



PRODUCT REPORTS 79

PRODUCT IDEAS FOR ARCHITECTS AND ENGINEERS

CASEBOOK STUDIES: DESIGN SOLUTIONS THROUGH PRODUCT APPLICATION

ARCHITECTURAL BUSINESS: THE UPGRADING OF SPECIFICATION WRITERS

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ARCHITECTURAL RECORD

**The Bold LookTM I ceiling. New from Armstrong.
The look of prestigious, heavy-textured tile.
The convenience of lay-in panels.**





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TRENDS

Trends in all phases of the building and product market are often very hard to spot due to the extended length of time from design conception to completed building. Manufacturing companies, of course, stress research and development continually to keep abreast of new techniques and materials. It is these companies which contribute and aid architects and engineers in their design and selection/specifying process. Nonetheless . . .

There are some trends that are quite noticeable in product application, some developing over a long period of time. We have, obviously, come a long way from the use of products like the ones depicted on this page, but the trends in product development are as new and exciting today as those in the accompanying collage were in their day.

Trends demonstrated in PR 79

The most noticeable changes in submissions this year came in areas that one would expect, knowing present-day technology. Computers and computer-aided design equipment—no matter what the expense—are available in varieties not seen years ago (see UCI Division 1). Insulation has become more diversified and effective (as shown in one of the following case studies). Interior furnishings (UCI Division 12) have shot forward with design diversity, particularly in office component furniture systems. Coupled with the latter have been advancements in task/ambient lighting (also shown in one of the case studies and UCI Division 12). Modularization is becoming more specialized, including bath units (UCI Division 15). But certainly the "hottest" product depicted is solar-related equipment (UCI Division 15). A new sub-division, labeled "Solar Equipment", was added to accommodate these.

Trends seen through others' eyes

Some other interesting ideas and trends have been culled from other sources:

According to *Industrial Engineering*, the modern office will continue to be open planned and increase in popularity but with better acoustical systems. Highly sophisticated mechanized equipment will replace ordinary office procedures.

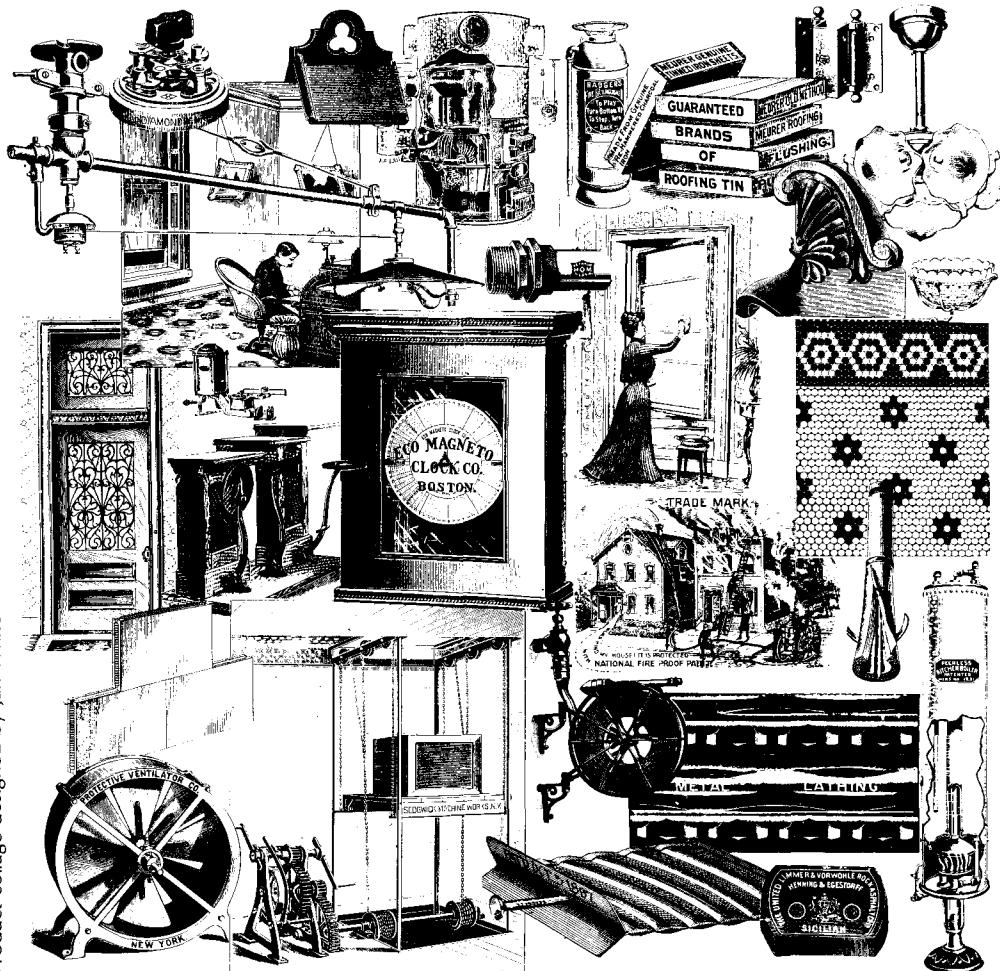
An MIT study indicates that concrete recycling is both technically and economically feasible. Recycled concrete debris would replace coarse aggregate with strength of the final concrete product at least 70 per cent of natural aggregate concrete.

Flat cable electrical wiring could be a NASA spin-off, says an article from the "Construction Market Dynamics" newsletter. Simply, a flat cable would be laid like tape under office floor coverings, eliminating the need and cost of under-floor raceways.

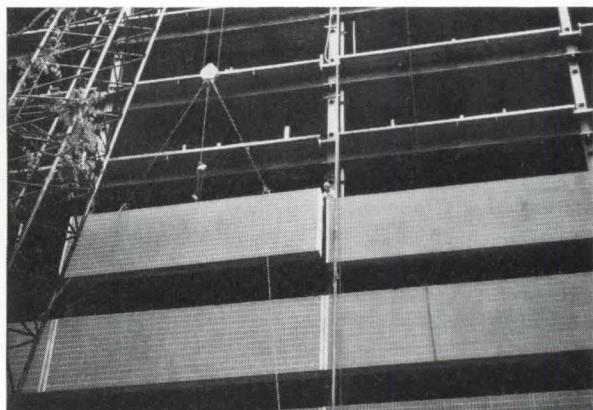
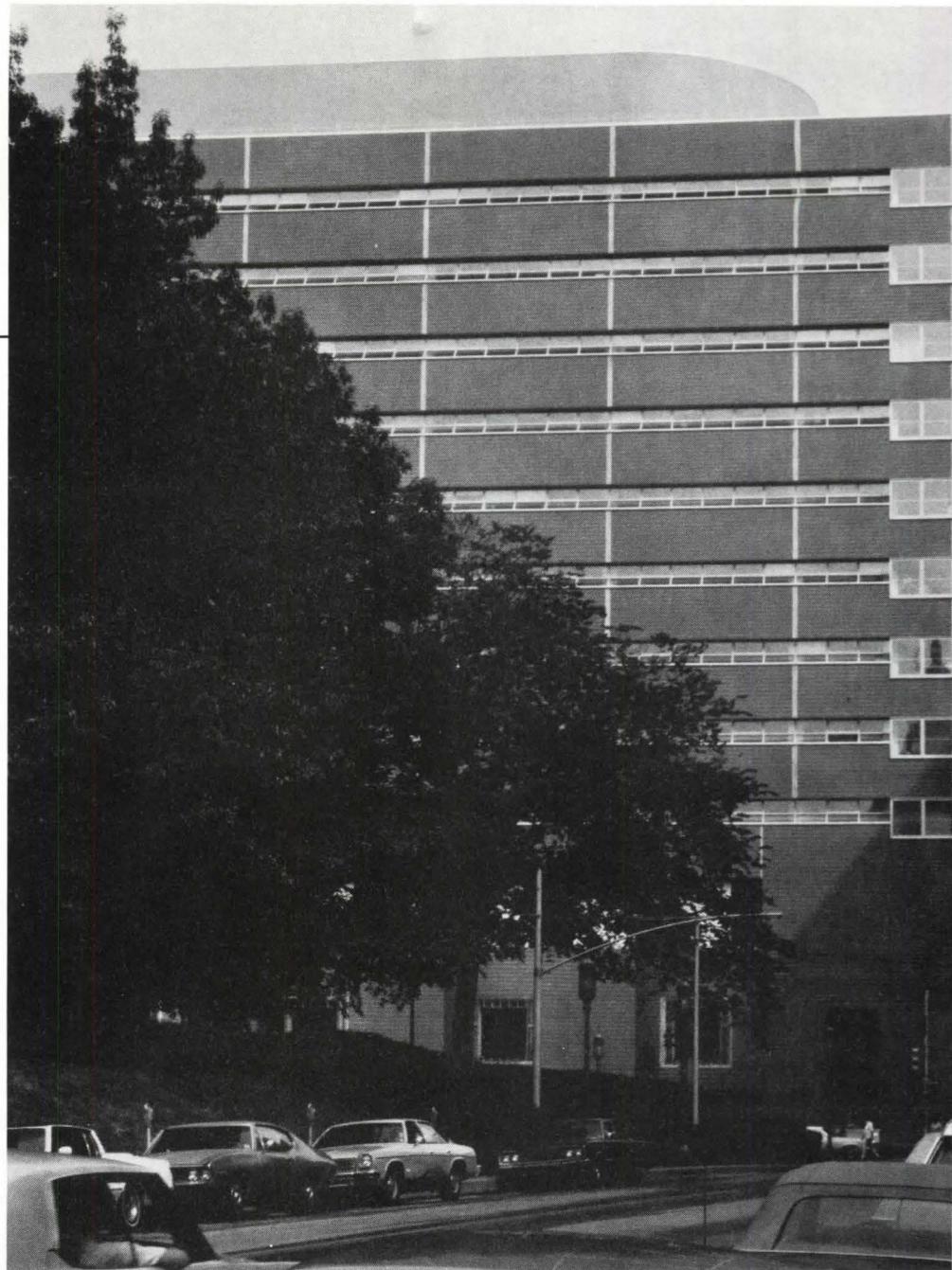
And finally, according to a panel of "industry experts" questioned again by "Construction Market Dynamics" newsletter (published by Construction Resources Inc. in Birmingham, Michigan), a plethora of trends is seen in the "Study of Construction Futures: 1985-90":

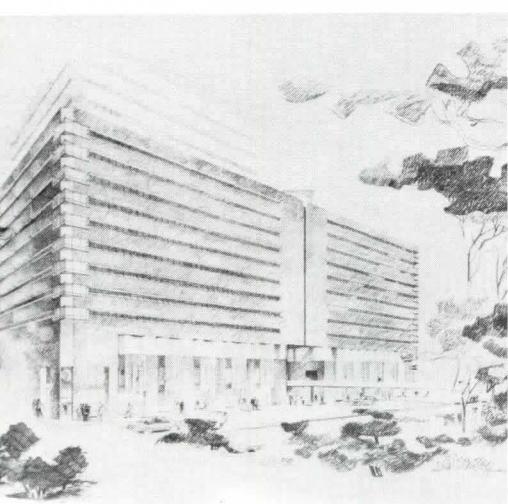
- Solar active heating systems will be installed in 10 per cent of new single family houses.
- Twenty-five to 50 communities will be developed near industrial or electric power plants to utilize their heat sources.
- Five to 10 per cent of new houses will be built underground to conserve energy; and 5 to 10 per cent of non-residential construction will also be built underground.

- Cost-effective computer graphics will provide 50 per cent of architects with a new sales tool.
- Systems building design will be a normal practice in \$10 million-plus buildings.
- A comprehensive national building code will be adopted.
- Substitute wood board products will account for 35 per cent of residential construction board use.
- New plastic/fiber reinforcement technology will be used regularly in commercial construction.
- Vinyl siding will account for more than 35 per cent of the residential market.
- Aluminum thermal break windows will account for 50 per cent of all aluminum prime windows.
- Curtain walls will contain mechanical, electrical and communication systems.
- Security systems will be installed in 20 per cent of all new housing. —Janet Nairn



Product collage designed by Jan White





TILE-FACED PRECAST PANELS SPEED CONSTRUCTION, WHILE GIVING A HAND-LAID LOOK

Though the red ceramic tile facing on the two large office buildings under construction in Harrisburg's Strawberry Square presents a hand-laid-up appearance, it was, in fact, applied to precast concrete panels in a factory for walls above the third-floor level for better quality control, speed of erection, and economy. These buildings—one 12 stories to be occupied by Bell Telephone of Pennsylvania, and the other 16 stories to be occupied by the Commonwealth of Pennsylvania—comprise the first portion of a 12-square-block urban renewal program in Harrisburg. Owned by Harristown Development Corporation, the buildings were designed by Lawrie & Green-Mitchell/Giurgola in a joint venture.

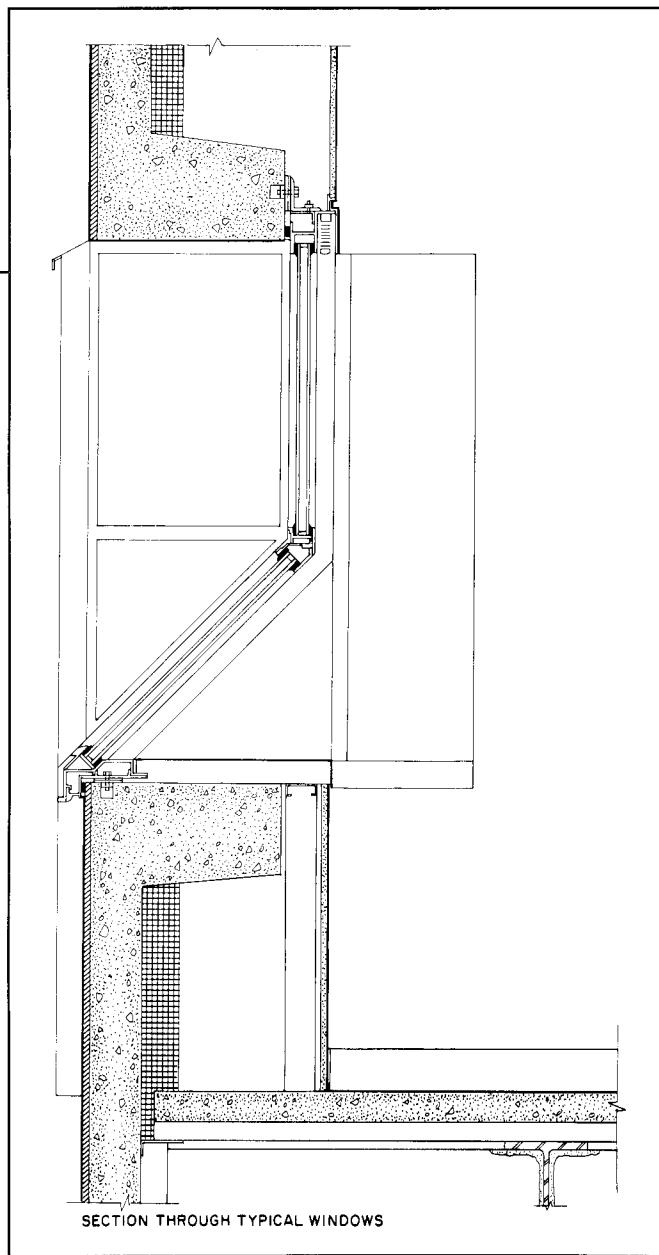
Because most of the buildings in the area generally are about 12 stories and because the front elevations of the buildings face the Capitol, the English Red tile, made by Gail

Ceramics, was used only up to this height for the portions of the buildings that can be seen from Capitol Park. The setback of the 16-story building and the mechanical penthouse structures of the 12-story building are faced with hand-laid Granite Gray tile. The red of the lower layer echoes that of surrounding buildings, while the gray of the upper layer recalls the color of the Capitol. The lobby has 12,000 sq ft of Bright Glaze White tile. Altogether there are 240,000 sq ft of precast tile panels and 100,000 sq ft of hand-set tile.

Though the precast panels vary in size, a typical panel is 30-ft long, 8-ft 8-in. high, and weighs 17,000 lb. The panel height allows 4 ft for windows in the 12-ft 8-in. floor-to-floor height. A typical 30-ft panel had haunches cast into its back, one at each end on the center line. Steel seats were welded to the structural columns to support the haunches of each two adjacent panels. After the panels were hung, steel ties at the top and bottom of each panel were bolted to the columns to prevent rotation of the panels. The precaster, Welsbach Concrete Systems (now J. DiSanti

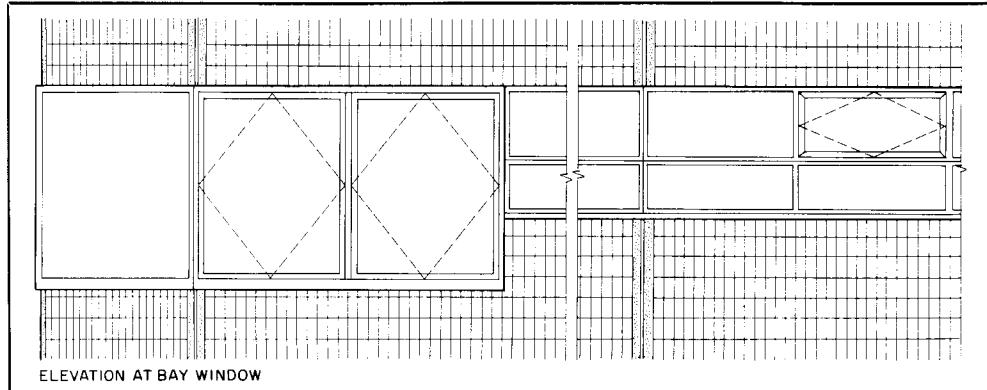
Concrete, Inc.), developed a unique system for applying tile to the panels after having sent one of their foremen to Germany to consult with Gail Ceramics and to study the methods of European contractors who have used these panels for some time. In Europe, rubber molds have been used to ensure uniform joint spacing of the tiles and to prevent tiles from slipping when the concrete is placed. Welsbach, however, decided, after consulting with a local plastics expert, to design a plastic grid mat liner for this purpose. Each 4- by 8-in. tile was placed in an individual pocket of the liner, made of urethane, whose ridges were rounded so that the joints between tiles would be in relief. Next grout was poured. Then, a steel reinforcing gage was laid down, followed by placement of concrete to make the total thickness about 6 in. Because the tile has a keyed back (dovetail-type ribs), it is locked physically into the panel.

Architect Harold S. Guida of the joint venture architecture team calls this process, "by nature, a time saver on tall structures."



Cost of the tile-faced precast plus the plain precast for soffits at windows was \$16.71 per sq ft. Another advantage is that factory prefabrication control is more accurate than on-site construction because weather and temperature problems are not a factor. Erection of the panels at Strawberry Square was under the direction of the general contractor, Mellon-Stuart Company. Problems of tile matching and making joints between panels were avoided by leaving narrow strips of exposed concrete at the ends. The joints were sealed by a double system: on the weather side, a silicone sealant was applied over a backup rod. Several inches back of this is a compressible neoprene strip that had been preglued to the panel edge.

All windows are double-glazed, and every fourth light of the vertical sash in the 4-ft strips is vertically pivoted for window washing. The five corner windows on the park-facing elevations of the two buildings are larger, providing a bay-window design for a view in the corner offices. These windows pivot except for the center one.





NEWLY-DEVELOPED INSULATED WALL PANELS CUT COSTS, ENERGY USE

An increasing concern for energy conservation led architects of a \$1 million, 46,000 sq ft industrial building in Bridgeport, Connecticut, to specify a newly-developed insulated building panel. The panel is manufactured by Maso-Therm Corporation.

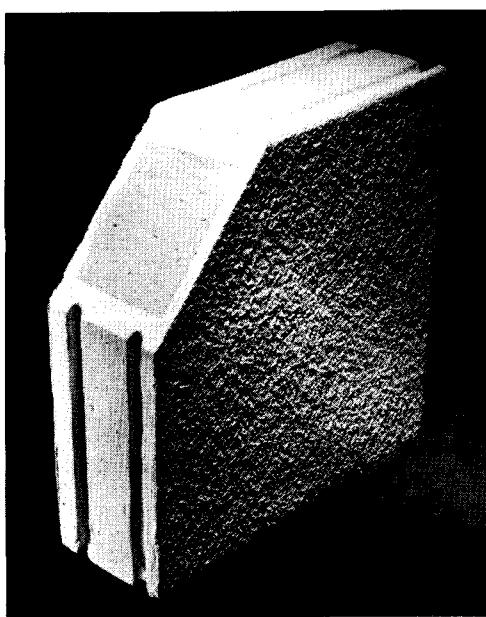
The panel (cut-a-way, left) is a light-weight, thermal insulation panel used for walls and roofs. It is composed of a rigid urethane foam core completely encased in a glass fiber-reinforced cement. The panel looks like concrete, but has much lower weight per sq ft and comes in a wide variety of textures and finishes. A 4-in.-thick panel has a U factor of only .04. By the inherent nature of the materials used, each is fire-proof.

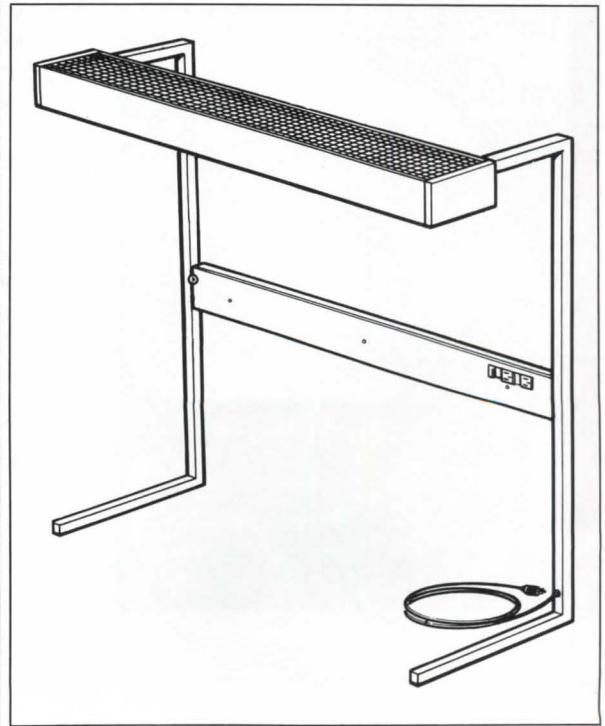
While there have been many applications of the Maso-Therm panels, the first large-scale use was on a manufacturing building for Dura Plastics of New York, Inc.,

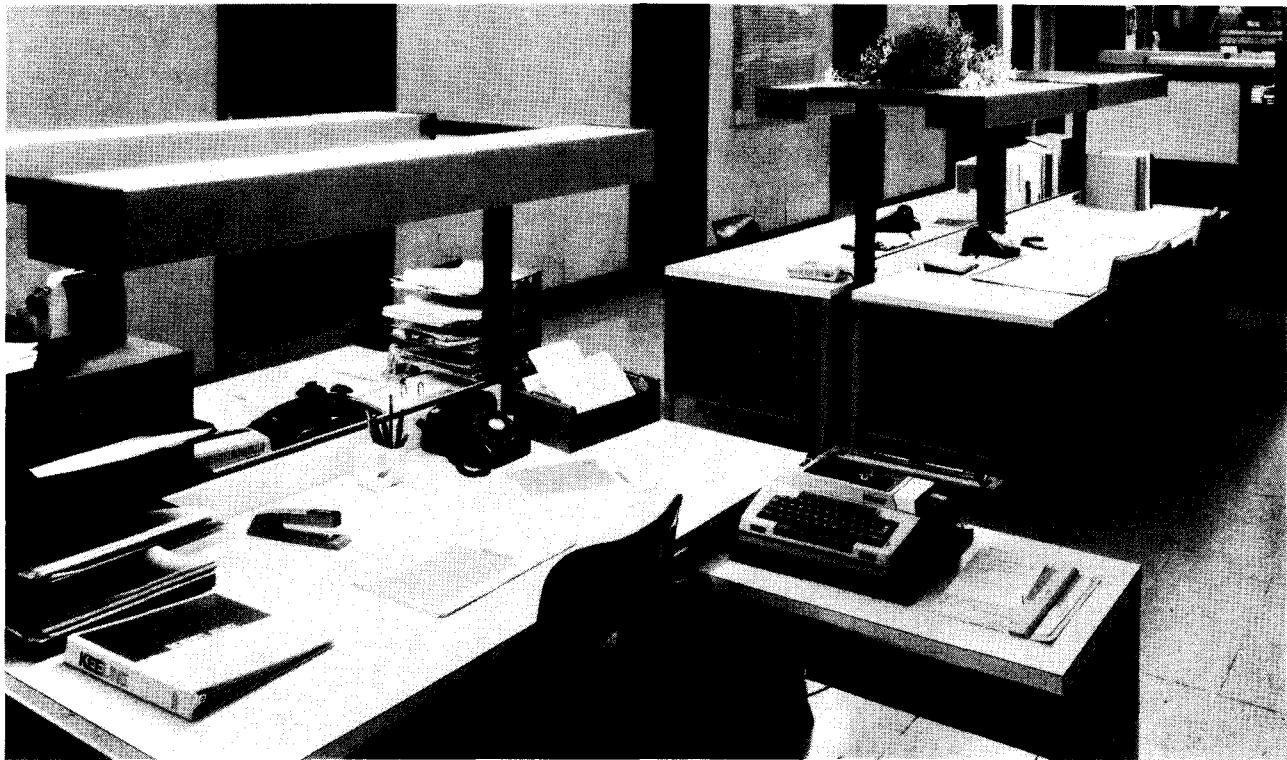
designed by architects Fletcher-Thompson, Inc. By using these panels, a projected energy cost savings of \$9,100 annually has been estimated by Maso-Therm and the architects.

The 4-in.-thick panels look like precast concrete but weigh only about 10 lb/sq ft, allowing a light structural frame to be specified. Installation of panels is simple: each is bolted to a steel "clip angle" which has been either bolted or welded to the steel frame. Shown during construction of the Dura Plastics building, erection crews adjust light-weight panels on the second level (above left) and a window panel (above right) to the frame.

The panels can be made in a wide variety of textures ranging from sand to rock face, and are normally supplied in white or buff or in a variation of brown colors. Most commonly used are 8- by 12-ft or 8- by 16-ft sizes (because of ease in shipping and erection); curved shapes are available. Panels are finished on both sides, requiring no additional interior wall finishing.







FREESTANDING TASK LIGHTING SYSTEM AFFORDS ENERGY SAVINGS, FLEXIBILITY, ADAPTABILITY

The upsurge in the design and use of task/ambient lighting systems over recent years is not a new idea, but a new design twist has recently been developed that enhances task/ambient lighting office furniture flexibility.

Developed by the Lighting Division of Keene Corporation is the "Taskmaster" task/ambient office lighting system—a freestanding, self-contained, portable unit. Its uniqueness is its freestanding capability, readily adaptable to any size or design of furniture, whether in new or old offices. This system allows any office to take advantage of the benefits of task lighting.

The premise for the design lies in the economic viability of task/ambient lighting. While it has been proven that in most applications task lighting does save energy, and therefore cuts costs, the company claims that

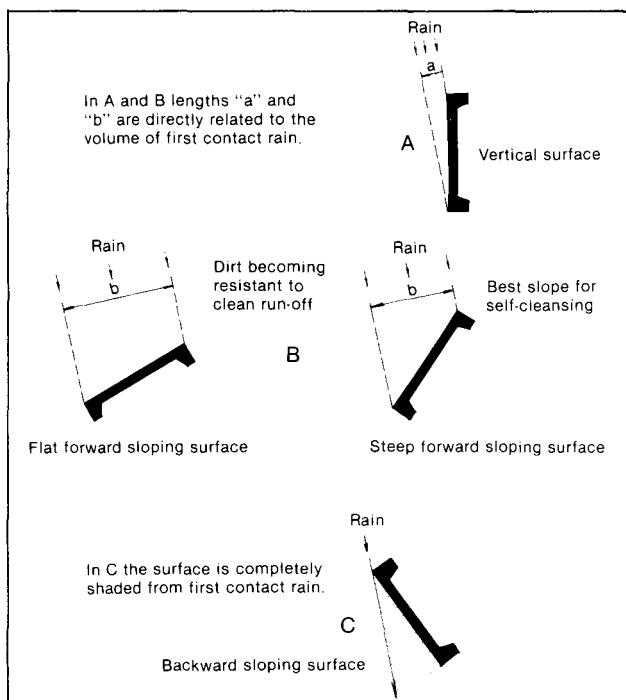
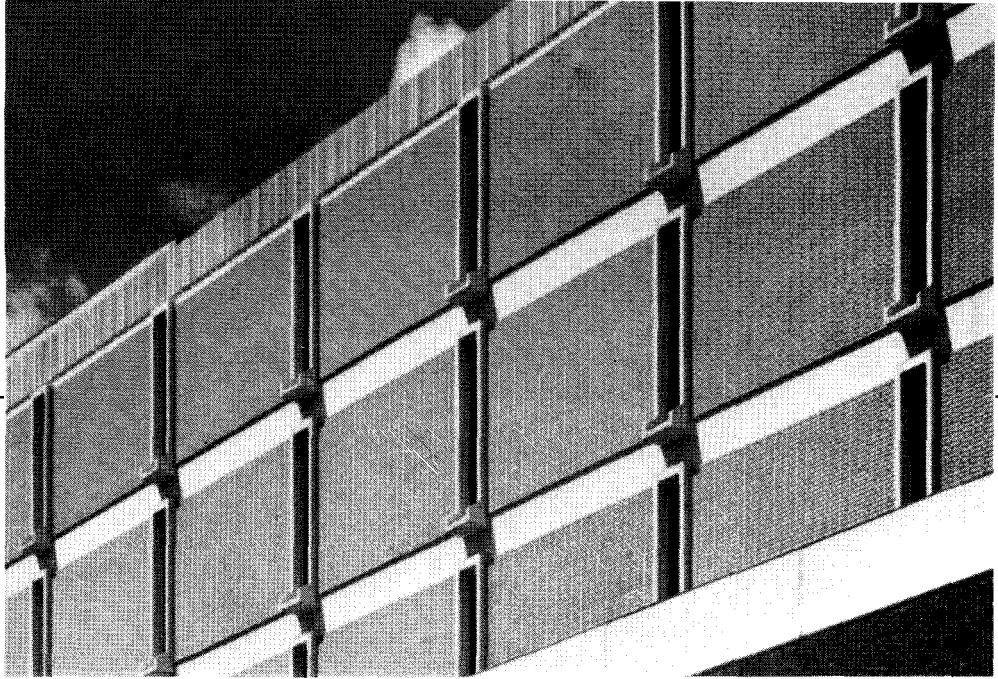
the system requires less than 2 watts of energy per square foot, reducing operating costs by 50 per cent (compared to 4 to 6 watts per square foot in conventional offices). Test installations at Keene's manufacturing plant offices near Boston (above) have resulted in a claimed 70 per cent reduction in energy consumption.

The system consists of four units: the desk light, wall-mounted light, file top light and a Kiosk (designed by lighting designer/consultant Sylvan R. Schemitz). The wall-mounted unit is installed with brackets and provides both up- and down-light. The file top light simply sets atop any file and lights opened file drawers; and the freestanding Kiosk unit (far left) directs light upwards. These units are not an integral part of any furniture system but adapt to any kind of furniture, often providing a visual unity that did not previously exist.

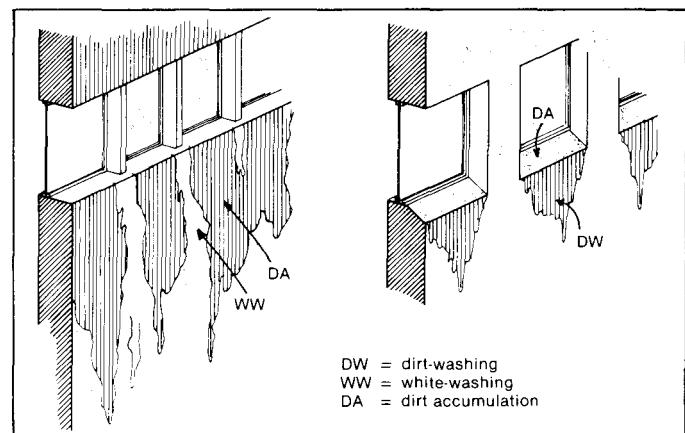
The freestanding unit (left) simply butts up to any desk without attachment. It is four feet long and has a panel raceway for power and communication cables, including tele-

phone, and contains a 10 amp circuit breaker. The main power line runs one leg and can be plugged into any 110/120 volt socket. Two standard 40-watt rapid start lamps are spring-mounted for easy replacement. Foot-candles average 80 on the work surface. A special sliding lens on the underneath side of the light can be adjusted to prevent glare and reflections; louvers on the top provide a shielded up-light for ambient space illumination. Each station has an additional individual on-off switch to control energy consumption. Units can be positioned singly or back-to-back (as shown) and dividers can be inserted for privacy. Presently under design is a unit for the typewriter return table and a light attachable under a shelf.

While the cost is comparatively inexpensive—the desk unit is available at \$400 or less retail—the key to the system is flexibility. It is lightweight and movable for easy rearrangement of furniture or from office to office. Assembly and disassembly are also easy to perform because only screws are needed to attach the power panel and the light fixture.



Volume of rain likely to hit wall surfaces.



DESIGNING PRECAST WALLS TO MINIMIZE STAINING: NEW INDUSTRY GUIDELINES

Attention to proper detailing of precast concrete, selection of aggregate and color of cement, design and placement of drips, gutters and scuppers, and the effect of surface characteristics, all can help minimize disfiguring staining of building walls comprised of precast concrete panels. The drawings on these two pages showing recommended practices, as well as what to avoid, appear in a new, comprehensive publication by the Prestressed Concrete Institute, "Design for Weathering of Buildings Using Architectural Precast Concrete." Following are the major points covered by this guide.

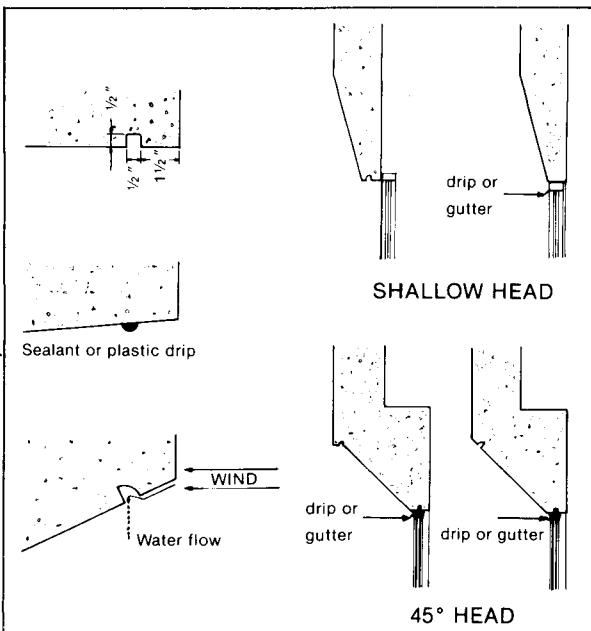
To prevent unsightly staining and streaking, wall elements should be designed, and windows integrated with the wall, so as to control water migration and collect and remove water runoff.

The major contributing factors to staining are: dirt in the atmosphere; deposits

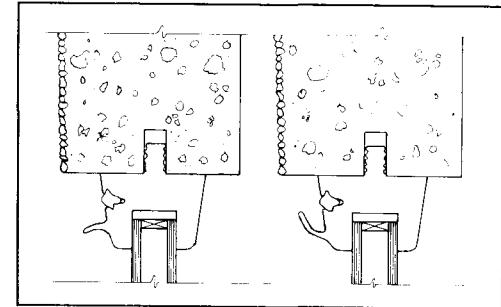
washed onto the precast concrete from an adjacent surface or material, for example, a stain-producing metal; chemical action from corrosive gases in the atmosphere; surface deposits such as efflorescence; surface changes such as crazing; foreign matter deposited during construction.

Design to minimize streaking. Small forward-sloping surfaces usually weather cleaner (see figure far left). Large areas may collect dirt at the lower end unless the angle is steep. The facade geometry of buildings is usually responsible for local concentrations of runoff that lead to the characteristic patterns of staining seen on buildings. Where some feature causes a heavy concentration of water, a lighter, cleaner streak (white-washing) results. Horizontal or near-horizontal surfaces tend to have the most dirt accumulation, and runoff carries this dirt to adjacent vertical surfaces to produce dark streaks (dirt-washing). Vertical surfaces can be protected and staining minimized by providing steeply sloping overhangs with drips.

Effect of surface finishes. Smooth pre-

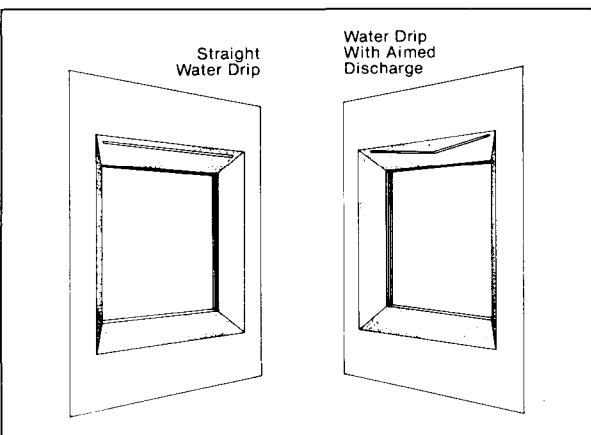


Design of water drip in relation to slope.

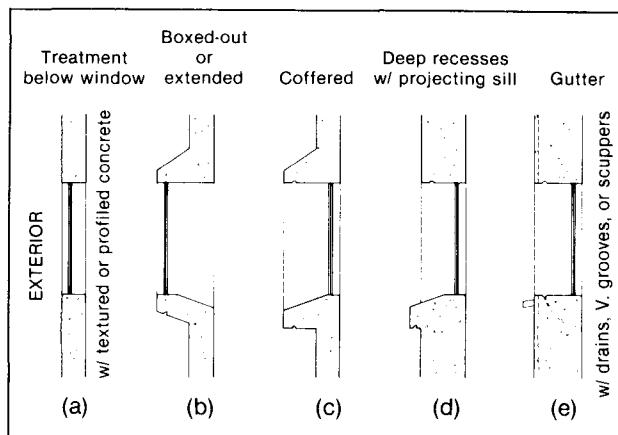


Drip or gutter incorporated into head section gasket reduces potential staining of windows.

Distribution of water flow.



Window treatments.



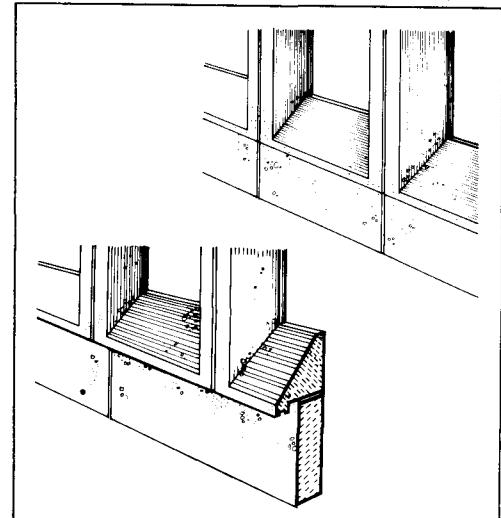
cast surfaces tend to show streaking more than textured surfaces. Honed or polished surfaces are less susceptible to this problem. Textured finishes, though they accumulate more dirt, can maintain a satisfactory appearance because the aggregate tends to break up and distribute water runoff and reduce streaking. Rounded aggregates are largely self-cleaning. While angular aggregates or rough texture tend to collect dirt, the dirt absorption generally is confined to the matrix. For this reason, the area of exposed matrix should be minimized.

Windows should contain and/or divert runoff. Windows should be designed with two principles in mind: 1) to contain the water flow within the window area, and 2) to disperse water at the bottom so water is spread not concentrated. One approach is to box the window out from the wall face, with a cutback at the base as perpendicular to the wall as possible. A coffered window also can minimize staining and streaking; drips should be provided at the head to avoid staining of the window, and below the sill to avoid

staining the wall. With vertical slot windows, of course, the water flow is least interrupted by sections of wall.

Glass staining or etching. The publication states that materials such as dirt that accumulate on glass hold water on glass and make it susceptible to moisture attack. Chemical reaction of sulfur and nitrogen pollutants in the atmosphere with cement compounds can result in the formation of materials that can stain and etch glass if they are allowed to remain for a period of time. The publication makes the point that glass staining can occur with metal curtain wall buildings as well as with precast concrete when differential wetting of windows occurs from a slow runoff of rain, such as by dripping. To avoid staining of glass the publication recommends that concrete frames at window heads should be designed so that they do not splay back toward the glass unless drip details are incorporated into the frames. Most importantly, the use of edge drips and a second drip or gutter serve to prevent slow runoff. (See above for details.)

Channeling of water via joints.



With a straight water drip the water flow is evenly distributed (center, left), but with aimed discharge it is directed toward the center, and dirt will show unless the panel is dark colored. Joints should not discharge water over vertical surfaces, but channel it away from them (above).

The Upgrading of Specification Writers

With the proliferation of materials, products and systems, the need and demand for individuals who are proficient in the area of specification writing has likewise grown. Since there is no formal scholastic training for these individuals, nor any licensing examination to evaluate their ability, how does the prospective employer determine the capability of one to be entrusted with these serious areas of involvement? Two groups involved in specification writing have recognized the problem and are developing standards to measure the competence of individuals who hold themselves out as specification writers. One is the Construction Specifications Institute, which has embarked on a certification program. The other is SCIP, Specification Consultants in Independent Practice, which is an organization concerned with the standards of individuals engaged in private practice as specification consultants.

by Harold J. Rosen, FCSI, PE

The specification writer of yesteryear, who was often relegated to a back room tediously writing specifications around a handful of building products, has had to become conversant with the major advances in building materials technology. Unfortunately, the schools of architecture have not been—and are not now—turning out individuals who are specialists in this new medium. It has taken on-the-job training to develop this new cadre of personnel.

To cope with these developments, new systems of specifying have been emerging, such as computer-generated specifications, master specifications, performance specifications, and specification formats, to name a few of the techniques.

Litigation—the result of new awareness—has also increased the demand for individuals with a special grounding in materials know-how, specification language, and a familiarity with general conditions and general requirement provisions of specifications.

With specification writing and materials research having become not just a vital but an increasingly complex part of the architectural profession, the preparation of the individual for this area of expertise must likewise receive some new focus. Professional development courses have been offered for a number of years to update the knowledge of those already writing specifications—including courses in the principles of specification writing, materials technology, and general conditions.

With systems building and owner-user performance criteria requirements coming into vogue, it has become increasingly important for specifiers to master the new tech-

niques of performance specifying. This is a specialty that few specifiers are equipped to cope with at the present, but which is being addressed by new programs, especially for government clients.

In June 1977, CSI embarked upon a program of examining and certifying construction specifiers. In April of this year, the first exam was given. Two objectives are being sought in this program: 1) to provide a means whereby specifiers may demonstrate their experience, ability, and knowledge in the preparation of written construction documents; and 2) to encourage elevation of the minimum competence required in specifying.

The CSI certification program will require an individual applying for a certificate to have at least five years of experience in architecture or engineering, and pass a written examination. The certification program also contemplates re-examination of qualifications every three years by submitting evidence of continuing competence.

The examination will test the candidate in the following areas.

1. *Bidding requirements*: "invitation to bid," "instructions to bidders" and "bid form" preparation.

2. *Types of bidding*: single contracts, multiple contracts, cost-plus contracts, etc.

3. *Division One, General Requirements*: summary of work, temporary facilities, project closeout, allowances, etc.

4. *Construction technology*: understanding of current materials, their proper installation, compatibility of adjacent materials in terms of thermal movement, chemical interaction, etc.

5. *Conditions of the Contract*: relationship between owner, contractor and architect, insurance provisions, etc.

6. In addition each candidate will be required to rewrite a deliberately garbled text

into a proper specification, and finally prepare a 500-word thesis on a particular specification subject.

SCIP: Specification Consultants in Independent Practice

First organized in 1970 as a loose confederation of individuals throughout the country engaged in independent specification practice, SCIP aids in the exchange of information concerning mutual problems related to this peculiar type of consultant work. Over the years, this group has slowly pieced together a collection of significant information that deals with independent practice.

For example, certain professional skills that are developed singly and are available through such sharing might include Mideast work, subway work, permafrost work, or certain peculiarities of governmental work.

Membership in SCIP is limited to individuals who have had at least five years of experience in specification writing and who are recommended for such membership by at least two SCIP members.

A prospective employer will be in a position to engage such an individual secure in the knowledge that the specifier and/or independent consultant has been subjected to some scrutiny of his technical skills.

The CSI certification program will weed out the incompetent and the inexperienced and provide the prospective employer with names of individuals who have applied for and obtained certification based upon experience of five years, and an examination.

The SCIP membership program will assure an architect that his proposed consultant is not a moonlighter or part time consultant, but an individual who is engaged in an independent practice full time and has the credentials and resources to perform most any assignment based on his ability to obtain shared technical information which enlarges and enhances his potential.

While there are no guarantees, it is quite obvious that a policing program on the part of CSI and SCIP will develop a number of individuals who are qualified to provide a service in an area that is potentially a source of litigation.

The evaluation of the competency of specifiers and consultants may not eliminate all of the problems, but it will go a long way toward reducing and minimizing the risks involved in the practice of architecture.

product reports 79

EDITORIAL

A time of new work, new problems, new solutions to problems. . . .

We tend, as editors, to think of our readers—you architects and engineers—as the “heroes” of architecture and the originators of all ideas for buildings great and beautiful. But for a couple of months each year—August and September, when this Product Reports issue is in production—we are reminded of the critical and creative ideas that the hundreds of suppliers to the building industry offer to design professionals. This issue is full of them.

As you might suspect, there are no revolutions—nothing ever happens that fast in this industry. But, as you thumb through the nearly 1000 new products described in Product Reports 79, you will be struck by the same sense of “things going on” that we felt as we sifted and sorted and selected the submissions for this issue from well over 1000 manufacturers.

What is going on? You’ll see the manufacturers’ response to the problems of energy conservation—in more efficient mechanical systems, more sophisticated glass, and a whole new section on solar energy equipment. For another example: you’ll see the manufacturer’s response to the growing strength and influence of the architect in interior design—in the biggest-ever section on furnishings and office modules. For another example: you’ll see the manufacturer’s response to the growing sophistication of design and engineering problems—for instance, in the growth of computer systems at a scale useful in pretty small professional offices.

In short, in these pages, we think that you will find critical and creative ideas from manufacturers that will be a real help to you in your work. Which is what this annual Product Reports issue is, after all, all about. . . .

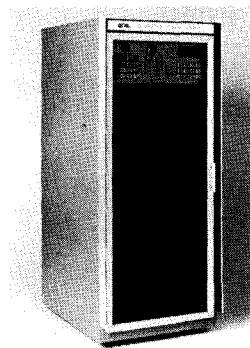
How to use this issue

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 cards on pages 9 through 12. There are circle numbers for more information on the products in any advertisement, and for more information on any product or literature item in the editorial pages you simply need write in the number of the item in boxes provided on the Reader Service Cards. An index to manufacturers whose products appear editorially may be found on page 5, while advertisers in this issue are indexed on page 4.

May you find in this issue 100 solutions to your problems and 100 fresh ideas you can use . . . —Walter F. Wagner, Jr.

