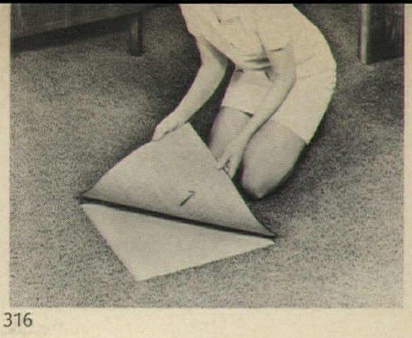
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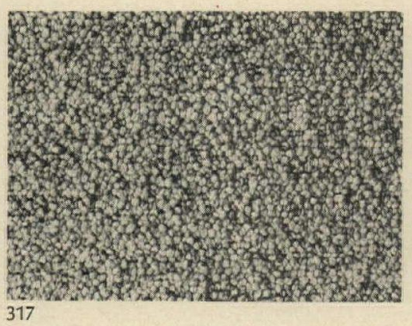
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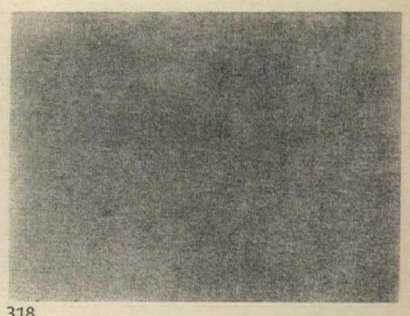
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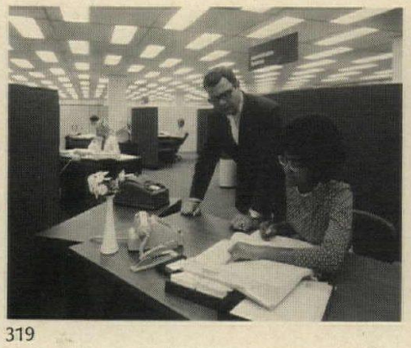
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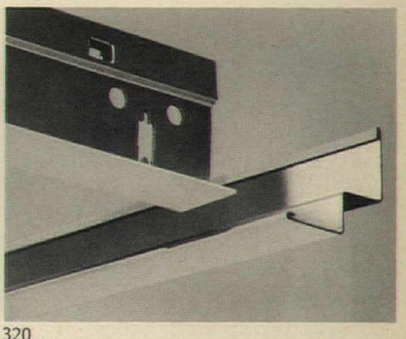
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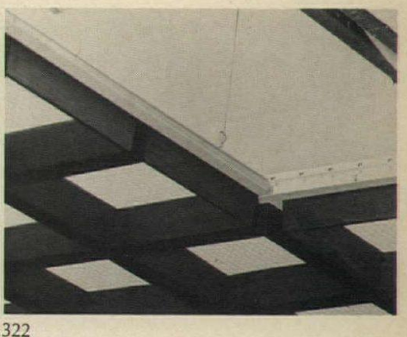
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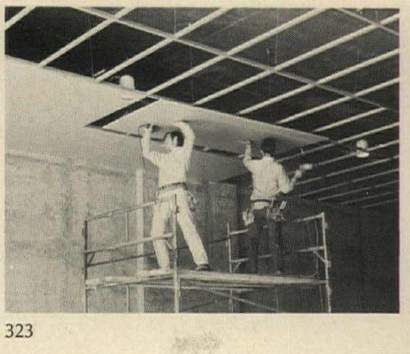
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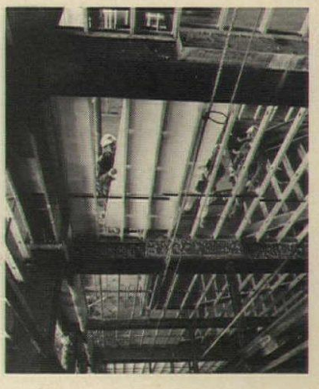
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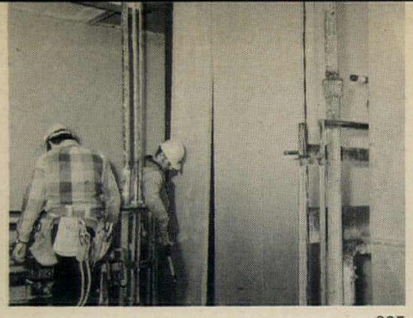

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wide, joined by T splines constitute the primary shaft enclosure, allowing initial erection without fasteners. / Georgia Pacific Corp. A,L,I*

FLOOR TREATMENT

326 EPOXY FLOORING / A slip-resistant, safety surface is the foremost factor of this product, according to the manufacturer. Two versions are available for general use. / Hallemite Div., Sterling Drug Inc. A, I *

327 VINYL FLOORING / The product is called *Quiet Zone*, a resilient flooring designed for commercial and institutional interiors. The new material has an inlaid vinyl wear surface backed by more than ⅛ in. of foam cushioning. Available in a houndstooth pattern, in six colors. / Armstrong Cork Co. A, I, L, D*

LATHING MATERIALS

328 STAINLESS SCREED / A ventilation screed in stainless steel is offered for applications requiring extra corrosion resistance, with no painting. All sizes are made in 10-ft lengths, in various widths. / H. K. Porter Co., Inc. A*

329 ALKYD FINISH / *Glid-Guard* direct-to metal single-coat alkyd for interior or exterior steel resists corrosion. Photo shows performance on scribed areas compared with other primers and multi-coat systems. / Glidden-Durkee Div., SCM Corp.

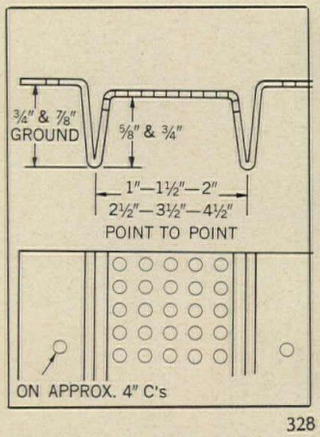
PAINTING MATERIALS

330 LATEX STAIN / A water-base stain, the product is fast-drying and recommended for rough-sawn siding, shingles, clapboards and vertical siding. Sixteen colors are available in flat finishes. / Samuel Cabot Inc. A, L*

331 MASONRY SURFACING / Two surfacings are offered in either a fine texture or coarse texture, in both solvent-based or water-based resins. Available in white or a full range of colors, both products can be sprayed onto damp masonry. / Cook Paint & Varnish Co.

332 STAINS / *Rez* solid latex stains are said to provide longer coating protection, shown in comparison photo of boards subjected to 1000 hours of weatherometer exposure. Available in 36 solid colors and 36 semi-transparent stains. / PPG Industries.

333 CORROSION-PROOF PAINT / A group of corrosion-inhibiting and tannin-stain blocking paint pigments which contain no lead or other toxic metal compounds is offered for household use, structural and marine applications. The prod-



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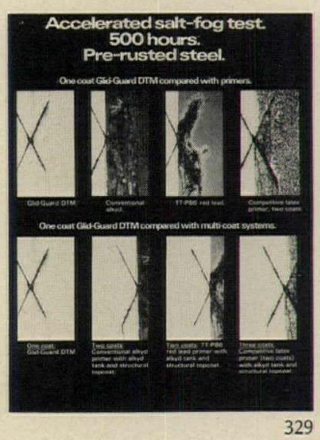

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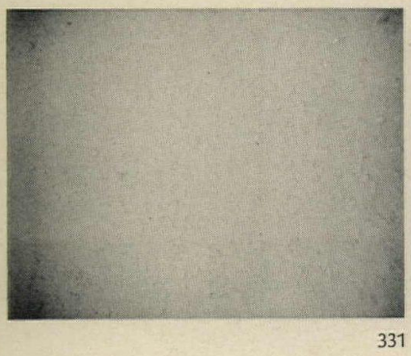

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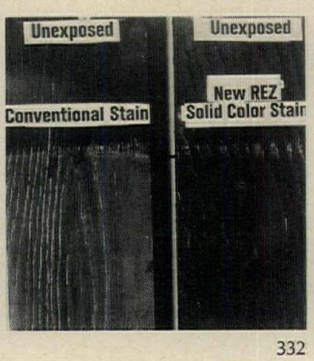

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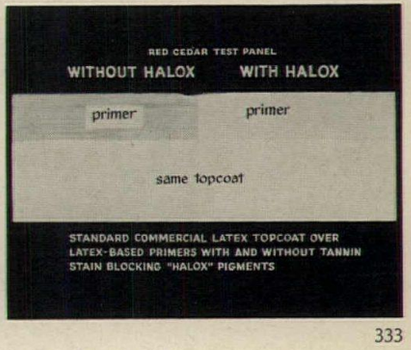

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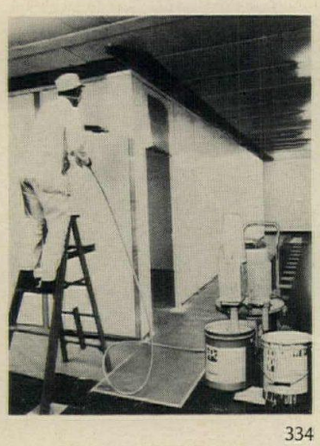

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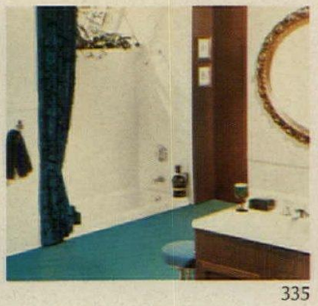

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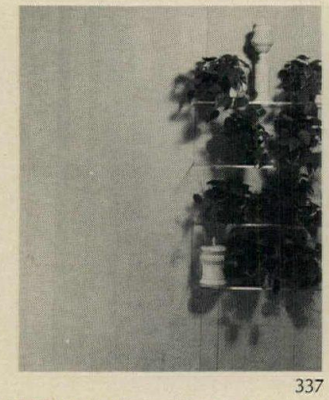

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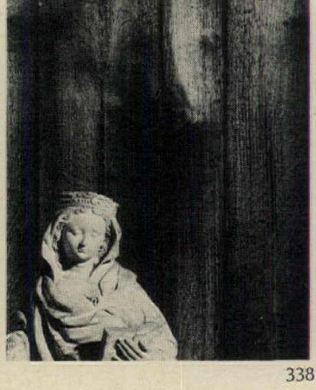

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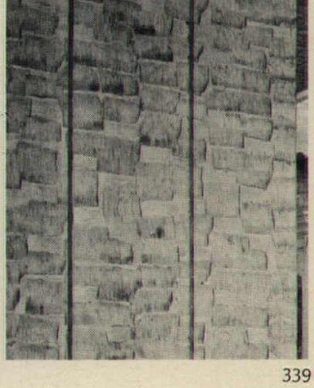

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uct is effective on tannin-bearing woods. / Halox Pigments.

334 INTERIOR PAINT / *Hide-A-Spray* paint forms a textured film that hides patches, hairline cracks, nail holes and other surface irregularities. Available in a flat as well as fine and medium texture and covers in one coat. / PPG Industries, Inc.

PREFINISHED PANELS

335 BATHROOM PANEL SYSTEM / Panel System 202—*No-Tile Bath*—is 1/16-in. laminated plastic bonded to a 1/8-in. sandwich of polystyrene foam. Matching molding system assures water-tight joints. Full bath area can be completed in 90 minutes, at costs from $1.35 to $1.75 a sq ft. / Formica Corp. A, L*

336 GRAPHICS PANELING / The *Motif Graphics* line includes 17 illustrations of produce, dairy and meats to direct consumers in stores. The illustrations are silk-screened on prefinished hardboard and come in various colors. / Marlite Paneling.

337 HARDBOARD PANEL / The look and feel of cork is reproduced in 4 ft by 8 ft prefinished panels in varying textures of white on white. Also offered in dark brown. / Masonite Corp.

338 HARDWOOD PANELING / This hardwood plywood paneling with an antique look is available in two hardwoods, with three shades. / Georgia-Pacific Corp. A,L,I,D*

339 HAND-HEWN PANELING / For interior and exterior use, this paneling features the natural adze marks of hand-hewn timber. / U. S. Plywood Div., Champion International.

340 HARDWOOD PANELING / South American hardwood is cut into varying lengths and thicknesses and glued to hardboard panels approximately 11¾ in. wide by 21½ in. high. Wood fingers extend over hardboard allowing for overlaps to hide seams. Hand-rubbed oil finish. / Pinecrest, Inc.

RESILIENT FLOORING

341 RESILIENT FLOORING / *Selbatwede* combines inorganic ceramic-coated quartz aggregates with a clear resin to provide a finish that is tough and chemical resistant. Matrix is 100 per cent solids epoxy and a urethane finish is available. / Selby, Battersby & Co. A*

342 GYM FLOORING / *Selbagym* is recommended for multi-purpose gyms used for both sports and social activities. It is installed ½ in. thick with neoprene-cork cushion coat and a ¼ in. neoprene resin topping. / Selby, Battersby & Co. A*

343 RAPID-CURING TERRAZZO / Because it is rapid-curing, this product is recommended for renovation work where shut-down time must be kept at a minimum. Available in 100 per cent solids epoxy, with white or pastel matrix. Installed ¼ in. thick. / Selby, Battersby & Co. A*

344 CONDUCTIVE FLOORING / *Novalite* safely dissipates static electricity, according to maker. It is acrylic resin terrazzo which cures rapidly. Total installation time is five to eight days. Resists blood and other chemical spillage. Typical uses: x-ray rooms, obstetrics, operating rooms. / Selby, Battersby & Co. A*

345 NON-SLIP FLOORING / The product has unusual abuse-resistant properties according to the maker. *Selbaroc* has a one- to two-day installation cycle. Recommended for factories, sidewalks, stadiums. / Selby, Battersby & Co. A*

346 CONDUCTIVE TILE / Solid vinyl *Conductile* can be laid over most subfloors and existing floors, according to the producer. Subtle pattern extends through the entire tile which can be ordered in four pastel colors. A short connection to the grounding terminal is required. / Vinyl Plastics, Inc.

347 CONDUCTIVE TILE / *Condulite* eliminates electrostatic hazards according to the producer. The tile is installed with a conductive epoxy which is both an adhesive and conductor. The product features a non-directional chip pattern and is offered in 12-in. squares. / Burke Flooring Products Co. A*

348 VINYL ASBESTOS TILE / *Mayfair* is a new styling with the geometric pattern embossed on a background of translucent vinyl chips containing particles of marble. For residential and light-traffic commercial areas. / Azrock Floor Products. A,L*

349 SEAMLESS FLOORING / This system is USDA-approved and comprised of fast-curing, two-part urethane resin that provides durability and resiliency. Floors can be installed in one day after surface preparation. Six types are offered, including a Venetian terrazzo. / 3M Co.

COATINGS & SURFACINGS

350 SEAMLESS FLOORING / This colorful flooring system is a combination of 100 per cent resin solids

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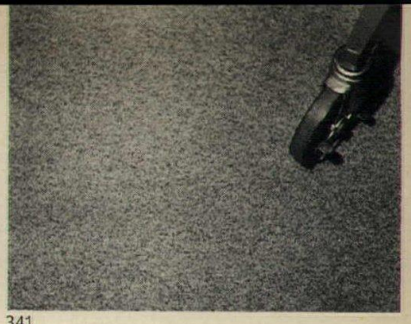
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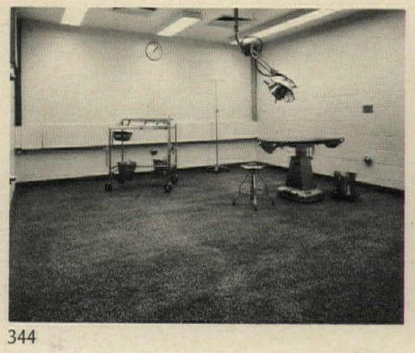
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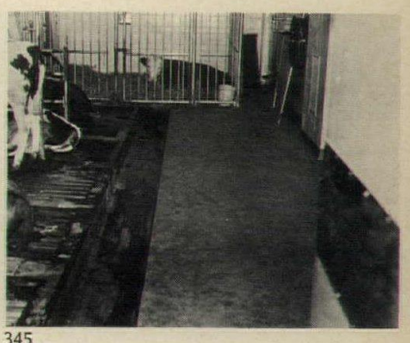
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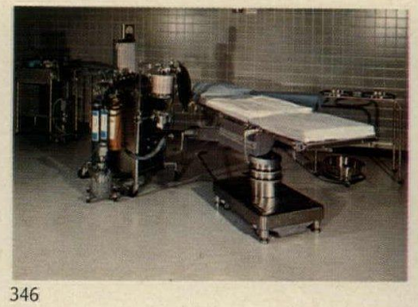
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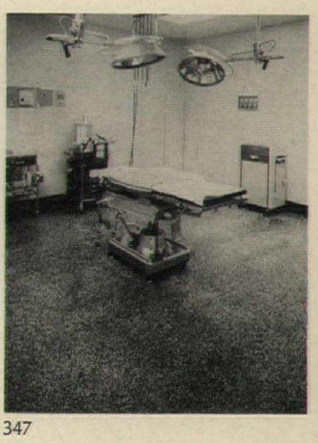
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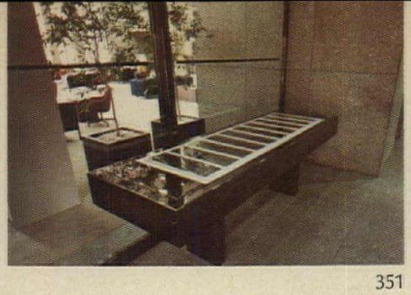

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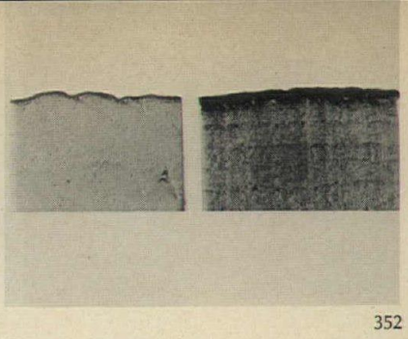

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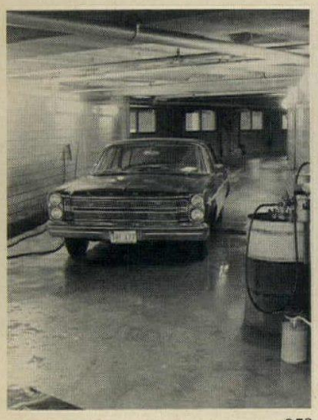
and granules of ceramically color-coated quartzite base rock which are over-coated with clear, two-part high solids urethane resin. Suited to interior areas of heavy traffic. / 3M Co. L,I*

351 BLACK CHROMIUM / The product is called *ChromeOnyx*, a durable electroplated black finish which the producer claims will apply to copper, nickel, chromium, stainless steel, zinc, aluminum alloys and plastics. Suited for accenting interior and exterior features such as handrails, elevator doors. / The Harshaw Chemical Co.



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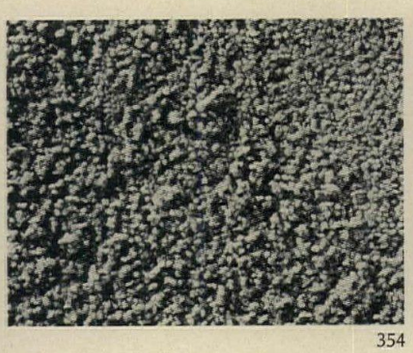

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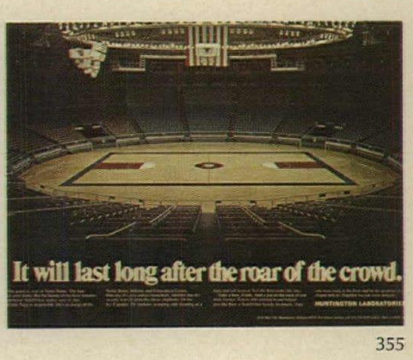

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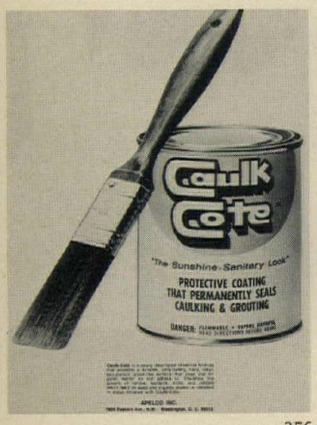
352 BUTYL RUBBER COATINGS / Trademarked *Vapalon*, these coatings resist chemicals, weather and water vapor according to the producer. Primarily for spraying over polyurethane foam insulation, the product may also be rolled or brushed over sandblasted steel, concrete, wood and building paper. Available in regular and in flame-retardant formulations of tan and gray. / Enjay Chemical Co.



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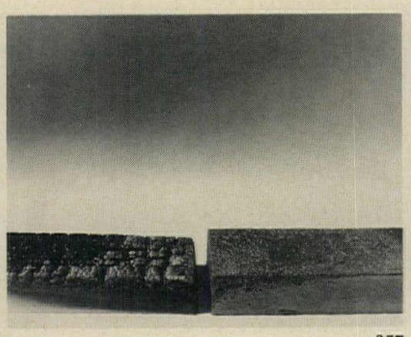

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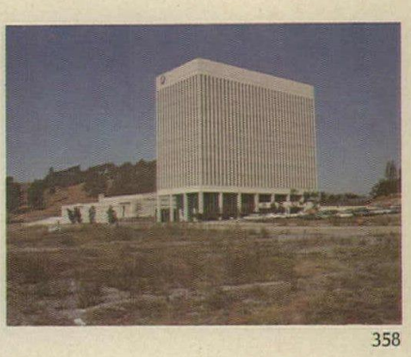

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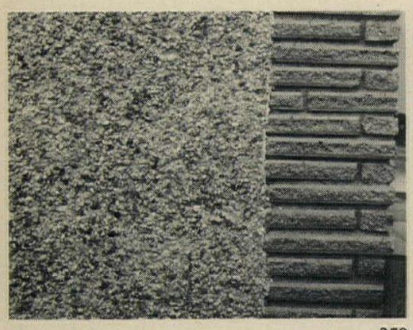
353 INDUSTRIAL FLOORING / This is a blend of two-part high solids urethane resin and particulate matter. It provides a tough, economical flooring surface in work areas where anti-slip qualities are needed. / 3M Co. L,I*

354 EXTERIOR COATING / Designed for use as a protective coating over concrete, stucco and wood, *SYN-CRETE E-16-1* is spray applied, at a spread-rate of 50-75 sq ft per gal, to a dried film thickness of 20-30 mils, which is said to obliterate most imperfections, cover seams and joints and many other surface defects. / Glazed Cement Corp. A*



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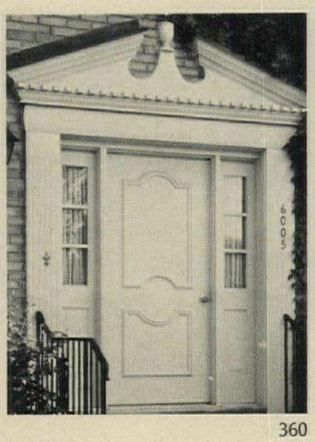

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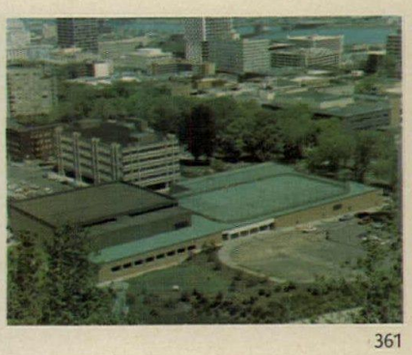

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355 WOOD SEALANT / *Seal-O-San* is a clear sealer to keep wood floors resilient, slip-resistant and glare-free. Resists rubber burn from regulation gym shoes. / Huntington Laboratories, Inc. A*

356 CAULKING SEAL / *Caulk-Cote* provides a permanent seal on existing caulking and grouting compounds, preventing dirt and bacteria from adhering to tile work. / Apelco, Inc.

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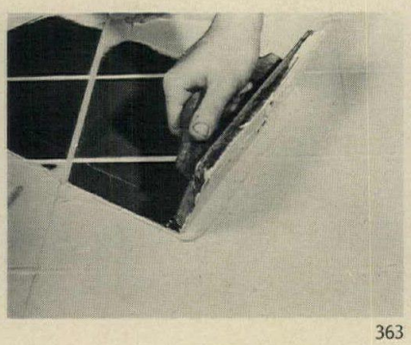

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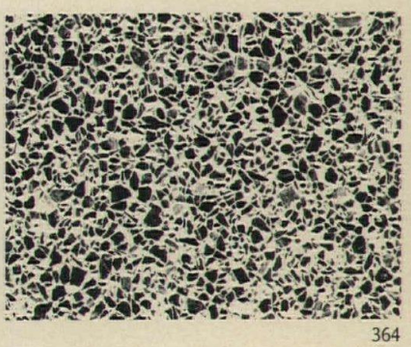

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357 FIRE PROTECTION / Fire-resistant ablative foams and intumescent coatings act to prevent fire spread. Easy to apply or install. Photo shows charring of treated (left) and untreated panel. / Avco Systems Div.

358 MASONRY COATING / *Tneme-Crete* is a fill, prime, and finish coat for exterior masonry and concrete. Available in 53 colors, this solvent-type epoxy coating can be

brushed, rolled, or sprayed. Finish is a flat, uniform sand texture. / Tnemec Co. A,I*

359 POLYMER SURFACING / This trowel-on catalyzed epoxy plastic system forms a three-dimensional effect on the outside or inside surface of a wall when used with stone, marble and other aggregates. Resists water, sunlight, freeze-heat cycles and exposure of any kind. Offered in a range of colors. / Berco Industries Corp. A*

360 WOOD OVERLAY / An acrylic-film laminated wood-fiber sheet material for prefinishing exterior wood building products is available to be used in place of paint. *Korlex* can be factory-bonded. It resists chalking, fading, cracking and chipping. Available in white or colors. / Latex Fiber Industries, Inc.

SPECIAL FLOORING

361 ROOF SURFACING / *Weatherdeck* surfacing, easily applied over new or old concrete or asphalt provides a surface for tennis courts or general purpose sports. Photo shows roof-top installation 280 by 300 ft at Portland (Ore.) State University. / 3 M Co.

362 PLAYING FLOOR / Now available in ¼ in. by 3 ft by 3 ft-panels for permanent installation, *Slick* can be used for ice skating as well as indoor recreational activities. A special conditioner makes the surface like real ice. Without it, a firm footing is obtained. / Vinyl Plastics, Inc. A*

363 EPOXY GROUT / Meeting demands for more color variety in tile or paver floors, *Rezklad* epoxy grouts are now available in red, green, and brown; suitable for industrial and commercial applications. / Atlas Minerals & Chemicals Div., ESB, Inc.

TERRAZZO

364 THIN TERRAZZO / Cost savings and ease of application are claimed for this wall matrix which adheres readily to stucco, concrete and other surfaces, including wood and metal. Applied in a ¼-in. layer. / H. B. Fuller Co. A*

TILE

365 CERAMIC PANELS / Joint-free sizes are available up to 5 ft by 4 ft, for external or internal wall and floor applications. Panels weigh less than 3½ lbs per sq ft. Installation methods include mechanical fixing, mortar bed or special adhesive. Patterns or solid colors in various glazed finishes are offered. / Amsterdam Corp.

366 TUB SURROUND / The *Redi-set System 310* ceramic tub surround fits most 60-in. tub recesses. It consists of eight sheets of silicone-grouted tile plus internal corner strips which permit up to ⅝-in. adjustment to fit. Seams and edges are sealed with the waterproof silicone. / American Olean Tile Co. A*

367 CERAMIC TILES / Three-dimensional tiles for exterior or interior use are offered in two-color combinations, many with raised motifs. Six grout and background colors are available. The tiles pass freezing, thermal and shock tests / Progressive Designs Inc.

368 CERAMIC MOSAIC / Unglazed ceramic mosaic stock patterns are composed of 1 by 1 in. natural clay ceramic mosaics, in sheet sizes 13⅛ by 13⅛ in. For interior and exterior floors and walls in commercial, institutional, or residential settings. / U.S. Ceramic Tile Co. A*

369 FLOOR TILE / 12-by-12 in. ceramic floor tiles feature an intermix of shades and surface irregularities for a hand-crafted look. "Tides" (left) is a flowing pattern; "Medallions" presents a grille-like Mediterranean pattern. / Interpace Corp. A, I*

370 CUSTOM CERAMICS / Architects can select from extensive library of prototype designs, or create designs that can be executed in any of 1500 colors and textures. Glazes suitable for use on walls and floors. / Interpace Corp.

WALL COVERING

371 GLAZED WALL TILE / A large variety of contemporary designs is available in Italian-produced tiles, 6 in. by 6 in. Shown is "Linee Caruso," black lines on white. Colors are available. / Country Floors, Inc. A, D *

372 PLASTIC WALL COVERING / *Kydex* sheeting resists breakage, chipping, scratching, staining and discoloration according to the maker. It is recommended for use in commercial, industrial and institutional buildings to protect exposed interior walls and doors. Offered in a variety of colors. *Kydex* is fade-resistant. / Rohm and Haas Co. A*

373 WALL SCENICS / Printed on 10-ft strips 44 in. wide by 90 in. high, the *Diamond Plus* series is available in four standard colorways. Custom color combinations are offered. Each identical strip can be reversed or turned to give new perspectives. / Katzenback & Warren, Inc.

374 PLYWOOD PANELING / Prefinished panels 4 ft by 8 ft are ready

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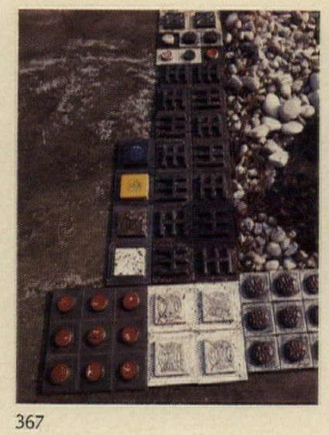
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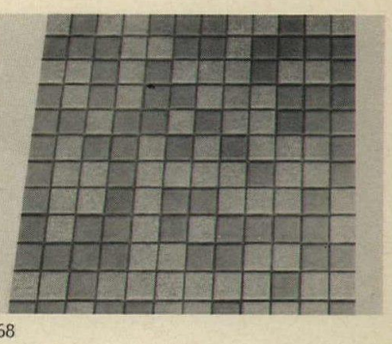
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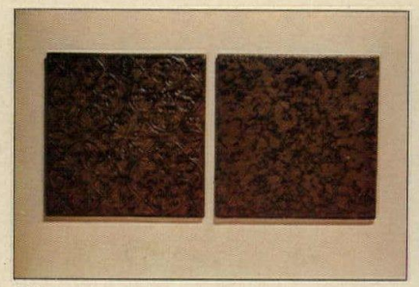
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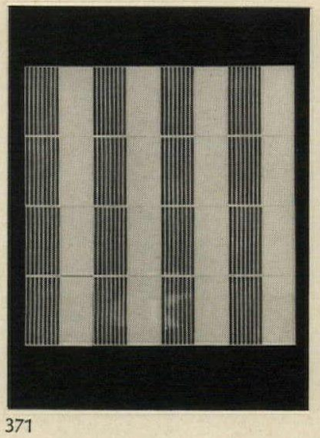
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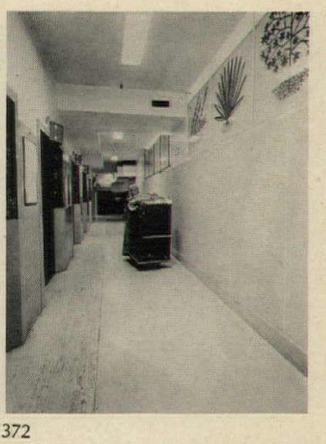
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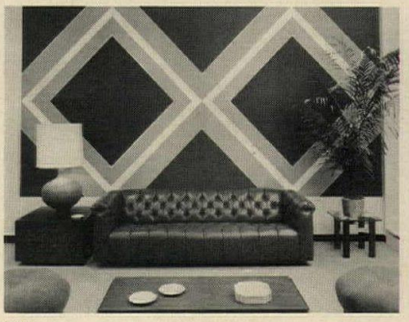
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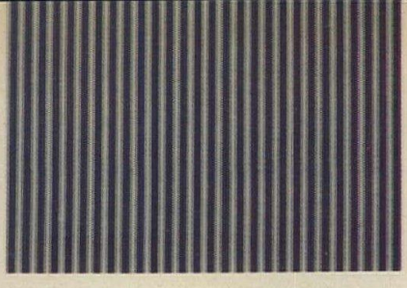

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to install with matching moldings. Available in a wide selection of patterns, a cork style is shown. Nearly impervious to most household chemicals, the product is cleanable / Evans Products Co.

375 PLASTER-LIKE COVERING / The end result of this product looks like textured burlap applied on tinted plaster. It is a woven jute fabric embedded in uncrystallized plaster, which is applied with an adhesive that causes the plaster to harden onto the wall permanently. It can be used over almost any surface, and is available in six colors. / Wall & Floor Treatments, Inc. A*

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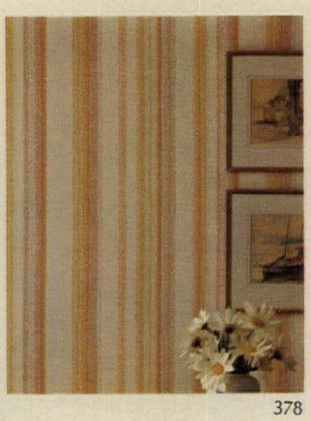

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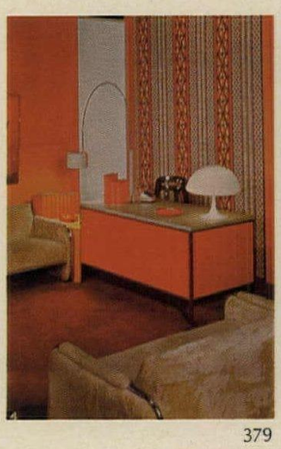
376 SHINY TICKING / A ticking stripe on patent vinyl, this wallcovering comes 30 in. wide, priced at $6 a roll, six yards to a roll. Available in white stripes on mint, yellow, avocado, light blue, dark blue, tobacco brown and black. / Louis W. Bowen, Inc.

377 WALLCOVERING / *Chevreau* is a low-pile simulated calfskin, one of nine designs in simulated animalskin, paper-backed wallcoverings. Black and white only, 54 in. wide, with companion fabric available. / Louis W. Bowen, Inc.



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378 VINYL WALL COVER / Using color over color, the design of this product is tweed-like. It comes in eight color combinations and in 27-in. widths. / B. F. Goodrich Co.

379 VINYL WALLCOVERINGS / *Raja Sari* is one of 72 new Type II wallcoverings available. Entire collection of light-, medium-, and heavy-weight vinyls is cross-referenced to Devoe custom color system. UL and Southwest Research Institute Class A fire retardant. / Celanese Coatings Co., Devoe Paint Div.

WOOD FLOORING

380 PARQUET FLOORING / Hardwood flooring recommended for shopping malls, retail stores and other heavy-trafficked areas. The company claims low-cost maintenance. / Harris Mfg. Co. A*

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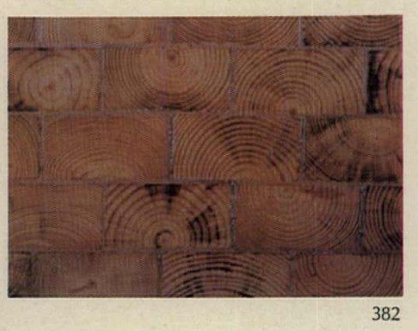

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381 WALNUT PLANK FLOORING / Characterized by knots and wavy grain, this product is prefinished and available in three-, five-, and seven-inch widths in random lengths. The planks are pre-drilled at the ends to receive wood screw face fastenings, which are covered with wooden plugs. Oak planks are also offered. / Wood-Mosaic Corp. A*

382 WOOD BLOCK FLOOR / Air-dried southern yellow pine up to 4 in. wide and 8½ in. long is treated with a urethane finish that is water-resistant. The high-gloss finish is clear, black or colored. / Jennison-Wright Corp. A, I*

383 FOAM-BACKED WOOD TILE / *Hartco Wood Foam-Tile* is 7/16-in. hardwood parquet flooring combined with a closed-cell foam underpadding to deaden sound, provide resiliency, and ovecome minor subfloor irregularities. Adhesive is factory-applied; installer simply peels away protective paper. / Tibbals Flooring Co. A*

384 GYM FLOOR / *Hartco Floating Floor System* features an underlayment of a double layer of plywood sheets and backing of closed cell foam. Installation is made by an authorized contractor, and floor is guaranteed for three years. / Tibbals Flooring Co. A*

385 LOW-NOISE FLOORS / These parquet hardwood floors have a factory applied, sound-absorbing foam pad. Available in three finishes of oak or pecan; 9 by 9 by ½ in. Over six in. concrete, this floor exceeds all New York City code requirements for sound transmission between floors. / Bruce Flooring.

386 WOOD-ACRYLIC FLOOR / *"Herringbone"* is one of four new patterns in *Permagrain*, a high-performance wood-acrylic flooring. Offered in 2-in. by 12-in. units, in a choice of six colors, the product resists abrasion, indentation and staining. / Arco Chemical Co. A*

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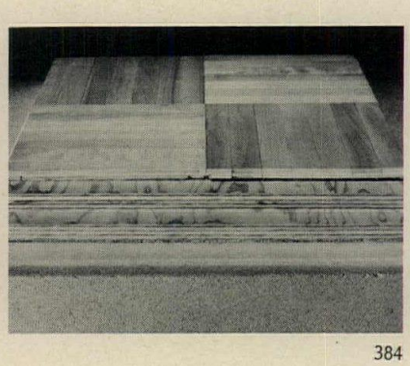

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When his name is on one of those bats, finishes based on KYNAR 500® will still retain their true color for 20 years plus.* And that's a long, long ball game. In spite of attack by sun, weather and pollutants.

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Introducing a new kind of contract carpeting that combines the look of wool with the durability of nylon.

Introducing Cordavel.

- Cordavel is the newest development in contract carpeting built for heavy traffic areas. Its face yarn is a unique blend of Dow Badische fibers: 68% acrylic, 29% nylon—plus 3% Zefstat*, a metallic fiber for static control.
- Cordavel is substantially less expensive than 100% wool carpets of comparable durability.
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Four myths about architects.

"To the architect, time is no object."

The truth is that in the new science of fast construction, it is *architects* who are the pioneers. Using new techniques like "Fast Track" and "Critical Path," they are meeting and even beating some murderous deadlines. At the site for Memorex's huge new headquarters in Santa Clara, California, architects had steelwork up in 3 weeks, the first products rolling off assembly lines within 9 months, and the entire complex (4 buildings, which won awards for their good looks) finished inside of 2 years!

"He loves to spend your money because his fee is a percentage."

The truth is that architects today will often negotiate a *fixed fee* before they begin work. But the architect who did Cities Service Oil's headquarters in Tulsa was working for the traditional percentage. He found a way to use the outer walls as a truss, thus reducing the cost of the building by $1,000,000 and–incidentally–clipping a sizable sum off his own fee!

"His estimate is an under-estimate."

The truth is that despite the dizzying impact of inflation, architects' estimates have proved to be surprisingly realistic. A random sampling of 25 architectural projects in North Carolina last year showed that final construction costs were $3,195,843 *under* the architects' original estimates. And there's no reason to believe that North Carolina's architects are any shrewder than the rest.

"He cares more about the way it looks than the way it works."

Ten businessmen who've dealt with architects recently have taken the trouble to demolish *this* myth. They describe how their architects gave them buildings that work in ways they would never have thought of themselves, and we've put their stories into a booklet. We'll send you a copy, free: Just drop a card to American Institute of Architects, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036. (It happens to be a good-looking booklet, as well.)

When he's old enough to design his own buildings, coatings made with KYNAR 500® will still be young.

When he has his name on the door of that architectural firm, finishes based on KYNAR 500® will still retain their original appearance. In spite of more than 20 years attack by sun, weather and pollutants.*

KYNAR 500 is the best base for color coatings on architectural metals. It resists chemicals, chalking, fading, corrosion and mortar stain. And won't crack, or craze. So matching is easy.

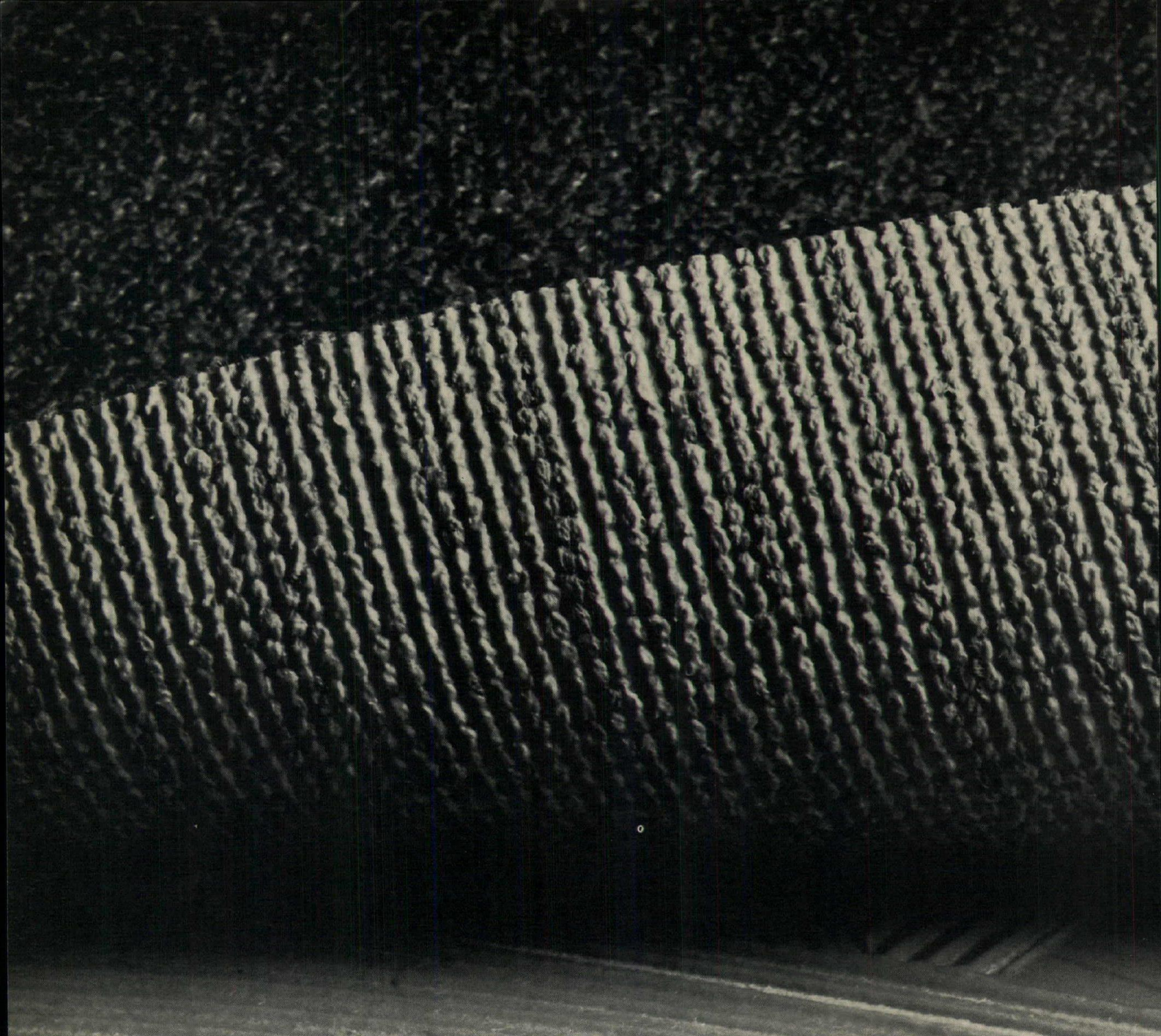
Use KYNAR 500 on your next building.
Write Pennwalt Corporation, Pennwalt Building, Three Parkway, Philadelphia, 19102.

*Based on accelerated life tests.
®Kynar 500 is Pennwalt's registered trademark for its vinylidene fluoride resin.

Make your base specification KYNAR 500®

PENNWALT
ARCHITECTURAL COATINGS

For more data, write A54 on inquiry card



How to soften floors you always

Floors subject to hard use no longer have to be hard.

There's a way to make them softer, quieter, safer, easier to maintain.

With carpet that has pile yarn tufted into backing of special Typar* spunbonded polypropylene and directly glued down.

This is carpet with no secondary backing—just one, tough, unitary backing of "Typar" that acts like a common bond between the carpet pile and floor.

So, when properly glued down, there's little danger of delamination from sudden stresses and wet cleanings, no in-between backing for heels and wheels to loosen.

And because it's spunbonded, "Typar" won't fray or ravel at the edge.

Seams stay tight. And virtually invisible.

No matter how you twist it, "Typar" keeps its shape. Patterns can be repeated in the longest corridors. And widest lobbies. Without getting out of shape.

And unlike natural-fiber backings, "Typar" won't rot, swell or shrink. Can be used below grade.

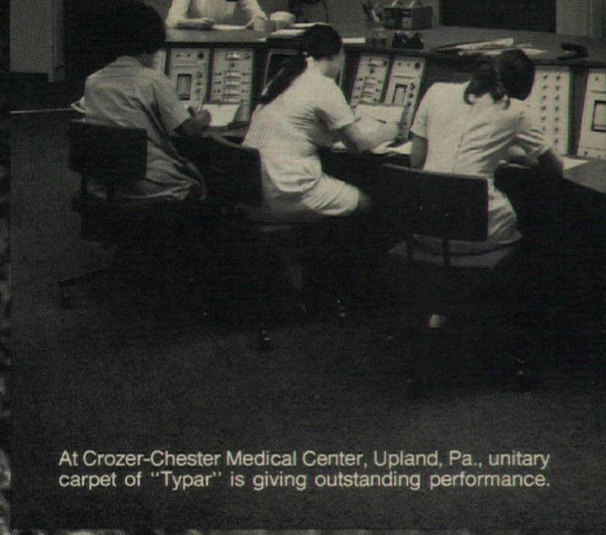
Also, unitary carpet is usually more economical than carpet with a secondary backing.

So now you can specify the warmth and beauty of carpet in places you always thought had to be hard. Send for full details: Du Pont, Textile Fibers Department, Room A-TU, Centre Road Building, Wilmington, Delaware 19898.

DU PONT
REG. U.S. PAT. OFF.

*Du Pont registered trademark

For more data, write A56 on inquiry card



At Crozer-Chester Medical Center, Upland, Pa., unitary carpet of "Typar" is giving outstanding performance.

thought had to be hard.

TYPAR® for unitary carpets you glue down.

ANNOUNCING "PRODIGY"™

A whole new look for the designing eye.

For the architect or designer looking for an escape from the ordinary, Prodigy is your magic carpet. In fact, a carpet as visually different as Prodigy had to start with the creation of a revolutionary sculpturing technique.

Sculptron™ is an exclusive new Armstrong process* that gives Prodigy a dimensional effect never offered before in carpeting. And with it the classic design and color of the finest pattern-dyed carpets plus the toughness and durability of the best in the commercial field.

The result is carpeting that's elegant enough for high-style private offices, conference rooms, or residential areas. Yet it easily takes heavy traffic in hotels, theaters, or restaurants. And it's exclusive with Armstrong.

While Prodigy is elegant and formal, the carpet takes on different personalities, depending on the colors selected. So it fits into virtually any decor, from traditional through Oriental to contemporary.

And wherever it goes, in whatever decor, it's tough. Its dense pile of 100% bi-component acrylic fiber—for greater resilience and texture retention—with foam backing, outperforms similar carpeting of 20% greater pile weight. It has excellent resistance to soil, cleans up quickly, and prevents static electricity buildup.

Prodigy is another of the new carpet ideas that keep coming from Armstrong.

For detailed information on the complete Prodigy line, write Armstrong, 4810 Rock Street, Lancaster, Pa. 17604.

*Patents Pending

Armstrong

CREATORS OF THE INDOOR WORLD™

For more data, write A57 on inquiry card

Chef Boy-ar-dee® added the Italian touch to J&J's carpet of Herculon®...

...but it was touch and go.

J&J's Commercialon 1800 carpet made with pile of HERCULON* olefin fiber normally doesn't touch the sauce. But this time it got an extra helping of delicious Chef Boy-ar-dee† Spaghetti Sauce. Heaped on a mound of piping hot spaghetti. But, in a matter of minutes it was all cleaned up and ready for dessert.

The stain resistance of HERCULON, coupled with uncommon resistance to abrasion and fading, gives you the perfect carpet for any commercial installation. Chef Boy-ar-dee didn't hang around J&J's carpet of HERCULON long enough to appreciate it. But your customers will.

For detailed information on HERCULON olefin fiber see Sweet's Ⓢ Light Construction, Architectural and Interior Design files. Or, write Fibers Merchandising, Dept. 222. Hercules Incorporated, Wilmington, Delaware 19899 for free 24 page booklet.

Specify carpet of Herculon® by J&J

HERCULES

†Registered trademark of American Home Foods.

*Hercules registered trademark.

For more data, write A58 on inquiry card

Conwed

RESISTS
ABUSE

Conwed®

IMPACTION™
CEILING SYSTEMS

more.....

Conwed

IMPACTION™ CEILING SYSTEM*

*Patent Pending

for ceilings in gyms, locker rooms, multi-purpose rooms—wherever ceilings take a beating

A ceiling that can take abuse, and snap back in place.

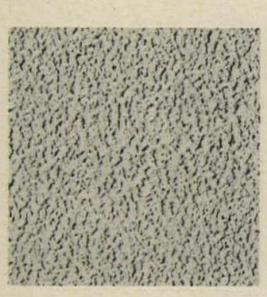
Some suspended ceilings take daily beatings. In school locker rooms, gymnasiums, and multi-purpose rooms, ceilings are under constant attack . . . targets of everything from basketballs and hockey sticks to pencils and paper clips shot from rubber bands.

In areas of high activity, ordinary suspended ceiling acoustical panels when under "bombardment" can be dislodged from the grid . . . sometimes they're knocked out altogether or broken. It's an expensive game no matter how you play it. Here's Conwed's answer . . .

New Conwed total Impaction Ceiling that thrives on abuse in high punishment areas

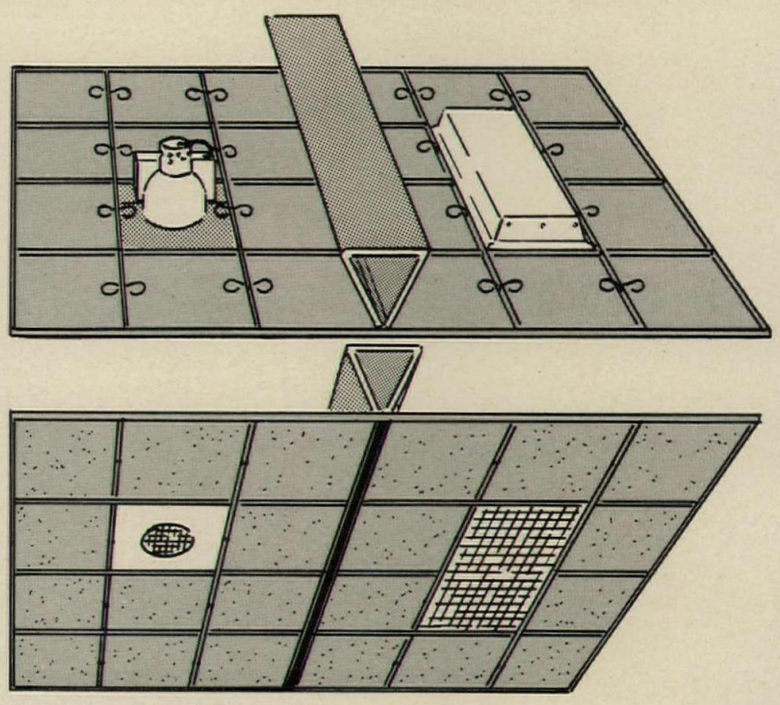
This new ceiling system combines lighting, acoustical control, air delivery and specially compounded Impaction panels with a new ingredient . . . deacceleration clips that absorb impact, then snap components back into place. Every part of this ceiling is designed to resist accidental impacts. Result: A total Impaction ceiling system from Conwed, world leader in ceilings and ceiling systems.

All Conwed components are dimensionally integrated to provide aesthetically appealing, as well as practical, ceiling packages. Several different Impaction packages are available to suit specific needs.



Bold, brawny, beautiful Rock Face pattern

Specially compounded ¾" plus thick Impaction panels, 2' x 2', offer a deep, naturally textured, rugged white surface. Panels are acoustical, install fast, yet provide easy lift out access.



Simple Fool-Proof Impaction System

When struck by an object,

a. Special Rock Face Impaction panels take the initial blow and are forced upwards.

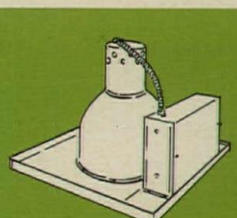
b. Impaction deacceleration clips absorb any anticipated impact.

c. Panels snap back properly in place on grid.

Plus Lighting and Air Delivery

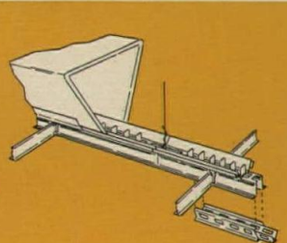
Mercury Vapor Light Fixture

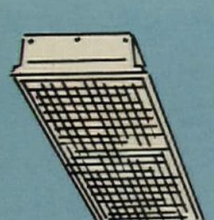
Screened mercury vapor units are recommended to provide quality light in high ceiling situations (gymnasiums, etc.)



1200 Series Air Bar

Delivers quiet air distribution in a comfortable horizontal pattern.





2' x 4' Fluorescent Light Fixture

Has abuse-resistant metal louver for lower ceiling height areas (multi-purpose rooms, etc.).

For further information on Conwed Impaction Ceilings write:

Conwed CORPORATION

Conwed Corporation, Dept. CISC
332 Minnesota Street, St. Paul, Minnesota 55101

For more data, write A59 on inquiry card

HOW ARE THE YOUNGER ARCHITECTS COPING WITH THE PROBLEMS OF THE REAL WORLD OF PRACTICE?

This and other questions will be answered in Architectural Record's December issue.

The entire December issue will be devoted to an examination and appraisal of what the younger practitioners are doing, aspiring to do — and what that portends for building design, for larger scale planning, for the practice of architecture and for the future of the profession.

The issue will be a voyage of discovery and recognition — and as such will be read with intense interest by the largest architect and engineer audience ever assembled by any architectural magazine.

A wonderful editorial background for displaying the best of your young products.

Closing date: November 1

Long Island home; Architects: Vernon and Jay Sears, Quogue, Long Island; vertical siding treated with Cabot products.

To enhance the beauty of wood...

Cabot's STAINS

Why are stains often chosen over paints? Because wood and stains are made for each other . . . stains bring out the best in wood, blend naturally, beautifully into the setting. For the home shown here, the architects specified Cabot's Bleaching Oil to attain the weathered "driftwood" look . . . an effect heretofore found only in seacoast areas after years of exposure to salt air. Cabot's Stains, in 87 unique colors, protect the wood, enhance the grain, grow old gracefully, never crack, peel or blister.

Samuel Cabot Inc.

One Union St., Dept. 1029, Boston, Mass. 02108

☐ Send color cards on Cabot's Stains

☐ Send Cabot handbook on Wood Stains

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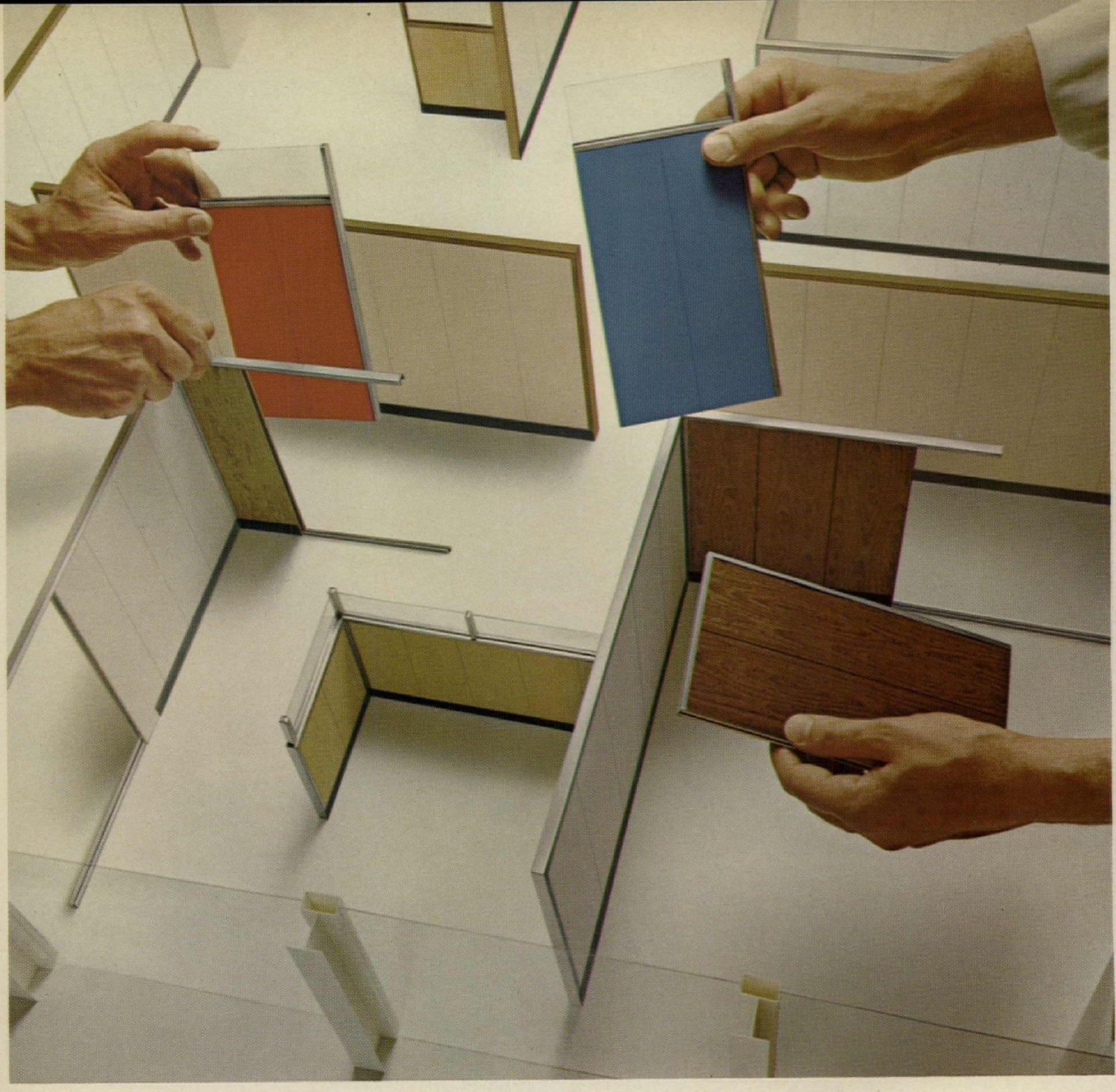
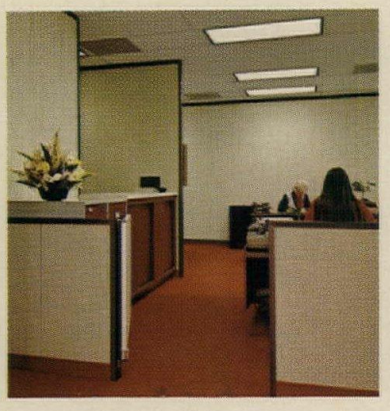
"Cabot's Stains, the Original Stains and Standard for the Nation since 1877"



One move and ULTRAWALL* pays its own way.



ULTRAWALL Movable Partition System starts saving big money the first time space needs change. Relocation costs a fraction of the expense of tearing out and rebuilding fixed partitions. There's no waste or debris to clean up; no need to slow up "business as usual" during remodeling.

Among movable partitions, only ULTRAWALL does it all. Components are noncombustible. Ceiling-height assemblies carry a 1-hour fire rating. Sound ratings range from 40 to 50 STC. Use any of five fast-installing systems. Or combine them. Just varying the stud creates a variety of partition functions. And ULTRAWALL is installed only by carefully selected and licensed contractors to assure consistent results.

Get all the details from your U.S.G. Technical Representative or write to: 101 S. Wacker Dr., Chicago, Ill. 60606, Dept. AR-102.

UNITED STATES GYPSUM
BUILDING AMERICA

*Reg. U.S. Pat. Off.

For more data, write A61 on inquiry card

specialties uci 10

Modularity and factory-finishing are the key words in describing the major trends in specialties and one relevant example of an industry's commitment to innovation is in access flooring.

There has recently been a tremendous change in product flexibility in this area and a willingness on the part of specifiers to experiment with the "computer floor" for general office usage. Major manufacturers of access flooring are making a strong bid to make the floor, not the ceiling, the source of all mechanical and electrical services and dispel the no-longer-true impression that access flooring is a high-cost item.

Perhaps the single most important aspect of access flooring is that it can be utilized with any type of structure. Another factor is its ability to accommodate all services, with little or no limit to the size of carriers or to the direction or positioning of such distributors. All installation of mechanical and electrical services can be completed with relatively little interfacing problems among trades.

Ten years ago the cost of access flooring would have prohibited its general purpose use. Now it is competitive with even the initial cost of other systems providing for underfloor services. Expanded finishes and varied load-bearing capacities make the product more suited to general uses as well.

Other products in this Division illustrate the trend to offer architects complete packages for specifying, rather than component parts. Users of these products will find the manufacturers are stepping up efforts to anticipate and eliminate problems of maintenance and inflexibility.

Metals prevail in this Division as the main material, in numerous finishes. Every category of products here features the latest technology of impermanence, from snap-on walls to entire wet rooms that plug into the structure. The continuing popularity of dividing space with movable, multi-purpose partitions can only mean that the varied sampling of these products shown here is just the beginning of more refinements on the idea.

Prepared with the help of
T. A. Rodgers, President, Liskey Aluminum, Inc., Baltimore, Md.

