



PRODUCT REPORTS 76: PRODUCT IDEAS FOR ARCHITECTS AND ENGINEERS, ALL ILLUSTRATED  
ARCHITECTURAL BUSINESS: BUILDING PRODUCTS AND PROFESSIONAL LIABILITY  
TRENDS AND INNOVATIONS IN PRODUCT USE  
ARCHITECTURAL ENGINEERING: AUTOMATIC DOORS AND THE HANDICAPPED  
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# ARCHITECTURAL RECORD

MID-OCTOBER 1975



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\$24.00. Canada: \$17 for architects, engineers and other individuals in the fields served; others \$26.00. Other countries: \$30.00 to architects, engineers; others \$38.00. Single copies \$4.00. GUARANTEE: Publisher agrees to refund that part of subscription price applying to unfiled part of subscription if service is unsatisfactory. ASSOCIATED SERVICES/McGraw-Hill Information Systems Co.: Sweet's Catalog Files (Architectural, Light Construction, Interior Design, Industrial Construction, Plant Engineering, Canadian Construction), Dodge Building Cost Services, Dodge Reports and Bulletins, Dodge/SCAN Microfilm Systems, Dodge Management Control Service, Dodge Construction Statistics, Dodge regional construction newspapers (Chicago, Denver, Los Angeles, San Francisco). THIS ISSUE is published in national and separate editions. Additional pages of separate edition numbered or allowed for as follows: POSTMASTER: PLEASE SEND FORM 3579 TO Fulfillment Manager, ARCHITECTURAL RECORD, P.O. Box 430, Hightstown, N.J. 08520.





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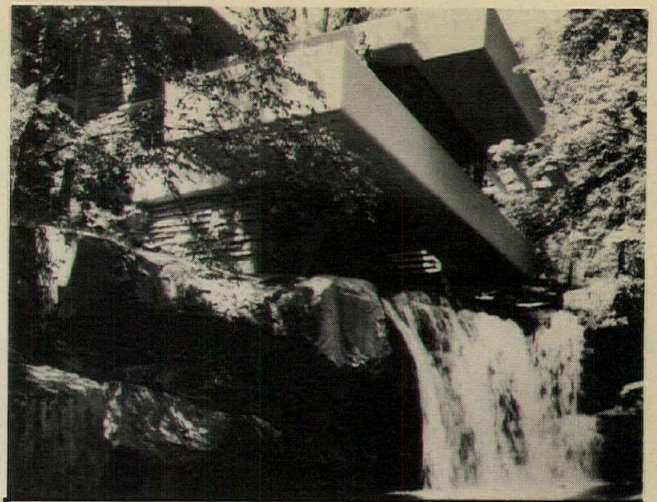
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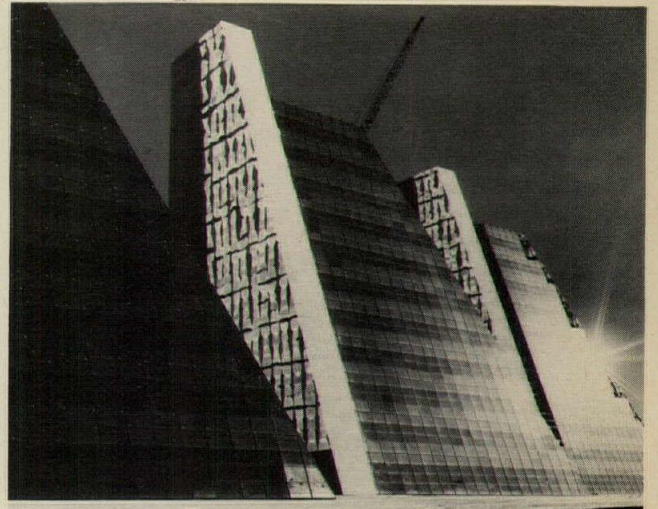
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Bernicke Rare Book and Manuscript Library, Yale U., New Haven, by Gordon Bunsbatt of SOM. Published in the Nov.-1982 issue of *Architectural Record*. The interior was described as "a spectacular showcase . . . glowing with light and kaleidoscopic color." Photo by G. E. Kidder Smith.

## september

sunday	monday	tuesday	wednesday	thursday	friday	saturday
			<b>1</b> 1827: F. L. W.'s hospital first designed Tokyo earthquake	<b>2</b> 1866: Great Fire destroyed London	<b>3</b> 1856: American architect Louis H. Sullivan born	<b>4</b> 1846: American city planner Daniel Burnham born
<b>5</b> 1887: American architect Rudolf Schindler born	<b>6</b> 1479: Renaissance architect Sebastiano Serlio born	<b>7</b> 1936: Boulder (New Haven) dam opened	<b>8</b> 1847: Belgian architect Victor Horta died	<b>9</b> 1827: American architect & educator Webb Beining died	<b>10</b> 1793: British architect Sir John Soane born	<b>11</b> 1864: American architect William Hesseltine born
<b>12</b> 1863: American architect Charles Adams Platt died	<b>13</b> 1729: Scottish architect Colin Campbell died	<b>14</b> 1909: American architect Charles Follen McKim died	<b>15</b> 1857: German architect Eric Mundtsohn died	<b>16</b> 1726: Baroque architect Johann Poenauver died	<b>17</b> 1846: American architect & author Claude Bragdon died	<b>18</b> 1782: G. Washington led suppression of US Capitol
<b>19</b> 1714: British architect Sir John Vanbrugh knighted	<b>20</b> 1883: German architect Hans Scharoun born	<b>21</b> 1808: Vault of US Capitol collapsed; engineer killed	<b>22</b> 1842: American architect Philip Adams Crap died	<b>23</b> 1914: Construction of U.S. Union Station, Chicago	<b>24</b> 1717: British architectural scholar Horace Walpole born	<b>25</b> 1887: Parliament explosion under bombardment by Turks
<b>26</b> 1828: F. L. W.'s Unity Temple dedicated	<b>27</b> 1919: Renaissance architect Jacopo Santucci died	<b>28</b> 1912: Sydney Opera House dedicated	<b>29</b> 1820: German architect H. H. Richardson born	<b>30</b> 1888: West tower of Third Abbey Church, Chury		





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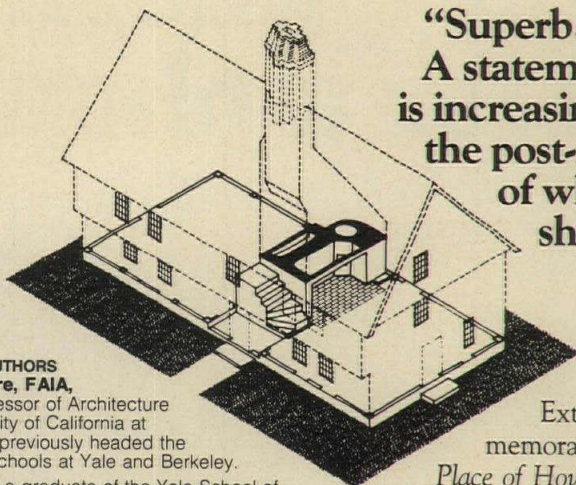
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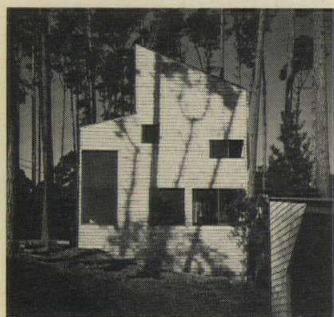
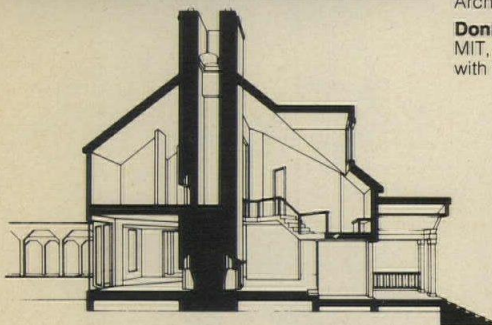
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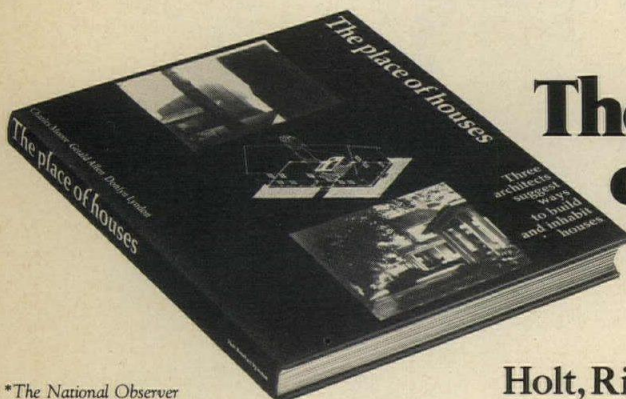
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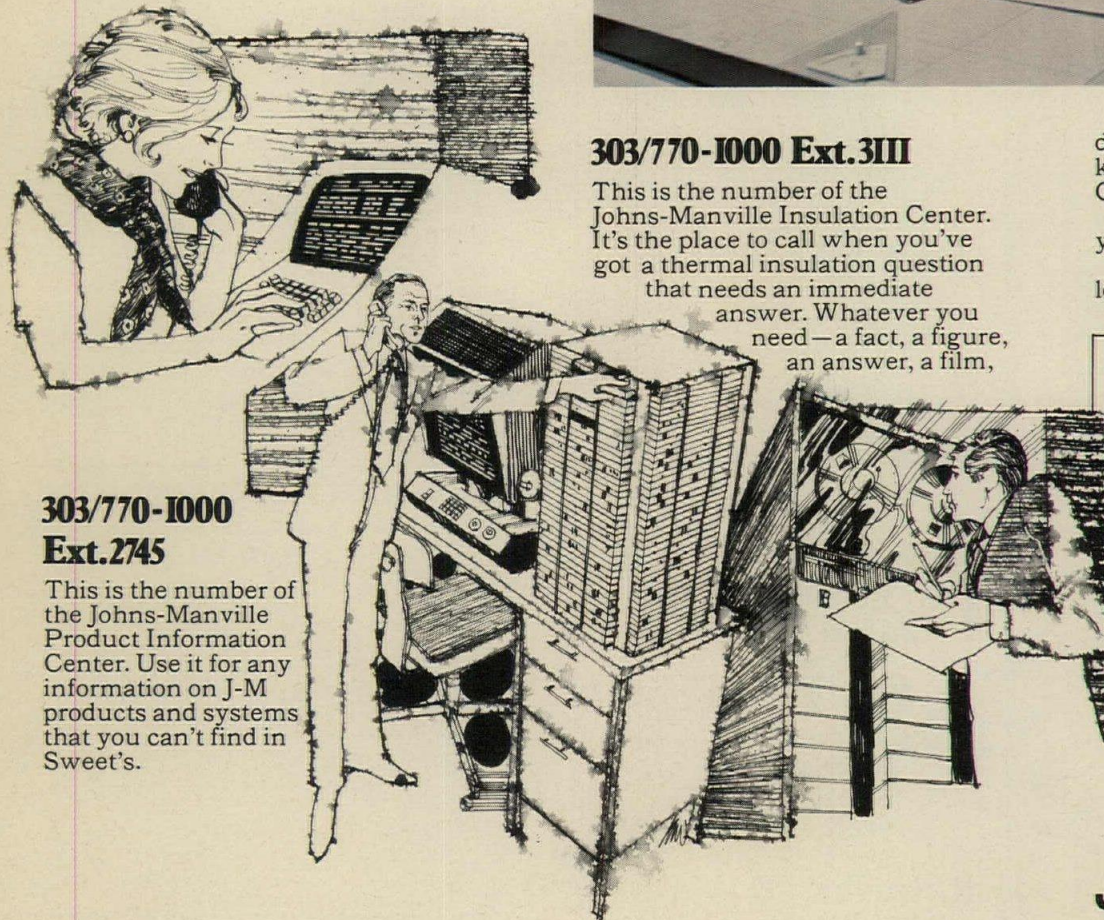
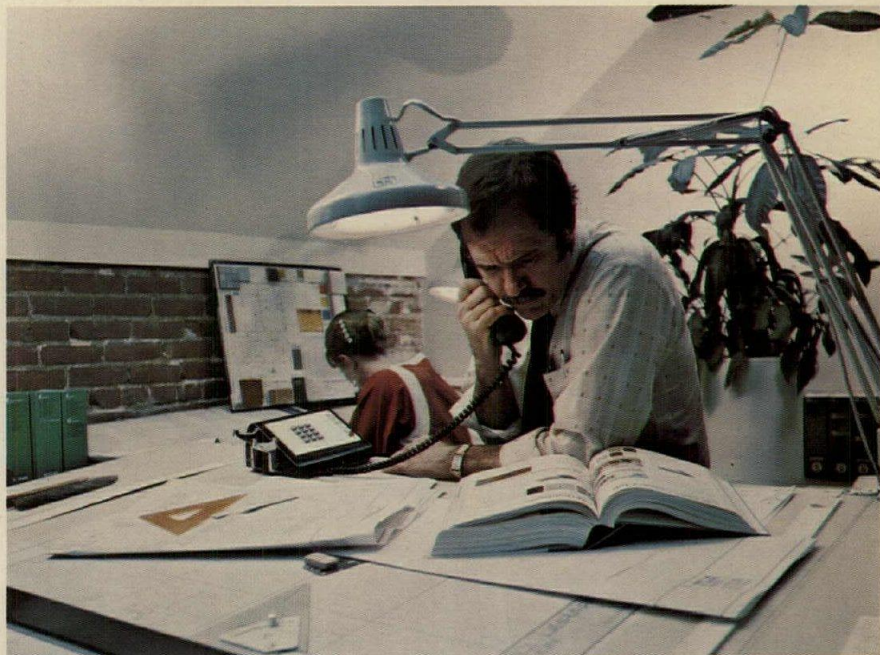
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## Building products and professional liability

*With an abundance of recent publicity about the malpractice problems confronting doctors, architects have only been reminded further that myriad legal considerations heavily influence modern-day professional practice. In addition to needing to be aware of the ramifications of contract law, labor relations law, building codes, zoning law and tax law, among other things—with the specter of professional liability never too distant—an architect cannot forget that even something as seemingly straightforward as a building product can involve a host of legal implications. This article by Washington attorney Arthur T. Kornblut will review a few of them, and will cover some aspects of products liability within the context of an architect's professional liability equation.*

The early development of the law relating to an architect's professional practice was influenced very little by the law of products liability. During the embryonic stages of products liability law in the 19th century, those responsible for products, in regard to both manufacturing and marketing, were well-insulated from most liability. The legal maxim *caveat emptor*—let the buyer beware—pretty well summed up in two words the state of the law. At the same time, an architect's exposure to potential professional liability was also quite limited. Simply stated, an 1898 New York medical malpractice case articulated the legal standards which applied to all professionals:

"(A professional) impliedly represents that he possesses . . . that reasonable degree of learning and skill that is ordinarily possessed by (professionals). . . . (The professional) is under the obligation to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed. . . . The law holds him liable for an injury . . . resulting from want of the requisite knowledge and skill, or the omission to exercise care or the failure to use his best judgment. . . . His implied engagement with his (client) does not guarantee a good result, but he promises by implication to use the skill and learning of the average (professional), to exercise reasonable care and to exert his best judgment in the effort to bring about a good result."

### **The law has reversed itself, and it is now the seller who must beware**

The foregoing rule of law is still valid, and an architect who practices so as to meet the criteria stated above will minimize his exposure to professional liability problems. However,

the law has changed dramatically with regard to products liability. Ever increasing legal responsibility is being placed on those who are commercially involved with products, and liability is quickly imposed for products that do not function properly for the purposes for which they are intended. It might be said that the law has reversed itself, and now it is the seller who must beware! The law generally now holds those responsible for products to a standard of strict liability. It does not matter if reasonable care was exercised in the making and selling of a product. If it fails to perform properly and causes injury or damage, liability will be imposed without regard to fault on those responsible for producing and selling the product. Although the law of products liability/strict liability has had a lengthy development, suffice it to say that its existence is at least partially due to shifting social beliefs that those responsible for products are in a better position both to prevent a failure in a product's performance through quality control in the manufacturing and distribution process and to bear the economic consequences of any injury that might result from the use of a product which does not function properly.

### **But modern practice can result in increased exposure to liability**

An architect—or any professional, for that matter—would find it impossible to practice if he were to be held strictly liable for the consequences of every judgment exercised on behalf of a client or for a failure to produce a result that is not detrimental to the client. An extreme consequence would be to hold a lawyer liable any time he lost a case. The law recognizes the human element of applying judgment, care and specialized training in the rendering of professional services, and thus imposes liability on professionals only for negligence. Despite this, modern professional practice involves written contracts, express and implied warranties, insurability questions and insurance, Federal and state laws, duties to third parties (other than clients), and higher standards of care, among other things, all of which can result in increased exposure to liability irrespective of an absence of negligence. The relationship between any one of these areas and products liability could be the subject of a lengthy article. Since space will not permit such elaboration, the following will simply touch on some basic considerations of interest in this regard.

*continued on page 20*



Evaluate complicated functions.  
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Find numerical solutions to ordinary differential equations.

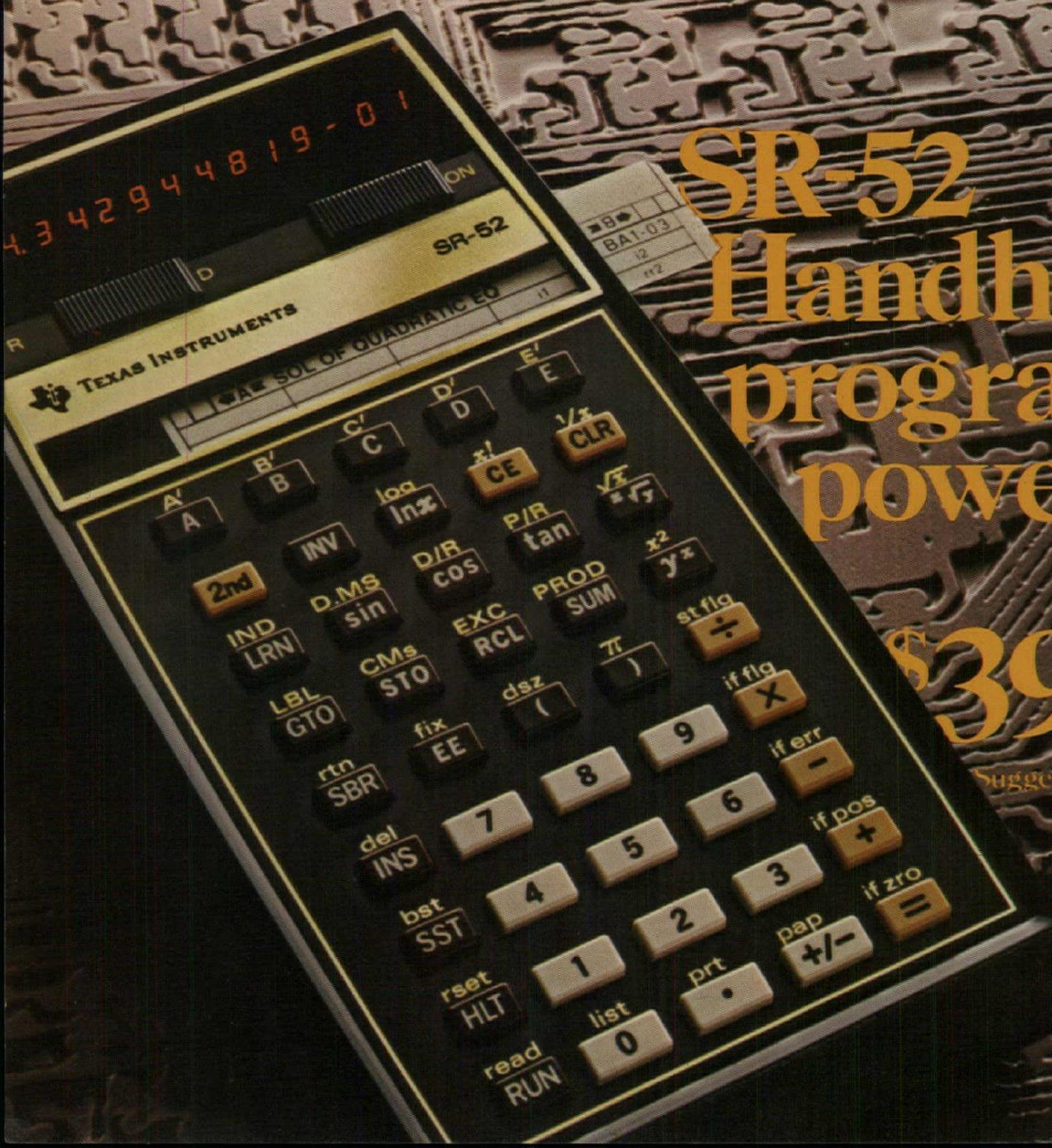
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### **Prove "reasonable care and judgment" in product selection in writing**

When an architect contemplates using a new building product (or an old product in a new or unfamiliar way) in a project being designed, care must be taken to investigate the product before calling for it in the drawings or specifications. Although an architect will not be held strictly liable for a product's failure to perform properly, liability can be imposed for negligently calling for the product's use in the first place. During an architect's evaluation of a product, certain precautions should be taken and documented in writing. If the product fails at some later date, this written record will be invaluable to show that the architect used reasonable care and judgment to investigate the product before calling for its use. In order to avoid or defeat charges of negligence, the architect should review other projects in which the product was used and discuss its performance in those projects with the manufacturer and the project owners, architects and contractors. Discussions with the manufacturer should attempt to ferret out information about bad installations and problems with the product, as well as the benefits of using the product. The manufacturer should be notified in writing about the intended use of the product on the current project, and complete technical data should be requested about the product's limitations for such use. If the product is to be a major element of the project, the manufacturer should be requested to provide a field representative to supervise or participate in the installation process.

In addition to taking safeguards related to the technical aspects of building products, an architect would be wise to investigate the track records of those to be responsible for the installation. Manufacturers' or contractors' ability to strictly adhere to the requirements of the contract documents, their experience with the particular type of product, their willingness to live up to warranties, and their financial condition all can influence the performance of a building product and the owner's future satisfaction or dissatisfaction therewith. And, at every stage of the investigation, the architect should not hesitate to keep the client informed about any known risks in using the product.

### **Professional liability insurance does not generally cover product failures**

Every effort should be made by an architect to reduce the potential of being charged with negligence and having to cope with problems that can develop out of the use of building products. However, in order to avoid being held to the product liability standard of strict liability, and to preserve being judged on the basis of a professional's legal standard, it is important to keep clear the distinction between providing professional services to a client and supplying a product for use in the client's project. Not only do different legal standards apply, there are also serious insurance implications. The professional liability insurance policies available to architects and engineers are designed to protect against claims arising out

of professional services. These policies contain various provisions and exclusions related to the area of products liability and generally are not intended to cover claims resulting from a product's failure to perform properly. A provision in one such professional liability policy specifically excludes claims arising out of "any goods or products manufactured, sold or supplied by the insured, or supplied by others under license from the insured." As volatile as professional liability insurance is today, it is calm in comparison to products liability insurance. As such, the insurance carriers who provide professional liability insurance to architects are normally quite careful to avoid confusing coverage for these two distinct types of risks.

### **In light of anti-trust laws, courts have upheld proprietary specs**

On another front, an emerging area of product-related legal problems for design professionals involves the Federal anti-trust laws. In recent months, a significant amount of attention has focused on anti-trust actions involving professionals' fee schedules and their aversion to competitive bidding as a basis for being selected by clients. Less visible have been a series of cases during the past three years in which certain aspects of architects' and engineers' technical services were alleged to be in violation of the anti-trust laws. Generally, these cases involved an architect or engineer who selected a certain building product or system for a project and then prepared what proved to be essentially closed or proprietary specifications. When a competitor of the manufacturer whose product was specified was unable to convince the architect or engineer to approve the competitive product as an acceptable alternative, the competitor was precluded from submitting a bid for consideration. The competitor then filed suit against the design professional (and in some cases against the client, the successful manufacturer and others) alleging restraint of trade and conspiracy under the anti-trust laws.

In the ensuing litigation, the courts looked at the customary practices of architects and engineers in light of the strictures of the anti-trust laws to determine if restrictive, closed or proprietary specifications are illegal. The cases indicate that although the law prohibits price fixing, intent to monopolize and conspiracy to restrain trade, a closed specification which may appear to cause such results, may not necessarily be illegal. The key factor is whether the specification resulted from the architect's or engineer's providing the client with what was believed to be the best advice and recommendations for the project. While the owner is not required to accept, and in fact may change, the specifications recommended by the design professional, the professional has an obligation to his client to recommend products of proven quality and performance. If the architect's specifications preclude a manufacturer from submitting a bid, it is not necessarily a restraint of trade. As one court said, "The burden is on the supplier who has not been specified to

convince the architect that his product is equal for the purposes of the particular project. This reduces itself to a matter of salesmanship." And, in this same vein, another court said, "Assuming there has been 'free competition among suppliers' with each supplier 'free to tout the virtues of (his product)' there is no combination in restraint of trade between the architect or engineer and the supplier whose bid is accepted. . . ." Thus, these cases appear to establish that an architect will not be liable for alleged violations of the anti-trust laws if he has exercised independent professional judgment in selecting and specifying a product which he believes best serves the client's needs. With the emphasis on the requirement for independent professional judgment, there obviously cannot be any collusion between the architect and the successful manufacturer or supplier in reaching a decision to use a certain product. On the other hand, at least one court did not see any anti-trust problem in a manufacturer preparing specifications for his product and then convincing the design professional to base his specifications on an adaptation of the manufacturer's specification. Again, as long as the professional's decision was based on his best judgment and the client's needs, there normally would not be any illegality in using a closed specification.

### **Make sure that warranties conform to the contract requirements**

A further area of concern for the architect involves warranties required from and given by product manufacturers. The standard AIA General Conditions (Document A201) requires the contractor to give certain warranties to the owner in regard to the materials and equipment furnished for the project. Presumably, the contractor will require his subcontractors and suppliers to provide the same warranties. Related to these contractual requirements, statutory law also can influence the extent and validity of warranties. The Uniform Commercial Code, which has been enacted in all states, governs the sale of goods and products and contains provisions related to express and implied warranties. Warranties required by contract must be in conformance with statutory requirements. In addition, the Federal Trade Commission recently issued new regulations affecting product warranties. If the contract documents prepared by the architect contain specific requirements for warranties as to duration, scope and applicability, care must be taken to confirm that the warranties actually given by the contractor or manufacturer conform to the contract requirements. If there is any doubt, the owner should be requested to seek an opinion from his attorney about the warranty language.

In conclusion, the time has passed when all an architect had to know about a building product was technical characteristics and cost. Unfortunately, time and effort now must be spent to contend with many other factors which have relatively little to do with applying design and technical skills in meeting clients' needs.

—Arthur T. Kornblut, Esq.



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# Product trends and innovations: the producers' point of view

Last summer ARCHITECTURAL RECORD conducted its second annual survey among building product manufacturers, hoping for some clue regarding near-term product availabilities, pricing and research efforts. To supplement this information, we also called on the consulting firm of Arthur D. Little, Inc., which has been researching the subject of energy and the construction industry for a large group of interested manufacturers. The results can be summed up as follows:

Pointing out that the construction industry accounts for 10 per cent of the Gross National Product, Arthur D. Little, Inc., states, "We expect the growth of

total construction to be roughly in line with that of GNP through 1980 and to be dampened by energy-related problems only insofar as these influence over-all GNP growth." In other words, the construction industry through 1980 will not suffer unusually because of energy problems.

Further, ADL says, "we expect existing suppliers of established energy-conserving materials and equipment . . . to benefit. In addition, we expect some developments now in limited use or in test stages to become substantial business opportunities for both existing producers and new entrants. These emerging opportunities include heat pumps, solar

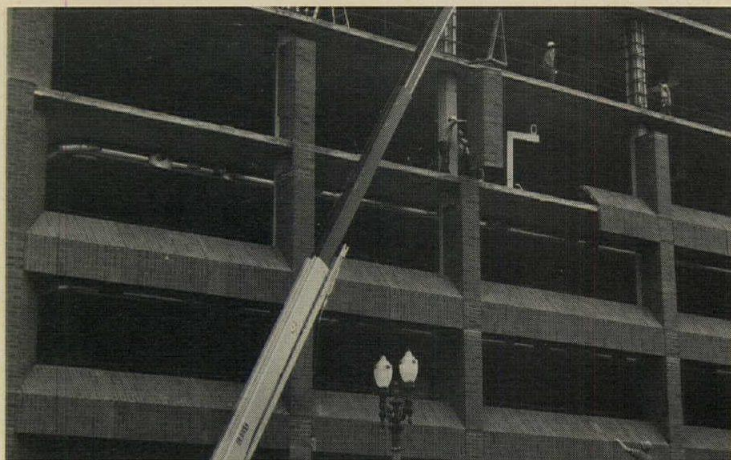
climate control systems, and new types of HVAC equipment, which will be more expensive on a first-cost basis but will offer lower operating costs."

Product introductions remained numerous in the last 12 months, as evidenced by the submissions to this year's *Product Reports* issue, and the RECORD survey, in which 90 per cent of the respondents reported a recent product introduction. Competition is increasing in the product area, and competitive factors more than anything else are affecting product changes. Some 37 per cent are increasing their research budgets this year.

Pricing, of course, is going to

continue upward, but shortages may not be a problem since more than half of the producers report increasing production, and surplus inventory. In the specification process, 57 per cent of the manufacturers reported the architect as becoming more important.

Finally, we asked these manufacturers, "What in your opinion has been the most memorable installation of your company's product(s) over the past year?" Several of the many submitted are featured in the following pages, along with product trend information that manufacturers would like to pass along to architects and engineers.



## Brick panels reinforced for seismic load

A newly developed brick panelization system acceptable in earthquake zones has been installed, for the first time, at the Oregon Telco Credit Union Building, now under construction in Portland, Oregon. Although Portland is classed as Earthquake Zone 2, the system was designed to load requirements for Zone 3, according to structural engineers Kelly, Pitelko, Fritz and Forssen, who engineered the system for Barkshire Construction, Incorporated, fabricators of the panels.

The 4-in. red-brick panels are constructed of high-strength units—also newly developed by Mutual Materials Company—reinforced both vertically and horizontally. The hollow clay bricks have a nominal size of 4 by 4 by 12 in. In the column panels, vertical reinforcing bars are grouted solid in the hollow brick, at a maximum spacing of 4 ft. (In the beveled spandrel panels, where courses are laid vertically, these bars of course provide horizontal reinforcing.) Special bond-beam

units admit horizontal rebars. Additionally, every third joint is horizontally reinforced with number 9 wire embedded in mortar.

The panels are hung from floor slabs, and masonry is conventionally laid in corners not economically feasible for panelization. On the end walls, field-assembled double-wythe panels, 8 by 24 ft, act as shear walls.

The wall required a number of panel shapes, from small planes at the juncture of columns and spandrels to the larger angled shapes needed for spandrels and end columns. The engineers attribute the system's cost advantage over precast concrete (the brick panels were selected by competitive bidding) to the flexibility achievable with brick panelization when a number of different shapes are involved—a condition that would require a new form in a precast system is easily dealt with in brick fabrication.

The designer and developer of the Telco building is Bank Building Corporation.

## Industrial flooring moves to quality interiors

New methods of filling joints and finishing surfaces have made end-grain blocks, long familiar as industrial flooring, desirable as a decorative finish for quality interiors.

To replace traditional coal-tar pitch fill, Jennison-Wright Corporation plugs joints between blocks with pelletized cork, broadcast over the surface and then swept into crevices. After shrinkage, the blocks are flooded with a thin liquid sealant, which percolates through the cork to create an effective expansion joint. The floor is then sanded and sealed with heavy urethane.

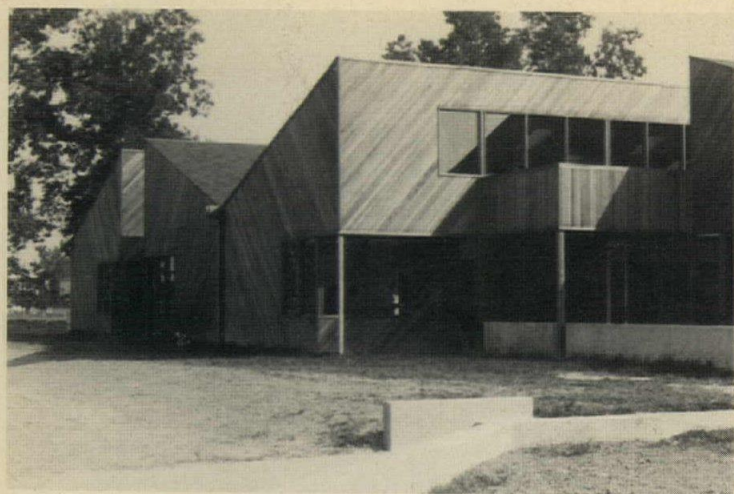
Advantages of these new

techniques, according to the company, include the elimination of open joints and the reduction of tracking and dirt build-up; and the floors can be wet scrubbed.

At the Columbus, Indiana, Occupational Health Center (shown here and in RECORD, October 1975, pages 95-102), Hardy Holzman Pfeiffer Associates selected end-grain wood flooring for its appearance and for its durability in heavily trafficked public areas. Jennison-Wright shaped and planed blocks to fit a series of circular ramps that wind through waiting areas, and then carefully matched them to maintain pattern from one level to another.







### Offices built with fire-retardant wood

In a departure from accepted construction for office buildings in the area, the Gulf South Research Institute in Baton Rouge, Louisiana, is housed in a wood building, permitted by building authorities because all wood elements—framing, redwood siding and interior finishes—were treated, by Osmose Co., for fire retardancy.

Originally a competition-winning steel-frame structure designed by architect David Calder Richardson, the building was en-

tirely redesigned when the client concluded that it must reduce its budget for the project. Basic savings were effected by reducing the floor area. Beyond this, however, the architect found that using treated wood resulted in a finished-building cost of \$30 per sq ft. After examination of the material and design, building officials waived code restrictions for the design, and also waived requirements for fire walls—saving about \$15,000, the architect estimates.



### Load-bearing pultruded FRP spans 50 feet

A pair of plastic bridges with clear spans up to 50 ft have been built by Fibergrate Corp. for E.I. DuPont in Puerto Rico. With a designed structural strength of 200 psf, the FRP bridge shown here will provide access for personnel and light equipment to a pump and aerator centered in an effluent pond at a chemical processing plant.

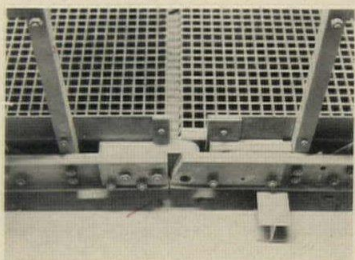
The pond contains corrosive fluids, and, although structural FRP is not a budget material, the alternative in this case was stainless steel.

The bridge, shown here during test assembly, has two sections: a 68-ft section that floats on FRP pontoons as effluent rises and falls, and a 50-ft span hinged at a concrete abutment on shore and at one end of the floating bridge.

Both sections are stayed by cables from shore.

The trusses are constructed of pultruded sections, manufactured by Morrison Molded Fiber Glass Co., with glass reinforcing fibers laid along the length of the members for maximum strength. The grated trafficway is similarly reinforced.

All bolts for trusses and hinges, as well as the hinges themselves, are also FRP.



### Computers run high-speed stage machinery

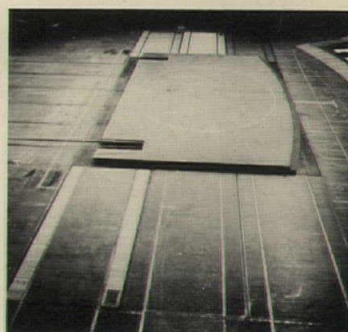
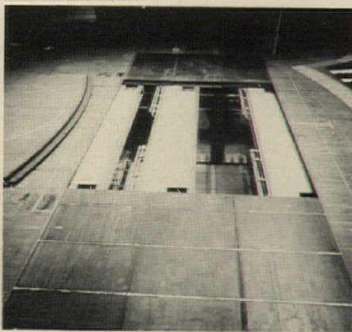
In mid-1973 an ambitious technical program for the theater world was commenced by the Macton Corporation of Danbury, Connecticut, under contract to the Martin Stern and Associates-designed MGM Grand Hotel in Las Vegas, Nevada.

Producers of Las Vegas' famed stage shows had long been severely limited in production by the technical problem created when main stage elevators were taken to lower levels to dispose of the sets and scenery from one scene and made ready for the next scene. The ultimate goal was to lower the entire stage floor and almost instantly cover it with a powered floor stored elsewhere on the main stage.

In collaboration with MGM's technical theater consultant,

(at bottom) providing tracks for six powered floors which quickly move to the center of the stage, covering the elevator shaftway. Behind these six powered floors high-speed lifts level the side stage areas so that in less than one minute it is possible to completely clear the stage.

In addition to the powered structures that cover the elevator shafts and level the stage, Macton provided a wide variety of other heavy theater machinery. Upstage is a powered stage wagon containing a turntable spanning almost the entire center stage area (just below). Overhead are six circular cable lifts which descend from the ceiling, and a 108-ft structural steel bridge weighing more than six tons which spans the entire width of the theater.

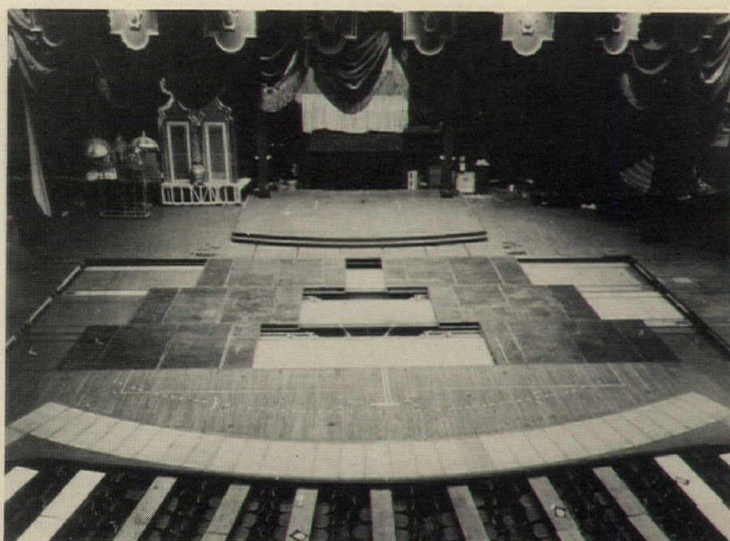


George Howard of Los Angeles, Macton designed, built, and shipped in less than three months 456,000 pounds of stage machinery powered by more than 350 horsepower that achieved the illusive, ultimate goal. What is more, the machinery—which would normally require a 6-foot deep space—is stored under the stage in 3 feet.

The main stage elevator provided by the Otis Elevator Company disappears into the bowels of the theater (just above) and in less than 40 seconds powered trusses move into the gaping hole,

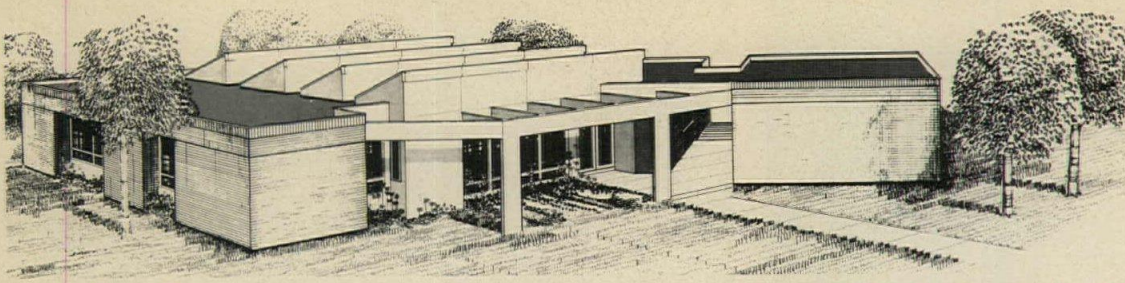
"From the walkways above the audience on either side of the main stage appear powered walkways emerging from the wall, which permit armies of chorus girls to descend from the ceiling across the bridge spanning the theater out into space and then to descend on elevators which emerge from the off-stage area, an incredible spectacle," according to a Macton spokesman.

The entire complex of Macton machinery is controlled by a central computer with interlock upon interlock to provide for the safety of the performer.





## Seeking alternative fuels, utilities sponsor solar energy applications



The utilities suffer more painfully than the rest of the country from fossil-fuel scarcity. Still further, scarcity of capital inhibits construction of new generating facilities. The utilities thus take an understandable interest in conserving some of their basic raw materials—particularly natural gas—and in finding alternative energy sources.

Beyond that, however, the companies would like to level off peaking loads—that is to say, plants designed for peak loading are underutilized for parts of the day. Indeed, it has been suggested that the utilities' interest in solar energy systems lies more with their storage capabilities than their heating capabilities.

Bob Murray, a member of Skidmore, Owings & Merrill's Portland office, writes in the firm's September 1975 newsletter *Energy Update*: "All solar heating and cooling systems include at least overnight thermal storage. Furthermore, in most areas of the country . . . electrical energy prices are still sufficiently low that it is not yet cost-effective to design a solar system that provides 100 per cent of the winter heating requirement . . . Thus an auxiliary system is required for those periods when solar radiation is not adequate.

"If solar systems are so designed that the auxiliary input is applied to the *storage* during *off-peak* hours, rather than at the direct point of use upon demand,

then the space and water heating peak demands can be virtually eliminated.

"It is interesting to note that this capability exists even during the periods with no solar input whatsoever. In fact, it might be useful to add the storage capability now and the solar collectors later."

Some utility-sponsored residential solar heating installations planned or already in operation:

- Solar Assisted Gas Energy (SAGE) is a three-year program jointly funded by Southern California Gas Co. and the National Science Foundation for installation and field testing of a solar domestic hot water system. (According to the utility, residential water heating accounts for 15 per cent of the area's natural gas consumption and 6 per cent of its over-all energy consumption.)

Since the end of August, a SAGE system has supplied hot water to 32 apartments at The Timbers community in El Toro, California. The SAGE system, which was designed and will be field tested by the Jet Propulsion Laboratory at Caltech, includes 48 roof-top collectors totaling 908 sq ft (shown below), heat exchanger, 1,200-gallon hot water storage tank, 100-gallon tempering tank, and natural gas boiler. The system is expected to supply 90 per cent of the buildings' hot water requirements in summer, 70 per cent in winter.

A second SAGE system is

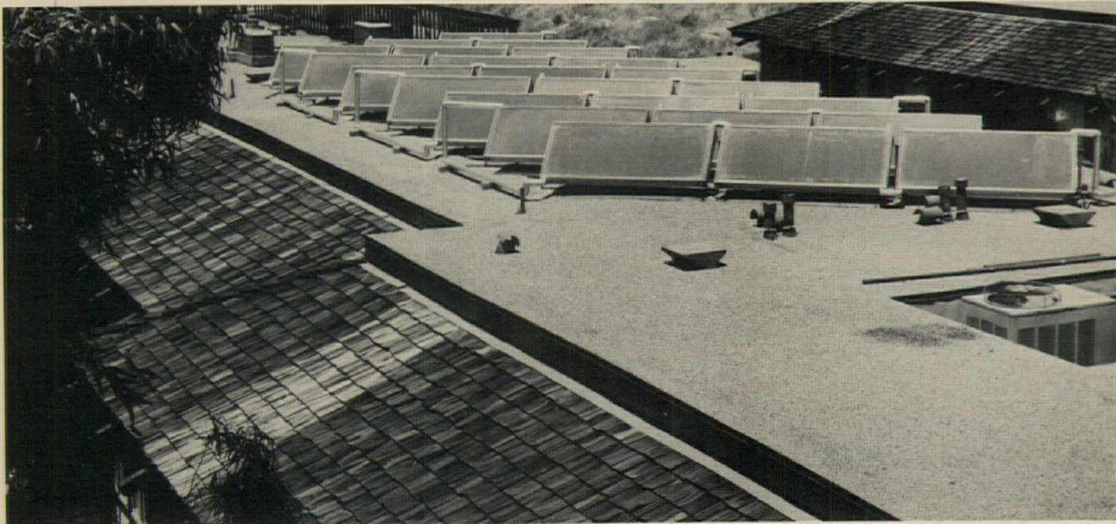
presently under construction in Upland, California.

- The Texas Electric Service Co. is a major sponsor of an experimental house now under construction at the University of Texas at Arlington (shown at top). It will have solar heating, cooling and domestic hot water.

Designed by Todd Hamilton of the school's Department of Architecture, the structure will allow various combinations and later substitutions of collectors, storage methods and other components for comparative analysis of solar-energy systems.

The three-bedroom house will be occupied by a graduate student family to establish real-life conditions for a middle-income single-family dwelling, and it will serve as research subject matter for the Colleges of Engineering and Business Administration and the Department of Architecture.

- In Portland, Oregon, Skidmore Owings & Merrill has designed an experimental house, to be constructed shortly, for Pacific Power & Light Company and the Oregon Museum of Science and Industry. Christened TERA One for the project Total Energy Resources Application, the design is not intended to test state-of-the-art applications but rather to test ways in which solar-energy systems can be integrated with other energy conservation techniques and with conventional patterns of living. (See RECORD, August 1975, page 35.)



## Developers build some solar-heated houses

While the government and large corporations build experimental installations to test solar energy systems, here and there commercial developers are going right ahead with solar-heated houses built on speculation.

In Jamestown, Rhode Island, Solar Homes, Inc., offers a 2½-bedroom ranch house (shown below) that its developers feel may be "one of the first homes in the country to use the solar collector/heat pump combination." The house uses Kalwall Corporation's fiberglass-covered collector panels and a concrete water tank for heat storage; distribution is by hot air. (The firm also plans other houses that will use air heating and other storage methods.) The builders claim that the system will be effective for as many as 21 consecutive sunless days, at an average daily consumption of 200,000 Btu. The house is heavily insulated—12 in. in the ceiling and 6 in. in the walls—and earth banked.



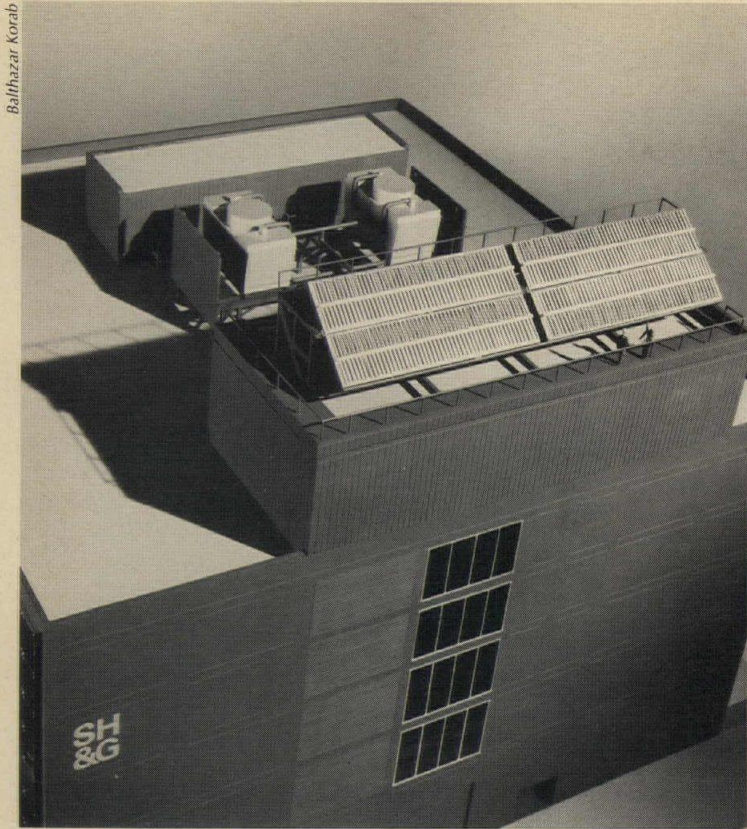
Components include, in addition to the collector, central air conditioner, thermostat, pump, hot water heater and back-up module.

Though Solar Homes figures that the solar heating system costs about eight times a conventional heating system, the firm also expects that lower operating costs will let the system pay for itself in less than ten years. The firm's cost breakdown for solar-energy installations: 1,000 sq ft house—\$5,994; 1,600 sq ft house—\$7,707; 2,400 sq ft house—\$10,367.

At The Pinery Colorado, a planned community southeast of Denver, another speculative solar-heated house is presently under construction; the architect is Richard L. Crowther. The hot-air system, designed by Solaron Corporation, uses gravel storage.

Terracor, the Salt Lake City firm that is developing The Pinery, hopes to offer solar-heated houses in a range of prices.





### New tubular collectors added to SH&G offices

Owens-Illinois's newly developed Sunpak tubular solar collectors differ radically from the more familiar flat-plate collectors. The construction of the collector components is glass, comprising three tubes of borosilicate glass—an outer cover tube for protection, a middle absorber tube, and an inner feeder tube through which the working fluid (water or ethylene glycol) moves.

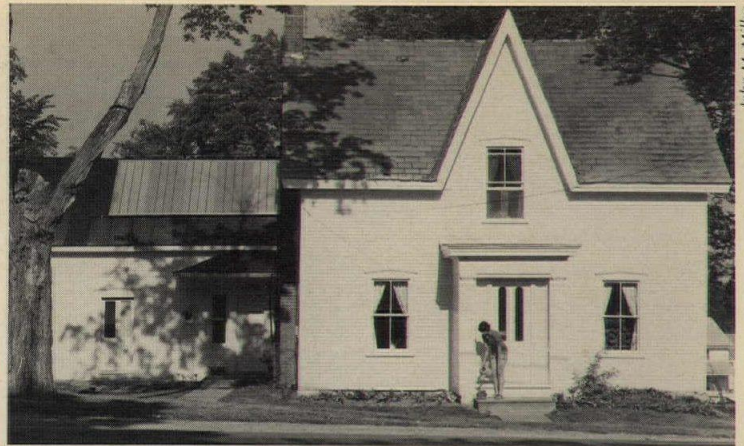
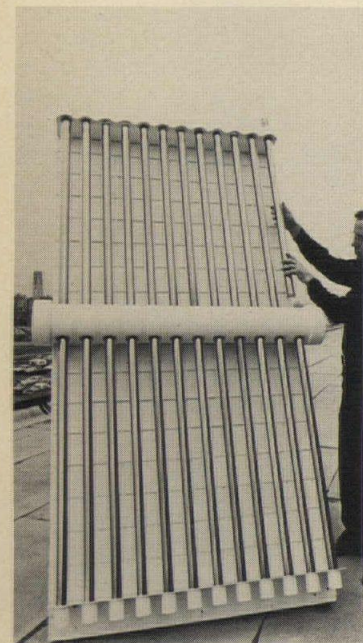
The collector's efficiency—it can heat water to 240 deg F, against the flat-plate maximum of about 180 deg F—stems from (a) a vacuum between the cover and absorber tubes and (b) a selective coating on the absorber tube. The

selective coating has high absorptance in the solar spectrum and low emittance in the infrared spectrum. Coating and vacuum together greatly reduce heat loss by conduction and convection. According to Owens-Illinois, the tubular collectors have a heat loss less than 15 per cent of available energy.

Collector modules consist of 24 tubes, 44-in. long, attached to an insulated copper manifold that routes the working fluid between tubes.

In Detroit, Smith, Hinchman & Grylls Associates are presently installing a 1,000-sq-ft Sunpak array on the roof of its offices. Intended primarily to provide domestic hot water for the A/E firm's 400 employees, the collectors will have excess capacity on sunny days, and the extra energy will be used to heat water in the cooling tower basin in spring and fall, to provide an energy source for the high-temperature hot-water refrigeration machine serving the computer area, and to provide a heat source for the perimeter fin-tube at the west wall.

The experimental installation will cost about \$100,000, and SH&G will record operating data to assess the economic and engineering feasibility of solar energy. The firm figures that immediate savings in domestic hot water costs will amount to 400 million Btu, or \$750, annually, with additional savings for other services.



### East-west collector orientation proves effective

One of the difficulties in equipping existing buildings with solar heating is orientation: the ridged roofs of old houses often cannot accommodate the southern or southwestern orientation recommended for solar collectors. Moreover, the slope of these roofs is generally shallower than the angle suggested for efficient collector operation.

Retrofitting a 200-year-old farmhouse in Hinesburg, Vermont, Garden Way Laboratories in Charlotte, Vermont, overrode

these difficulties by installing a dual collector oriented east and west; the five west-facing collector panels shown here are duplicated on the opposite roof. The collectors are mounted to conform to the existing slope. Despite these violations of accepted practice, Garden Way reports that the system works effectively, supplying about 80 per cent of domestic hot water requirements.

The house, incidentally, was once the home of President Chester Alan Arthur.

### Theater wall slides up for open-air performances



Early in the design process for Lewiston, New York's, Artpark Performing Arts Center, architects Vollmer Associates consulted with Elwin G. Smith, manufacturers of metal wall systems, to canvass the possibility of using operable panels at one end of the theater. The walls open opposite the center's stage to expand the auditorium's capacity by 4000 seats, set on a grass slope outside for

fair-weather performances.

The primary requirement was for a thin, lightweight panel that could easily and quickly be lifted by motor. Additionally, the panel had to provide an attractive interior finish and high insulating values when the wall was closed, and both inside and outside surfaces had to be color matched to other materials.

The final design incorporates four separate panels, slotted into sloping wide-flange sections and raised and lowered by cables; the motors are mounted on the face of the steel sections. The panels, the manufacturer's *Foamwall* system, are composed of two sheets of galvanized steel sandwiching a core of foamed insulation.





## In-house reprographic equipment gains sophistication and availability

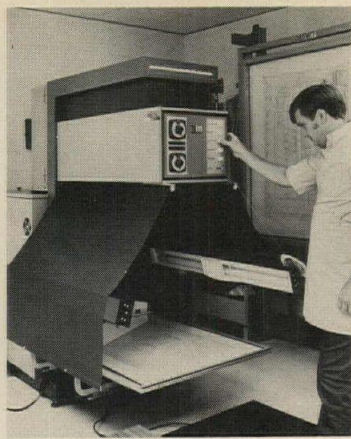
The following report on current trends in reprographics for architectural and engineering practice was obtained from 3M Company vice president in charge of the Industrial Graphics Division, Thomas P. Skoog.

There are about 25,000 engineering and architectural firms in the nation today, many of which are among the largest users of in-plant reprographic techniques to produce reports, specifications, proposals, office work, manuals, books, directories, engineering drawings and catalogs.

The advantages of inhouse plants include: 1) rapid service; 2) reduction in costs; 3) security and confidentiality; and 4) in-house control.

Several suppliers have directed their efforts to this promising new reproduction market. For instance, 3M developed the automated camera plate system that produces polyester offset plates, rather than metal or paper plates, from a single unit and without a darkroom. Run lengths of these plates today have been increased threefold to 10,000 impressions and the speed at which an operator can prepare a camera plate for the press has been increased to at least ten times that of a conventional metal plate.

This system is at the core of the 3M product line, but the company recognized that new config-



urations of the basic \$11,000 unit would be needed. A large copy-board, for example, was added for "D" size engineering drawings, and then a tilt lens was developed with vertical free standing copy-board to extend the range and reduction ratio even further for "E" size drawings.

In addition, a microfilm head was attached to the unit to blow-back computer output and other micro formats, such as aperture cards, to plates. Software improvements have included most recently an extended run length plate material that was preceded by the addition of positive transparency film for overhead visuals and negative film to image long-run metal plates.

In-plant printers are also adapting composition equipment to their operations. There are basically two classifications today—strike-on typewriters and pho-

typesetters. The choice usually is based on current and future needs. Space, charts, engineering drawings and similar jobs usually require the strike-on equipment, such as a VariType or IBM Composer.

Two-unit phototypesetters with a recording terminal and photo unit are most frequently used with paper tape to produce text jobs, such as proposals, manuals, company brochures and other publications. New trends include magnetic tapes, discs, computer memories and other electronic storage devices for recording the typesetting input.

Manufacturers of facsimile systems are zeroing in on quality, speed and cost per word transmitted. With recent breakthroughs in data compression over conventional telephone lines, the cost per word is decreasing to the point where this technique is beginning to look practical for more general use. Costs will drop even more over the next few years with increased use of broadband telephone lines and microwave transmissions.

So far, cost and quality are still the chief barriers to the extended use of facsimile. But with a stylus electrostatic type of system—a non-impact recorder/printer using non-mechanical means—the quality and cost per copy, as well as turnaround, will be falling into line.



Peter Bitner

## Automated planter ties into plumbing

Many plants prefer constant moisture to periodic soaking, and regular watering of planters constitutes a sizable maintenance expense in many offices. The Grobot planter, developed by Highbeam Design, Inc., provides automatic, controlled watering from a reservoir in its base.

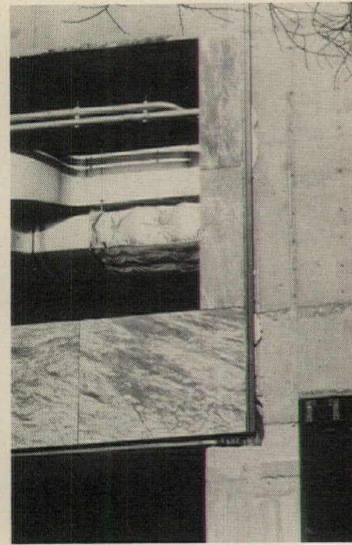
The most sophisticated of the Grobot models, System III (shown here), is a fully automatic system that is an extension of the building's plumbing. A specially designed electrically operated valve, connected to a plumbing riser, maintains water at a preselected level.

System I planters have doors in their sides through which the reservoir can be replenished manually. System II planters link up with the plumbing system, but the tap must be opened manually.

## Cast-iron tree gratings meet strict standards

For the beautification of a stretch of Sunset Boulevard, Neenah Foundry Co. supplied the City of Los Angeles with 153 specially designed tree gratings. Both material and design were submitted to testing by the city to ensure compliance with its strict standards for load-bearing capacity (300 psf) and for grate pattern.

One of these standards was a requirement that openings not exceed  $\frac{3}{8}$  in., a safety measure for women who still, or will again when fashion changes, wear stiletto heels. Because it is difficult to get clean castings of openings this narrow, the pattern was designed within limitations.



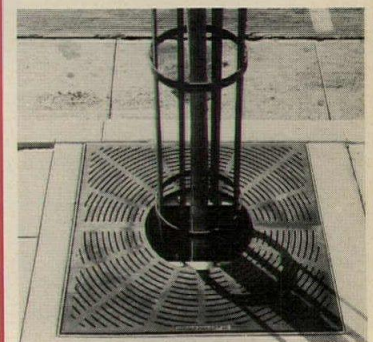
## Insulation foamed in place at Chicago's 74-story Water Tower Place

Foamed-in-place urea formaldehyde, familiar as residential thermal and acoustical insulation, has recently found increasing acceptance in high-rise construction. At Chicago's Water Tower Place, a 74-story concrete structure designed by Loeb, Schlossman, Dart

& Hackl and C.F. Murphy & Associates, the 3-in. air space between structure and marble facing panels is filled with Rapperswill Corporation's foamed insulation.

According to the architects, the chief advantage of the foam over rigid insulation was cost.

Beyond this, however, the foamed material fills the entire air space, rather than the 1½ in. occupied by rigid insulation, thus preventing convection and its attendant condensation behind the marble panels. The material is, in addition, dimensionally stable.







Lubitsch & Bungartz

### Good lighting is basic tool for downtown renewal

Streetlighting was a "key architectural tool" for the Ninth Street renovation in downtown Wilmington, Delaware, according to The Architects Studio, Inc., project designers.

The Ninth Street improvements were undertaken by local merchants not only to reverse a trend toward declining daytime business, but also to attract new nighttime activity. For lighting, the architects sought a quality of soft luminescence, without sacrificing the efficiency needed for pedestrian security and vehicular safety. Beyond this, the merchants expressed a preference for relatively low illumination of shop fronts, where display windows and entrance lamps would suffice.

The luminaire selected to perform all these functions—the Pericline, manufactured by the Moldcast division of Weil-McLain Co., Inc.—conceals a lamp above

a cone-shaped specular reflector that distributes its main beam widely, while the lamp housing cuts off glare above 75 deg, the critical angle for visual comfort with outdoor lighting. The luminaire's optical system can be built for asymmetric distribution of light, which on Ninth Street means that the roadway and sidewalks receive the main beams, while shop fronts are dimly lit.

The Ninth Street project is only one part of the Wilmington downtown development; it also involves Market Street, redesigned as a pedestrian mall, which runs perpendicular to Ninth Street and which is also fitted with Pericline luminaires. Lamps are white mercury vapor along the streets and yellow high-pressure sodium at the intersection. This color distinction offers an esthetic sense of place as well as a directional cue for drivers.

### GLIM program predicts lighting quality

A British company, Applied Research of Cambridge Ltd., has announced the availability of a computer program designed to predict the behavior of interior lighting in relation to room geometry and to other sources of light.

Known as GLIM, an acronym for general light interreflection model, the program is an effort to assess the quality of light rather than mere quantity.

The energy issue has greatly increased architects', engineers' and building owners' awareness of lighting and its costs, both initial and operational. The government now demands some statistical documentation for projection of lighting levels in new buildings, and knowledgeable clients are demanding proof of lighting quality as well as economic analyses. The need for more sophisticated

methods of measuring lighting is evidenced by the efforts of lighting engineers to foster understanding and acceptance of ESI (equivalent sphere illumination) footcandles and VCP (visual comfort probability) numbers.

The GLIM program is intended to give a graphic prediction of luminance within a rectilinear space (though the program can be adapted to outdoor applications). Input required includes the geometry of planes (walls, windows, furniture, external buildings and so on); reflectance and transmission factors; conditions of natural lighting, such as position of sun, amount of cloud cover, and reflection from ground surfaces; and artificial light. Output consists of halftone pictures of simulated light conditions and surface luminance figures.

### Thoughtful detailing enhances window walls

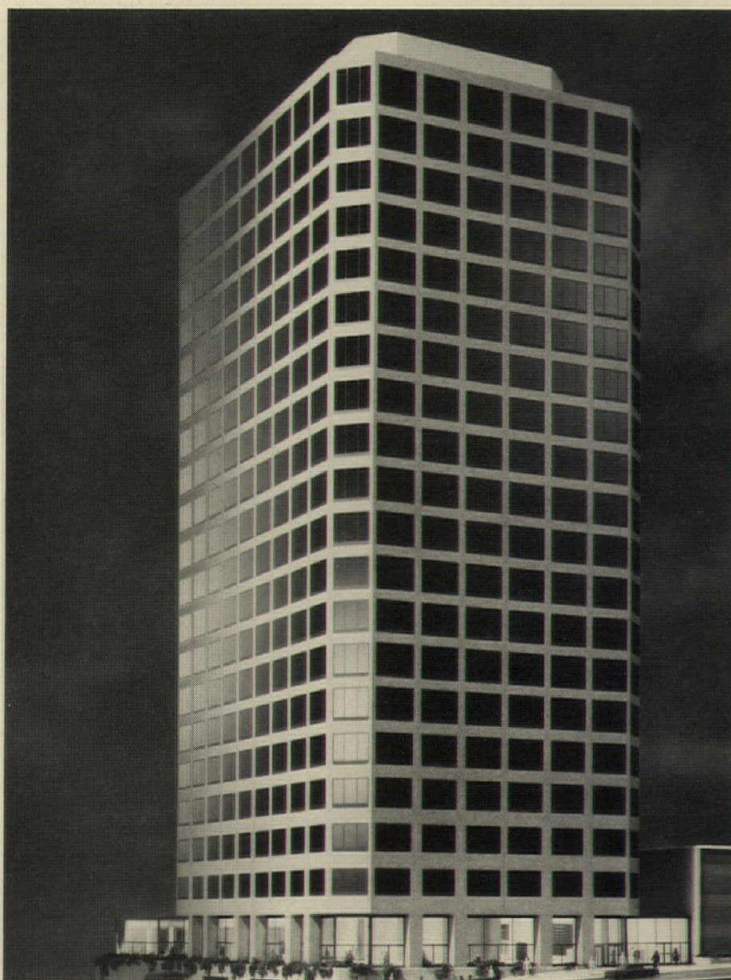
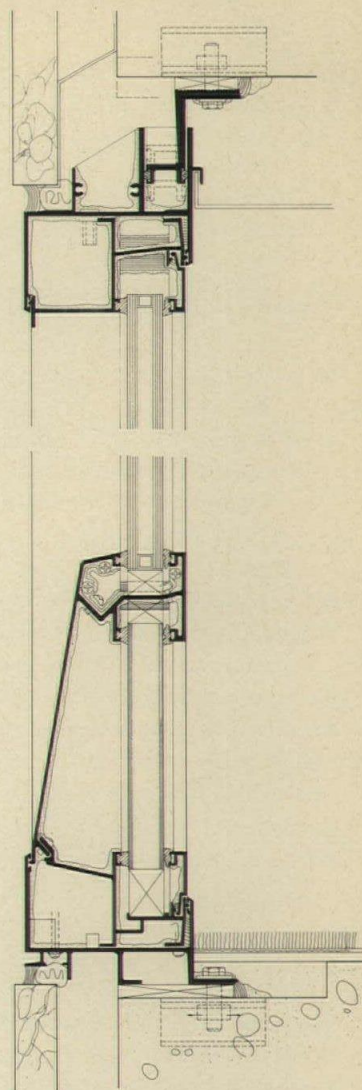
The detailing of glass walls for high-rise buildings grows more demanding as designers learn more about the effects of wind load and water infiltration.

For the Eighth and Main Building in Richmond, Virginia, designed by Skidmore, Owings & Merrill's Chicago office, the Southern Extrusions Division of Howmet Corporation supplied custom-designed aluminum framing for the window units. The windows contain three lights of reflective, heat-strengthened glass from Binswanger Glass Co., contractor for the glass and metal assembly.

One of the unusual details of the frame, worked out by Southern Extrusions with design consultant E.O. Tofflemire Associates, is a 3-in. projection at head and sill that allows the window assembly to trim with granite facing panels. A continuous sloping sill panel required an unusually large single extrusion.

An expanding head anchor accommodates settling and thermal expansion, and, along with expansion angles at the jamb, permits sizing adjustment. Unit was tested by Construction Research, Miami, Florida, for static and dynamic load and thermal cycling.

Cabot, Cabot & Forbes are the building owner-developers.



Hendrich-Blessing



## Building Components: automatic doors and the handicapped

by Richard G. Martin

More than 20 million disabled Americans have been thwarted for years by architectural barriers. Of these, more than 400,000 are confined to wheelchairs, 1.1 million wear heavy leg braces, and 172,000 use artificial limbs.

Progress in meeting their needs is being made. Since 1968, Federal Law 90-480 has required that new or altered buildings used by the public and financed with Federal funds be accessible to the physically handicapped. All fifty states now require that all new state-owned or -financed buildings be accessible to the handicapped. And an increasing number of municipalities are passing ordinances or amending building codes to require publicly funded buildings to provide such access, and some require access to publicly used but privately owned buildings. But enforcement of these legal measures does leave something to be desired in many areas of the country, surveys have revealed. And in a large number of states, the law refers only to newly constructed buildings, ignoring thousands of existing buildings with architectural barriers.

### The problem for the handicapped begins at the building entrance

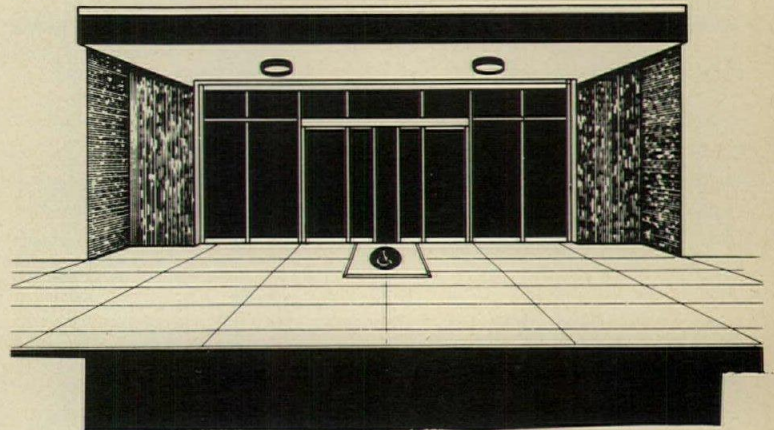
Doors are too narrow to allow a wheelchair to pass through; are of the revolving type, which completely frustrates a disabled person; are too heavy for a disabled person to open; have thresholds that are too high and require too much strength for many wheelchair persons to negotiate; or have improperly adjusted door closers which close too soon for the handicapped to cope with.

The vast majority of laws requiring access for the handicapped are patterned after American National Standards Institute specifications. Among the specifications are requirements that at least one primary entrance to each building shall be "usable" by individuals in wheelchairs; that doors shall have a clear opening of no less than 32 inches when open and shall be operable by a single effort; and that thresholds, as much as possible, shall be flush with the floor.

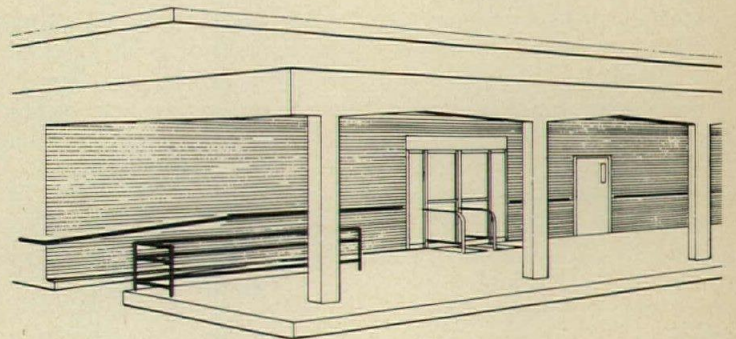
Automatic doors are "very satisfactory" for implementation of these specifications, says ANSI in Note 2 of Section 5.3.3. Lack of specific wording regarding doors has undoubtedly caused some confusion. The term "single effort" is subject to varying interpretations, for example. A door's pressure can vary depending on such factors as wind velocity and pattern, inside and outside temperatures, height of the building, and heating and ventilation equipment. Such inconsistency in a manual door could cause a problem for the disabled.

Managers of buildings where at least one automatic door has been installed at primary entrances report that such action has eliminated the problems that disabled persons have had to cope with when confronted with manual doors.

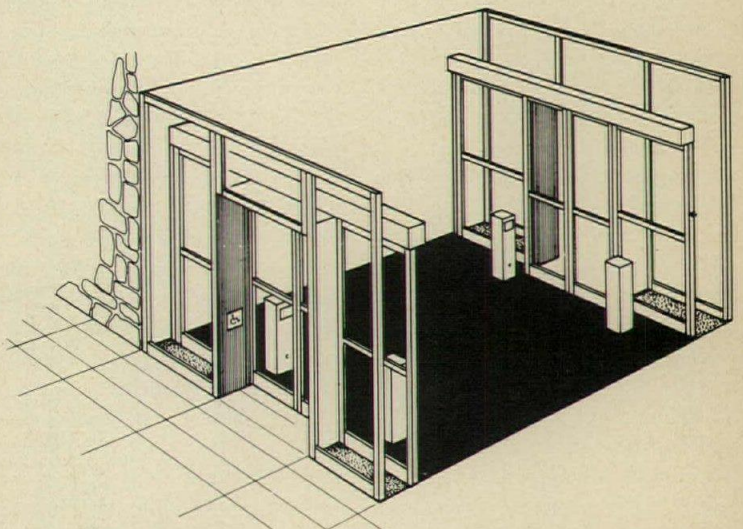
The time of tighter writing of the laws regarding access to the handicapped appears to be fast approaching. A large number of national and local groups are exerting steady pressure on authorities to put more teeth into specifications, including those regarding entrances. Despite the vague wording in many present laws, some Federal, state and municipal departments have gone ahead and put in



Automatic sliding door with bi-part opening and carpet controls.



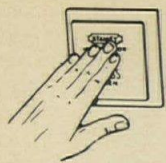
One entrance and one exit automatic door, both center pivoted.



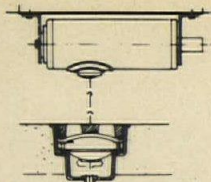
Air-lock vestibule approach for two-way traffic, two sets of automatic sliding doors with push plate switch controls and photo electric units.

*Mr. Martin is Marketing Manager of Stanley Door Operating Equipment Division, The Stanley Works*

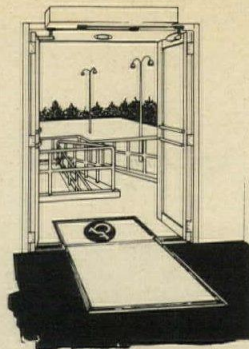




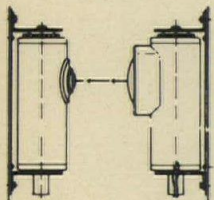
**Push or Kick Plate**  
Can be mounted for actuation by foot or hand



**Photoelectric**  
Vertical for fully automatic actuation



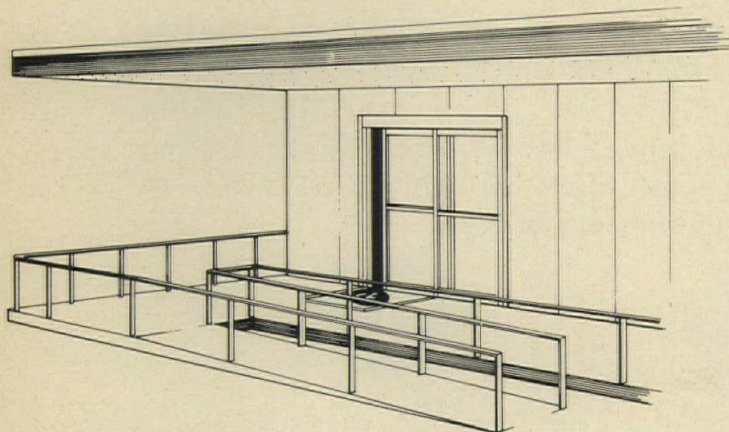
**Bi-swing Hinged Doors**  
for two-way traffic.  
Push plate switch with time delay from exterior, carpet actuation from interior.



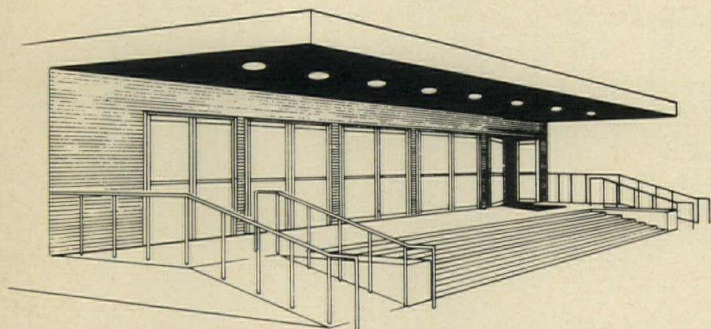
**Photoelectric**  
Horizontal for full automatic actuation



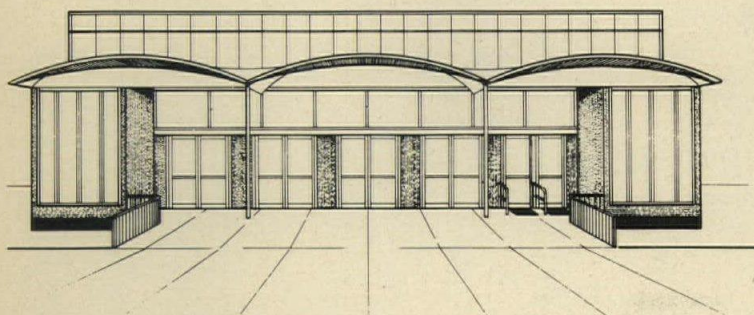
**Floor Button**  
Used for pedestrian traffic only



Typical prime entrance for small buildings or secondary entrance for larger buildings. Power-operated single door with carpet controls.



Main entrance with one set of automatic bi-swing center pivoted doors with carpet controls for two-way traffic.



Automatic swinging doors (one entrance, one exit) at right supplement manual doors. Each automatic door is center pivoted, has carpet control.

automatic doors in at least one "primary" entrance, and only the vague wording has held back faster implementation.

### The added cost of a "fully accessible" building is minimal . . .

. . . and has been estimated at less than one per cent, on the average, depending on the size of the building. The cost of an automated door at each primary entrance would represent only a small part of the total additional expense of providing access, which would also include such things as ramps, special parking spaces, signs, and so on.

Cost is minimal during planning; higher in remodeling. Thus, specification of automatic doors for the handicapped in key areas is preferable during the design stage of the building. However, replacement of manual doors with automatic doors or automating an existing door is not difficult, and should be considered in cases where handicapped persons have a chronic access problem with existing facilities.

### There are two types of automatic door: swinging, and sliding

Swinging doors swing away from the person going through. More than 70 per cent of automatic doors in use today are of this type. They usually have a pressure sensitive carpet or floor mat on the approaching side which opens the door, and holds it open as long as the mat is occupied on either side of the door opening.

Sliding doors are available either as single sliders or bi-parting. They are not as susceptible to changing wind velocity, save on use of conditioned air, and are probably esthetically superior to swinging doors. They swing open for emergency use, such as in a power failure, with only a slight push.

Automatic doors can be operated electrically, hydraulically or pneumatically with any of several types of controls:

1. *Carpets*—The electronic switching mat or carpet is the industry's mainstay. When pressure is applied to the mat, a circuit is closed, activating a relay in the control box of the operator. In a normal swinging door installation, two carpets are used; one energizes the relay that activates the operator, and the other energizes a safety circuitry that prevents the operator from actuating if a person is standing on the mat on the other side of a swinging door.

2. *Photo-electric cell*—This was the first actuating mechanism used for automatic doors, but accounts for only a small proportion of installations. Standard photo-electric units cannot be used on the outside of a building because they are subject to interference by sunlight and reflective glare, but a new generation of photo-electric devices is now being used in some applications. Light Emitting Diodes are not subject to some of the operating problems with sunlight and reflective glare, are smaller in size, and have proved ideal for some applications such as hospital operating rooms.

3. *Push plates, pull cords, step plates and touch controls*—These devices offer the user certain decided advantages, such as longer lead approach and more flexible location of control areas.