Office supplies and equipment

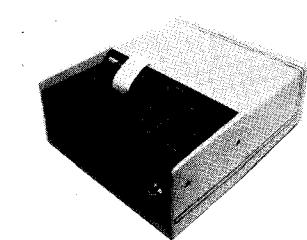
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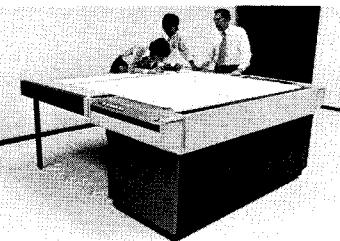
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COMPUTERS

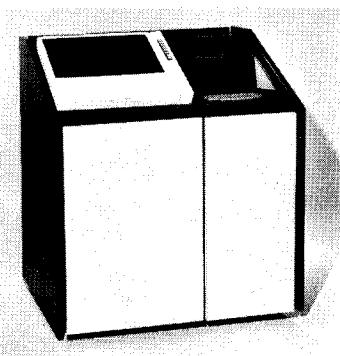
1 COMPUTER CONTROL / The "Computer Power Center" is a computer that provides flexible, clean power for all the equipment in a computer room. The center provides a central node for power distribution and can be programmed to provide proper voltages and currents for different computers. / Emergency Power Engineering.

2 BUSINESS COMPUTER / A flexible disc-based computer with a built-in data base manager and a number of software modules have been newly introduced. The *HP 250* system includes a standard typewriter-like keyboard, CRT display, system memory, user memory, disc drives and printer. Cost is nearly \$25,000. / Hewlett-Packard Co.

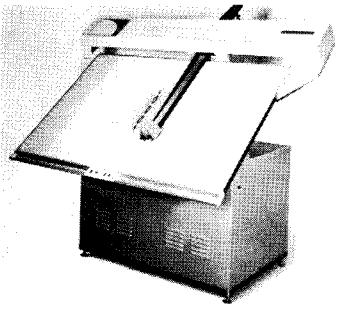
3 PORTABLE DATA LOGGER / The "Compact 3430" portable machine operates either from a 110/230 volt power source or by built-in rechargeable batteries. Three models are available. / EMR Telemetry.



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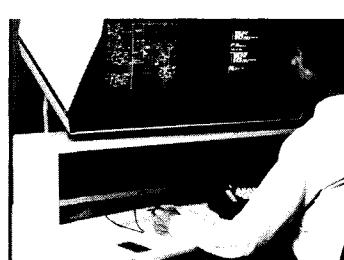
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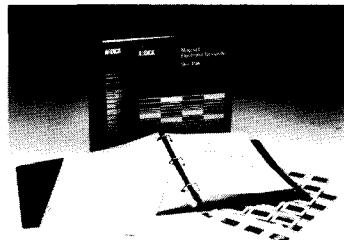
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4 ELECTROSTATIC PLOTTER / *Versatec 8272* is claimed to have the widest high resolution electrostatic plotter manufactured, using over 14,000 electronic writing nibs to produce 200 dot/in. resolution across 72-in.-wide paper. It aids computer design equipment and can be used for mapping and general drawing that require high speed. / Versatec.

5 PLOTTING WORK STATION / The "Model 6300" micro-computer-based magnetic tape plotter has been introduced, which has the interface capability to write tapes on the system directly, and without removing the magnetic tape plot off-line. The base price is \$13,500. / Zeta Research.

6 DRAFTING PLOTTER / "Data Technology 3454 Series Automatic Drafting Plotter" is a flatbed plotter that operates at up to 16 in./sec. For both on-line and off-line production, these plotters can interface without digital data sources. The drafting surface is tiltable. Base price is \$15,900. / Data Technology, Inc.

COMPUTERS
INSTRUCTION MANUALS
MAINTENANCE/ OPERATIONAL
EQUIPMENT
OFFICE MACHINES
OFFICE SUPPLIES
REPRODUCTION EQUIPMENT

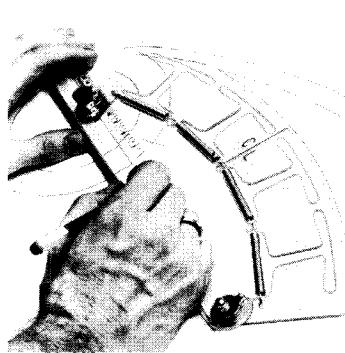
8 COMPUTER GRAPHICS SYSTEM / An interactive computer graphics system allows an architect to work directly at a video display terminal to create two- or three-dimensional drawings. This becomes part of a data base from which all other personnel can retrieve information. / Calma.

INSTRUCTION MANUALS

9 EDUCATIONAL MANUALS / A comprehensive package of software and instructional materials has been developed that simplifies implementation of word processing instruction in business education curricula. Called "Edu-Pak," the program is designed for use with the company's Magna I electronic typewriter. / A.B. Dick Co.



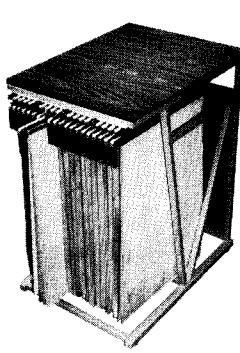
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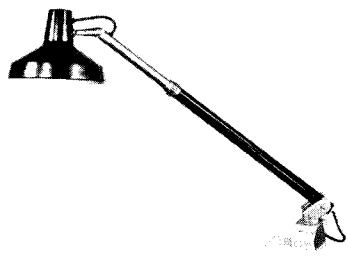
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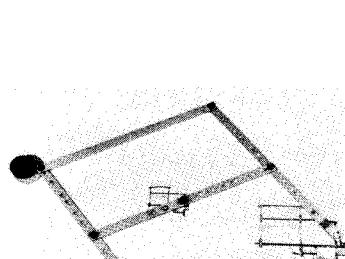
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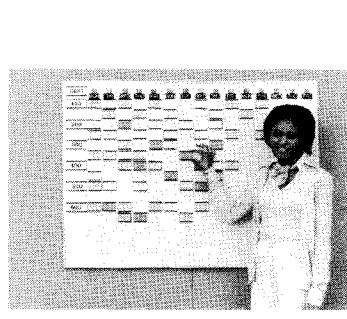
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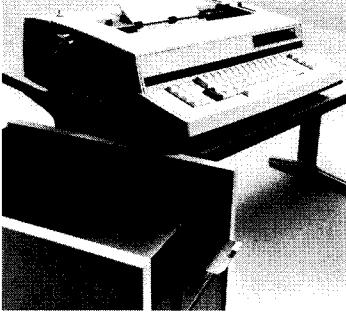
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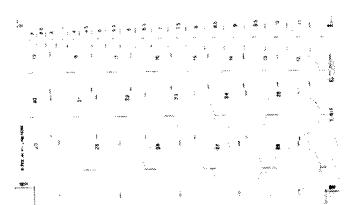
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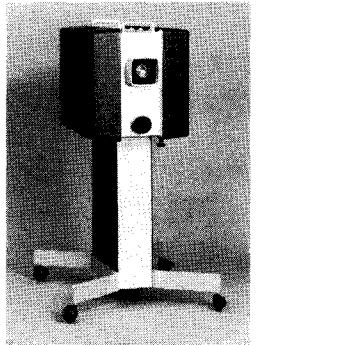
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MAINTENANCE/OPERATIONAL EQUIPMENT

10 DRAWING STORAGE / "Flasher" display unit holds up to 70 prints or plans in a compact unit that can be easily moved. Made of reinforced tubular steel treated with a baked enamel finish in either black or white, the unit is 45- by 42- by 31-in. / Presentation Systems, Inc.

11 LIGHT FOR DRAFTING / A telescoping light for use on drafting boards combines fluorescent and incandescent tubes. Called "Vermcolite VL-4", it extends from 26- to 46-in. and pivots 90 deg vertically and 350 deg horizontally at its base. / Vemco Corp.

12 METRIC TEMPLATES / Two new metric circle templates have been introduced. One incorporates circles ranging from 2 to 30 mm; the other ranges from 30 to 50 mm. Both are fabricated of transparent plastic. / The C-Thru Ruler Company.

13 CURVED RULER / The "Acu-Arc" ruler can be quickly adjusted to form any circular curve with a radius between 6 1/4 and 200 in. The edge is beveled for improved inking from pens. Also available in metric sizes. / Hoyle Products, Inc.

14 PANTOGRAPH / A simple but sturdy pantograph (metal hole-bar type) is suitable for reducing and enlarging plans, drawings, templates, pictures, etc. It has a point accuracy of $\pm 0.3\text{mm}$. Nineteen different transmission ratios can be set up. / EPIC, Inc.

15 TELEVISION PROJECTOR / "PJ5000" is a large screen color video projector, with built-in remote control capability that could have a variety of applications, including projecting information from any video source. It can be coupled to computer facilities, project graphic displays, presentation of visuals during meetings, etc. / General Electric Co.

16 CONSTRUCTION DOCUMENTS / Dodge/SCAN system delivers complete bidding documents to an office on 35 mm film, which then can be projected to full size and original scale on a specially designed worktable/viewer provided at no additional cost. / F.W. Dodge Division, McGraw-Hill Information System Co.

17 VISUAL ORGANIZER / Five "Work/Plan Visual Organizer" kits are available. The kits include gridded porcelain boards in sizes from 18- by 24-in. to 48- by 144-in., featuring all-magnetic cardholders. The boards can be used for production schedules, personnel assignments, etc. / Magna Visual Inc.

18 FILING SYSTEM FOR DRAWINGS / The GABS vertical filing system features a plan selector, which permits easy access and replacement of drawings. A single system accommodates 2,000 full-width documents, or up to 8,000 of various sizes. / United Filing Corp., Ltd.

19 FREESTANDING FILE / A free-standing file for vertical and roll storage of plans is called "Plan Caddy," part of the company's modular storage system. Its height can be adjusted to accommodate sheet sizes up to 48-in. long, and models are available with casters. / Plan Hold.

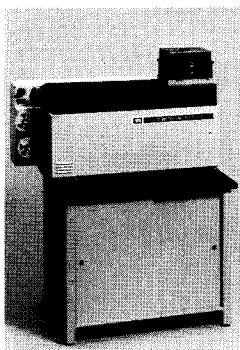
OFFICE MACHINES

20 ELECTRONIC TYPEWRITER / The "Magna 1 Electronic Typewriter" can produce a typical full page letter in 45 seconds, and repetitive letters can automatically be typed quickly (at a rate of 500 words per minute). / A.B. Dick Company.

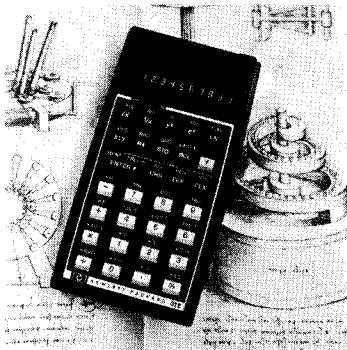
21 LETTERING MACHINE / An electric machine produces *KroyType*, the company's "type on tape" system available in 18 type styles. It is claimed to be faster than hand lettering, simpler than photo-headliner machines and more economical than computerized/photographic machines. / Kroy Industries, Inc.



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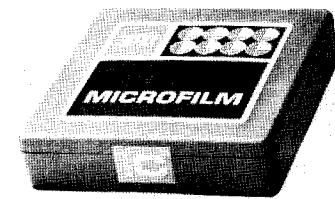
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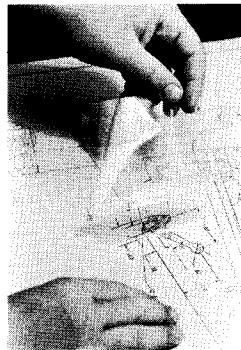
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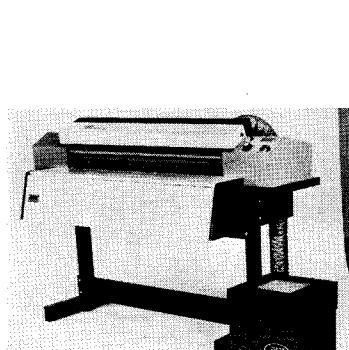
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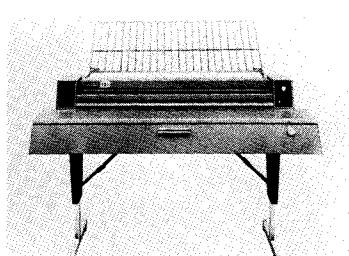
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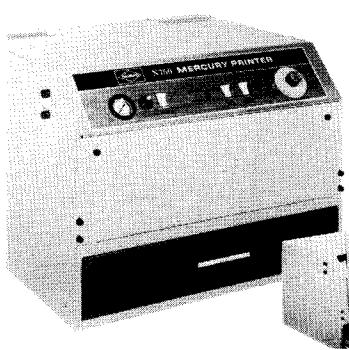
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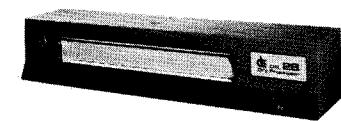
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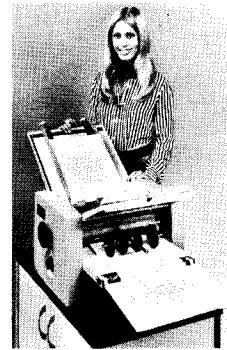
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22 MICROFILM CAMERA / An in-office microfilm recording system could be efficiently used for easy storage and retrieval of any kind of information including plans, renderings and library material. It is compatible with all standard types of retrieval systems—microfilm readers. Cost is \$2,000. / 3M Company.

23 MICROFILM PROCESSOR / A self-threading Microfilm Processor is available for use within the office. It accepts film lengths from 6 in. to 215 feet, processing both 16 mm and 35 mm microfilm. A light-tight film magazine is a key element. Cost is \$5,700. / 3M Company.

24 CALCULATOR / The "Series E" calculators (only one model shown above) newly introduced were designed to be hand-held and for scientific use. The series features a new display size, error messages and new unit design. / Hewlett-Packard.

25 PAPER TRIMMER / The *Kuttrimmer* paper trimmer can trim and cut up to 50 sheets of paper at a time and can handle a wide variety of hard-to-trim materials. It can make hairline trims, make automatic repeat trims and cut multiple sheets. / Michael Business Machines Corp.

OFFICE SUPPLIES

26 MICROFILM / For use in any high-speed microfilm camera and document sorter (particularly compatible with the company's machines), this high-speed film is available on 2.5 and 4 Mil *Trimar* polyester base, which resists scratching and tearing. No special processing is required. ANSI- and NBS-approved. / 3M Company.

27 COPIER LABELS / Self-adhesive copier labels used as "change" labels for drawings can be used in conjunction with office copier machines. Model 6997 drafting labels cost approximately \$52 per 100 sheet box. / Avery International Co.

REPRODUCTION EQUIPMENT

28 AMMONIA ARRESTOR / For removing ammonia odor from white-printing machines, a hood compatible only to *DiAZiT* equipment can be simply attached to the equipment. UL-approved. / *DiAZiT* Co., Inc.

29 WHITEPRINTER MACHINE / A console/machine-stand whiteprinter is now available that features a light-tight compartment (for storage of cut sheets of sensitized paper) and a bar for holding roll stock. Machine height is adjustable from 38 to 35-in. / BLU-RAY, Inc.

30 MERCURY PRINTER / Model N750 mercury printer is used for platemaking, proofing and contact work particularly useful for graphics presentations. Uniform exposures are assured due to a built-in "light integrator." It plugs into a standard 110-volt outlet. / nuArc Company, Inc.

31 PAPER COPIER / An improved line of plain paper copiers is available, featuring copying on both sides of the paper, and accepting paper sizes ranging from 4-by 6-in. to 11-by 17-in. The Model 990 uses plain bond paper in roll or sheet form. / A.B. Dick Co.

32 DRY PROCESSORS / A table-top, temperature-controlled, ammonia vapor, dry processor machine can replace a darkroom for producing high-quality graphics. The unit is self-contained and Model 26 (above) will accommodate materials up to 42-in. wide. / CIEL, Inc.

33 PAPER FOLDING MACHINE / Specifically designed for in-office printing departments, this compact "Fast-fold" folding machine emphasizes simplicity for paper loading and efficient paper flow. / Michael Business Machines Corp.

OFFICE LITERATURE

OFFICE SUPPLIES & EQUIPMENT: UCI 1

3000 DRAFTING FURNITURE / Two new "Drafting Room Economies" booklets have been published that cover *Dial-A-Torque* and VR 20 lines of drafting furniture. Fatigue is claimed to be reduced by the adjustable table heights and angles. / Hamilton Industries.

3001 DRAFTING SHORTCUTS / "Architectural Drawings Made Easy" is a brochure which features drafting shortcuts and the philosophy behind the move towards more use of photography in drafting. Included are paste-up techniques, microfilm usage, rendering photographic aids, etc. / Eastman Kodak Co.

3002 MARKETING / A 92-page illustrated book entitled "Visual Marketing—A Program for the Design Professional" offers suggestions on how audio-visual techniques can help architects increase the impact of their client presentations. The book is based on a series of the company's Design Professional Workshops in Visual Marketing held throughout the country. Its list price is \$6.25. / Eastman Kodak Co.

3003 STORAGE IDEAS / Storage and filing solutions for the office are offered in a large brochure, claimed to be the first comprehensive planning guide to assist architects and builders in designing high-density filing/storage systems. The 32-page guide was developed after two years of consultation with architects and specifiers, and suggests ways to design modular mobile carriage systems for maximum utilization of available space for compact storage of documents and materials. / The Spacesaver Corp.

3004 COMPUTER EVALUATION / A 4-page brochure is available that provides a comprehensive check-list to assist in the evaluation of typical computer installation to determine if the power structure is properly installed. Forty-four questions plus 23 evaluation items comprise the check list. / Computer Power Systems Corp.

3005 GRAPH PAPERS / The new company line of chart and graph papers has been published. The 36-page catalog shows almost all of the standard grid patterns in either actual or one-fifth size. Comprehensive listings provide additional details such as minor and major accent intervals, number of divisions, and/or log cycles, scale factors and time remarks. / Codex Book Co.

3006 COPY MACHINES / The Electrostatic Offset Masters brochure describes a newly-developed equipment line that provides improved and consistent master quality, permitting sharp, high fidelity copies. Solids are dense and weak images come out dark, crisp and clear. / A.B. Dick Co.

SITE WORK: UCI 2

3007 INDUSTRIAL FENCING / Full-line catalog describes the basic components of chain link fencing for industrial and commercial security applications, and illustrates the fence fabric choices available. Gates, operators, and special products such as windscreens and picket railings, are included in the 24-page booklet. / Anchor Fence Div., Anchor Post Products, Inc. GB*

3008 SLIDE GATE / Aluminum-frame cantilever slide gates as large as 60-ft double opening are shown in a product folder. Cut-away views illustrate the friction-free bearing assemblies; no wheels or supports of any kind are required on the bottom of the gate. / Anchor Fence, Div. Anchor Post Products, Inc. GB*

3009 ELECTRIC GATE OPERATORS / Motomatic gate operators handle any overhead track, cantilever slide, or swing gate; operators have reversing motors of up to 1 hp, available in any voltage. Entrance for vehicle or pedestrians may be controlled by key switch, card control, intercom, or three-button control, operable at distances of up to six miles. / Anchor Fence Div., Anchor Post Products, Inc. GB*

3010 INSIDE SECURITY / Wire fence partitions for stock rooms, tool storage, and other interior areas requiring custom-designed security are outlined in a 4-page brochure. The partition's compression-type supports are shown in detail drawings. / Anchor Fence Div., Anchor Post Products, Inc. GB*

3011 TENNIS ENCLOSURES / Complete product specifications and installation photos of *PermaGreen* vinyl-clad tennis court fencing are included in a color brochure. / Anchor Fence Div., Anchor Post Products, Inc. GB*

3012 CHAIN LINK FENCE / An architectural specification kit supplies product data, detail drawings, ASTM standards, test results, and advertising reprints on aluminized fence fabric, as well as catalog pages on fence fittings, hinges, sliding gates, etc. / Acco, Page Fence Div.

3013 TREE GRATES / A 16-page color catalog illustrates 50 different sizes and designs in square, round, oval, rectangular, and hexagonal cast iron tree grates. / Neenah Foundry Co. GB* more literature on page 32

ARCHITECTURAL RECORD REPRINTS

FOR A
FREE
INVENTORY
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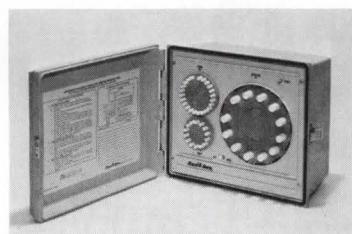


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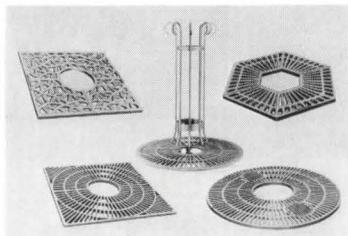
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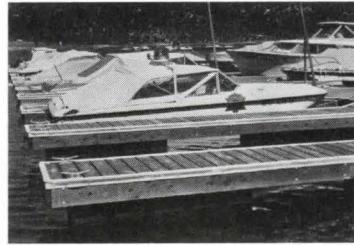
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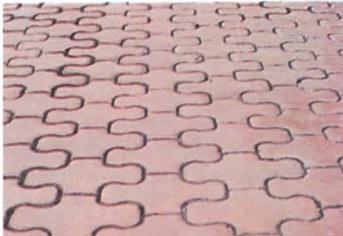
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IRRIGATION SYSTEMS

46 IRRIGATION CONTROLLER / Two 12-station models are available to control residential and commercial landscaping irrigation, providing watering periods of 3- to 30-minutes, or 6- to 60-minutes. A 24-hour clock scheduling automatic start-up and a 14-day irrigation calendar are other features of the two controllers. List price: \$215. / Rain Bird Sprinkler Mfg. Corp. GB*

47 SOLID-STATE CONTROLLER / Available in 6-, 9-, and 12-station models, the "KCS" keyboard irrigation controller uses solid-state microprocessor technology to provide specific timing, scheduling and reliability features for residential and light commercial landscape requirements. / Johns-Manville.

LANDSCAPING

48 TREE GRATES / Custom-fabricated tree guards are available to complement any of the 50 different shapes, sizes and designs offered in cast iron tree grating. / Neenah Foundry Co. GB*

49 EROSION CONTROL / Easy-to-handle polypropylene netting is said to provide economical protection of loose mulches and sod against wind or water erosion. Made with a rectangular mesh opening about 1.5 by 1 strands per inch, the black mesh will gradually disintegrate in sunlight after turf becomes established. / Conwed Corp.

MARINE WORK

50 FLOTATION UNITS / Designed to act as an integral part of floating dock structures, five sizes of flotation units are molded in one piece from Marlex polyethylene and filled with closed-cell foam. They allow for a simple framing method, using a minimum of lumber and hardware. / Thompson Flotation Co., GB*

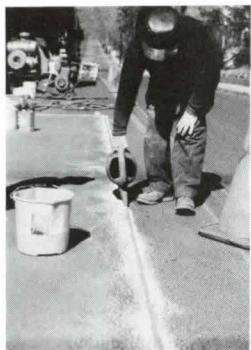
51 FLOATING PONTOONS / The six 3- by 6-ft fiberglass-reinforced plastic pontoons that support this swimming dock provide steady, low-care flotation. Pontoons cannot rust, rot or corrode, and they are unaffected by oil or gas spills. / Molded Fiber Glass Co.

PAVING & SURFACING

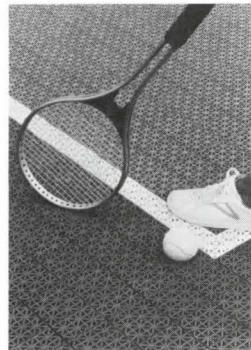
52 BLACKTOP SEALER / A cold-applied tar emulsion blacktop sealer, *Sure Seal* resists oil, gasoline, moisture and sunlight, and will not crack, soften or track in hot weather. / Republic Powdered Metals.

53 GRASS PAVER / The "Checker Block" grass paver is now manufactured with 6- by 6-in. $\frac{3}{8}$ gauge steel reinforced rods; the waffle-like configuration can withstand 5000 psi. Voids between the concrete hubs are planted, providing a non-eroding grass/concrete surface for vehicular traffic or parking. "Checker Block" can be manufactured near each job site. / Hastings Pavement Co., Inc. GB, I*

54 INTERLOCKING PAVING / A "jigsaw" is a new pattern available in *Bomanite* imprinted concrete paving. Said to be less costly than unit pavers on most paving application, *Bomanite* patterns are offered in a range of colors. / Bomanite Corp. GB, LRC*



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55 PAVEMENT CAULK / *Gold Label Flex* is a waterproof polyester system said to be ideally suited for embedding traffic inductance loops because of its excellent adhesion to both concrete and asphalt substrates, whether damp or dry. / Preco Industries, Inc.

56 ALL-WEATHER SURFACE / *Rub Kor* is a non-slip, non-abrasive resilient recreational surface that minimizes body shock and leg fatigue among athletes playing in spikes, flats, or bare feet. Made of rubber and cork blended with hot asphalt and mineral aggregates, *Rub Kor* needs no special drainage system or curbing; average useful life of the surface is said to be more than 20 years. / Rub Kor America, Inc.

RECREATIONAL FACILITIES

57 RUNNING TRACK / The "400 Surfacing System," when laid over a structurally sound base of appropriate grade, is said to provide a track with the performance characteristics of a top-of-the-line synthetic surface at substantially lower cost. The track is made of four-layers. Chevron U.S.A. Inc. Asphalt Div.



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58 TENNIS COURT SURFACE / Molded of plug-together plastic 10- by $\frac{1}{4}$ -in. modules, the *Swiss-Flex* court surface provides resilient playing comfort without slipping, and ball bounce somewhat faster than clay. For year-round outdoor, or indoor, use, the self-draining surface is guaranteed by the American manufacturer for three years; useful life expectancy is over ten years. Hand-laid over any hard, flat subsurface, *Swiss Flex* costs \$1.45 per sq ft. / Swiss-Flex.

SITE FURNISHINGS

59 CONVENIENCE SEATING / Round and square table tops and benches are polished terrazzo; concrete supports are natural stone aggregate. / Wausau Tile.

60 DISPLAY KIOSK / The "E.C." outdoor display kiosk has a bubble skylight roof, two weatherproof fluorescent fixtures, and six display panels with tamperproof, locking doors. Glazing is *Plexiglass* or *Lexan*; unit is 5-ft wide, 10-ft long, and 7-ft high, shipped kd for easy on-site erection. Price: approximately \$3,000. / Columbia Equipment Co., Inc.



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61 TRANSIT SHELTERS / The "White Plains" shelter system is based on a barrel-vault roof module 10-ft wide by 5-ft long, made of clear, tinted or translucent acrylic or polycarbonate plastic. Options include wood or aluminum benches, lighting, and special graphics. The prefabricated modular system, based on a design by architects Wallace McHarg Roberts and Todd, may be used for bus and train stations, walkway canopies, etc. Shelters list from \$10,000 to \$15,000, depending on size. / Columbia Equipment Co., Inc.

62 TABLES/SEATING / Offered in redwood or oak, for exterior or interior uses, the "Promenade" tables and seating units shown have fiberglass panels available in 12 colors and two textures, or an optional wood slat top. Table is 30-in. high and 51-in. sq; seats are 17-in. high and 23-in. sq. / Landscape Forms, Inc. GB*

63 PLANTER BENCH / The "Promenade" bench is 91-in. sq, with a wood frame in redwood for exterior applications, and in oak for interior use. The fiberglass planter and bench inserts are available in 12 colors and two finishes. / Landscape Forms, Inc. GB*



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64 PLANTER BENCHES / Another variation offered in the "Promenade" line of indoor/outdoor site furnishings, this planter-bench unit is 18 $\frac{1}{2}$ -ft long. Fiberglass-lined planters are 51-in. sq. / Landscape Forms, Inc. GB*

65 PLANTERS / Planters for large-scale interior spaces are constructed of solid wood tambour in oak or teak bonded to structural fiberglass. Rims have a dark bronze anodized color. / Forms & Surfaces, Inc.

66 PLANTERS / The 18-in.-dia Hex planters shown come in 10-, 15-, and 20-in. heights, and may be stacked or individually placed. Largest Hex shown weighs 120 lbs. Made of natural stone concrete aggregate with a smooth interior, landscape planters are available in many sizes and shapes, as well as to architectural specifications. / Wausau Tile.

The truth architects may not know about tennis court surfaces:

IF YOU WANT ECONOMY YOU HAVE TO PAY FOR IT.

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Chevron Laykold® costs more initially, but is a better investment now than ever before. Properly installed, it can last longer, cut maintenance costs, reduce the need for resurfacing, and deliver better per-month return on your investment than any bargain-priced surface.

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1 Laykold is a planned system, not a paint. Most of our competitors just supply surface coatings, not a four-level system like Laykold. These four essential levels stabilize a court; give Laykold a planary (true) surface that provides correct ball trajectory and speed, superb player comfort, and proper drainage.

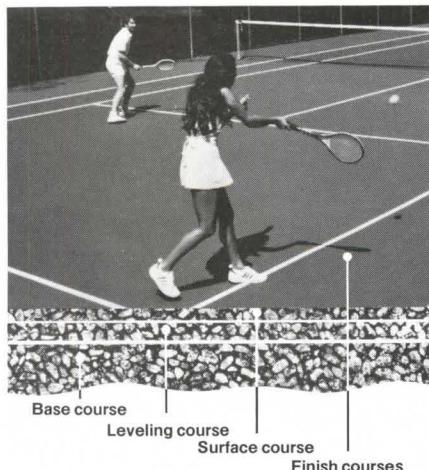
Probably no other surface in the world can match it.

2 Laykold cuts maintenance cost to the bare minimum. The less time your client spends tending his courts, the more money they save him. His per-month cost should be extremely low.

3 Laykold lasts longer. Cheap surface coatings crack, peel, fade—rarely stand up. But Laykold wears uniformly and durably, indoors or out, under heavy use or in bad weather.

4 Laykold reduces the need for resurfacing. The long-lasting Laykold base, leveling, surfacing and finishing layers stay "in condition" longer than cut-rate surfaces. So when the time inevitably comes to resurface, Laykold makes it easy and economical to correct age and wear problems—not just cover them up.

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5 Laykold reduces worry. Low price surfaces can be made by anyone. They may be well-intentioned beginners who may not be around later to answer your questions. Chevron will. Laykold is the product of our 50 years experience in tennis court construction. We have 26 people in two laboratories to promote that reputation, and on-site engineers in your region to protect it. No other supplier in the world ships more asphalt for tennis surfaces than Chevron.

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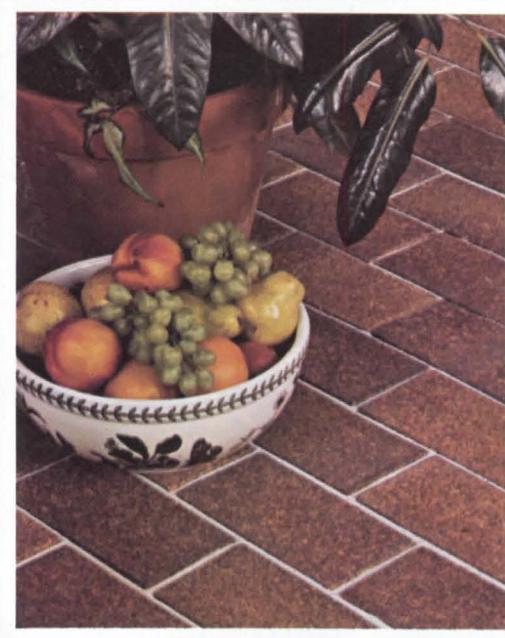
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Thin pavers shown here are available as 3 5/8" x 7 5/8" rectangles. All are 5/8" thick. Compressive strength 10,500 psi. Maximum average absorption rate 4%. Freeze-thaw cycles, 100 minimum. Size and distortion tolerance and color variations on pavers will meet ASTM Designation C-216, Type FBS.



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3014 OUTDOOR PAVEMENT / Color catalog insert includes installation photos and product specifications for asphalt block, brick pavers, London walks and grass-concrete Checker block. / Hastings Pavement Co., Inc. GB*

3015 RECREATION EQUIPMENT / Eighty pages of color photos present a full line of playground climbers, preschool items, therapeutic equipment, park benches, tables, shelters, and athletic field equipment. Special attention is given to the proper layout and installation of the recreational products. / Miracle Recreation Equipment Co., Inc. GB*

3016 TRANSIT SHELTERS / Architect-designed, prefabricated shelters, engineered to be as durable as possible, are presented in a series of product brochures. Models are made for a variety of site requirements, including narrow sidewalks, and accept a range of street furniture. Police-fire alarm boxes, mail boxes and telephones may be integrated into the shelter design. / Columbia Equipment Co., Inc.

CONCRETE: UCI 3

3017 ELECTRICAL SUPPORTS / An illustrated catalog describes the *Brite-Line* support system for electrical construction, consisting of galvanized steel channel, zinc-coated fittings, and mounting hardware. Applications include control panels, substations, cable trays, conduit supports, raceways, and lighting grids. GB* / Unistrut Corp.

3018 CONCRETE RETARDER / Applied as a coating to freshly placed concrete slabs, "Control Set Top Surface" chemically delays the setting of the concrete, allowing the mortar to be removed later to expose the aggregate. A fact sheet gives mix, application and timing instructions to produce the desired rough-textured, non-slip surface. / Anti-Hydro Co. GB, ICR*

3019 FORM COATING / "Control Set Form Type" is a pink-colored mix applied to concrete forms for walls where exposed aggregate finishes are required. A product data sheet describes "Control Set's" application, form removal and precautions. / Anti-Hydro Co. GB, ICR*

3020 CEMENTITIOUS DECK / "Fiboplank/Urethane" combines insulation, structural and acoustical properties in one chemically bonded, plant-assembled panel, ready for immediate roofing. An illustrated brochure lists insulation values for the panels, composed of a *Fiboplank* (cement-bonded wood fiber) substrate, urethane foam insulating layer, and 15 lb asphalt roofing felt top surface. / Martin Fireproofing Georgia, Inc. GB*

WATERSTOP-PLUS

It's the most revolutionary new solution to the problem of leaking concrete joints.

INTRODUCTION

Waterstop-Plus is a revolutionary new product designed to solve the problem of leaking concrete joints. It is a cartridge-applied compound that expands in the presence of water, pressure-sealing the joint area.

DESCRIPTION

The *Waterstop-Plus* cartridge is inserted into a specially designed *Waterstop* system. The *Waterstop* is a flexible, self-expanding strip that is applied to the concrete joint. When water comes in contact with the *Waterstop*, it triggers a chemical reaction that causes the *Waterstop* to expand, sealing the joint.

USE

The *Waterstop-Plus* cartridge is applied to the *Waterstop* system using a special applicator. The applicator is inserted into the *Waterstop* and the cartridge is pushed into the applicator. The applicator then applies the *Waterstop-Plus* to the *Waterstop*.

ADVANTAGES

The *Waterstop-Plus* has several advantages over other waterstops. It is a cartridge-applied compound, which makes it easy to apply. It is also a self-expanding compound, which means it will seal the joint even if the joint moves. It is also a flexible compound, which means it can conform to the joint.

3021 JOINT SEALANT / A product brochure explains how *Waterstop-Plus* concrete joint sealing material differs from other waterstops by composition, application, performance and cost. The cartridge-applied compound expands in the presence of water, pressure-sealing the joint area. / Effective Building Products, Inc.

CONCRETE ACCESSORIES

An Architectural Specification and Product Data Guide briefly describes a line of concrete chemicals, including form coatings, cures, floor treatments, masonry corrective and protective compounds, grouts and bonding agents. Application method, coverage, code compliance and cost information is given in the brochure. / L & M Construction Chemicals, Inc. GB, E*

3023 FORMING PRODUCTS / A catalog describes forming services for poured-in-place reinforced concrete. Illustrations show design opportunities using *Flangeforms*, *LONGforms*, or *LONGdomes* for one-way joist construction. Also covered are two-way joists using *STEELdomes* and *FIBER-GLASSdomes*, as well as products for beam, slab, wall and column forming. / The Ceco Corp. GB*

MASONRY: UCI 4

3024 STRUCTURAL CERAMICS / Written as a complete technical guide to the use of structural glazed facing tile in non-residential construction, a 24-page brochure provides installation photos and bonding pattern diagrams, coursing tables, and typical layout sheets. Product information includes sound absorption and heat transmission characteristics, radiation protection and fire rating levels, etc. / Stark Ceramics, Inc. GB, ICR*

METALS: UCI 5

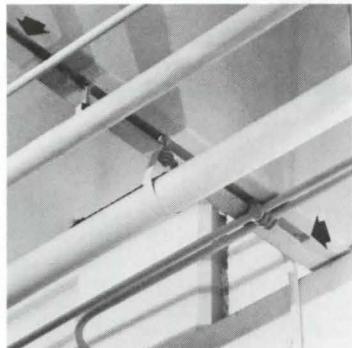
3025 SLIDE BEARING SYSTEMS / Product brochure describes *Dura Slide* bearing pads of *Teflon* bonded to carbon steel, stainless steel, neoprene and fabric pads. Architectural applications include cross beam and girder slip joints; roof slabs; vibration pads; and curtain wall expansion joints. Load values and friction data are listed. / Tobi Engineering, Inc.

more literature on page 36

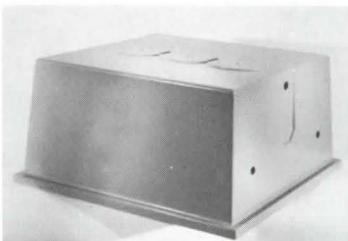
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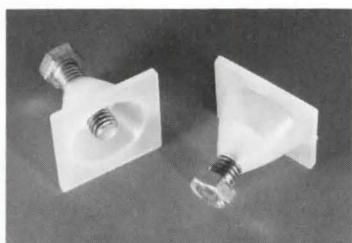
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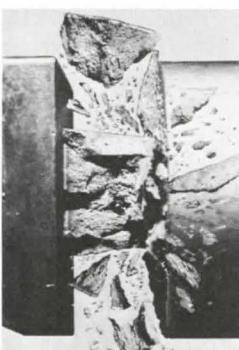
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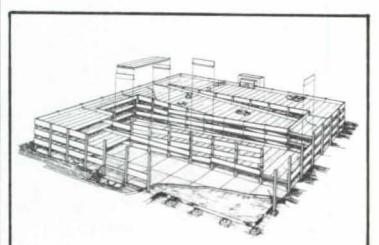
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CONCRETE ACCESSORIES

79 CHANNEL/ANCHOR INSERTS / Available in 10- and 20-ft lengths, channel inserts are held in place by spring wire under the prestressing cable; anchors come in varying lengths to provide 1-, 1½- or 2-in. of concrete cover over the cable. / Unistrut Corp.

80 CONCRETE INSERT / "Peg Studs" are rated at a 5000-lb pull-out strength in 5000 psi concrete, and are designed for suspending ceilings, etc. without drilling. The molded-plastic retainer shells holding a threaded zinc-plated bolt self-adhere onto steel, fiberglass, and wood forms before concrete is placed. / Preco Industries Limited.

CONCRETE FORMWORK

81 FIBERGLASS FORMS / Using fiberglass spandrel beam and long forms in the same flying gang form is claimed to improve quality, save time and labor, and facilitate pouring floor and beam at the same time. / Molded Fiber Glass Concrete Forms Co.

82 MULTIFUNCTIONAL FORMS / Custom-made 36-in. fiberglass forms are contoured so that both air outlet and lighting fixture can be located precisely in recesses cast in the concrete after forms are stripped. Rubber plugs in form holes leave openings in the concrete for attachment of light diffuser. / Molded Fiber Glass Concrete Forms Co.

CONCRETE MATERIALS

83 EPOXY GROUT / "EPO Grout" is a two-component epoxy resin designed as a waterproof adhesive grout patch or anchoring compound with fast set, 13,000 psi strength, and excellent chemical resistance and weathering characteristics. / L & M Construction Chemicals Inc.

84 GROUT / A non-corrosive grout, Crystex is said to offer superior dynamic load stability and positive expansion for full face-to-face lifetime performance. The grout conforms to CRD-C 588-78 and ASTM-C 827T. / L & M Construction Chemicals Inc.

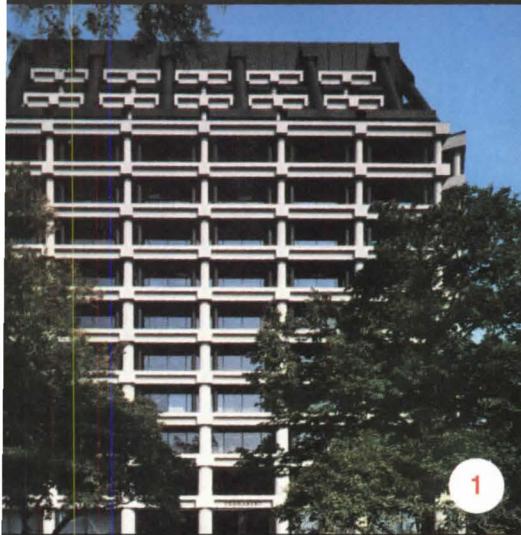
85 REINFORCED CEMENTS / A non-revertible acrylic resin emulsion, *Everbond* will permanently bond new concrete, masonry, stucco terrazzo and portland cement-sand mixes to horizontal and vertical concrete. *Everbond* cements and mortars are waterproof, resist acids, alkalis and abrasion, and will not discolor. / L & M Construction Chemicals Inc.

86 JOINT MATERIAL / "Waterstop Plus" is applied to concrete joints during construction, using a caulking gun. When cured, the putty-like compound forms a resilient waterstop in horizontal or vertical joints in any concrete structures having high or low hydrostatic pressures. / Effective Building Products, Inc.

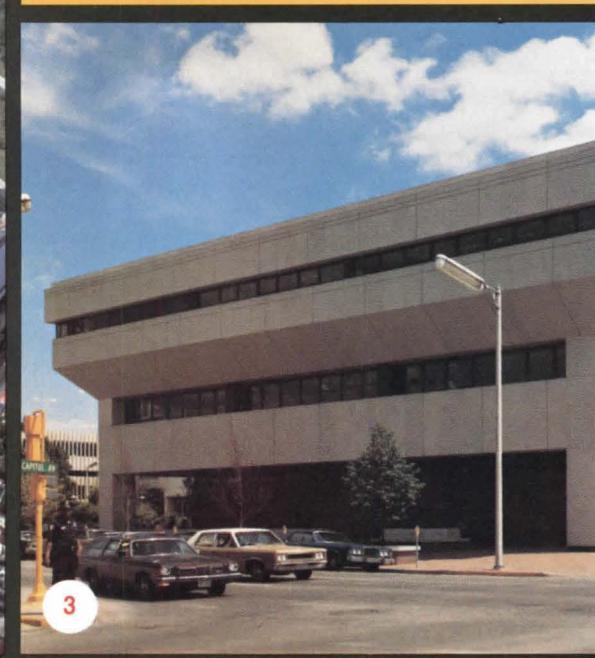
PRECAST CONCRETE

87 PARKING SYSTEM / "Metro-space" is an open deck multi-level precast concrete structural system designed for self-parking facilities. "Metro-space" has column-free parking areas for flexible car arrangements. / Precast Systems, Inc.

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Today's needs for energy conserving buildings make concrete the designer's logical choice. Concrete lends itself naturally to design which is highly creative—and at the same time can be dramatically energy-efficient. Concrete is practical and economical for creating large overhangs and eyebrows to reduce air-conditioning loads, or for underground structures which are protected from heat losses and the ravages of weather. Energy loads can be reduced in many ways through concrete's design versatility. It's ideal for smaller window areas. Its light color is heat reflective, and concrete's mass has significant insulating properties. In addition, concrete reduces infiltration. What's more, inside or out, concrete's design integrity provides pleasing visual continuity and contributes long-term investment advantages. Mail the coupon. We'll send you more information about designing for energy conservation with concrete.



1. Nat'l Permanent Building, Washington, D.C.
Architect: Hartman-Cox

2. Hilton Hotel, Atlanta, GA
Architect: Wong & Tung

3. Lincoln Library, Springfield, IL
Architect: Graham, O'Shea & Wisnosky

4. Stearns-Roger Center, Denver
Architect: Stearns-Roger Architects, Ltd.

5. Mutual Benefit Life Insurance Building at IBM Plaza, Kansas City, Mo.
Architect: Fujikawa Conterato Lohan and Associates, Chicago

6. Adams Hotel, Phoenix
Architect: Schwenn & Clark

7. University of Minnesota, Minneapolis
Architect: Myers & Bennett Architects/BRW

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Write for details on how each of the buildings shown here took advantage of concrete design to save energy. AR-108

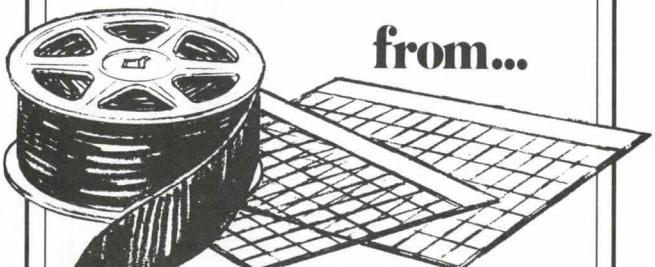
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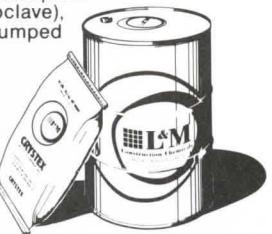
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3026 ROOF EXPANSION JOINTS /

Two types of *Reflecto-Flex* prefabricated roof expansion joints are described in a data sheet: style "AP" has 6-in. insulated bellows to fit openings with curbs and/or cants; "LPM" joints have 4-in. metallic flanges crimped to 5-in. *Hypalon* bellows. / *Reflecto-Barrier Sales Co., Inc.*

3027 CONCRETE FASTENERS /

Pull-out and shear test results are included in a 20-page catalog of *Red Head* self-drilling anchors, nylon and plastic fasteners, hammers and accessories for concrete fastening systems. A price list insert is included. / *ITT Phillips Drill Div.*

3028 STEEL FLOOR DECK /

A 6-page catalog explains the use of *Epicore* steel composite floor deck with reinforced concrete beams, precast beams, and *Epic* slab beams. In these applications, *Epicore* is both the permanent form and positive reinforcing for the concrete slab. Literature includes technical tables, specifications, fire resistance ratings, and details of typical assemblies. / *Epic Metals Corp.* GB*

3029 FLOOR AND ROOF DECKS /

The newly-revised "Design Manual for Floor Decks and Roof Decks" includes industry-wide criteria for composite floor construction. Design Examples are used to explain the procedure for choosing the right product for a given application. Load Tables and UL-fire resistance ratings are given. / *Steel Deck Institute*, GB*

3030 MUNICIPAL RAIL /

Brochure illustrates typical installation details of aluminum rail designed for use in sewage and water treatment plants. The rust-proof railings meet OSHA requirements. / *Napco, Inc.*

3031 ALUMINUM RAILINGS /

Corridor, stair and landing, and balcony railings made of extruded aluminum are shown in a product brochure. Included are mounting details for wall railings marketed for hospitals, nursing homes and other areas requiring HUD and OSHA approvals. / *Napco, Inc.* GB*

3032 METAL BUILDING PRODUCTS /

A 133-page General Engineering catalog describes products such as steel channel; nuts and bolts; pipe support hangers, brackets, and clamps; concrete inserts; and lighting fixture, electrical and specialty fittings. / *Unistrut Corp.* GB*

3033 METAL FRAMING /

In-plant applications for *Unistrut* metal framing, *Moduspan* space frame and *Telespar* tubing are illustrated in a metal building systems brochure. Photos show uses such as space frame roof structures, fluorescent lighting grids, office partitions, storage racks and mezzanines, and electrical and mechanical supports. / *Unistrut Corp.* GB*

3034 SPACE FRAME /

Illustrated folder describes the components, use and assembly of the *Power-Strut* space frame. Color photos show a recent installation of the structural metal framing system. / *Van Huffel Tube Corp.* GB*

3035 STRUCTURAL STEEL SHAPES /

A 50-page booklet supplies design properties for a new series of W (wide-flange) and HP (H-pile) structural steel shapes entering production as of Sept. 1, 1978. These new shapes replace or significantly alter many shapes previously offered. Full dimensions for detailing are listed for the complete line of W and HP steel. / *U.S. Steel*

WOOD & PLASTICS: UCI3

3036 ARCHITECTURAL WOODS / A 60-page book, "Beautiful Woods" discusses wood and lumber as construction material and as an architectural finish. The principal characteristics of over 250 different woods from around the world are listed; color photos show grain patterns of the most popular species. Copies may be ordered for \$1.50 each from the Frank Paxton Lumber Co., 6311 St. John Ave., Kansas City, MO 64123.