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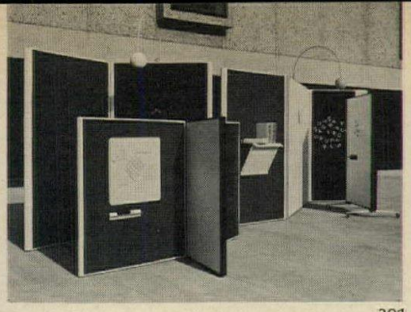

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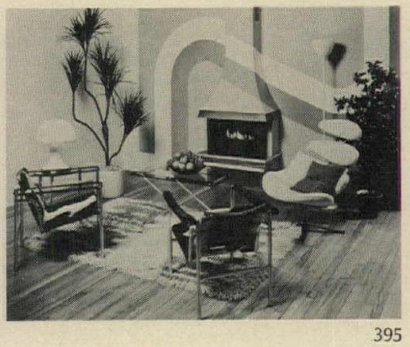

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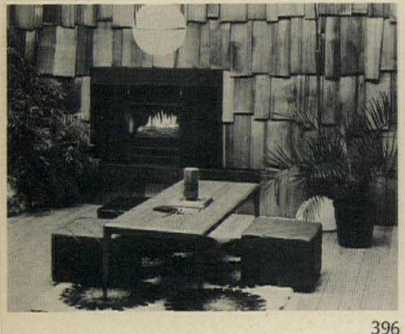

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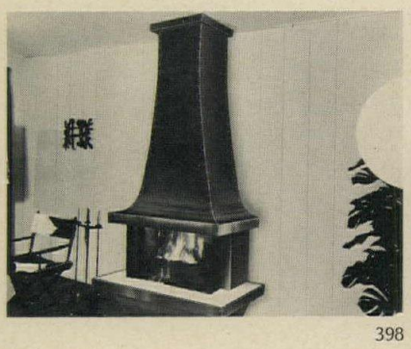

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CHALKBOARDS

390 LIQUID CHALKBOARD / Felt-tip markers are used to write on a semi-gloss surface, illuminated by an overhead fluorescent light. The image dries instantly, according to the company, and can be easily erased. For permanent use on walls or as movable equipment, in 4-ft and 8-ft widths. / Claridge Products and Equipment. A*

391 PORTABLE PANELS / The *Sho-Wall* system, with demountable feet, in heights up to 7 ft and widths up to 8 ft 4 in. Many surface colors are offered, as well as chrome mylar and inherently-magnetic, mylar-coated steel. / The Brewster Corp. A, D*

LOUVERS & VENTS

392 VENTILATOR / The thermostatically-controlled *Power Vent* features UL approval, plastic hood material and increased ventilating capacity. A heavy-duty self-flashing aluminum base and one-piece flange provide complete water seal. Unit fits between 16-in. or 24-in. on-center rafters or studs. / Louver Mfg. Co., Inc.

ACCESS FLOORING

393 FLOORING SYSTEM / Ideal for office-landscaped spaces, this floor system conceals all building services while allowing complete access at any location. Accomodates all services: electrical, mechanical, and communication. / Liskey Aluminum, Inc. A*

394 FLOOR SYSTEM / This low-silhouette access flooring provides underfoot duct space. Modules are 16 in. by 16 in. and will support a 250-lb uniform live load. Factory-applied carpet finish. / Mini-Floor Co.

FIREPLACES

395 GAS FIREPLACE / With push-button flame control using either natural or L.P. gas, the product is wall-mounted with cantilevered base and raised hearth. Prime-coated at the factory, unit can be painted after installation. / Heatilator Fireplace, Div. of Vega Industries, Inc. A, L*

396 GAS FIREPLACE / The unit can be set directly on a wood floor and against studding and other combustible material. The flat black surround is a self-trim feature. Screen extension is available up to 60 in. / Heatilator Fireplace, Div. of Vega Industries, Inc. A, L*

397 WOOD-BURNING FIREPLACE / This unit is a controlled heat-circulating, low-cost, factory-built fireplace that requires no masonry foundation. It can be placed directly on a wood floor and against combustible wall materials. Heated air is channeled to any room or up the flue, as desired. / Heatilator Fireplace, Div. of Vega Industries, Inc.

398 PRE-BUILT FIREPLACE / This wall-hanging, wood-burning fireplace comes with a pewter or matte black hood and flue wrapper, stainless steel hearth, and fire curtain. It requires zero clearance to combustible walls and floor and needs no framing or foundation. / The Majestic Co.

FLAGPOLES

399 ALUMINUM FLAGPOLE / Venetian entasis-tapered poles are available in seamless aluminum, with porcelain-like finish in 80 colors. Finish resists chemicals, moisture and abrasion. Internal halyard system serviced by a flush access door, eliminates vandalism. / American Flagpole, Div. of Kearney National Inc. A*

GRILLES & SCREENS

400 ROLLING METAL GRILLE / Curtain composed of aluminum rods and pressed links can include inserts in geometric or random patterns. Grille is finished in satin-anodized metal or in varying shades of duranodic or bronze anodize aluminum. / The Kinnear Corp. A,I*

401 SHOJI SCREEN / This panel is made of translucent vellum filler and is offered in 15 standard styles and custom designs. Sliding window panels, dividers, screens and sliding doors can be made to order. / Pinecrest, Inc. A, L*

IDENTIFYING DEVICES

402 DIRECTORY / This product is offered with a frame of any metal or finish and it can be free-standing or wall-mounted. One-way tinted glass on the face affords the effect of a solid black background, with only the illuminated letters visible. / Nelson-Harkins Industries, Inc.

403 DIRECTORY / *Panelume* directories have item listings in black letters on clear inserts which ride on horizontal strips between front clear or bronze glass and a back translucent white panel. Framing and support stems are in stainless steel and other finishes. / Copley Mfg. Co.

404 ENGRAVED SIGNS / For engraved exterior signs, plot plans, directories and area maps—reading one or both sides—the design is engraved into three-ply laminated fiberglass. Glare-free matte finish. Life is 20 years of normal use. / Best Mfg. Co. A, I, D*

For more data, use inquiry card.

LOCKERS

405 CHECKING LOCKERS / For a variety of applications, these units feature tamper-proof locks, with owner-adjustable coin selector for nickel, dime, quarter or token selections. Stainless steel or enamel finishes are offered. / American Locker Co., Inc., AVM Corp.

406 LOCKER LOCK / A level tumbler lock, this product is available for steel box lockers or those with handles and vertical locking rods. All models can be master-keyed and ordered to fit most existing lever tumbler master-keyed systems on the market. Fits all standard locker piercings. / Master Lock Co. A*

407 TENANT STORAGE / All-steel lockers for use in apartment buildings are offered with security features and ease of installation. Door components are pre-hung in their own frames and arranged for bolting to divider partitions. / List Industries, Inc. A*

POSTAL SPECIALITES

408 MAIL DISTRIBUTION / A security distribution system with flexibility provided for additional components. The producer claims personnel are able to increase mail distribution by 30 to 40 percent. Available in a variety of finishes and compartment sizes and configurations. / Capitol Mail Chute Corp. A*

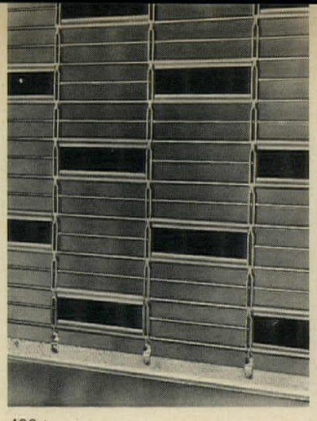
409 MAILING CENTER / For the small business or professional office, this model contains storage space below the *Textolite* work surface, and sorting racks above it. Equipment shown is an electric envelope opener, a scale and an electric postage meter mailing machine. / Pitney Bowes.

PARTITIONS

410 FOLDING PARTITION / Double-wall, double-insulated partition can withstand furnace temperatures up to 2300F for eight hours, with a sound rating of STC 43, according to the manufacturer. / The Won-Door Corp. A*

411 HARD PANEL PARTITION / *Sonicwal's* twin panels of dense particle board cores have optional surfacing of wood veneers, high-pressure and vinyl laminates. The partition weighs 6 lbs per sq ft and adjusts to building irregularities. / Panelfold Doors, Inc. A, D*

412 SPACE DIVIDERS / These screens for the open-plan office or school are made of unitized tubular steel, with panels faced in heavy-duty nylon velvet. Trim is mirror stainless steel. Straight and curved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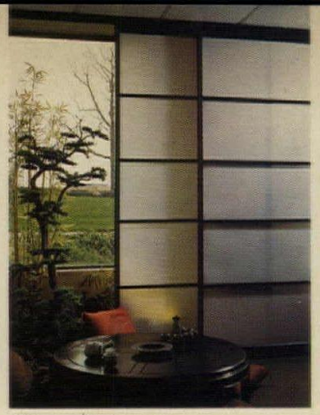
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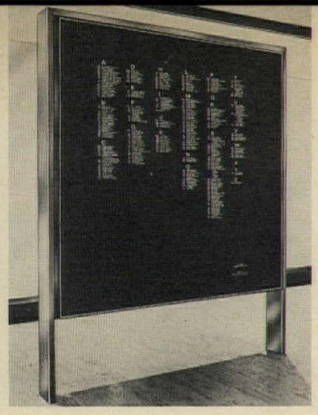
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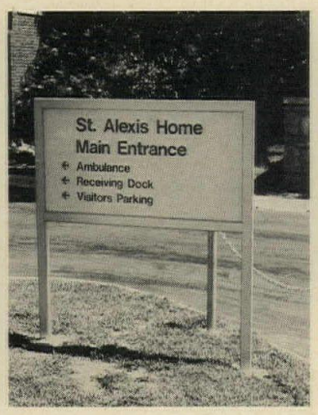

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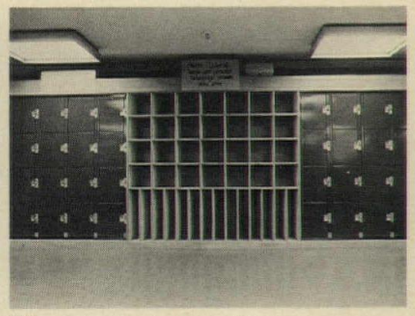
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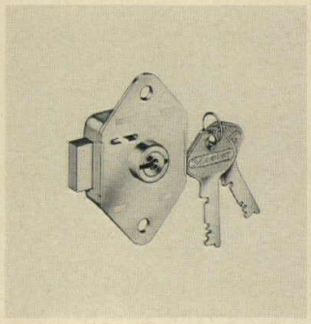
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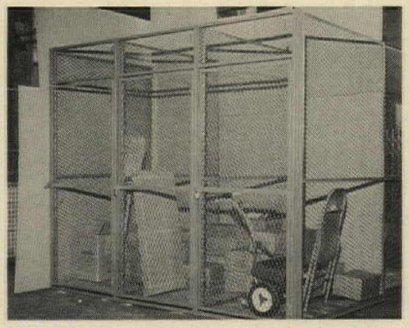
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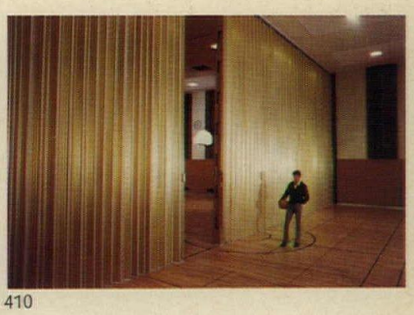
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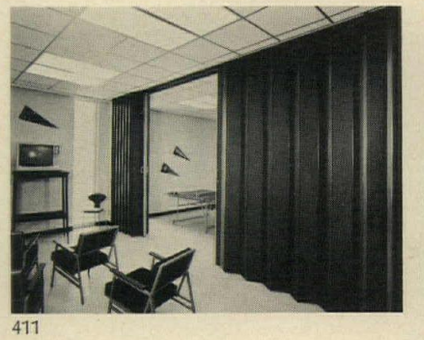
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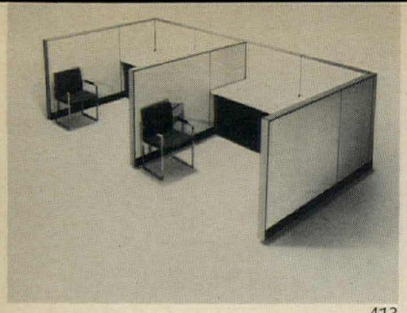
*Included in 1973 Sweet's Catalog File(s).



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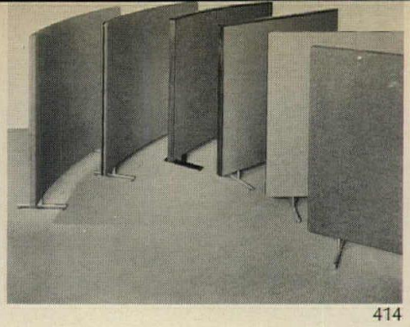
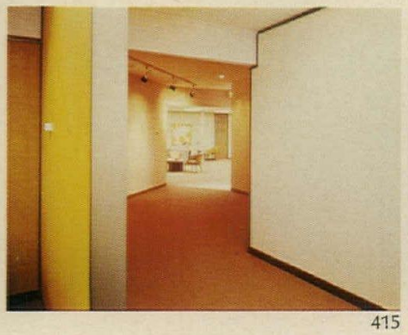


414

screens are available in various sizes and five colors. / Vogel-Peterson Co. A*

413 PARTITION SYSTEM / Available in surfaces of wood, high pressure laminate, cork or upholstery, the units offer channels for all communications and electrical service. Add-on components include returns, credenzas, desks and shelves. / JG Furniture Co. Inc.

414 ACOUSTICAL SCREENS / Offered in straight or curved models on a choice of three bases, these units feature wood trim, in walnut or oak and tubular chrome or flat chrome bases. Fabrics come in 25 colors, or fabrics of the customer's choice may be used. / Nucraft Furniture Co. D*



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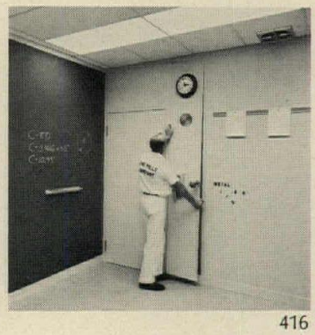

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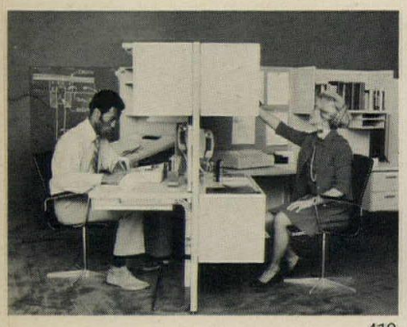
415 WALL PANELS / Panels that snap on and off in less than 60 seconds are the heart of a demountable partition for use in schools, offices, commercial and institutional buildings. *KW-700* includes aluminum studs, choice of wall surfaces that snap onto the studs. / Kaiser Gypsum Co., A,I,D*

417

418

416 CLASSROOM DIVIDERS / System consists of a ceiling member, unitary panel and finish base, with no flow track, caps or clips needed. Relocation is simple. Economies are claimed for the product. / The Mills Co.

417 OFFICE PARTITION / Self-standing units are available in six fabrics and ten vinyl finishes. Glazed rail units are offered also. The units are available in standard widths up to 60 in. and heights up to 84 in. / Masonite Corp. D*



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418 STEEL FOLDING WALL / This product satisfies architectural requirements for fire safety and abuse resistance. Consists of continuously-hinged models, individual panels and paired panels so that designers can create space flexibility to suit needs. Panels can be covered with any material. / Holcomb & Hoke Mfg. Co., Inc. A*

419 OFFICE COMPONENTS / A modular office group, the *ASD* system is composed of free-standing wall panels on which desks, files, cabinets, chalkboards, and other accessories can be hung. All panels and work surfaces are of high-pressure laminate. / Westinghouse Architectural Systems Dept., Westinghouse Electric Corp.

SPECIALTY MODULES

420 PRE-FAB MEZZANINE / With pre-fabricated stairway designed for second level storage, observation platform or office. The "starter" unit is 12 ft wide and 10 ft deep and comes with uprights, steel floor decking, beams, tie rods and braces, railing and stair. / Equipto.

421 DISPLAY MODULES / A variety of display and interior design applications can be satisfied with this square tube frame construction system, offered in 26 colors and finishes. / Dexion Inc.

422 IN-FLOOR ELECTRIFICATION / Access floor system can be, maker claims, economically specified in place of raceway/duct systems. Service changes can be made at minimum cost. / Liskey Aluminum, Inc. A*

423 SERVICE MODULES / Either wood or metal framed, these self-supporting load-bearing modules are complete kitchens, baths, stairways, laundry facilities, with all HVAC, electrical and plumbing. / Alcoa Construction Systems, Inc.

424 WET MODULES / Delivered fully plumbed and 80 per cent wired, these kitchen-bath, bath only units are ready for rapid hook-up. Custom designs are available. Delivery in western states only at present. / Modular Cores, Inc.

STORAGE SHELVING

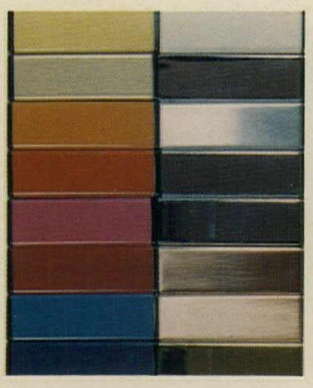
425 STEEL SHELVES / A system of steel shelving coated with a smooth white vinyl finish will support up to 200 lbs without sagging. A complete range of shelving and storage items is offered for closets. / Closet Maid. A*

426 METAL SHELVING / Prefinished, expandable shelving that can be installed without screws or togglebolts is said to reduce installation time, according to the producer. Self-supporting brackets are driven into drywall at any location, eliminating the need to locate studs. Shelves are available in depths of 12, 14 and 18 in. / Timber Engineering Co. A*

427 METAL SHELVING / Adjustable metal shelving with reversible non-handed wall supports, punched for standard and non-standard framing, are offered. Parts are constructed of heavy steel, with an oyster-white, low-sheen enamel finish. Lengths are available up to 96 in. / Stanley Hardware. L*

SUN CONTROL DEVICES

428 WALKWAY COVER / The system includes acrylic roof covers, in sheets up to 10 ft by 12 ft, thermo-formed into various shapes, in bronze or grey tint. Extruded aluminum framing system in natural,



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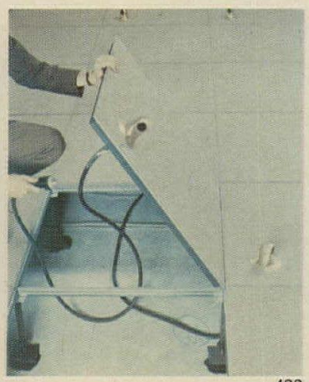

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For more data, use inquiry card.

color anodized or polyurethane color coatings. / E. L. Burns Co., Inc. A*

429 REFLECTIVE WINDOW FILM / Designed to permit maximum visibility while reducing solar heat, glare and ultraviolet rays, typical applications include restaurants, stores and ground-level glass areas where lighting can be a problem. The film is particularly suited to tinted glass. / 3M Co.

430 SKYWALK COVER / This is a completely extruded aluminum structural system including framing, roof deck and wall system. Units are shipped assembled, with panels and glazing. Finished in color or clear anodized metal, or polyurethane colors. / E. L. Burns Co, Inc. A*

TOILET, BATH ACCESSORIES

431 SHOWER SEAT / Retractable stainless steel unit is available with an optional cushion. In position for use, legs angle into the base of the wall. Legs fold against the wall for a low silhouette when the seat is not in use. / Tubular Specialties Mfg., Inc. A*

432 DISPOSAL UNIT / The *Flushet* is designed for the disposal of sanitary napkins in public or institutional restrooms. Available as a wall-recessed unit, wall hung unit or floor unit. Operates on 115/120v power and any water supply. / Eagle Mfg. Co

433 TOILET SEAT / Designed with comfort in mind, this is a round, closed-front seat with cover, available in nine colors. Seat and cover of solid molded wood with baked-on enamel. An integrally-installed hinge prevents wobble. / American Standard.

434 FIBERGLASS TUB SURROUND / This product can be installed over any hard, solid surface including drywall, plastic or ceramic tile, plaster. Needs no grouting, edge moldings or mitering. Installation is accomplished with an adhesive. Available to fit standard tubs up to 62 in. long. Offered in six colors. / The Swan Corp.

435 TOILET COMPARTMENTS / Maker's line includes flush-front toilet compartments (shown), urinal and entrance screens, vanity centers and tops. Ceiling-hung style (shown) has been added to wall-hung, floor-anchored, and post-to-ceiling units. / Bobrick Washroom Equipment Inc. A*

436 WASHROOM VANITY / Vanity centers, constructed of ¾-in.

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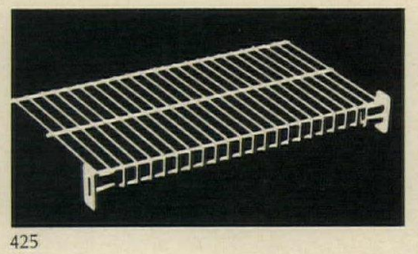
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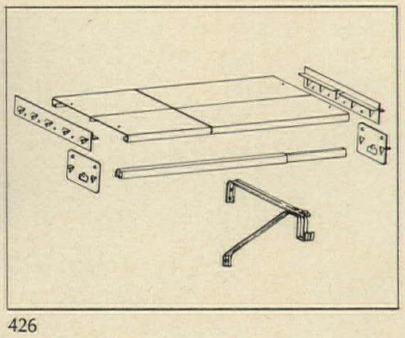
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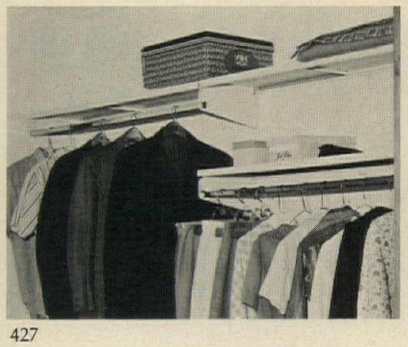
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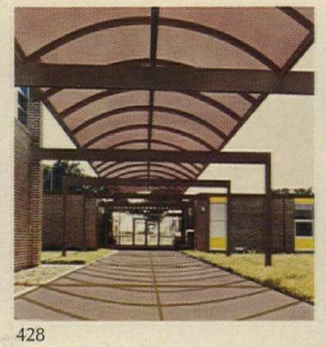
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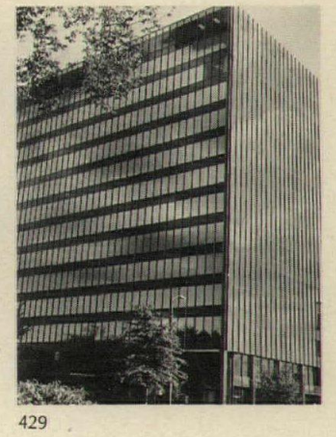
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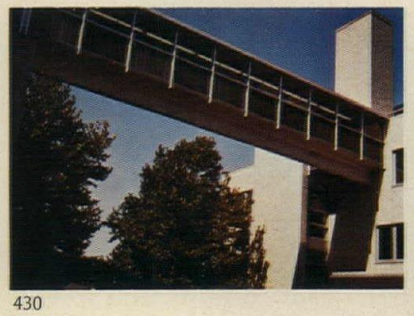
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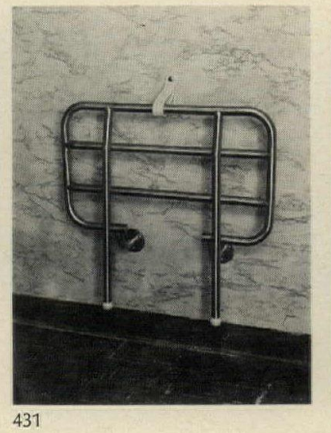
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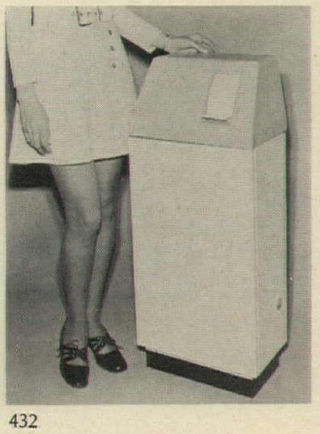
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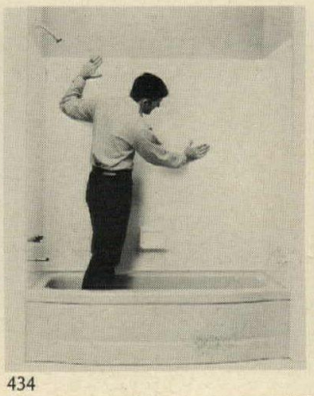
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**Included in 1973 Sweet's Catalog File(s).*

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resin-impregnated wood, are available in most of wood-grain finishes and colors of maker's toilet compartments. Built-in accessories are satin-finish stainless. Five models, one- or two-lavatory. / Bobrick Washroom Equipment Inc. A*

437 SHOWER DOOR / These shower doors fold back to the side for complete access. They meet all building and safety codes and will actually cushion falls. Available in a dozen colors, to fit all tubs, showers and fiberglass modules. / Tub-Master Corp. A*

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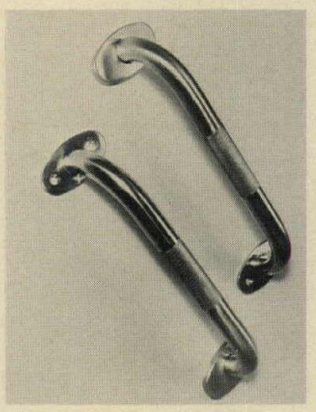

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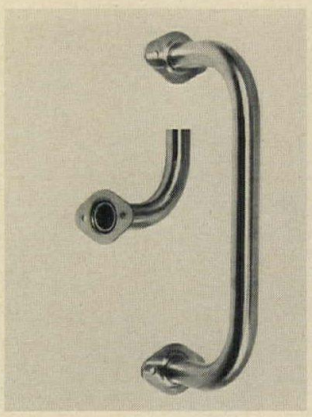
438 COMPACT LAVATORY / Four new space-saving *Mini-Consoles* equipped with lavatories, soap dispensers and other accessories have been added to the company's line of units designed for buildings where wash-up areas must be located for convenient, immediate use. / Bobrick Washroom Equipment, Inc. A*

439 GRAB BARS / A complete line of stainless steel grab bars for hospitals, clinics and other institutions. Over 14 styles are offered for urinal, commode, shower and tub safety needs. / Trent Tube Div., Colt Industries.



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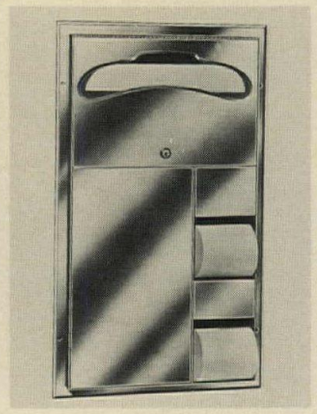

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440 GRAB BAR / Flanges are attached mechanically with this bar, eliminating the need for welding. Tubing is attached by means of upset and flare to form a single unit which meets all Federal requirements for grab bars. / Tubular Specialties Mfg., Inc. A*

441 TISSUE DISPENSER / This partition-mounted unit is designed to minimize equipment, installation and maintenance costs. The stainless steel unit dispenses 1,000 single sheets or half-fold toilet seat covers, 500 from each side, and four tissue rolls, two from each side. / Bobrick Washroom Equipment, Inc.

442

443

442 RECESSED CABINET / The twin side cabinets of this unit provide full circle vision in distortion-free plate glass, as well as adequate storage. Mirrors sized for choice. / Nutone, Div. of Scovill.

443 BATH ACCESSORIES / Recessed and surface fixtures as well as towel bars are triple-plated, hand-polished and finished in antique brass or pewter. / Hall Mack Co.

444 ACCESSORY CONSOLE / A spring-activated push-up towel dispenser that mounts on the cabinet door and dispenses paper towels through the console top is featured. Self-closing stainless waste door. / Reserv-A-Roll Co. A*

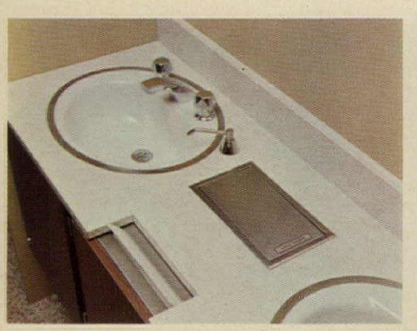
WALL & CORNER GUARDS

445 WALL & DOOR GUARDS / Made of vinyl, these guards are mounted on a continuous aluminum retainer and snap into position. Corner, wall and door protectors are available in six colors with a matte pebble grain surface. / Construction Specialties, Inc. A*

446 WALL GUARDS / Constructed of PVC, guards are designed to protect walls and finishes from cart or vehicle impact damage. Guard snaps into an aluminum channel fastened to the wall. White, black, grey, and tan in 10 ft lengths. Also in rubber for heavy duty in garages and freight docks. / Pawling Rubber Corp. A*

WARDROBE SPECIALTIES

447 OFFICE VALET / This unit is made in 3 ft 3 in.-, 4 ft 3 in.- and 5 ft 3 in.-models that can be assembled to any required length in one-foot multiples. Overall height is 6 ft 4 in., with the depth at the base 18½ in. Available in chrome and five colors. / Vogel-Peterson Co. A*



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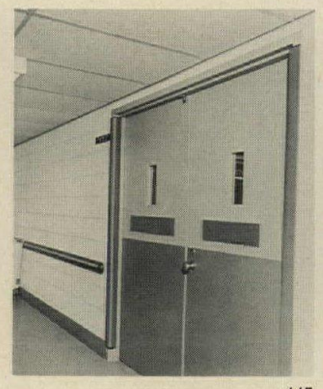

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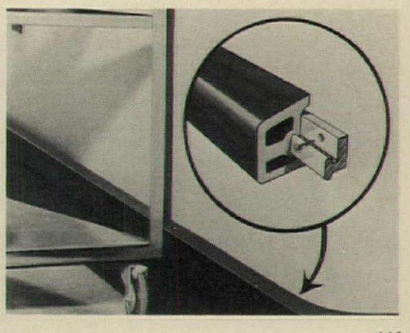

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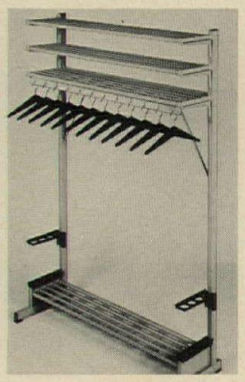

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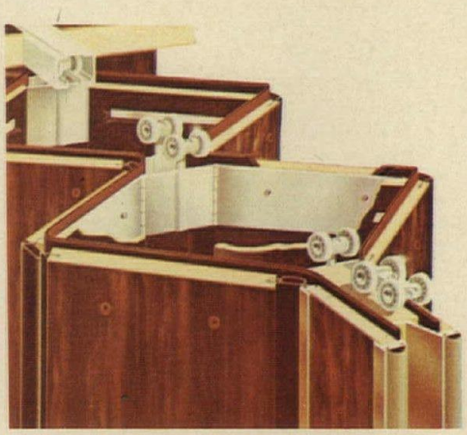
University of Miami — Miami, Florida — Connell and Associates, Architects



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equipment uci 11

The burgeoning construction of housing and food service facilities has been accompanied by major developments in particular product groups, not the least of which is the waste handling department. Because Federal, state and local regulations often ban the use of incinerators, there continues to be a proliferation of systems that reduce the volume and increase the density of solid waste—systems better known as compactors.

These devices range from small residential units to the large apartment house compactors that compact into a large wheeled container or into a carousel-type plastic bag system.

Other waste handling methods shown in this Division include the wet-pulper type which shreds waste into a sanitary land fill. Not to be overlooked is the fact that incinerators have been redesigned for pollution control.

Products for the preparation of food feature improved maintenance and even a degree of conservation in features that permit less power and water usage. Compactness, simplified installation and new maintenance-free features meant to keep costs low, both initially and in actual operation, are apparent.

For the residential market, the emphasis is on more space-saving, modular, factory-finished equipment, with again, a great deal of labor-saving features. Innovative materials and finishes make the products abuse-resistant and help achieve the basic compactness without sacrificing usable space. For instance, thinner-walled refrigerators are possible with the use of foam insulation.

The do-it-yourself trend of previous years remains strong as many products shown are intended to eliminate the need for operating personnel, illustrated by bank and vault equipment in particular.

The evolution of the educational processes is bringing more modular equipment that permits change indefinitely, and where a child's progress was once noted on a report card, it is evident in these pages that his brain waves can now be recorded as well.

Prepared with the help of
Francis A. Govan, York Research Corp., Stamford, Conn.

air systems
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Grease-extracting ventilators for institutional and commercial kitchens. Consultation, drawings, manufacturing.

New built-in wash system costs less than a built-in wash system.

A shower a day keeps the fire engines away. This is the first announcement of our newest ventilator design — Simplex. Its built-in wash system for easy maintenance is handled by a full-length combination water manifold and grease extraction baffle. This simplified construction eliminates most of the internal plumbing required for conventional built-in wash systems. ☐ Give owners and insurance men peace of mind with an Air Systems specification. Vanguard, Pacemaker and Simplex models safely confine cook-top flare-ups within their unique grease extractors. Flames can't soar up the ductwork. ☐ Air Systems equipment (nee Cockle Ventilator Co.) is installed in every type of in-plant, fine restaurant and fast food facility — as well as in the White House. Write for our "Idea Log," a binder full of innovations and complete catalog data. Don't be surprised if a knowledgeable representative delivers your copy personally.

Vanguard Ventilator Systems maintain a constant 99+% grease extraction efficiency (photo). Other models: Pacemaker Ventilator System with permanent stainless steel Grease-Away filters — over 30,000 in use. Wheeling Ventilator Systems, stainless steel construction for restricted budgets.

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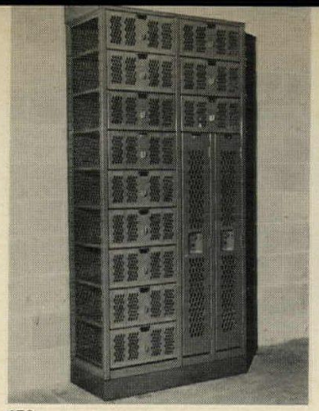

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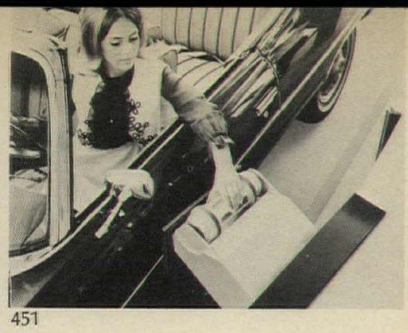

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ATHLETIC EQUIPMENT

450 ATHLETIC LOCKERS / Designed for maximum security, maximum ventilation and safety, this product also features 12 anti-corrosion, baked epoxy colors. There are approximately 200 sizes and assembly combinations. / List Industries, Inc.

BANK & VAULT EQUIPMENT

451 AUTO TELLER / By virtually placing the pneumatic carrier in the customer's hand, this remote banking unit provides maximum ease of use. A lighted instruction panel guides the customer in using the unit. Carrier opens at either end. / Diebold Inc. A*

452 SECURITY ALARM / An alarm monitoring system can offset criminal technical sophistication to duplicate line signals produced by ordinary monitoring devices. This unit uses a two-way random digital interrogate-response transmission between bank and police. / Diebold Inc. A*

453 REMOTE BANKING / The captive carrier remote banking system speeds transactions because the bank customer is able to initiate the business by pressing a button at the unit. Lighted instruction panel. / Diebold Inc. A*

454 AFTER-HOURS DEPOSITORY / This product can be used for drive-in banking as well as for regular use. Called the *Securomatic,* the depository utilizes a full-circle rotary operating principle that enhances its efficiency and security. Both envelope and bag deposits can be accepted. / Diebold Inc. A*

455 BANK PROTECTION / Operated by a fully-programmable computer the *DGM-320* security system offers full-perimeter protection for a bank and its branches. The unit checks every security sensitive area in milliseconds and produces a simultaneous report on the status of every point. / Diebold Inc. A*

456 VAULT LOCKERS / These units provide roomy safekeeping for bulky valuables. They are offered in stainless steel or a variety of colors in enameled steel, 15 in. by 31 in. by 18 in. Opened only by proprietary key in the possession of the user. / American Locker Co., Inc., AVM Corp. A*

BUILT-IN MAINTENANCE

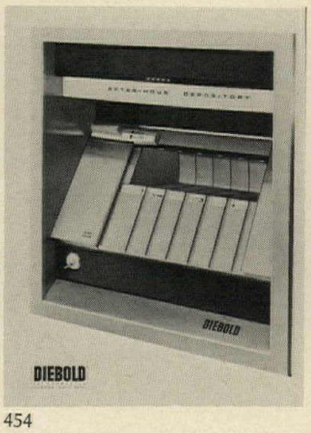
457 CENTRAL VACUUM / Now available in a wide range of commercial and industrial applications are central vacuum cleaning systems with remotely located dirt exhausting units. The system offers both wet and dry pick-up. / Lamson Div., Diebold Inc. A*

DETENTION EQUIPMENT

458 TURNSTILE BOOTH / With structural framing of aluminum, this booth includes doors and side panels of tempered glass or Plexiglass, ¼ in. thick. ID card, coin or token permits the turnstile arms to revolve 120 degrees, then relocks automatically after the single entry. / Robot Industries Inc. I*

ECCLESIASTIC EQUIPMENT

459 CHURCH CABINETRY / Vesting wardrobes, drawer bases, sink bases, upper and lower storage cabinets and sacramental units are offered in high pressure laminate. Adjustable shelving and positive-stop drawer slides are featured. / National Industries Div., AVM Corp. A*



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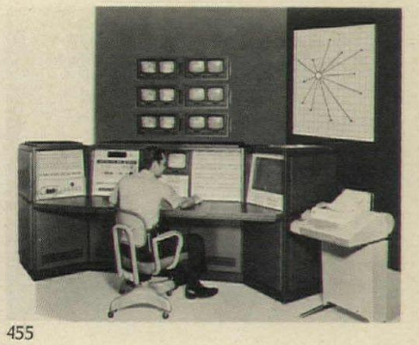

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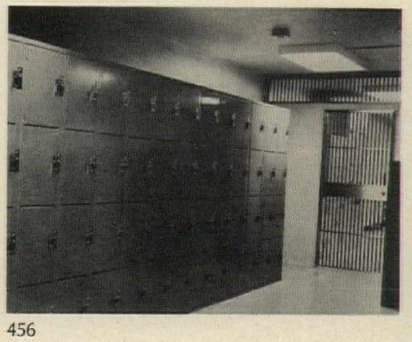

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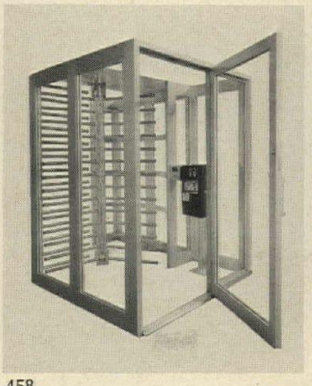

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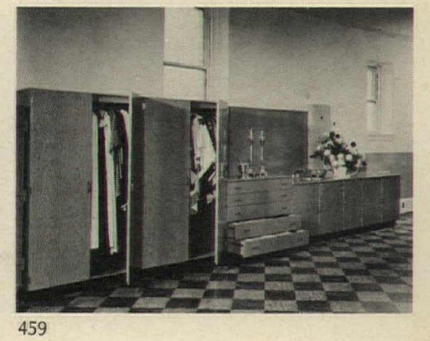

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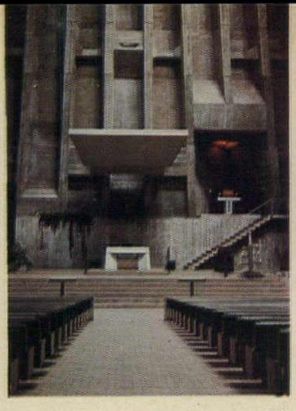

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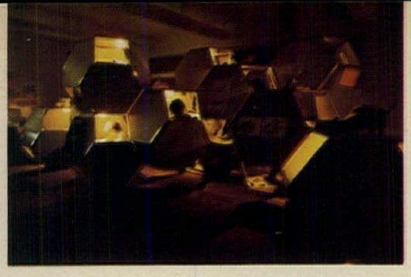


461

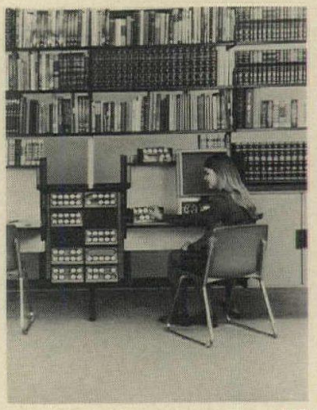
460 CHURCH FURNITURE / Butcherblock pews provide strength, in several standard lengths and designs. A choice of upholstery is offered, with or without matching chancel pieces. / Sauder of Oxford.

EDUCATIONAL EQUIPMENT

461 SELF SPACES / Educational environment that can be constructed in a variety of colored modules. Basic panel comes with book racks, seating and overhead light, in painted enamel finish, with stainless brackets. / St. Charles Mfg. Co.

462

462 BRAIN WAVE SENSOR / Brainwaves occurring during times of tension or intense concentration are detected through the use of a sensitive electronic instrument which picks up signals from the scalp of the subject. Self-training can control these states of mind. / Neuronics, Inc.



463

463 MEDIA CENTER / This *ES/II* media center includes a uniform support system of wall-mounted, mobile wall and relocatable means for all storage, display and work surfaces components. Also provided is a circulation station structure that can be expanded or relocated. / American Seating Co. A*

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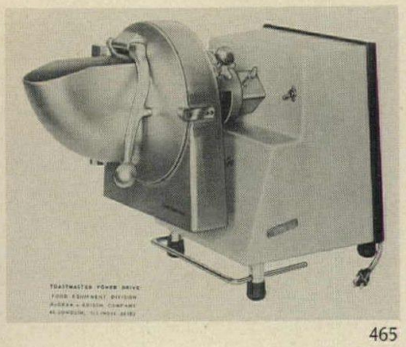

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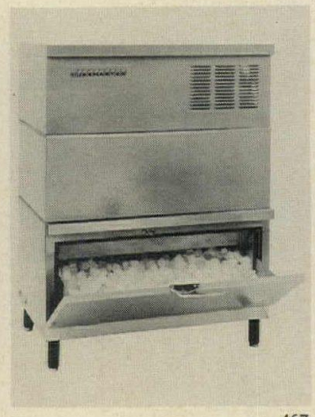
FOOD SERVICE EQUIPMENT

464 DISH CART / Built of welded stainless steel, the cart is mounted on 5-in.-diameter swivel casters with rotary bumpers. This unit can accommodate 680, 4½- to 5½-in. diameter dishes. / Precision Metal Products, Inc.

465 POWER DRIVE UNIT / Designed for a variety of hub attachments used in the preparation of food, this unit takes less than a square foot of counter space. Both models have a ½-hp motor and require 115v power. / McGraw-Edison Co.

466

466 COFFEE BREWER / An automatic, electric coffee brewer which can be used for pouch pack or open filter brewing is offered in a 7½-in. width. Units are shipped with attached cord sets for fast installation. / Bunn-O-Matic Corp.



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467 ICE MACHINE / This model produces 225 lbs. of ice cubes per day, with storage for 440 lbs. Unit can be used with a storage bin or sleeve for up to 750 lbs. storage. / Liquid Carbonic Corp.

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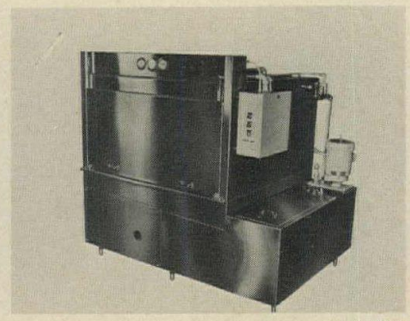


469

468 COOKING CENTER / Unit consists of a gas range with a large rolled steel griddle-radiant broiler with independent grease drain. Non-clog burners are featured, with automatic lighting, simmer-set valves, formed steel spillover trays and pull-out drip trays. Unit is 60 in. wide. / Chef Div., Franklin Products Corp.

469 WASH-RINSE UNIT / For fast clean-up of pots, pans, utensils and similar items, this compact unit features easy loading and self-cleaning stainless steel spray nozzles. Recommended for high volume food preparation operations. / Metalwash Machinery Corp.

470 REFRIGERATOR / Available in one-, two- and three-section models, units are finished in stainless steel, stainless steel and aluminum, and white baked enamel and aluminum. Capacities range from 24 cu ft to 72 cu ft. / Victory Metal Mfg. Corp. A*

471 ICE MAKER / The twenty-four hour capacity of this unit is 515 lbs of ice. Standard models are 36 in. wide and 30 in. deep, with a height of 64 in. on the 300-lb. storage bin. / McQuay-Perfex, Inc.

472 WINE VAULT / Prefabricated, the wine storage unit is shipped flat and knocked down, to be assembled in about one hour at the site of installation. Lined in redwood, the unit is cooled by refrigeration. / The Wine Vault Co. I,D*

473 FRYER DRAIN CABINET / The unit handles two twin fryer baskets or one large basket and fits flush with fryers and ranges in a battery installation. It has a drain pan equipped with a perforated stainless steel screen to elevate food away from grease run-off. / Chef Div., Franklin Products, Corp.

474 DEEP FRYER / The *Accu-Fry* contains a built-in, fat-recirculating filter system that keeps shortening at a constant temperature. A heat exchanger gives quick heat recovery, meaning less gas usage. Stainless steel construction. Unit measures 26½ in. deep, 36½ in. high and 15 in. wide. / Davmor Industries, Inc.

475 ICE DISPENSER / Up to 710 lbs of ice per day are offered with this unit, which can be adjusted to give large, round solid cubes or bite-size chips. Dispensing chute and working tray are located at a convenient height. / McQuay Div., McQuay-Perfex Inc. A*

476 RANGE ACCESSORIES / Designed for use with the company's gas equipment and ranges, this range spreader plate fits ranges in battery arrangement, providing storage and work surface. Made of cold rolled steel, with stainless steel also available. / Chef Div.,

For more data, use inquiry card.

Franklin Products Corp.

477 SELF-CLEAN BROILER / Two high-capacity self-cleaning char broilers use the prolytic principle to clean in 20 minutes. Corrosion, a major cause of heating element failure, is significantly reduced in these units. / General Electric Co.

478 HOT WATER DISPENSER / Designed for residential use, this unit delivers hot water up to 190 degrees F, instantly at the sink. It will provide up to 60 cups an hour. The tank assembly mounts on the wall under the sink and weighs 9 lbs. / In-Sink-Erator Div., Emerson Electric Co. A*

479 DISHWASHER CONDENSER / The steam condenser is mounted directly over the vents of the dishwasher and performs the necessary exhaust function. Excess moisture is removed from the air and conditioned for its return to the dish room. / The Hobart Mfg. Co. A*

480 FOOD WARMER / Offered is a line of mobile dispensers that heat, store and dispense one-piece pellet bases to keep plates hot and food at serving temperatures while being transported. The stainless steel cabinet includes a push handle. / AMF, Inc.

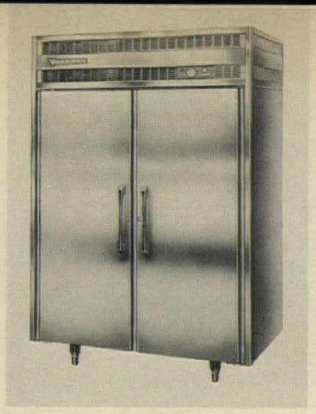
481 DISHWASHER / A door-type dishwasher has been introduced with an integral electric water heater which frees under-table space and reduces installation costs. Factory-plumbed and pre-wired, the unit eliminates five of the eight electrical and water connections necessary on other dishwashers having separate booster heaters. / General Electric Co.

LABORATORY EQUIPMENT

482 CARBON DIOXIDE INCUBATOR / With room for up to eight shelves, this unit also features devices to eliminate stratification of the air/carbon dioxide mixture. Unit measures 34 in. wide and contains 24 cu ft of interior working space. / Lab-Line Instruments, Inc.

483 CLEAN WORK STATION / This system is offered with modular construction featuring separate blower-filter section, table and cabinets. The work chamber is 28½ in. high by 28½ in. deep and all models fit under an 8-ft. ceiling. / Agnew-Higgins, Inc.

484 WALK-IN INCUBATOR / Built-in and pre-fabricated working cold labs, incubators, freezers, and controlled environments are offered by the company, in standard sizes from 4 ft wide by 2 ft deep up to 12 ft by 12 ft. Larger units are optional. / Hotpack Corp.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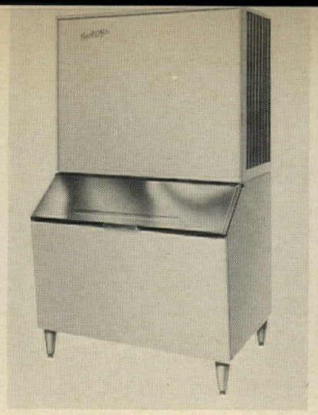
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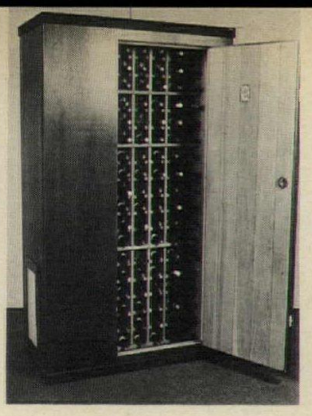
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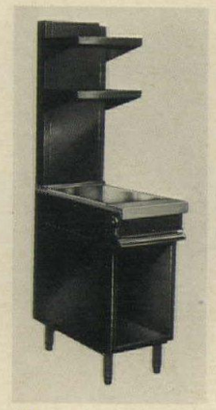
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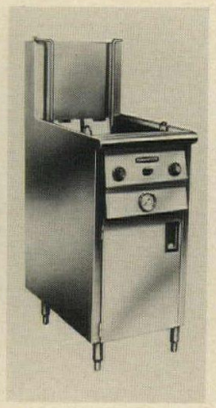
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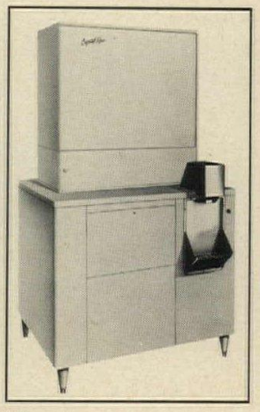
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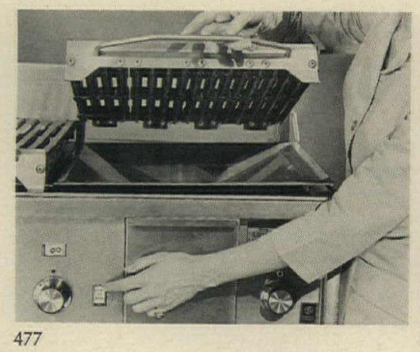
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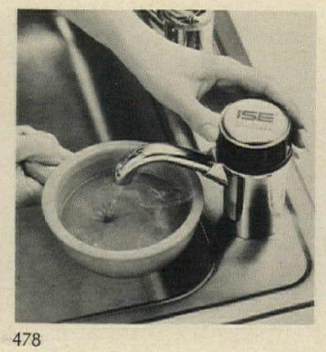
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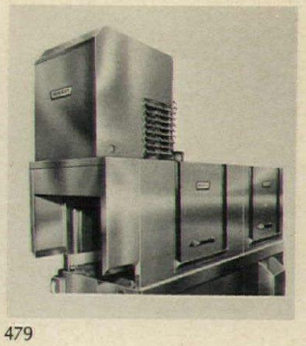
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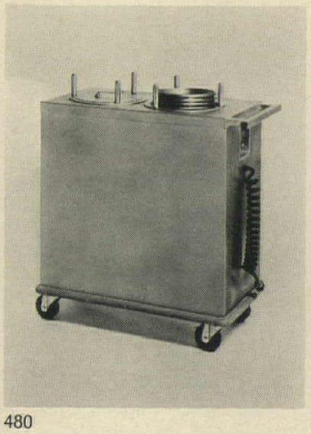
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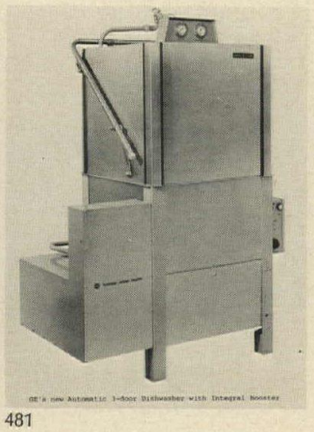
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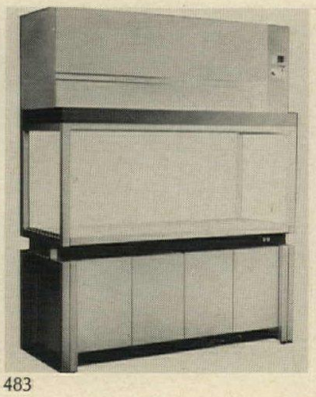
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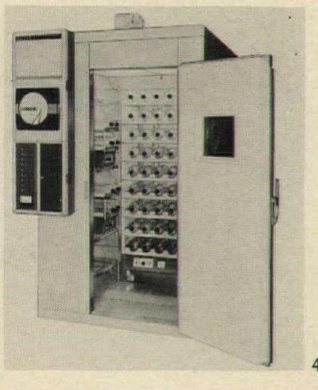
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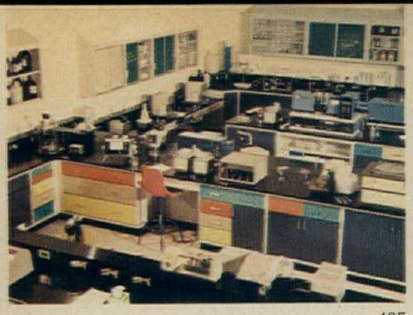

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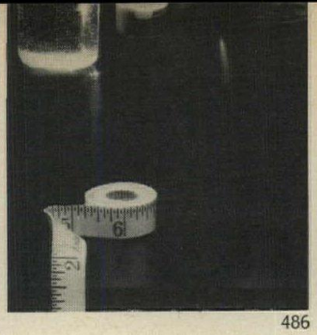

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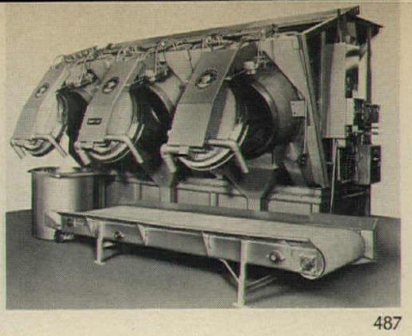


487

485 LAB FURNITURE / The *Contempra* series is heavy-gauge steel, with cabinet drawers and doors available in six colors. Neoprene gasketing around cabinet doors makes units dust-tight and quiet. Everything from base units to fume hoods is offered. / Fisher Scientific Co. A*

486 EPOXY SLABS / This material for laboratory tops combines high strength with corrosion resistance and light weight. Product needs to be applied only ½ in. thick, as opposed to other materials applied 1 in. thick. Can be applied to wood or metal furniture. / The Duriron Co., Inc.

LAUNDRY EQUIPMENT

487 SLANT LINE WASHER / The basic modular 200-lb-capacity units can be bolted together into a centrally controlled system or used separately. Operated at a fixed tilt so work can be dropped into the top during loading and out the bottom when the door is opened at the end of the cycle. / American Laundry Machinery Industries.

488 IRONING CENTER / Cabinet in unfinished seasoned wood with ¾ in. lumber core birch door for on-the-job finishing. Interior contains a 46 in. vented steel ironing board that can withstand over 200 lbs at the extreme end. Fully wired and containing safety features. Fits between studs on 16 in. centers and available in several board lengths. / Iron-A-Way, Inc. A*

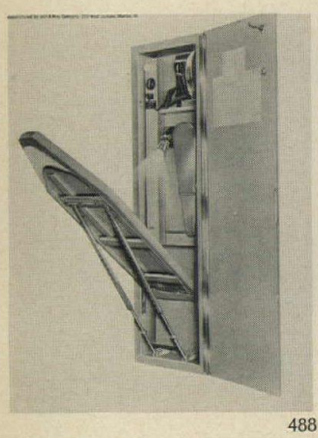
489 CHUTE LOADER / This automated loading system can load up to 600 lbs. into a laundry washer in less than a minute. Cylinder dimensions of units are 72 in. by 44 in., 60 in. by 44 in., and 60 in. by 36 in. Fully automatic cycle programming. / Pellerin Milnor Corp.

490 WASHER-EXTRACTOR / The capacity of this unit is over a million pounds per week, according to the producer. The 800 to 900 lb-top/side automatic washer extractor can process up to 8,000 lbs per hour. Each unit has automatic programming for all phases of washing, rinsing and extracting. / G. A. Braun, Inc. A*

491 LINEN INSPECTION TABLE / This table, with translucent glass light trough, is used for inspecting wrapping cloths before surgical packs are made up and sterilized. The most minute tear is detected by an attendant. Unit is stainless steel and offered in several sizes. / Jamestown Products Div., AVM Corp. A*

LIBRARY EQUIPMENT

492 LIBRARY SHELVING / Automated system eliminates aisles by



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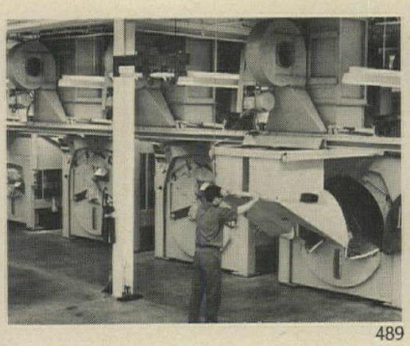

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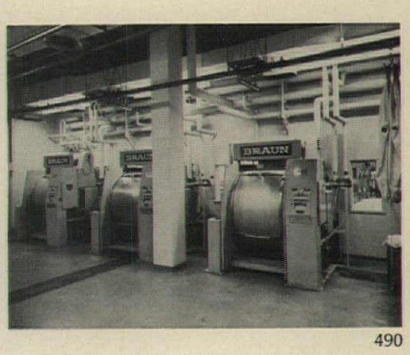

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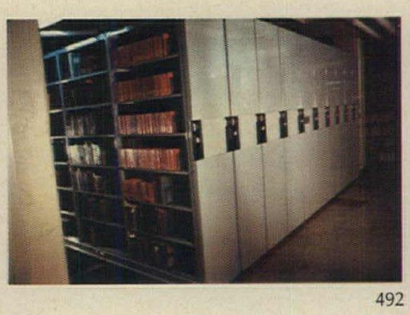

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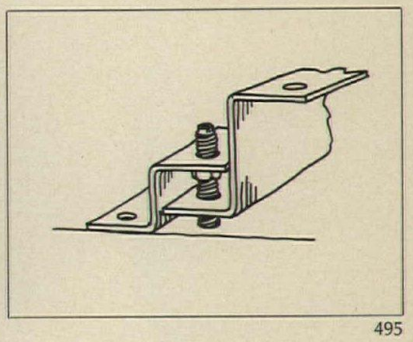

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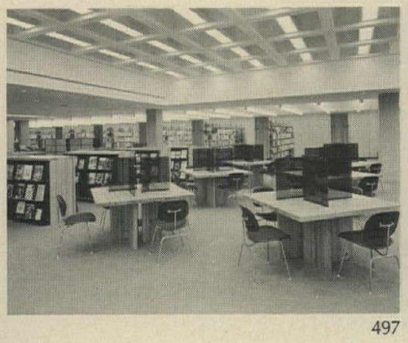

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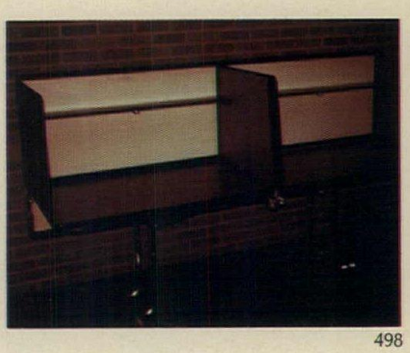

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For more data, use inquiry card.

compacting storage. Pressing a button at the end of any range opens the desired aisle. Safety devices prevent other ranges from opening while any one range is in use. Modular construction permits growth. / Library Bureau. A, D*

493 LIBRARY LANDSCAPE / This economical system of modular components features four-way punch upright construction for maximum flexibility. Components include study stations, table tops, carrels, posts, panels, tack and black boards, sliding door storage, bookstacks and shelving. / Estey Corp.

494 MOBILE STORAGE / By eliminating all but one access aisle, this unit saves space and features a variety of specialized shelving, including those for vertical files, microfilm, records, rare books and artifacts. Unit is manually or electrically operated. / Estey Corp.

495 FLOOR FASTENING / Designed to end bookstack tipovers, this floor fastening system anchors library stacks and shelving, while maintaining the ability to level and plumb shelving. / Estey Corp.

496 EXHIBIT SYSTEM / This modular display system comes with sturdy adjustable chromium-plated uprights and canvas-covered screens. Optional accessories include shelves, book supports and lockable showcases. / Library Bureau.

497 LIBRARY FURNITURE / This contemporary butcherblock furniture can be built to architects' specifications, including tables, cases and shelves. A choice of hardwood finishes is available. / Sauder Mfg. Co.

498 STUDY CARREL / This versatile unit is also a table or room divider. Unfolded, it is a self-contained carrel with fold-out book shelves. Unit folds up compactly, rolls into storage on ball-type casters. Twin electrical outlet. / Sico Inc.

LOADING DOCK

499 LOADING DOCK LIGHT / Improved lamp protection and strength are claimed for the new DL Series heavy-duty *Docklite* fixture. Easy lamp replacement, cord guard, push button on/off switch and touch control adjustability are several other features. Finished in safety yellow, the steel fixture is available in single-, double-, and triple-arm models with 24 to 90 in. reach. / Phoenix Products Co., Inc.

500 DOCK LEVELER / Mechanically hinged lip dock leveler features counterbalanced, upward biased platform to form perfect transition from dock to truck, according to the producer. This unit is available in all sizes, with a 20,000 lb roll-over capacity. Units offer full safety features and come fully assembled, tested and ready for installation in pre-formed pits. / Rite-Hite Corp. I*

501 LOADING DOCK BUMPERS / Made of laminated sections of rubberized fabric in a steel frame, they are rated heavy duty. Available in nine sizes, 4½ in. thick. / The R. C. Musson Rubber Co. A, I*

502 DOOR SEALS / Features of this product are 12-in. deep foam pads coated in vinyl; 4-in. back-up guide stripes; galvanized steel backing plates for fast installation. Models are available with adjustable headers to accommodate trucks of varying heights. / Serco Engineering.