#### 4. *Second Generation Control Devices*

a) *Microwave controls* sense the approach of a person through a reflected microwave radar signal. The device then opens the door and holds it open as long as the reflected signal is received.

b) *Infrared controls* create a sensitive area on either side of a door. When a person intrudes into this sensitive area, reflected infrared light generates a signal which either energizes a relay that activates the operator, or energizes a safety circuit that prevents the operator from actuating, much as a carpet does.

c) *Ultrasonic controls* sense the presence of person in the defined area through reflected high frequency sound waves, and, again, generate a signal which either energizes a relay that activates the operator, or energizes a safety circuit. An ultrasonic control can be a true presence sensor, but has found only limited application because of its sensitivity to environmental disturbances, such as wind and noise.

Operating costs for automatic doors are not significant. For example, a typical sliding door requires only 100 watts for the typical six-second operating cycle.



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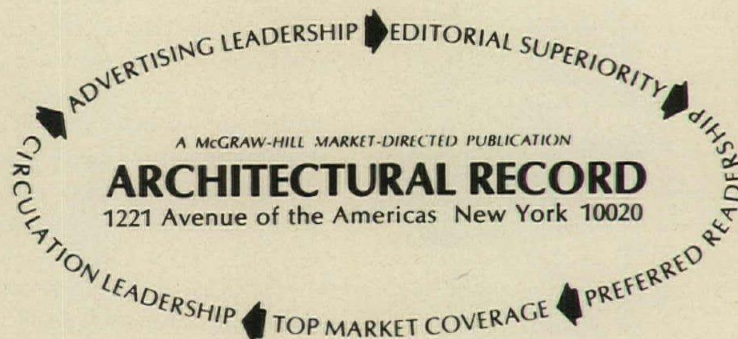
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# product reports 76

## EDITORIAL

This is the fourth edition of RECORD's Product Reports issue—which first appeared in mid-October 1972. It has as its goal the same goal as the original effort—to show in an organized, easy-to-use-for-reference fashion the most important new products recently introduced or to be introduced early next year. As before, the material was gathered by surveying all of the manufacturers who serve our industry, all across the country, and asking them to submit their new products for use.

The response was a bright spot in what has for the whole industry been, to say the least, a truly crummy year. As with most architects and engineers, business and profits have been down for the bulk of manufacturers and materials producers—but it is nonetheless clear from this year's new product submissions that the manufacturers are ready and willing when the market really starts back up strongly. There is no scarcity of new products—once again we received more than twice the number we could publish and were faced with a difficult editing task. There is no scarcity of new ideas to meet the new problems of materials shortage and energy conservation. So, most importantly, there is clearly no scarcity of faith in the future of the industry and its established marketing patterns.

### **How to use this issue**

This year Product Reports is organized, as usual, on the 16-division UCI format. The page number for each division can be found on the Contents page, page 3, and more information on any product or service in this issue can be easily obtained by using the Reader Service section that begins on page 8. Post-paid inquiry cards are provided for reader convenience on page 9. An index to manufacturers whose products appear editorially may be found on page 5, while advertisers in this issue are indexed on page 182.

A special feature of this issue should be noted. Again this year, readers will be able to circle one number on the Reader Service Card to receive manufacturers' literature on entire product sections within any of the 16 divisions. Of course, information on individual products may still be requested by circling the product's number in the case of advertisers, or by writing the number in the space provided, in the case of products featured editorially. However, if you wish to use the Reader Service Cards on page 9, we think you will find them useful as you read this issue.



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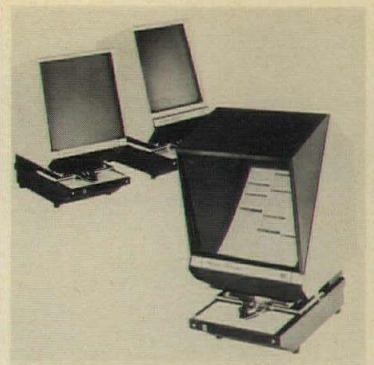
# office supplies and equipment



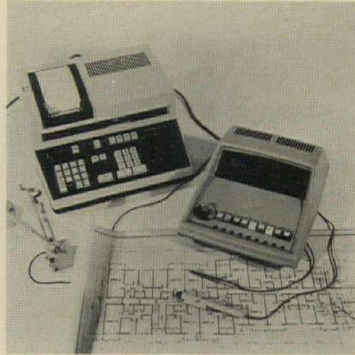
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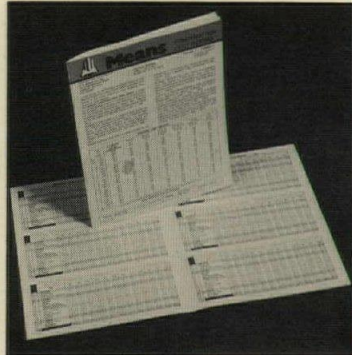
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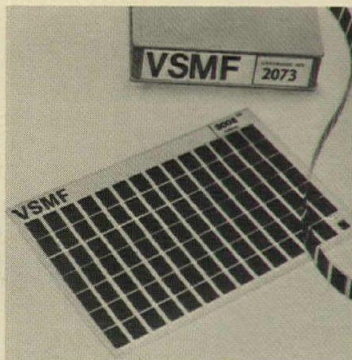
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## COMPUTERS

**1 BUSINESS COMPUTER** / The BBC 80/31 is said to be a turn-key system providing such ease of operation that it can be run by office personnel with a minimum of training. Applications include: billing, general ledger, mailing lists, accounting, and general administrative services. Designed for small businesses, the economical system can be expanded. / Business Controls Corp.

**2 ELECTRONIC ESTIMATING** / The Model 810 programmable estimating system simplifies plan take-offs and estimating procedures. Three probes enable estimators to extract item counts, linear footage and area directly from construction plans. Any standard scale or unknown scale can be used. / Diversified Electronics.

**3 GRAPHICS TERMINAL** / A low-cost interactive graphics terminal enables users to perform graphics applications concurrent with other engineering computer operations. / Digital Equipment Corp.

**4 CONSTRUCTION** / Small computers, work stations, printers, and both digital and analog plotters for the construction, architectural and engineering areas include comprehensive software systems for processing construction management applications. Shown is the WCS/10 computer, the smallest of three processors by the company. / Wang Laboratories, Inc.

## INFORMATION SYSTEMS

**5 CONSTRUCTION COSTS** / A new quarterly subscription service lists index figures on a CSI division-by-division basis for over 200 cities in the United States and Canada. The indexes are broken down into material, installation and total cost factor. A one-year subscription costs \$37.50. / R. S. Means Co., Inc.

**6 UL STANDARDS** / This product includes microfilmed, fully indexed, automatically updated UL Standards for Safety and UL Draft Standards. A user may subscribe to all or part. / Information Handling Services.

**7 MICROFICHE READER** / A modular family of readers with one common base and three interchangeable hoods comes in either fan cooled or ultra-quiet fanless models. Magnification ranges from 18x to 66x with interchangeable lenses. / Micro Design Inc.

## OPERATIONAL

**8 FILING SYSTEM** / The UnitSystem is a series of five- and 10-drawer flat files, and two- and three-drawer vertical files which intermember with each other. Files are available in a variety of sizes. / Hamilton Industries.

**9 DRAFTING MATERIALS** / The company is offering a family of drafting materials consisting of Gaftrace drafting laminate, Draffrace vellums and tracing papers and Polytrace drafting films. / GAF Corp.

COMPUTERS  
INFORMATION SYSTEMS  
OPERATIONAL EQUIPMENT  
OFFICE MACHINES  
REPRODUCTION

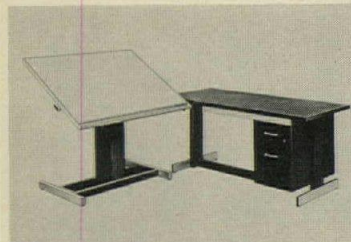




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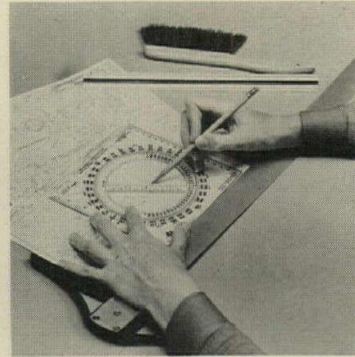
**10 DRY TRANSFER LETTERING /** *Shado+* is available in six type styles in 60, 72 and 96 point caps and five colors plus black and white. A variety of special effects is possible including extra deep shadows. / The C-Thru Ruler Co.

**11 HUMIDITY CALCULATOR /** Providing estimates of capacity requirements for basic industrial and commercial applications, a compact slide rule also has a quick reference table for the proper humidifiers. / Walton Laboratories.

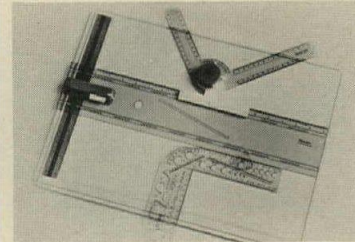
**12 DRAFTING TABLE /** The VR 20 drafting table features power electric operation for 20 in. of vertical travel (from 50% in. down to 30% in.). / Hamilton Industries.



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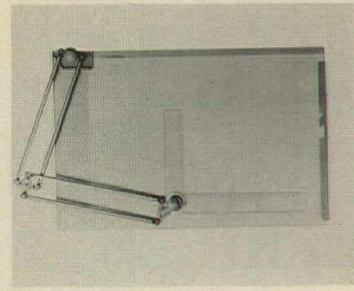


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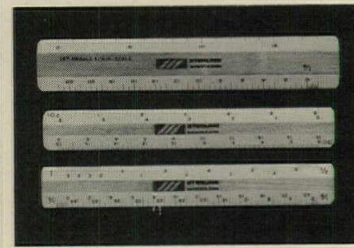
**13 BLUEPRINT CABINET /** Clamps hold as many drawings, or sets of plans as a single flat drawer. The units are available in mobile and wall mounted models. / Plan File Co.

**14 ANGULAR MEASUREMENT /** Equipped with two vernier scales to allow readings as precise as 0.1 degree and 5 minutes of arc, the *Rotangle* protractor permits the user to dial any angle to 360° and draw perpendiculars to any slope, draw symmetrical angles, or transfer angles without resetting. / Labindustries.

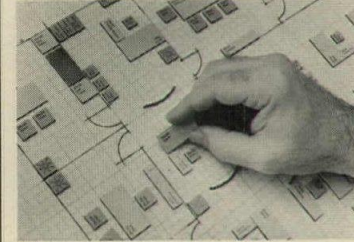
**15 DRAFTING SYSTEM /** A portable drafting set features a plastic drawing plate with tracking T-square, and a choice of add-on components. The board accommodates paper up to 12 by 17 in., or up to 9 by 12 in. / Sam Flax, Inc.



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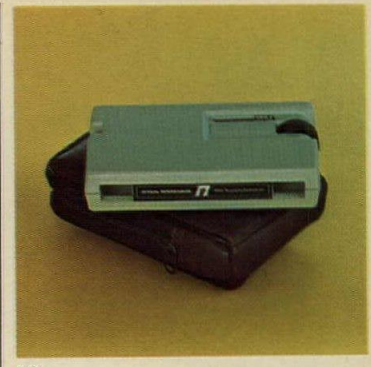


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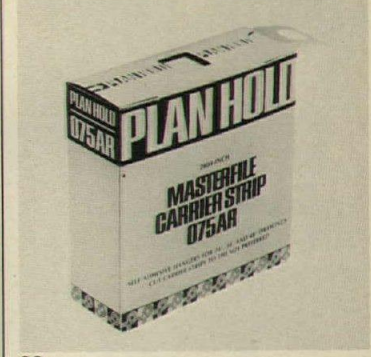
**16 PORTABLE DRAFTING /** These units are constructed of high-impact shatterproof and crack-proof plastic. The product is equipped with paper clamps and drafting machine plexiglass right angle and protractor with snap-action in 15 increments. / Hunter Associates.

**17 POCKET SCALE SET /** Three 6-in. scales of Venezuelan boxwood can be used to estimate studs, joists and blocks; two edges, 16 in. on center at 1/4 in. = 1 ft are featured. An architect's scale includes four edges, 1/8, 1/4, 1/2, 1, 3/8, 3/4, 1 1/2 in., and 3 in. = 1 ft. / R. S. Means Co., Inc.

**18 OFFICE PLANNING KIT /** Color-coded magnetic pieces on a 1/4 -in. scale gridboard help design office layouts. The kit includes desks, credenzas, typing returns, files, lounge furniture and assorted tables. / Ideas for Planning.



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**19 OPTICAL TAPEMEASURE /** Distances up to 100 ft can be measured by sighting through a viewfinder and operating a dial on the device. Instantaneous readings in feet and inches can be made by one person. / Ranging Inc.

**20 CARRIER STRIP /** A continuous roll of self-adhesive hangers for original drawings, called "Masterfile Carrier Strip," is prepunched on 6 1/2 -in. centers and can be cut to 24-, 30- or 48-in. lengths. It will go through all reproduction equipment. / Plan Hold Corp.

**21 DIAL-A-LIGHT /** Tables utilize intensity-controlled light surfaces in place of standard drawing surfaces on the VR-20, *Dial-A-Torque*, *Dial-A-Torque "L"* and *Pedestal* drafting tables. Transistorized control with variable intensity permits a complete range of adjustments. / Hamilton Industries.

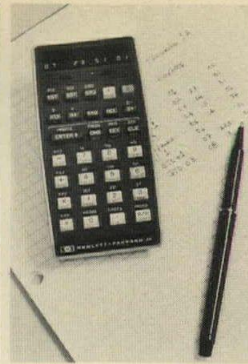




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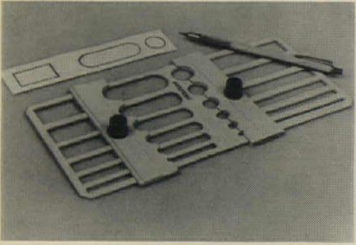
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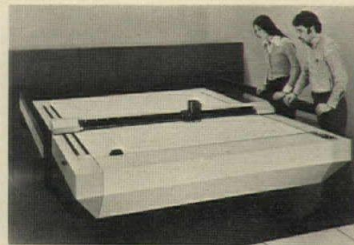
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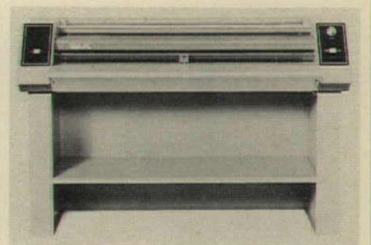
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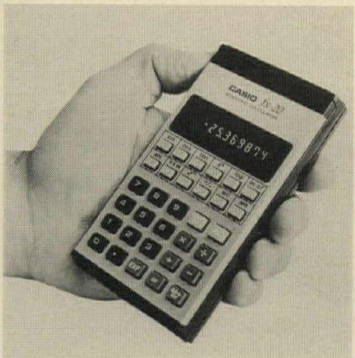
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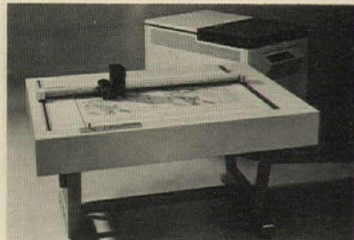
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**22 DRAFTING FURNITURE** / Positioning flexibility is attained in eight two-unit models of modular drafting furniture. Because board and table are individual, the unconnected reference table can be placed anywhere. A single control adjusts both height and tilt, and all models are available in either black or sand. / The Huey Co.

**23 ADJUSTABLE TEMPLATE** / An adjustable slot and rectangle template makes circles, squares, and other geometric figures. The model shown requires a quarter turn of its cam lock knob to hold adjustment bar in position. / Universal Enterprises.

**24 DISTANCE MEASURING** / The Rangematic 400 provides instant, one-person measuring from one location, horizontal or vertical, indoors or outdoors, from 100 to 400 ft. The instrument is available with its distance scale in feet, yards or meters. / Ranging Inc.

**25 DRAWING POINTS** / A series of nine drawing point sizes has been engineered to reflect a geometric progression based on the square root of two (1.414). The range of nine line widths is from 0.13mm (0.0051 in.) to the widest, 2.00mm (0.078 in.). / Koh-I-Noor Rapidograph, Inc.

**26 TRANSFER-TYPE ADHESIVE** / The system permits repositioning of photographs, artwork, and similar materials for proper alignment, then bonds permanently after application of pressure. It will not dry out, stain or discolor paper. / 3M Co.

#### OFFICE MACHINES

**27 SCIENTIFIC CALCULATOR** / A handheld scientific calculator with independent memory, this eight-digit machine performs trigonometric functions and also has a sexagesimal/decimal conversion key. / Casio, Inc.

**28 POCKET CALCULATOR** / The six-ounce "HP-25" is designed to provide simplified, yet comprehensive programming capability for engineers, and others. The calculator has 49 steps of program memory, full editing capability, and performs full register arithmetic. / Hewlett Packard.

#### REPRODUCTION

**29 FLATBED DATAPLOTTER** / The Model 430/201 is designed for high-speed plotting of digital graphic information, including contouring, engineering drawings, road mapping, aerial photogrammetry and property layouts. The area produced measures 54 by 76 in. / Broomall Industries, Inc.

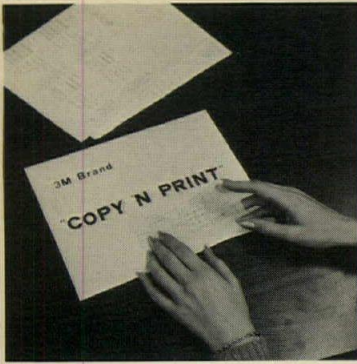
**30 FLATBED PLOTTER** / Model 430/101 Flatbed Dataplotter is designed for high-speed plotting of digital graphic information. The standard plotting area of the 430/101 is 31 by 36 in. on a variety of drafting materials. / Broomall Industries, Inc.

**31 INCREMENTAL PLOTTING** / System applications include engineering drawings and engineering design, scientific/equation plotting, business graphs and bar charts, road mapping, contouring (for geodetic surveys), aerial photogrammetry, and property layouts among others. / Broomall Industries, Inc.

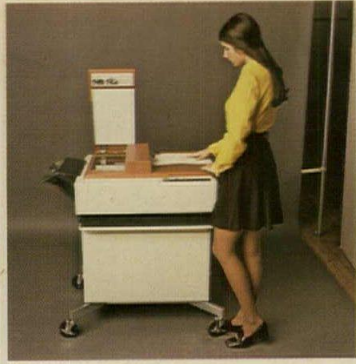
**32 NON-VENT DIAZPRINTER** / The tabletop "185 FL" diazprinter, a non-vent, fluorescent, semi-automatic machine designed for moderate volume users and satellite operations, features a 48-in. width. / GAF Corp.

**33 CAMERA/PROCESSOR** / Recommended for engineering reprographic departments, the "440" camera processor features extended range reduction/enlargement capabilities from 25 to 200 per cent. Automatic and self-contained, the unit produces line/halftone film or paper prints that are sized to meet a particular need, and delivered dry. / Itek Graphic Products.





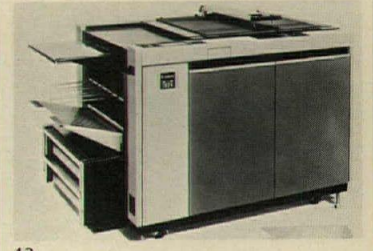
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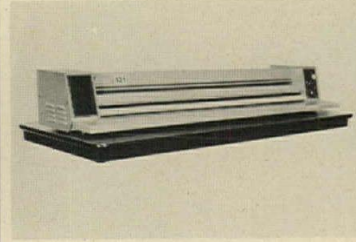
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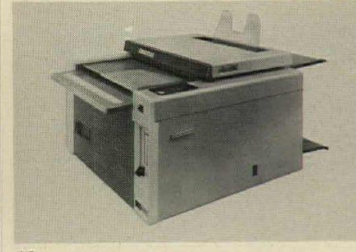
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**34 DRAFTING APPLIQUE** / An adhesive-backed translucency material for engineering specification imaging from most electrostatic copiers can be used for copying blocks, symbols, design forms and standards from other drawings. While the image is scratch-resistant, it can be erased. / 3M Co.

**35 LOW-COST COPIER** / Specifically designed for small business needs, this copier makes sharp, bond-like copies up to 8½ by 14 in., from originals of any color. The unit fits on a desk and operates on 110 volt AC. / Nashua Corp.

**36 PLAIN-PAPER COPIER** / The PBC copier is said to produce its first copy in eight seconds, and makes 37 copies per minute. It is intended for medium volume use, and rents on a 30-day basis for \$210 per month plus 2.5 cents per copy after the first 5000 copies. / Pitney Bowes.

**37 LARGE DOCUMENT COPIER** / This machine produces copies from originals as large as 14 by 18 in., and accepts originals at a rate of almost 20 per minute. The copier stands 39 in. high and can be rolled to any point of need and plugged into a standard, single-use circuit. / Xerox Corp. A\*

**38 WHITE PRINTER** / Formerly available only as a complete package, the Model 121 may now be purchased separately from the console for use as a tabletop unit. Several options, including print rack and accessory feed board, may be purchased. / Blu-Ray, Inc.

**39 AUTOMATED DRAFTING** / *Datadraft* is an automated drafting system that produces finished engineering drawings from designer sketches. It stores, retrieves and updates drawings, and generates engineering data. / Dimensional Systems, Inc.

**40 WHITEPRINTER** / The *DART* will make copies up to 45 in. wide by any length at printing speeds up to 16 ft/min. The compact unit can be used on a tabletop or installed on one of the company's custom stands with paper storage compartment. / Diazit Co., Inc.

**41 COLOR PRINTING** / The *Model 137 Color-in-Color System I* is capable of doing color prints, transfer separations, correction, rendition and composition. The unit is said to be useful in matching colors, for instance, to fabric samples. / 3M Co.

**42 DESK SIZE COPIER** / Low-cost reproduction of small blueprints and other wide documents is claimed for the *SAC1245* copier, which can reproduce documents up to 17 in. wide. Automatic trimming of documents to exact length up to 460 ft in length is also claimed. / Oce-Industries, Inc.

**43 LARGE-SIZE COPIES** / This plain copier reproduces copies as large as a newspaper page, and is recommended for architectural offices. It produces black and white copies from any color original with tone shades and half tones from solid white to solid black. / Canon Copiers U.S.A.

**44 PRINTER/PLOTTER** / A low-cost electrostatic printer/plotter that produces computer-generated alphanumeric and graphic material on 11-in. fanfold or roll paper operates at a resolution of 100 dots/in. vertically and horizontally. / Gould Inc.

**45 FILMS AND REPRO PAPERS** / The company has added to its offering sensitized products used in the reproduction of drawings, maps and other line originals. Included are 17 films including wash-off types, and 13 papers for low-cost reproductions. / Eastman Kodak Co.



# site work

## uci 2



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### FENCES & GATES

**57 CORROSION-PROOF FENCE** / Called "Colorbond Super Security Fence," the vinyl-clad galvanized steel chain-link fence fabric is woven into a  $\frac{5}{8}$  in. mesh. It is made of 11 gauge galvanized steel wire with a 100,000 psi tensile strength, and carries a 10-year factory warranty. / Colorguard Corp.

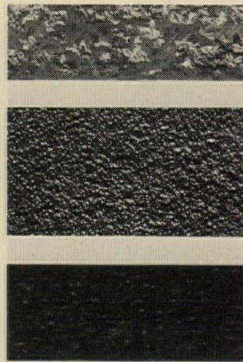
**58 SYNTHETIC CHAIN** / A line of industrial-grade link chain in polyethylene weighs 8.75 lbs per 100 ft, and has a conservatively rated breaking point of 175 lbs. The chain comes in seven colors, and is available in nine sizes. / Mercury Products Corp.

### FOUNTAINS & POOLS

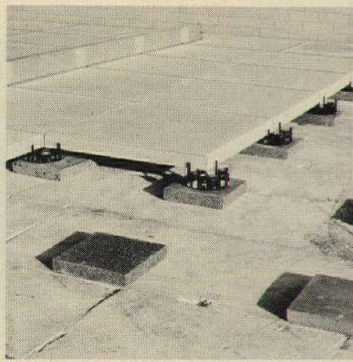
**59 FOUNTAIN** / This patented nozzle discharges 700 to 800 gpm of recirculated water, producing 24 15-ft high streams of large, heavy water crystal droplets. Fountain nozzle, patented lighting system, pump, manifold and all necessary fountain hardware are included. / Rain Jet Corp.



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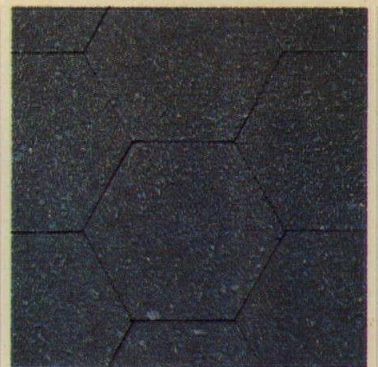
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### PAVING & SURFACING

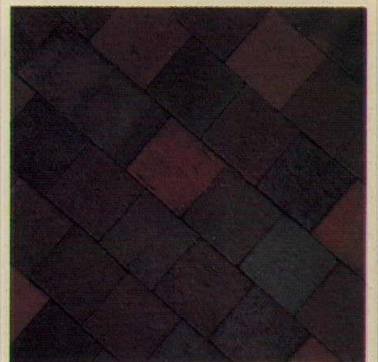
**60 SLAB SURFACING** / An economical process for treating concrete slabs to create durable surfaces having the character of brick, tile, cobblestone and other patterns, *Bomanite* is installed by specially licensed contractors. New patterns include: Herringbone Brick, Adobe (9 by 18 in. running bond), Fishscale Cobblestone, Fieldstone. / Bomanite Corp.

**61 PAVEMENT PROTECTION** / A latex copolymer emulsion can be added to *Jennite J-16* to provide a long-lasting protective coating on paved areas subject to high concentrations of traffic or exposure to aromatic fuels. *Jennite J-16* is an asphalt sealer. / Maintenance Inc.

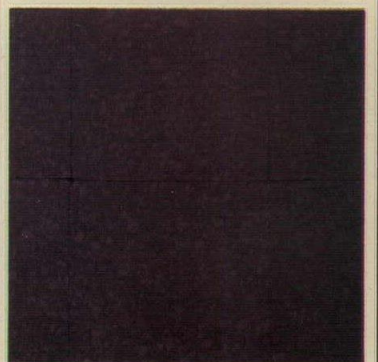
**62 RAISED PAVERS** / This pedestal system for installing pressed concrete slabs may be used in lieu of bituminous setting bed. The system is recommended for quick installation of the company's "London Walk" slabs, and can provide for easy drainage. / Hastings Pavement Co., Inc. A\*



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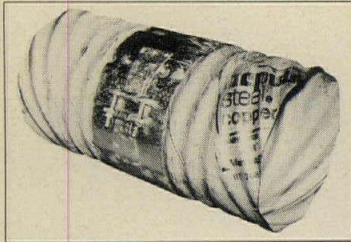
**63 ASPHALT BLOCK** / The sand-blasted finish on this block is prepared when the pavers are installed on the job, giving the blocks a "weathered look," and providing a softer walking surface. Any one of the company's blocks can have the special finish. / Hastings Pavement Co., Inc. A\*

**64 BRICK PAVERS** / "Rustic" brick pavers are made from extruded fire-clay or shale and are fired to produce a dense paver with an average absorption of less than 4 per cent (in a 24-hour cold-water absorption test). Pavers can be ordered in a color range from red to copper, with some brown hues. / Hastings Pavement Co., Inc. A\*

**65 ASPHALT BLOCKS** / The "Reading" finish, which has brown aggregate mixed with brown sand, is offered on pavers available in these shapes: square, rectangular, hexagonal, "Z" interlocking, and "H" interlocking. / Hastings Pavement Co., Inc. A\*

FENCES & GATES  
FOUNTAINS & POOLS  
PAVING & SURFACING  
SITE DRAINAGE  
SITE FURNISHINGS  
IRRIGATION SYSTEMS

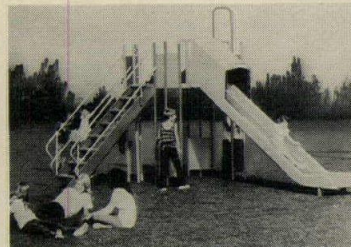




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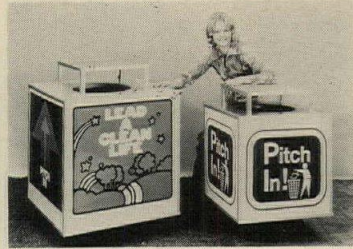
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## SITE DRAINAGE

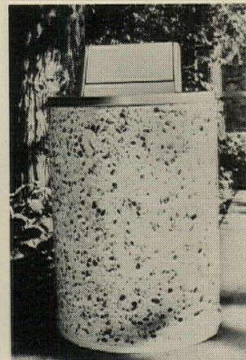
**66 CONNECTING BAND** / A dimpled squeezer band for connecting sections of corrugated steel pipe uses no gasket or additional mastic applied to the end overlap. It has been successfully hydrostatically tested to pressures of 20 psi. / Republic Steel Corp. / \*

## SITE FURNISHINGS

**67 MODULAR PLAYGROUND** / Designed mainly for 4- to 12-year-olds, the "Playstack" system of cube clusters was developed in Europe. The 39½ in. high polycarbonate cubes can be assembled and reassembled into numerous configurations. / Tedruth Plastics Corp.



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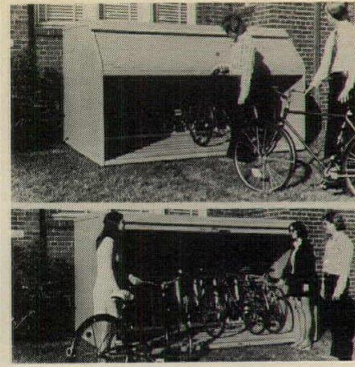


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**69 LITTER RECEPTACLE** / A 30-gal. litter receptacle measures 25 by 25 in. with a height of 36 in. A wide variety of graphic panels includes interchangeable side panels in seven standard environmental messages, six solid colors, simulated wood grain, and 15 exposed aggregate surfaces. / Clean City Squares, Inc.

**70 TRASH RECEPTACLES** / Available with exposed aggregate, the concrete container comes in nine standard pigment colors and three aggregates. Unit accommodates standard galvanized trash can, available as an option, or plastic bag. / Hanson Concrete Products.

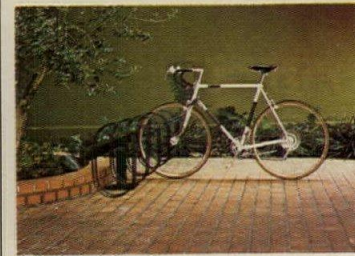
**71 MINI-PLAYGROUND** / Around a slat-roofed "tower" for playhouse games are four ways to enter and exit: a 6-ft long extra-wide stainless steel slide; an Astroturf-covered staircase with handrail; a fireman's sliding pole; and a net-chain staggered-rung ladder for bilateral climbing. / PlayLearn Products.



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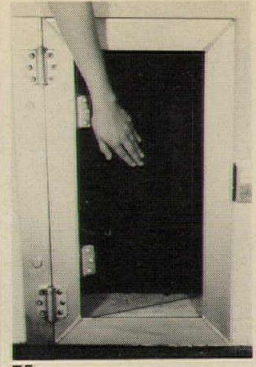


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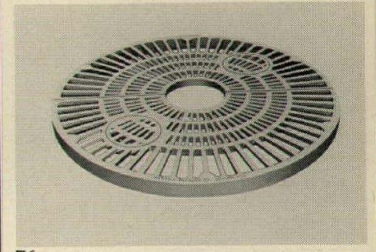
**72 BICYCLE STORAGE** / Two sizes provide for six to 10 bikes. The garage "door" is actually a counter-balanced slat closure which opens and closes with fingertip control. The frame and rolling front are made of heavy-gauge galvanized steel. / J. G. Wilson Corp.

**73 OUTDOOR FURNITURE** / The table is 54 in. in diameter and with its 1 in. thick wood core liner weighs 90 lbs. The benches are 41 in. long and have ¾ in. thick wood core liners. The fiberglass finish guarantees a minimum of maintenance. / Freight Container Corp.

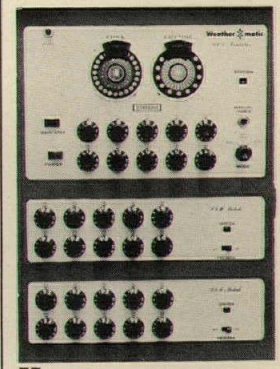
**74 BICYCLE RACK** / Heavy-duty and finished with a polyurethane coating, the rack is permanently mounted, and the post design eliminates accumulation of trash underneath. Many models and colors are available. / Park-Rite Co.



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**75 KENNEL DOOR** / A two-way kennel door and electric lock features a master control button that activates locks so dogs can be retained indoors. Dogs enter and exit freely when locks are not activated. The door has a heavy duty extruded aluminum frame with see-through polycarbonate inner door. / Long Environmental Systems L\*

**76 TREE GRATES** / The tree grates are available in square, round, hexagonal or oval shapes. Each assembly consists of two or four sections and many are designed with removable grids for subgrade night lighting. / Neenah Foundry Co. A, L\*

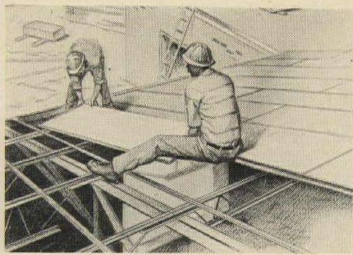
## IRRIGATION

**77 IRRIGATION CONTROLLER** / The SSM (solid-state module) 10, 20 and 30 station irrigation controller can handle up to 30 sprinkling stations in automatic irrigation of commercial institutional properties. / Weathermatic Div., Telsco Ind. A\*



# uci 3

# concrete



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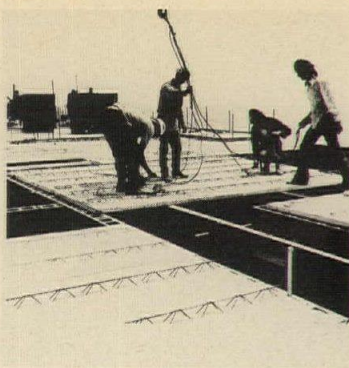
## CEMENTITIOUS DECKS

**90 GYPSUM ROOF DECKS** / The system combines laminated gypsum board planks with steel framing. Assemblies meet liveload requirements on spans up to 8 ft. The noncombustible planks weigh 8.4 psf, and can be supported by steel sub-purlins, bulb tees, truss tees or H-channels. / United States Gypsum Co.

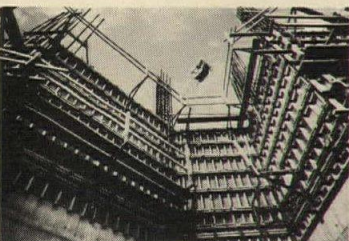
**91 LIGHTWEIGHT CONCRETE** / On a typical roof-deck application, stable preformed-foam is injected into a properly proportioned cement mix while the mix is being agitated in a conventional mixer. The concrete is then pumped continuously into place. / Waukesha Foundry Co.

## CONCRETE ACCESSORIES

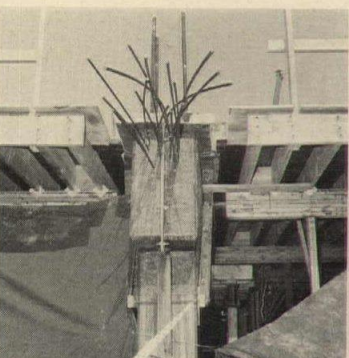
**92 CONCRETE CURING** / *Kure-N-Kote* transparent curing compound allows the selection of a durable finish without the need of complicated preparatory work such as grinding or acid etching. It may be used on both new or aged concrete surfaces. / Con-tech Inc. A\*



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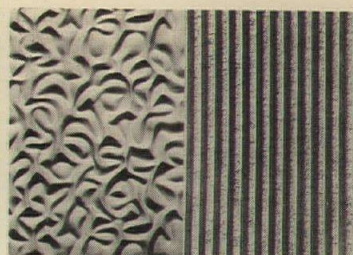
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## CONCRETE FORMWORK

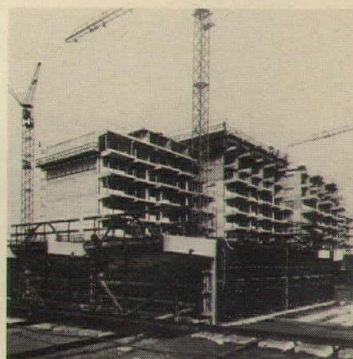
**93 CONCRETE SLABS** / *OMNIA* wideslab can be used not only as a floor or roof composite slab but can also be used for walls, retaining wall systems and composite structural systems. The wideslab is a stiffened pre-cast panel that initially serves as a permanent form, but subsequently becomes composite with the cast-in-place concrete. / Inter-Omnia, Inc.

**94 RE-USE FORM** / The plywood panel has a resin impregnated fiber overlay on one side, permanently fused to the plywood under heat and pressure. Up to 20 re-uses can be expected from *MultiPour* panels, available in 4 by 8 ft or 4 by 10 ft size. / Simpson Timber Co.

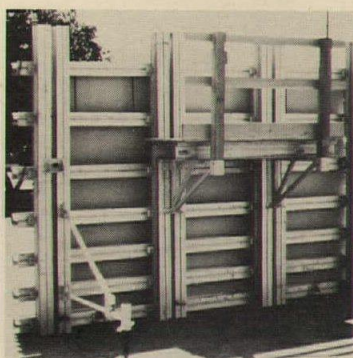
**95 CONNECTOR FORMS** / Intended for custom installations, these fiberglass poured concrete column connector forms come in two versions open at both ends for use with interior column and closed at one end for end columns. Advantages include a smooth surface finish, ease of handling, dimensional stability and re-use. / MFG Concrete Forms Co.



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**96 FIBERGLASS MOLDS** / *Textur-Form* provides the capability of executing complex textured surfaces or three-dimensional shapes. Economies are obtained with *Textur-Form* through their initial cost, reusability, ease of handling and gang forming capabilities. / Freight Container Corp.

**97 GANG-FORMING SYSTEM** / Known as "*Tun-L-Form*," the product enables a contractor to set up, pour and strip rooms on a continuous 24-hour cycle. One complete room is formed with a single retractable gang section, including walls and deck, and stripping is done in a single step. / Patent Scaffolding Co.

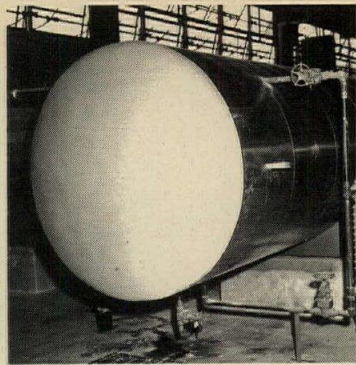
**98 WALL FORMS** / An aluminum reinforced wall system featuring aluminum stiff backs and wales is pre-assembled, ready for setting. The high strength light aluminum structural members reduce weight as much as 50 per cent compared to steel wall forms, according to the company. / Interform.

CEMENTITIOUS DECKS  
CONCRETE ACCESSORIES  
CONCRETE FORMWORK  
CONCRETE MATERIALS  
CONCRETE REINFORCEMENT  
PRECAST CONCRETE  
SPECIALLY PLACED CONCRETE

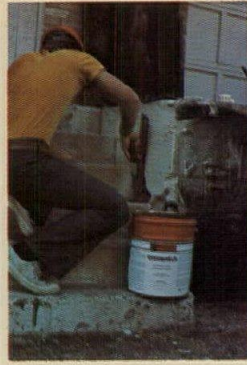




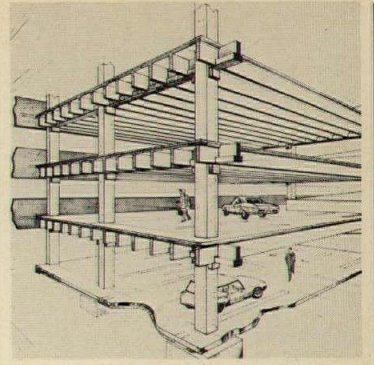
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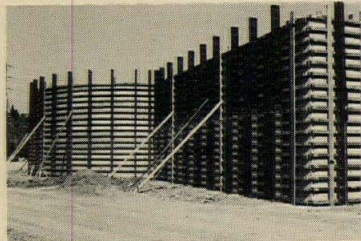
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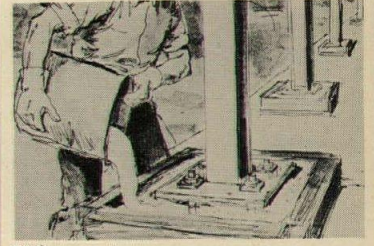
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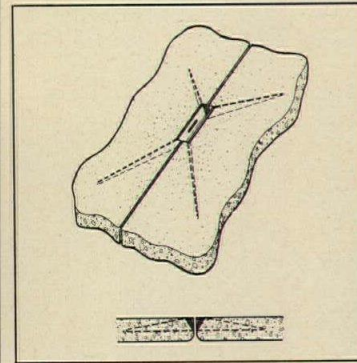
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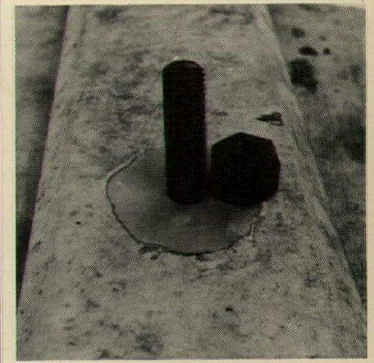
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**99 COLUMN FORM** / The pre-assembled plastic coated, plywood form has an aluminum reinforced cam-lock to eliminate need for bolts or ties. Cam action provides adjustable closing pressure for consistent forming. / Interform.

**100 STEEL FORMING SYSTEM** / Safe loading with minimum deflection up to a maximum of 21,000 ft lbs. bending moment and 16,800 lbs. end reactions, is reported. Key components are cold rolled steel vertical members which incorporate continuous corrugated web plates. / Burke Concrete Accessories Inc.

### CONCRETE MATERIALS

**101 CONCRETE SEALER** / Used for sealing and protecting both horizontal and vertical concrete and masonry surfaces, *TIAH* acrylic sealer is said to be excellent for commercial and industrial floors, sidewalks, interior and exterior masonry walls and architectural concrete and masonry. / W. R. Meadows, Inc. A\*

**102 INSULATING CEMENT** / A newly improved mineral wool insulating cement, *SUPER POWERHOUSE*, suitable for high temperature applications, is readily troweled on any surface, sets quickly to form a smooth, white, hard surface and may be painted after drying. It is recommended for use as a surface layer over insulation blocks, etc. / Keene Corp.

**103 SPRAY CONCRETE** / A life-preserving waterproof texture coating based on *Pliolite* resin, hides concrete imperfections and stops water, salt spray, mildew and air pollution damage. / Goodyear.

**104 CONCRETE BONDING** / *Sonobond* is a two-component, epoxy adhesive system for bonding fresh concrete toppings, overlays and mortar patches to older, existing concrete surfaces. It can be applied to virtually any concrete or masonry surface including concrete block, brick and stone. / Contech Inc. A\*

**105 NON-SHRINK CONCRETE** / *Sonopatch*, a quick setting, non-shrink concrete repair compound, offers a ten-minute set, and is similar in appearance to regular concrete mortar. It is designed to fill, repair or patch holes and cavities in all types of concrete. / Contech Inc. A\*

### CONCRETE REINFORCEMENT

**106 COATED DOWEL BAR** / The *DOUBL-COAT* plastic-coated dowel bar is a tested load-transfer device for concrete construction. High density polyethylene plastic over black mastic permanently covers the steel bar for a non-bonding surface that eliminates lubrication and remains smooth. / Republic Steel Corp.

**107 SHEAR CONNECTOR** / This simple, one-piece weldment is easily positioned before or after the pour assuring uniform ductility, weldability and proper embedment. The deep "V" design accommodates a welding slug or direct fillet weld below the concrete surface. / Martin Concrete Engineering Co.

### PRECAST CONCRETE

**108 BUILDING SYSTEM** / A pre-cast, pre-stressed concrete building system for parking garages is made up of standard double- or single-tee roof and floor components and a precast concrete structural frame. *Metro-Space* also includes mechanical and electrical subsystems. / Precast Systems, Inc.

### SPECIALLY PLACED CONCRETE

**109 NON-SHRINK GROUT** / The product is stable, containing no iron, aluminum, or other metals which can rust and no gypsum which can erode. Suitable for underwater use, *HALCO GROUT* is an all-purpose cementitious product. / Hallemite.

**110 ANCHORING COMPOUND** / This product is an instant, pourable anchoring compound that sets anchor bolts in concrete for anchoring machinery, conveyors, railings and other fixtures to the floor. It has been tested and proven to have a tensile strength of 46,100 lbs. / Randustrial Corp.



# Five reasons why fast construction with Precast and **PRESTRESSED CONCRETE** can save time and money



## **Newark State College Dormitories**

The project cost was placed at \$39 million. All bids were rejected. Two years later, in competition with five other methods, a revised design-build concept, utilizing prestressed precast concrete components was selected. The original cost was reduced \$10 million, making the project financially feasible.

## Here are the ways you can save:

**1. Lower overhead and job-site labor costs** Overhead and labor account for an ever-increasing share of building costs. Each day saved at the job site significantly lowers those costs. Use of precast prestressed concrete can cut construction time considerably compared with other construction methods.

**2. Shorter interim financing** The current high cost of interim financing can be crucial to a developer's profit margin. Obviously, the shorter the construction time, the less the interim financing. On large projects this often amounts to many thousands of extra dollars in bottom-line profit.

**3. Earlier occupancy** Every month required to build a commercial structure is a month that costs rather than pays the developer. The amazing speed of construction possible with precast and prestressed concrete assures earlier occupancy—in documented instances as much as 11 months sooner than estimated with other methods of construction.

**4. All-weather construction** The use of precast and prestressed concrete components, manufactured in all-season plants under highest quality-control standards, usually results in a better product than on-site production, minimizes delays caused by bad weather, and permits year-round construction in most climates—saving both time and money.

**5. Fast-track construction** Precast and prestressed components provide a special advantage on fast-track (team management) projects. Concrete components are mass produced in the plant while excavation and foundation work proceeds at the site, then delivered on schedule. In almost every instance, units are erected directly from truck to structure. They fit readily into place, shortening total construction time and reducing labor costs.

To these speed-of-construction advantages, add further money-saving benefits: durability, lower maintenance costs, and high fire resistance with resultant lower insurance rates.

For more information, call your local precast and prestressed concrete producer.

**ARCHITECTURAL**  
**PCI**  
**STRUCTURAL** **PRESTRESSED CONCRETE INSTITUTE®**

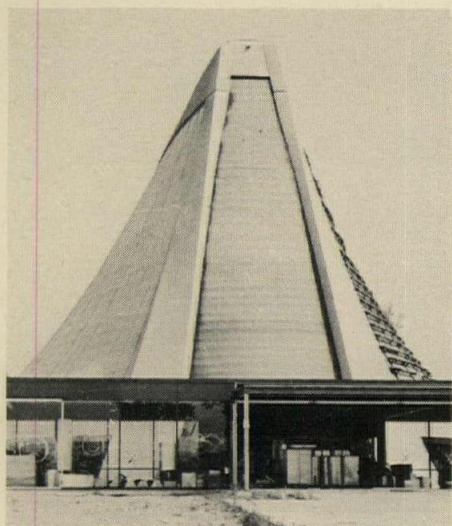
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For more data, circle A07 on inquiry card

ARCHITECTURAL RECORD Mid-October 1975 41



# SYMONS SOLUTIONS: Help architects to create unique and dramatic concepts in enduring concrete.



**The towering, twisted columns of Beth El—inspired by the biblical "Tent of Meeting".**

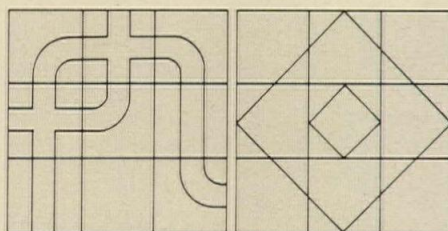
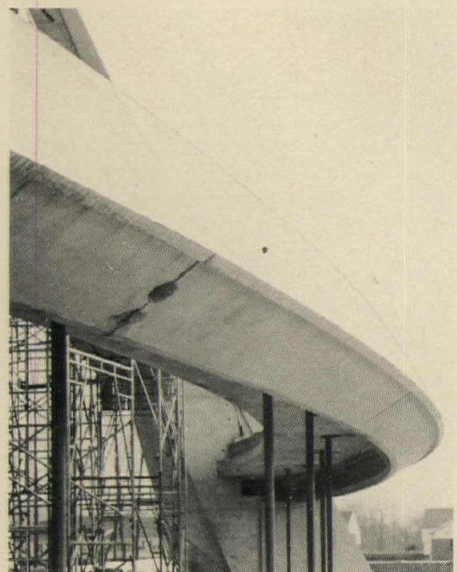
It would be hard to imagine support columns more graceful than the four which support Detroit's remarkable Temple Beth El.

Or to imagine columns more difficult to form.

Designed by world-renowned Minoru Yamasaki & Associates, the Temple's sweeping use of concrete sends columns twisting skyward to a height of 90 feet in a unique parabolic curve.

"Symons did an excellent job of this very complex, tight-tolerance forming task," reports Top 400 contractor A. J. Etkin. "Their custom forms produced a beautiful finish."

For full information, write for Case History No. 109.

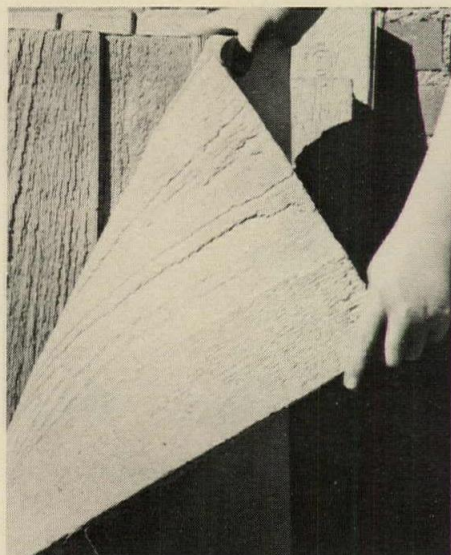


**Symons Plastic and Fiberglass Form Liners achieve special architectural surfaces.**

Now you have the freedom to create unique surface patterns, or unusual textures in your next design.

Because Symons will furnish economical custom plastic or fiberglass liners designed to achieve desired effects. There is a wide variety of standard textures available and, they can be formed into an almost unlimited variety of shapes and textures.

For more information, write for "Symons Custom Made Architectural Form Liners".



**Flexible Elastomeric form liners offer excellent reproduction in a wide variety of standard surface textures.**

There are 24 standard surfaces—in the Symons Elastomeric line—from weathered barnwood to fractured fin.



**SYMONS**

Plus an endless range of custom possibilities. Beautiful effects can be achieved in both pre-cast and cast-in-place concrete.

Because they're so versatile, Symons Elastomeric liners give architects total freedom in designing distinctive surface finishes.

Because they're so durable and flexible, contractors can reuse them hundreds of times at a very low cost per use.

Write for more information on Symons Elastomeric Form Liners.



**Symons offers a complete line of concrete care chemicals to protect your designs.**

From start to finish, Symons MagicKOTE® chemicals help provide the clean, stain-free concrete surfaces you create and specify.

From MagicKOTE® form release to curing and hardening agents, and ACS sealers that continue to shield your designs against dirt, moisture, rust, hydrocarbon emissions, efflorescence and fungi. (Even graffiti can be cleaned off.) Symons has a complete package of chemicals to preserve your concrete design.

Write today for information on Symons Chemical Products for Concrete Care.

Please send me material checked.

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120

**When we promise a solution, you get a solution.**


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For more data, circle A08 on inquiry card





# DUWE DULITE<sup>®</sup> ROOF DECK



for quiet, strong architectural expression.  
Duwe DULITE Roof Deck provides an economical engineering approach to attractive, permanent building construction.

Check these proven **DULITE** advantages:

Rates "as having a two-hour fire retardant value" by the Insurance Rating Bureau. This high safety factor assures lower insurance premiums. U.L. approved.

Conserves heating and cooling energy: insulating value equals 2" rigid board insulation, approximately four times that of ordinary concrete — "U" factor = .169.

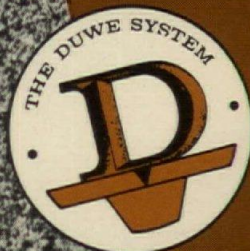
Helps meet OSHA noise control requirements — NRC = .75.  
Offers "nailable" concrete surface for covering with roofing materials as desired.

Made with light, strong DuCrete aggregate, may be trimmed to fit with power saw on the job as required.

Weighs no more than 10 lbs. per sq. ft., is not affected by water, will not retain moisture.

Finished in a natural, light grey color that may be easily spray painted. Presents an attractive textured surface for improved building decor. Available in slabs 3", 3½" and 4" thick by 24" wide; lengths up to 8'4". Standard, in-stock lengths are 4' and 5'.

Write or call for complete information and specifications on nationally available DULITE and Duwe's complete structural concrete line.



# DUWE

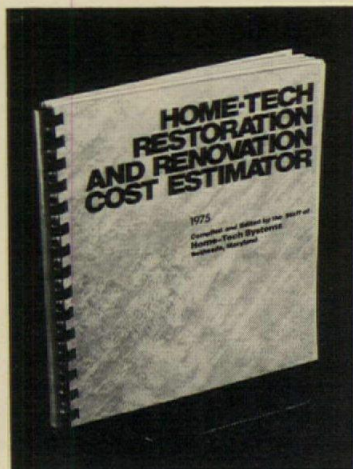
PRECAST CONCRETE PRODUCTS, INC.  
P.O. Box 2068  
Oshkosh, WI 54901  
414-231-3980



**OFFICE EQUIPMENT**

**D01 INCREMENTAL PLOTTING** / A technical bulletin describes the "M2916" Magnetic Tape Incremental Plotting System that employs a soft controller and a 45-in. per second tape drive, and interfaces to "Model 2000", which plots up to 2000 steps per second. / Broomall Industries, Inc.

**D02 SHOPPING CENTERS** / Tenant and cost information data on more than 550 shopping centers in the United States and Canada have been published by the Urban Land Institute. The new features of the 328-page book include a section on super regional shopping centers in the United States complete with tenant information tables on the 33 participating centers; and an innovative data series—funds after debt service—for each of the four shopping center types studied. These data (FADS) furnish a look at "net cash flow" in terms of median dollars per-square-foot of GLA. / Urban Land Institute.



**D03 HOME REMODELING** / *The Home-Tech Restoration & Renovation Cost Estimator*, which applies the same unit cost method to the figuring of renovation and restoration projects, is primarily designed for use in the rehabilitation of inner city houses and buildings. A few of the items included in this book are: the cost of gutting a two-story townhouse; plaster repair and drywall installation over existing plaster; lowering concrete floors to gain adequate height for a basement apartment. It is available for \$18.90. / Home-Tech Publications.

**D04 HOSPITAL PLANNING** / "Building Tomorrow's Health Care Facilities: 10 Answers" is the title of a booklet produced by The Eggers Partnership, Architects and Planners, New York City. Environmental and energy problems, changing codes, new requirements for fire safety, building efficiency, expandability, flexibility, all aspects of hospital planning are touched upon. / The Eggers Partnership.

**D05 COMPUTER GRAPHICS** / A new six-page short-form catalog describes computer graphics equipment including digitizers, drum and flatbed plotters, photo-plotters and automatic digitizing systems. / Broomall Industries, Inc.

**D06 CALCULATOR** / Bulletin 5952-2439 describes how the "9830" programmable calculator and software can be used to design HVAC control systems, including heat loss/gain, duct and pipe sizing. / Hewlett-Packard.

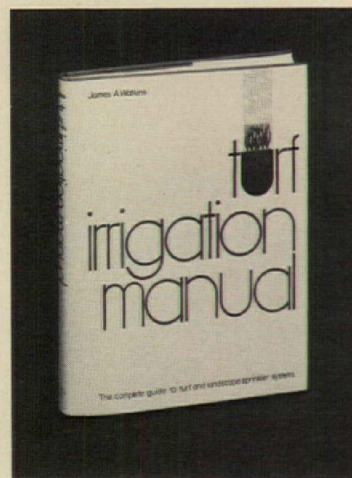
**D07 BEAM DESIGN** / Bulletin "5952-8915" shows how the "9830" programmable calculator and prestressed concrete beam design software provide optimum design and save time. It can also be used for structural design. / Hewlett-Packard.

**D08 ADMINISTRATION** / Bulletin "5952-8975 (09)" describes all of the "9830A" programmable calculator software presently available for the engineer or administrator in construction or architecture. Included are descriptions of software for: structural engineering; hydraulic engineering; HVAC design; and administration. The equipment configuration for the operation of each software pac is also presented. / Hewlett-Packard.

**SITework**

**D09 ALUMINIZED FENCE** / Features of aluminized chain link fence fabric are explained in a full-color brochure, PF-175. Eight styles of fence, including barbed wire, are presented, in addition to fittings and gates in heavy, medium-heavy or medium construction. / Acco, Page Fence Div.

**D10 LANDSCAPE TIES** / Crossties, like those used on railway lines, are described in a booklet, "Enliven Your Landscape." The booklet offers hints for installing ties. When pressure-treated with a preservative such as creosote, pentachlorophenol or Wolman salts, the wood is resistant to attack from insects and decay. / Koppers Co., Inc.



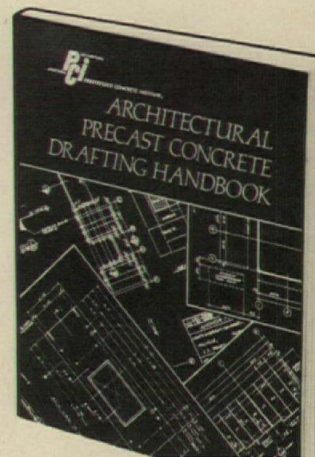
**D11 IRRIGATION MANUAL** / The fourth edition of the reference work on landscape sprinkler system design, complete with illustrations and engineering data tables, details equipment, material, surveying, layout and hydraulics. / Weather-matic Div., Telesco Industries. A\*

**CONCRETE**

**D12 FLYING FORMS** / A four-page brochure describes flying fiberglass long forms that produce a concrete surface needing no finish and reducing the weight of a typical gang form from 20,000 to 10,000 lbs. Also included in the literature are the sizes and shapes of long forms. / Molded Fiber Glass Concrete Forms Co.

**D13 FOUNDATION FAILURE** / The company has reissued its 32-page booklet, *Failures in Foundations*, by Jacob Feld, Ph.D. The booklet describes many typical as well as extraordinary foundation breakdowns, ranging from pulled-down wall corners and column footings to a huge Canadian grain elevator that tilted 34 feet out of level a day after it was filled with grain. / Soiltest, Inc.

**D14 REBAR SPLICES** / A third edition, 1975, of the CRSI booklet *Reinforcing Bar Splices* includes the 1973 and 1974 changes to the ACI Building Code that affect splices and development of reinforcing bars. Also, major revisions were made to simplify splicing practice. Design data is also presented for development of reinforcement and lap splices. / Concrete Reinforcing Steel Institute.



**D15 PRECAST CONCRETE** / Standards for precast concrete shop drawings are meant to enable draftsmen to translate the architect's contract documents into usable information for manufacture, handling and erection of precast concrete units. Contents contain: drafting techniques and procedures; drawing preparation; submittal process; drafting room; and design and drafting aids. The hardcover book contains 208 pages, and is \$16 pre-paid. / Prestressed Concrete Institute.

**D16 CONCRETE CHEMICALS** / The data includes product description, application methods, coverage, specification compliance and cost estimating data on form coatings, cures, concrete floor treatments, masonry corrective and protective treatments, grouts and bonding agents. / L&M Construction Chemicals Inc.

more literature on page 72

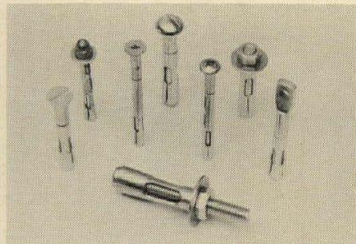
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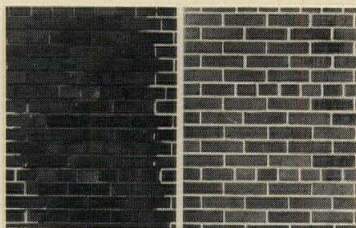
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## MASONRY ACCESSORIES

**123 TEXTURED MASONRY COAT** / This polyacrylic material forms a non-porous stone-like surface over concrete, cinder block and other types of raw masonry. The process is only available through authorized contractors. / Durasurf, Inc.

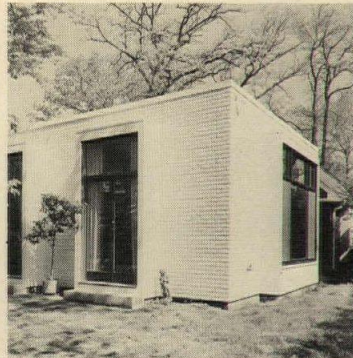
**124 MASONRY ANCHOR** / A complete line of sleeve anchors features vertical ribs to prevent rotation. *Sup-R-Sleeve* anchors are pre-assembled and eight types are offered to cover most installation requirements. / General Cable Corp.

## MASONRY RESTORATION

**125 MASONRY CLEANER** / Called *FORMULA 22*, the cleaner eliminates the need for sandblasting and uses no harsh chemicals. It can be used on masonry, brick, cement block, aluminum, steel, terrazzo, limestone, terra cotta, granite, tile and sandstone. / The Monroe Co., Inc.



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## MORTAR

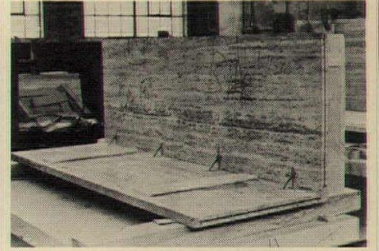
**126 NONMETALLIC GROUT** / Shown in application in this apartment complex, grout No. *F-100* is used in the placement of precast, prestressed concrete exterior and interior structural wall panels. The inorganic, nonshrinking, water/oil resistant compound offers fast set and high strength. / Sauereisen Cements Co.

## SIMULATED MASONRY

**127 MASONRY PANELING** / Duplicating the appearance of oven-fired brick, "Brookline" is available in white, buff, and red. It comes pre-mortared for application, and 18-brick panels cover 3 sq ft. / Masonite Corp.

## STONE

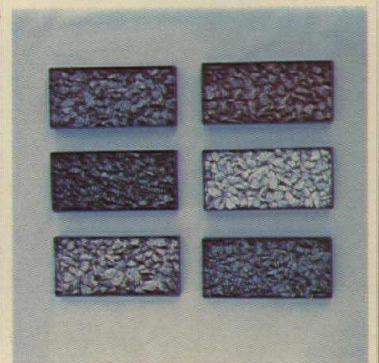
**128 NATURAL STONE TILES** / Tiles and slabs for flooring and wall panels are now available in the U.S., imported from the Netherlands. "Alta Quartzite" tiles come in a medium shade of gray-green. / Gran-Quartz International, Inc.



129



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**129 SHOP BONDING** / The "Shop-Bonding" process includes the design, layout, cutting to size, finishing and attaching together, by high-strength bonding cements, small marble or stone units into larger final assemblies. / Vermont Marble Co. A\*

## UNIT MASONRY

**130 THIN BRICK** / This kiln-fired brick is 7/8 in. long and 3/8 in. thick. It is available for both face brick veneers and floor paving. The unglazed brick comes in two widths: 2 3/4 in., and 3 in. Six colors are also offered. / Maybrik.

**131 GRANITE AGGREGATES** / Granite aggregate in a variety of colors is being produced for use in building panels, landscaping and roofing applications, available in various sizes. / Cold Spring Granite Co. A\*

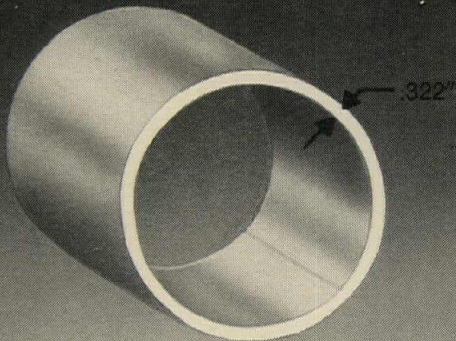
MASONRY ACCESSORIES  
MASONRY RESTORATION & CLEANING  
MORTAR  
SIMULATED MASONRY  
STONE  
UNIT MASONRY



# 46 KSI at no extra cost

why settle for less in a structural column?

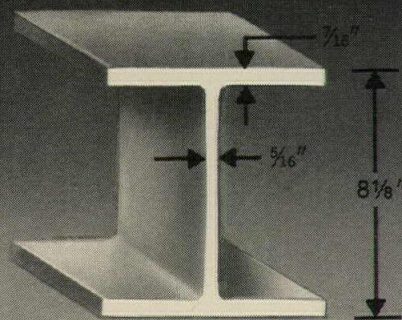
**PIPE**  
**36 ksi**



8 5/8"

**28.6 lb/ft**

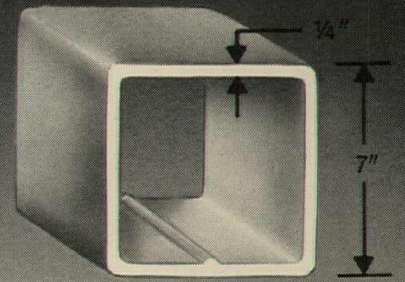
**W SHAPE**  
**36 ksi**



8"

**35 lb/ft**

**SQUARE TUBING**  
**46 ksi minimum**



7"

**22.7 lb/ft**

Cold formed welded square tubing weighs less than W shape or pipe structural columns. And you get greater yield strength at no extra cost. Shouldn't you be specifying square tubing for your structures?

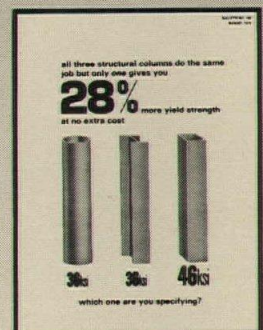
we produce cold formed welded steel tubing in more sizes and wall thicknesses than anyone in the industry.

**RECTANGULAR:**  
3" x 2" x 3/16" to 20" x 12" x 1/2"  
**SQUARE:**  
2" x 2" x 3/16" to 16" x 16" x 1/2"

**WELDED TUBE COMPANY OF AMERICA**

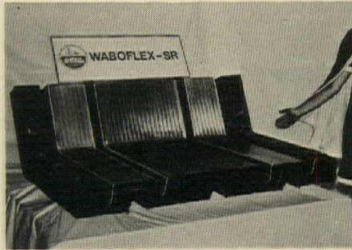
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1855 EAST 122ND STREET  
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for facts  
and figures

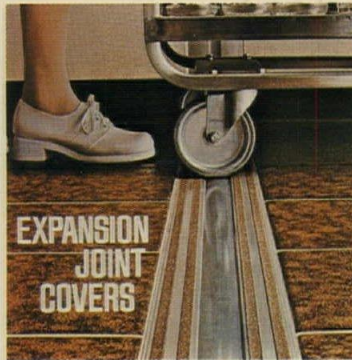




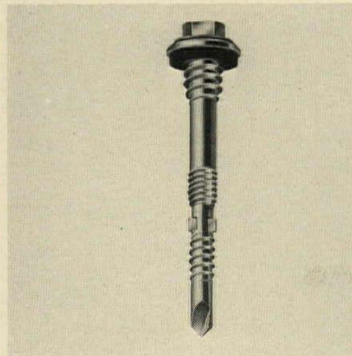
# uci 5 metals



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145



146

## EXPANSION CONTROL

**144 EXPANSION JOINT** / The *Waboflex SR 13* curb and gutter configuration shown is fabricated from molded *Neoprene* elastomeric joint. Designed for major bridge structures, the rubber molding includes ribbed, extruded, high-strength aluminum alloy wear plates vulcanized on the riding surfaces for skid-resistance. / Watson Bowman Assocs.

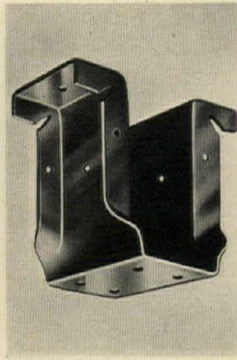
**145 JOINT COVER** / A floor expansion joint cover system in extruded aluminum or bronze is designed for flush mounting and full movements in horizontal or vertical planes without use of filler strips. It is virtually vandal-proof. / Balco, Inc. A\*

## FASTENERS & SUPPORTS

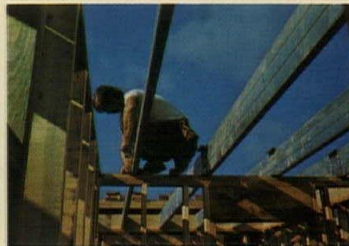
**146 RIGID INSULATION DRILL** / Fastener damage to rigid insulation is said to be prevented and its attachment to structural purlins or girts is simplified by using the *STANDOFF/R* self-drilling fastener. It penetrates the insulation, drills into structural member and fastens securely. / Buildex.



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**147 LOW PROFILE FASTENER** / Available in four sizes, the fastener provides positive driver/head/drill point alignment that eliminates wobble and the resultant drill point walking and drilling of excessively large holes. The recessed drive and low profile button head are appearance features. / Elco Industries, Inc.

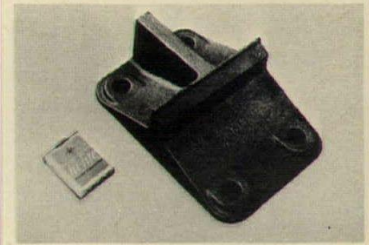
## LIGHTGAGE METAL FRAMING

**148 PURLIN CLIP SADDLE** / The new "saddle" permits purlins to be placed between trusses, flush with the top of the truss. Clips can be applied before the truss is installed, simplifying purlin installation. / The Panel Clip Co.

**149 STEEL JOISTS** / A high-performance, load-bearing system offers an economical method for framing floors and flat roofs in single- and multi-family housing. Factory-cut to length with holes for electrical and plumbing services, joists can be spaced 24 in o.c. / United States Gypsum Co. L\*



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**150 BOLTLESS FRAMING** / A self-locking boltless structural steel framing system is said to provide ease of installation, eliminating the need for special instructions to installers. / Mult-A-Frame Corp.

**151 H-BEAM BRACKETS** / Cast steel brackets and bases for H-beam construction are made in Japan, and said to save on installation because of custom fabrication to specified requirements. Both items conform to the A216-70A WWC ASTM standard. / Hitachi Metals America.

## METAL DECKING

**152 FLOOR DECKS** / Two decks, the *EC266* and the *EC366*, now have built-in dovetail ribs for hanging ceilings, mechanical and utility components. Hangers can be installed during construction or after occupancy. / Epic Metals Corp. A\*

EXPANSION CONTROL  
FASTENERS & SUPPORTS  
LIGHTGAGE METAL FRAMING  
METAL DECKING  
METAL FABRICATIONS  
METAL STAIRS  
METALS & ALLOYS  
RAILINGS & HANDRAILS





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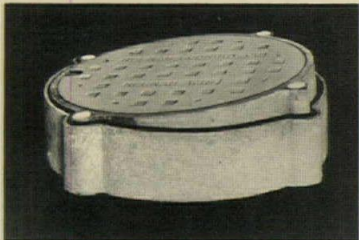
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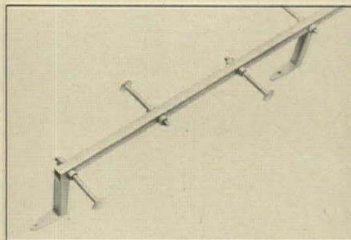
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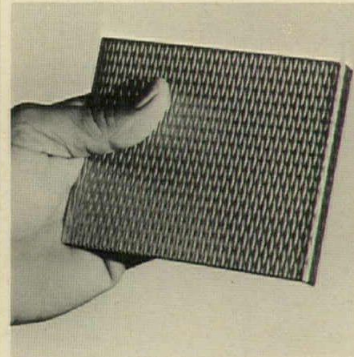
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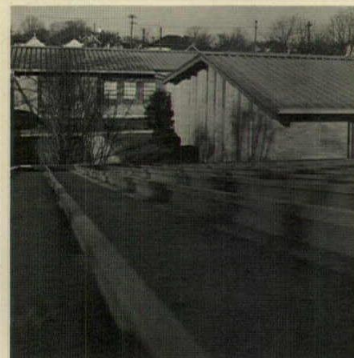
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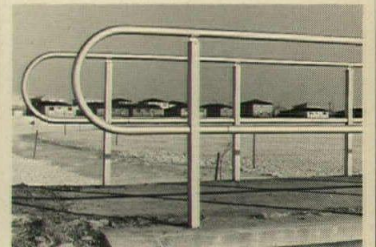
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**153 COMPOSITE DECK** / The *EPI-CORE* floor system features triangular shaped ribs with narrow rib openings for hangers to be installed later. The hanging system is said to be important especially for hospitals where additional medical support equipment may be needed. / Jones & Laughlin Steel Corp.

### METAL FABRICATIONS

**154 ADJUSTABLE MANHOLE** / The unit can be raised up to 4 in. instantly by turning adjustable bolts, permitting resurfacing jobs without resetting of manholes. The unit can be tilted to match the road surface. / Neenah Foundry Co.

**155 CHROME SPACE FRAME** / This application of the company's *Moduspan* space frame features chrome plated components. Designed by Alfred N. Beadle, the unit provides an entry canopy for the Mountain Bell headquarters in Phoenix. / GTE Sylva Inc.

**156 SPIRAL STAIRS** / Featuring hand-finished clear oak steps, oak platforms and oak handrails, the stairs are available in five diameters and four models. All-steel structural components, pre-finished in matte black and heavy-duty steel poles, pre-drilled for instant installation, are included. / American General Products, Inc.

**157 LADDERS** / Manufactured to customer specifications these adjustable bracket ladders are engineered for clip-mounting on transmission pole surfaces. The brackets provide an 8-in. (20.32 cm) vertical adjustment range to accommodate pole "seams" and pole sections of mixed lengths. / McGregor Architectural Iron Co., Inc.

**158 ASSEMBLED STAIR** / The company is able to mass-produce stairs to any set of specifications. A company truck hauls twenty-four flights of conventional stairs in a single load, and the company's engineering department will provide detailed drawings for assembly. / Linders Fabricating & Manufacturing Co.

### METAL STAIRS

**159 SPIRAL STAIR** / Featuring no central column and a hand rail on both sides, the engineered design allows for easy assembly with no special tools required. Each segment contains an inside rail, an outside rail, and a wooden tread. / White Seal Stairways, Ltd. A, I\*

### METALS & ALLOYS

**160 VANDALPROOF STAINLESS** / The company is developing a special sound-deadening, abrasion-resistant, and graffiti-proof textured stainless steel, primarily for use in mass transit vehicles. The metal is being furnished in cooperation with Rigidized Metals Corporation of Buffalo, N.Y. / Arvin Industries, Inc.

**161 ALUMINIZED STEEL** / Aluminum coated steel for roofing is said by the company to offer a low coefficient of thermal expansion, and in corrosion tests, it outlasts unpainted galvanized roofs at least five to one. / Armco Steel Corp.

**162 LIGHTWEIGHT STEELS** / High strength galvanized steels are said to exhibit tensile strengths ranging from 55,000 to 70,000 psi. They were developed for applications where corrosion presents a problem for uncoated steels. The steels are recommended for expanded walkways and stair treads, among other uses. / Sharon Steel Corp.

**163 SOLAR SCREEN** / *Shadopanel* is available in either porcelain or baked enamel finishes in a variety of standard panels and colors. The panel is roll-formed aluminum supported on extruded aluminum mullions. Standard screen heights are from 2 to 6 ft. / Mapes Industries.

### RAILINGS & HANDRAILS

**164 ALUMINUM RAIL** / This utility rail has been designed to install with mechanical fasteners, and needs no welding. Aluminum is anodized and the product meets the 1970 National Building Code of Canada. Stainless steel hardware is offered. / Dominion Aluminum Fabricating Ltd. A\*\*



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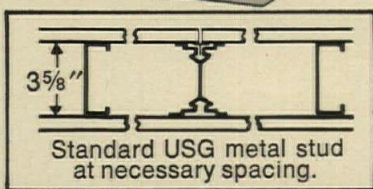
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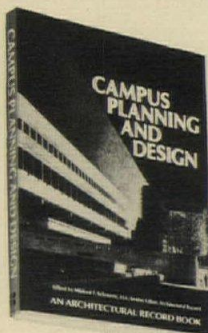
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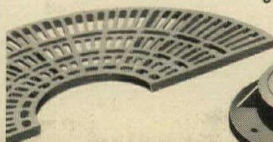
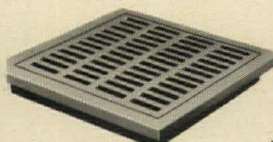
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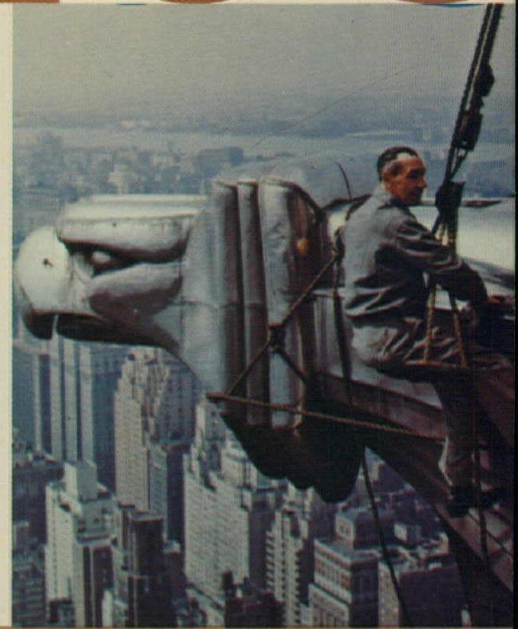
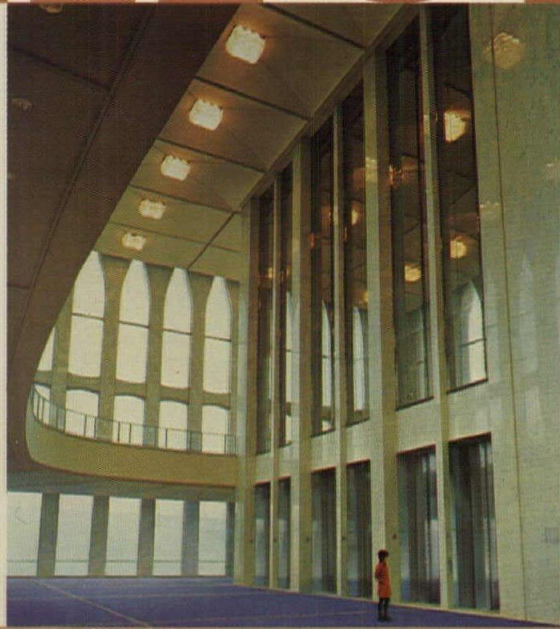
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Timeless/stainless steel. Uncompromising in its stubborn resistance to corrosion. Strong, tough, durable. High strength-to-weight ratio. Resistant to abrasion and denting. Takes the hard knocks of heavy traffic. Dimensionally stable at high and low temperatures. Easy to clean and to

keep clean. Practically self-cleaning in rain.