3037 INTERIOR WOODWORK /

Full color photographs of residential and commercial interiors demonstrate the versatility of fine woods used as walls and ceiling paneling, flooring and moldings, in a 20-page architectural design book. A separate portfolio of molding ideas describes the variety and applications of available stock millwork. Copies of "Distinctive Interiors" are \$2.00, and may be ordered from the Frank Paxton Lumber Co., 6311 St. John Ave., Kansas City, MO 64123.

3038 CONNECTOR PLATES /

A 4-page brochure explains the differences between gross area and net area nail values in the specification of wood roof and floor trusses, and lists the advantages of the *Gang-Nail* connector plate in wood construction. / *Automated Building Components, Inc.* GB, LRC*

3039 SILICONE RUBBER /

This manufacturer is now offering a line of silicone rubber composite for use in gaskets, ducts, solar energy systems, and other industrial products. Literature explains the product variations possible with the rubber laminating process. / *Keene Corp., Chase-Foster Laminates Div.*

3040 PLASTIC LAMINATES /

Color brochures present all the solid colors, patterns, marbles and slates, wood-grains, and "Missouri Barnboard" designs available in the *DuraBeauty* line of laminate surfaces. Product specifications and code approvals are included.

more literature on page 39

*In 1979 *Sweet's Catalog File (s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR)*.



100



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102

MASONRY ACCESSORIES

100 MASONRY SEALER / Especially made with a high percentage of pure white cement for hardness and resistance to staining, mildew and efflorescence, *Blockoter* above-grade masonry sealer is available in a ready-mixed form for brush application. / Republic Powered Metals.

101 TEXTURED FINISH / Offered in fine, medium or coarse textures and six colors, *NU-Tex* acrylic may be sprayed over interior or exterior concrete, stone, block and other masonry surfaces. The textured coating acts as a filler, seal, insulator and waterproofer. / Republic Powered Metals.

102 ACRYLIC COATING / *Nu-Sensation Hy Build* acrylic covers small cracks and flaws in concrete and masonry surfaces. The non-toxic formulation cleans up in water, and will not show overlap marks from brush or spray. Sold in 15 standard colors. / Republic Powered Metals.



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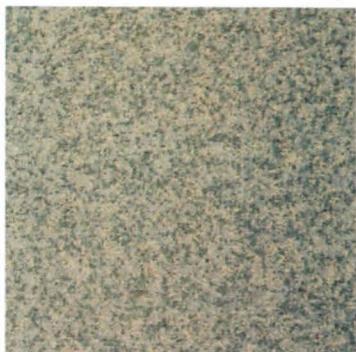
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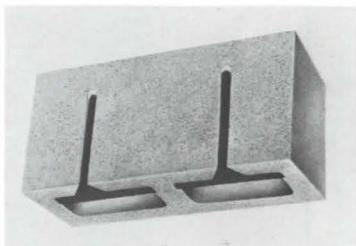
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SIMULATED MASONRY

103 BRICK TRIM / Manufactured from crushed limestone reinforced with fiberglass, *Marlite* brick can be used to accent store fronts, display windows, etc., indoors or out. The 12-brick panels can be installed as a unit, or individual "bricks" can be snapped off and applied one-by-one. / Marlite Div., Masonite Corp. GB.

104 BRICK PANELS / Mini-Bricks, $\frac{7}{16}$ -in.-thick kiln-fired units made of Alberhill clay, are now offered mounted on an asbestos/cement board backed with a steel frame. A 4- by 8-ft panel weighs 300 lbs; units are made-to-order in 4 different brick sizes and more than 30 color variations. The surfacing material meets ASTM C67 requirements under freeze/thaw testing. / Pacific Clay Building Products.

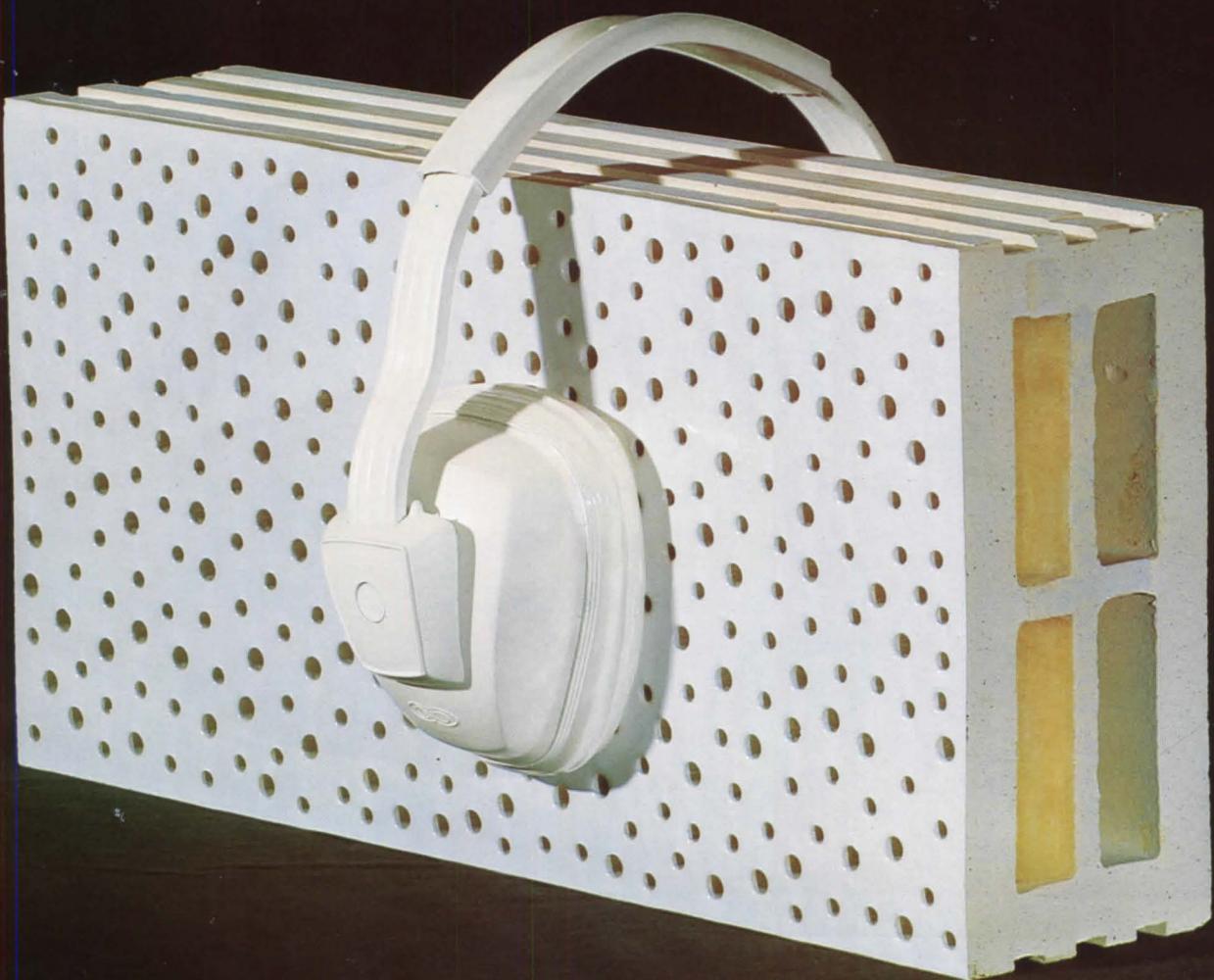
105 MAN-MADE BRICK / Offered in a variety of traditional colors and textures, these lightweight fiberglass-reinforced crushed stone panels install over most regular surfaces, including existing masonry walls. Harmonizing corner sections and edges complete wall and accent areas. / Marlite Div., Masonite Corp. GB.

UNIT MASONRY

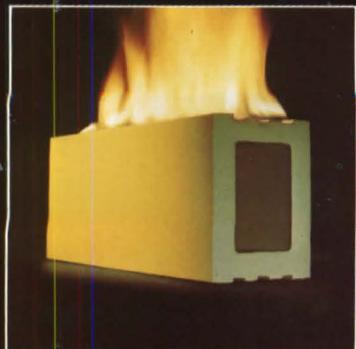
106 FACING BRICK / A UL-listed Class 1 (10-0-0) building material, non-combustible *Z-Brick* may be applied as a decorative wall finish inside or out, using adhesive mortar. Individual bricks are easily cut to fit corners, doors and windows. / Z-Brick Co., Div. VMC Corp. GB, ICR, LR, I*

107 GLAZED MASONRY UNITS / A new facing process for *Spectra-Glaze* units incorporates blends of ceramic particles in a soft satin texture; this *Vari-Tone* masonry series is offered in 24 three-dimensional earth-tone colors and plain, scored and sculptured faces. / The Burns & Russell Co. GB, ICR*

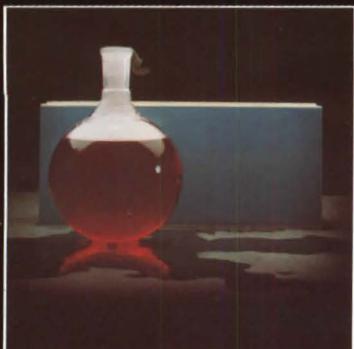
108 SOUND-ABSORBING BLOCK / A new 4-in. size *Soundblox* structural unit has been added to the "R-Series" of improved acoustical performance masonry. The "Type R" block combines funnel-shaped slots with septum-type fillers; meets ASTM C-90, -129, -423, and E-90. / The Proudfoot Co., Inc. GB, ICR*



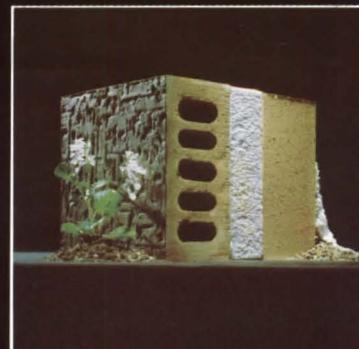
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finish utility brick and
High Brick.

3041 OVERLAY PLYWOOD / Construction information on the uses of high- and medium-density overlay plywood is given in a 12-page booklet. Product data contains bending strength, vapor permeance, thermal properties, chemical resistance, shop practice and finishing. / American Plywood Assn.

3042 SPAN-RATED FLOORS / The "Sturd-I-Floor" plywood combined subfloor-underlayment system is explained in an 8-page booklet. Application recommendations, rated joist spacings, and fire hazard information is included. / American Plywood Assn.

3043 PLYWOOD GRADES / More information on plywood types, grades and species groups is included in the revised edition of the "Guide to Plywood Grades." The 6-page brochure features charts listing different engineered and appearance grades available, and shows sample grade-trademarks and applications for each. / American Plywood Assn.

3044 STRUCTURAL PLYWOOD / A 20-page "Technical Literature Index" lists publications dealing with plywood beams, diaphragms and sandwich panels. / American Plywood Assn.

3045 PLYWOOD PUBLICATIONS / Catalog describes hundreds of publications about the uses of plywood, from an all-weather wood foundation, through floors, walls and roof systems, to wood fillers and Z-flashing. Full-color idea books, step-by-step home improvement guides, and technical manuals are included in the "Plywood Publications Index." / American Plywood Assn.

3046 PLYWOOD SIDING / The most popular APA grade-trademarked plywood siding patterns are illustrated in a new booklet. Four sidings covered are Texture 1-11, reverse board and batten, rough sawn and medium-density overlaid panels. / American Plywood Assn.

3047 STRUCTURAL WOOD / Floor and roof framing systems designed with "Mini Lam" laminated beams are explained in a 12-page color booklet. Photos show buildings under construction; span and load charts and technical data are also included. / Standard Structures Inc.

3048 DECORATIVE LAMINATES / A full-color selector guide displays all the current *Micarta* high-pressure laminate patterns: solids, woodgrains, patterns, embossed, marbles, and leathers. Types, surface finishes, fabricating requirements and performance standards are discussed. / Westinghouse Electric, *Micarta* Div.

3049 FIBERGLASS GRATING / The use of 70 per cent fiberglass reinforcement (by weight) in straight strands, is said to give *Kerrigan Weldforged* gratings an extremely high strength-to-weight ratio with minimum deflection. A product brochure describes the non-conductive gratings, suggested for such applications as pit covers, walkways, screens, and platforms in highly corrosive or electrical industrial environments. / IKG Industries, Div. of Harsco Corp. E*

3050 STOCK MILLWORK / The "WM/Series" catalog shows full-size most of the current wood molding patterns available, their number, and the standard size to which they are produced. / Wood Molding & Millwork Producers.

3051 DECORATIVE MOLDINGS / Color photos of room settings illustrate decorative uses of wood moldings in an 8-page brochure. Three-dimensional drawings of standard wood molding profiles provide a perspective of the actual shape. / Wood Molding & Millwork Producers.

THERMAL & MOISTURE PROTECTION: UCI 7

3052 ROOF INSULATION / An architect's guide describes the *Fesco* factory tapered floor insulation and drainage system which provides a positive slope of $\frac{1}{16}$ -in. per ft. Roof meets UL- and FM- requirements for most installations. / Johns-Manville.

3053 CONTROLLED RELEASE WALLS / Folder describes a new concept in wall design that helps protect power generating facilities and other industrial buildings from structural failure caused by severe storms, tornadoes and explosions. Test data, design criteria and performance characteristics are included. / H. H. Robertson Co.

3165 MEMBRANE COATING / Data sheet gives full engineering and design information on silicone rubber ready-to-use construction coatings recommended for application to sprayed-in-place polyurethane foam. / Dow Corning Corp. ICR*

more literature on page 43

*In 1979 Sweet's Catalog File (s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR).

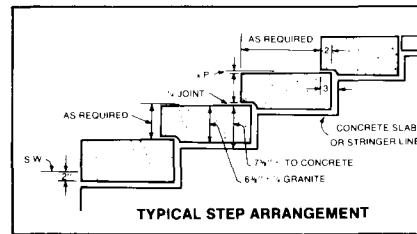
Granite.

Tough enough to take the thunder of 10 billion feet.

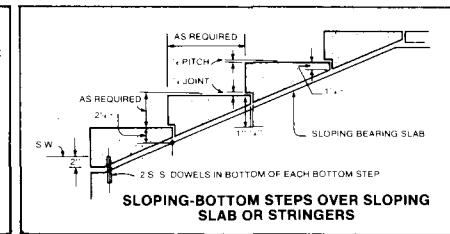


Architect: Tinsley Higgins Lighter & Lyon, Des Moines, IA





TYPICAL STEP ARRANGEMENT



SLOPING-BOTTOM STEPS OVER SLOPING SLAB OR STRINGERS

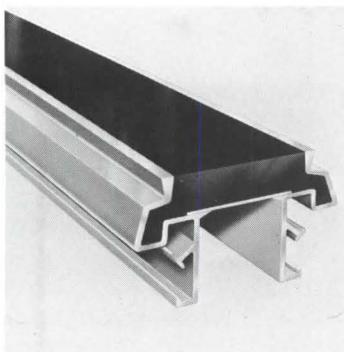
What else but granite can take 38 years of wear and weather without fading, staining, or showing measurable wear? That's what made Cold Spring granite the ideal choice for the Banker's Life Insurance Building when it was built in Des Moines, Iowa, in 1939. And that same unique combination of beauty and unsurpassed durability make it ideal for today's floors, facades, core walls, steps, malls and walkways — wherever you need maximum durability that's virtually maintenance-free.

For more information, plus a free copy of our 16-page, full color catalog showing all 18 Cold Spring colors available, call toll free **800-328-7038**. In Minnesota, call (612) 685-3621. Or write to the address below.

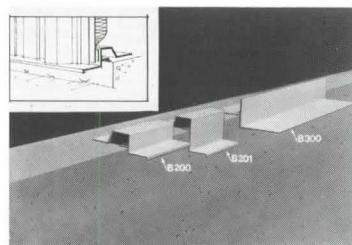
Cold Spring Granite Company, Dept. AR-10B 202 South 3rd Avenue, Cold Spring, MN 56320



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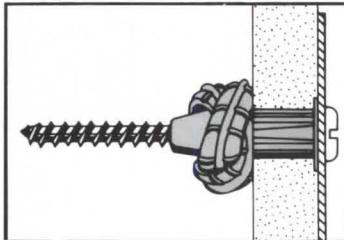
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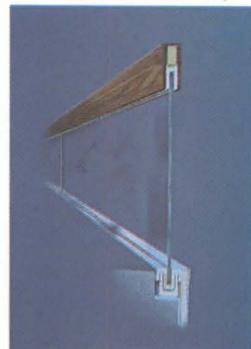
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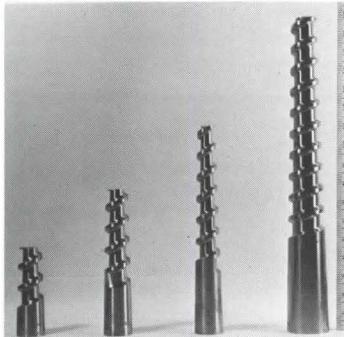
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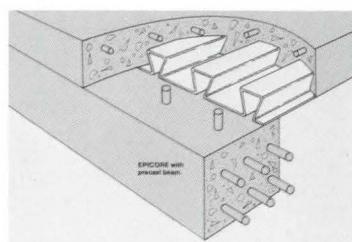
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EXPANSION CONTROL

121 ALUMINUM JOINT / The *Flex-Seal* expansion joint is composed of aluminum alloy retainers, chemically etched and primed to receive the permanent elastomeric sealant. *Flex-Seal* expansion control permits multi-directional movement, and can conform to such difficult areas as radius applications. / MM Systems Corp., GB*

FASTENERS & SUPPORTS

122 EXPANSION ANCHOR / Designed for a variety of light load applications, the "Poly-Set" polyethylene "twisting action" anchor fastens in drywall, hollow block and solid concrete. It may also be used in virtually any construction material such as paneling, hardboard, and ceiling tile. / ITT Phillips Drill Div. GB, ICR*

123 SCREW ANCHOR / This completely recoverable screw anchor is supplied in four sizes for concrete construction, including precast, building, bridging and heavy civil engineering. / Watson Bowman Associates Inc. ICR*

124 POST-POUR FASTENERS / *Base-girt* fastening members are pre-shaped to fit concrete slab or wall, acting as a structural fastening surface as well as an exterior base trim. Made of extruded aluminum with a baked enamel finish in white, bronze or special colors. / Construction Fasteners, Inc.

LIGHTGAGE METAL FRAMING

125 SPACE FRAME / A 40- by 80-ft *Moduspan* space frame supports a metal roof deck over the pumps in this gas station application. The dark-brown structure is assembled on the ground as one section and set in place by crane. / Unistrut Corp. GB*

METAL JOISTS

126 REINFORCED BEAM / The *Epicore* slab beam is a reinforced concrete beam totally contained within the depth of the slab, so that the floor thickness remains constant throughout. / Epic Metals Corp. GB*

METAL STAIRS

127 FREE-FORM STAIR / Steel stringer construction, with no center post, allows the "Ernst Universal Stair" system to adapt to any space requirement. Each tread can be set at any angle to the previous tread, then locked into place. / Topper & Griggs.

RAILINGS & HAND RAILS

128 GLASS RAILINGS / *Clearail* is a freestanding railing, with $\frac{1}{2}$ -in.-thick structural glass supporting a top rail of finished hardwood, stainless steel or aluminum. The aluminum base channel, either curb or flush, is rigidly attached to the building's substructure. / Midwest Architectural Metals, Inc. GB*

STRUCTURAL METAL FRAMING

129 STEEL BRIDGES / The "Continental" steel bridge is designed for a range of landscape crossing requirements, carrying people, cattle, pickup trucks, carts, etc. over spans from 10- to 160-ft. / Continental Custom Bridge Co., GB, E*



8"

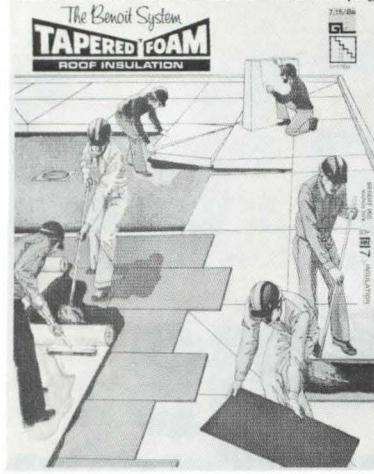
Nature Paints Regal Earth TubeTM So You Don't Have To

Our new structural steel tubing combines great strength with a beautiful weathering surface. Its warm earth tones become even richer as sun, wind and rain enhance its colorations. Painting is never required. Available in square and rectangular

shapes, size ranges from 2 x 2 through 10 x 10 and 12 x 8—with dozens of wall thickness/perimeter combinations for all structural applications. Earth Tube. Created to give you a beautiful new choice in structural steel. Send for our catalog.

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3054 CLOSURE PANEL / Said to be an improved method for closing off the exterior and interior wall openings below double tee, pre-stressed concrete construction spans, "Insulated Closure Panels" are described in a product brochure. Panels have a cut-to-fit polystyrene core, faced with cement asbestos or gypsum board. / Benoit Inc.

3056 MEMBRANE COATING / Data sheet gives full engineering and design information on silicone rubber ready-to-use construction coatings recommended for application to sprayed-in-place polyurethane foam. / Dow Corning Corp. ICR*

3057 SLATE COMPOSITE / Petrarch building panels for interior and exterior applications are made with a high percentage of stone granules, bonded with resin and reinforced with glass fiber, cast in a mold formed from genuine slate. Developed in England, the panels are said to be relatively less costly than other products; have a quality, natural appearance, and are said to be extremely impact-resistant. Folder provides technical and pattern information. / Redland Claddings, GB*

3058 POLYMER SEALANTS / Color brochure outlines the chemical properties and most popular applications of LP liquid polysulfide polymers, used as sealants in a variety of construction areas. / Thiokol/Chemical Div. GB*

3059 SILICONE SEALANTS / Static and dynamic joint design, and the importance of correct sealant selection and application are covered in two design guides. / General Electric Co., Silicone Products Dept. GB, ICR, E*

3060 ROOF DECK VAPOR BARRIER / Catalog sheet supplies product description and technical data Reflecto-Barrier vinyl film vapor barrier and *FR-Class 1 fire retardant adhesive. Barrier system enables insulated roof decks of steel concrete and wood to meet FM and UL Class 1 requirements. / Reflecto-Barrier Sales Co., Inc.

3061 ROOFING INSULATION / A step-by-step guide helps architects and engineers use the "Energy Management Systems 3" telephone-operated computer program for finding the "economic thickness" of roof insulation for new construction, reroof, and recover projects. / Owens-Corning Fiberglas Corp. ICR*

3062 SLATE ROOFING / Published in 1926 and reissued in 1976, the "Slate Roofs" book is said to be the definitive work on slate as roofing material. Illustrated with installation photos and line drawings, the 84-page book covers the quarrying, milling and installation of slate, and discusses waterproofing, flashing and repair of the slate roof. Copies priced at \$5.50 postpaid, are available from the Vermont Structural Slate Co., Inc., Fairhaven, VT. 05743

3063 MEMBRANE WATERPROOFING / Spray or trowel application of Bentonite membrane waterproofing is discussed in a product brochure. Drawings show how and where the material can be used, including the external sides of floor slabs, covered structural plazas, etc. / Effective Building Products, Inc.

3164 ELASTOMERIC ROOFING / Product literature describes a roofing system of spray-applied urethane insulation and weather-resistant elastomeric coatings, offered as a complete roof package. The "2300/5300" configuration meets UL 790 Class A requirements for non-combustible decks. / Owens Corning Fiberglas Corp.

more literature on page 119



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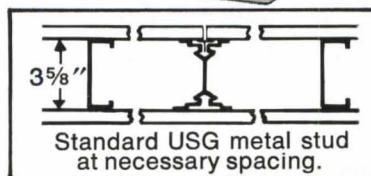
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wood and plastics

uci 6

LAMINATED & PROCESSED SHEETS
PLASTIC LAMINATES
PREFABRICATED STRUCTURAL WOOD
SIMULATED WOOD
STOCK MILLWORK



142



143



144

LAMINATED & PROCESSED SHEETS

142 STRUCTURAL WOOD TESTING / Each laminated wood tension member has been proof loaded to 4000 psi in bending, according to ICBO-approved procedures. / Weyerhaeuser Company.

PLASTIC LAMINATES

143 WOODGRAIN LAMINATES / Part of the "International Collection" of premium woodgrain reproductions, "Island Koa" and "Quince Burl" are used on the cabinetry and shelving surfaces of this storage unit. All patterns are available in standard size laminate sheets. / Formica Corp. GB*

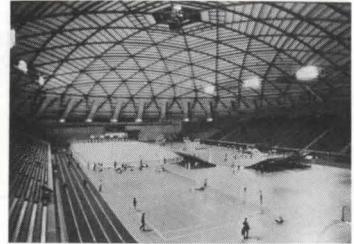
144 DIMENSIONAL LAMINATE / Offered in a general-purpose grade particularly suitable for kitchen cabinets, elevator cabs, partitions, and other vertical surfaces, "Missouri Barnboard" woodgrain decorative laminate is produced using the *Homestead* finish to have the look and feel of rough-sawn wood. / Consoweld Corp.



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147

PREFABRICATED STRUCTURAL WOOD

145 IN-STOCK BEAMS / Laminated timber beams are available in stock in lengths to 18-ft for roof and floor construction. Offered in five appearance grades, the structural components may be stained or painted. / Koppers Co., Inc. GB*

146 SPIRAL STAIRS / A new 7-ft diameter model has been added to this line of red oak spiral stairs which offers a range of diameters from 4- to 7-ft. The 7-ft stair has four balusters per tread, and is available in a variety of designs for new and existing residential and commercial construction. / Stair-Pak Products Co.

147 DOME STRUCTURE / The Varax computer-engineered roof dome can provide unobstructed interiors up to 700 ft in diameter. Construction features curved glued laminated ribs, steel hubs and 2-in. roof decking, arranged in a three-way grid of great circle ribs, with steel tension rings at the base. / Unadilla Laminated Products. GB*



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148 FABRICATED WOOD JOIST / Designed for residential and commercial framing systems, the "Wood I" floor and roof joist has top and bottom chords made from fir/larch 2x3s. Web member is $\frac{1}{8}$ -in. CD plywood, tongue-and-groove mated and pressure-glued into the chords. It has ICBO, BOCA and SBCC approvals. Costs: 3x10 runs 65¢. / Wood I Systems, Inc.

SIMULATED WOOD

149 SIMULATED WOOD FLOORING / *Trinatta* is made of an elastomeric substance that combines quietness, comfort and resilience, while providing the look of wood. The floor consists of a system of interlocking pieces, which form a parquet pattern. / 3M Co.

STOCK MILLWORK

150 VICTORIAN MILLWORK / Millwork made from kiln-dried hardwoods, primarily oak and poplar, is offered in authentic 19th century designs. The line includes solid wood fretwork, privacy panels, and brackets. / Cumberland Woodcraft Co.

BRAND **Marlite®** **Planks**



**Now you can create the unusual.
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Marlite brand $\frac{1}{4}$ " planks are just 16" wide. So they're lighter—easier to handle and install. In horizontal, vertical, even diagonal and herringbone patterns. Without the waste of time, product and client dollars that prohibits specification of conventional panels. Without the splintering, staining and scuffing associated with true woods.

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adhesive ensure a tight bond between our planks and furring strips, wallboard—most existing surfaces.

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MEMBRANE ROOFING
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ROOF ACCESSORIES
ROOFING SPECIALTIES
SEALANTS
SHINGLES & ROOFING TILES
VAPOR BARRIERS/RETARDANTS
WATERPROOFING



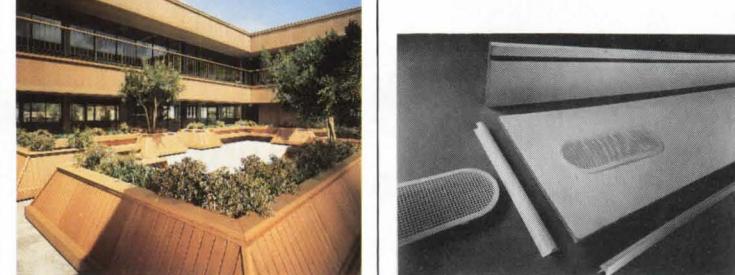
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168

CLADDING/SIDING

163 REDWOOD PLYWOOD / Fire-retardant treated redwood plywood siding has a Class 1 (0-25) fire rating, and has major code approval for application directly to building studs to serve as both sheathing and siding. Saw-textured plywood is manufactured in two appearance grades and a variety of profile patterns. / California Redwood Assn.

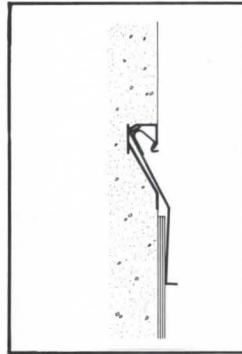
164 ALUMINUM SIDING / A complete line of wood-grained and standard aluminum siding for commercial application includes vertical and horizontal panels, window treatment systems, cornering, soffits, fascia, rainware and accessories. *Vin-A-Wood* horizontal siding has a 40-year limited warranty. / Alcan Building Products.

COMPOSITE BUILDING PANELS

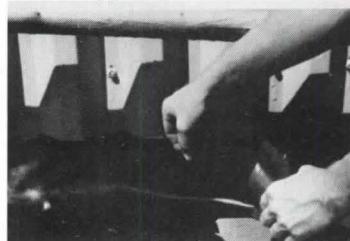
165 COMPOSITE PANELS / Architectural panels made of inorganic masonry materials offer strength and dimensional stability, and are highly resistant to wind, weather, moisture and high humidity. / Johns-Manville Corp. GB*



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FLASHING

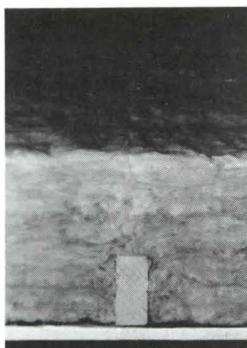
166 SOFFIT BOARD / "Ready-vent" *Soffitsote* is made of *Homastote* 440 wood fiber insulating building board in $\frac{3}{8}$ -in.-thick panels, die-cut with vent holes ready to receive snap-in, screened plastic inserts. Panels are factory primed on both sides, and are available in 12-ft lengths and widths to 48-in. / Homastote Co. GB*

167 LAMINATED PANELS / Laminated, insulated panels are offered with *Glasweld* inorganic coatings and continuously fired architectural porcelain enamel over a choice of insulating cores. Panels have applications ranging from solar absorption plates to complete enveloping systems incorporating a thermal barrier joint assembly. / Gill Corp. GB*

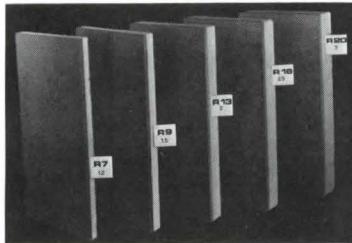
168 CLADDING MATERIAL / Lightweight, high-strength *Qasal* architectural cladding material is now available in integrally colored buff, charcoal gray, and bronze-tone shades, as well as polished white. / Gill Corp. GB*

170 COUNTERFLASHING / The *Snaptite* system consists of an extruded aluminum frame with stainless steel spring cups that hold the flashing tightly in place. The counterflashing may be subsequently removed without destroying the bond between the reglet frame and wall. There are configurations for surface, stucco, masonry and cast-in-place mounting. / Imetco. GB*

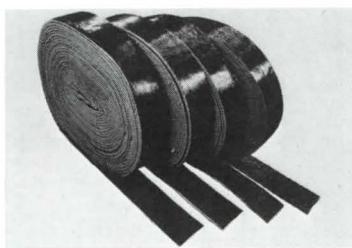
171 NEOPRENE FLASHING / Designed to protect building areas of intense stress due to structural movement, thermal shock and wind pressure, *Permaflash* neoprene sheeting will adhere to metal, composition, or masonry surfaces with special adhesives. / Republic Powdered Metals.



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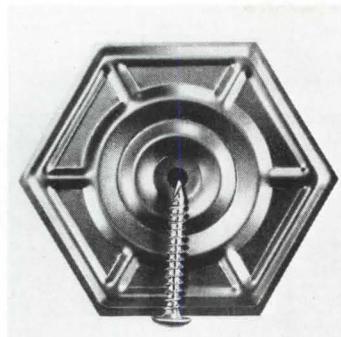
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INSULATION

172 FIBERGLASS BATTs / "R-30" fiberglass insulation blankets now come in 16- and 24-in. widths, to completely cover joists and eliminate voids in insulation coverage. Insulation is available with or without a Kraft paper vapor barrier. / Johns-Manville. GB, LRC*

173 ROOF INSULATION / Offering weather-resistant insulation as well as a structural nail base for finish roofing. *Thermasote* boards have up to 2.5-in. urethane foam insulation, faced with a layer of asphalt saturated felt, bonded to *Homasote* sheathing. It is applied over roof decking to achieve R values of up to 27. *Homasote* Co. LRC*

174 SILL SEALER / Acting as an effective gasket in buildings where frame construction joins masonry, the sill sealer is a chemically treated cellulose insulating blanket laminated between polyethylene liners. When compressed between masonry and framing, it completely fills in all voids without cracking or drying out. / Conwed Corp.



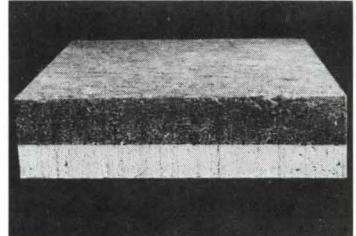
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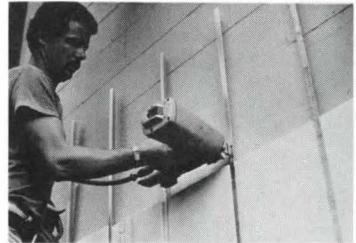
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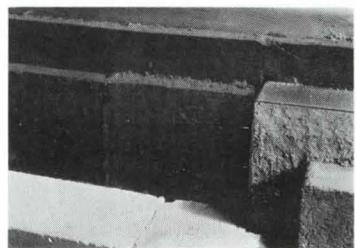
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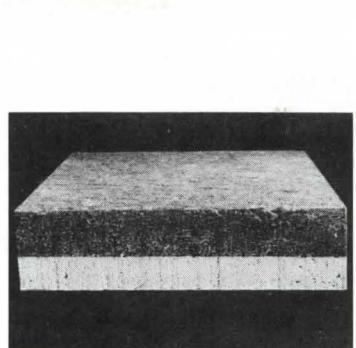


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175 INSULATION FASTENER / Used to "lock" insulation down to steel roof decks, the *Gaftite* fastener consists of a 3 1/4-in.-wide steel plate through which a self-drilling screw (1 1/8- to 6-in. long) is driven. The FM-approved system is said to have excellent holding power, wind resistance, and requires 50 per cent fewer fasteners. / GAF Corp. GB, ICR*

176 INSULATION PROTECTION / Designed to weatherproof exposed *Styrofoam* insulating sheathing, "Nu-Sensation Hy Build" is an odorless, non-toxic, nonflammable coating applied with brush, roller, or spray. It will permit moisture formed in the foam insulation to pass freely without causing blisters. / Republic Powdered Metals.

177 FOAM INSULATION / The "Metering and Automatic Ratio Controller" continuously monitors the amount of resin and foaming agent as they mix in the urea-formaldehyde application gun. The unit allows the *Homefoamer* contractor to insulate new or existing structures more efficiently. / Scientific Applications, Inc.



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178 REFRactory INSULATION / *Thermaface* mineral wool boards can be used as an exterior insulation in applications including boilers, ducts, etc. *Thermaface* is easy to install in corners and flues; the low K insulation will not dust or disintegrate. / Keene Corp.

179 RETROFIT INSULATION / UL- and code-approved retrofit insulation application on concrete or masonry walls is facilitated by the use of "Z" channels attached to the walls by power tools. Panels of *Styrofoam* are bonded into the space created, and siding, 1-in. of stucco or, for commercial interiors gypsum board, is fastened to the "Z" channels. / Dow Chemical Co. GB, ICR*

180 IMPROVED INSULATION / *Mono-Block* mineral wool insulation is now offered with improved density and compression strength ratings, moisture resistance, and in a wider range of standard sizes. The industrial process insulation also has effective acoustical properties. / Keene Corp.

181 ROOF INSULATION / Lightweight "XFS-4249" boards, consisting of *Styrofoam* insulation with a 3/8-in. cement mortar facing, improve the thermal performance of new and existing roofs while accommodating heavy foot traffic. The 2- by 4-ft tongue-and-groove boards are loose laid over the membrane and secured around the roof edges; no caulking, stones or hot layer is needed. / Dow Chemical Co. GB, ICR*

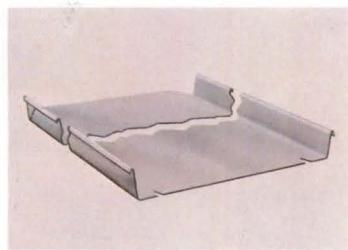
MEMBRANE ROOFING

182 ROOFING REPAIR / A heavy-duty fibered asphalt coating with rubber added for extra flexibility, *Permaroof* is said to be economical and easy to apply by brush or spray. A wet surface additive permits application of *Permaroof* to wet or damp roofs for emergency repairs. / Republic Powdered Metals.

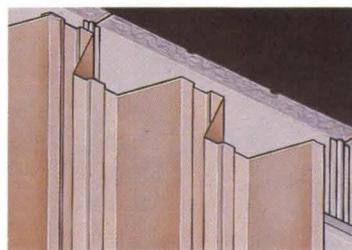
183 ROOFING PROTECTION / Metal, masonry and built-up roofs can be protected against corrosion or moisture seepage with *ALLUMANATION 301*, a sprayable or brushable highly reflective surface. / Republic Powdered Metals.



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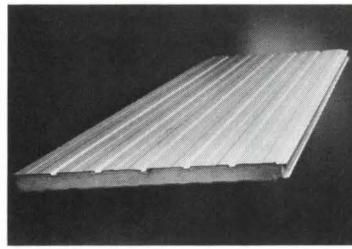
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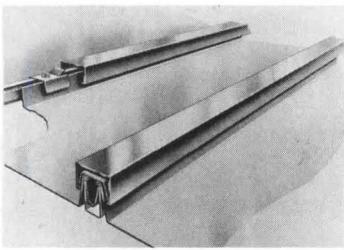
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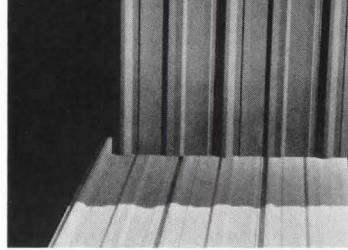
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184 MEMBRANE ROOFING / KMM membrane roofing applied to roof decking, is a five-layer laminate composed of a thick, flexible plastic core protected on each surface by a layer of modified bitumen and an outer sheet of polyethylene; the surface is embossed aluminum. / Koppers Co., Inc. GB, ICR*

185 THERMOPLASTIC ROOFING / An 80-mil-thick single-ply extruded sheet, *Carbofol* membrane roofing is composed of a mixture of ethylene, copolymer/bitumen and anthracite micro-dust. Systems can be mechanically adhered to a new or old roof surface, bitumen bonded, or loosely laid with ballast. All seams are hot-air welded. / MM Systems Corp. GB, ICR, E*

METAL ROOFING

186 METAL ROOF SYSTEM / The *Batten-Tite* roof is prefabricated to provide a continuous batten-seam metal roof covering with built-in expansion/contraction ability. The *Batten-Tite* roof is now offered in long lengths to reduce labor costs. / MM Systems Corp. GB, ICR*

187 SHEET METAL / *Microzinc 70* zinc-copper-titanium roofing material is available with factory-formed pans to reduce on-site labor. Batten and standing seam roofs, fasciae and mansards are offered with pre-formed pans. / Ball Metal & Chemical. GB*

188 STANDING SEAM ROOF / Roof panels are secured to purlin-mounted clips by tapping along the panel seam with a rubber mallet, permitting installation on any roof slope and against parapet walls. Fire rated at UL-90, the system can be installed over blanket insulation to achieve a .05 U-factor. / American Buildings Co. GB*

PREFORMED WALL & ROOF PANELS

189 FARM/INDUSTRIAL ROOFS / Manufactured from 29-gauge cold rolled steel, the *Rigid Batten* roof and siding panel has a 15-in.-wide board and batten design with a $\frac{3}{4}$ -in. rib depth that produces a shadow effect. The galvanized coating meets the ASTM A 525 G90 coating designation. / Republic Steel Corp.

190 BUILDING PANELS / A deep-rib (4-in.) sheeting for long span siding and roofing applications, *Super-Rib* is available in long lengths and custom cut. Varying metal gauges may be specified for spans from 13- to 30-ft. / Steelite, Inc. GB, ICR*

191 WALL/ROOF PANELS / The "VP300" architectural wall and roof system offers two- to six-in. of polyurethane core insulation, faced on both sides with 26-gauge embossed steel. The panels have thermal values to R42 (U .024). / Varco Pruden. GB, ICR*

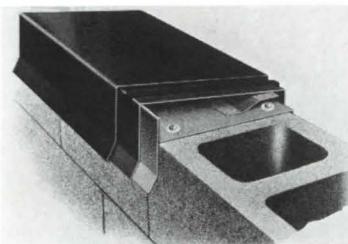
192 INSULATED PANEL / *StarTherm* wall and roof panels have painted metal skins, in three configurations, bonded to a rigid isocyanurate foam insulation core with a non-metallic member interlocking the interior and exterior skins. Panels have ASTM C-236 U-factors of .040-.043; and are rated Class 1 by the FM corner test. / Star Mfg. Co. GB*

193 STUCCO TEXTURE / "Stucco/Ripple" texture is now available for the pre-finished steel skin of the "2PS" insulated sandwich wall panels. The shadow pattern is offered in all standard *Duofinish* coating colors. / Inryco, Inc.

ROOF ACCESSORIES

194 PVC GUTTERS / This maintenance-free snap-together PVC gutter system is now available in a fade-proof charcoal gray color, as well as solid white. Gutter design is said to allow for free expansion and faster water flow. / Plastmo Inc.

195 OPERATIVE SKYLIGHTS / Simple operation is said to be a feature of these electric-powered sliding skylights for flat, pitched or circular type roofs. Prices start at \$3000, according to design; the *Rollomatic* roof is guaranteed watertight. / Rollomatic Roofs Inc. GB*



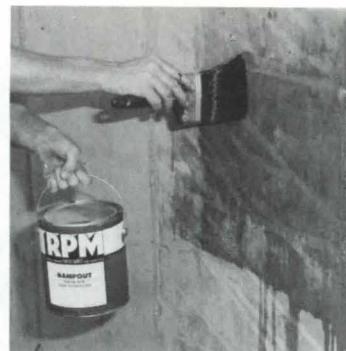
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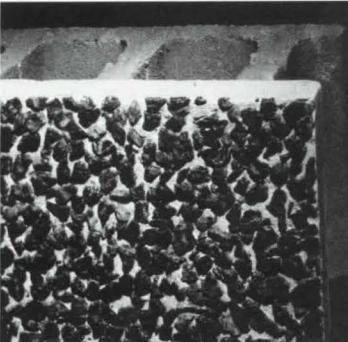
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ROOFING SPECIALTIES

196 COPING / Concealed anchor plates fasten aluminum coping to the parapet; gutter/splice plates with butyl seal strips under the coping at each joint to prevent leaks. Coping is available in all architectural metal finishes. / MM Systems Corp. GB, ICR*

SEALANTS

197 INSULATION JOINT SEALER / Applied by caulking gun to the seams of exterior, below-grade type insulation, *Insul-Seal* prevents loss of insulation efficiency because of water migration. Formulated from water-catalyzed chemical compounds, *Insul-Seal* will adhere to, but not attack, the insulation. / Effective Building Products.

198 MASONRY SEALER / A transparent acrylic resin, *EA-Sealer* weather-proofs exposed aggregate concrete exteriors. Treated surfaces shed water, dirt, soot and chemical contaminants to prevent dulling, staining and moisture damage to the matrix. / Preco Industries, Ltd.

199 STRIP JOINT SEALER / Replacing backer rods behind elastomeric sealants, resilient *Polytite-B* open cell polyurethane strip, saturated with polybutylene sealant, is compressed in a building joint. The strip's internal recovery force holds it in place, preventing air or water penetration behind the caulk. / Sandell Mfg. Co. Inc. GB*

200 GLAZING SEALANT / A one-part silicone rubber said to offer excellent adhesion to most non-porous glazing surfaces, *Proglaze* sealant cures full in 96 hours. Other characteristics of the construction and sanitary caulk include \pm percent movement capability and long-term ultraviolet resistance. / Tremco. GB*

SHINGLES & ROOFING TILES

201 CONCRETE ROOF TILE / Cool Sand, Cool Blue and Marble White heat-reflecting colors are now available in this line of concrete roof tiles. Under-tile baffles prevent infiltration of wind-driven moisture; tiles pass the ASTM C67-72 freeze-thaw test, and may be used in the coldest climates. Price: \$40 per sq. approximately. / Monier Co. GB, LRC*

VAPOR BARRIERS/RETARDANTS

202 UNDERSLAB BARRIER / A lighter-weight configuration has reduced the cost, but not the tested effectiveness, of *Moistop* underslab vapor barrier. Made of two sheets of reinforced kraft paper between plies of black polyethylene, *Moistop 395* shows a 0.15 Vapor permeance, 76+ water resistance, and 63 puncture resistance. / St. Regis Paper Co. GB*

203 LATEX VAPOR BARRIER / *Insul-Aid* latex primer-sealer, when applied at 400 sq ft per gal, has a permeability rating of 0.6, exceeding FHA standards. It protects wall cavity insulation. / Glidden Coatings & Resins.

WATERPROOFING

204 WATERPROOFING/ADHESIVE / A moisture-cured polyurethane/coal tar compound, *Rockweld CTU* is designed for use as an interface adhesive/waterproofing membrane for sandwich slab construction. / Preco Industries, Ltd.

205 MASONRY WATERPROOFER / Applied by brush or spray, *Damp-out* is a clear silicone-based liquid for sealing and protecting mortar, stone, brick, concrete, unglazed tile, stucco and cement surfaces from wind-driven moisture. / Republic Powdered Metals.

206 MEMBRANE WATERPROOFING / *Bentonize* waterproofing is an inorganic resealing material that is trowel- or spray-applied to vertical or horizontal below-grade surfaces. It functions under high static head conditions, with low permeability characteristics. / Effective Building Products, Inc.