503 DOCK FENDER / This product is made of extruded *Neolastic* rubber which absorbs shocks and is highly resistant to deterioration by weather or abrasion. Available in lengths of 12, 18 and 24 inches and custom lengths up to 20 feet. / B. J. Rubber Products, Div., of Borg-Warner.

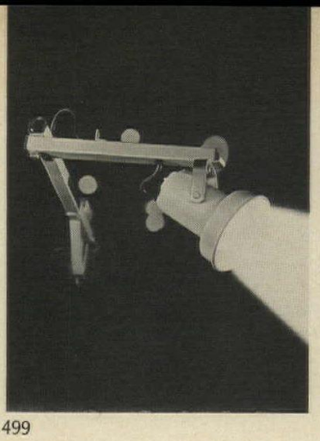
504 DOCK BUMPER / Guaranteed for five years, this nylon and rubber bumper has a cadmium-plated mounting plate completely recessed so that only the nylon touches the building. A name or logo can be molded into the front surface. / Ellis Industries.

MEDICAL EQUIPMENT

505 PASS-THROUGH / Designed to be built into the wall between the patient's room and the corridor, this double-door unit permits removal of soiled items without disturbing the patient. Available in enameled steel or laminated high pressure plastic. / Jamestown Products Div., AVM Corp. A*

506 PHARMACY DISPENSER / *Uni-Dex* is designed for dispensing unit-dose medications in the pharmacy. Furnished with 73 plastic trays and dividers, the unit accommodates 144 various drugs. Trays are removable for refilling. Many accessories offered. / Watson Mfg. Co., Inc.

507 MEDICINE DELIVERY / *Uni-Kar* is used to distribute unit doses in 12- to 48-patient capacities. The cartridges, which may be locked, are refilled in the pharmacy, then transferred to the nursing station. Trays and cartridges are color coded. / Watson Mfg. Co., Inc.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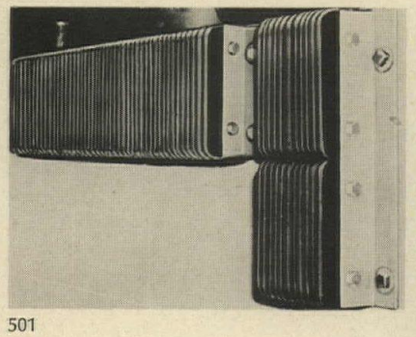
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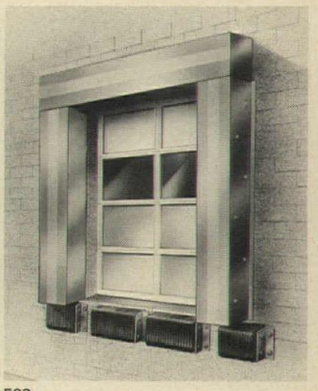
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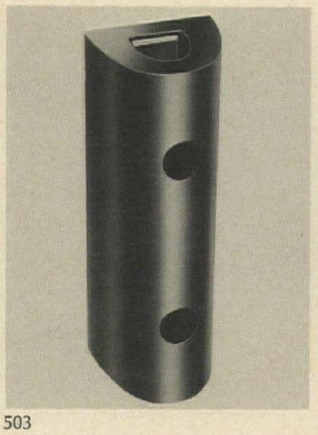
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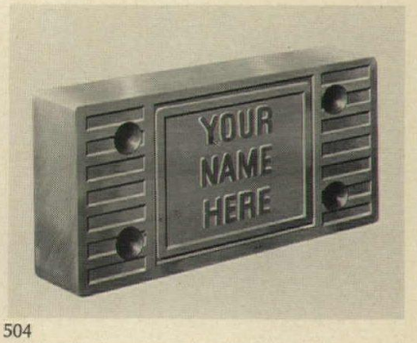

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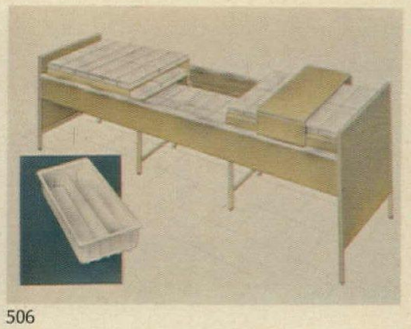
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*Included in 1973 Sweet's Catalog File(s).

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508 WALK-IN BATHTUB / Designed for the safety and comfort of invalids and geriatric patients, this product eliminates hoists and reduces manual aid requirements. Door is 21 in. wide, while the tub is 43 in. wide, 31 in. from front to back and 35⅝ in. high. It holds 60 gallons of water. Reinforced fiberglass in blue and white. / American Sterilizer Co.

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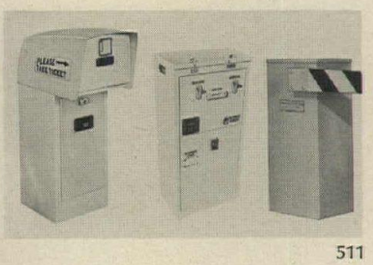

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509 INTENSIVE CARE UNIT / Designed to transform a hospital room into an intensive care unit in less than half a day, this wall system brings every service to the patient's bedside. *AMSCO Wall Systems* attach to existing walls or room partitions, installed with simple hand tools. Basic module is 53½ in. wide. Factory pre-wired, the modules comply with all codes. / American Sterilizer Co.

510 NARCOTICS LOCKER / This steel unit provides secure work area storage for health care drug supplies. Typical installations allow for locker to be fastened to inside of a wall cabinet or nurses' station. A lock holt-actuated switch operates a warning light when locker is opened. Custom-built to specifications. / Jamestown Products Div., AVM Corp.

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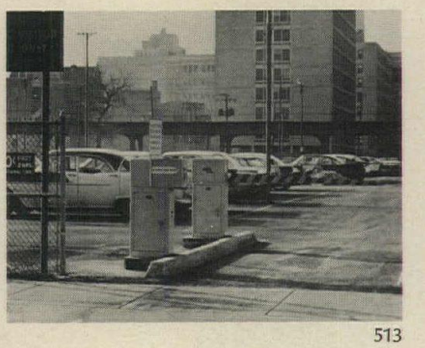

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PARKING EQUIPMENT

511 PARKING CONTROL UNIT / Three models are offered to provide parking lot barriers, ticketers and collectors. The trio makes a lot almost self-sustaining. All-welded steel construction, with baked-on enamel finishes are featured. / Federal Sign & Signal Corp.

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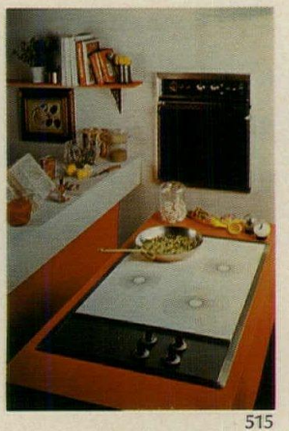

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512 TICKET DISPENSER / For direct ticketing of motorists, this model features in-and-out time only, rate computing, ticket-token reserved parking and automatic-manual-remote control with or without a gate. Dispensers have a 5,000 ticket capacity. / Coin Handling Div., Keene Corp.

513 CARD-CONTROLLED GATE / This model incorporates all standard parking systems, including card, coin, token, ticket dispenser and remote pushbutton, for both one- and two-way traffic. A lot capacity counter automatically deactivates entrance controls. / Coin Handling Div., Keene Corp.

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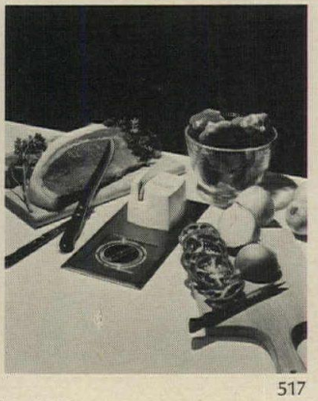

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514 PARKING GATE / The *Soft-Touch* gate arm will cease its downward motion instantly should it encounter any obstruction. Rubber-sheathed leading edges make the gate even safer. The gate housing is heavy gauge steel, designed for all-weather protection. / Cincinnati Time Recorder Co.

RESIDENTIAL EQUIPMENT

515 SMOOTHTOP RANGE / No special pots and pans are needed for this range, with a flat sheet of white glass-ceramic for a cooking surface. The cooking areas are staggered and the over-all length is 35 in. Mounting rim is stainless steel. / Corning Glass Works. A*

516 HOME LAUNDRY CENTER / The *Skinny Mini* model is 24 in. wide and operates on regular 15 amp current instead of a special 230-volt current. The compactness affords installation in very small areas of the home or apartment. Available with eye-level controls, five-year protection plan and can be ordered in three color combinations. / Frigidaire. A*

517 FOOD CENTER / Seven fully-sized food preparation appliances are operated by a concealed ⅓-hp motor available for counter-top installation. Six-speed dial operates knife sharpener, beater, ice crusher, juicer, shredder, blender and meat grinder. / Nutone. A*

518 BLACK & WHITE CABINET / The *Overture* line is contemporary and economical, according to the producer. Modular units for both kitchen and bath can be easily installed in apartments, townhouses and homes. / Del-Mar. L*

519 COMPACT KITCHEN / All units which feature ranges offer self-cleaning ovens. The unitized kitchens come in sizes from 30 in. wide, with sink, range and refrigeration provided. Gas or electric models are available. / Acme-National Refrigeration Co., Inc. I*

520 COMPACT KITCHEN / This 51 in.-wide model is completely factory-assembled and includes a four-burner range, oven and broiler, refrigerator, stainless steel sink and countertop, and a cutlery drawer. Available in three color finishes, with matching wall cabinets. / King Refrigeration Corp. A*

521 OFFICE KITCHEN / The 42-in. *Debonair* includes an electric range, 6 cu ft refrigerator with 25-lb freezer and a deep stainless steel sink. Available in black or walnut vinyl-clad steel with matching formica top. / Acme-National Refrigeration Co., Inc. A*

522 REFRIGERATOR / The *Mini-Bar* is 18-15/16 in. wide by 17-7/8 in. deep. It has a 2.65 cu ft-capacity and produces up to 12 lbs of ice daily, automatically. The unit is offered with copper-toned metal sides and walnut vinyl-clad metal door. / Acme-National Refrigeration Co., Inc. A*

For more data, use inquiry card.

523 COMPACT LAUNDRY / This portable washer and dryer uses standard household current and comes with an optional detachable window-venting system with five feet of flexible hose. Each model fits in a 24 in.-wide space. / Whirlpool Corp.

524 COMPACT LAUNDRY / Offered is a choice of two single-tub automatic washers, and a companion electric dryer which operates on 115v power and requires no external venting. A special stack rack permits closet, kitchen or alcove installation of a pair in less than 4 sq ft of floor space. Units are 21 in. wide. / Hotpoint.

525 APARTMENT GAS RANGE / This 21-in. wide model features a large oven and automatic oven cleaning during normal operation. / Athens Stove Works.

526 ELECTRIC RANGE / This range-grill-oven combination features an electric char-flavor grill and a ventilation system that exhausts fumes outdoors without an overhead hood. Continuous-cleaning oven is also offered. / Jenn-Air Corp.

527 MICROWAVE OVEN / This portable unit can be built-in or free-standing and plugs into a standard 115v grounded outlet. The cloud-grey, vinyl-clad steel case and glossy-black front are accented with chrome. / Hotpoint.

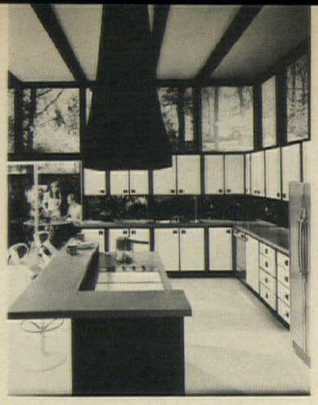
528 RANGE HOOD / Offered in 30- and 36-in. widths, all models feature rear and top knockouts for wiring, two-speed blowers, removable permanent grease filter and pushbutton control. Non-vented models include replaceable charcoal filters. / Hotpoint.

529 APARTMENT RANGE / This 21-in. compact range can be used as a slide-in or free-standing model and is available in four colors. The top and front feature porcelain enamel. Four hidden leveling legs permit adjustment to countertop height. / Hotpoint.

530 WALL OVEN / This electric built-in double oven is 27 in. wide. Available with self-cleaning properties, the unit is equipped with a 58-in. flexible cable for electrical hookup. / Hotpoint.

531 REFRIGERATOR, FREEZER / This deluxe 20.9-cu ft model is one of 13 in the contract line of this company. The freezer holds up to 243 lbs. Foam insulation permits outside dimensions of 30½ in. wide, 29 in. deep and 66 in. high. / Hotpoint.

*Included in 1973 Sweet's Catalog File(s).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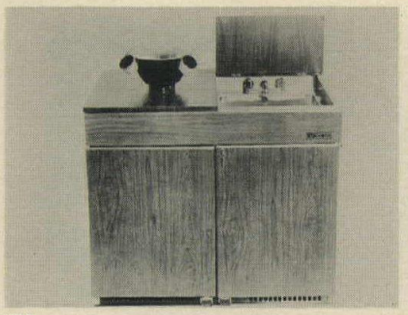
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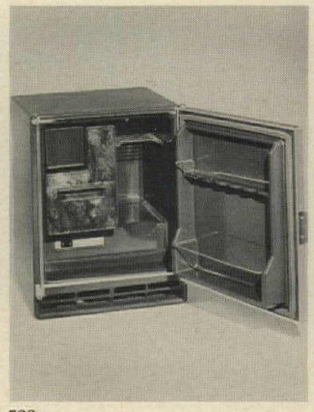
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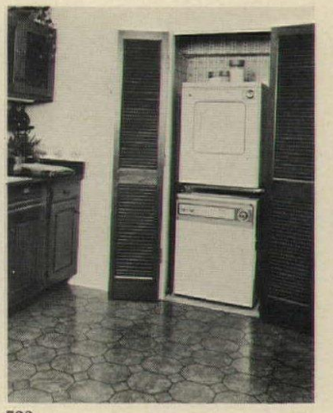
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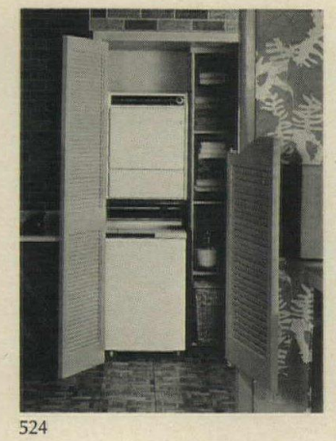
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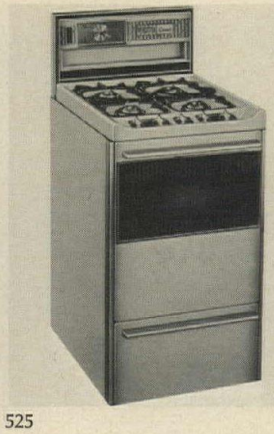
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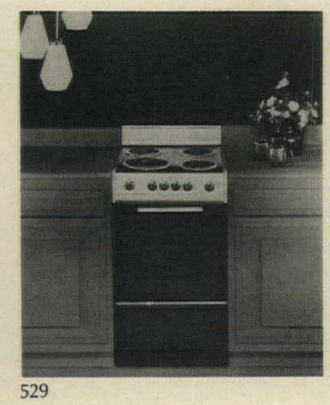
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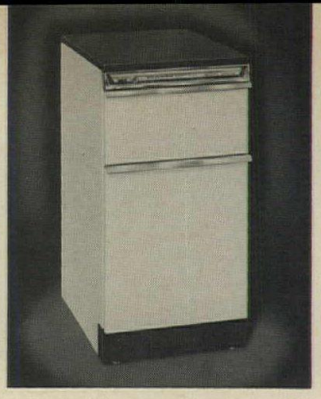

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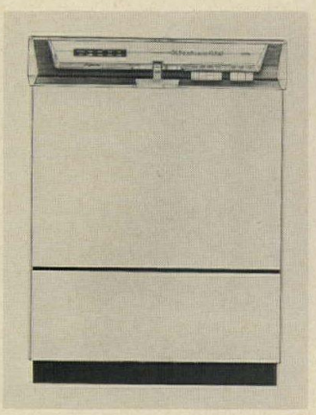
532 DROP-IN RANGE / This off-the-floor built-in range fits between countertop sections to eliminate costly cutouts and the need for floor covering beneath. All models feature brushed-chrome top. Offered in a 24-in. unit and a 30-in. unit. / Hotpoint.

533 HOME COMPACTOR / Exerting pressure of 3,000 lbs, this model reduces cans, bottles and other household waste to one-quarter its original volume. / The Hobart Mfg. Co. L*

534 HOT WATER DISPENSER / This unit will provide water up to 190 degree F from a reservoir tank mounted in the cabinet below the sink. Water temperature is controlled by a thermostat. / The Hobart Mfg. Co. L*



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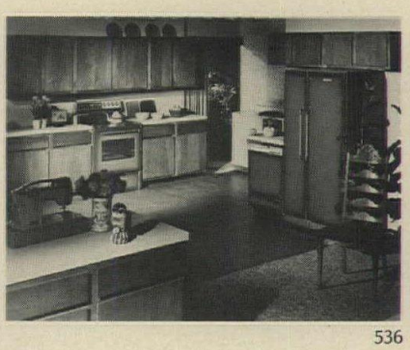

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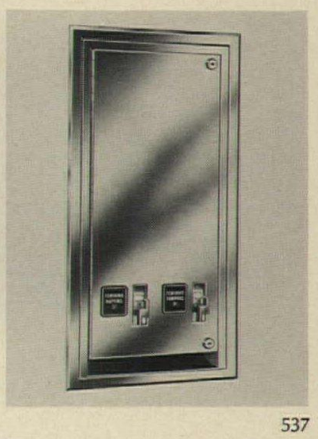

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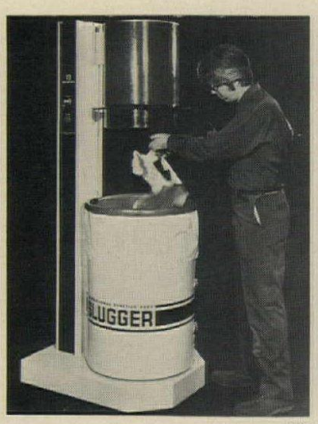
535 DISHWASHER / Featuring a front control panel, this unit offers full cycle control, soak cycle or light soil cycle. There is also a rinse-only cycle. A wide range of colors is available, with wood, metal or cloth front panel. / The Hobart Mfg. Co. L*

536 KITCHEN CABINETS / An economical line of contemporary cabinetry is offered in nutmeg tones. Made of northern hardwoods. / Connor Forest Industries. A,L*



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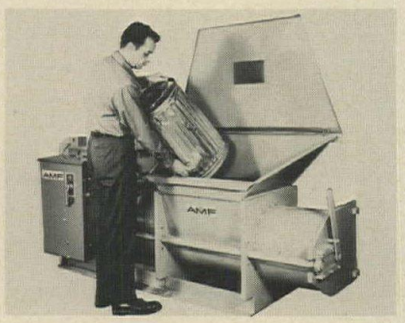
VENDING EQUIPMENT

537 RESTROOM VENDOR / Two exterior locks designed to thwart vandals are featured on this sanitary napkin vendor in stainless steel. The door, constructed of 18 gauge stainless steel with satin finish, is equipped with a full-length stainless steel piano hinge. / Bobrick Washroom Equipment, Inc.



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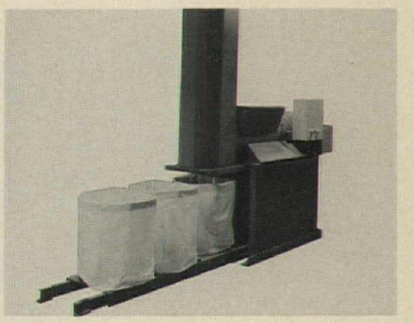

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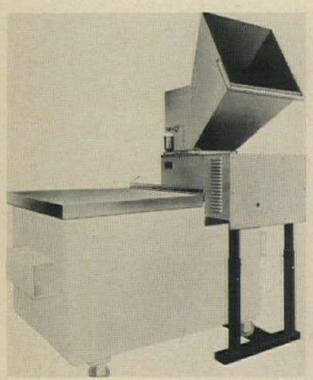
WASTE HANDLING

538 WASTE COMPACTOR / The *Slugger* model is a low-cost refuse compactor designed for fast food restaurants, supermarkets, factories and institutions. It runs on 110-volt current and needs no special installation. Compaction can vary in a ratio of up to 10 to 1. / International Dynetics Corp. A*



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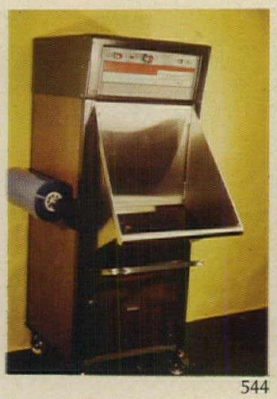

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539 WASTE COMPACTOR / Designed for operations where only a limited number of people need access to the disposal unit, this single bag unit is 27 in. wide, 74 in. high and 27 in. deep. The unit is mounted on casters and plugs into a 115-volt, 20-amp outlet. Compaction ratio is 5 to 1. Unit is stainless steel. Double bag unit also available. / AMF Incorp. A*

540 WASTE INCINERATOR / Unit can incinerate up to 3,000 lbs/hr of

For more data, use inquiry card.

solid waste without smoke, odor or fly ash, according to the producer. A controlled combustion system, requiring no scrubbers, filters or other air cleaning devices, completely incinerates wastes and gases. Available in seven sizes, with mechanical loading and ash removal. The *Combustall* uses natural gas, L.P. or fuel oil. / The Air Preheater Co., Inc.

541 HEAVY-DUTY COMPACTOR / The producer claims this model is designed to compact a wide range of refuse. Welded steel construction with a painted finish. Other features include a sixty gallon hopper, safety interlocked doors, rainproof electrical system and replaceable cutting edges. Up to 20,000 lbs of compacting force for 19 cu yds of waste per hour. / AMF Incorp. A*

542 REFUSE COMPACTOR / Designed to serve the needs of apartment houses of any size, this product is in the economy range. Units have variable compaction ratios, simple controls, built-in deodorizer and disinfectant sprays. / International Dynetics Corp. A*

543 WASTE PROCESSOR / Designed for hospital wastes, this unit shreds and compacts all normal refuse, deodorizing it as well. Unit is relatively small and can be installed indoors or out. / American Sterilize Co.

544 COMPACTOR / This unit is constructed of structural steel tubular framework, with walnut vinyl-clad panels. Mounted on 5-in. heavy duty casters. Dimensions are 29 in. wide, 71 in. high and 29 in. deep. Unit is capable of 7,500 lbs. compaction force. / Precision Metal Products, Inc.

545 VERTICAL COMPACTOR / Virtually all types of solid waste can be compressed to one-fourth its original volume in a few seconds, using 6,000 lbs. of ram force. Unit is 27½ in. wide, 28⅝ in. deep and 79 in. high. Stainless steel construction is featured, with wet and dry waste handling possible. / Clarke Floor Machines.

546 WASTE COMPACTOR / A vertical packer, this unit is recommended for fast-food chains, schools, hotels, hospitals and apartments. The *Handy Pack* operates on 110/115v power and can be used indoors or out, requiring 4.2 sq ft of floor space. / Peabody Solid Waste Management. A*

547 STATIONARY PACKER / The line ranges from ½ cu.-yd.- to 5 cu yd units and units are recommended for apartment houses or municipalities. The apartment model will handle the output of as many as 600 apartments. The unit is used with both front and rear loader containers. / International Dynetics Corp.

548 WET PULPER / The *Econo-Line* pulper for processing food and general wastes, pumps waste in a slurry, to the loading dock. A water-press removes the water, leaving a moist, biodegradable pulp. Unit reduces waste volume up to 90 per cent. Stainless steel. / Wascon Systems, Inc.

549 TRASH COMPACTOR / A built-in or free-standing home trash compactor is offered to fit in the place of a 15-in. base cabinet. Operates on 115v power and compresses up to four garbage cans of trash into a 1½-ft cube. / Hotpoint.

550 WASTE DESTRUCTOR / This *CA* unit destructs all types of organic waste while conforming to all state and federal air pollution requirements. Capacities range from 30 to 2,500 lbs of waste per hour. The unit operates without a scrubber and therefore needs no water or special drainage site. / Besser-Wasteco Corp.

551 HYDRAULIC COMPACTOR / *Model 1100* is an all-stainless steel refuse compactor that can pack as many as seven 26-gallon trash cans into one sanitary, odorless 3.2-cu ft plastic bag. It runs on standard 115v, 15-amp power. / Enviro-Health Industries, Inc.

552 STATIONARY PACKER / This compaction unit is for shopping centers, apartments and industrial plants, and offers a compaction force of 41,140 lbs. The roll-out tray provides ease of service. Operation is entirely self-contained, with remote control optional. / Cobey Co.

553 HEAVY-DUTY COMPACTOR / This unit will handle everything from pallets and barrels to waste paper. Designed to compress materials into closed steel containers, which are hauled away. Unit meets all sanitary and building codes. Rated capacity is 145 cu yds per hour. / The Heil Co. A*

554 GARBAGE DISPOSER / This all-stainless steel unit is part of the company's commercial line and features a totally-enclosed motor for long life. / In-Sink-Erator Div., Emerson Electric Co. A*

555 TRASH COMPACTOR / For institutional and commercial use, this compactor can be placed anywhere and is suitable for point-of-origin compaction. / In-Sink-Erator Div., Emerson Electric Co. A*

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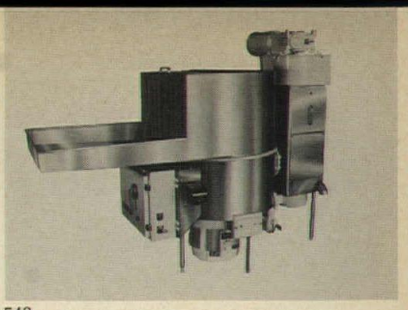
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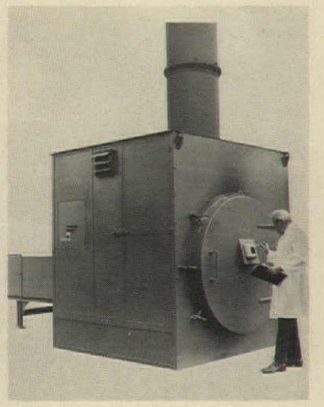
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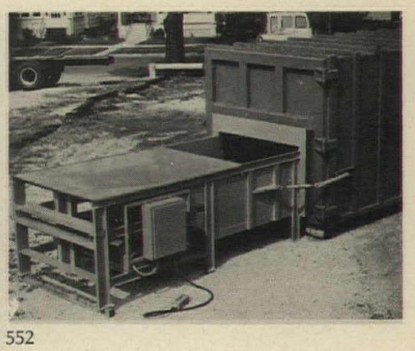
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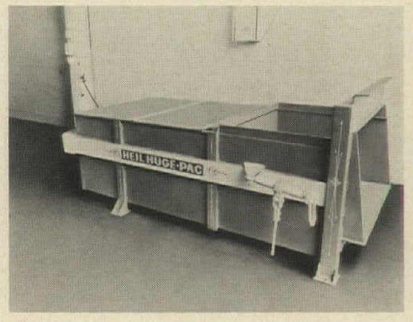

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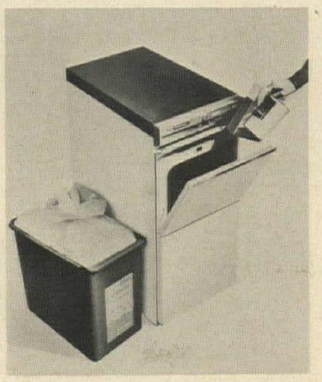
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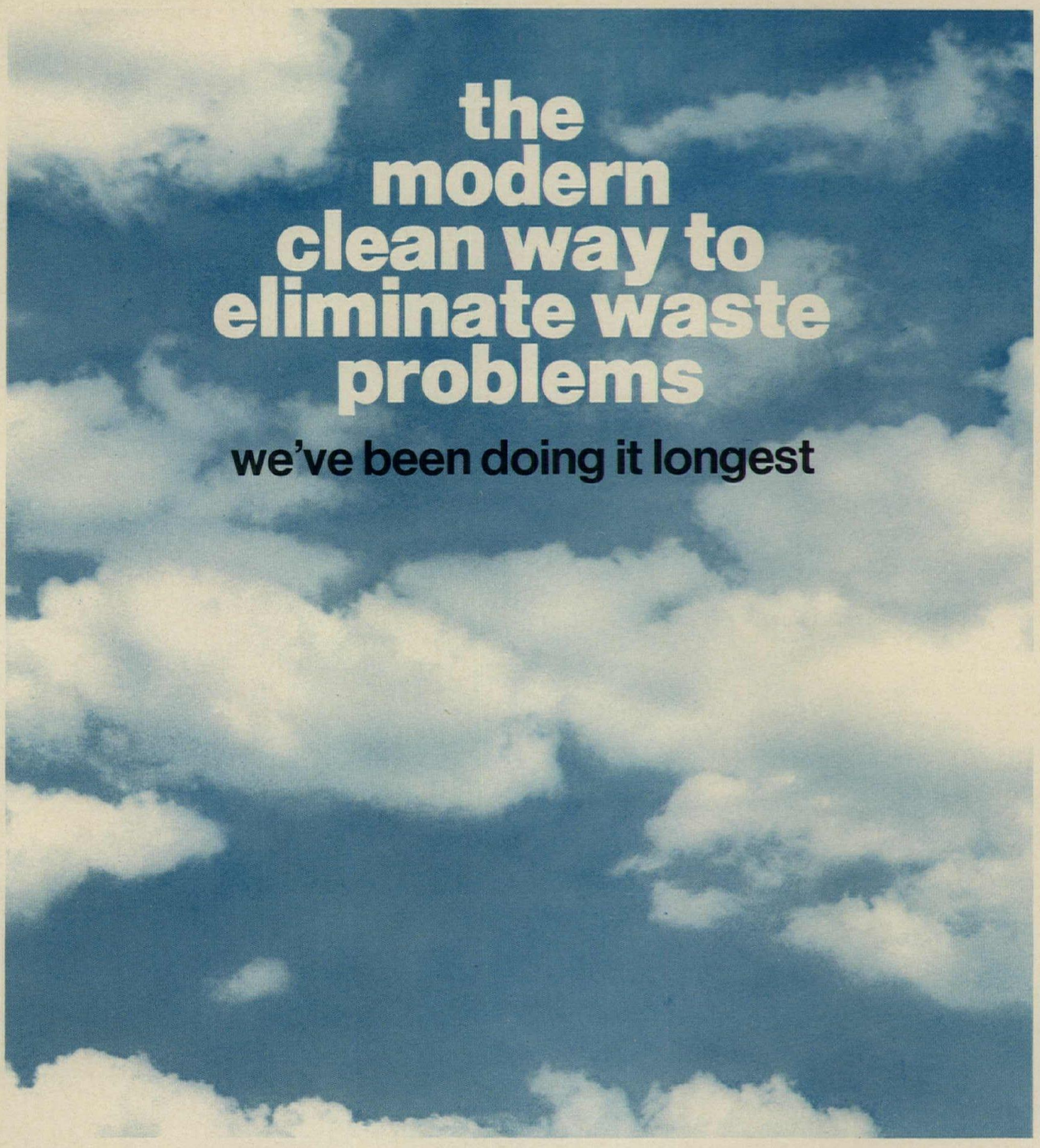

As the inventors, designers and largest manufacturer of pneumatic waste disposal systems, we've made lots of contributions to the environment . . . sanitary trash and linen collection conveying to collection and disposal equipment. The most valuable contribution of the system is great savings in operating costs, manpower, servicing and space requirements. Whatever your requirements . . . there is an ECI Air-Flyte pneumatic waste system to suit the need. ■ Investigate our 63 installations . . . all successfully producing savings for hospitals, laundries and institutions. ■ We have designed, engineered, built and installed 93% of all pneumatic waste systems in the U.S.A. This proven engineering and manufacturing experience is available to you . . . See our catalog in Sweet's, Write or call us.

ECI Air-Flyte Corp. / The Originators

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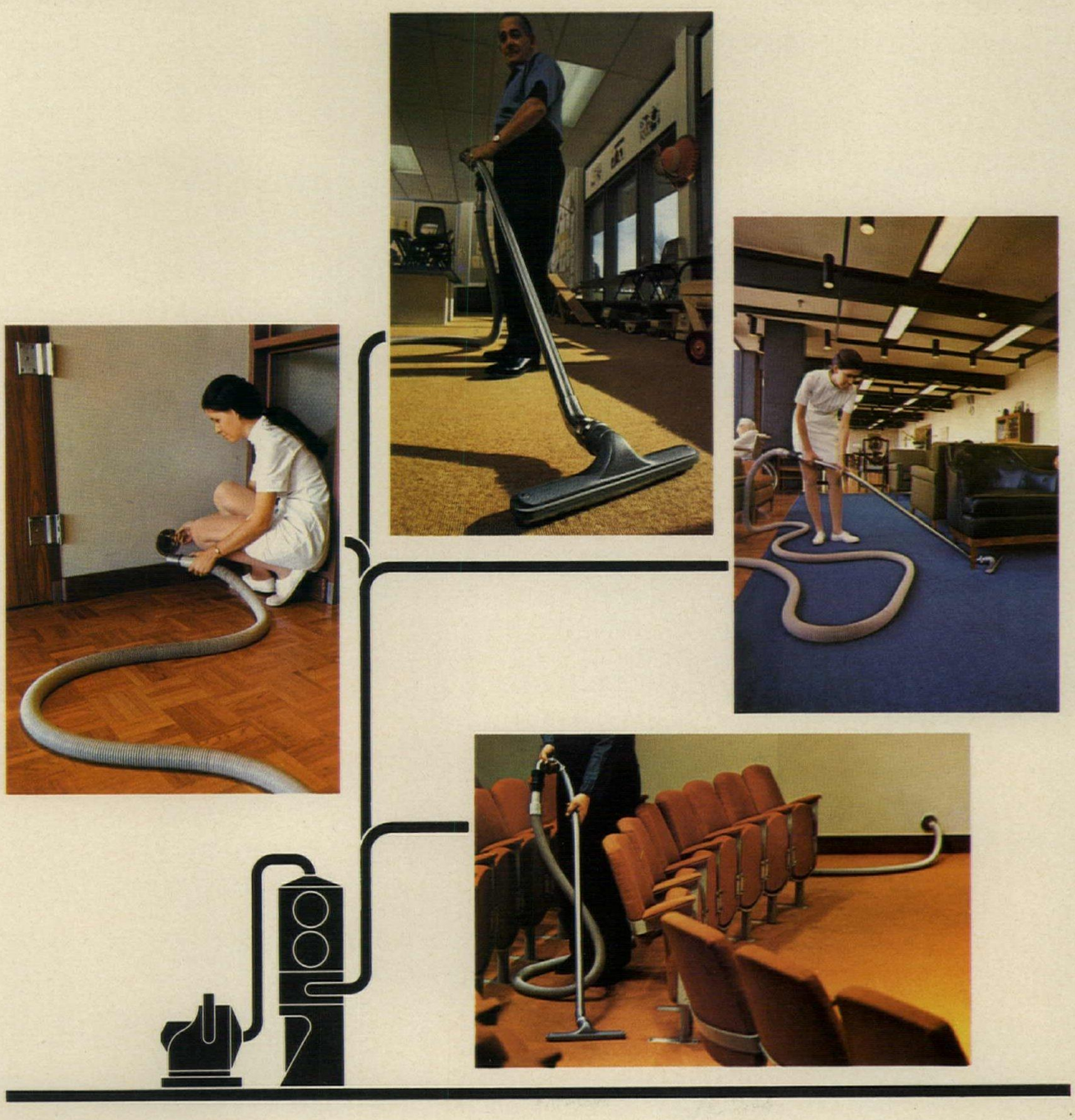
A Spencer central vacuum cleaning system is a one-time investment that keeps paying off.

When a Spencer system goes in, a lot of future maintenance costs go out, and the drawing board stage is the time to put it in. The initial investment is soon forgotten because of reduced maintenance labor costs, and the many, many individual vacuum units that would wear out before a Spencer system even reaches middle age. (We can show you some of our systems that are still going strong after 50 years of hard use.)

But the economy is just a happy plus. The major factor is the sensible principle of the availability of the central vacuum action at wall outlets to pull dirt, dust, grime, liquids and germs to a basement collection center where they belong. The hygenic aspect and whisper noise level are obvious benefits in hospitals and schools. And in any building, who needs the musty, dusty smell of stirred-up dirt that individual units produce? A Spencer system has no exhaust in the area where it's being used, so unpleasant odors just don't happen.

There's no complication for you. Our technical staff will incorporate our system into your plans. Write or phone for our new booklet that shows and tells it all.

The Spencer Turbine Company, Hartford, Connecticut 06106, (203) 233-3631



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Sling chairs that stack. Sling chairs that swivel. And new shapes in executive seating. Conference chairs that tilt into lounge chairs. Harter—growing by design.

Designs:
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furnishings uci 12

The environment of any interior space must be far more than just functional, for it is now well understood that a space does influence the mood and attitude of its occupants. Once technical aspects of lighting level, temperature control, and acoustical comfort have been established, the task of providing this functional/pleasing space challenges the architect or designer as much as any other part of the design job.

And with the growing trend toward requirements for extreme plan flexibility, the responsible designer must become more and more familiar with available furniture, fabrics, accessories, carpeting, art work and window treatments.

As design firms have become more perceptive and demanding in the interior design field, manufacturers have put in a great deal of research and product development, and we now see each year new and unique applications of new materials. For example, the carpet industry is witnessing a revolution in the development and application of man-made fibers, and the furniture manufacturers are responding with imaginative designs, applying fibers and plastics—not just for decoration or style—to utilize their inherent structural and forming capabilities. Those interested in the more traditional materials seem to have regained an awareness of the classic feeling exhibited in the Bauhaus work, complemented by more contemporary designs.

The age-old question of machine-made versus hand-crafted problems has been clarified with the application of new materials, for these plastics, foams, hardened finishes and new application of metals have been developed in the age of automation and their machine manufacture is both essential and well accepted.

The need, in fact demand, for flexibility has caused the architect to apply the same modular thinking used in designing the building systems to the interiors. Hospitals, office buildings, and schools demand furnishings with flexibility and mobility; and of course we have seen the development of flexible, interchangeable, relocatable furniture systems for all of these applications.

Even art selection and graphic design becomes an integral part of interior design—satisfying not only the demands of flexibility but needs to adjust the mood and color orientation of a space.

Prepared with the help of Richard Hayden, Poor and Swanke & Partners, New York; Guido E. Baumgartner, Thonet Industries, Inc., New York; and Bob Blaich, Herman Miller, Zeeland, Michigan.

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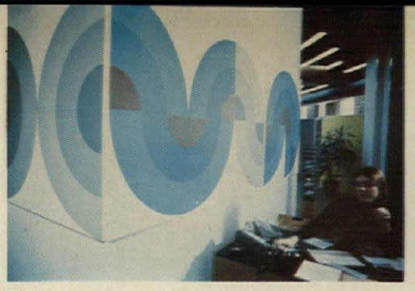

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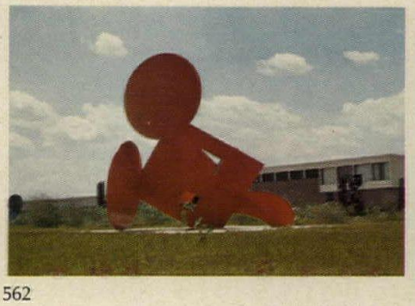

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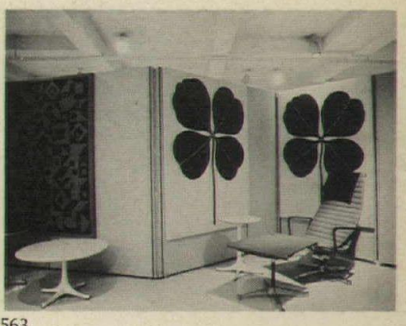

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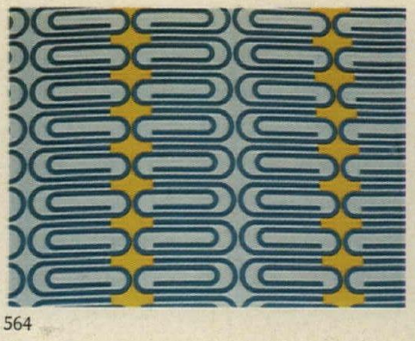

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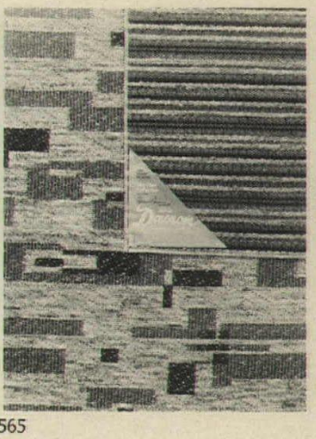

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ARTWORK

560 MODULAR MURAL / Wall graphics for public and commercial buildings consist of frameless panels of white translucent acrylic plastic with geometric designs silk-screened on their top surfaces. A large number of designs and colors are offered. / Corvia, Inc.

561 SCULPTURE / In an edition of two, George Sugarman's "Trio" is in aluminum, painted yellow. The dimensions are 10 ft by 32 ft by 14 ft. / Lippincott Inc.

562 SCULPTURE / The Claes Oldenburg "Geometric Mouse, Scale X" measures 18 ft by 22 ft by 11 ft and is fabricated of steel, painted "Golden Gate Red". / Lippincott Inc.

FABRICS

563 MODULAR PRINTS / Mounted on squares and rectangles to fit all sizes of the company's partitions, 39 fabric prints are offered on linen or handwoven Mexican cotton. / Herman Miller Inc.

564 CONTRACT FABRIC / For draperies or wall coverings, *Clips* is a series of enlarged paperclips in blue and gold or fuschia and raw teak. From the *Pausa* Collection. / Isabel Scott Fabrics Corp.

565 UPHOLSTERY FABRICS / *The Tibet Collection* is a new group of fabrics of Dacron polyester fiber, available in nine patterns, each in a wide range of colorways. All have a "natural" look, nubby texture, soft hand, and unusual surface interest. / P. Kaufman Fabrics.

FLOOR MATS

566 DRAIN MAT / A one-piece molded polyethylene mat is available for shower areas, behind bars, food and chemical processing areas and marine locations. Available in three colors, sized 20 in. by 20 in. by 1 in. thick / Samuel Furiness Mat Co., Inc.

567 CARPETED TREAD SYSTEM / The *Pedimat* model, with replaceable carpet treads, is a blend of *Acrilan*® and light-fast nylon. Available in many colors and patterns, with deep pile for absorbency. / Construction Specialties, Inc. A*

568 ENTRANCE FOOT GRILLE / The *C/S Pedigrid* grille with replaceable treads, is available with 8/32 in. thick pile *Acrilan*® in six colors. Dirt falls between the 1-in. wide treads into a catch basin. Available in custom sizes, for both level pit base and drainage pit application. / Construction Specialties, Inc. A*

569 FLOOR MAT / This line of floor mats features a backing that adheres without movement to carpeting and hard surfaces. Continuous-filament nylon pile brushes dirt and moisture from shoes, but will not shed. Seven colors are available, in seven sizes up to 20 yds. / Crown Rubber, Ludlow Corp.

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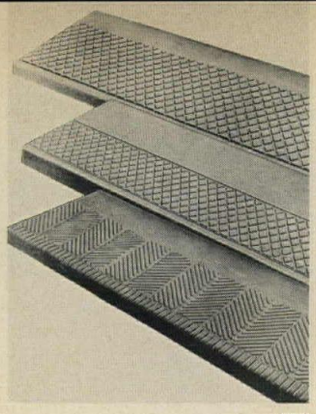

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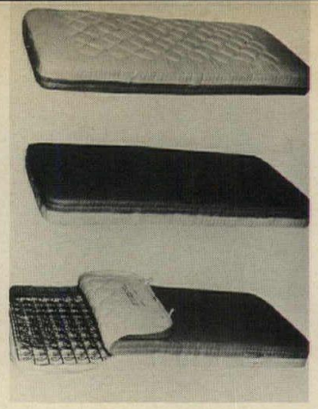

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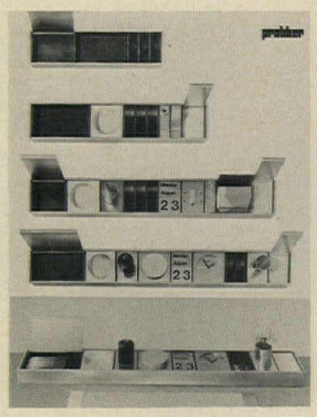

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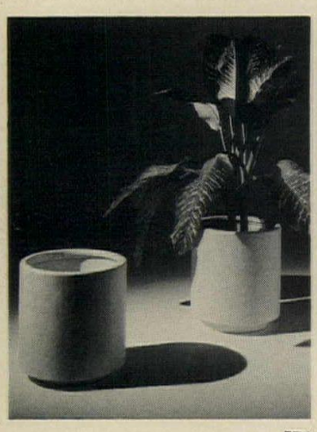

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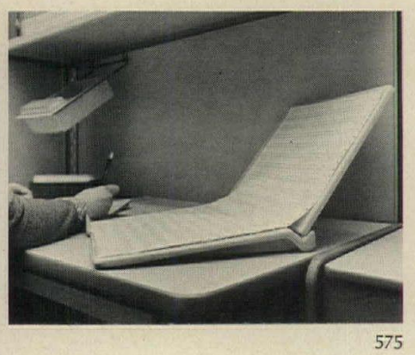

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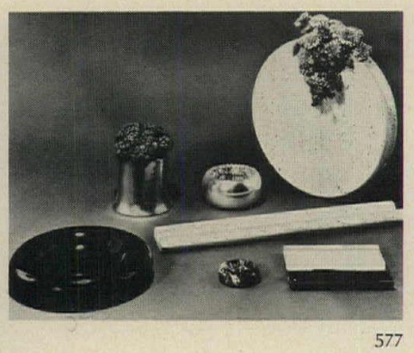

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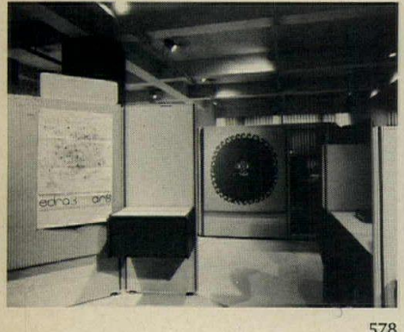

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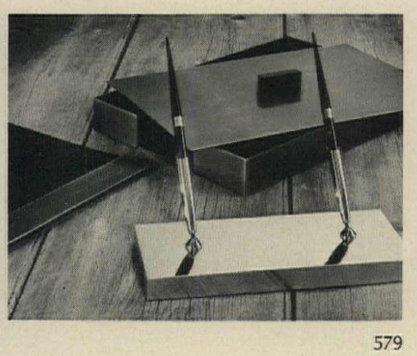

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570 STAIR TREADS / Molded rubber treads meeting OSHA requirements for non-slip surfaces are offered in eight marbleized colors, in lengths from 24 in. through 72 in. / Durable Mat Co. A*

FURNISHING ACCESSORIES

571 INSTITUTIONAL BEDDING / Recommended for medical institutions, this mattress features removable covering that is launderable, fluid-proof and non-allergenic. Flame-retardant models are available and all models exceed Federal requirements. / Denison Mattress Factory.

572 DESK ACCESSORIES / Based on a unit design scheme, a variety of arrangements within four standard cases can be obtained, up to 36⅜ in. long. All metal parts are spun, cast or extruded aluminum, polished or anodized. / Harvey Probber, Inc.

573 FIBERGLASS PLANTER / This one-piece planter is leak-proof and comes in six colors. It weighs 6 lbs and measures 14 in. square. / Duk-it, McDonald Products Corp.

574 PLANTER / This product, 16 in. wide and 17 in. high, will accommodate a standard 14-in. growing container. The planter is available in smooth or textured surfacing and the recessed base has carpet ventilators. Ten colors are offered. / L. Paul Brayton Ltd.

575 EDP ACCESSORIES / Designed for use with the company's *Action Office 2* line, the computer reader stand and card tray hold print-outs open and keep cards organized. / Herman Miller Inc.

576 PLASTIC PLANTERS / A new series of plastic planters, called *FPR* units, are made up of several fiberglass-reinforced laminates of mat, black or white, fire-retardant *Hetron*® polyester resin. The units are available in a wide range of sizes and designs. / Ficon Containers Ltd.

577 HAND-MADE CERAMICS / Accessories hand-crafted of clay, plexiglas, stainless steel, marble, sandstone and sterling are part of an architect-designed collection in economy, moderate and luxury price ranges. All designs are stocked. / Atelier International, Ltd.

578 ACOUSTICAL PANEL / An add-on tuner panel with fiberglass core can be used to acoustically tune the office. Panels are available for use with the company's partitions, in 50 fabrics and four sizes. / Herman Miller Inc.

579 DESK ACCESSORIES / The new *Presidential Desk Accessory Collection* is made up of 17 coordinated items, each available in three metal finishes: Antique Pewter (#8700), Presidential Bronze (#8500) and Mirror Chrome (#8300). / McDonald Products Corp. D*

580 ASH RECEPTACLES / Finished in mirror chrome, this trim cylindrical floor ash receiver is designed with a die-cast grid top, an outer case of heavy-wall steel, and a deep, seamless and leakproof inner aluminum liner. / McDonald Products Corp.

581 ASH URN / Upward finger pressure on a concealed release tab unlocks ash receiver body which then swings forward and down while lid hinges open to empty ashes. Surface-mounted, semi-recessed and recessed models are available. / Reserv-A-Roll Co. A*

582 CASTER / Winner of a recent Danish designed award, this dual-wheel nylon caster is now available. The product will not mar floors and moves over thick carpet. Life-time factory lubrication eliminates need for oiling. / Walker & Zanger, Inc.

583 WALL ASH URN / The cylindrical unit with funnel top is designed with a die-cast mounting bracket and matching inlay. The outer case is seamless steel with a leakproof inner aluminum liner. Available in several finishes. / McDonald Products Corp. D*

FURNITURE

584 CLOTHING STORAGE / The *StorRobe* is designed for hospitals, nursing homes and dormitories, integrating wardrobe hanging space and drawer storage. Models are available with no drawers or up to four. Panel or wood slat folding doors are available and drawers are one-piece seamless steel. Interior and exterior finishes are vinyl. / Simmons Co. A*

585 SCHOOL CHAIR / Chair construction with open back is of a special polypropylene compound which the maker claims is very durable. Available in five colors, the chair has been designed for the lumbar region of the spine. The seat is fastened to a sled frame without surface rivets. The chair model stacks. / Peabody Seating Co.

586 MODULAR CABINETRY / The *Spectra III* series is a full line designed for the open-plan school. Lightweight modules can be

For more data, use inquiry card.

stacked, fixed to walls, put on casters or bases or used singly. A long, narrow unit could be used horizontally or vertically. All surfaces are plastic-laminated in five colors. Special finishes are available, with a variety of working surfaces. / Mutschler.

587 ARM CHAIR / Mirror chrome tubing forms the frame allowing independent movement of the seat and back. The seat and back are in a choice of walnut with sealed oil finish or maple with black full rubbed finish. Natural cane. The Gibilterra Chair. / Vecta Contract Co.

588 MODULAR LOUNGE / Polyurethane foam, cut in various densities, covered in stretch velour creates flexible seating. Different-shaped units can be grouped in a variety of permutations. / Stendig, Inc.

589 BUTCHERBLOCK SEATING / Part of a line of butcherblock furniture, this sofa is finished in light, hand-rubbed oak, with a variety of fabrics. / Tech Furniture Inc.

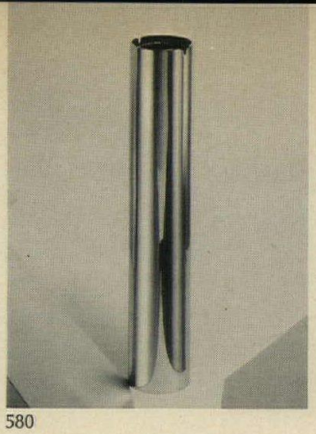
590 EXECUTIVE DESK / The *Floating Cube*, with matching cabinet, features mitered construction in Kashmir burled walnut on an island of mirror-polished stainless steel. Available in other woods, with base in self-wood, marble or bronze. Several sizes. / Eppinger Furniture Inc.

591 WALL UNIT / Wall-mounted or free-standing, this line of walnut components mounts in either black enamel or chrome standards. Sliding-door and glass-front cabinets are offered. / Vogel-Peterson Co.

592 WORK STATION / The *Duplex* modular work station for an executive and secretary is typical of the arrangements possible with these stock components. / The Shaw-Walker Co.

593 OFFICE SYSTEM / *Pentaplan* components consist of table-desks, typing units and cabinets in a choice of oak veneer or oak-edged plastic tops on mirror-chrome steel bases. / Harvey Probber, Inc.

594 LATERAL FILES / The *Series 58* features a wrap-around case shell, with no seams on the back to detract from appearance when unit is used as a room divider. More than one drawer cannot be opened at a time. Stack-on cupboards provide ample storage. / Corry Jamestown Corp. D*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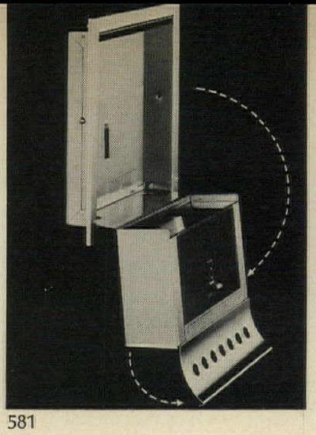
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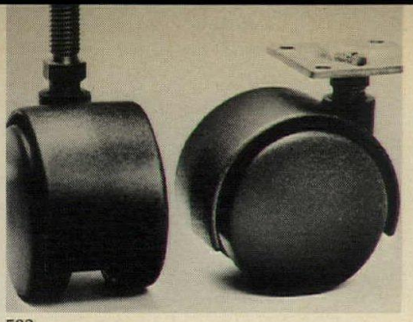
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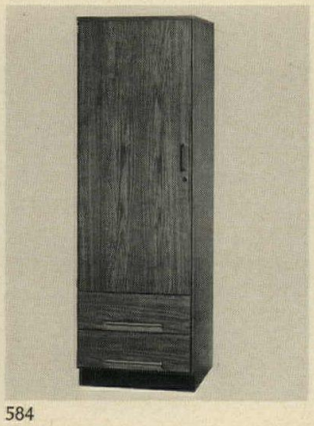
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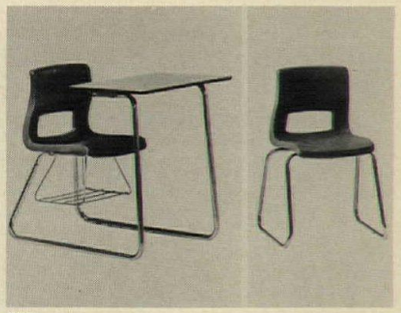
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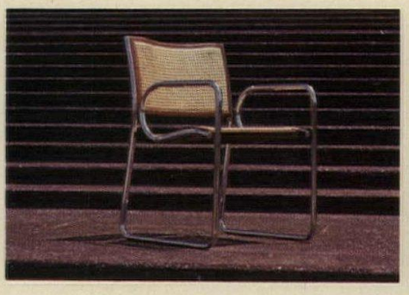
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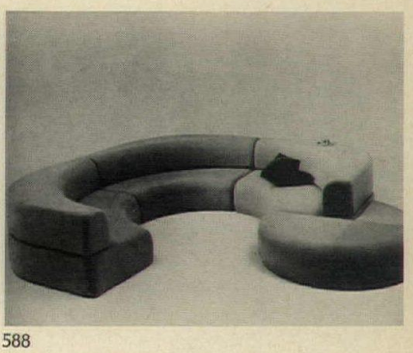
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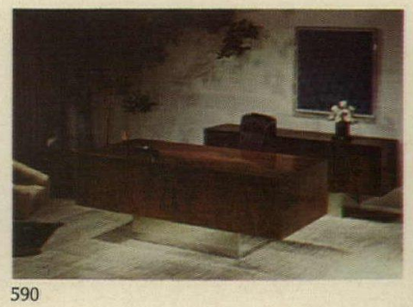
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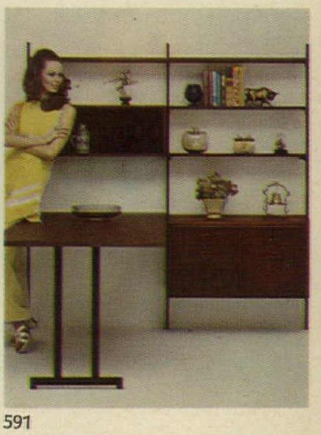
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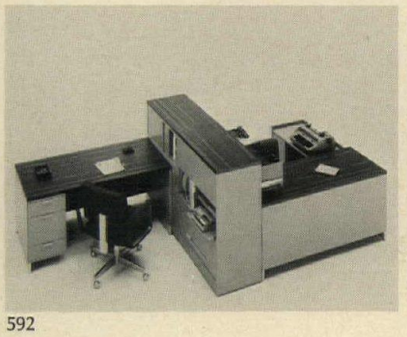
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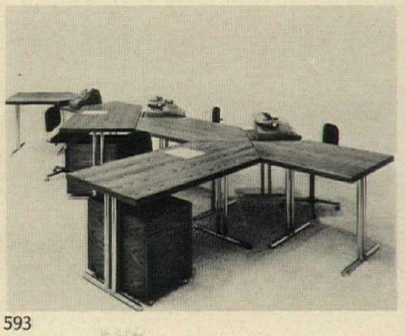
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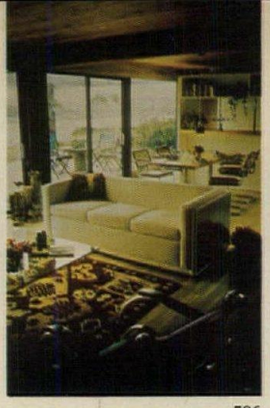

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595 EXECUTIVE DESK / Hand-rubbed, oiled walnut finish, accented by bronze hardware, is featured on this desk, with matching credenza. The desk measures 74¾ in. long, 36 in. wide and 29 in. high. All pieces in the *1000 Series* are also offered in oak. / Myrtle Desk Co.

596 SOFA-BED / Fire-tempered, mettle finished in brushed satin, chrome side panels and back accent this model from the *Collection '72* series. A plinth base gives the illusion that the sofa floats in air. / Simmons Co.

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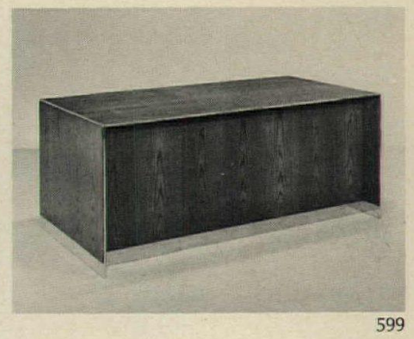

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597 OFFICE GROUP / Included in this system is an expansive 78¼-in. screen of teak veneer and vinyl-suede. The desk top is high-pressure plastic laminate and the filing units come in a variety of colors. / Mosler.

598 ECONOMY FILING / The two-, three-, four- and five-drawer files are offered in letter and legal size cabinets, complete with file guides, label holders and guide rod. Five paint finishes are standard. / Sturgis Div., The General Fireproofing Co.

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599 WIDE DESK / This model is 38 in. wide, with an optional recessed back. Lengths are offered up to 72 in. The desk is paneled in American walnut, white plain oak veneer, or with enameled steel. / The General Fireproofing Co.

600 WORK STATIONS / Panels and screens in 10 widths from 9 to 42 in. and heights of 62 in. and 79 in. are offered for straight or circular arrangements. Featuring acoustical properties, the screens are supplied in many enamels, fabrics or vinyl-clad steel. / The General Fireproofing Co.

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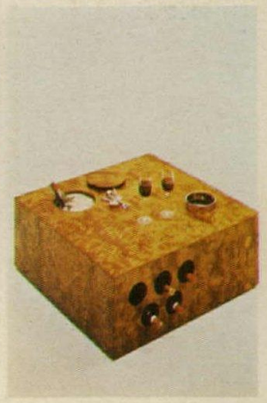

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601 COCKTAIL TABLE / The base of this table is of one-part white, or other color, fiberglass. The top is spun stainless steel, with laminates optional. The table is 44 in. in diameter and 15 in. high. / Vecta Contract Co.

602 FIBERGLASS DESK / With white fiberglass drawers and genuine rosewood accents, this award-winning desk has a matching credenza with oak drawers. Other colors are offered. / Vecta Contract Co.

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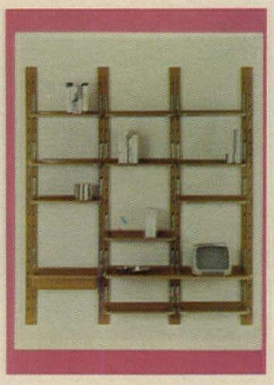

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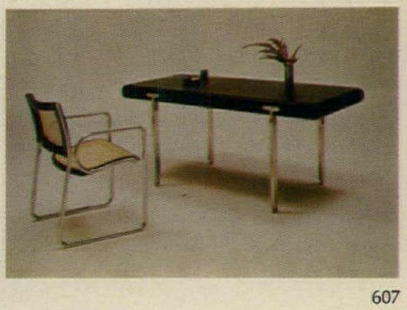

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603 SOFA / A unit with sufficient mass to properly fill an open area, this sofa has a seamless mirror-polished stainless steel base, hardwood frame, hand-tied coil springs and a

For more data, use inquiry card.

hand-tied front cushion platform edge. Available in various covers. / Vecta Contract Co.

604 COCKTAIL TABLE / This table includes bottle tubes, in black ASB, and a stainless steel ice bucket. The cube is made of French olive ash burl or color laminates. / Vecta Contract Co.

605 DESK / This design by John Mascheroni reflects the style of welded tubular pieces of his design in the Museum of Modern Art. This desk is constructed of aluminum tubing, dark English oak or rosewood and walnut. Available with matching credenza. / Vecta Contract Co.