New York's Empire State Building became its most prominent architectural showcase. Builders protected the world's then-loftiest building and made it handsome with lavish use of timeless/stainless steel.

Since the roaring twenties, timeless/stainless steel has been making architectural history. Each application tends to be more spectacular than the one before. In the lobbies of the World Trade Center, architect Minoru Yamasaki used 35,000 square feet of matched panels of ENDURO type 304 for walls that rise a breathtaking 70 feet high. Not a ripple or a fastener shows in the bright #8 architectural mirror-finish surface.

Other interior elements—curved floor gratings, flashing, railings, revolving

doors, escalators and elevators—all are timeless/stainless steel.

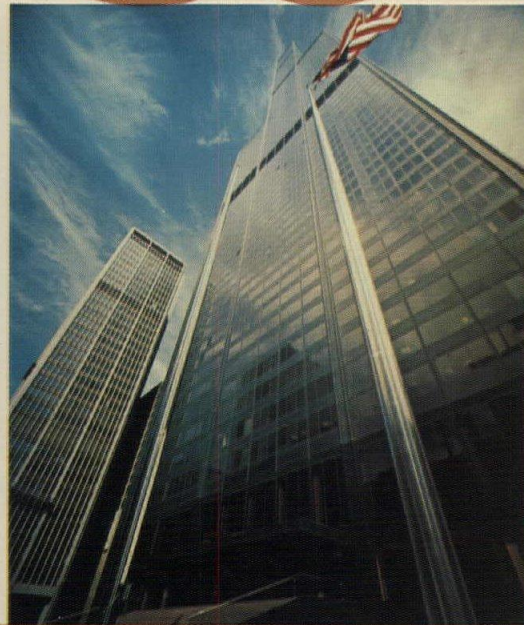
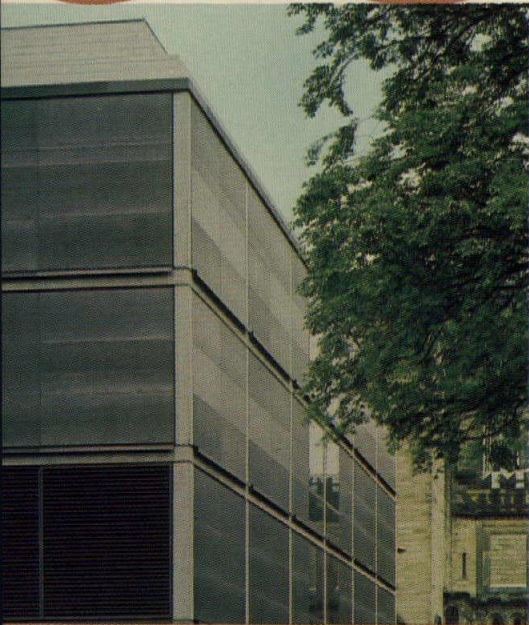
While the Empire State Building was showcasing timeless/stainless steel at 34th Street, the equally imposing Chrysler Building was being topped out at 42nd Street. It, too, was topped with ENDURO, including gargoyles high up at each corner. Forty years later, those gargoyles still grimace over Manhattan, still shining, still resistant to atmospheric corrosion and the effect of New York weather.



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An industry first—timeless/stainless steel in new "pewter" finish. Unlike ordinary finishes which are silvery, pewter is an uneven gray resembling cold rolled stainless plate. New from Republic.

Architect Louis Kahn wanted this look for his new special art museum currently under construction.

Trio Industries fabricated the 12- and 16-gage type 304 timeless/stainless in pewter finish for exterior walls, interior panels, and railings of the museum.

Sears Tower—world's tallest building—rising 110 stories into the Chicago sky. Building team member Flour City Architectural Metals, Minneapolis, fabricated and installed ENDURO architectural metal products inside and out.

Timeless/stainless steel adds special luster to virtually any building, any type of construction. It can be thin and light enough for curtain wall,

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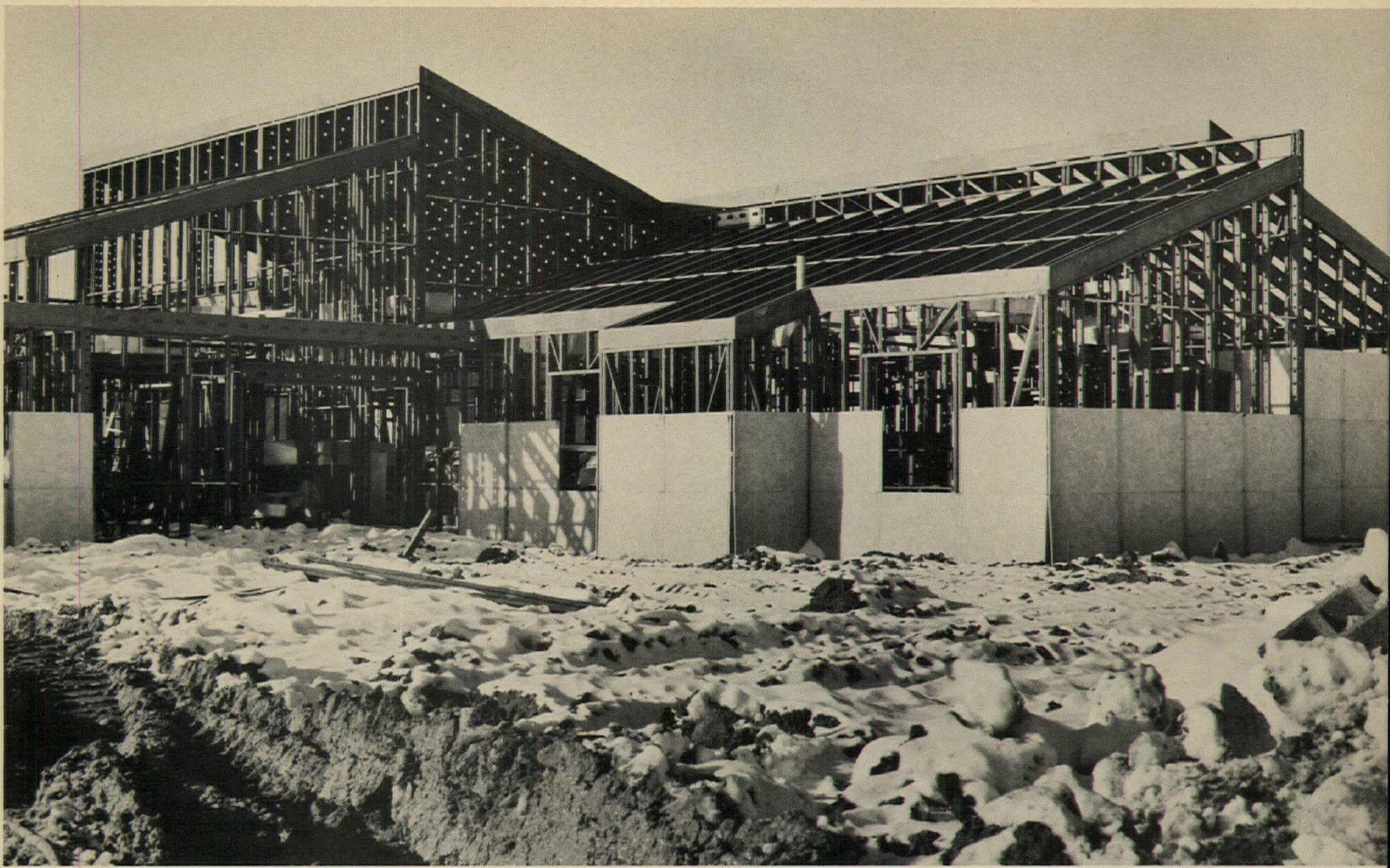
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Nine buildings (left) are also involved in PUU HELEAKALA, the 126 unit apartment project designed by architect, Charles R. Sutton & Associates and being built by Associated Masons Ltd., for the Ferguson Land Company and Kaiser Industries on Oahu, Hawaii. Pre-fabrication of panels by Tayler Products of Burlingame, California and Honolulu, saved on-site job time in Hawaii.



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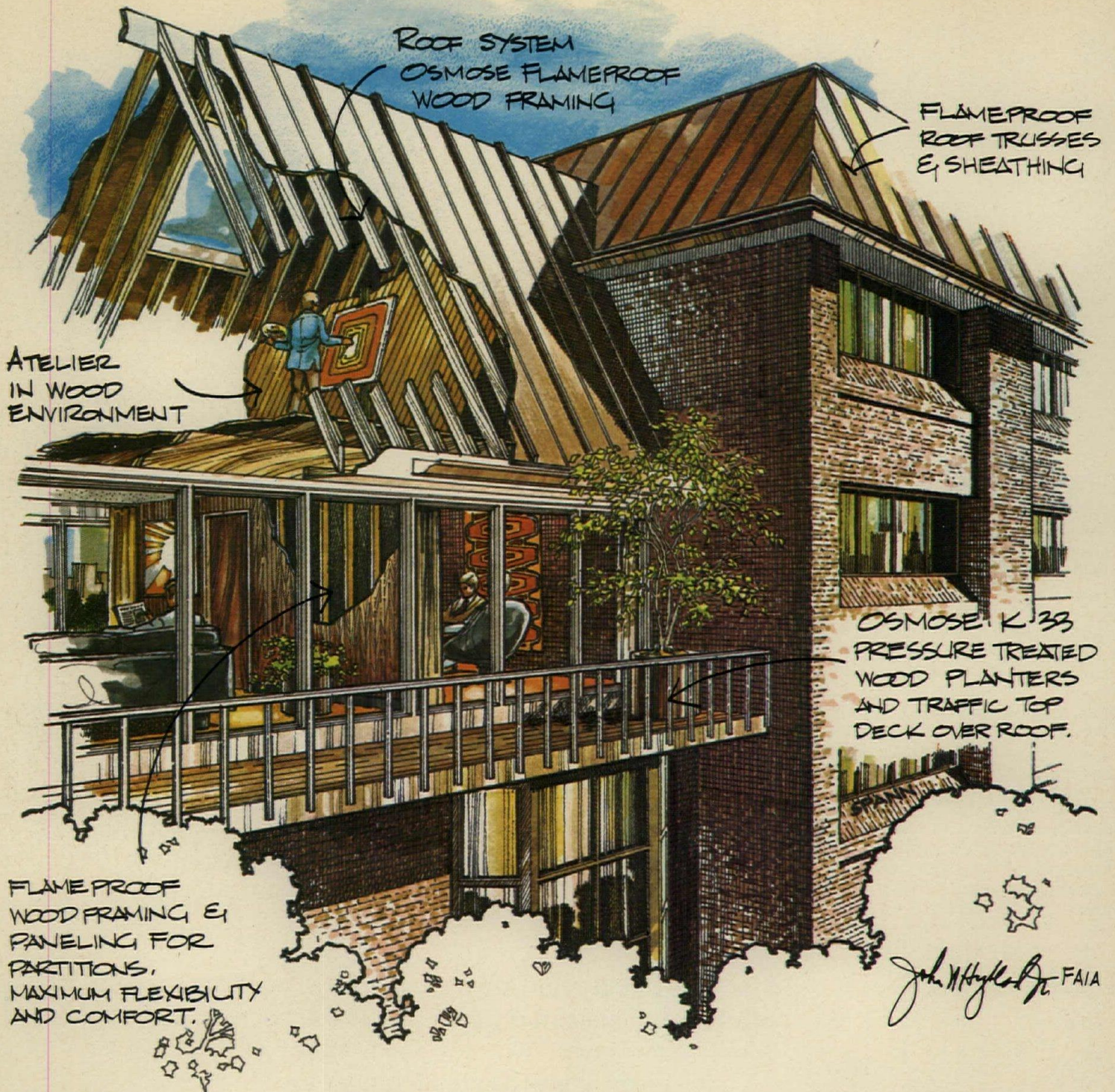
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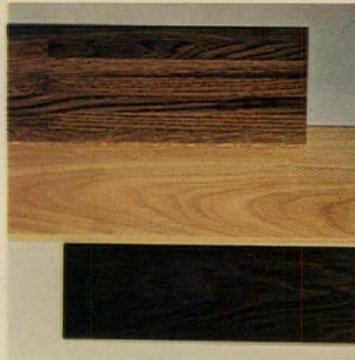
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# uci 6

# wood and plastics



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## ARCHITECTURAL WOODWORK

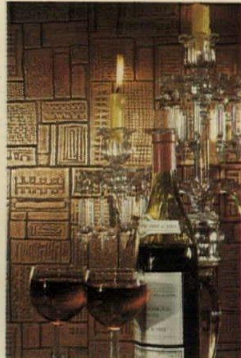
**177 ACRYLIC/WOOD** / This is a prefinished product composed of natural hardwood impregnated throughout with acrylic plastic, subsequently hardened by irradiation. Oak, walnut, and ash moldings are available in four shapes. / Julius Blum & Co., Inc. A,1\*

**178 CARVED WOOD** / The company produces over 60 carved wood patterns that can be used for flexible wall set-ups, built-in furnishings, and room dividers. Systems include a choice of Walnut, Red Oak, Beechwood or select grades of White Pine with other woods available on special orders. / Stanwood Corp.

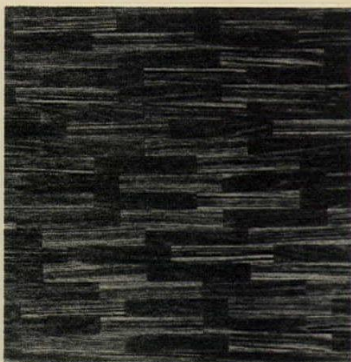
**179 STRIP PANELS** / Constructed of 3/4-in.-wide strips of tempered hardboard with genuine teak, walnut or other hardwood veneers, or primed for painting, strips are mounted on a flexible fabric backing. Standard panels are 24 in. wide and 96 or 120 in. long. / Forms & Surfaces.



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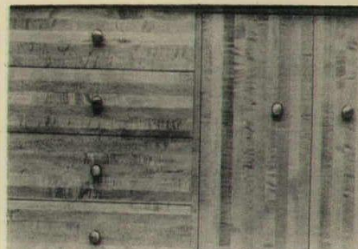
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**180 WOOD AND MIRROR** / *Sculpturewood* wall panels are available with *Plexiglas* mirror in 3/4-in. wide strips, set in grooves cut into modular panels of Redwood, hardwoods and in woods with durable color finishes. Panels are 11 in. wide and 96 in. long. / Forms & Surfaces.

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**181 METALLIC LAMINATES** / Suitable for fixtures and accent walls in banks, airports, hotels, retail firms, and theaters, *Metallic Laminates* are genuine aluminum and copper foils in a high pressure laminated sheet. The 12 patterns are embossed and antiqued. / Wilson Art Co.

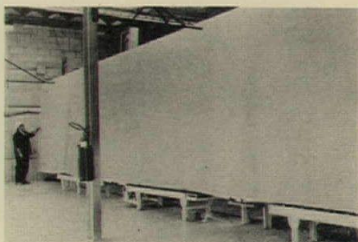
**182 PLANK FILM** / "Random Plank," a pattern in woodgrain vinyl film, is laminated to board and used in consumer and institutional furniture, kitchen cabinets and bathroom vanities. It is available from stock, or it can be custom printed in the colors of choice. / Phillips Films Co., Inc.



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**183 PRELAMINATED PANEL** / The panel, with a polyester surface thermoset to particleboard, comes in several woodgrains and solid colors and patterns, including "Butcher Block" as shown. Panel thicknesses range from 1/4 to 3/4 in. in nominal 4- and 5-ft widths by 8- and 10-ft lengths. / Ralph Wilson Plastics Co.

**184 SHEATHING** / A fire-resistant structural sheathing can be used under most exterior finishes. It is clad in water-repellent paper, and attached with nails on staples. / United States Gypsum Co. A,L\*

**185 STRUCTURAL FOAMS** / The material is reported to have higher impact resistance and increased thermal stability over other thermoset foams. Materials are composites composed of integral skin foams with reinforcing filaments, in sizes up to 10 ft wide by 45 ft long. / Xentex Co., Div. of Exxon Enterprises, Inc.

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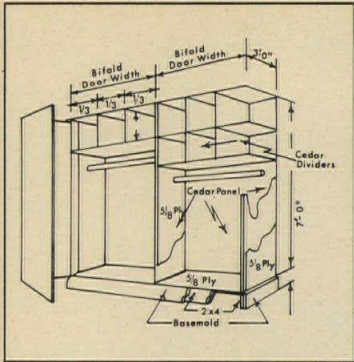


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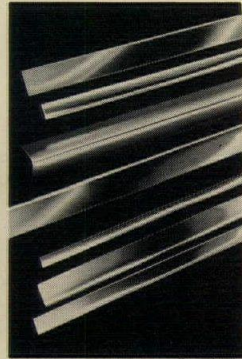
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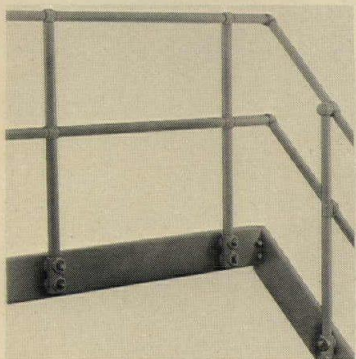
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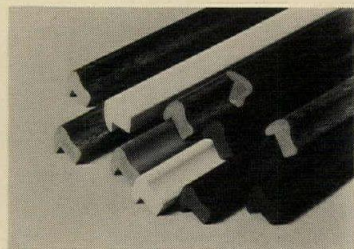
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## LUMBER

**186 CEDAR CLOSET** / Cedar flake-board panels, which come 4 by 8 ft, are made from aromatic Tennessee red cedar. Panels are sawed like plywood and nailed direct to plaster or studs. / Giles & Kendall, Inc.

**187 REDWOOD** / Redwood lumber paneling is available in Clear and Clear All Heart. Clear contains streaks of cream-colored sapwood. Clear All Heart does not necessarily need any finish. Both are available in a choice of textures, sizes, and patterns. / California Redwood Assn. A,L,\*

## PLASTIC FABRICATIONS

**188 FRP HANDRAIL** / For use in environments that rust or corrode conventional metal handrails, these handrail systems are also electrically non-conductive. Produced in a round tubular style, handrail systems are said to be fast and simple to install, and meet OSHA regulations. / Fibergate Corp.

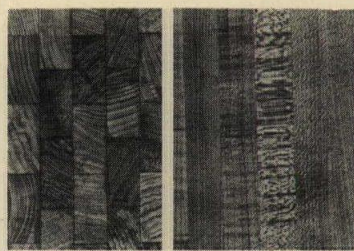
**189 FRP TUBING** / A line of *Glaspul* fiberglass reinforced plastic tubing for structural applications is made from thermoset polyester plastic reinforced with long glass fiber strands. It has high electrical and thermal insulating properties. / The Pultrusions Corp.

**190 METAL-LIKE TRIM** / *Silvatrim* extruded plastic trim is impervious to heat, cold, rain, snow and most chemicals, and will not tarnish, pit or corrode. It is made with a clear plastic film extruded over foil. / Glass Laboratories, Inc.

**191 DOOR SURROUND** / A line of cabinet door surrounds using expanded cellular vinyl in many colors and textures, has high uniform density so trim holds nails or staples without splitting. It offers an ASTM rating of "non-combustible." / A & E Doron Plastics.



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## PLASTIC LAMINATES

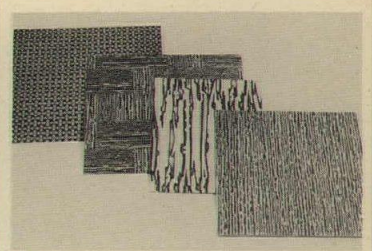
**192 ASH LAMINATE** / "Golden Ash" is the most recent woodgrain pattern addition to the company's line of high-pressure plastic laminates. It is recommended for commercial, institutional and residential applications and suggested uses include cabinets, doors and fixtures. / Exxon Chemical Co. USA.

**193 LAMINATES** / Three butcher block patterns have been added to this line of high-pressure laminates. End cuts in blonde (left) and walnut shades are made up of 1- and 1 1/2 in. blocks. A blonde long grain is composed of 3/4-in. planks. / Westinghouse Decorative Micarta Div.

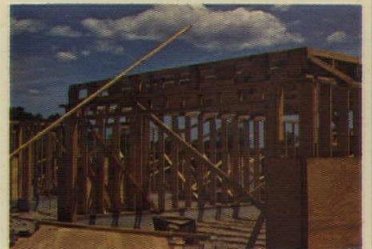
**194 PLASTIC LAMINATES** / The new laminate reproduces natural cork in a striped arrangement. A matte finish gives the laminate a soft, natural finish, and the pattern meets or exceeds NEMA standards. / Exxon Chemical Co. USA.



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**195 BLOCK LAMINATE** / A random design and burl'd grain-look characterize this laminated plastic suggested for all types of kitchen applications. / Wilson Art Co.

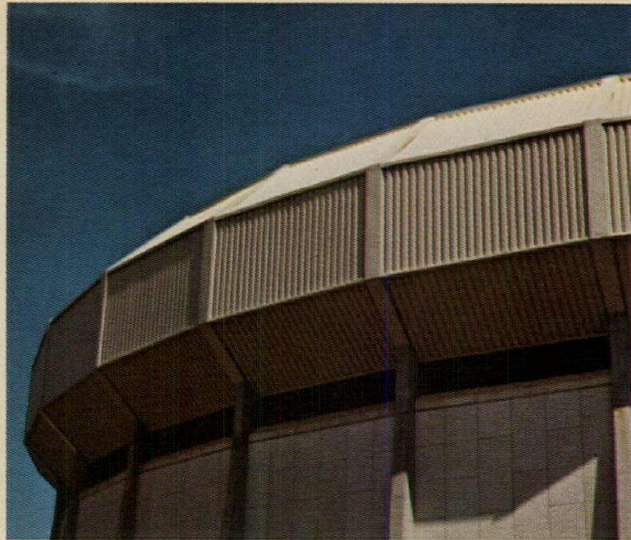
**196 METALLIC LAMINATES** / Basketweave, Parquet, Rough Hewn and Bark are among the genuine copper and aluminum metallic *Homopal* laminates being offered in 4- by 8-ft panels, solidly embossed in antiqued, pewertone or natural finish. Brushed aluminum and steeltones are also available. / The Diller Corp.

## PREFABRICATED WOOD

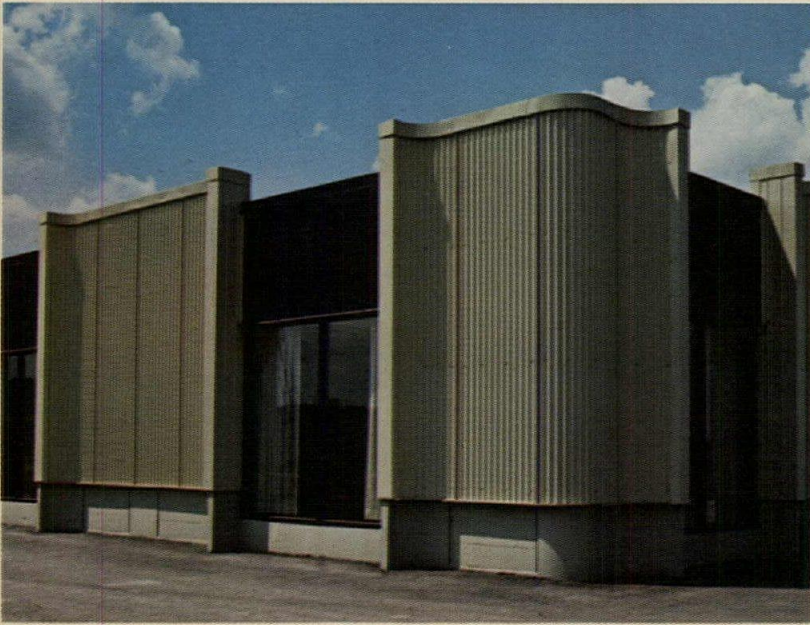
**197 JOIST SYSTEMS** / The W3 series is competitive with 2 by 10 and 2 by 12 framing and offers a 50 to 80 per cent reduction in jobsite labor, according to the maker. Web openings are provided for duct, wiring, and HVAC installation. / Wood Fabricators, Inc. A,L\*



complex metal  
walls are simple...  
simply specify  
**SMITH!**



Alabama



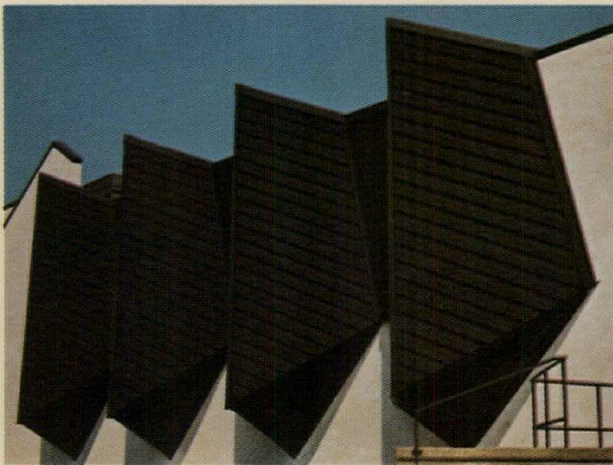
New York



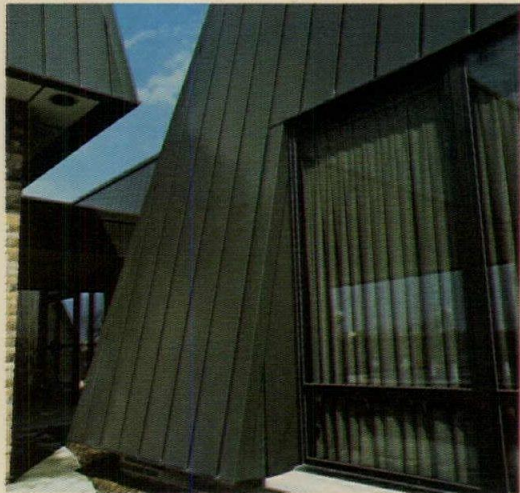
California



Maryland



Illinois



Indiana

If you have a complex metal wall project, let us help early in the design stage. For full details, write for Catalog 75A17.



**ELWIN G. SMITH DIVISION**

100 WALLS STREET, PITTSBURGH, PENNSYLVANIA 15202

EGS 116

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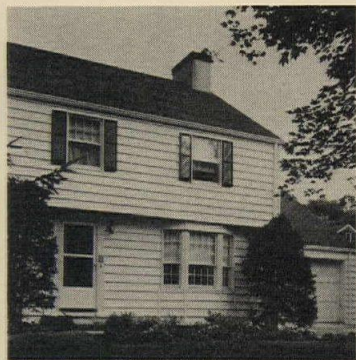


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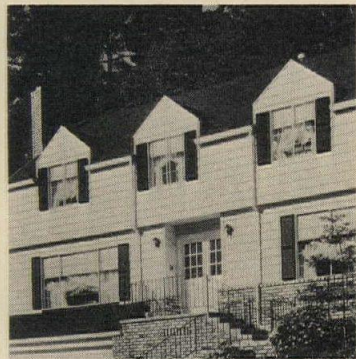
# thermal and moisture protection



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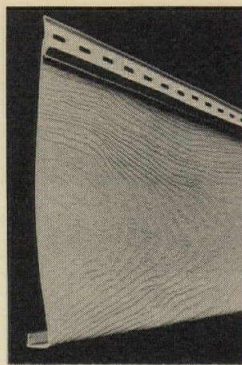
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## CLADDING/SIDING

**210 GRANITE-LIKE FACING** / A granite-like facing material for both interior and exterior surfaces is a compound of glass, flint, granite and similar aggregate in a completely inorganic binder. *MINERALITE* is available in lustrous and non-lustrous colors. / H.B. Fuller Co.

**211 VINYL SIDING** / The clapboard design provides 8 or 4 in. exposure; an 8 in. vertical is also available. The siding comes in shades of yellow, green and white; vinyl shutters contrast in white, black or deep green. / GAF Corp. A, L\*

**212 VINYL SIDING** / Vinyl siding with an embossed wood grain texture is available in white and in light green and yellow. It is produced in three profiles: a double 4 in., an 8 in. horizontal, and an 8 in. vertical. / Johns-Manville.



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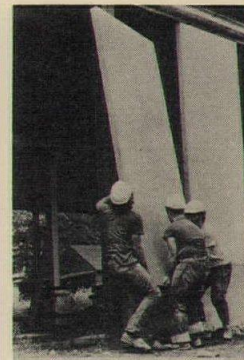
**213 VINYL SIDING** / A new gold color siding is available in either 8-in. or double 4-in. horizontal widths with a wood-grain surface. Vertical siding in an 8-in. width is also available. / Certain-Teed Products Corp.

**214 ALUMINUM SIDING** / Aluminum siding is available with a two-tone embossed finish. Called "Twin-tone" siding, it features a deep embossed wood grain surface coated in two tones of one color: white, adobe gold and rustic green. / Bendix Modern Materials Corp.

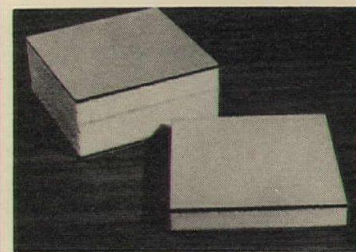
**215 EXTERIOR HARDBOARD** / Siding with integral battens on 12 in. centers is offered with battens that are 2½ in. wide over-all and raised ¼ in. above the embossed textured surface. Siding is available in 4 by 8 and 4 by 9 sizes, primed or unprimed. / Masonite Corp.



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**216 LAP SIDING** / A hardboard lap-siding features a beaded drip edge. Factory priming and back sealing allow installation in all types of weather and finish coats can be delayed. Available in 7/8 in. thickness, sizes are 8 and 12 in. widths by 192 in. in length. / U.S. Plywood. A,L\*

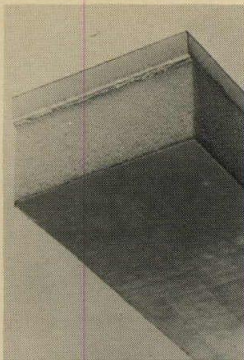
## COMPOSITE BUILDING PANELS

**217 COMPOSITE PANEL** / Panels are an encapsulation of urethane foam by glass fiber-reinforced cement. The combination of the two materials creates a high strength, lightweight curtain wall panel that weighs 6-7 lbs. per square foot. Both sides can be decorated independently. / Maso-Therm Corp.

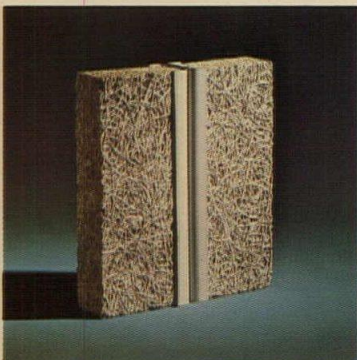
**218 PORCELAINIZED PANELS** / Offered in 20 colors, or custom matched colors, the insulated panels have a .020 in. stucco embossed aluminum skin with a porcelain finish. The "U" factor of a panel 1 in. thick is .24 / Mapes.

CLADDING/SIDING  
COMPOSITE BUILDING PANELS  
INSULATION  
METAL ROOFING  
PREFORMED WALL & ROOF PANELS  
ROOF ACCESSORIES  
ROOFING SPECIALTIES  
SEALANTS  
SHINGLES & ROOFING TILES  
WATERPROOFING & DAMPROOFING

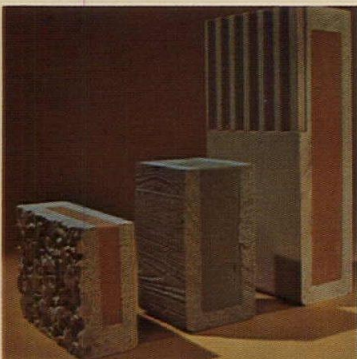




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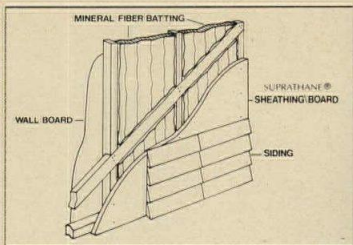


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**219 INSULATED WALL** / *InsulWal* is said to provide a finished, insulated wall in one step on bearing walls of concrete, brick, block or steel. It complies with fire codes, provides a vapor barrier, and has no surface nails or screws. / Panel Era. A, L\*

**220 TEE SYSTEM** / The "Super-Tee System" enables 2½, 3, and 3½ in. thick cement-fiber roof deck to span up to 8 ft. The subpurlin consists of a 16 gauge steel, roll formed 2½ in. high by 2 in. wide "H" section that weighs 1.6 lbs. per lineal foot. / Cornell Corp. A\*

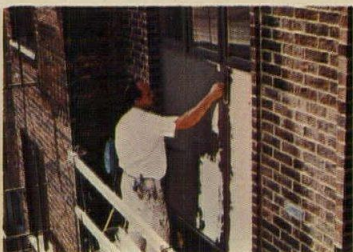
**221 POLYMER CONCRETE** / A third generation of *Ar-Lite* polymer concrete precast panels has been introduced. Like previously available aggregate surfaced and boardmarked panels, new "Sculptura" panels (at right) are said to be lightweight yet strong. Texture can be smooth or ribbed. / Architectural Research Corp. A\*



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## INSULATION

**222 SHEATHING/BOARD** / The *SUPRATHANE* sheathing/board consists of a closed-cell urethane foam, sandwiched between aluminum foil skins reinforced with glass fiber. Standard 4 by 8-ft sheets are available in ¾, 1 and 1¼ in. thicknesses providing thermal resistance values of R-5.8, R-7.7 and R-0.6. / Rubicon Chemicals Inc.

**223 URETHANE FOAM** / The 3-lb overall density *Isofoam* rigid polyurethane foam system is formulated to provide a smooth surface over which the protective coating can be easily applied. At lower temperatures, the new system can be froth-sprayed. / Witco Chemical Corp.

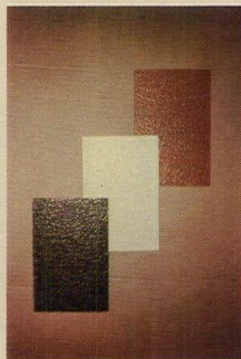
**224 FINISH SYSTEM** / *ZONOLITE THERMOCLAD*, an insulation and finish system that goes on the outside of building walls, combines high insulating efficiency and good weathering properties. *Thermoclad* consists of styrene foam insulation, adhesive, a prime coat, and a finish coat. / W.R. Grace & Co. A, I\*



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**225 SIDEWALL** / "Puncture Resistant" is a sidewall product for indoor tennis courts and other areas where some indoor abuse is expected. It is available in green and white. / Johns-Manville.

## METAL ROOFING

**226 ZINC ROOFING** / Guaranteed for 20 years, *MICROZINC 70* batten and standing seam *LOK* systems feature pre-formed components. Easily formed pans and snap lock systems are said to reduce installation errors and on-site labor costs. / Ball Metal & Chemical Co. A\*

**227 TEXTURED ROOFING** / Now available with textured surface, in eight colors, *Colorklad* roofing is made by applying *Duranar 200*, a fluoropolymer coating, to 24 gauge steel. The finish is backed by a 20-year PPG warranty. / Vincent Brass & Aluminum Co. A\*



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## PREFORMED WALL/ROOF PANELS

**228 METAL FACADES** / Large factory assembled metal wall units are easily handled and quickly installed, according to the company. Panels are available in stainless steel, bronze, copper, aluminum and other metals. / Forms & Surfaces.

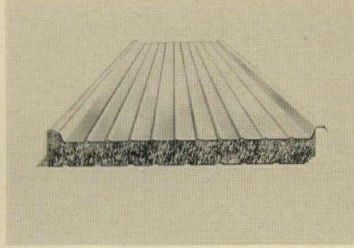
**229 METAL WALL PANEL** / Available with a choice of three exterior profiles, "Formed Foamwall" is 16 in. wide, and up to 23 ft long, with 2 in. of polyurethane insulation. It is available with any company color finish. / Elwin G. Smith Div., Cyclops Corp. A\*

**230 PORCELAIN PANELS** / Porcelain-on-steel panels up to 5 ft. wide surpass the company's previous 4-ft width. Panels come in 112 colors and never require painting or other maintenance. / Alliancewall Corp. A\*

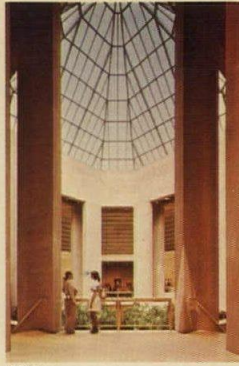




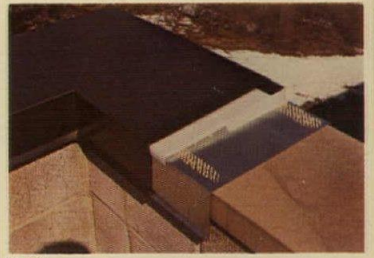
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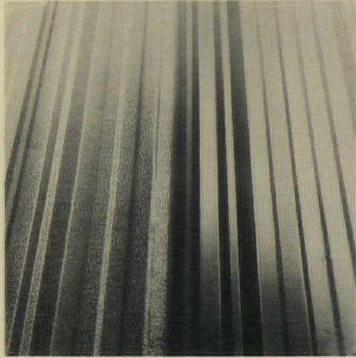
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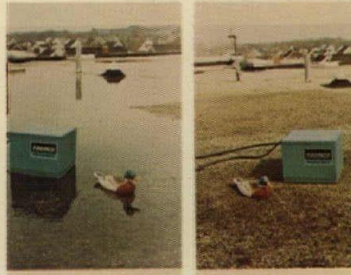
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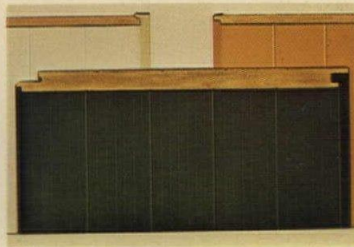
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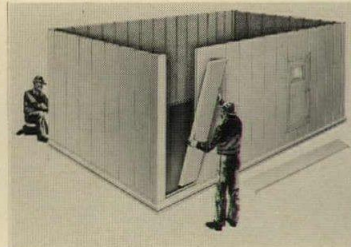
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**231 WALL SYSTEM** / This wall system features flat, exterior wall panels installed between roll-formed steel "Tulocs." Fasteners, flashings and girts are usually eliminated. / Multiloc Corp.

**232 CORRUGATED WALL** / An embossed nestable corrugated wall panel, called *ARW-IV*, has less than half the reflectivity of the smooth product. Reflecting values vary with color: azure blue, autumn gold, colony green or polar white. / Armco Steel Corp.

**233 EXTERIOR PANELING** / The system will allow panelization of an entire 40- by 200-ft building in one day. The *PORT-R-SPAN* building panel combines a finished interior surface, thermal insulation and weather-tight exterior, in one panel. A variety of colored and textured aluminum or steel facings is available. / W. H. Porter, Inc.

**234 INSULATED PANEL** / *F-103*, a factory insulated roof or wall panel, achieves a .05 thermal efficiency rating. The outer and inner steel faces have factory applied color finishes. The insulation between faces is 2½ in. of polyurethane. / Butler Mfg. Co. A,I\*

**235 WALL PANELS** / The *CFP* series of architectural wall panels in three profile designs, with concealed interior fastener arrangements, has an overall "U" value of 0.13, utilizing standard fiberglass insulation and flush-surface interior liner panels. / Steelite Buildings, Inc. A,I\*

**236 INSULATED WALL PANELS** / *Inryco/wall* comes in three factory-insulated versions: 2 in. thick, one-piece sandwich panel (U-value .080); ¾ in. thick liner for conventional wall construction (U-value 0.15); and 1½ in. thick face panel (U-value 0.12) for renovation of older buildings. / INRYCO, Inc. A,I\*

## ROOF ACCESSORIES

**237 ALUMINUM SKYLIGHT** / A tubular aluminum skylight system with concealed fasteners for any geometric configuration, features a condensate channel concealed in the structural profile. Shown is the polygonal skylight and window walls of the Lehman Wing, Metropolitan Museum, New York City / Roper I.B.G. A\*

**238 SIPHONING SYSTEM** / An automated system to remove ponded water from roof decks down existing roof drains operates up to four "Pond Sentry Units" that sense the presence of water, and prime drain lines for natural siphoning. / Tremco, Inc.

**239 HVAC ENCLOSURE** / *Acousti-Panels* for field erected air conditioning equipment enclosures, are lightweight and include integral structural members, prefab doors, windows and fittings. / Tempmaster Corp.

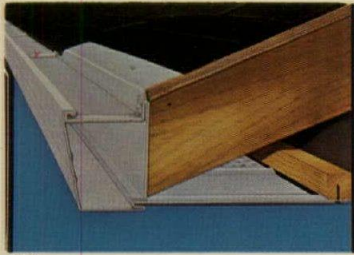
## ROOFING SPECIALTIES

**240 COPING** / A four-piece system includes cleat, chair, .063 coping in 10-ft lengths and concealed joint covers. An adhesive bonds the cleat to the parapet. The product claims to withstand wind uplift of 60 psf, and the leakproof styrene chair carries water from joints back to the roof. / W.P. Hickman Co. A,L\*

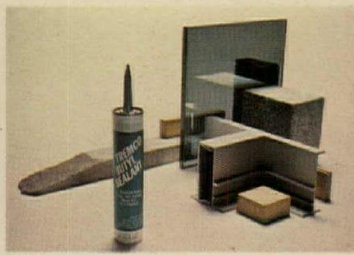
**241 ROOF EXPANSION** / *NERVA-FLEX CA 454* moves in any direction, and features a 5 in. insulation bellows with 4 in. metal flanges to fit joint openings with cants. It has high tensile strength and provides high resistance to weathering. / Rubber & Plastics Compound Co., Inc. A\*

**242 BUILT-UP ROOF** / *GAF Mineral Shield* is a cold-applied built-up roofing system consisting of an application of mastic into which are embedded two or three plies of company roofing. Over this is applied more mastic and a final surface of granules. The system is light-weight. / GAF Corp. A,L,I\*

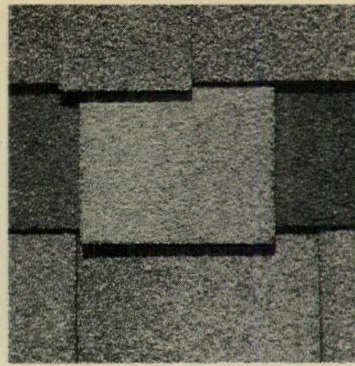




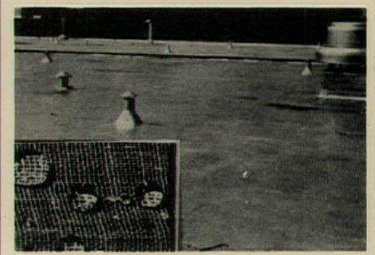
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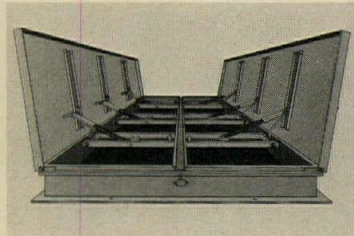
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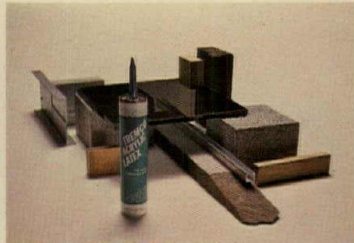
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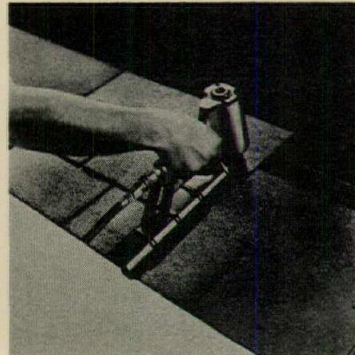
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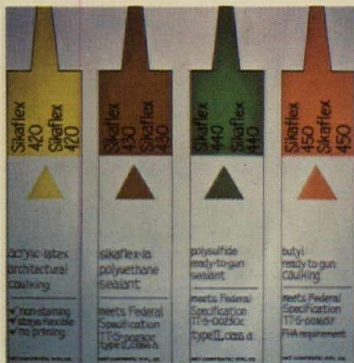
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**243 RAIN CARRYING** / *Omni Facade* provides both gutter and fascia in a single piece of aluminum which is channeled to accept and hold the soffit as well. It is available in white and brown. / *Omni Products Co. A\**

**244 SMOKE VENT** / *Big Smoky* is a large galvanized steel vent offered in widths to fit 5-ft, 5-ft 6 in.- and 6-ft joist spacings and lengths from 6 through 12 ft. It opens automatically in event of fire. Unit is Underwriters' Laboratories listed and Factory Mutual approved. / *INRYCO, Inc. A\**

**SEALANTS**

**245 SEALANT** / *Sikaflex-1a* is a one component, polyurethane-based sealant, for any joint: concrete, glass, ceramics, aluminum, epoxy, PVC, wood, steel. / *Sika Chemical Corp. A, I, D\**

**246 BUTYL SEALANT** / Designed as an intermediate butyl rubber sealant, it fits such general purpose uses as 1) caulking and sealing joints where maximum total joint movement of 10 per cent can be expected, 2) buttering of mullions and thresholds, 3) various curtain wall applications, and 4) secondary glazing seals. / *Tremco, Inc. A\**

**247 LATEX CAULK** / The product is for caulking and sealing interior joints subjected to minimal movement. Other features include low odor, paintability within one hour, and the addition of a fungicide for mildew resistance. / *Tremco, Inc. A\**

**248 COMPRESSION SEAL** / Available for architectural expansion joints in commercial and industrial buildings, bridges, parking structures and wherever a water-proof joint is desired, *ACMASEAL* can accommodate joint movements from 3/8 to 3 in. / *Acme Highway Products Corp. A\**

**SHINGLES & ROOFING TILES**

**249 ASPHALT SHINGLE** / "*Sierra*" heavy-duty asphalt roof shingles approximate split shakes. They are self-sealing and carry a 25-year guarantee. Six color blends are available. / *The Flintkote Co.*

**250 STAPLED ROOFING** / A revision to Underwriter's Laboratories Standard UL 55B, accepting 1 in. wide crown, 16 gauge staples on a one-for-one basis with roofing nails, is applicable to all square-tab, organic felt asphalt strip shingles applied under the Class C label for new roofs. The company sponsored the testing. / *Senco Products, Inc.*

**WATERPROOFING**

**251 ROOF COATING** / *FLEXICOTE* coating covers smooth asphalt roof surfaces with a white, rubbery coating that is highly reflective. Excellent water and weather-resistance, according to the company, also makes the coating suitable for sealing masonry walls. / *The Monroe Co., Inc.*

**252 SILICONIZED ROOF** / The chemical introduction of silicones into an aluminum roof coating combines the waterproofing qualities of siliconed asphalt with the heat reflective qualities of aluminum pigment. The formula helps retain the elasticity and flexibility of the roof surface. / *The Monroe Co. Inc.*

**253 WATERPROOFING** / The test photo shows how treated surfaces repel water. Rain and stain producing environmental pollutants cannot penetrate the sealed surface, according to the company, and run-off cannot penetrate lower treated surface. / *Acme Highway Products Corp.*


**254 WATERPROOFING** / *TREM-proof 150* is a one-part, hot-applied rubberized asphalt for exterior waterproofing applications. A blend of synthetic rubber and asphalt, it is recommended for sandwich slab construction on plazas, parking garages, etc., and can be applied down to 0°F. / *Tremco, Inc. A\**

*For more information, use inquiry card.*



# Sculptured walls by Robertson as low as \$7.50 / sq ft

San Mateo County Social Services  
Building, Palo Alto, Calif.  
Architect:  
James W. Foug & Assoc.  
Owner:  
Bay Road Community Corp.  
Contractor:  
Johnson & Mape Construction Co.



**Robertson**  
H. H. Robertson Company  
400 Holiday Drive  
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# Super-C Steel cut installation

## Why?

Because they're light... so they handle easily. And they're strong... so fewer of them have to be used.

Super-C Steel Framing members, developed by U.S. Steel, are roll formed from hot-dipped galvanized steel (40,000 psi minimum yield point). Sized like framing lumber, steel joists weigh about 33% less per linear foot (and steel studs 25% less) than comparable wood members. Builders have found two men can handle and install Super-C Steel Joists with ease—even extra-long lengths.

And because they're strong, Super-C Steel Joists and Studs can be spaced 24" on center in typical installations. Walls can be prefabricated and set in place as a unit.

Here's how Super-C Steel Joists and Studs stack up in some other areas:

**Which gives you a better frame?** No contest. Super-C Steel Joists and Studs can't warp, shrink, swell, or split. They're termite and rot-proof. They don't cause floors to squeak. You should expect *no callbacks* with Super-C members.

**How do in-place costs compare?** Wood costs less per member today. But Super-C Steel Joists and Studs are delivered pre-cut, so there's no waste in the





# Joists and Studs time and costs.

field. They're pre-punched for wiring and plumbing. Add in the fast installation we talked about, and final installed costs can well be less with Super-C.

## Can Super-C Joists and Studs be used separately? Definitely.

Builders have used Super-C members separately and in combination, using a variety of framing practices, for projects ranging from detached

houses to apartments and light commercial structures of many types. They're compatible with conventional building materials and methods. Plywood or steel decking and conventional wall coverings are easily applied.

## How do I get more information?

Details and specifications for Super-C Steel Joists and Studs can be found in the 1975 Sweet's Architectural File (5.3/Uni). Or mail this coupon. We'll send you structural design booklets on both Super-C Steel Joists and Studs— with load tables and the information you need to start working with them. Plus, the name of an independent steel fabricator serving your area. He's ready to work with you *now*.



**United States Steel**

For more data, circle A19 on inquiry card

## Super-C Steel Framing

United States Steel, P.O. Box 86 (C 391-1)  
Pittsburgh, Pa. 15230.

Dear Sirs: Please send me information on Super-C Steel Joists and Studs:

Name \_\_\_\_\_ Title \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_ Zip \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Type of units \_\_\_\_\_ How many? \_\_\_\_\_





# Guaranteed maintenance-free roofs

*New, pre-engineered application of zinc*



Southeastern Bible College Chapel, Lakeland, Fla.; Architect: Setliff-Regnall

## MICROZINC 70<sup>®</sup>

*(Batten and Standing Seam LOK Systems<sup>™</sup>)*

- Guaranteed 20 years
- Preformed components minimize error, reduce cost
- For enduring beauty in roofing, fascia, gravel stops
- Self heals scratches and cuts
- Snap-lock components provide air flow
- Air space insulates, saves energy

On-site labor greatly reduced

Easily soldered if required

Send for our newly revised Sweet's Catalog



**Metal  
& Chemical  
Division**

GREENEVILLE, TENNESSEE 37743

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# J-M roof insulation builds savings into built-up roofing systems.

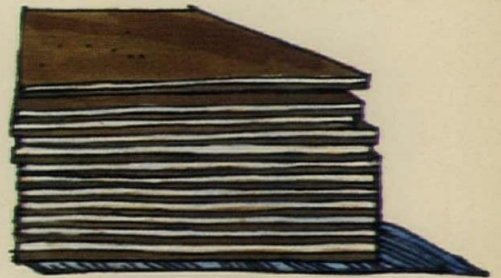


Thermal insulation between roof deck and roof membrane in built-up roofing systems can provide you with important savings in both fuel and initial heating/air-conditioning equipment costs. All of which shows up as a benefit in life-cycle costing.

Johns-Manville offers two roof insulation boards specifically designed to provide an effective thermal barrier in built-up roofing systems.



**FESCO® Board** for intermediate thermal requirements, with C-values from 0.48 to 0.19 and R-values from 2.08 to 5.26, combines economy with performance.



**FESCO-FOAM™ Roof Insulation** for high thermal requirements, with C-values from 0.15 to 0.05 and R-values from 6.67 to 20.00, offers outstanding thermal efficiency.

To upgrade insulation means the building will probably cost more to begin with. But, it's an investment that will pay off in savings and comfort in the years that follow.

For more information, write for BU-274, Johns-Manville, Greenwood Plaza, Denver, Colorado 80217. Or call Peter McCracken - 303/770-1000.

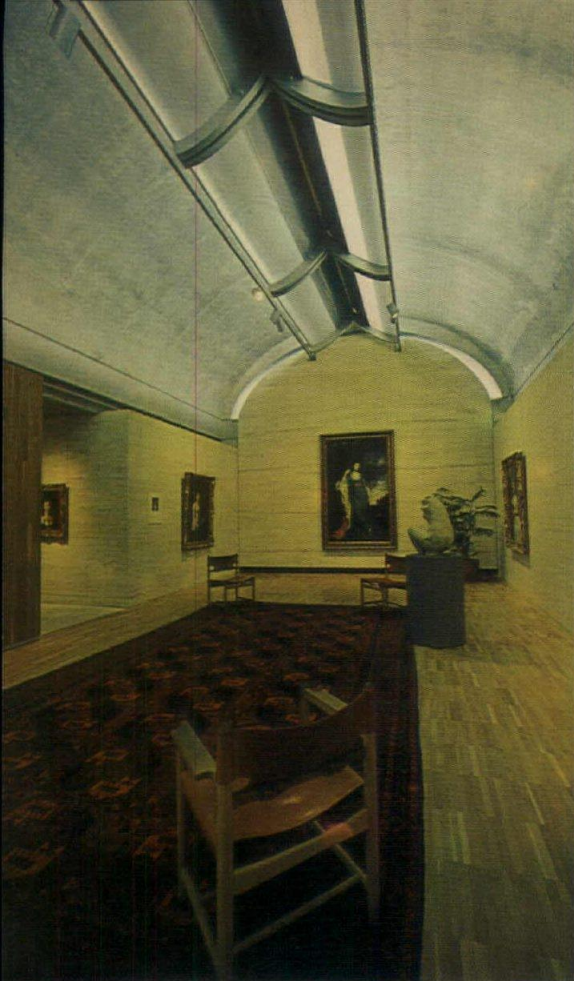
**The single-source  
built-up roofing system**



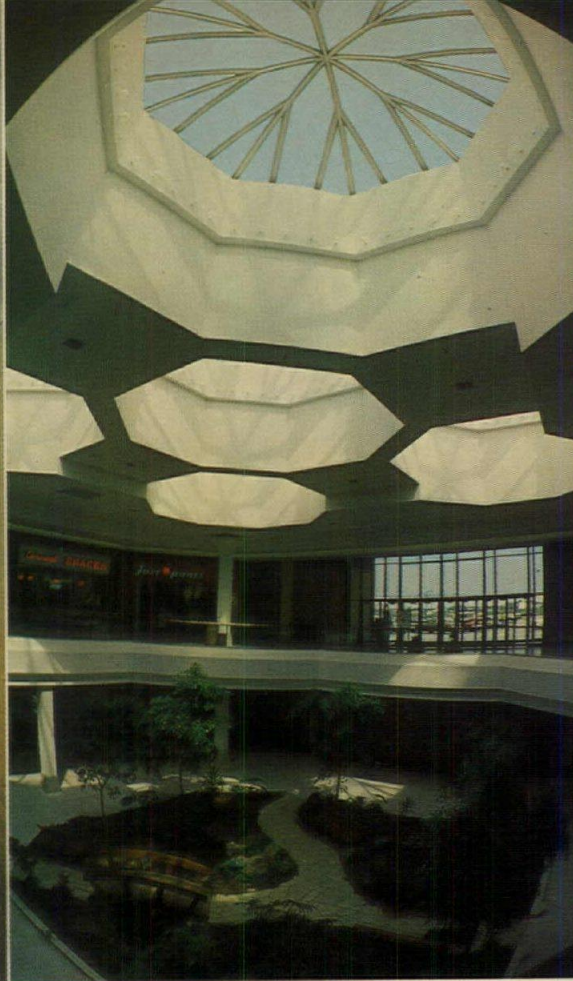
**Johns-Manville**

For more data, circle A21 on inquiry card





Kimbell Art Museum  
Fort Worth, Texas



Southlake Mall  
Merrillville, Indiana



Midway Motor Lodge  
Milwaukee, Wisconsin

# Saving energy can be beautiful with Skylights by Naturalite®.

Flattering, natural light was the obvious complement for the masterpieces on display at Fort Worth's Kimbell Art Museum. Naturalite Skylights provided the efficient, beautiful answer. The American Institute of Architects and the Illuminating Engineering Society provided the awards. (The museum won the AIA's coveted Honor Award in 1975 and received the Lumen Award from the IES in 1973.)

Should the day come when power is

rationed, the Southlake Mall in Merrillville, Indiana, will go right on doing business as usual. Because this beautiful facility lets the sun do the work of expensive lighting fixtures — thanks to Naturalite Skylights.

Swimming is a year 'round affair at the Midway Motor Lodge in Milwaukee, Wisconsin. Skylights by Naturalite provide a striking, practical domed enclosure that allows the Lodge's guests to sun and swim any time, all the time.

Other Naturalite installations in schools, warehouses and residences

throughout the country are doing equally beautiful jobs of saving energy by using *free* natural light. For a closer look at how others have discovered beautiful results using Naturalite products, write for our free color brochure. Better yet, let one of our Architectural or Engineering Consultants demonstrate how you can incorporate innovative energy saving skylight designs into the structures you're now planning. Call collect or write.

**NATURALITE® INC.**

P.O. Box 28636 Dallas, Texas 75228 214/278-1354

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## Introducing New Steelite Architectural Wall Panels

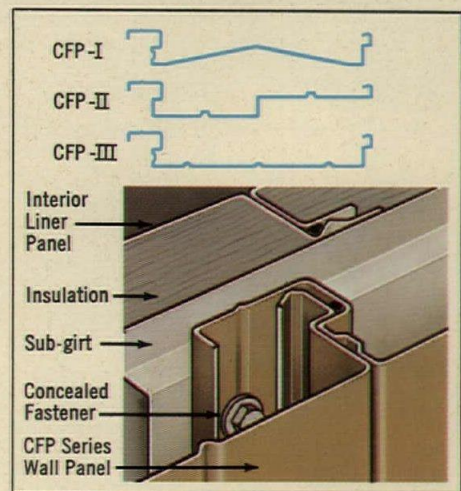
Steelite's CFP Series panels offer you a choice of designs to economically meet your needs for strength and durability and to achieve your architectural intent with pleasing colors and contours. These new concealed fastener profiles complement the Steelite Econo-Panel wall systems that have given long-life performance to many satisfied owners.

The field-assembled insulated wall panel system consists of concealed fastener exterior panels, efficient fiberglass insulation and flush-surface interior liner panels.

Steelite roll-formed galvanized steel CFP Series Wall Panels, with long-life color coatings, are available now . . . in gages and thicknesses to meet your structural requirements and in living colors proven for weatherability.

Check with Steelite when you start planning your new building. For more information on CFP Series Wall Panels, call or write:

Steelite Buildings, Inc.  
239 Fourth Avenue  
Pittsburgh, Pa. 15222  
Telephone 412/261-3140



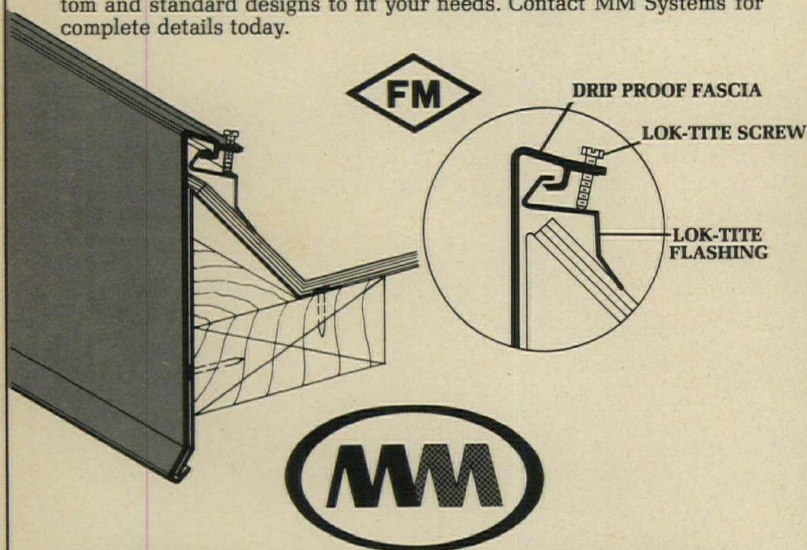
# STEELITE



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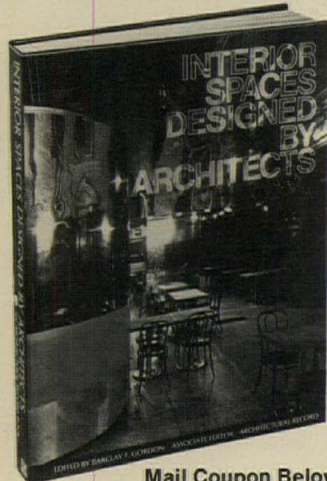
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## INTERIOR SPACES DESIGNED BY ARCHITECTS



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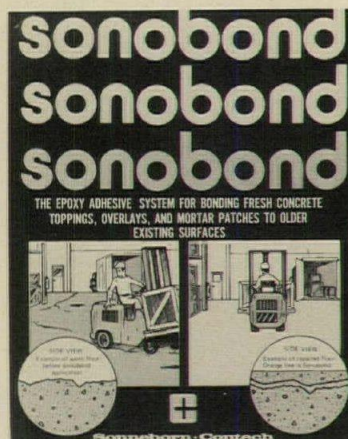
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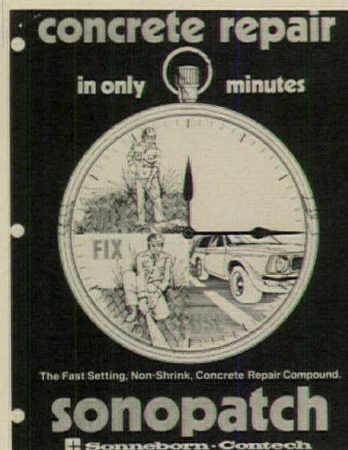
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continued from page 44

**D17 CONCRETE CLADDING** / Six joint design considerations for applying the rain-screen waterproofing principle to precast concrete cladding are given in a data sheet. Second in a series, the two-page illustrated data sheet details modified rain-screen and rain-screen principles for four types of precast panel joints, sandwich wall panel joints and windows. Included are guidelines for effective rain-screen design with support data on airflow-energy loss, and air seals. / Tremco.



**D18 EPOXY ADHESIVE** / A four-page brochure on a concrete epoxy bonding system outlines complete application instructions including concrete surface preparation, mixing and cure times. *Sonobond* may also be used for structural bonding and anchoring; the physical properties of the material have been adjusted to minimize stresses that occur at the concrete bonding agent interface due to thermal shock and creep. / Sonneborn-Contech.



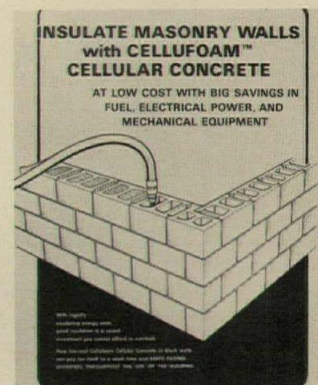
**D19 CONCRETE REPAIR** / A four-page brochure on a fast-setting concrete repair compound called *Sonopatch*, offers a description of this material along with physical properties, application procedures, packaging, etc. *Sonopatch* is designed to fill, repair or patch holes and cavities in all types of concrete surfaces. / Sonneborn-Contech.

**D20 CURING SYSTEM** / *Kure-n-Kote*, a curing and sealing system for concrete surfaces is the subject of this brochure, covering the complete application instructions and coverage rates for new and aged concrete surfaces. Standard precautions, limitations and routine maintenance requirements are also given. / Sonneborn-Contech.

### MASONRY

**D21 BRICK VENEERS** / A four-color publication details concrete brick as a cladding for residential structures. Included is information regarding common sizes and colors, compressive strength, water absorption limits, and mortar proportions; quality control during manufacture; and construction tips. Also provided are guide specifications that can be incorporated into specifications. / Portland Cement Assn.

**D22 STONE ANCHORS** / A booklet explains why stainless steels are recommended for stone and masonry anchors. The most frequently used stainless steels are identified, and their nominal mechanical properties are given. Allowable stress values are shown for stainless steels in various hardness conditions, along with calculations for a typical installation. / American Iron and Steel Institute.



**D23 INSULATING MASONRY** / A bulletin discusses the economics of insulating masonry walls with *Cellufoam* cellular concrete. Included are typical fuel (energy) savings as a per cent of insulation costs for various U.S. cities. In addition, charts list the heat loss ("U" value) per hour for each degree of temperature difference between inside and outside walls, for common types and sizes of block. The bulletin also provides detailed architectural specifications. / Waukesha Foundry Co., Inc.

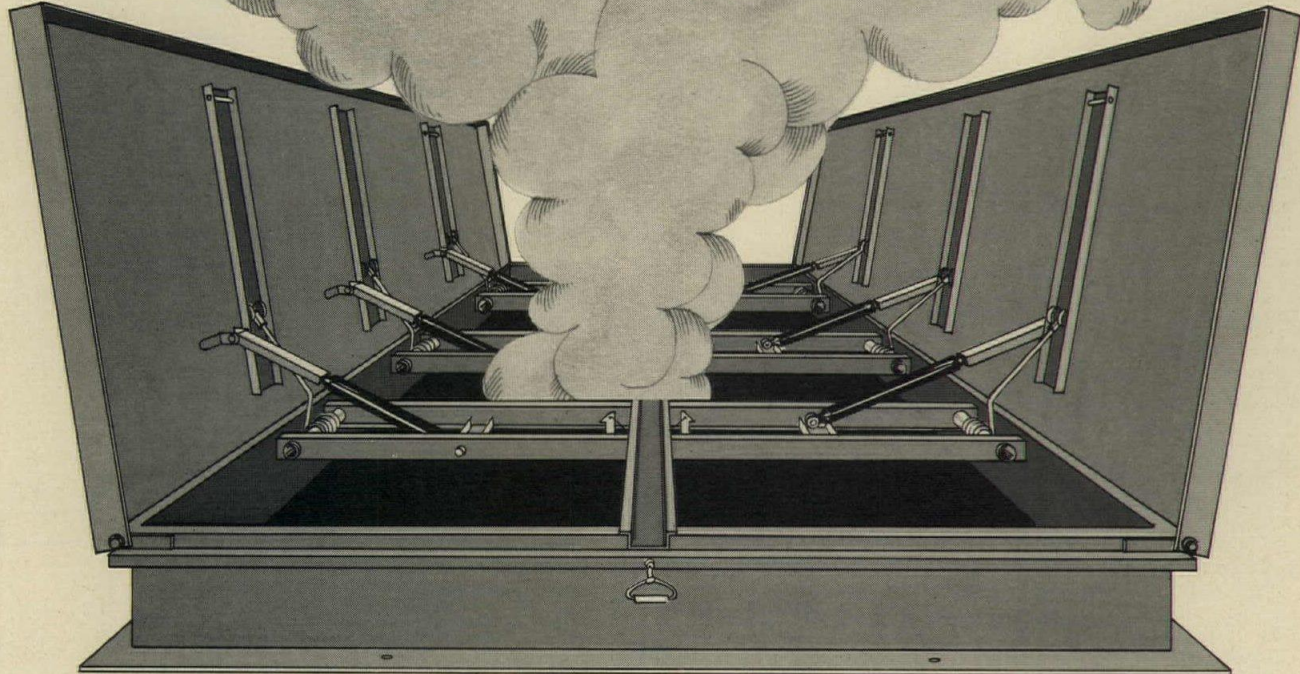
**D24 LIMESTONE HANDBOOK** / This biennial edition of the *Indiana Limestone Handbook* contains updated information on wind-load stress resistance and clear-span anchorage as well as new information on safety factors for both horizontal and vertical loading. Continual revisions include the latest accepted design, fabrication and construction procedures. / Indiana Limestone Institute.

more literature on page 94



Here's the new, "large economy size"  
steel heat and smoke vent

**Big Smoky** T.M.



Underwriters' Laboratories, Inc. listed. Factory Mutual Research Corp. approved.

**for 5'-0", 5'-6" and 6'-0" wide spans  
...in lengths from 6'-0" to 12'-0"**

Now, when you need automatically operating heat and smoke vents for buildings with 5-ft., 5-ft. 6-in. or 6-ft. joist spacings, you don't have to settle for aluminum units. Big Smoky brings you the strength and economy of steel.

Its unique composite cover design—with galvanized steel cover and liner laminated to an inner core of 2" thick rigid foam insulation—provides a variety of benefits: **Strength**...will safely carry loads of 70 psf; **Rigidity**...surface continuously supported by firm inner

core; **Light Weight**...comparable to internally reinforced aluminum covers; **Excellent Insulation**... "U" factor of .093 (compared to .26 for 1" thick glass fiber); **Condensation Control**...no cold spots.

Big smoky is a well designed, carefully made, good looking vent with clean, straight, non-sagging lines. It has passed the rigid test standards of Underwriters' Laboratories and Factory Mutual to assure dependable performance. For complete details on sizes,

construction and operating features, write to: Special Products Group—Milcor Division; INRYCO, Inc.; Dept. KS, 4033 W. Burnham Street; Milwaukee, Wisconsin 53201.



General Offices: Melrose Park, Illinois  
Formerly INLAND-RYERSON CONSTRUCTION PRODUCTS CO.

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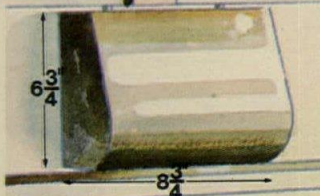
# Stanley introduces the Magic-Scan<sup>®</sup> Sensor. Smartest door control ever made.



There's more than a little magic in this one.

The Magic-Scan Sensor continuously "scans" a 5' x 5' zone in front of the door. Inside, outside or both. When someone enters the zone, the control is actuated. And the sliding doors open.

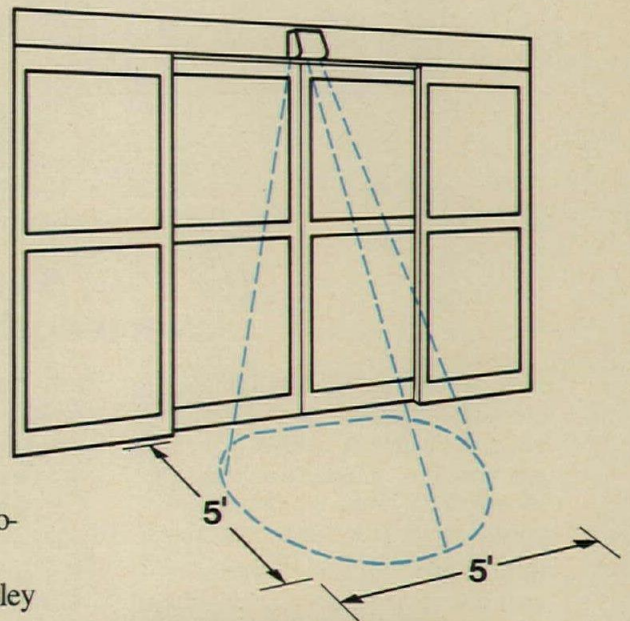
The Magic-Scan Sensor is completely self-contained, simply mounted on the header. It's solid state for dependability. Heat or cold won't affect it.



You get longer trouble-free life — and an uncluttered, more pleasing appearance.

The Magic-Scan Sensor can be used with all Stanley Auto-Slide<sup>®</sup> Door Packages.

Be smart and call us. Stanley Door Operating Equipment, Division of The Stanley Works, Farmington, Connecticut 06032



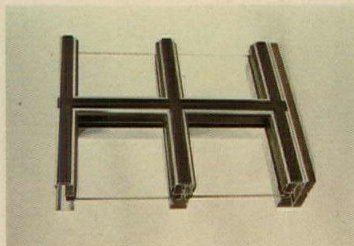
**STANLEY**<sup>®</sup>  
helps you  
do things right

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# doors and windows

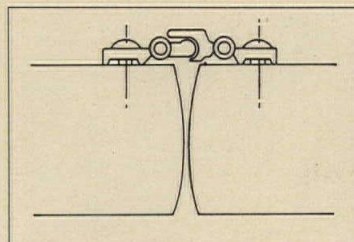
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## ENTRANCES & STOREFRONTS

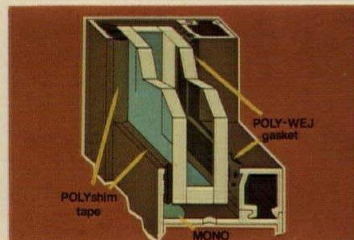
**277 FACADE REHAB** / For remodeling facades without destroying standing materials, *Deca-trim* permits the company's Safetyline entrances to be installed in most existing frames, with savings in both materials and labor. / Amarlite/Anaconda. A\*

**278 SLIDING ENTRANCE** / A wide bi-parting entrance operates automatically from a 115V AC mat-actuated power unit built into the header. Openings up to 84 in. wide are available, with custom width and height options. / Ronan & Kunzl, Inc. L\*

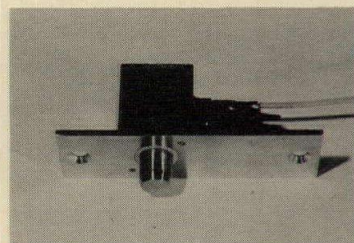
**279 SECURITY ASTRAGAL** / The product, which can be installed economically on almost any door, consists of interlocking beads, bolted on the inside of the doors, automatically sealing the entrance when doors are closed. Designed for doors up to 8 ft high, the astragal prevents tools from forcing the panic bars. / Amarlite/Anaconda.



280



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282

## GLAZING

**280 INSULATING UNIT** / An improved *TruTherm* insulated window with primary and secondary seal has been developed. The non-banded construction is now adaptable to the latest glazing techniques and all glass used may be tempered. / ASG Industries Inc. A,E\*

## GLAZING ACCESSORIES

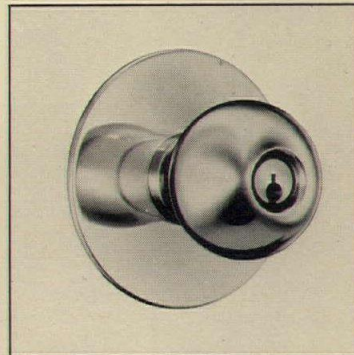
**281 GLAZING SYSTEM** / The *POLY-WEJ* system is designed for applications of calling for 25-50 per cent compression of sealing tape. The system includes highly adhesive preformed tape with built-in shim, compression gasket, and gunnable sealant. / Tremco, Inc. A\*

## HARDWARE & SPECIALTIES

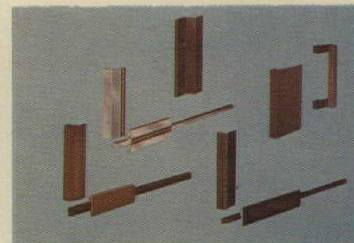
**282 AIR BOLT** / This air powered bolt can be located in the threshold, the frame or the header of a door. A central control closes the door, activating a solenoid controlling the air cylinder. / Eco Security Corp. A,I,E\*



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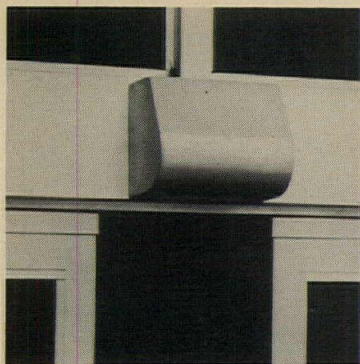
**283 TUMBLER DEADBOLT** / A full 1-in. security deadbolt is key controlled with an interchangeable core. The 57T series has a solid brass wrench-resistant, tapered cylinder ring, plus models with no exposed mounting screws. Federal specification finishes are offered. / Best Lock Corp. A, E\*

**284 BALL LOCK** / This new design features a ball knob, with a large 3<sup>9</sup>/<sub>16</sub>-in. diameter rose or a 3<sup>1</sup>/<sub>4</sub>-in. square rose, both with a 3<sup>3</sup>/<sub>4</sub>-in. backset. Available in brass, bronze, chromium and stainless steel finishes, the product is recommended for residential and institutional applications. / Schlage Lock Co. A,L\*

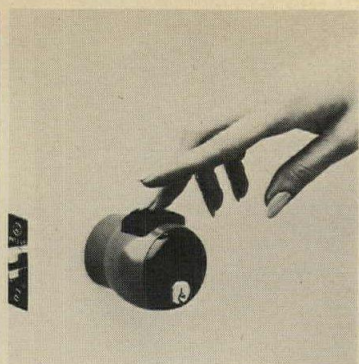
**285 PUSH-PULL HARDWARE** / New hardware designs, available for immediate delivery, are intended for the company's 190, 350 and 500 doors, plus *Panic Guard* and *Balanced Entrances*. All hardware if finished in *Permanodic* anodized hardcolors. / Kawneer Architectural Products.