207 LEAK ISOLATOR / Applied in a grid pattern from a caulking gun directly to the dry side of the waterproofing membrane in-between slab concrete construction, "Leak Localizer" isolates any water seepage, preventing further movement of water between the slab. The original leak source can be found and repaired more easily. / Effective Building Products, Inc.

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These buildings prove Dryvit saves energy.

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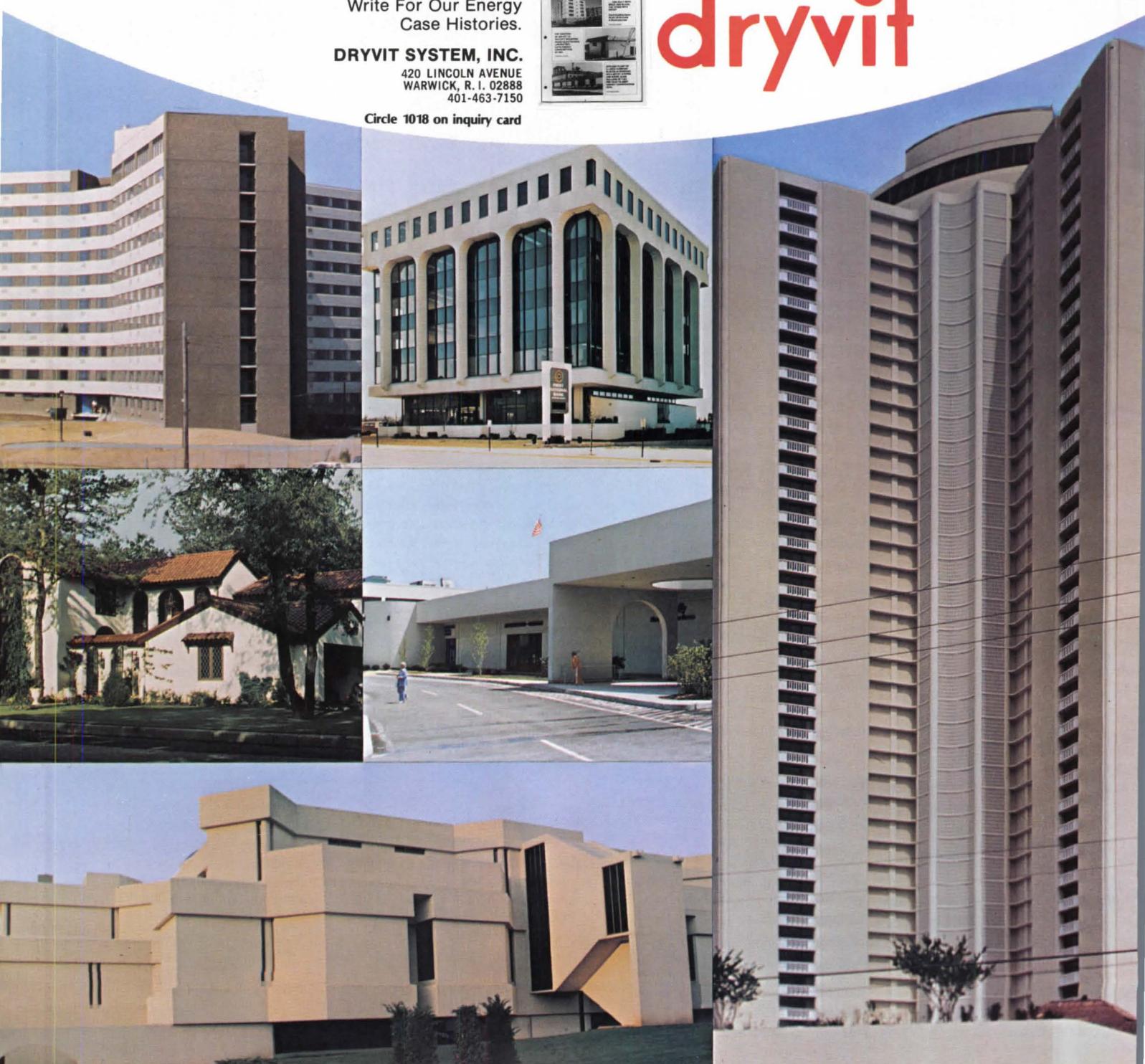
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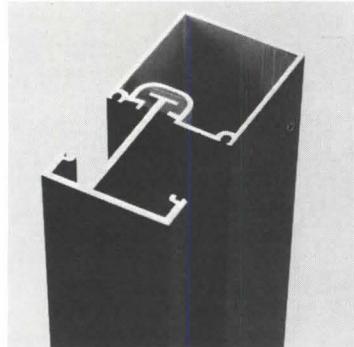
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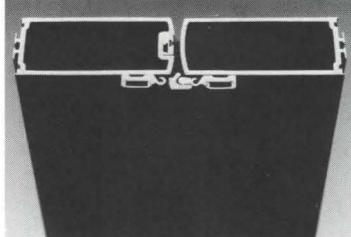
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ENTRANCES & STOREFRONTS

220 ALUMINUM ENTRANCES / Top and bottom rod locks and tamper-resistant cylinder are security features of the *Safetyline* narrow stile commercial entrance. Push/pull bar is marked and located on the door for easy use by persons with loaded arms. / Amarlite Anaconda Aluminum Co. GB*

221 CONCEALED ASTRAGAL / The *Panic Guard* entrance system with a concealed retracting astragal bar provided improved security when subjected to National Crime Prevention Institute tests. Non-removable pintype hinges also resist pries or jimmies. / Kawneer Co. GB*

222 ALUMINUM FRAMING / An insulated system designed to reduce hvac costs, *Insulcast 450* glass framing has a thermal barrier of rigid polyurethane to separate interior aluminum from exterior metal and resist interior condensation. All exterior aluminum faces are seamless; *Insulcast 450* accepts 1-in. insulated glass. / Kawneer Co. GB*



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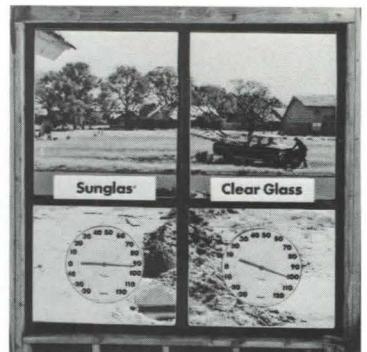
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223 SECURITY ASTRAGAL / Designed to prevent use of a wire hook to trip the panic hardware, this security astragal consists of separate spring-operated hinged leaves for each door. These automatically close and interlock when the actuating levers meet the strike installed in the header. / Amarlite Anaconda Aluminum Co. GB*

GLAZING

224 WINDOW FILM / *Scotchtint P-19* window insulation film provides the benefits of standard sun control film, and has double the insulating performance. The aluminum-coated polyester film also screens out ultraviolet rays, and is optically clear from the inside. / 3M Co. Energy Control Products.

225 VANDAL-RESISTANT / Glazing of *Protect-A-Glaze* polycarbonate sheet is recommended for such vandal-prone areas as the park bandstand shown. The economical, weather-resistant sheet comes in a pebble finish and translucent colors; it has excellent light diffusion properties with minimum glare. / General Electric Co. GB*



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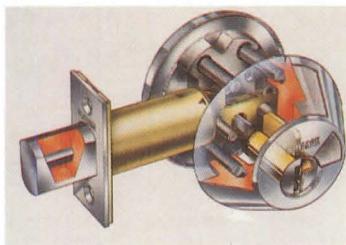


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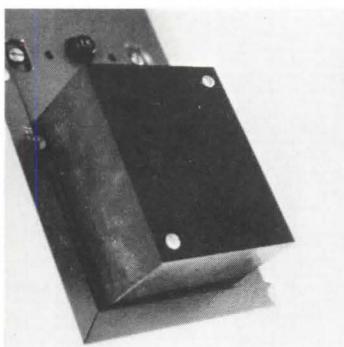
226 RESIDENTIAL GLAZING / *Sunglas* is said to offer substantial heat absorbing properties at less cost than gray, bronze or reflective glazing products. *Sunglas* has a high light transmission level for brighter interiors. / Ford Motor Co.-Glass Div. GB, IRC, LRC*

227 BREAK-PROOF GLAZING / The *Lexan 9034* sheet used in this 275- by 45-ft skylight is guaranteed against breakage for three years. The lightweight polycarbonate material is said to be easy to fabricate, handle and install; it is approved by all major model codes, and is UL-listed as burglar resistant. / General Electric Co. GB*

228 GREENHOUSE GLAZING / Manufactured from *Lexan* polycarbonate, *Qualex* double-walled glazing sheet has uniformly straight ribs, resulting in maximum light transmission, insulation value and mechanical strength. Fifteen per cent the weight of glass, *Qualex* is virtually unbreakable. / Cadillac Plastic & Chemical Co.



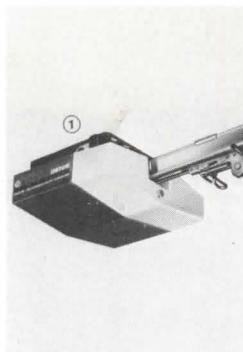
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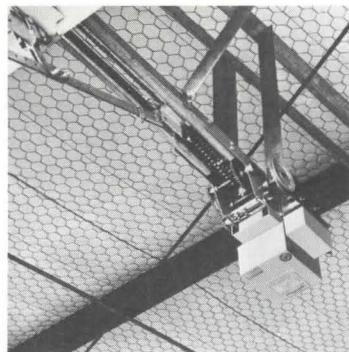
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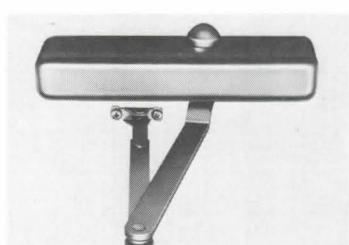
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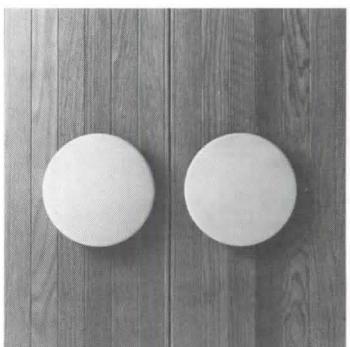
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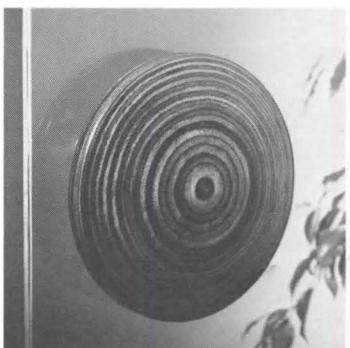
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HARDWARE & SPECIALTIES

229 DEADBOLT LOCK / A number of extra security features have been incorporated into the design of the *Superbolt* deadbolt-type lock. Included are wrench-resistant cast bronze covers; stainless steel one-in. bolt; and a strike/frame reinforced to resist kick-in attacks. / Schlage Lock Co. GB, LRC*

230 DOOR TIMER / Available for use with a line of commercial electric door operators, this solid state timer attaches to the electrical box. A safety feature of the unit allows the stop button to be used as a timer cut-off switch. / Jim Walter Doors.

231 HARDWOOD PULLS / White oak cabinet pulls are offered in five contemporary styles: three designed for recessed attachment with glue; two, mounted with screws. Pulls are furnished unfinished. / Forms & Surfaces, Inc.

232 GARAGE DOOR OPERATOR / The UL-listed *Genie CS-450* automatic garage door opener has an optional digital control, the *Cryptar*, which provides 3000 codes for extra security. Quiet door operation is by electronic relay activated by push button, limit switch, torque switch or radio. / Alliance Mfg. Co., Inc.

233 STEEL DOOR PULLS / For use on wood, metal, frame and glass doors, these 1 1/2-in. dia stainless steel tubular pulls are available in 18- and 27 1/4-in. c.c. sizes. Concealed back-to-back mounting is by turning washer and double-threaded bolt. / Forms & Surfaces, Inc.

234 DELAYED ACTION CLOSER / Hydraulic door closers provide a time delay action for easier use by handicapped and elderly persons. The delay action of the closer automatically functions when the door is opened to its maximum. / LCN Closers. GB*

235 DOOR OPERATORS / New additions to this line of commercial door operators are the model "RD-30," said to be an economical but rugged unit for use with medium-duty rolling steel doors and grilles, and the "920" opener for warehouse, showroom and loading dock torsion spring doors. / Overhead Door Corp. GB, ICR*

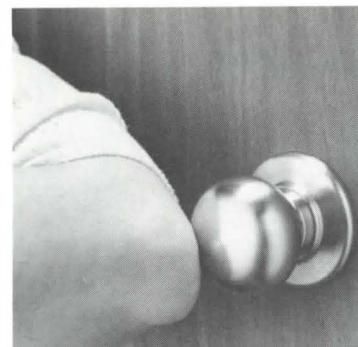
236 BARRIER-FREE CLOSERS / Four series of door controls are available for openings requiring self-closing doors without creating an architectural barrier. Full feature hydraulic closer models for interior and exterior door meet ANSI A117.1 specifications; pneumatic-assist units provide economical free access within current codes. / Reading Door Closer Corp. G*

237 COMMERCIAL LOCKS / Three lock series provide a variety of interior and exterior security levels for commercial and high-security buildings. Appearance of the locksets is similar within the "S", "X" and "M" series. / Falcon Lock.

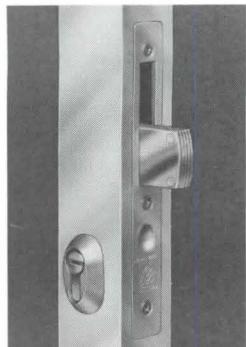
238 SECURE DEADBOLT / Offered in brass and chrome finishes to blend with existing hardware, the "D-11" series provides high-security lock features without a fortress-like appearance. Deadbolt is 1-in.-long hardened "anti-saw" steel. / Medeco Security Locks Inc. GB*

239 GEOMETRIC PULLS / Black or white color is solid throughout the durable urea/melamine blend used for the "A-300" doorpulls. Concealed back-to-back mounting provides strong attachment to glass, wood or metal doors. Price: \$50.00/pair. / Forms & Surfaces, Inc.

240 PUSH/PULL HARDWARE / Shown on 1/2-in. tempered glass doors, the "A350" doorpull is made of laminations of natural wood veneers, resin bonded, and finished in a soft luster. Back-to-back mounting provides secure attachment on glass doors. / Forms & Surfaces, Inc.



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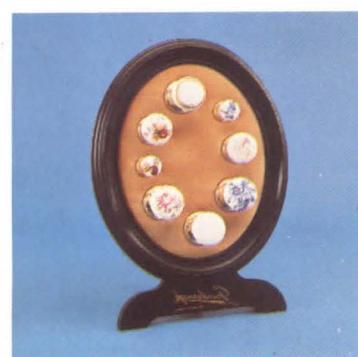
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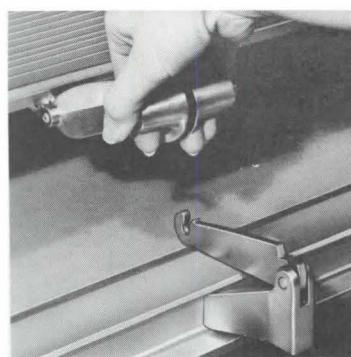
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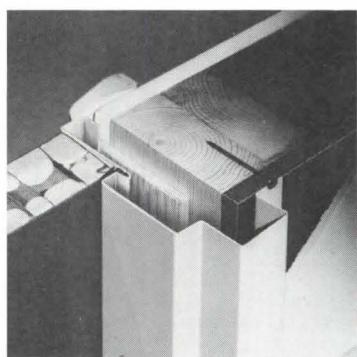
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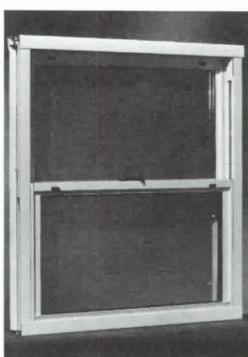
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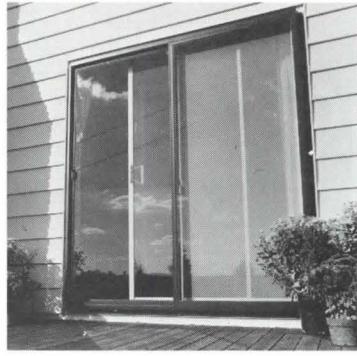
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241 ROTATING LATCH / The *Rolatch* two-way positive latch can be operated by fingertip, hand or elbow, for easy use by handicapped or aged persons. Chrome-plated knobs or push/pull plates may be specified; heavy-duty models are UL-listed. / Schlage Lock Co. GB, LRC*

242 COORDINATED FITTINGS / The "Gainsborough Collection" of passage sets, wardrobe and cabinet knobs includes porcelain, stoneware and crystal designs, all available in matching sets. / Weslock.

243 PRE-ENTRY ALARM / The *Lock-alert* improves residential security by sounding an alarm before the door is opened. When the door has been locked by key, anyone twisting the door knob to check if it is unlocked will activate an 80 dB intermittent horn. List price: \$49.95. / Teledyne Water Pik.

244 METRIC DEADLOCK / Designed to accept key cylinders of the European profile (extruded) type, this deadlock for glass doors has a 32mm bolt throw. Saw-resistant lock set offers an optional threshold drop-bolt and an armored strike. / Adams Rite Mfg. Company

245 WINDOW LOCK / "Link/Lock" hardware enables a room occupant to operate a window to a 15 degree hold-open position for ventilation, but eliminates the danger of falls from windows. Offered for hospital and institutional markets, the device meets NFPA 101 Life Safety Code requirements. / The Amelco Window Corp. GB*

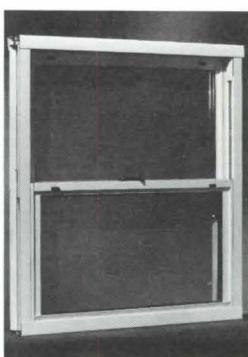
METAL DOORS & FRAMES

246 PATIO DOORS / "Vista" insulated steel patio doors offer 2- or 3-panel systems in complete units, which may be combined in series. Any one door in a unit may be active, hinged to a center jamb which anchors the inactive panels. / General Products Co.

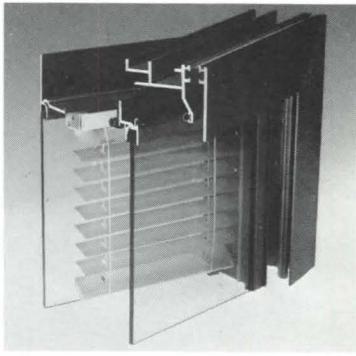
247 ROLLING DOOR / The *Coil-Away* door is a continually-hinged series of individual galvanized steel slats that fit standard or custom configurations up to 12- by 14-ft. Offering economical security for commercial and industrial installations, the largest *Coil-Away* door needs only 15-in. of headroom. / Overhead Door Corp. GB, ICR*

248 ENTRANCE FRAME / An exterior steel frame to be prehung with an insulated "LD-24" door, model "PF-20" is said to install quickly and to provide efficient weathersealing. The galvanized steel entrance system is especially suited for motel and apartment applications. / Steelcraft, An American-Standard Co. GB*

249 PATIO STORM DOOR / A sliding unit with its own track, the *Patio Glide* storm door installs outside the existing door. Constructed of extruded aluminum in bronze or white finish, marine-glazed with tempered safety glass, the *Patio Glide* resists condensation, drafts and air infiltration. / Alsco Anaconda.



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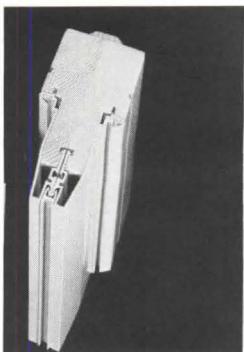
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METAL WINDOWS

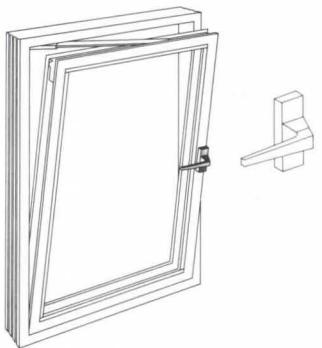
250 ALUMINUM WINDOWS / Exterior casing, blindstop and sill of the *Excel* wood window are extruded, prefinished aluminum; insulating glass is used on all styles. Double-hung, slider, casement and awning windows are offered, all with a Class A air and water infiltration rating. / Louisiana-Pacific Corp.

251 DOUBLE-HUNG UNIT / Featuring a full thermal break of "Nor-guard" insulator material on frame and sash members and $1\frac{3}{16}$ -in. double-pane insulating glass, the *Norandex* replacement window is available in white or bronze. / Norandex Aluminum Building Products. GB, LRD*

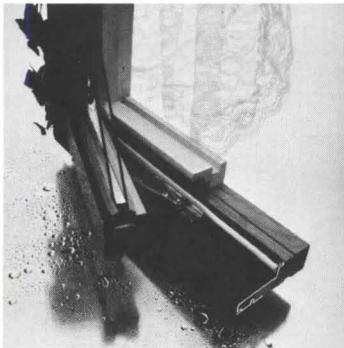
252 SPECIAL THERMAL WINDOW / The series T-2001 "Weather-trol" window has a side-hinge in-swing casement, which features a poured-in-place polyurethane thermal break. It has a certified combined U-value of 0.47. DISCO Aluminum Products Co., Inc. GB*



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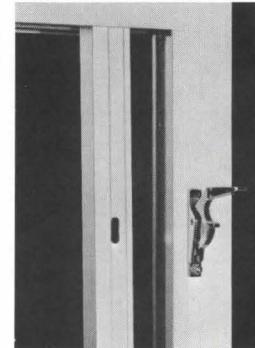
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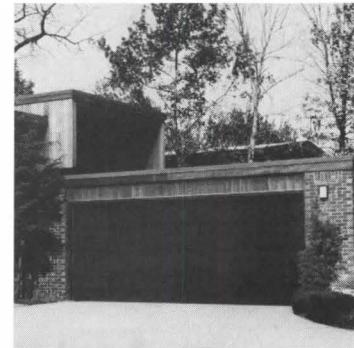
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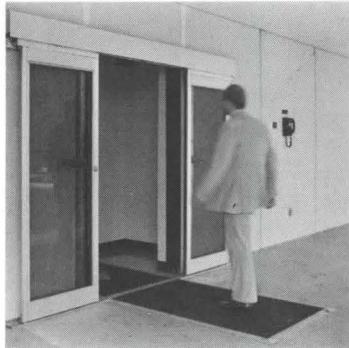
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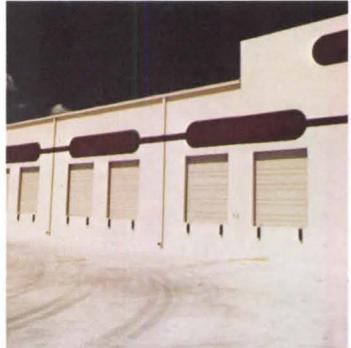
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253 ALUMINUM-CLAD WINDOW / The "Casemaster" line of heavy-duty wood windows is now available with an aluminum exterior finished in white or dark brown baked acrylic. The fully-weatherstripped casement window may be double- or triple-glazed; removable stops facilitate reglazing. / Marvin Windows.

254 COMMERCIAL WINDOW / Fully weatherstripped *Versa/Vent* aluminum window opens two different ways: inward from the top to a limit stop, and, when the handle is turned a full 180 deg, past the vent position, the window swings inward vertically. Options include double-glazing, solar screens and built-in blinds. / Flour City Architectural Metals. GB*

255 CASEMENT WINDOW / "CAR-clad" casement and awning windows are aluminum-covered wood units, glazed with tinted insulating glass, and double-weatherstripped to reduce air infiltration. / Caradco Window & Door Div., Scovill. GB*

256 REPLACEMENT WINDOW / The "Optima" thermalized replacement window offers optional head, jamb and sill extensions. This low-maintenance panning system covers all remaining parts of the old master frame wood. / Season-all Industries, Inc. GB*

257 SLIDER WINDOW / This slider-type replacement unit has the sash frames recessed completely into the insulated master frame; a positive-locking latch secures the window. Residential and commercial models are available. / Season-all Industries, Inc. GB*

SPECIAL DOORS

258 GARAGE DOORS / Available with either a honeycomb or polystyrene insulating core, these nominal 1 $\frac{1}{2}$ -in. flush wood residential garage doors have smooth or rough sawn exteriors offered primed on both sides, unpainted, or treated with preservative. / Jim Walter Doors. LRC*

259 FOLDING FIRE DOOR / Wide-span, UL-approved folding partitions, the *Fireguard I & II* doors of V-grooved formed steel panels are fire-rated at 1 and 1 $\frac{1}{2}$ hours. Part of the "Feire" system of automatic fire protection, the doors open for evacuation, then close to isolate fires; doors can be easily opened manually and then re-close automatically. Batteries supply back-up power. *Fireguard* doors can be connected to extinguishing systems. / Won-Door Inc. GB*

260 EXTERIOR SLIDING DOOR / Designed for lower installation costs, the *Auto-Slide* "4000 Exterior Slider" series doors mount on the outside of an entrance, with the door sliding along the exterior wall. No side panels or wall recesses are needed. Door panels are hung from a one-piece trussed trolley, and can be pneumatically- or electrically-operated. / Stanley Magic-Door. GB*

261 STEEL ENTRY DOOR / Eleven embossed styles, with matching sidelites and steel or wood frames, are offered in this residential line of steel entry doors. Rated doors have a 1 $\frac{1}{2}$ -hr fire label. / Jim Walter Doors.

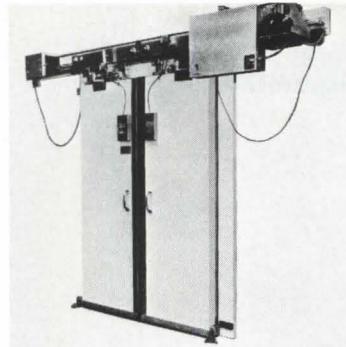
262 AUTOMATIC DOOR CONTROL / Designed for the *Auto Slide* security automatic door, the "Access Control System" uses a power solenoid bolt to lock the door. Activating the control—by floor mat, card readers, switches, etc.—opens the door panels, which are automatically bolted as the panels return to a closed position. Panel provides both remote control and monitoring of the door system. / Stanley Magic-Door. GB*

263 INSULATED DOORS / To minimize the loss of heating and cooling energy in commercial and industrial buildings, these steel sectional doors are insulated with fiberglass, polystyrene, or polyurethane. An optional weatherstrip kit includes complete top, bottom, joint and jamb seals. / The Windsor Door Co. GB*

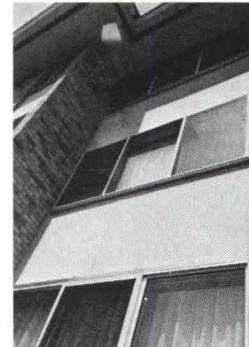
264 REVOLVING DOORS / This manufacturer's series of revolving door entrances are now available in a choice of colors. The fluoropolymer resin *Kynar 500* full-strength coating used has an expected useful life of over 20 years, with excellent corrosion resistance. / Crane Fulview Door Co. GB*



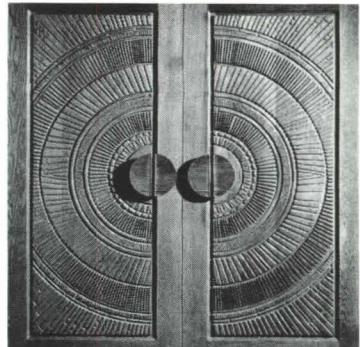
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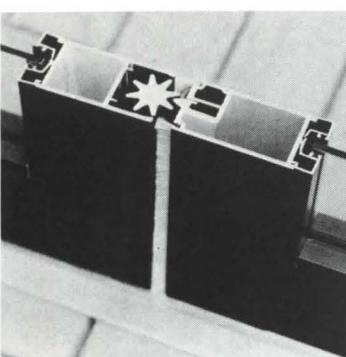
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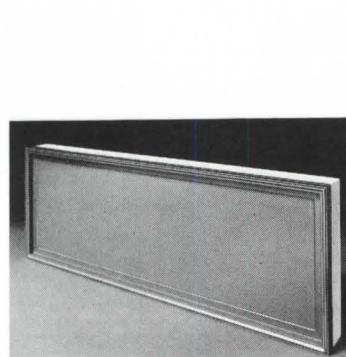
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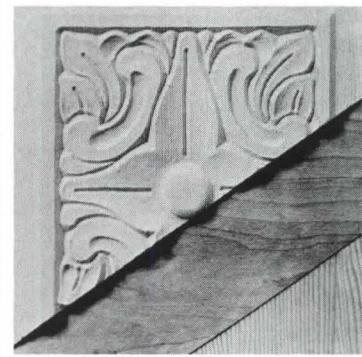
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265 INDUSTRIAL BIFOLD / A new folding drive bracket allows installation of the *Prest-O-Matic* bifold door as close as 9-in. to a sidewall or obstruction. Door sections are of 26-gauge galvanized steel, plastic, flush plywood, or 18-gauge steel over a urethane insulating core. / Clark Door Co. Inc. GB, ICR*

266 PANIC DOORS / The *Nightwatch* concealed rotary astragal door prevents illegal entry by tripping the panic device. The door fits flush against any wall; constructed of extruded aluminum in narrow and medium stile sizes, the *Nightwatch* door will accommodate any panic device or bar. / Howmet Aluminum Corp. GB*

267 GLAZED ROLLING GRILLES / Panels of $\frac{1}{8}$ -in. *Plexiglas G* are fixed in each opening in the "Vistaguard" rolling grille, providing a 96 per cent solid barrier against the theft of small articles through the grille and passage of refuse, odors, etc. The see-through security grille may be operated by hand crank, motor, or push-up. / Cornell Iron Works, Inc. GB, LRC*

268 PLASTIC STORAGE DOORS / The "Mark II Electroglide" bi-parting cold storage door is one of the larger doors for larger openings now available in the manufacturer's line of molded plastic, seamless doors for cooler or freezer applications. / Jamison Door Co. GB*

SPECIAL WINDOWS

269 WINDOW FRAMES / *Pella Clad* frames are custom-sized to accept glass or *Pella Clad* panels. Cladding is acrylic-finished extruded aluminum; head, jamb and sill are compatible in design and finish to other products in the window line. / Rolscreen Co., G, L, C*

270 STAINED GLASS WINDOWS / Architectural glass is available in a variety of forms and applications—leaded, painted, faceted, etched and carved in original designs fabricated and installed. / Rambusch Co.

271 STORM WINDOWS / The energy efficiency of otherwise sound institutional and other commercial windows can be substantially improved by the installation of storm windows. Standard units are offered as tall as 103-in. and as wide as 120-in., in 16 models. / Season-all Industries, Inc. GB*

272 WINDOW PANEL / The "Thermalizer" panel frame is used to reduce the size of extremely deep existing window openings to accommodate lowered ceilings, raise the glass area away from the floor, or simply to reduce the glass area to conserve energy. / Season-all Industries, Inc. GB*

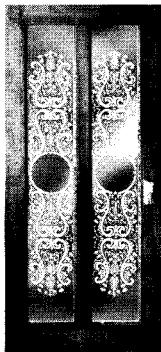
WOOD & PLASTIC DOORS

273 CARVED DOORS / The *Weath erbond* three-ply laminated door panel can take the worst weather extremes without splitting through, according to tests conducted under NBS procedures PS1-74 and PS51-71. The stile and rail entry doors are made of fir or Western hemlock vertical grain faces over an Alder wood center core. / E. A. Nord Co., L*

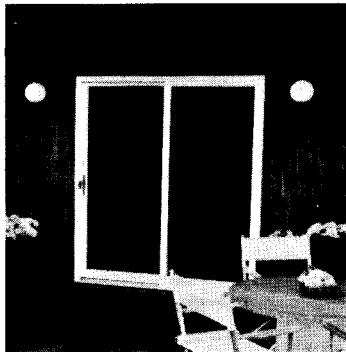
274 ENTRY DOOR / Stile and rail construction in either ponderosa pine or redwood frames a ruggedly carved Aztec-inspired design on the "SB1" entry door. Standard sizes are 36- by 84- and 36- by 96-in.; a number of finish options are offered. / Customwood Mfg. Co.

275 PATIO DOORS / A one-piece thermal barrier patio door sill extruded from *Lexan 153* resin is used to control frost and ice build-up for this line of wood sliding patio doors. The sill has low thermal conductivity and excellent impact strength. / Marvin Windows. L*

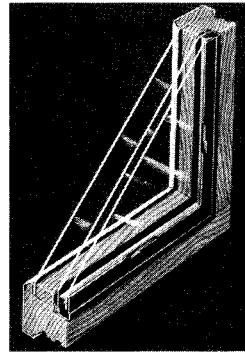
276 OAK DOORS / A carved solid oak panel is laminated to an oak veneered solid-core door for a hand-crafted look. The "DA10" door is available with the carving on one or both sides, unfinished or oil stained. / Customwood Mfg. Co.



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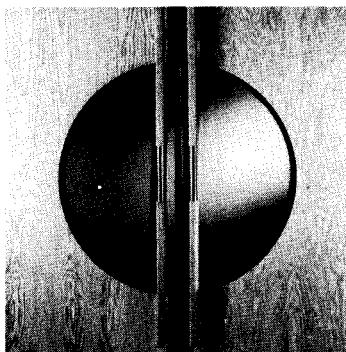
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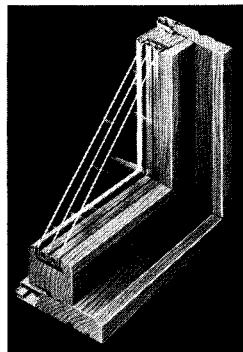
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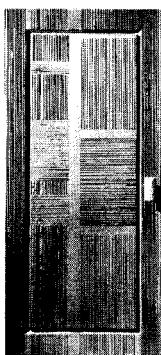
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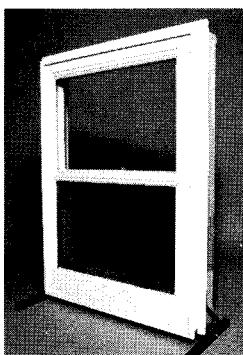
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277 ETCHED GLASS / A variety of glass designs from hard-edge geometric to Art Nouveau patterns suggest a range of applications for the seven different doors in the "Etched Glass" series. Doors are stile and rail construction of ponderosa pine, redwood, or "Knot Block" wood types. / Customwood Mfg. Co.

278 GEOMETRIC GLASS / Primary-form glass lights are used with solid-core hardwood veneers in the "Geometric" door series. Four different designs are available, in either single- or double-door models; veneer species include birch, oak and walnut. / Customwood Mfg. Co.

279 GRAPHIC DESIGN / A scored graphic design carved in ponderosa pine or redwood provides a random linear composition in the "SG1" entrance door. Standard sizes are 36- by 84- and 36- by 96-in.; other sizes may be ordered. / Customwood Mfg. Co.

280 PATIO DOOR / Extensive design improvements are said to make the *Perma-Shield* vinyl-clad wood sliding door more resistant to air and moisture infiltration, and provide better energy conservation and security features. A new smaller size, offered in addition to the standard 6-, 8-, 9-, and 12-ft sizes, is suitable for replacement applications. / Andersen Corp. GB, L*

281 STORM DOOR / Constructed of structural foam polystyrene with inner metal reinforcements sealed in plastic, the *Woodstead* winter/summer storm door has wood grain texture and raised panels. Adjustable hydraulic closure holds the door tight against high winds; glazing is tempered safety glass. / Bird & Son, Inc.

WOOD & PLASTIC WINDOWS

282 CLAD WOOD WINDOW / These low-maintenance aluminum-clad double-hung windows incorporate a nailing fin and an extruded sill. All windows are combination units containing storm and screen; single-glazing or *Crestopane* insulating glass may be ordered. / Crestline.

283 FIXED WINDOWS / Triple insulating glass is available in all *Pella* large fixed windows. Three panes of $\frac{3}{16}$ in. glass (used in larger sizes) with $\frac{1}{16}$ -in. air spaces control heat loss and condensation. / Rolscreen Co., G, LC*

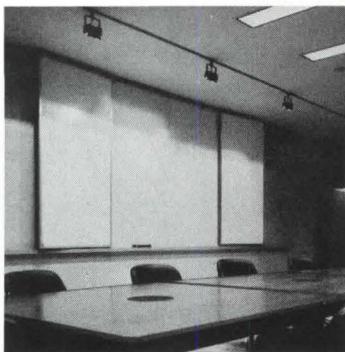
284 DOUBLE-HUNG WINDOWS / Designed for economy and simple installation, these residential wood windows have tilt-out sash for easy cleaning. The double-glazed units are said to provide excellent thermal values. / Rodman Industries, Inc., Rimco Div. G, L*

285 THERMAL WINDOWS / Continuous double weatherstripping helps the *Nordic* wood window achieve a Class A rating under air and water infiltration tests set up by the National Woodwork Mfrs. Assn. Made from clear Western pine in a variety of finishes, the *Nordic* window comes in casement, bow, awning, picture and combination styles. / Pozzi Window Co.

286 PREHUNG DOORS / The *Doormaster* series of framed, prehung doors for new construction or remodeling applications have frames adjustable to wall thickness from 3½- to 8½-in. Doors are *Formica* laminate or a choice of wood or steel finishes. / Ampco Products, Inc.

287 TRIPLE-GLAZED WINDOW / An aluminum framed insulating glass panel with $\frac{1}{4}$ -in. air space clips into rabbet on the inside of casement window sash. The $\frac{1}{4}$ -in. air space between the exterior glazing and the triple-glazing panel allows the use of removable wood muntin bars. / Rolscreen Co., GB, L, C*

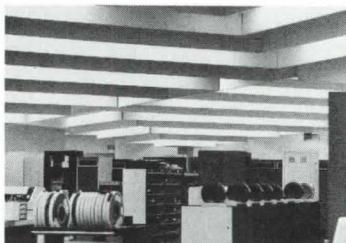
288 CLAD/ALUMINUM / "Model USA" double-hung windows have a white or bronze finish aluminum exterior frame with wood sash and wood interior frame. Tilt-in sash is removable; options include removable grilles, insulating glass, and storm windows. / V. E. Anderson Mfg. Co.



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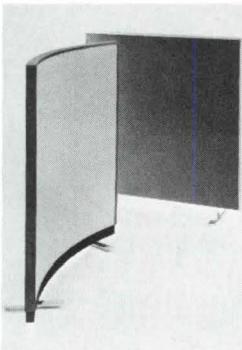
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ACOUSTICAL TREATMENT

301 WRITING PANELS / A multi-functional acoustical panel system, the fabric- or vinyl-covered *Decoustics* wall now incorporates hinged doors which, when opened, expose a porcelain-metal writing surface. These doors can also be used to hide electrical boxes, storage areas, etc. Sizes up to 4- by 8-ft, with a continuous internal frame. / *Decoustics Ltd.*

302 SPACE DIVIDER SYSTEM / These mobile freestanding dividers provide acoustically efficient work areas: locking devices connect the panels for use with most furniture styles. Each panel base has a cavity to accept electrical and communications wiring. / *Owens-Corning Fiberglas Corp. I**

303 SOUND CONTROL SCREENS / Class 1 fire-rated, *Acoustaflex* space divider screens have a dense inner core and sound blocking septum to provide a NRC of .95 and a STC of 26 by ASTM tests. There are eight straight and four curved sizes for office landscaping applications. / *Conwed Corp.*

304 SOUND ABSORBERS / Designed to reduce reverberating sound by up to 33 per cent, Class 1 rated panels attach to walls, pillars and lateral files in offices, computer rooms, etc. / *Conwed Corp.*

305 SOUND-ABSORBING PANELS / Available in a choice of 24 colors, *Softscape* wall panels acoustically treat reflective room surfaces and add esthetic appeal. ASTM flame, fuel, and smoke ratings: 15 for the substrate. Wall panels offered to 107-in. long. / *Capaul Ceilings. GB**

306 IMPACT-RESISTANT PANELS / A fabric-finished unit, the "Type 2" panel is designed to resist damage in high traffic areas such as gymnasiums, lounges, etc. One- and 2-in.-thick panels have a NRC of .75 and 1.00 respectively, and are available in sizes up to a nominal 4- by 10-ft. / *Decoustics Ltd.*

307 CEILING BAFFLE / Acoustical baffles align with internal splines; matching locking sections join corners for layout flexibility. Fabric- or vinyl-finished panels, supplied with "D" rings, mount on "T" grids or direct from slab. / *Decoustics Ltd.*

CARPETING

308 MULTI-COLORED CARPETS / Offered in 16 multi-colorations, "Invitational" all-nylon saxon carpeting is treated with *Scotchgard* fabric protector and static control for low maintenance characteristics. / *Georgian Carpets, West Point Pepperell Carpet & Rug Div.*

309 CARPET SQUARES / The "Graphic Impressions" commercial carpet modules have a built-in fire-retardant sponge rubber cushion. The pile is wear-guaranteed for seven years; the *Lok-Lift* installation method suggested for the carpet facilitates removal and rearrangement of the 18- by 18-in. squares. / *Commercial Carpet Corp.*

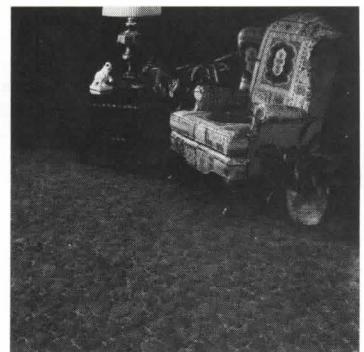
ACOUSTICAL TREATMENT
CARPETING
CEILING SUSPENSION SYSTEMS
PAINTING MATERIALS
PLASTER
PREFINISHED PANELS
RESILIENT FLOORING
SPECIAL COATINGS & SURFACINGS
TILE
WALL COVERING
WOOD FLOORING



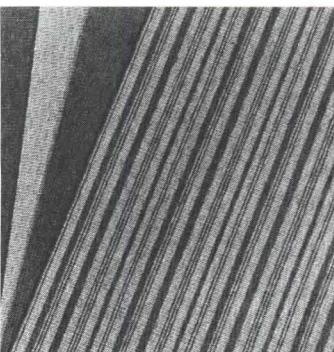
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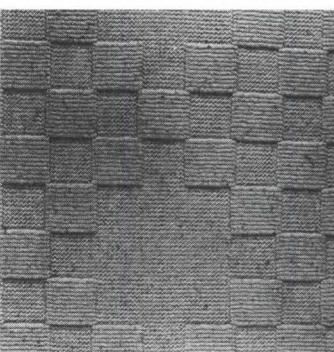
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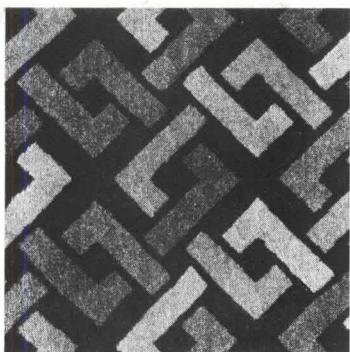
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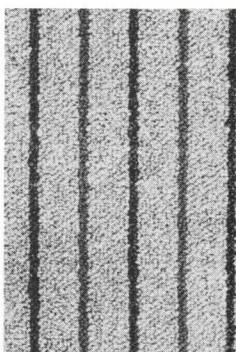
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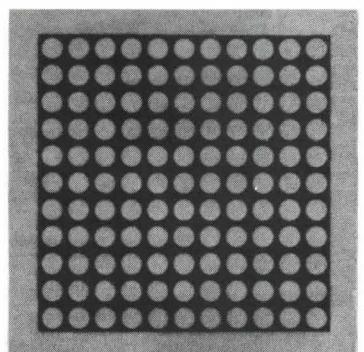
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310 AXMINSTER CARPET / Executed in five colorways, "Chevron" is one of eight axminster broadlooms offered for heavy-duty commercial as well as residential uses. Carpet is 80/20 wool/nylon, 12-ft wide; meets DOC FF 1-70 and ASTM E84-70. / Couristan, Inc.

311 CABLE TEXTURED CARPET / Made from Zeflon 500 solution dyed nylon, "Rockledge" extra-heavy-duty carpeting is rated at 500-plus hours light fastness performance for the 12 heather colorations available. A special soil-repellent finish augments the fabric's soil-hiding characteristics. / Collins & Aikman.

312 HEAVY-DUTY GEOMETRIC / Constructed of cut-pile nylon and durable enough for public places, "Interchain" carpeting is available in Rustic Gold, Blue Canyon and Festival Red. / Bigelow-Sanford, Inc. GB*

313 FIRE-RATED CARPET / "Brookhaven" woven velvet carpeting passes standard contract carpet flammability tests, including ASTM E-84, with a Class A rating. An acrylic/nylon blend with a 20.9 lb tuft bind, "Brookhaven" has a pin-stripe effect and is available in nine colors. / Pennsylvania Carpet Mills, Inc.

314 NYLON WILTONS / Any of 14 patterns, all of two-frame Wilton construction, can be woven in the specifier's choice of any two of 50 available colors, in 12-ft widths. Carpet is soil-hiding, static-control Antron III nylon. / Lees Carpets.

315 LEVEL LOOP CARPET / Performance-certified by the yarn manufacturer for Class III, extra-heavy commercial traffic, "Iron Clad" Zeflon 500 nylon carpeting is available in four stripe colorations, with nine coordinating solid colors. / Patcraft Mills, Inc.

316 RESIDENTIAL CARPETING / Scattered highlights and flowing color are features of "Wanderer" Enkaloft nylon carpeting. The cut-loop pile is available in seven natural earth colors. / Pepperell Carpets.

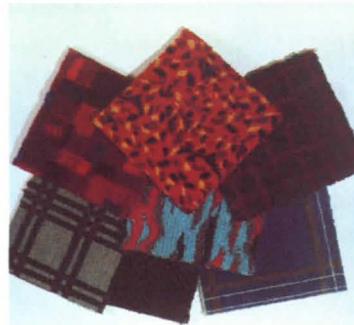
317 ENGLISH WILTONS / The "Britannia Collection," designed by Adriana Bitter and woven in England of 80 per cent wool and 20 per cent nylon, is available in custom colors. Carpet is 27-in. wide, and lists for about \$45.45 a linear yard. A coordinating cotton needlepoint fabric is also available. / Scalamandre.

318 DOT PATTERN / The cut pile 18-by 18-in. zeflon spun nylon squares offered in the "Graphic Impressions" series are available in seven geometric patterns on a choice of 11 background colors. / Commercial Carpet Corp.

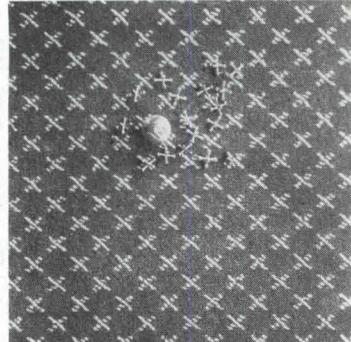
319 EDUCATIONAL CARPET / "Campus" color coordinated woven carpets have been specially developed for the high performance requirements of schools, colleges and other institutions. All-nylon construction "Campus" is offered in 10 heather, and five stripe colorations. / Bigelow-Sanford, Inc. GB*

320 ALL-WOOL CARPETS / The "Mira Casa II" line includes three Berber twist all wool carpets woven on Wilton looms modified to produce dimensional patterns. Offered in four natural wool colors, "Mira Casa" rugs list for \$60 per sq yd. / Mira X International Furnishings, Inc.