606 SHELVING / One-inch diameter chromed steel tubing with ends closed at a 45-degree angle provides the frame for this system, with struts, shelves, double shelves, bins and deep bins of vacuum-formed ABS in four colors. / Vecta Contract Co.

607 LEATHER-TOP DESK / Designed by John Mascheroni, this desk is a slab covered in hand-worked leather, with legs of polished stainless steel. / Vecta Contract Co.

608 TABLES / Tops of butcher-block, laminates, veneers and Italian marble can be combined with steel cylinder bases in various colors for tables that serve in many varied applications. Various heights and diameters can be ordered. / Vecta Contract Co.

609 PLANTERS / Designed for large spaces, the units can vary in height from 14 in. to 37 in. Forty-four inch-diameter bowls of reinforced fiberglass sit on bases 23 in. in diameter, made of steel tubing. Three standard colors are available. / Vecta Contract Co.

610 MOVABLE WALL SYSTEM / A new *Mobiles* movable wall system features interchangeable fabric- or vinyl-covered panels, and complete concealment of permanent or casual wiring and telephone cords. The wall units come in a number of sizes, and with a selection of six wall-mounted work surfaces and storage units. / Steelcase Inc.

611 SEATING GROUP / *Soft Seating* includes a sofa, club chair and two contemporary tables. The furniture is made of tough fiberglass, acrylics, leathers and urethane-coated fabrics in tan, brown, black and white. / Steelcase Inc.

612 TABLE AND SEATING SERIES / Molded of fiberglass, these table and seating elements are designed for interior or exterior use; they are easily movable or may be anchored for permanent installation. Table and bench have a contrasting color for the underside and for a recessed band on top and ends; a variety of standard colors in a semi-gloss finish are available. / Acron Furniture. D*

613 MULTIPURPOSE TABLES / Featuring 1¾ in. diameter steel tubular legs, the *Tempest* table line includes folding and non-folding models for use in cafeterias, student unions or conference rooms. Available in oblongs, rounds and squares, the new series offers a wide selection of sizes and finishes; tops are plastic laminate. / Howe Folding Furniture Inc.

614 HOSPITAL COMPONENTS / A new system of integrated modular components for transport and storage of hospital supplies and equipment known as *CO/STRUC* for *Coherent Structures*, consists of a wide range of containers, frames, carts, wall-mounting rails and swivel arms, drawers, shelves, doors and bedside facilities. All are fabricated of a thermoplastic resin which can withstand 190 degree temperature hot water and steam. / Herman Miller Inc.

615 TUBULAR OFFICE GROUP / Bright chrome legs contrast with red or brown molded-plywood veneer of the Ayous tree of West Africa. The wood is processed in Italy, and offers a consistent grain. Smoke-tinted acrylic end panels on the desk, enclose the drawers. / Herman Miller Inc.

616 GLAZED PARTITION / The steel frame of this product is made with extrusions for installing glass, plexiglass or other materials in heights up to 80 in. and widths up to 48 in. The manufacturer does not provide the glass and recommends safety glass. / Herman Miller Inc.

617 DRUM TABLES / Available in a wide selection of wood veneers, the new *Series O* drum tables have tops of carefully matched grains, arranged in sunburst fashion. The tables are finished in conversion varnish oil or lacquer, and are sturdy enough to be used as sculpture pedestals. / Contemporary American Furniture, Inc.

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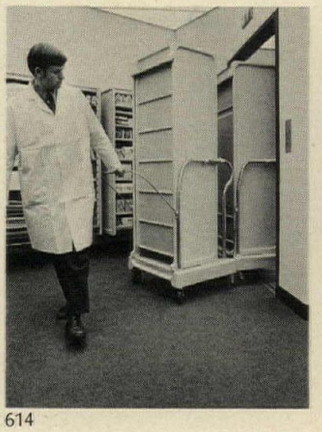
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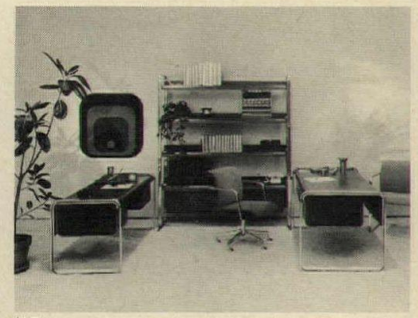
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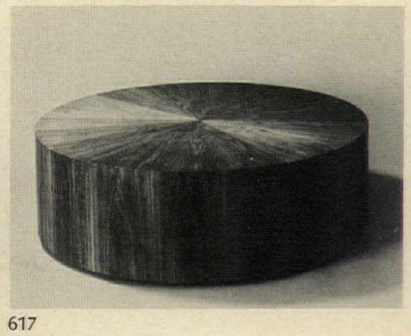
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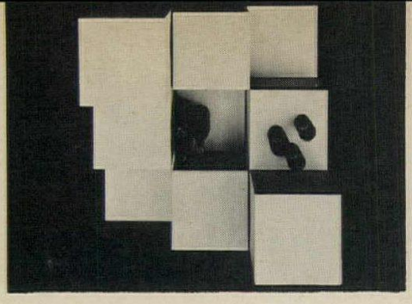

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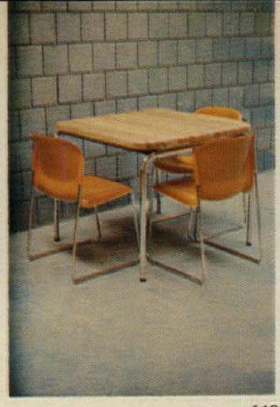

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618 END-COFFEE TABLE / Modular blocks of black, textured, self-skinned urethane foam complete this system of tables. / Atelier International, Ltd.

619 STACKING CHAIR, TABLE / Constructed of injection-molded plastic, the shell of the chair is mounted on chrome steel. It is available with upholstery. *Nova* stacks, and can be ganged. The table top is offered in either butcher-block or white laminate. / Atelier International, Ltd.

620 LOW PARTITION / A 48-in. height is available in widths up to 48 in. The panels and hardware relate to the higher versions of the company's panels and hang-on work surfaces are offered. / Herman Miller Inc.

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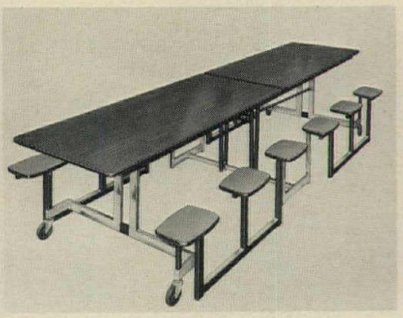

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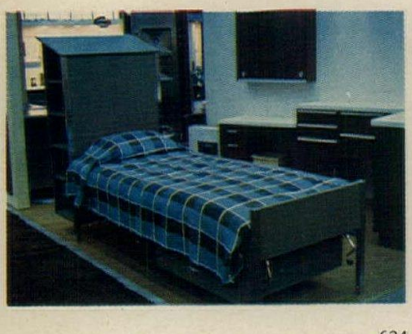
621 LOUNGE FURNITURE / Designed for extra strength in butcher-block-style, this line of lounge furniture includes tables, chairs, sofas and benches, all coordinated and available in different sizes. Upholstery is fine-textured nylon in a choice of colors and patterns. / Sauder Manufacturing Co.



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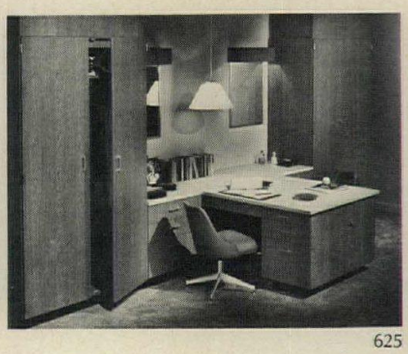

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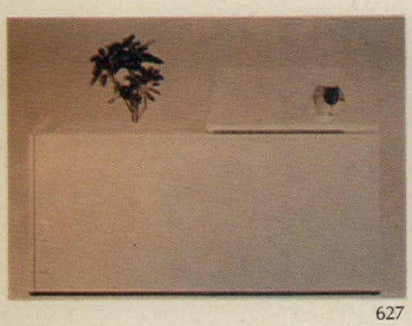
622 PORTABLE TABLE / Available with attached seating for 12, with 24-in. spacing, this table is available in 12-ft and 10-ft lengths for juvenile and adult groups. Stores in a small space. The chrome-with-black understructure comes with colorful plastic tops. / Mitchell Mfg. Co.

623 CUBE DESK / Offered with related equipment, this series of desks features straight-lined, square-cornered flush panels that extend to the floor. A chrome reveal strip between the top and pedestal strengthens the entire unit. Available in a full range of colors, styles and sizes. / Cole Div., Litton Industries.



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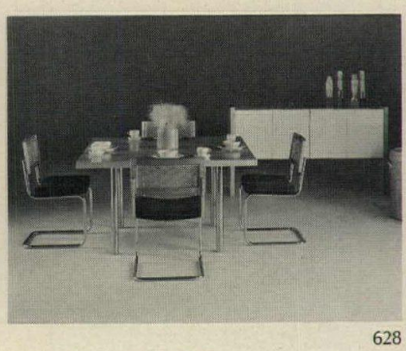

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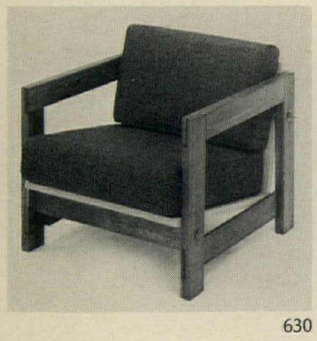
624 ALL-IN-ONE UNIT / For health and psychiatric care, this combination bed-bureau-wardrobe permits room arrangements which conform to Hill-Burton space concepts. High pressure laminate surfaces resist scratches, dirt and stains. A variety of colors is offered. / National Industries Div., AVM Corp. A*



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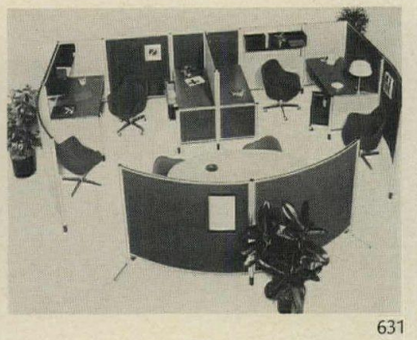

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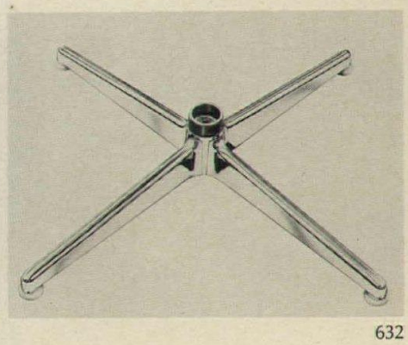

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625 DORM BUILT-IN / Every exposed surface, even inside drawers, is high pressure laminate. Corners on drawers are rounded for safety and magnetic door catches provide positive closing. Available in many

For more data, use inquiry card.

colors. / National Industries Div., AVM Corp. A*

626 CUBE TABLE / This open-bottom table is 17 by 17 by 17 in., of ¼-in. bronze Plexiglas. Edges can be sanded or polished. Connectors are 1½-in. Plexiglas cubes, glued, to give a translucent appearance. / Creative Ideas.

627 OFFICE DESKS / A series of desks incorporating resilient vinyl laminate surfacing is offered in many colors. All have steel inner frames with an integral drawer suspension system. Either the open look or the cube look is possible. / Drexel Office Furniture.

628 BUTCHERBLOCK GROUP / The dining chair features chrome-plated steel framing, urethane foam seat and plywood seat frame. The dining table with solid maple top has chrome-plated steel legs. Buffet has a maple top. / Thayer Coggin, Inc.

629 KITCHEN CABINETS / This group features solid oak construction, exclusive beveled-edge construction, self-closing hinges and reversible doors. Quiet drawers offer plastic finish interiors. / Raygold Div., Boise Cascade.

630 LOW-COST CHAIR / Part of of the *Lodgepole* line, this chair is designed for utility at low cost. It is straightforward and simple in appearance, made of solid pine, steel and high-density particleboard. / Northwood Corp.

631 OPEN PLAN SYSTEM / Components consist of tops, sides, drawers, storage units and more that can be used with panels to form complete work stations. Acoustical properties are offered. / Rosemount Partitions, Inc.

632 PEDESTAL SYSTEM / A hub and a leg in chrome are available in several sizes and orifice types, for assembling in a wide variety of configurations to fit any table top. The system offers unity of design with unlimited flexibility. / Krueger.

RUGS

633 CUSTOMIZED RUGS / Rugs and carpets of pure wool are hand-tufted from yarn specially spun, scoured and dyed. Custom design services are offered. / V'Soske, Inc.

634 ALL-WOOL RUG / Designed by Roger McDonald for use in a seaside house, this hand-tufted rug with cut pile is an example of the workmanship offered by the manufacturer. Wall hangings are also created on a custom basis. / V'Soske.

SEATING

635 BUTCHERBLOCK SEATING / Solid walnut and oak are combined, with jumbo tufted upholstery in vinyl. Chair, love seat and three-seat sofa are offered. / Monarch Furniture Corp.

636 WALNUT OFFICE GROUP / The *Plateau I* collection offers walnut as the principal material, with legs in bronze or polished chrome finishes. Chairs feature full perimeter walnut framing around upholstered inserts. / Monarch Furniture Corp.

637 MODULAR SEATING / Eight basic seating units are made of multiple-density urethane. Tables are textured fiberglass. Suited to intricate island arrangements, *Modulari* can be configured into conventional sofas and loveseats as well. / Jacobson/McKiness, Inc.

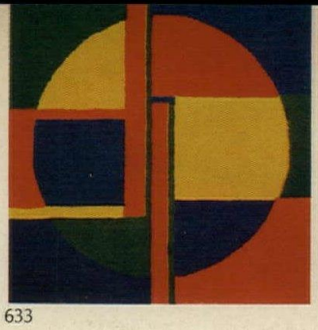
638 OFFICE CHAIR / Charles Eames has designed this chair, using a process that bonds the covering, chair core and shell. Cover is fabric or vinyl on a fiberglass reinforced plastic shell. Overall width is 26 in. Cushion can be removed for cleaning. / Herman Miller, Inc.

639 LEATHER CHAIR / Made of mirror-chrome tube and black or brown suede leather, the *Modello Gio* chair is a design by Giovanni Offredi. / Vecta Contract.

640 CONFERENCE CHAIR / Also suited to dining or lounge areas, this chair is available in two sizes and seat heights, with or without arms. Made of polished chrome steel tube, with natural or black saddle leather. A table can be suspended between the chairs. / Stendig, Inc.

641 SIDE CHAIR / Part of the *Cantilever* collection, this chair is made of chrome-plated tubular steel with black maple frame and natural cane seat and back. All designs are available with upholstered seat and back. Designed by Arthur Umanoff. / Thonet Industries, Inc.

642 LOUNGE CHAIR / Laminated blonde oak combines with brightly colored tweeds in this chair, part of the *Skandia* series. / Thonet Industries, Inc.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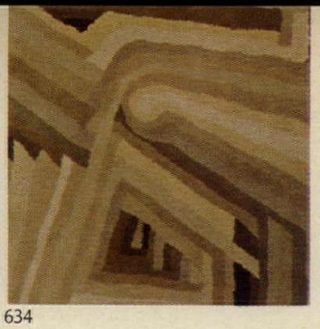
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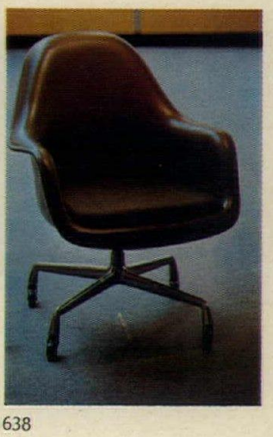
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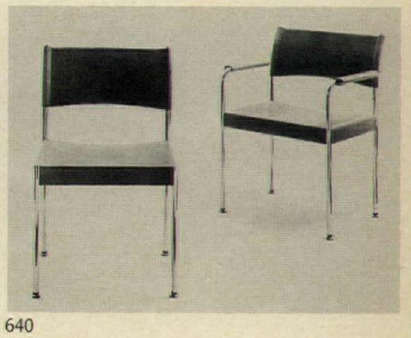
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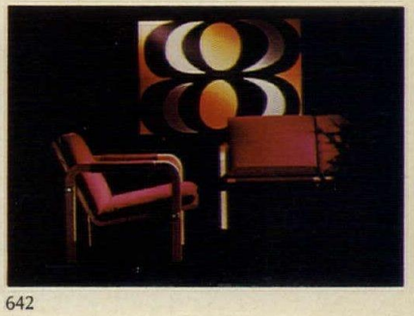
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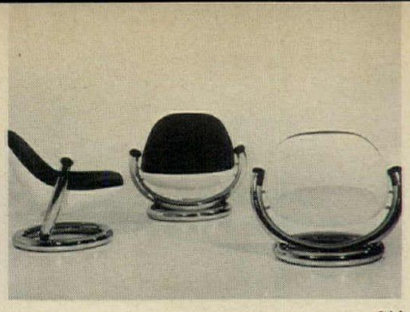

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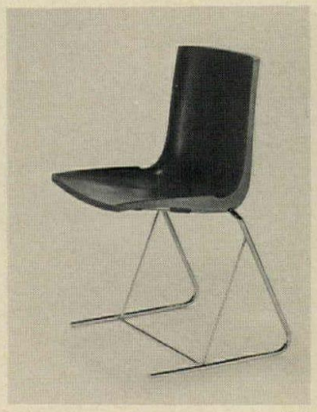
643 LEATHER ARM CHAIR / From Switzerland, this chair is in cast aluminum with polished finish; upholstered in mocha-colored leather or vinyls and fabrics. / Thonet Industries , Inc.

644 FIBERGLASS CHAIR / Molded shell is attached to a tubular steel base, chrome-plated. The white shell is upholstered in leather, vinyl or fabrics, in various colors. Called the *Anaconda Chair.* / Thonet Industries, Inc.

645 FIBERGLASS ARMCHAIR / Two- and three-seater lounges are also available in the *American Contemporary Industries Collection.* Loose cushions in vinyls or fabrics are placed in the frames, offered in various bright colors in addition to white. / Thonet Industries, Inc.



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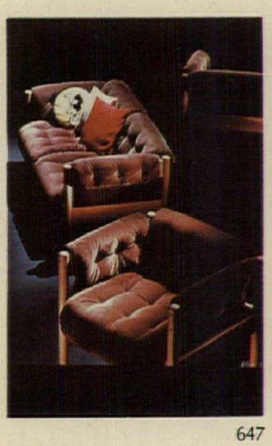

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646 STACKING CHAIR / This chair can be stacked as high as 20 units. Part of the *Straessle* series from Switzerland. / Thonet Industries, Inc.

647 TWO-SEATER / Over-stuffed tufted seat and arm cushions curve around a natural oak frame in the *Optima* group. Available in a three-seat model and a lounge chair style. / Thonet Industries, Inc.

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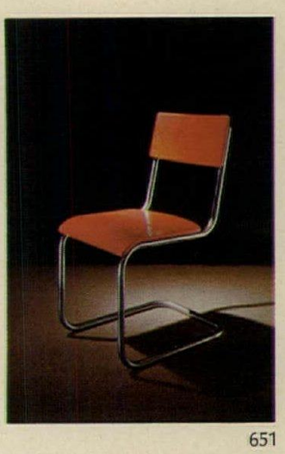

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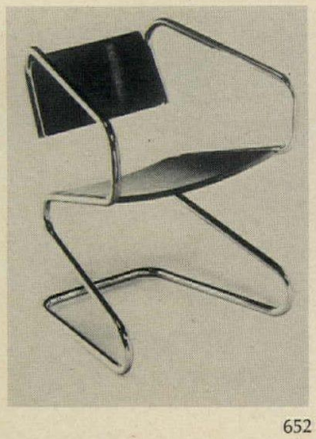
648 LOUNGE GROUP / Reflecting the revival of the simple lines of the Bauhaus School, this group is available in synthetic suede and polished tubular steel. Model 4352. / Thonet Industries, Inc.

649 CLUB CHAIR / From the *Premiere* collection, the chair is designed for reception areas and public lounges. Polished chrome cantilevered frame supports sling sides, with tight seat cushion and loose back. In genuine suede in a choice of taupe or rust. Also available in sailcloth. / Thonet Industries, Inc.



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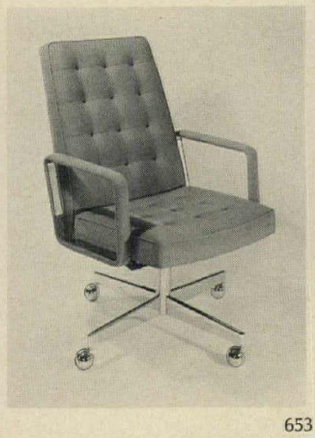

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650 TWO-SEATER / Bright, tweed upholstery over a butcherblock frame characterizes this line. The seat of the model shown is 43 in. long. / Thonet Industries, Inc.

651 CLASSIC CHAIR / A revival of a classic Bauhaus design, the *Stam* chair dates from 1926. It is updated with six translucent stains, bright colors that allow the wood grain to show. Oak veneer over molded plywood on a chrome cantilevered frame. / Thonet Industries, Inc.

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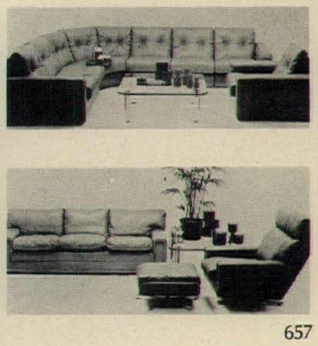

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652 STACKING CHAIR / The *Chorus Line* stacking chair consists of a polished chrome frame gripping a maple-veneered seat and back. Available in six translucent colors. Stacks vertically as well as in a tight horizontal group. Thonet Industries, Inc.

653 EXECUTIVE CHAIR / This chair comes with shoulder-high backrest, buttonless tufting on multi-layered cushioning, and a torsion-bar tilting mechanism. / The Shaw-Walker Co.

654 SEATING CLUSTER / Shown is one of a wide number of arrangements possible with the *Cubo* line, made of "self-skinned" urethane foam, reinforced in steel, and dacron-clad. Floating back and arm sections lock in place with concealed steel connections. / Harvey Probber, Inc.

655 LOUNGE SEATING / Upholstered seating has been added to the *Kill* collection, available in 18 leathers and 30 hand-woven woolens. Frame is of soft-edge matte chrome steel. / Harvey Probber, Inc.

656 WICKER SEATING / Natural, handwoven wicker, suede and a chrome base are combined to create this chair in the Bauhaus tradition. Separate foam rubber seat and back, covered in suede, add comfort. / Harvey Probber, Inc.

657 LEATHER SEATING / This furniture is offered by a British manufacturer which makes each piece in unit form, allowing multiple groupings to any length. Frames are of selected hardwood and seats and backs are thick foam and dacron supported by rubber webbing. / Arthur Gordon Assoc.

658 SIDE CHAIR / Finished in teak or walnut grain, this chair is constructed of lacquered plywood. It can be stacked 40 high within four feet. / The General Fireproofing Co.

659 CHAPEL CHAIR / This stacking chair is constructed of solid red oak, in a variety of finishes, including custom finishes. The foam-padded seat is upholstered in a choice of vinyl and cloth fabrics. / Endicott Church Furniture.

660 AIRPORT SEATING / An aluminum frame-suspension concept is used to create this modular seating designed by Andrew Ivar Morrison and Bruce R. Hannah. / Knoll International.

661 MULTIPLE SEATING / This add-on line is available with arm or armless versions that can be assembled with a slot-and-bolt fastening. Seat frames are of solid ash with demountable upholstered seat and back. / Eppinger Furniture Inc.

662 OFFICE CHAIR / Called the *Body Chair*, this model is designed to fit the human contours for comfort. Dual-shell reinforced fiberglass construction, fully upholstered, is featured with a steel pedestal base. / The General Fireproofing Co.

663 DESK ARM CHAIR / No tools are required to attach the arm assembly to the chair. The writing surface is available in several colors of plastic laminate over plywood. / The General Fireproofing Co.

664 LOUNGE CHAIR / This Italian design is constructed of round and rectangular polished stainless steel. The upholstered seat and back are filled with poly dacron. / Davis Furniture Industries, Inc.

665 LOUNGE CHAIR / In the luxury range, this chair with hardwood frame, is on a base of 6-in. steel tube and ½-in. thick solid steel plate, finished in mirror chrome. / Vecta Contract Co.

666 LOUNGE ENSEMBLE / A reinforced fiberglass shell on a recessed black base forms tables and seating in this related group. Shells are offered in colors, with various covers. / Vecta Contract Co.

667 SLING CHAIR / With 1½ in.-diameter mirror polished chrome-plated steel tubing, this sling chair can be covered in a variety of materials. / Vecta Contract Co.

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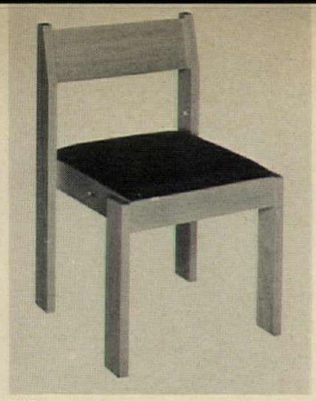

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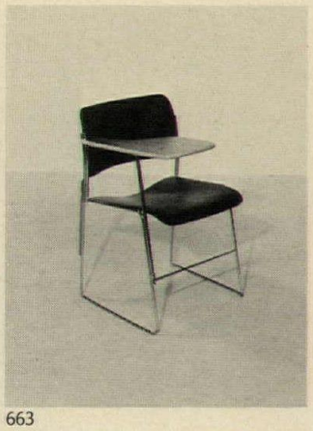

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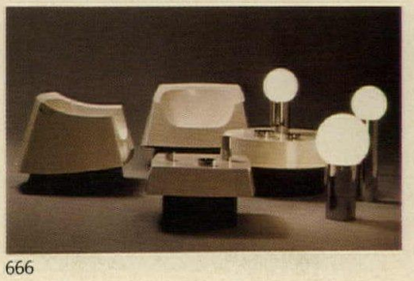

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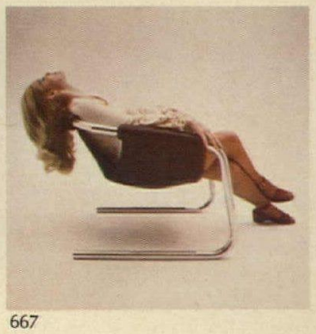

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668 **SLED-BASE CHAIR** / A simple shell chair, this model offers a controlled torsional tilting motion to reduce tension and fatigue. A rigid urethane shell is featured. / Vecta Contract Co.

669 **SWIVEL CHAIR** / Solid cast-aluminum frame and understructure in heat-fused fluidized butyrate characterizes this executive chair that can be ordered in various covers. Several frame colors are available, including gloss black ripple that resembles old porcelain. / Vecta Contract Co.

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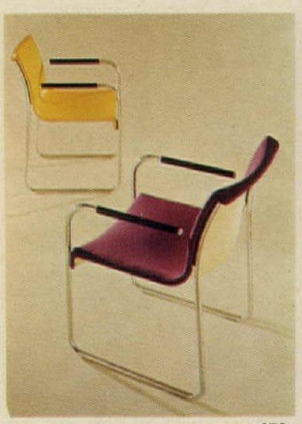
670 **LOUNGE CHAIR, SOFA** / The shells of this grouping are formed of ABS, reinforced with fiberglass and rigid urethane. The filling is polyurethane foam, 5 in. thick in seat section. Covers are optional and replaceable in the field. / Vecta Contract Co.

671 **OFFICE CHAIRS** / The *SOF Series* of chairs is made of round steel tubing with polished chrome finish. Fiberglass seat and back shells are deeply curved and have protective bumper edging. Five models include high- and low-back swivels, secretarial, sled-base side, and a two-position side chair for conference or lounge use. / Harter Corp.



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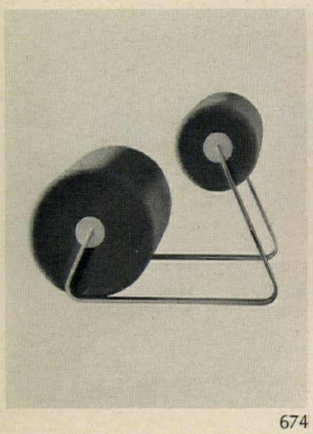
672 **ALL PURPOSE ARMCHAIR** / The plastic shell of the *Model KOE-10* chair is supported on a concealed steel armature to eliminate leg stretchers. The shell is available in seven textured urethane enamel finishes or fabric upholstery. The tubular steel frame has a polished chrome finish and vinyl armrests. / Harter Corp.



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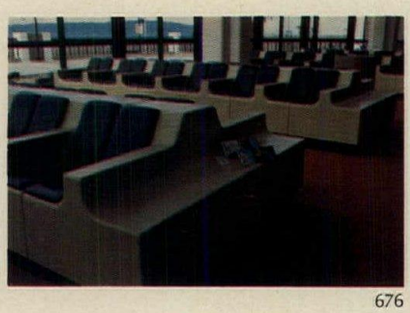
673 **SLING SEATING** / Constructed of polished-chrome-finish steel rod, the *Sling Series* chairs come in five models: secretarial, clerical with arms, tablet arm, and armless or arm side chairs. Side chairs stack 20 high and can be ganged. / Harter Corp.

674 **"STEAMROLLER" CHAIR** / A novel design for lounge seating combines fabric-covered rolls, as seat and back, with a frame of bar-stock aluminum. The unit is available in a modular series of single or multiple seats. / Raspberry Fence, Inc.



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675 **THEATER SEAT** / The slender profile, free-standing design provides total radius and placement flexibility with maximum aisle space economy. Counterbalanced seat requires no complicated spring mechanism and is silent in operation. A disappearing tablet arm is of high-strength plastic. / JG Furniture Co.

676 **PUBLIC SEATING** / *TMS Series* is free of visible connectors, legs, or other impediments to cleaning. Group "seating islands" or linear arrangements are possible. Suited for outdoor use, seat elements are molded of fiberglass. Available upholstered. / Arcon Furniture. I*

677 **OFFICE CHAIRS** / This new line of *200 Series Chairs* will offer a choice of 20 variations: swivels with and without arms, clerk and secretarial, conference and side chairs. Arms and outer shell are of high-impact ABS copolymer; fabric upholstery may be tufted or non-tufted. Bases are mirror-, colored-, or brushed-chrome. / All-Steel Equipment Inc.

678 **SEAT REPLACEMENT KIT** / A stadium seat replacement kit for worn steel-and-wood seats is offered to replace a slat or entire seat. The kit components can be attached to an existing steel frame. Several styles are available to match existing designs. The aluminum surface is finished in anodized silver or baked enamel color. / Howmet Corp. A*

679 **UPHOLSTERED SEATING** / A full selection of fabrics, vinyls and leathers is combined with oiled walnut to produce this modular seating called *Pianura*. It is available with or without arms and can be ganged in a variety of configurations, complemented with low tables in walnut. / Atelier International, Ltd.

680 **PLASTIC STACKING SEAT** / *Enneuno* can also be ganged and is available in both matte and glossy finishes, in many colors. The chair is made of compression-molded fiberglass. / Atelier International, Ltd.

681 **URETHANE SEATING** / *Camaleonda* is made of molded foam, covered in a full selection of fabrics, vinyls and leathers. Base, back and arm units are arrangeable in an infinite variety of patterns. / Atelier International, Ltd.

682 **ECONOMICAL LOUNGE** / The *Bonanza* collection is offered at modest prices because of the simultaneous molding of internal steel reinforcement, plastic upholstery edge detail, the exterior black urethan skin and the foam cushioning. / Atelier International, Ltd.

For more data, use inquiry card.

683 LOUNGE SEATING / Offered at a modest price, the *Amanta 24* consists of a 24-in. seating module and an 8-in. arm module on a compression-molded fiberglass shell. The seat is 17½ in. high and can be ganged. The shell comes in brown, black or white and can be upholstered in fabric, vinyl or leather. / Atelier International, Ltd.

684 PLASTIC FOLDING CHAIR / An import from Italy, this new chair (Style #6E-40) is plastic injection molded (ABS resin) with hinges and joints of nylon. It is available in lobster red, black or white; colors reportedly will not fade in the sun with outdoor use. / Thonet Industries, Inc.

685 DINING ARMCHAIR / Designed by German architect, Guenter Renkel, this *Cortina Armchair #570* features arms of elm with pencil-rounded edges and an enamel finish in a choice of colors. The upholstered seat and back are available in vinyl or soft fabrics. There is also an armless version. / Thonet Industries, Inc.

686 MODULAR SEATING / Designed for flexible seating arrangements, the *MODLOK* chairs interlock for safety and stack from 7- to 10- high, depending on accessories. Construction is of natural-finish, laminated Danish beech, with a wide selection of upholstery colors and fabrics. / Sauder Designare International, Inc.

687 SLING CHAIR / Designed by Milo Baughman, the chair features a leather seat on a chrome-plated steel frame. / Thayer Coggin, Inc.

688 EXECUTIVE CHAIR / From the William Plunkett Collection, this upholstered chair is only one of many featuring sleek styling and the modular rib seat-back design. / Orfield Assocs.

689 AUDITORIUM SEATING / All plastic seat and back, upholstered seat and back or upholstered seat and plastic back are a few of the options available with this seating which features smooth-operating gravity-lift seat. Cast iron standards are offered. / American Seating Co. A,D*

690 SLED-BASE CHAIR / This sculptured stacking chair features a one-piece shell of compregnated beechwood plys and horizontal sled base frame. The shell is splinter-, crack-, chip, scratch- and acid-resistant. / American Seating Co.

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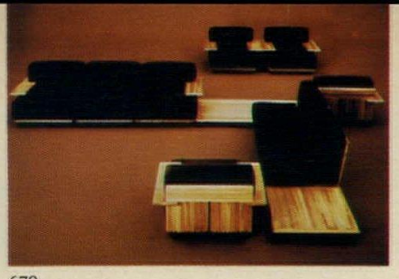
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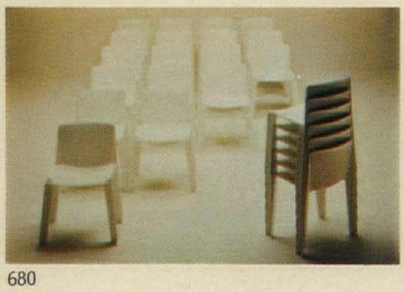
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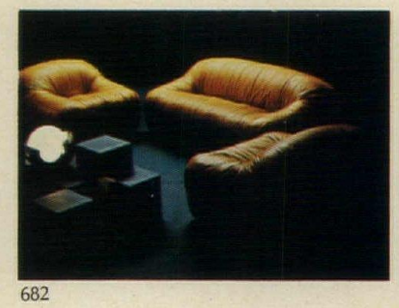
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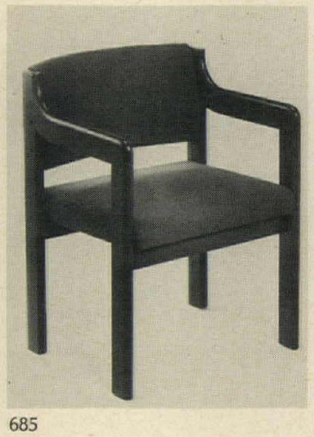
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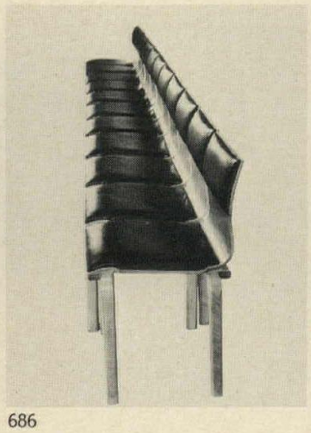
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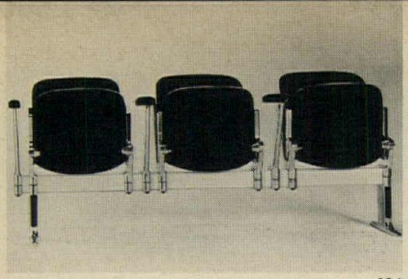

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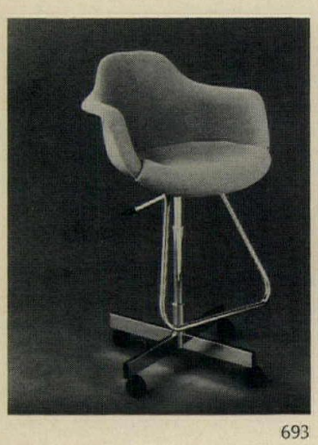

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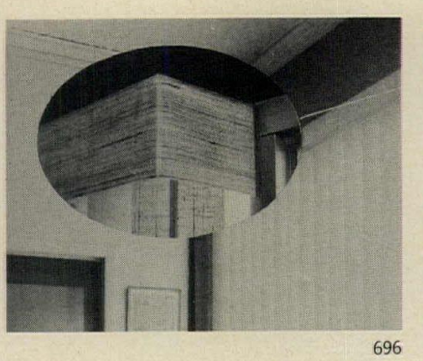

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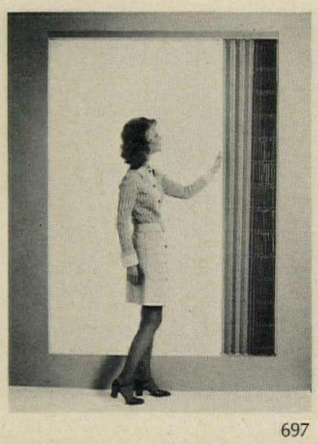

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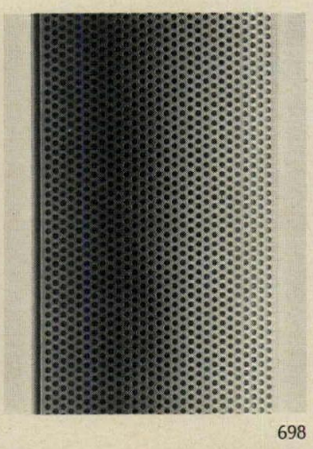

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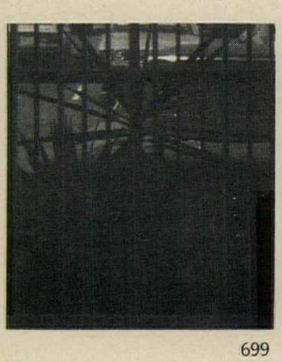

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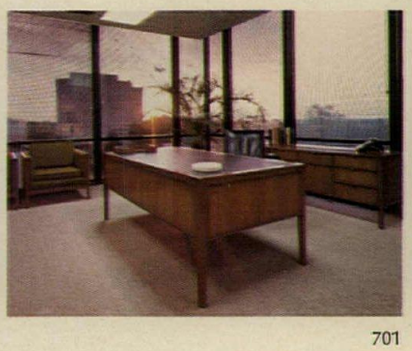

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691 AUDITORIUM SEATS / The *Axis 4000* design features structural components and bases of mirror-finished aluminum. The seat is spring-loaded and tension can be adjusted. Offered in oak, walnut or rosewood veneer, six fabric colors, or eight vinyl colors. / Krueger.

692 LOUNGE GROUP / Group consists of two high-back chairs, one low-back chair, an ottoman and three tables. Chairs are available with or without arms. Upholstered in nylon, wool or vinyl, the chairs come with chrome bases and open cushion design. / American Seating Co. A,D*

693 SWIVEL STOOL / Designed for draftsmen, bank tellers or other cashier types, this stool features pneumatic adjustment with a 24-in. to 31-in. range. Available with or without casters and in plain or upholstered versions. / Krueger.

WINDOW TREATMENT

694 GLARE AND HEAT SCREEN / The *Comfort Screen* can be cut to fit any frame and blocks up to two-thirds of the sun's heat, reducing air conditioning costs. / J. P. Stevens & Co., Inc.

695 TRAVERSING SYSTEM. / Using a flat drapery panel, this system creates folding drapes, without pleats. A nylon tape stitched to the drapery is attached to the folding linkage by snap-on buttons. The track may match the fabric or wall covering, and is offered in four colors. / Baker Drapery Corp.

696 VALANCE / Vertical fabric blinds in many colors and textures are available with a valance in a 5-in. width proportional to both 3½ in.- and 5 in.-louvers. The valance is made of plastic-impregnated fabric identical to the louvers. / Thru-Vu Vertical Blind Corp.

697 ALUMINUM DRAPERIES / An all-aluminum system consists of a trim cornice with built-in drapery track, and "draperies" of louvers which lock together to present an uninterrupted expanse when fully closed and pleat automatically when moved by hand along the track. Eleven enamel-finished colors are available. / Alcan Building Products.

698 ACOUSTICAL BLINDS / Vertical blinds are offered with sound absorption capabilities. Excellent shading and heat insulation are also offered. Standard installation and controls are used. / LouverDrape, Inc. A*

699 VERTICAL BLINDS / With three-way perforated louvers, this product eliminates glare and heat while providing privacy. Finger-tip rotation permits full sun screen during the day and complete privacy at night. Louvers traverse like drapes. / LouverDrape, Inc. A*

700 VENETIAN BLINDS / Slim 1 in. slats and headrail and bottom rail only 1 by 1½ in. emphasize contemporary styling of these blinds. Slats tilt with torque wand or cords. Full visibility when opened. / Marathon Carey-McFall Co. A, I, D*

701 BLINDS / The product is offered in 60 colors, including metallics. Also in perforated slats. Blinds can have one color on the inside and another on the outside. The blinds can be motorized. / Levolor Lorentzen, Inc.

702 SHUTTERS / Pine or white oak shutters are offered in ¾-in. and 1⅛-in. thickness, in a rustic texture. Massive 2½-in. blade louvers pivot 2¼ in. on center. Horizontal and vertical louvers are available, as are custom panels. / Pinecrest, Inc.

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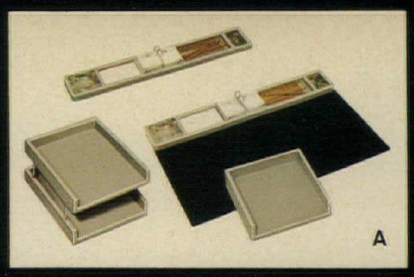

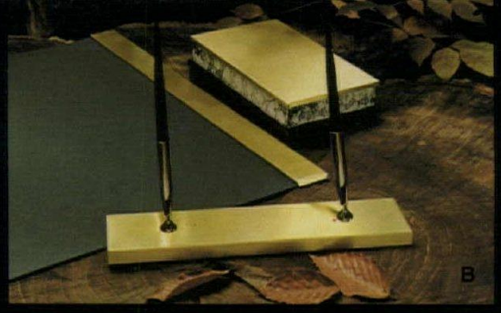

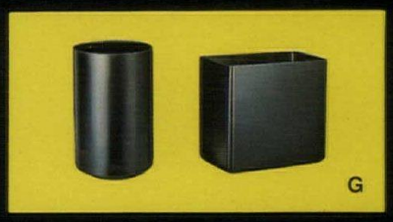

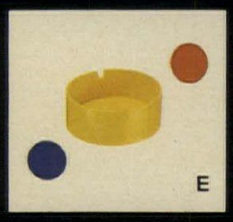

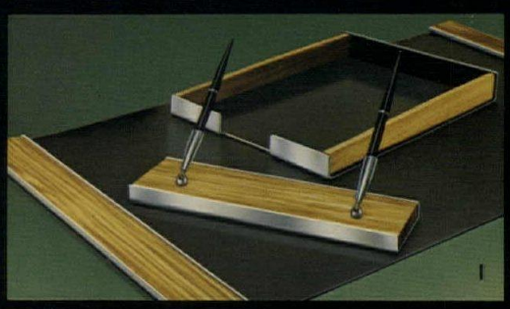

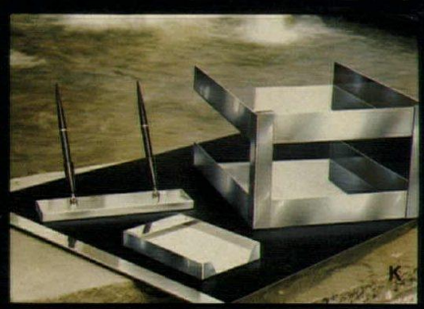

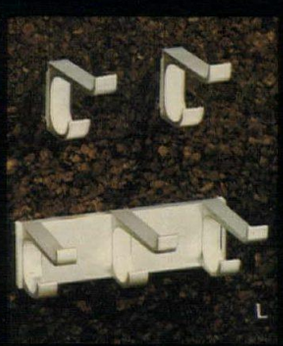

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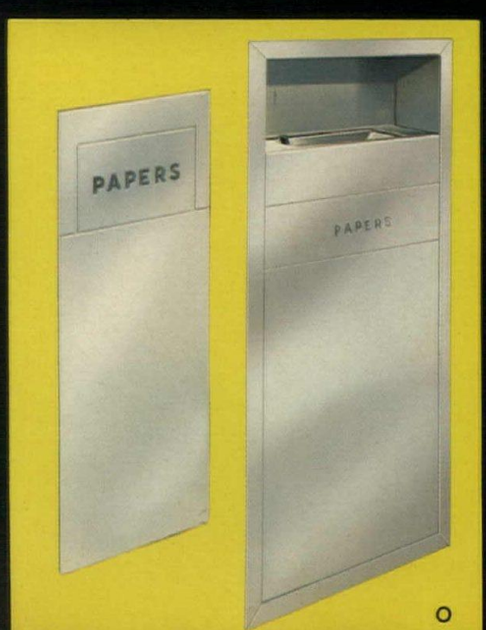

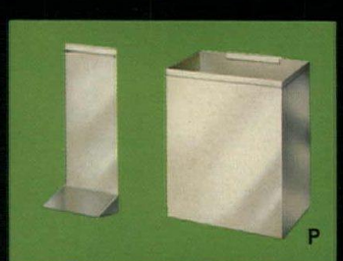

A. 2100 GROUP: Beautiful new look. Modern design, durable and versatile materials combine smartness with practicality. Quality decor at budget consideration.

B. 6300 GROUP: Satin brass. Created with all the care and technique of the skilled craftsman. Buffed surfaces in brass for lasting warmth and depth.

ASHTRAYS:

C. D. Ceramic — round or square, high-fired, chip-resistant. Series 166000 (round) and 166100 (square), both available in black, white, yellow, red, blue, green and earth.

E. Enameled — brilliant and burnproof 163200 Series available in red, yellow and blue.

F. Enameled — tip-action top with burnproof enamel finish. 164100 Series available in blue, green, burnt orange, yellow and red.

G. CYCOVIN® WASTE BASKETS: Smart, one-piece, molded design. Self-extinguishing grade Cycovin KA. Ultra serviceable in any office.

H. 5300 GROUP: Beautifully grained solid walnut furniture-finished by hand. Transitional styling adds versatility to a variety of office settings.

I. 5600/5500 GROUPS: Oak or walnut woods with hi-polish brass or satin aluminum metal trims available.

J. 3300 GROUP: There's executive decor in this striking combination of black Crush Suavo leather-trimmed with hi-polish brass. Available too in black leather with hi-polish aluminum trim (3400 GROUP); or black leather with black trim (3200 GROUP.)

K. 2600 GROUP: To brighten the desk scene, mirror stainless steel, highly polished in smart, proven design.

L. COAT HOOKS — SOLID ALUMINUM: Available in single-, three-, and five-hat and coat hook units with concealed hardware. Choice of anodized aluminum or black.

M. STAINLESS STEEL RECTANGULAR WALL UNITS: Aristocrat® receptacles have hidden-hinge top for greater security. Wall units have flush, tip-action tops with hinges. Available in mirror or satin-finished stainless steel.

N. CYLINDRICAL WALL UNIT: #124500 Series, available in satin chrome, mirror chrome, or antique bronze. Has funnel top, die-cast backplate with inlay.

O. RECESSED WALL UNITS: Fully recessed. Satin stainless steel trash unit has door and swing-out trash container with disposable plastic bag. Dual-purpose unit has same door construction and is finished satin aluminum and stainless steel with disposable plastic bag. Ash receiver has tip-action operation.

P. WALL BRACKET: Suspends aluminum or black waste basket from desk side or wall.

Q. ROUND, DUAL-PURPOSE FLOOR RECEPTACLE: Satin chrome, tip-action top. Stainless steel body.

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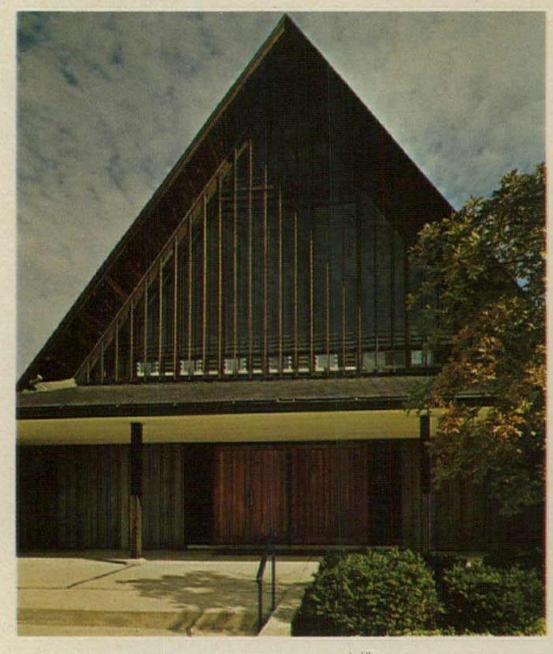
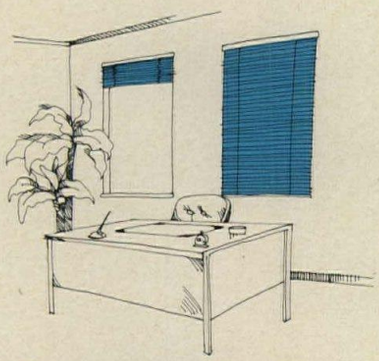
LEVOLOR RIVIERA BLINDS

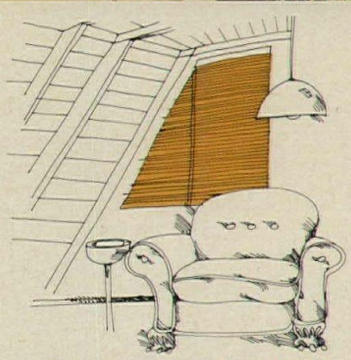
The blinds designed by people who understand architects.



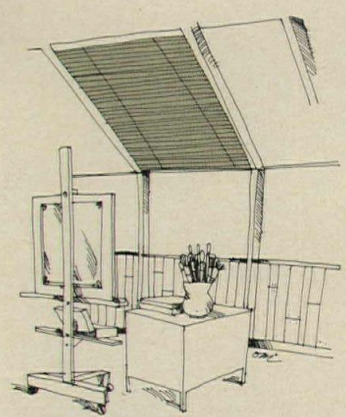
James P. Wong, the architect for this Ann Arbor church wanted to keep the open look of his "A" frame design, yet be able to control the light. Levolor blinds gave him the control he needed without breaking the dramatic lines of his structure.



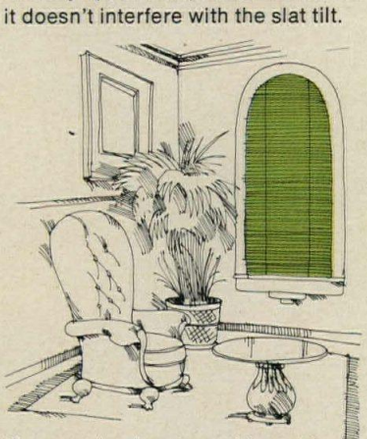
When you want to achieve uniform visual appearance, inside and out, specify Levolor's Top-Lok feature. This device fixes the blind either all the way up, or completely down. And it doesn't interfere with the slat tilt.



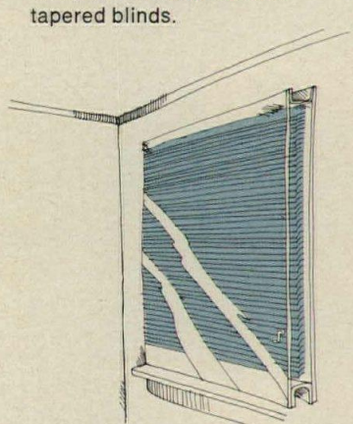
If you want to break away from the straight up and down look, and your design calls for unusual window openings rather than traditional lines, we can help with our tapered blinds.



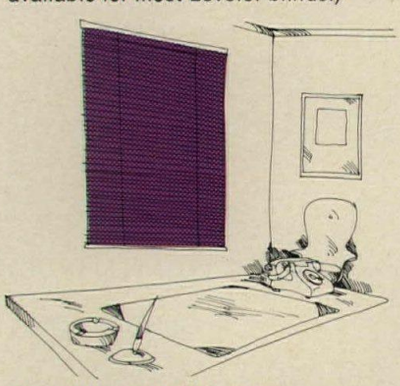
Levolor enjoys working with designers of the unconventional, like Tatter and Kelly. Their Towson College building has inclined windows that are covered with Levolor Rivieras. (motorized controls are available for most Levolor blinds.)



You can do almost anything with a window with the help of Levolor Rivieras in any one of our 60 colors. There are some window shapes (a circle, many trapezoids) which can be fitted with fixed slats only.



Tamper-proof Tween-Glass blinds are set between panes. Offer optimum light control and heat reflectance.
Tell us about your windows before someone with less vision tells you it can't be done.



Our perforated slat (unfortunately impossible to show in a sketch this size) gives you a new dimension in decorating. Thousands of pin-point dots create a star-lit effect while still retaining the light-control functions only blinds can provide.

LEVOLOR BLINDS

FOR ARCHITECTS WHO BREAK THE RULES.

Levolor Lorentzen, Inc., 720 Monroe Street, Hoboken, N.J. 07030.

For more data, write A72 on inquiry card

For more data, write A73 on inquiry card ▶

What makes this All-Steel chair so comfortable?

An inner steel "H" frame in back and seat has been designed into the new 200 Series chair to give you back support and comfort where you need it most, in the lumbar area. This unique structural design also provides added strength and rigidity for years of dependable chair service. 20 models. Choose from a wide selection of colorful fabrics and expanded vinyls.
For more information write: All-Steel Equipment Inc., Aurora, Ill. Showrooms in New York, Chicago, Los Angeles, Aurora. In Canada, B. K. Johl Inc., Montreal, Toronto, Vancouver.

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#194 CASTLE lounge chair designed by sculptor Wendell Castle. Indicative of the extensive selection of durable plastic furniture available from Stendig. Write for our new plastic brochure. Stendig, Inc., 410 E. 62 St., New York City 10021

Stendig

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Lounge, Cleveland Chapter of A.I.A.
Cleveland, Ohio
Architect: Dalton-Dalton-Little-Newport, Inc.

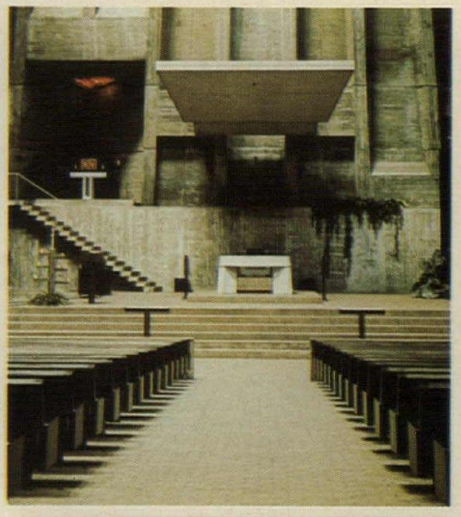
SAUDER, the furniture architects specify... for the buildings they use

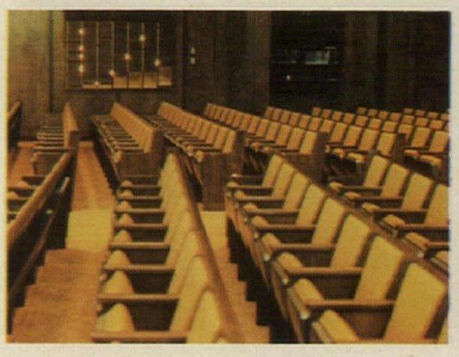
...for the buildings they design.

Prince of Peace Chapel, Aspen, Colorado
Architect: Henneghan & Gale

Churches, synagogues, courthouses, libraries, professional and public buildings. Wherever you expect fine interior furnishings, expect Sauder.

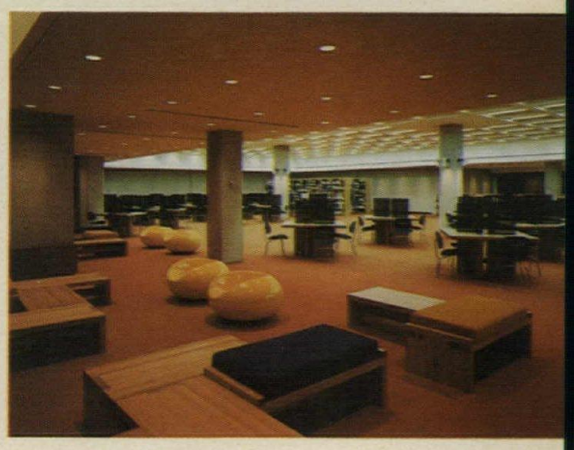
Sauder specializes in quality, custom designed furniture, including the popular butcher block style. Each installation perfectly complements the overall concept with lasting beauty. Budget estimates on your commissions are invited.





Top—St. Francis DeSales Catholic Church
Muskegon, Michigan
Architect: Marcel Breuer & Herbert Beckhard

Lower—Temple Beth Emunah
Brockton, Massachusetts
Architect: Pike and Chaskes



Top—Village of East Hills
Long Island, New York
Albert Wood and Five Sons, Interior Designers

Lower—Library, Lakeland Community College
Mentor, Ohio
Architect: Dalton-Dalton-Little-Newport, Inc.

SAUDER MANFACTURING COMPANY, Archbold, Ohio 43502

For more data, write A77 on inquiry card

Computer rooms generated the need for access flooring. Liskey pioneered in meeting these needs and use of its floors in other specialty areas—hospitals, laboratories, communication centers. These areas of constant change require reallocation of building services, as well as space.

Ambassador College
Office Facilities Buildin

Freedom in Design... Flexibility in Use

Today, new designs, new materials, new systems—at costs 60% below the old "computer floors"—allow architects and engineers to utilize the many advantages of access flooring for general construction.

1973 is the year of "The Floor". Over 1,000,000 square feet of access floor will be utilized in a single general office facility. Are you aware of the advantages of access flooring?

Details can be obtained promptly by calling for "Design Assistance" (301) 796-3300.

For more data, write A78 on inquiry card

LISKEY
ALUMINUM, INC
Baltimore Friendship Airport
Baltimore, Maryland 21240

special construction

uci 13

Pre-assembled buildings as such are not new, yet those shown here reveal that the technology is being refined and improved, and the manufacturers engaged in producing products in this area are tenaciously seeking a larger role in the construction market.

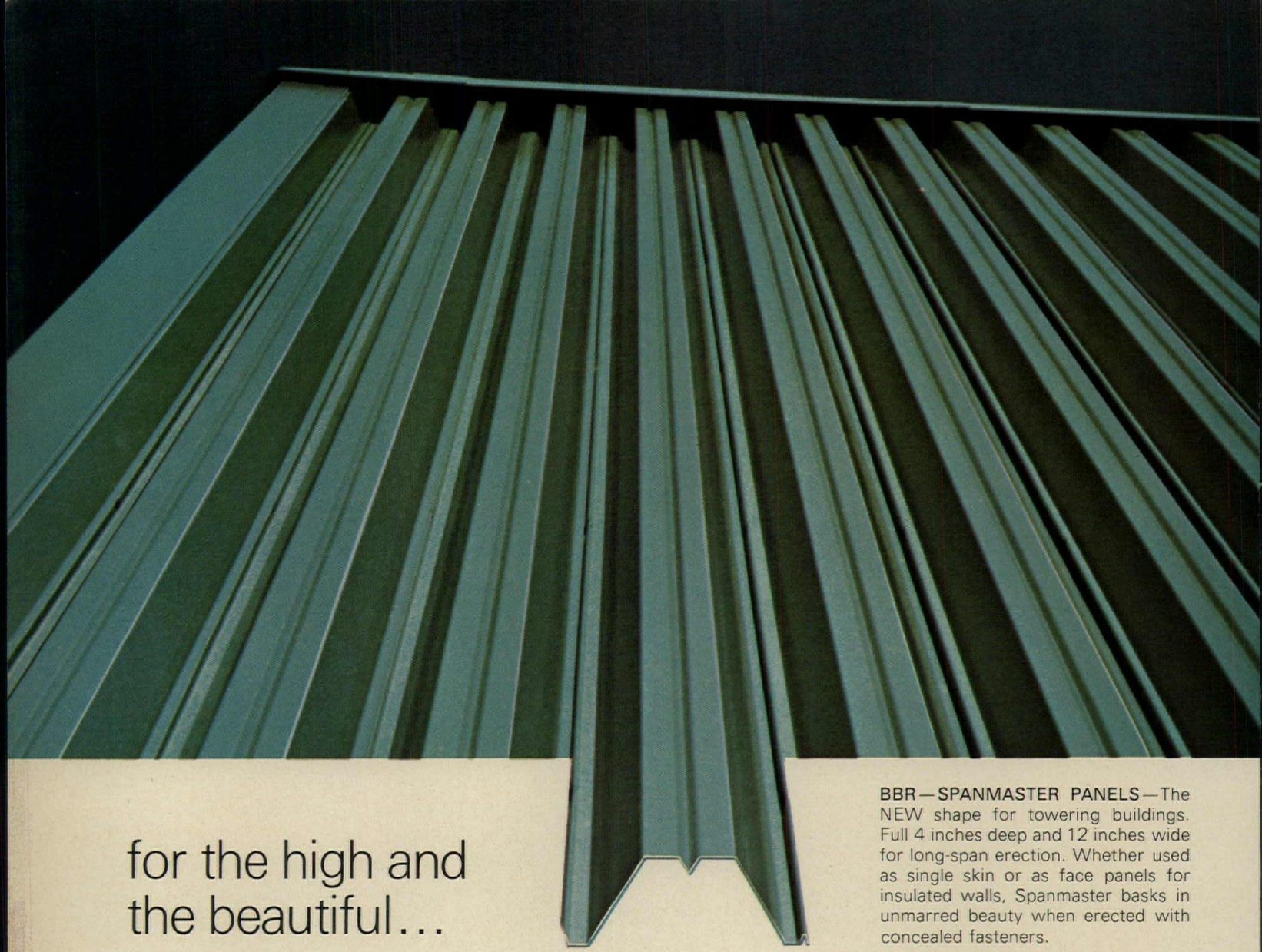
As design in this field continues to improve,—and you will see here that it is improving—more commercial and community building requirements will be satisfied with these systems, once limited essentially to the industrial market. Design improvements, plus the advantages of reduced construction time, fast return on investment, low maintenance and easy expansion may see metal building systems winning a greater share of the nation's construction. Clearly, this industry is making every effort to enlist the architect and engineer who are capable of correctly applying this product type for functional, esthetic and economic needs.