ENTRANCES & STOREFRONTS  
GLAZING  
GLAZING ACCESSORIES  
HARDWARE & SPECIALTIES  
METAL DOORS & FRAMES  
METAL WINDOWS  
SPECIAL DOORS  
SPECIAL WINDOWS  
WINDOW WALLS/CURTAIN WALLS  
WOOD & PLASTIC DOORS  
WOOD & PLASTIC WINDOWS

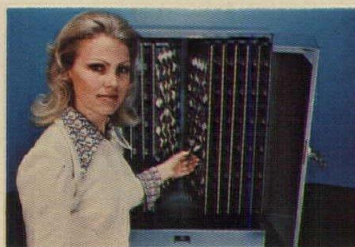




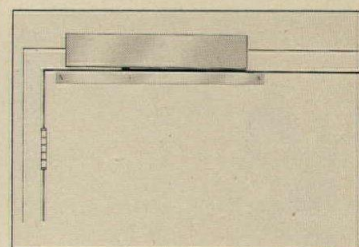
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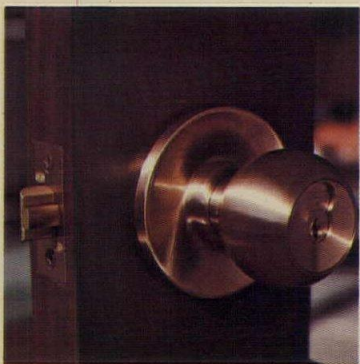
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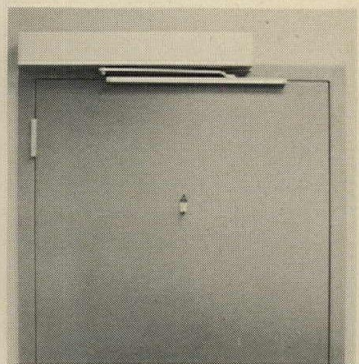
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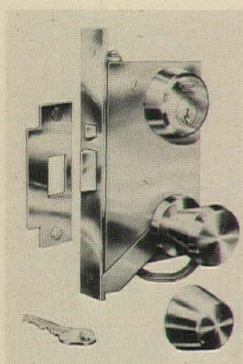
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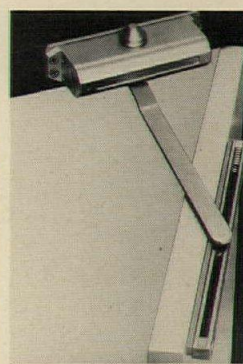
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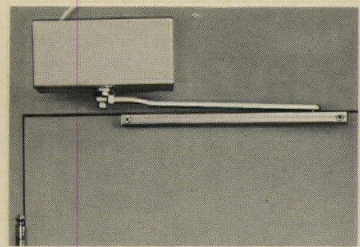
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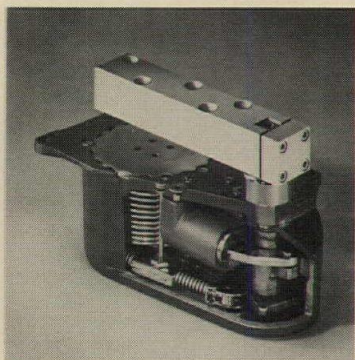
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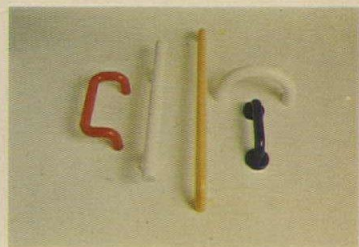
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297

**286 DOOR CONTROL** / A control for automatic doors mounted over the entrance transmits a high-frequency beam over a 25-sq-ft area in front of the door, causing it to be opened when anyone passes within range. / Stanley Door Operating Equipment Div. A\*

**287 HEAVY DUTY LOCK** / The 77K series, a heavy duty cylindrical lockset, includes a 9/16-in. deadlocking latch bolt throw, a 3 3/8-in. diameter concave escutcheon, and knobs with 1/8-in. thick walls. Finish and basic functions may be changed in the field. / Best Lock Co. A,E\*

**288 DOOR HOLDER** / The unit automatically closes corridor and patient room doors in hospitals when fire or smoke is detected. Doors close pneumatically. The *AutoCLOSER* control connects to existing or new fire alarm systems. / Autocall Div., Federal Sign & Signal Corp.

**289 LOCKSET** / A push-button doorknob that looks like a knob and works like a lever, the Meroni "Nova" is made in Italy. Suited at present for residential use, it will soon be available for several contract functions. / The Ironmonger.

**290 CLOSER-HOLDER** / An electro-mechanical closer-holder with integral fire and smoke detector is recommended for hospitals and other institutions where lifesafety standards require UL-listed detectors. / Eaton Corp. A,I\*

**291 MORTISE LOCK** / The 29H series mortise deadlock features a solid brass deadbolt extending 1-in. with saw-resistant and encased hardened steel pins. An armored front conceals cylinder set screws. The unit is available with 2 1/2-in. or 2 3/4-in. backsets. / Best Lock Corp. A,E\*

**292 KEY CABINET** / Capable of securing 1200 individual keys, model *DWT-1200S* may be attached to a wall or mounted on a table with rubber feet (as shown). The cabinet is made of cold-rolled steel. / TelKee Inc.

**293 MORTISE LOCK** / A mortise lock for medium security institutional use as well as industrial and commercial applications features an automatic deadlocking latch function, with brass and stainless steel parts throughout. / Folger Adam Co.

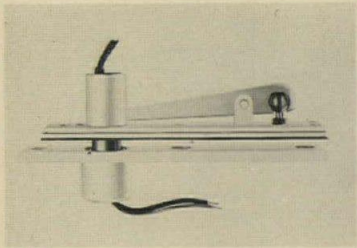
**294 FLOOR CLOSER** / Recommended for lead-lined and extra heavy doors 2 in. thick or larger, and weighing up to 1000 lbs, this unit allows a maximum opening of: 85, 90, 95 or 105 degrees with positive stop and hold-open at the same degrees. / Rixson-Firemark, Inc. A\*

**295 DOOR CLOSER** / This closer offers unlimited hold-open positions, a built-in dual chamber ionization detector and electronic release. The *LCN MED* closes fire and smoke barrier doors automatically whenever current is interrupted. / LCN Closers. A\*

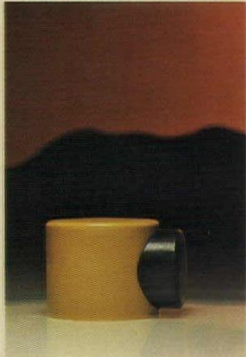
**296 DOOR CLOSING DEVICE** / The UL-listed product is designed to solve the problem of lack of clearance between the opened door and a 90 degree wall. The closer body is mounted on the frame above the pull side of the door. The projection of the track is 3/4 in. / Reading Door Closer Corp.

**297 DOOR PULLS** / Door pulls made from solid nylon and in a choice of nine colors, are available in two diameters and in lengths up to 80 in. Various assembly methods are also available. / The Ironmonger.

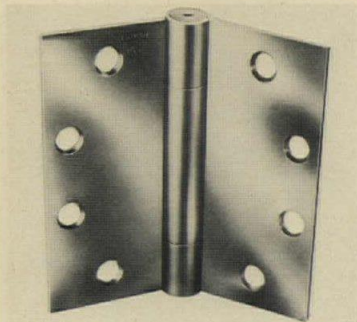




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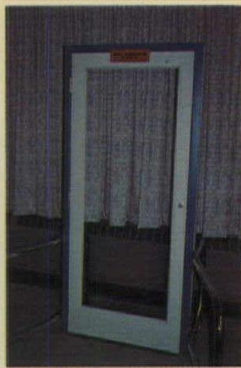


300

**298 TOP PIVOT** / A heavy duty unit with fully concealed wiring for transferring electric power from door to frame is available in aluminum, bronze or steel, in standard and plated finishes. / Rixson-Firemark, Inc. A\*

**299 DOOR STOP** / A floor-mounted doorstop in nylon, with black rubber bumper, is available in nine colors. It is designed for contract use and is nonremovable once installed. / The Ironmonger.

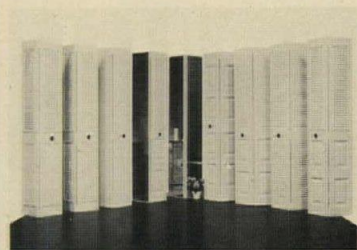
**300 SPRING HINGE** / The product is made so that torque can be adjusted to meet varying operating requirements on apartment and condominium corridor doors, etc. The hinge has a concealed bearing and is listed by Underwriters' Laboratories for use on all labeled fire doors. / Stanley Hardware. A\*



301



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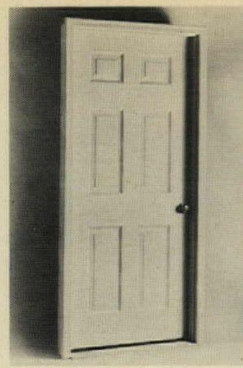
303

## METAL DOORS & FRAMES

**301 ENTRANCE DOOR** / Stile and rails are formed from 16 gauge galvanized steel sheets and are 3½ in wide except bottom rails which are available 3½, 5½, 8 or 12 in. high. The door is available to receive a 4½ or 5 in. high butt hinge or for double or single acting floor checking hinges. / The Ceco Corp. A\*

**302 STEEL DOOR FRAME** / For light commercial, multi-family and heavy traffic areas, *Rediframe* is pre-finished and supplied knocked-down. It can be ordered in over 30 profiles. / Evans Products Co. A\*

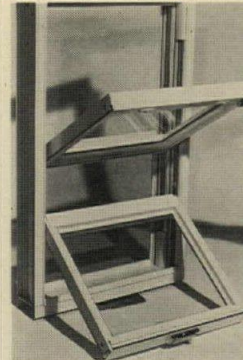
**303 BI-FOLD DOORS** / Nine 1976 models are offered ranging from cleanly flush through a selection of deeply sculptured and louvered styles, to a mirrored type. High and low profile mounting tracks are provided. Hinges are welded directly to cross braces for rigidity. / National Industries Inc.



304



305



306

**304 PRE-HUNG DOOR** / Available as complete pre-hung packages, insulated steel entrance doors reproduce on both sides traditional wood panels. The group includes ten models, including seven with tempered safety glass lights and flush door. Doors are pre-hung. / General Products Co.

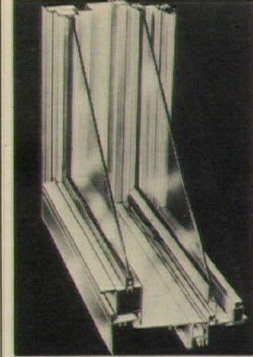
## METAL WINDOWS

**305 INSULATED SLIDER** / A horizontal slider window swings in for cleaning and is geared for residential and commercial prime and replacement markets. The window features a heavy aluminum exterior frame interlocked with a rigid vinyl interior frame. / Thermal-Barrier.

**306 TILT WINDOW** / A residential window includes features that enable it to meet commercial performance requirements. These include heavy-duty construction of extruded aluminum, full weatherstripping, and marine-type wrap-around vinyl glazing. / Season-all Industries, Inc.



307



308



309

**307 HOME WINDOW** This metal window has received FHA approval for use in the extreme temperature ranges of Alaska. It features twin panes of welded-edge glass, filled with a special dry gas for added insulating value. It has extra-heavy weather stripping. / Aluminum Co. of America.

**308 UNITIZED WINDOW** / The *Optima Model 135* is a unitized window/storm window/screen combination. Made of extruded aluminum, this double-hung, three-in-one unit combines both sets of sashes and a full or half screen. It is a prime window or a replacement. / Season-all Industries, Inc.

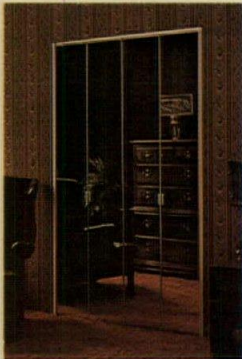
## SPECIAL DOORS

**309 ENTRANCE DOORS** / Doors are hydroformed in stainless steel, bronze, copper and in aluminum with anodic or baked enamel color finishes. Glass is installed in a black neoprene gasket. Doorpulls are nylon, in a choice of five colors. / Forms & Surfaces.





310



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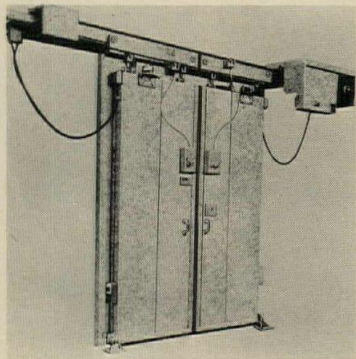
**310 COOLER DOOR** / A traffic door for use with walk-in coolers allows carts to move through in minimum time. The door features insulated, shock-absorbing construction. / Rubb-Air Door Div., Eckel Industries, Inc. A\*

**311 CLOSET SYSTEMS** / Four-panel, all-mirror steel bi-fold doors are bonderized, then finished with a mar-resistant enamel. Side trim compensates for slight construction inaccuracies and side adjustments. Doors are 1½ in. thick. / Kinkead Industries. L\*

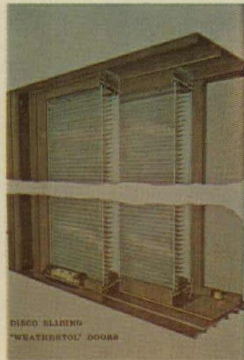
**312 REVOLVING DOORS** / Two new models include: a hinged model featuring a full-length heavy-duty hinge on one side and an adjustable wheel carrier at the base; a pop-out double-snap lock model is designed for quick removal in case of emergency. / Consolidated International Corp.



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**313 WAREHOUSE DOOR** / Coil-Away doors, especially suited to the mini-warehouse market, are said to cost less than conventional rolling steel doors. Low head- and side-room requirements and an adjustable torsion spring counterbalance system allow manual operation, chain hoist, or electric operator. / Overhead Door Corp.

**314 COLD STORAGE** / Effective August 1, 1975, the company guarantees to the original owner, each new Mark II cold storage door and its component parts against defective materials and workmanship for three years after shipment. / Jamison Door Co.

**315 SLIDING DOORS** / Weather-trol doors are thermally insulated units with side hinged vents that allow access to the venetian blinds and all glass surfaces. A venetian blind tilt control allows adjustment. Finishes include satin anodized, bronze, and black duronodic. / DISCO Aluminum Products, Inc.



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**316 ACOUSTICAL DRAPE** / The acoustically rated transparent strip curtain suspends from overhead hardware. The strips part at any point. / W.B. McGuire Co. A,I\*

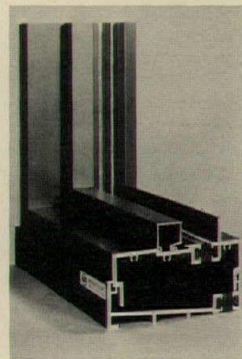
**317 MIRROR DOOR** / A bi-fold door features a small support channel visible at top and bottom. Available for openings from 18 to 72 in., the doors have double-strength mirrors. / Evans Products Co.

#### SPECIAL WINDOWS

**318 PIVOT WINDOW** / The unit has acrylic-coated aluminum cladding on all exterior surfaces, in dark brown, dark bronze and white plus eight special colors. Inside surface is natural wood for insulation value. / Pella Rol-screen Co. A,L\*



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**319 SKYLIGHT** / The "ROTO-SKYLIGHT" is hinged in the middle and can be pivoted 90 degrees for cleaning. The unit is available in a dark brown lacquered finish. / Roto International.

#### WINDOW/CURTAINWALLS

**320 INSULATED WINDOW** / A 4½-in. deep insulated window wall system designated the WMC 4250-T series features a ¾ in. thermal insulator of polyurethane providing thermal properties similar to 1 in. insulating glass. The units are self-mulling and factory assembled. / Wausau Metals Corp. A\*

**321 CURTAIN WALL** / An operating vent concealed from exterior view in closed position, making it look identical to a fixed glass light, fits the company's SW-8900 curtain wall. The vent exceeds the PA-3 performance standards for both air and water infiltration established by the AAMA. / Kawneer Architectural Products.

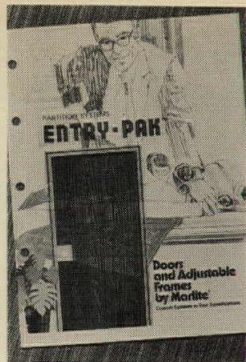




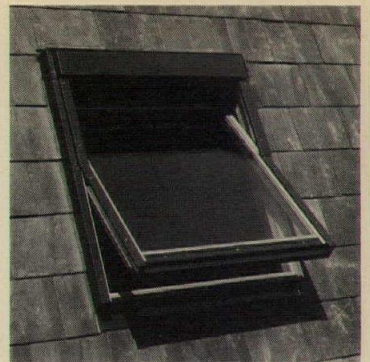
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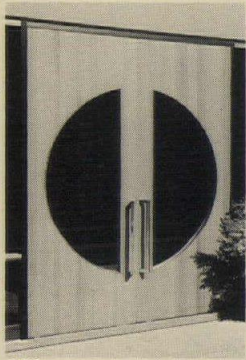
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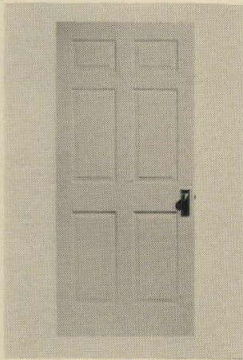
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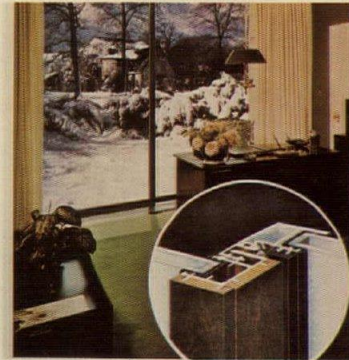
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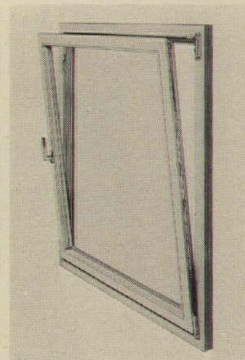
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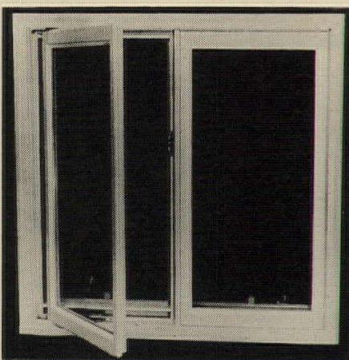
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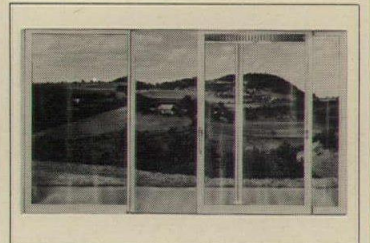
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## WOOD & PLASTIC DOORS

**322 WOOD SLIDER** / A prefinished wood gliding door in "Terratone," to match the new color in the company's *Perma-Shield* vinyl-clad wood window line, has a factory-applied polyurea finish. Units are available in 6-, 8-, 9- and 12-ft widths. / Andersen Corp. A,L\*

**323 OAK DOORS** / Doors are made of solid all heart Redwood 2½ in. thick, or solid red oak 1¾ in. thick. Various circular and radius-corner glazed openings are available. / Forms & Surfaces.

**324 CARVED DOORS** / Carved wood doors feature carved textures or abstract patterns. Modular panels are carved in all-heart Redwood or Honduras mahogany and assembled to meet individual door size requirements. Available unfinished or in dark Walnut oil finish. / Forms & Surfaces.

**325 HAND CARVED DOORS** / "La Croix" 2½ in. thick solid mahogany doors are hand carved in authentic historical designs. Doors are available in all sizes, and any design or logo can be incorporated into the doors. / Pinecrest Inc. A\*

**326 COLONIAL DOOR** / The "Colonist" door facing is made from a single sheet of ¾ in. hardboard, utilizing a die-formed fiber process of manufacturing. Because facing is one piece, there are no joints to separate or distort. / Masonite Corp. A,L\*

**327 BI-FOLD DOORS** / *Grandor* polyurethane bi-fold doors are available in prefinished white. A steel reinforcement system provides extra structural stability. / Grandor Corp.

**328 INTERIOR DOORS** / Doors and adjustable frames intended to complement movable wall systems, include hollow core, solid fresco core, solid wood staved core, solid wood flake core, and lead shield core. They are available in a range of colors, textures and patterns. / Masonite Corp.

**329 WOOD SLIDER** / According to the company, the new doors combine the stability and versatility of aluminum with the warmth of wood. *Thermal-Wood* doors offer full weather insulation, reversibility, heavy duty safety locks, and double-pane, bronzed glass. / C-E Building Products.

## WOOD & PLASTIC WINDOWS

**330 CASEMENT WINDOWS** / Featuring double-pane insulating glass, and double weatherstripping on all four sides, the Ponderosa Pine casement eliminates the need for a separate storm panel. Interior screens with anodized aluminum frames are included. / Northern Sash & Door Co.

**331 ROOF WINDOW** / This all-wood window can be set in a sloping roof to open up attics or loft space. The window comes with flashing and it features double pane insulating glass and a ventilating flap that admits air while the window is closed. / Velux-America Inc.

**332 TILT-TURN WINDOW** / This two-way opening window can be tilted towards the inside. Windows are available in dimensions up to 63 in. wide and 71 in. high, and are available in wood, aluminum, and PVC. / Roto International.

**333 SLIDE WINDOW** / This window is first lifted before it slides. Manufactured in West Germany, these units are completely weathertight. Window units up to 12 ft wide, can still be easily opened without having a negative impact on its weathertightness. "Lift & Slide" windows are available in all wood with either single or double glass. / Roto International.







# Amarlite architectural products designed to protect people from

- energy loss     injury  
 forced entry problems

Newspaper headlines and TV-radio newscasts have made everyone aware of the energy crisis. To conserve energy, the architect has turned to thermal curtain wall systems.

But which one? The imaginative architects who have added the Amarlite PBS-380 positive thermal barrier system to their design tools like it because it is flexible to give added design freedom as well as energy conservation and cost savings.

- dry glaze system for low-rise (PBS-383, a similar system for high rise)
- single or double glazing
- adaptor permits reduction from 1" to 1/8" through 3/4" within one module
- variety of vertical mullion depths through exterior covers
- choice of clear anodized or Amanodic bronze or black finish
- contrast finishes between exterior and interior at no cost penalty.

## SAFETYLINE — SAFE AND SECURE

You specify entrances protecting people from injury and forced entry, when you design with Amarlite Safetyline:

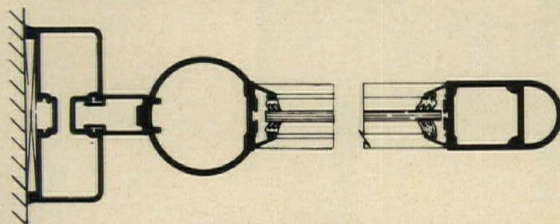
- no injury at pivot stile — cylindrical design prevents opening at jamb
- no injury at lock stile — vinyl cushion protects fingers
- no forced entry — top and bottom rods unlocked only by key — inset lock cylinder defies burglar tools.

Specify Safetyline in clear anodized or Amanodic bronze or black finish. Models to meet any job requirement.

Going places together  
with **AMARLITE...**



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(Left hand page) First Federal Savings and Loan: Lakeland, Fla. Architect: Perry C. Langston. General Contractor: Pritchard-Wetherington, Inc. Glass Contractor: Central Glass Co., Inc., Lakeland, Fla. Curtain Wall: PBS-380.

(Left) One of several entrances as seen from lobby of Lakeland Civic Center, Lakeland, Fla. Architects: Setliff and Regnval. General Contractor: Biltmore Construction Co. Glass Contractor: Central Glass Co., Inc. 104 Safetyline doors and SGS-580 glassholding system.

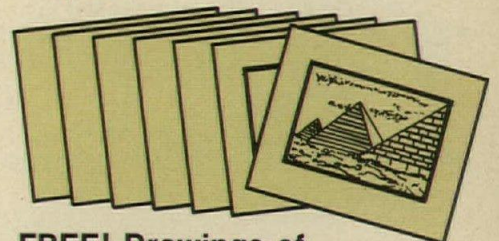


## Win a Trip for Two to the Pyramids or sites of other Architectural Wonders

See the Pyramids of Egypt — the only one of the 7 Wonders of the Ancient World that exists today. Or choose a trip to the area of any of the others: Hanging Gardens of Babylon, Mausoleum at Halicarnassus, Shrine of Zeus, Colossus of Rhodes, Temple of Diana at Ephesus, Pharos Lighthouse at Alexandria.

### SWEEPSTAKES RULES

1. Fill out entry card to be eligible for Sweepstakes and free set of 7 Wonders prints.
2. Entries must be postmarked before December 31, 1975.
3. All entries eligible for Sweepstakes Drawing, January 21, 1976.
4. Winner will be notified by mail.
5. This contest is nationwide except where prohibited by law.
6. Winner will be announced February 1, 1976.



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Suitable for framing. Available to registered architects and consulting engineers.

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Yes, I wish to enter the Amarlite Going Places Together Sweepstakes and receive a set of 7 Wonders of the World Prints.

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AR-PR-75



# 3 special times to architecturally

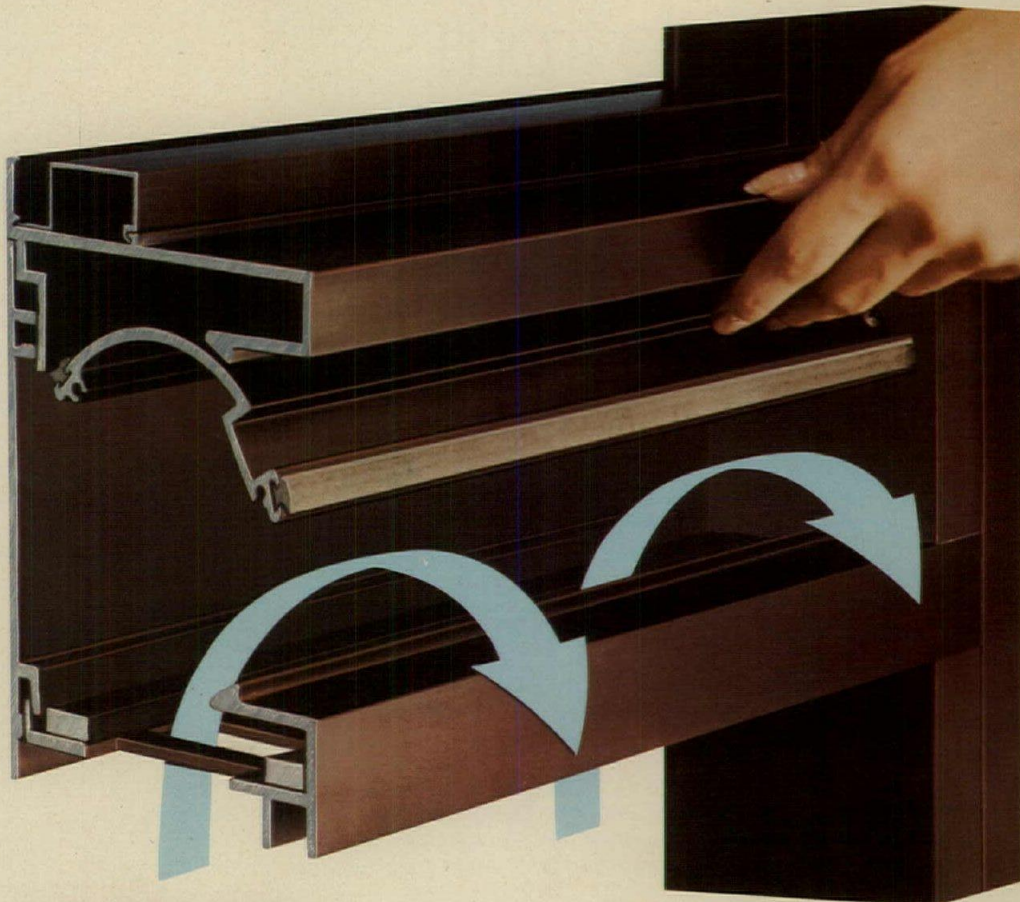
The usual time to consider Wausau is when you need top-of-the-line custom extruded aluminum windows — pivoted, projected, casement, top-hung, escape, or fixed.

But there are three times when Wausau can meet a very special need:

**1** When you need fixed window security but immediate access to outside air.

Wausau makes custom fixed windows with an unique, arcuate panel built into the frame that permits draft-free air circulation when desired. Wind gusts, rain and snow are kept out at all times.

The Circu-Vent is an ideal window for hospitals, schools, nursing homes and secured environment. Passage of objects, insects and people is prevented by a heavy, perforated



security grille and screen.

The panel may be opened fully or partially at a touch, and can be located at the top, bottom, or middle of the window. *It may also be used in combination with Wausau's top-hung, casement and pivoted windows.*

Circu-Vent windows are described in general in our current insert in Sweet's. Or, request our detailed brochure.



# consider Wausau correct windows

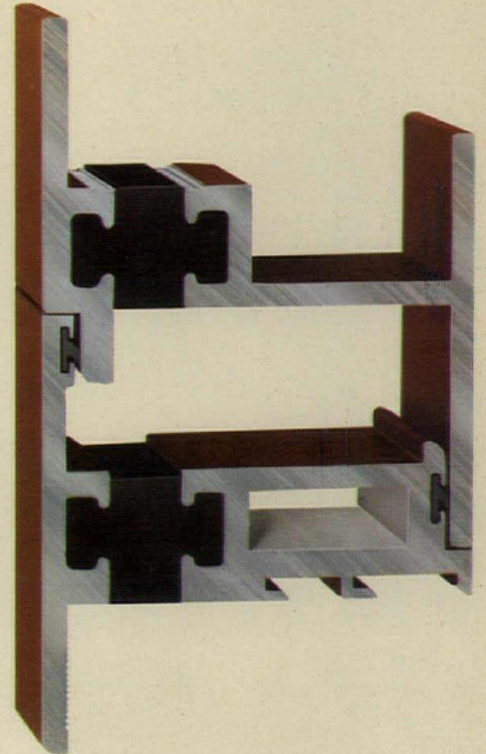
**2** When both high thermal resistance and a rugged, precision frame are required.

Every one of our many custom monumental aluminum windows may be ordered with an advanced,  $\frac{3}{8}$ " polyurethane thermal barrier — the most effective in the industry.

The Wausau Thermo-Barrier

minimizes frosting, cuts fuel costs, and reduces sound transmission. The mechanical precision of the window is not affected, because the frame members begin as one-piece extrusions. The liquid polyurethane goes into a cavity in the extrusion, where it hardens and bonds. *Then the metal bridge is milled away.*

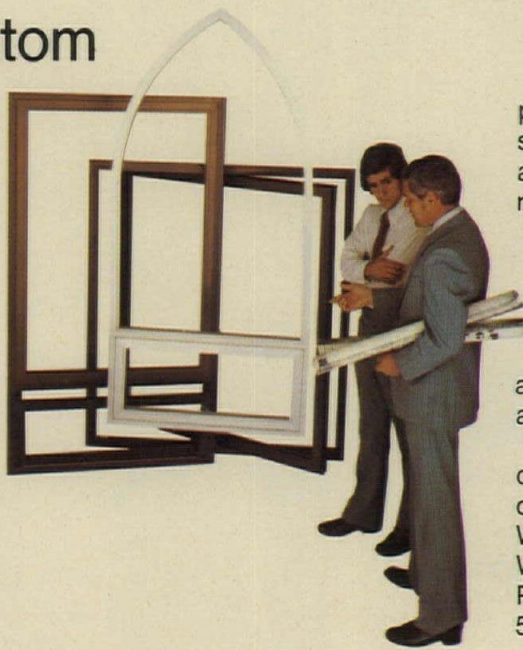
Other features of Wausau's Thermo-Barrier windows include continuous neoprene weatherstripping, and non-bridging hardware and anchorage. See Sweet's, or request our Thermo-Barrier brochure.



**3** When your plans call for custom aluminum windows and your reputation is at stake.

All Wausau aluminum windows are produced using precision milling and joining equipment, rather than by high-speed punching. All structural members — frames, sash bars, meeting rails and mullions — are formed of tempered one-piece extrusions.

We have experienced field



personnel in more than 40 states — backed by engineers at our home office who are ready to work with you on the development of special window details and specifications.

And we guarantee direct job-site delivery to most areas within 48 to 72 hours from acknowledged shipping dates.

For the name of our distributor in your area, check our Sweet's insert, or contact: Wausau Metals Corp., Attn: W. A. Russell, V.P. Sales, P.O. Box 1305, Wausau, WI 54401. Phone: (715) 845-2161.



**WAUSAU**  
METALS CORPORATION

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**Polarpane®**  
Reflective Insulating Units

*. . . To keep your cool and your  
warmth and look beautiful doing it.*

Beautiful gold or silver outboard lites combined with clear, bronze or gray inboard. Gold rejects over 90% of infrared solar energy at 20% visible light transmission. Total indoor heat gain as low as 37 BTU/hr/sq. ft. .31 U value.



# Power Windows



We make glass with muscle. To put power in your windows. Power to curb the power of the sun. And the cold. And noise. Power to slice a big hunk out of HVAC costs, and energy costs, every day, from now on.

Check to see how well our power windows work. See our catalog in Sweets: 8.26/CE. For further facts, answers and planning assistance, ask your local C-E Glass representative. Or write us: C-E Glass, 825 Hylton Road, Pennsauken, N.J. 08110. (609) 662-0400.

## Polarpane® Insulating Glass Units

*... So you don't have to watch all your heat go out the window.*

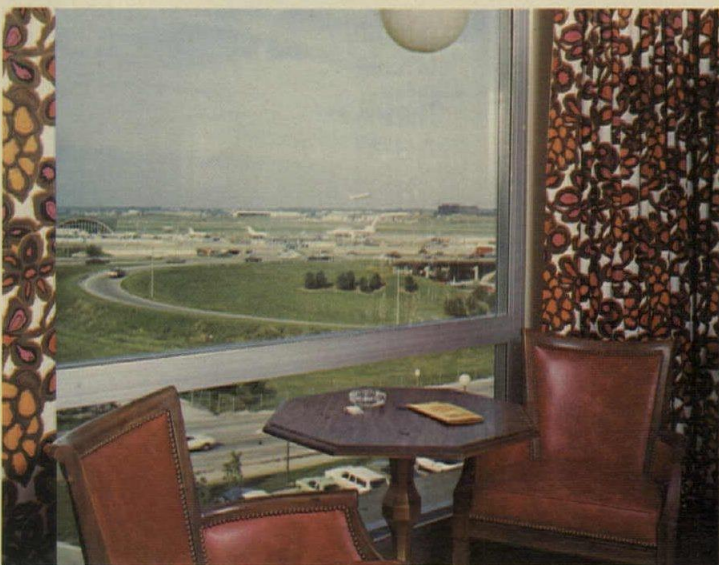
Available in a wide selection of pattern, clear or tinted glass; annealed and tempered. Hermetically sealed in moisture-free construction. 5 and 20 year warranties.



## Polarpane® Sun Control Units

*... Ideal answer to a glaring problem. Adjustable for privacy.*

Rotating venetian blind between sealed lites for full control of sunlight and glare as well as outside view. Blinds stay dust and maintenance-free. Excellent temperature and sound insulating characteristics.



## Polarpane® Sound Control Units

*... So you can hear yourself think without tractor-trailers, jets, assorted motor bikes and missing mufflers.*

Basic unit shuts out as much noise as a 6-inch concrete block wall. Higher STC ratings available. .48 U value. Choice of such prestige customers as the Marriott Corporation for their luxurious facilities at Chicago O'Hare, Dulles, Miami, Kansas City and St. Louis International Airports.

**CE GLASS**

COMBUSTION ENGINEERING, INC.

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# Warm, versatile, economical wood.

Between you  
and the elements --  
**Caradco**  
Wood Windows...  
the climate controllers

Made of wood—nature's finest insulator—Caradco windows help keep you warm where it's cold (and cool where it's hot). Caradco refinements like complete high-efficiency weatherstripping, insulating glass and vinyl glazing create remarkable weather-tight window systems, give you energy-saving, cost-saving comfort anywhere.

And Caradco has a complete line of double-hungs, casements and sliders for commercial and residential buildings . . . 228 Caradco choices! See your local distributor for full details.

Caradco  
Window and Door Division

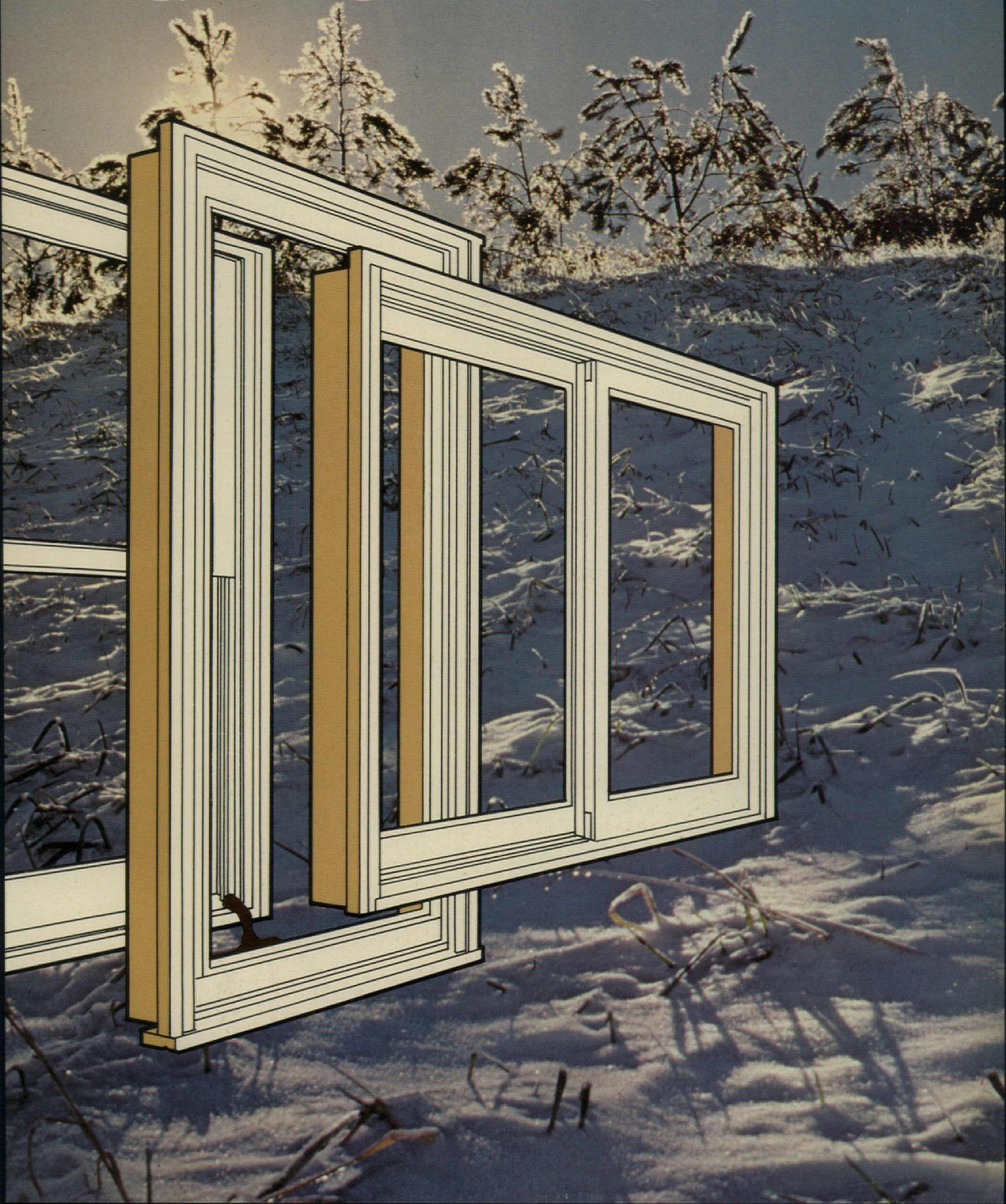


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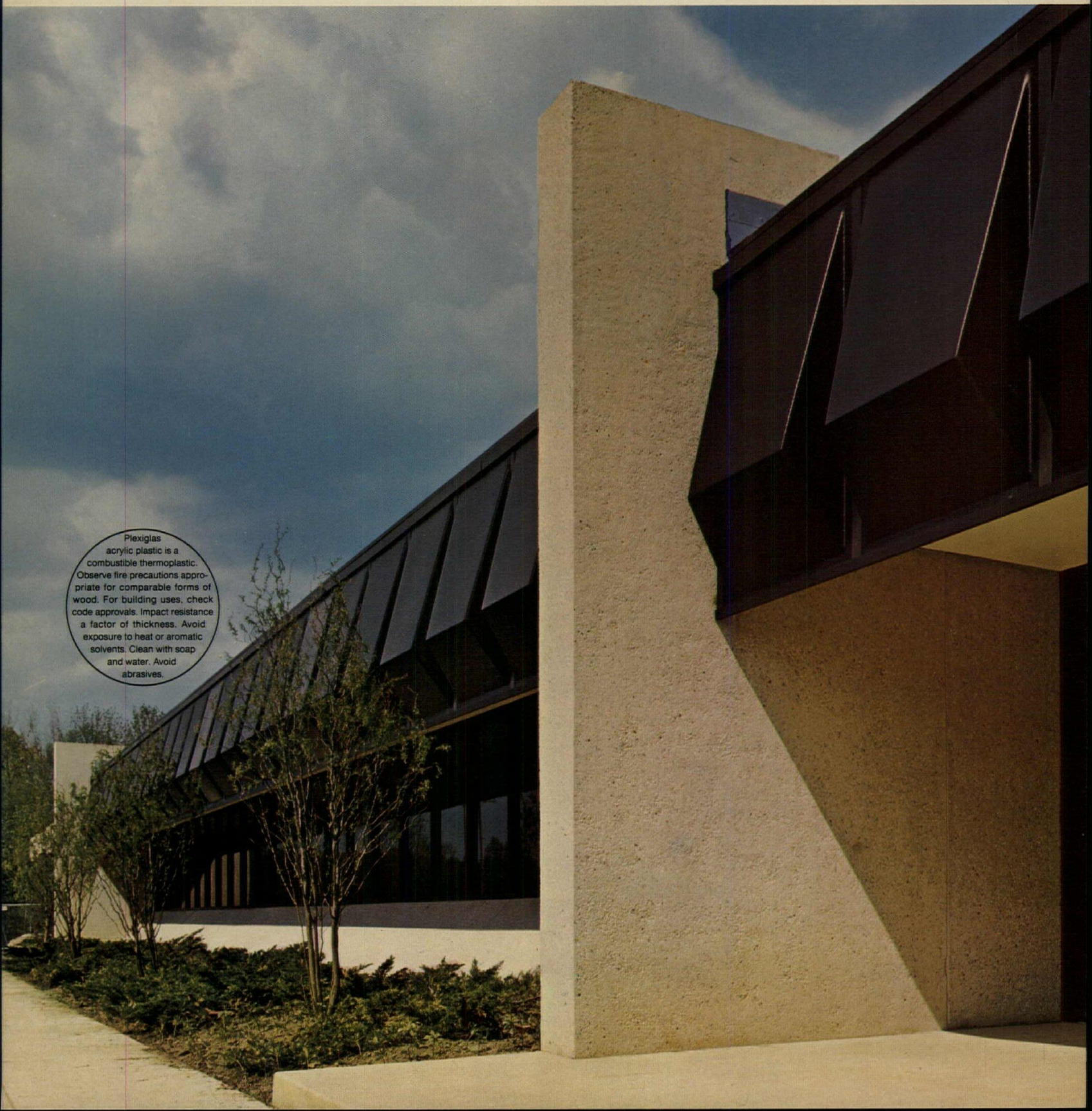
Energy-saving windows by Caradco.





# CONDITION WITH

Plexiglas acrylic plastic is a combustible thermoplastic. Observe fire precautions appropriate for comparable forms of wood. For building uses, check code approvals. Impact resistance a factor of thickness. Avoid exposure to heat or aromatic solvents. Clean with soap and water. Avoid abrasives.





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more than ever...  
it makes such  
beautiful  
sense.

# PLEXIGLAS®

Form, function and light are the basic elements of architectural design. And nothing blends them more beautifully than Plexiglas brand acrylic plastic.

Introduce dimension to function. Control solar heat by crowning a building with massive looking, light transmitting bronze Plexiglas.

Combine form and function. Enhance interior spaces with energy-saving three dimensional windows.

Add form to man-made light. Throw an incandescent glow under a nighttime sky with tough, decorative enclosures of Plexiglas acrylic sheet.

The creative dimensions of this safety glazing material are limited only by your imagination. Consult Sweet's Catalog 8.26/Roh, call (215) 592-6799, or write for our latest brochure on the application that interests you. *Plastics Dept., Rohm and Haas Company, Independence Mall West, Philadelphia, Pa. 19105.*

*Building codes limit areas of Plastic glazing. Approvals for large-area Plexiglas enclosures must be applied for on a special permit basis. Fire safety design considerations must take into account the combustibility of Plexiglas.*

"Eyebrow" sunscreens, Sun Oil Building, Twin Oaks, Pennsylvania. Designer/builder: Marketing Facilities & Distribution Dept., Sun Oil Co., Philadelphia.

Bronze-tinted luminaires, Broadway Pier Embarcadero, San Diego, California. Designer: William Mitchell, Mitchell-Webb & Associates, San Diego.

Free-formed "porthole" windows, Bahia Mar resort, South Padre Island, Texas. Architect: Swanson, Heister, Wilson & Claycomb, Brownsville.

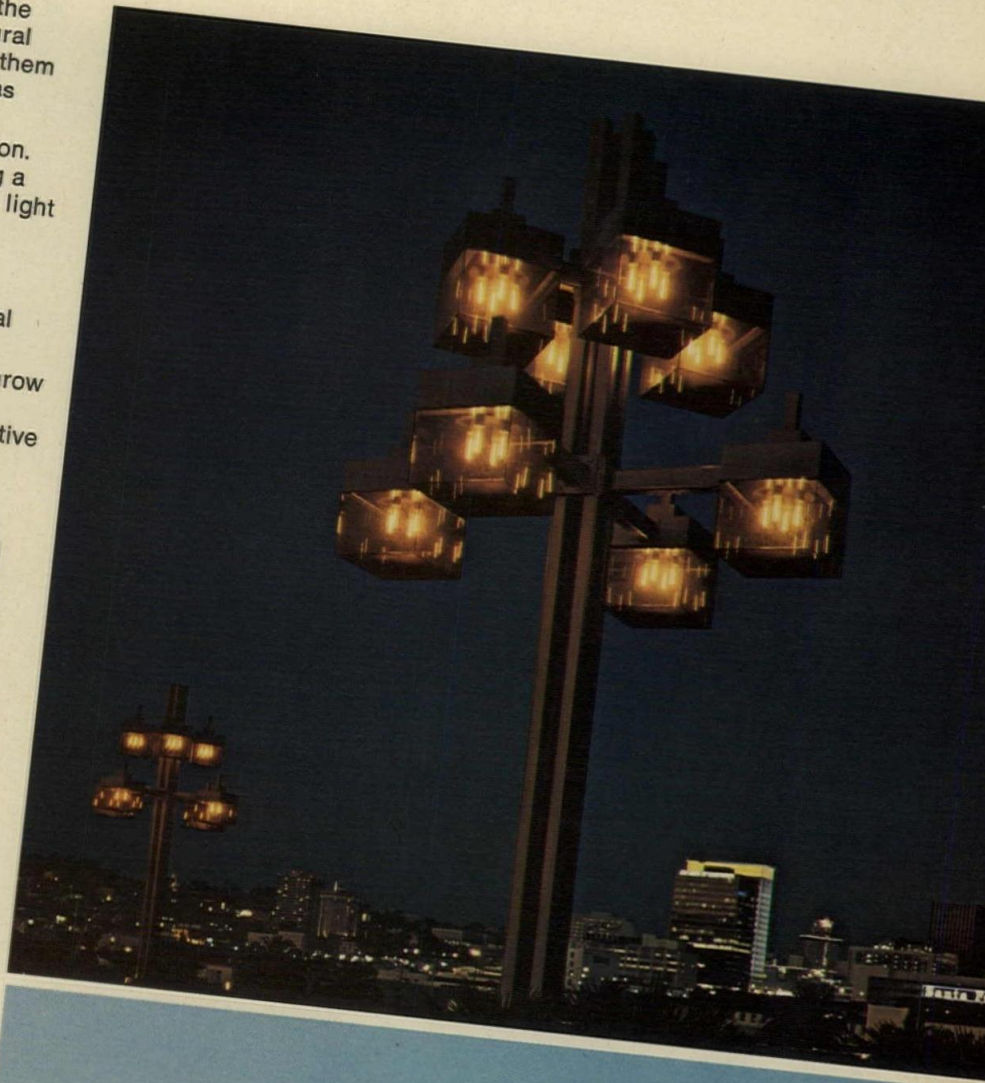
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the company

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# COLOR COMES TO ANDERSEN<sup>®</sup> PERMA-SHIELD<sup>®</sup>





## Now there's a Perma-Shield Casement and Awning Window for commercial designs.

Wood, brick, stone, masonry—Andersen® Perma-Shield® Casement and Awning Windows in our new Terratone color blend beautifully with almost any commercial and institutional building material.

And equally important is the ability of this earth-tone to bring out the low maintenance advantages of Perma-Shield rigid vinyl.

So you not only have windows with color, but long-life windows designed not to chip, blister or peel. Not to rust, pit or corrode.

And, unlike leaky, drafty windows, Perma-Shield Casement and Awning Windows in Terratone are designed to save on owner heating bills.

Beneath their rigid vinyl sheath lies a wood core, one of nature's best insulators.

And they're built two times more weathertight than recognized air-infiltration standards. To help seal out drafts and dust, help save on heating and cooling costs.

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And inside, there's Andersen wood trim that can be stained or painted to match any decor.

So now you have Perma-Shield Casement and Awning Windows in a new Terratone color, designed for commercial and institutional construction.

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The beautiful, carefree way to save fuel.

**Andersen® Windowalls®**  
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Printing limitations prohibit exact color duplication.  
Use actual sample for building specifications.

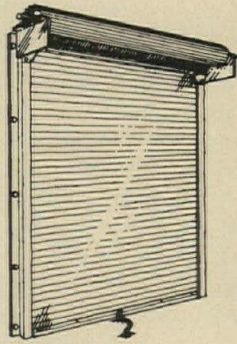
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# Introducing our new Coil-Away Door. The most economical rolling steel type door you can buy.

## Easy price.

Our Coil-Away Door is the newest addition to our line of rolling steel type doors. It's designed for maximum cost effectiveness in a low traffic application. With the top quality features you want for your building. So it's an easy choice for any low-cost industrial door need.



## Easy on the eyes.

Baked on epoxy primer assures durable, attractive exteriors.

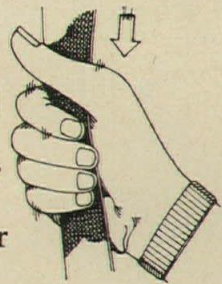
## Easy on the ears.

A sound-deadening insert in each guide makes functioning unusually quiet.

## Easy operation.

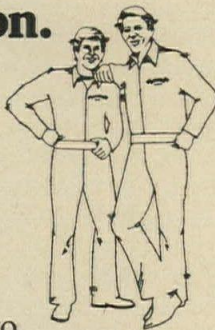
The Coil-Away's completely enclosed, adjustable torsion-spring counterbalance system makes it effortless to use.

Chain hoists are standard for doors larger than 10' X 10'. Overhead Door electric openers are available for any size door you may require.



## Easy installation.

Minimum headroom and sideroom requirements make our Coil-Away Door the most versatile on the market. It fits almost any bay opening, in custom-sized configurations up to 12' X 14'. And it's easy to install. Two of our installers can do the job in 30 minutes. Or install it yourself for extra savings.

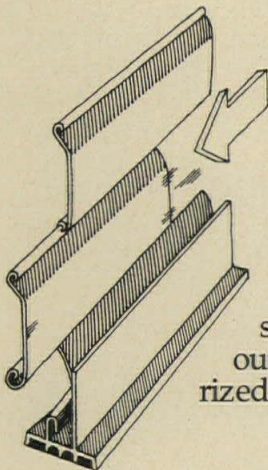


## Easy to appreciate.

An extruded aluminum bottom bar, galvanized steel and baked on primer slats and a rugged security lock are standard on the Coil-Away Door. Optional extras include bottom bar weather seal, lintel baffle and slide bolt locks in bottom bar.

## Easy maintenance.

Unique continually-hinged slat construction allows individual replacement of damaged slats to reduce repair costs. And reliable servicing is provided by our more than 400 authorized distributors nationwide.



## Easy to get.

Just check the Yellow Pages under Doors for the listing of your nearest authorized "Overhead Door" distributor. He's got all the information you need on our exclusive Coil-Away. The door that's easy to live with. At a price that's easy to like.



**OVERHEAD DOOR CORPORATION**  
DALLAS, TEXAS



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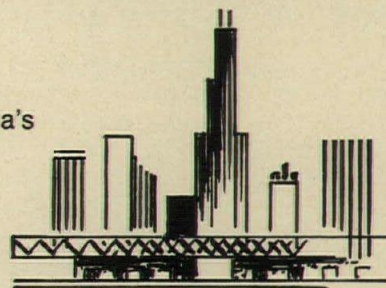
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- ▶ **CONTROL**—*lock and/or unlock from a remote location*
- ▶ **MONITOR**—*from a central control panel*
- ▶ **RELEASE**—*automatically in a power failure emergency*

Folger Adam strikes are being used in the security systems of many of America's newest commercial buildings.



LISTED/BURGLARY PROTECTION DEVICES/FIRE  
DOOR ACCESSORIES (MODELS 310-2 & 310-3)



**SPECIFY RELIABLE ELECTRIC STRIKES  
ENGINEERED AND MANUFACTURED BY...**



## FOLGER ADAM CO.

ARCHITECTURAL SECURITY DIVISION

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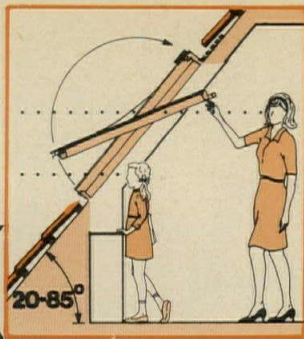
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continued from page 72

# VELUX®

## Roof Windows



### Functional and elegant design create "new" living/work space under pitched roofs

No other building component offers a more economical and practical method of bringing daylight and ventilation under a sloping roof than the VELUX Roof Window concept. The window is equally adaptable to new or existing buildings—be it a home, school, office or plant.

VELUX roof windows offer you:

- Design flexibility and aesthetic appearance—8 standard size windows.
- Extremely low cost design factor/sq.ft.—83% less than dormer construction.
- 40% more daylight than from vertical dormer windows.
- Considerable cost savings on your energy bill—double insulated glass.
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- Craftsman quality construction—made from the highest quality pine.
- Ample ventilation when window is in closed-locked position.
- Ease of installation and cleaning—window rotates 180 degrees for cleaning... installed from the inside.
- Prefabricated flashing assures absolute weather proofing.

VELUX roof windows permit locked settings in open positions. Sun screening, venetian blinds, and remote operation are optional features. Sold throughout the world.

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**Roof Windows**

VELUX—THE ORIGINAL INVENTOR OF THE ROOF WINDOW CONCEPT

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### METALS

**D25 PIPE HANDRAIL** / An eight-page brochure describes a prefabricated anodized aluminum pipe handrail, incorporating interlocking parts that are shop welded and require no mechanical fasteners. Low-cost standard components may be ordered from stock. Standard details, applications, load chart and a complete parts list are included. / CraneVeyor Corp.

**D26 FRAMING ANCHOR** / The specification sheet presents descriptive and technical material including recommended safe working values on the *Du-Al-Clip* anchor. Manufactured from 18 gauge zinc coated sheet steel, these framing anchors are available in a single style with both right- and left-hand types. / TECO.

**D27 STEEL JOISTS** / The literature contains a description of the complete line of "Super-C" joists and accessories, details of application for a garden apartment unit and a 38- by 26-ft single-story house, typical load-span table, and gauge and size availability. / United States Steel Corp.

**D28 STEEL JOISTS** / An eight-page brochure outlines design and construction features as well as cost-reduction benefits of load-bearing steel joists for residential construction. Spaced at 24-in. intervals, steel joists carry loads equivalent to wood joists at 16-in. spacing. / United States Gypsum Co.

**D29 EXPANDED METAL** / A brochure, "How You Can Use Expanded Metal—The Versatile Material," illustrates the various types of expanded metal products, and suggests a variety of uses. Carbon steel, aluminum, stainless steel, and other metals are available in this form. These metals are slit and expanded simultaneously to form a strong mesh with diamond-shaped openings. / Expanded Metal Manufacturers Assn.

**D30 STEEL STUD BROCHURE** / A brochure presenting guidelines for the use of "Super-C" steel studs includes a step-by-step procedure for designing steel framing and typical details of a wall framed with "Super-C" steel members. It covers suggested specifications for materials, assembly and installation. / United States Steel Corp.

**D31 DECK, SIDING SYSTEMS** / A 32-page catalog covers roof, floor, cellular, long span and acoustical decks. The catalog was planned for use by building designers, and shows cut-away illustrations, dimensions, section properties, load span tables, accessories, typical construction details, and specifications. / Elwin G. Smith Div., Cyclops Corp.

**D32 STEEL JOISTS** / The brochure presents design properties, and structural details and data on joists and accessories. Also included are gauge and size availability, load-span tables, and allowable loads for joist hangers, building overhangs, and roof and balcony cantilevers. / United States Steel Corp.

**D33 BUILDING FRAMES** / A four-page brochure on the company's building frame packages describes product features: cold-formed, galvanized steel members, in packages made for simple erection by buyer, using locally available wood submembers. / Shenango Steel Buildings, Inc.

**D34 STEEL FRAMING** / Steel structural framing systems are described in case histories of several typical projects, illustrating the ways in which steel framing may be employed to reduce over-all project costs and foundation requirements, speed enclosure, and provide for greater spans than alternative construction techniques. / Metal Lath/Steel Framing Assn.

**D35 SURFACE ARMORS** / An eight-page catalog features hexagonal surface armors for use as a reinforcing material. The catalog contains information on typical installations, fabrication and engineering services, ordering, general specifications, and tables on stainless steel data and weights. / Keene Corp., Metal Products Div.

**D36 BATTENLESS WALL** / The brochure contains specifications on door frames, utilities, glazing, installation, and fire and sound control ratings, as well as a general product description. Many illustrations are provided, showing how the wall panels are attached to "Perma-Lock" studs with the "Keene Klip." Since the system is non-progressive, the brochure states that revisions and relocations can be made quickly and easily, and costs are kept at a minimum since all parts are reusable. / Keene Corp., Porta-Fab Div.

**D37 CURVED SHEETS** / An eight-page catalog covering "Curved Sheets for Industrial and Architectural Applications" includes complete specifications and data on the various configurations and metals available. Limitation and reference tables give the sheet widths and coverages, gauges, lengths, minimum radius possible, and type of curve. Details of several typical conveyor hoods are shown, along with photos of conveyor installations. / Elwin G. Smith Div., Cyclops Corp.

more literature on page 114

For more information, use inquiry card. \*Included in 1976 Sweet's Catalog File(s).



# SCHLAGE®

The world's most respected name in locks.

Handcrafted Hardware



**Florence**  
2 1/4" Knob  
2 1/2" x 17 1/2" Rose  
Bright Brass  
Blackened 610(7)



**Versailles**  
2 1/2" Knob 9 1/2" Rose  
Satin Bronze Blackened 616(11)



**Haida**  
2 1/2" Knob 6" x 9" Rose  
Verde Antique 472(22)



**Dahlia**  
2 1/2" Knob  
2 3/16" Rose  
Bright Bronze &  
Dark Brown 617(13D)



**Chancellor**  
3 1/16" Lever  
2 1/4" Rose  
Satin Bronze  
Blackened 616(11)



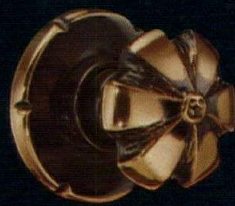
**Lily**  
4 1/8" Lever  
2 1/8" Rose  
Satin Nickel  
Blackened 620(15A)



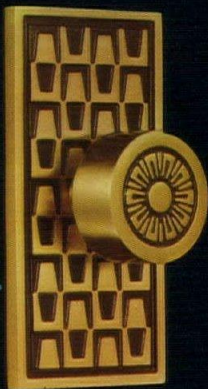
**Palace**  
1 3/8" x 2 3/8" Knob  
2 3/8" Rose  
Satin Brass  
Blackened 609(5)



**Cavalier**  
3 3/8" x 18 1/2"  
Bright Brass 605(3)



**Jasmine**  
2 1/16" Knob  
2 3/8" Rose  
Antique Copper 489(8)



**Sahara**  
2 7/8" Knob  
4 3/8" x 8 3/8" Rose  
Satin Brass  
Blackened 609(5)



**Majorca**  
3 1/2" x 18 1/2"  
Bright Brass  
Blackened 610(7)

For more data, circle A38 on inquiry card





Palm Harbor General Hospital, Garden Grove, California. Architect: Widom/Wein & Associates, Los Angeles, California. Sculptured metal facade by Warnel Corporation, South El Monte, California. Coil Coater: California Finished Metals, Inc., Cucamonga, California.

4-10

## Just what the doctors' architect ordered: DURANAR 200® coatings from PPG.

The Palm Harbor General Hospital in Garden Grove, California, got a beautiful, durable exterior and still stayed within the budget. How? By incorporating a sculptured metal facade by Warnel Corporation, prefinished with a DURANAR 200 fluoropolymer coating from PPG.

Sculptured metal facades provide a fantastic array of truly beautiful textures and effects, while reducing the weight of exterior walls with commensurate savings in framing. And DURANAR 200 coatings give the metal the

minimal-maintenance beauty and extended durability characteristic of other, more expensive fluoropolymer finishes.

The secret of DURANAR 200 coatings lies in PPG's patented combination of remarkably durable resins, together with pigmentation techniques that assure maximum color durability. It can give your medical center—or any building—a very healthy skin.

For information on DURANAR 200 coatings, see Sweet's Architectural or Industrial Construction

Files 9.10/PPG or contact: Market Manager, Coil Coatings, PPG Industries, Inc., Dept. 16-W, One Gateway Center, Pittsburgh, PA 15222.

**PPG: a Concern for the Future®**



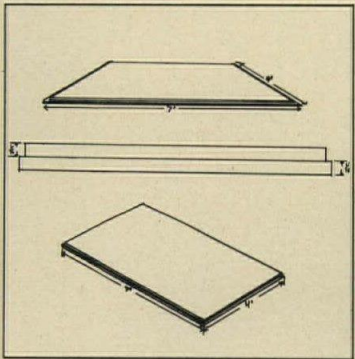


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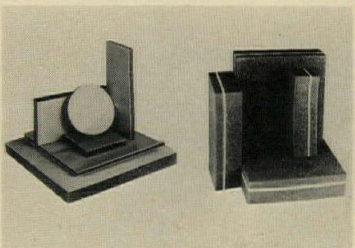
# finishes



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## ACOUSTICAL TREATMENT

**346 SEALANT** / Inexpensive and easily applied, *USG Acoustical Sealant* forms an excellent acoustical barrier at partition and ceiling system perimeters, will adhere to both porous and nonporous materials, and has permanent flexibility and high resilience. / United States Gypsum Co.

**347 ACOUSTIC PANEL** / New sound controlling *Vicracoustic* wall panels can be affixed to any metal surface by the use of small magnetic plates. The magnetic plates are applied with contact cement or screws. / L.E. Carpenter & Co., Inc.

**348 NOISE BARRIERS** / *Type KC* single or double noise control composite materials are flexible, loaded PVC noise barriers with one or two permanently-laminated polyester urethane absorption foam layers. They have an operating temperature rating of 200° F. / Consolidated Kinetics Corp.



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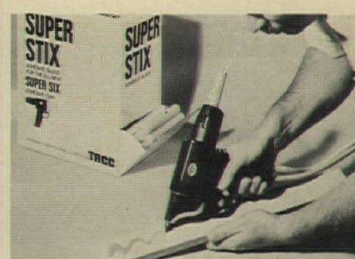


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**349 NOISE BARRIER** / *Type 1000B Eckousta-Foam* is a lightweight, noise-absorbing liner that can be quickly applied to the walls of engine compartments and machinery enclosures. *Eckousta-Foam* is self-extinguishing and meets UL 94 requirements. / Eckel Industries, Inc.

**350 ACOUSTIC PANEL** / The new *Soundsoak* panel is a 15 in. by 44 in. acoustical baffle that can be applied to exposed ceiling grids. Installed with a special clip, the fabric-covered baffle offers acoustical control with an NRC of .62. / Armstrong Cork Co.

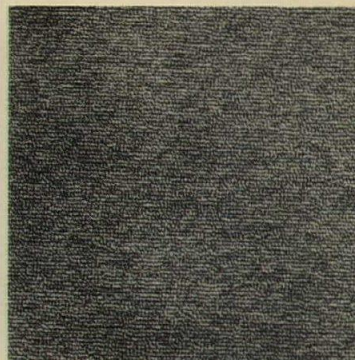
**351 CEILING PANELS** / *Vistasonic* mirrored ceiling panels are lightweight, fire-retardant acoustical panels covered with aluminized film to form a reflective surface. A nonstatic surface reduces dust buildup, and a shatterproof surface offers distortion-free reflection in 2- by 2-ft or 2- by 4-ft sizes. / United States Gypsum Co.



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## ADHESIVES

**352 ADHESIVE GUN** / A new, hot-melt hand gun and special 6-in. adhesive slugs are said to eliminate the commonest hazards associated with presently available systems. The gun is designed for simpler, speedier use in commercial bonding. / Transworld Adhesive & Chemical Corp.

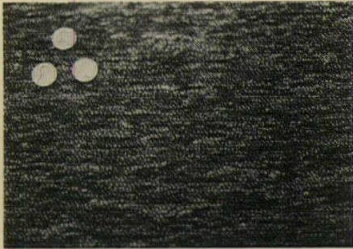
**353 BONDING AGENT** / *Wall Board Adhesive* and *Kwik Dry Contact Cement*, developed for remodeling and glue-it-yourself markets, can be used for bonding virtually all porous and non-porous materials. Both products are priced competitively. / Con-tech, Inc.

## CARPETING

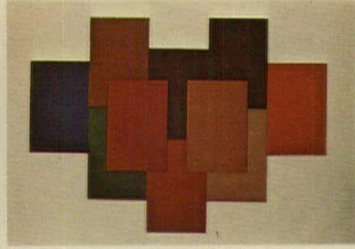
**354 CARPET** / *Woodlark* is a dense level loop nylon contract carpet. All synthetic, the carpet has a primary backing of polypropylene and a secondary backing of *LOK-tuft*. It is available in 12 multicolors and tone-on-tone colorations in widths up to 12 ft. / Gulistan Carpets.

ACOUSTICAL TREATMENT  
ADHESIVES  
CARPETING  
CEILING SUSPENSION SYSTEMS  
GYPSUM WALLBOARD  
PAINTING MATERIALS  
PREFINISHED PANELS  
RESILIENT FLOORING  
SPECIAL COATINGS & SURFACING  
TILE  
WALL COVERING  
WOOD FLOORING

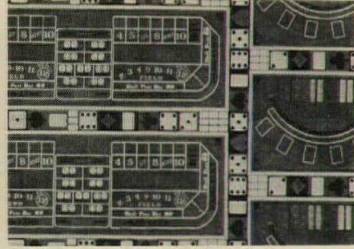




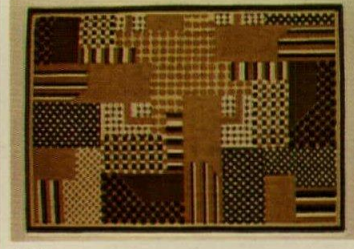
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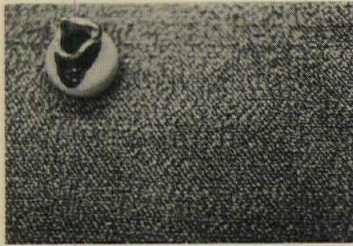
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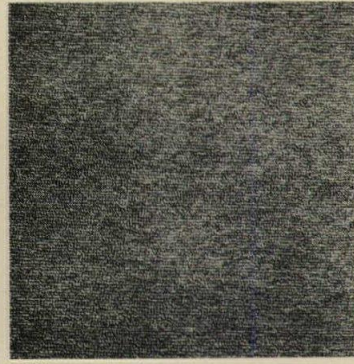
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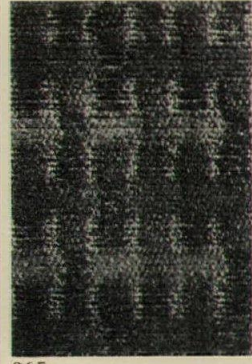
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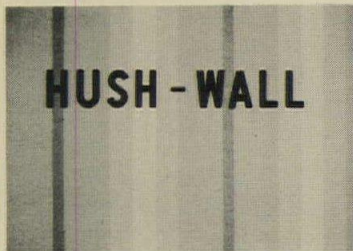
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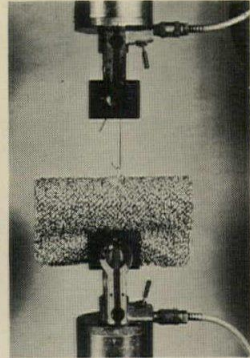
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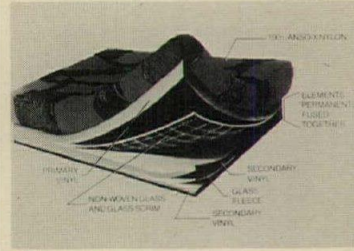
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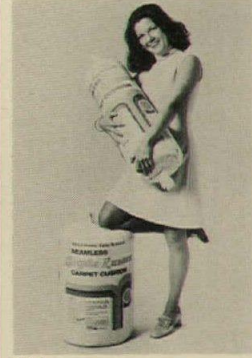
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**355 CARPET** / Made with *Herculan IV* in a 1/10 gauge construction, "North Point" has a low static propensity. Available with jute or foam cushion backing, "North Point" comes in face weights between 16 and 28 ounces and meets current flammability standards. / Burke Carpet Mills.

**356 CARPET** / "Ranier" is made with *Anso-X* anti-shock nylon in 1/10 gauge construction, is soil-resistant and easily cleaned. It is available in 12 tri-color tones and in standard 22 ounce face weight. Other weights are also available. / Burke Carpet Mills.

**357 WALL CARPET** / The new *Hush-Wall* line of acoustical wall carpets includes: "Acoustex," a level loop nylon in eight solid colors; "Heathertex," a level loop modacrylic in ten heather colors; "Tapestrie," a striped acrylic; and "Berbertex," a textured wool/acrylic in five colors. / Stratton Industries.

**358 CARPET** / "Adroit," a wear-guaranteed cut and loop pile carpet is designed for heavy traffic applications. Woven of acrylic nylon, it has a five-year wear warranty, fire retardant sponge rubber cushioning and is static-controlled. / Commercial Carpet Corp.

**359 CARPET** / "Europa" is woven in 100 per cent wool, broad multi-ply yarn and is available both as custom carpets and rugs in the designer's color choice. It is suitable in a wide variety of commercial and/or residential installations. / V'Soske.

**360 CARPET** / "Precedence" and "Protector" are *Unibond* commercial carpets manufactured with a new process that bonds together the primary and secondary backing materials and face yarn. Both products have tuft binds tested at 20 lbs. / Lees Carpets.

**361 CASINO CARPET** / A broadloom carpet print that reproduces "craps" and "blackjack" tables is made of *Anso* nylon and carries a five-year wear guarantee. A 5/64 gauge construction with static control is featured. / Allied Chemical Corp.

**362 CARPET** / "Very Best," a 100 per cent heat set nylon, and "Dream Time," a plush polyester, are two new offerings. Both come in a range of color choices and are available in widths up to 12 ft. / Gulistan Carpet Div. of J.P. Stevens & Co.

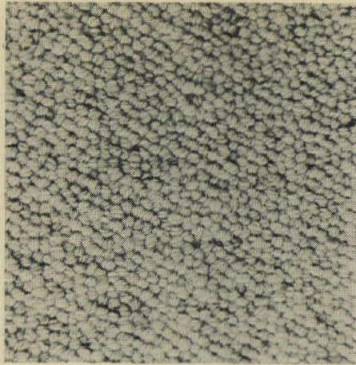
**363 CARPET** / A new five-layer, fusion-bonded backing ensures against shrinkage, stretching, buckling or delamination. This unusual construction allows a modular carpet system to be installed without adhesives of any kind. / Carpets International-Georgia, Inc.

**364 CARPET** / "Monopoly" is a hand-made rug executed in a tight, low-level loop construction. It is available in a variety of neutral colors combined into a choice of small-scale patterns. / V'Soske.

**365 CARPET** / "Moor Land," "Quadrille" and "Mainspring II" are three new offerings. All are 100 per cent *Acrilan* and all are produced using the new *Colometrics Dye System* which results in the controlled application of three to six colors with fine definition and separation. / Magee Carpet Co.

**366 CARPET CUSHION** / A new 12 ft wide, polywrap, seamless cushion is available in sizes ranging between 6 by 9 feet to 12 by 18 ft. It increases carpet life and provides insulation. / Dayco Corp.





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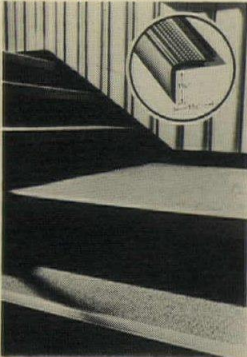
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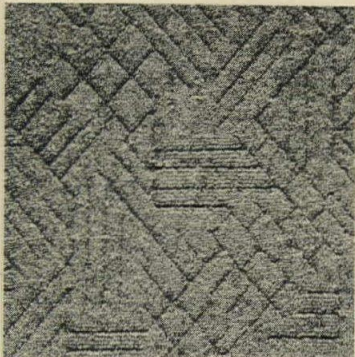
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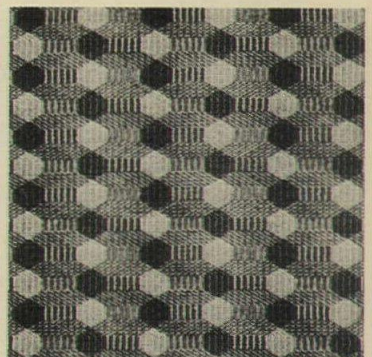
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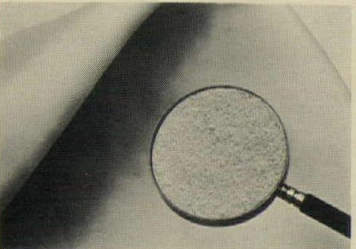
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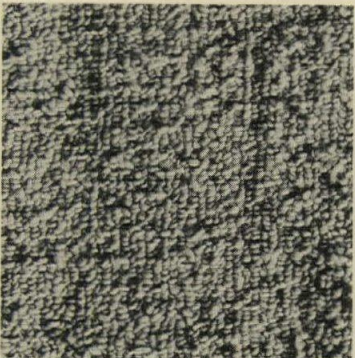
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**367 BERBER CARPET** / "Bryndle," made by the Philadelphia Carpet Mills, is a 50-ounce pile yarn of this company's *Zefran* acrylic carpet yarn, in ten Berber colors. It is available in 12 and 15 ft standard widths, custom tufted to any size, shape or diagram seamless up to 25 ft wide by 60 ft long. / Dow Badische Co.

**368 STAIR NOSING** / Manufactured in vinyl and in seven colors, the stair nosing includes a receptacle to secure carpet edge, a friction grip step surface, a short radius at point of nose and a long lip and adhesive flange. / Mercer Plastics Co., Inc.

**369 CARPET CUSHION** / *System Alpha* is fashioned of *Omalon*, has a thickness of .375 in. and a density of 2.2 lbs per cubic foot. It is suited for applications where carpet durability is a prime consideration. / Olin Corp.

**370 CARPET** / A new product for heavy traffic commercial areas, "Achilles" is 100 per cent nylon and has a secondary backing of jute. Eight color tones are available—all in large dye lots. / Harding Carpets Ltd.

**371 BERBER STYLE** / A heavy-duty geometric styled Berber texture carpet made of 100 per cent stock dyed acrylic face yarns has a handcrafted appearance. "Procedure" is offered in eight natural colors. / Monarch Carpet Mills.

**372 BERBER CARPET** / Available in four Berber colors from Casablanca Creme to Kenitra Brown, the wool carpet is also made in a second quality, corded and lighter weight. / Decorative Carpets, Inc.

**373 BROADLOOM** / Seven styles include these two: "Embassy," a densely constructed cut pile of 70 per cent acrylic/30 per cent modacrylic, offered in 11 heather colorways; "Mt. Vernon," a 1/8 gauge level-loop Berber of 100 per cent acrylic, offered in eight natural Berber colors. / Collins & Aikman.

**374 NYLON CARPET** / "Rexpoint" is a densely tufted carpet of *Anso* nylon, in a level loop construction with ribbed corduroy effect. The synthetic backing is suitable for direct glue-down installation. Twelve tri-color hues are offered. / Bigelow-Sanford, Inc.

**375 ACOUSTIC CARPET** / Acoustic wall carpet, available in level loop nylon and *Acrilan/PVC*, is suggested for new construction and refurbishing projects. It resists abrasion, and adds insulation value. Various colors and patterns are offered. / Barwick Mills.

**376 STAND-UP SHAG** / This highly textured shag is said to exceed the minimum HUD/FHA established standards, and is available in 14 colorations. It is recommended for the residential/contract fields. / Philadelphia Carpet Co.

**377 NYLON CARPET** / A small-scale hexagon design is woven into cut and looped pile yarns of *Antron* nylon in this heavy-duty broadloom for contract and residential use, and available in 14 skein-dyed colorations. / Karastan Rug Mills.

**378 ACRYLIC CARPET** / The *Zefran* blend *CR-4* yarn program features 70 per cent acrylic and 30 per cent nylon yarn, available in 74 colors. The company has added 14 new heather and six additional solid colors. / Dow Badische Co. A,D\*





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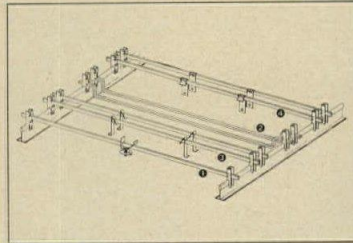
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**379 BERBER CARPET** / "Proclamation," a new Berber design, is made of 100 per cent *Acrilan* acrylic in 14 natural colorations, including 12 solids and two stripes. It has a rugged looped texture and is made in 12-ft widths. / Cabin Crafts Carpets, West-Point Pepperell Carpet & Rug Div.