321 CUT-PILE CONTRACTS / The "Structural Series" of nylon Chroma-Dye carpets includes the small-scale "Spectrum" pattern shown. The geometric designs are durable enough for lobbies, banks, stores, and other commercial applications. Costs about \$15.95 per sq yd. / Bigelow-Sanford, Inc. GB*



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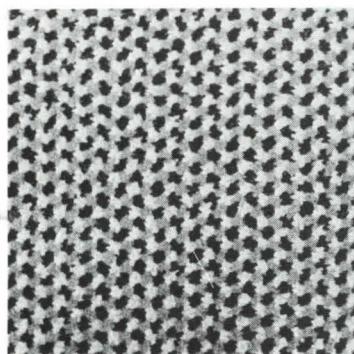
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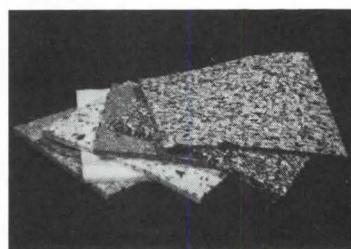
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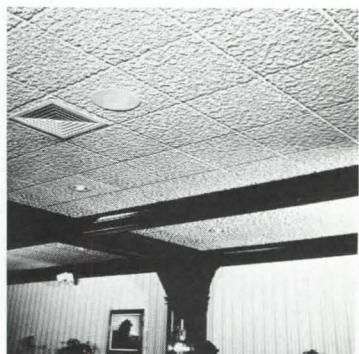
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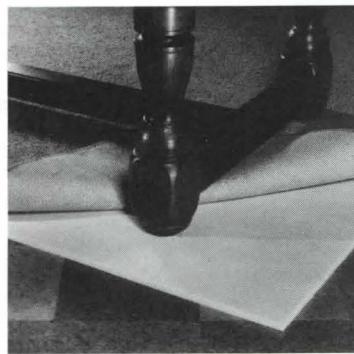
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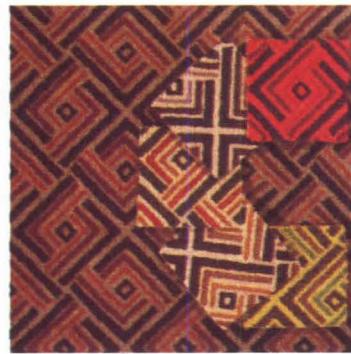
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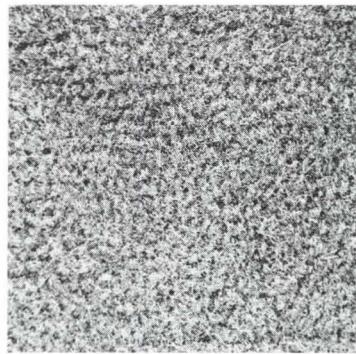
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322 CUSTOM-WOVEN WILTONS / Orders for as little as 300 sq yds of Wilton acrylic/nylon contract carpeting can be individually designed patterns, insignias, etc., in any selection from 74 available color choices. Carpet is one per cent *Zefstat* for static control. / Pennsylvania Carpet Mills, Inc.

323 NYLON PLUSH / Performance certified for Class II, heavy commercial traffic, "Ultra Point" *Zeflon* subdued luster nylon carpet carries a five-year wear and anti-shock warranty. The patterned cut pile plush carpet comes in nine colorations, with custom colors available from an inventory of 37 solid and heather tones. / Patcraft Mills, Inc.

324 HIGH RESILIENCE CUSHION / Suggested applications for "Monolith" prime urethane carpet cushion include foyers, clubs, and restaurants. ASTM E-84 tested at a flame spread of under 75. The 3/8th in.-gauge version of "Monolith" meets FHA Class 1 (heavy traffic) requirements. / Ludlow Carpet Cushion.

325 BROADLOOM CARPET / A criss-cross design available in eight colors, "Jax" is power-loomed in Ireland of 80 per cent wool and 20 per cent nylon. Of axminster-type construction, "Jax" meets DOC and ASTM E-84-70 standards. / Couristan, Inc.

326 URETHANE CUSHIONING / Bonded urethane carpet cushion meets the flammability requirements of DOC FF 1-70 (Pill Test), and provides an R factor of 1.34. Typical applications include bedrooms, playrooms, offices and showrooms. / Ludlow Carpet Cushion.

327 CONTRACT CARPETING / A printed, low-profile plush of *Antron* nylon, "Angles" is contrast carpeting available in six colorways, 12-ft wide, with static control built-in. / Trend Carpets.

328 SAXONY CARPETING / "Moirs" is a thick pile saxon style *Antron* nylon carpet available in 41 solid colors. / Cabin Crafts Carpets, West Point Pepperell.

329 ANTI-STATIC CARPET / Installed in computer rooms in place of standard anti-static carpet, *Compu-carpet* has superior electrostatic properties even compared to tile and other hard surface flooring. Rated Class B by ASTM E84, *Compu-Carpet* was designed specifically to meet IBM's recommendations for computer room floor coverings. / United Technical Products, Inc. GB*

330 CONTRACT CARPETING / A dense cut pile made from *Zeflon* nylon, "Prime Minister" is available in eight natural wool-like colors. The carpet is performance certified for five years of heavy commercial use. / Portier Carpet Mills.

CEILING SUSPENSION SYSTEMS

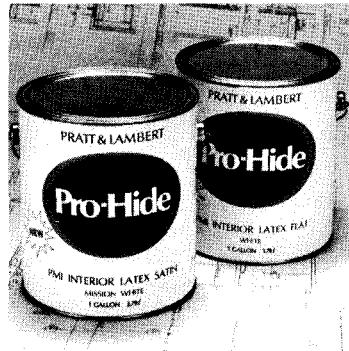
331 MIRRORED PANELS / Acrylic panels in the "Reflections Series" can be used in suspended ceilings; standard sizes are 2- by 2-ft and 2- by 4-ft, offered in 11 mirror colors and three texture variations. Panels are easy to cut, and custom sizes may be ordered. / ALP Lighting Products. GB, E, I*

332 MINERAL-FIBER CEILINGS / *Acoustone* integrally colored ceiling tile and panels now come in five earth tones: ivory, clay gray, pumice, sandstone, and sierra brown, as well as a wide range of factory custom painting. / United States Gypsum Co. GB*

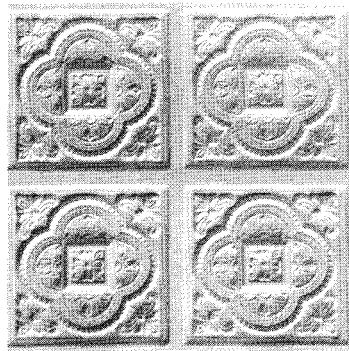
333 CEILING PANEL / Offering good sound-absorbing (up to an NIC of 20), light reflectance, and insulating characteristics, *Silok* ceiling panels are made of noncombustible mineral-fiber. The 2- by 4-ft boards are easily removed and replaced in a standard grid system. / Armstrong Cork Co. I*



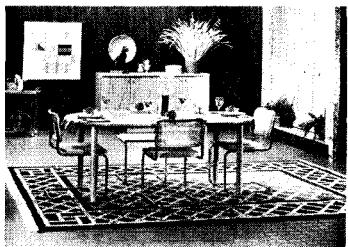
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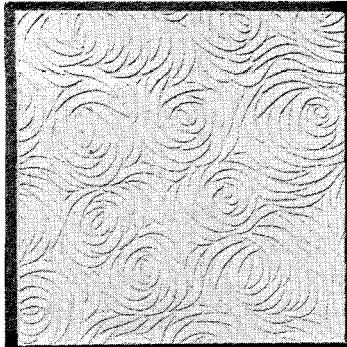
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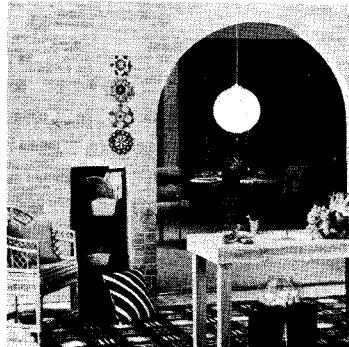
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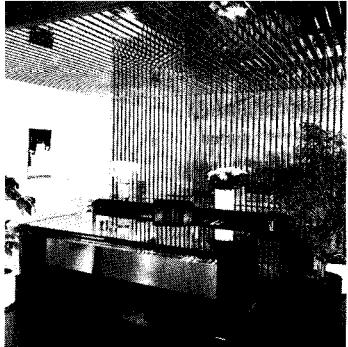
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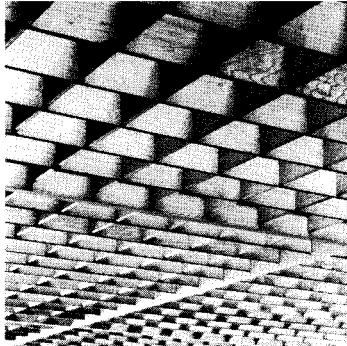
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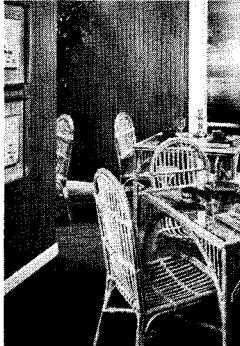
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334 CEILING TILE / A mineral tile in a deeply eroded, radiating pattern, "Corona" acoustical ceilings present a multi-directional, "one-piece" design from any viewpoint. Available in 12- by 12-in., concealed edge, and 24- by 24-in. reveal edge tile, or UL time design fire-rated. / Conwed Corp. GB, ICR*

335 WOOD FIBER CEILING / A swirl pattern, "Monticello" wood fiber ceiling pattern is available in 12- by 12-in. squares and 2- by 4-ft lay-in panels, both intended for do-it-yourself installation. / Gold Bond Building Products.

336 CEILING GRILLE / The "CS-1" ceiling grid consists of 4- by 4-ft panels of solid redwood fins intersecting on 4-in. centers. The grille is available with Class A fire-retardant treatment. / Forms & Surfaces, Inc.

PAINTING MATERIALS

337 INTERIOR LATEX FINISH / Offering an economical spread rate of 450 sq ft/gal, *Pro-Hide* interior latex flat finish and satin enamel are vinyl acrylic formulations with soap and water clean-up. / Pratt & Lambert.

338 ACRYLIC LATEX STAINS / Water-based "All-Acrylic" solid color stains are said to offer excellent color retention with superior adhesion. Especially recommended for rough-sawn siding, shingles, clapboards, etc., latex stains are available in 17 colors. / Samuel Cabot Inc. GB, LRC*

339 WATERPROOFING STAIN / Designed to color, waterproof and weatherproof porous surfaces such as wood, concrete and masonry, *Seal-Stain* is offered in 22 solid and semi-transparent colors applied by brush, roller or spray. / E.A. Thompson, Co., Inc.

PLASTER

340 PLASTER MOLDED CEILINGS / Cast from fiberglass-reinforced gypsum plaster, $\frac{3}{8}$ - or $\frac{1}{2}$ -in.-thick tiles have deep three-dimensional patterns molded in. Screwed to lathing secured to the ceiling, 2- by 2-ft tiles are then spackled and spray primed. \$1.45 per sq ft, FOB factory. / Poudrier Ceiling Tiles, Inc.

PREFINISHED PANELS

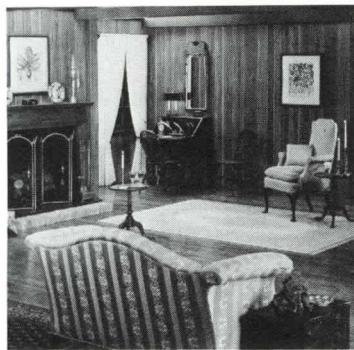
341 LIMESTONE PATTERN / *Masonite* panels in the "Natural Stone" design have "cut" stones at the edges to prevent repeat in pattern. The 4- by 8-ft panels wipe clean, and are durable enough for use in kitchens. Retail price: \$16-18 per panel. / Masonite Corp. I*

342 OAK-DESIGN PLANKS / Graphic 1-in. scorelines permit a variety of horizontal, diagonal, herringbone and chevron applications for "Natural Oak" 16-in. by 8-ft prefabricated planks. / Marlite Div., Masonite Corp.

343 WOODGRAIN PANELS / Suitable for both modern and traditional interiors, "Birch" prefinished woodgrain hardboard comes in 4- by 8-ft panels with wide embossed grooves and random planking. / Masonite Corp. I*

344 ACOUSTICAL PANELING / With either wood- or mirror-finished metal battens mounted on fabric- or vinyl-covered acoustical core, these prefabricated sound attenuating panels are said to be ideal for theaters, auditoriums, lobbies, etc. / Decoustics Ltd.

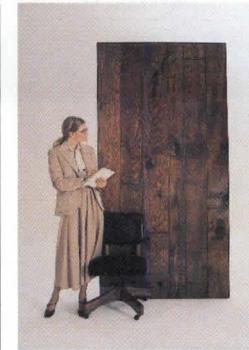
345 HARDBOARD PLANKS / Available in "Shell Pecan" design, these 16-in. by 8-ft hardboard panels are scored every two inches; tongued-and-grooved edges simplify installation in smaller wall areas. Adhesive and concealed metal clips are used to secure the planks over furring strips, woodboard, etc. / Marlite Div. Masonite Corp.



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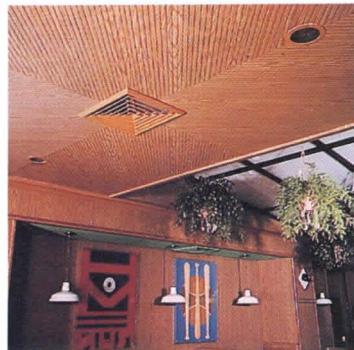
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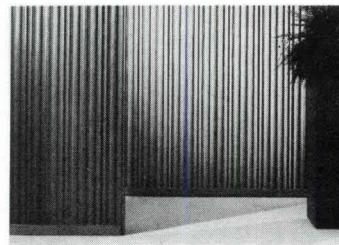
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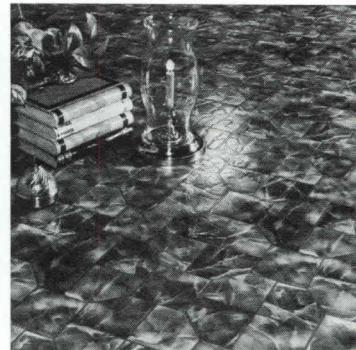
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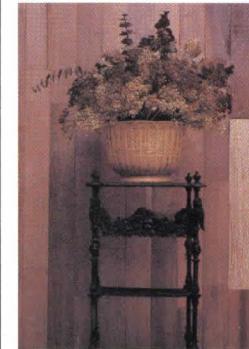
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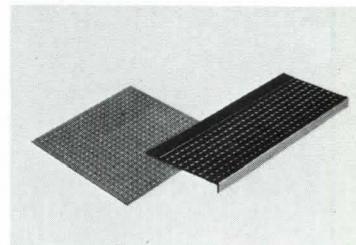
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346 PREFINISHED PANELS / One of the "Tradition II" series of panels expected to retail in the \$10-12 range, "Hickory" is a woodgrained hardboard in a rich golden color. / Masonite Corp. I*

347 PREFINISHED PLANK CEILING / *Marlite* prefabricated, hardboard natural oak planks compose an unusual ceiling. The planks are 16-in. by 8-ft and can be installed in a tongue-and-groove manner over solid backing or furring strips. / Commercial Division, Masonite Corporation.

348 HEAVY-USE PANELS / Vertical stainless steel members in a polished or satin finish accent "Combi-Form" wall panels for banks, lobbies, etc. Standard 24- by 92-in. panels are made of colored plastic laminate or various metals, and are designed to read continuously over wall surface without visible joints. / Forms & Surfaces, Inc.

349 WOOD GRILLE PANELS / Designed for noise control, the "As-5" wood grille has black lateral members and dark facing material over the sound absorptive insulation. The 24-in.-wide units read continuously over a wall or ceiling without visible joints; "Thermo-Lag" fire retardant finish is available on all red oak or redwood parts. / Forms & Surfaces, Inc.

350 CARVED PANELING / "Panel-carve 720" is a random molding profile with a carved surface texture; standard sizes are 11½-in. wide by 36- or 96-in. long. Available woods include ¾-in. red oak and 1-in. redwood in a natural or dark walnut finish. Prices range from \$17.50 to 68.00 per panel. / Forms & Surfaces, Inc.

351 NON-COMBUSTIBLE PANELS / USDA-approved *Glasweld* fused mineral enamel surfacing is offered in a veneer panel form for institutional interiors. The inorganic panel is available in 21 colors, and has a Fire Hazard Classification of 0-0-0. / Gll Corp. GB*

352 CEDAR PANELING / Random face veneers used in "Mark X" 5-ply cedar paneling have been toned and protected with a catalyzed vinyl finish. New "V" grooving and cross-scoring give a wood-plank effect to the 7/16-in.-thick interior panels. / Roseburg Lumber Co.

353 CLOSURE PANEL / An insulated closure panel that closes off the space above interior partitions, is custom manufactured to fit any "Double T" configuration. It is constructed of a lightweight polystyrene core with cement asbestos facings. / Benoit Inc.

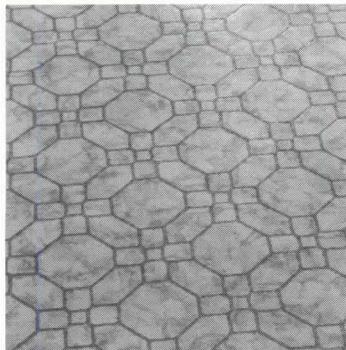
354 RANDOM-JOINT PLANKS / Clear grade redwood has been finger-jointed into single boards, 3/8-in.-thick by 4- and 5-in. wide, and is available in easy to install 8-, 10-, and 12-ft lengths. "Random Plank LaHonda" panels are reversible: one face textured, the other, smooth. / Simpson Timber Co. ICR*

355 PANELING / Also included in the "Tradition II" line of prefabricated wood-grain hardboard panels, "Pecan Design" features mellow tones with random width planking. The 4- by 8-ft interior panels retail in the \$10-12 range. / Masonite Corp. I*

RESILIENT FLOORING

356 VINYL FLOORING / The *Chromabond* vinyl used in the "Dynasty" flooring line is said to provide superior stain resistance, color integrity, mildew resistance, and lasting durability. Shown is "Arden Marble," a no-wax floor for public areas and light commercial applications. / Congoleum Corp. GB, LRC, I*

357 RUBBER TILE / "Target" rubber-based floor tile and stair treads have been especially compounded to offer an ASTM Flame Spread Rating of 25 or less; they are highly resistant to stains, heavy traffic, and cigarette scorch. / The R.C.A. Rubber Co. GB*



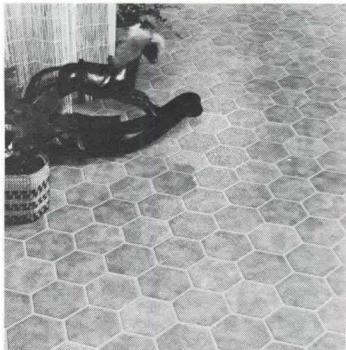
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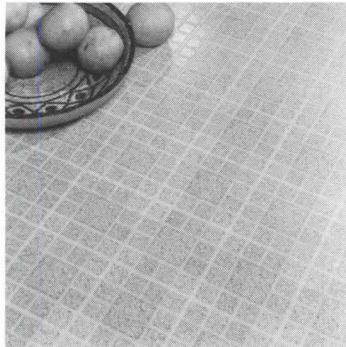
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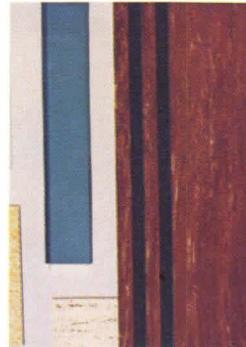
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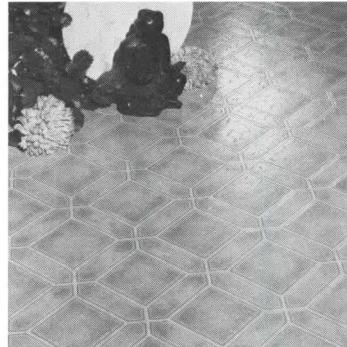
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358 CUSHIONED VINYL FLOORING / The "Spring Valley" residential flooring pattern features an octagonal based geometric over a marbleized background. The no-wax vinyl comes in gold, white, green and almond colors; and has a flame spread of 20 (ASTM E-84). / Congoleum Corp. GB, LRC, I*

359 EMBOSSED VINYL / A smooth raised coin pattern, "Loncoin" all-vinyl sheet provides a non-slip safety surface and low maintenance characteristics in heavy traffic areas. A cloth backing promotes good adhesion to the substrate; solvent welding installation of "Loncoin" material provides a seamless floor. / Lonsel Inc. GB*

360 TILE PATTERN / "Barclay Square" sheet vinyl flooring has a pattern of small natural tiles available in six colorations. One of the "Villager" floors intended for the residential construction market, the vinyl sheet has a no-wax wear-layer 20 per cent thicker than minimum FHA requirements. / Congoleum Corp. GB, LRD, I*

361 RESIDENTIAL VINYL / A Spanish motif highlights "Cedar Grove" no-wax vinyl flooring, which has a floral diamond tile inset with a hand-tooled look. Available in six colors, the cushioned vinyl meets FHA specifications for residential housing. / Congoleum Corp. GB, LRD, I*

362 VINYL MATTING / Open construction of resilient vinyl loops allows grit, dirt and snow from footgear to pass through *Nomad* heavy-duty floor mat for easy clean-up. The 1/2-in.-thick mat is easily cut to fit, and is resistant to grease and most harsh chemicals used in industry. Passes the FS FF1-70 Flammability test. / 3M Co.

363 COLORED RUBBER FLOORING / A full line of rubber tile, cove, base, and stair treads is now offered in 32 colors and three patterns. Made of thermal-molded rubber, the flooring products are abrasion-, fire-, and stain-resistant. / Burke Flooring Products. GB*

364 SHEET FLOORING / Especially manufactured for the heavy traffic and low maintenance requirements of contract and institutional applications, "Architect's Choice" has a 25-mil thick vinyl wear layer. Flooring meets Hill-Burton smoke generation standards, and has a Class B rating with O Fuel Contribution. / Mannington Mills Inc.

365 VINYL COMPOSITION TILE / "Concours" vinyl composition floor tile features a large-scale design: four 12-by 12-in. tiles form a circle. Tiles may be installed in any arrangement for a custom flooring pattern. "Concours" is available in terracotta, white, tan and light beige colorations, and is grease-proof, alkali-, fire- and stain-resistant. / Azrock Floor Products. GB*

366 RESIDENTIAL VINYL / An addition to the "Villager" line of sheet vinyl flooring marketed for the residential building industry, "Harmony Court" pattern has five natural-tone colors in a simple geometric design. The flooring has an ASTM E-84 Flame Spread of 30, and is said to show superior resistance to alkaline, mildew, and staining. / Congoleum Corp. GB, LRD, I*

367 COMMERCIAL FLOORING / The "Dynasty" vinyl flooring line is suitable for public and light commercial uses, as well as in private homes. The "Camarillo" pattern shown has a look of ceramic tile, with realistic grout lines, and is offered in five colors. / GB, LRC, I*

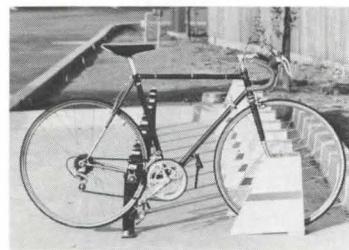
368 SHEET VINYL / Another "Villager" residential flooring pattern, "Fair-lawn" is a natural over-all design offered in four colors: gold, white, almond, and avocado. It can be installed on, above or below grade, and has good color integrity and abrasion resistance. / Congoleum Corp. GB, LRC, I*

SPECIAL COATINGS & SURFACINGS

369 PARTICLEBOARD COATING / A durable surface applied to one or both sides of *KorPINE* particleboard substrate, *KorTron/EB* is applied by an electron beam in a wide range of solid colors. For use in shelving, cabinets, institutional furniture, etc., *KorTron/EB* is abrasion-, stain-, and scald-resistant. / Willamette Industries, Bend, Ore. GB, ICR, LRC, E, I*

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ATHLETIC EQUIPMENT

487 CYCLE SECURITY / A two-compartment unit constructed of *Nylabond* coated steel bar and anodized aluminum plate, the "RR-300" rack accepts all bicycles and locking devices, securing vehicle frame and both wheels. Modular units permit a variety of placement options. / Rally Racks Div.

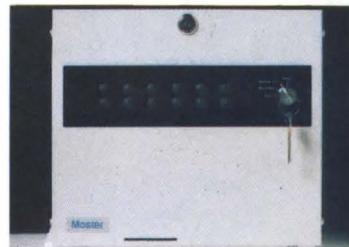
BANK & VAULT EQUIPMENT

488 SURVEILLANCE CAMERA / The *Photoguard* 35mm camera provides constant surveillance of bank and security areas. Made to be as failproof as possible, the camera has solid-state controls, precision drive, daylight spool loading, and constant monitoring capacity. / Mosler, An American Standard Co. GB*

489 ALARM SYSTEM / Representing the most comprehensive bank burglary protection ever offered by this maker, the "Century 21 Bank Alarm System" supplies electronic security equipment for a range of exposure levels. Mosler, An American Standard Co. GB*



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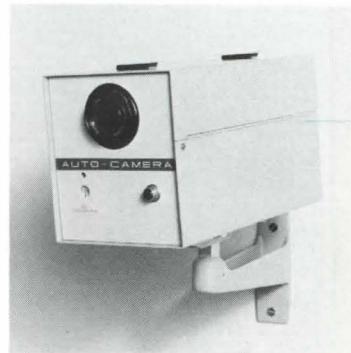
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490 VAULT DOOR / Easy to operate, the "American II" 3½-in. vault door has been designed to solve architectural and security problems of organizations that must keep cash, securities, and valuable documents with maximum safety. The "American II" vault door has 13 different appearance options. / Mosler, An American Standard Co. GB*

491 HOLDUP PROTECTION / The "MAC-14" alarm system provides up to 14 individual zones of dependable day/night holdup protection and premise security. It has the capability to immediately sound an alarm bell upon any criminal incident, and/or simultaneously alert law enforcement agencies via a silent signal. / Mosler, An American Standard Co. GB*

492 REMOTE TELLER / The *Trans-Vista III* transaction system is said to be fast, simple to operate, and economically priced. A direct-vision teller unit, the *Trans-Vista III* has a 4½-in. pneumatic tube carrier, with a horizontal presentation for send and receive. / Mosler, An American Standard Co. GB*

493 BANK COUNTERS / Financial furniture designed specifically for banks uses a system of interchangeable panels, allowing the specification of any type surface, color or finish. The modular counter units can be assembled in many different configurations. / Mosler, An American Standard Co. GB*

494 WIDE-ANGLE SURVEILLANCE / A full-frame 35mm camera, "Model 22" meets all bank and FDIC regulations. Its wide-angle f2.8 lens gives 63 deg coverage; film magazine holds up to 150 ft of film. Two modes of operation allow for "Hold-up override" and one-frame "suspicion" capability. / D/B Cameras, American Electronics. Div.

495 SECURITY CAMERA / The "Surveillance Camera System" offers the economies and photo clarity of 16mm equipment, allowing banks to identify bad check passers and robbers, and to monitor transactions. Camera is automatically operated by a data authenticating device, which matches checks to photos of cashiers; it can also provide continuous surveillance and fast filming during hold-ups. One camera can cover three teller stations. Price: \$1000. / 3M Co., GB*

ATHLETIC EQUIPMENT
BANK & VAULT EQUIPMENT
DARKROOM EQUIPMENT
FOOD SERVICE EQUIPMENT
INDUSTRIAL EQUIPMENT
LAUNDRY EQUIPMENT
LOADING DOCK EQUIPMENT
MEDICAL EQUIPMENT
PARKING EQUIPMENT
RESIDENTIAL EQUIPMENT
THEATER & STAGE EQUIPMENT

*In 1979 Sweet's Catalog File (s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR).

to 3-in. dia. / Ingersoll-Rand Co.

door doubles as a work area. / Square
D Co.

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ARCHITECTURAL RECORD Mid-October 1978

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ATHLETIC EQUIPMENT

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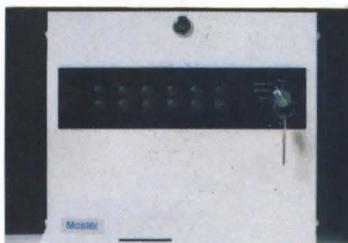
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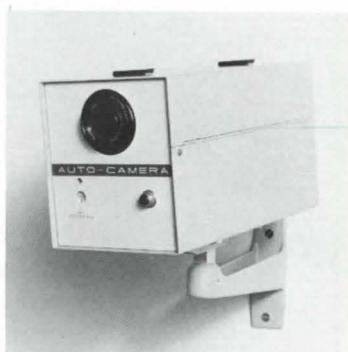
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493 BANK COUNTERS / Financial furniture designed specifically for banks uses a system of interchangeable panels, allowing the specification of any type surface, color or finish. The modular counter units can be assembled in many different configurations. / Mosler, An American Standard Co. GB*

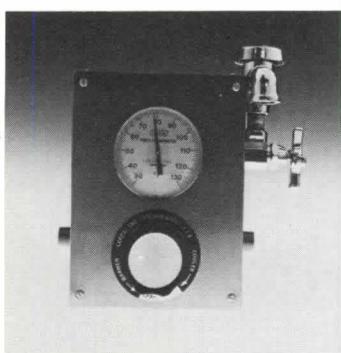
494 WIDE-ANGLE SURVEILLANCE / A full-frame 35mm camera, "Model 22" meets all bank and FDIC regulations. Its wide-angle f2.8 lens gives 63 deg coverage; film magazine holds up to 150 ft of film. Two modes of operation allow for "Hold-up override" and one-frame "suspicion" capability. / D/B Cameras, American Electronics. Div.

495 SECURITY CAMERA / The "Surveillance Camera System" offers the economies and photo clarity of 16mm equipment, allowing banks to identify bad check passers and robbers, and to monitor transactions. Camera is automatically operated by a data authenticating device, which matches checks to photos of cashiers; it can also provide continuous surveillance and fast filming during hold-ups. One camera can cover three teller stations. Price: \$1000. / 3M Co., GB*

ATHLETIC EQUIPMENT
BANK & VAULT EQUIPMENT
DARKROOM EQUIPMENT
FOOD SERVICE EQUIPMENT
INDUSTRIAL EQUIPMENT
LAUNDRY EQUIPMENT
LOADING DOCK EQUIPMENT
MEDICAL EQUIPMENT
PARKING EQUIPMENT
RESIDENTIAL EQUIPMENT
THEATER & STAGE EQUIPMENT



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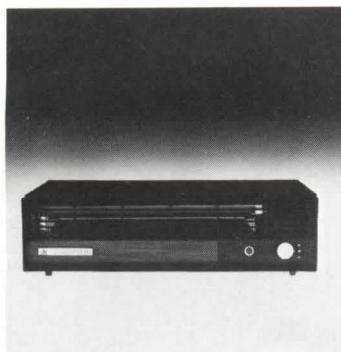
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DARKROOM EQUIPMENT

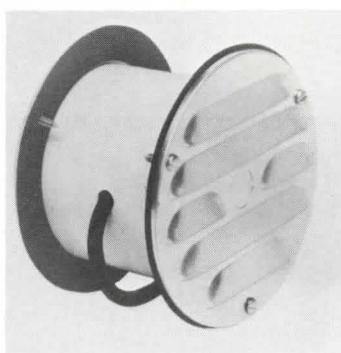
496 FIBERGLASS SINKS / Sink pans are fiberglass with a red gel coat surface layer; ribbed bottoms improve temperature control of developing fluids without the use of duckboards. Stands are electro-galvanized metal; features include a full-size lower storage shelf and adjustable leveling feet. / Leedal, Inc. GB, E*

497 TEMPERATURE CONTROLS / Thermostatic water controls are designed to maintain accurate temperature for processing film, prints and X-rays. Unit automatically mixes cold and hot water supplied to achieve correct temperature, and compensates for the usual fluctuations in water pressure. / Leedal, Inc. GB, E*

498 DARKROOM EQUIPMENT / Unit shown is one of a full line of stainless steel processing sinks and print washers available for graphic arts, photo and X-ray production. All steel parts are arc welded; stainless surfaces are completely resistant to photographic chemicals. Bases are zinc-plated, painted with *Resistal* synthetic finish. / Leedal, Inc. GB, E*



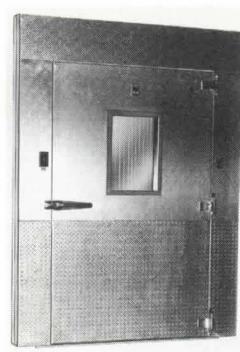
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499 ELECTRONIC AIR CLEANER / Capable of cleaning the air of particles that spot negatives and prints in rooms up to 10- by 15-feet. Unit operates at two speeds; stainless steel screen and plate are washable. / Leedal, Inc. GB, E*

FOOD SERVICE EQUIPMENT

500 FREEZER VENT PORT / Two models of heated ventilator ports for walk-in coolers and freezers have a spring-loaded, two-way valve to permit outside air to enter during the cooling cycle, and expanding air to escape when defrosting. The ventilator ports equalize pressure inside the cooler/freezer, so doors open and close easily. / Kason Industries, Inc.

501 CANTILEVERED SHELVING / Said to provide maximum food storage capacity in any given space, these adjustable cantilevered shelves have been designed especially for use in prefabricated walk-in coolers and freezers. Shelves are made of galvanized or stainless steel; wall standards are extruded aluminum. / Bally Case & Cooler, Inc. GB, E*

502 ABUSE-PROOF DOOR / Offered as an option on this maker's walk-in freezers and coolers, the "Super Door" has diamond plate kick and bump sections on door frame and face, inside and outside. Doors are insulated with 4-in. of foamed-in-place urethane. / Bally Case & Cooler, Inc. GB, E*

503 MOBILE SERVING CART / Able to serve 250 people coffee or cocktails, the "Meeting Master" cart dispenses hot water, coffee, and post- or pre-mix carbonated beverages from both sides of the unit. The service cart requires no utility connections, and can hold coffee at a temperature of 175F or more for over two hours. Prices range from \$1865 to \$3950, depending on options selected. / Gentleman-Stoner, Inc.

504 COMMERCIAL DISHWASHERS / Energy-saving features of the "Speeder 6" double-tank dishwashing machine include automatic shut-down when intervals between rack processing exceed a preset time. UL-listed and NSF approved-unit is built for heavy-duty use and simplified, front-access maintenance and repair. / Insinger Machine Co. GB, E*

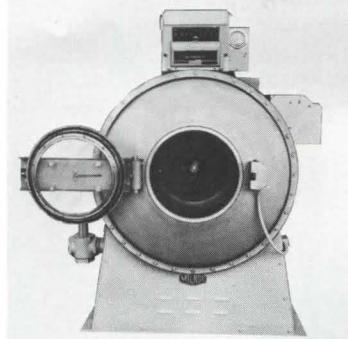
505 COMMERCIAL ICE MAKER / Producing up to 521 lb. of hard ice cubes per 24 hrs., the *Transtec II* commercial ice maker head fits in a space 17-in.-wide by 26-in. deep. A flow-through water system automatically meters the amount of water introduced into the freezing chamber, permitting a small amount of water to continuously drain and flush away minerals and impurities accumulated during ice formation. / Whirlpool Corp. GB, E*

506 PATTERNED TRAYS / "Fabrilla" trays have imported art prints molded into the transparent resin surface; 14- by 18-in. trays are stain-resistant, dishwasher-proof and virtually unbreakable. / Molded Fiber Glass Tray Co.

507 FOOD SERVICE TRAYS / Made of fiberglass-reinforced plastic, this line of trays, boxes, and containers meets FDA, NSF, and BISSC standards for food-handling products. Equipment can also be custom-molded to meet individual service requirements. / Molded Fiber Glass Tray Co.



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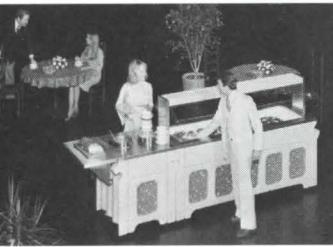
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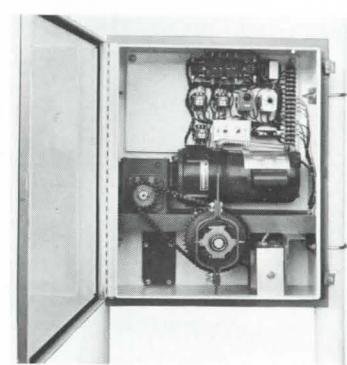
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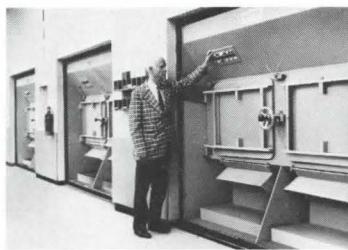
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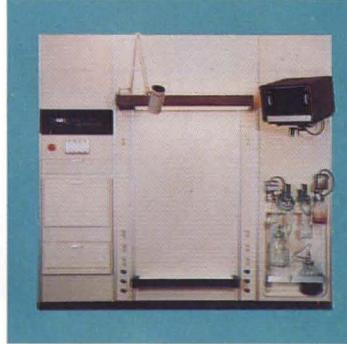
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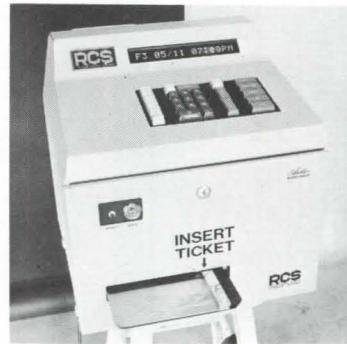
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508 NOURISHMENT STATION / The "Chef Center" is designed to facilitate the storing, preparation and dispensing of ice, liquids, regular meals, supplementary diets, and between meal food. Units are 72- or 84-in. wide; each includes a refrigeration unit and granular ice maker; two hot plates; supplies dispensers; and work and storage areas. The larger unit is pre-wired for microwave ovens. / AMSCO/American Sterilizer Co., GB, E*

509 BUFFET/CAFETERIA UNITS / The Wear-ever "Galley" line of hot and cold food display and service units consists of self-contained modules easily arranged by one person into a number of dining traffic patterns. Units are UL-listed, and NSF-approved. / Lincoln Mfg. Co.

INDUSTRIAL EQUIPMENT

510 HYDRAULIC WRENCH / An air/hydraulic power module provides extremely accurate and consistent torque control to this hydraulic wrench system for running threaded fasteners. Four wrench sizes work bolts from 3/4- to 3-in. dia. / Ingersoll-Rand Co.

LAUNDRY EQUIPMENT

511 OPEN POCKET WASHER / Large laundry production capacity in a small space is a feature of the "4226 QWE" 125-lb open pocket washer-extractor. A 42-in. washing cylinder provides good lifting and dropping wash action; the *Mitrol* automatic programmer controls all functions, including injecting supplies into the machine. / Pellerin Milnor Corp. GB*

512 COIN-OPERATED WASHER / Two-speed commercial *Filter-Flo* washers, the "Water-Miser" units require only 40.6 gal per load. All-cold-water rinses and reduced hot water consumption in the wash cycle provide additional energy savings. / General Electric Co., GB, LRC*

513 SELF-CONTAINED LAUNDRY / All laundry machines in this line—up to and including the 800-lb dry-weight capacity units shown in photo—are combination washing machine, extractor, and final fluff machine. Equipment can process all types of laundry, from heavily soiled shop cloths to hospital linens. / G. A. Braun Inc. ICR*

LOADING DOCK EQUIPMENT

514 DOCKLEVELERS / Extensive use-testing went into the development of *Dyna-Load* docklevelers, with balanced-stress design and unitized construction. Three operating modes are offered: hydraulic; mechanical; and a utility model, spring-counterbalanced and manually raised. Dockleveler prices start at \$800. / Kelley Co., Inc. GB*

MEDICAL EQUIPMENT

515 EXAMINATION LIGHTS / *Examtron* lights are specifically designed for medical use, and have been approved for minor surgery applications. Fixture comes in units for wall, ceiling or mobile floorstands. / Keene Corp./Lighting Div.

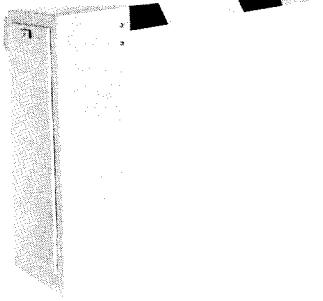
516 MEDICAL WALL / A nurse's cabinet providing ample in-wall storage space for diagnostic equipment, medications and supplies is now offered as a part of the "Series 3000" medical wall system. The cabinet's fold-down door doubles as a work area. / Square D Co.

517 NEONATAL CARE UNITS / Constructed to meet UL 1047 and available with non-isolated or isolated electrical systems, this line of neonatal intensive-care units can adapt efficiently to any pediatric area. Each module can be either wall-mounted or freestanding, and can handle up to four incubators. Space for linen and instrument storage is included. / Square D Co.

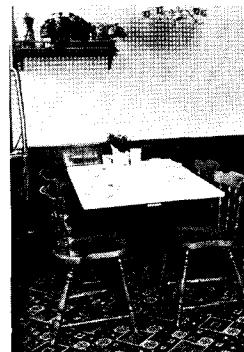
PARKING EQUIPMENT

518 GATE OPERATORS / The "GS" series is a heavy-duty line of gear drive electric fence operators, post-mounted for simplified installation in parking lots or industrial access areas. All relay logic are plug-in type for ease of maintenance. / International Controls & Equipment Co.

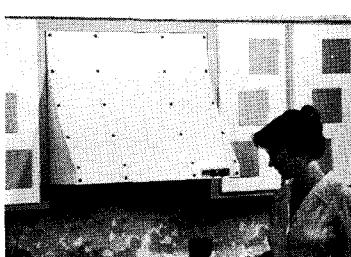
519 PARKING FEE COMPUTER / An electronic cash register, the *Auditor CR* computes and displays the parking fee, prints a customer receipt, produces a ticket audit trail, and reports revenue totals and exit lane statistics. Easy to operate the *Auditor* leads the attendant through each step of the transaction. / Revenue Control Sciences.



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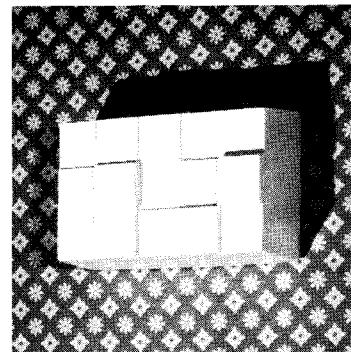
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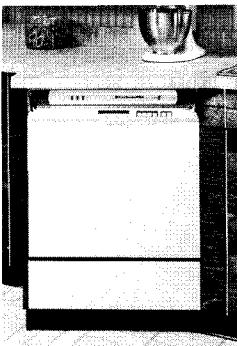
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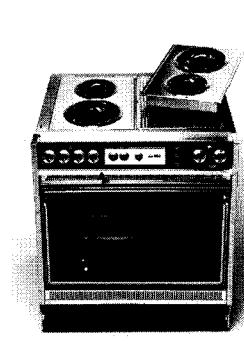
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520 AUTOMOBILE BARRIER / The "Single Door" auto gate is easy to adjust and service. The all-weather steel cabinet has a white textured finish; UL-listed unit is 42-in. high and draws 15 amps. It is part of a complete line of parking control systems, card readers, ticket spitters, and coin acceptors. / Automatic Parking Devices Inc. GB, ICR, E*

RESIDENTIAL EQUIPMENT

521 DISHWASHER / *Potscrubber III* dishwashers offer a high performance wash action, with a number of lower water usage cycle selection options. Deep, heavy-gauge racks provide flexible loading; the *PermaTuf* interior will not chip, crack, peel or rust. / General Electric Co., GB, LRC*

522 BUILT-IN DISHWASHER / Priced in the upper middle of this dishwasher line, the new "Patrician" built-in unit has a multi-level washing system and a hot-water saving short wash cycle. UL-listed dishwasher has a limited five-year guarantee. / KitchenAid Div., Hobart Corp. LRC*

523 FOLDING WALL TABLE / The "Floating Fold" wall table, measuring 30- by 48-in., is a space-saving "disappearing" fixture for apartment dining areas, utility room, etc. The surface rises into place with a slight lift, locking into a cantilevered position. The counterbalanced hinge holds the table vertically up against the wall when not in use, projecting only 2 1/2-in. Surfaces offered in laminate or wood; custom sizes and materials available. / SICO, Inc. GB*

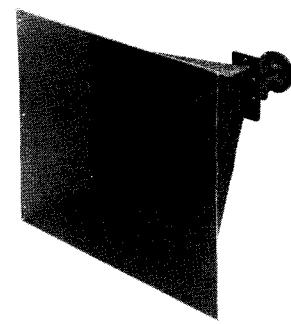
524 DOOR CHIME / The "Surreal" chime cover is a white random high-low montage of squares and rectangles, 6 1/4-in. wide by 4 1/2-in. high. The chime sounds two notes for the front door, one note for the rear door. / Miami-Carey.

525 BARBECUE/RANGE / Available as a drop-in, set-in, or freestanding unit with side panels, The *Dacor* full-size self-cleaning oven is offered with a convertible barbecue cooktop. Cooking modules are either energy-saving *Econo-Coil* or *Smoothline* glass, and are interchangeable with barbecue, griddle and rotisserie accessories. / Distinctive Appliance Corp. LRC*

526 RANGE HOOD / A canopy-type hood 24-in. high is available in textured steel in six colors: almond, coffee, wheat, avocado, onyx, and white. Ducted or unducted units have an infinite speed control, work light, and easy-to-clean fan blade assemblies. / Miami-Carey.

527 ICEMAKER / For use in homes, offices, hotel suites, etc., the "DC30" icemaker can now be ordered with walnut front panels, embossed steel sides, and a white leather grain finish. The icemaker is 33-in. high by 15-in. wide, and can produce up to 700 hard, clear cubes daily. / Scotsman Ice Systems, Queen Products Div., King-Seeley Thermos Co. LRC*

528 MICROWAVE/ELECTRIC OVEN / Kitchen range combines full 700-watt microwave cooking power with the advantages of conventional baking and broiling, cooking at the same time or independently in the same full-size, self-cleaning oven. Range has variable control of microwave power at settings from 20 to 100 per cent. Priced at \$949.95, range has UL, BRH, and FCC approvals. / Caloric Corp.



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THEATER & STAGE EQUIPMENT

529 AUDIO TIME RELAY / A high-quality time-delay device using shift-register type digital circuitry, the "1640" system's low cost relative to other digital units may allow its use in many applications which previously could not economically justify time delay. / Altec Lansing.

530 SOUND REINFORCEMENT / The "1660" and "1661" modular audio time delay devices can be effectively used in a reinforcement system in theaters, rooms with a very high reverberation time, and recording studios. Outputs are adjustable in 1 ms increments, up to 510 ms. / Altec Lansing.

531 LOUDSPEAKER / A directivity control mid/high-frequency horn, model "MR64" is said to eliminate the problem of high-frequency beaming, maintaining uniform dispersion at all frequencies. Listeners sitting off-axis of a *Mantaray* speaker will hear the same sound quality as those sitting on-axis. Lightweight horn design minimizes resonance. / Altec Lansing



Carpet Installations of Zefran and Zeflon

3087 NYLON CARPETING / A 20-page brochure supplies use data and color photos of a number of commercial applications of contract carpeting made from Zefran and Zeflon nylon. It also explains the free services offered to carpet specifiers, architects and builders. / Dow Badische Co.