Size is becoming an innovative factor with these structures, with larger clear spans offered and greater heights. The capability to rise above one story in these systems buildings is a new and major development.

In the array of integrated ceilings shown, air distribution, lighting and often sound control are offered in a single package that is part of the one-stop-shopping appeal of this kind of building. The use of plastics by the makers of these products accounts for the variety of visual effects presented this year. Not surprisingly, one of the most distinctive of these systems is the simplest and may prove to be a new standard in the field. It consists of indirect lighting arranged along large parallel ducts.

Certainly, the next few pages will leave no doubt that better-looking and -performing structures can be made from packaged products and systems.

Prepared with the help of
Robert N. McDonald, Butler Manufacturing Co., Kansas City, Mo.



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long-span, deep design panels

Dramatic new dimensions in metal building design. Uncommon strength permits long-span erection—20 feet and even more . . . Plus your choice of shapes with shadow-casting deep valleys . . . Amplifies the beauty of your building. It cannot hide in the sun or the hazy distance.

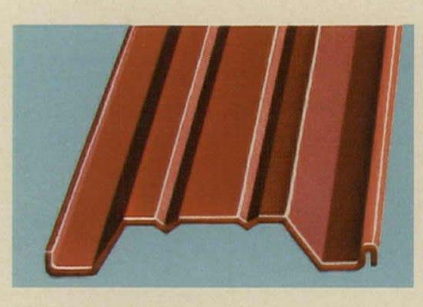
Using them by themselves or in combination with other Binkley designs, you achieve an infinite variety of architectural effects. Let your imagination soar when designing the lofty ones . . . Build big with Binkley.

Call or write today for brochure, "BINKLEY WALL SYSTEMS" or to have a Binkley Sales Engineer call. **THE BINKLEY COMPANY, Building Products Division, 331 Thornton Avenue, St. Louis, Missouri 63119, phone 314-968-4750.**

ROLL FORMERS FOR THE BUILDING INDUSTRY

BBR—SPANMASTER PANELS—The NEW shape for towering buildings. Full 4 inches deep and 12 inches wide for long-span erection. Whether used as single skin or as face panels for insulated walls, Spanmaster basks in unmarred beauty when erected with concealed fasteners.

400 DR—CANYON-RIB—Another new shape for today's big buildings. A real beauty with deep 4-inch design (12 inches wide) for long-span benefits.



ABCF—MAJESTIC—The shape of buildings to come. A husky, 12-inch wide, 2-inch deep intermediate long-span Binkley original.

For more data, write A79 on inquiry card

INTEGRATED CEILINGS

703 LUMINOUS CEILING / This low-cost, three-dimensional suspended ceiling is made of lightweight plastic forming 3- by 3-ft coffers. The product can be adapted for standard downlights, spotlights, sprinklers and luminous skylight areas. / Integrated Ceilings, Inc.

704 CEILING SYSTEM/A fully integrated 5 ft by 5 ft flat modular ceiling system provides acoustical control, lighting and air distribution. Rearrangements can be accomplished without any additional hardware or mechanics. / Armstrong Cork Co. A*

705 CEILING MODULES / *Compac* modules contain components for lighting, air supply, air return, sound absorption and attenuation. Besides standard pyramidal type, modules of other colors with incandescent downlights or amber-tinted G-40 bulbs within deep amber plastic louvers (shown) are available. / Day-Brite Lighting Div., Emerson Electric Co.

706 CEILING SYSTEM / Lighting, air distribution, acoustical control, and partition attachment are integrated in this modular system. Standard module is 60 by 60 in., but may be reduced or varied by any combination of 30 by 60 in. / Donn Products, Inc. A*

707 FLAT CEILING MODULE / Flat *Compac* modules—58¼ in. square by only 6 in. high—provide same sound and air handling, and partition track capability, as pyramidal models, but require less plenum height. Lamp compartment is 28 in. by 28 in., takes two or three U-shaped lamps. / Day-Brite Lighting Div., Emerson Electric Co.

708 LUMINOUS CEILING / Designed to match the dark look of solar glass, *Acrylicube* features an extruded aluminum support system that is completely screened from view. Louver modules 1 ft by 2 ft are covered by a flat opal white or clear prismatic sheet which blocks the view of the hanging system. / Integrated Ceilings, Inc.

709 LIGHTED CEILING SYSTEM / The *PyraMirror* system features inverted stainless steel pyramids in 18-in. or 24-in. modules, high-lighted by exposed incandescent lamp filaments. / Integrated Ceilings, Inc.

710 AIR DISTRIBUTION / This fully coordinated ceiling, with interchangeable components, features fluorescent lighting running along the top of air ducts. The system represents the custom design and engineering services offered to the architect. / Air Factors Co.

711 ILLUMINATED CEILING / This system is composed of molded, rigid urethane available in 2 ft by 2 ft and 2 ft by 3 ft panels. *Fancy Free* will provide 100 footcandles in a space whose width is approximately four times the room height. / Neo-Ray Lighting Systems, Inc.

712 CEILING SYSTEM / A choice of pyramidal or seamless flat 5 ft by 5 ft modules are available with concealed air handling options, acoustical panel styles and a variety of HID and fluorescent lighting fixtures. / Holophane Co., Inc.

PREFABRICATED BUILDINGS

713 PORTABLE OFFICE/ Prefabricated of 2-in. thick aluminum with honeycomb laminated core, the relocatable office is recommended for industrial locations. Choice of window and door types, with exhaust fan, drop ceiling and fluorescent lighting. Special sizes available. / Endure-A-Lifetime Products, Inc. A*

714 CARPORT / Pre-engineered and mass-produced from galvanized steel to withstand up to 90-mph winds, these carports are erected with no on-site welding needed. Three-car bay construction is offered. Styles and finishes are available in several choices. / Childers Mfg. Co. A*

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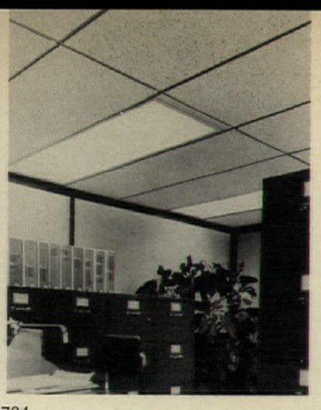
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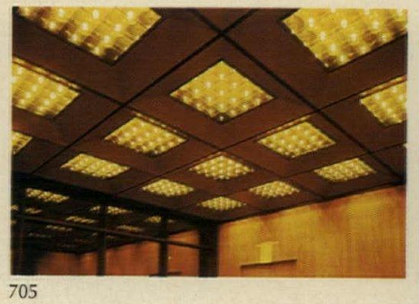
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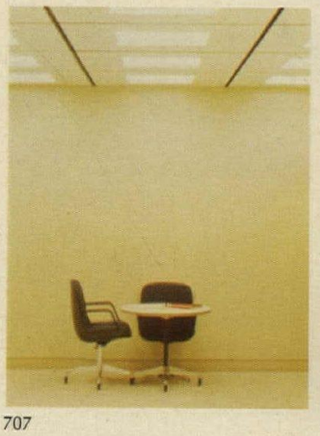
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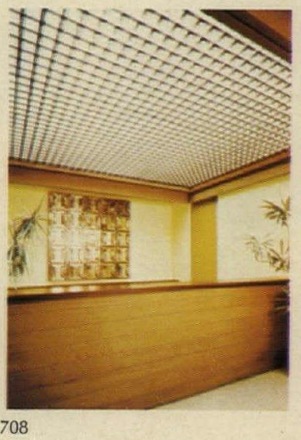
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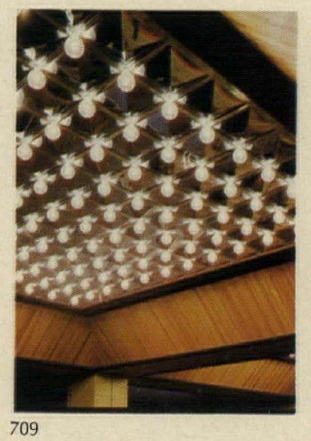
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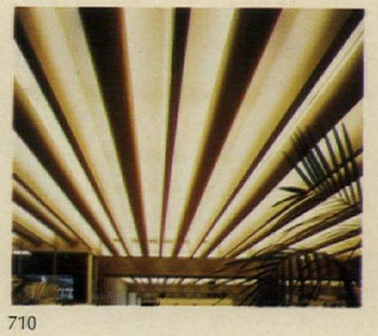
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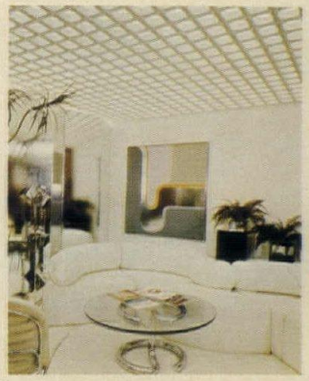
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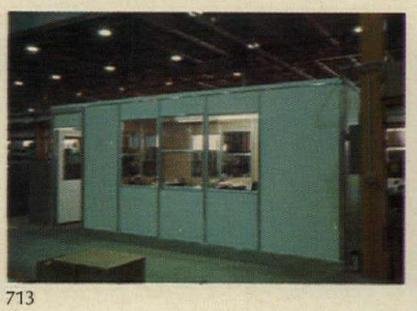
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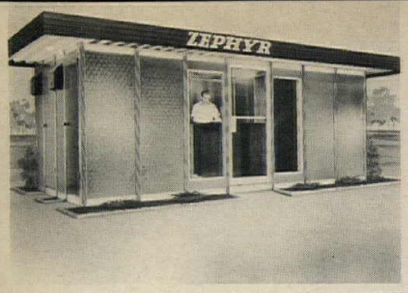
*Included in 1973 Sweet's Catalog File(s).



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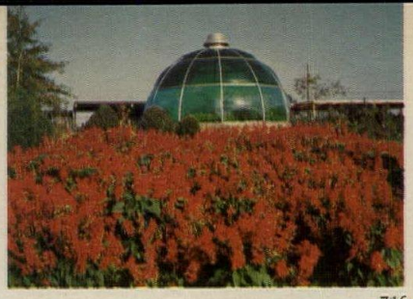

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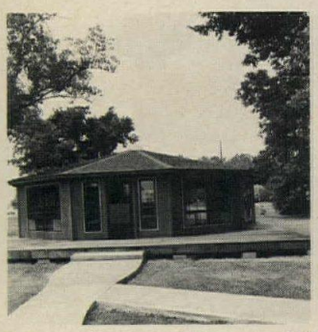

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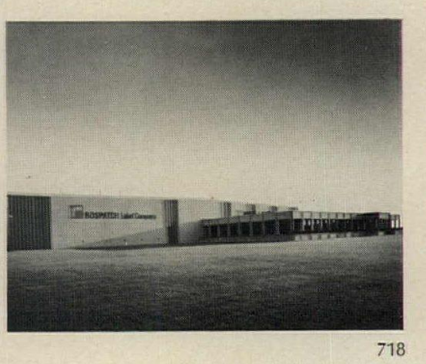

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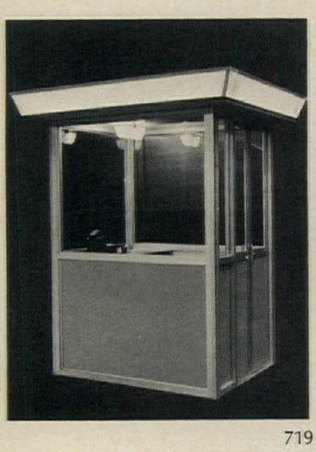

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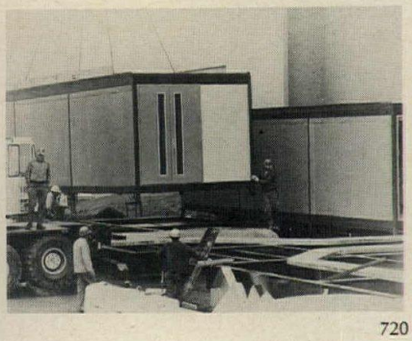

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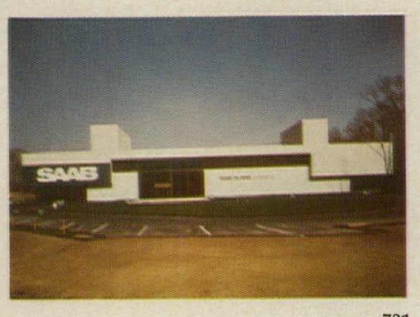

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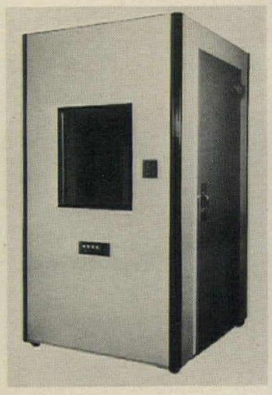

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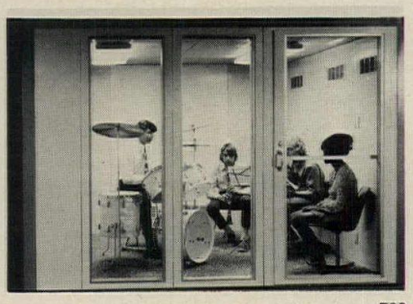

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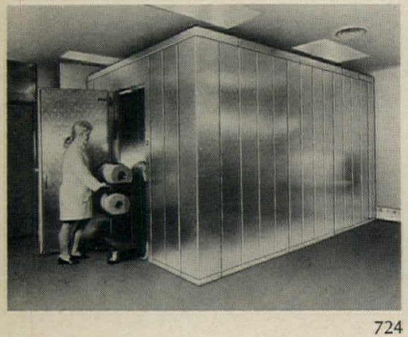

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725

715 SERVICE STATION / Designed to save time and construction costs, this modularized building is ready for site placement and utility hookup. It is offered in a standard 8 ft by 20 ft size, with lighting, flooring, heating and shelving. Welded aluminum construction. / Partition Div., Keene Corp.

716 SOLAR DOME / This product comes in diameters up to 50 ft, and is glazed with clear or colored acrylic. The extruded aluminum structrue incorporates a complete glazing system within each extrusion. / Lord & Burnham. A*

717 CIRCULAR BUILDING / Prefinished *Carousel* modular structure has clear span roof and walls. Insulated walls, insulating windows and doors. Sizes to 2580 sq ft, for slab or pole foundation. / Distinctive Homes Inc.

718 BUILDING SYSTEM / This system features a virtually flat roof combined with clear spans up to 80 ft and bay spacings up to 35 ft. Widths are offered from 40 ft to 240 ft and eave heights up to 28 ft with straight sidewall columns. Available in a wide range of colors and styles. / Stran-Steel Corp. I*

719 SERVICE BUILDING / A compact unit, this building is 7 ft 8 in. wide. Standard shell construction features an extruded aluminum or steel frame. Standard ¼-in. glass is used. The roof is equipped with a water control system. / Ventaire Corp. A,I*

720 CONTROL ROOM / A modular approach to control room design results in prefabricated steel modules 40 ft long and 12 ft wide by 10 ft high. Units serve as the final structure, as well as the assembly and shipping unit. / Westinghouse Electric Corp.

721 BUILDING SYSTEM / The *Landmark* system uses integrated building components, including steel structure wall panels, roof panels and a ceiling subsystem, which serves for illumination, acoustic control, partition support, air supply and return. / Butler Mfg. Co.

SPECIAL PURPOSE ROOMS

722 HEARING TEST BOOTH / For use by doctors, audiologists and industrial hygienists, this unit features a latchless door which is operated by a magnetic-audio seal to assure both secure closure and acoustic integrity. Forced-air ventilation. / Audio Suttle Corp. A*

723 MUSIC ROOM / A music practice room, free-standing and prefabricated in modular sections, consists of 4 ft by 8 ft-panels with accessories and equipment in place. Wiring, lighting, ventilation and vibration isolation are included. / Ray Proof Corp. A*

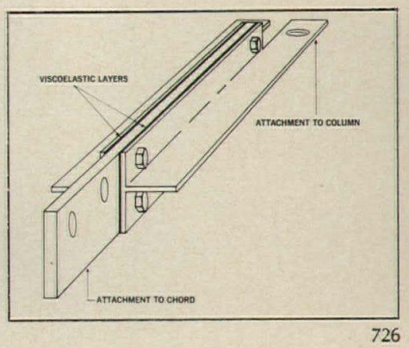
724 COMPUTER TAPE VAULT / Designed for protection of computer media against fire, water, humidity, demagnetization, theft and other damages, this unit consists of prefabricated panels of urethane. Patented joining devices are included for easy installation or expansion. / Liskey Aluminum, Inc. A*

725 SAUNA BATH / 80-sq-ft unit has room for 15 people. Constructed of kiln-dried redwood, it is insulated and strengthened by polyurethane foam. The exterior is laminated plywood. An exterior control panel with automatic timing device operates the 9-kw, 240-volt heater. UL listed. / Urethane Fabricators, Inc. A*

SOUND CONTROL

726 VIBRATION DAMPING / A viscoelastic material that reduces motion in tall buildings when used in building dampers is offered with high energy absorbing characteristics. Mechanical energy of motion is absorbed and dissipated as heat. / 3M Co.

727 SOUND WALL / For noise control in multiple living units, this product is sprayed between studs onto the wallboard. It breaks the paths of vibration along piping and provides noise control more economically than batt insulation, according to the company. / National Cellulose Corp. A*



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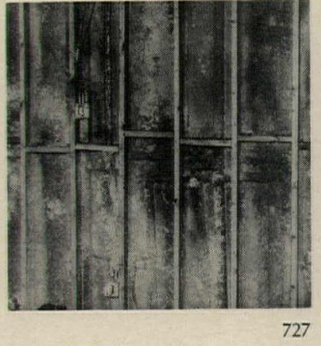

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This and other questions will be answered in Architectural Record's December issue.

The entire December issue will be devoted to an examination and appraisal of what the younger practitioners are doing, aspiring to do—and what that portends for building design, for larger scale planning, for the practice of architecture and for the future of the profession.

The issue will be a voyage of discovery and recognition—and as such will be read with intense interest by the largest architect and engineer audience ever assembled by any architectural magazine.

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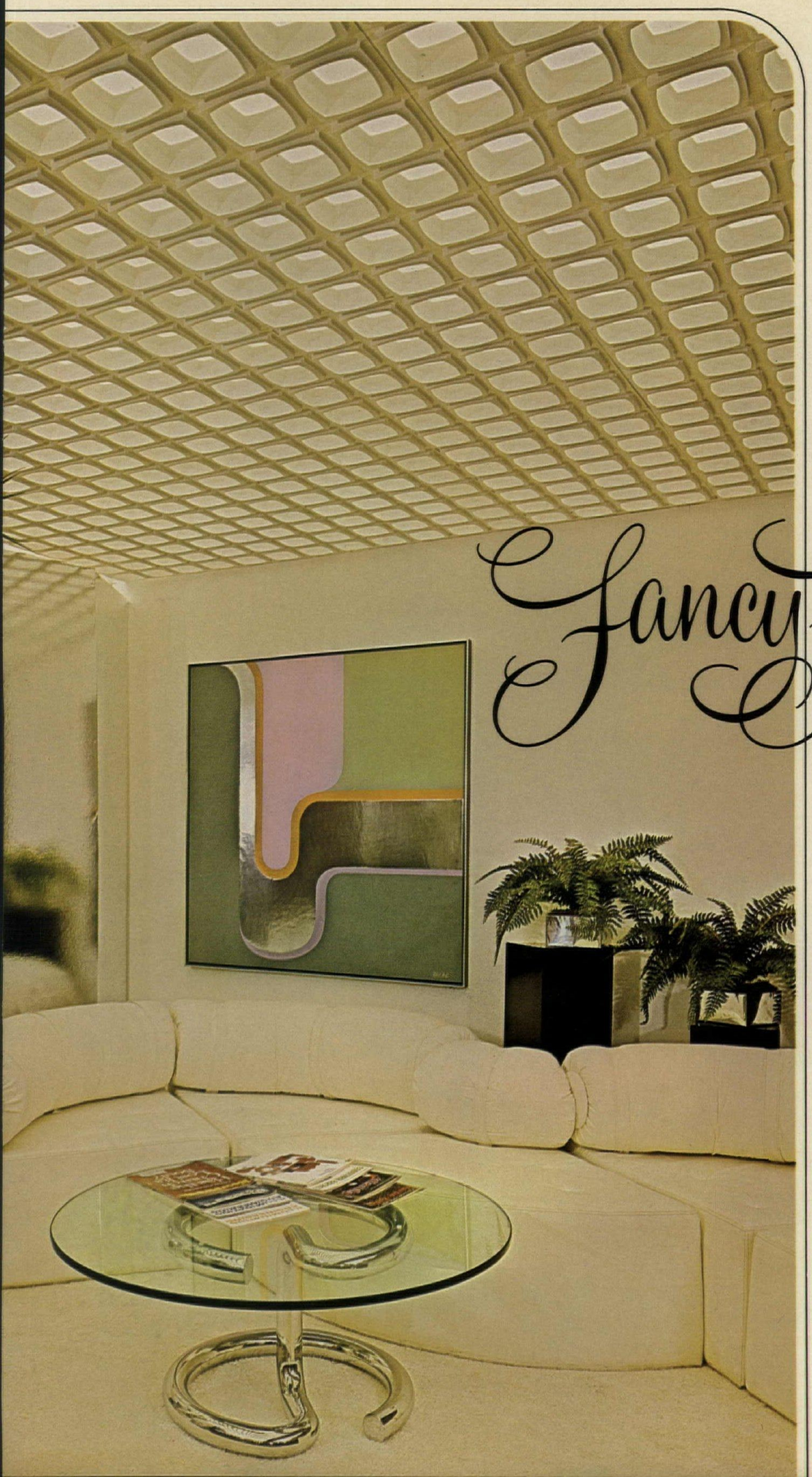

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conveying systems uci 14

The conveying systems of this Division cover a wide range of materials- and people-handling systems—horizontal and vertical conveyors for mail, records, supplies, and inter-office correspondence in office buildings, conveyors to move materials through industrial plants, luggage and freight through airports, prescriptions, linen, and supplies through hospitals; dumbwaiters in a variety of building types; elevator systems from the simplest to the complex, multi-bank systems of super-tall buildings; hoists and cranes used both during construction and inside industrial plants; moving stairs and sidewalks now proliferating in use in shops and stores, in airports, and to move crowds through new urban complexes; pneumatic tube systems, which have come a long way from the time they were sent to get a shopper's change, and are now used to dispense medicines, to transfer small parts, to deliver mail in high-rise buildings; and turntables which are now a critical part of effective design in auditoriums and theaters everywhere.

In addition to a continuous stream of new and useful devices within this Division, industry leaders report these trends and developments:

1. More sophisticated and specialized systems, many computer-controlled; others operated by adaptations of the sophisticated control techniques employed in machine tools. In some cases, manufacturers can devise computer simulation of systems for investigation before the system is actually contracted.

2. Standards set by government agencies are expected to have a heavy impact on conveying systems.

3. The industry anticipates more sophisticated pickup and dispatch stations for use with automatic retrieval systems—especially in manufacturing and warehousing installations.

In short, what appears in the wind is a higher level of control sophistication, a higher level or technical expertise on the part of manufacturers available to architects and engineers designing such systems into their buildings.

Written with the help of Raymond J. Lloyd
Conveyor Equipment Manufacturers Assoc., Washington, D.C.

montgomery's NEW SSC-6010

moves montgomery elevators smoothly and precisely

The new Montgomery SSC-6010 offers a precision elevator power control system with all the desirable characteristics space age technology can supply. The thyristor power unit is of modular construction for quick access and maintenance.

Designed to control Montgomery geared and gearless elevators from 100 to 1500 fpm, Montgomery's SSC-6010 incorporates completely static control for adjustable speed, acceleration and deceleration, precise leveling accuracy and exceptionally smooth stops.

Backed by 10 years of product reliability, the Montgomery SSC-6010 elevator power control system *eliminates* the bulky motor-generator set and its control and maintenance requirements. Plus, SSC-6010 can reduce your elevator power bill up to 15% per elevator.

For more information on Montgomery's new SSC-6010 contact our general office at the address below.

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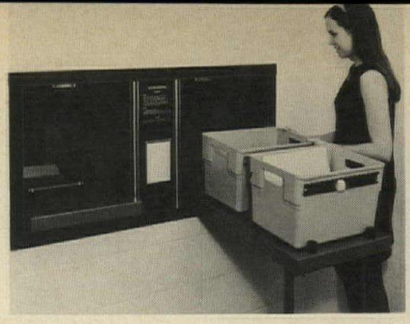

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CONVEYORS & CHUTES

728 MULTI-STORY CONVEYOR / Used to distribute mail, records, supplies and inter-office correspondence in high rise buildings, this conveyor operates on a continuous vertical loop. Tote box can carry 33 lbs of material and the system accepts 12 containers a minute. / Standard Conveyor Co. A*

729 DOCUMENT CONVEYOR / Paperwork can be distributed in an upright position throughout an office and between floors and buildings at speeds up to 600 fpm according to the manufacturer. The conveyor can negotiate tight horizontal turns and can be programmed to reach nearly 1800 stations. / Silver Line Products, Inc, A*

730 LIME HANDLING SYSTEM / Lime handling equipment for water treatment plants and industrial waste water treating operations features components for unloading of bulk trucks and rail hopper cars and conveying the lime to storage. Individual components can be installed in existing systems. / Carter-Day Co.

731 VERTICAL CONVEYOR / Designed to deliver x-rays, mail, lab reports and mass supplies, the system stores regularly required items within the vertical conveyor itself. Recommended for hospital use, the system makes optimum use of the conveyor and shaft at all times. / Olson Div., Acco.

732 TROLLEY / This trolley for power-and-free conveyor systems incorporates into a single unit the functions of leading, intermediate and trailing trolleys normally used. A leading trolley can be easily converted to a trailing trolley by interchange of minor components. / MHS Div., Acco.

733 HOSPITAL CONVEYOR / Using a variety of containers, all designed for ease of use at their destinations, the *Varicon* system reduces the chance of cross-contamination. System is fully automated, with load and unload stations connecting the using departments with risers and runners. / Lamson Div., Diebold Inc.

734 VERTICAL CONVEYOR / Automated messenger service for mail, records and a variety of items is provided from floor to floor, at a rate of 14 deliveries per minute. Mail containers can be locked. A variety of different containers can be provided for diverse handling needs. / Lamson Div., Diebold Inc. A*

735 LUGGAGE DISPENSER / The design of this dispenser permits a selection of various shapes, including oval, square or triangular. A low profile bumper and inclined surface help passengers to select and lift luggage easily. Available in stainless steel and colored polyurethane. / Mathews Conveyor Div., Rex Chainbelt Inc.

736 CONVEYOR TRANSFER / A simplified, low cost method of transferring loads from one conveyor path to another in power-and-free systems simplifies track sections, installations and operational modifications. Quick drops and quick rises are eliminated. / MHS Div., Acco.

ELEVATORS

737 ELEVATOR CONTROL / This variable voltage controller adjusts speed, acceleration and deceleration, precise leveling and assures smooth stops. The *SSC-6010* eliminates the bulky motor-generator set and its control problems. / Montgomery Elevator Co.

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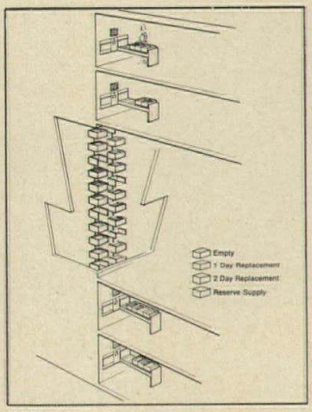

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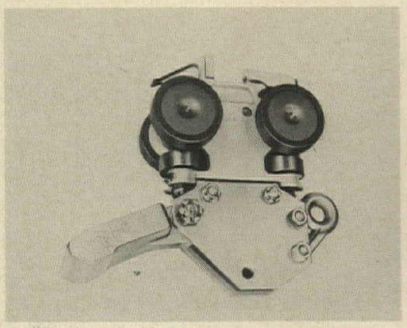

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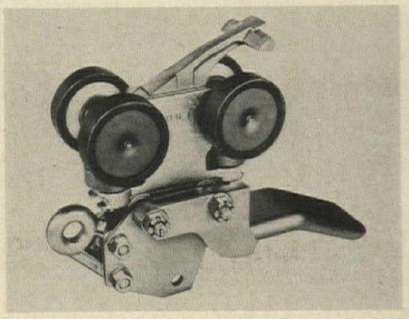

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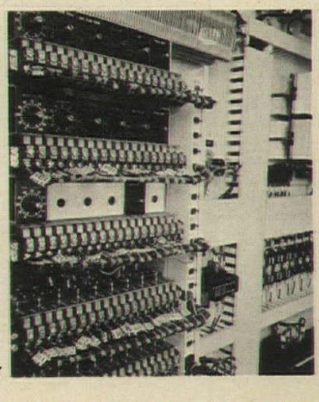

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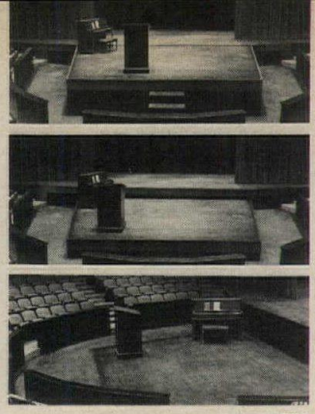

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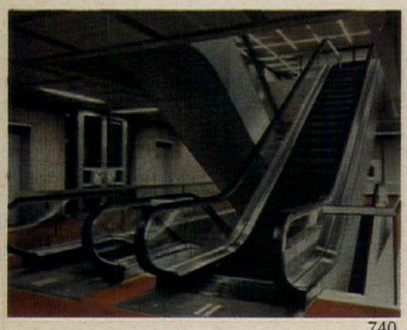

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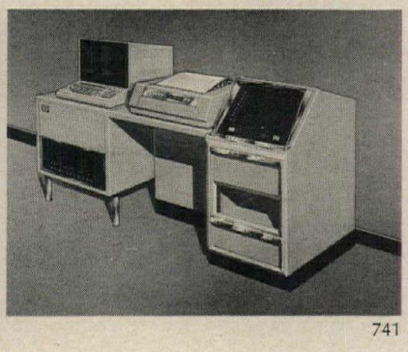

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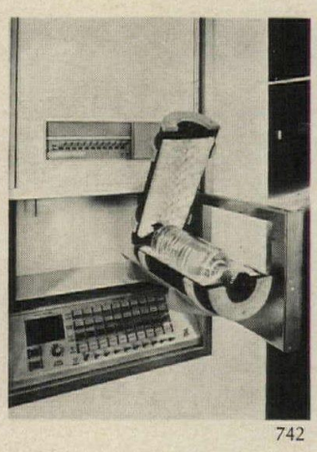

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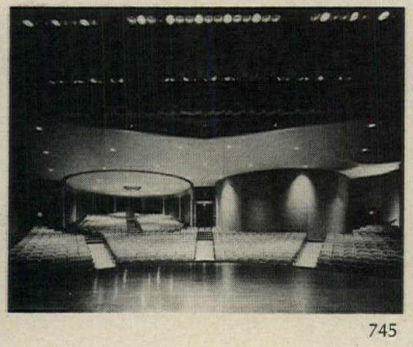

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738 PRE-ENGINEERED ELEVATOR / Automatic elevator service for rises up to 30 stories is offered in the *GT* series of electric-traction passenger elevators. Reduced hoistway masses result in economies on initial and operating costs. Removable panels permit changing of interior decor. / Otis Elevator Co. A*

LIFTS

739 STAGE LIFT / Offered in both hydraulic and screw jack types, this product has a raising capacity of 50 lbs per sq ft., and a sustaining capacity of 100 lbs per sq ft. The producer also provides planning, design, engineering and installation services. / Joyce-Cridland Co.

MOVING STAIRS & WALKS

740 CRYSTAL BALUSTRADES / Offered as an option on the company's escalators, these free-standing balustrades are made of ½-in. structural glass, with no obstructions from top to bottom. / Montgomery Elevator Co. A*

PNEUMATIC TUBE SYSTEMS

741 PNEUMATIC TUBE SYSTEM / Computerized to log transactions, analyze use trends and report maintenance needs, this system features a multi-purpose container. Two types of station terminals are offered —desk-height console or wall mounted. / Powers Regulator Co. A*

742 PHARMACY DISTRIBUTION / A pneumatic tube system designed primarily for dispatching unit-dose medication from pharmacy to nursing floor. Precise air flow brings the carrier to a gentle stop after transporting at a speed of 20 mph. / American Sterilizer Co.

743 PNEUMATIC TUBE /A single-tube system to transport paperwork, money and other items weighing less than one pound, this product carries items two ways, a maximum of 750 ft. / Cutler Air Chute Systems. A*

744 COMPUTERIZED AIR TUBE / A computer makes possible high levels of carrier delivery speed and reliability in a system designed for hospitals and commercial installations. Noise is reduced to a minimum. / Lamson Div., Diebold Inc. A*

TURNTABLES

745 AUDITORIUM TURNTABLE / The turntable consists of a seating structure of steel or wood and a segment of a circular wall built on it. The wall generally consists of outside layers of plaster, offset studs and interleafed fiberglass, with controls incorporated. / The Macton Corp. A*

For more data, use inquiry card.

mechanical uci 15

Many of the most noticeable changes or improvements in plumbing fixtures and accessories in some way reflect a willingness on the part of manufacturers to use more plastics to attain a combination of durability, economy and good appearance in products for the home. New colors and finishes appear as might be expected in an area where style is important.

The need for energy conservation has led to increased product development in heating, air conditioning and ventilating systems, particularly in variable air volume systems. These permit the use of internal building heat to be used directly for temperature control, rather than a separate heat source as is the case with reheat systems. In the last ten years, manufacturers have developed a wide range of hardware and engineering techniques to make variable air volume control practical, and that trend continues. This Division contains a number of these products, all designed to produce the right climate for the right application at reasonable costs.

Zone control is well represented with offerings that show the trend in this area is toward more variety of sizes to do the job while reducing space requirements. Less ductwork is required and system breakdowns are infrequent since the failure of one unit has no effect on others.

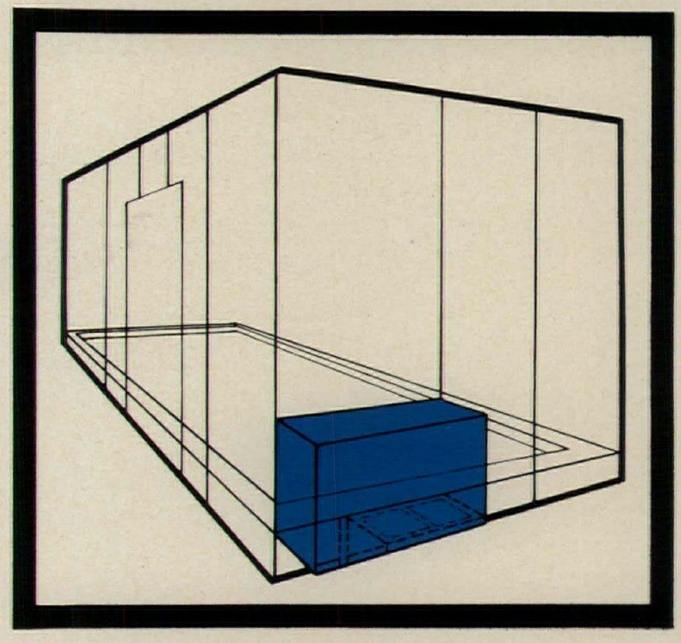
The improvements in the entire area of climate control will see more and more applications where such systems would have once been a luxury. Schools will include more air conditioning which appears to reduce building and maintenance costs as a result of fewer windows being needed and shorter wall perimeters. As the school year approaches full-time status, climate control will become even more important.

Climate control specialists also see a trend to greater integration of heating and cooling, especially in home construction where considerable savings can be realized on available single systems for year-round climate control. Such innovations could mean fixed panes of insulating glass which would permit greater architectural potentials. Separate packaged systems for the home would handle more efficiently the discrepancies between air needs in different portions of the house. More residential zoned control is in the offing.

Prepared with the help of York Div., Borg-Warner Corp., York, Pa.; and the Air-Conditioning and Refrigeration Institute, Arlington, Va.

New for modular housing.

Fedders goes outside to solve two big hang-ups in air conditioning/heating



Hang-up #1 used to be the space waste of an inside central air unit. So Fedders designed the "Outsider." It sits on a slab—for back ducting. Or on an accessory transition piece, if you're ducting under. Either way the "Outsider" doesn't cramp your style inside.

Hang-up #2 used to be the generally smaller size ducting in modular housing. So this Fedders unit is specially designed with high static capability to move the air nice and easy.

The "Outsider" is also a flexible heat-cool package. Available in 50,000 btu gas, or 10 KW electric. And in two cooling capacities with nominal tonnage of 1½ and 2 tons. All certified by A.R.I.

It's protected by enamel-coated heavy gauge steel, and U.L.-approved for outdoor installation.

If you'd like to know more about the "Outsider," call your Fedders central air conditioning distributor, or send Reader's Service Card today.

FEDDERS

Central Air Conditioning & Heating, Edison, New Jersey 08817

For more data, write A85 on inquiry card

AIR DISTRIBUTION

746 ZONE MODULATION / The producer claims this thermostat-controlled system is a low-cost method of accurately controlling room or zone temperatures in offices, motels and commercial buildings. The thermostat-operated motor assembly automatically positions the blade dampers to maintain a set zone or room temperature. / Young Regulator Co.

747 INSULATED A/C HOUSING / *Type HS*, 4-in. thick panels containing fiberglass insulation are clad with 20 gauge solid metal face and perforated back sheets. Offered in standard modules, an enclosure of the required size to accommodate large equipment components can be erected on the site. / United Sheet Metal Div., United McGill Corp. A, I*

748 AIR DIFFUSER / With built-in adjustable damper and pattern control, this model delivers a full 360-degree pattern. Available in a wide range of standard sizes. Surface areas are finished in baked white enamel. Interior surfaces are flat black. / Connor Engineering Corp.

749 VOLUME CONTROL / The *Thermal-Flo*, a variable volume unit, selects the correct amount of air conditioned air to satisfy space cooling loads. Powered by duct air pressure, the unit requires no external energy source. Connection to a pneumatic room thermostat completes the control system. Available in six sizes from 100 to 3,200 CFM. / Barber-Colman Co.

750 MIXING BOX / Blower-powered mixing boxes provide economical zone temperature control, at a constant volume in buildings served by a central, single-zone unit. They are recommended for adding cooling to any structure using heating systems not conducive to add-on cooling. / Lennox Industries, Inc. A, I, L*

751 HVAC MODERNIZATION / Designed for schools, this system uses a unit that combines the functions of a mixing box and a blower to blend inside and outside air in proper amounts. Maximum use of existing equipment is gained with this system which offers air control at a fraction of new construction costs. / MKM Corp.

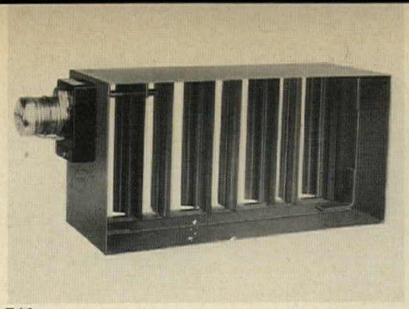
752 VARIABLE TERMINAL / This variable volume terminal mounts in the ceiling and is totally self-contained with its own thermostat, automatic air control and adjustable diffusers. / Titus Mfg. Corp.

753 SIDE-WALL DIFFUSER / Spring loaded inserts allow many heating and cooling patterns and the multi-louver shut-off permits control of air flow. / The Auer Register Co.

754 AIR FLOW MEASURE / These measuring devices for use in supply or return air ducts feature velocity measurement of plus or minus 5 per cent accuracy. Units in various sizes can be installed horizontally or vertically and at right-angle take-offs or following elbows. / Krueger Div., Lear Siegler, Inc.

AIR TREATMENT

755 VARIABLE AIR VOLUME / The company claims an economical way to air condition low profile buildings using a *VariTrane* variable air volume system in conjunction with single zone rooftop units. Improved maintenance costs, building usage, ceiling appearance and operating costs are also claimed. / The Trane Co. A, I*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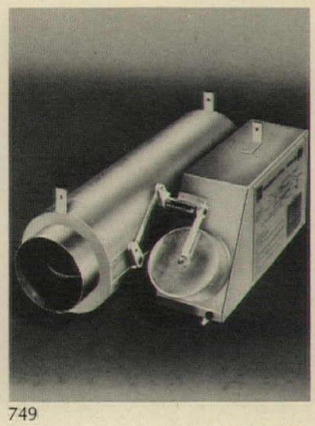
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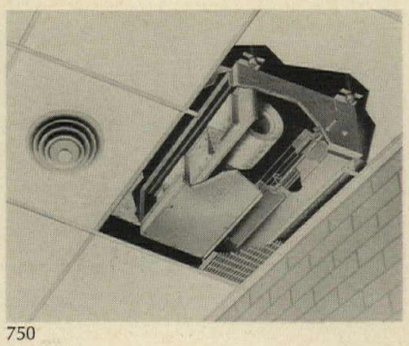
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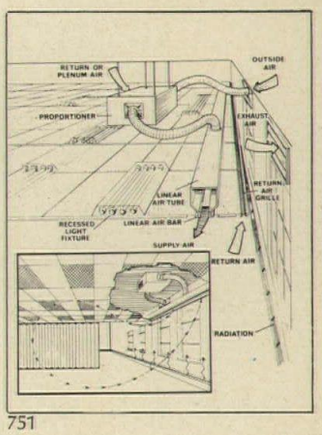

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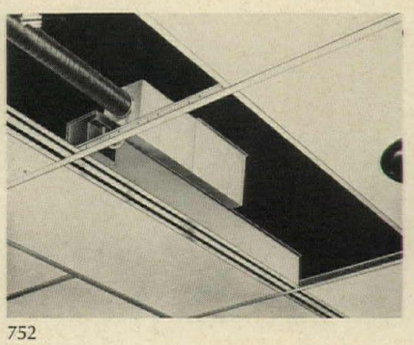
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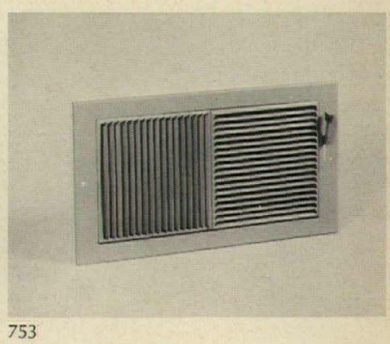
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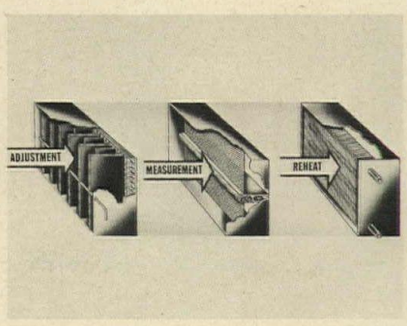

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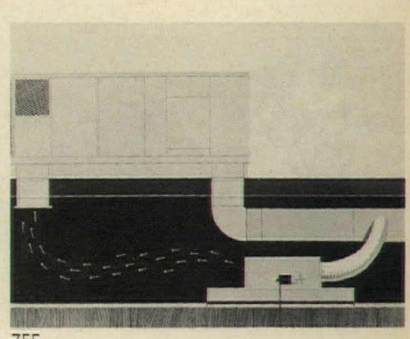
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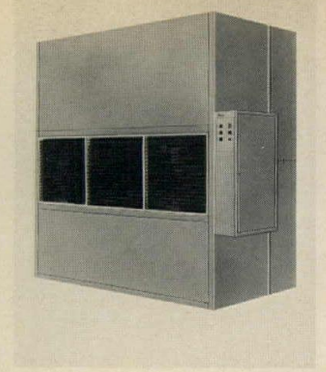

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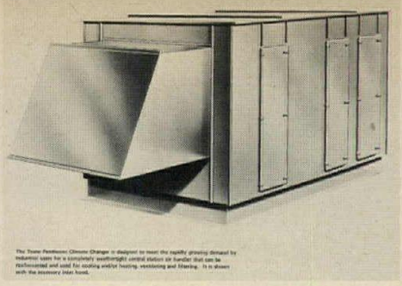

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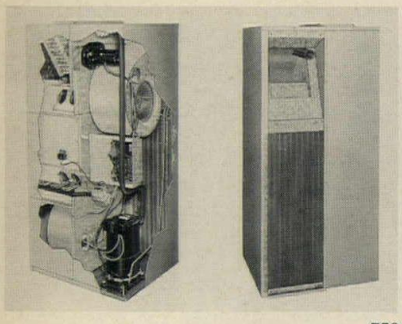
756 COMPUTER ROOM UNIT / Self-contained computer room units in 3-, 5-, 7½-, 10- and 15-ton sizes are designed to keep temperature at 72 degrees and relative humidity at 50 percent. Available in water- or air-cooled models. / The Trane Co. A, I*

757 CLIMATE CHANGER / This penthouse model is designed to be weathertight, roofcurb-mounted and used for cooling and/or heating, ventilating and filtering. Recommended for industrial, school and commercial buildings. / The Trane Co. A, I*



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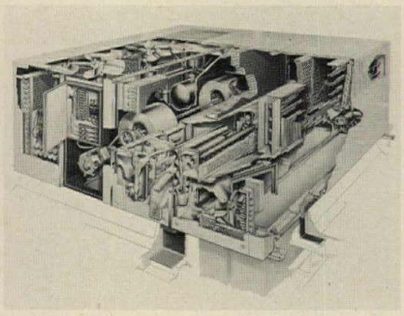

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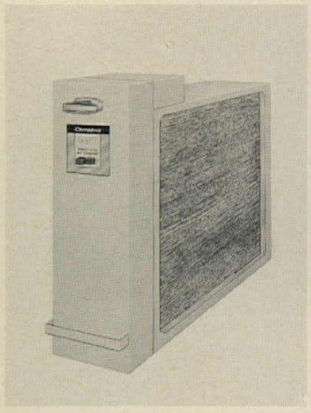
758 APARTMENT AIR CONDITIONER / Designed for apartments, single-family and industrialized modular homes, this unit is a gas heating / electric cooling thru-the-wall single package model, with ducted air capabilities. Shipped completely assembled, wired. Height: 56 in., width: 27 in., depth: 24 in. / Mueller Climatrol Corp.



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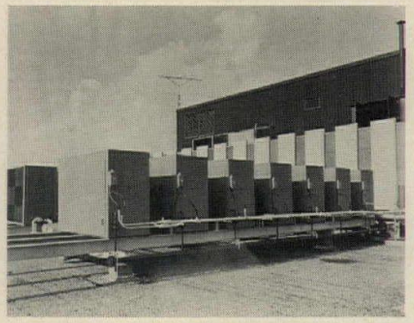

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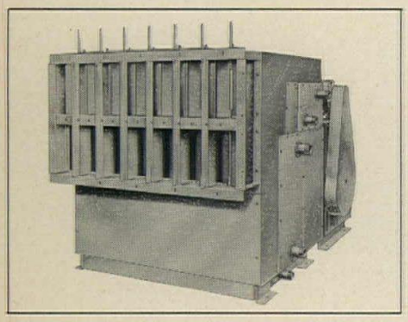
759 SINGLE ZONE ROOF UNIT / Rooftop heating and air conditioning units with 10-, 15- or 20-ton capacities offering four selections of heating systems. Three choices of air flow arrangement are available. A rust-proof aluminum covering finished in baked-on enamel, plus the internal use of heavy-gauge galvanized steel eliminates rust. / Modine Mfg. Co.

760 AIR CLEANER / An electronic device engineered to remove up to 95 per cent of air-borne particles, the unit can handle up to 1,400 CFM. A sail switch automatically energizes the electronic cleaner when it senses air movement, eliminating control wiring to the furnace. / Mueller Climatrol Corp.



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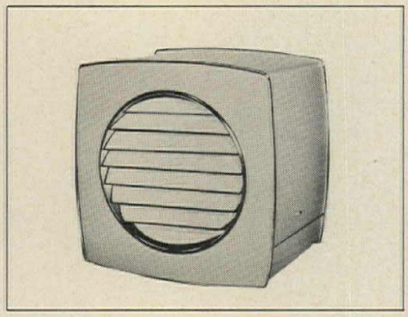

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761 MULTIPLE CHILLERS / Fourteen gas-fired chillers, in this system, are connected to a central water pump serving one cooling coil. All units are 10-ton models, and each chiller can be serviced at any time without interrupting the operation of the rest of the system. Automatic controls determine the required number of chillers to suit the cooling load. / Bryant Air Conditioning Co.

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762 CENTRAL STATION / This line of air handlers features modular components for more precise application in commercial, institutional and industrial installations. Fan range is up to 48,000 CFM. Aluminum airfoil fans are standard in larger models. / York Div., Borg-Warner Corp. I,L*

763 ELECTRIC UNIT HEATER / Units are available for horizontal or vertical mounting and provide full 360-degree warm air patterns. Built-in contactors are completely pre-wired and motors and thermostats are totally enclosed. Fifteen sizes up to 36 kw are offered. / ILG Iudustries, Inc.

764 AIR CLEANER / The electric unit is installed in the cold air return of the furnace ducting. With automatic water washing, dirt is removed periodically. Thirty-three models are available to fit any size forced air furnace. / Electro-air Div., Emerson Electric Co.

765 HUMIDIFIER / This power humidifier provides up to 25 gallons of moisture daily, using a *Lexan* resevoir that will not chip, crack or dent. Simple installation is claimed, along with features that prevent accidental spillage into the furnace. / Electro-air Div., Emerson Electric Co.

766 ABSORPTION EQUIPMENT / Each model is completely self-contained, consisting of one or more activated charcoal filters, motorized blower and a mounting stand. The unit removes odors and contaminating vapors, and is designed for low-cost control in air conditioning systerms. / Barnebey-Cheney.

767 CONDENSING UNIT / Especially for apartment applications, the *HSW4* series comes in 1-, 1½- and 2-ton sizes and is built for through-the-wall or free-standing installation at grade level. Cooling capacities range from 17,000 through 28,000 BTU/hr. The unit is made of galvanized steel, weather-protected. / Lennox Industries Inc.

768 CLEAN AIR SYSTEM / A flush wall-type laminar flow clean air system for hospital operating rooms comes in kit form with major components pre-assembled. The system projects 10,000 cfm of Class 100 germ-free air from a 10 ft-wide central HEPA filter section. Five hundred changes of air per hour are provided. / Agnew-Higgins, Inc.

769 HEATING - COOLING VALANCE / An enclosure featuring "square pan" design, this heating-air conditioning valance is suitable for apartments, hospitals, schools and offices. Beam construction of the finned heat-cooling element eliminates ceiling hangers and wall-to-wall installations are possible with unbroken lines. / Edwards Engineering Corp.

770 DRY STEAM HUMIDIFIER / This series of units features a bellows in place of stem packing on the sliding valve operator, eliminating possible leaks and stem binding if it is too tight. Available in

For more data, use inquiry card.

three pressure ranges. / The Clark-Reliance Corp.

771 AIR CLEANERS / Centrally installed electronic air conditioners for the home—F50 manual wash and F51 in-place wash—use two-stage electronic precipitation. 16-by 25-in. model will handle 1400 cfm at 70 per cent efficiency. 20-by 25-in. model handles 2000 cfm. / Honeywell Inc.

772 HUMIDIFIER / The *Hydro-Air Model 80* is designed for the home using either hot water or steam heat. The unit will humidify up to 3,000 sq ft of living space, with an evaporation capacity of 19g per day. / Aquaduct Humidity Corp.

773 SMOKE-CONTROL VENTILATOR / For commercial feeding establishments, *SPC Ventilator* treats kitchen exhaust air through a grease-extraction chamber and an electrostatic precipitator. Self-cleaning on shut-off. / Gaylord Industries.

774 DUCTLESS BATHROOM FAN / Requiring no duct work, unit contains a fan, which can be wired to a remote switch, that pulls air through replaceable cartridges which destroy bacteria and eliminate odors. Maker reports code approval. / Rush-Hampton Industries.

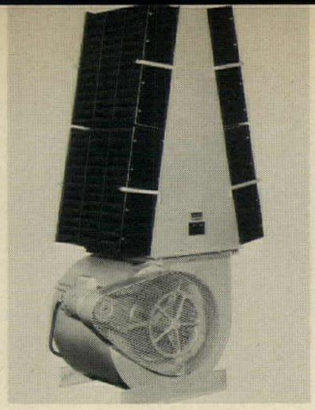
775 HUMIDIFIER / Power humidifier operates with forced-air furnace to provide water vapor in winter. Unit is plumbed to a water line, automatically controlled by a humidistat. Evaporator pads are easily accessible and replaceable by homeowner. / General Electric Co.

776 ROOFTOP HEATING / Cooling and ventilation up to 105-ton capacities is also offered in this single- or multi-zone unit. Electric, gas, oil, propane air, hot water or steam heating capacities range from 500 to 1,800 MBH. / Lear Siegler, Inc.

HEAT GENERATION

777 WATERTUBE BOILER / *Model 4* features high-performance membraned waterwalls in a 1 to 6 million Btuh package, said to be the smallest in its class. Available in hot water, low- and high-pressure steam units; gas or light oil firing. / Cleaver-Brook Div., Aqua-Chem, Inc.

778 MAKEUP AIR HEATER / Recommended for industrial and commercial heating applications, this model is available in seven rooftop or ceiling-suspended models with an over-all range of 3,500 to 80,000 cfm, with temperature rises up to 120F. / The Trane Co. A, I*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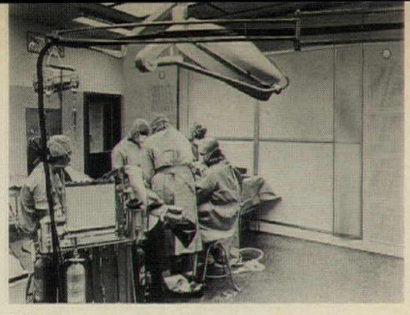
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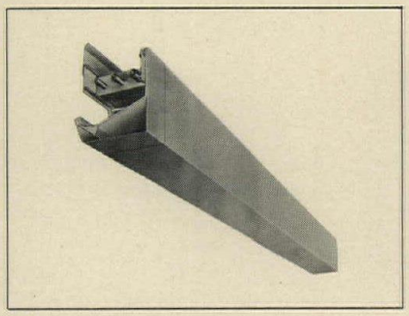
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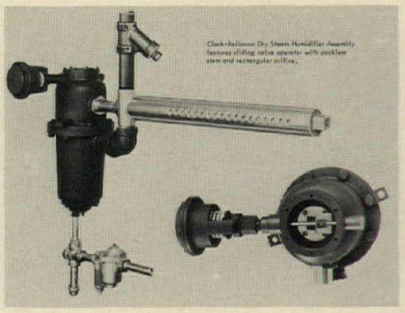
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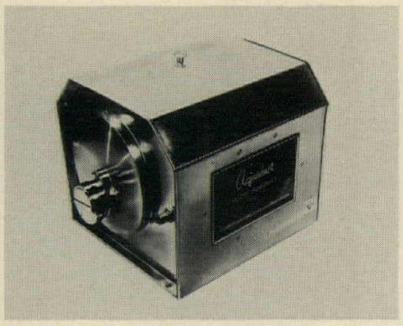
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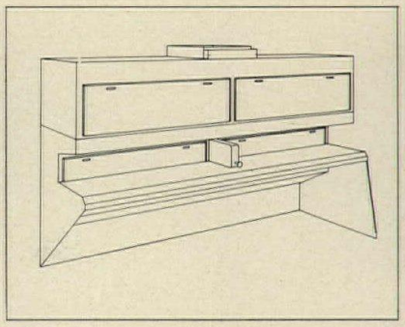
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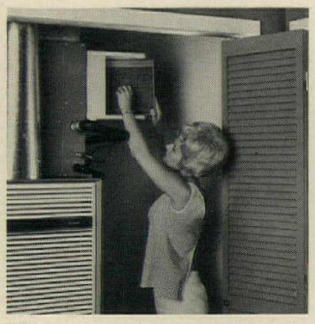
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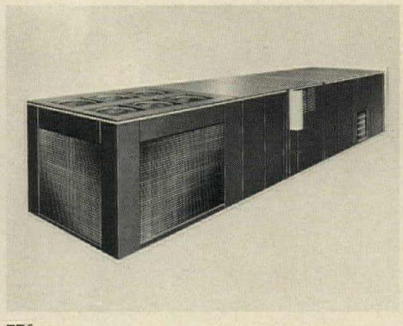
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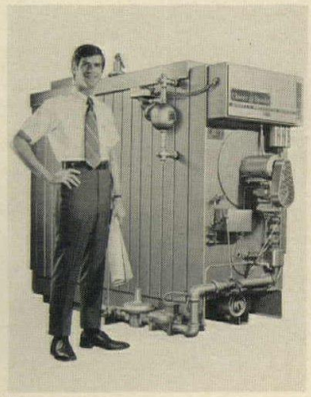
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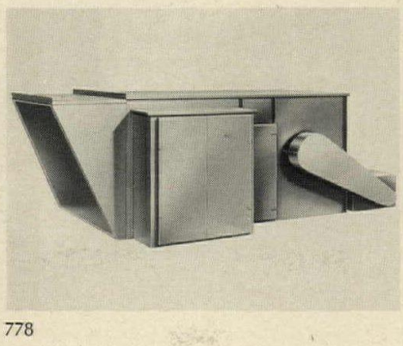
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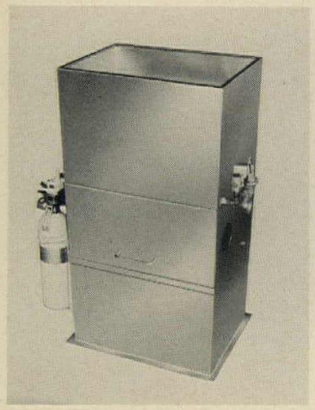

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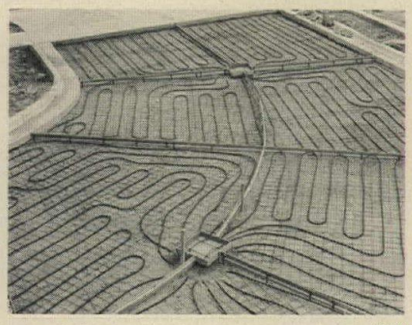

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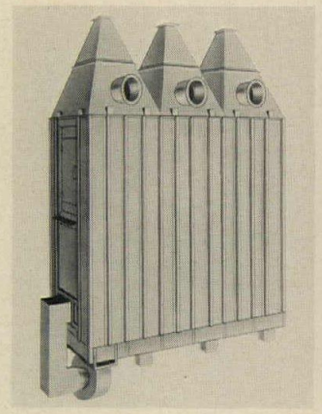

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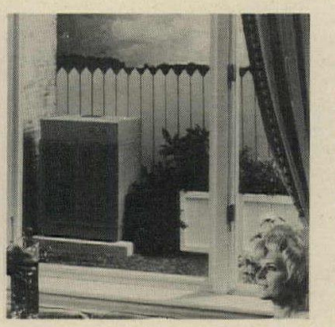

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779 AIR DOORS / For use where clean atmosphere or constant temperature is required, *Extra High Velocity* air doors keep out dust, insects and fumes. Available to fit doors to 16 ft. high, any width. / Mars Sales. A, I*

780 GAS FURNACES / Top-of-line *Executive* furnaces, in capacities of 100,000, 130,000, and 165,000 Btuh, offer modulation control using three different fan speeds and flame levels for varying outdoor conditions. Can be fitted with air conditioner. / General Electric Co.

COMBUSTION EXHAUST

781 SCRUBBER / A system for the elimination of grease and related problems is available with automatic fire extinguisher. The unit is made of stainless steel and available in four sizes. / Clima-King, Inc.

782 SNOW MELTING / Hydronic plastic pipe embedded in concrete is capable of radiating waste heat from air conditioning, generators, and plan processes all year long. Maker designs pipe system, heat transfer equipment, and supervises installation. / Hume Snow Melting Systems, Inc. A*

783 DUST COLLECTOR / *Airliner* features double bags, one inside the other, and eliminates compressed air, air dryers, bag cages, diaphragm valves. Cleaning cycle utilizes low-velocity air that "milks" the inner bag of dust and dirt. / Aerodyne Development Corp.

FIRE PROTECTION

784 ROOF VENTILATOR / A smoke and heat removal ventilator serves a dual purpose in combining normal building exhausting with emergency smoke and heat dissipation. Under fire conditions, it electronically converts to emergency operation. / American Coolair Corp.

785 SMOKE DETECTOR / A self-contained early warning fire and smoke detector is offered for residential and institutional use. Designed for surface mounting. The audible alarm is a high-frequency squeal. UL-listed. / Pyrotronics.

786 FIRE DETECTOR / This UL-approved ionization detector reacts to products of combustion and flashes an alarm before any smoke or fire. Available for ceiling or duct mounting. / Honeywell Commercial Div.

787 SECURITY COMMAND / This command post links detector devices, CCTV, patrol tour, intercom and card reader, bringing the entire security network to one point. Tailored to fit specific requirements, the network can monitor mechanical and electrical systems as well. / Honeywell Commercial Div.

HEAT PUMPS

788 HEAT PUMP / *Weathertron* residential models have capacities from 18,000 to 60,000 Btuh, commercial models to 240,000 Btuh. Indoor parts of system take little space, outdoor sections discharge air and sound upwards. / General Electric Co.

789 EMERGENCY POWER / All solid-state power system supplies 117-volt ac, 60-Hz power up to 3000 watts during power outages. Models start at $750 complete with batteries. One cabinet houses batteries, charging system, dc to ac inverter, automatic load-transfer circuits. / Terado Corp.