**380 WILTON BERBER** / Carpets are made of 100 per cent two-ply *Zefran* acrylic with *Zefstat* anti-shock for static control. This program is offered in 10 natural colorations, which can be woven into any custom design. / Philadelphia Carpet Co.

### CEILING SUSPENSION SYSTEMS

**381 PIVOTED CEILING** / Made in PVC/steel laminate in either plain or perforated finishes, white only, the 1-ft wide panels can be supplied to order. / Alpro Acoustics Div., Structural Systems Corp.



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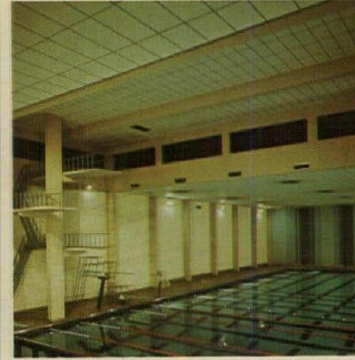
**382 DROP CEILING** / For installing recessed and surface lighting fixtures into tee-bar drop ceilings, this unit installs across a 2-ft span. Units may be used singly or in pairs to accommodate most standard recessed light fixtures. / Fastway Fasteners, Inc.

**383 MODULAR GRID** / *Rigid-Air* provides a basic planning module of 60 by 60 in. All primary components are factory slotted to accommodate sub-tees and mechanical and electrical components, and exposed surfaces are white thermosetting vinyl enamel finish with slotting in black enamel. / Roblin Building Products Systems. A\*

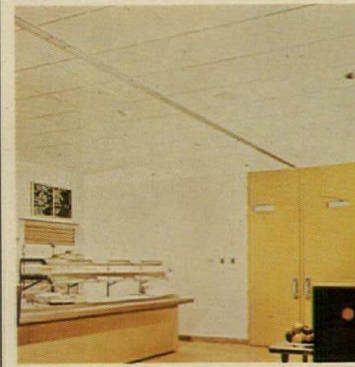
**384 METALLIC CEILINGS** / Commercial ceilings for specialized installations such as shops, boutiques, beauty parlors, include: Gold Leaf, Antique Glass, Corkstyle and Registry. / Armstrong Cork Co. A\*



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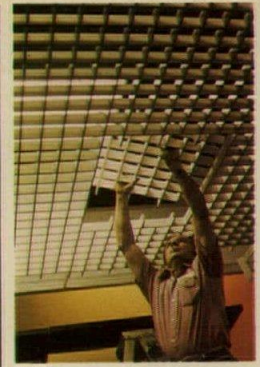


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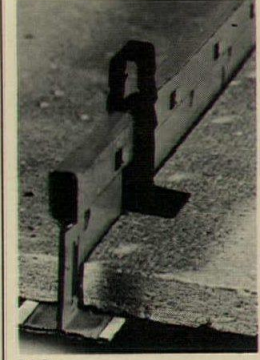
**385 CEILING PANEL** / *S-SERIES 2* by 2-ft modules in four patterns, are ready to drop into standard ceiling grids. Handcrafted fiberglass castings match stained glass in weight and are shatterproof. / ENVEL Design.

**386 HUMIDITY CEILING** / *Ceramic* mineral lay-in panels provide suspended ceilings that will not warp or sag under conditions of heat, humidity or corrosive chemical fumes. Panels are available plain or perforated in 24- by 24-in. and 24- by 48-in. units. / Conwed Corp. A,I,E\*

**387 WASHABLE CEILING** / Washable *Metal Face* panels feature vinyl coated embossed aluminum bonded to a mineral fiber substrate, available plain or perforated in 24 by 48 in. units. Panels can be installed in standard exposed suspension systems. / Conwed Corp. A,I,E\*



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**388 LOUVER CEILING** / A trackless louver ceiling in four cell openings from 3 by 3 in. and up will install wall to wall or float. White and bronze are standard colors. Lighting can be located above, inset into the cells or hung through. / Butterfly Inc.

**389 CEILING TILE CLIP** / This "Tile Tite Clip" digs into the ceiling tile to prevent any movement of the tiles on the "T" bar causing gaps between it and the tiles as a result of building vibration. / Fastway Fasteners Inc.

### GYPSUM WALLBOARD

**390 SEPARATION WALLS** / These lightweight, non-load bearing gypsum drywall assemblies are designed for use as vertical fire barriers separating occupancies in wood-frame apartments, condominiums and townhouses. Fire ratings to 3 hours are claimed. / United States Gypsum Co.

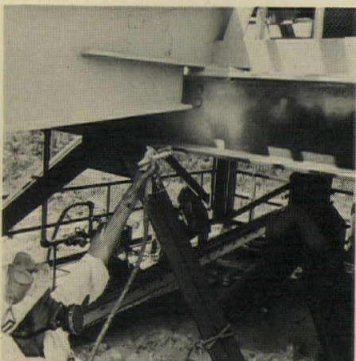




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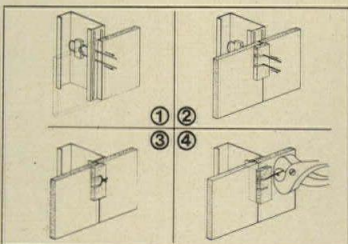
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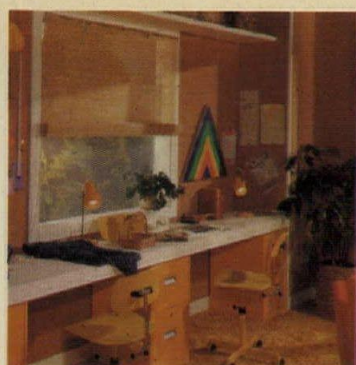
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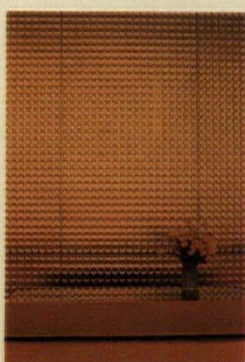
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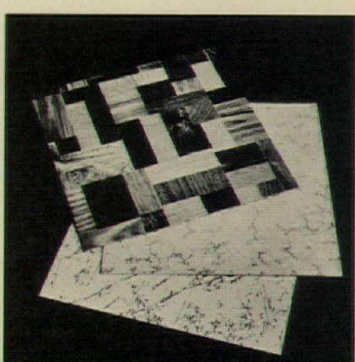
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## PAINTING MATERIALS

**391 SOLID COLOR STAIN** / Solid color stains are opaque to hide the grain but not the texture of the wood. A one-coat application is often sufficient. *O.V.T.* resists cracking, peeling, blistering, and is applicable to all types of lumber. / Samuel Cabot Inc. A,L\*

**392 RUST PREVENTATIVE** / A water-reducible acrylic coating is now available in six "deep tone" colors as well as pastel finish coats. These industrial maintenance coatings offer: fast-drying time; gloss retention; weather-resistance; and chemical resistance. / Rust-Oleum Corp. I\*

**393 RUST INHIBITOR** / Pigmented with zinc chromate and iron oxide, the coating may be top coated in two hours or many months later. It offers compatibility with a wide range of coatings, including alkyd, epoxy, vinyl and chlorinated rubber. / Glidden.

**394 FIRE-RESISTANT PAINT** / A fire-retardant, high-build flat coating for application on interior gypsum panels, plaster or masonry surfaces offers a UL flame-spread rating of 20, fire hazard classification of fuel contributed 0, smoke developed 0. / United States Gypsum Co. A\*

## PREFINISHED PANELS

**395 PANELING** / The medium-priced paneling is random grooved with an embossed oak design and is available in 4- by 8-ft panels of 5/32 in. or 1/4 in. thicknesses. Colors are: white with gold, white with green, white with blue, and white with black. / Boise Cascade.

**396 WALLBOARD ATTACHMENT** / This method uses a special stud-tie assembly to hold *Durasan* pre-decorated gypsum panels in alignment against adhesive-covered studs, until the adhesive has fully cured. The wire is then removed, leaving an almost invisible battenless joint. / Gold Bond Building Products.

**397 CORK PANELS** / A 3/32 in. prefinished veneer of light swirl cork is factory laminated to a substrate of basic 1 5/32 in. structural insulation board, for use either as an entire wall area or as accent panels. / Homasote Co.

**398 METAL WALL PANELS** / Geometric patterns are hydroformed in copper, bronze, stainless steel and aluminum and in metal with durable color finishes. For walls, ceilings, doors, and elevator interiors, the product is available as metal sheets, or in a panel system. / Forms & Surfaces.

**399 PECKY CYPRESS** / Interior wall panels feature Pecky Cypress wood characteristics reproduced on durable hardboard in 4 by 8 sheets. Prefinished paneling has a random plank design and is offered in four colors. / Masonite Corp. A,L,D\*

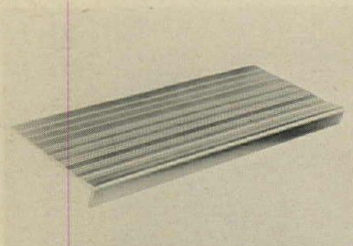
**400 PLYWOOD PANELS** / Adze marks distinguish this prefinished paneling available in 1/4 in. thickness in 4 by 7-, 8-, 9-, and 10-ft sizes. "Shenandoah" paneling meets the Class C flame spread rating provided by Underwriter's Laboratories. / U.S. Plywood. A,L,D\*

## RESILIENT FLOORING

**401 VINYL TILE** / Tile that never needs waxing, comes in three patterns, top to bottom: "Wildwood," a butcher block effect, "Avalon," a textured swirl, and "Harvest," a random splattering of color. "Carefree" is available regular dry back or self-adhering. / Amtico Flooring Div., American Bilrite.

**402 INLAID TILE** / For both residential and commercial installations, the tile is available in a red-and-white 9-by-9-in. size, as well as in a 3-by-9-in. size. / Amtico Flooring Div., American Bilrite.





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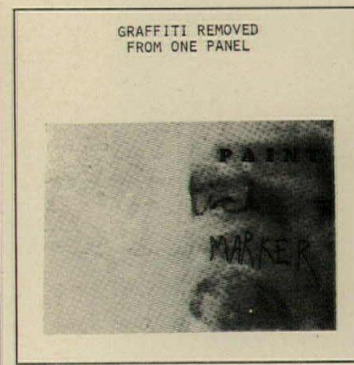
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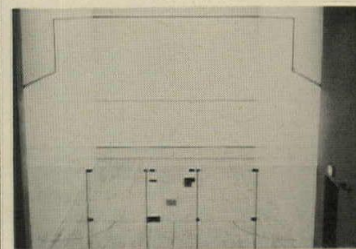
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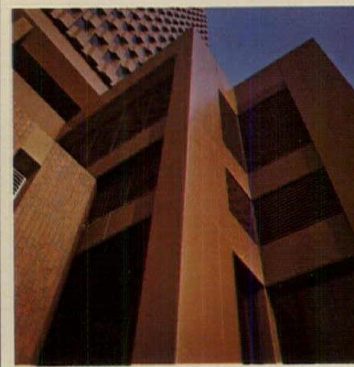
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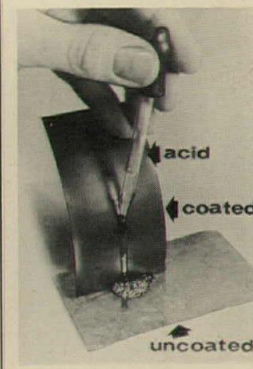
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**403 VINYL TREAD** / A tread for 2-by-12-in. plank or concrete steps has an extra size 1 3/4 in. square nose. The tread can be trimmed to any length for exact full coverage fitting. It comes in six standard widths and five colors. / The R. C. Musson Rubber Co. A,I\*

**404 VINYL ASBESTOS TILE** / The hand-set wood parquet floors are recreated in "Concord Woods," available in dark Walnut, Rosewood, Sandalwood, and medium Oak. Designed for residential appeal, they can be used in light traffic commercial areas. / Azrock Floor Products. A,L\*

**405 SHEET VINYL FLOOR** / The *Gafstar* system of no-wax cushioned sheet vinyls, recreates hand-painted Delft tiles. The vinyl comes in 12 ft widths, and is appropriate for either light commercial or residential installations. / GAF Corp. A,L,D\*

**406 PLAY TILES** / "Epcar" EPDM rubber provides a soft, resilient play surface. The tiles are abrasion and skid resistant and have weathering characteristics. / B.F. Goodrich Chemical Co.

**407 GYM FLOOR** / *Gymflor*, now available on a nationwide basis, is a cushioned sheet vinyl gym floor system with a non-slip, non-glare surface. Its foam backing also helps reduce noise levels. / Tarkett. A\*

#### SPECIAL COATINGS / SURFACINGS

**408 BALL COURT** / This epoxy wall coating system is a protective treatment for indoor courts. The adhesive, long-lasting coating is spray-applied to achieve a uniform, smooth, high gloss surface with economical maintenance. / Desco International Assn.

**409 GRAFFITI COATING** / *ANTI-G #400* is a clear protective coat recommended to protect surfaces from graffiti. Designed to be used on a wide variety of surfaces, it produces a low gloss finish and is a water based acrylic emulsion which can be applied with a paint roller or spray equipment. / Flexi-Wall Systems. A,D\*

**410 WALL INSULATION** / This finish system for new construction as well as older structures has high bond strength and will not crack or peel under normal conditions. It is water resistant, self-cleaning and provides heat reflection. Colors are integral and fade-fast. / Dryvit System Inc.

**411 METAL COATING** / A comprehensive line of 34 colors has been introduced for *Fluropon* architectural coating, a full-strength fluorocarbon metal coating that can be coil coated for building panels, fascia or shingles or spray coated on aluminum panels, louvers, trim and extrusions. / DeSoto, Inc.

**412 FOAM COATING** / *Ure-K Spray* coating is an approved (Factory Mutual) protective coating for polyurethane foam. A 3/4-in. thermal barrier preventing urethane from melting and producing products of combustion when exposed to a fire, it also provides sound absorption and low thermal conductivity. / National Cellulose Corp. A,E\*

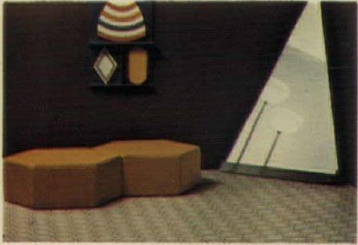
**413 GRAFFITI PROTECTION** / A clear anti-graffiti masonry protection product also protects against atmospheric pollutants. Graffiti defacement may be removed often with a mild soap solution without harming the original protective *Sonosield* coating. / Sonneborn-Contech. A\*

**414 NO-PRIMER COATING** / A coating for high temperature applications (up to 600° F) provides protection on steel, steam pipe lines, exhaust tubes, smoke stacks, exhaust systems, etc. against corrosion and damage from water, rust and chemical attack. / E. M. Howey & Co.





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**415 MASONRY COATING** / Available for interior or exterior use, *Acma-gard* sealer products are clear, do not change the color of the substrate, and dry to a glossy finish. They are applied with a pressure spray or roller. / Acme Highway Products Corp.

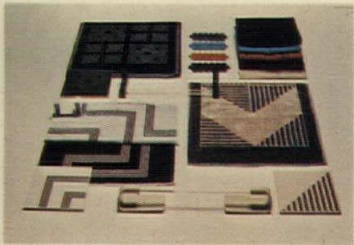
## TILE

**416 GLASS TILES** / "Concept 75" is a hexagonal floor tile of hardened glass with a slightly textured surface. It is resistant to shock and abrasion. Six colors are available. The tiles are approximately 5½ in. from flat to flat and ¾ in. thick. / Briare Co. Inc.

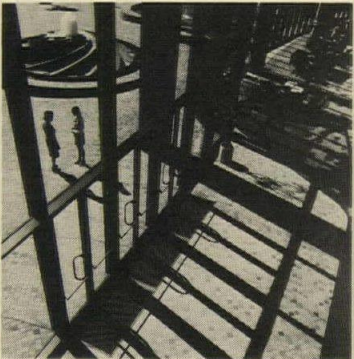
**417 GLASS TILES** / "Triton Briare" is made of tempered glass and can be used for floor and wall applications. It has a curved diabolo shape and a length of 1¾ in. Sixteen colors are available. / Briare Co. Inc.



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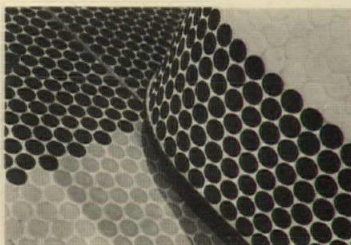
**418 GLASS TILES** / "Pastiles Briare" are impervious, dense and homogenous glass tiles. They have a circle shape of approximately 11/16 in. and can be used for floor, wall, interior, exterior, residential and commercial applications. / Briare Co. Inc.

**419 BATH ACCESSORIES** / "Accessits" are three series of bathroom fittings made of ABS plastic in colors matching glass tile manufactured by the company. They include vanity shelf, towel rail, toilet paper holder, soap dish, coat hook, ashtray and mirror light. Towels are available in the same colors. / Briare Co. Inc.

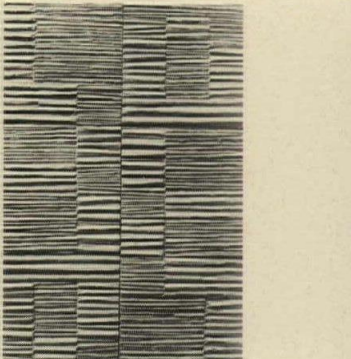
**420 NON-SKID PAVER** / The 4-in. stoneware tiles lend themselves to any shape or contour from flat walkways to a curving stairway. Four subdued earthen shades are offered. Assembled on 12½- by 12½- by ½-in. sheets, *Tarascan* can be installed in a minimum of time. / Latco.



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**421 HAND PAINTED TILES** / Tile for floors or walls has a floral theme with accents of vine or cherry. Hand painted designs are completed when four 8- by 8-in. tiles are combined. / Hastings Tile & "Il Bagno" Collection. A\*

**422 GLASS TILE** / *Module 42* (42mm or 1¾ by ¾ in. thick), is a round, colored glass tile made in France. It is a vitrified glass tile with a non-slip surface, and is colored throughout. Half round tiles are available for edges and corners. / Hastings Tile.

**423 CERAMIC WALL** / A ceramic wall surfacing design series features three 12- by 12-in. textural units that may be composed in many different ways or set at random. / Design-Tech-nics Ceramics Inc. A\*



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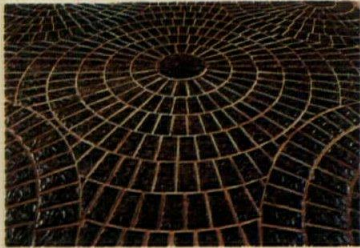
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**424 QUARRY TILE** / The tile comes in two colors, a deep chocolate brown and a brick red. Various shapes and sizes are offered and trim tile is available. This is a natural clay product. / Monarch Tile Mfg. Inc. A\*

**425 TILE COLORS** / Four New colors have been added to the hand-crafted-look "Primitive" ceramic tile line: Greenstone, Leather, Mahogany and Aspen glazes, which separate in a delicate tracery. Tile has a ½ in.-thick, dense body with less than 3 per cent absorption with irregular perimeters. / American Olean Tile Co. A\*

**426 CERAMIC TILE** / "Briarwood," a ceramic tile with a bark-like texture of brown over black undertones, is for moderate use interior residential and commercial floors. The top and perimeter surface are irregular, with a hand-crafted effect. / American Olean Tile Co. A\*





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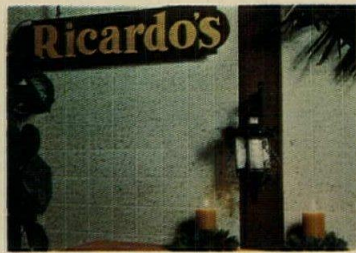


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**427 GLAZED TILE** / Three different, but interrelated, wedge shapes and a circular shape are used to form the circles in the "Serpentine" pattern. In addition to a circular pattern, the shapes may be used in a fan or meandering design. Several colors are offered. / Interpace. A,D\*

**428 COBBLESTONES** / Tiles are 4-by 4 in. glazed ceramic whose hand-made appearance is heightened by surface irregularities and slight variations in color and texture. "Cobblestones" is available in four different colors: brown, flashed walnut, flashed white and white. / Interpace.

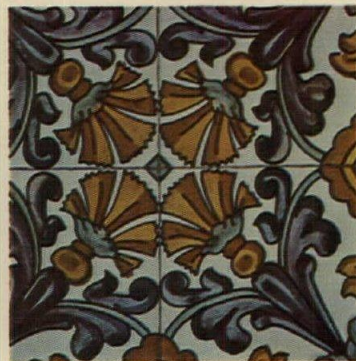
**429 CERAMIC TILE** / Tile is available in the 4¼-in. sq size and is designed for total wall treatment in antique white, Olive, Blue, Pink, Gold and Beige. / United States Ceramic Tile Co. A,D\*



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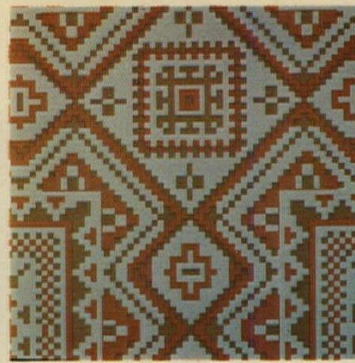
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**430 GLAZED TILE** / Dappled with splashes of color, this tile is available 4¼-in. sq in Gold, Yellow, Pink, Blue, Beige, Olive and White. / United States Ceramic Tile Co. A,D\*

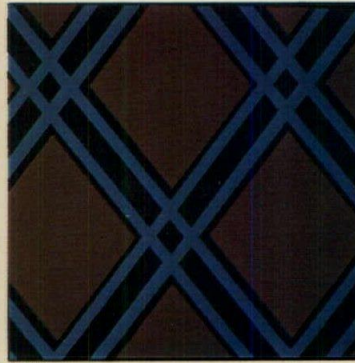
**431 PAVERS** / Quarry-type tiles for institutional, commercial and residential applications are available in 6-in. squares in Flashed Red and Blended Red. Tiles are frostproof. / United States Ceramic Tile Co. A,D\*

#### WALL COVERING

**432 PREPASTED COVERING** / Developed from 16th Century Spanish and Portuguese tiles, "Amadora" is a new wallcovering from the company's London Style 4 Collection. Each tile section is 5¼-in. square, and each full tile 10½-in. square. It is available, pre-pasted, in two color-ways. / ICI United States, Inc.



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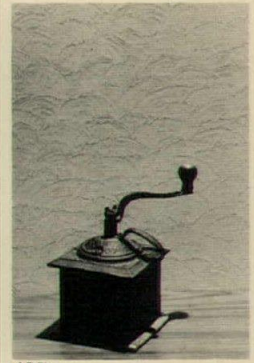
**433 WALL COVER** / "Pawnee" is taken from rug and blanket designs of North America's Plains Indians. The geometric patterns are available in three colorways: toast, orange on white (seen here); slate, electric blue on white; and taupe/grey on white. / ICI United States, Inc.

**434 WALL COVERING** / "Square Border" is composed of 5-in. wide diamond forms set horizontally with parallel lines as trim. It is available in four colorways, all on silver Mylar. / James Seeman Studios, Inc.

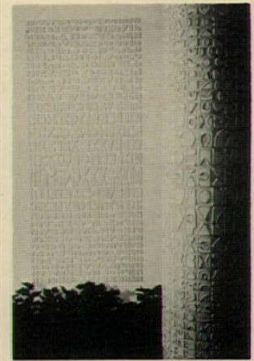
**435 WALL COVERING** / "Over the Rainbow," shown above, coordinates with "Somewhere . . ." where the word RAINBOW runs on the diagonal, to create a room for a youngster. The two are offered in primary colors or in pastels, both on a white ground. / Imperial Wallcoverings.



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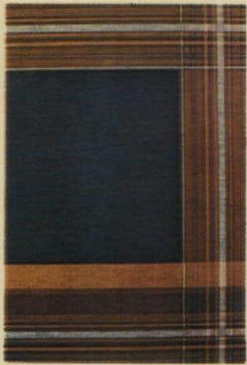
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**436 WALL COVERING** / Designed for both commercial and residential use, the collection features plaids, stripes and a variety of textures, including tweeds, basket weaves. "1ST CHOICE" wallcoverings are fabric-backed, Type 1 vinyl. / Imperial Wallcoverings. A,D\*

**437 EMBOSSED DESIGNS** / Colors of the line range from neutrals, beiges and off-whites to accent colors such as reds, greens, blues, browns and gold and silver metallics. In addition to a variety of pure, unmixed textures, the new line includes some texture combinations. / B.F. Goodrich General Products Co.

**438 WALL TREATMENT** / The full design as shown on the rear wall measures 34 by 78 in. but can be repeated to cover an entire wall. The elevations are created with sculptural elements cast in acrylic resins on a background of GENON vinyl wallcoverings. / General Tire & Rubber Co.





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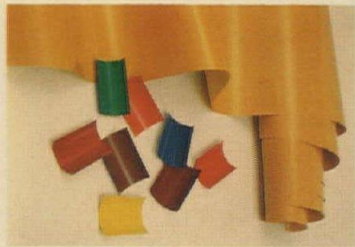


441

**439 VINYL WALLS** / Vinyl coated Venilia wallpaper, imported from France and designed by Pierre Cardin, features large squares in navy blue surrounded by bands of light brown. The roll is 21 in. wide. / Wall Trends International.

**440 VINYL WALLCOVERING** / Tunnel tested and fire rated, this vinyl from France meets all the prescribed tests of ASTM-E84. / Wall Trends International.

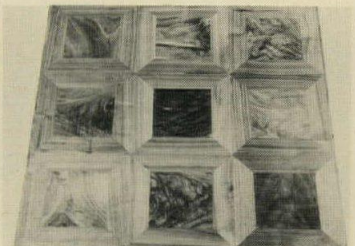
**441 SANITARY COVERING** / A covering for walls in shower rooms and other washing areas helps eliminate bacteria and keep the area virtually germ-free. *Wallgard* flexes to form seamless corners, and is available in a variety of colors. / Tarkett. A\*



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**442 ITALIAN WALLCOVER** / Reproducing the look of lacquer, the "Jabik Collection" is available in 15 solid colors, and a few simple geometric patterns. The aluminum-based wallcovering is scratch-proof, fade-proof, odor resistant, and washable. / Karl Mann Assoc.

### WOOD FLOORING

**443 PARQUET** / These smooth, simple, natural grained oak parquet blocks can be installed in mastic over almost any subfloor, including concrete. Constructed of three plies of hardwood bonded under pressure with waterproof glue the 9- by 9-in. parquet blocks resist expansion and contraction. / E. L. Bruce Co., Inc.

**444 WALNUT** / These 10- by 10-in. squares are made of a walnut burl or highly figured center surrounded by straight-grained, walnut pickets, but this custom-made flooring is available in any wood. / Wood Mosaic. A,D\*



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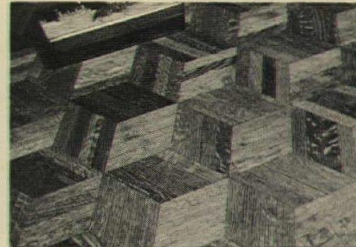


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**445 PLANK FLOOR** / "Village Plank" is 3/8 in. thick, with random widths of 3, 4 and 7 in. It is constructed of three plies of hardwood bonded with waterproof glue, prefinished in a mellow brown shade, with factory installed pegs. / E. L. Bruce Co., Inc. A,D\*

**446 WOOD TILE** / *Hartco Wood Foam-Tile* is available in two new finishes: Windsor Oak and Olde Brown Oak. Adhered foam backing on each 12-by-12-in. hardwood parquet floor tile provides sound control, and aided by interlocking tongue-and-groove construction, the foam overcomes subfloor irregularities. / Tibbals Flooring Co.

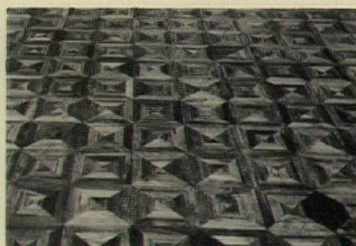
**447 GYM FLOOR** / A parquet floor of hard Maple has foam backing to reduce fatigue and injuries and absorb sound. / Tibbals Flooring Co.



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**448 FINISHED PARQUET** / Antique textured finished parquet in Red or White Oak is 11 by 11 in., composed of four squares, each consisting of 5/16 in. thick, solid hardwood slats. / Harris Mfg. Co. A,D\*

**449 WOOD TILE** / *PermaGain "Aspen"* has a textured appearance similar to that of travertine and is offered in green, blue, and brick as well as four standard wood colors. The new tile is produced from Aspen wood wafers and has the same performance standards as *PermaGrain* acrylic/wood parquet. / ARCO Chemical Co. A,D\*

**450 TEAK PATTERN** / In teak only, each pattern unit is 5/16 by 12 by 12 in. with a net back. It is finished with a penetrating sealer and has a slightly relieved perimeter edge. / Bangkok Industries, Inc.



# Expect quality carpets And expect their

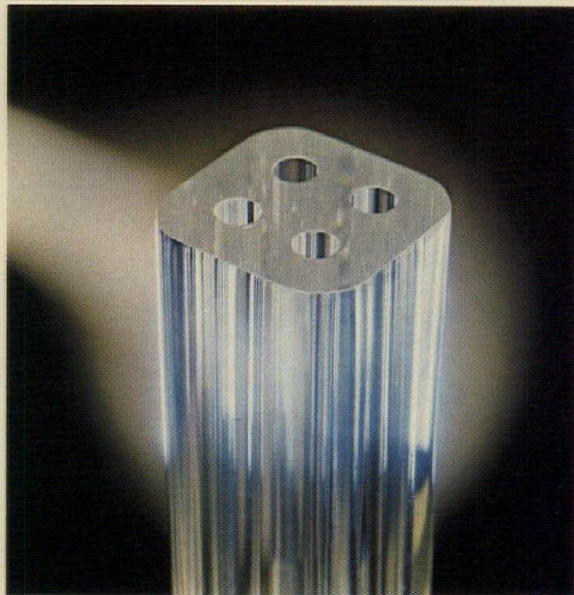




# to be in Antron<sup>®</sup> nylon. look to last.

**General Telephone & Electronics Corporation** wanted commercial carpet that didn't look commercial, a style to complement the distinctive architecture of their new world headquarters in Stamford, Conn. At the same time GTE wanted to take full advantage of the long-term appearance retention inherent in carpet with pile of Antron\* nylon. From the wide variety of styles now available in "Antron" they specified this ribbed-texture construction in four custom colors for a total of 35,000 sq. yds.

**NEW:** "Antron" III nylon for static control is now available in selected styles.



**What you see is what you'll get for a long time.** "Antron" is a soil-hiding carpet fiber. It is the leading commercial carpet fiber brand with more than twice the available styles in "Antron" than those made of the next brand. Its ability to diffuse light helps blend soil concentrations into the overall look of the carpet (normally they would show up as spots). Also, being nylon, "Antron" gives carpet exceptional durability and crush resistance.

**How "Antron" keeps carpet looking fresh.** Its filament structure is remarkable, as simulated in this greatly enlarged model. The four microscopic holes scatter light to minimize rather than magnify the dulling effects of soil, while maintaining an attractive, subdued luster. This property of the fiber, together with its outstanding wearability, helps the look of the carpet to last.

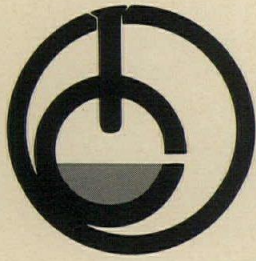


*For more data, circle A40 on inquiry card*

\*Du Pont registered trademark. Du Pont makes fibers, not carpets.



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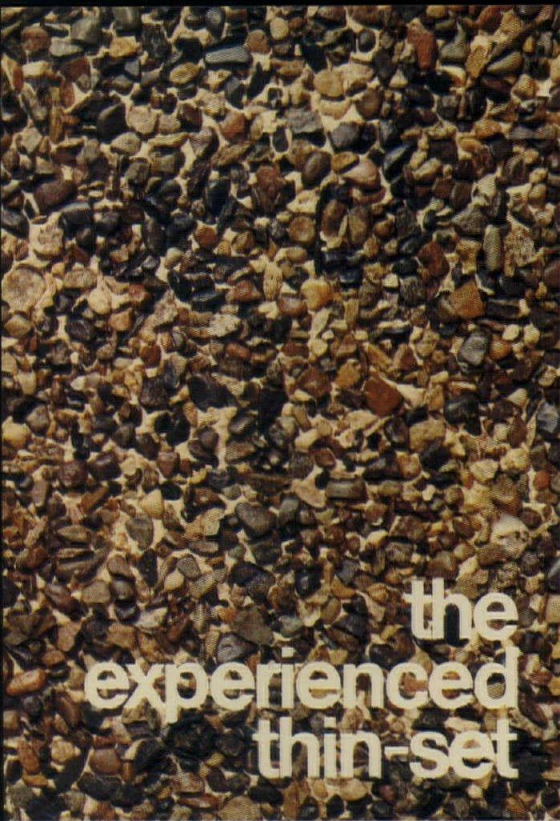
What's more, there is a Hillyard architectural consultant in your area who will be happy to recommend the proper treatment for the floor you are specifying. He will bring you Spec Data Sheets and AIA numbered folders which contain "long form specifications" plus detailed instructions you can give your contractor. He will help you keep your files up-to-date with periodic mailings. And your Hillyard consultant will even supervise application procedures at job site.

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# Get your slice of the big-city market... with Arapahoe smoke suppressant technology.



Many of our large cities have set up strict smoke regulations. If your product can't measure up to these low-smoke standards, you're out of that market which includes major commercial construction projects. Some companies simply ignore these markets – and potential profits – and sell their products elsewhere.

But a floor-tile manufacturer has determined that he can meet smoke regulations – with FE-55® smoke suppressant. Two of the company's products were tested in a certified ASTM E-84 Tunnel Testing facility. Two control samples of Product A without FE-55 produced an average smoke-density index of 611\*. Three samples of this product containing only 0.3% FE-55 produced an average of 214\* – well below the maximum figure of 450\* established in strict

building codes. That's a 65% smoke reduction! The second product (B) with 0.3% FE-55 produced a 49% smoke reduction.

Start reaping your share of the big-city market with the help of Arapahoe Chemicals' smoke suppressant technology:

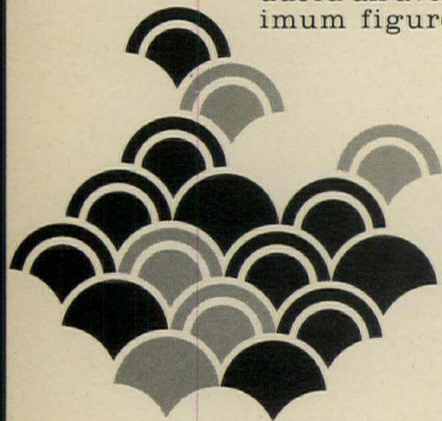
**FE-55** is a smoke suppressant for rigid and semi-rigid PVC systems.

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# Three ceiling problems, three Conwed solutions.



## 1. Rough treatment

There are actually two Conwed® solutions to this problem. Our ultra-hard Rock Face™ tile and panels provide both abuse-resistance and beauty and are ideal for unsupervised corridors and public places. Where abuse is heavy—such as a gymnasium—we offer an Impaction Ceiling System. It's designed to take a blow from a high flying ball, give with it, then snap back into place. It's U.L. fire rated too! Both of these solutions were introduced by Conwed.

## 2. Grime and grease

There are certain areas where cleanliness is crucial: kitchens, hospitals, laboratories, supermarkets. For these problem areas, Conwed makes the Metal Face Ceiling. The vinyl-coated, metal-clad surface resists penetration of dirt, moisture and odors. Even areas with concentrations of grease come clean with a sponge and mild detergent solution. The washable ceiling is another Conwed first.

## 3. High humidity

Conwed Ceramic Ceilings are designed to withstand high humidity and are resistant to heat and corrosive chemical fumes. They offer excellent acoustical control, a pleasing appearance and a two-hour U.L. fire rating. An obvious application is for swimming pools, but the Ceramic Ceiling is also appropriate for installation under outside canopies or soffits and in areas as diverse as kitchens and industrial plants.

# And as many more solutions as there are problems.

Conwed has been making ceiling products for over 50 years. We've had one basic way of doing things—isolate a need, and develop a product solution in a form contributing to interior design and

minimal maintenance. This approach has made Conwed a concept and product innovator. For more ceiling solutions, write Conwed Corporation, 332 Minnesota Street, St. Paul, Minnesota 55101.



**Conwed**

CORPORATION

*Ceilings that challenge comparison.*

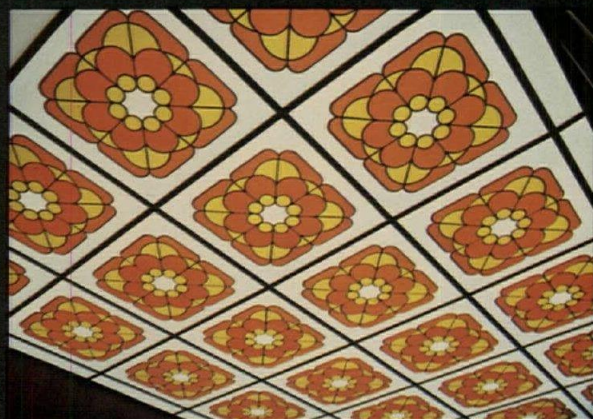
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# ENVELITE™

## "S" SERIES ILLUMINATED

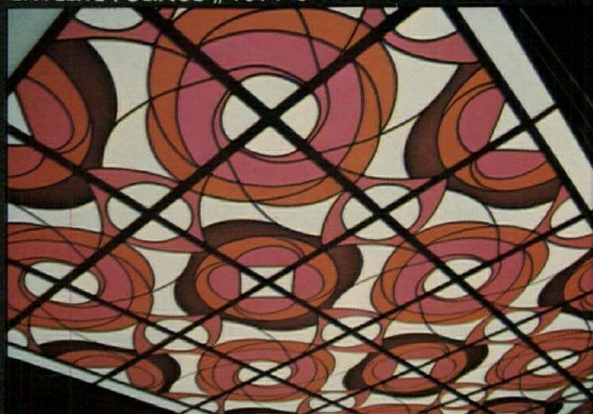
### 2' x 2' CEILING PANELS



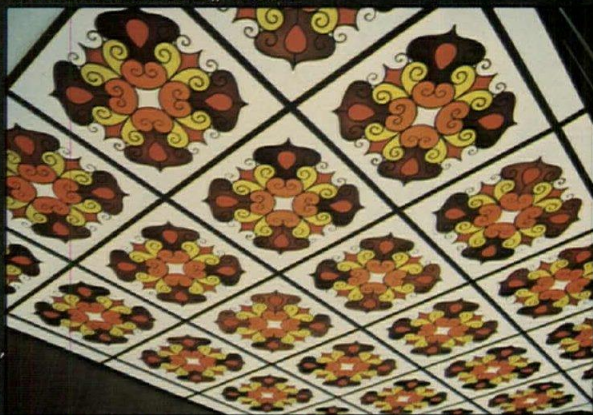
ENVELITE ROSETTE #1801 S



ENVELITE FOLIAGE #1814 S



ENVELITE FESTIVAL #1736 S



ENVELITE CANTINA #1717 S

ROSETTE

#1801 S

FOLIAGE

#1814 S

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CANTINA

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**4 New low-cost ways...**  
TO CREATE BEAUTIFUL CEILINGS. WRITE TO:

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continued from page 94

## WOOD & PLASTICS

**D38 CEDAR SIDING** / Cedar siding and paneling installation recommendations and product specifications are presented in a six-page booklet. Discussed are properties of insulation, weather resistance, weight and flame spread rating. Text and drawings cover application and nailing recommendations for various patterns of siding and paneling. / Western Red Cedar Lumber Assn.



**D39 MARINE WOOD** / A brochure contains 10 color pages devoted to "K-33" pressure-preservative-treated wood for all offshore and onshore construction. Also included in this brochure are retentions, marine borer tests and usage charts supplemented with diagrams for technical assistance. / Osmose Wood Preserving Co.

**D40 PRESSURE-TREATED WOOD** / This four-color guide includes addresses of all Society of American Wood Preservers members, their products and services, and specifications and recommendations for all types of water-borne and oil-borne preservatives and their minimum net retention levels. / Society of American Wood Preservers, Inc.

## THERMAL/MOISTURE PROTECTION

**D41 BUILT-UP ROOFING** / Seven kinds of built-up roofing materials, roof insulation boards and roof taping systems for the three climatic areas are outlined in a 36-page brochure, entitled "Fiberglas Reinforced Built-Up Roofing Systems." It contains reference specifications, design factors and general requirements for the proper installation of the materials. Application procedures for insulated decks, non-nailable decks and *Fiberglas* insulated decks are explained in detail and 14 procedures for flashing situations are outlined. / Owens-Corning Fiberglas Corp.

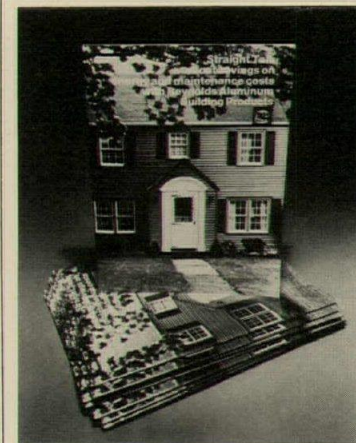
**D42 ELASTOMERIC ROOFING** / A single component, one step, cold applied, spray-foam-grade elastomeric roof coating is described in a two-color brochure. Designed specifically for rigid urethane foam insulation, the brochure explores the advantages the material offers to provide the protection that rigid urethane foam requires. / Contech-Sonneborn.

**D43 FACING** / A 12-page brochure illustrates architectural designs with *Shadowform* extruded aluminum hardcolor facing. *Shadowform* regular, bold and random profiles are shown in Permanodic bronze and black anodized finishes. Also shown is a fascia combining a sand-like texture with aluminum. Specifications and basic details for both 4½- and 9-in. wide shapes are included. / Kawneer Architectural Products.

**D44 FACE PANELS** / A set of single-page catalog sheets describe the firm's line of face panels, liner panels, insulating panels, panel systems, flashings, and trim. The literature details each type of interior and exterior panel offered, giving complete general specifications, architectural specifications, and dimensional drawings. Additional sheets provide information on standard colors, and finish specifications. / Crown Panels Co.

**D45 METAL WALLS** / An eight-page energy conservation report titled "Think of U & \$" includes a documented report showing a comparison of annual heating costs between a typical building with concrete block walls and the same building with the company's insulated metal panel walls. Heat loss and energy consumption are tabulated in Btu's and actual dollar cost comparisons based on calculated energy consumption in terms of KWH of electricity, gallons of oil or cubic feet of gas are shown. A table shows U-values of typical wall materials. / Elwin G. Smith Div., Cyclops Corp.

**D46 INSULATION** / "How To Conserve Energy In Commercial, Institutional and Industrial Construction," is a 20-page manual and work pad to help building owners, architects and contractors calculate how much insulation is required to meet upgraded insulation standards. / Mobay Chemical Corp.



**D47 ALUMINUM PRODUCTS** / The 18-page brochure features residential aluminum building products, and provides information about the energy saving features offered by some of the products. / Reynolds Metals Co.

more literature on page 120

For more information, use inquiry card. \*Included in 1976 Sweet's Catalog File(s).



*It's hard to  
look good in a  
men's room!*



Or in a hallway.

Or in a lobby.

Or anywhere the wallcovering you specify has to stand up to heavy traffic and soil.

That's why you should take a good look at BFG Koroseal® Vinyl wallcovering coated with duPont Tedlar\* PVF film.

It won't chip. It won't crack. It won't fade.

The tough Tedlar PVF film acts like an invisible shield. Ballpoint pen, nicotine, crayon, and shoe polish, clean off easily at any time. In medical installations, silver nitrate and merthiolate also wash off.

And whether your customers clean with water, mild acids,

alkalies, acetone or other ketones, BFG's Koroseal wallcovering is virtually impossible to stain or discolor.

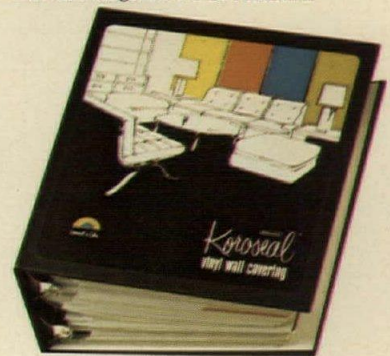
B.F. Goodrich Koroseal Vinyl, coated with Tedlar PVF film is your ideal choice for problem areas. It lasts. It's easy to maintain. And you'll find lots of striking colors, patterns and textures to pick from.

Just ask your local BFG distributor to show them to you. And his wide variety of uncoated Koroseal and Korolite™ wallcoverings, too. Or write B.F. Goodrich General Products Co., P. O. Box 657, Marietta, Ohio 45750.

No matter where you use them,

Koroseal Vinyl wallcoverings keep looking good. And that makes you look good.

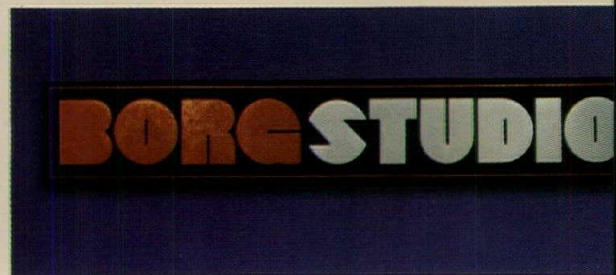
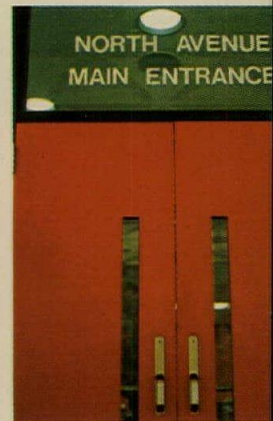
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**B.F. Goodrich**

**Koroseal Vinyl  
Wallcoverings**





## AFTER YOU DESIGN THE "WHAT" LET US HELP YOU DESIGN THE "WHERE."

Our staff can begin work on your signage system as early as the building blueprint stage. We start with a survey/analysis: (1) to evaluate the needs of the users of your building and; (2) to determine your requirements for a system that complements the color, textural and spatial themes you have created.

We analyze all exterior and interior traffic routes—parking lots, building approaches, entry ways, hallways, elevators, etc. Plus secondary routes such as connecting corridors, alleys and aisles. We then develop a coordinated signage system for the entire complex.

Once the graphic designs are approved by you and the components specified, we proceed to fabrication and eventual installation.

If you create your own signage graphics—as many architects do—we can join your project at the fabrication phase and follow through from there.

Our design and production capabilities encompass every type of architectural signage: simple vinyl legends; damage-resistant NOMAR fiber-reinforced polyester panels; post and panel assemblies; plaque signage of metals and plastics; metal letters in a complete range of styles, sizes and finishes; and fiber-reinforced polyester monoliths, opaque or illuminated.

The design latitude of these materials is practically unlimited, whether we work from your graphics or ours.

Matthews. For total identification systems. Let us send you our comprehensive catalog. Write to Jas. H. Matthews & Co., 1315 West Liberty Avenue, Pittsburgh, Pa. 15226.

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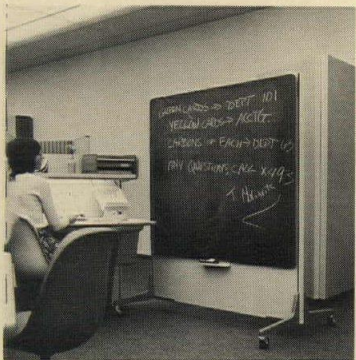


# uci10

# specialties



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## CHALKBOARDS & TACKBOARDS

**463 NO-DUST WRITING** / Called "Rite-On, Wipe-Off," the system combines porcelain-on-steel writing boards and dry-marker pens. Writing can be erased with a dry cloth or regular felt eraser. Panels also double as bulletin boards and as projection screens. / AllianceWall Corp. A\*

**464 MOBILE CHALKBOARD** / A panel-hung chalkboard is easily moved when a wheel assembly is connected to the panel. As part of the Action Office open plan furniture system, the mobile unit is compatible with all Action Office components and can accept display units and tackboards. / Herman Miller, Inc.

## COMPARTMENTS & CUBICLES

**465 MARBLE COMPARTMENT** / "Marblstal" is prefabricated with all necessary hardware, in standard sizes. / Georgia Marble Co. A\*



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**466 TOILET COMPARTMENTS** / The "Tempo Line" partitions are available in floor-mounted, ceiling-hung, and overhead braced designs in a standard selection of six colors and woodgrain designs. Finished faces are constructed of FORMICA melamine. / Ampco Products, Inc.

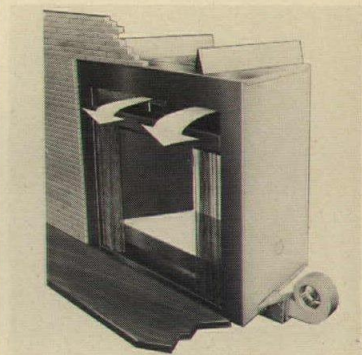
## FIREPLACES

**467 FIREPLACES** / A line of freestanding fireplaces in three configurations includes three styles in sizes ranging from 28 to 40 in. wide, and in six colors. Wood-burning units are adaptable to gas or electric log operation. / Heatilator Fireplace. A, L, D\*

**468 PARLOR STOVE** / The stove is all castiron, from original hand-carved patterns. The stove as shown is 31 1/4 in. high. It is available without base and legs (22 1/4 in. high) for mounting directly on a non-combustible hearth. / Washington Stove Works.



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**469 ELECTRIC FIREPLACE** / A freestanding, electric fireplace comes with all connecting parts, a 6-ft electric cord and an electric log set. The fireplace can be installed to a 120-volt electrical outlet. A 1500-watt heater generates up to 5100 Btu. / The Majestic Co.

**470 RADIANT HEAT UNIT** / This wood-burning fireplace circulates heated air with a power circulator fan that draws cool air in near the base of this zero-clearance fireplace. A switch gives "off-on" control of the circulator. / Western Fireplaces.

## FLAGPOLES

**471 FLAGPOLES** / Poles are equipped with a hidden slim line tilting base and an anchor system that allows easy installation and alignment. The halyard system is internal. All exposed surfaces have a clear anodized finish. / Dominion Aluminum Fabricating Ltd. A\*\*

CHALKBOARDS & TACKBOARDS  
COMPARTMENTS & CUBICLES  
FIREPLACES  
FLAGPOLES  
GRILLES & SCREENS  
IDENTIFYING DEVICES  
LOCKERS  
POSTAL SPECIALTIES  
PARTITIONS  
SPECIALTY MODULES  
STORAGE SHELVING  
TELEPHONE ENCLOSURES  
TOILET & BATH ACCESSORIES





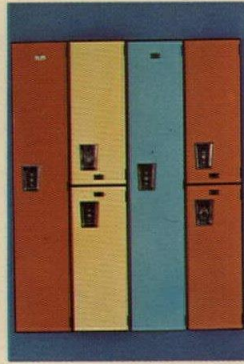
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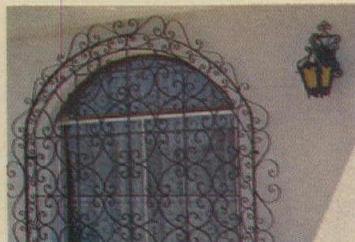
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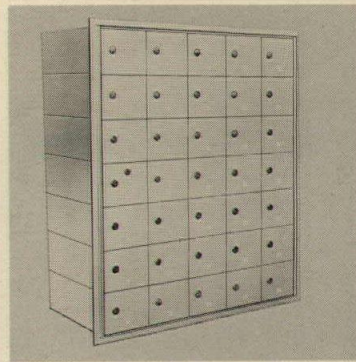
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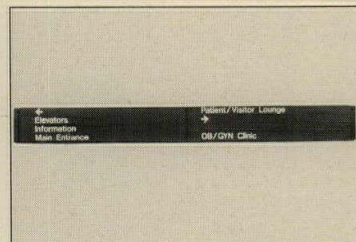
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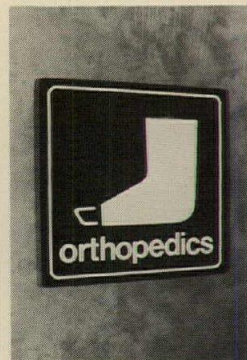
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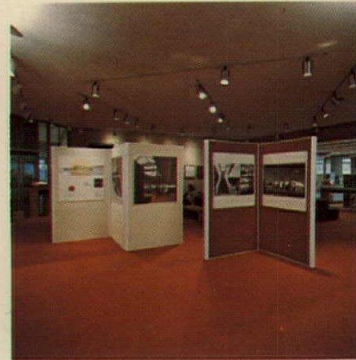
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**472 FLAGPOLES** / "Patriot" models in six heights of tapered aluminum alloy, are seamless and available in natural or colored finishes. Four base styles provide sturdy mountings. A gold anodized ball is standard; eagle and cleat cover are optional. / Sterner Lighting Systems Inc.

### GRILLES & SCREENS

**473 WROUGHT IRON** / All designs are custom and available as windows, fences, railings, shutters, columns, room dividers, wall systems, doors, gates, window boxes etc. for exterior or interior. / The Forge. A\*

### IDENTIFYING DEVICES

**474 QUICK-SIGN** / A do-it-yourself interior sign system is available in four sizes, with frames that pop off for assembly of flat graphics, type, photos or illustrations. / Matthews Identification Systems. A\*

**475 HELVETICA** / "Quik-Align" lettering is made of self-sticking vinyl for indoor/outdoor use. It is self-aligning and available in white or black in 1- to 6-in. characters. / W. H. Brady Co.

**476 LETTERS, GRAPHICS** / A newly expanded line of sculptured letters cast in special resins includes over 30 styles and many different sizes. Self-adhesive vinyl letters and architectural and directional signage, stamped on acrylic sheet, are also available. / Art Products Co.

**477 SIGNAGE SYSTEM** / Used primarily in corridors where directional information is needed, the signage system consists of milled end frames applied to hardboard covered by phenolic. *Hedlock* fasteners allow the engraved directional panels to be easily replaced. / Woodtone Signworks. A\*

**478 POST & PANEL** / Post and panel signage is constructed entirely from aluminum using patent-pending post and inter-locking panel extrusions. Signage is available illuminated and non-illuminated, and the standard baked enamel finish carries a five-year guarantee. / Andco Industries Corp. A,D\*

**479 DIRECTORY** / A semi-recessed or surface mounted changeable-item directory features item inserts that are rigid to prevent bowing and light leakage. Over-all size and number of inserts are variable, and many face colors and framing finishes are available. / Copley Mfg. Co.

**480 PICTOGRAPHICS** / More than a hundred new subjects are presented in a new and comprehensive selection of "Pictographics." / The Letter Factory.

### LOCKERS

**481 LOCKERS** / Flush-front, low-decibel "Mondrian" lockers are varied rectangles of solid color. Lockers, specially equipped for quiet closing, are available in single, double and triple tier, two-person and duplex groupings. / Republic Steel Industrial Products Div. A\*

### POSTAL SPECIALTIES

**482 MAIL BOX** / The "Aristocrat" horizontal mail box has solid 1/4-in. aluminum doors and a concealed hinge and frame. It is available in front and rear loading models with 6- by 6- by 15-in. deep compartments. / American Device Mfg. Co. A\*

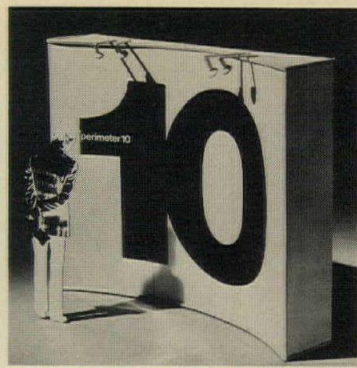
### PARTITIONS

**483 CONNECTOR SYSTEM** / The system for the company's "SHO-WALL" portable panels now allows more stable connection of panels. Each panel is a freestanding self-contained unit. / Brewster Corp. A,D\*

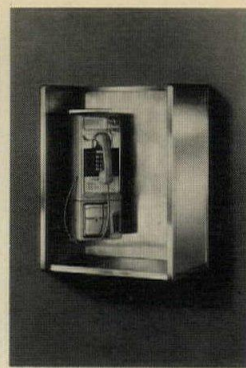




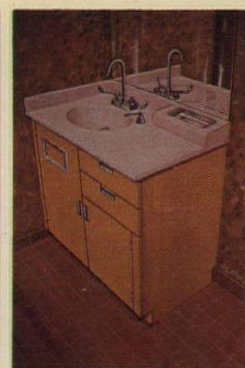
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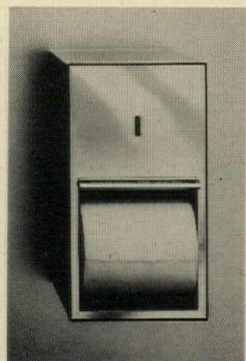
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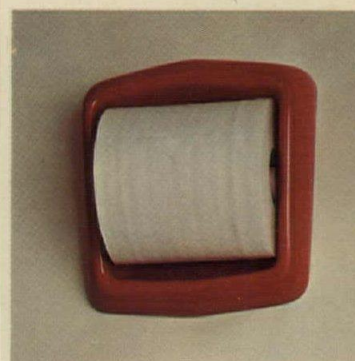
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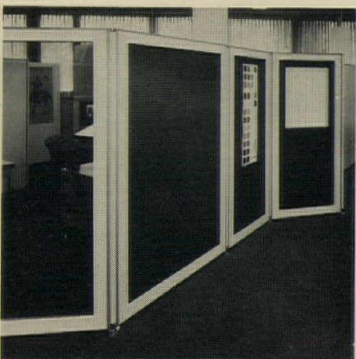
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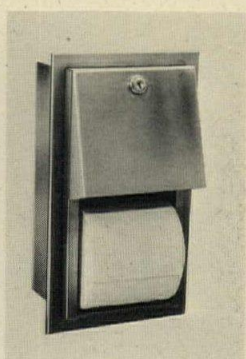
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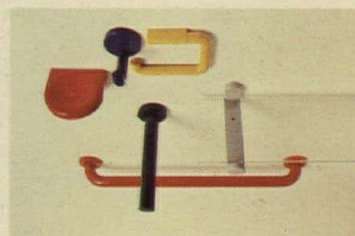
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**484 PORTABLE PARTITIONS** / "Econoline" portable partitions include panels that can be used as room dividers or to create complete rooms. "Econoline" works with solid or suspended ceilings, carpeted or hard surface floors. A variety of finishes and accessories is available. / Kwik-Wall Co. A\*

**485 DOOR PANEL** / An addition to the open plan Action Office furniture system is designed to meet needs for greater levels of visual and acoustical privacy. It comes as shown in a natural light vinyl or in oak veneer. The side panel is also available in clear plastic. / Herman Miller, Inc.

**486 ACCENT PANELS** / Integral accent panels provide color and texture, plus hanging capacity for work surfaces and storage components. A Mocha Beige steel frame is offered in 14-, 20-, 32-, and 46-in. widths, in seated and standing heights. / E. F. Hauserman Co.

## SPECIALTY MODULES

**487 EXHIBIT SYSTEM** / "Perimeter 10" offers a self-contained basic 10-ft exhibit. Made of fire-retardant paperboard with a supporting plastic frame, it comes with all necessary hardware; lighting is optional. / Perimeter Exhibit Systems.

## STORAGE SHELVING

**488 WOOD SHELVING** / Prefabricated wood storage shelving is adjustable on 2-in. increments without tools. It is suited for use in institutions, offices and warehouses. / Lundia, Myers Industries, Inc.

## TELEPHONE ENCLOSURES

**489 TELEPHONE BOOTH** / A compact, acoustical telephone booth for indoor use features inner and outer shells of heavy steel with a dark bronze baked enamel finish. A stainless steel interior is available on special order. The booth is adaptable to several types of mounting. / Acoustics Development Corp. A\*

**490 PHONE BOOTH** / A stainless steel indoor acoustical booth can be mounted at wheelchair height to be used for regular walkup calls. Colored, patterned or woodgrain plastic laminate side panels are available. / Acoustics Development Corp.

## TOILET & BATH ACCESSORIES

**491 TISSUE DISPENSER** / The chromium steel Model No. 201 multi-roll toilet tissue dispenser is offered at the lowest price for this type of dispenser, according to the company. / RAR Co.

**492 TWIN ROLL DISPENSER** / An 18-8 stainless steel recessed twin roll toilet tissue dispenser, No. 720, is designed to hold two 1500 sheet rolls of tissue up to 5½-in. in diameter. An extra roll remains in upper compartment and lowers automatically. Unit frame recesses to any depth from 1½ to 4 in. / American Dispenser Co., Inc. A\*

**493 ACCESSORY CONSOLE** / A line of plastic laminated cabinets for patient rooms includes all necessary washing accessories as well as drawers for the patient's use and a storage area for bedpans, etc. / RAR Co.

**494 BATH ACCESSORIES** / In brilliant colors of red, orange, yellow, blue, green, brown, bone or white, accessories include soap holder, toilet tissue holder, tumbler holder, combination sponge/soap holder with grab bar, or small bidet soap holder. / Hastings Tile & "Il Bagno" Collection. A\*

**495 BATH ACCESSORIES** / Accessories in solid nylon designed for contract use are unbreakable and available in nine colors. Shown above are soap dish and towel rail in red; large wall hook in blue; toilet roll holder or towel ring in yellow; shelf bracket in grey; and a pole-type towel rail in green. / The Ironmonger.



continued from page 114

**D48 URETHANE ROOF** / "RX for Roofs: Urethane Board Roof Insulation," is a 20-page booklet that reports on currently available composite and laminated urethane roofing materials. Contents include application and fire safety information, suggested specifications, product details, and names and addresses of nine manufacturers. / Mobay Chemical Corp.

**D49 PLYWOOD SIDINGS** / A 28-page plywood sidings brochure highlights natural and prefinished textured panels; smooth-surfaced *Duraply* panels for painting; and stone-aggregate *Sanspray* siding. The range of options in a variety of groove patterns is supplemented with information on vapor barriers and insulation materials. / U.S. Plywood.

**D50 WATERPROOFING** / A new brochure describes the characteristics and uses of "Liquid Membrane" waterproofing material. This hot-applied rubberized asphalt forms a flexible, self-healing membrane that bonds positively to horizontal and vertical surfaces. / Uniroyal, Inc. A\*

**D51 BUILDING INSULATION** / A four-color booklet on urethane and isocyanurate products for building insulation contains tables of physical properties, insulation efficiencies and code test data on boardstock products. The 12-page booklet gives specifications for such aspects of building insulation as perimeters and subgrade floor slabs, cavity walls, masonry and concrete wall-gypsum wallboard or plaster systems, wood or channel-stud exterior walls, sandwich panel/curtain wall construction and metal siding backer-board. / The Upjohn Co.

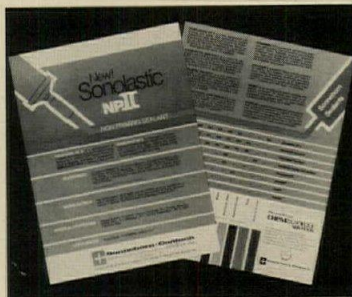
**D52 WALL CLADDING** / For industrial and commercial buildings, these factory-assembled, insulated steel panels consist of two walls of galvanized, finished steel bonded to rigid insulation. Data states up to 70 sq ft of wall area can be enclosed in a single application. A variety of exterior configurations, colors, finishes and insulation factors are available complete with standard and custom flashings. / HF Industries.

**D53 GYPSUM SHEATHING** / A four-page brochure describes "Triple-Sealed" gypsum sheathing and outlines product features and installation techniques for this low-cost structural sheathing that fits a variety of uses under exterior surfaces such as masonry veneer, wood siding, wood shingles, stucco and composition siding. / United States Gypsum Co.

**D54 ROOF/CEILING SYSTEM** / The cost and energy-saving benefits of *Formboard*, a lightweight, insulating, roof/ceiling board for poured-in-place roof decks are described in a new brochure. Charts detail thermal and noise-control properties and fire resistance. A "Roof Raiser's Guide" with U-value tables, shows how to calculate cost and energy savings in the three heating and cooling zones in the 48 contiguous states. / Owens-Corning Fiberglas Corp.

**D55 COMMERCIAL ROOFS** / "Plywood Roof Systems for Commercial Buildings," contains case histories on eight different roof systems. Case histories include design information and photographs on: heavy timber; wide-span bowstring truss; space frame; hyperbolic paraboloid; pre-framed panel; wide-spaced truss; fire retardant treated plywood over metal framing; and folded plate. / American Plywood Assn.

**D56 WATERPROOFING** / The catalog details products within the *Nervastral* line to answer various construction waterproofing needs. Featured are: (1) concealed flashing and membrane waterproofing products, as well as exposed flashing products; (2) liquid membrane waterproofing for concrete floors, slabs, vertical walls; and (3) prefabricated roof expansion joints. / Rubber & Plastics Compound Co. Inc.



**D57 SEALANT COLORS** / A two-page color card on the company's sealant line offers a brief description of each of the eight sealants with printed samples of the nine architectural colors that are available. The card is designed to be used as a pocket guide and color sample. / Sonneborn-Contech Inc.

**D58 INSULATION** / An illustrated catalog on the company's complete line of insulation products for utility, petroleum, chemical process and other industrial plants, includes tables, graphs and photos. It also discusses insulations for stainless steel and ECON, a method of determining the economic thickness of pipe and flat forms of thermal insulation at elevated temperatures. / Keene Corp., Insulation Div.

## DOORS & WINDOWS

**D59 SLIDER WINDOWS** / The product sheet highlights the removable sashes of the two- and three-light slider windows. Sashes can be lifted out completely for cleaning. It also explains that each "NuPrime" replacement slider window is custom measured and custom built of heavy extruded aluminum. / Season-all Industries, Inc.

**D60 COLD STORAGE DOORS** / Designed for quick reference, the catalog contains suggested guidelines and considerations in selecting cold storage doors with illustrations of door types and styles. Standard and optional features are listed, along with specifications, special notes and options on horizontal sliding, overhead rolling, vertical sliding, swinging and double acting cooler and freezer doors, both power and manually operated. / Jamison Door Co.

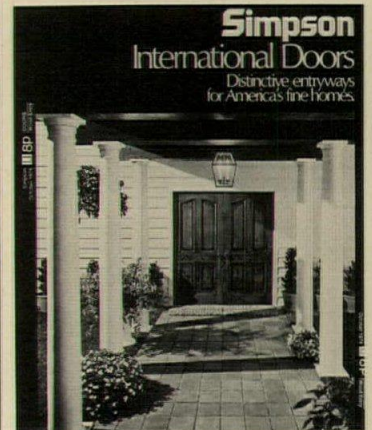
**D61 REVOLVING DOORS** / The company has issued scaled templates on its complete line of revolving doors. The templates on pressure-sensitive sheets can be used by architects and engineers for laying out photographic darkrooms, X-ray labs and "clean" rooms, computer data centers, and air-inflated buildings. The templates are available in one-quarter inch and one-eighth inch scale. / Consolidated International Corp. A\*

**D62 EXIT DEVICES** / A line of exit devices is described in an eight-page bulletin. Details and specifications are included on thin line (for narrow stile doors), rim, vertical rod, and mortise devices. / American Device Mfg. Co. A\*



**D63 SECURITY HARDWARE** / Security hardware and electronic components, from simple door alarm units to electronic signalling equipment to monitor multiple openings covering large areas, are described in a six-page brochure. The brochure lists the features and specifications of exit control locks, entry control systems, remote indicating panels, exit alarms, door switches and related equipment. / Detex Corp.

**D64 INDUSTRIAL DOORS** / Being revised for 1976 is the company's brochure on special doors including shielding doors, sound doors, crane doors, blast doors, security doors and anechoic and clean room doors. Vertical and horizontal sliding models are detailed, along with swinging types. / The Peelle Co.



**D65 ENTRYWAYS** / There are now 20 individually styled doors in this line, many with one-of-a-kind carved panels. Specifications for each are listed. / Simpson Timber Co.

**D66 INDUSTRIAL DOORS** / The eight page catalog, in addition to providing guidance for correct door selection includes drawings, specifications and photographs of power and manually operated doors for a wide variety of industrial applications. Descriptions of door controls, standard and optional components are also included. / Clark Door Co., Inc.

**D67 STEEL DOORS** / Steel doors and frames are described in a 12-page bulletin, including details on 1 3/8 and 1 3/4 in. thick doors, a line of knocked-down frame profiles and easy-to-install drywall frames. / Republic Builders Products Corp. A, I\*

**D68 FLOOR CLOSER** / An eight-page catalog includes details on floor closers and concealed overhead closers; door holders and stops; combination smoke detection/door holding/release/closing devices; and smoke detectors and electromagnetic door holder/releases. / Rixson-Firemark, Inc. A\*

**D69 VINYL MOULDINGS** / The company has published a new brochure on its "Duracote" line of vinyl wrapped wood mouldings and jamb, showing architectural drawings of the "Pin-flex," three piece adjustable jamb that adjusts from 4 to 6 1/2 in. The product is available unfinished or prefinished in three vinyl wood grain colors. / Duke City Lumber Co.

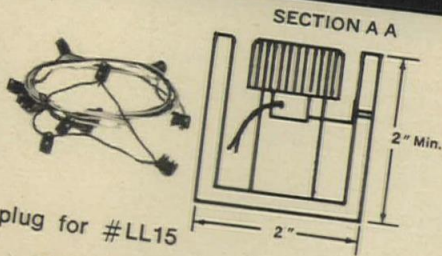
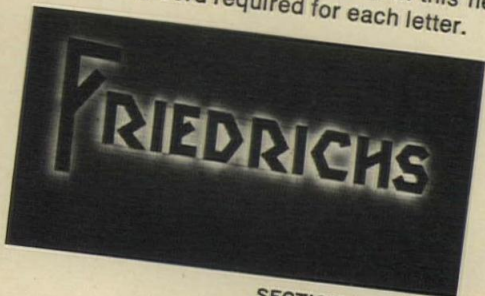
more literature on page 127



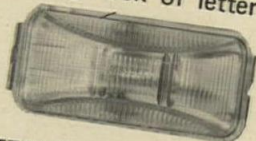
# letter-lites

... insured years of service • guaranteed 30,000 hours

Photo shows typical backlighting effect from Letter-Lites. The patented, weatherproof, shockproof, 10½ volt, incandescent lamps will render years of trouble free illumination at a fraction of the power cost of ordinary lighting. No glass to break . . . no costly transformers to replace . . . complete safety with 10½ volt power supply . . . years and years of service with the same lamps. Free estimates on your requirements in this new era of lighting. Note: 115 volt, 2 wire cord required for each letter.



Typical Letter-lite assembly showing back of letter



plug for #LL15

- FREE CATALOG - YEARS OF MAINTENANCE-FREE SERVICE  
- ANY SIZE TO YOUR REQUIREMENTS

**LAKE SHORE MARKERS INC. • ERIE, PA. 16512**

For more data, circle A50 on inquiry card

ADCO Acousti-Call® booth...

**SOAKS UP NOISE!**

Lets You Hear,  
Be Heard,  
Have Privacy...



Compact, attractive Acousti-Call 20-S booth lets you hear and be heard, permits conversational privacy in airy comfort. Fits in corners, against walls, in corridors or rest rooms. Acoustical blanket behind stainless steel interior soaks up sound and noise. Writing shelf.

Compact — quiet. Stainless steel ADCO 40-S Acousti-Call booth has no legs, takes no floorspace. No door, low maintenance.

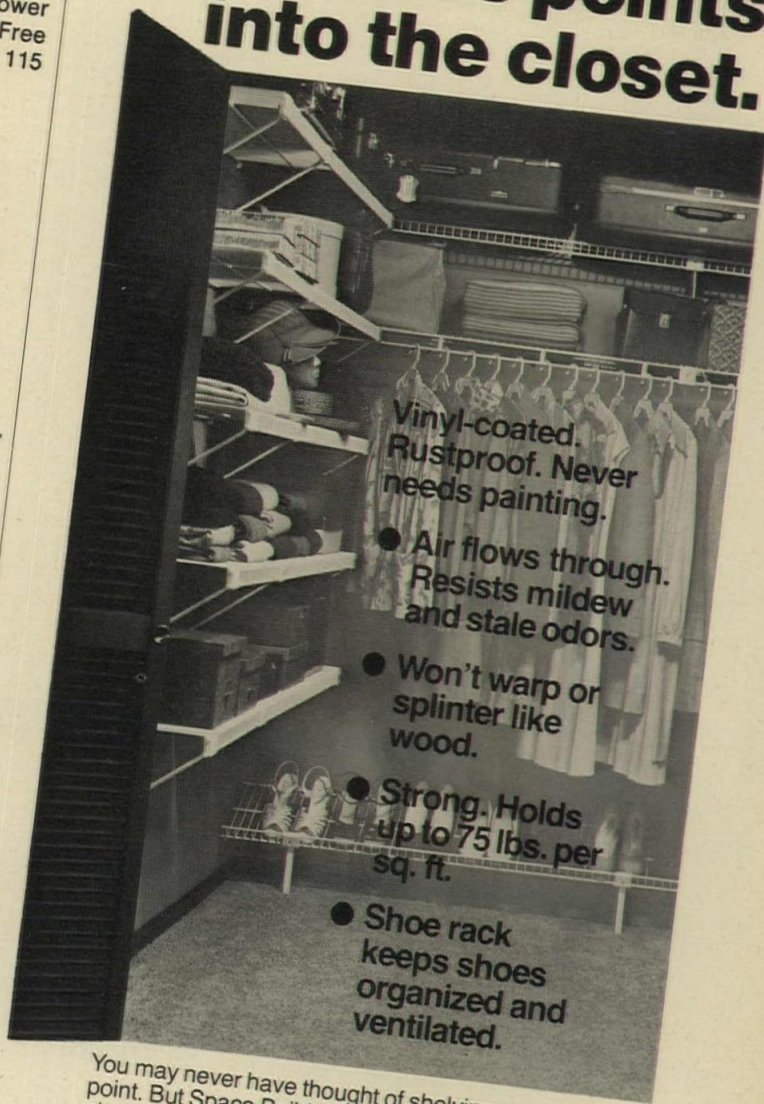
Send today for color brochures on ADCO and Burgess-Day acoustical booths.



**ACOUSTICS DEVELOPMENT CORPORATION**  
and its BURGESS-DAY DIVISION  
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Northbrook, Ill. 60062 Phone 312/272-8880

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## Let's put some real sales points into the closet.



Vinyl-coated. Rustproof. Never needs painting.

● Air flows through. Resists mildew and stale odors.

● Won't warp or splinter like wood.

● Strong. Holds up to 75 lbs. per sq. ft.

● Shoe rack keeps shoes organized and ventilated.

You may never have thought of shelving as a sales point. But Space Builder ventilated shelving is out to change that.

Developers tell us that Space Builder shelving becomes as much a plus in selling a condominium or home as other features usually thought of as "prestige".

There are plenty of advantages from your point of view, too. It goes up fast and lasts for a lifetime.

One man can put up as much as 300 feet a day, using our template system. That's six living units, considering 50 feet per unit. We custom cut to your specifications, and pack shelving and hardware per unit so there's no waste of time or materials.

No painting necessary, either. And there's practically no cleanup. In fact, Space Builder can be the last thing installed, even after the carpeting is down.

Let us give you a free estimate on your next project. Call Closet Maid Corporation, 904/732-8734, or write CMC, Suite 1510 P.O. Box 304, Ocala, Fla. 32670.

We figure that helping you sell more effectively is pretty good business for us, too.

**SPACE BUILDER**  
VENTILATED SHELVING

A Product of

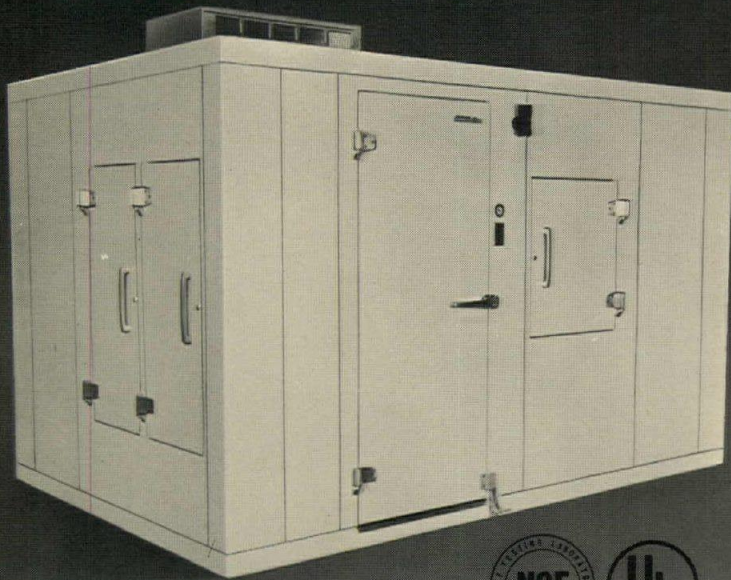
**Closet Maid Corporation**



For more data, circle A52 on inquiry card



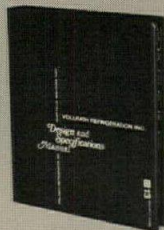
# IT FITS



## VOLLRATH WALK-IN COOLER/FREEZER

Name your dimensions and we'll provide a modular walk-in that fits . . . exactly. We use true, full-size dimensions, not nominals, making your specification work easier. Means more storage space, too. To insure a perfect fit, all components are factory tested. Vollrath walk-ins are fabricated in accordance with N.S.F. and U.L. standards, using the latest technology: foamed-in-place urethane insulation, posi-loc assembly, fully covered floors and ceilings, tight energy-saving joints and doors. Wide choice of options, finishes, self-contained or remote refrigeration systems to fit your needs and requirements.

Ask your Vollrath equipment specialist for details, or send for our comprehensive design/specification manual.



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THE VOLLRATH COMPANY • SHEBOYGAN, WIS.

For more data, circle A53 on inquiry card

## Give Us 30 to 87 Inches



### and Cervitor Will Give you Everything... Including the Kitchen Sink

When you are looking for economical little kitchens, CERVITOR is the name to remember. We build more than 23 standard models plus many variations.

Pick any color—texture—or warm hardwood veneer based on standard patterns. Your little kitchens can have a sink, cook-top or electric stove, refrigerator, storage space, overhead cabinets, and even width modifications to your exact specifications.