3088 CARPET TREATMENT / A color folder explains how the *Scotchgard* carpet protector system holds dirt, grit and grime loose near the surface of carpets for easier removal by vacuum. This greatly extends the time interval between carpet cleaning and saves maintenance costs, according to the literature. / Commercial Chemicals Div., 3M.

3089 COMMERCIAL CARPET / Written specifically for architects, interior designers, and other specifiers, architects and builders, four guides provide updated information on selecting carpet for educational, health care, business/commercial and lodging/food service facilities. Data given on *Antron III* nylon carpets include construction and wear characteristics, cleanability, and product performance test results. / Du Pont Textile Fibers.

3090 CONTRACT CARPETS / A portfolio provides actual samples of six different qualities of wool faced/polyester backed velvet-loomed carpet. The multiple-needle tufted carpet is available skein dyed and seamless in custom widths, shapes and colors. Priced from \$29.61 to \$44.91 per sq yd. / V'Soske.

3091 SAFETY FLOORING / A color fact sheet gives details on the flame-retardant qualities of *Disc-O-Tile* and *Disc-O-Tred* safety design flooring and stair treads. The rubber flooring material is shown in the six standard colors offered. / The R.C. Musson Rubber Co. GB, ICR*

3092 STAIR COVERINGS / An 8-page catalog presents a full line of color-coordinated rubber and vinyl treads, risers, stringers, flooring and landing tiles. Each product is illustrated with photos and detail drawings. / The R.C. Musson Rubber Co. GB, ICR*

3093 SEAMLESS VINYL FLOORS / Seam-welded solid vinyl flooring is featured in an 8-page catalog. The 36-by 36-in. tiles are laid in the standard way; the seams are then routed out and the sections heat fused together with vinyl beading. The result is a completely homogeneous floor surface with no open seams, suitable for hospitals, nursing homes, etc., as well as commercial uses. Four tile patterns are available. / VPI.GB*

3094 SHEET VINYL / Imported from Sweden and marketed throughout the U.S., *Tarkett* sheet vinyl flooring is 80 per cent vinyl, and offers a five-year wear guarantee. A color brochure discusses the various flooring systems, especially designed for various hospital, school, gymnasium, industrial and other requirements. Material provides flame and other test data, and compares the life-cycle advantages of *Tarkett* flooring. / Tarco Western, Inc.

3095 TERRA COTTA TILE / Color catalog page shows hand-made Mexican Terra Cotta tile in a number of residential and commercial flooring applications. Low-fired clay tiles are 3/4-in. thick, available in square, rectangular and hexagonal shapes. / Hastings Tile.

3096 VITRIFIED GLASS TILE / A four-page brochure is illustrated by recent installations of "Module 42" frost-proof colored glass tile. The 1 5/8-in.-dia tile is offered in four standard colors; custom colors are available for large orders. / Hastings Tile.

3097 HAND-PAINTED TILE / Italian tile in dozens of colorful hand-painted patterns is shown in a 4-page catalog. Installation photos show "Serie Italia" tile on floors and walls in both commercial and residential applications. / Hastings Tile.

3098 MARBLE TILE / A Sample Portfolio includes a full size, 6- by 6- by 1/4 in. marble tile, plus nine additional samples in other available colors. Literature shows many applications of marble tile for foyers, bathrooms, walls, dining rooms, fireplaces, etc. The file-sized folder costs \$7.50, refunded on the first order. Bufalini Marble Corp., 4 West 56th Street, New York, N.Y. 10019.

3099 VITREOUS PAVERS / Complete product specifications are given for stoneware *Minerva* pavers; catalog page also shows the nine earth-tone colors offered in the dense, frost-proof tile line. Unit price is about \$1.25 per sq ft. / Structural Stoneware Inc.

more literature on page 146

**In 1979 Sweet's Catalog File (s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR).*

THE DOK LIFT!

What It Is.



■ Definition: A Dok Lift is an inexpensive freight elevator used at the dock to load and unload trucks.

FOR MORE INFORMATION WRITE FOR YOUR FREE DOK LIFT DATA KIT!

Where it is used.

- **At Buildings With No Dock** to act as a Dock. A Dok Lift provides maximum loading dock utility because of its infinite range of adjustment. It is far less expensive than building up a concrete dock or digging out a depressed driveway.
- **At Buildings With A Raised Dock** to handle irregular traffic. Because of its infinite range of adjustment, a Dok Lift can service a far greater range of truck loading heights than docks with fixed heights or docks equipped with dock levelers.
- **As An Alternative To A Concrete Ramp** to handle dock to ground access. A Dok Lift is less expensive, uses less real estate, provides greater building security, reduces mobile equipment maintenance costs and is far safer and easier to use than a concrete ramp.

ADVANCE LIFTS, INC. • 1000 LEE STREET • ELK GROVE, IL 60007 • 312/956-7404

Circle 1046 on inquiry card

The look and comfort of honest elegance.

All-Steel's new 130 series seating.

A blend of tasteful styling, ergonomics, and quality engineering.

Here is a subtle fusion of form, materials, and concerned attention to detail. A deep, dual cushioning system offers luxurious, controlled support to both the lighter and heavier parts of the body, and the waterfall perimeter relieves under-

knee pressure which can interfere with circulation. Notice the angled arms. More than a styling element, they allow the chair to be pulled farther under a desk, closer to the work.

We use the intrinsic excitement of oval, tubular chrome and a unique button tufting to create design continuity.

The new 130 Series includes 13 models, 26 styles, and a choice of four or five-arm bases. We suggest you inspect and sit in these chairs yourself. Then, make your own assessment of honest elegance.

For our new color brochure, write to All-Steel, Aurora, IL 60507.

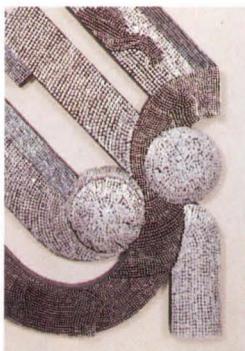




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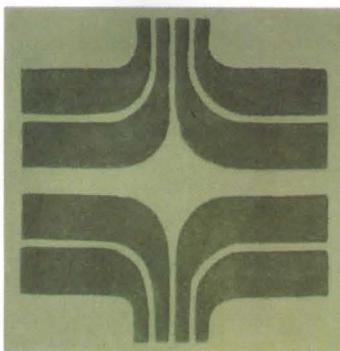
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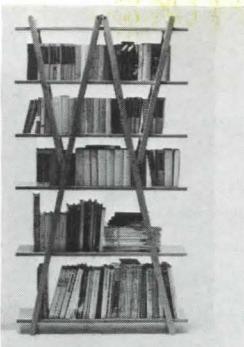
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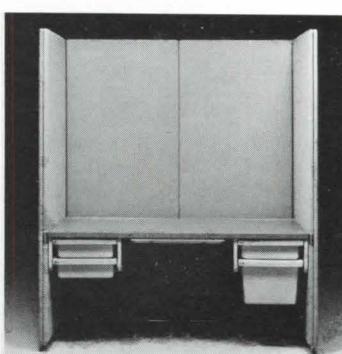
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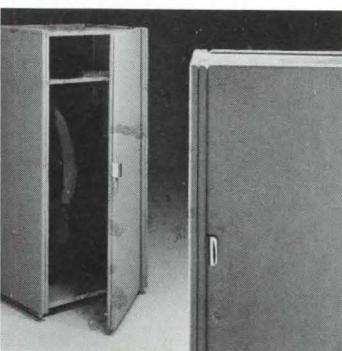
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ARTWORK

544 SERIGRAPH / Part of a limited edition of 250, "Strawberries in a Bowl" by Bob Stanley is one of a collection of art works offered for contract and commercial display. The 40- by 28½-in. serigraph is priced at \$300. / Marden Fine Arts.

545 WOODCARVINGS / Cheerful carvings of birds, animals and sun faces appear in a group of works by Stan Dann. Carvings are available in ash, unfinished or with a light natural finish, or redwood in three finish choices. / Forms & Surfaces, Inc.

546 WALL SCULPTURE / Pictured is one of Danish artist Oluf Gravesen's sculptures constructed entirely of nails. Other nail art in varying sizes includes spheres, boxes, and labyrinthine shapes. Prices range between \$1200 and \$3000; artist works on commission for special projects. / Karl Mann Associates.

547 TAPESTRIES / The artwork is based on the company's Architectural Painting System. It comes in 48- or 72-in. widths, on fire resistant polyester fabric. The system was designed to encourage rotation of artwork throughout the office. Any scene, art object or design that can be photographed can be reproduced. / 3M Company, Decorative Products Division.

548 ARTWORK / Any wall can be decorated with a photograph, like this rose. The process allows exclusive imagery to be used anywhere, but it is recommended for public spaces. / 3M Company, Decorative Products Division.

549 CORPORATE ART / Logos and other corporate identification can be woven into wall hangings of 100 per cent virgin wool carpet. Suitable for such large wall areas as banks, airports, etc., wall hangings can be made in sizes starting at 2- by 3-ft. / Logo Looms Ltd.

CABINETS & STORAGES

550 LIBRARY SHELVING / The "Nuova Rosa" freestanding library/shelving system may be specified with frame members in natural beechwood or beechwood tinted ebony. Frame assembly folds; beechwood veneer shelves are removable. / Atelier International.

551 DESK STORAGE UNITS / Storage units that hang below horizontal desk surface are made of molded polystyrene. Easily attachable, the drawers are rugged but lightweight. Each unit locks and has steel full-extension slides. / JG Furniture.

552 WARDROBE STORAGE / Assembled from standard UPS fabric-covered panels, with hardware for clothing or general office supply storage use, 34-in.-wide wardrobe units can be quickly set up "on the job." Options for different storage configurations include four-lamp up-light, with or without a parabolic louver. / JG Furniture.



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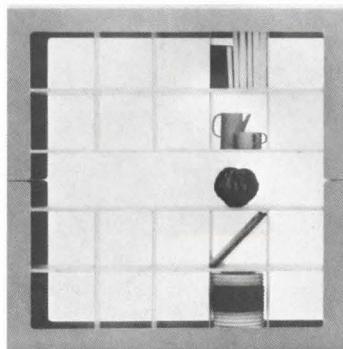
553 MODULAR STORAGE / *Unicel* is composed of six basic cabinets or cells that receive interior trays, pull-out shelves and drawers. Made of one-piece molded structural foam, *Unicel* storage can be sanitized in a cart washer or with a steam wand. / *Monitor Products*.

554 KITCHEN CABINETS / Large storage units have been added to the "Penthouse" line of kitchen cabinets. Constructed of plastic laminate in a range of solid colors, or woodgrains, "Penthouse" cabinets have hidden hinges, pull out shelves, and swing-out pantry units. / *Roseline Products, Inc.*

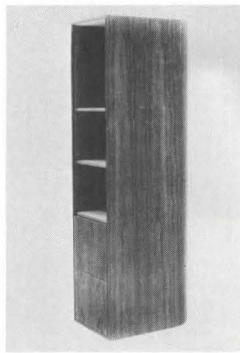
555 BED STORAGE / *Murphy Bed* cabinets can accommodate telephone, radio, book storage, ashtray, water carafe, etc. Cabinets may be ordered in any type of lumber or plastic laminate; in single-, double-, or queen-size. / *Lew Raynes Inc.*



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556 DIVIDER SYSTEM / Designed to function as a room dividing unit between the kitchen and the dining room, "Tielsa" cabinets follow kitchen casework dimensions and are accessible from both rooms. Finishes include oak, teak, walnut, rosewood and pine; doors are available to match. / *Contemporary Systems, Inc.*

557 ROOM DIVIDER / "Telaio" stacking units, designed by Pamio, Toso and Massari, are available in natural ash and a choice of laminate colors. / *Altair*.

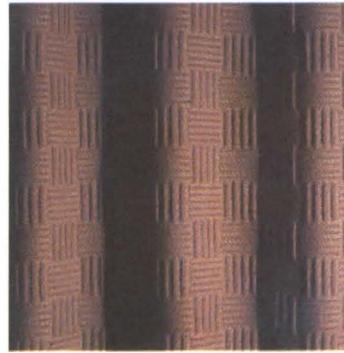
558 STORAGE COLUMNS / Vertical credenzas in the "Task Groups" collection are 54- and 75-in. tall; each has six file drawers, box drawer, shelving and door options. Mobile cabinets list at about \$2000, depending on configuration selected. / *Dunbar*.



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559 DRAWER MODULES / Stackable drawer/case units may be suspended in any combination beneath work surfaces in the "UniGroup Office" system. Mobile or stationary pedestal bases allow freestanding use of drawer stacks where needed, and include taboret top for service or storage. / *Haworth, Inc.*

560 PHARMACY COMPONENTS / All parts of the "Co Struc Pharmacy" work station system, including lockers, cassettes, drawers and medication carts, are especially designed to transport pharmacy products. New components include picking or dispensing rails, are intended for unit dose drug distribution. / *Herman Miller, Inc.*, Health/Science Div.

FABRICS

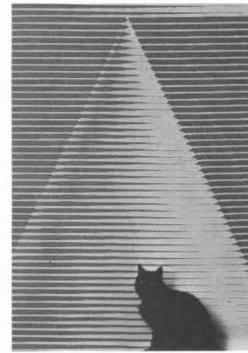
561 CONTEMPORARY FABRIC DESIGN / A 100 per cent wool fabric, the design called "Chequers" contemporizes the jacquard technique with a square motif, executed within a 3 1/4-in. repeat pattern. The palette is earthenware, terra cotta, burnt orange and zaffre. / *Gretchen Bellinger Inc.*



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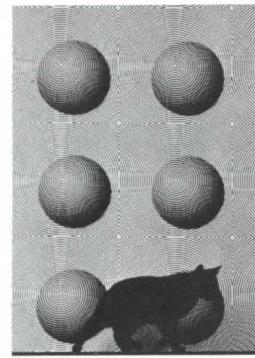


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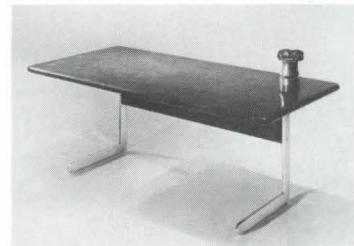
562 MATERIAL FOR PANELS / The "Carre" jacquard can be applied to either a curtain or panel wall. A 1/4-in. square motif is subdivided into four smaller squares of reverse diagonal weave. / *Gretchen Bellinger Inc.*

563 TEXTURED WEAVES / "Contour" collection is of textured stretch upholstery weaves from Scotland. Composed of 93 per cent wool, 6 per cent nylon, and 1 per cent elastane. They are flame retardant and water repellent. / *Scalamandre*.

564 DESIGN FABRICS / Designed by Verner Panton, this unusual wall of fabric is made of hand-screened material. "Design Cone 1" is one of two large geometric forms. They are printed in dark brown only on 48-in. wide cotton. Cost is \$30 per yd. / *Mira-X International Furnishings, Inc.*



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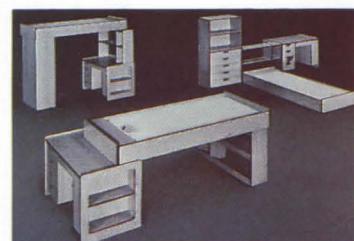
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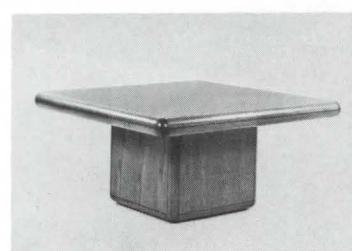
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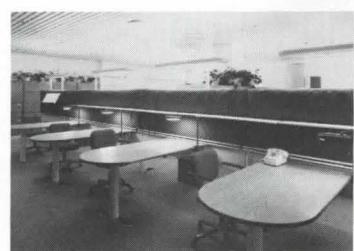
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565 PRINT / A hand-screened fabric-printed artwork is the "Design Globe." It is printed in three separated scales in a 1-2-3 ratio. Patterns are printed in dark brown only and are 48-in. wide. / Mira-X International.

FURNISHING ACCESSORIES

566 ASHTRAY / Designed by Barbieri and Marianelli, this rectangular or square ashtray has a removable lid and liner of black anodized aluminum in a modern, streamlined style. / Atelier International.

FURNITURE

567 CONFERENCE TABLE / The "Delta" oak table is recommended for conference room use. Designed by O.J. Holahan, the tops are of sliced white oak veneer or double needle stitched vinyl, and are available in a variety of finishes and colors. / The Sunlocke Company, Inc.

568 EXECUTIVE DESK / The "Architective V" desk series is a compact line in either walnut or carpathian elm burl, with either chrome- or bronze-finished steel bases. The cantilever effect of the desk is also utilized in a complementary credenza. / John Stuart International Inc.

569 STUDENT LIVING FURNITURE / A compact, modern, interlinking set of furniture pieces specially designed for student use, offers flexibility. The system is composed of a platform bed, desk, storage unit and bookshelf. / Thonet. I*

570 ENERGY SUPPORT SYSTEM / In order to provide off-the-floor electrically-serviced energy source, a paneling system that incorporates special raceways to handle power and communication lines has been devised. It can be used with existing or with attachable components. / Sunar Ltd.

571 OFFICE COMPONENT / As part of the Series 9000 + office furniture system is a wiring system that multiplies the power potential of the open plan work-station. / Steelcase, Inc.

572 COMPUTER ROOM FURNITURE / A task lighting component furniture system has been designed for the special needs of computers and their users in the "9000 +" series. CRT's can be positioned securely on hanging shelves with plenty of work surface adjacent. Electrical outlets can be moved easily from one work station to another. / Steelcase Inc.

573 ROUND CONFERENCE TABLES / Round "Concept" tables are available in four diameters and four heights, and with either solid oak or walnut bases. The tops are of polyester resin for durability and come in fourteen colors. They were designed for institutional, contract or residential applications. / Metropolitan Furniture Corp.

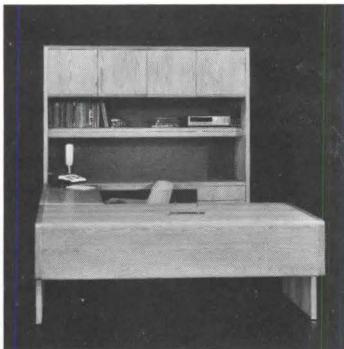
574 SEGMENTED DESK / A curved segmented desk is recommended for use by either the executive or the receptionist. It is available in white and walnut veneer. / Wood Design Office Furniture Co.

575 DORMITORY FURNITURE / A solid wood "Roommate Collection" provides a complete grouping for dormitory furniture including chest, bookcase, study chair, desk with light, wardrobe, platform bed with drawers or steel-frame bunkbeds. Available in solid red oak, ash and maple. / Adden Furniture Inc.

576 OPEN PLAN SYSTEM / This open plan furniture system incorporates units of various heights to accommodate a variety of working situations. Shown in a typical desk set-up with one circular light at each end with a storage unit above. / GF Business Equipment, Inc.



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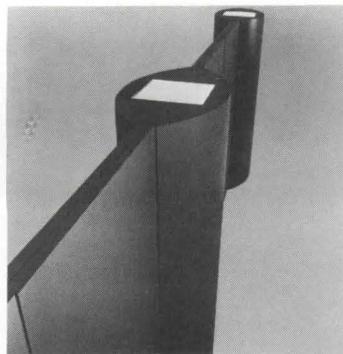


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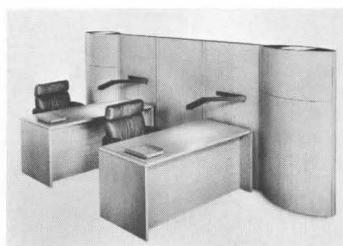
577 EXECUTIVE CONFERENCE TABLE / The first of a complete line of custom conference tables is this "RBT" model. The base is constructed of polished stainless steel. / Davis Furniture Industries, Inc.

578 OFFICE SYSTEM / An office system designed for the executive, the "POS" models use walnut and oak veneers. The system includes desks, credenzas and modular accessories, which offer a variety of tackboards, task lighting and storage units. / Davis Furniture Industries Inc.

579 MODULAR WORK STATIONS / Modular work station components comprise freestanding configurations. Task lighting is offered, along with a variety of necessary units typical in systems of this kind. Two-, three- or four-bay work stations in both oak and walnut are available. / NuCraft Furniture Co.



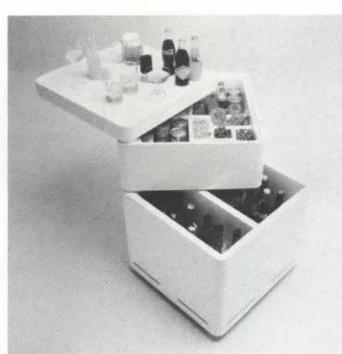
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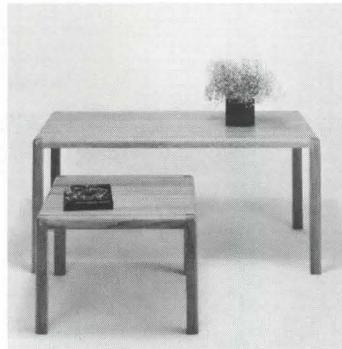
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580 WALL SECTION / An ovoid wall section acts as "light pockets" for housing HID ambient light fixtures. They can replace wall panels at any location within the company's Advent III furniture configuration. / Harvey Probber, Inc.

581 PRIVACY WALLS / Advent III partitions are easily movable to form a variety of work stations, either connected to furniture or freestanding. Each conceals electrical and communication cables. / Harvey Probber, Inc.

582 SYSTEMS FURNITURE / The "Series 8000" offers a comprehensive and versatile organization of both freestanding and modular components. Panels can be either acoustical or non-acoustical with choice of fabric and trim, and has raceways carrying a Class A fire rating. / All-Steel Inc.

583 PORTABLE REFRIGERATOR / A handsome portable refrigerated storage unit was designed by Carlo Urbinatti. Made of expanded polyurethane, *Ciarily Bar* is subdivided into three sections that open along a vertical axis. Ideally suited to either office, hotel or residential use. / Hastings II Bagno Collection.

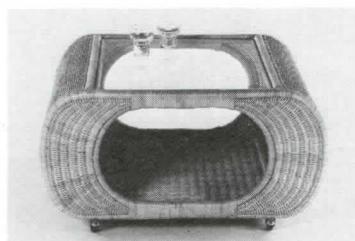
584 PARSON'S TABLE / A Parson's Radius table is made of exposed mortise and tenon joinery where the legs meet the table surface. Of solid oak, all edges are softened with a 1-in. radius. / Tuohy Furniture Corp.

585 CIRCULAR TABLES / In a series of "Cylinder" tables, there is a utilization of selected flitches of rift cut oak veneers. The tables are also available with optional plastic laminate tops. Heights are either 16-in. or 21-in. / Tuohy Furniture Corp.

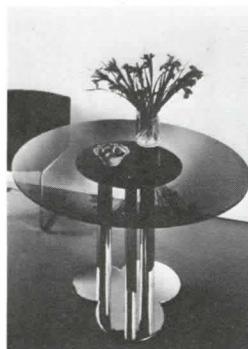
586 RECEPTIONIST'S STATION / An oak-framed movable wall, with acoustical panels, nearly surrounds existing furniture, hiding clutter. Hidden slots permit hang-on components. / Harter Corp.

587 OAK FURNITURE LINE / "Series 3300" includes executive desks, credenzas, storage units, tables and secretarial desks of oak, accented with metal trim. Front facing panels do not reach the floor. / Alma Desk Co.

588 COFFEE TABLE / The "250 Milano" low table was designed by Tito Agnoli and provides a transparent surface sandwiched between the legs and screw discs. The legs are of round tubular steel with a mirror-chrome finish. The glass top is available in smoked or clear glass. / Stendig, Inc.



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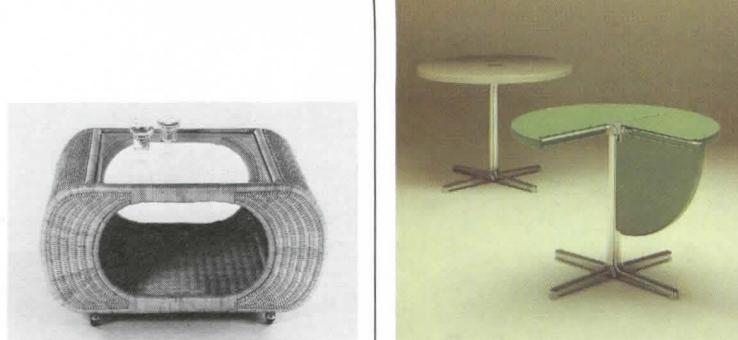


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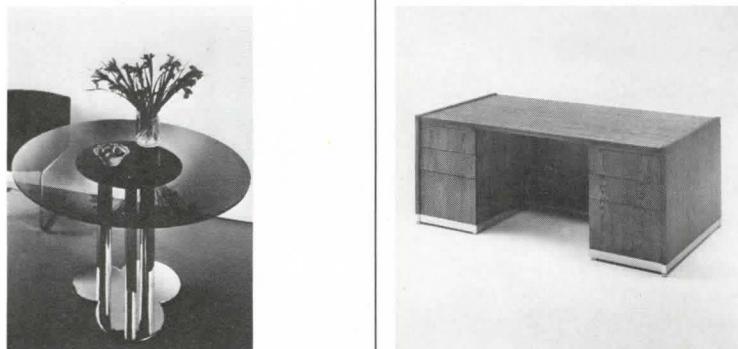
589 BAR TABLE / Constructed of natural woven rattan, "Samantha" furniture is durable for use in hotels due to a special understructure and weaving. It is topped by a light lacquer finish to permit sponge cleaning. The grouping includes lounge chairs, ottoman, chaise, coffee table and bar table (shown). / Stendig Inc.

590 DINING TABLE / Designed by Sergio Asti, the "Trifoglio" table stands on a base of mirror polished chrome in a design reminiscent of the Art Deco period. A variety of tops are available including marble, granite, burl and glass. / Stendig, Inc.

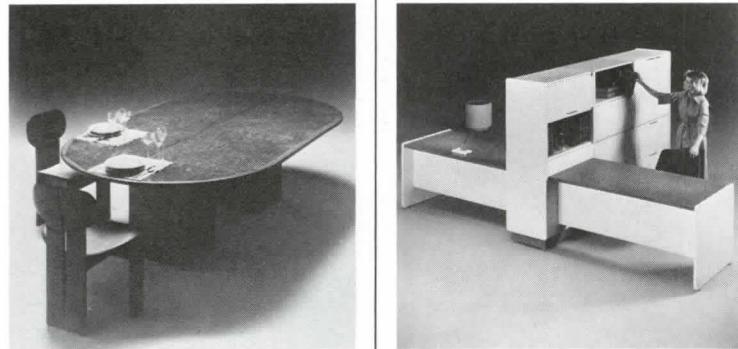
591 CONFERENCE/DINING TABLE / An interesting table design combines Briar surface with laminated walnut or rosewood edges set atop a base with parallel strips of hardwood with walnut and rosewood finish, and accented with brass striping. / B&B Italia.



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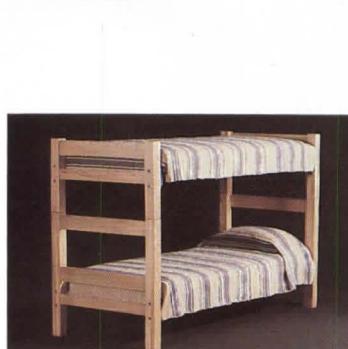
592 FOLDABLE TABLE / An ingenious design, the "Plano" folding table combines durability and style with easy storage. The top is molded rigid polyurethane available in white, green, beige and brown. / Castelli Furniture Inc.

593 WOOD DESK / The "Cube 1100" series office furniture combines credenzas, pedestal desks, L-shaped units and secretarial stations. Oak and walnut veneers are accented with polished chrome or antique bronze base plates. / Conwed Corp.

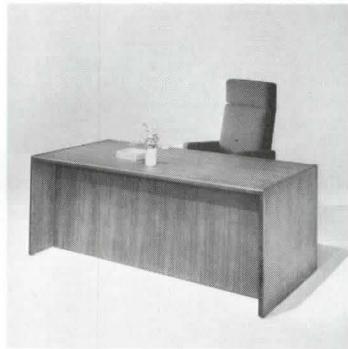
594 MODULAR WORK CENTER / To provide working convenience for an office the "Work Center" combines horizontal work surfaces with vertical filing and storage in easily assembled units. All modules can be rearranged and interchanged. / Conwed Corp.



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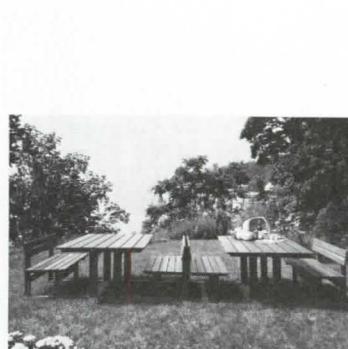
595 DESIGNER'S TABLE / The "T780" series of "occasional" tables has ten model variations all featuring two semi-circular wood bases topped by a plate of clear glass. The bases are available in either a 16-in. or 22-in. height, and in walnut, oak, dark lacquer, English oak, rosewood or elm burl. / Helikon Furniture Co., Inc.

596 BUNKBEDS / Sturdy bunkbeds, part of the "Roommate Collection," can be used for all residential applications but are recommended for dormitory use. Each bed has 3-in. sq solid wood posts, a steel channel frame, and is available with or without mattress. / Adden Furniture, Inc.

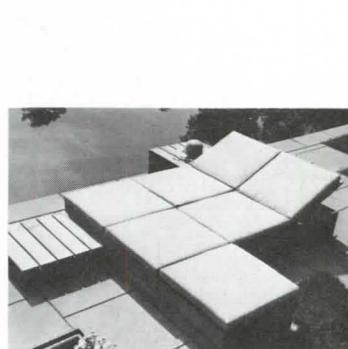
597 EXECUTIVE DESK / The "8874F" executive desk is of walnut. The desk and credenza (not shown) feature all panels coming to the floor giving a massive, yet stately appearance. / Myrtle Desk Co.



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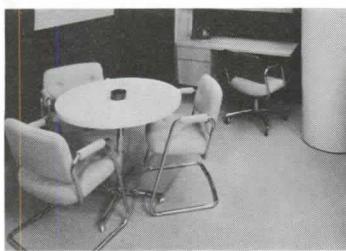


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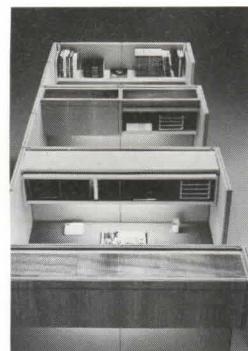
598 ULTRA-MODERN DESKS / The *Nelson Workspaces*, by George Nelson, were designed with special attention to detailing. Components are steel with liners of nylon-flocked rigid foam; troughs are provided at all edges to hold brackets supporting bookcases, shelves, panels, etc. A corrugated base resists impact. / Storwal International, Inc.

599 PICNIC TABLES / Sturdy, durable materials have been combined with contemporary styling in this outdoor furniture. Solid mahogany hardwood needs only to be cleaned with soapy water. / C1 Designs.

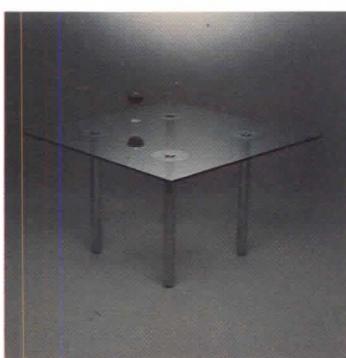
600 PADDED OUTDOOR FURNITURE / Mahogany hardwood is elegantly styled with cushions. Cushions are dacron wrapped foam, covered in canvas. A platform arrangement with movable parts allows for any kind of seating arrangement. / C1 Designs.



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601 OPEN PLAN OFFICE / These work stations use wood accent panels to highlight an open plan office system of contemporary style. Acoustical panels, "flipper" doors on cabinets are just a few features in a system with a variety of configurations. / Rosemount Office Systems, Inc. I*

602 CONTEMPORARY TABLE / The "Sunray" table comes in square, rectangular or circular tops in three different heights. The legs are of polished chrome with brushed satin support plates, fully visible through the plate glass tops. Tables with adjustable legs are also available with walnut, white oak, or plastic laminate tops. / Neville.

603 WOODEN BED FRAME / The "Tai" bed has a structure of natural or shaded black natural ash frame. Designed by Pamio and Toso, it is contemporary in style. / ALTAIR.

604 OVERHEAD STORAGE UNITS / In a variety of designs, these overhead storage units are specifically used with office furniture. Each model has lightweight "flipper" doors, optional locks, backed enamel parts throughout; up-lights are available. / JG Furniture.

605 WALL UNIT / The "Delta" wall unit features a refined detailing and oak veneers combined with white oak. The unit is available with optional acoustical tack panel and undershelf task lighting. / The Gunlocke Company, Inc.

RUGS

606 HAND-WOVEN RUGS / "Mira Coco basket weave" is a handwoven rug of cocoa vegetable fibers, chosen for durability, soil and dirt resistance, anti-static and colorfast characteristics. / Mira-X International Furnishings Inc.



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607 RUGS / Constructed with Acrilan plus acrylic pile, "Floral Inlay" comes in a variety of contemporary colors. Bold loops give the appearance of being hand-hooked. / Cabin Crafts Rugs, West-Point Pepperell Carpet & Rug Div.

SEATING

608 SLED-BASE CHAIR / For office use, the "Cambre" group chair has a sled-base as part of laminated oak frame. Light in scale, it is available in a wide range of fabrics and leather. / The Gunlocke Company, Inc.

609 STYLISH OFFICE CHAIR / A series of desk chairs elegantly styled, the "Alpha" series designed by Warren Snodgrass, is intended to be used throughout the office including secretarial and conference use. The design eliminates pressure on the backbone and has a sturdy 5-prong base. / The Gunlocke Company, Inc.



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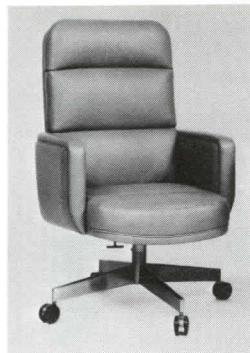


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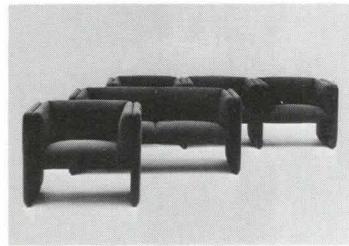
610 ANTHROPOMETRIC SEATING / The "Anthro Series" chair, designed by Leif Blodee, is called by the company "a machine for sitting." At the touch of a button, an optional gas cylinder adjusts the height and tilt of the chair. It has a 5-prong laminated bent oak base. / The Gunlocke Company, Inc.

611 VERSATILE SEATING / A modestly scaled chair for office use, the "De Fuccio Series II" chair has contoured upholstery outlined with a structural solid white oak steam bent frame, or is available fully upholstered. It has a chrome plated steel swivel base. / The Gunlocke Company, Inc.

612 CONTOURED WOOD CHAIR / The "Holohan Chair Collection" is constructed of contoured bent oak plywood. The wood base and perimeter line around fabric are highlights. / The Gunlocke Co., Inc.



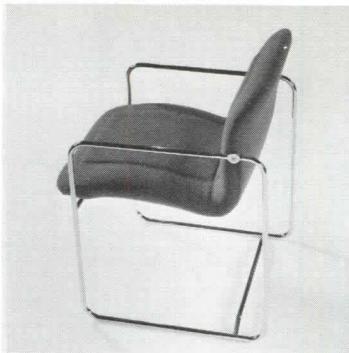
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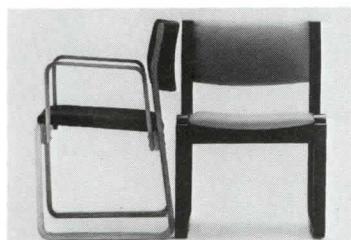
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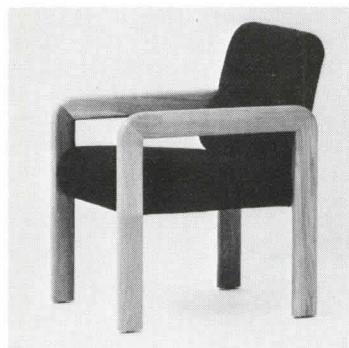
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613 LUXURIOUS OFFICE CHAIR / A distinctive chair for offices is the "Carlton Chair" that has ample proportions. Two versions feature full upholstery and segmented back styling. A variety of upholstery is available, along with leather. / The Gunlocke Company, Inc.

614 STREAMLINED CHAIR / The "De Fuccio Series I" chair, designed by Robert De Fuccio, is steam bended and has a minimum number of parts. The series emphasizes a direct method of joinery which incorporates a flexible back post for added comfort. / The Gunlocke Co. Inc.

615 TAILORED CHAIR / Designed by Jay Heumann, the "538 Seating Group" has exposed solid oak or walnut end frames and is available in single-, two- or three-seat versions. Recommended for contract and institutional applications. / Metropolitan Furniture Corp.

616 GANGED SEATING / Ganging is possible due to modular design, but a singular usage is equally appropriate. Assembling can be in a variety of ways including alternating the direction of chairs. / Metropolitan Furniture Corp.

617 EXECUTIVE SWIVEL CHAIR / A modestly-scaled chair of solid oak or walnut is available. A hardwood interior frame gives it added durability in heavy-use areas. / Metropolitan Furniture Corp.

618 COMPACT CHAIRS / Two new chairs to the "450 Series" are a five-adjustment secretary's chair and a high-back, swivel-tilt chair. Both are available in the full spectrum of fabrics and colors. Dual wheel casters are optional. / GF Business Equipment Inc.

619 OPEN OFFICE FURNITURE / Furniture that is particularly compatible with the open office plan is available in the "570 Series". There are seven basic models, each featuring self-skinned urethane arm and side-frame construction and leg "bumpers" to ward-off damage. A full range of fabrics, finishes and colors are available. / GF Business Equipment, Inc.

620 CURVILINEAR SOFT SEATING / Modular units of soft seating, called "Slope," form continuous ganged lounge seating. A variety of styles are available that make for an almost infinite combination and layouts. / JG Furniture.

621 MODULAR SOFT SEATING / Luxurious seating is designed to retain its comfort and appearance in heavy-use areas. Interchangeable cushions are available. There are one-, two-, three- and four-seat versions. / JG Furniture.

622 SIDE CHAIR / Designed by Stephen D. Sherman, this is a small side chair with $\frac{5}{8}$ -in. bent tubing frame holding a bent tubing upholstery box. / Davis Furniture Industries, Inc.

623 CHAIR SERIES / Designed by Richard Schultz, the "Paradigm" seating series is designed primarily for open plan office systems. The six chairs are variations on the basic design. Ergonomic considerations led to the sculptured seat and back shapes. / Stow/Davis Furniture.

624 OFFICE FURNITURE / The newest addition to the "130 Series" maintain design continuity throughout 13 different styles and 26 models with oval-tubular arms and bases of mirror chrome, and contoured one-piece outer shells. / All-Steel, Inc.



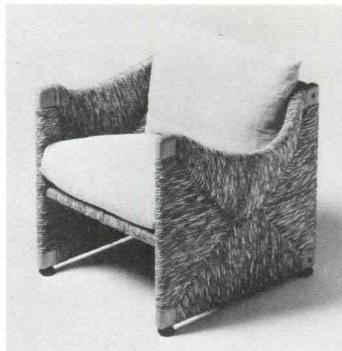
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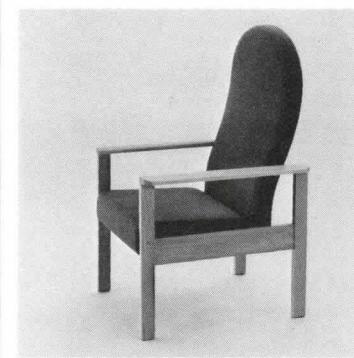
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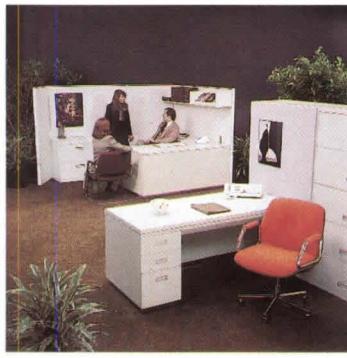
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625 HIGH STYLED CONFERENCE CHAIR / A lightly-scaled arm chair for conference room use has a slender line attributable to the seat and back cantilevering over a steel tube frame. / Harvey Probber, Inc.

626 STACKING CHAIR / This chair series has a laminated oak frame, available as arm chair or side chair. Special ergonomic design provides seating comfort. It is highly resistant to fire. / R-Way Furniture Co. I*

627 ROUND-BACK ARM CHAIR / Called the "UDC 137", this chair was designed for both contract and residential applications. It emphasizes an unbroken, flowing line and comes in walnut or oak frame with either leather or fabric. / Helikon Furniture Company, Inc.



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628 CONTEMPORARY SEATING / A collection of contemporary seating has an exposed solid walnut, sculptured frame with an upholstered back and seat in fabric, vinyl or top grain leather. The series offers swivel chairs and arm chairs. / Myrtle Desk Company.

629 HIGH-BACK CHAIR / For use in the extended-care market, a contoured cathedral back chair is available. The chair arm/leg frame is solid elm and may be detached from the upholstered seat/back. / Thonet.

630 SIDE CHAIRS / The new "Hoffman" chairs are revived from an original Hoffman design circa 1926. They have steam bent solid wood frames and seat rim. / Thonet.

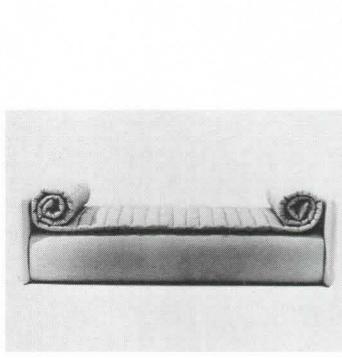


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631 ARM CHAIRS / The "Robert Bernard Arm Chairs" incorporate a solid oak frame with a continuous bentwood arm and front leg. The chair is available with or without an upholstered arm insert. / Thonet.

632 BREUER BARSTOOLS / An elegant, highly refined barstool version of the famous Breuer chair is available. In 24-in. and 30-in. heights, the barstools may be ordered with a cane seat and back, fully upholstered seat and back and or a combination of cane back and upholstered seat versions. / Thonet.

633 CHAISE / The "Liegend" chaise has a movable head-rest and a double-T base of stainless steel. The simplicity in line is a significant design feature. / Brayton International.



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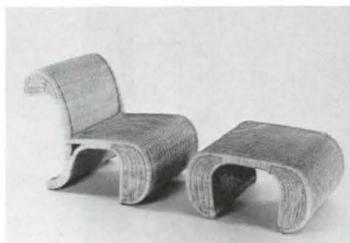
634 INFORMAL SEATING / The "Papiro" chair, designed by Mario Bellini, has a biechwood frame, with hand-woven seagrass covering bolted to biechwood subframe and supporting down-filled pillows. A full selection of fabrics, vinyls and leathers are available. / Cassina (distributed by Atelier International).

635 SECRETARIAL CHAIR / A swivel chair with centrally hinged upholstered back support are available in a variety of upholstering. The seat and back are contoured polyurethane foam with a steel back support and five-blade stainless base. / Castelli Furniture Inc.

636 CHAISE / An elegant design for a chaise has easily detachable upholstery for cleaning. List price: \$1875 COM. / Dunbar.



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637 TABLET ARM CHAIR / Constructed of solid red oak, this specialized chair has a wide writing surface of high-pressure laminate over Finnish plywood with radius edges. The seat and back can be all wood or upholstered. A book rack is standard. / Adden Furniture, Inc.

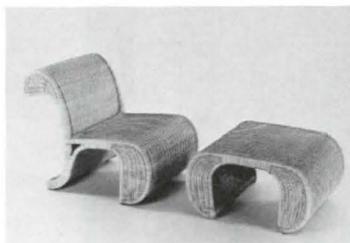
638 LOUNGE CHAIR / With a strong understructure of bent rattan, this hand-crafted chair is of an informal design by Nanna Ditzel of Denmark. Easily cleanable frame can be ordered with or without seat cushions. / Stendig, Inc.

639 CANTILEVERED CHAIR / A flat oval-shaped steel tubular frame supports a seat and back that cantilever. Almost any application is possible because of the simple design and durability. May be covered in company materials or COM. / Stendig, Inc.

*In 1979 Sweet's Catalog File (s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR).



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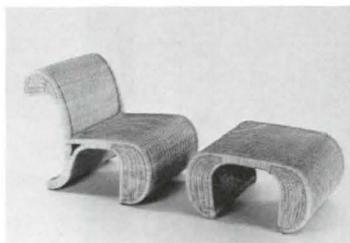
640 CLUB CHAIR / The "Davos Group" is made up of a club chair, two- and three-seat sofa and a footstool. A hardwood frame understructure is topped by layers of foam covered with dacron. / DeSede of Switzerland (distributed by Stendig, Inc.)

641 SOFA BED / The "Eletto" sofa bed has an aluminum and steel frame, imbedded in molded polyurethane, and is fixed onto steel strip netting. Highly styled when closed, it is not noticeably a sofa bed. Sheets and blankets can be made up and kept in place; there is storage for pillows. / B&B Italia.

642 LOUNGE SEATING / Distinctive styling and proportions highlight this design. A seat and back supporting frame made of cold rolled profiled steel is embedded in cold molded polyurethane foam. The frame is secured to plywood side panels. / B&B Italia.



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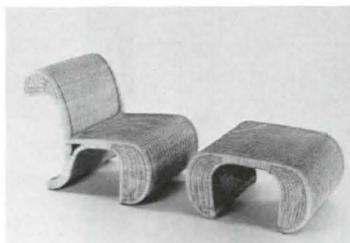
643 EXECUTIVE CHAIR / With multi-directional flexibility, the seat and back move independently, adjusting to changes in seating position. The sled base requires only 4 in. between chairs when positioned at a conference table. / Vecta Contract.

644 SECRETARIAL CHAIR / Details include large back and sloping of forward section of the seat downward for greater body support. / C I Designs.

645 CUSHION FURNITURE / Called the "Snuggle Rump" furniture, this lightweight, cushiony all-foam seating system comes in adult and child sizes. Primarily designed for use in schools, the system is nearly indestructible while giving supportive seating. It is covered with a tough, durable hide that makes them safe, fun to sit in, jump on, or flop into. / The Carter Company.



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646 STACKING CHAIR SYSTEM / As part of the "Montina Collection", this all-wood stacking chair has a slightly contoured seat which allows for comfort. / Montina (distributed by Castelli Furniture, Inc.)