HVC TERMINAL UNITS

790 INDUCTION TERMINAL / Aimed at the big building, this line of induction equipment is available for wall or floor mounting in both standard and low vertical configurations. High-pressure duct transitions are eliminated. / The Trane Co. / A, I*

791 TRI AIR CONDITIONING / New line of terminal reheat induction units, ideal for hospitals, are available in 5 sizes, air capabilities from 70 to 390 cfm. Units are readily disinfected, have no cooling coil to create contaminating condensate problems. / The Trane Co.

792 HEATING-COOLING UNIT / A through-the-wall terminal commercial unit, the *RB* model is said to be four times quieter than previous models. Besides single room application, the unit may be used as perimeter control in conjunction with interior zone air conditioning serving the building core. / Westinghouse Electric Corp., C. I. P. Group.

793 PACKAGED TERMINAL / This system provides in a single wall-mounted cabinet the functions of heating, cooling, filtration and ventilation. Cooling is from 7,000 to 15,000 BTU. Heating is up to 22,800 BTU. / Fedders Corp. A,L*

SUPPORTING DEVICES

794 UNIT SUPPORT FRAME / The frame for air conditioning unit arrives at the job site factory-assembled. A sealing material is applied around the duct opening, making the frame a water-tight part of the roof. No intermediate supports are required. / Carteret Air Conditioning Div., The Singer Co.

For more data, use inquiry card.

VIBRATION ISOLATION

795 EXPANSION BEARINGS / Included in each unit are sole plate, stainless steel face plate and pads with low-friction surfaces. The bearings are said to accommodate multi-directional loads, and are self-compensating under load rotation. Pre-assembled and custom-engineered to individual load-bearing and dimensional requirements. / Fabreeka Products Co.

PIPING & SPECIALTIES

796 INSULATING PIPE / Non-corrosive and electrically non-conductive, *Fiber-Gard* is factory-fabricated. It is composed of an ADI-FRP conduit and a steel pressure carrier pipe insulated with calcium silicate. / R c-Wil, Inc.

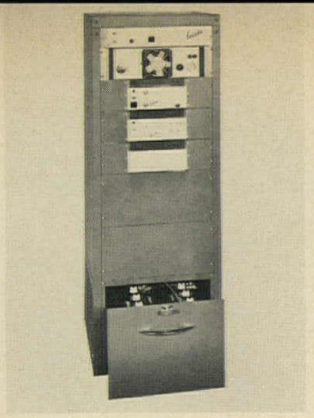
797 FIRE SPRINKLER / Designed for compartmented, light hazard occupancies, the copper-fabricated system is engineered to tailor fire control capabilities in terms of water densities, distribution patterns and demand flow to each compartment in the building. It is an automatic, cost-effective system. / Copper Development Assoc., Inc.

798 FITTINGS / A full range of flanged and grooved fittings for use with the company's polymer-encased metal pipe is suited to chemical and oil industries and industrial waste treatment operations. *Kerolite* pipe and fittings are available in diameters of 2 in. to 12 in. / Kearney Fluid Equipment, Inc.

799 LABORATORY DRAINLINE / *Polyglass* drainline features Pyrex borosilicate glass piping with polypropylene fittings and *Zytel* compression couplings. Installed cost is near that of all-plastic, with better temperature resistance; but will not withstand range of chemicals or temperature of all-glass system. / Corning Glass Works.

800 SINGLE-STACK PLUMBING / An economical pre-fabricated plumbing wall for two-story garden apartments to high rise buildings is offered. This self-aerating one-stack drainage system eliminates the need for a separate vent pipe. Savings of 40 per cent per bathroom are claimed. / Copper Development Assoc., Inc.

801 CORROSION-PROOF PIPE / This metal pipe is coated on the outside and inside with a plastic that resists corrosion and abrasion. The permanently bonded coating will not separate even if the pipe is dented. Oil and chemical industry applications are recommended. / Kearney Fluid Equipment, Inc.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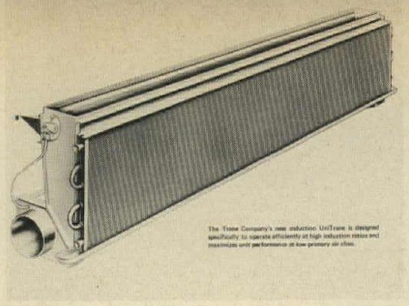
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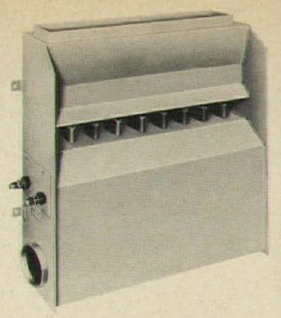
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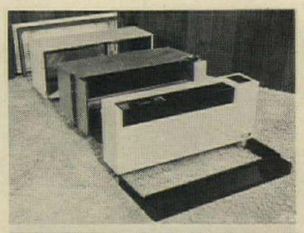

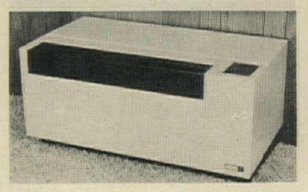
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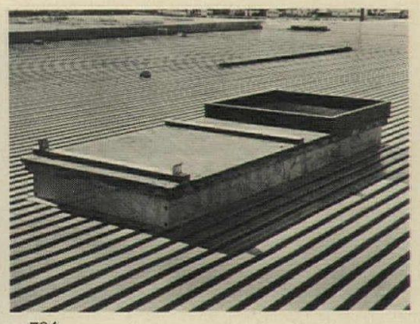
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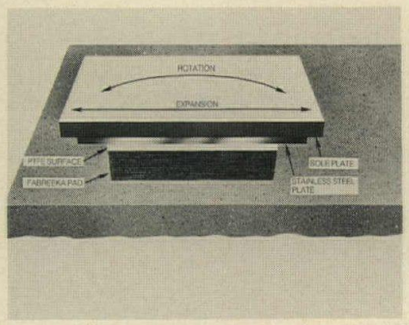

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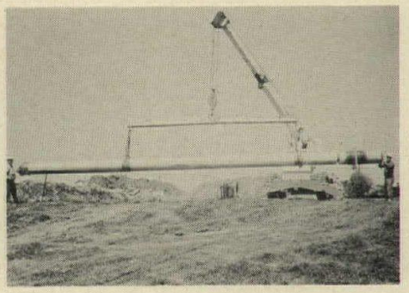
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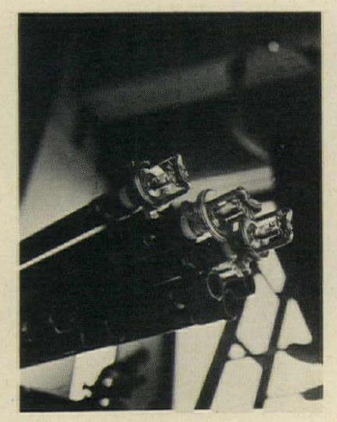
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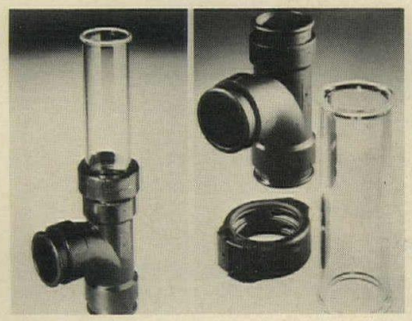
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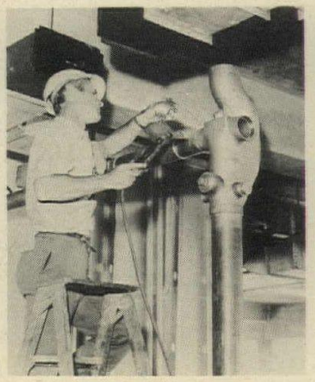
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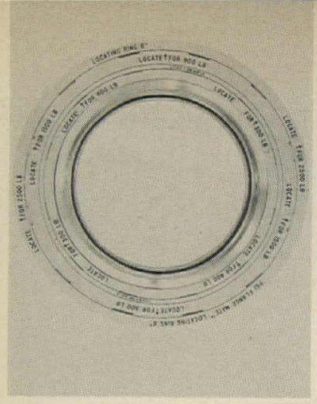

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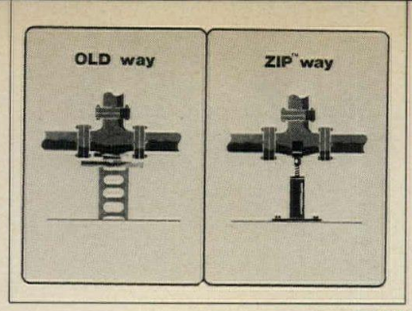

803

802 GASKET / This fire-resistant, self-centering gasket fits flanges from 150 lbs to 2,500 lbs pressure ratings with only one gasket for a given size of pipe, at temperatures from minus 400 degrees to 2,200 degrees F. / PSI Products, Inc.

803 PIPE STAND / This unit gives support to lateral runs of all piping and valves and measurably reduces installation time and costs. Made of 11 gauge steel, these units will support up to 16,000 lbs. / Afco Mfg. Co.

PLUMBING FIXTURES, TRIM

804 BLACK BATHROOM FIXTURES / Shown is a tub, one of eleven fixtures now available by the manufacturer in black. The tub is a 5½-ft by 7-ft oval in fiberglass. / Kohler Co.

805 RECESSED WATER COOLER / Electric, precast stone fountain has a polished terrazzo-like finish and matching louvre grille. Units extend 1 in. from wall. White, grey, beige, green and smoke onyx. Remote chillers are 6- and 12-gph capacities. Metal mounting box. / Haws Drinking Faucet Co. A*

806 MAN'S LAVATORY / The manufacturer has designed this enameled cast iron model especially for men. It features a large basin and measures 28 in. by 19 in., with a deep, sloping bowl. The self-rimming model is available in twelve colors, with a shampoo hose and spray, and a soap or after shave dispenser. / Kohler Co.

807 LIGHT-OPERATED FAUCET / Called *Aqua-Matic*, this faucet is operated by a photo-cell. When the user places his hands in the wash zone, breaking the light beam, water flows until the user removes his hands from the wash area. Available with a chrome-plated brass body. Deck or back mounted. A 12-volt ac power source is required. / The Chicago Faucet Co.

808 BED PAN FLUSHER / The producer claims this diverter valve model requires no soldering of the tailpiece to complete piping between the flush valves and the diverter valve. A threaded connection provides a rigid union and allows for a 1-in. adjustment in length of the tailpiece to compensate for roughing-in variances. Equipped with an antiseptic injector. / The Chicago Faucet Co.

809 SHOWER ENCLOSURE / A complete line of tub and shower enclosures are available with anodized frames, satin finished, in two and three door models. Sizes range from 32 in. to 58 ½ in. Units adjust for variations in width and come with lifetime nylon rollers

810 BATH FIXTURES / A shower-tub console and a lavatory console, both with fully assembled faucets and plumbing, are offered in three colors. The high-gloss finish will not not chip, peel or fade. Surfaced-mounted on the bath enclosure, the shower-tub enclosure affords simple connection to water lines. ASB plastic is the material. / The Vollrath Co.

811 RECYCLING TOILET / This self-contained recycling flush toilet contains a total of 100 gallons of water and is designed to serve up to eight persons for up to two years without servicing. The unit is recommended for vacation homes, mobile homes or in entire communities with water table problems. / The Port-O-Let Co., Inc.

812 STAINLESS STEEL SINK / Redesigned rim and deck contours and a new brushed finish characterize the *Harvest* and *Explorer* lines. In the medium-price range, these models are 20-gauge stainless in single- or double-bowl units. / American Standard.

813 SINK FITTING / The aerator spout turns 360 degrees at the base of this model and the head can be tilted 45 degrees from right to left. It is a low-cost, dual-handle unit, encased in bone-colored, fiberglass reinforced *Celon*. / American Standard.

814 KITCHEN FAUCET / A line of single-handle faucets in five colors is offered, constructed of thermoplastic, injection-molded. The material resists wear, is guaranteed and is priced 30 per cent below conventional single-handle faucets. / Bradley Corp.

815 VANITY TOPS / A line of marbleized acrylic tops with integral bowls and single-handle faucets is offered in six colors which completely penetrate the acrylic and resist chemicals, scratching and impacts. / Bradley Corp.

816 TUB-SHOWER CONTROL / The single-handle control is offered in five colors with matching shower head. A 1000-month guarantee against leaks and repairs is included. / Bradley Corp.

817 LAVATORY FAUCET / Wing-type lever handles are featured on this model, the 4-in. *Olympian*, with 4-in. spout, aerator and pop-up waste. Four finishes are offered. / Bradley Corp.

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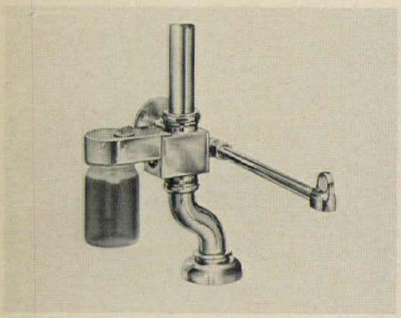

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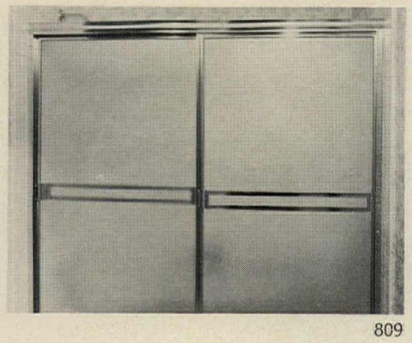

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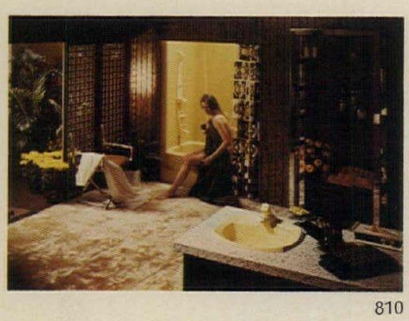

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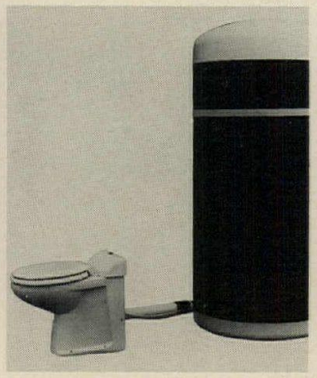

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For more data, use inquiry card.

818 BIDET / *Caravelle*, a one-piece vitreous china fixture, is designed to match the maker's top-of-line fixtures (as shown) in all colors including black. Unit is 14 in. high, 24¾ in. long; with conveniently located controls, hidden supply lines. / Kohler Co.

819 COMPACT SINK / *Urbanite* sink has an elevated garbage disposal basin which can double as an auxiliary drain when larger basin is in use. Sink is cast iron, in 12 colors, self-rimming, 25 by 22 in. / Kohler Co.

820 THREE-COMPARTMENT SINK / *Trieste* is 43 by 22 in., self-rimming, in white and 12 colors. Large basins are 17 by 15½ in.; central basin, 13½ by 8¼ in., is designed for waste disposal unit. Cast-iron construction assures rigid mounting of disposal unit. / Kohler Co.

821 BATHTUB / The *Neu Criterion* model, 5 ft 6 in. long, features factory-installed water controls, safety-grab bar and built-in soap holder. It is made of acid-resisting porcelain-enameled cast iron. / Crane Co.

822 KITCHEN FAUCET / A single-handle control molded entirely of non-corrosive materials, this unit is guaranteed for five years. Available with either a clear or smoked acrylic handle. Both spout and escutcheon plate are chrome-plated. / The Vollrath Co.

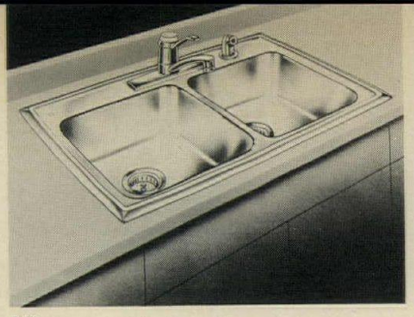
823 TWO-HANDLE FAUCETS / Designs for kitchen and lavatory offer blade or knob configurations, choice of options including *Spray 'Round*, a swivel spray aerator. Rotary cylinder valve eliminates compression washer. / Delta Faucet Co.

824 SINGLE-CONTROL FAUCETS / *Delex* single-control pressure-balancing mixing valves for tubs and showers compensate for sudden changes, pushbutton diverter automatically returns to tub position when valve is turned off. / Delta Faucet Co.

825 SELF-RAISING SEAT / This solid plastic seat has a preset, soft-spring hinge that never needs adjustment. When not in use the seat slowly raises itself to an upright position. Available for regular or elongated bowls. / Beneke Corp. A*

826 SELF-HELP SEAT / White nylon-coated metal arms and round, solid plastic arm supports are featured on this plastic seat for the physically handicapped. Arms rotate with seat. Regular or elongated, open or closed front models are offered. / Beneke Corp. A*

*Included in 1973 Sweet's Catalog File(s).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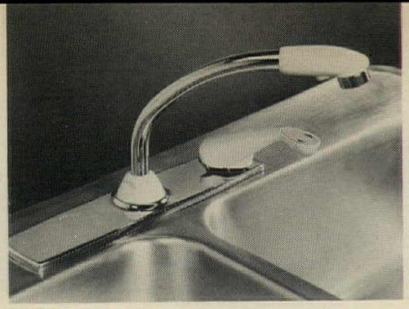
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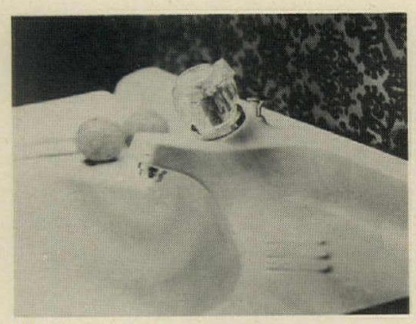
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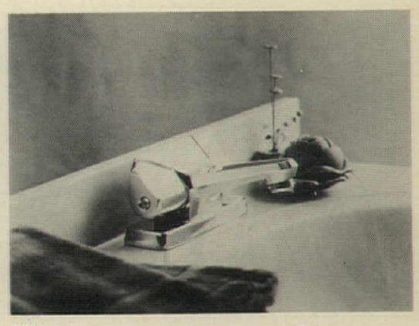
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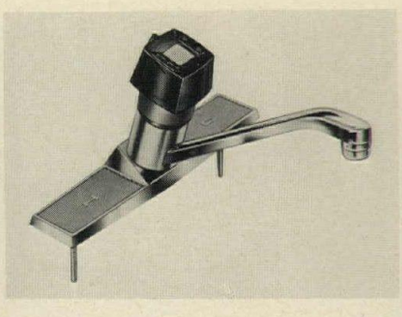
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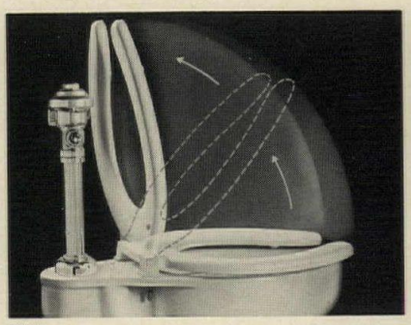
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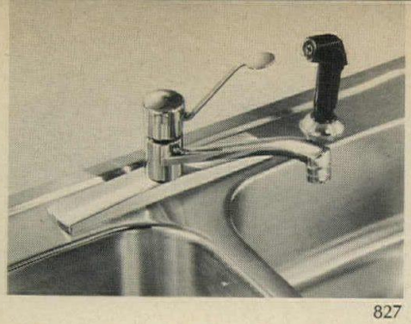

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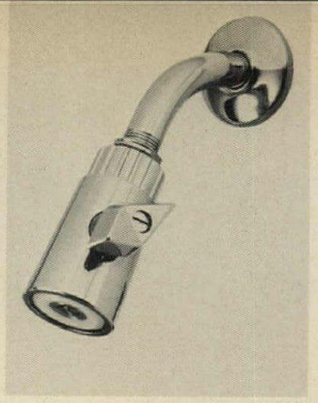

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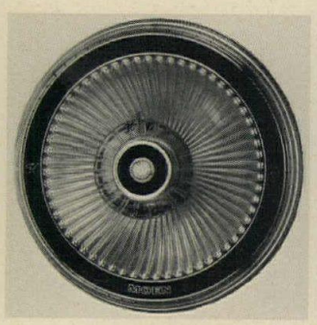

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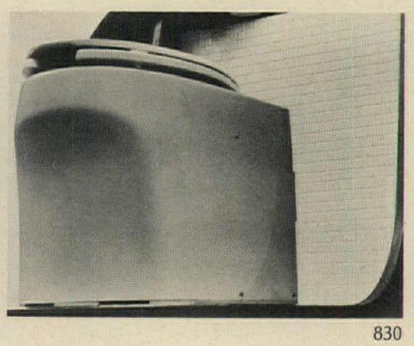

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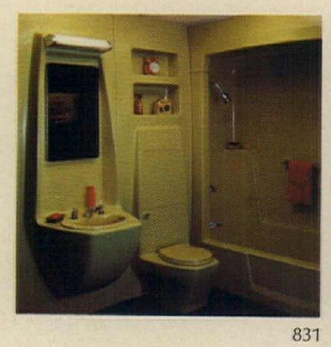

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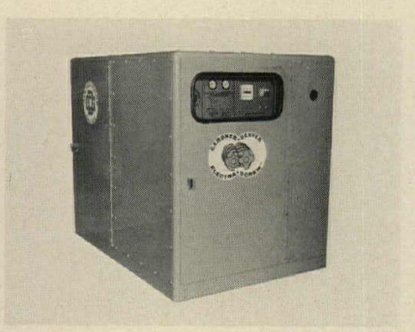

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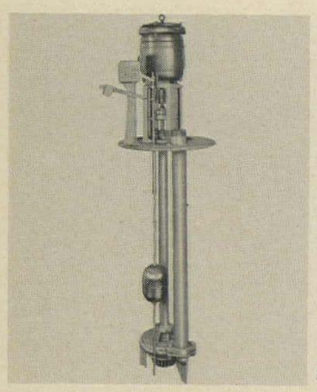

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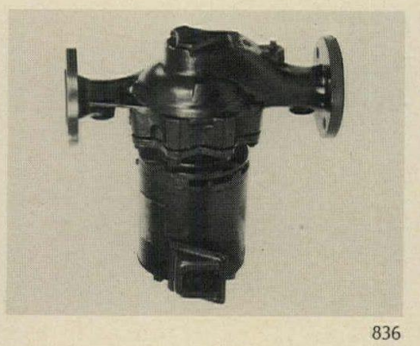

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827 KITCHEN FAUCET / This unit comes with a hose spray and has a 9-in. spout. Supplies can be specified without threaded fittings for sweat or compression connections. /Moen Div., Stanadyne.

828 SHOWER HEAD / This unit can be attached to any standard shower connection and offers 60 directional spray jets that are adjustable from full flood to the finest spray. Self-cleaning action prevents lime build-up. Unit is solid brass with triple chrome plating. / Moen Div., Stanadyne.

829 ESCUTCHEON / This shower-tub combination features a see-through surface that is deeply recessed. A decorative plating is applied to the back of the escutcheon to protect it from damage. / Moen Div., Stanadyne.

830 SANITATION SYSTEM / Designed for use where septic systems, sewers or holding tanks are not feasible, the *FT-4* uses any light distillate fuel such as kerosene, to totally incinerate all human waste in six minutes. Although operating temperatures exceed 1,800 degrees F, the external surfaces remain at ambient temperature. / Tekmar Corp.

831 FIBERGLASS MODULES / *Concept III* is a system of modules combined with conventional fixtures to save on construction costs of bathrooms. All plumbing pipes can be mounted on the wall or stud surfaces, behind the modules. / Eljer Plumbingware Div., Wallace-Murray Corp.

832 DUAL-HEIGHT FOUNTAIN / A chilled water combination fountain assures ready access to all people, including the physically handicapped. The model *HRWC-5* or *10* provides chilled water up to 5 or 10 gallons per hour. The entire unit is stainless steel. / Haws Drinking Faucet Co. A*

PUMPS & COMPRESSORS

833 SUMP PUMP / For home use, this pump is an auxiliary that goes into action when there is a power failure. *Flud-Gard* uses no motor or batteries and does not require fuel or electricity. Water is drawn in by suction. / Glenmarc Mfg. Inc.

834 AIR COMPRESSOR / These helical screw compressor units range in size from 30 to 400 hp, with free air delivery rating of 125 to 1,900 CFM and operating pressures to 125 psig. Either air or water cooled units are available. / Gardner-Denver Co.

835 SUMP PUMP / Units handle drainage water or any liquid waste containing small, non-fibrous solids and assure uninterrupted service, according to the manufacturer. / Weinman Pump Co.

836 IN-LINE CIRCULATOR / The *Etatherm* centrifugal pump can be mounted in many positions, from horizontal in-line with the motor on top, to vertical in-line with motor horizontal. Designed for heating and air conditioning systems and for general circulating service, the pump is available in sizes from 1¼ in. to 3in. discharge. / KSB Pump Co.

837 CORROSIVE HANDLING PUMP / Self-priming centrifugal is capable of highly corrosive liquids. Available with universal, flexible coupling and close coupling; with standard packing or mechanical seals. / Peabody Barnes. A*

REFRIGERATION

838 COMPRESSOR / Suitable for large volume gas and liquid cooling systems in the food, chemical and petroleum industries, this unit requires relatively little space according to the company. Factory-assembled and delivered with all piping and electrical connections in place. Ranges are 20 tons to over 800 tons of refrigeration. / Vilter Mfg. Co.

839 COMPRESSOR / For heavy-duty commercial and industrial refrigeration and process applications, this line of reciprocating compressors is offered in ranges up to 300 hp. Compact design minimizes floor space requirements. / York Div., Borg-Warner Corp. I,L*

840 PREFAB COOLER / Prefabricated refrigerated buildings are available with architectural color-coded metal facades, applied after the building is erected. Formed-in-place urethane provides the insulation and aluminum roofs are weatherproof. Buildings in any length and width can be erected up to 36 ft high. / Bally Case and Cooler, Inc. A*

841 DISPLAY COOLER / This 104-cu ft model features four self-closing sliding doors and is available in six colors. It is constructed of fiberglass and offers a patented air flow system. Unit is lighted. / Fogel Refrigerator Co.

SELF-CONTAINED HVC

842 SPACE HEATER / Gas infrared industrial space heaters have BTU input ratings of 30,000 up to 160,000 and all are AGA certified. All models operate on L.P. gas, and are controlled by thermostat or manually-operated switch. / Detroit Radiant Products Co.

For more data, use inquiry card.

843 COMPUTER ROOM AIR UNIT / *Convertible 4* provides precise environmental control for small computer installations. Easily converted from upflow to downflow air discharge. Four-ton units either water- or air-cooled; choice of colors. / Liskey Aluminum Inc. A*

844 ROOFTOP HVAC / This line includes complete heat-vent-cool assemblies, including condensing units, in weatherproof, low-silhouette, single packages. Each unit has a choice of gas, electric, hot water or steam heat. Air distribution is 12 or 18 zone multi-zone control at unit. / Lennox Industries, Inc. A, I, L*

845 UNIT HEATER / Maker's gas-fired unit heaters and duct furnaces now feature 24-volt controls, fan switch, factory installed gas train and ignition. Optional modulating control for 50 per cent to full capacity. / The Trane Co.

TANKS & BASINS

846 STORAGE TANK / A horizontal tank of high-density polyethylene is said to be impervious to most chemicals and corrosion-resistant. Recommended for use as septic tanks, or for general storage and distribution of liquids. / Molded Products Corp.

VALVES

847 ZONE CONTROL VALVE / This hydronic control provides control for all heating and cooling systems. Compact design and economical operation are claimed for the *Modu Mate* unit. / ITT & Gossett.

848 ZONE VALVE / A solder-connected, non-electric zone valve for application to hot water heating systems is available in ½-, ¾-, and 1-in. sizes. / Ammark Corp.

849 COMPENSATOR / A one-piece cylinder that helps eliminate hammer-like noises in hot and cold water lines is 12 in. long and made of copper. / Wolverine Tube Div., UOP.

850 SEWER FLOODING CONTROL / System prevents basement flooding due to backups. Float rises with incoming sewage, activates knife valve. Remote monitor records system's activity, alerts maintenance that system is closed internally. / Cherne Storm Guard.

851 STEAM REGULATOR / Noise reduction in the *Les-Sonic* steam regulator stems from radical redesign on main valve plug. Top left, plug with throttling vanes to guide steam flow reducing noise within OSHA limits; compared with conventional main valve. / Leslie Co.

**Included in 1973 Sweet's Catalog File(s).*

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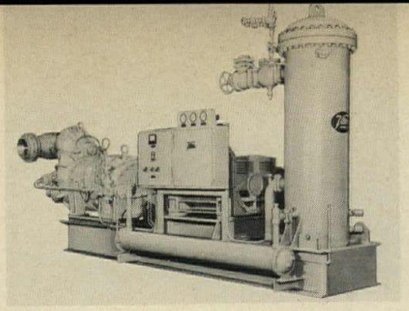
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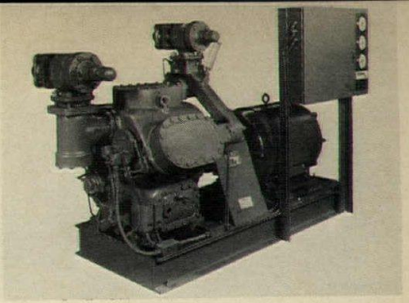
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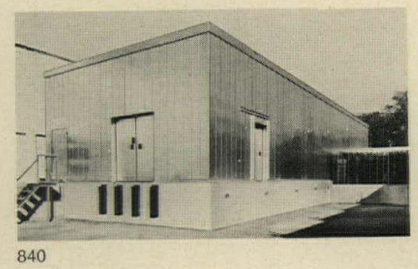
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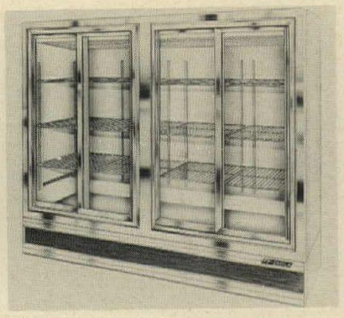
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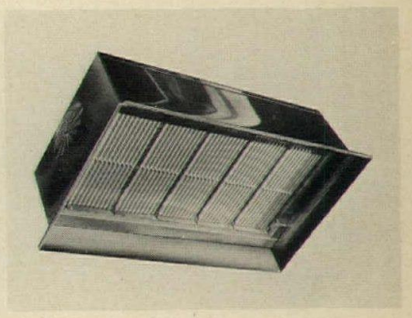
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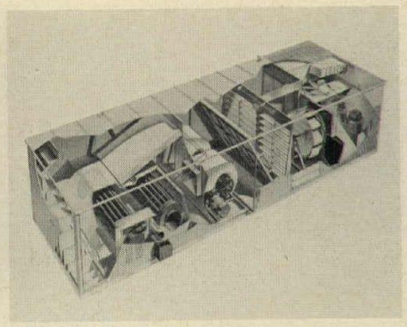
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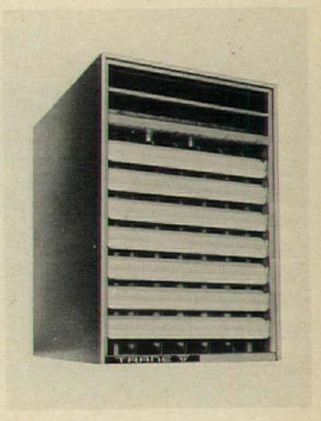

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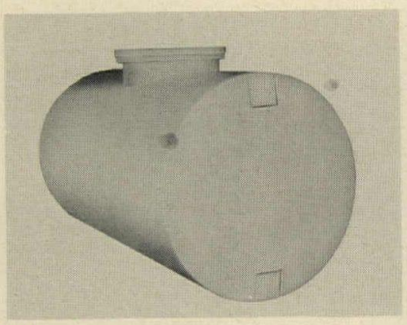
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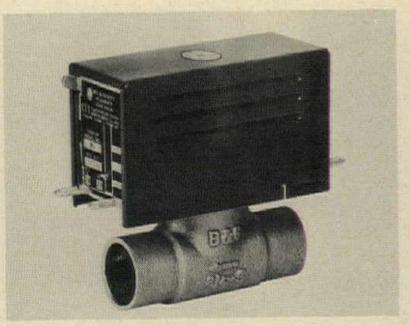
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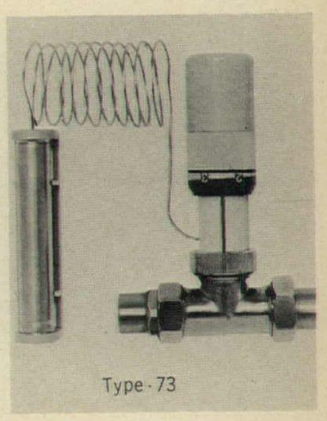

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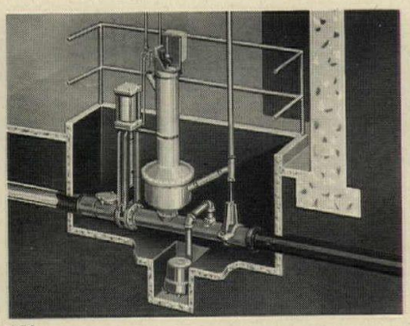
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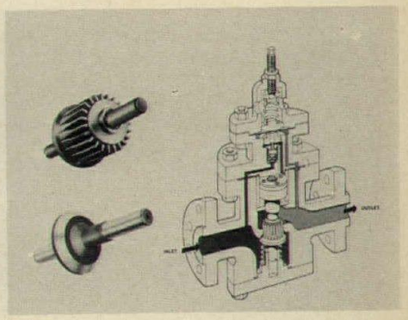
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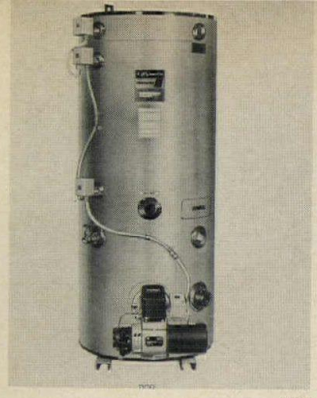

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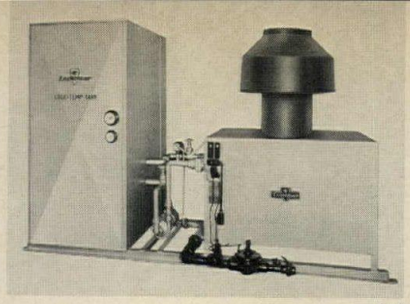

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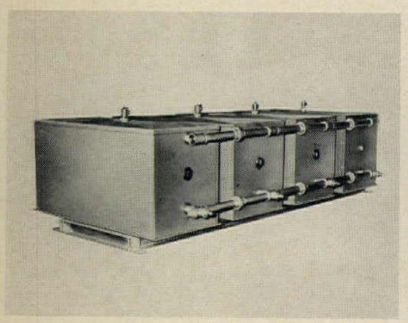
WATER TREATMENT

852 WATER HEATER / A full line of oil-fired water heaters is available in varied sizes up to 700,000 BTU/hr input. Units are capable of firing 1.7 to 5.0 gallons of No. 1 or No. 2 fuel oil per hour. / A. O. Smith Corp.

853 WATER HEATER / This unit features a steel jacket and two inches of fiberglass insulation. The package unit is pre-engineered and pre-assembled. Sizes available up to 504 gal. / Lochinvar Water Heater Corp.



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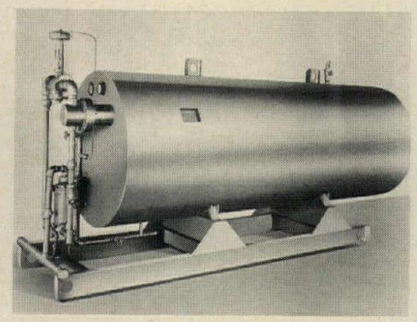

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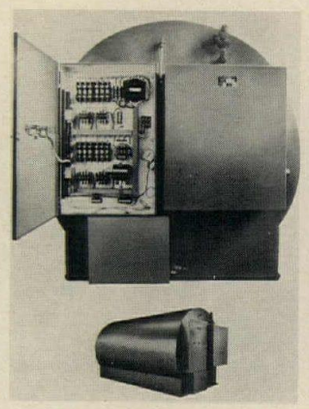
854 OIL-FIRED WATER HEATER / Especially designed for the car wash or laundry industries, the *Mod-U-Fire* package contains one to four units, individually thermostatically controlled for step-firing. All-weather construction. / Lochinvar Water Heater Corp.

855 WATER HEATER / Unit consists of an ASME-code built storage section, vertically or horizontally mounted, in which a shell and tube-type heat exchanger are located. The heat source is steam. The package also includes factory-installed controls, valves, strainers, relief valves, thermometer, pressure and temperature gauges. / Sellers Engineering Co. A*



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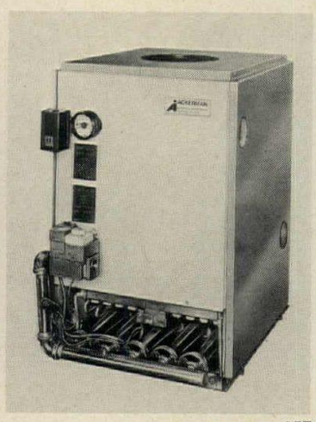

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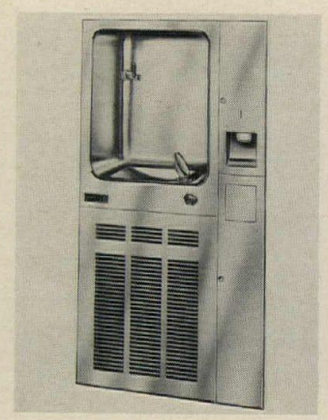
856 THERMAL STORAGE UNIT / The electric unit, designed for space and domestic water heating, stays off the line electrically up to 13 hours. Units are up to 30 per cent smaller than standard water heaters, according to the company. / Megatherm Corp.



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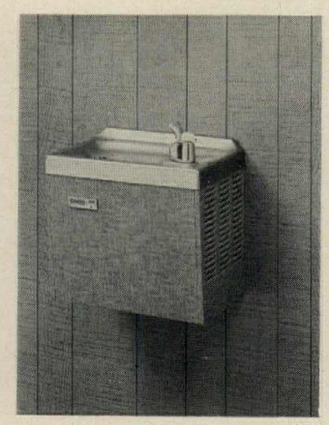


859

857 BOILERS / *Ultratherm* hot-water boilers are available in nine input sizes from 80,000 to 400,000 Btuh. Steam boilers are also available in nine sizes. Units are gas-fired, are factory-wired, pass through 30-in. doorways. / Ackerman Div., Automation Industries.

858 WATER COOLER / A fully-recessed cooler with glass filler and cup dispenser-disposal cabinet is offered in stainless steel. The unit is capable of delivering 8.7 gph. Removable louver grill conceals and vents the refrigeration unit. / Elkay Mfg. Co.

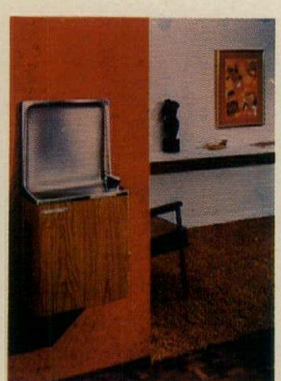
859 WATER COOLER / Units in this series occupy 16 in. by 17 in. of wall space and deliver up to five gallons per hour. The polished stainless steel top features an anti-splash ridge. / Ebco Mfg. Co.

860 WATER COOLER / A simulated-recessed, wall-hung cooler has been designed to be mounted on any type wall. It protrudes 9½ in. to the aisle and is available in both 6- and 13-gph capacities. / Dispenser Div., Eaton Corp. A*

861 HOT WATER GENERATOR / Glass-lined units for industrial and commercial application can be connected to steam or hot water boilers. Coil feature makes it possible to use process water for heating general purpose water. Recovery capacity to 23,000 gph, sizes from 140 to 2,000 gallons. / A. O. Smith. A*

862 WATER CONDITIONER / Units offer continuous flow rates from 16 to 230 gpm for all industrial and commercial installations. Control valve is all-brass, 5-cycle, motor-driven. Distribution system and brine tank are corrosion-proof. / Dispenser Div., Eaton Corp. A*

863 WATER HEATING SYSTEM / Skid-mounted systems consist of a boiler, storage tank, and accessory components pre-piped and wired, ready for fast installation. Ninety different heater-tank combinations available, 80 to 2000 gal. / A. O. Smith. A*



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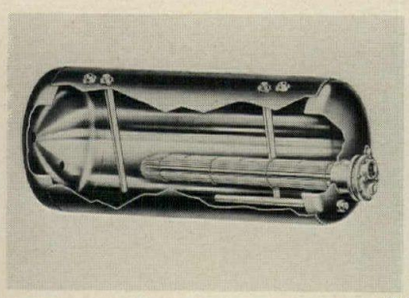

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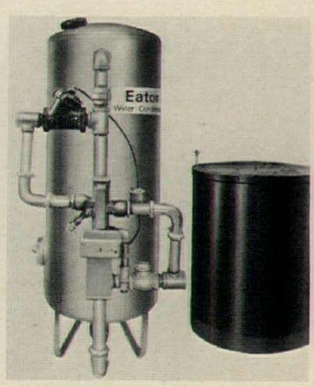

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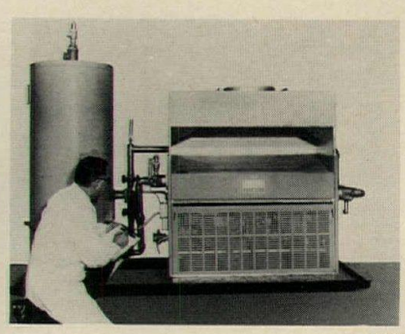


863

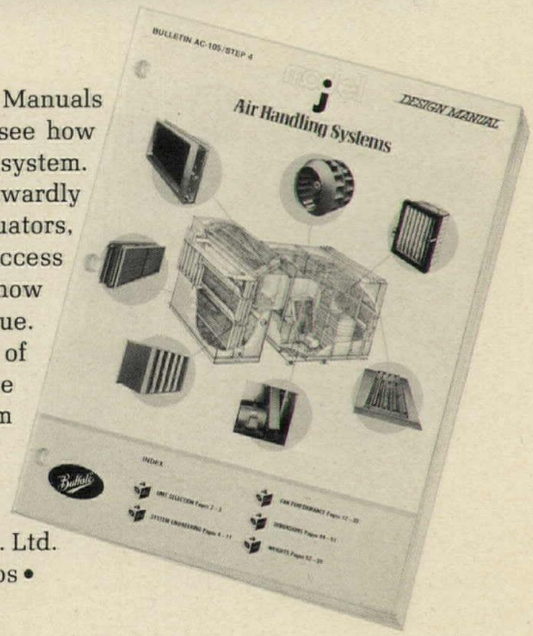
For more data, use inquiry card.

an open letter on air conditioning *to building owners, architects, consulting engineers and contractors* from the Buffalo Forge Company.

In view of the demand for more sophisticated air conditioning systems, the rapid rise in construction and maintenance costs, and the growing concern for our natural resources, Buffalo Forge supports those who believe:

- Operating and maintenance costs are assuming greater importance with respect to initial cost.
- Energy conservation is essential, economically & ecologically.
- Central Air Handling Systems are necessary to achieve optimum performance.
- Designers should have complete engineering and cost information for selecting air handling cabinet components to exactly meet modern environmental requirements.
- Controlled cost factory fabrication of the complete air handling system is necessary to get a top quality unit with the best possible value.
- You, the building team, should have the communication tools required to produce concise specifications, control equipment procurement and facilitate installation.

Buffalo's new model "J" air handling systems give you these "tools".



Request copies of Buffalo's new Specification and Design Manuals from your Buffalo Sales Engineer. Or write direct. Now, see how easily you can build specifications for any air handling system. Study the unequaled choice of components, including backwardly curved fans, low air-friction coils, filters, sound attenuators, vibration isolation bases, dampers, service plenums, access doors, and many more. Your Buffalo Sales Engineer will show you how to apply this new Specification and Design technique. He can quickly and accurately quote any combination of components you select. Act today. We believe you'll be delighted with Buffalo's answer to your Air Handling System specification and design problems.

Air Handling Division, Buffalo Forge Company, Buffalo, N.Y. 14205. In Canada: The Canadian Blower and Forge Co. Ltd.
Air Handling Equipment • Finned Coils • Centrifugal Pumps • Machine Tools.

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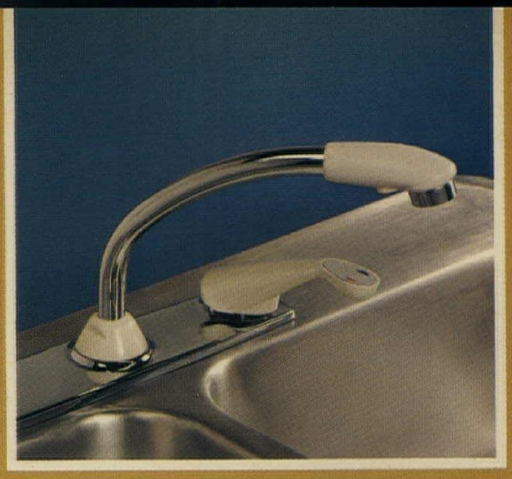
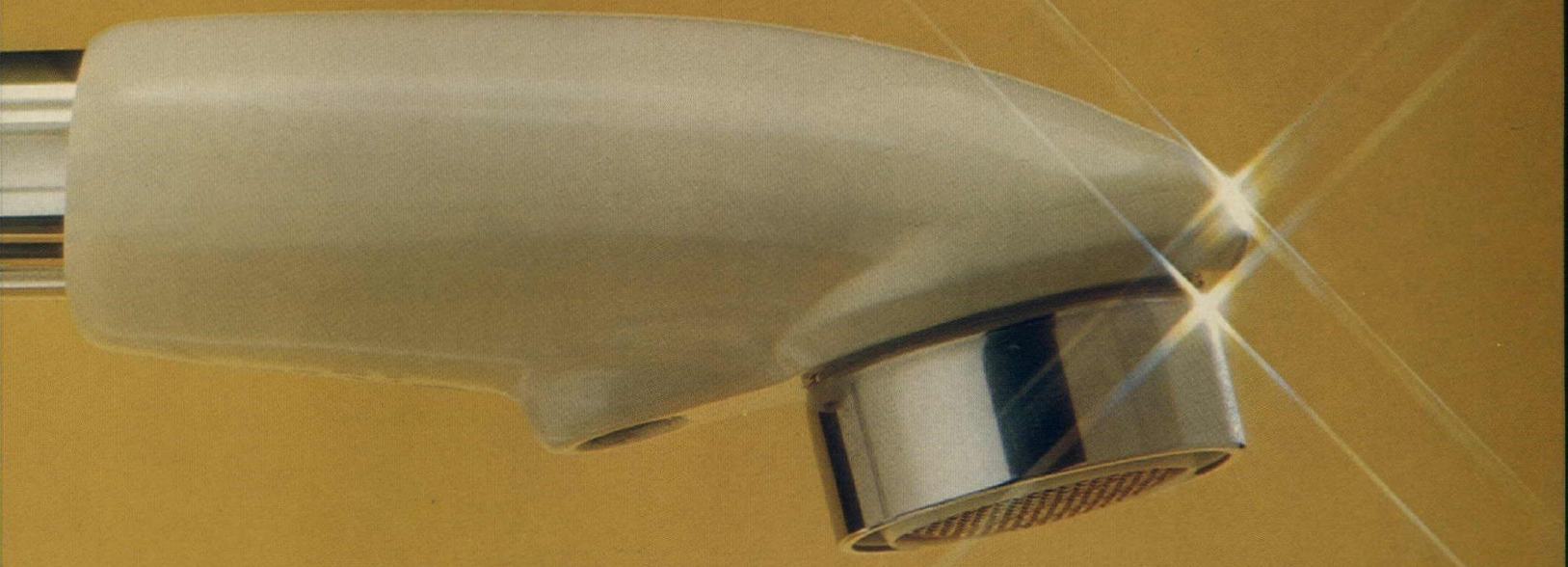
AMERICAN STANDARD
PLUMBING / HEATING

New Aquamix™

Space-Age fitting for budget places.



Spout swivels 360° and head tilts 45° right or left to direct water anyplace in sink.



Look at Aquamix through the eyes of a young homemaker and you'll recognize the tremendous potential.

The kitchen fitting with touches of decorator color to set off the gleaming chrome. The perfect color—Bone, to harmonize with any decor.

The convenience of single-lever control. The crisp action of the washerless ceramic-disc cartridge. The swivel head to direct water anyplace in the sink.

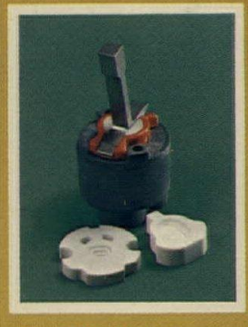
Modern design. Space-Age modern.

It's the only *quality* fitting at the lower end of the price spectrum.

Utilizing space-age materials such as Celcon®—so dependable it's used for gears and fuel emission systems in cars.

Goes in fast. No connections to sweat. Most parts can be tightened without tools. Unique temporary retainer clip works like an extra hand. Makes the job even easier. Designed for sinks with three holes on 4-inch centers.

New Aquamix. For new multi-unit and lower cost housing markets. The best keeps getting better. American-Standard, P.O. Box 2003, New Brunswick, N.J. 08903. Available July 31, 1972.



Ceramic-disc cartridge controls water with no metal-to-metal or metal-to-rubber contact. Two gem-smooth ceramic discs adjust flow from trickle to a blast. Withstand silt, minerals, and sand.

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For New Construction or Modernization . . .

Eaton/Cordley

Coolers, Chillers and Fountains

More new Eaton/Cordley products to help you keep pace with the latest application trends.

1. Simulated-Recessed Cooler

Extends only 9½" from any wall—without recessing. Mounts flush to provide all the installation economies of wall-hung coolers, yet offers space-saving and styling advantages of semi-recessed models. Capacity: 6 or 13 g.p.h.

2. Compact Wall-Hung Cooler

Measures only 15¾" wide, 13" deep, 15" high. Can be mounted anywhere space is a premium—at any height. Capacity: 2 or 4 g.p.h.

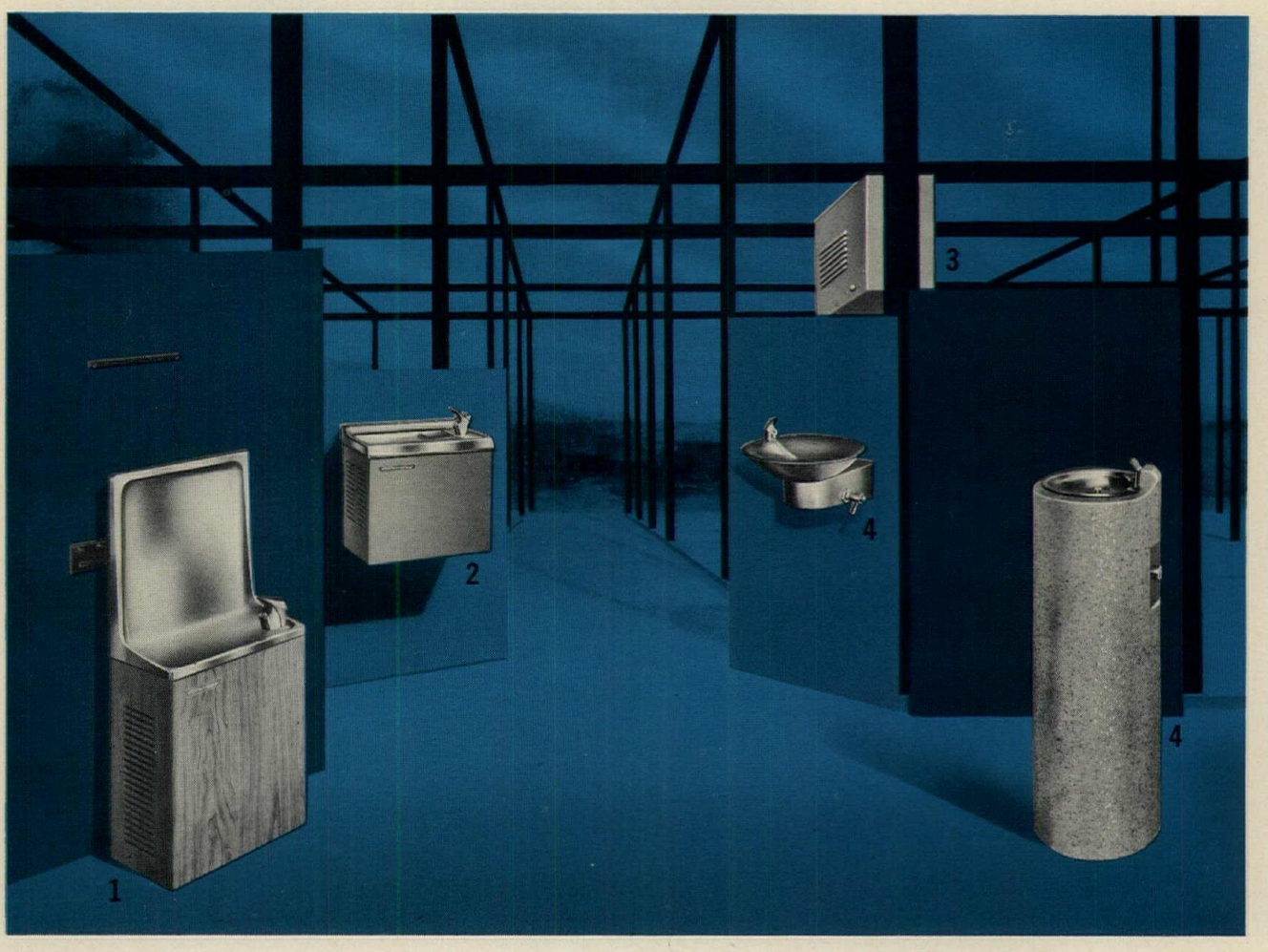
3. Compact Remote Chiller

Ideal for supplying cool water to glass fillers or remote fountains. Measures only 14½" deep, 10" wide, 15½" high; can be installed in out-of-the-way, space-saving locations. Capacity: 4.1 g.p.h.

4. Drinking Fountains

An extensive line of Eaton/Cordley metal, aggregate, and vitreous drinking fountains in many sizes, styles, and shapes. Can be connected to remote packaged chillers when cool water is desired.

For more information write Eaton Corporation, Dispenser Division, 3727 Mt. Prospect Road., Franklin Park, Illinois 60131. International Operations: Telex 72-8310.



EATON Controls Products

108 R

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Coming in the December Architectural Record...

an editorial exploration and recognition of

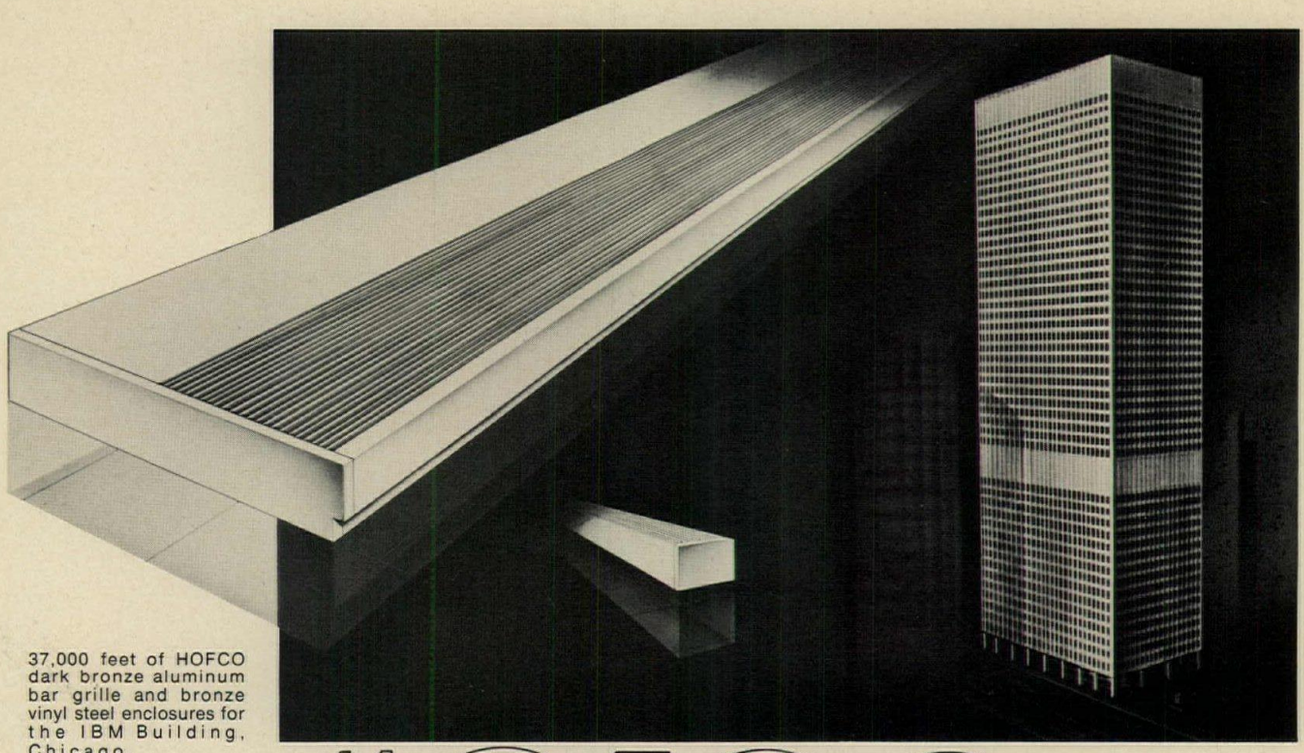
THE BEST WORK OF THE YOUNG ARCHITECTS

The entire December issue will be devoted to an examination and appraisal of what the younger practitioners are doing, aspiring to do —and what that portends for building design, for larger scale planning, for the practice of architecture and for the future of the profession.

The December issue dramatizes the Record's traditional interest in young talent. It will be a voyage of discovery and recognition—and as such will be read with intense interest by the largest architect and engineer audience ever assembled by any architectural magazine.

A wonderful editorial background for the display of the best of your young products.

Closing date: November 1.



37,000 feet of HOFCO dark bronze aluminum bar grille and bronze vinyl steel enclosures for the IBM Building, Chicago.

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custom enclosures

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Architecturally inspired... custom engineered for strength, availability and ease of installation. Infinite designs to inspire the viewers of these graceful enclosures. It is possible to create a memorial of beauty in each room or office of any size building with our enclosures... A new (patent applied for) process of vinyl clad grilles for all types of base materials has recently been added to the available grilles of extruded aluminum, aluminum bar, steel bar, punched louver and plastic.

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mini-computer control emerges

JC/80 system stands alone in building automation.

Johnson's JC/80 breakthrough lets you specify programmable computerized control anywhere. At the price of fixed-program systems.

The JC/80 Stand-Alone is ideal for single buildings and small complexes. It has the first mini-computer designed for building automation. Connected to operator's console and remote points by co-ax, it is a general communications loop. Handles 500,000 bits a second. Operates in real time, always on line. Compares performance to stored ideals.

Maximum response time is just 4 seconds for any system. Reports alarms in chronological sequence. Compatible with all digital systems. Operator functions programmable on-line. Modular hardware and software available locally. And immediately.

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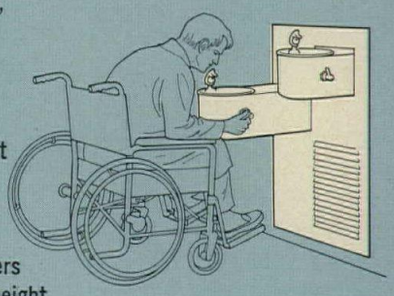
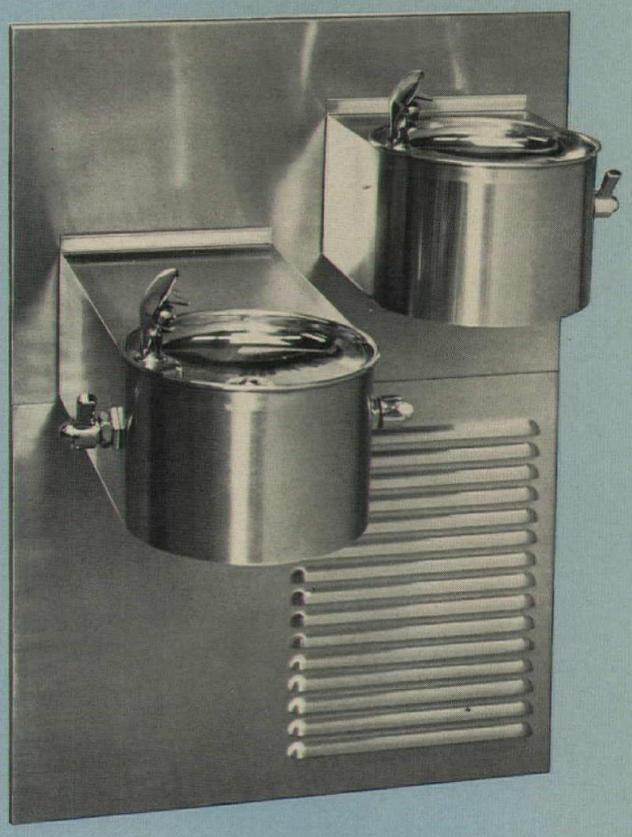
This Haws fountain helps the handicapped. It helps you comply with public law 90-480...

which says buildings constructed, leased, or financed by the Federal Government must provide facilities suitable for use by the physically handicapped.



Someone in a wheel chair can wheel up to the lower fountain on our new dual unit and comfortably drink without straining. The fountain extends 20½" to allow ample wheel chair clearance. And there are operating handles on both sides. Others conveniently use the adjacent standard-height fountain. No waiting necessary.

The entire unit is stainless steel. **Model HRWC-5 or 10** has a remote water chiller neatly concealed behind a louvered bottom grille. **Model 1108** is the same dual fountain without the water chiller. For further details write **Haws Drinking Faucet Co.**, 4th and Page Sts., Berkeley, Calif. 94710.