And CERVITOR delivers—when and where you want them—complete in every detail, ready to plumb-in, hook-up and use. No multiple purchases. No costly delivery delays. No storage costs. No lengthy installations.

Now it's up to you—we've given you the choice.

Specify Cervitor...  
The BIG Name in Little Kitchens

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South El Monte, California 91733  
(213) 443-0184 • (213) 283-0841

For more data, circle A54 on inquiry card



**HOUSES ARCHITECTS DESIGN FOR THEMSELVES** makes a rich and dazzling source of professional ideas.

In the profusely illustrated pages of this handsome volume you are taken inside and around the immediate grounds of 61 homes 61 architects built for themselves! Intriguing? Indeed. Idea-creating? Immensely so.

Just what kinds of houses do architects design for themselves? You'll get some of the answers to this open-ended question in this gorgeously illustrated volume showing the best ideas which 61 architects put into their very different individual houses. They talk about how they solved for themselves problems of site and location, budget (both great and small), the desire to blend traditional and contemporary approaches, renovating the city dwelling, meeting family needs, tastes, and personalities, designing special custom features, and finding solutions to a host of unique problem situations. Altogether, here's an architect's architecture book you don't want to pass up.

**HOUSES ARCHITECTS DESIGN FOR THEMSELVES**  
Edited by Walter F. Wagner, Jr., and Karin Schlegel. 9x12. 222 pp., WITH HUNDREDS OF ILLUSTRATIONS, 8 pp. in color.



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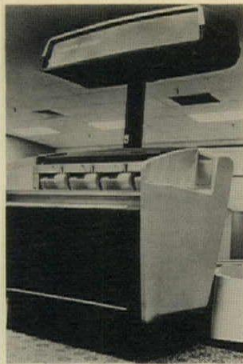
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## ATHLETIC EQUIPMENT

**508 BOWLING** / An automatic scorer is integrated into the entire "Astroline" system, with bowler identification panels built into the ball returns. "Gemini" seating, providing a choice of arrangement and color, is keyed to "Astroline's" two-lane concept. / Brunswick Corp. A\*

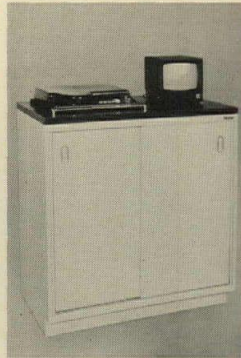
## BANK & VAULT EQUIPMENT

**509 DRIVE-IN BANKING** / The "Vistra System" consists of: bullet resistive vision windows; deposit receiver drawer; flush counter tops; closure panels; and tellers' comfort controls. The system is available in 30 variations, from two to four lanes of drive-in banking equipment. / Mosler Safe Co. A\*

**510 TELLER-ASSIST** / The "Accelerated Cash Terminal (DACT)" enables a bank teller to cash a check in one third the time manual methods require. The DACT is a variable currency and coin counting and delivery system that also helps reduce teller errors. / Diebold, Inc. A\*



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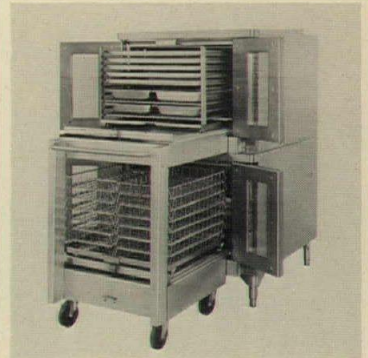
**511 AUTOMATIC BANKING** / "TABS Total Automatic Banking" has been extended to drive-in banking. Designed primarily for in-wall applications, the automatic banking unit places all system controls within easy reach inside the car, with video instruction screen. / Diebold, Inc. A\*

**512 SURVEILLANCE** / The "Photoguard TV Surveillance System" utilizes videotape in a closed-circuit television system for live action viewing; instant replay; quick hard-copy prints; and time and date display. / Mosler Safe Co. A\*

**513 WALK-UP BANKING** / The "TellerVue" walk-up transaction system shown here permits teller stations to be located in safe areas because business is conducted over a remote audio-visual network. Drive-in systems are also available. / Mosler Safe Co. A\*



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## FOOD SERVICE EQUIPMENT

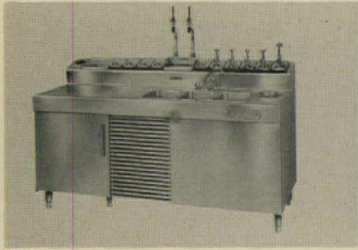
**514 DIETARY MODULE** / "Model 3136" contains convection ovens and a roll-in refrigerator. It accepts a variety of patient tray sizes. / Crimsco, Inc.

**515 CONVECTION OVEN** / The components make possible the fast, mechanized loading and unloading of complete convection oven loads, minimizing oven compartment heat loss during loading and unloading. The component package consists of roll carts, docking mechanism, tracks, dollies, pan carriers and wire baskets for foil pack lunches. / General Electric Co., Food Service Equipment Business Dept.

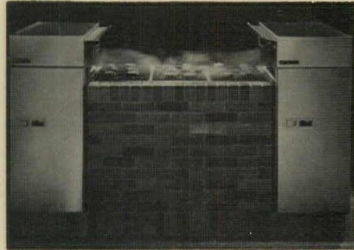
**516 MEAL SERVICE** / The "CYBEX 100" is a total system of equipment components, each mechanically and functionally coordinated to expedite patient meal tray assembly, distribution, service and sanitizing. Components permit its use in existing facilities. / Crimsco, Inc.

ATHLETIC EQUIPMENT  
BANK & VAULT EQUIPMENT  
FOOD SERVICE EQUIPMENT  
LABORATORY EQUIPMENT  
LAUNDRY EQUIPMENT  
LIBRARY EQUIPMENT  
LOADING DOCK EQUIPMENT  
MEDICAL EQUIPMENT  
RESIDENTIAL EQUIPMENT  
WASTE HANDLING EQUIPMENT





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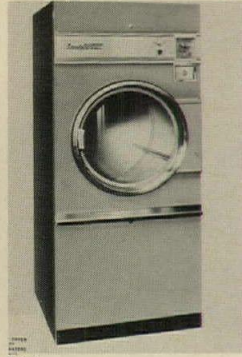
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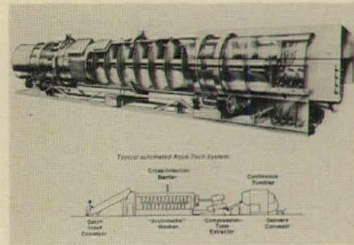
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**517 SODA FOUNTAIN** / The fountain includes a stainless steel draft station, syrup and chocolate pumps, crushed fruit containers and a dipper-well. The built-in water cooler has a capacity of 600 6-ounce glasses per hour and the self-contained refrigerator has 7 cu ft capacity. / Stanley Knight Corp. A\*

**518 NOURISHMENT CENTER** / Two modular pre-fabricated nourishment centers are designed for use in nursing homes, medical and dental practice buildings, institutions and other health facilities. The 57-in. center is freestanding and the 60-in. center is designed to be built-in. / Dwyer Products Corp. A\*

**519 MINI-KITCHENS** / A complete factory assembled kitchen unit, 42 in. wide, features a two-gas- or electric-burner range, refrigerator, one-piece stainless steel sink and counter-top, storage compartment, maple cutting board, and a choice of white, copper-tone, avocado or antique white finishes. / King Refrigerator Corp. A\*

**520 VENTILATION** / A proximity ventilation module is a complete power-exhaust and filter system built within a stainless steel cabinet and designed for floor level installation. Exhaust vents on the module are placed at the source of fumes. / Jenn-Air Corp.

#### LABORATORY EQUIPMENT

**521 FUME HOODS** / Designed to meet Federal and state regulations, these fume hoods offer controlled sound levels and minimum energy requirements, improved visibility through increased sash glass area, and improved baffle operation. / Hamilton Industries.

**522 LAB FURNITURE** / "Co/Struc" laboratory modules can support heavy equipment; provide work surfaces and storage; and accommodate electrical, mechanical and plumbing outlets. / Herman Miller, Inc.

#### LAUNDRY EQUIPMENT

**523 COMMERCIAL DRYER** / A self-service clothes dryer is designed for handling all washable apparel. The unit consists of two regular-size commercial dryers, each with a single-load capacity, stacked one on top of the other. / The Maytag Co.

**524 COIN-OP DRYER** / To combat energy costs, an electronic proven pilot ignition system burns pilot gas only on the running cycle. In addition, a push-to-start ignition control is designed to prevent re-ignition when only a part of the timed drying cycle is used. / Penn Controls.

**525 LAUNDRY SYSTEMS** / Only one employee is needed to load, wash, extract, and condition laundry with the constant 74-85 lb batches pacing plant operation. Water consumption averages 0.8 gallons per pound laundered. / Aqua-Tech Laundry Systems, Inc.

**526 WASHER-EXTRACTOR** / A washer-extractor with a 50-lb capacity employs reversing tumbler washing action. It offers rigid welded construction, stainless steel cylinder and shell, and triple shaft seals. The machine is 35½ in. wide. / Pellerin Milnor Corp. A\*

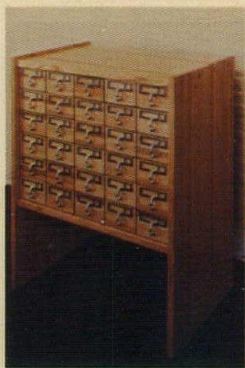
**527 WASHER-EXTRACTOR** / The 600-lb 60-by-66-in. "Cascadex" is a double pocket machine that loads into the bottom compartment from an overhead sling or hopper, and unloads from the top compartment. / American Laundry Machinery.

**528 WATER RE-USE** / Designed to reduce a laundry's water and fuel requirement for washer-extractors by one half, the system recycles rinse water. It also strips and uses heat from wash water that is not reusable. / G. A. Braun, Inc. A\*





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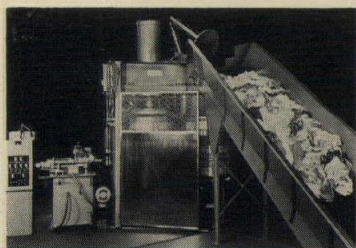
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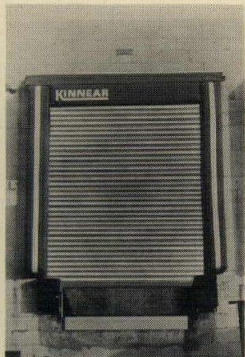
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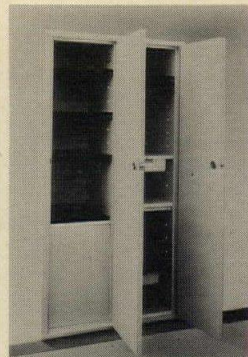
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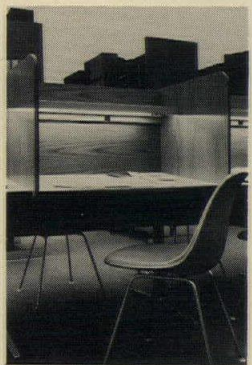
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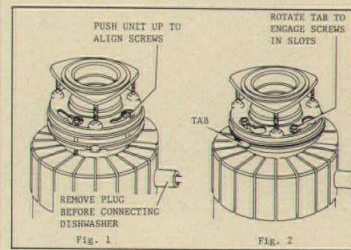
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**529 LAUNDRY SYSTEMS** / The "Washmaster" utilizes an automatic dispensing system for liquid detergents. The machine is equipped with a complete variety of built-in, push-button programs for the type of items being washed. The "Washmaster" is vibration free, and can be freestanding without bolting. / Fraser Laundry Systems.

**530 EXTRACTOR** / Easy to install because it requires no pit, the new "Carrousel" can handle up to 4000 lbs per hour. Loading, extracting and discharge occur within less than three minutes, without aid from an attendant. / American Laundry Machinery.

#### LIBRARY EQUIPMENT

**531 LIBRARY FURNITURE** / This freestanding library carrel can be panel hung or wall hung. Outfitted with a slanted surface, electrical outlets and task lighting, it is part of the Action Office Library Program. / Herman Miller, Inc.

**532 CARD CATALOG** / The solid oak card catalog unit has no visible dividers, so drawers fit flush. The cycloac drawers have solid oak fronts that are available with five different styles of label pulls. / John Adden Furniture.

#### LOADING DOCK EQUIPMENT

**533 DOCK SEAL** / A compression-type truck dock seal with an automatically adjustable "floating" design includes a weather guard that extends over the vehicle, a sloped top to hinder accumulation of water or snow, and a sealing flap that keeps the seal pressed tightly to the wall to retard air leaks. / Kinnear-Div., Harsco Corp. A,I\*

**534 DOCK LIFTS** / Installed on a pad, this model "LS4-50W" dock lift is installed at a 45 degree angle to the building for efficient product flow. This 4000-lb capacity model has a 72-by 96-in. platform with safety rails. / Southworth Machine Co.

#### MEDICAL EQUIPMENT

**535 WHIRLPOOL** / The sit-down tub with a door near the floor is now available with an optional whirlpool unit for hospital or nursing home use. Lightweight, and portable, the whirlpool conforms to UL codes and is equipped with a 50 gpm pump. / American Sterilizer Co.

**536 NURSERVER** / A non-contaminating method for supplying a patient's room with medication, food tray, clean linen, bedpans, etc., and removal of all disposables, the unit has 1½ hour fire rating. The cabinet is ventilated; doors are baked enamel, mounted on full length stainless steel hinges. / Accessory Specialties Inc. A\*

**537 MEDICAL WALL** / Medical walls are designed for use in general patient care as well as CCU/ICU areas. Internal wiring and piping is done at the factory to meet all codes and standards. The panels are fabricated of vinyl-clad steel. / Sorgel Electric Corp.

#### RESIDENTIAL EQUIPMENT

**538 CLEAN-UP TRIO** / This labor-saving threesome includes a five-cycle dishwasher, a continuous-feed disposer and a trash compactor. The company's Contract Sales Department offers them in white, avocado, gold or coppertone. / Sears, Roebuck and Co. A,L\*

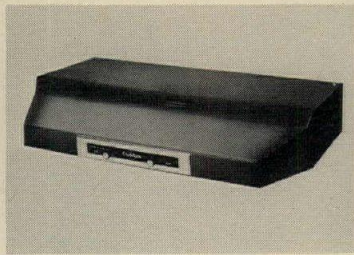
**539 GERMAN CABINETS** / This line features: fronts of high-pressure plastic laminates with recessed grip-bars of anodized aluminum; concealed, self-closing hinges; and drawers with ball-bearing glides. Body construction is particleboard with a melamine plastic finish. / Tielsa International Kitchen Technique.

**540 WASTE DISPOSER** / One assembles the sink flange into the mouth of the sink, lifts the disposer model into position and turns the supporting ring to engage three studs into the mounting flange key slots. / General Electric Co. A,L\*

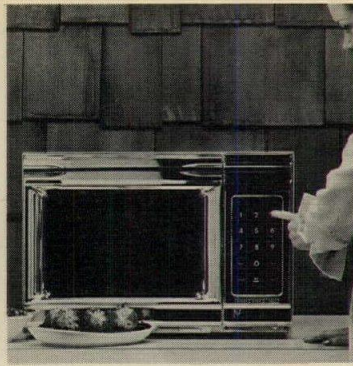




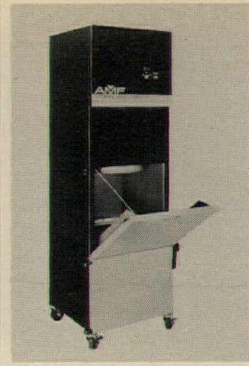
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**541 GAS RANGE** / An energy saving pilotless gas range that can save 10-50 per cent on cooking fuel bills features an automatic electric ignition system for top burners and the oven broiler burner. The range has bright chrome front and top trim. / Tappan Appliance Group.

**542 COUNTER WARMER** / The "Counter/Warmer" unit is a 16- by 20-in. combination glass-ceramic food preparation surface, where foods may be cut, and a warmer unit, designed to hold foods and beverages at serving temperatures. / Corning Glass Works.

**543 MICROWAVE OVEN** / A countertop microwave oven senses the internal temperature of the food and turns off automatically at the proper time. The "JET90" has a 1.3 cu ft capacity. / General Electric Co.

**544 RANGE HOOD** / Infinite speed/solid state controls are new features of this 1976 line. All models are available in major appliance colors, have totally enclosed light, removable filters, and all are UL listed. / National Industries Inc.

**545 CABINETS** / "Mountain Oak," an economy-oriented kitchen with the feel of hand-hewn wood, features oak drawer fronts and doors. Drawers ride on nylon rollers, and are lined with vinyl. / Boise Cascade Kitchen Cabinet Div.

**546 DISPOSERS** / Called "Easy Mount," the unit cuts hanging time by at least 50 per cent, and permits rotation of disposer to align with plumbing. It has a stainless steel grind chamber, cast iron drain chamber, and reversing action. / Hobart Corp.

**547 MICROWAVE OVEN** / The "Touchmatic" Radarange microwave oven, model RR-6W, has a built-in solid-state computer that eliminates conventional timers and controls. / Amana Refrigeration, Inc.

**548 RANGE HOOD** / The unit accommodates any of 10 power units for interior and exterior mounting with CFM range of 185 to 1000. Complete housing, solid state speed control, and four sizes are offered. / NuTone, Div. of Scovill. A\*

**549 TRASH COMPACTOR** / The product converts from freestanding to under counter use, and features a ½-hp motor, enclosed power pack, electrical interlock, and triple drive ram. An all-welded, "U" shaped steel frame rigidizes construction. / Hobart Corp. A,L\*

## WASTE HANDLING EQUIPMENT

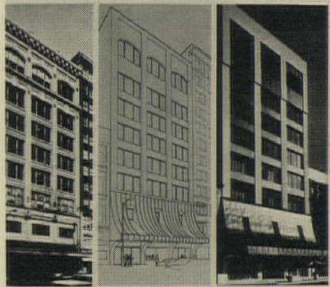
**550 SOLID WASTE SYSTEMS** / Model "AP-Plus 1" compacts waste at 10,000 lbs, requires 4.7 sq ft of floor space, and has a ½-hp 115v, 15 amp motor. Exterior is vinyl clad steel; the interior is stainless. For safety, it compacts only when the chute door is closed. / AMF Solid Waste Systems.

**551 COMPACTOR** / A new size of chute-fed waste compactor in the "Pollution Packer" line is designed for commercial buildings with waste disposal chute systems. The compactor includes automatic controls for the complete cycle, feeding, compaction and ejection. / The Tony Team, Inc.

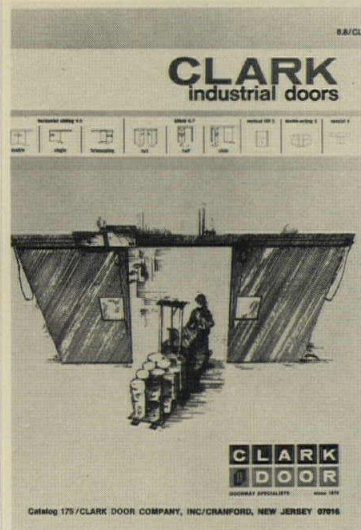
**552 COMPACTOR** / New options enable users of the "COMMANDER 150" compactor to dispose of their solid waste in plastic bags or from a reusable container. Compaction is to 1/20th of original bulk. / Command Products, Div. of Owatonna Tool Co.



continued from page 120

Remodeling  
with Kawneer

**D70 REMODELING** / Text of the 12-page brochure explains why remodeling an existing building is often more economical and more desirable than new construction, and a dollars-and-cents section uses figures gathered from case histories to outline the significant increases in sales and profits possible after storefront remodeling. The article also discusses typical costs of storefront remodeling, methods of financing, and tax advantages. / Kawneer Architectural Products.

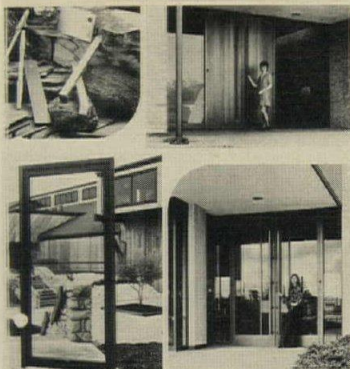


**D71 ACOUSTICAL DOOR** / A bulletin features a simplified chart method of identifying any specific noise problem and selecting the right STC rated door to correct the problem. The four-page, illustrated bulletin in addition to providing specifications, drawings and descriptions of this line of industrial acoustical doors, includes a chart showing how to determine cumulative noise exposures. / Clark Door Co., Inc. A, I\*

**D72 BYPASS DOORS** / A catalog and installation drawings for conventional type by-pass doors from 3/4 to 1 3/4 in. thick also includes a line of hardware for bi-fold doors, room divider hardware, pocket door hardware, and pre-built pocket door frames. / L. E. Johnson Products, Inc.

## Aluminum Entrances by Kawneer

A guide to choosing the right entrance system



**D73 ENTRANCE SYSTEMS** / Standard and architect-designed swing entrance systems are described in a 28-page color brochure. Text offers practical guidance on entrance zone considerations such as the type of building, climate, traffic flow, and appearance. It also covers selecting proper hardware to make a fully functional entrance system. / Kawneer Architectural Products.

## FINISHES

**D74 ACOUSTICAL WALL SYSTEMS**

/ A color manual gives details on installing five different types of "Vicra-coustic" sound-control panels, all of which can be finished with any pattern, any color "Vicrtex" vinyl wall-covering. Sound-control data and suggested specifications are also included. / L. E. Carpenter and Co.

**D75 PLYWOOD PANELING**

/ The 16-page, four-color catalog is meant to guide specifiers in the selection of custom veneers, finishes and panel core components. In addition, other hardwood panels, new softwood lines and the latest print and embossed print lauans are featured with examples of wood tones and colors available. A comprehensive fire classification table and details on the wide variety of fire-retardant panel constructions facilitate architectural choices. / U.S. Plywood.

**D76 CARPET ADHESIVE**

/ The catalog provides information on adhesives for carpet and resilient floors, for walls and general use. / E. T. Barwick Mills.

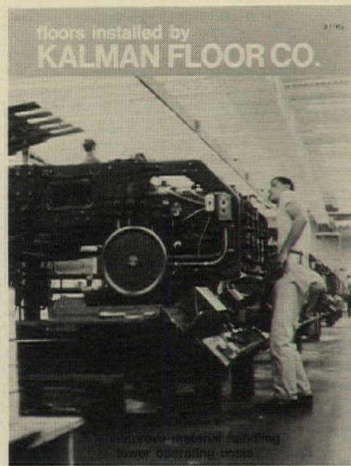
**D77 FLOORING**

/ The "Fashions in Floors" 24-page, four-color catalog shows the entire line of the company's resilient tile products: solid vinyl, vinyl asbestos, self-adhering tile and asphalt. / Kentile Floors Inc.

**D78 WALL COVERINGS** / In a review of 20 years of sustained buying habits by architects and interior designers, the company has assembled a series of the most popular designs still in steady demand. Introduced as "A Reference Book: Murals" and "A Reference Book: Side-walls," the two books will offer a capsulated history of wall coverings by the company. Murals and side-wall patterns which pre-date the latest company collections make their "reappearance" in new colorways and printed, for the first time, on such grounds as gold mylar and buckskin vinyl, among other standards. / The Jack Denst Designs, Inc.

**D79 STEEL COATING**

/ The literature describes *Environ III* coating, a water-base coil-coating system that includes finish coats, primers and backers and made exclusively for galvanized steel. Designed to comply with most existing air pollution and heavy metal legislation, *Environ III* coatings are available in medium gloss finishes in a range of colors. They are formulated for two-coat applications. / PPG Industries. A, I\*

**D80 INDUSTRIAL FLOORS**

/ The 12-page illustrated brochure describes how 5000 to 15,000 sq ft of abrasion resistant concrete floors are mass produced on the job. The vibratory absorption process is a deferred concrete topping applied on a base slab. This technique is said to produce a dense, durable, cleanable and self-polishing floor. / Kalman Floor Co., Inc.

**D81 ACOUSTICAL PRIVACY**

/ "Achieving Acoustical Privacy in the Open Office" is a design guide containing both design considerations and specifications, as well as appropriate technical data. / Owens-Corning Fiberglas Corp.

**D82 CARPET INSTALLATION**

/ An eight-page carpet installation specification guide describes tackless strip, metal and vinyl mouldings, tapes and adhesives. / Kinkead Industries.

**D83 FLOORING PRODUCTS** / The 16-page catalog contains full-color illustrations of all colors and patterns in vinyl asbestos floor tile, asphalt floor tile, feature strip, and cove base. Also included is general information on sizes, gauges, uses, installation, light reflectance values, and brief specifications. / Azrock Floor Products.

**D84 PATTERNED CARPET**

/ A color brochure describes the "Points East" collection of four patterned carpets made of 100 per cent nylon with a cut-pile Saxony texture. The brochure shows the carpets in installations and complete color lines (seven colorations in each pattern). Specifications and a list of typical installations are included. / Cabin Crafts Carpets, West-Point Pepperell Carpet & Rug Div.

**D85 GYM FLOOR MANUAL**

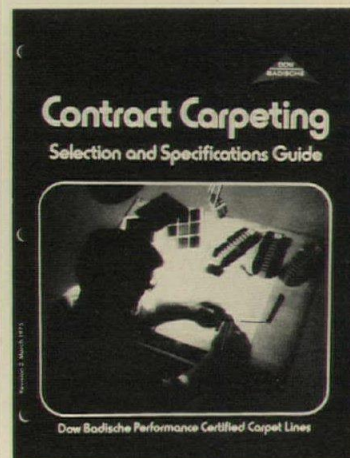
/ A revised and updated gym floor manual includes the company method of refinishing a gym floor with *Seal-O-San*, and reviews other alternate methods of refinishing various conditions of flooring. The manual also includes directions for lining the gym. / Huntington Laboratories, Inc.

**D86 LATH**

/ A technical data file describes how with high moisture resistant properties, APB lath is especially suited for exterior stucco and/or curtain-wall work, as well as for ceramic tile installations. / The Bostwick Steel Lath Co.

**D87 RESIN-BASE FINISH**

/ *Kynar 500* polyvinylidene fluoride resin is a base for high-performance finishes made by several paint formulators. Samples of commercial, industrial and monumental structures coated with a *Kynar 500* based finish are highlighted, and a section of the booklet lists technical information. Also included is a listing of company sales offices throughout the United States. / Pennwalt Corp.

**D88 CONTRACT CARPETING**

/ "Contract Carpeting Selection and Specifications Guide" is a listing of the performance certified carpet lines by the company's carpet mill customers, showing a picture and all of the specifications necessary for carpet selection. / Dow Badische Co. A, D\*

more literature on page 144



# THE JAIME CHAIR

The comfort comes from deep within. It stems from the Harter Comfort Concept, so basic to the Jaime design. Attuned to the shape, mass, and move-

ments of real people. Offering effective support where needed, whether working or lounging.

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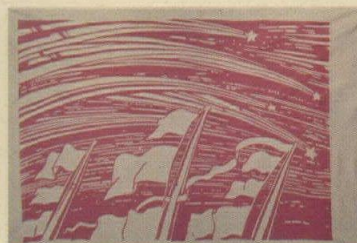


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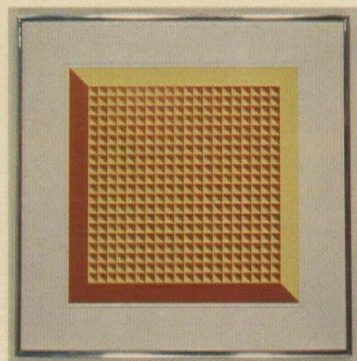
# furnishings



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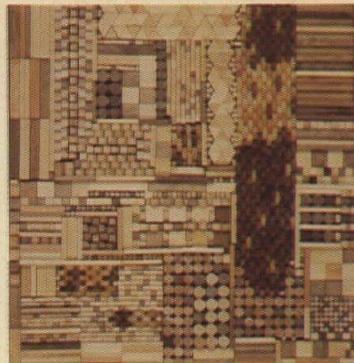
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## ARTWORK

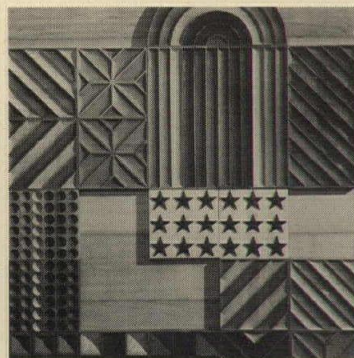
**565 GRAPHICS** / "An American Portrait, 1776-1976," is a trilogy of contemporary original graphics and sculptured multiples of 33 artists and sculptors, including Anuszkiewicz, Appel, Barnett, Calder, Dali, Grossman, Indiana, and Vasarely. / Transworld Art.

**566 BANNERS** / From 3- by 4-ft to 6- by 4-ft, designs can be installed as stretched canvases or hung as banners or tapestries. Panels are silk-screened on 100 per cent cotton sailcloth. / Big/Art.

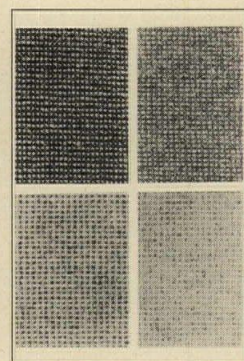
**567 GRAPHICS** / In limited editions, etchings, serigraphs, wood-cuts, and lithographs feature subjects of landscapes, still lifes, hard-edge, and non-representational art. / Tunnel Gallery at Karl Mann Assoc.



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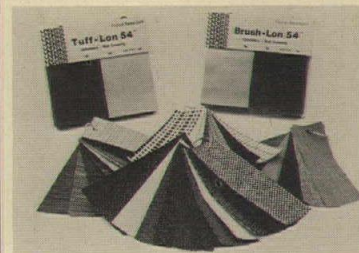
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**568 WOOD DESIGNS** / Large wood constructions, in a variety of natural woods and geometric shapes, are framed and can be ordered in custom sizes. / Karl Mann Assocs.

**569 WOOD GRAPHICS** / Modular carved wood designs that can be used independently as wall hangings or combined in large wall graphics or signs are carved in all-heart redwood 1 3/4-in. thick and finished in transparent color stains. / Forms & Surfaces.

## FABRICS

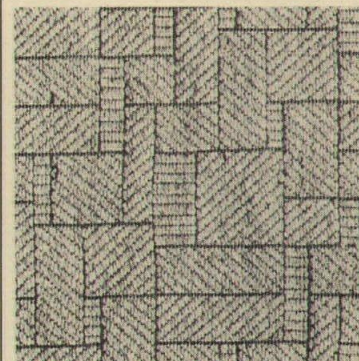
**570 IRISH WOOLENS** / Irish woollens for upholstery and wallcoverings are power loomed of 100 per cent virgin wool, and feature original interpretations of check and plaid designs. / Isabel Scott Fabrics Corp.



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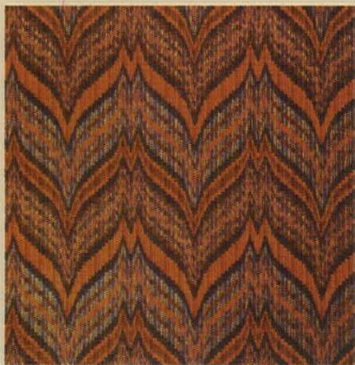
**571 UPHOLSTERY** / These 54-in., 100 per cent nylon upholsteries are available in 117 colors. The flame retardancy characteristics have been established by an independent testing laboratory and are certified to pass the California Upholstered Furniture Flammability Regulation. / M. H. Lazarus & Co.

**572 HAND-WOVEN SILK** / Eleven Siamese silks in 28 colorways consist of prints, jacquard weaves, ribbon stripes and solids. Each is 100 per cent pure silk and adaptable for paper or acrylic backing. / Robert Tait Fabrics.

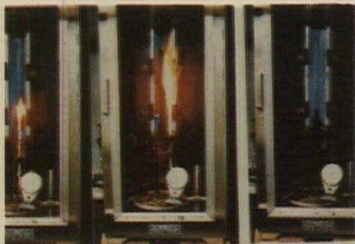
**573 WOOL** / Three fabrics in the "Contract III" wool collection were developed in Europe. Available in six Berber colors, these are hard-wearing upholstery fabrics designed primarily for the contract market. / Design Tex Fabrics, Inc.

ARTWORK  
FABRICS  
FLOOR MATS  
FURNISHING ACCESSORIES  
FURNITURE  
RUGS  
SEATING  
WINDOW TREATMENT





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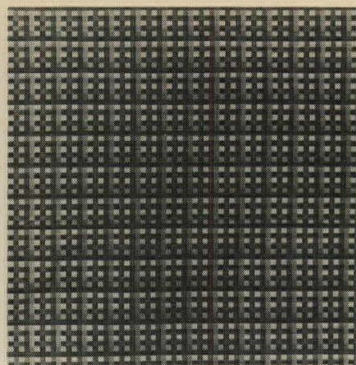


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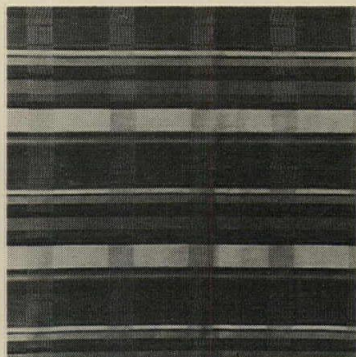
**574 BLENDED FABRIC** / Available in five colorways, the fabric is 56 in. wide, with a 10¼-in. repeat. It is of 50 per cent rayon, 26 per cent acetate, 19 per cent cotton and 5 per cent nylon. / Lee/Jofa, Inc.

**575 POLYETHYLENE** / Coated woven polyethylene fabric is used as tent flooring and sometimes as wall material because it is tough, flexible, waterproof and lightweight. A new quality, not previously available in Canadian-made material, is flame retardant. / Consolidated-Bathurst Ltd.

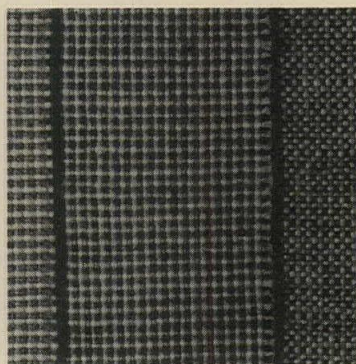
**576 NYLON** / *No Burn*, a flame resistant treatment for 100 per cent nylon upholstery fabric, was developed for the contract furniture market. Initial offerings include tweeds and textures as well as solid color weaves. The fabrics are 54-in. wide. / Collins & Aikman.



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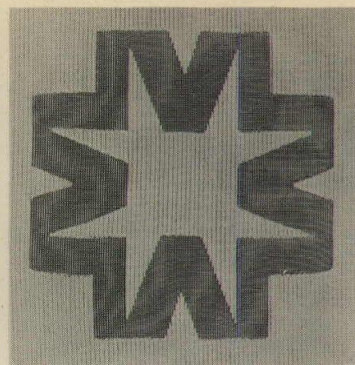


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**577 BAUHAUS** / Bauhaus fabrics are being produced in Italy for the first time by Cassina. Five woven fabrics are available in this country—in wool, cotton, and staple rayon. "Mosaico" is shown. / Atelier International, Ltd.

**578 WOOL BLEND** / "Allegro," in wool and staple rayon is a warm bright plaid with oranges predominating. / Atelier International, Ltd.

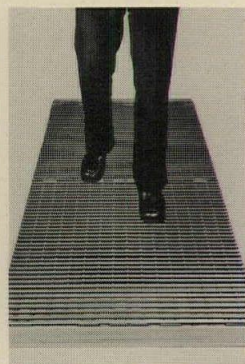
**579 WOOL TWEED** / "Tenero," a 100 per cent wool tweed, is 51-in. wide. It is produced in three colorways, all using dark brown, tawny, and white. / Stow/Davis Textile Div.



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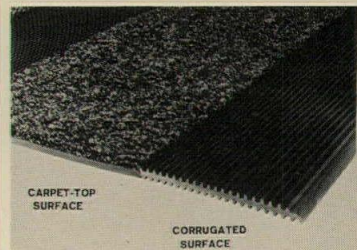
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**580 CORPORATE LOGOS** / This collection of decorative contract fabrics incorporates company logos. The manufacturer will create a custom design incorporating any company symbol into a drapery design of any desired color. / Dazian's, Inc.

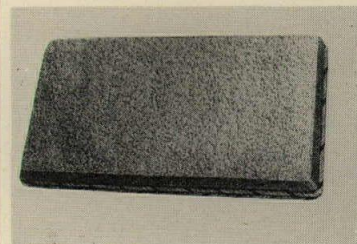
#### FLOOR MATS

**581 COCOA MATS** The vinyl backing eliminates the need for the old style binding which, in turn, facilitates making or cutting the mats in any size or shape. They are available in six mat sizes or in rolls. / The R. C. Musson Rubber Co. A,I\*

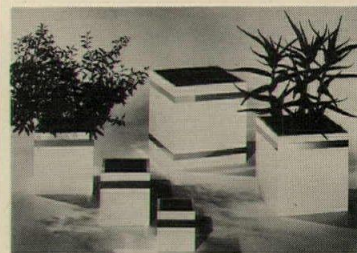
**582 GREEN MATS** / Avocado green increases the total number of company color choices to six. / Space-Links, Inc.



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**583 FLOOR MAT** / An entrance mat combines shoe cleaning and dirt catching advantages of both corrugated matting and carpet-top matting. Alternating strips of corrugated vinyl and plush vinyl backed carpet are permanently fused together. Patterns and colors can be achieved. / Samuel Furness Mat Co., Inc.

**584 SCHOOL MATS** / Heavy grade door mats are manufactured from Coir fibers. Thirteen standard sizes are available, along with special sizes. / Meakins McKinnon, Inc.

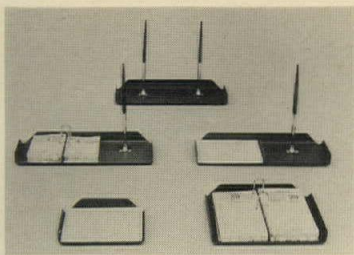
#### FURNISHING ACCESSORIES

**585 PLANTER/PEDESTALS** / Twelve collections of textured or reflectant surface planter/pedestals include: cork, half round cork, buri weave, cane, and split bamboo. A second series with surfaces of mylar, chrome, and brass strips is also offered. / Avenir Furniture Corp.





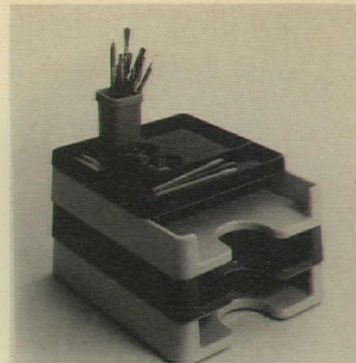
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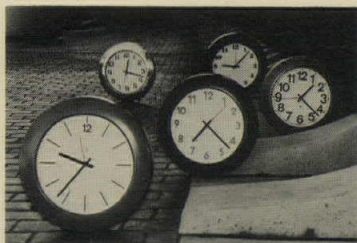
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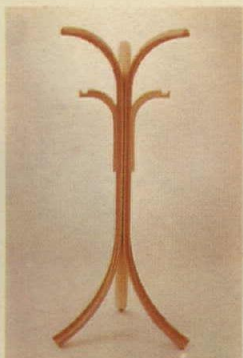
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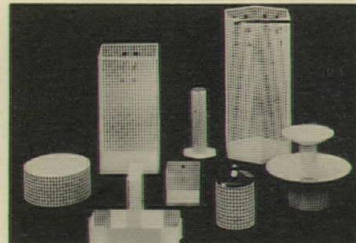
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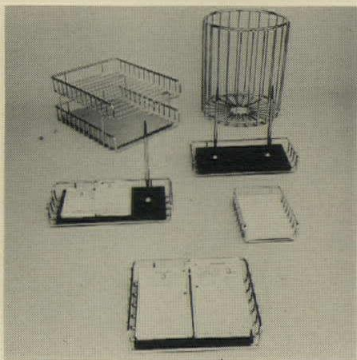
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**586 SAND URN** / A combination sand urn and waste receptacle will also serve as an umbrella stand. The stand of ABS plastic is available in white, brown, red or green with white trim. Ash receptacle is of non-flammable white melamine. / Hank Loewenstein, Inc.

**587 CLOCKS** / A 19-in. institutional clock series for standard wall surface mounting or double face ceiling mounting includes different housing finishes, and 20 face designs. Clocks run on tuning fork battery movements, electric movements, or can be incorporated into master time systems. / Peter Pepper Products.

**588 DESK ACCESSORIES** / Taken from the "turn-of-the-century look" a desk accessory group is a combination of chrome with fine hardwoods (walnut or oak). / Peter Pepper Products.

**589 DESK ACCESSORIES** / This inexpensive steel desk accessory group is available in 16 colors. The file trays come in regular or legal sizes and can be stacked three high. / Peter Pepper Products.

**590 COSTUMER** / Steam-bent Ash in natural finish only is 31 in. round, and 64½ in. high. It was designed by Giovanni Offredi. / Stendig Inc.

**591 HOOKS** / A series of multi-purpose wall & ceiling hooks made in solid nylon are unbreakable, and resist static electricity, bacteria, corrosion and deterioration. All are made in nine colors. / The Ironmonger.

**592 ACCESSORIES** / Gunter Eberle and Hugh Acton designed "AMV III" accessories for introduction at NEOCON '75. Plinth bases of black vac-form ABS combine with mirror chromed steel, or a bronze finish. / Vecta Contract.

**593 BRONZE PLANTERS** / Round planters in bonded bronze are offered in sizes up to 60 in. in diameter. Interiors of planters are reinforced fiberglass. / Forms & Surfaces.

**594 WOOD PLANTERS** / Interior planters made of end grain blocks of solid redwood or oak are available up to 48 in. in diameter, and are 16 or 24 in. high. Larger versions have a seating area. / Forms & Surfaces.

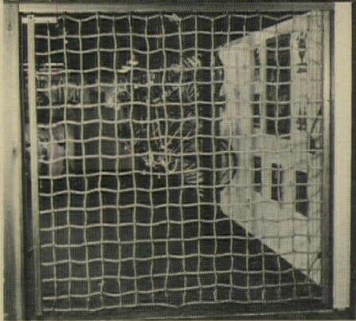
**595 LETTER TRAYS** / Produced with high impact, anti-static ABS plastic, the trays are available in: red, orange, yellow, black, and white. An interlocking pattern of grids permits vertical and tiered stacking. / Interior Products Group, Inc.

**596 VIENNA ACCESSORIES** / Designed by Josef Hoffmann for the Wiener Werkstaette 1903-1933—a group of artisans and artists founded by Hoffmann to promote original craftsmanship—these accessories are made of white lacquered perforated metal. / ICF, Inc.

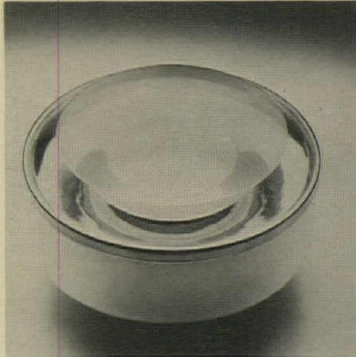
**597 ASH TRAY** / A compact combination stainless steel ash tray and waste receptacle is manufactured of type 304 stainless steel, with all welded construction. Exposed surfaces are satin finished. / Bobrick Architectural Service Dept. A\*



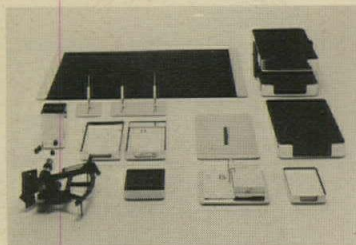
## PEDAL 'N WHEEL



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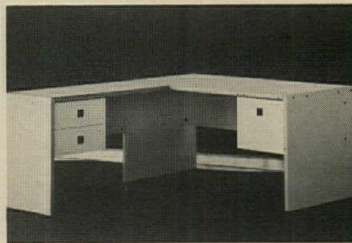
**598 WOVEN ROPE** / Flexible woven rope partitions on a track or units affixed to frames, or removable woven rope units make the product's application either functional or esthetic. Natural manila rope is available custom designed and made to size specifications. / Cloud-Woven Ropeworks.

**599 PAPER WEIGHTS** / Paper weights designed by DiRosa and Guist are available in marble or sandstone. A silverplate vase, designed by Studio Castello, has a removable top which exposes a perforated horizontal surface for flower arranging. / Atelier International, Ltd.

**600 ACCESSORIES** / The "Eclipse" line is available in these finishes: bronze, chrome and "Midnight Reflections." / McDonald Products Corp.



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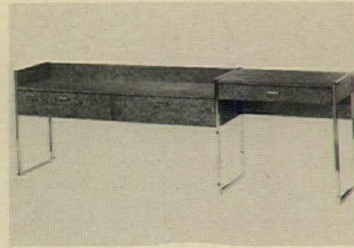
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## FURNITURE

**601 DESK** / Extreme cantilevering characterizes this desk designed by Edward Julian. Support frame is in brushed aluminum with polished stainless or chrome steel legs. Top is glass over leather or vinyl on a p-honeycomb slab. / Ipolar, Inc.

**602 WOOD OFFICE** / The "KD Desk Series" features pedestals that slide into position on steel channels; they can be simply removed and exchanged. The series is made standard in a high impact strength laminated plastic, and exposed desk edges are finished in white oak solids or veneers. / Louis Ethan Ltd. LTEE.

**603 SWEDISH OFFICE** / The "Facit 80 Office Environment" is being shown in this country to designers for the first time. The frames are of steel tubing and the screens are finished with various fabric coverings. Desks and tables, all adjustable in heights, are in the line. / Facit-Addo, Inc.



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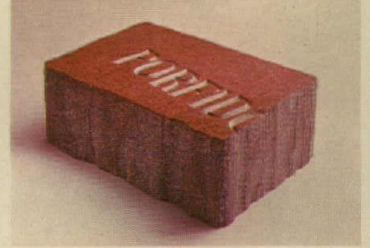


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**604 HOTEL CASE GOODS** / The sled base design and laminate finish combine with mirror-finished chrome or bronze. This line is available in various guest room pieces. / Simmons Co.

**605 KNOCKED-DOWN DESK** / Designed by Bob DeFuccio, the series features an aluminum support system with four legs that screw into it. The series offers occasional tables, round tables and conference tables in a variety of sizes. / The Gunlocke Co.

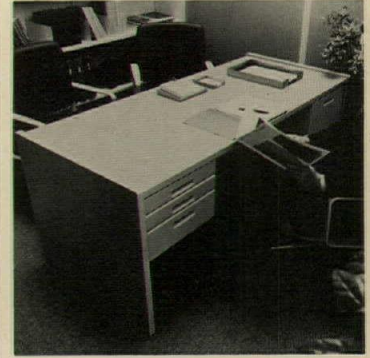
**606 BENCHES & PLANTERS** / Laminated wood benches and planters are available in Douglas Fir and Kola wood, in addition to redwood and oak. Select vertical grain Fir is 2½ in. in thickness and has a light finish. / Forms & Surfaces.



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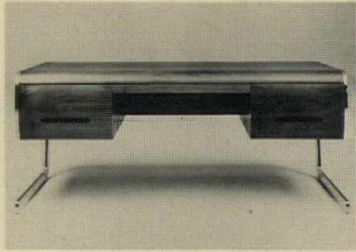
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**607 COCKTAIL TABLE** / Designed by Piero Gilardi, the table looks like a slab of granite with a polished and chiseled top surface. It is in fact, made of solid molded foam with a washable and alcohol-resistant surface. / Stendig Inc.

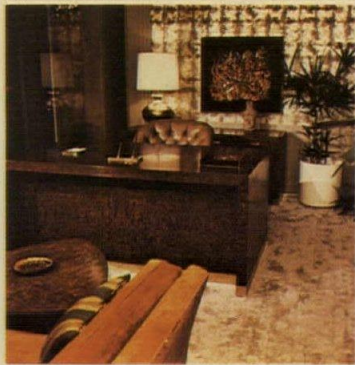
**608 STORAGE CUBE** / Included in the "Cube Series" are 12 single pedestal desk models, eight double pedestal units, a variety of typing returns and a collection of 15 console units. / GF Business Equipment, Inc.

**609 COMPONENT GROUPS** / The two groups—the "ASD" table group and "ASD" desk group—are compatible in design and function with the "ASD" open office furniture system. Tabletops are covered with decorative Micarta high-pressure laminates, or in genuine wood veneers. / Westinghouse Electric Corp.





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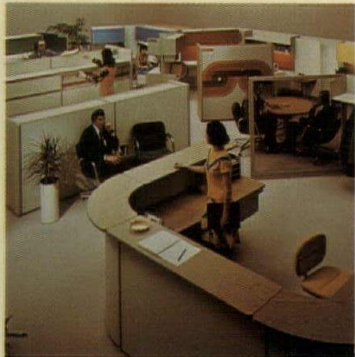
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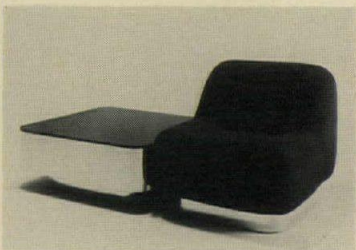
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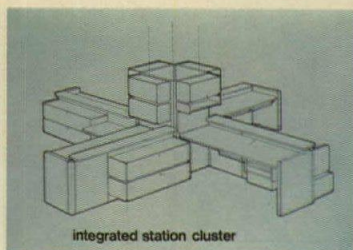
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**610 WALNUT DESK** / Desk and credenza "float" on stainless cantilevered leg supports. Designed by Bert England, "The Desque" and Credenza will retail in excess of \$10,000. / The Gunlocke Co.

**611 CABINET STORAGE** / The inner cabinet storage system was designed to provide total internal space utilization in "ASD" group cabinets. It takes care of: mail storage; computer readout paper; stationery of all sizes; filing; books; loose-leaf manuals; and drafting tools. / Westinghouse Electric Corp.

**612 CHROME TABLE** / Radiused mirror chrome steel bases provide a common element and design continuity with the modular seating units. Tops are of solar bronze glass or black plastic laminate. The tables may be ganged. / Stow/Davis.

**613 CUSTOM FURNITURE** / The desk and credenza of Carpathian elm and bronze are an original design custom built by the company. / Dunbar Furniture.

**614 INTERIOR SYSTEM** / Available in three color trim options with several surface finishes and textures, over 250 standard components for panel mounting are offered. Panels are available in four heights, and five widths. / Haworth, Inc.

**615 TABLE** / The table top is manufactured by covering a wooden "honeycomb" core with plywood, to which a wood veneer, glossy polyester, or matte polyester finish is applied. The base is chromed steel tubing. / Castelli Furniture, Inc.

**616 FLEXIBLE FURNITURE** / The expanded "Haller Program" offers a complete office environment for both open plan and closed offices. The structural framework supports shelves, drawers and files. Casters are beneath pedestals and containers. / Herman Miller, Inc.

**617 WOOD FURNITURE** / Designed by Leif Blodde, the Beam Lounge Group includes chairs, benches and low tables. A one-piece solid oak beam under-structure extends the length of any single-, two- or three-piece lounge group. / American Seating Co. A\*

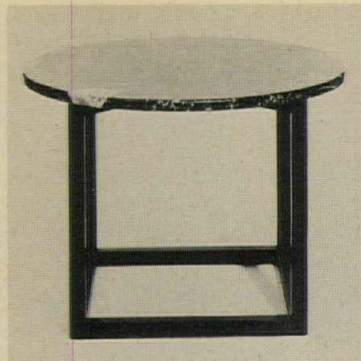
**618 MODULAR WORKSTATIONS** / Part of the new Action Office Low Profile Group, this is one of a variety of possible setups. The basic 33-in. high panel system enables work surfaces to be adjusted to varying heights from 25 to 30 in., and from 48 to 96 in. wide. / Herman Miller Inc.

**619 MODULAR FILING** / Based on the lateral configuration, this 36-in. wide shelf system, combines steel tiers, tops and bases, optional doors (with or without locks), and removable cardboard filing containers. Units, in legal or letter size, are assembled from two tiers to any desired height. / Supreme Equipment & Systems Corp.

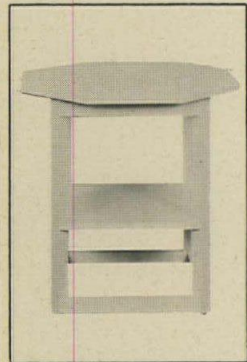
**620 OFFICE SYSTEM** / "Modulo 3" features fully integrated components and furniture. A load-bearing acoustical panel plus a range of desk and storage units may be used freestanding or as panels. Panel-mounted components form unlimited combinations of work-stations. / Modulo 3 Inc.

**621 EXECUTIVE OFFICE** / "Cambay" is a modular cube executive office furniture group of desks, returns, credenzas, book shelves, lounge and office seating. Acacia veneers, hand rubbed with a high solids premium lacquer finish and recessed hardware highlight the group. / R-Way Furniture Co.





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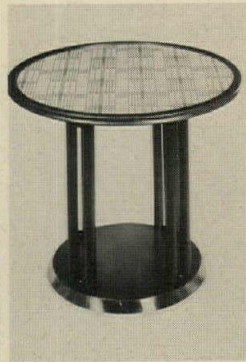
**622 CABINETT TABLE** / Designed by Josef Hoffmann ca. 1910 for use with the Cabinett chairs, the table has a top of black aggregate marble; the base is mahogany. / ICF, Inc.

**623 PURKERSDORF TABLE** / Designed in 1903 by Josef Hoffmann for Purkersdorf Sanitarium in Vienna, the octagonal table of white lacquered wood was made for use with Purkersdorf chairs. / ICF, Inc.

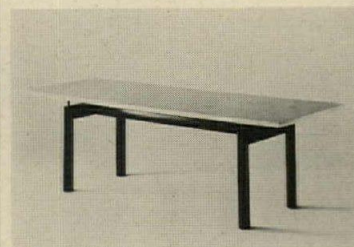
**624 STRAP TABLES** / A group of solid walnut Butcher Block tables, includes supports of rectangular steel in mirror chrome or antique bronze. Tables are available in a variety of sizes. / Monarch Furniture Corp.



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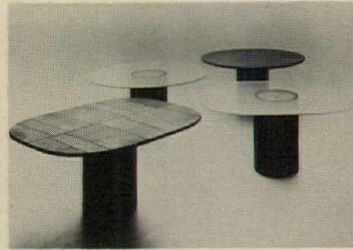


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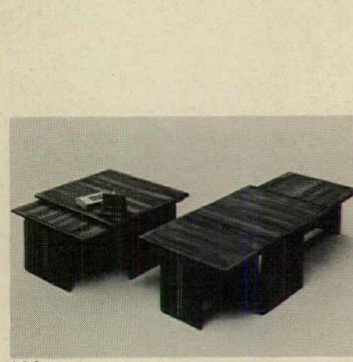
**625 METAL TABLES** / Paul Mayen has designed an all-metal table with a bullnose-edged top, spun in concentric rings. A hard clear coating is bonded to the surface. The top and base are available in Satin "Chrome" and Satin "Brass" in several sizes. / Architectural Supplements, Inc.

**626 CAFE TABLE** / Designed by Josef Hoffmann in 1908 for the Fledermaus Cafe in Vienna, the table is rosewood stained beech. The inset glass top protects original Hoffmann-designed Notschrei tapestry. / ICF, Inc.

**627 DINING TABLE** / The dining table designed by Le Corbusier features a top available in natural or black ebony—finished ashwood or in glass. The base is constructed of oval tubing. / Atelier International, Ltd.



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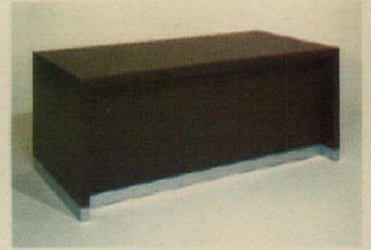


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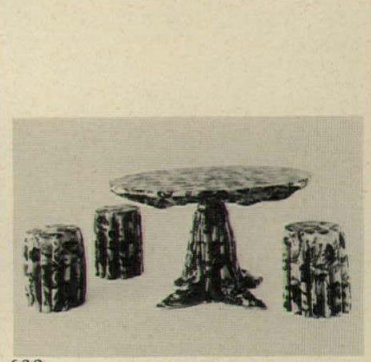
**628 TABLES** / Circular and oval top versions in leather and glass are suitable for both dining and conference rooms. Leather tops are done in a patchwork application of varying sized pieces applied to a plywood base. / Atelier International, Ltd.

**629 NESTING TABLES** / A series of nesting tables in two sizes, 33.7 by 31 in. and 49.5 by 27.5 in., are available in either walnut or rosewood. / Atelier International, Ltd.

**630 MOBILE ROOM** / A plug-in, relocatable room solves problems of security and privacy. The Action Office Mobile Room can be assembled at one-quarter the labor cost of conventionally partitioned rooms, and plugs into overhead or floor power ducts. / Herman Miller, Inc.



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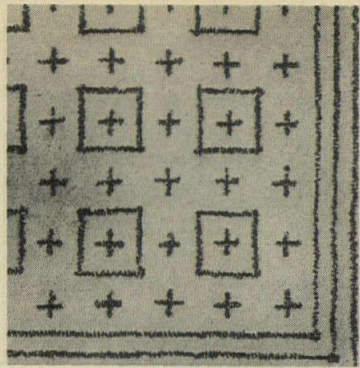
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**631 EXECUTIVE GROUP** / The "1600" series desks and tables feature an option of recessed or flush seamless back panels. A range of pedestal variations is enhanced with the availability of an EDP accommodation, colors and wood or laminated tops. / All-Steel Inc.

**632 DINING TABLE** / The table and stools are made of a polyester resin impregnated fabric which hardens into the shapes shown above. The fabric is pure cotton or linen; the customer's own fabric can be used. / Stendig Inc.

**633 TABLE GROUP** / The "710 Table Group" of round, square, and rectangular tables for office, conference area, dining room and library use is compatible with the company's 40/4 and Zographos chairs. Tops are available in oak and walnut veneers and a variety of laminate finishes. / GF Business Equipment, Inc.





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## RUGS

**634 CUSTOM RUGS** / The "Systems Collection I" of machine-tufting and hand-tufting enables the specifier to achieve a custom luxury look at a controlled cost. All carpets and rugs are 100 per cent wool. / V'Soske.

**635 KILIM RUGS** / All wool, in traditional patterns and colors, the rugs are suited to residential and contract interiors. They may be used as wall hangings. / Karl Mann Assoc.

## SEATING

**636 LOBBY LOUNGE** / A combination of curves and straight chairs provide numerous layout possibilities. Shaped in high density urethane foam with soft *Dacron* padding, these units are available in a range of covering materials. / Airborne Furniture Inc.



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**637 SWEDISH SEATING** / Karl Erik Ekselius designed the seating pieces in this series: lounge/reception/swivel tilt and desk seating. The solid aluminum frame is satin finished, and foam upholstery is covered in suedes, leathers, and fabrics or COM. / Stendig Inc.

**638 LOUNGE CHAIR** / This chair has a chrome or stainless steel frame consisting of four closed loops connected at various separations to float the elements. It is covered by tensioned leather or suede. The design is by Edward Julian. / Ipolar, Inc.

**639 SOFA** / Sheathed in olive ash burl, the sofa is a Milo Baughman design. The seat and back cushions are filled with *Richlux* foam wrapped in *Dacron*. It is also available with *Qualux* self-extinguishing foam and flame retardant fabrics. / Thayer Coggin Institutional, Inc.



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**640 LOUNGE CHAIR** / Designed by Jan Ekselius, the chair is polished chrome steel with flat steel inner spring suspension, covered with molded foam. Covers are easily removed for cleaning and replacement. / Stendig Inc.

**641 SIDE CHAIR** / The "ZETA" dining chair is upholstered cane encased in natural elm to form a cantilevered Z-shaped seat and back unit. The chair has a polished chrome steel tube frame, with an unusual twist in the side member. / Thonet Industries, Inc.

**642 ARMCHAIR** / Designed by Pino Camerani, the chair has a sled base of mirror chromed oval steel tube, with foam upholstery on plywood. / Stendig Inc.



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**643 MODULAR SEATING** / The molded plywood urethane covered seat unit is upholstered in a sewn sleeve of either vinyl or fabric. The polished chrome arm/leg frame may be ganged in groups of one to four. / Thonet Industries, Inc.

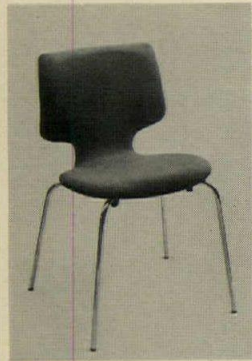
**644 THOR** / The stacking/coupling chair features a molded plywood shell, veneered in Oak or Teak. It can also be fully upholstered. / Stendig Inc.

**645 STACKING CHAIR** / A dining or general purpose chair, "Marina" can be stacked five high. The frame is: steel tube, chromed, mirror polished. The seat and back are: foam on molded plywood, upholstered in a choice of materials. / Stendig Inc.





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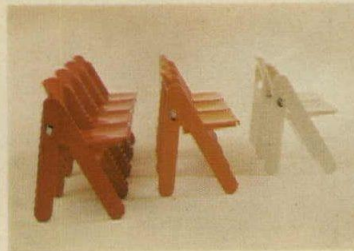


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**646 DRAFTING CHAIR** / "Danica" designed by Mogens Roepstorff is a drafting or counter height chair with adjustable height controls. There is a companion secretarial chair. / Stendig Inc.

**647 SMALL CHAIR** / "Odin" is said to be tough, resilient, inexpensive, and suitable for heavy public-use areas. It stacks, and the shell is molded plywood, veneered in Oak or Teak. The frame is polished chrome steel tube. / Stendig Inc.

**648 LAMINATED SEATING** / Frames are manufactured of laminated beechwood layer upon layer bonded together. Models include: side chairs, arm chairs, sofas, and tables. Frames are available in wood finishes or color stains. / Hanseatic Furniture Co.



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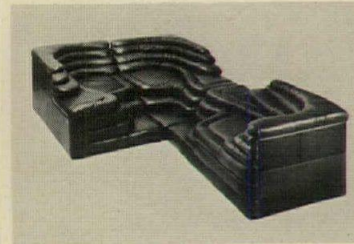
**649 FOLDING CHAIR** / Built-in linking devices permit quick side-by-side alignment in rows, with proper spacing between chairs. Laminated Beech in a choice of opaque colors and aniline color stains is offered. / Stendig Inc.

**650 SOFT SEATING** / Made of polyurethane foam, cold molded over a steel armature, the club chair and two-seat sofa can be covered in vinyls, leathers, suedes or COM. / Stendig Inc.

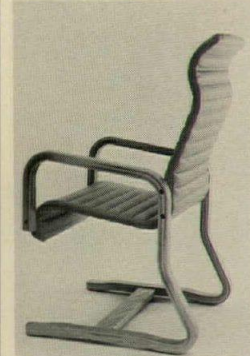
**651 OFFICE CHAIRS** / Designed by Eberle, the "9000" chairs feature 12 models suitable for all office seating functions. Designers may choose from plain seamless upholstery or three selections of tufting styles. / Cramer Industries Inc. D\*



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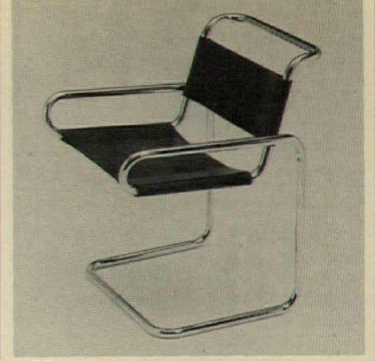


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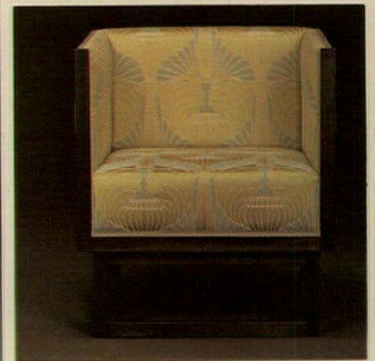
**652 OFFICE CHAIR** / Designed to be a secretarial or conference chair, the chair is available either height adjustable or with a fixed base. Upholstered units are removable for recovering. / Hank Loewenstein, Inc.

**653 MODULAR SEATING** / "Terrazza" consists of two basic elements, one left facing and one right facing. These elements can be used singly, or in multiples. Construction is Dacron and structured foam covered in a choice of Swiss leathers and suedes. / Stendig Inc.

**654 HOSPITAL CHAIR** / The channel back highback with a continuous bentply arm/leg is designed to be orthopedically correct, and its molded plywood frame rocks. The vinyl upholstery sleeve may be unzipped and replaced. / Thonet Industries, Inc.



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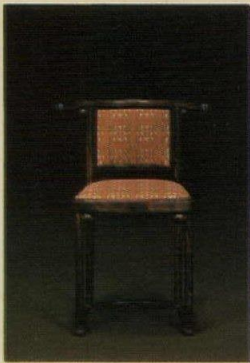
657

**655 SLING CHAIR** / A reverse cantilevered design is made possible by patented double tube frame construction. The frame is finished in bright chrome; seat and backrest are available in black or natural top-grain saddle leather. Ralph K. Rye is the designer. / Krueger.

**656 ARMCHAIR** / This design by Josef Hoffmann ca. 1910, is upholstered in fabric designed in same period by Viennese designer Koloman Moser. Both fabric and furniture reproductions have been authenticated. It is available as two-seat and three-seat sofa. / ICF, Inc.

**657 KUBUS CHAIR** / Designed in 1910 by Josef Hoffmann, this geometric form was later adapted by Le Corbusier who worked with Hoffmann as a student at this time. The chair is also available as two-seat and three-seat sofa, covered in leather. / ICF, Inc.

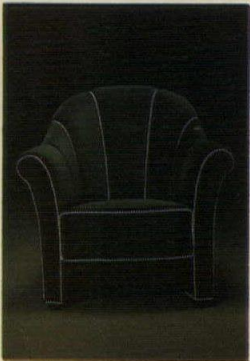




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**658 FLEDERMAUS CHAIR** / Designed by Josef Hoffmann in 1909 for the Fledermaus Cafe in Vienna, the frame of the chair is rosewood-stained beech; seat and back are covered in original Hoffmann-designed Notschrei tapestry. / ICF, Inc.

**659 ARMLOEFFEL CHAIR** / Designed in 1908 by Josef Hoffmann influenced by Rennie Mackintosh, the chair frame is of limed ash stained black; the removable tufted seat cushion is leather. / ICF, Inc.

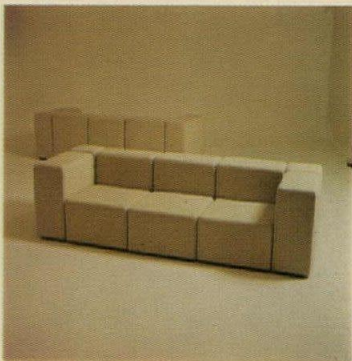
**660 HAUS KOLLER CHAIR** / This model was originally designed in 1911 by Josef Hoffmann. The chair is also available as two-seat and three-seat sofa, upholstered in velour and outlined in black and white piping. / ICF, Inc.



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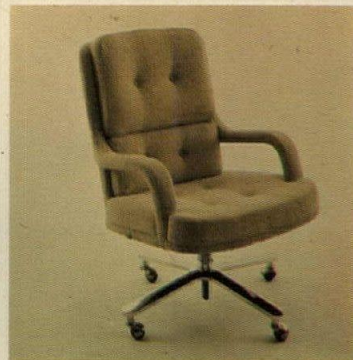
**661 CANTILEVERED CHAIR** / The chair features a metal frame coated with "Tenite CAB" powder, supplied by Eastman Kodak Company. The chair is one of many metal institutional furniture units in the company's "Curricula" line. Fabric or vinyl upholstery is available. / Carolina Seating Co.

**662 LOUNGE** / "Inter/Section" features a double compound mitering of wood joints in conjunction with angled wood legs and rails. Walnut and oak with an oil resin finish are standard. / Metropolitan Furniture Corp.

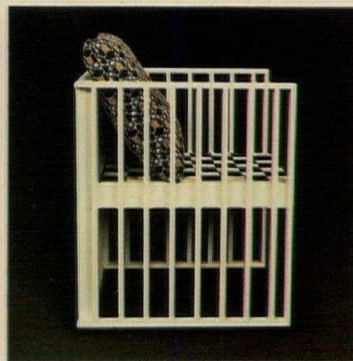
**663 MODULAR SEATING** / The "Sistema" system is based upon three separate units: seat, back/arm, and corner, and is equally adaptable for contract or residential use. The seat unit measures 61 centimeters (or 24 in.) square. Modules are made of injected polyurethane foam over a rigid polyurethane base. / Castelli Furniture, Inc.



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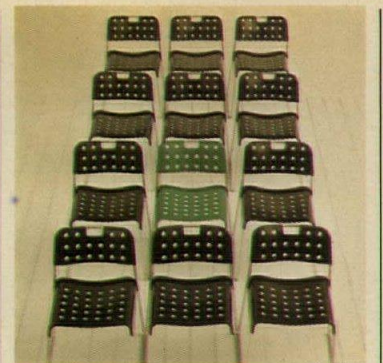


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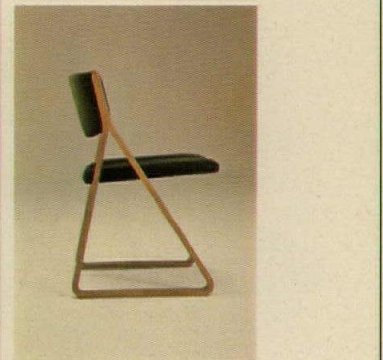
**664 CHAIR** / The "206" chair, designed with lateral frames in die-cast aluminum alloy and an underframe of nylon-coated tubular steel, features a five-blade base equipped with casters or glides. Its height is adjustable. / Castelli Furniture, Inc.

**665 EXECUTIVE SWIVEL** / The chair is designed with two tufted and buttoned back cushions, and a tufted and buttoned seat. Four variations on both swivel and bullnose wood bases are available, including closed- and open-arm types. / Helikon Furniture Co., Inc.

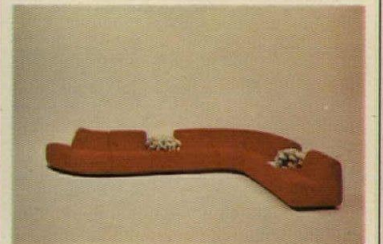
**666 PURKERSDORF CHAIR** / The chair design from 1903, by Josef Hoffmann for Purkersdorf Sanitarium in Vienna, features a frame of lacquered white wood. The seat is black and white webbing; the back is a removable cushion. / ICF, Inc.



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**667 STACK CHAIR** / Designed in London by Rodney Kinsman, this chair with chromium-plated frame and epoxy coated metal seat and back, stacks and gangs and also comes in an outdoor version. / ICF, Inc.

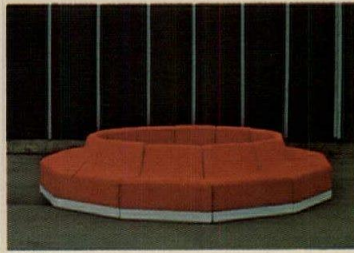
**668 TRIANGLE CHAIR** / Designed by Robert De Fuccio, armless and arm chairs have triangular frames of laminated oak or walnut. / Stow/Davis.

**669 SEATING SYSTEM** / "Tappo II," designed by John Mascheroni includes: 30- and 24-in. straight seats; 45-degree inside and outside wedges; two types of "plug-in" arms and gangers; tables; planters; and table-planters. / Vecta Contract.





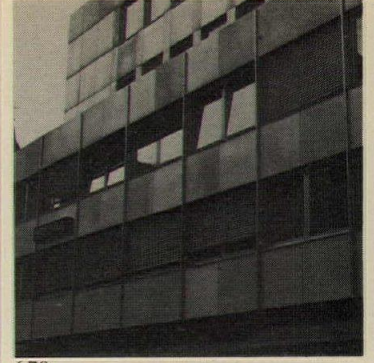
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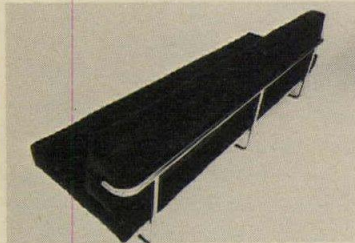
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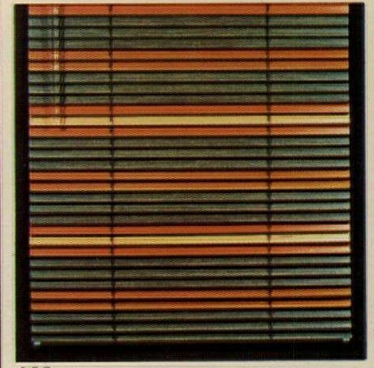
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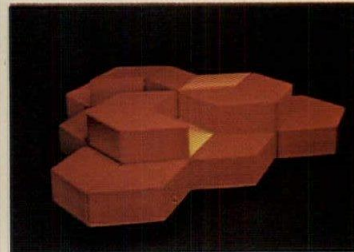
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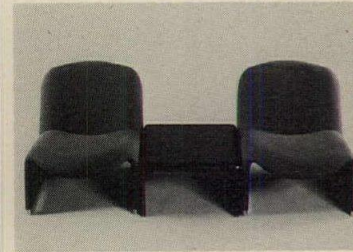
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**670 SEATING** / The seating structure consists of ashwood compression poles sitting on pivot details, held in place on a plywood base by nylon straps in tension. This structure in turn supports an internal canvas and a top layer of leather down. / Atelier International, Ltd.

**671 SOFA** / The "LC/5" sofa, continuing in Corbusier's modular tradition, is available in fabric or leather upholstery with foam polyurethane and Dacron fiberfill padding. Base is available in polished chromium plate or the original brick red or black varnish. / Atelier International, Ltd.

**672 CHAIR** / The "306" chair, designed with padded armrests, features lateral frames in die-cast aluminum alloy and an underframe of nylon-coated tubular steel. A five-blade base equipped with casters or glides is utilized. / Castelli Furniture Inc.

**673 MODULAR SEATING** / "Thick + Thin" molded foam units may be used conventionally or back to back. Twelve small wedges form a circle with an outside diameter of 7 ft 4 in., while twelve large wedges form a circle with an outside diameter of 12 ft. / Harvey Propper, Inc.

**674 MODULAR SEATING** / "Softop" is a series of tables and six seating units that may be used singly, combined into sofas or ganged to form individualized continuous seating arrangements. Various arm arrangements are possible. / Harvey Propper, Inc.

**675 SEATING SYSTEM** / A seating and table system based on a hexagonal module offers numerous layout arrangements. A four-way connector requires no tools and clusters can be re-arranged. The group consists of seat, back, low and high tables, each on a recessed base. / Jens Risom Design. D\*

**676 RED OAK CHAIR** / The chair features a contoured plywood seat upholstered over polyurethane foam. It is available in both a side and arm chair model. Seat and back can be all wood or upholstered. / John Adden Furniture.

**677 STORM CHAIR** / "Storm Chairs" designed by Charles Bernard of France are molded in fire-resistant, high-resiliency foam on steel frames. Tufted upholstery is available in a range of fabrics. Bases in heavy gauge steel are available in bright chrome or bronze. / Airborne Furniture Inc.

**678 LOUNGE CHAIR** / The "Alky" lounge chair is manufactured with flexible polyurethane foam injected over a steel frame and covered in a variety of fabrics and vinyl. An optional nylon ganging device is available. Tables in rigid polyurethane are also available. / Castelli Furniture, Inc.

## WINDOW TREATMENT

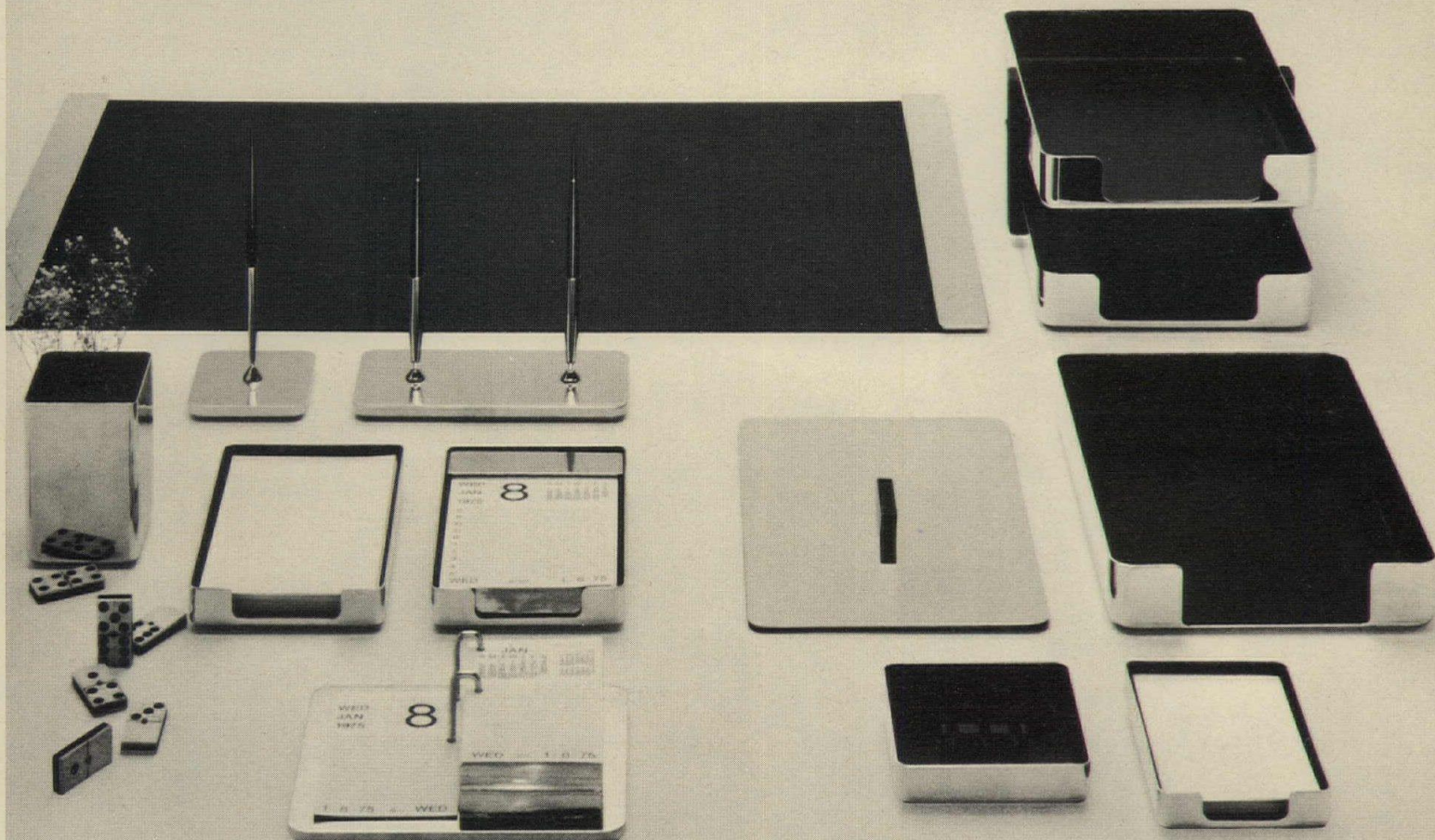
**679 ROLL-BLINDS** / Blinds are available in either aluminum or PVC in a variety of colors. Maximum dimensions per unit are 12 ft wide and 12 ft high. The container with the roll section is installed above the window, and opening is from the interior by either cord or a rod. / Roto-International.