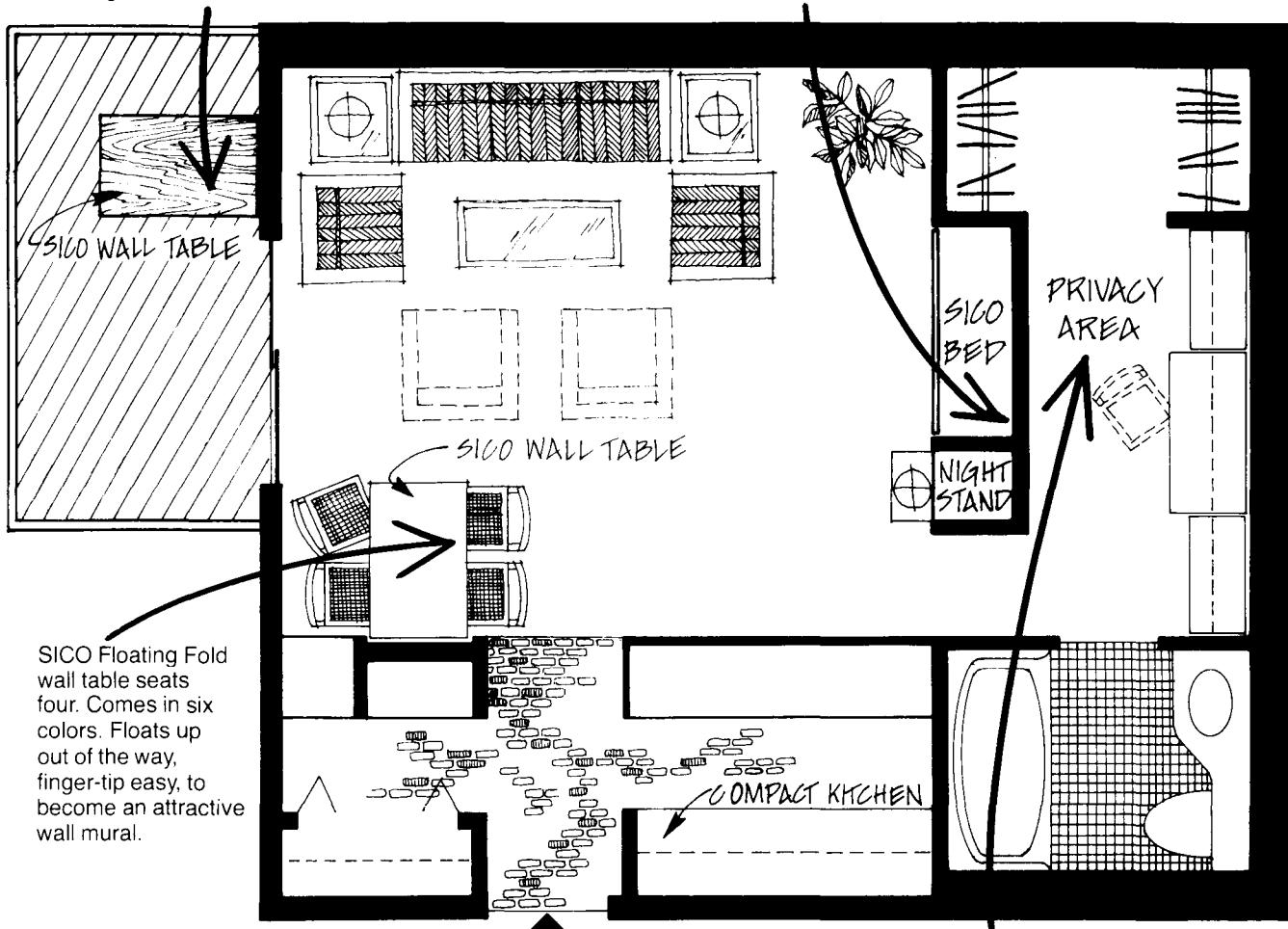
647 METAL STACKING CHAIRS / The "System Plurais" is a well designed contemporary group seating system. Each chair is attachable to the next. The self-supporting seat body is made of glass reinforced polyester. Colors available are white, dark brown, Chinese Lacquer Red and green. / Artemide (distributed by Castelli Furniture Inc.)

648 ELEGANT GANG SEATING / Designed for use in conference centers, cinemas and lecture halls the system consists of a ganged armchair with either one or two arms between the seats. The single armrest design can have a neatly concealed opening which houses a flip-up writing tablet. Installation of communication ductways for an earphone is optional. / Castelli Furniture Inc.

SICO® designs privacy for tenants, profits for you.

SICO Floating Fold wall table comes in several outdoor wood finishes and custom sizes and shapes. Floats up out of the way to become attractive design element.

SICO In-Wall beds and Wall Systems provide a "Fifth Wall option" that makes efficiencies more attractive and rentable. Can qualify for inclusion in your financing.

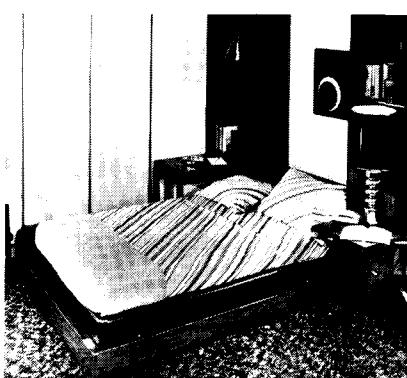


Privacy for tenants with a dressing room area created by the SICO Fifth Wall. It acts as a room divider.

The expandable efficiency.

It's designed to minimize tenant turnover resulting from lack of privacy, or lack of useable space. It's designed to let you charge more for less space, while offering more attractive features. SICO calls it the Fifth Wall System. And will custom design to your needs or offers you the 480 sq. ft. plan here or a 350 sq. ft. plan.

Attached to the floor, the SICO In-Wall bed can qualify as part of your financing. Options include mattress/box spring (twin, double, or queen), night stand, desk/table, and cabinet.



in your choice of several attractive finishes.

Don't wait. Send for the name of your local SICO representative. And for more information on how you can save space and add profit. Write: SICO, Incorporated, 7525 Cahill Road, Minneapolis, MN 55435, Dept. AR-10. Phone (612) 941-1700/Cable WILSICO

Innovation by design



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VIP OAK

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3100 TEXTILE WALLCOVERINGS / Sample folders contain swatches of acrilan and wool-based textured wall-coverings, available in 30-in. widths. Flame-resistant (Class A) fabrics are mounted on a strippable substrate; wallcoverings are offered in "Berberlook" naturals, heathers and stripes. / Scott Carpet Mills, Inc.

3101 PLANK WALLS / Aluminum strips for interior wall covering are available in silver and gold specular finishes, as well as baked enamel in almost any color. A fact sheet provides installation details on the "Living" wall. / Simplex Ceiling Corp. GB*

3102 GYPSUM-JUTE FABRIC / Results of NBS-conducted tests comparing gypsum-impregnated jute fabric with vinyl, prefinished plywood and other wallcovering products are given in a 4-page folder. Tests judged *Flexi-Wall* according to bond strength, fire hazard, impact- and scratch-resistance, water vapor permeance, etc. / Flexi-Wall Systems. GB*

3103 SOFT WALL COVERINGS / *Brunswall* soft textured wallcovering may be used on wall surfaces as well as office dividers, panels and screens. Folders contain samples of the material in five different textures; all are Class A-rated and have good acoustical properties. / Brunswall, GB*

SPECIALTIES: UCI 10

3105 EXTERIOR/INTERIOR SIGNS / Architectural signage, graphic displays and lettering for applications ranging from building identification to desk-top signs are presented in a 44-page condensed catalog. Weatherproof illuminated signs are featured; installation photos show various signs in place. / Architectural Signing Inc.

3106 OFFICE PARTITIONS / Moveable, acoustical panel systems for use in open landscaped office space are featured in a 16-page color brochure. Frame options include oil-finished hardwood, aluminum, or acrylic enamel; panels are covered in fabric, vinyl or carpet. / Panel Concepts, Inc.

3107 ROLLING FILES / Accessories for the *Roll-Shelf* mobile shelving system are listed in a 24-page catalog. Products include dividers, pull-out shelves, folders and stacking units. / Merchandising Equipment Group, Inc.

3108 ARCHITECTURAL GRAPHICS / Six interior and nine exterior sign systems are described on catalog sheets with index-file folders. Each signage series works within a basic module and message sizes, yet allows flexibility in message style, detailing, changeability, color and finish options. / Spanjer Bros., Inc. GB, I*

3109 HAND DRYERS / Electric hand- and hair-dryers designed for vandal-resistant service in public washrooms are detailed in a 12-page full-line catalog. All dryers have stainless steel housings; are UL-listed; and carry a 3-year warranty. / Electric-Aire Corp.

3110 POSTAL SPECIALTIES / Product bulletin sheets explain the advantages of using data recording microfilm cameras to establish a permanent record of parcel shipments. UL-listed unit, compatible with most microfilm systems, is priced about \$1,600. / 3M Co.

3111 ZERO CLEARANCE HEARTH / Fact sheet outlines the *E-Z Heat* fireplace, a wood-burning heat-circulating unit that installs directly on a wood floor, flush against studs. Only the flue and heat ducts require 1-in. clearance. / Superior Fireplace Co., LRC*

3112 PERSONAL SHOWERS / A professional catalog contains photos and detailed information on a line of personal showers, illustrating components and accessories, water supply options, and capacity data. / Alsions Corp. GB*

3113 ACCESSIBLE CONSOLES / "Accessory Consoles Designed to Accommodate the Handicapped" is a 20-page technical data manual covering a full line of washroom vanity cabinets built to meet or exceed all ANSI specifications for accessibility and wheelchair clearances. / RAR Enterprises.

3114 HIGH-DENSITY STORAGE / A comprehensive planning guide is offered to assist architects in designing high-density filing/storage system for industrial applications. The 36-page booklet shows how modular mobile carriages provide maximum utilization of available space, balancing user access requirements, floor loading capabilities, and the structural constraints of the building. / Spacesaver Corp. GB*

EQUIPMENT: UCI 11

3115 DETENTION GLAZING / Illustrated brochure describes *Shat-R-Gard* glass, for use in construction where inmate or patient detention is required. Consisting of three lites of 1/4-in. float glass sandwiched with two polyvinyl layers, *Shat-R-Gard* provides security and constant visual control. Glazing instructions, testing data and warranties are included in the literature. / Environmental Glass Products. GB, ICR*

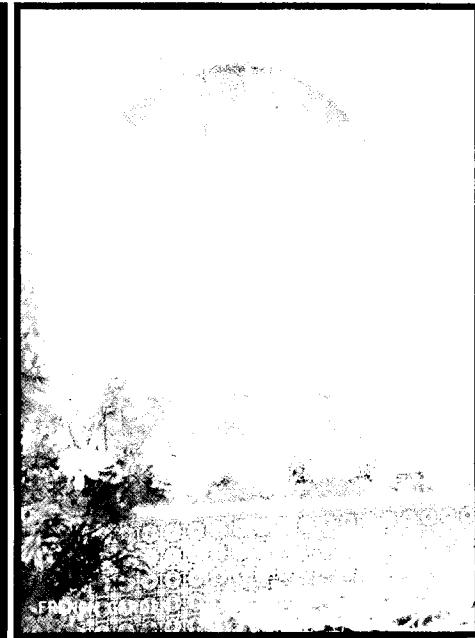
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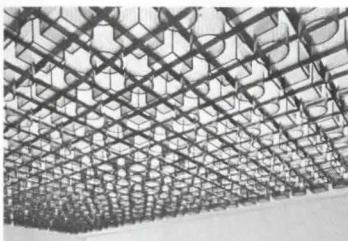
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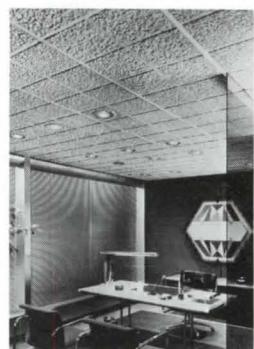
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INTEGRATED ASSEMBLIES

661 BUILDING ENVELOPE / The "Thermal Barrier Enveloping System" provides custom finish and insulating options within a standardized building panel line. The joint method used is said to assure connections as thermally efficient as the body of the envelope. / Gil Corp., GB*

662 GEODESIC DOMES / Dome shown above is a 232-ft clear span covering 42,000 sq ft. Said to exceed all states' code requirements. Domes are pre-fabricated of heat-treated aluminum alloy designed to withstand heavy wind and weight loads. / Temcor, GB*

INTEGRATED CEILINGS

663 CURVED CARRIERS / Pre-punched 8-ft carriers for convex and concave ceiling applications are now available. The suspension system is designed for use with the *Planar* ceiling, which consists of aluminum panels snapped into carriers. The new curved carriers are compatible with the standard carriers. / Alcan Building Products, ICR*

664 CEILING FIXTURES / Designed to work with aluminum paneled ceilings, lighting fixtures include fluorescent, incandescent or mercury vapor styles. Air diffuser makes use of slots between panels in the *Planar* ceiling; modification or cutting of aluminum panels is not necessary. Concealed directional weirs control the flow of air, and are adjustable from the underside of the panels. / Alcan Building Products, ICR*

665 LIGHT SOURCE CEILING / The *Tiburon* all-welded acrylic ceiling is "invisibly" suspended from the *Sturdigrid* tee system; the coated surface of the $\frac{1}{4}$ - or 1-in. tee bar matches masking on the geometric *Tiburon* units, disappearing when viewed from below. Accepted under the UBC, the all-acrylic panel has an anti-sag construction design. / United Lighting and Ceiling Corp., GB*

666 SIMULATED SKYLIGHTS / The *Garden Court* is a modular light source ceiling of regressed acrylic shapes, said to provide the feeling of spaciousness found with typical skylights. Three basic geometric configurations are offered. / United Lighting and Ceiling Corp., GB*

667 ACOUSTICAL CEILING / The *Accent* 4-by 6-ft grid provides flexibility in relocating demountable partition headers, and offers one-third direct accessibility to the plenum area. The 2-by 2-ft rock face and natural fissured mineral acoustical tile used in the *Accent* ceiling have kerf-rabbeted edges. / Conwed Corp., GB*

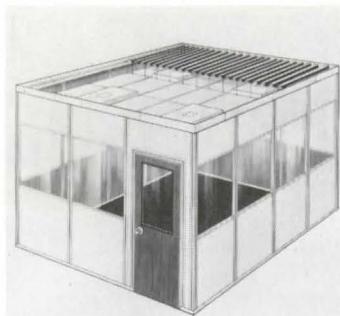
668 SUSPENDED CEILING / "Bold Look I" 2- by 4-ft lay-in ceiling panels are scoured in both directions with 1-in.-wide routings to look like individual tiles; panel edges are cut back to recess the grid, giving the textured ceiling a monolithic appearance. / Armstrong Cork Co., I*

PREFABRICATED BUILDINGS

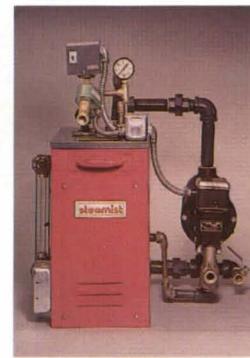
669 PARKING BOOTHS / More convenient interior layouts and greater structural stability are offered in the redesigned "SP" portable booths for parking attendants. Tempered safety glass windows and sliding cashier door are standard features; options include heat and air conditioning, outside roof shelter and restrooms. / Keene Corp., PortaFab Div.



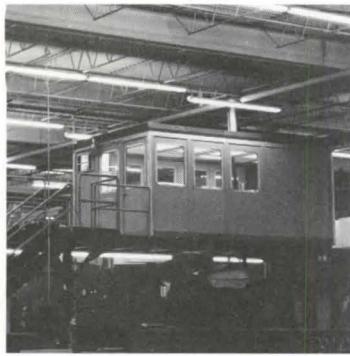
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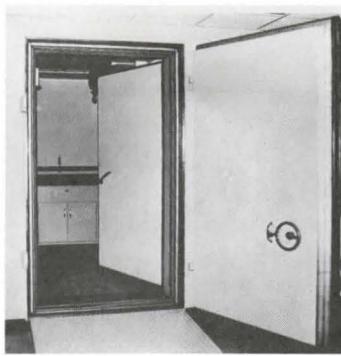
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670 UTILITY BUILDINGS / A new line of portable, prefabricated buildings for commercial and industrial construction use. With walls and roofs of corrugated steel, the buildings are available in many sizes, from 6- by 6-ft to 16- by 20-ft; options include thermal insulation, electrical components, and roof vents. / Keene Corp., Porta-Fab Div.

671 PORTABLE OFFICES / Constructed of steel and precast concrete to meet heavy-duty industrial requirements, *Trans 10* pre-finished portable offices are furnished complete with floor, roof, walls, windows, wiring and accessories. Sound reduction: minimum 25 dbA; floor system is designed for 125 lb/sq ft live load. *Trans 10* units may be used outdoors as well as in-plant. / Pease Co.

672 GUARDHOUSE SHELTER / A completely prefabricated personnel enclosure, the *Trans 10 Solo* booth measures 72- by 40- by 91-in. high, and weighs about 700 lbs. Welded steel frame, walls and roof have a polystyrene core; windows are $\frac{3}{16}$ -in. tinted safety glass. Enclosure is prewired, including light fixture, ready to connect to power source. / Pease Co.

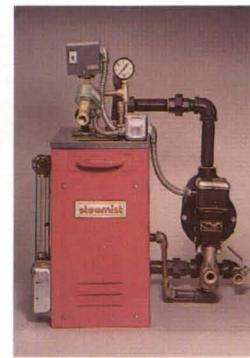
673 IN-PLANT OFFICE / A line of demountable office structures permits the user to lay out and install offices of virtually any size; no skilled labor or special tools are needed to erect the in-plant structures. Office wall panels are 9-ft high, allowing 8-ft headroom after dropped ceiling is installed. / CleCon Inc.

RADIO FREQUENCY SHIELDING

674 SHIELDED ROOM / The shielded room pictured is installed at Walter Reed Hospital in Washington, D.C. The soundproof enclosure has a double magnetic seal around the door. / Keene Corp., Ray Proof Div.

SPECIAL PURPOSE ROOMS & BUILDINGS

675 IN-HOME STEAMBATH / Designed for safe, low-maintenance residential use, the Steamist steam generator has an all-welded stainless steel boiler; solid state controls have no float mechanism to jam or break. / Steamist Co., Inc. GB, I*



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676 COMMERCIAL STEAMBATH / Manufactured to Section 1, ASME for heavy-duty, day-night operation in health and country clubs, spas, etc., Steamist packaged commercial steam generators are completely automatic: no attendant is needed to operate the steambath. Unit has many safety features; steambaths are priced between \$995 and \$1,285. / Steamist Co., Inc. GB, I*

677 SPA/HOT TUB HEATERS / UL- and AGA-certified electric and gas water heaters are specially designed for use with spas and hot tubs. They are approved for installation on combustible flooring, and can be placed directly on redwood decks, etc. Gas-fired heaters are intended for outdoor use. / A.O. Smith Corp. GB*

678 PRACTICE ROOMS / The *Sound Module* is a completely self-contained room, sound-controlled for music practice, counseling, office use, etc. Relocatable rooms are offered in more than 50 sizes; optional closure panels allow an architectural "built-in" appearance. Panel surfaces are baked enamel. / Wenger Corp. GB, E*

679 CLEAN ROOMS / Prefabricated clean rooms come in component form for installation in medical/pharmaceutical, food processing, chemical plants, etc. Four standard room sizes are offered. The air filters used in the vertical or horizontal laminar flow systems remove 99.97 per cent of all bacteria and pollen larger than 0.3 microns. / Atmos-Tech Industries.

SWIMMING POOLS

680 POOL WATER MONITOR / *Swimtrol "Model 48"* unit maintains pre-set chlorine and pH levels, as well as automatically compensating for changes in water temperature and other water conditions. / Uniloc, Inc.

TOTAL ENERGY SYSTEMS

681 BUILDING AUTOMATION / *Comguard "System 20"* now offers eight upward compatible configurations for all applications, including management, security, and life safety. Use of existing communication wiring for *Comguard* reduces installation costs by up to 60 per cent. / Comguard Corp.

116 PROFESSIONAL SOUND / concert hall, movies, theaters, and auditoriums: complete sound systems for a variety of professional requirements are explained in a color catalog. All components, amplifiers, loudspeakers, etc., are illustrated and described. / Altec Lansing.

117 CHECKROOM EQUIPMENT / space- and labor-saving automatic check room conveyors offered in five different shelf configurations are shown in a catalog insert. Complete capacity and dimensional data is included in the brochure; a price list is available. / White Machine Co. GB*

118 DOCK LEVELERS / Stressbalanced *Dyna-Load* permanent dock-levelers are featured in a 20-page color brochure. Literature contains selection criteria for all applications, with descriptions of hydraulic, mechanical and stability models and optional equipment. / Kelley Co., Inc. GB*

119 RESIDENTIAL EQUIPMENT / currently available major appliances, built-in and window room air conditioners, and planning services offered by the manufacturer are presented in a 2-page "Showcase" publication. Included are ranges, regular and microwave ovens, refrigerators, dishwashers, trash compactors, and other UL-listed residential equipment. / General Electric Co., GB, LRC*

120 SPORTS EQUIPMENT / An expanded line of athletic, sports, physical fitness, playground and field and gym equipment appears in a 16-page color catalog. Included are backstops, benches, soccer and football goals, and portable baseball and field hockey goals. / SportsPlay Products.

121 LABORATORY COUNTERS / Work surfaces of man-made stone *Colorlith/Colorceran* material are detailed in a 12-page brochure. Photos show the laboratory counters in place; test data and maintenance information, as well as color choices offered are included. / Johns-Manville Corp. GB, R*

FURNISHINGS: UCI 12

122 OFFICE ENVIRONMENTS / Work stations for different office needs—group clerical, mid-management, secretarial, supervisory stations—are pictured in a color *Concept* open office brochure. Acoustic performance, lighting options, and cabinetry and storage choices are briefly outlined. / Conwed Corp. I*

123 ARMCHAIR / Catalog page describes the "Marlowe Variant" armchair, available with modular oak nesting tables for waiting room use. Chair frame is solid oak with open mortise and tenon and mortise joint construction. / Tuohy Furniture Corp.

3124 MOBILE OFFICE WALL / An acoustical wall program designed for quick and easy division of office space is described in a 16-page color brochure. A wide variety of frame junctions are shown, including a flexible 180 deg. "Living Hinge," and a "Lockslide" junction for precise layout adjustments. / Harter Corp.

3125 OFFICE FURNITURE / Styles from Bauhaus to Traditional Walnut are offered in this maker's office furniture line. Color brochures show the "President 900," "Executive 3000," "7000," and "VIP Oak" solid wood and wood veneer furniture, including executive desks and storage units, secretarial and reception pieces, etc. / Kimball Office Furniture Co. I*

3126 OPEN OFFICES / An open office planned for productive people is the theme of a color brochure outlining this maker's Open-Plan System. Panels and connectors, power supply and lighting variants, and work station components are shown in photographs. / GF Business Equipment Inc.

3127 LOUNGE SEATING / The "St. Olaf" Stacking armchair requires only 24-in. of floor space, but provides a full 18-in. of seat depth. Catalog sheet shows how the solid oak frame is joined with steel fasteners; chair may be ganged or used individually. / Tuohy Furniture Corp.

SPECIAL CONSTRUCTION: UCI 13

3128 SWIMMING POOLS / "Recirculating Overflow Gutters & PassWall System" brochure is offered for commercial and institutional pool designers. It describes operation, applications and features for the architect to consider in the planning of larger municipal and club swimming pools. / Paragon Inc. GB*

3129 PORTABLE PREFABS / Portable, prefabricated buildings designed for indoor and outdoor use are described in an 8-page brochure. The catalog lists options, building features, industrial and commercial applications, and generally discusses design and engineering services offered by the manufacturer. / Keene Corp. Porta-Fab Div.

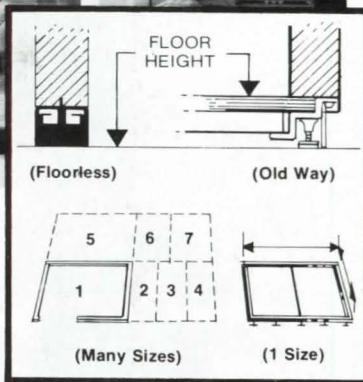
3130 METAL BUILDING SYSTEMS / Brochure highlights a range of building variations, designed by architects using basic *Mitchell* structural systems. Detailed diagrams explain the clear span rigid frame; post and beam rigid frame; clipped truss system; and the flush wall system. / Mitchell Engineering Co.

3131 TOTAL ENERGY / Illustrated brochures help the architect and building owner understand the importance of energy management and systems control in existing buildings and multi-performance industrial complexes. / Johnson Controls, Inc.

SOUND DESIGN!



Why Specify Wenger Sound Module® Rooms Instead of Built-in Sound Control Rooms?



GUARANTEED RESULTS — that's why Wenger pre-engineered Sound Module® rooms are a better choice than built-in rooms. You are **SURE** of specified sound isolation and you get a **KNOWN** acoustical presence within the rooms.

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— FLOORLESS CONSTRUCTION—lowers cost; means no marring of floors since there's no permanent attachment to building.

See Sweet's Architectural File (13.18/WE) for details and specs. Then call us **TOLL FREE**: 800-533-0393 (In Minn., call (507) 451-3010 **COLLECT**).

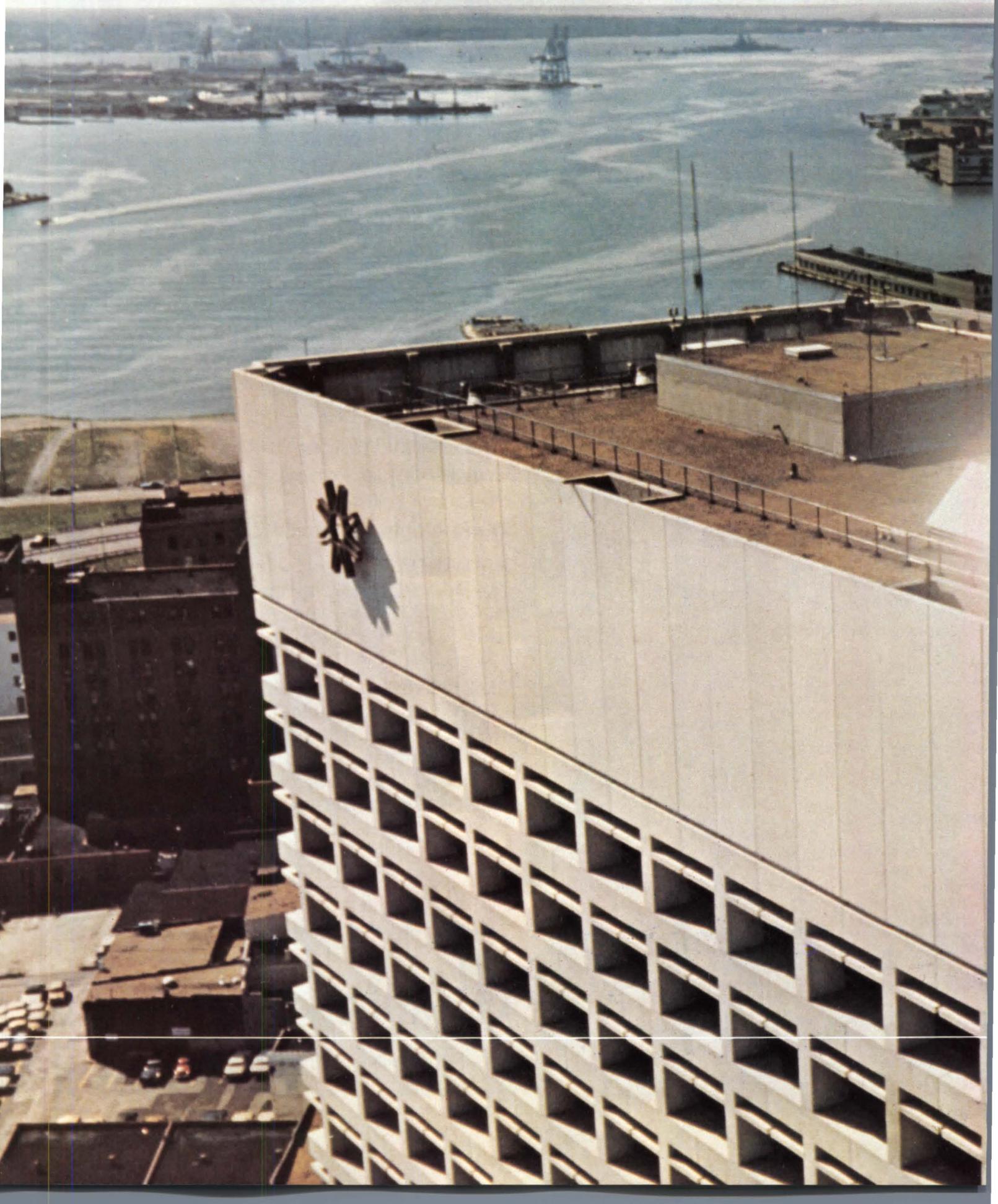
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SunPanel™ deposits su



sunshine at Virginia National.



That old star, the sun, continues proving itself to be one of our most powerful helpers.

And, for more than 40 years, LOF has been improving ways of putting that power to practical, down-to-earth uses. That's why Virginia National Bank in Norfolk turned to us and our SunPanel™ solar collectors.

As part of the total reworking of its energy management, Virginia National has installed SunPanel collectors. From April through October each year, the solar collectors will allow the bank to substitute a supplementary 75-hp boiler for their 500-hp unit, passing on im-

pressive energy savings. This combined system is intended to supply all the hot water needed for the 1,200 people who work in the building.

LOF is proud to have been included in the bank's total energy-saving plan, an effort which began in 1973 and already has brought a 45 percent reduction in electrical consumption and 70 percent in natural gas. SunPanel, plus the system cost analysis we provide, made LOF a likely partner in the plan.

Do you have an energy-saving plan? Remember LOF, the company that deposited sunshine at the bank. Refer to Sweets catalog or write Mr. Marty Wenzler, Dept. A, Libbey-Owens-Ford Company, 1701 E. Broadway, Toledo, Ohio 43695.

Circle 1057 on inquiry card

LOF

Conveying systems

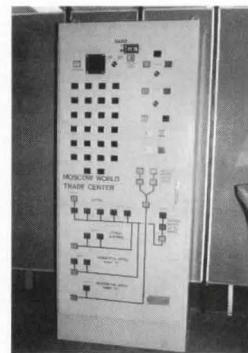
CONVEYORS & CHUTES
ELEVATORS
PNEUMATIC TUBE SYSTEMS



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CONVEYORS & CHUTES

694 DOCUMENT HANDLER / The *Telelift* automated document-handling and materials distribution system carries anything weighing up to 20 lbs from any single station to any of 1,000 possible stations within the system. Each self-powered car moves at about 100 ft per minute. / Mosler, An American-Standard Co. GB*

695 TRASH COLLECTION / The programmable "Logic Controller" illustrated is a major component of the fully automated pneumatic trash collection system to be installed in the Moscow World Trade Center, USSR. Automatic trash and linen handling systems built and installed by this manufacturer are in use in hospitals, hotels, and offices world-wide. / Trans-Vac Systems. GB*

696 FIRE-RATED LOADERS / Loading stations for pneumatic trash and soiled linen transport systems are housed in a UL-B fire-rated enclosure. Loading door and trim is No. 4-finish stainless steel; each loading station is equipped with an electronic module containing controls and red and green indicating lights. / Trans-Vac Systems. GB*

697 CONSTANT DISCHARGE / Continuous discharge trash collectors, equipped with replaceable internal screens, are used to remove trash or soiled linen from the air transport system at the desired drop-out point. Photo shows a trash collector feeding twin waste compactor. / Trans-Vac Systems. GB*

698 VERTICAL CONVEYOR / The *Whizlift* transports any mixture of items, up to a maximum girth of 120-in., from receiving docks through multiple floors, to discharge area. Cartons are held on the vertical conveyor by an elastic retaining cover, which automatically stretches to conform to the item's shape. / W&H Conveyor Systems, Inc.

699 MAIL DISTRIBUTION / When integrated into design plans before construction, this mail and supplies distribution system can provide maximum material handling capabilities for business users. Track used to route the self-propelled carrier cars may be installed in the building's interstitial space. / Mosler, Airmatic & Electronic Systems Div.



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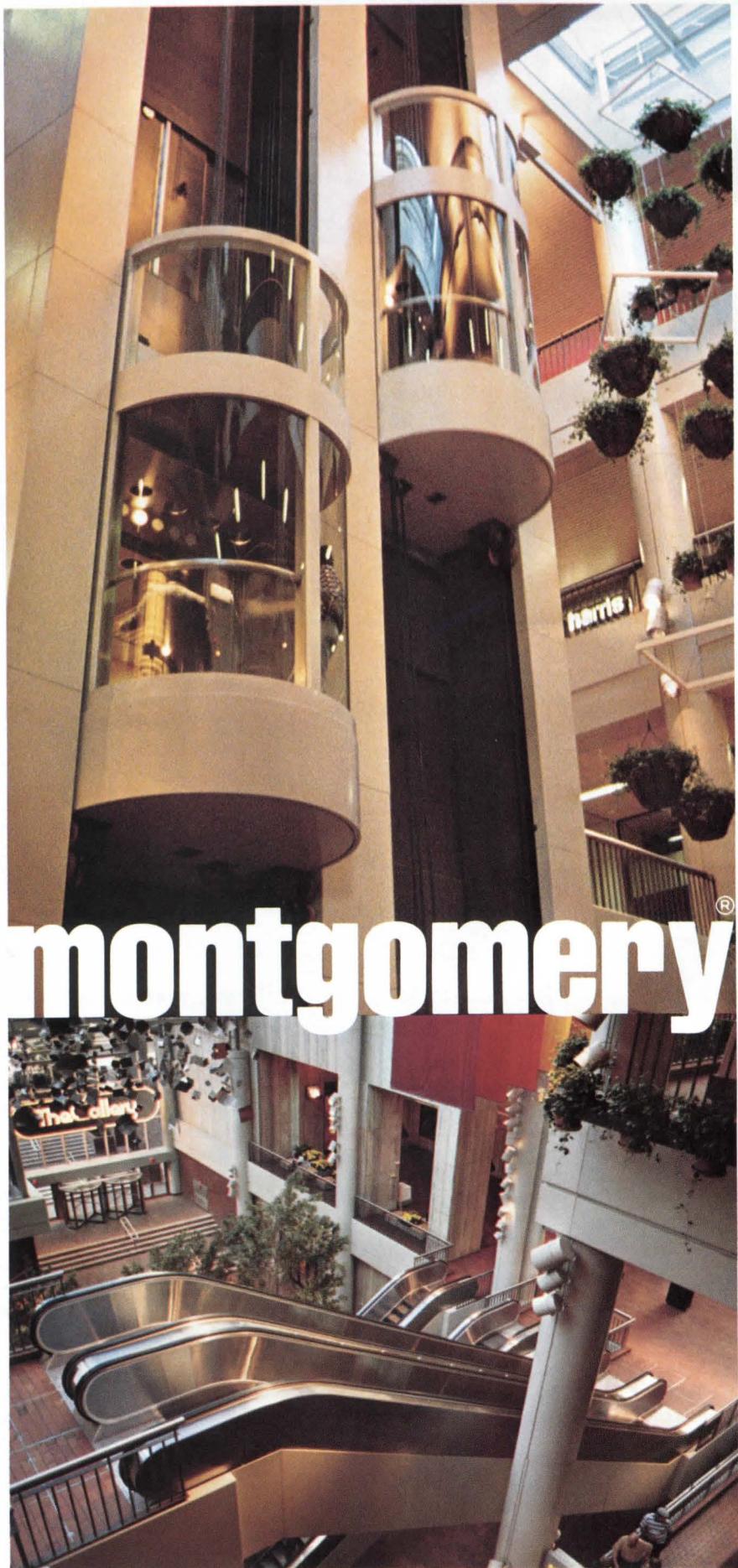
ELEVATORS

700 SECURITY CONTROLS / The "System 500" expands the *Cardentry* access control line, offering complete and simplified security for multi-story office elevators. Card-activated reader and keyboard in the elevator cab can limit access on any or all floors at any hour. / Rusco Electronic Systems.

701 ELEVATOR CONTROLLER / The electronic control system required to command and operate an 8-car bank of elevators has been microprocessed: a room full of wiring can be replaced by an 8- by 17-in. circuit board. Computerized controls can be installed in new low- or high-rise buildings. / U.S. Elevator, Cubic Corp.

PNEUMATIC TUBE SYSTEMS

702 SOLID STATE CONTROLS / Pneumatic tube dispatching systems may be controlled by solid state printed circuit boards, said to be more dependable than mechanically functioning electrical relays, yet simpler and less expensive than computer controls. / Standard Conveyor Co. GB*



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ARCHITECT: BOWER & FRADLEY, PHILADELPHIA

OWNER: REDEVELOPMENT AUTHORITY OF THE CITY OF PHILADELPHIA

Montgomery elevators and escalators move people at The Gallery Market Street East.

Aiding in the rebirth of downtown Philadelphia, the Rouse Company's new development, The Gallery at Market Street, presents a unique shopping environment.

Twelve Montgomery escalators and two glass enclosed Montgomery elevators move shoppers swiftly, safely and economically between the different levels that house over 125 boutiques, shops, restaurants and the major department stores.

The elevator and escalator installations blend into the mood created by earth tones in the walkways, trees, shrubbery and hanging plants throughout the mall.

Montgomery offers total capability in design, production, installation and maintenance of the equipment to move people anywhere, anytime.

Montgomery moves people.

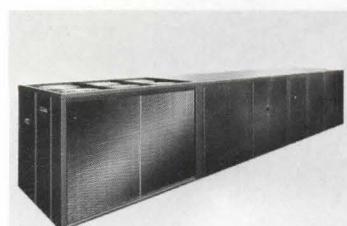
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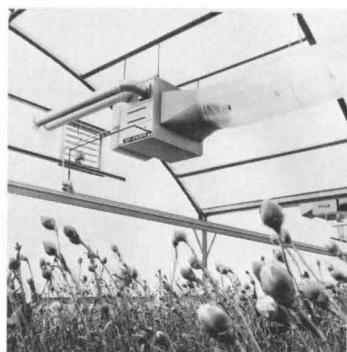
montgomery moves people

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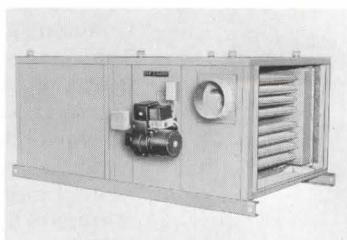
AIR DISTRIBUTION EQUIPMENT
FIRE PROTECTION EQUIPMENT
HEAT GENERATION
HEAT PUMPS
HVAC TERMINAL UNITS
LIQUID WASTE EQUIPMENT
MECHANICAL CONTROLS
MECHANICAL INSULATION
PLUMBING FIXTURES & TRIM
REFRIGERATION EQUIPMENT
SELF-CONTAINED HVAC UNITS
WATER SUPPLY & TREATMENT
SOLAR EQUIPMENT



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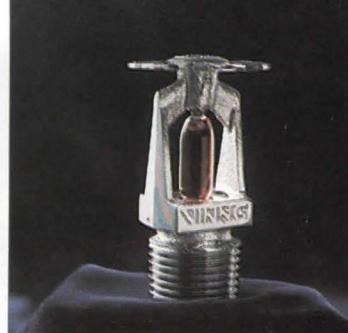
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AIR DISTRIBUTION EQUIPMENT

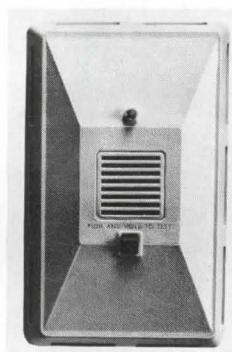
715 HVAC SYSTEM / An expansion of the company's "Adapt-Aire Modular Penthouse System" line of HVAC units includes this model that can be either roof-mounted or located inside a building. The new frame size utilizes the same multiple standardized sections of other models. / Lear-Siegler, Inc., Mammoth Division.

716 SPOT HEATER / The "XFD-SCFD" model spot heater can be used in industrial applications or in a greenhouse (above). A four-point suspension system permits it being hung where necessary. The fan-type design has an aluminized steel heat exchanger. / ITT Reznor.

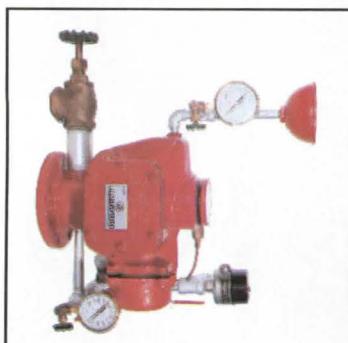
717 OUTDOOR FURNACE / An oil-fired outdoor forced-air furnace is available with outputs of 200,000 and 308,000 Btu/h. The weatherized cabinet permits outdoor installation. Each model is completely pre-packaged, factory-wired and fire-tested. / ITT Reznor.



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FIRE PROTECTION EQUIPMENT

718 MINIATURE SPRINKLER / A small, low profile, glass-bulb sprinkler was designed to maintain the esthetics in any area. It is available in a wide range of temperature ratings. The glass bulb will burst during high heat from a fire, releasing pressurized water. Water is distributed in a uniform pattern. / Viking Corp. GB, ICR, E*

719 RESIDENTIAL SMOKE ALARM / The "Pyrotector" is a battery-powered photoelectric smoke alarm designed for residential use. It detects all types of fires—smoldering as well as flaming. It is powered by a 9VDC Alkaline transistor battery. / Chloride Pyrotector.

720 LIGHTWEIGHT CONTROL VALVE / A dry pipe valve, "F302" model, is a differential latch-type valve used to control the flow of water to dry pipe sprinkler systems and to provide actuation of fire alarms when the sprinkler system operates. It is specifically designed for installation where piping and sprinklers are exposed to freezing temperatures, but the valves are not. / Grinnell Fire Protection.



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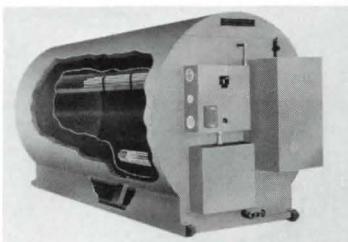


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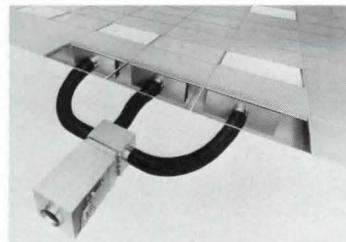
721 WHEELED FIRE EXTINGUISHER / This movable dry chemical fire extinguisher has a single valve for "one-step" actuation. A fill cap can be removed without special tools. It is corrosion resistant and features a pressure relief vent with warning sound. / The Ansul Company. GB, ICR, E*

722 PORTABLE EXTINGUISHER / A dry chemical extinguisher, the "10-20-30 Cartridge" models has a guard attached with a spring clip eliminating the need for a guard retainer on the shell. A shaped handle facilitates carrying. UL-listed. / The Ansul Company. GB, ICR, E*

723 SMOKE DETECTOR / The "Earli-Gard" smoke and fire detector is available in four styles: direct-wired, single station; direct-wired, multiple station; direct-wired, multiple station with auxiliary contacts; and single station, battery-operated. UL-listed. / Square D Company.



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HEAT GENERATION

724 THERMAL STORAGE SYSTEM / The *Energy Bank* thermal storage system was engineered to meet the particular requirements of a wide variety of space heating and domestic hot water applications. Can be used in an energy "retrofit" program. / Megatherm.

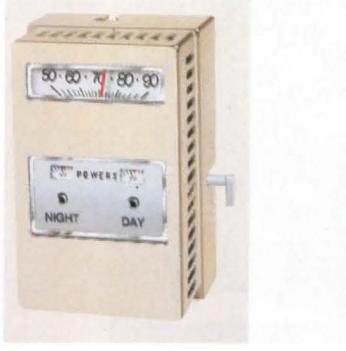
725 GAS FURNACES / A new line of up-flow and counterflow gas furnaces, known as "Tappan 20," carries a 20-year limited heat exchanger warranty. The units are compact to save space in new construction or replacement applications. / Tappan Air Conditioning Division.

HEAT PUMPS

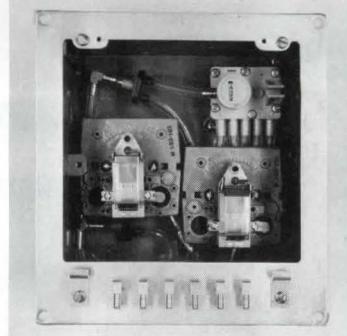
726 ADD-A-ROOM HEAT PUMP / Designed to serve the needs of residential expansion, the *Zoneline III* is easy to install through the wall. The unit provides individual room heating and cooling and is claimed to reduce operating costs compared to regular resistance heating. UL approved. / General Electric Co. GB, LR*



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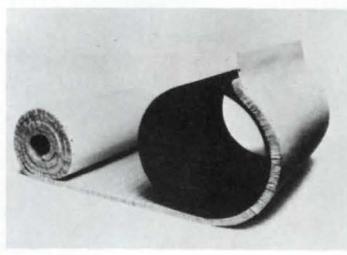
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HVAC TERMINAL UNITS

727 VARIABLE AIR VOLUME / A large zone variable air volume system, called "Modobox," is a box/boot system. "Modobox" consists of factory-assembled airflow control box, optional reheat coil and an optional octopus connector to diffuser boots. / Carrier Air Conditioning Group.

LIQUID WASTE EQUIPMENT

728 WATER TREATMENT / A system of water treatment components is composed of fiberglass reinforced plastic adjustable-notch weir plate and troughs up to 12-ft lengths, but can also be custom molded. / Molded Fiber Glass Water Treatment Products Co.

MECHANICAL CONTROLS

729 THERMOSTAT / A two-scale pneumatic thermostat, "NRG Saver III" conserves energy usage by limiting temperature settings for both day and night usage. The limits are field adjustable or can be factory-fixed. / MCC Powers.

730 ENTHALPY SELECTOR / The inside workings of the "H100" enthalpy selector (above) show only three operating parts. The use of enthalpy transmitters is claimed to avoid errors, to obtain a stable enthalpy signal and to simplify initial set up. / Robertshaw Controls Co., Control Systems Div.

731 COMPUTER MANAGEMENT SYSTEM / The "DMS 2400-3" building management system is a computer-operated way of controlling and monitoring energy output for a whole building. It is characterized by a "mix-and-match" modularity set-up for an individual client. A CRT is the most visible element, but programs can be written or changed using the FORTRAN IV language. / Robertshaw Controls Company, Control Systems Division.

MECHANICAL INSULATION

732 PIPE INSULATION / Pipe wrap insulation is on Fiberglas and fits a wide range of large-diameter pipe, in four thicknesses from 1½- to 3-in. Rather than preformed to a specific diameter, it is simply unrolled and cut to fit the circumference of the pipe. / Owens-Corning Fiberglas Corp. E*

PLUMBING FIXTURES & TRIM

733 WATER PRESSURE VALVE / The "Equa-Flo" pressure balance valve for tub/shower plumbing products uses a special sensing mechanism to maintain the same flow of water and near the same temperature when other demands for water in the home might cause changes. / Bradley Corp., Faucet & Special Products Division.

734 LAUNDRY FAUCET / A faucet for the laundry room features decorative handles formed of highly reflective crystal-like acrylic or highly polished metal. It carries an 83½-year free replacement warranty against drips or leaks. / Bradley Corp., Faucet & Special Products Division.

735 BAR FAUCET / Designed for residential recreation or family room installations, a faucet for the bar is made of highly polished metal. It comes with a standard 8-in. swivel spout on a 4-in. center. An optional 10-in. spout can be ordered. / Bradley Corp., Faucet & Special Products Division.



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736 BARRIER-FREE SHOWER / A pre-assembled, in-wall shower module can be used by the handicapped. There is a stainless steel mounting frame and front panel, a fixed-direction institutional showerhead, water balancing/mixing valve, plumbing access panel, hand-held shower spray with 60-in. hose and grab bar (one model has a folding seat). / Bradley Corp. GB, ICR, E*

737 LOW HEIGHT WATER COOLER / A water cooler designed for additional access by a wheel chair features a soft touch and self-closing push bar. On model "HCWC-8," the bubbler can be activated by lightly pushing a 12-in.-long bar. Mounting height is recommended at 38½ in. from the floor. UL- and ARI-approved. / Sunroc Corp.