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Haws offers the world's best drink

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Simplified HVAC Planning & Installation is Here

with no compromise in performance

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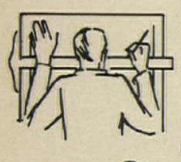
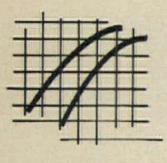


Planning United makes HVAC planning easy — only one source to consult for all air handling components. Plus, detailed data and specifications included in all product bulletins means faster, easier reference; less time "on the board".

Installations Special emphasis on engineering and manufacturing excellence produces easy to install, compatible components. Mechanical contractor has only one "brand" to become familiar with. Detailed instructions, in-stock warehousing and factory supplied sealants and tape all combine to further facilitate the installation . . . with less job site time.



plus superior performance United's components performance has been proven on jobs, both large and small, throughout the country. Continued testing and research results in constantly improved products . . . allowing engineers and architects to specify United Sheet Metal in complete confidence that they will perform as required.

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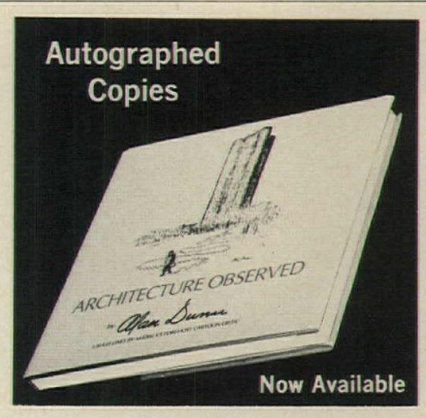

Alan Dunn's

ARCHITECTURE OBSERVED

Earlier this year, Architectural Record published—in hardcover book form—a collection of 139 of Alan Dunn's best cartoons which appeared in the RECORD over the years. The warm reception of this book by architects and others has prompted us to plan a second printing.

In the meantime, Alan Dunn has graciously consented to autograph a limited number of available copies which are being offered at this time on a first-come, first-served basis. The price of these personally autographed copies is $10 each.

In addition to the autographed copies, unsigned copies are also available at $6.95 each. These also make excellent gifts for your business associates and friends—particularly as Christmas gifts. **To order your copies, use the coupon below.**

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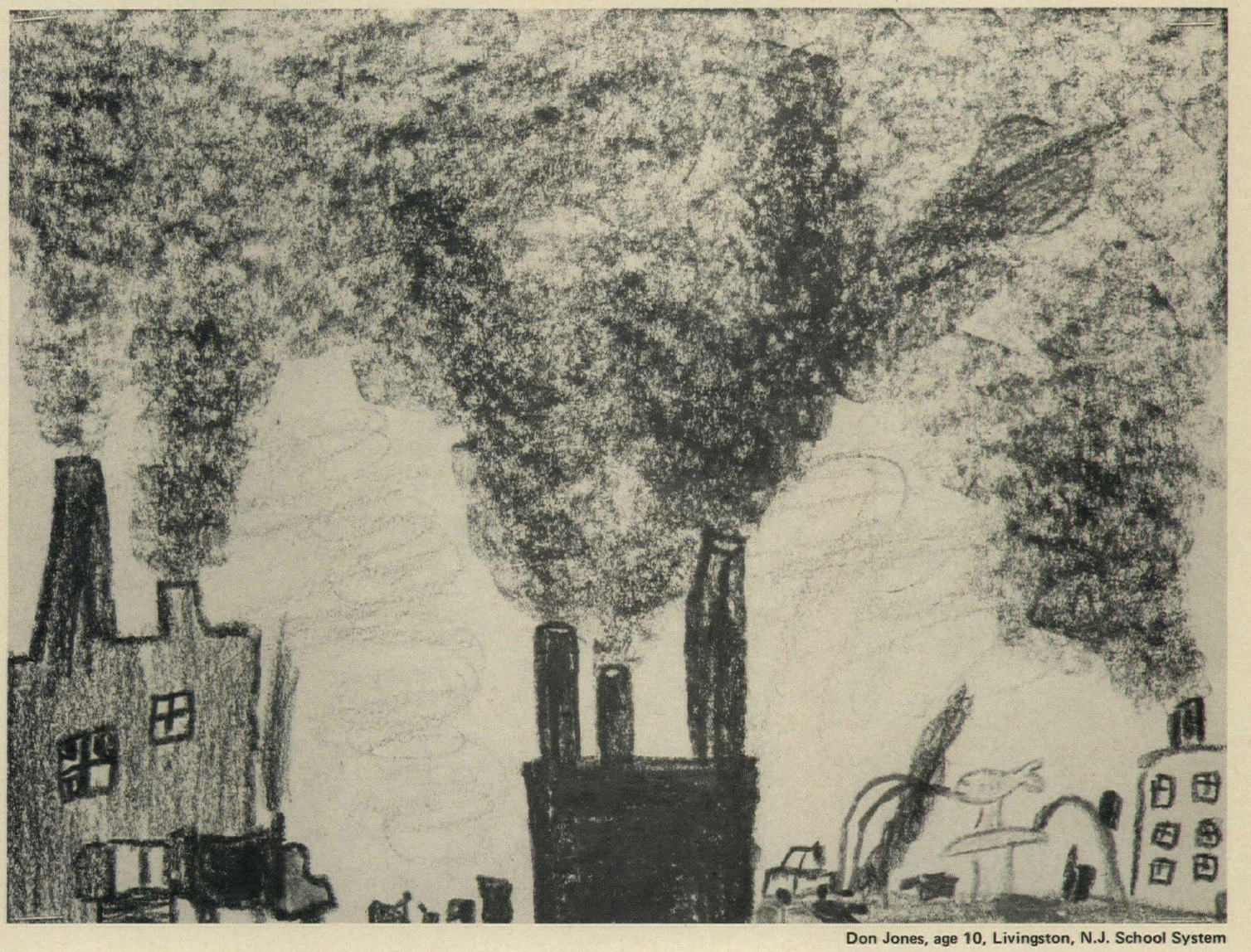

Don Jones, age 10, Livingston, N.J. School System

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This device:

- ⋆ Removes particles from smoke produced by apartment house incinerators
- ⋆ Uses no water
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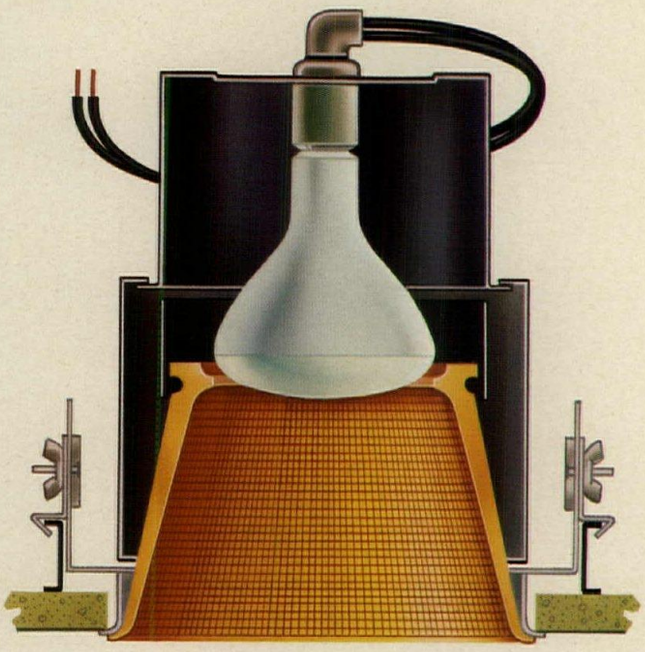
CEILINGS COME ALIVE



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Now Guth-Glo™ allows you to break from old disciplines . . . no more holes in the ceiling trying to be innocuous.

Because GUTH-GLO's Prismagic™ Color-Cones are **designed** to be seen and noticed. They **participate.** You can actually **use** them to complement the atmosphere you're creating.

Use Guth-Glo in fine restaurants, stores, lobbies . . . even applications where downlights haven't been used before. In blue, green, amber, ruby red, or crystal. Surface and semi-recessed units, too.

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electrical

uci 16

The largest portion of this Division is devoted to the latest in lighting of every type from the most general illumination to highly specialized luminaires, for both interior and exterior use.

The first trend noted in lighting is the search for understanding of what constitutes good lighting practice and how it can be achieved with products. One of the conclusions of the search is that low lateral brightness (reduced glare) and improved light diffusion produce beneficial results. Manufacturers have responded to this need, as evidenced by many of the products in this Division, with low-glare luminaires that use materials such as plastics, in correct configurations, to produce more controlled lighting. The products with this capability range from general office luminaires to outdoor area and display lighting. Another trend in the industry is the development of new luminaires and materials that reduce reflected glare from critical seeing tasks.

To discourage vandalism, many more fixtures are found made of indestructible plastics and metals or else they feature components that are inaccessible.

In terms of protective features, other products in this Division reflect the higher security levels being sought by owners. Automated building systems will become more prevalent in future years, with possibly some of the products shown here in charge of monitoring and controlling everything from access to the building, to the building's mechanical and electrical systems.

Many new types of detectors for fire, intrusion and contraband are on the market just recently in such profusion that one has only to think of a type of calamity to discover there is, and will continue to be, a means of guarding against it.

One of the most innovative products might well be the application of electro-luminiscent plastic sheets to signage, and possibly soon, general lighting. The panels produce light many times brighter than incandescent types and can be made into vandal-proof, cold light signs. Certainly, there will be more development of this technology to produce more applications.

Produced with the help of
J. H. Blitzer, Jr., Integrated Ceilings, Inc., Los Angeles.

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An imaginative ensemble of light
that distinctively combines function and form.
Created to complement and enhance
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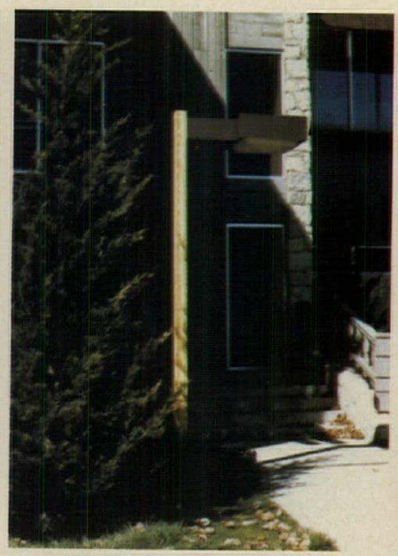
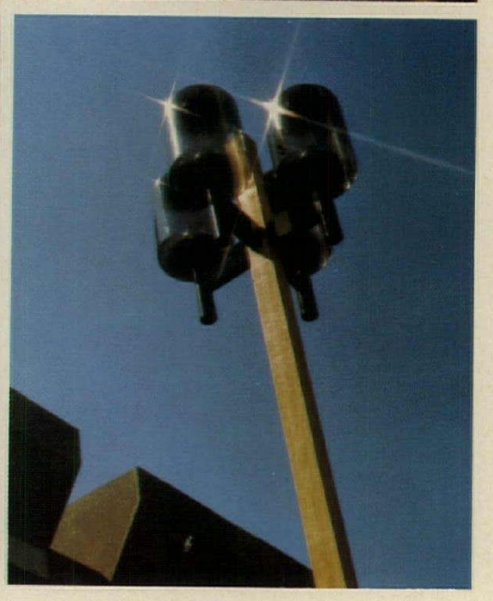


designer group



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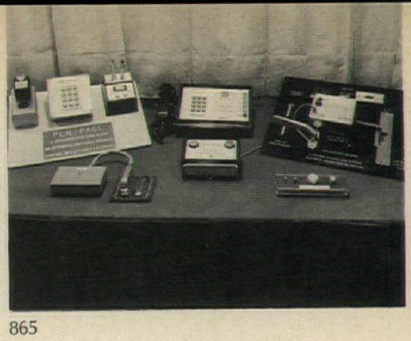

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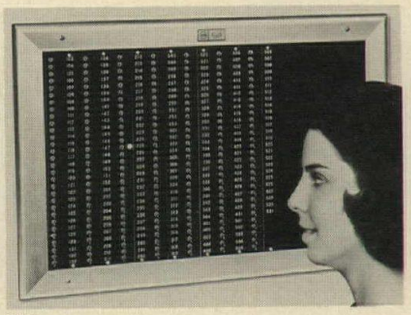

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COMMUNICATIONS

864 VANDAL-PROOF SPEAKER / A speaker which the producer claims is almost immune to vandal attacks can be surface mounted or recessed completely in either wall or ceiling. Weather proof and designed for maximum intelligibility, the APF-15 model is rated 15 watts at full continuous power. / Atlas Sound.

865 TRACKING DEVICE / Minute ultrasonic devices worn by persons allow them to be located immediately in medium and large corporations, institutions or terminal facilities. A variety of automated systems are available, including TV scanning systems. / Recognition Devices Inc.

866 ROOM INDICATOR / This system keeps hotel personnel aware of the readiness state of all rooms. Light-emitting diodes in place of lamps eliminate bulb replacement. The system is designed to give the housekeeper and desk clerk a running check on room conditions and the location of maids. / S. H. Couch Div., ESB Inc.

867 AMPLIFIER / Available in four sizes, from 20- to 40-watt units, the *Triumph* line provides the necessary equipment for professional systems for commercial sound uses. The amplifier is equipped with two speaker sockets, plus a terminal strip. / Dukane Corp.

868 MICROPHONE / This professional dynamic microphone, with the feature of two pickup patterns in a single unit, delivers smooth response over a wide range of frequencies. It can be converted to an omni-directional type from a cardioid with a twist of a ring on the microphone. / Bogen Div., Lear Siegler, Inc.

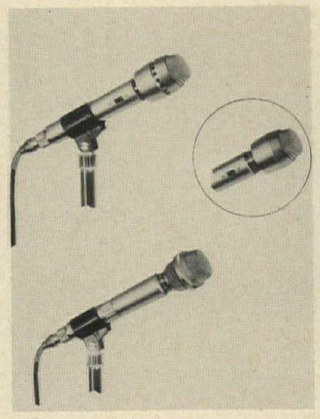
869 HOTEL TELEVISION / With an alcohol-resistant finish and an 18-in. screen, this unit eliminates guest tampering. A complete hotel-motel single source package is available. / RCA Service Co.

870 LUMINOUS PANEL / The company has developed a technique whereby minutely thin sheets of electro-luminescent plastic light when plugged into an electrical outlet. The panels can be used for vandal-proof, cold light signs. The light is 200 times brighter than incandescent and is low cost. / International Scanning Devices, Inc.

871 LOUDSPEAKER / The three-way, horn-loaded system offers absolute minimum distortion through all frequencies while providing efficiency and uniformity over the entire frequency range. Recommended for studio monitoring or anywhere a high-level playback system is needed. / Electro-Voice, Inc. A*

872 MEDIA CONTROL / Featuring random-access to slides, this multi-media slide display system is entirely electronic, with pushbutton controls. It has 320 slide capacity, dual images, automatic memory and logic system for storage, and can incorporate motion pictures and sound. / Information Management International.

873 A-V CONTROL / This product can program and control up to five projectors for multi-screen presentations. The *Media Master 375* weighs 4½ lbs and can control the advance of slide projectors individually or simultaneously in any combination. / Columbia Scientific Industries.



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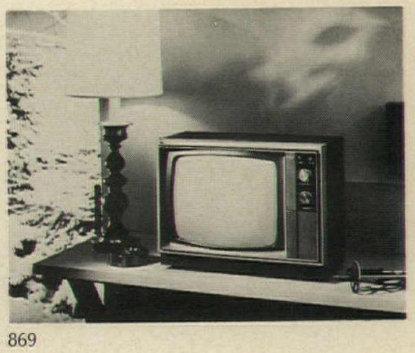

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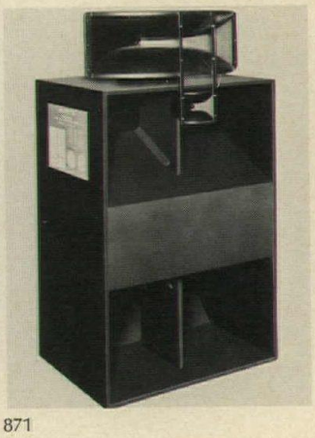

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*Included in 1973 Sweet's Catalog File(s).

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874 TELEPHONE SYSTEM / This system consists of an operator console, single and multiline extension phones and associated electronic controls. It permits growth from 20 extensions and four outside lines to 164 extensions and 28 outside lines. All cable and power controls are housed in a four-drawer file cabinet-sized enclosure. / Tele-Resources, Inc.

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875 PATIENT STATUS UNIT/ This system provides up-to-the-minute bed census information through an electronic information handling device. With *Registrat*, information is fed into the system once, whereafter memory units advise on bed availability, patient status and other clerical work. / Executone, Inc.

876 INTERCOM/ Instant two-way voice communication throughout a hospital is offered with this system. The "hands free" operation should be of interest to doctors and nurses. A single call can be carried to multiple departments. / Executone, Inc.

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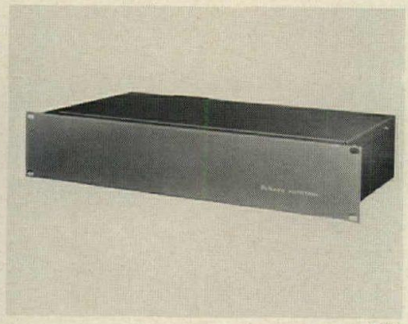

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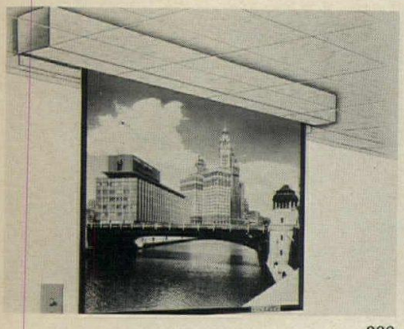
877 MESSAGE CONTROL CENTER / Unit signals guests by ringing the telephone at pre-set intervals. When the message is delivered, the room extension is wiped from the device. Connects to existing phone systems. / Varian-Talix.

878 WAKE-UP SYSTEM / Guest wake-up system automatically telephones guests at the requested time and prints a permanent record of each call. Easily installed without wiring of guest rooms. / Varian-Talix.



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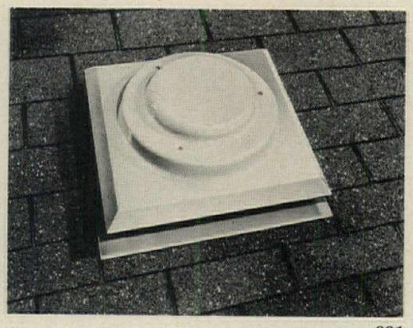

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879 MASTER CONTROL / The *Dial Access* communications system integrates and combines the functions of various school communications and signal devices. / Dukane Corp.

880 PROJECTION SCREEN / Electrically operated, the *Executive Electrol* screen recesses completely in the ceiling and provides its own ceiling closure. The three-in.-wide closure can be finished to match the ceiling treatment. Screens are available up to 12 sq ft, in white glass beaded or non-gloss matte white surfaces. / Da-Lite Screen Co., Inc. A*

HEATING—COOLING

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881 ATTIC COOLING FAN / The RF 58 is a low profile, exterior, 1,000 cfm attic cooling fan with enameled zinc-grip steel housing. Provides eight air changes per hour in 7500 cu ft attic space. The 1/7 hp motor is UL listed. / Nutone. A*

882 RADIANT HEAT / A cable-embedding machine is used to rout twin grooves simultaneously and insert radiant heat cable into gypsum board after it is installed. This eliminates hand-stapling of cable. The system is suited to new and remodeled residential and light commercial buildings. / Kaiser Gypsum Co., Inc.

883 UNIT HEATER / Available in 15 ratings ranging from 1.5kw (5122 btu) to 36kw(122,940 btu) with horizontal air flow and seven ratings ranging from 12 to 36kw with vertical air flow. The producer says units are easy to install. Bryant Div., Westinghouse Electric Corp.

884 FURNACE / This electric unit is offered for commercial, industrial and residential applications from 4 to 40 KW. PSC-type motor, ½ hp, delivers up to 2,400 CFM. UL listed for all positions, 0 in. clearance on cabinet, plenum and duct. Complete control package complies with NEC, NEMA, and other standards. / Tennessee Plastics, Inc. A*

885 AIR CONDITIONER / A through-the-wall unit, this model is recommended for homes, motels, apartments and light commercial use. Six cool-only models are offered up to 15,500 BTU/hr. / Hotpoint.

886 BASEBOARD ELECTRIC HEAT / These narrow units will deliver 340 BTU per linear foot, and are available in colors. / Zell-Aire Corp. A*

887 BATHROOM HEATER / *EB Series* is small, completely automatic. Calrod heating element provides instant heat. Built-in thermostat, chrome-plated grill, surface-mounted or recessed between standard studs. / Tennessee Plastics, Inc.

888 CEILING HEATER / *CH 1* fan-forced ceiling heater has nichrome open coil element with aluminum reflector for maximum heat distribution and minimum back-plate temperature. Chrome or enamel finish; surface-mounted to standard outlet box. / Tennessee Plastics, Inc.

889 SPACEBOARD HEATER / An electric heater for toe-space recessing under kitchen and laundry cabinets combines safety features with installation ease. The heaters are factory-wired for 1,350 and 1,800 watts, with optional single- and double-pole thermostats available. A black grill is included. / Berko Electric Mfg. Corp.

890 FURNACE CONTROL / This solid-state control for electric furnaces maintains a nearly-constant air flow at the desired temperature, activating one or more furnace elements as needed, rather than acti-

For more data, use inquiry card.

vating all elements which is the conventional operation principle. / Mears Controls, Inc.

891 TEMPERATURE CONTROL / A solid-state thermistor sensing temperature controller is offered with fail-safe break protection and mounting options. The unit features heavy duty, dust covered 10 amp relay output and is capable of handling inductive loads of 250VA. / Fenwal Inc.

892 BUILDING AUTOMATION / A standardized mini-computer building automation system is offered as a general communications loop. Programmed to building management objectives, the unit is constantly assessing the operations and acting to correct problems. / Johnson Service Co.

ELECTRONIC EQUIPMENT

893 TAPED MUSIC / Designed to eliminate tape threading, the product consists of a playback unit and a loading magazine enclosing two 7-in. reels. Capable of holding over 400 selections. Three-year guarantee. / Tape-Athon Corp.

894 AIR CLEANER / A re-designed electronic unit is now offered at a lower cost than previous models. Compactness has also been produced, with indicator lights to monitor power and filter cleanliness. Model EAC-8200. / Thermo-Products, Inc.

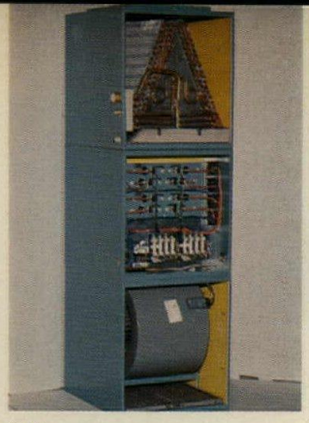
895 AUTOMATION CONTROL / The system is being offered for custom implementation in real-time control applications. Optionally expandable for monitoring operations as an integral system. / Applied Systems Corp.

896 SOUND MASKING / *Sono-Mask* provides an electronic curtain of sound to mask annoying noises in open areas of buildings. / New Jersey Communications Corp.

CONTROLS

897 BUILDING AUTOMATION / System is designed for budget installation. *Mini-mation* includes visual and audible system alarm; instantaneous temperature, set point and motor status indication; start-stop functions; graphic system display and master intercom capability. Corrective action starts within a minute. / Barber-Colman Co.

898 THERMOSTAT / Designed for line voltage control of electric heating, this economy thermostat has a textured floating panel with 360-degree ventilation. An air gap protects the bimetal. / Sunne Controls Div., Peco Mfg. Co., Inc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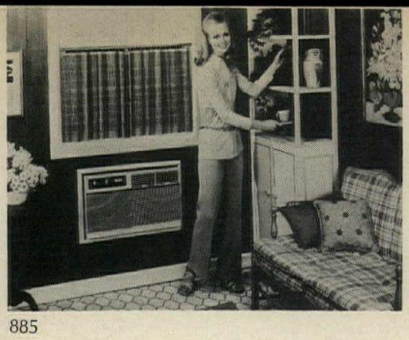
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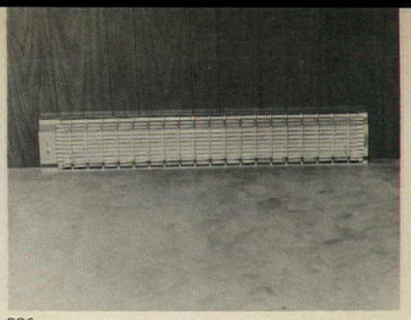
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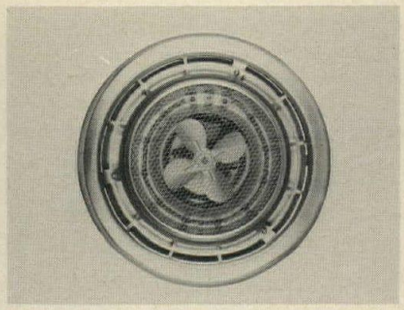
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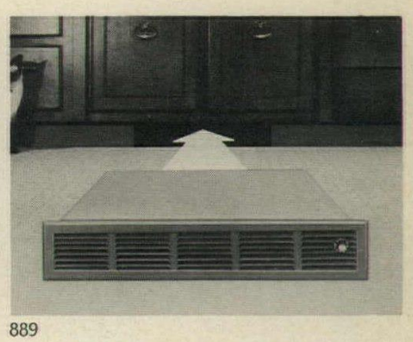
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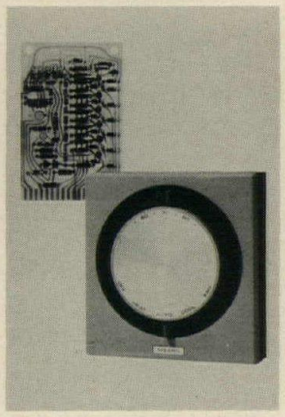
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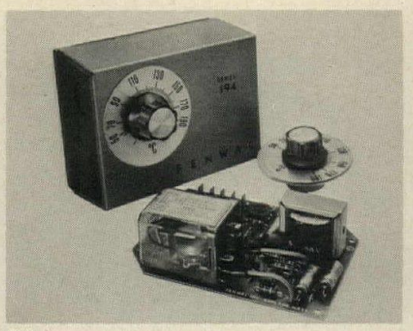
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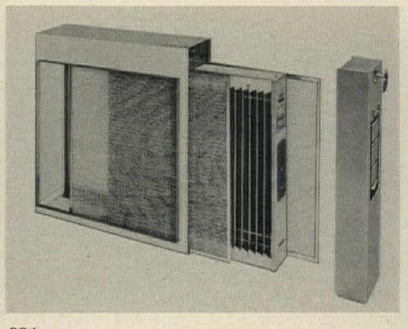
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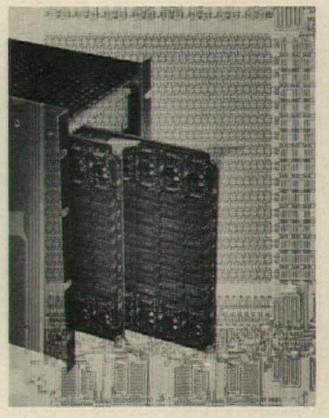
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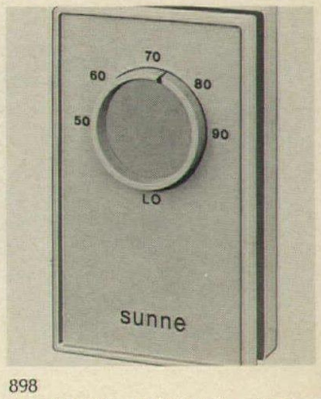

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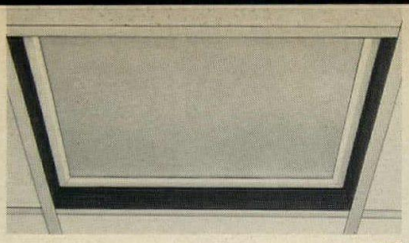

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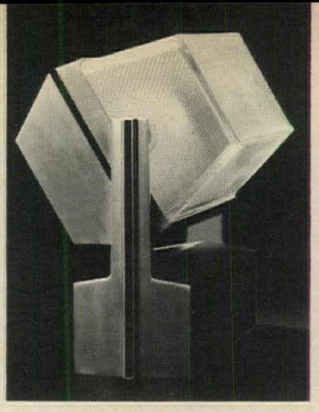

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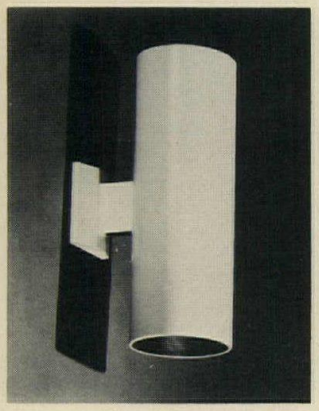

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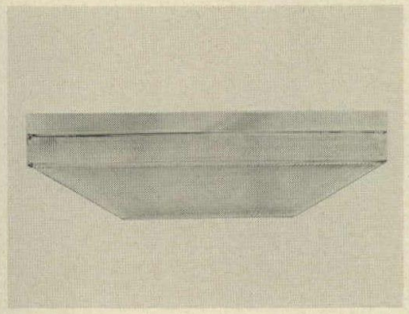

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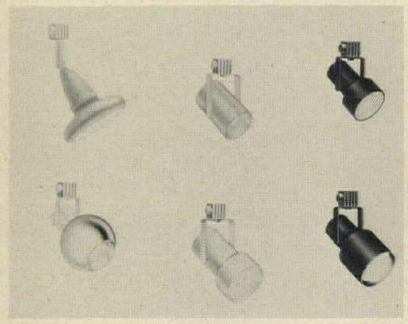

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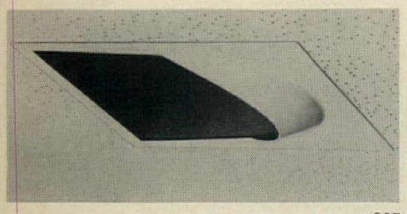

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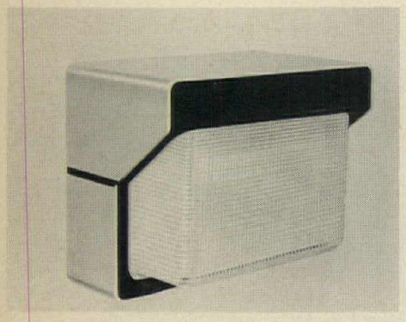

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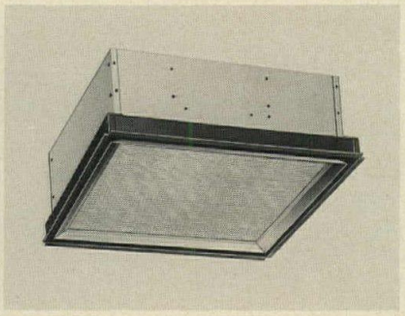

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LIGHTING

899 HID LIGHTING FIXTURE / A new 2-ft by 2-ft Mercury Vapor 250w and 400w recessed square is offered with a choice of lay-in flanged or *Micro-groove* lay-in trim for vertical appearance. The floating illusion is created by separating the extruded aluminum door from the trim. / Art Metal Lighting.

900 ADJUSTABLE OUTDOOR BRACKET / This weather-tight fixture for wall, ceiling or pad mounting features a painted aluminum or brushed duranotic bronze finish. The lens is a protected Holophane *Borosilicate* glass refractor which operates in conjunction with the reflector. / Art Metal Lighting.

901 BRACKET CYLINDER LIGHT / An invisible mounting device that simplifies installation is one of the features noted by the company. Recommended for open areas where light is required on higher-than-average walls. / Nutone. A*

902 FLUORESCENT LIGHTING / A blend of downlight, sidelight and uplight for uniform illumination is the result of this slim enclosure. Units can be ceiling or pendant mounted, either singly or in rows. The fixture is fabricated of heavy gauge steel and features an acrylic prism enclosure, which opens from either side for maintenance. / Guth Lighting.

903 TRACK LIGHTING / Miniature track lights scaled for home application are 3½ in. in diameter and available in cylinder, step cylinder and spherical shapes, in chrome, white or black and chrome. One-circuit track is ⅝ in. deep and available in 4- and 8-ft lengths. / Progress Lighting.

904 OUTDOOR LIGHT / Introduced for residential use, this 10 in. light comes with built-in core and coil ballast and a 50w mercury vapor bulb. The sphere is shatter-resistant acrylic. Other styles are available. / Progress Lighting.

905 WALL-WASHER LIGHT / The square unit is available in mercury vapor and incandescent models for use in highlighting areas. Designed to integrate with ceiling tiles and grid ceiling systems. Matte-white acrylic ceiling plate. / Guth Lighting.

906 AUDIO-VISUAL EXIT / This sight and sound exit light is activated by heat sensors throughout the building, or manually. Battery-operated in case of power failure. Single- or double-face versions are available. / Thomas Industries Inc.

907 OUTDOOR FIXTURE / Mercury vapor, wall-mounted unit is housed in extruded aluminum, in a combination of satin-etched, clear and matte black finishes. Light is directed down and out, away from the wall. The luminaire is 14 in. wide, 12⅜ in. high and projects 10 1/16 in. or 8 in., depending on model. / Thomas Industries Inc.

908 RECESSED MERCURY LIGHT / Heat developed by the lamp produces a natural convection effect, drawing cooler room air upwards through the lamp chamber, resulting in cooler operation, helping ensure optimum ballast and lamp life. Housing is 24 in. by 24 in., designed for installation in exposed or concealed grid ceiling. / Thomas Industries Inc.

909 SECURITY LIGHTING / Combines a cast aluminum housing with a prismatic glass refractor that projects 8 9/16 in. from the mounting surface. Available in 100 through 250w mercury vapor and up to 300w incandescent. / ITT Landmark Lighting.

910 POLE LIGHTING / The 4000 and 1600w models take four lamps, metal halide, mercury vapor or high pressure sodium. Each lamp is prewired with a quick disconnect plug to its own ballast assembly mounted on an individual swing-open, removable door for servicing. / ITT Landmark Lighting.

911 COFFER LUMINAIRE / The *Percepta* is designed for use with suspended ceilings. White or black panels of the 2 ft by 4 ft luminaire can be replaced with ceiling tiles where desired. The producer claims this unit virtually eliminates veiling reflections. / Holophane Co., Inc.

912 HID-LAMP DIMMER / Mercury vapor lamps, either 400w or 1000w types, can be dimmed, from 100 per cent to 2 per cent. Dimming is continuous over the entire operating range. / Wide-Lite Corp.

913 GERMICIDAL FIXTURE / As air circulates, this unit irradiates the upper strata, destroying air-borne bacteria, viruses, fungi and spores. Design prevents ultraviolet rays below the installation height. / American Ultraviolet Co.

914 EMERGENCY LIGHT / A line of 12-volt emergency lighting units, powered by a nickel cadmium battery is offered with cabinet-mounted lighting heads or remote-mounted fixtures. / Emergency Lighting Div., Tork Time Controls, Inc.

915 MARINE FLOODLIGHT / Corrosion-resistant, the *Series 3000*

For more data, use inquiry card.

floodlight has a die cast copper-free aluminum housing and all hardware is stainless steel or nonferrous material. It is a vandal-proof unit that can be wall-, cross arm- or pole-mounted. Lamp types include metal halide, mercury vapor and quartz incandescent. / Harvey Hubbell, Inc.

916 MARINE BOLLARD / All aluminum construction and stainless steel locking nuts make the unit tamper-proof, according to the producer. Heavy glass marine lens directs the light in a wide spread pattern. Available in either incandescent or mercury vapor lamps. / Prescolite.

917 PRISMATIC LENSES / This fluorescent system provides uniform lighting. Injection-molded acrylic, these lenses are self-framing, directing light downward and outward, while controlling glare. The luminaires are 2 ft by 4 ft. / Holophane Co., Inc.

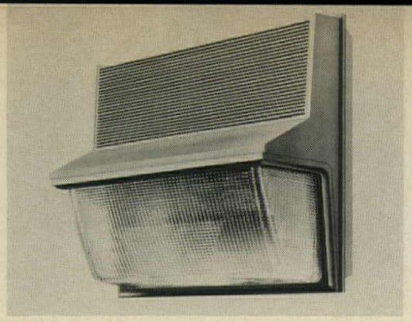
918 HID FLOODLIGHT / This downlight, in the *Spectra* series, is recommended for airports, shopping centers or anywhere rigid light control is needed. All light is confined below the horizontal plane when the fixture is mounted lens down. Units can be mounted singly or in groups of 2, 3, 4. Baked enamel finish. / Wide-Lite Corp.

919 CEILING LIGHT / The bulb in this plexiglass dome gains double exposure via a plexi-chrome reflector. The dome comes in six transparent colors, in two sizes for 6 and 12 bulbs. / Auralume.

920 LUCALOX LAMP / Average life of the 1000w size is now 10,000 hours at 10 hours per start, up from the 8,000-hour rating previously claimed. Initial lumen output rating remains at 130,000, or 130 lumens per watt, with a light output maintenance throughout lamp life of 92 per cent mean. / General Electric Co., Lamp Business Div. A,I*

921 REFLECTOR BOLLARD / For outdoor use, this low-profile mercury vapor luminaire is 48 in. high and 8⅜ in. in diameter. Light is directed downward, through a clear acrylic enclosure. The unit is constructed of cast aluminum and is suited to damp locations. / Prescolite. A*

922 LOUVER LENS / The producer is offering a one-piece 3 ft by 3 ft-light-air panel, of molded clear acrylic. The product is also available with pattern-delineating black accent on the louver edges. While diffusing light, the product permits supply and return air circulation. / Scientific Lighting Products. A*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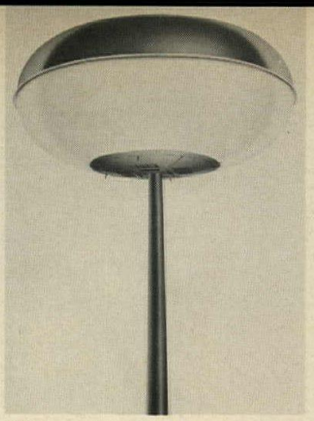
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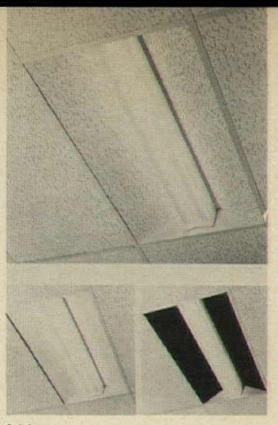
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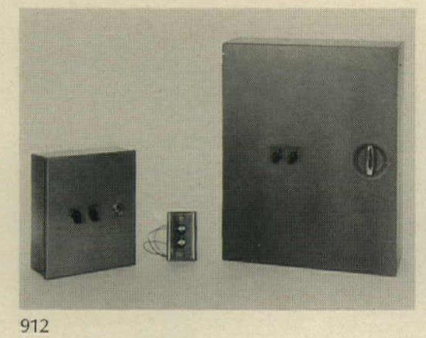
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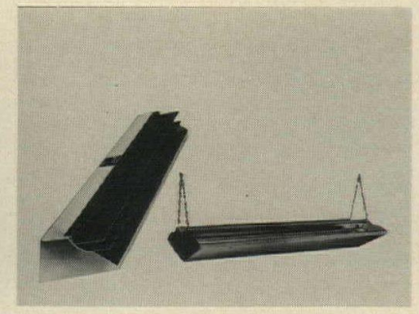
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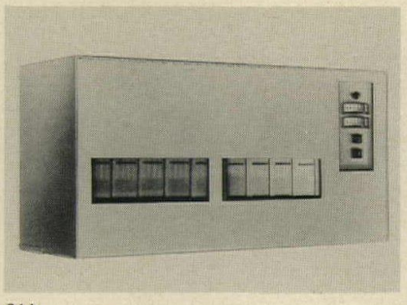
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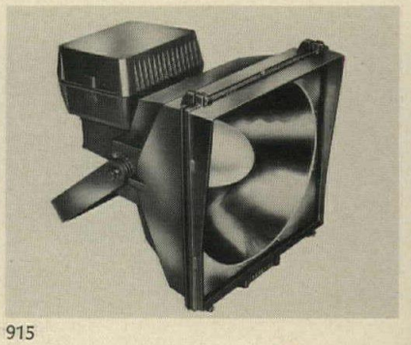
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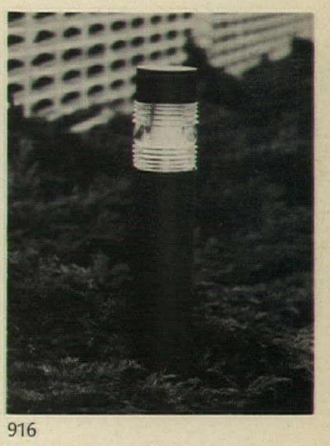
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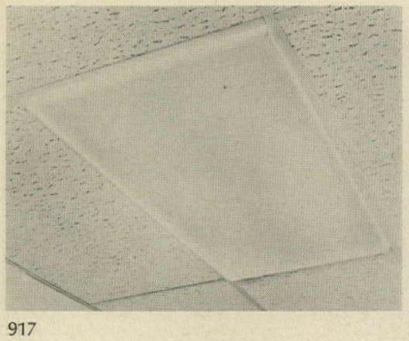
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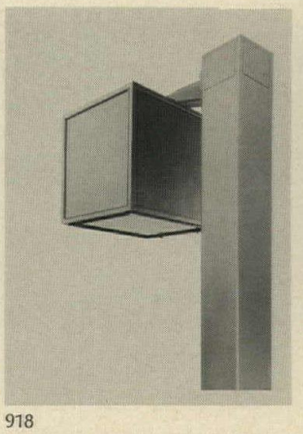
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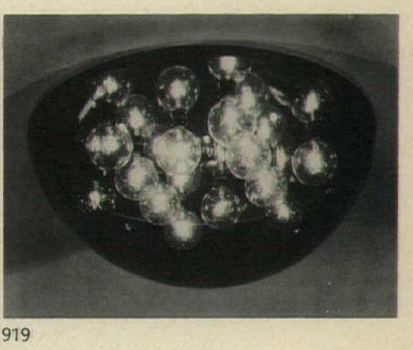
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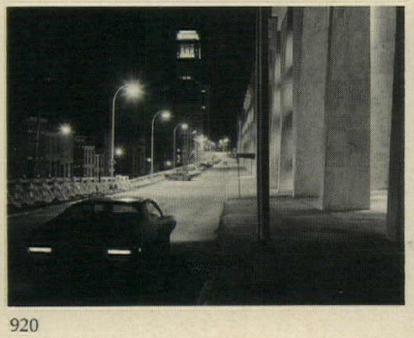
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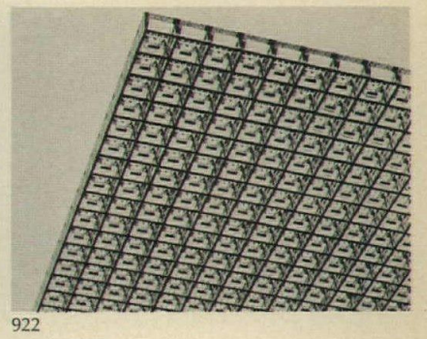
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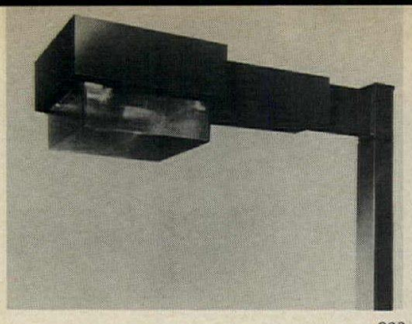

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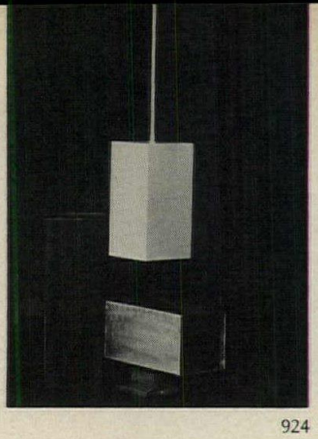

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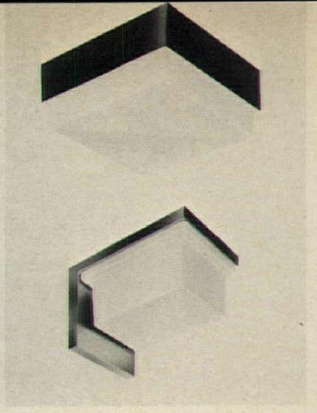

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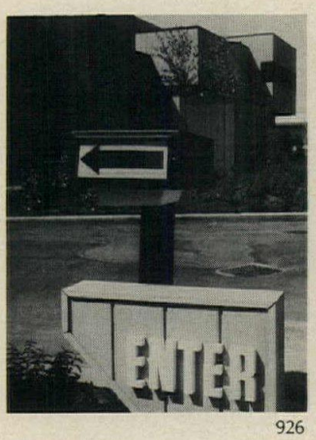
923 OUTDOOR LIGHTING / Designed for parking lots, malls and streets, this luminaire is available in 16 baked-on enamels and four rectangular shapes. Steel, aluminum or wood poles in lengths up to 60 ft, can be painted on the site. Mercury vapor, sodium or metal-halide lamps can be accommodated in the unit which measures 18 in. wide, 26 to 39-in. long and 10½ to 13-in. high. / Westinghouse Outdoor Lighting Div.



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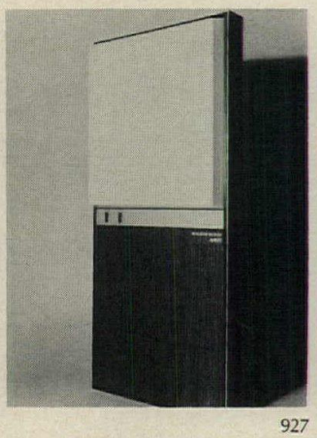

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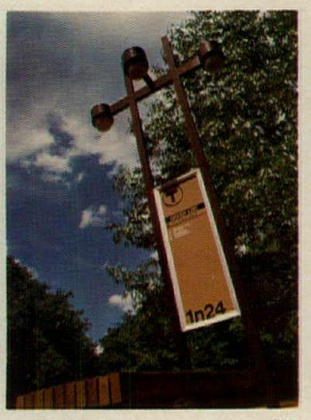

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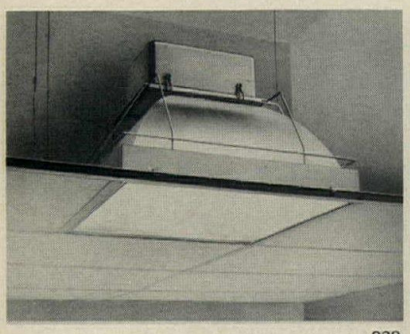
924 PENDANT LIGHTS / Architectural squares in pendant- or surface-mounted units are made of seamless aluminum in a variety of finishes. Pendants have swivel-top stems for sloped ceilings. / Nu-Tone Div., Scovill.

925 OUTDOOR LIGHTING / A series of wall-bracket and recessed designs called *Durathon* are offered for incandescent, mercury vapor and fluorescent lighting. The non-destructible, molded diffusers are formulated with ultra-violet inhibitors. / Marvin Electric Mfg. Co.



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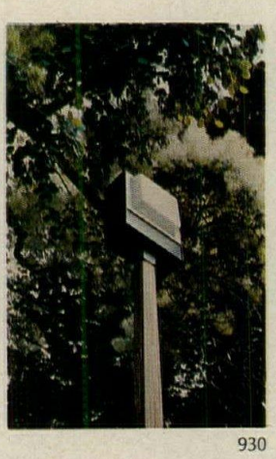

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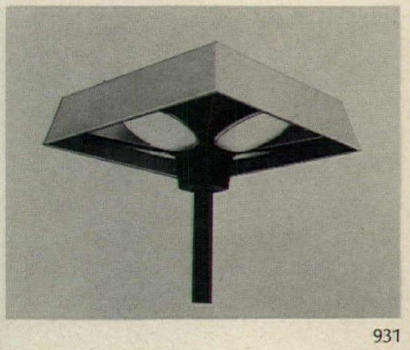

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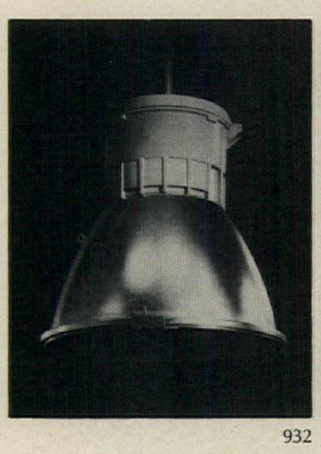
926 DIRECTIONAL LIGHT / This high-intensity light provides an illuminated directional arrow that can be reversed to point right or left. The background panel is offered in a range of colors. Weathertight, the unit stands 30 in. high and is painted black. / Elsco Industries.

927 EMERGENCY LIGHT / The *Avanti* is a totally sealed silicon, solid-state fluorescent light which is slim, measuring 15½ in. wide, 31¼ in. long and 4¾ in. deep. It is edged with brushed structural aluminum. This 12v emergency lighting system offers 1½ hours of emergency light. / Teledyne Big Beam.



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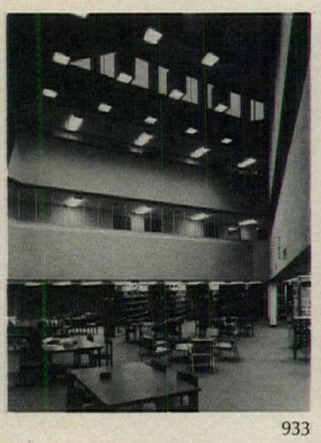

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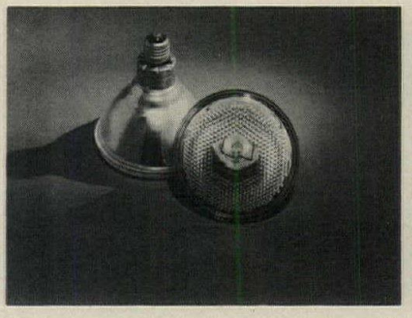
928 OUTDOOR LUMINAIRES / The unit shown is part of an outdoor lighting series that allows the designer to create lighting packages from catalog items. Luminaires are available for HID and incandescent lamps. Prefinished aluminum, wood and steel standards are included and all luminaires can be coordinated with signage, planters and benches. / J. H. Spaulding Co. A*



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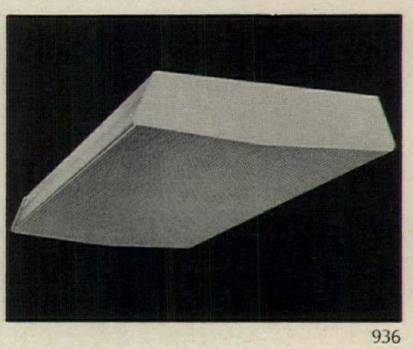

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929 CEILING LUMINAIRE / A mercury vapor fixture, the basic unit for recessed or flush mounting fits a 2 ft. by 2 ft ceiling opening. The luminaire accepts decorator panels that are vinyl-clad or anodized, for surface or pendant mounting. / Crouse-Hinds Co. A*

930 LUMINAIRES / Two- and four-light clusters, or single units horizontal or vertical (shown) offer designed appearance for parking

For more data, use inquiry card.

lots, malls, walkways. White acrylic lens, bronze acrylic or flat metal top. Available with variety of lamps, wattages to 400. / Crouse-Hinds Co. A*

931 OUTDOOR LUMINAIRE / *Ultra-Lite* for large outdoor areas, comes in four models 62 in. square high, with straight or slanted sides tailored to design needs. Takes four 1000-watt halide or mercury vapor lamps. / Crouse Hinds Co. A*

932 HID FIXTURE / This 400-watt HID, enclosed and gasketed fixture is recommended for indoor and outdoor industrial applications, where moisture, dirt, corrosion, vibration and rough usage are problems. Available in both refractor and reflector models for mounting heights from 15 to 25 ft. / Crouse-Hinds Co.

933 QUIET BALLAST / For areas that require lower-than-average noise levels from lighting ballasts, this HID unit reduces noise by means of silicone-sponge cushioning between the yoke and ballast and between the yoke and fixture body. / Wide-Lite Corp.

934 AREA LIGHTING / Decorative, non-glare lighting for parking lots, malls, motels and residential areas is available in cast aluminum, designed for vandal resistance. The luminaire is equipped with a ballast for 100- or 175-watts mercury vapor lamp. Unit is 30 in. or 72 in. high. / Westinghouse Electric Corp.

935 LONG-LIFE LAMP / For safety applications, lobbies and reception areas, high-ceiling applications, stage lighting, 250-watt *PAR-38 Quartzline*—with small self-cleaning lamp within the bulb—is said to offer 3000-hr. life, higher efficiency, and better maintenance of light output. / General Electric Co.

936 CEILING FIXTURE / This *CFC* fixture meets adopted standards for classroom lighting, with coefficients of utilization that achieve a 70-foot candle illumination level in a 30 ft by 30 ft space with three 28-ft rows of luminaires. / Day-Brite Lighting Div., Emerson Electric Co.

937 EMERGENCY EXIT SIGN / This system incorporates a battery pack and charger arrangement which meets NEC specifications of 1½ hours operation. The sign does not have to be recessed, due to its shallow dimensions. / Day-Brite Lighting Div., Emerson Electric Co.

938 "WARM" MERCURY LAMPS / Two new sizes of *Warm Deluxe White* mercury lamps—250- and 1000-watt— have a phosphor coating to produce a warm, rich-in-red white light. Primary use: stores; but suitable for other public spaces. General Electric Co.

939 VANDAL-PROOF FIXTURE / Recessed fixtures in various rectangular sizes are available, with dirt- and moisture-resistant all-plastic construction. Unwarranted access is prevented with special latching provisions. / Day-Brite Lighting Div., Emerson Electric Co.

940 FLOODLIGHT / Offering an extremely tight beam pattern, the *Tite-Lite* can be mounted on *Spectra*-series poles. High-lumen output is achieved with 1000-watt Lucalox lamps. The product is recommended for all long-throw applications. / Wide-Lite Corp.

941 VANDAL - PROOF LIGHT / This unbreakable wraparound fixture features a shallow profile and tamper proof fasteners. It is offered for use with two 40-watt fluorescent Lights. / Harvstone Mfg. Corp.

942 EMERGENCY LIGHTING / Fixtures are made in single- and two-head versions, in black, white or spun aluminum, with other colors available. Batteries, charger and controls are in the cylindrical housing. Unit will light up to four hours. / Dual-Lite Co.

943 ACCENT LIGHTING / No overhead electrical source is needed with the *Parentesis* model which utilizes the cable-in-tension principle. The unit will accept any type of lamp and the fitting moves up or down the cable, which is fastened to the ceiling and weighted at the floor. / Atelier International, Ltd.

944 PLAZA LIGHTING / For outdoor use, this globe fixture is made of breakproof, seamless acrylic. Unit uses incadescent lamps. The globes are 18 in. in diameter, inside of which are bronze-anodized aluminum quartette candelabra sockets to accommodate 60w lamps. / Stonco Lighting Div., Keene Corp.

945 MERCURY VAPOR LIGHT / A recessed, louver-type fixture made of cast bronze houses mercury vapor lamps up to 100w. / Stonco Lighting Div., Keene Corp.

946 CLEAN LIGHTING / Designed for industrial areas where cleaning light fixtures is a problem, this unit has a smooth, one-piece welded steel housing that has no means for dirt, dust, moisture to enter. The *Cleanlite* uses one, two, three or four fluorescent lamps. / Wheeler Lighting Div., Keene Corp.

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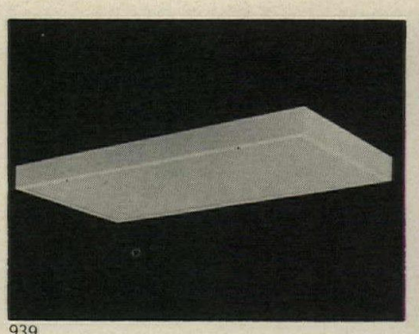
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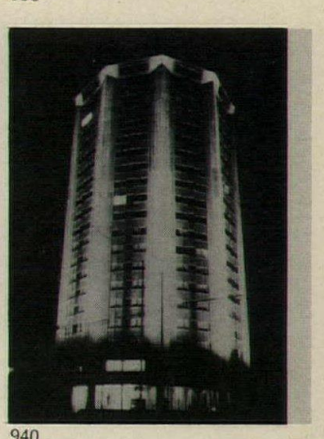
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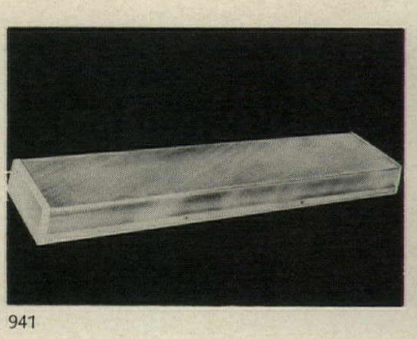
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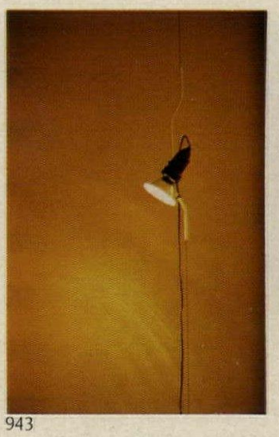
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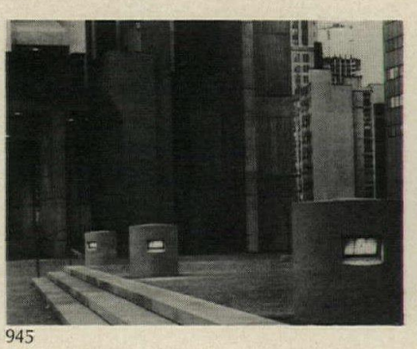
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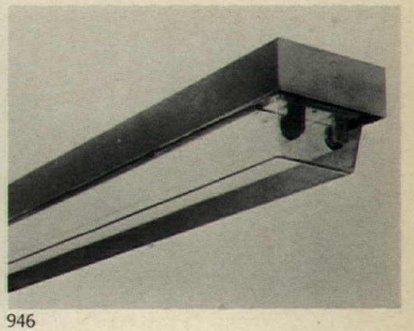
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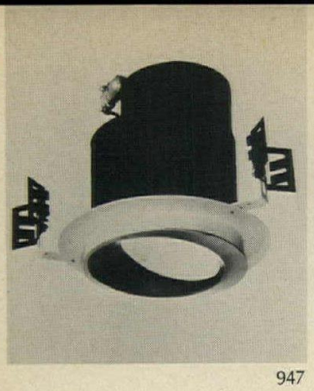

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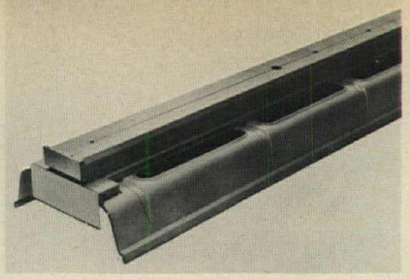

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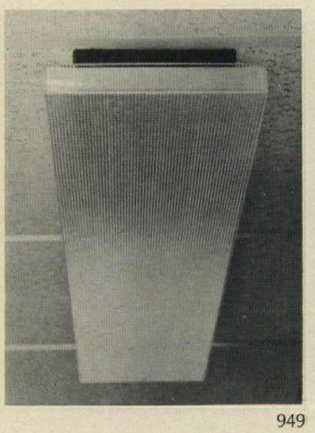
947 WALL WASHER LIGHT / Even light distribution is claimed for this unit, which has a 5-in. diameter lens and houses one R-40 spot lamp of 150w or 300w. Unit mounting ring can be placed first and the fixture installed after the ceiling is completed. / Smithcraft Lighting Div., Keene Corp.

948 INDUSTRIAL LIGHTING / The *SI* series is comprised of rapid-start or slimline fixtures, available to house two, three or four lamps. Snap-in, ice-tong clamp hangers are featured. Many hanger, reflector and accessory options are available. / Smithcraft Lighting Div., Keene Corp.



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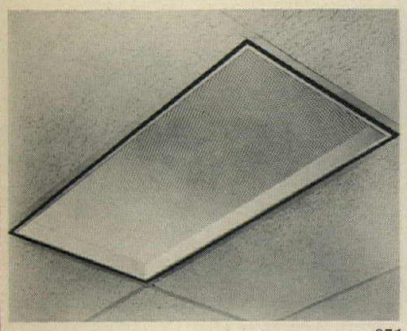
949 CEILING FIXTURE / The catadioptric prisms in the lens of this unit are a unique design feature. The fixture can be surface mounted or suspended. The prism design eliminates all lamp image. / Sechrist Lighting Div., Keene Corp.

950 EXIT SIGN / Fulfilling all code requirements, this unit is available in a matte black finish with various colored letters. Luminous-faced models come in combinations of white and green or red. Units may be top, left or right end, back or pendant mounted. / Sechrist Lighting Div., Keene Corp.



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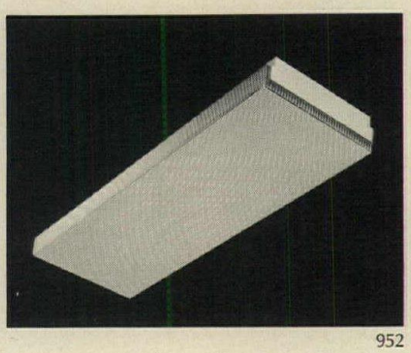

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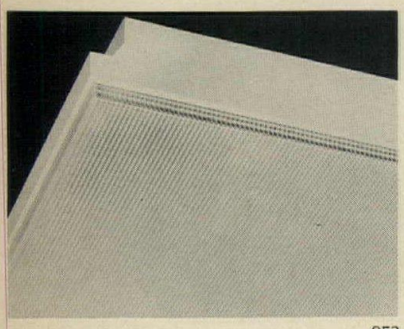
951 RECESSED TROFFER / Acrylic and other diffusers are offered on this series which comes in rectangular and square sizes. The line includes deep recessed extruded aluminum doors, with reversible hinging and latching. / Sechrist Lighting Div., Keene Corp.

952 GLARE-FREE LIGHT / The injection-molded diffuser features prismatically precise design for glare-free, uniform illumination with low surface brightness, using 40w rapid-start lamps. Available in two-lamp and four-lamp models. / Lighting Products, Inc.