**680 VENETIAN BLINDS** / "Trade Winds" is an example of different color slats, headrail and bottom rail in the same blind, with 1-in. slats. There is no extra charge for "duplex" slats in up to 10 designated colors, with an off-white outside. / Marathon Carey-McFall Co. A,D\*

**681 SUN SWITCH** / The product is a battery powered remote control motor operator for tilting the "Alcan Mark II" 1-in. venetian blind. Remote controlled blinds are recommended for executive offices, hospitals and between the panes of double glazed windows. / Alcan Building Products.



# FOUR REASONS MCDONALD DESIGNS NAMED THIS NEW OFFICE ACCESSORY LINE "ECLIPSE"



## 1. First Contact.



The shadow at the beginning of an eclipse is called "first contact." This small shadow is like the nice rounded corners of our new product, and it gave us the idea for our name, Eclipse, as well as the names of our finishes (Sunrise Bronze, Daylight Chrome, Midnight Reflections). Eons ahead.

## 2. First Contact, again.

First contact is also like a first impression. We think our new Eclipse line is a practical means, at a practical cost, to make a good first impression in the business world (or any other world for that matter).

## 3. Our Competition.

We're going to get between our competitor's product and your mind, creating a small shadow at first, then a larger one, until our competition is totally eclipsed. You've heard of solar eclipse. You've heard of lunar eclipse. Well, this is McDonald Eclipse. Dazzling.

## 4. First Contact, third time.

Let's face it. It's a tough, hard-edged world we live in. But we have a soft-edged product to make it less tough. If you agree, you'll make first contact with us very soon. So we've done all we can to make the most of it. To make it pleasant. Informative. And very efficient. Because we don't want our first contact to be our last.

### McDonald Designs.

McDonald Products Corp.,  
721 Seneca Street,  
Buffalo, New York 14210





## Our remote control blind is a shade above the others.

Alcan Mark II® blinds control heat, light and glare as well as any window treatment. But we made our blind a shade better than the rest. Because we made the only one-inch blind that is one inch all over: louvers, headrail and bottomrail. With nearly invisible ladders. So the slim-line effect is beautifully consistent from top to bottom.

Now we've added another little touch. Motorized control. Two "C" batteries power a tiny motor that fits invisibly inside our one-inch-square headrail. And the control can be installed at the wall or anywhere in the room.

Remote control is just a shade of difference,

maybe. But enough to set one executive office or conference room apart from another. And it's an especially good idea for blinds between the surfaces of double-pane windows.

We'll send you a list of window manufacturers who use Alcan Mark II blinds. We'll also send you a book full of other good design ideas — colorful ideas — for using the Mark II with or without motorized control. Just write for *Window Moods* to Alcan Aluminum, Dept. IA, Box 511, Warren, Ohio 44482.

**Alcan Building Products**  
Division of Alcan Aluminum Corporation



*For more data, circle A59 on inquiry card*



# JG

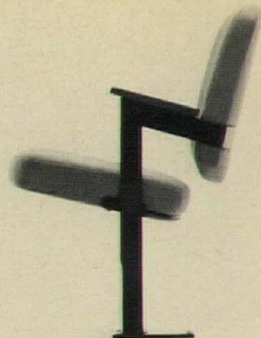
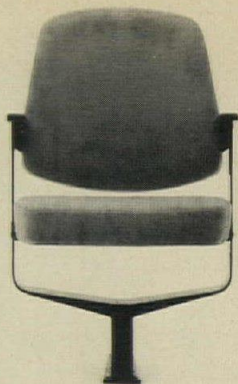
**J G Furniture Company**  
Quakertown, Pa. 18951

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## auditorium seating

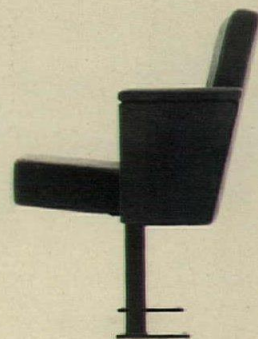
**62-63**

design: Peter Dickinson



**T-100**

design: Dave Woods



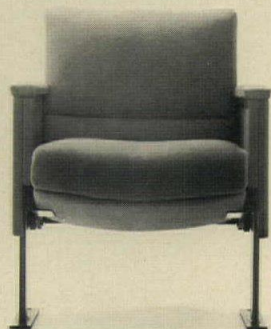
**Westminster**

design: Dickinson/Smith



**T-74**

design: Dave Woods



**800**

design:  
Goldman/ Williams





# What if they have to get out in a hurry?



Where there's a possibility of fire, cushioning foam of Du Pont Neoprene means potentially more evacuation time.

Cushioning materials in areas of public assembly need no clanging cymbals to attract attention. They have attention—from federal authorities, local fire marshals and commissions who have a hand in setting fire codes. Foam of Du Pont Neoprene is attracting attention, too, because it provides outstanding performance on two crucial counts:

- First, Neoprene foam can be

used to design chairs with high resistance to flame ignition.

- Second, if ignited it exhibits a lower rate of heat generation and flame propagation than do other common cushioning materials.

In addition, Neoprene foam lets you design durability and comfort into even the most irregular seating styles. Resilient Neoprene foam does not harden or crumble on aging, stands up to oils, most chemicals and cleaning fluids as well as moisture and temperature changes.

When you specify foam cushioning of Du Pont Neoprene, you get a material that's proven itself by more than 16 years of service in public seating and bedding applications where the possibility of fire is of significant concern—in schools and ships, airplanes and auditoriums, trains, theatres and hospitals.

For more information on suppliers of Neoprene foam cushions or finished seats made of Neoprene, write: Du Pont Co., Room 24354D, Wilmington, DE 19898.

## Cushioning Foam of DuPont Neoprene



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## The executive look from **ALL-STEEL**

All-Steel's new 1600 Series Panel Desks and Tables offer you the opportunity to specify *steel* with the executive look. Prestige one-piece back panels available in choice of recessed or flush design. Specify with double, single, or no pedestals. Concealed wiring channels

hide telephone and machine cords. Flush bases in mirror or brushed chrome. A natural move up for mid-management applications. Compatible with the popular All-Steel cube concept. Write for more on the 1600 Series: All-Steel Inc., Aurora, Illinois 60507





continued from page 127

**SPECIALTIES**

**D89 MOBILE STORAGE SYSTEMS** / Based on eliminating aisle space by making all storage units mobile, these systems are designed to be moved manually or electrically. Individual planning is done without charge, and a company's existing shelving can be used. Full details and illustrations are offered in the "Mobile Filing & Storage Systems" catalog. / Spacemakers, Inc.

**D90 POSTAL CENTERS** / Postal Centers for new communities and housing developments are described in a four-page bulletin, including details of the U.S. Postal Service's new centralized mail distribution concept, which replaces door-to-door delivery. / American Device Mfg. Co. A\*

**EQUIPMENT**

**D91 CHECKROOM EQUIPMENT** / A complete cloakroom system is designed to meet all needs from a simple wall rail with hooks to a grid suspended from the ceiling with captive ring hangers and three sizes of hooks. A brochure is available. / The Ironmonger.



**D92 I.V. SUPPORT SYSTEM** / The *Extensor*, a wall mounted extendable intravenous support system, is described in a brochure including specifications, photographs and dimensional drawings. / Grant Hardware Co. A\*

**D93 EDUCATIONAL PRODUCTS** / A price list featuring coordinated library furnishings, and offering specific information on all items in the line, focuses on bookstacks and features ideas and installation. A section of the brochure introduces distributive education equipment, manually and electrically operated mobile stack storage systems and an open plan school and office system. / Reflector Hardware Corp.

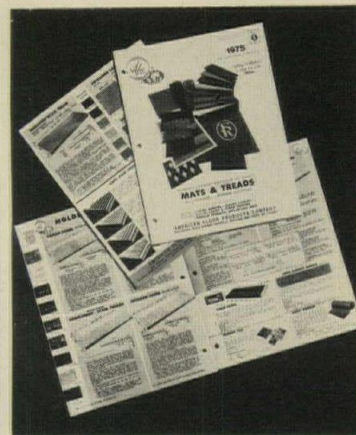


**D94 DOCK LIFT** / A brochure designed to aid architects and engineers in the design, selection and installation of dock loading systems includes details on standard pit designs, product application and cost justification. Also included are instructions on how to specify, design and install equipment. / Southworth Machine Co.

**D95 APPLIANCE CATALOG** / A 1975 catalog provides detailed feature and installation information for contract customers on a major appliance and air conditioning line. The 20-page catalog covers freestanding cabinet ranges, drop-in and slide-in ranges, highflow ranges, wall ovens and surface sections, range hoods, microwave ovens, etc. Washers and dryers, including coin-op models, also are featured. Cut-out dimensions on all built-in products are also included, along with information on how architects can have their kitchen/laundry plans analyzed by the company's design staff. / Hotpoint Contract Sales Operation. A,L\*

**FURNISHINGS**

**D96 CONTRACT FURNISHINGS** / An expanded line of contract furnishings is shown in a 60-page catalog, including products offered for commercial and institutional use. A 56-page illustrated price list accompanies the catalog. / B. Brody Seating Co.



**D97 MATS & TREADS** / Architectural cross-sections in use, photographs, technical specifications and full color details give accurate data covering this selection of entrance mats, stair treads and athletic flooring. / American Floor Products Co. A\*

**D98 OFFICE PLANNING GUIDE** / A 98-page office planning guide demonstrates the versatility of "Mobiles," open office systems furniture using lateral files, desks and 2-in. movable walls. It also includes data on wiring, acoustics and color. The brochure presents 28 workstation ideas, three dimensional drawings of the 28 workstations, and a planning grid. / Steelcase, Inc.



**D99 BUSINESS FURNITURE** / Over 95 pages illustrate in color a line of business furniture and accessories. With the exception of drapes and carpeting, any size office or special requirement can be furnished from the catalog, states the company. / Cole.

**SPECIAL CONSTRUCTION**

**E01 SWIMMING POOLS** / A workbook offers detailed technical drawings of diving towers, diving stands and boards, geared adjustable fulcrum, starting platform, lifeguard chairs, water polo goals, ladders, underwater windows, grab rails, pennant lines, racing lanes, underwater speaker, stantions and built-in steps. / KDI Paragon Inc. A\*

**E02 SHIELDED ROOMS** / A technical presentation on "Construction Methods and Evaluation of Radio Frequency Interference and Electromagnetic Shielded Construction Systems" describes all of the components of a shielded room, room assembly and grounding, and testing. / Keene Corp., Ray Proof Div.

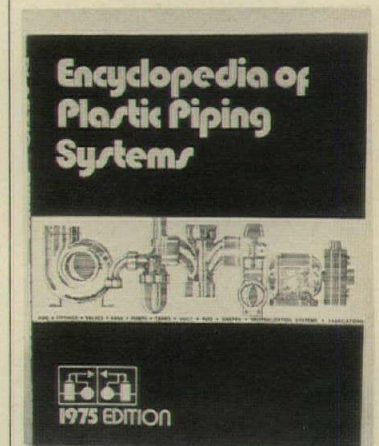


**E03 SOLAR HOUSE BOOK** / A 57-page book with 10 pages of plans for building a solar-heated home is priced at \$24.95. / Edmund Scientific Co.

**CONVEYING SYSTEMS**

**E04 TRACTION ELEVATORS** / "SPM" elevators for medium-rise buildings having a capacity of 2500 lbs with speeds of 200 or 350 fpm are described in a brochure available from the company. / Montgomery Elevator Co. A\*

**E05 ELEVATOR PLANNING** / A guide details control systems, passenger and freight elevators, entrances, dumbwaiters, escalators and power walks and ramps. / Montgomery Elevator Co. A\*

**MECHANICAL**

**E06 PLASTIC PIPING** / The 1975 edition of the "Encyclopedia of Plastic Piping Systems," contains 212 pages of pictures, diagrams, conversion charts, specifications and prices for all types of plastic fluid and air handling products including pipes, fittings, valves, drainage systems, tanks, pumps, fans, duct and neutralization equipment. / Plastic Piping Systems.

**E07 PIPE INSULATIONS** / The company has published a 23-page booklet on its *Flame-Safe* fiberglass pipe insulations, said to meet high protection standards against fire and smoke. The two new products—one for indoor piping, the other for outdoor—are designed for temperatures from 0°F to 500°F. Installation, cost savings, application recommendations, and key properties are also reviewed, and a table makes it possible to determine the economic thickness of heated pipe insulation required. / Johns-Manville.

more literature on page 146



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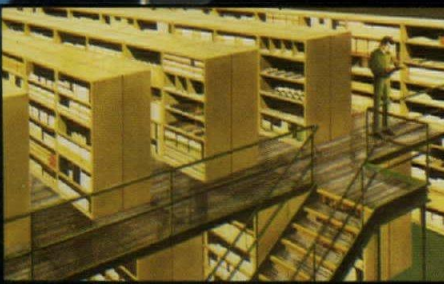
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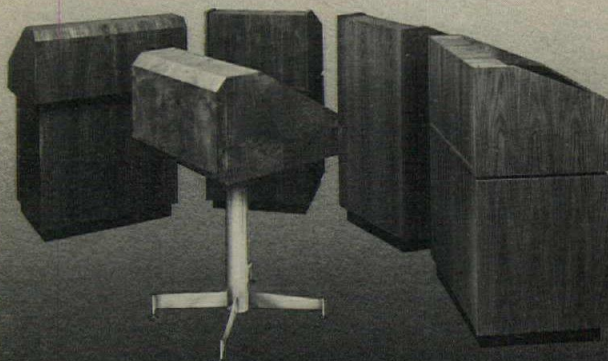
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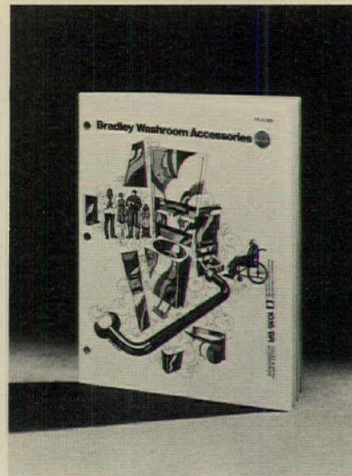
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continued from page 144



**E08 WASHROOM ACCESSORIES** / A 31-page catalog covering washroom accessories includes multipurpose units, towel dispensers and waste receptacles, napkin vendors and disposals, tissue holders, soap spray systems and soap dispensers, mirror and shelves, grab bars and other specialties and accessories. Specifications, dimensional drawings and data on optional features are given. / Bradley Corp. A\*

**E09 ALL-FUEL CHIMNEY** / A catalog illustrates and describes specifications for pipe, fittings, supports and accessories in all-fuel chimney systems up to 12 in. in diameter. Tables and diagrams for installations are included, with applications for residential, commercial and industrial uses. / General Products Co.

**E10 PLUMBING FIXTURES** / A 12-page catalog covers washfountains and comparative costs as opposed to conventional washroom lavatories. It also lists the different styles of washfountains and colors available. Pre-assembled wash centers and safety drench-showers and eye-washing units are also described. / Bradley Corp. A\*

**E11 HOT WATER** / A folder describes an oil-fired hot-water system that produces 86 per cent efficiency with such features as high CO<sub>2</sub> label during combustion, low stack temperature, double insulation, and sealed combustion system. This system can replace any type of existing furnace. / General Products Co.

### ELECTRICAL

**E12 OUTDOOR LIGHTING** / An eight-page color brochure shows performance data, cutaway photos and descriptive copy for the "Cordova" luminaire. / J. H. Spaulding Co.

**E13 MALL LIGHTING** / The eight-page brochure contains sections on parking lots, merchandising areas, accent and mall lighting. Recommendations are made for pole heights, lighting levels, number of fixtures required and suggested fixtures for each application. / GTE Sylvia.

**E14 LIGHTING GUIDE** / A comprehensive specifier's catalog is divided into individual product brochures that may be ordered separately from the company for use on actual project proposals. Available only through agents and salesmen, each catalog is registered in the recipient's name so that updates may be provided. / Crouse-Hinds Co.

**E15 MEDICAL LIGHTING** / An illustrated 36-page booklet on medical-hospital lighting fixtures and systems describes luminaires for low-brightness patient room lighting; basic patient service consoles (surface, semi-recessed and flush mounted); complete patient service console systems; patient-care walls (for private or semi-private patient rooms); *Examatron* color-corrected examination lights, and auxiliary equipment and accessories. Complete product descriptions, variations, specifications and add-on options are given. / Keene Corp., Keene Lighting.

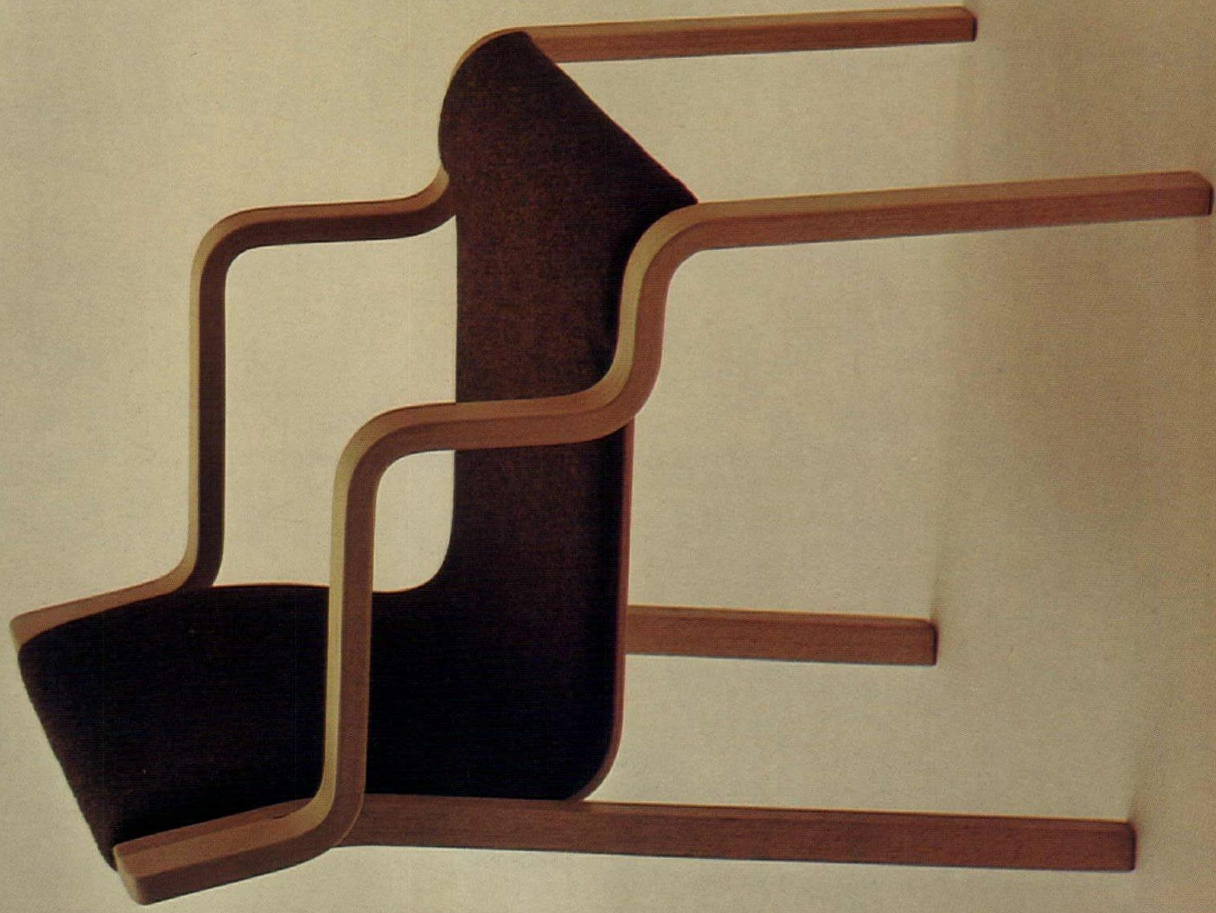
**E16 MERCANTILE LIGHTING** / Entitled "Top Shelf Lighting for the Bottom Shelf," the six-page brochure discusses the current trend to recessed HID luminaires for store lighting and explains the company's "merchandising footcandle concept," defined as the amount of light on the merchandise as seen by the customer, no matter where the merchandise is. An illustrated case study of two nearly identical stores shows how HID luminaires maintain more footcandle uniformity from top to bottom shelves than conventional lighting methods. / Westinghouse Electric Corp.

**E17 WATER-COOLED LIGHTING** / The illustrated, eight-page brochure discusses how water-cooled luminaires—when properly integrated with a building's heating and cooling systems—can result in advantages including load leveling, reduced auxiliary heating requirements, smaller ductwork, and less horsepower for fan motors. A case history details the benefits achieved by the water-cooled lighting system at the company's headquarters building. Also included is a list of other water-cooled lighting installations in operation. / Westinghouse Electric Corp.

**E18 DECORATIVE LIGHTING** / The company has introduced a supplement to its current decorative lighting catalog "M." New designs in "Early American," "Frontier" and "Victorian Era" styles have been added. The designs feature combinations of wood and brass with shades of opal and ruby glass. The fixtures are specifically designed for commercial interiors, with diameters from 30 to 68 in., and with options on number of lights, arms, and decorative shades. / R. A. Manning Co., Inc.



# Half Nelson-Half Workhorse



**2120 NELSON** — stacks, lines up, stands up to all kinds of wear and provides maximum comfort. All laminated Beech in selection of finishes and aniline color stains.

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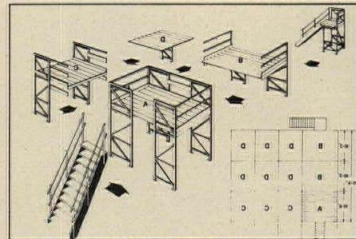


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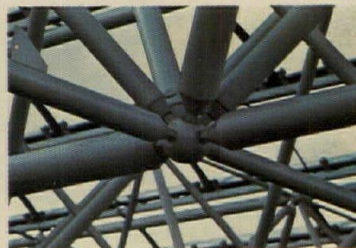
# special construction



706



707



708

## AIR SUPPORTED STRUCTURES

**706 CUSTOM ROOFS** / The company provides design, fabrication, and installation services for large, permanent fabric roofs. New developments in *Teflon-Fiberglas* materials and cable-reinforcement systems now enable coverage for very large areas. / Birdair Structures Inc.

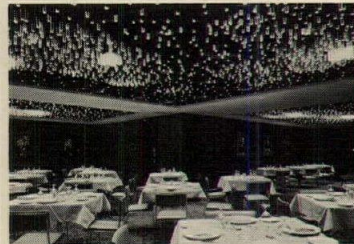
## INTEGRATED ASSEMBLIES

**707 MODULAR STORAGE** / A modular storage deck system consists of a basic starting module, to which the user may add any number of mezzanine modules: an outside-edge railing, pre-assembled framework and grating. / Penco Products Inc.

**708 SECTIONAL BUILDING** / The company has announced an exclusive agreement with MERO Company of Wuerzburg, Germany to market MERO building system products. Main elements of the system are MERO nodes and members that combine to form a space-frame type structure. / Unistrut Corp.



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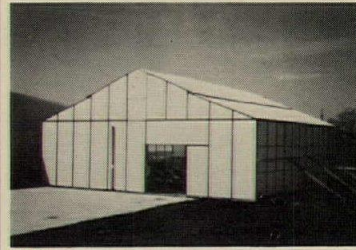
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**709 PATIENT-CARE / "COM/CORE"** is composed of a patient service console, a two-level reading/examination light, overhead lights and an overhead coreway for distributing all plumbing and electrical services. / Daybrite Lighting Div., Emerson Electric Co.

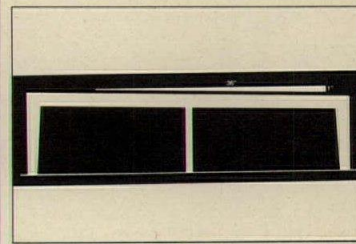
## INTEGRATED CEILINGS

**710 ILLUMINATED CEILING** / Hundreds of 3-, 4-, 5-, and 6-in.-long acrylic crystals are suspended through openings in the black ceiling matrix. Matrix panels are removable so that overhead lamps, wiring, diffusers, etc. may be conveniently reached. / Neo-Ray Lighting Systems, Inc.

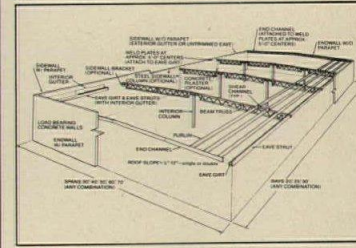
**711 LUMINAIRE** / The ceiling system incorporates a standard lay-in suspended ceiling with a vaulted light module that houses a light fixture, high-intensity discharge lamp, and a clear prismatic lens. The unit takes mercury vapor lamps up to 400 watts. / Armstrong Cork Co. A\*



712



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714

## PREFABRICATED BUILDINGS

**712 ENCLOSURE SYSTEMS** / A system for fast erection of clear-span, temporary buildings incorporates the use of a special "gable package," which has been added to the present line of standard-sized company panels. / Kelly Klosure Systems, Inc.

**713 SHOPPING CENTER** / A building system for strip shopping centers, called the "SS-3," requires no front-wall bracing; it offers a low profile roof, and can be readily adapted to varying floor space requirements. / Armco Building Systems.

**714 DIAPHRAGM ROOF** / A metal diaphragm roof and structural system, called MBF, is designed to use pre-engineered components with load-bearing concrete walls. The *Butlerib* roof system is UL listed for Class 90 wind uplift. / Butler Mfg. Co. A,I\*

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SPECIAL PURPOSE ROOMS & BUILDINGS  
SOUND & VIBRATION CONTROL  
SWIMMING POOLS  
SOLAR ENERGY SYSTEMS

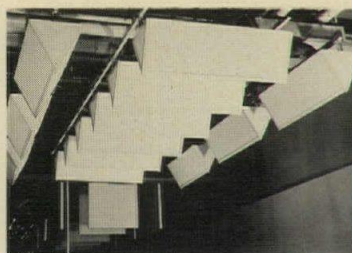




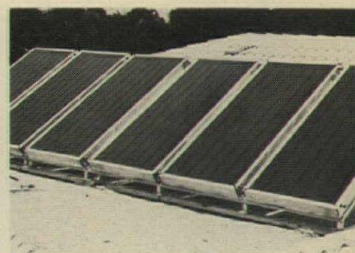
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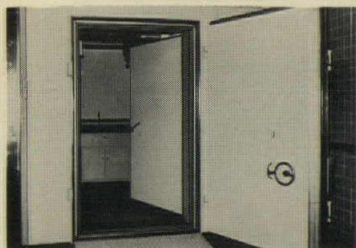
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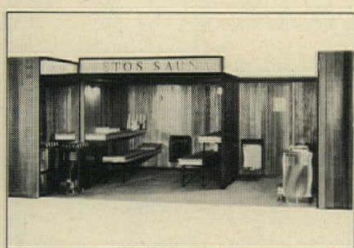
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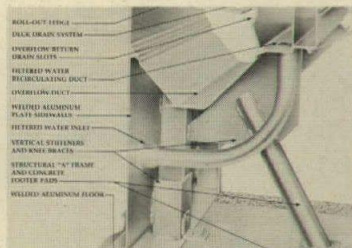
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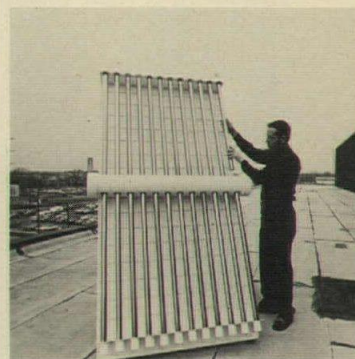
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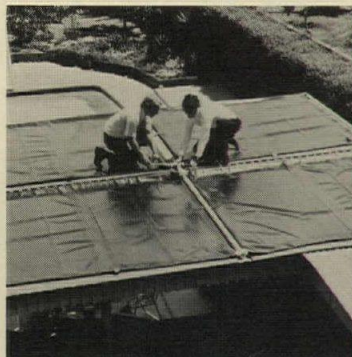
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**715 PORTABLE STRUCTURES** / An all-steel model can be ordered with bullet-resistant windows and wall panels. Sizes range from 3- by 5- to 7- by 9-ft. It is wired and equipped with self-leveling "feet" and a range of interior options is offered. / B-I-G Enterprises, A.I.\*

### RADIO-FREQUENCY SHIELDING

**716 SHIELDED ROOMS** / Radio frequency (RF) shielded soundproof rooms provide RF shielding of 120 db at full frequency range and from 14 KHz up to 10 GHz. Sound absorption as measured by ASTM C423-66 has a noise reduction coefficient of NRC = 1.00. / Keene Corp., Ray Proof Div. A\*

### SPECIAL PURPOSE ROOMS

**717 PRE-BUILT SAUNA** / The "Universal Room" can be put together in a variety of room arrangements and sizes. It is redwood inside; the outside is simulated walnut. It operates on standard currents, and can be assembled easily anywhere. / Viking Sauna Co. A.L.\*

**718 AUDIOMETRIC BOOTH** / Model AB200-3 audiometric booth is used to satisfy the hearing testing needs of local school systems. The booth is economical, portable, and comes pre-assembled, according to the company. / Eckel Industries, Inc. A\*

**719 SAUNA** / The sauna heater is listed by Underwriters' Laboratories. Besides a complete line of sauna heaters, controls and accessories, the company fabricates pre-cut material and equipment packages and prefabricated packages in clear vertical grain Western Canadian Cedar. / Metos Sauna Inc. A,L\*

**720 MOTEL UNITS** / Twenty-six modules can be set in an eight-hour day. Completely finished, the wood or steel framed modules can include: guest rooms, baths, hallways, offices, reception areas, managers' apartment, stairways and mechanical and service areas. / Alcoa Construction Systems, Inc.

### SOUND & VIBRATION CONTROL

**721 NOISE CONTROL** / Noise abatement products comply with OSHA regulations, and include individual wedge absorbers designed to be installed between pipes, ducts and obstructions found in plants. / Armstrong Cork Co. A\*

### SWIMMING POOLS

**722 POOL WALL SYSTEM** / The product contains all circulation ducts as built-in integral units, to renovate an existing pool economically with an all-aluminum liner. Pictured is a cross-section of the pool side wall. / Chester Products Inc. A\*

**723 POOL HEATER** / Solar heaters can be installed on both new or existing pools, in or above ground. Typically, the pool water heated in the panels will rise in the range of 2 to 8°F. / Burke Rubber Co.

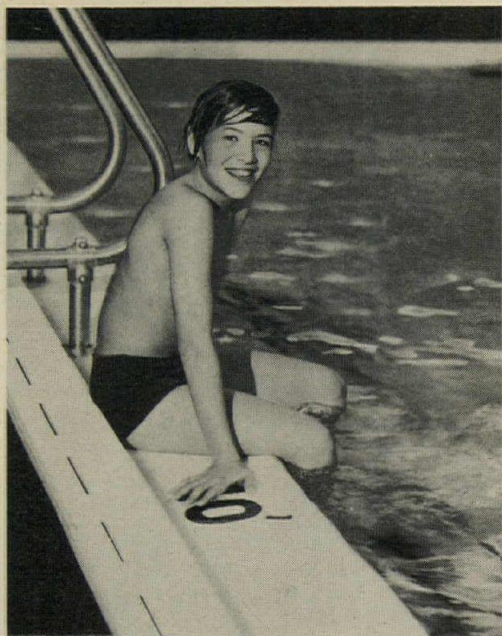
### SOLAR ENERGY SYSTEMS

**724 SOLAR COLLECTOR** / Modular solar energy collectors are factory-assembled and ready to install. The sun's heat is absorbed by copper collector plates. The heat is transferred to a liquid, which is circulated through rectangular copper tubes attached to the collector panel. / Revere Copper and Brass Inc. A\*

**725 SOLAR COLLECTOR** / The basic module of the "SUNPAK" collector measures 4- by 8-ft and consists of a series of 24 glass tubes, each 40 in. long. The special tubes are connected to a manifold system and can use water or ethylene glycol as the heat transfer fluid. / Owens-Illinois, Inc.

**726 FLAT PLATE COLLECTOR** / The unit features serpentine copper tubing bonded to a black coated plate set in a 3- by 8-ft aluminum panel having a double window of tempered glass and high transmittance polyester film. Panels are applicable for residential, commercial and industrial water heating systems. / Solar Dynamics Inc.





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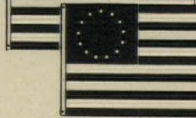
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**A1. Home Flag Set**—The only flag set approved for use with the golden Double Eagle top ornament (included), symbol of the Bicentennial. Heavy-duty 3 x 5 ft. flag with double-stitched stripes, canvas heading, and brass grommets. Extra-strength, gold steel pole (6 ft., two piece). Wall bracket, screws, halyard, instructions, and storage box. Choice of 50 Star, Betsy Ross, or '76 Bicentennial Flag. **\$9.95** each.

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Betsy Ross Flag



'76 Bicentennial Flag.



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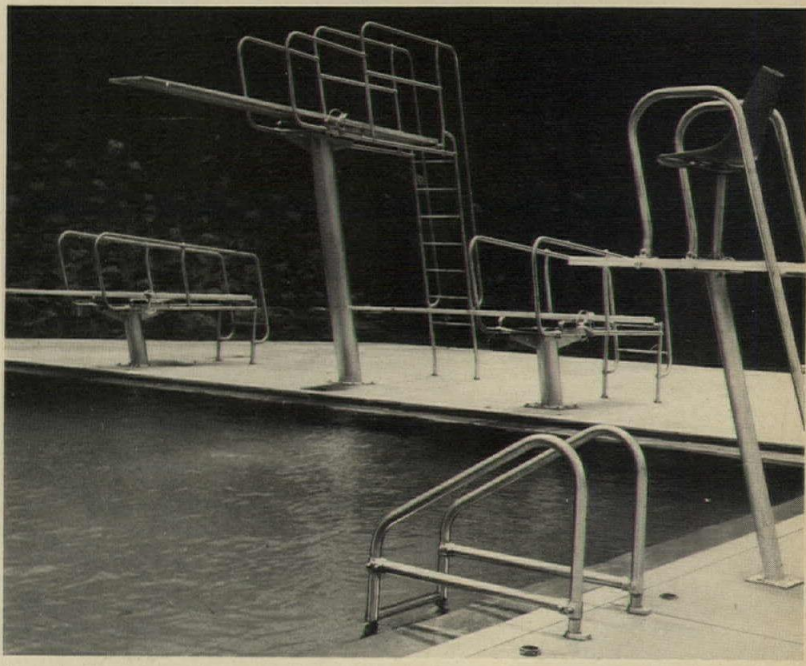
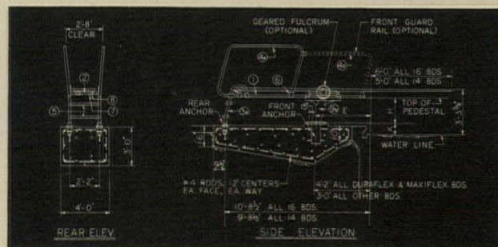
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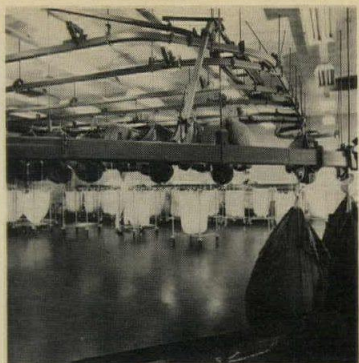
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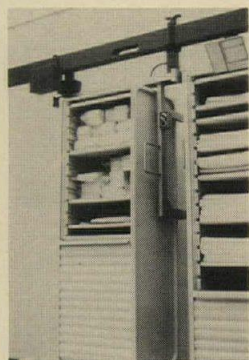


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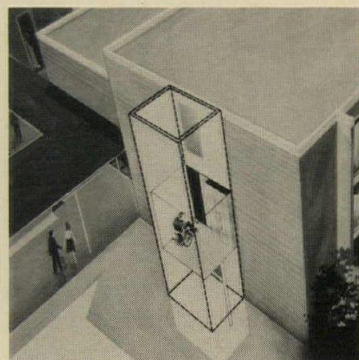
# conveying systems



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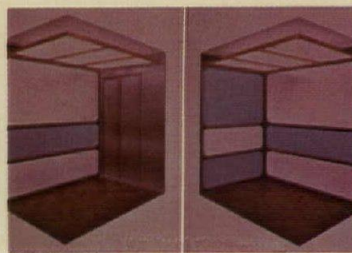
## CONVEYORS & CHUTES

**739 LAUNDRY HANDLING** / Two *Power-Flex* overhead conveyor systems are used to collect incoming bags of laundry, deliver them to sorting tables and then to washing machines. Each loop accommodates 10 trolleys, or a capacity of 1800 lbs per line. / Acco, Chain Conveyor Div.

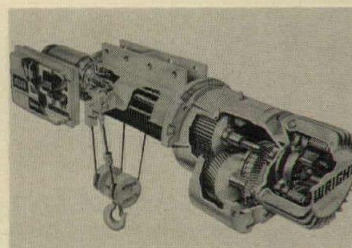
**740 MATERIAL HANDLING** / Material handling for hospital facilities features a transporter that allows Herman Miller's plastic C-locker to be substituted for the carts which normally carry hospital supplies along the ACT automatic cart transportation system. / Acco, Chain Conveyor Div.

## ELEVATORS

**741 HYDRAULIC** / The IVO Oil-draulic elevator features an inverted hydraulic piston and a lifting frame that attaches to the cylinder to support the car. This eliminates the expense of drilling a deep jack hole. / Dover Corp. A\*



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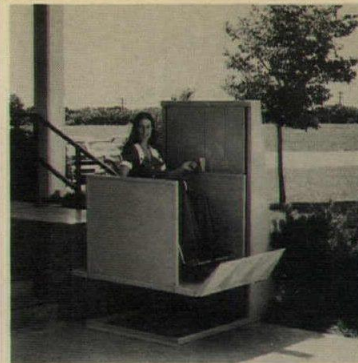
**742 MODULAR CAR** / Pre-engineered, "Go-line" elevators for mid-rise buildings use a modular system of car design and construction to offer hundreds of different elevator interiors. The line has capacities from 2000 to 4500 lbs. / Otis Elevator Co. A\*

## HOISTS & CRANES

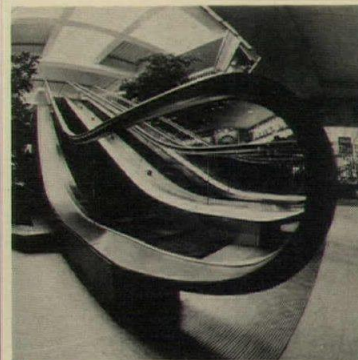
**743 HOISTS** / *Wright* work-rated hoists are available in a capacity range of 2000 to 40,000 lbs. Each model hoist has the same general configuration. / Acco, Hoist & Crane Div.

## LIFTS

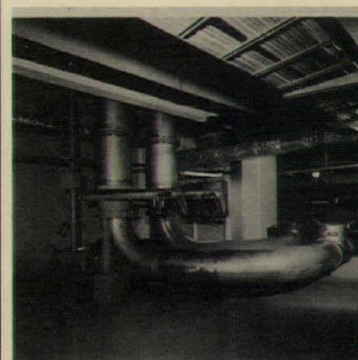
**744 STAIRLIFT** / The "StairLIFT" will be preassembled as far as possible prior to delivery to permit simple installation of the five major components: rail, trolley, pedestal, chair, and power unit. It is designed for straight stairways not less than 29 in. in width. / Inclinator Co. of America. A\*



745



746



747

**745 LIFT SYSTEM** / A lifting platform to overcome architectural barriers for the handicapped, called *Porch-Lift*, operates on standard 110-volt electrical current. The lifting mechanism is enclosed in a weather-resistant housing. / American Stair-Glide Corp.

## MOVING STAIRS & WALKS

**746 ESCALATOR** / Pre-engineered escalators are available with opaque or transparent balustrades. Widths of 32 or 48 in. are available, and 90 ft per minute, 120 fpm or two-speed units are also offered. / Otis Elevator Co. A\*

## PNEUMATIC TUBE SYSTEMS

**747 LAUNDRY CONVEYING** / An automatic conveying system for laundry and refuse uses air to transport sacks through sealed pipes or ducts. The "SF Airborne Conveying System" was developed by AB Svenska Flaktfabriken ("FLAKT") of Sweden. / SF Air Control, Inc.

CONVEYORS & CHUTES  
ELEVATORS  
HOISTS & CRANES  
LIFTS  
MOVING STAIRS & WALKS  
PNEUMATIC TUBE SYSTEMS



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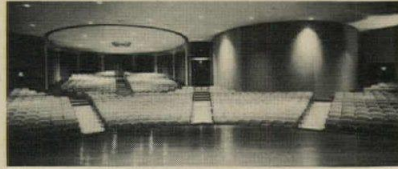
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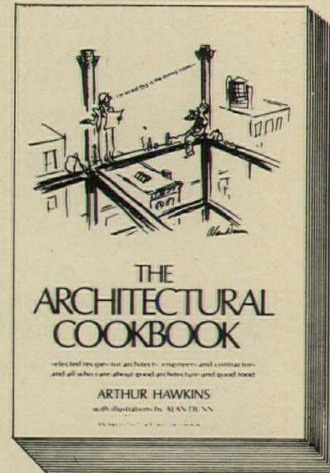
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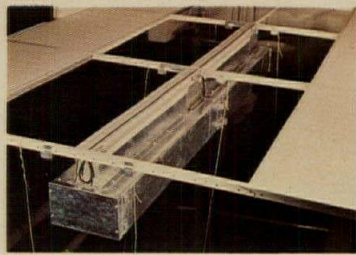
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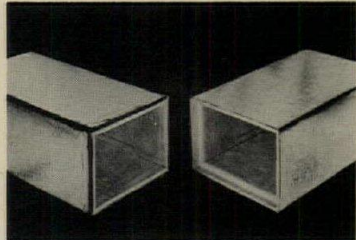




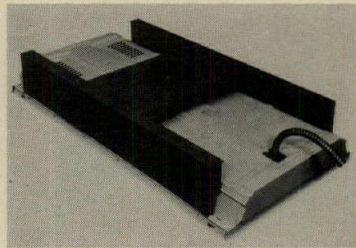
AIR DISTRIBUTION EQUIPMENT  
 AIR TREATMENT EQUIPMENT  
 HEAT GENERATION  
 FIRE PROTECTION EQUIPMENT  
 HEAT EXCHANGERS  
 HEAT PUMPS  
 HVC TERMINAL UNITS  
 MECHANICAL CONTROLS  
 PIPING & SPECIALTIES  
 PLUMBING FIXTURES & TRIM  
 PUMPS & COMPRESSORS  
 REFRIGERATION EQUIPMENT  
 SELF-CONTAINED HVC UNITS  
 VALVES



760



761



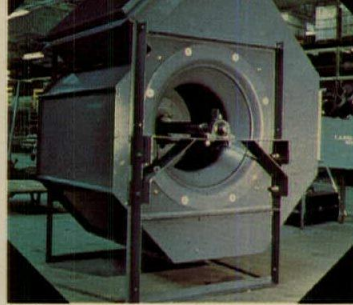
762

## AIR DISTRIBUTION EQUIPMENT

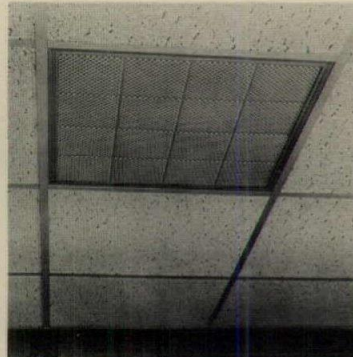
**760 AIR TERMINAL** / "Moduline" 37AG and 37AJ ceiling air terminals operate as slave or control units. The 37AG handles 20 to 200 cfm; the AJ handles 10 to 100 cfm. Self-contained controls afford fast response and allow zone changes easily. / Carrier Air Conditioning Co.

**761 FIBERGLASS DUCT** / A fiberglass duct board featuring a 51-in. width and molded ship-lap edges is self-insulating. "Ultra\*Duct" is faced on one side with a non-combustible, foil skim kraft vapor barrier jacket. / Certain-teed Products Corp.

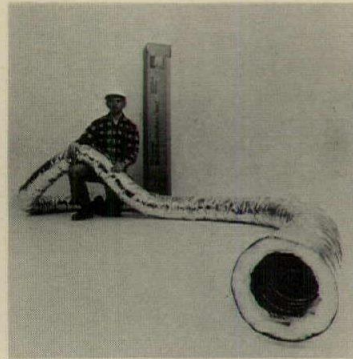
**762 AIR DIFFUSERS** / Air diffusers to fit the 5200, 5400, 4500, 7200 and 7400 series of fluorescent troffers are available for single side or dual air supply. The volume control dampers in the diffuser are fully adjustable from below through the fixture air-slot. / Columbia Lighting, Inc.



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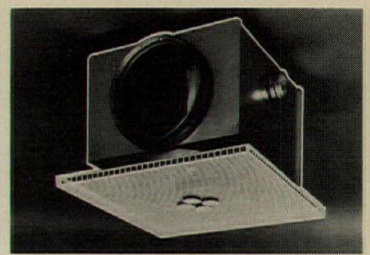


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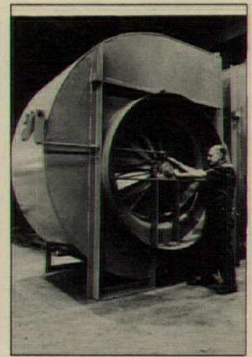
**763 CENTRIFUGAL FAN** / Designed to eliminate misalignment of rotating parts, the unit has an octagonal scroll braced with heavy structural side support members. / The Trane Co. A, I\*

**764 CEILING DIFFUSER** / A flush mounted ceiling diffuser is engineered to provide five different unobstructed air flow patterns. Called the "Surf-air," the new diffuser directs air patterns across the ceiling surface, not down. / Hart & Cooley Mfg. Co.

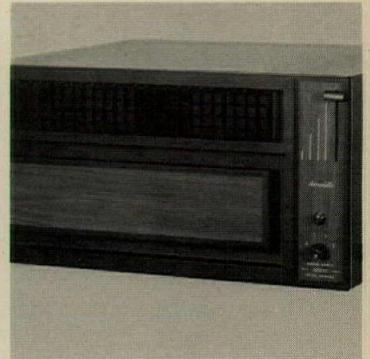
**765 FLEXIBLE DUCT** / A lightweight, flexible duct system for use as air duct or connector on supply and return lines is 25 ft long. "INL-25" can be used in residential, commercial and industrial installations. It has an impervious inner barrier. / Owens-Corning Fiberglas Corp.



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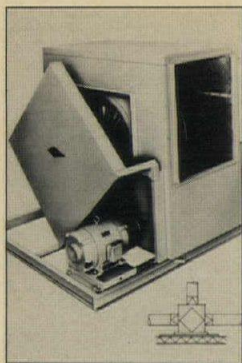
768

**766 AIR DIFFUSER** / A constant-throw diffuser for variable-volume air-conditioning systems uses a wafer-type jet nozzle to maintain constant throw length and diffusion, independent of the turndown of airflow as low as 30 per cent. / American SF Products, Inc.

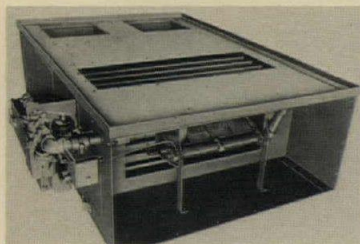
**767 INLET VANE CONTROL** / A new feature eliminates flutter. Activated by an automatically controlled damper motor, the modulating mechanism responds to maintain positive pressure within a building despite extreme variations of outside air pressure. / Ilg Industries.

**768 AIR INTAKE** / This apparatus saves heat by means of recirculating the incoming cold air, which is mixed with the excess warm air accumulated near the ceiling. It is recommended for dwellings, hospital rooms, offices, class rooms, etc. / Aston Industries Inc. I\*\*

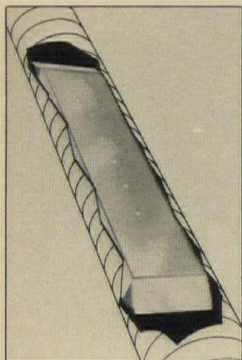




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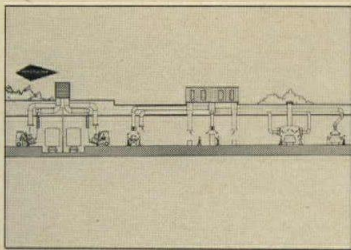
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## AIR TREATMENT EQUIPMENT

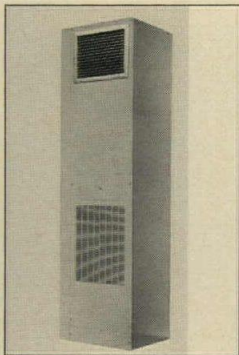
**769 CENTRIFUGAL FAN** / The *Acousti-Fan* (available up to 150,000 cfm) allows multiple outlets from the same casing, saving equipment room space. Up to 17 db quieter than conventional centrifugal fans, the "Acousti-Fan" eliminates additional noise attenuation, according to the company. / Tempmaster Corp.

**770 GAS-FIRED HEATERS** / Model LUR features the use of return air dampers, which permit circulation of 50 per cent room air and 50 per cent fresh air. Designed for curbed roof mounting or indoor suspension, the units are suitable for a range of industrial applications. / Dravo Corp. I, E\*

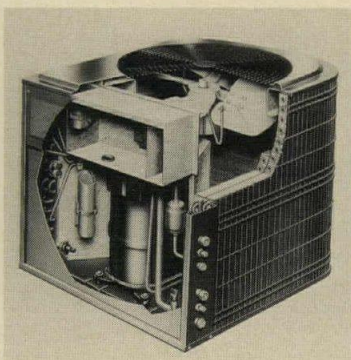
**771 NOISE ATTENUATOR** / *Acousti-Cell* removes 69 per cent more db's per foot of low frequency sound with 18 per cent less air friction than conventional perforated metal covered absorbers, according to the company. It can be installed in any duct. / Tempmaster Corp.



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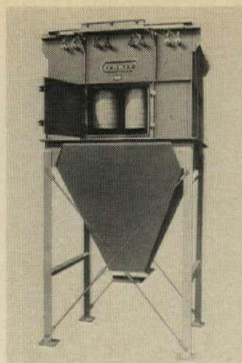


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**772 FACTORY AC** / A factory air conditioning approach, which can reduce first cost by as much as 50 per cent, incorporates computerized load calculation and air distribution system design, to deliver air at the proper volumes, velocities, and temperatures. / Tempmaster Corp.

**773 HEAT RECOVERY** / A water-to-air heat recovery unit recovers heat from areas of a building requiring cooling; the recovered heat is then transferred to areas that require heating. Heating capacity is 9600 Btuh and the cooling capacity is 9000 Btuh. / McQuay Group, McQuay-Perfex Inc.

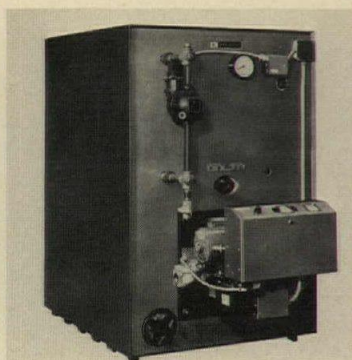
**774 CONDENSER** / An air conditioning condensing unit may be installed singly or in multiples in residential and commercial applications. It is the "HS10" series which comes in sizes from 2½ to 5 nominal tons, ranging in capacities from 27,000 Btuh to 58,000 Btuh. / Lennox Industries Inc. A,L,I\*



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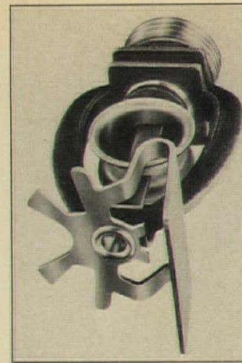
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**775 DUST COLLECTORS** / The "ID" series of five continuous-duty models has quick-change filter cartridges for lower height and easier maintenance. Automatically cleaned, high-efficiency elements range from 1150 to 6120 sq ft per unit. Average capacity is 2000 to 12,200 cfm. / Torif Div., Donaldson Co., Inc.

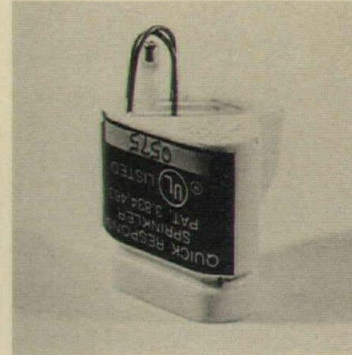
## HEAT GENERATION

**776 VERTICAL HEATER** / For mounting on either high or low ceilings in factories, etc., the unit is available in 10 sizes, for steam or hot water service from 104 to 1540 EDR in systems to 150 psi. / Dunham-Bush, Inc.

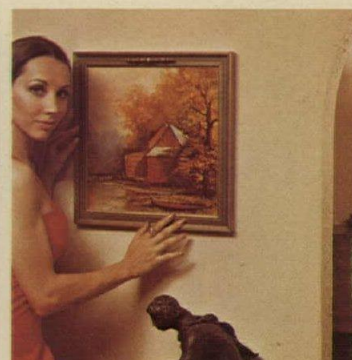
**777 BOILER-BURNER** / For light oil, gas and gas-light oil, the No. 86 is offered in 13 sizes with net I-B-R ratings from 626,100 to 2,913,000 Btuh hot water and 2250 to 10,935 sq ft steam. / Weil-McLain. A\*



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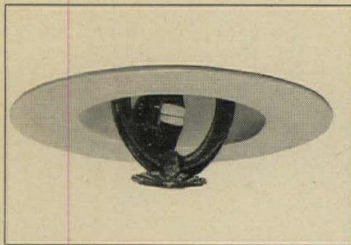
## FIRE PROTECTION EQUIPMENT

**778 SIDEWALL SPRINKLER** / A horizontal sidewall sprinkler features a 14-by-28-ft spray pattern for 392 sq ft of coverage. The UL-listed sprinkler is recommended for light hazard conditions, typically found in apartment and office buildings, etc. / Grinnell Fire Protection Systems Co., Inc. A,E\*

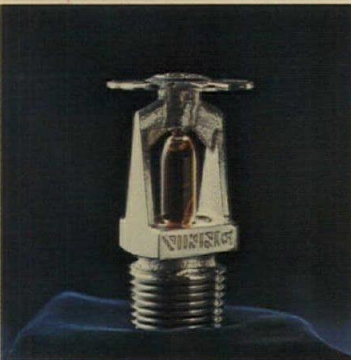
**779 SPRINKLER ACTUATOR** / The "Quick Response Actuator" was developed for extremely rapid containment and extinguishment of fires. It can be used with both wet and dry systems for all new and existing sprinkler systems and operates at 135°F. / Grinnell Fire Protection Systems Co., Inc. A,E\*

**780 FIRE STATION** / Recessed behind a framed picture or a mirror, *Fire Warden* has 45 ft of high-pressure hose and a chemical extinguisher. It connects to home water systems. / American General Products, Inc.

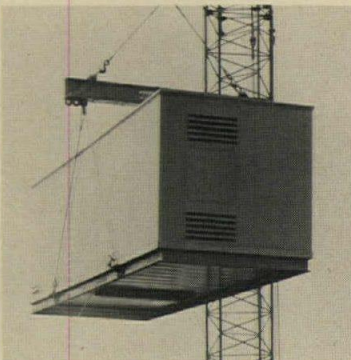




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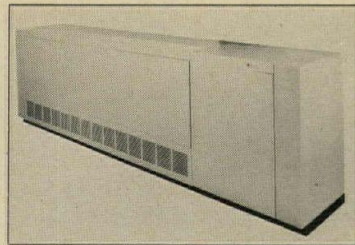
783

**781 RECESSED SPRINKLER** / Metlock escutcheon plates are available in white or chrome and can be used with all standard manufactured heads. It is UL-listed and can be installed after the sprinkler and ceiling. / Metcalfe Industries.

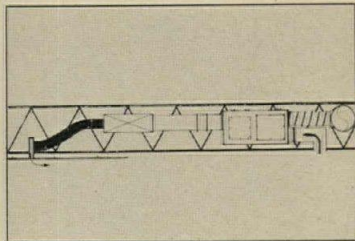
**782 SPRINKLER** / Measuring 2.2 in. high and less than 1 in. wide a glass bulb sprinkler is available in chrome or brass finishes, upright or pendant styles and in a range of fusing temperatures. It will be available after June 1976. / The Viking Corp. I,E\*

#### HEAT EXCHANGERS

**783 ENERGY RECOVERY** / Available for any size job, energy reclaim systems incorporate semi- or fully-welded parallel plate aluminized or stainless steel heat exchangers suitable for corrosive gases with temperatures up to 1500°F. The equipment is suited to severe applications. / Viron Corp.



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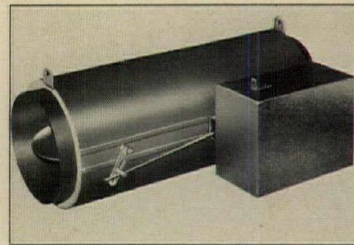
#### HEAT PUMPS

**784 HEAT PUMP** / The company says this system can cut school energy costs by at least 25 per cent. Applicable for both renovation and new construction, it relies on reverse cycle air conditioners connected to a closed water loop. / American Air Filter Co. A\*

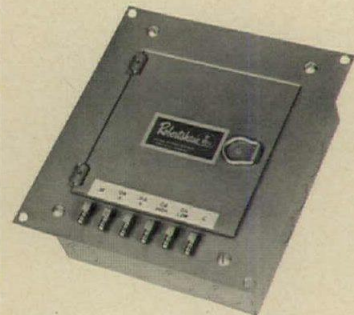
#### HVC TERMINAL UNITS

**785 HEATING TERMINAL** / By cycling the unit fan when the main variable volume system is shut down, the unit maintains the room air temperature eliminating the disadvantages of the reheat system concept. Units will handle perimeter heating/cooling. / Tempmaster Corp.

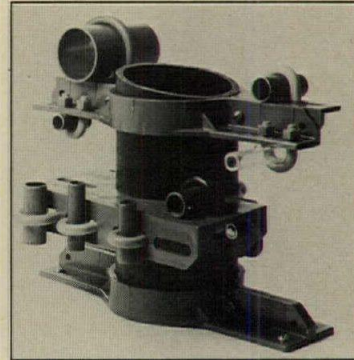
**786 AIR POWERED TERMINAL** / Type "SC" and "CDS" terminal units are available in eleven sizes from 50 to 2400 cfm. The company provides computerized design services, including complete acoustical design, and system optimization. / Tempmaster Corp.



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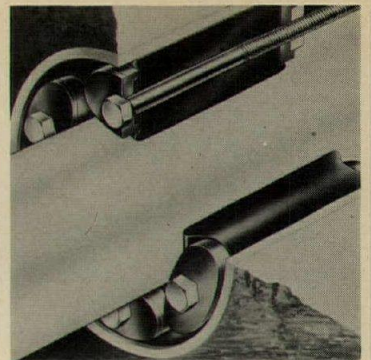
**787 VARIABLE VOLUME** / "HUP" delivers controlled air volumes under varying load conditions with adjustable volume settings, according to the company. It is recommended for sequenced hot water or electric heat. / Barber-Colman Co.

#### MECHANICAL CONTROLS

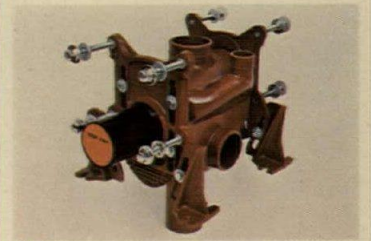
**788 ENTHALPY SELECTOR** / The "H100" enthalpy selector is a pneumatically operated energy conservation system designed for optimization of outside and return air usage in air handling systems. It senses airstream total heat content (enthalpy) and provides the desired sequence of operation. / Robertshaw Controls Co.

#### PIPING & SPECIALTIES

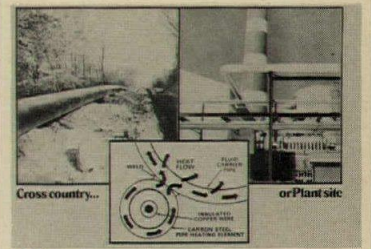
**789 PIPE SUPPORT** / The bracing components are made of ABS, eliminating static electrolysis and bi-metal corrosion. / P & M Bracket Co., Inc.



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**790 LINK-SEAL CLOSURE** / Diameters up to 120 in. can be sealed with the new models. All models of "Link-Seal" are available for special services such as high-temperature application lines. / Thunderline Corp.

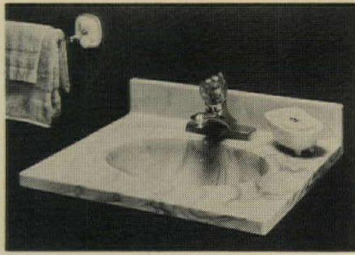
**791 CARRIER-FITTING** / A vertical, adjustable intermediate length carrier-fitting replaces short and long barrel carrier-fittings. The carriers feature an anchoring device to provide rigid installation. / Tyler Pipe. E\*

**792 PIPE HEATING** / The Sect electrical tracing system utilizes the skin or proximity effect of 60 Hertz alternating current, to provide heat along the entire length of a pipe line. Current applications include crude oil, solid slurry, water freeze protection, etc. / Ric-Wil Inc.





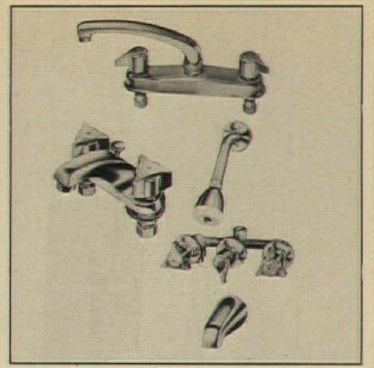
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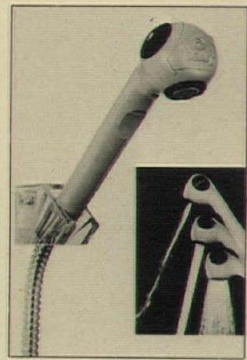
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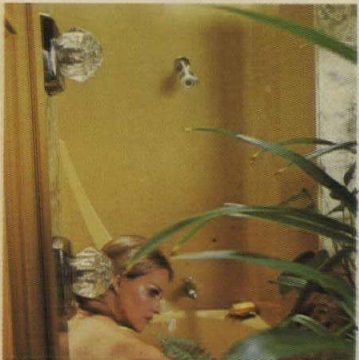
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## PLUMBING FIXTURES & TRIM

**793 WATER-CONSERVING WC** / The "Mercury III" needs 3½ gallons per flush as compared with 5½-6 gallons for conventional toilets. / Universal-Rundle Corp.

**794 SHOWER CONTROL** / A pressure balanced single handle mixing valve with integral thermometer is suggested for commercial, health care and residential use. / Symmons Industries Inc.

**795 MOUNTING SYSTEM** / The *Fiberglas* model valve can be installed on *Formica*, *Fiberglas* or other modular bath materials. The valve design permits mounting anywhere on the wall, in any configuration on framing and stringers. / Delta Faucet Co. A,E\*

**796 MARBLEIZED VANITY** / Measuring 20½ in. wide by 18 in. deep, the marbleized vanity top with integral bowl is offered in six colors. It is produced by hot pressure molding silicone and polyester, with two subsequent stages of heat tempering. / Bradley Corp. A\*

**797 BATH FITTINGS** / In chrome, fittings are made of brass for maximum resistance to corrosion, then heavily chromium plated. / Hastings Tile & "Il Bagno" Collection. A\*

**798 BATH FIXTURES** / "Serie Ariete," in molded vitreous china, is available for pedestal sinks, bidets and toilets. Brilliant orange, red, blue, green, yellow, or brown exteriors are contrasted with white interiors. / Hastings Tile & "Il Bagno" Collection. A\*

**799 SHOWER** / "Serie 2001" was designed in Italy by Fabio Lenci. The shower is made of chrome, clear plastic, and colored fiberglass in red, blue, green, yellow, beige, black or white. / Hastings Tile & "Il Bagno" Collection. A\*

**800 BATH FIXTURES** / Fluted exteriors in colors on these bath fixtures, combine with a complete line of bath accessories. / Hastings Tile & "Il Bagno" Collection. A\*

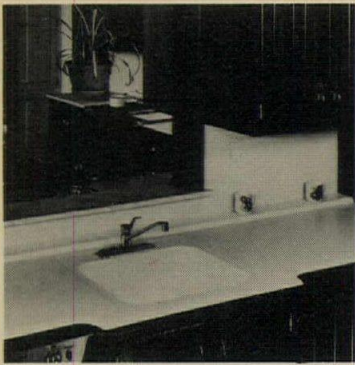
**801 TOILET** / *Flushmate* is a system for flushing toilets using 2 to 2½ gallons of water instead of 5 to 8. The self-contained cylinder is 7½ in. in diameter and 16 in. in width. / Water Control Products/N.A., Inc.

**802 FAUCETS** / The "Mark V" washerless line features a patented valve eliminating washers, springs, rubber or brass seats. The line carries a 10-year warranty against leaking, dripping, or valve replacement. / Union Brass & Metal Mfg. Co.

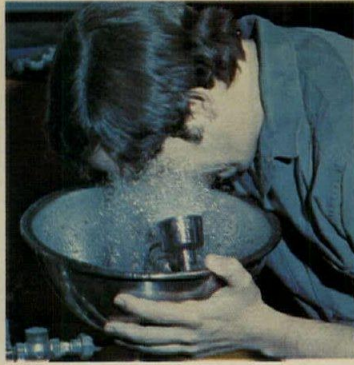
**803 PERSONAL SHOWER** / The "Daisy" incorporates three different sprays in one lightweight unit. Easily connected to any existing plumbing installation, the "Daisy" is offered as a replacement hand set or, complete with wall mounting systems and accessories. / Interbath, Inc.

**804 HANDSHOWER** / The unit delivers water in a pulsating stream. Several models and various accessories are offered for homes, hospitals, institutions. It is made of high-impact materials. / Moen Div. of Stanadyne.

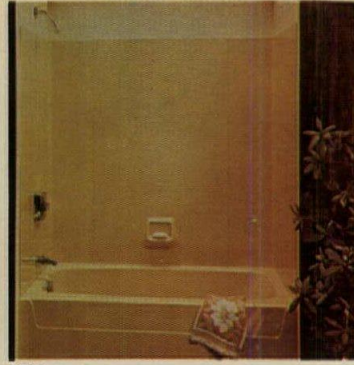




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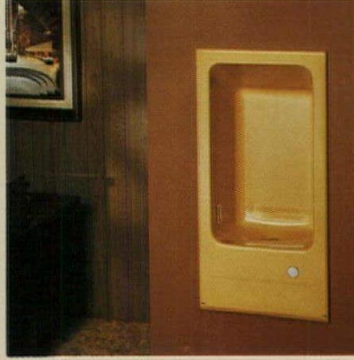
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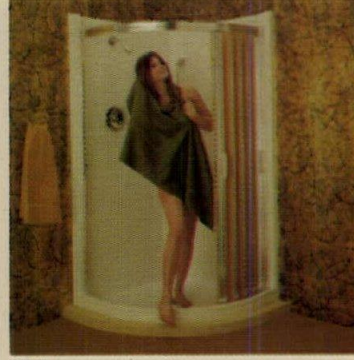
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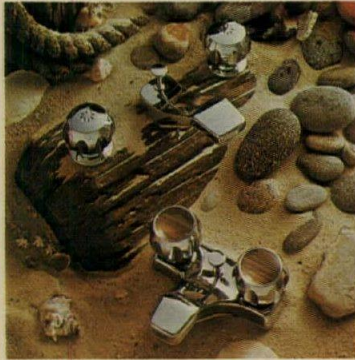
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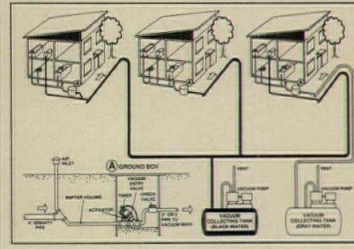
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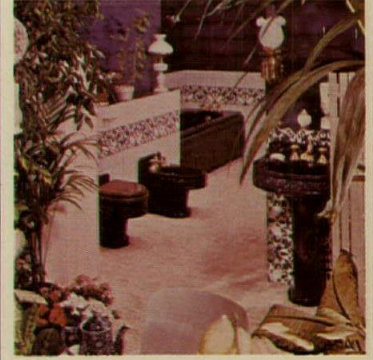
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**805 KITCHEN COUNTER** / The new unit, which has the look of marble, is 10 ft long, 25 in. wide and  $\frac{3}{4}$  in. thick. A 5-in. matching backsplash is included. It is available in white and a marbled beige. "Corian" is repairable. Cigarette burns can be rubbed out with abrasive cleanser or fine sandpaper. / DuPont Co.

**806 URINAL** / A space-saving siphon jet urinal also saves on water. The "Savon" is 16 in. wide and flushes on 1.5 gallons of water. / Eljer Plumbingware, Wallace Murray Corp.

**807 FITTINGS** / Competitively priced, water saving fittings feature large, non-corrosive handles, in a choice of chrome-plated handles or changeable, decorative insert handles. Fittings are available in 4-in. centerset or combination fittings, with 8-, 10-, and 12-in. spreads. / Eljer Plumbingware, Wallace Murray Corp.

**808 EYE/FACE WASH** / A 13-in. diameter stainless steel bowl, and two chrome plated brass spray heads are featured. Actuated by a push flag handle, the unit includes volume and pressure controls. / Western Drinking Fountains.

**809 FOUNTAIN** / A drinking fountain molded of *Polymarble* is for full-recessed wall installation. It is available in white or five other colors, and features a flush-mounted angle-stream bubbler. / Haws Drinking Faucet Co. A\*

**810 WHIRLPOOL BATH** / The bathtub features four self-cleaning side jets, creating the whirlpool action. The pump is safe, sealed, and operates on normal household current. A choice of nine colors is offered. / Briggs.

**811 ACRYLIC BATHTUB** / The "Dolphin" acrylic tub looks and wears like cast iron. Available in white and six colors, it comes in standard or above-the-floor roughing in models. The optional matching three-panel wall surround features seamless corners. / Powers-Fiat, Div. of Powers Regulator Co. A\*

**812 CORNER SHOWER** / A one-piece molded glass fiber unit provides a compact shower where space is limited. Base has a stainproof, slipfree surface. Units are available in white, avocado, and harvest gold. / Kinkead Industries.

**813 SEWAGE COLLECTION** / The "Envirovac" system uses 3 pints of water per flush. Because vacuum is utilized, plastic piping can be laid independently of grade which saves installation and material costs. / Colt Industries.

**814 WATER COOLER** / This wall-mounted water cooler was created for persons with physical handicaps. It projects 18½ in. from the wall and lever handles on both sides make possible either right- or left-hand operation. / Halsey Taylor Div., King-Seeley Thermos Co.

**815 ACRYLIC VANITY** / *Acryloid VIII*, a two-component, thermosetting acrylic resin having the look and feel of quarried marble is used in lavatory and vanity tops with integral bowls, bathtubs, bath accessories, and kitchen countertops. / Rohm & Haas Co.

**816 BATH CERAMICS** / The company uses natural clay from its own mine in the northeast of England as raw material to manufacture its ceramic. All products are individually hand-finished. A range of nine colors and hand-decorated patterns is available. / Adamez Inc.

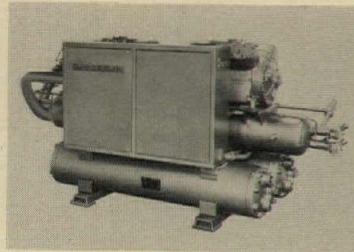




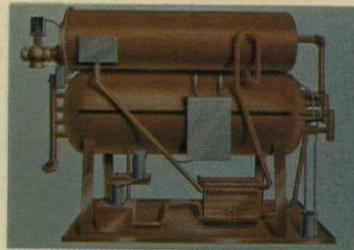
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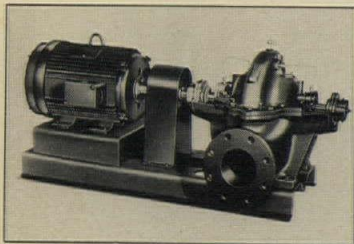
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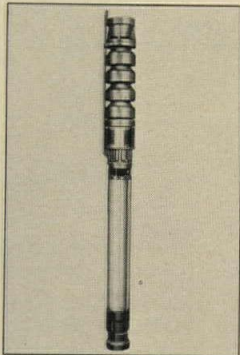
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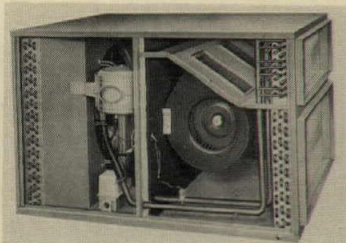
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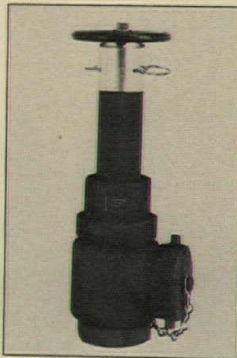
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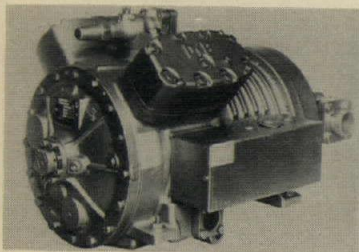
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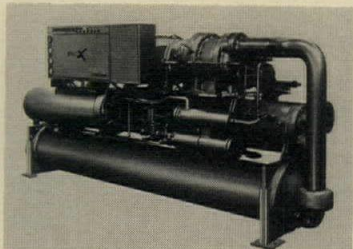
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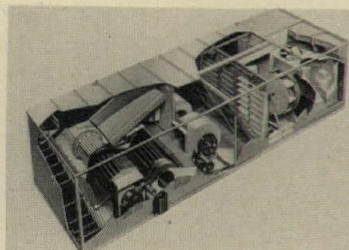
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**817 SINGLE-HANDLE** / The line utilizes push-pull operation. Total temperature control in gradual degrees is afforded by 90-degree rotation in each of the hot and cold positions. Finishes include polished chrome, satin chrome, antique chrome and antique bronze. / Price Pfister.

## PUMPS & COMPRESSORS

**818 CENTRIFUGAL PUMP** / A horizontally split case pump is designed for all liquid handling problems requiring a large capacity, with either high, medium or low head pumping. Flows range to 5000 gpm and heads to 400 ft. / LFE Fluids Control Div.

**819 COMPRESSOR** / A metric reciprocating unit features low power consumption and high EER (energy efficiency ratio). Available in either four or six cylinders, 17 models are offered. It is reported to consume 39 per cent less energy per same Btu than competing 3500 rpm machines. / Dunham-Bush, Inc.

**820 LIGHTWEIGHT PUMP** / The pump weighs less than 35 lbs, and handles 9000 gallons per hour. Designated the PP-2, the self-priming centrifugal pump is powered by a 3-hp engine. / Stow Mfg. Co.

**821 SUBMERSIBLE PUMP** / Seven models range from 35 through 180 hp, with optimum efficiencies available at 14 increments between 28 and 1000 g.p.m. The pumps feature multiple stage design with open brass impellers and bolted cast iron diffuser bowls. / Weil-McLain Co. Inc.

## REFRIGERATION EQUIPMENT

**822 COMPRESSOR** / A positive displacement rotary screw compressor permits stable operation over a range of discharge pressures. It is available from 120 to 750 tons. / Dunham-Bush, Inc.

**823 PACKAGED CHILLER** / The unit incorporates a heavy-duty compressor that has a high EER rating. Capacities from 2 through 75 tons are offered, and the chiller is designed for low temperature fluid cooling from plus 30 degrees F to minus 20 degrees F. / Dunham-Bush, Inc.

**824 ELECTRIC/GAS UNIT** / Tests have shown that this electric gas cooling-heating unit with heat transfer module can reduce gas heating fuel consumption by up to 19 per cent over an entire heating season when compared to a conventional gas furnace, according to the company. / Amana Refrigeration, Inc.

## SELF-CONTAINED HVC UNITS

**825 MULTIZONE SYSTEM** / A control system to monitor a rooftop multi-zone unit, the "DMS4" assures that only the exact amount of air required for cooling is processed. Solid state controls also continually monitor the heating and cooling requirements. / Lennox Industries, Inc. A,L,I,E\*

**826 AIR CONDITIONER** / A 25-ton air conditioning unit designed for use with solar energy will be introduced in 1976. The artist's rendering depicts the Solaire "300," which can operate at full capacity with a firing water temperature as low as 195° F. / Arkla Industries, Inc.

## VALVES

**827 REGULATING VALVE** / An automatic pressure regulating valve for use in high-rise standpipe and hose systems assures that hose and nozzle pressures will not exceed 100 psi under either flow or no-flow conditions. / Seco Mfg. Inc. I\*

**828 SHOWER VALVE** / This combination tub/shower valve provides a pressure equalizing "Hydroguard" plus a diverter that always returns to tub fill. An additional feature is constant visual indication of water temperature. / Powers-Fiat, Div. of Powers Regulator Co.



# New heat-recovery heating/cooling units will burn less energy in your building!

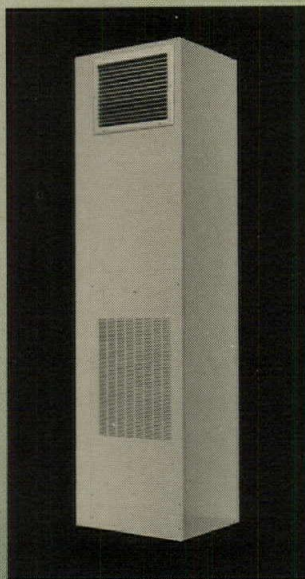
Introducing McQuay's new Hi-Line SEASONAIRE® water-to-air heat-recovery unit. It's a heat pump that not only provides year-round heating/cooling, but also helps pay your energy bill. The unit does this by recovering heat from any area of the building that requires cooling; the recovered heat is then transferred to areas that require heating.

Performance? Well, for openers, the Energy Efficiency Ratios (EER) look like this:

Heating BTUH	C.O.P.*	Cooling BTUH	EER**
9,600	2.7	9,000	8.3
17,600	2.7	18,000	8.7
26,600	3.1	24,000	9.2

\*Coefficient of performance \*\*Compressor and fan motor

These new units are very quiet, too. So they're ideal for places like hospitals, nursing homes, office and apartment buildings. They also save on both field-supplied labor



and materials because we ship them with all risers for condenser water and drains, and with all internal control systems. The units are self-contained, too, and they can be stacked one above the other in multi-story buildings, each independent of the others. So if a malfunction should occur, only one unit is affected: the rest keep on operating.

And here's another plus: there's plenty of design freedom for the architect because units with finished cabinets are well-suited for use either in new buildings or in remodeling jobs. (Unfinished units can be specified for built-in applications.)

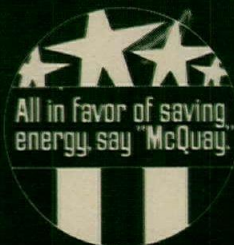
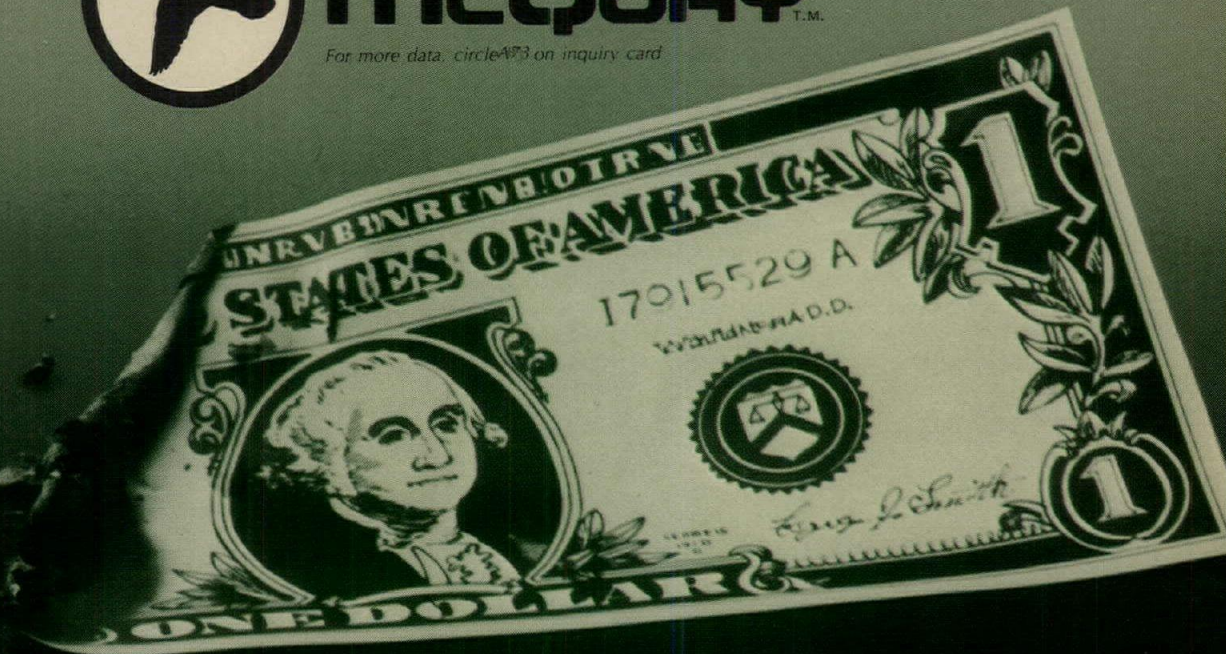
And you can choose ¾, 1, 1½ and 2-ton models, for heat-recovery and/or cooling-only applications.

For full details, contact your McQuay representative, or write: McQuay Group, McQuay-Perflex Inc., Box 1551, Minneapolis, Minnesota 55440.



## McQUAY T.M.

For more data, circle 473 on inquiry card





# Speakman SENTINEL MARK II

Balanced Pressure Valve  
...stands guard over safety, comfort and economy

Here's a new concept in design for single-handle controlled shower and shower/bath valves, developed especially for institutional, commercial or residential installations. The benefits will please you and your customers . . . at a price you can both live with!

Speakman's Pressure Compensating Valve\* protects against sudden, dangerous changes in water temperature due to pressure variation. As an added safety feature, water flow is automatically reduced to an insignificant trickle when either cold or hot water supplies are cut off completely.

There's even less chance of scalding because the valve must be turned off in the cold position. Selection of desired water temperature must progress from cold . . . through warm . . . to hot . . . and back.

Adjustable Temperature Limit Stop, an added safety feature (standard on all models), can be set to limit the temperature

by restricting travel of the control handle. You get not only additional protection, but water and fuel conservation as well. Volume control is available on Sentinel Mark II, conveniently located on the face plate.

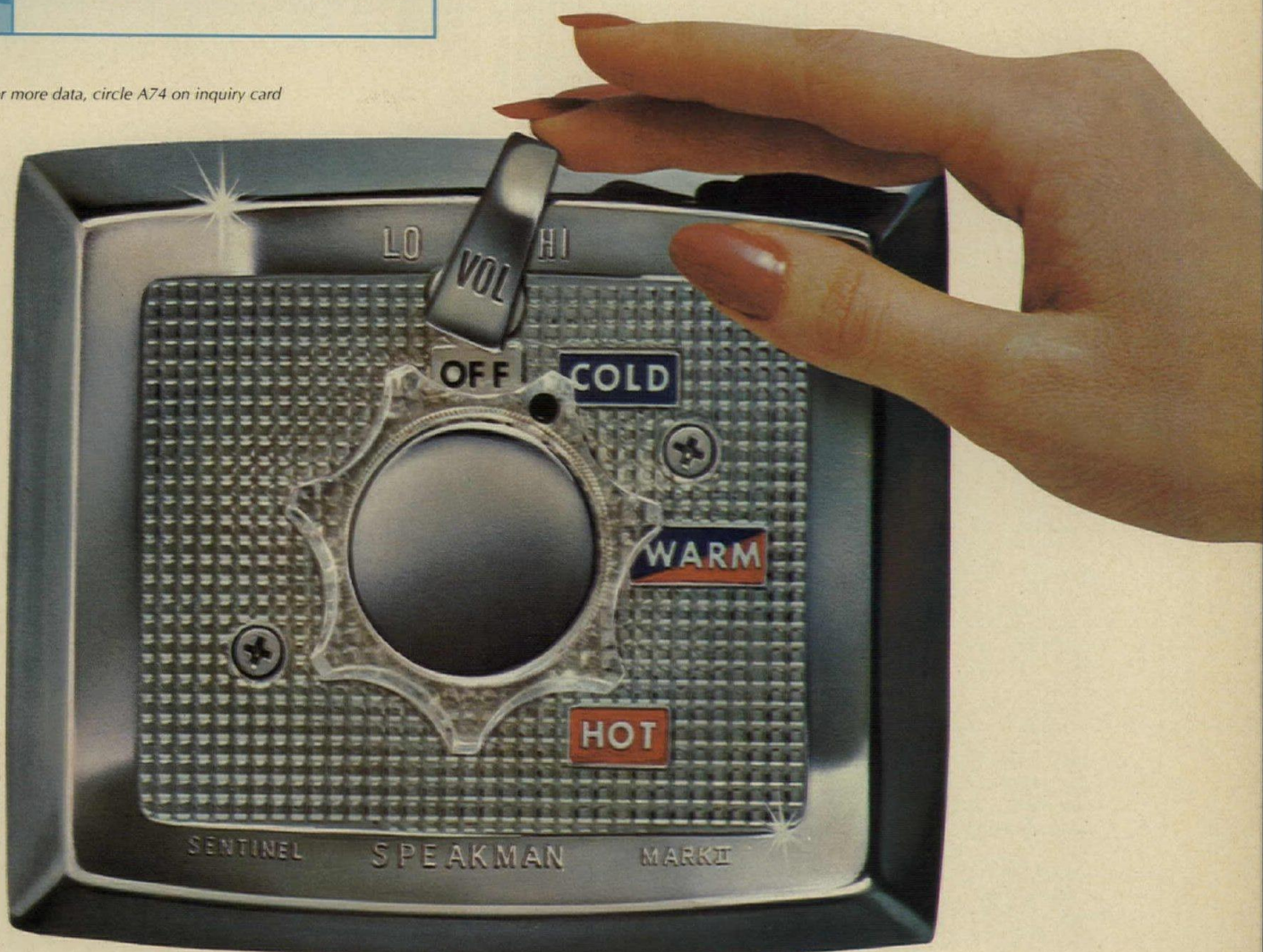
Factory-sealed balancing module is easy to replace as inlet seals are located at the back where they can't bind. Long-lasting ceramic valve module is also easy to remove and concealed stops are available. And for Back-to-Back installations, a reversible supply requires only a simple reversal of the ceramic valve module.

Combine the features of laboratory and field tested Sentinel Mark II with the traditional quality you get from Speakman. Then call your Speakman representative. He'll see you get the full story on all 32 models. Or write Speakman Company, P.O. Box 191, Wilmington, Del. 19899, for free brochure.

\*Patent Pending



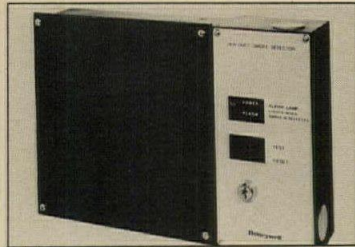
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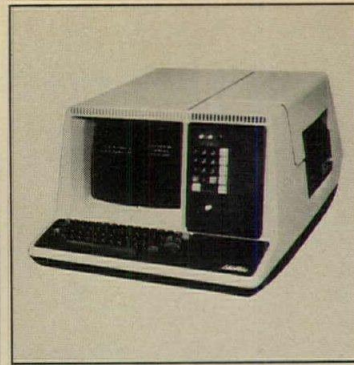
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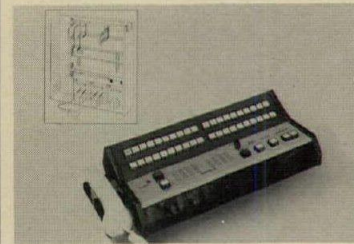
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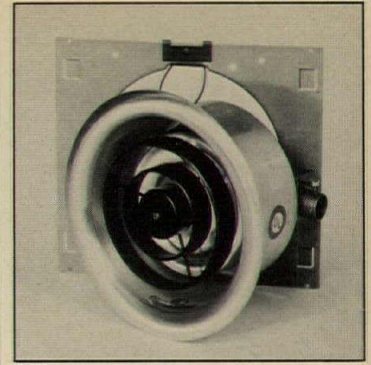
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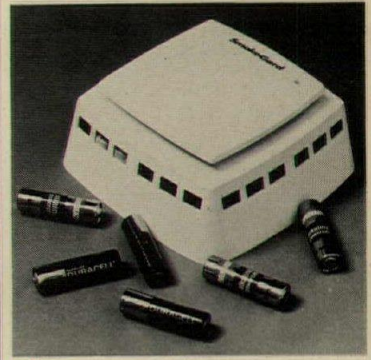
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## COMMUNICATIONS

**841 SMOKE DETECTOR** / A duct-mounted ionization (smoke) detector controls fans and dampers to prevent spread of smoke throughout air-conditioning. The UL-listed detector operates on 120/140-volt 50/60-cycle AC or on 24-volt DC. / Honeywell's Commercial Div.

**842 TELEPHONE BRANCH** / The "CBX" (computerized branch exchange) is designed for applications having between 80 and 800 telephone stations. A mini-computer enables the system to provide numerous operating features. / Rolm Corp.

**843 POWER AMPLIFIER** / The "6233" professional amplifier weighs 35 lbs, is virtually distortionless and delivers its full rated output continuously in ambient temperatures as high as 120°F. Plug-in cross-over modules can be added. / James B. Lansing Sound, Inc.

**844 HOSPITAL SYSTEM** / The "Tempus System" provides personalized patient-to-nurse communications plus patient/bed status information, and also registers the in-out status of staff members. / Executone, Inc.

**845 NURSE CALL** / The basic system consists of: a nurse master station (illustrated) with a capacity of 10 to 60 patient room stations; necessary patient room stations; corridor lights; emergency (bathroom) stations; and auxiliary (utility rooms) reply stations. / Multi-Vox Ltd.

**846 EMERGENCY SYSTEMS** / This all-solid-state device continuously monitors the operational readiness of emergency sound systems, providing electrical supervision of amplifiers, speakers, and speaker lines. Up to 128 locations may be sequentially scanned and digitally displayed. / Rauland-Borg Corp.

**847 SPEAKER** / A flush-mounted speaker compatible with recessed lighting is available for life safety and fire alarm signaling systems as part of the temperature-rated "Voice Control" speaker line of the company. The all-metal "AP-15D-TU" is a 15-watt RMS double re-entrant type speaker. / Atlas Sound.

**848 SMOKE DETECTOR** / Ionization smoke detectors for the home operate on regular AA 1.5-volt alkaline batteries. The "800A Smoke-Gard" detector is also self-monitoring and features a blinking light to visually determine that the battery circuit is in proper operating order. / Statitrol Corp.

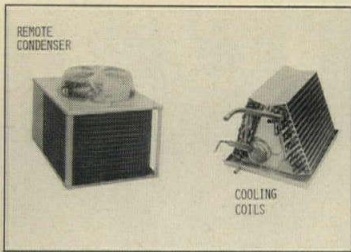
**849 MASKING SYSTEM** / A masking sound system in combination with acoustical ceilings and screens provides speech privacy in open offices. The system includes a newly designed speaker and a rack of amplification equipment along with a 1/3 octave active filter set panel. / Dukane Corp.

COMMUNICATIONS  
ELECTRICAL HEATING-COOLING  
ELECTRICAL & ELECTRONIC CONTROLS  
ELECTRONIC EQUIPMENT  
LIGHTING  
POWER GENERATION  
PROTECTIVE SYSTEMS  
RACEWAYS  
SERVICE & DISTRIBUTION  
WIRING DEVICES

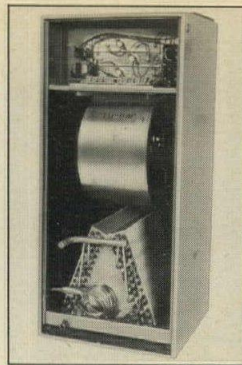




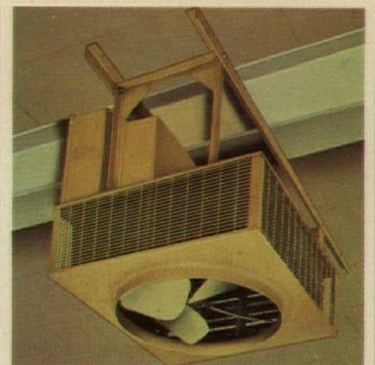
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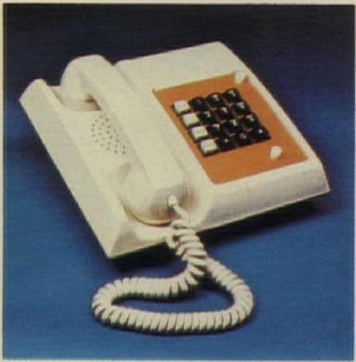
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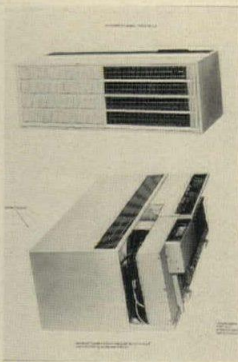
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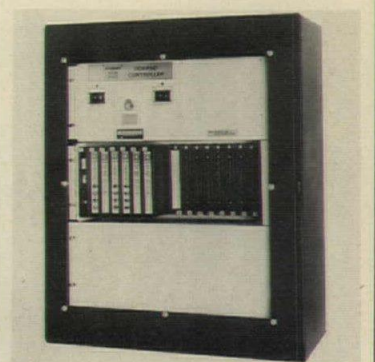
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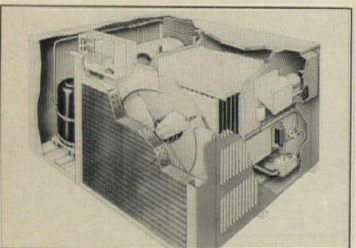
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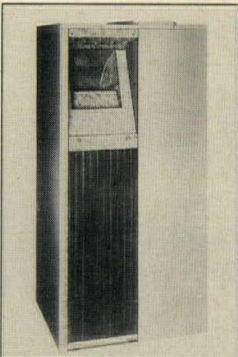
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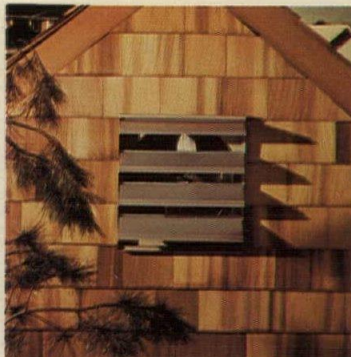
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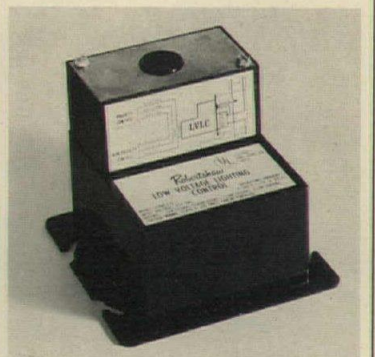
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**850 FIRE SECURITY** / The "Alpha 1000" provides cost-effective fire protection and security with energy management. A microcomputer permits keyboard program changes, and a single pair of wires links "Alpha" with scores of zones. / Honeywell.

**851 INTERCONNECT SYSTEM** / The "D-1000" telephone permits a user to hold a call, consult with another person inside or outside the system, transfer an outside call, pick up a call from another phone in the system, forward incoming calls, etc. Over 25 special features are provided. / Executone, Inc.

### ELECTRICAL HEATING/COOLING

**852 HEATING/COOLING** / Model "RCG" is a self-contained single package gas-fired heating/electric cooling year-round comfort air-conditioning unit for outdoor installation at ground level or on rooftop. Units are available in the 2½- to 5-ton range. / ITT Reznor.

**853 COOLING COILS** / "Sun Dial" cooling coils, from 1.5- through 7.5-ton capacity, and with 1-ton through 5-ton remote condensers, are now available. Cooling coils can be supplied as an integral part of a "Sun Dial" electric furnace or as a separate "add on" unit. / Square D Co.

**854 PACKAGED TERMINAL** / "Climazone" heating/cooling units for through-the-wall application are available in (1) electric cooling only, (2) electric cooling/heating, and (3) electric cooling/hydronic heating models. All units are certified in accordance with ARI Standard 310. / Mueller Climatrol Corp.

**855 HEAT/COOL** / "Vertipak" is a single-package, heating cooling system expanded to include a 33,000 Btuh model in an electric heating, electric cooling version. The unit combines a gas or electric warm air furnace with an electric cooling system. / Fedders Corp.

**856 ELECTRIC FURNACES** / Electric furnaces, from 5KW at 240V AC for residential and mobile home installations, to 48KW at 480V AC for commercial applications feature single unit galvanealed cabinets with a baked enamel finish. Drawout construction permits easy access to components. / Square D Co.

**857 ROOFTOP HEATING** / A "Twin-Package" system permits dual-fuel rooftop heating and cooling for commercial and industrial applications. It offers heating and/or cooling by combining three types of 7½- and 10-ton units. / General Electric Co. A,L,I\*

**858 ATTIC FAN** / A wall-mount louvered attic cooling fan delivers 2090 cfm, and is HVI rated. It has an automatic thermostat and reset thermal protection, 1/5-hp motor, and zinc-coated steel frame. / NuTone, Div. of Scovill. A\*

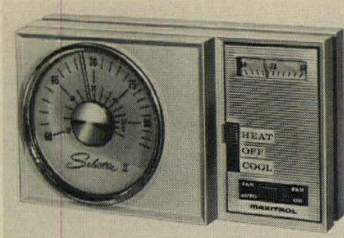
**859 UNIT HEATER** / In 5 through 50 KW, 208-600 volts, featuring built-in optional control voltages and "save-a-watt" cycle, the vertical heater converts wasted high temperature ceiling air into usable heat energy at floor level. / Markel Electric Products, Inc.

### CONTROLS

**860 DEMAND CONTROLLER** / The "Class 8855 Load Demand Control System" is modular in design to allow custom installations from a few stocked components. It is recommended for controlling air conditioners, heating loads and refrigeration units. / Square D Co.

**861 LIGHTING CONTROL** / The "L200 & L300" modular low voltage lighting control has an integral power supply; very low control current allows long Class 2 wiring or more units per switch circuit than conventional units. It features a 20-ampere load capacity, on 120V and 277V AC models. / Robertshaw Controls Co.

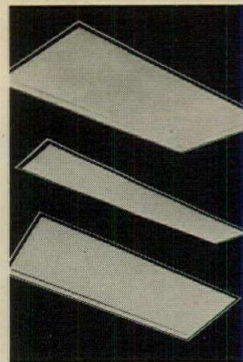




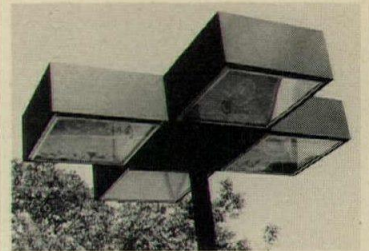
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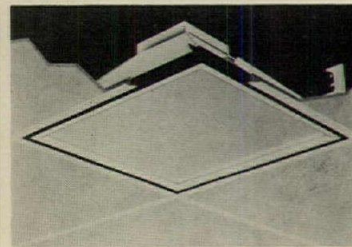
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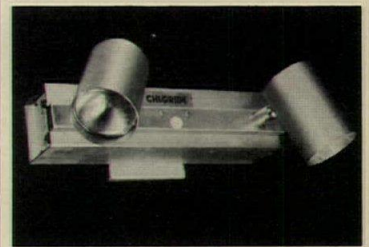
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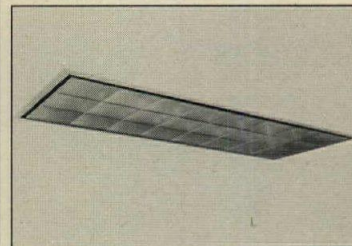
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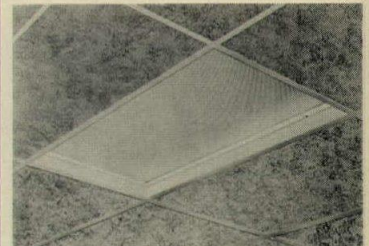
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**862 GAS MODULATION** / A solid state electronic gas flame modulation system, "Selectra II," consists of three groups: 1) heat/cool for modulated space heating with single stage cooling; 2) heat only for modulated space heating and 3) heat only for modulated discharge air sensing. / Maxitrol Co.

**863 PUMP CONTROLLER** / These fire pump controllers operate electric motor-driven pumps, which provide necessary pressure and gallons-per-minute capacity in fire mains and sprinkler systems. They come in wall-mounting and freestanding types. / GTE Sylvania.

**864 BUILDING AUTOMATION** / The "Modular System 570" integrates diverse building operation, life safety, and security functions under one central control. The system provides a payback within 2 to 5 years, according to the company. / Powers Regulator Co.

**865 ENERGY MANAGEMENT** / The "Delta 1000" is a compact energy management system to suit single, clustered or widely dispersed facilities. It controls points over a single pair of wires, and its microcomputer permits keyboard program changes, and expansion. / Honeywell.

**866 VOLTAGE REGULATORS** / Inductrol regulators are said to assure precise voltage control with  $\pm 1$  per cent to reduce operating costs, especially for hospitals, computer installations, etc. These regulators are drift-free, 98.5 per cent efficient and come in ratings from 120-15,000 volts. / General Electric Co.

#### ELECTRONIC EQUIPMENT

**867 ACCESS CONTROL** / The "System RS30-8" console offers a choice of 250, 500 or 1000 memories. Capacity has been increased to service up to 8 readers with as many as 20 status levels. Standard options can be added in the field. / Rusco Electronic Systems, A,I,E\*

#### LIGHTING

**868 AIR-HANDLING FIXTURES** / The "Univaire" recessed fixture, with air-handling capabilities, is a lay-in grid fixture available in several sizes. It has a regressed aluminum floating door, and a variety of enclosures. / Day-Brite Lighting Div., Emerson Electric Co.

**869 SODIUM SQUARE** / Recessed square lighting fixtures designed to accommodate 100-, 150-, 250- and 400-watt high-pressure sodium lamps are available in 24- by 24-in., 16- by 16-in. and 12- by 12-in. sizes. The fixtures are available in static or heat removal models. All units feature prismatic glass refractors. / Guth Lighting, Div. of Sola Basic.

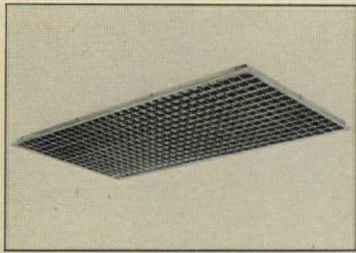
**870 LUMINAIRE** / The "Parabolum" luminaire measures 20 by 48 in. and is available in two or three-lamp models. One two-lamp fixture, installed in every other module, provides 75 uniform footcandles and uses 1.84 watts of electricity per square foot illuminated. / Columbia Lighting Inc. A,D\*

**871 PARKING LUMINAIRES** / A contemporary rectangular design provides sharp cut-off, low glare, and all aluminum and totally self-contained components. It can be equipped with a full range of lamp types and wattages. / C-E ElSCO.

**872 EMERGENCY LIGHTING** / A low profile, pin-point, emergency light with cylindrical design is suggested for cocktail lounges, restaurants, etc. Each "Mini-Twin" lamp delivers in excess of 100 lumens. / Chloride Inc.

**873 TROFFER** / Fluorescent troffers featuring a 2-in. deep extruded aluminum regressed trim are available in 1- by 4-ft, 2-ft sq, and 2- by 4-ft sizes. The units feature hinged and latched door frames and acrylic, prismatic lenses. / Guth Lighting, Div. of Sola Basic.

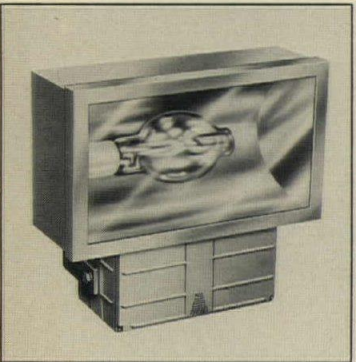




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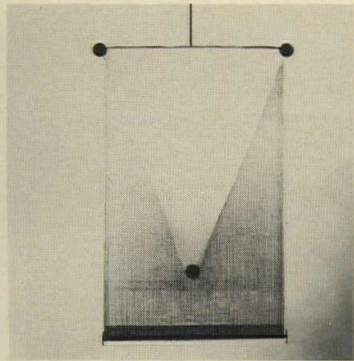
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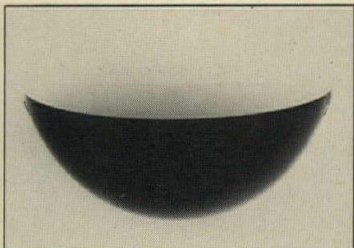
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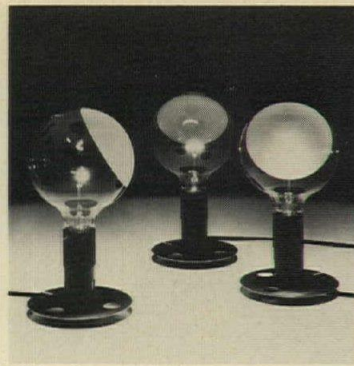
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**874 CEILING LOUVER** / The "Paracube II" louver is molded in a large cell configuration to provide efficient energy utilization. The cell-wall design compensates for relative intensities of parallel-to or cross-lamp viewing to provide uniform appearance. / American Louver, Co.

**875 LUMINAIRE** / A new addition to the "Pericline" series of outdoor lighting fixtures combines an 18th-century coach lantern look with the patented "Pericline" reflector for uniform and energy-efficient light distribution with no glare. / Moldcast Lighting Div., Weil-McLain Co., Inc.

**876 FLOODLIGHT** / The "Series 7000" integrally ballasted floodlights have been designed to efficiently utilize the light output of 400W metal halide and 400W high-pressure sodium lamps. Four preset beam patterns are available. / SEPCO Lighting Div. E\*

**877 FLUORESCENT LAMP** / Offering the effect of incandescent lighting, "Optima 32" is recommended in offices, schools and similar public work areas, and photographic and television studios. The lamps are presently available in 40- and 75-watt sizes. / Duro-Test Corp.

**878 ITALIAN LIGHT** / Designed by Achille and Pier Giacomo Castiglioni, a metal top with a socket in it has metal rods attached to two sides with two pieces of gauzy translucent fabric draped over them. / Atelier International, Ltd.

**879 QUARTO** / Designed by Tobia Scarpa, a wall and ceiling lamp is made of circular pressed glass folded at right angles with an enameled metal shade. It is a quarter of a sphere and gives diffused light adjustable in every direction. / Atelier International, Ltd.

**880 LAMPADINA** / Designed by Achille Castiglioni, a 40-watt spherical bulb is partially shielded by a special sandblasting procedure, with its socket inserted into a base "reminiscent of a reel of film." / Atelier International, Ltd.

**881 EFFICIENT LIGHT** / "Type 5" offers high efficiency and excellent glare control, combined with a square cut-off light pattern that allows up to 25 per cent greater pole spacings with increases in illuminated area up to 40 per cent over traditional round light patterned fixtures. / Kim Lighting, Inc.

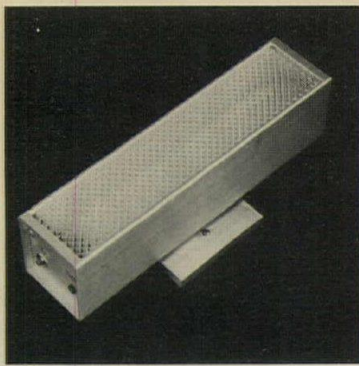
**882 FLUORESCENT LAMP** / The color temperature of the "TruBloom" lamp (600 degrees Kelvin) makes it suitable for indoor gardeners. Every lamp is guaranteed to lose not more than 1 per cent of its color rendition ability for the life of the lamp. / Verilux, Inc.

**883 SODIUM LAMP** / The 215-watt E-Z Lux high-pressure sodium lamp can operate in many existing 250-watt mercury lighting systems while providing at least 65 per cent more light and using 12.5 per cent less electricity. It is used for roadways, etc. / General Electric Co.

**884 METAL HALIDE LAMP** / At least 63 per cent more light with up to 8 per cent less energy is claimed for a new 1000-watt I-line Multi-Vapor "Plus" metal halide lamp. It operates vertically in mercury or metal halide ballasts, and its rated life averages 10,000 hours. / General Electric Co.

**885 FIXTURE** / The "Transitional Series" combines geometric shapes with vintage scrolls and filigree. Globes, cubes, cylinders, ellipsoids, etc. are available in acrylic, polycarbonate and polyethylene in finishes from white to bronze tint to smoke. / Sternberg Lanterns Inc. A\*

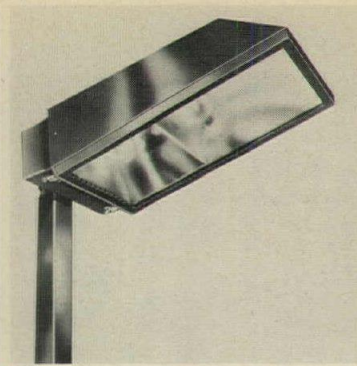




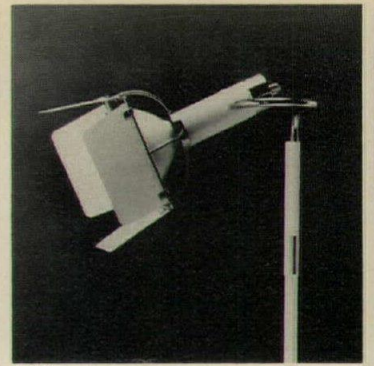
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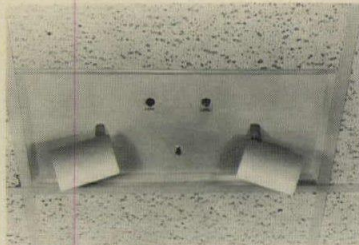
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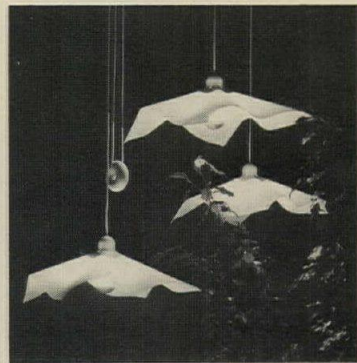
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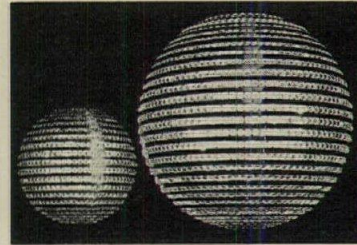
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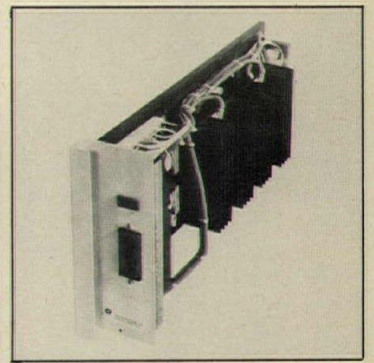
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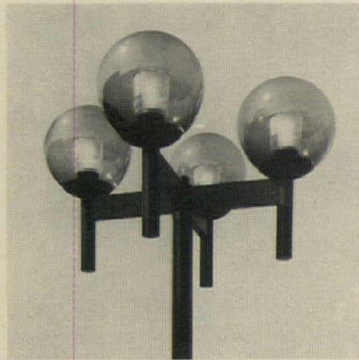
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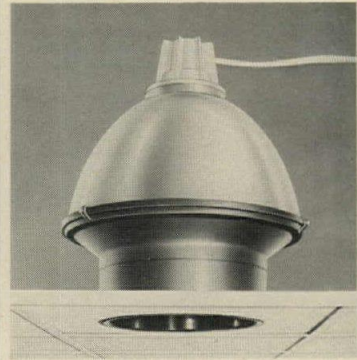
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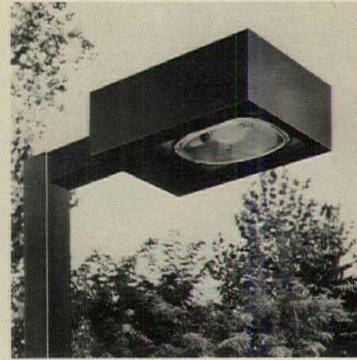
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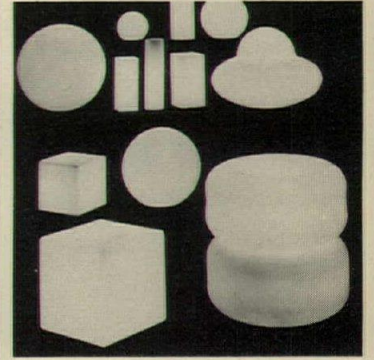
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**886 LINEAR LUMINAIRE** / Fixtures may be installed either vertically or horizontally. The luminaire features a 12-gauge extruded aluminum housing, with a clear, shatterproof prismatic diffusing lens. / Chloride Inc.

**887 EMERGENCY LIGHT** / This self-contained, maintenance-free unit has been specifically designed for T-bar ceiling applications. The cabinet is constructed of 18-gauge steel with a corrosion-resistant under-coating. It is finished in white enamel. / Chloride Inc.

**888 MODULAR LUMINAIRES** / The "Glo-Metrics" system of coordinated, modular luminaire components permits a unified lighting system. Shown is a four-sphere cluster luminaire with smoke acrylic spheres and prismatic glass refractors. Light sources include incandescent, mercury vapor, and high-pressure-sodium. / Appleton Electric Co.

**889 FLOODLIGHT** / Two batwing flood-light fixtures, combining 32 fixture specifications into two designs, can be used with 400-watt or 1000-watt mercury or metal halide lamps. Both fixtures are equipped with a photocontrol receptacle and a shorting cap. / GTE Sylvania.

**890 SUSPENSION LAMP** / Designed by Mario Bellini, the "Area 50 Suspension" is one of a collection of eight lamps, featuring a square sheet of heat resistant textured synthetic material as a diffuser. The suspension model is available with or without white lacquered metal counterweight. / Castelli Furniture, Inc.

**891 H.I.D. DOWNLIGHTS** / H.I.D. recessed downlights furnish optimum luminosity for low, medium and high ceilings. Designed for commercial installation, the "Opti-Lume Group" of mercury and metal Halite recessed downlights are offered in 175-, 250- and 400-watt sizes, for 2-by-2-ft grid ceilings. / The Rambusch Co.

**892 AREA LIGHTING** / An outdoor area light incorporates one optical system to "throw" illumination out over an area, while the other optical system "spreads" illumination to the sides. The fixture's construction includes a one-piece aluminum housing. / Guth Lighting, Div. of Sola Basic.

**893 CUSTOM FIXTURES** / The American representative of this Austrian concern states the company's qualifications to plan and construct architectural designs in crystal. Company designers are available to consult. / Chester International Ltd.

**894 OUTDOOR LIGHTING** / Available in three modular sizes, the "Cordova" is recommended for lighting walkways, roadways, malls, etc. A choice of standard Velvet Black, Tahitian Bronze or Mist Green finishes is offered, with mounting heights up to 50 ft. / J.H. Spaulding Co.

**895 FLOOR LAMP** / "Showlites" feature Tungsten Halogen bulbs and a fully adjustable pattern. Chrome highlights the base and a stand that is adjustable overall from 42 to 84 in. in height. Colorful accents include chrome, yellow, red, white and blue. / Berkey Colortran, Inc. D\*

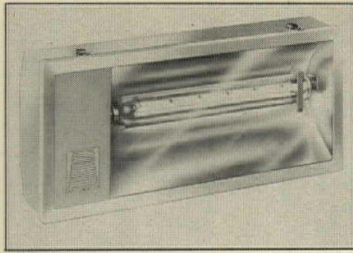
**896 MERCURY-VAPOR LIGHT** / The system is suitable for 100-, 175-, 250- or 400-watt mercury-vapor lamps. Units enable commercial customers to uniformly reduce the lighting levels in a building to as low as five per cent of maximum with a corresponding decrease in power requirements. / Hub Electric Co., Inc.

**897 WHITE LAMPS** / "Light-White" lamps are molded from high density, impact resistant, translucent white polyethylene and come with UL-approved electrical parts. The cylinders are made of opal acrylic. Certain styles can be stacked up to four high. / Trimblehouse Corp.

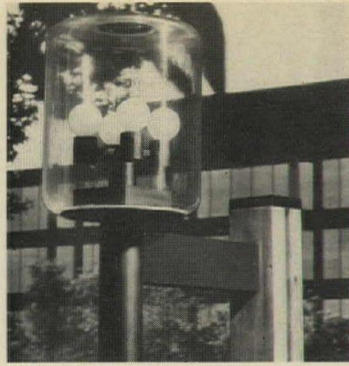




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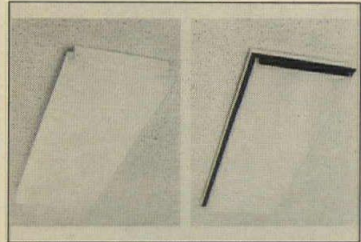
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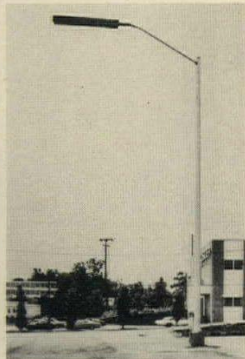
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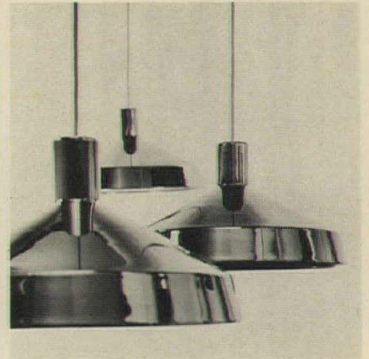
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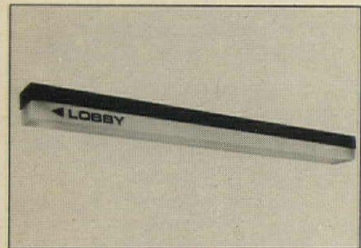
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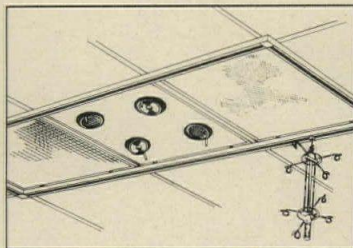
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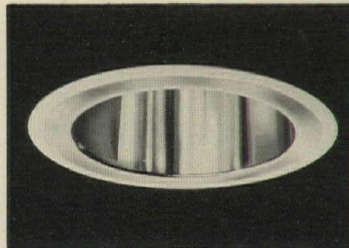
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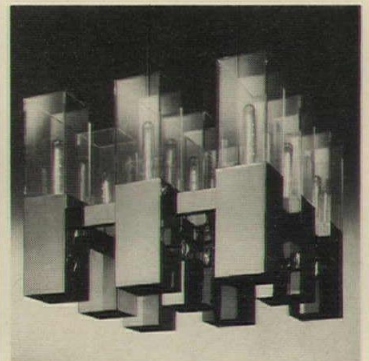
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**898 LIGHTING SYSTEM** / Designed for outdoor applications, the system can withstand 30 psf of wind pressure. Panels are acrylic; the aluminum frame hinges down. The system can be specified any size, shape, and in different colors. / Wilson Research Corp.

**899 FLUORESCENT LIGHTING** / The *Truline* series of surface-mounted commercial fluorescent luminaires have a clean, trim design. They are available in two styles, each with two or four lamps, and measuring 12 or 16 in. in width. / Johns-Manville, Holophane Div.

**900 LINEAR LIGHT** / "Line-lite" features clean linear design and provides soft illumination in corridors, or on walls. The steel channel is available in white or black as standard with custom colors optional. It is available in 2- or 4-ft nominal lengths. / Columbia Lighting, Inc.

**901 REFLECTOR SYSTEM** / A reflector system controls the beam of low pressure sodium lamps. The design makes it possible to transmit controlled light at distances in excess of 125 ft. Fixtures utilizing the reflector design are available for 35-, 55-, 90-, 135-, and 180-watt low pressure sodium lamps. / SEPCO Lighting Div. E\*

**902 LUMINAIRE** / "SOX" low pressure sodium luminaires are designed to meet new energy requirements, and design requirements for roadway, parking, park or commercial areas. / Trimblehouse Corp.

**903 IV SUPPORT** / A single unit combines adjustable high intensity direct examination lighting, general room illumination, patient activity lighting, mono-rail I.V. track and carrier, and adjustable I.V. holder. / The Miller Co.

**904 LANTERNS** / Spheres, cubes, cylinders and ellipsoids in various sizes and colors are mounted on metal poles or on laminated wood poles, up to five fixtures per pole. Companion models for wall mounting are available. Mercury vapor and incandescent fixtures are cast aluminum, anodized. / mcPhilben Lighting, Emerson Electric Co.

**905 DIRECTIONAL SYSTEMS** / Multimedia directional systems are designed to satisfy interior signage requirements. Extruded aluminum fixtures are available in seven sizes, and a library of symbols covers commercial, medical, transportation, industrial and other signage requirements. / mcPhilben Lighting, Emerson Electric Co.

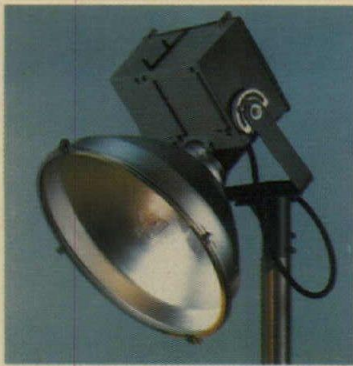
**906 DOWNLIGHTING** / An asymmetrical recessed downlight utilizes a general "A" type service lamp in conjunction with a dual reflector system. The fixture may be selectively sectioned to provide various types of corner or wall wash illumination and downlighting. / Prescolite, A U.S. Industries Co.

**907 LIGHTED CEILING** / "Wood-bay" is a suspended non-combustible coffered ceiling in a simulated honey colored oak wood finish. Incandescent down lights may be placed within any coffer to provide desired lighting levels. Coffers are available in 16- or 24-in. modules. / Integrated Ceilings, Inc.

**908 HOOD** / Designed by Stuart Barnes, the unit is available in: polished chrome with a deep blue white mirror finish, brushed chrome, polished brass, dull brass, oxidized brass, or bronze, coppers (some oxidized to variegated tones), rusted iron, pewter and black matte baked enamel. / Robert Long Inc.

**909 LIGHTING FIXTURE** / The solid brass extrusion forming the base of the chandelier is the same dimension as the hand made acrylic sheet chimneys. These chandeliers are available in six-, nine-, and 12-light modules with a matching attaching bracket. / Robert Long Inc.





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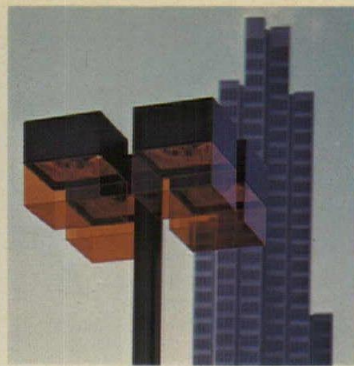


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**910 SPORTS LIGHTING** / The "Omega," with its reflector designed to totally control the emitted light from metal halide lamps, features a choice of integral or remote ballasts. A heavy-duty, mogul base porcelain socket is standard in all units. / J.H. Spaulding Co.

**911 EMERGENCY LIGHTS** / "SC6G" emergency and auxiliary lights have a teak panel, beige enamel finish and a rechargeable gel electrolyte battery. The 26-amp units meet the 2-hour Chicago Code; the 16-amp units meet 1½-hour NFPA and OSHA codes. / Teledyne Big Beam.

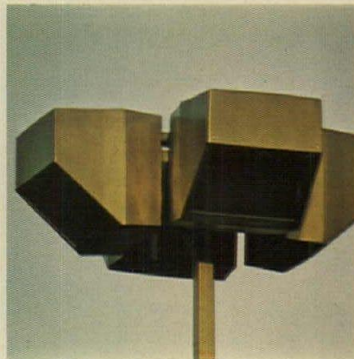
**912 LUMINOUS CEILING** / "Quadradome" is a decorative skylight form, lighted from above by standard fluorescent strips. It is available in 8- to 14-ft squares, in 2-ft modules and in rectangular lengths based on any combination of 2-ft modules. / Integrated Ceilings, Inc.



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**913 CUBE LUMINAIRE** / The "Form Twelve" series combines clear, bronze or amber tinted acrylic boxes with anodized aluminum housings. Said to offer uniform light distribution, with glow and spill light control, the series is available in 14- and 20-in. cube sizes, in single, double or quad configurations. / Gardco Mfg. Inc.

**914 OUTDOOR LIGHTING** / This linear refractor luminaire can be specified for 100W, 175W or 250W mercury; 175W metal halide or 150W high pressure sodium lamp sources. Heat resistant prismatic glass is hinged for lamp replacement. / Prescolite, A U.S. Industries Co.

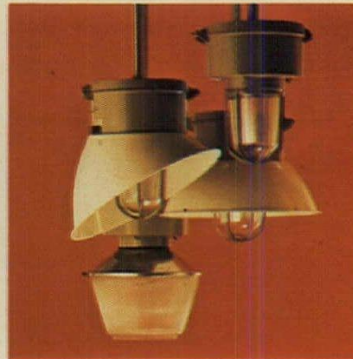
**915 PRECISE LIGHT** / Designed for 400 or 1000-watt HPS, a computer designed reflector produces a beam of peak candlepower at 62 degrees while providing cut-off of light just above the beam at 73 degrees. The "CLX Precise Light" is housed in a bronze-finished two-piece FRP housing. / Crouse-Hinds Co.



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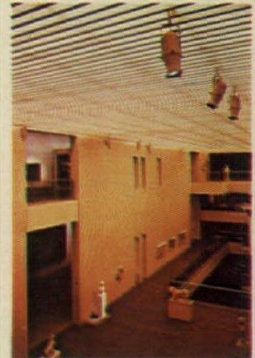
**916 ACCENT LIGHTING** / A compact adjustable uplight for accent illumination of shrubbery, small trees, etc. is a weatherproof unit of cast aluminum. It accepts a 150-watt PAR-38 lamp, either flood or spot. The fixture is finished with a medium bronze baked enamel. / Kim Lighting, Inc.

**917 FLOOR LAMP** / *Lite Kiosk* is a portable floor lamp providing indirect illumination with high intensity discharge bulbs. It also incorporates track lights for accent or task lighting, and is available in any finish. / Peerless Electric Co.

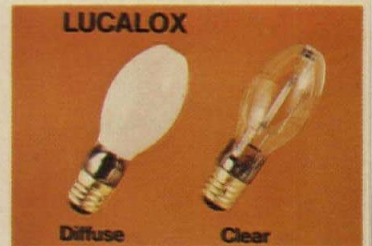
**918 INDUSTRIAL LIGHTING** / In pendant, stanchion, wall bracket and ceiling mounts, the "Champ" line is built for corrosive, wet, dirty, non-hazardous applications, and Classes I & II, Division 2 hazard areas. / Crouse-Hinds Co.



919



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**919 EXIT SIGN** / An explosion-proof exit sign meets all requirements of Class I, Groups C&D; Class II, Groups E, F, G; OSHA, NFPA, and all national and state codes. Pendant, wall or end-bracket mounted, "EXL" uses 6 in.-by-¾-in. red letters on an acrylic panel. / Crouse-Hinds Co.

**920 SUSPENDED LIGHT** / The "Lite Blade System" is a suspended network of parallel extruded aluminum channels that filter indirect light throughout a space and incorporate display lights for accent. Specifications include any finish, any length, and any configuration. / Peerless Electric Co.

**921 SODIUM LAMP** / A diffuse-coated 150-watt *Lucalox* high-pressure sodium lamp meets demands for a lower brightness HPS source for low mounting heights in offices, shops, and commercial areas. Rated life averages 16,000 hours; initial output, 15,000 lumens. / General Electric Co.

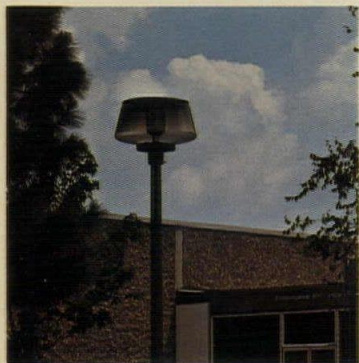




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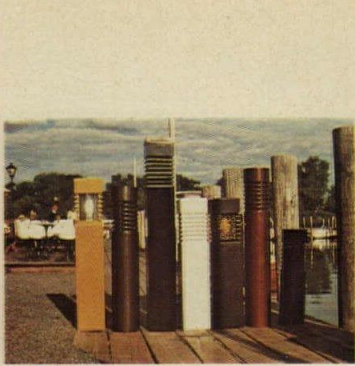


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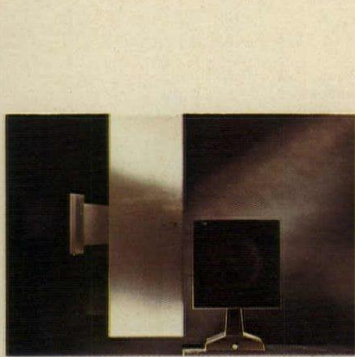
**922 ENERGY CONTROL** / A solid-state control maintains a constant indoor light level with all types of HID lamps from 250 to 1000 watts. A photocell sensor reads light levels and a monitor senses differences between actual and desired levels, controlling the dimming of ballasts for each HID luminaire. / Wide-Lite Corp.

**923 POST-TOP** / A post-top outdoor lighting fixture features a diffuser of tempered, impact-resistant bronze reflective glass. The unit comes with either round or square cast-aluminum slip fitters to fit either round or square poles. / ITT Landmark Lighting.

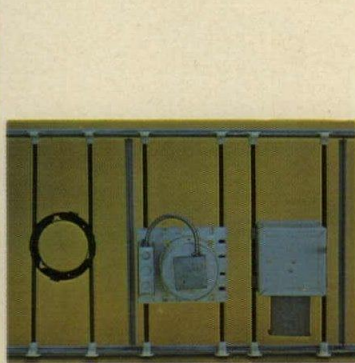
**924 OUTDOOR LIGHTING** / Available in four shades—clear, translucent, bronze or smoked—the unit can be mounted directly onto a 1/2-in.-diameter tenon, or with a cast aluminum slip-fitter on a 2-, 2 1/2- or 3 1/8-in.-diameter tenon. The fixture will accommodate 100, 175 or 250-watt mercury vapor lamps or 100-, 150- or 250-watt high pressure sodium lamps. / ITT Landmark Lighting.



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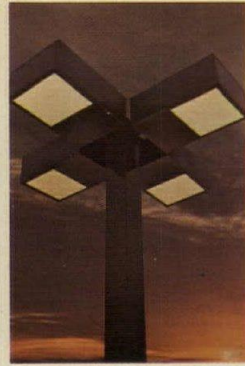


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**925 OUTDOOR LIGHTING** / A bollard-style fixture features vandal-resistant construction and a louvered design that shields glare. Available in round or square shapes, the "Annapolis" comes in five heights for low-level accent light. / Sterner Lighting Systems.

**926 LIGHTING** / Architectural squares are of extruded aluminum, and die cast brackets feature invisible mounting. Squares come in 5, 6, 11 and 12 in., in a choice of four colors. / Sterling Lighting, Nutone. A\*

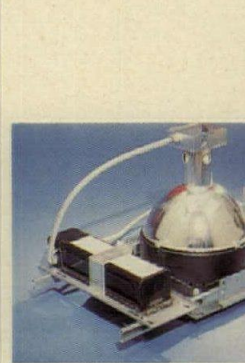
**927 T-BARS** / Snap-on "T" Bars are used to hang flush and/or recessed fixtures in or on a suspended ceiling. Any fixture may be installed using one of two models. / Eclipse Mfg. Inc.



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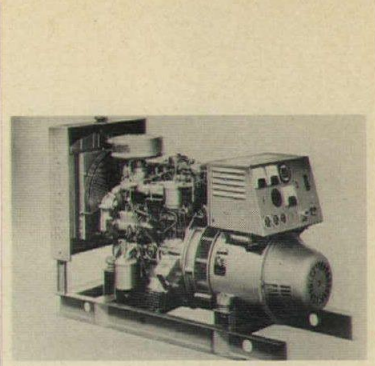


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**928 HID DOWNLIGHT** / Sharp cutoff and precise beam control are features of these downlight-floodlights, with reflectors for 175- to 1000-watt clear HID lamps. Designed for parking lots, roadways, malls, etc., they have optional internal light-controlled shields. / Wide-Lite Corp.

**929 LIGHT DUCT** / "Lite Ducts" feature suspended, cylindrical, polished brass housings and rapid start lighting. They are available in any length, any diameter, with lenses, and with any finish. / Peerless Electric Co.

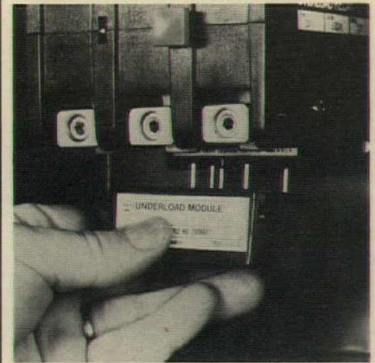
**930 H.I.D. LIGHTING** / Over 250 individual H.I.D. lighting luminaires include recessed, surface-mounted and post-top styles in mercury vapor, metal halide and high pressure sodium. / Markstone Mfg. Co. A,L,D,E\*



931



932



933

## POWER GENERATION

**931 DIESEL GENERATOR** / Seven new diesel generator sets carrying ratings of 4, 8.5, 12, 20, 125, 350 and 500KW have been added to the line. The diesels are offered for both stand-by and prime power installations, in a range of voltages. / Kohler Co.

**932 GAS TURBINE** / A 10,000-horsepower industrial gas turbine with a specific fuel consumption in the 8000-Btu/hp-hr range is a simple-cycle, high pressure-ratio, two-shaft engine that the company claims will deliver more horsepower per dollar than any comparable engine. / Solar Div. of International Harvester. A,I\*

## PROTECTIVE SYSTEMS

**933 OVERLOAD RELAY** / A modular overload relay system, which improves motor circuit protection without auxiliary devices, features plug-in modules, familiar configuration and compact size, and solid-state circuitry. / Westinghouse Electric Corp.

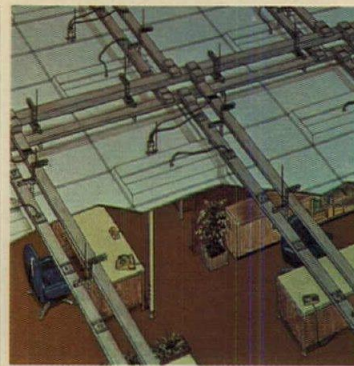




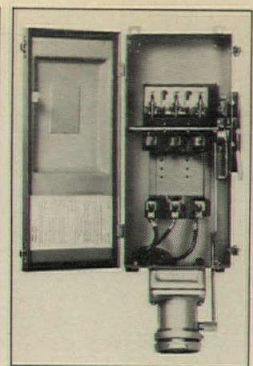
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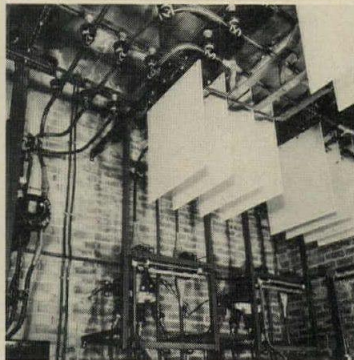
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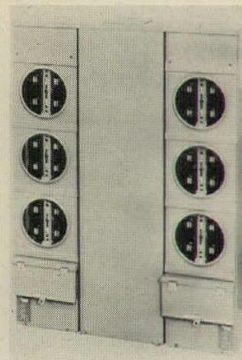
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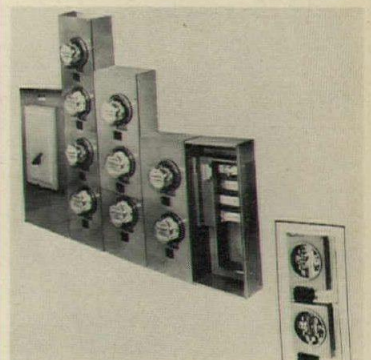
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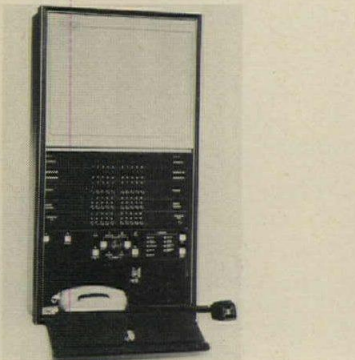
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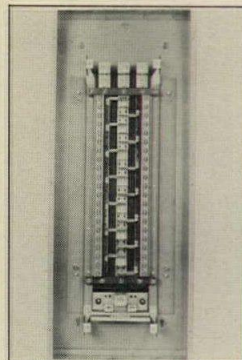
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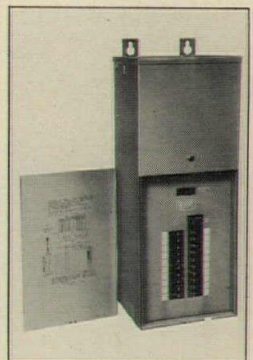
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**934 FIRE ALARM** / A computer-based fire alarm system with UL listing as a multiplex Type I fire alarm system, is designed specifically for building automation, and features a dual coaxial cable data communication system. The "JC/81" can be interfaced with almost any type of system. / Johnson Controls, Inc.

**935 CARD ACCESS** / The system's most striking feature is that there is no card slot and hence, no visible place for vandals to damage the security system. A wallet-size card activates the lock by receiving and returning a radio frequency signal sent from a transmitter/sensor hidden behind a wall. / Schlage Electronics.

**936 PROTECTIVE SIGNALING** / "Fire Voice" houses control electronics and system status displays, and serves as a central point from which a fire may be managed. Also included in a typical system would be manual and automatic fire reporting devices. / Exide Safety Systems Div., ESB, Inc.

**937 FIRE DETECTOR** / A miniaturized, dual chamber, ionization detector for use with low voltage early warning fire detection and alarm systems is intended for use in dormitories, hospitals, homes for the aged, and light commercial environments. / Pyrotronics.

### RACEWAYS

**938 CONDUIT SUPPORT** / The product provides support for conduits, cables, pipes, cable trays, and fluorescent fixtures. Its wide slot channel is designed to make all electrical-mechanical installations easy and faster. / Mult-A-Frame Corp.

**939 DISTRIBUTION** / Factory-wired horizontal raceways, affixed to specified main T-bars, are incorporated into ceiling support systems. Pre-wired vertical distribution poles may be placed where needed to provide power, communication and electronic service at the point of use. / 3M Co.

**940 OVERHEAD DISTRIBUTION** / Overhead distribution systems are 125- and 277-volt prewired electrical systems with matching raceways and fittings required for lateral distribution of power circuits, used with surface metal raceways for header runs for power. / The Wiremold Co.

### SERVICE & DISTRIBUTION

**941 METER CENTER** / Rated 125 amps per meter position, the UL-approved all-in-one design includes two-to-six meter sockets as well as the provision for the utility service termination and individual tenant breakers. / Arrow-Hart, Inc.

**942 MAIN LOADCENTER** / Rated 38 circuit, the unit is UL-approved, and provides service for electric heat or for any 400-ampere service where one or two sub-feeds are required. Space is provided above this main for an additional 200 amp, 2-pole breaker, or for two 100-amp, 2-pole breakers, for sub-feeders. / Arrow-Hart, Inc.

**943 PROTECTOR-LOCK SWITCH** / A 600V AC, 100, 200 and 400-amp disconnecting switch is used in industrial plants and food refrigeration applications. It prevents big shock hazards when heavy-duty electrical equipment is disconnected under load. / Arrow-Hart, Inc.

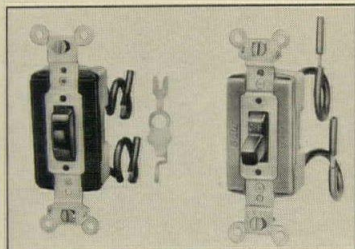
**944 APARTMENT METERING** / Meter-breaker modules featuring plug-in meter modules reduce installation costs. The enclosure contains horizontal bus rated 600 amperes. Breaker positions are rated 125, 150 & 200 amperes. / Anchor Electric.

**945 DISTRIBUTION** / The "Panel/Tran" zoned power center, available in 5, 7½, 10, 15 and 25 KVA with primary voltages of 240/120, combines an encapsulated, dry-type distribution transformer, primary and secondary breaker/disconnects and power panel. / Acme Electric Corp.

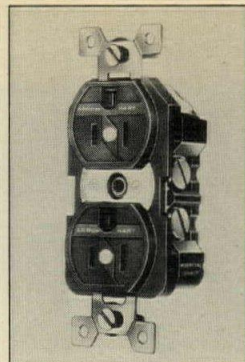




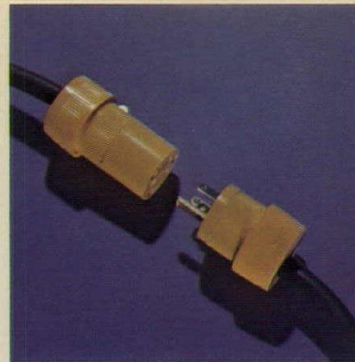
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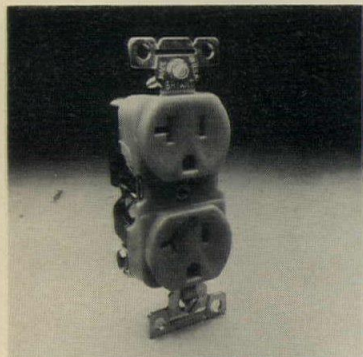
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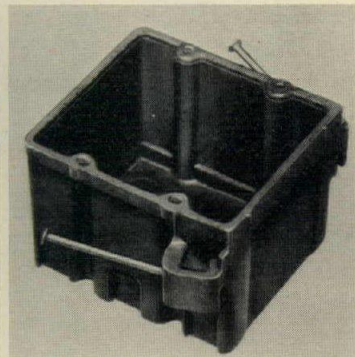
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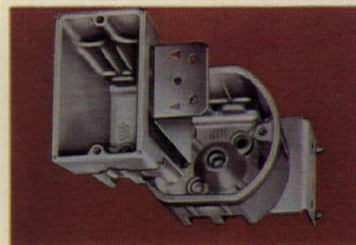
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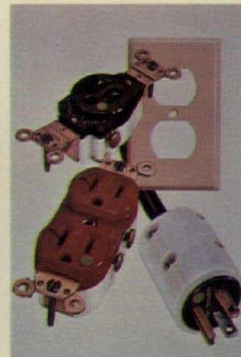
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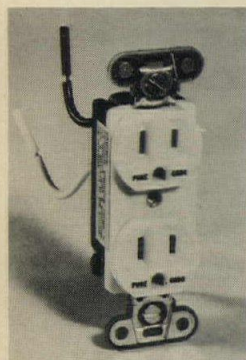
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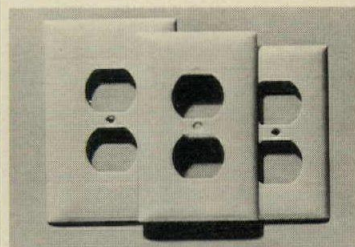
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**946 POWERPOST** / An outdoor power distribution post to supply 125-volt power to mobile equipment offers outlet combinations covering 7½, 15 and 30 amps. Circuits are protected by push-to-reset circuit breakers. / Powerlite Devices Ltd.

#### WIRING DEVICES

**947 HOSPITAL DEVICES** / "Hospital Grade" wiring devices, made of high impact nylon, meet or exceed all UL tests for "Hospital Grade" and conform to all Federal and 1975 National Electrical Code specifications. / Westinghouse Electric Corp.

**948 RECEPTACLES** / These specification grade isolated-grounding duplex devices are intended for power supply to sensitive electronic equipment, protecting them from stray current interference. They are available in standard colors. / Sierra Electric.

**949 PIGTAIL SWITCHES** / Pre-wired pigtail switches are available in 15-amp or 20-amp single pole, double pole, 3-way and 4-way, in both toggle and key locking versions. Designed for 120/277-volt applications, these switches meet Federal Specification W-S 896. / Slater Electric Inc.

**950 SWITCH BOXES** / Two electrical boxes made of phenolic materials, include a center nail, three-gang box with 45 cu in. of wiring capacity, and a two-gang box providing 35 cu in. of wiring capacity. Both are listed by Underwriters Laboratories. / GTE Sylvania.

**951 JUMBO PLATES** / "Junior Jumbo" plates are ¾-in. wider and taller than standard wall plates and are designed to provide full coverage of wall openings for new series of larger switch boxes used in residential and mobile home construction. / Sierra Electric.

**952 GFI RECEPTACLE** / An indicator light shows when the device is operative and safe to use. Maximum protection against corrosion is provided by a sealing type conformal coating over the electronic circuit board, a chrome plated yoke, and a separately enclosed mechanical interrupter. / Leviton Mfg. Co., Inc.

**953 PLASTIC BOXES** / Switch and outlet boxes are molded of fiber-reinforced polyester. UL-listed, they are for use with non-metallic sheathed cables. Ceiling boxes are 3½ and 4 in. in diameter with side brackets or on-bar hangers. / Midland-Ross Corp.

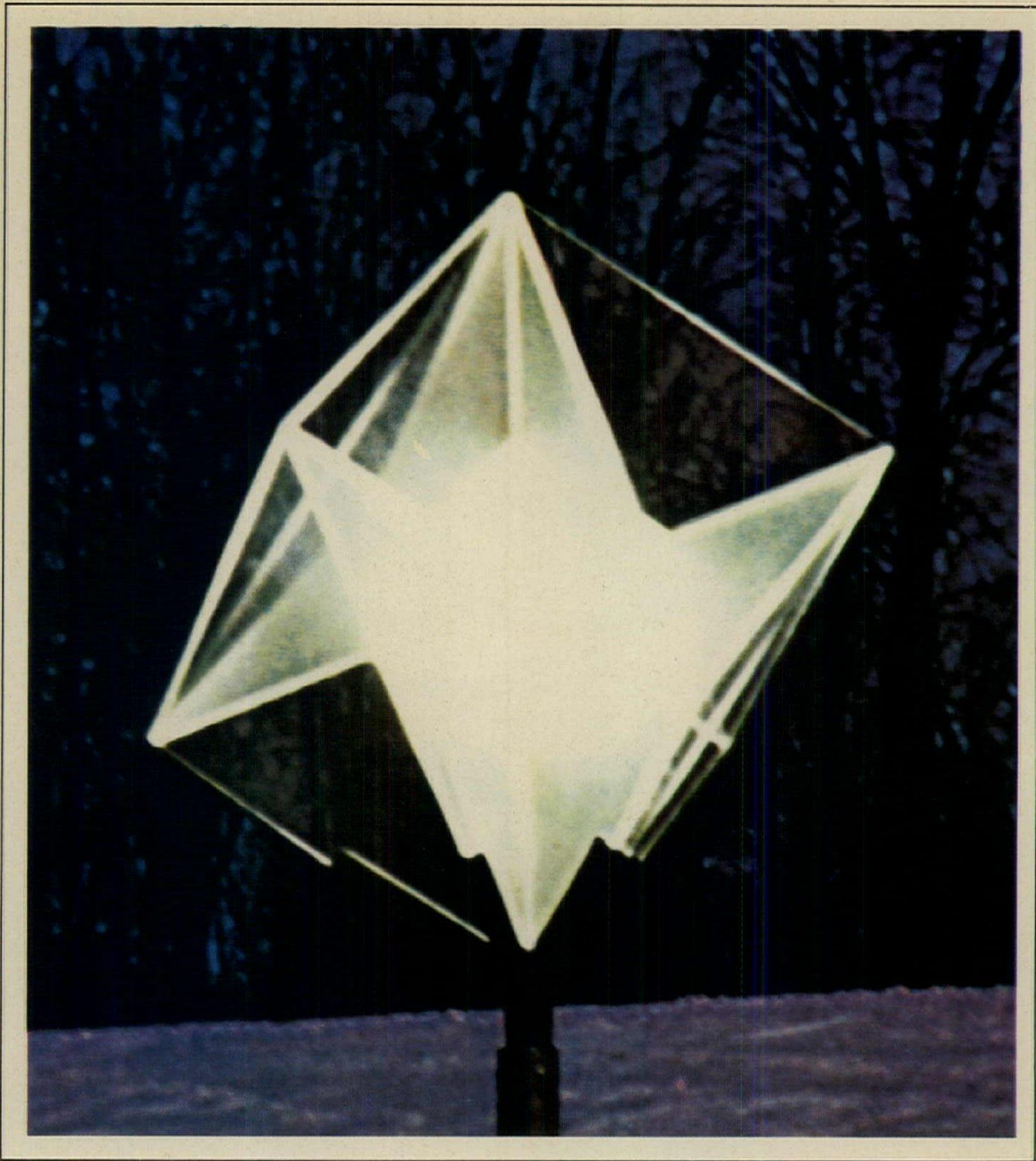
**954 GF PROTECTOR** / "Interrupter/15" is offered in a choice of ivory, white or black with matching plates or weatherproof covers for outdoor use. / Pass & Seymour, Inc.

**955 NYLON CONNECTORS** / "Kwiklok" yellow nylon caps/connectors have a patented cord grip, with no screws or metal parts. Cord wires into individual clamp-type insulating dividers. The product is offered in 31 NEMA configurations. / Eagle Electric Mfg. Co. Inc.

**956 HIGH-ABUSE WIRING** / Duplex and single receptacles feature nylon body and face, cupronickel exposed metal parts, double-wipe heavy brass contacts and a 25-year guarantee. Nylon plugs feature dead front construction, automatic cord grip, and individual wire pockets. / Leviton Mfg. Co., Inc.

**957 RECEPTACLES** / Super Arkite heavy duty circuit breaking plugs and receptacles meet all UL and OSHA requirements. Polarization-keyed plugs and receptacles feature die cast, copper free aluminum housing, FRP insulative interior, and 30, 60, 100-amp crimp. / Crouse-Hinds Co.



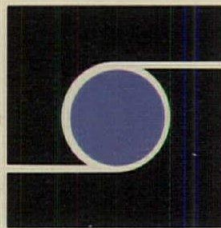


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for the **Good** things in life.

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Meeting today's needs today, Guth is developing new lighting systems that do a better job of illuminating and use less energy at the same time.

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These systems are typical of Guth's response to the demand for more energy-efficient lighting. So before you specify lighting for any indoor or outdoor applications, look to Guth Lighting first—the source of the newest ideas.

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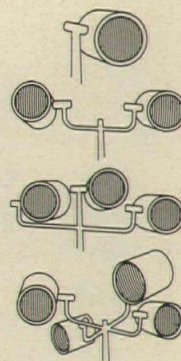
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as it lights.  
Vectorflood<sup>®</sup>  
by Holophane.**

Now there's a floodlight system you can use as an integral design element, with both clean architectural styling and outstanding performance. Vectorflood by Holophane.

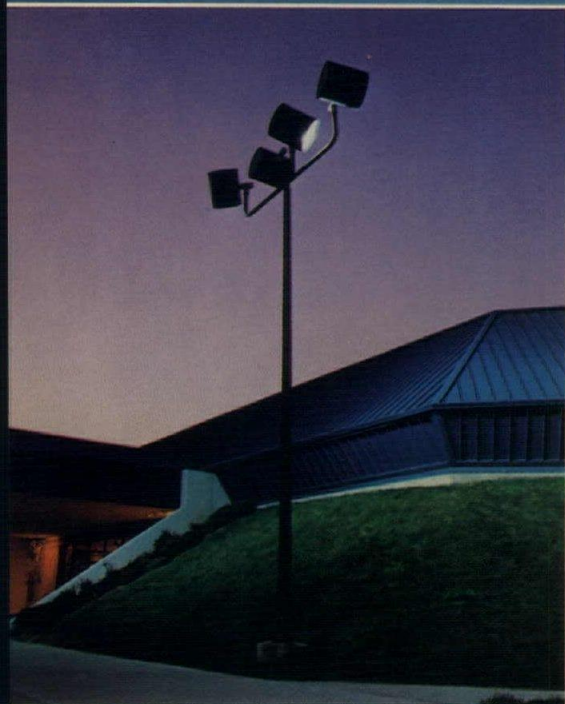
First to introduce a crisp cylindrical profile, Vectorflood complements modern architectural concepts. You can even color coordinate with a spectrum of designer hues.


Plus, its advanced optical system gets the most out of the new, short-arc HID lamps—high pressure sodium to 1000W, or metal halide to 1500W—for maximum energy savings.

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Design with cylinders:  
singles, doubles,  
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**Johns-Manville** 

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The Front Row Theatre,  
Highland Heights, Ohio  
Architect:  
Richard R. Jencen & Associates  
Structural Engineer:  
D. T. LeVigne Associates, Inc.  
Electrical Engineer:  
Denk-Kish Associates, Inc.  
General Contractor:  
Faro Construction, Inc.  
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**Economical new early warning fire detector fits most commercial applications and any budget.**

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SAFETY  
SYSTEMS



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# Only the stylish are part of the night life in Cancún.

When the sun goes down on this exciting tropical resort in the Mexican Caribbean, the night is brightened by beautiful people. And by beautiful lighting. Spectra VIII\* HID floodlights from Wide-Lite.

The Spectra VIII style starts with a classic, linear shape. And its good looks will last, thanks to its standard UltraClad finish. A space-age polyester powder finish, electrostatically fused to the all-aluminum fixture housing. For the combined advantages of porcelain and baked enamel, in your choice of tasteful colors.

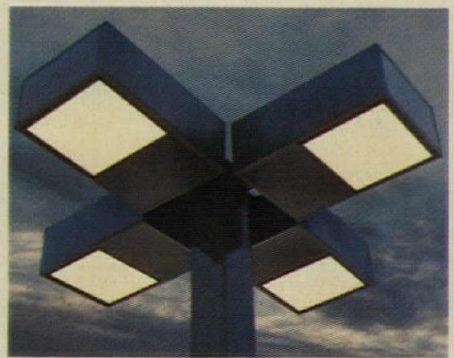
But the beauty of Spectra VIII is more than skin deep.

Its computer-designed stepped (or faceted) reflector is made of anodized high-grade specular aluminum. It offers extraordinarily efficient control of lamp output; up to 20% more efficient than other fixtures with similar candlepower distribution. This unique reflector makes for fewer fixtures and fewer poles per job. And it comes in a choice of distribution patterns for area or roadway lighting.

This reflector design gives Spectra VIII its low-angle control and exceptionally sharp cutoff. For smooth, high-level illumination without offense to neighboring areas. So important to a romantic setting like Cancún.

Cancún won't be having maintenance problems with its Spectra VIII floodlights either. The separate ballast compartment has a heat barrier for cooler operation. And the encapsulated ballast is factory tested for reliable operation in ambient temperatures as high as 150°F. The standard clear glass lens is tempered for strength and durability, too.

But a chic resort isn't the only place that calls for enduring beauty and exceptional control of light. So write for our brochure and find out how Spectra VIII from Wide-Lite can brighten your surroundings. With style.



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BELGIUM (FOR EUROPE), CANADA, MEXICO AND GREAT BRITAIN.  
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