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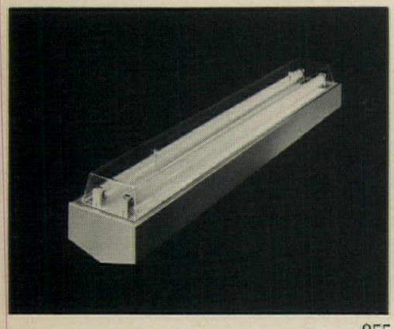
953 WIDE-LENS LUMINAIRE/The lens and troffer design provides an extra-wide lens area for maximum light output. No light leaks. Lamp images and ballast channel shadow are eliminated. Lay-in or flange mounting. / Lighting Products, Inc.



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954 EMERGENCY LIGHT / This incandescent luminaire installs on lay-in T-bar ceilings and gives up to 90 minutes or more of light at full rated lamp output. Available with from one to four lamp heads. / Holophane Co., Inc.

955 FOOD INDUSTRY LIGHT / This fluorescent luminaire was designed for the food, drug and cosmetics industries and carries the approval of the U.S. Department of Agriculture. Bacteria growth is inhibited on the unit by the absence of open seams, cracks and crevices. Flat surfaces are offered, without external screws or rivets. / Lighting Products, Inc.

956 OUTDOOR GLOBE / A choice of post and wall-bracket mounting is offered with this luminaire, available for mercury vapor and incandescent lamps. A vandal-proof acrylic globe is optional. / Holophane Co., Inc.

957 OUTDOOR FIXTURE / This *Vista-Sphere* series of spherical luminaires offers a choice of three geometrically-shaped prismatic glass refractors. Custom lighting fixtures can be created by combining standard components—spheres, internal refractors, lamps and mounting elements. Tinted, clear or translucent spheres are available. / Holophane Co. Inc.

958 STREET LIGHTING / This unit has a sharp cut-off so that pedestrians are not subjected to constant glare, and landscape floodlighting is not washed out. Units can be equipped with every size HID lamp. Ballasts are mounted as self-contained units. / Kim Lighting, Inc.

959 HID LUMINAIRE / For indoor use, the *Panelglow* unit increases interior design flexibility, and offers a flush acrylic refractor or decorative panel. Installation and maintenance can take place from below the ceiling level. / Lighting Systems Business Dept., General Electric Co.

960 METALARC LAMP / Recommended for large indoor areas, this lamp offers high light output and good color rendition. Available with base-up and base-down versions with a mogul screw base. / GTE Sylvania Inc.

961 LIGHTING SYSTEM / Designed by two Danish architects, the *Spectaculume* system is made of brushed aluminum shades and acrylic tubes that easily make up into floor, table and pendant lamps. This low-level lighting and high reflection give variable diffused light distribution. / Orfield Assocs.

962 BULLET-PROOF SHIELD / A transparent shield is offered for the company's *Batwing* fixtures. Designed to resist up to .22 caliber bullets, the acrylic shield is installed quickly on existing fixtures as well. / GTE Sylvania Inc.

963 OUTDOOR LIGHTING / Any of five large-scale, classic architectural forms, each enclosing a highly efficient wide-area luminaire, can be combined in numerous mounting arrangements on a variety of

For more data, use inquiry card.

poles. / Holophane Co., Inc.

964 LIGHT LOWERING DEVICE / Built into any location, this lowering device lowers luminaires for maintenance. The product can raise and lower fixtures with multiple circuits up to 900 lbs to heights up to 75 ft. Device can be built in flush with ceiling. / Pfaff & Kendall.

965 OUTDOOR FIXTURE / Available in four sizes, the *Manchester* unit features an integral ballast and refractors for all available distribution patterns. Housing is of aluminum and provides a 90-degree cutoff of light from the mercury vapor lamp. / Sterner Lighting, Inc.

966 EMERGENCY LIGHTING / The *Model 12* system gives completely automatic control over illumination, battery recharge and recharge-termination functions. Available in three ampere-hour capacities, the units are capable of powering from 1 to 20 illuminating heads. / Shotec, Inc.

967 CONCRETE LIGHT POLES / These spun, pre-stressed hollow concrete standards are offered in lengths from 16 ft to 33 ft., in round or octagonal tapered units. Smooth concrete or polished terrazzo finishes. Steel-wire reinforced. / Centrecon, Inc.

968 ACCENT LIGHTING / A fluorescent uplight provides general illumination, while decorative side lights add sparkle. Rectangles can be raised or lowered and snap-on display lights can be added for exhibits. / Peerless Electric Co.

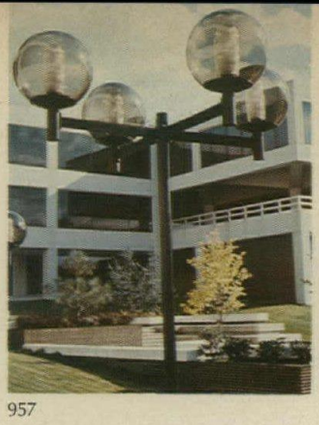
969 LIGHT STRING / Extruded aluminum in up to 96-in. standard lengths features medium base sockets on 6-in. centers. A large variety of lamps can be used, in different sizes and shapes. / Peerless Electric Co.

970 LIGHTING POLE / Pressure-treated straight or curved standards are available from 12 ft to 40 ft above ground. Luminaires from five major manufacturers will be accommodated by these standards. / Weyerhaeuser Co. A*

971 LOW-GLARE LIGHTING / The *Pericline* design produces broad, even illumination yet has a nighttime light so low in glare, it resembles gas light. Single or multiple luminaires are available for various wattages with poles 10 ft to 28 ft tall. / Moldcast Mfg. Co.

972 BOLLARD / Only 33 in. tall, the product provides ground illumination with low glare. Ruggedly constructed square or round shapes are available in several architectural finishes. / Moldcast Mfg. Co.

*Included in 1973 Sweet's Catalog File(s).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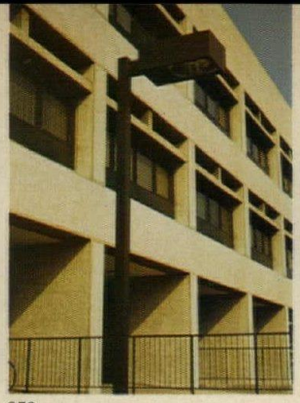
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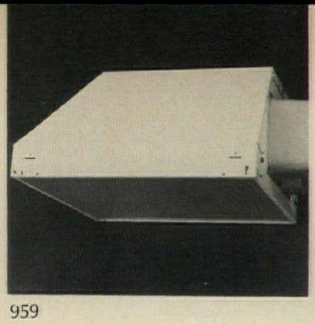
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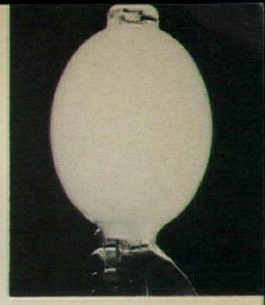
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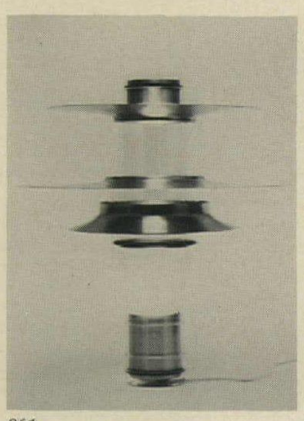
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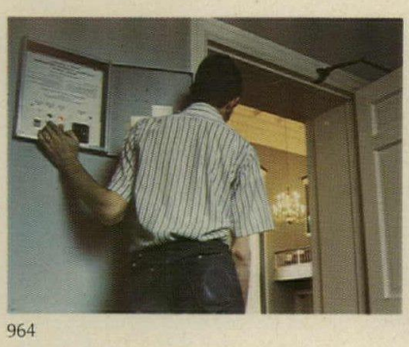
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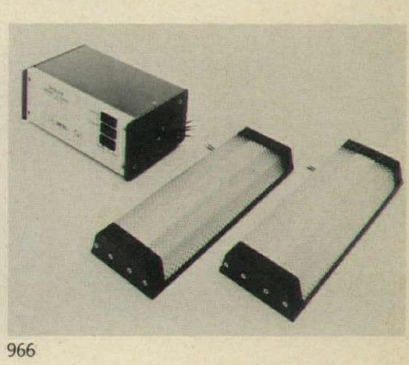
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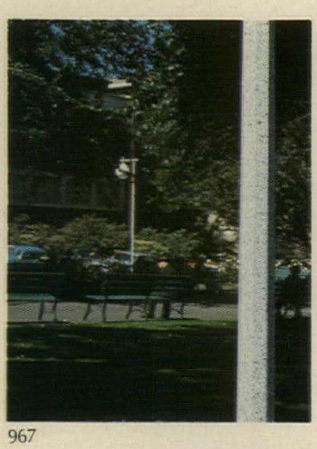
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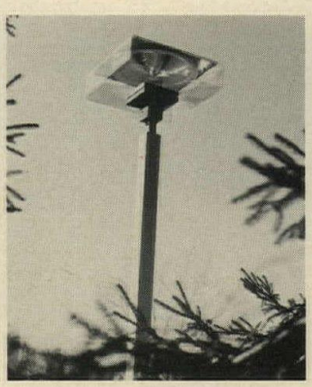
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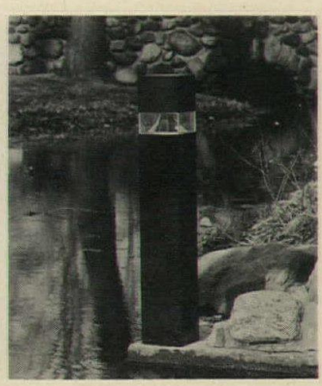
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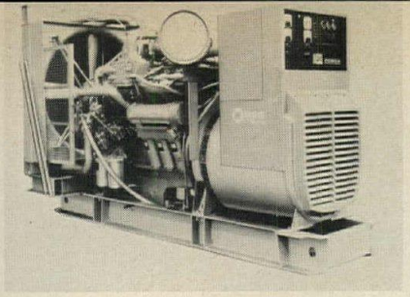

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MOTORS & CONTROLS

973 MOTOR CONTROL CENTER / The primary feature of this unit is the die cast top and bottom frame to which all vertical structural elements are attached. Additional rigidity is gained through use of steel vertical beams and corner bracing. This unit is recommended for industrial motor controls. / Allis-Chalmers.

POWER GENERATION

974 DIESEL GENERATOR / This 500-kw electric generating set is designed for hospitals, commercial buildings and similar structures where interruption of high-line power cannot be tolerated. / Onan Corp. A*

PROTECTIVE SYSTEMS

975 ALARM SYSTEM / Audible and visual annunciation, interfaced with printout capability of alarm activity, is accomplished with this system. Product can be connected with any number of alarm initiating devices, such as smoke and heat detectors. / Remvac Systems Corp.

976 INTRUSION DETECTION / The *Teletale* system emits a low frequency sound wave which, when disturbed, triggers the alarm circuit. Unit is tamperproof and can operate more than 12 hours during a power failure. / Webster Electric Co., Inc.

977 BAGGAGE INSPECTION / A portable radiographic detection system designed to quickly inspect luggage and parcels at airports is offered. The radiation dose is low enough to permit multiple inspections without affecting contents, even photographic film. The image is produced on a TV screen. / The Bendix Corp.

978 ACCESS SYSTEM / A controlled access system connects card readers to a computer to limit entry to individual ID card numbers, door location and time of day. Any or all of these controls can be changed or new cards validated by keying new instructions into the computer. / International Business Machines Corp.

979 SECURITY ACCESS / A card-reading security access system is available, primarily to monitor control access. System can also maintain employee time records and monitor fire and maintenance alarms. / Remvac Systems Corp.

980 CARD READER / A dual-code card reader to control entry permits owner selection of up to 14 card codes. Unit is constructed of cast-aluminum and may be furnished in weather-tight models. Designed for surface or pedestal mounting. / Remvac Systems Corp.

981 INTRUSION DETECTOR / A microwave motion detector provides total premise protection, wall to wall, ceiling to ceiling over as much as 3,500 sq. ft. Movements from an intruder set off the alarm circuits while a filter rejects movements of small animals and other false alarms. / Mountain West Alarm Supply Co.

982 HOME SECURITY ALARM / Four basic alarms are offered to protect the principal home entrances, detect motion within the home, and warn of fire and smoke. All are moderately priced. / Magnavox Co.

983 HOME FIRE ALARM / Working on an ionization principle, this detector senses a fire before either flame or smoke is visible. It operates on a 10.7 volt battery and emits a 110 decibel sustained alarm. An intrusion detector model is also available. / The Magnavox Co.

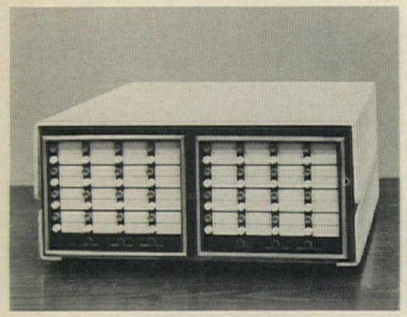
984 EMERGENCY POWER / To assure sensitive electrical and electronic equipment uninterrupted operation during a power failure, a battery-supplied power station is available. It connects to wiring which leads to the electrical load, affording maximum branch circuit protection. / Holophane Co.

985 ACCESS CONTROL / The *Identimat* is an electromechanical device that instantly identifies persons by measuring the geometry of the hand. The measurement is reduced to a digital code. The code and the "handprint" must match before access is permitted. / Identimation Corp.

986 DOOR MONITOR / These instruments are designed to control or monitor, from a central station, remote doors equipped with electric strikes or security detection devices such as fire, heat, smoke or burglary detectors. A custom system can be created from standard models. / Von Duprin, Inc. A*

987 DOOR ALARM / Featuring flush-panel construction, this alarm is designed for office buildings, apartments, hospitals, any areas where unauthorized entry is not wanted. Two high-decible horns are set off when the door is opened without the key that disarms the device. / Detex Corp.

988 DOOR MONITOR / A free-standing remote annunciator will signal when a door has been opened without authorization. A built-in channel warns against tampering or other failure of electrical power. Dimensions are 10 in. wide by 7 in. deep by 6 in. high. / Detex Corp.



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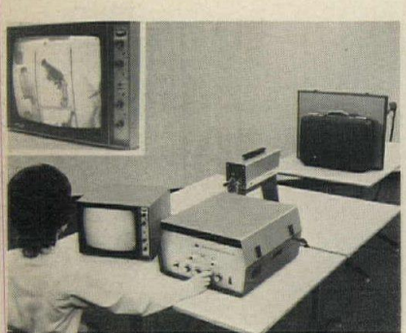

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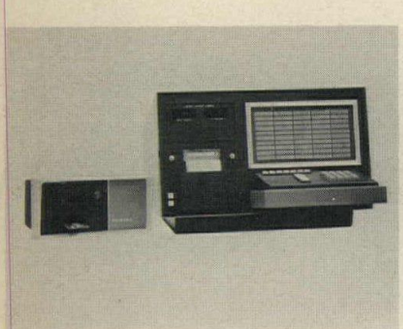

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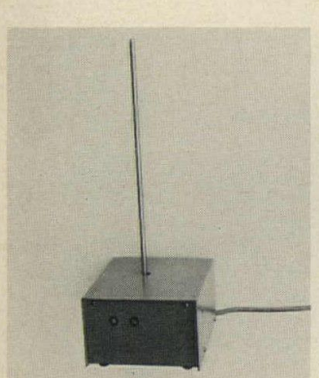

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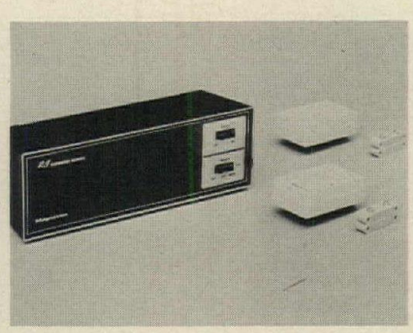

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For more data, use inquiry card.

989 CYLINDER SWITCH / Key-operated, this product will permit authorized personnel to by-pass electrically-operated door alarms. The switch may be installed on either the inside or the outside of a door. / Detex Corp.

RACEWAYS

990 VINYL SURFACE RACEWAY / This electrical raceway is designed for convenient, economical installation which is accomplished mechanically or with adhesives, to a variety of surfaces ranging from cement block to wood. Cover strip, end caps and corner pieces snap over the base strip allowing for changes. / Johnson Rubber Co.

991 FLUSH OUTLET / Three electrical services have been combined into one outlet that forms a fitting flush with the carpet. Inside the outlet are facilities for telephone, TV, duplex receptacles and other auxiliary services. Finishings are stainless steel, aluminum, bronze, black or blue chrome. / H. H. Robertson Co. A*

992 FLOOR WIRING / A complete load-bearing floor with an integral wiring distribution system is offered under the name *Q-Floor Taproute*. Electrical distribution trenches and outlet boxes are affixed to prepunched cellular floor sections in one installation contract. / H. H. Robertson Co.

SERVICE & DISTRIBUTION

993 POWER CENTER / The *Mini-Power Center* is a self-contained transformer, primary breaker and panelboard for indoor-outdoor application. Designed for use wherever 120- or 240-volt branch circuits need to be taken from a 480-volt line. Particularly useful in factories. / Westinghouse Electric Corp.

994 PRE-WIRED CEILING / A pre-wired T-Bar system, called *Power-T-Duct*, includes the complete electrical distribution system for all ceiling lighting needs. Fixtures may be plugged into receptacles on the main T-Bar. Portable plug-in power poles can be attached to conventional overhead wiring or *Power-T-Duct* to suit office arrangements. A UL-listed system. / Miroflector Co., Inc.

995 CONTROL CENTER / Control center structures with a choice of full width or separate vertical wireway door styles are offered. Vertical wire space in both models is 40 sq in. Structure sections are a standard 20 in. wide and either 20 or 15 in. deep, with provisions for front-only or back-to-back mounting. / Cutler-Hammer.

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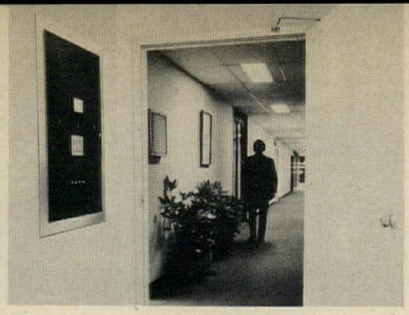
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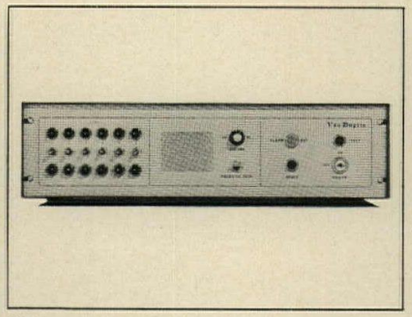
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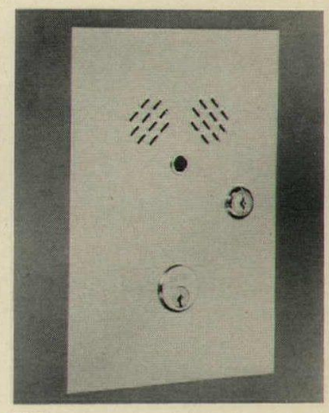
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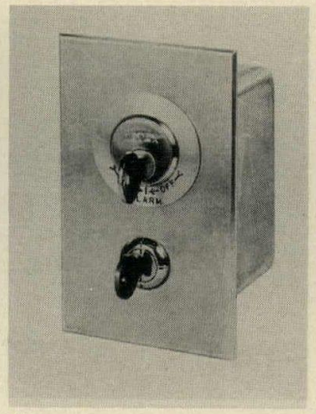
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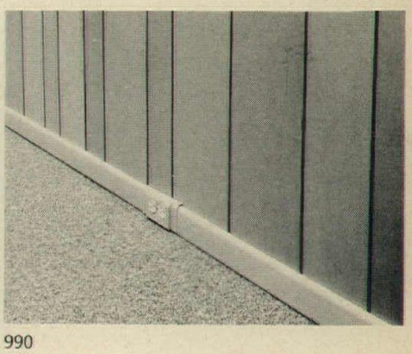
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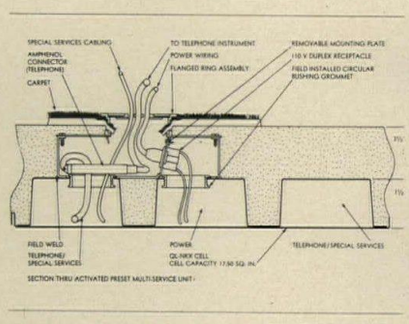

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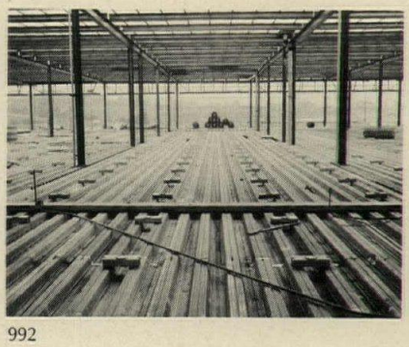
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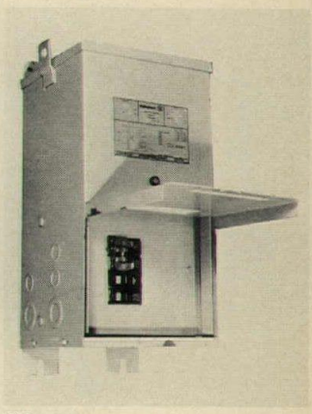
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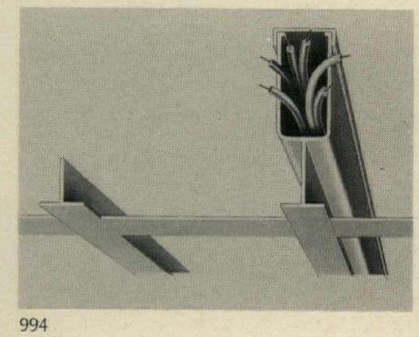
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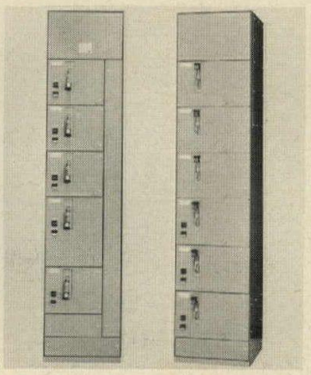
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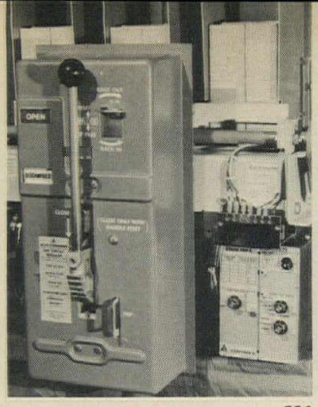

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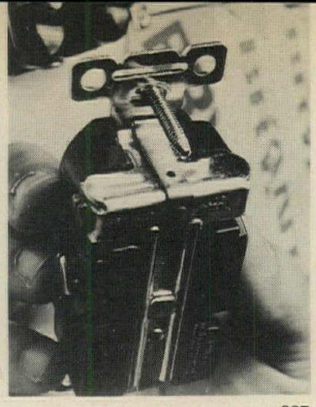

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996 OVERCURRENT TRIP / A line of second generation static overcurrent trip devices is offered, for the company's 600v metal-enclosed switchgear. A new option is a ground fault trip indicator that operates on ground faults only. / Allis-Chalmers.

WIRING DEVICES

997 DUPLEX RECEPTACLE / Self-grounding, 2-pole, 3-wire industrial and commercial receptacles use heavy phosphorous-bronze strap that automatically grounds to the junction box upon installation of receptacle. / Westinghouse Electric Corp.

998 X-RAY PLUGS / The producer is offering UL-listed plugs and receptacles which meet National Electrical Code requirements for hospitals, medical centers and related facilities. The receptacles are mounted at a 30-degree angle in a 10 by 10-in. cast aluminum plate. / Harvey Hubbell, Inc.

999 RECEPTACLE / A UL-listed receptacle designed for direct connection to aluminum conductors is available with built-in fast-loop wire guide for connection. Offered in brown, ivory or white, with or without a self-grounding feature. / Leviton Mfg. Co., Inc.

E1 GROUNDING CLIP / With the addition of a grounding clip to the company's receptacles, greater safety is offered. The clip is non-corrosive and low-profile. / Circle F Industries.

E2 HAZARD-AREA PLUGS / Plugs and receptacles for NEMA five and six, U-ground configurations are offered in 15 and 20 ampere models, factory-sealed. The *Ark-Gard* receptacle cannot be energized until an *Ark-Gard* plug is inserted and rotated. / Crouse-Hinds Co.

E3 SURFACE SWITCH / A low-voltage system, this product eliminates conduit or armored cable in switch circuits, and offers savings in labor costs and installation time. The system consists of a wall switch, a power unit and a .005 in.-thick conducting tape with adhesive back. The tape can be cut at any time to add or move switches. / Switchpack Systems, Inc.

E4 NYLON PLUGS / Plugs and connectors of nylon feature built-in cord grip action and safety dead front construction. Designed to meet the latest OSHA, NEMA and UL standards. / Leviton Mfg. Co., Inc.

E5 MARINE WIRING DEVICE / For use under severe environmental conditions, these units are for 20 amp, 125V AC or DC service. The series includes 2-pole, 3-wire single outlets, caps, connectors and inlets as well as covers. Units will not corrode. / Harvey Hubbell, Inc.

E6 CIRCUIT BREAKER / Designed to head off electrical shocks, this product senses a current leakage of five milliamperes resulting from personal contact with a defective appliance or tool. Within a fraction of a second, the device opens the circuit and stops current flow. / Cutler-Hammer, Inc.

E7 STUD MOUNT CLIP / A built-in grounding clip and an extra screw-in lock for attachment to metal studs have been added to this stud mount box. Designed with a double-locking grip on the stud, the screw-in lock holds the box rigidly in position. / Fastway Fasteners, Inc.

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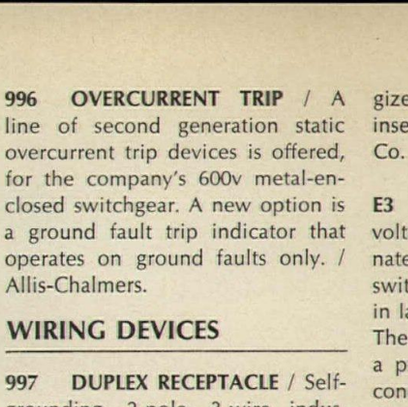

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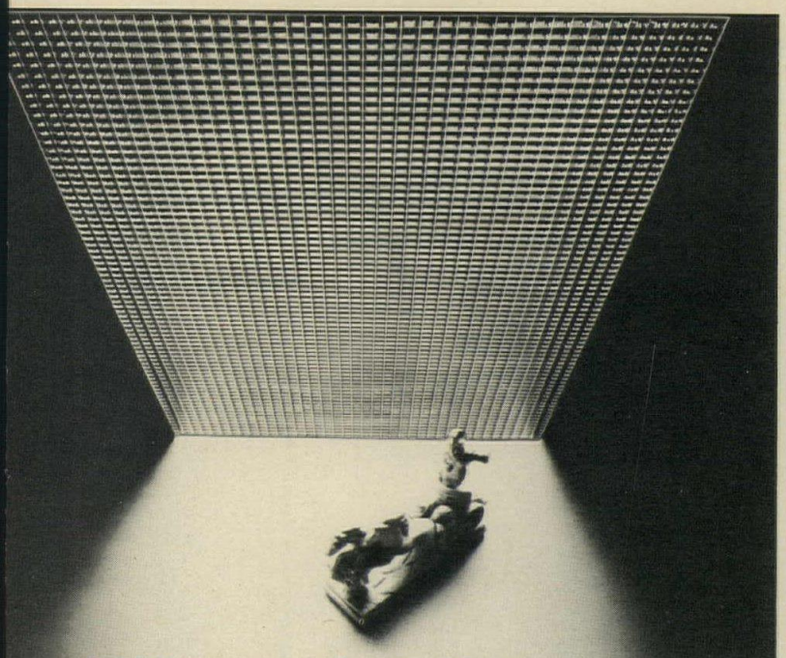
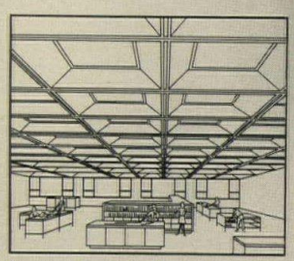


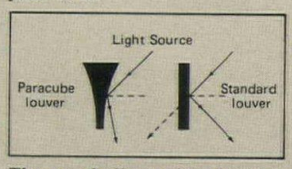
New 3′x3′ Paracube Louver– thousands of tiny mirrors to harness brightness

aracube Louver in new 3′x3′ size ideal for integrated ceiling systems nd large area luminaires. Paracube esign lets you increase footcandles ithout increasing brightness and are. Each cell wall is an optically erfect parabolic mirror – almost 300 of them per square foot. ou'll get superb lighting efficiency, nd complete brightness control no matter how high the lighting tensities. It's the noblest louver f them all.

rite for brochure plus installation nd maintenance tips.



Exclusive with American Louver–Paracube louvers in 3′x3′ size for large area luminaires and luminous ceilings designed for 3′x3′ modules. Other sizes 2′x2′, 1′x4′, 2′x4′ for all applications.



The parabolic wedge design is so effective that you can't see any light above 45° – truly the "no light" look. Available in silver and gold metalized finish on either an acrylic or styrene base.

AMERICAN LOUVER COMPANY
7700 AUSTIN AVENUE • SKOKIE, ILLINOIS 60076

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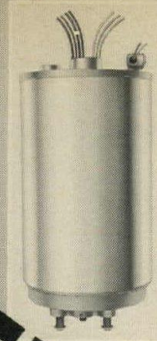

Pfaff & Kendall
84 Foundry Street, Newark, N.J. 07105

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Company _____ Title _____

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ELM* brings the out-of-reach down to you

Get push-button access to high fixtures with ELM — the unique, self-contained Electrical Lowering Mechanism that lowers and raises lighting fixtures. ELM gives new design freedom, lets you specify or install lighting in places that used to be inaccessible for re-lamping and maintenance. With ELM, the touch of a button electrically disconnects fixtures and lowers them to floor level — for complete working safety. No more climbing ladders or scaffolding. ELM even allows entire lighting fixtures to be changed in minutes for conversion of multi-purpose areas. Indoors or out, uses for ELM are limited only by your imagination. Write for free brochure. No obligation.

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Light is to be dramatic by. Light is to come right in by.

That's our kind of light. Coordinated to enhance the fine stroke of the architect. Friendly to welcome all but trouble.

We make a newly expanded line of outdoor light fixtures. They start ideas. They make ideas come true. For accents and broad strokes. Contemporary or traditional. Large area or small. They're all coordinated. All pleasing to the eye, by day or by night.

You see a sample here. Post tops. Wall mounts. Up downs. Pencil beams.

Check the reader service card, and we'll send you our new Idea Book that covers the whole spectrum.

Or let's begin with where you want to light. Call us or your nearby Crouse-Hinds agent or distributor. He's ready to do the analyzing, costing and comparing with an assist from our home office computer.

We'd like to hear from you.

Outdoor Lighting Dept., Crouse-Hinds Company, Syracuse, N. Y. 13201. *For more data, write A98 on inquiry card*

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Is the traditional board room obsolete?

If you think of the board room as —

- the output system for the highest-level policy and decision-making body
- a dynamic and responsive informational environment where the future course of a business is determined

— then you may agree that the traditional, paper-oriented board room, with its massive table and minimal communications, *is* fast becoming obsolete.

To help meet the dynamic information needs of tomorrow, IMI has developed a new kind of information environment, served by advanced communications. Our Management Communications Centers are produced through the teamwork of the architect and our management communications specialists.

We provide a turn-key service for architects and planners including:

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The benefit to the architect is one-source coordination through all phases of planning and implementation.

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Call us for a visual presentation of the projects we've completed, or write for our Photo Reference Book on *Management Communications Centers and Display Systems.*

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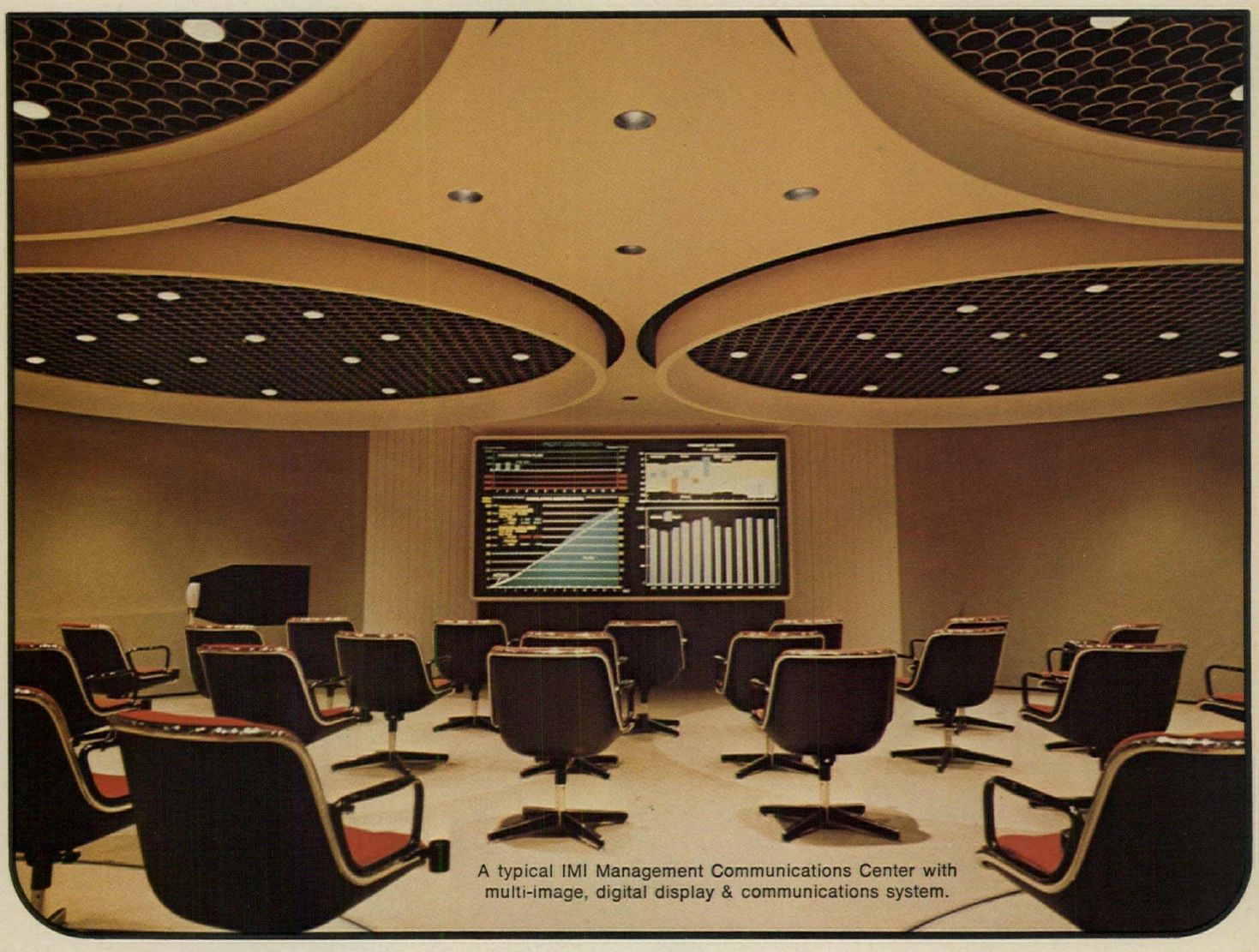

A typical IMI Management Communications Center with multi-image, digital display & communications system.

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Get candle light without a flicker with our new fluorescent dimming system

General Electric has taken action to assure smooth performance with its new DS-6000 fluorescent dimming system. Even at lowest intensity settings, there's no flickering, no swirling; and its not susceptible to normal line interference or line voltage variations. Lamps dim and brighten smoothly in complete unison. The system's dimming range is wide—from full brightness to 0.05 percent of maximum light intensity. The new system will be available in both 120V and 277V.

The General Electric DS-6000 system is specially designed and engineered for commercial and industrial applications, large or small. You can control as few as four lamps or as many as 4000 (single-phase).

Dimming components include an attractive intensity selector, dimming auxiliary and dimming ballast . . . GE total system responsibility.

DS-6000 fluorescent dimming system—one more way General Electric is building its reputation on action. Get details now. See your nearby GE sales representative, or write:
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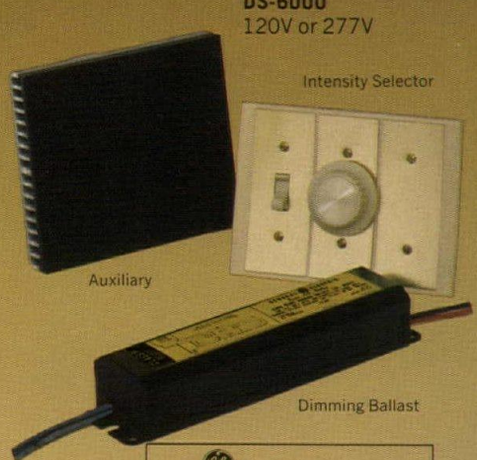

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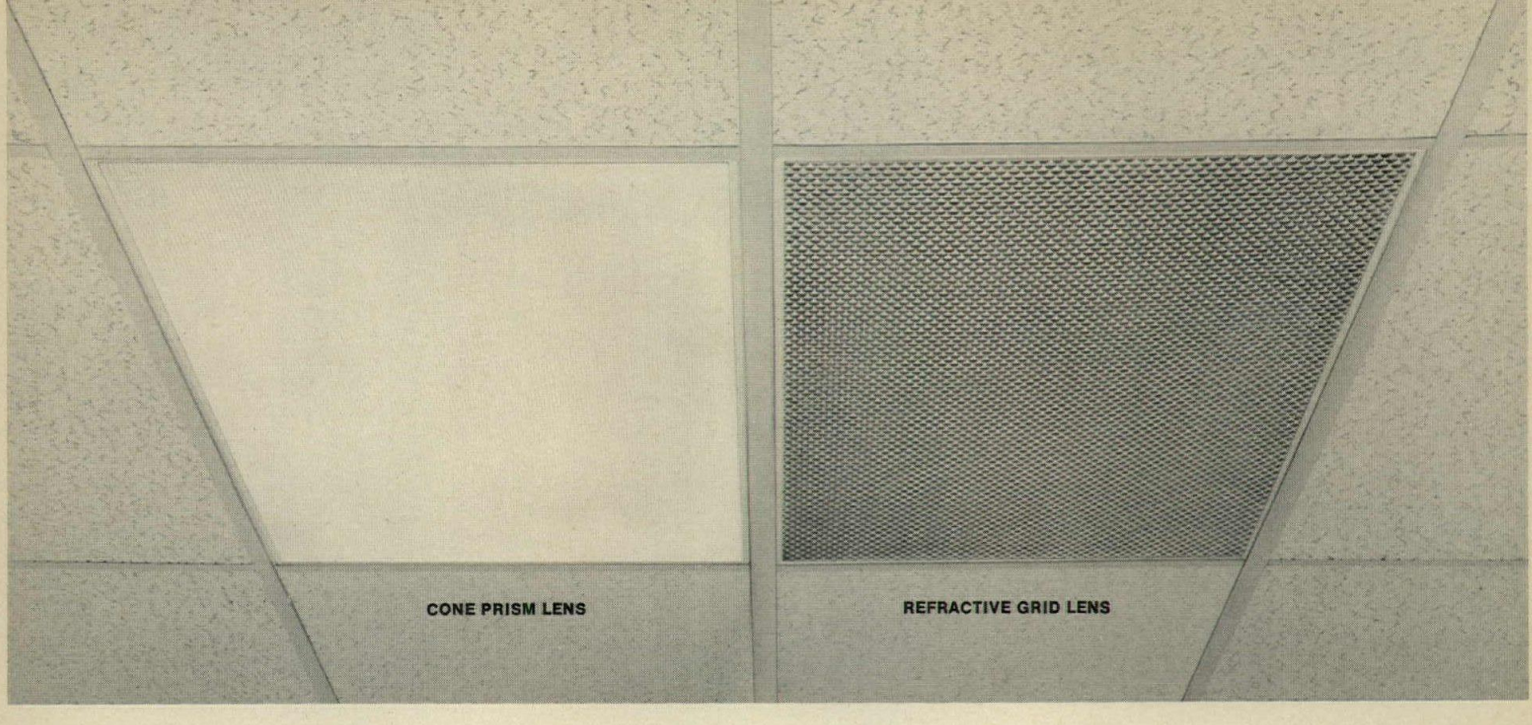

The lens on the left looks nice and bright. That's what's wrong with it.

The new lens on the right reduces high-angle brightness up to 70%, yet increases useful light. That's what's right with it.

The REFRACTIVE GRID CONTROLENS® is a major scientific breakthrough in prismatic light control. At the same time, it opens up new vistas for architectural expression in ceiling appearance.

First, let's look at what REFRACTIVE GRID does for viewing comfort.

REFRACTIVE GRID lighting is so easy on the eyes you can use it in rooms of any size and still be sure of a VCP (Visual Comfort Probability) of 70 or above. Often well above.

There's no discomfort with REFRACTIVE GRID because the new lens cuts high-angle brightness 70% as compared with the best existing light controlling medium, the cone prism lens. Yet despite its lack of brightness, the new lens actually increases the amount of available useful light.

How does it do this?

The answer is a totally new hemispherical refractive element that transmits downlight freely, while redirecting potential glare rays into useful zones beneath and between the rows of luminaires.

Holophane invented this new optical concept as an improvement upon the cone prism, itself an original Holophane invention some 20 years ago.

Now, let's consider ceiling design.

The low brightness of the REFRACTIVE GRID lens markedly improves the appearance of your installation. REFRACTIVE GRID blends smoothly into the background, giving the ceiling a look of continuity.

It's easy to see that REFRACTIVE GRID has set new standards for both visual comfort and appearance. It's the lens against which future optical device designs will be measured. And it's an important lighting advance you really ought to know more about.

Write us.

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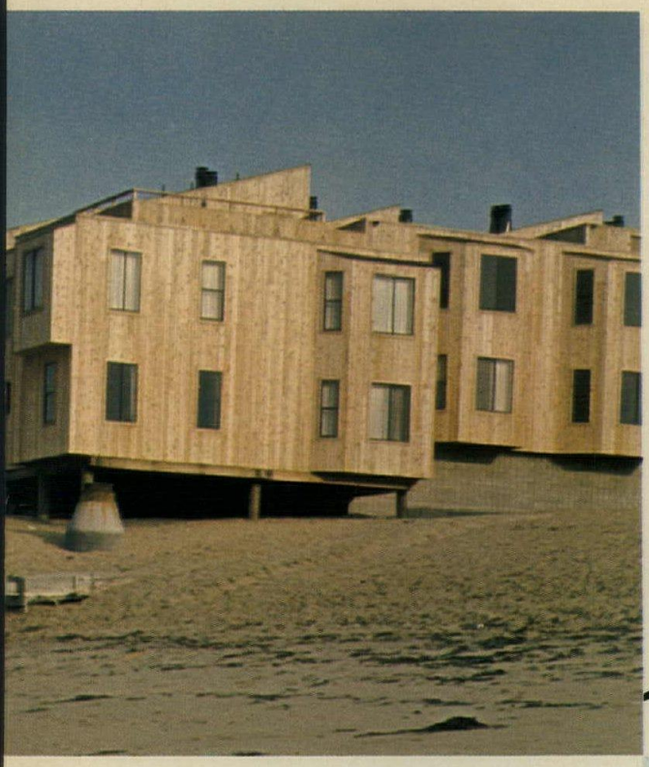

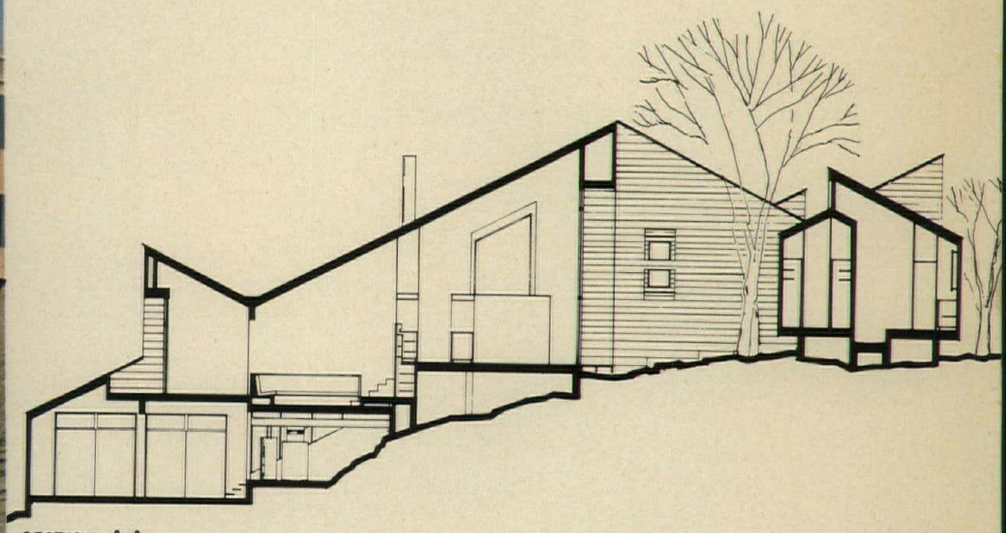

SECTION A-A

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In mid-May Architectural Record's *Record Houses and Apartments of 1973* offers a timely opportunity for manufacturers of quality building products to exert year-in and year-out influence on those architects and builders who are at the forefront of the continuing housing boom. It will reach all major groups of specifiers and buyers in this market:

- over 42,000 architects and engineers who are verifiably responsible for 87 per cent of the dollar volume of all architect-planned residential building.
- 20,000 of the nation's foremost builders qualified by Sweet's on the basis of annual building activity to receive the Light Construction File.
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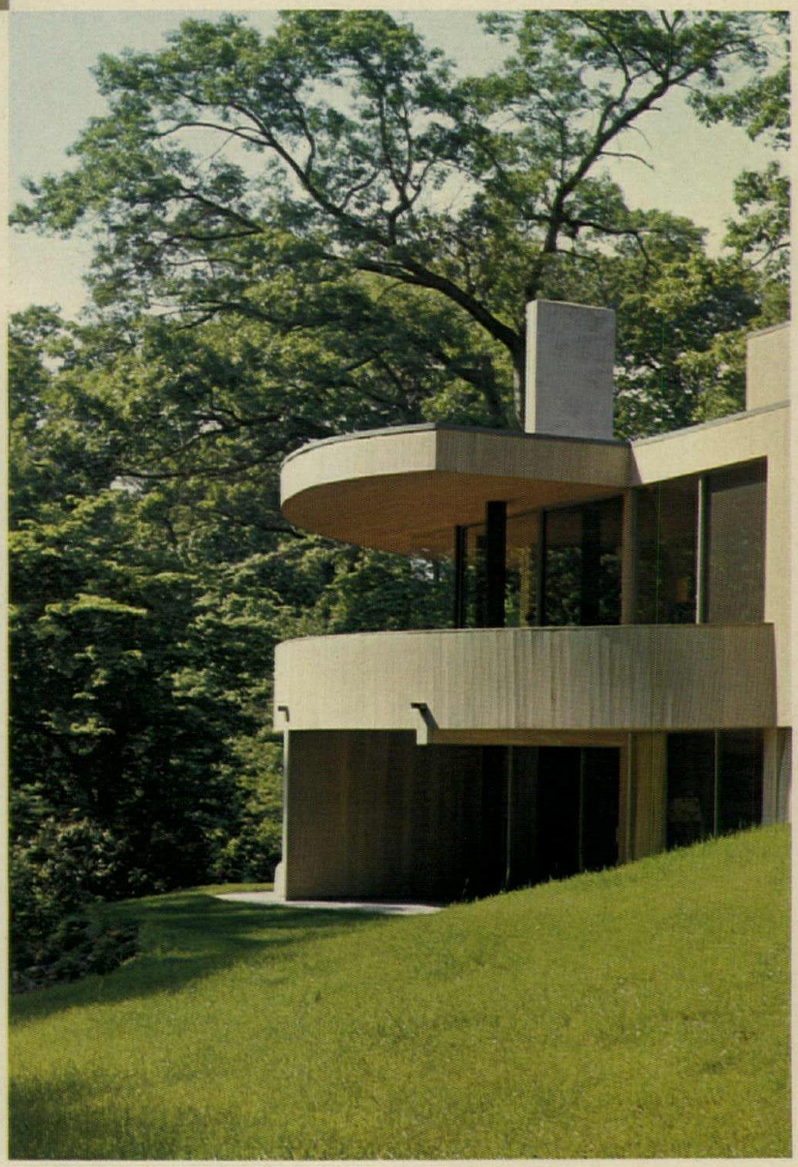
- in addition, bonus bookstore distribution to an influential segment of the house building and buying public.

Record Houses and Apartments offers its advertisers a unique advantage:

The issue has the longest working life of any issue of any architectural magazine! Architects refer to it five, ten, even fifteen years after publication.

Don't miss it! Closing date: April 15.



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Design for a Better Light Time Environment

What you see illustrated are more than fixtures. Each of these lighting forms has been designed to create a specific atmosphere, not only in the daytime, but at night when no other element plays a more important part in the outdoor environment than site lighting.

With these tools you can develop and reinforce a mood and directions which will help you to create your desired architectural statement.

Listed below are some of these environments and the lighting units which produce them.

A Warmly Glowing Decorative Atmosphere — Bathes the environment with remarkably even, ultra-low glare light distribution for the ultimate in visual comfort. Produces a mood reminiscent of gas light. Illustrated by (1) *Pericline Contemporary*; (3) *Round* and (5) *Square Landscape Chandeliers*.

Intimately Scaled Below Eye Level Illumination — Creates a comfortable atmosphere with minimal visual intrusion and low glare. Rugged, compact designs, either square or round. Illustrated by (2) *Bollard Pericline*.

High Level Area Illumination from Unobtrusive Hidden Sources — Offers design simplicity with unexcelled glare control, for a high degree of cut-off illumination over broad areas without a hint of distraction in the environment. Illustrated by (4) *Sans Serif*.

Site Coordination Created by Complete Families of Architectural Lighting Forms — Designed to repeat the most popular building forms, these families serve to create a visual link between the site and the central architecture while producing controlled illumination for all applications. Illustrated by (6) *Site Module*.

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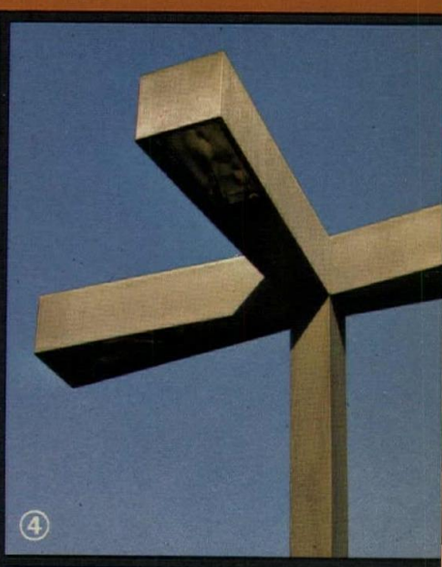
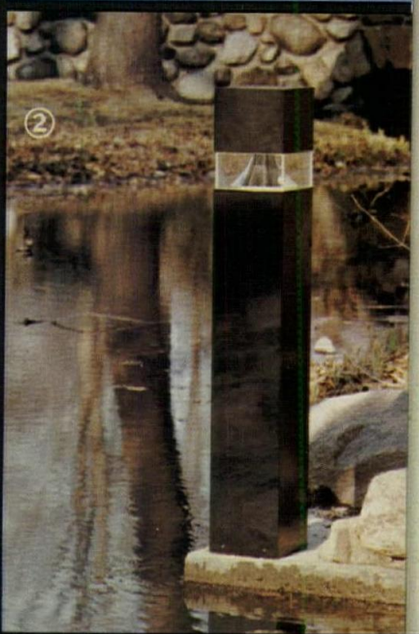
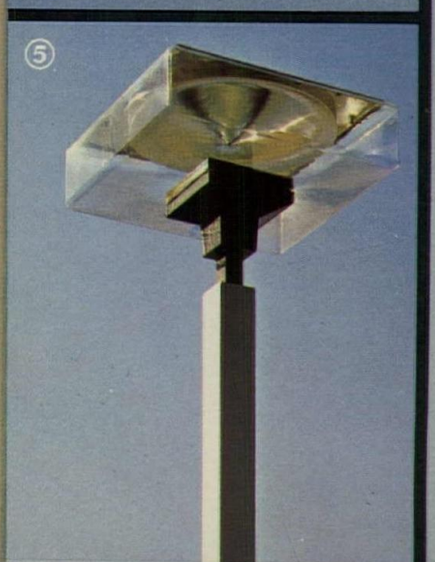
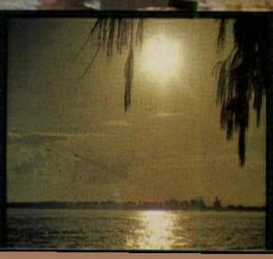






The Night Time Environment People



MOLDCAST

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3 Gateway Ctr., Pittsburgh, Pa. 15222
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Box 1474, Augusta, Ga. 30903
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2500 Park Ave., New York, N.Y. 10451
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400 Commonwealth Ave., Bristol, Va. 24201
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1900 Marina Blvd., San Leandro, Calif. 94577
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12315 Robin Blvd., Houston, Tex. 77045

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S. Parker Hardware Mfg. Co. 87
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Box 248 Tamiami, Miami, Fla. 33144
Prescolite 219
1251 Doolittle, San Leandro, Calif. 94577
Prescon Corp. 40
Box 2723, Corpus Christi, Tex. 78403
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1040 Chelsea T.W., Kansas City, Kan. 66104
Progressive Designs Inc. 115
6701 Beach Blvd., Jacksonville, Fla. 32216
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Box 12701, Philadelphia, Pa. 19134
Protex Industries Inc. 39
1331 W. Evans Ave., Denver, Colo. 80223
Proudfoot Co., Inc. 109
283 Greenwich Ave., Greenwich, Conn. 06830
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3333 N. San Fernando, Burbank, Ca. 91504
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8 Ridgedale Ave., Cedar Knolls, N.Y. 07927

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Raspberry Fence, Inc. 166
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Raynor Mfg. Co. 90
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50 Keeler Ave., Norwalk, Conn. 06856
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7079 Peck Rd., Marlette, Mich. 48453
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7350 W. Wilson Ave., Chicago, Ill. 60656
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Box 2645, Houston, Tex. 77001
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Box 879, Miami, Okla. 74354

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66 W. Colorado, Memphis, Tenn. 38106
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600 Middle St., Archbold, O. 43502
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Box 248, Oxford, Neb. 68967
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10545 Baur Blvd., St. Louis, Mo. 3132
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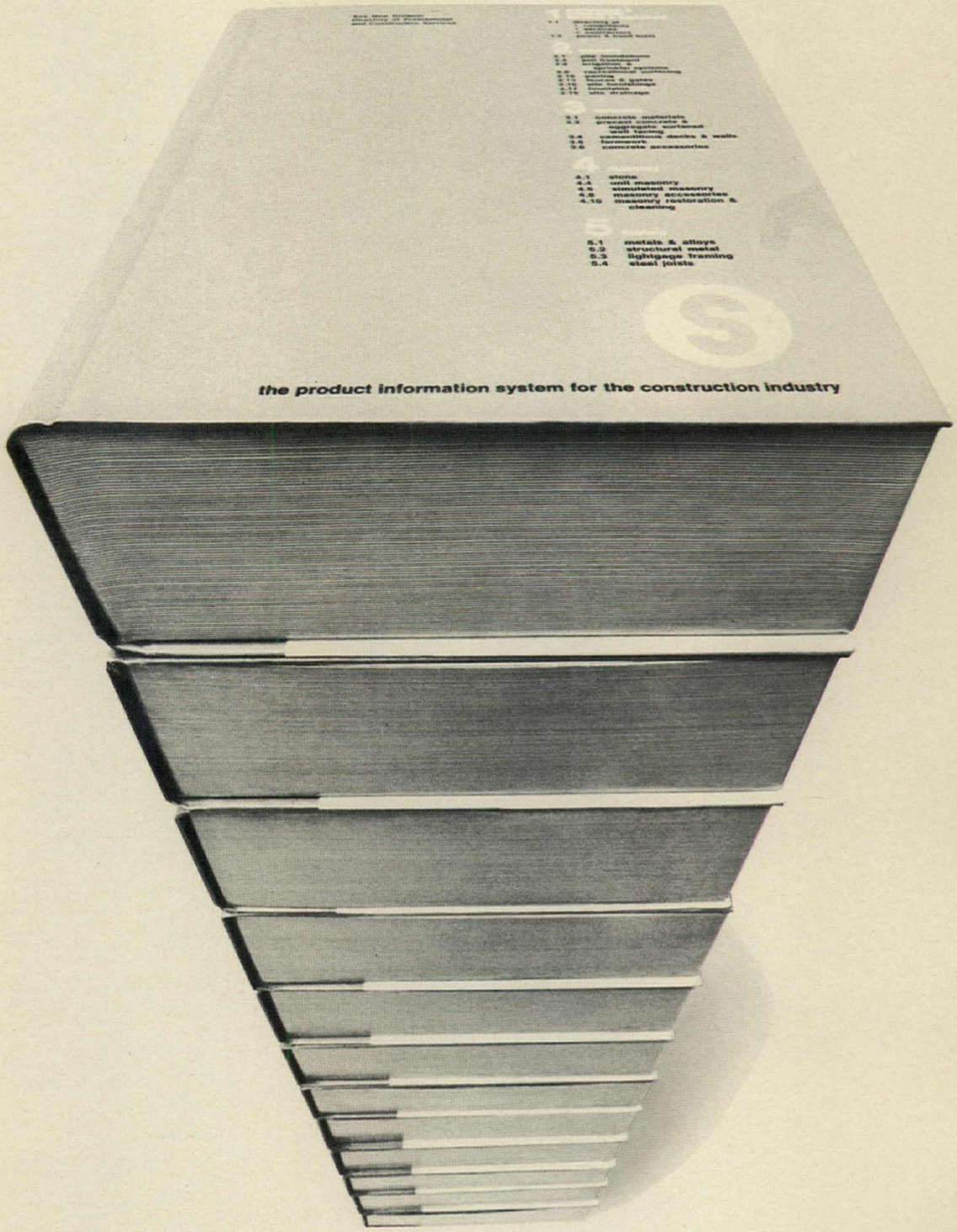

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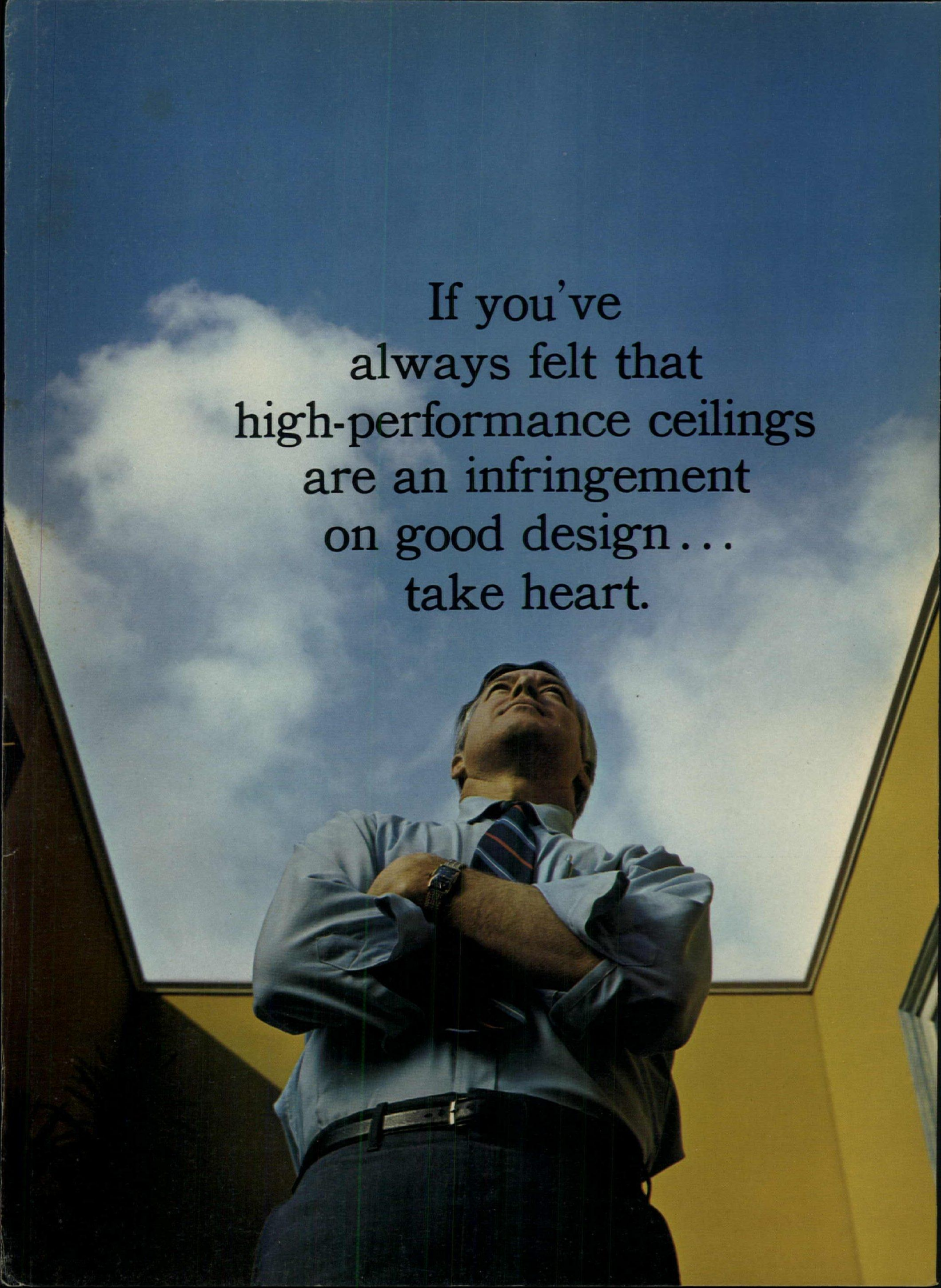
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