738 HANDICAPPED DRINKING FOUNTAIN / A wall-mounted drinking fountain is designed to provide easy access to those confined to a wheel chair. The modernistic design permits the skirt to extend 20 in. from the wall. Control buttons are positioned on the side. Cost: \$395. / Western Drinking Fountains.



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742 NEW COLOR ADDITION / "Country Grey" color has been added to color line for plumbing fixtures. A subtle neutral color, it is gaining popularity as a back-drop for brighter bath accessories. / Kohler Co.

743 COMPACT SINK / A convenient self-rimming sink that measures 25- by 22-in. can be a replacement fixture. It seals easily into an existing countertop because of the rim design. / Kohler Co.

744 WATER MIXER / The "Diacore" safe shower valve permits the proper water mixture without sudden changes. It can only be turned on in the cold position and provides a wide comfort range with adjustable, tamper-proof "hot limit stop." / Elkay Manufacturing Co.



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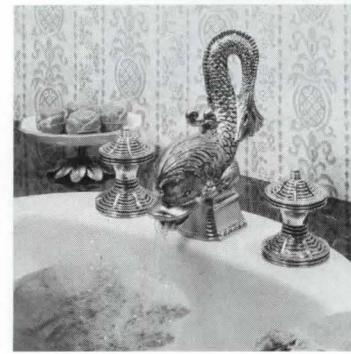
745 BIDET / This bidet can replace the conventional toilet, providing electronically-controlled warm water washing and warm air drying. With a complete hook-up kit the unit connects to the existing water supply through one line and to the nearest electrical outlet through another line. UL-approved. / Rusco American Bidet.

746 PEDESTAL FOUNTAIN / For outdoor use, this pedestal drinking fountain provides room for a wheel-chair. The unit has two level handle valves and automatic stream regulation. Approximately \$740. / Haws Drinking Faucet Co. GB, E*

747 WATER COOLER / This wall-mounted electric water cooler meets Public Law 90-480 for use by those in a wheel chair. A handsome unit of stainless steel, the receptor has a waste strainer and patented anti-splash ridge. / Haws Drinking Faucet Co. GB, E*



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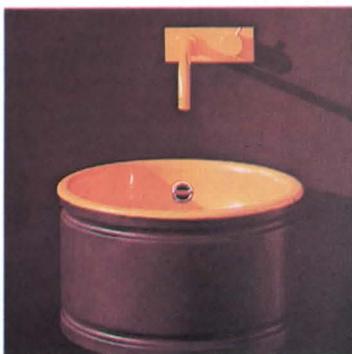
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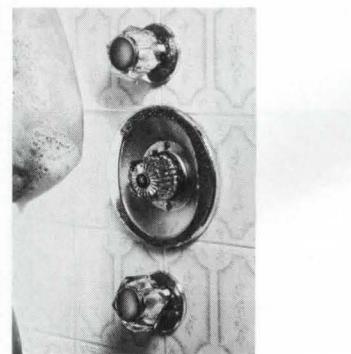
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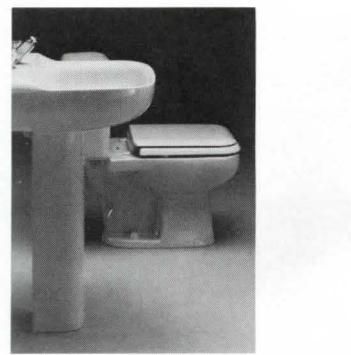
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748 CONTEMPORARY FAUCET / A faucet intended for mounting in the kitchen or at the bar, is part of a modular plumbing system, comprised of a coordinated range of mixing valves, outlets, backplates and accessories. It is constructed of brass and uses a single-control mixing valve with no washers. Designed by Arne Jacobsen, it has a high spout and easily controllable handle. / Architectural Complements.

749 ENAMEL SINK / The "Alape Vitreous Enamel Sink" is wall-hung, impact-proof and acid resistant. Its large diameter and circular drum-like appearance make it applicable for heavy use areas, including industrial. Durable because of enamel coating, it comes in brown, white, red or black. / Architectural Complements.

750 LAVATORY & FITTINGS / The counter lavatory is impact-proof and acid-resistant and is self-rimming. It is available in brown, white, red and black. The faucet is single control and part of a modular plumbing system. / Architectural Complements.

751 DOLPHIN FAUCET / Gold fittings, available in the dolphin design (shown) or a baroque motif, are produced in Europe from solid cast brass and finished in 24-karat gold plate. / American-Standard.

752 MIXING VALVE / A rapid response thermostatic valve helps eliminate bursts of scalding water and cold water surprises by providing constant water temperatures. A temperature range from 68 to 140 deg may be selected. / American-Standard.

753 TOILET & LAVATORY / Designed by Paolo Tilche, the "Tilche Suite" is comprised of a toilet and pedestal lavatory, available in nine colors, the newest being blue/green and apricot. / American-Standard.

754 HANDICAPPED SHOWER / A pre-assembled shower module for use by handicapped persons is a 3- by 3-ft compartment. Stainless steel is used throughout. Special features include fold-down seat, several grab bars and water mixing valves. / Bradley Corp. E*

755 BIDET / A bidet of molded vitreous china features a pedestal design. A selection of 25 bold colors is possible. Fittings are chrome-plated brass. / Hastings II Bagno Collection GB, I*

756 PEDESTAL BASIN / As part of the "Ariete" collection, a new pedestal basin is made of molded vitreous china, complementary to the bidet. Twenty-five color combinations are available. / Hastings II Bagno Collection.

757 WHIRLPOOL BATH / An 8-jet whirlpool bathtub has been introduced that is 6-ft long and self-rimming to prevent water seepage. The whirlpool system is pre-piped and self-draining. The system also has a water sensing device which stops the motor from running if there is no water in the system. / Hastings II Bagno Collection. GB, I*

758 PEDESTAL / A large stainless steel, highly reflective pedestal can be combined with beige Zeta Marble. The marble top is available in modular 6- by 12- by 1/4-in. sizes and is resin impregnated for strength. / Hastings II Bagno Collection.

759 OVAL TUB / A large, oval bathtub, called "Constellation", is shown here in gray, only one of a large collection of colors available. The tub controls are "Principe" (shown on the next page). A whirlpool unit is optional. / Hastings II Bagno Collection.



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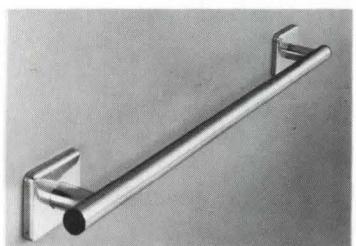
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760 MIRRORED BATH UNIT / A combination of stainless steel and mirrored veneer brighten the bath, and can be used with a brown or black laminated top. The washbasin unit is designed to fit all ceramic sinks and has fittings for shelves, shoe racks, laundry basket and drawers. Fifteen possible unit shapes are available. / Hastings II Bagno Collection.

761 RUSTPROOF BATH MODULE / "Lavandone" is a rustproof bathroom unit of polyurethane. The unit has rounded edges and corners; a wide, deep basin; spacious counter; open compartments and a medium-wave radio with frequency modulator. It is available in three colors—white, black and browns. / Hastings II Bagno Collection.

762 ACCESSORY MIRROR / A mirror-medicine cabinet is simply designed, using Lyonite glass and accented with a mirror stripe at one end. It is color-coordinated to match the company's "Serie Ariete" fixtures. The unit is nearly 34- by 20- by 3-in. / Hastings II Bagno Collection.

763 SCALLOPED BASIN / An elegant wash basin designed with scallops is made of vitreous china. It is white, and measures 22- by 21 $\frac{1}{4}$ by 8 $\frac{1}{4}$ -in. The "Margaritana" can be ordered with a pedestal. / Hastings II Bagno Collection.

764 GLEAMING CONTROLS / Designed for rugged use, these tub water control fixtures are made of brass and plated with chromium. All fittings are simple to install. / Hastings II Bagno Collection. GB*

765 HANDICAPPED BATH UNIT / A complete one-piece unit for use by handicapped persons includes a shower, toilet and lavatory. A fiberglass shower stall is large enough for a wheel chair to be moved inside. Features include a fold-down seat, water pressure and balanced temperature controls and lever-type fittings. / Universal-Rundle Corporation.

766 LARGE KITCHEN SINK / A double compartment sink, called the "Hi-Low," made of porcelain enameled cast iron, is self-rimming and installable without a metal frame. Due to moving the fittings to the corner of the sink, an enlarged bowl is acquired for washing large items. / Eljer Plumbingware.

767 HIGH-IMPACT FAUCET / Bath and kitchen fittings, made of Lexan resin, are extremely durable and offer a somewhat transparent fixture. / Moen.

768 GRAB/TOWEL BAR / To increase safety in the bath, this towel bar is strong enough to be used as a grab bar. It has been HUD-tested to 250 lb for 5 minutes. Special application is suggested for hotels and hospitals. / Tubular Specialties Mfg, Inc. GB*

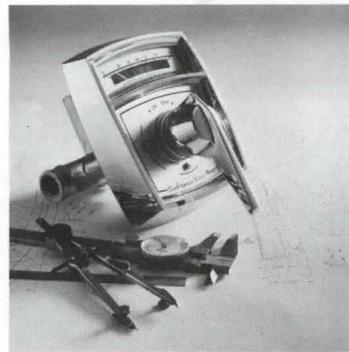
769 WHIRLPOOL BATH / This bathtub can be installed into a raised platform, sunken or skirted with an optional access panel. Three water inlets are fully adjustable and work with a minimum water level. Gold-plated parts and custom colors are also optional. Retail price is \$1460. / Jacuzzi Whirlpool Bath, Inc. GB, LRC*

770 SHOWER MASSAGE / A handheld unit for the shower has four different spray settings, conveniently tapered handle and is lightweight. A conventional hood-up hose is covered with a clear plastic coating to avoid leaks and corrosion. / Ondine.

771 WASHROOM CONSOLE UNIT / Specifically designed for hospital use and convenient for person in a wheel chair, this recessed unit is mounted so the sink is 35-in. from the floor. It is of one-piece construction and has fixed, tilted mirrored door, fluorescent light, paper towel and soap cup dispensers. / The Charles Parker Co. GB*



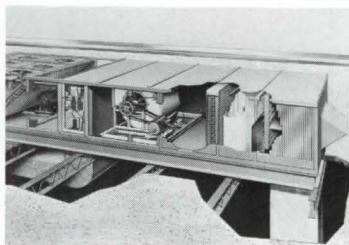
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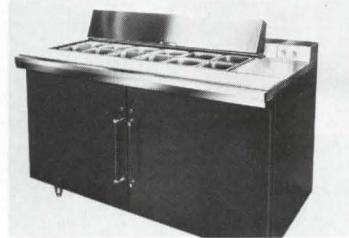
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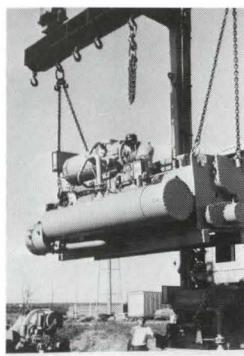
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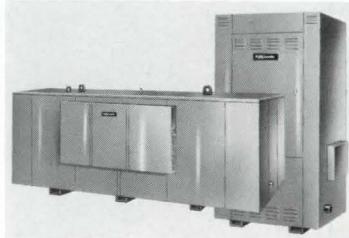
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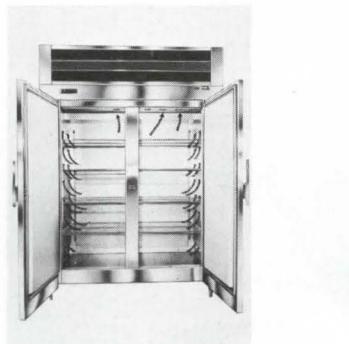
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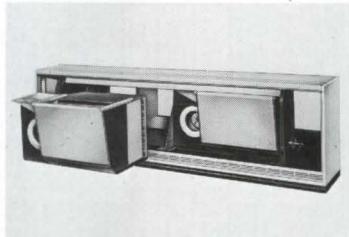
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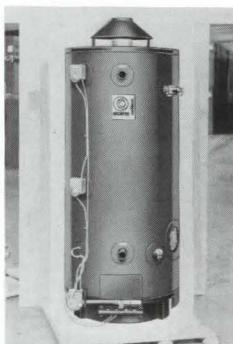
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772 WATER CONSERVER / A toilet which uses no more than 3.5 gal has been introduced, and claimed to use 30 per cent less water than conventional units. Model 6014 "Silhouette II" is of one-piece construction with an elongated design. / Briggs. GB, LRC*

773 WHIRLPOOL BATHTUB / Nine different sizes range from the standard single bath to a spacious 7- by 5½-ft model. The new tubs are color-coordinated with the company's other units. UL-, IAPMO-, ANSI-approved. / Viking Sauna Co. GB, LRC*

774 CONTEMPORARY CABINET DESIGN / The "moonlight collection" comes in sectional units that can be combined in a variety of patterns. Sections include sink and cabinet, single-shelf with "storage pouch," cabinet containing laundry basket or twin-shelf storage compartment, and "towel hold" (shown above). Construction is of multilayer laminated plastic; color combinations include stripes. / Hastings II Bagno Collection.

775 VISUAL WATER VALVE / A single handle pressure-balancing water mixing valve has an integral thermometer that is mounted in a shatterproof Lexan case with color-coded dial to correspond to color-coded valve plate. The face is blue, green, red, and angled for easy reading. / Symmons Industries, Inc.

REFRIGERATION EQUIPMENT

776 COMMERCIAL REFRIGERATION / A 48-in.-wide unit to specifically refrigerate salads and sandwiches has a deep cold well and removable stainless steel cover. A blower-actuated refrigeration system provides efficient operation. / Nor-Lake, Inc. GB, E*

777 ENERGY-SAVING UNIT / Due to a ducted-air distribution system and thermostatic expansion valve, a constant temperature variance of 1 deg is maintained in this reach-in refrigerator-freezer. A variety of models are available for specific applications. / Nor-Lake, Inc. GB, E*

778 TEMPERATURE ALARM / An electronic alarm system that warns of mechanical or electrical problems that cause temperature variations in equipment being monitored has been designed. A digital display will indicate problems along with audible alarm sounds. It can be mounted flush on refrigerator, freezer or walk-in unit. / NorLake, Inc. GB, E*

779 LIQUID CHILLER / A hermetic centrifugal liquid chiller is claimed to reduce energy consumption up to 20 per cent over previous company models. It is a one-piece, factory-assembled unit. / Carrier Air Conditioning.

SELF-CONTAINED UNITS

780 MODULAR HVAC UNIT / A unit applicable to all building types where central station fan coil units or induction units have been used previously features a one- or two-slide-out refrigeration or heat pump chassis. / ITT Nesbitt. GB*

781 ROOF-MOUNTED SYSTEM / A variable air volume roof-mounted air conditioning unit utilizes inlet vane controls and air foil fans. The system provides from 20 to 48 nominal tons of cooling and operates over an air volume range of 5,000 to 13,000 CFM. The company claims the unit eliminates simultaneous heating and cooling. / American Air Filter Co. GB, ICR, E*

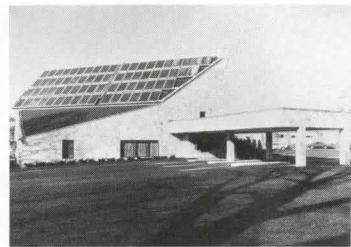
WATER SUPPLY & TREATMENT

782 INSULATED STORAGE TANK / A new jacketed large volume storage tank has been added to the company's existing line. Steel cabinets are insulated by a high-density fiberglass that meets ASHRAE 90-75 standards. Both horizontal and vertical tanks are available. / A.O. Smith Corp. GB*

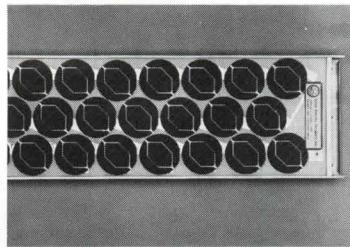
783 WATER HEATER / The Sandblast-er unit is only one of many additions to the company's existing line of similar products. Completely gas-operated, it reduces the build-up of sand, lime and sediment that can be a cause of tank failure. / State Industries, Inc. GB*



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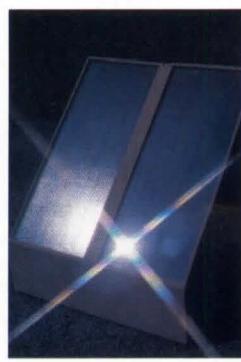
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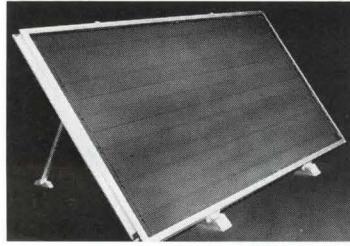
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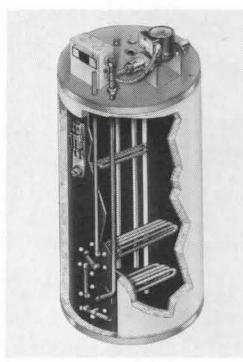
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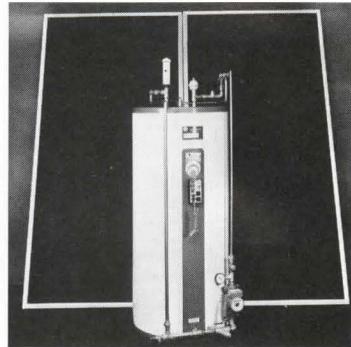
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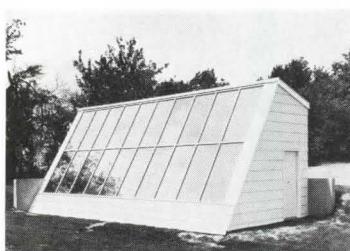
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SOLAR EQUIPMENT

784 GLASS COATING / *Enersorb* is a black absorptive coating on solar collectors claimed to withstand out-gassing, chalking, fading, blistering, peeling and cracking at temperatures up to 400 deg. It can be used for both space and hot water heating applications on residential and commercial buildings. / DeSoto, Inc.

785 SOLAR HEAT COLLECTORS / Extrudable *Lexan* resin is used as a transparent cover on the company's *Thruflo* Solar Heat Collectors. In this collector, air enters between a black perforated aluminum collector sheet and the *Lexan* resin cover, and as the air moves downward through the perforations, it is quickly heated. / Park Energy Company.

786 SOLAR COLLECTOR / These panels have no mechanical fasteners or caulking visible on the faces. Frames are anodized bronze, black or clear to eliminate the need for painting. They feature flat aluminum absorbers with a solar coating (guaranteed for 25 years) and tempered, low-iron solar glass. / Energy Alternatives, Inc.

787 SOLAR COLLECTOR / The 21-B model has an integrated "temperature limiter" to protect the system from excessive temperature build-up to maintain internal collector temperatures below 270 deg regardless of ambient conditions. A folded polymer "heat trap," which replaces the second glazing, is claimed to inhibit convection and radiation losses. / Daystar Corp. GB, ICR, LR, E*

788 SOLAR GLASS / *Solatex* is a glass specifically designed for solar energy applications. It is a reduced iron content lime glass that is claimed to offer higher performance at a lower cost than other company solar glass products. A patterned surface allows a solar transmittance of 90 per cent and is glare-reducing. / ASG Industries, Inc. GB, ICR, E*

789 SOLAR HOT WATER HEATER / Only one in a line of domestic hot water heaters, *Sunfire* operates as an open system, supplying hot water by pumping potable water from the storage tank through the solar collector(s) and back to the storage tank. / Solar Energy Products, Inc. GB, LR, E*

790 POWER SOURCE / The *Electro-ol*/Photovoltaic Power Module consists of silicon solar cells encased in an aluminum frame and covered by a transparent glass covered by a transparent glass cover plate. It is specifically designed for remote, unattended equipment like pumps, fans, communication relays and navigational aids. Two terminal strips provide electrical hook-up, and mounting is adjustable to achieve desired tilt angle. / Solar Energy Products, Inc. GB, LR, E*

791 SOLAR COLLECTOR / The *Sunfire* collector allows all components to be easily serviced and/or interchanged from a selection of absorber plates, coating, glazings, structural enclosures and mounting systems. / Solar Energy Products, Inc. GB, LR, E*

792 SOLAR HEATING SYSTEM / A total system for residential heating includes solar collectors, air handlers, hot water coils, ducts and controls. The solar collector is double-paned, tempered, insulated glass, enclosed in a custom-molded rubber gasket that seals the glass to the frame. / Research Products Corp.

793 SOLAR COLLECTOR / The model SCM-200 is a non-tracking unit, designed to be assembled in arrays of any quantity. In operation, the module is a heat pipe vaporizer in which solar radiation is converted to thermal energy which is transported as low pressure steam to a storage tank. / Entropy Ltd. GB, E*

794 SOLAR WATER HEATER / The *Conservationist* solar electric water heater uses a direct immersion heating method where heat gathered from solar collectors is used to heat stored water directly. Two or four heat exchangers are used in sets to maximize heat transfer. / A.O. Smith Corp. GB*

795 PLUG-IN MODULE / Solar heat transfer modules are virtually "plug-in" units, arriving packaged, containing all necessary pumps, heat exchangers and controls, pre-piped, wired and assembled. Individual models can handle up to 6,700 sq ft of collector surface. / ITT Bell & Gossett.



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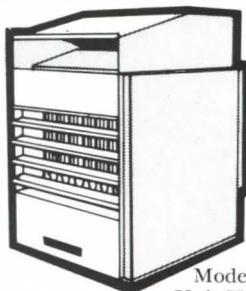
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Conditions were Spartan in both factory and retail establishments back when Reznor first introduced its gas burning space heater. But its introduction helped bring

dustrial and commercial heating, ventilating and air conditioning systems. What is the secret to a ninety year success story that is still growing? Respect for our customers, pride in our products, and engineering that plans on a long future for both.

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3132 HOTEL HVAC CONTROL / Hotel/ motel hvac room units can be turned off from the reception desk as soon as the guest has checked out with the plug-in energy management system described in a "Power Line Utilization System 4000" brochure. System is said to integrate easily with load shedding equipment. / Johnson Controls, Inc.

3133 INTEGRATED CEILINGS / Two aluminum ceilings—the *Planar* and the *Plenum Mask*—are covered in a technical brochure. Indoor and soffit applications, size limitations, finishes, special angles and curves, lighting and sprinkler operation are discussed in the literature. / Alcan Building Products. ICR*

CONVEYING SYSTEMS: UCI 14

3134 HOSPITAL CONVEYORS / The Act-automatic cart transportation-system is shown handling hospital supplies and equipment in a 4-page color brochure. The Act conveyor may be designed into new construction or integrated with existing facilities, according to the text. / Acco, Chain Conveyor Div.

3135 HOISTS AND CRANES / Hand-operated and electric hoists for industrial materials handling are described in a 12-page catalog; trolleys and accessories are also shown. / CM Hoist Div., Columbus McKinnon Corp. E*

3136 RESIDENCE ELEVATORS / Vertical and stair lifts for home installation are pictured in a color brochure. The Elevette car has been completely redesigned with flush interior construction. The *Inclin-ator* lift for indoor and outdoor use is included in the brochure. / Inclinator Co. of America, GB*

MECHANICAL: UCI 15

3137 WATER SAVING FIXTURES / A variety of water conservation products are presented in a 4-page bulletin. Fixtures for residential, commercial and industrial applications include *Control-A-Flo* adjustable cartridge units for faucets, *Econo-Flo* outlet adapters, and self-closing faucets. / Chicago Faucet Co.

3138 ACCESSIBLE FOUNTAINS / Drinking fountains for the physically handicapped are described in an 8-page color brochure. Nine different units, specifically designed to comply with Public Law 90-480, are pictured in real-life situations. Full specifications and finish details are given in the catalog. / Sunroc Corp.

3139 PIPING & SPECIALTIES / A 16-page manual reviews specifications products recently redesigned or added to this line of piping specialties. Products include carrier fitting clean-outs, floor drains, roof drains, hydrants *Shokstops* and interceptors; full size and engineering data is given for each item. / Tyler Pipe, Wade Div.

3140 BARRIER-FREE WASHROOMS / Color brochure discusses elements of barrier-free design of washroom and shower rooms, including recommendations on entrances, toilet stalls, accessories and lavatories. Products described include washfountains, showers, wash centers, grab bars, etc. / Bradley Corp. E*

3141 SOLAR ENERGY COSTS / The "Solcost Space Heating and Heat Loads Handbook" is written to help architects and engineers design and assess the direct benefits of solar equipment. It is one of a series of solar energy cost bulletins researched under contract to the Department of Energy, Solar Technology Transfer Program. / International Business Services, Inc., Solar Group.

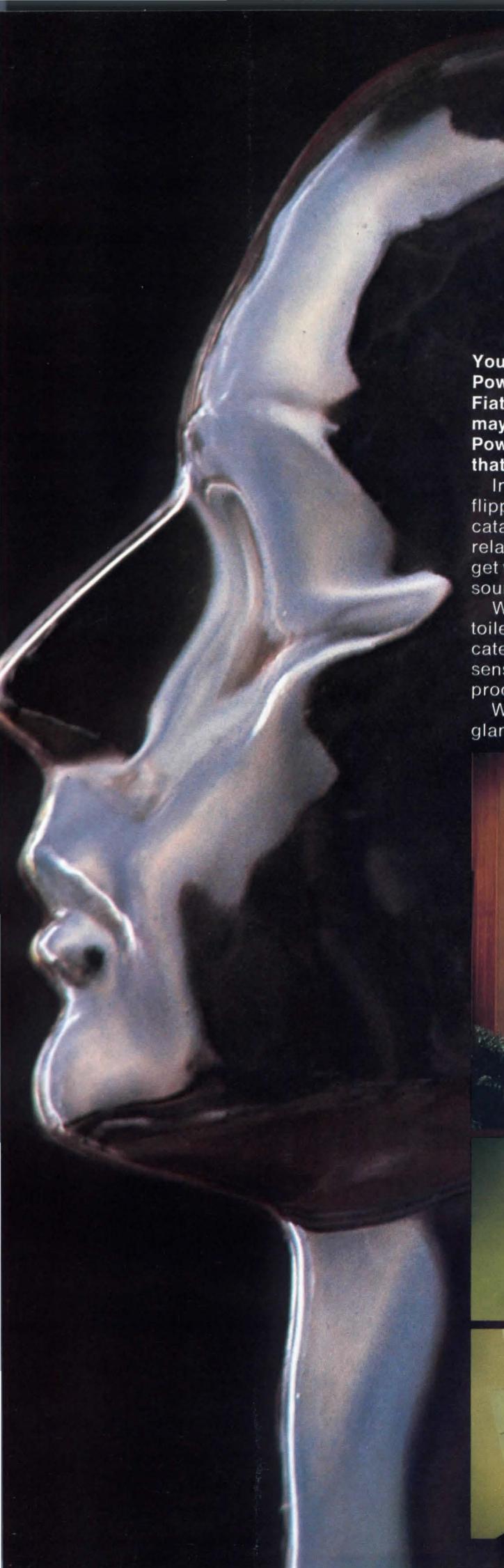
3142 SOLAR COLLECTORS / The "CU30-WW" collector and *Sunfire* energy systems are explained in a 10-page specifications and applications brochure. Product descriptions include specific features, dimensions and capacities, approvals and certifications; mounting details are illustrated. / Solar Energy Products, Inc. GB, LRC, E*

3143 SOLAR ENERGY / A 4-page brochure describes the *Sunworks Selector* solar energy collector in considerable detail, offering product data, specific design advantages, installation drawings, and performance data. The lowest cost/BTU/ft. sq. in the industry is claimed for the *Sunworks* system. / Sunworks Div. of Enthone, Inc. GB, ICR, E*

3144 CHEMICAL EXTINGUISHER / Illustrated bulletin explains the *Range Guard* wet chemical fire protection for commercial cooking areas. Out-of-the-way nozzles concentrate streams of liquid *Karbaly* directly on fires, turning burning grease into easily-cleaned up soap residue. System has NFPA, UL and FM fire protection approvals. / "Automatic" Sprinkler Corp. of America. GB, ICR, E*

more literature on page 192

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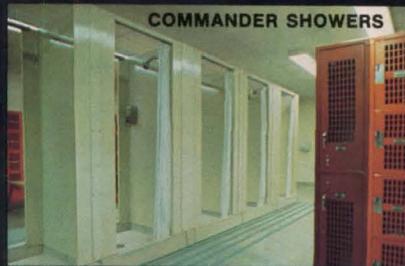
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SHOWER FLOORS



SHOWER/BATH CONTROLS



COMMANDER SHOWERS



MOP
BASINS



SHOWERTROL MULTIPLE CONTROL



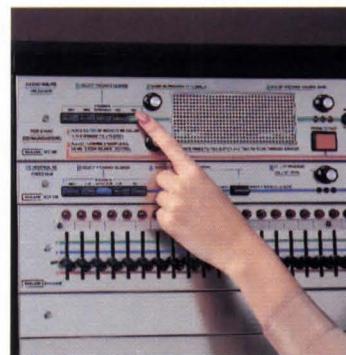
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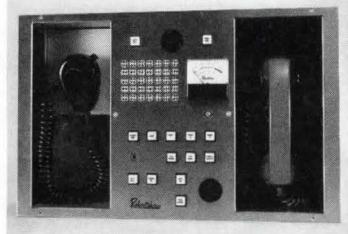
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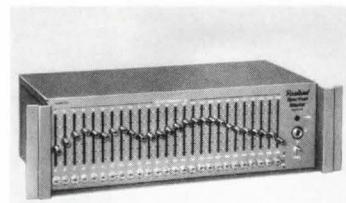
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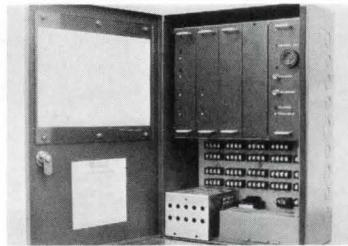
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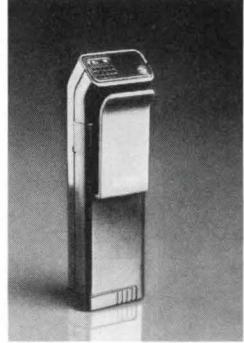
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COMMUNICATIONS

808 MICROPHONE MIXER / A microphone mixer-preamplifier has been designed for professional installations requiring the use of multiple microphones. A "voice entree" feature controls automatically eight microphones simultaneously without feedback. / Rauland-Borg Corp.

809 SCHOOL SOUND SYSTEM / Specially designed for schools, a sound/communications system is color-coded: colored buttons refer to color instructions appearing on the control panel. It provides two-way voice communications with any classroom as well as standard announcement capability to all rooms. / Rauland-Borg Corp.

810 SOUND EQUALIZER / The Spectrum-Master Model 6226 is designed for extended-range equalization in concert halls, theaters and performing arts centers where precise control of acoustical conditions is necessary. / Rauland-Borg Corp.

811 TELEPHONE SYSTEM / The D-1000 model telephone system is claimed to enhance intercommunications plus save costs by telephone ownership. Capable of handling up to 800 station lines and 144 trunks, the unit uses plug-in-module circuitry. The system is installed and maintained by a national network of local company offices. / Executone, Inc.

812 EMERGENCY COMMUNICATIONS / For "life-line" safety in buildings, the system is comprised of firefighters' communications and public alerting equipment. The model "Recom 10" shown, shows phone and microphone units in the "command center." / Robertshaw Controls Co., Control Systems Division.

813 FIRE ALARM PANEL / The model FMS 500 is a modular, solid-state control panel offering flexibility in input/output programming. A cabinet houses the master board providing five plug-in-position for interchangeable terminals. / Robertshaw Controls Co., Control Systems Division.

814 FIRE/SECURITY SYSTEM / A combination fire protection and security monitoring system has three major functional components: signal initiating device, monitoring and processing equipment and operator control/printer units. A modular system, it can be connected to other company communications equipment. / Robertshaw Controls Co., Control Systems Division.

815 PHONE SYSTEM / Designed for organizations that require from 15 to 50 phones, the user can receive messages via built-in-speaker and can respond to an intercom call without picking up the handset. It also provides a direct line between any two stations without dialing. / Executone, Inc.

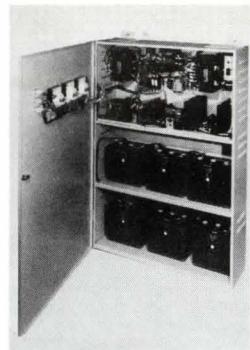
816 POCKET PAGE SYSTEM / This digital system makes it easy to locate personnel, especially in hospitals. Each receiver contains an easily removable code module that houses the circuitry, with receivers totally interchangeable. It can also be tied into an organization's telephone system. / Executone, Inc.



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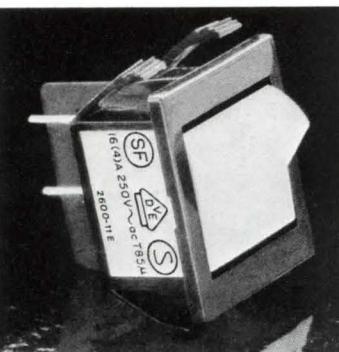
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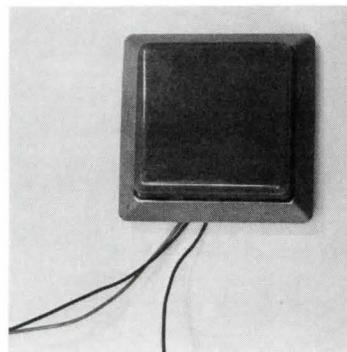
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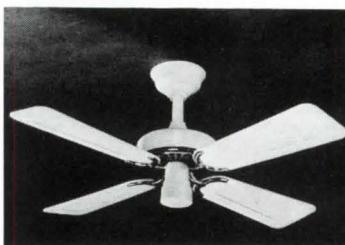
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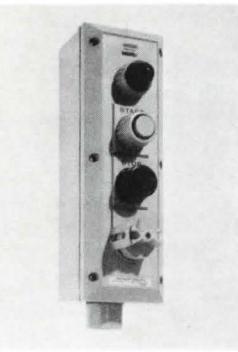
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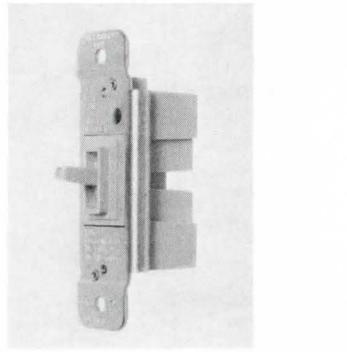
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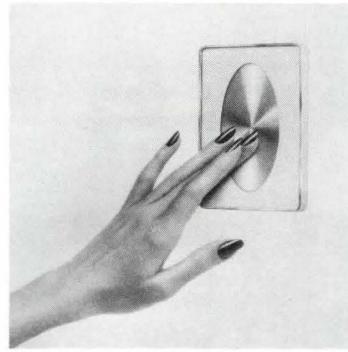
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ELECTRICAL & ELECTRONIC CONTROLS

817 ELECTRICAL POWER SUPPLY / An uninterruptible power supply system, called "AccuPac 1" is designed to deliver continuous, filtered precision power to critical loads and eliminate problems of power fluctuations or blackouts. / Westinghouse Electric Corp., Industrial Equipment Division.

818 SNAP-IN SWITCH / Miniature snap-in, rocker-lever switches with high current capabilities are available. It has a 16-amp 250-volt AC rating for fast mounting on electronic instrumentation, medical equipment, computers, business machines, consumer and commercial appliances. / Crouse-Hinds Co.

819 CONTROL UNIT / A factory-sealed, corrosion-resistant control station for use in refineries, chemical or hazardous indoor and outdoor locations is available. The enclosure is a fiberglass-reinforced polyester material. / Crouse-Hinds Co.

820 ENERGY MANAGEMENT SYSTEM / A microprocessor-based energy management system is designed for use in commercial and industrial applications where the electric bill exceeds \$1,000. Energy loads may be controlled on both a demand and time-of-day basis. / Square D Co.

821 HUMIDITY SENSOR / The EH500-2 duct model humidity sensor is housed in a molded Lexan enclosure, mounted directly to any of the company's 2- by 2-in. thermostats. / Robertshaw Controls Co.

822 DIMMER SWITCH / The *Light Demand* dimmer switch looks like an ordinary toggle switch but gives a full range dimming control. It can be installed into standard electrical switch boxes. Switches are available in 600- and 1000-watt models. / Power Controls Corp. E*

823 EMERGENCY SYSTEM / "Access Power" is a solid state AC computerized emergency control system. Fully automatic, it is claimed to provide a cost effective solution to the problem of reliable emergency power. / Standby Systems, Inc.

824 TEMPERATURE CONTROL / The *Sunfire DC-PA* differential temperature control unit has a variable flow-rate feature than can extend pump life by minimizing pump cycling. It also offers upper temperature limit protection and frost cycle features. / Solar Energy Products, Inc. GB, LRC, E*

825 DIMMER CONTROL SWITCH / This switch makes it possible to select the light intensity by a simple no-pressure fingertip touch. There are no moving parts. It has a built-in memory that returns to the exact light level selected previously. / Leviton Manufacturing Co., Inc. E*

ELECTRICAL HEATING-COOLING

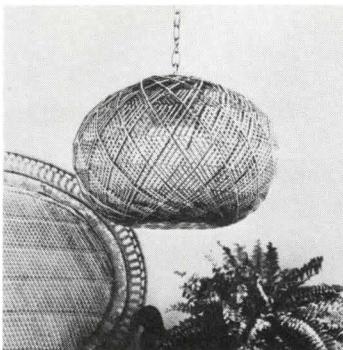
826 GREENHOUSE HEATER / A low temperature electric radiant heating panel makes an effective heater for greenhouse extensions. Panels can be surface-mounted or suspended on chains. Each is silicone sealed for water and moisture resistance. / Aztech Int., Ltd. E*

827 CEILING FANS / A collection of "Olde Tyme" ceiling fans has a pancake motor cover. A 36-in. size can be installed in practically any room of the house where a larger fan would not fit. Six finishes are available; wooden blades come in white or pecan finish. / Hunter Division, Robbins & Myers, Inc.

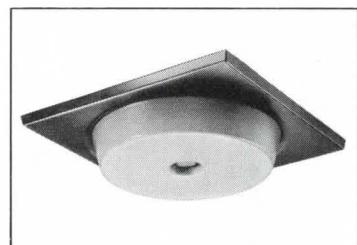
828 FAN INSERT / A new cane fan blade insert is available as an option to the company's line of "Olde Tyme" fans. Five motor finishes complement the blade finishes. / Hunter Division, Robbins & Myers, Inc.



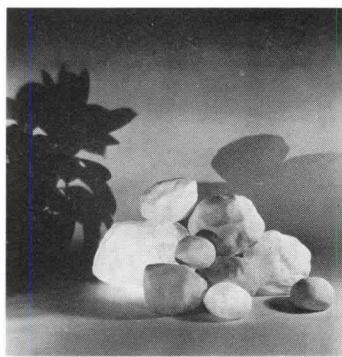
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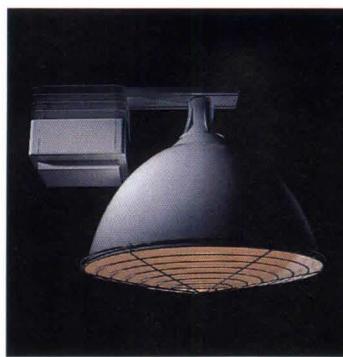
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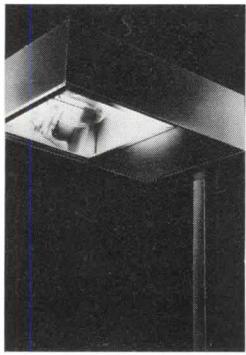
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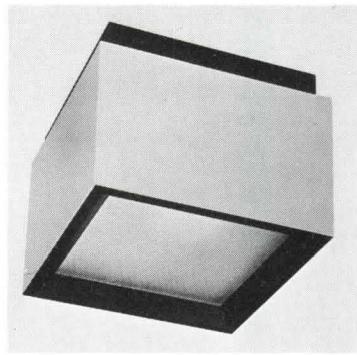
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ELECTRICAL SUPPORTING DEVICES

829 INSTRUMENT CASE / A corrosion-resistant enclosure with clear, acrylic plastic cover has been designed to house instruments that require an externally readable display. Known as NJBW enclosures, they accept metering devices such as ammeters, voltmeters and watt-hour meters. / Crouse-Hinds Co.

LIGHTING

830 "FUNKY" LIGHTS / A set of various sized lights in the shape of rocks that glow are called "moon rocks." Available in different sizes, they range in price from \$59 to \$190. / Koch + Lowy Inc.

831 OUTDOOR LIGHTS / An HID luminaire for general outdoor use features sharp cut-off of spill light, eliminating glare in many applications. Constructed of heavy-gauge extruded aluminum, the CBR series Area Cube has ballast lug on interior mounting plate with plug-in connectors and hinged access doors for easy maintenance. / Keene Corporation, Lighting Division.

832 WICKER LIGHT / A simulated natural wicker light uses a standard 75 watt bulb and a white 8-in. diameter glass ball, supported by a polished chain. Its recommended applications include residential and commercial uses such as restaurants. / Virden Lighting.

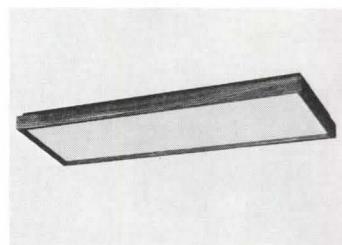
833 TENNIS LIGHTING / Designed for installations where height is a critical factor, *INVERT-O-KING* fixture has a 24-in. porcelain reflector. Extruded plate with ballast and socket slides into wiring tray attached to ceiling framework. / Benjamin Division, Thomas Industries, Inc.

834 TRACK LIGHTING / Overhead track lighting called the "premier" power cube is small, only 1 7/16-in. square and 3/4-in. deep. A variety of accessories are available including track with joiners for L- or T- or X-shape configurations. / Thomas Industries Inc.

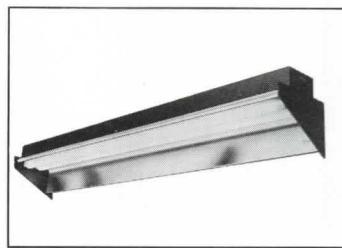
835 WATT WATCHER / Called "Recess Conversion Trim" comes in a kit consisting of trim (metal plate) and diffuser with socket adapter which can be installed in place of an incandescent fixture. The new unit uses fluorescent lighting tubes. / Thomas Industries Inc.

836 RESIDENTIAL LIGHT / A contemporary lighting fixture is chain-hung and has a rustic appearance, with amber glass of different shades and antique brass finished frame. / Thomas Industries.

837 RECESSED FIXTURE / An incandescent and HID recessed surface square lighting fixture is available in either 12-in. square or 16-in. square sizes. Each features a deep regressed aluminum "door" that is available in black or white. Construction is finished hydroform reflectors, and all steel bodies are finished in acrylic enamel. / Guth Lighting.



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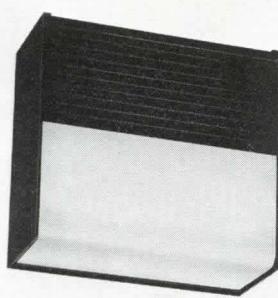


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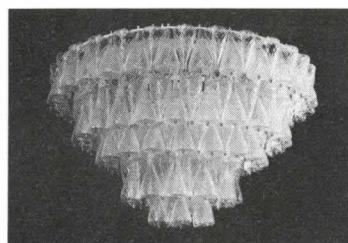
838 HARDWOOD FIXTURES / Matte-white acrylic diffusers for fluorescent fixtures called the "Sophisticates" are framed with solid red oak, finished in walnut. Units range in size from 1/2- by 4-ft to 4- by 4-ft, and can be mounted in a continuous row with only 1/4-in. clearance. / Guth Lighting.

839 TASK LIGHTS / Task-Lite fluorescent luminaires are available in 4- and 8-ft lengths with symmetrical or asymmetrical distribution. Manufacturers say their new energy-saving ballast on 40W units reduces input wattage by 10 watts and operates 25 per cent cooler. / Guth Lighting.

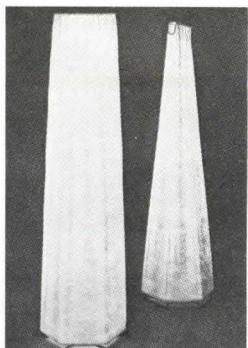
840 INDUSTRIAL FIXTURE / Aisle-Lite HID industrial fixture has computer-designed elliptical reflector of 16-gauge *Alzak* aluminum to provide high-intensity asymmetric distribution along aisles and high up on stacks. / Guth Lighting.



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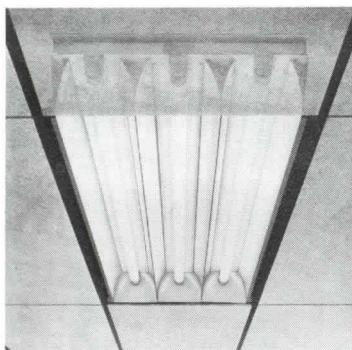
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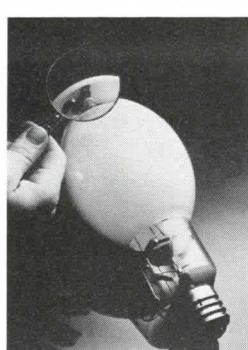
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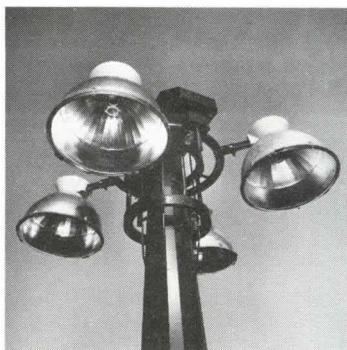
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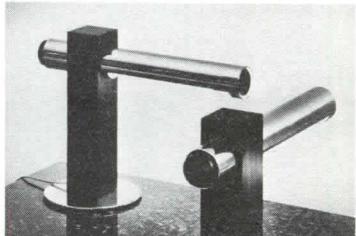
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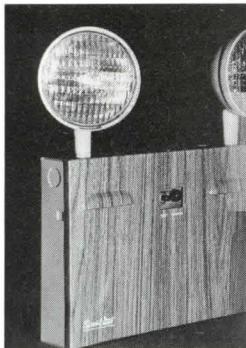
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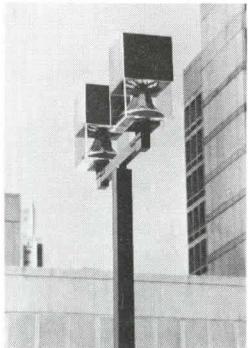
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841 WALL BRACKET / Wall-Liter bracket has aluminum housing finished in bronze-colored acrylic enamel for durability in outdoor installations. It is available for 100/150W high-pressure sodium and 175W mercury vapor lamps. / Guth Lighting.

842 PARABOLIC LUMINAIRE / "X-Parabolic" luminaire has open configuration, with no lenses or baffles, to maximize use of light energy and to reduce maintenance. Reflectors completely surround lamps for wide beam pattern. / Lighting Products, Inc.

843 EMERGENCY LIGHTING / Model XR-9 package can power up to seven tungsten halogen lamps for emergency lighting. The package also includes solid-state charging and switching, a brownout circuit, and solid-state protection against overload and shorts. / Sure-Lites, Inc.

844 CHANDELIER / A hand-blown Venetian glass chandelier has been designed, primarily for use in large open rooms, such as hotels. Five tiers of pyramid-shaped individual glass units are combined in a circular pattern. UL-approved. / Lumen Design Co. I*.

845 SAFETY HID LAMPS / Each HID lamp in the new Safeline series has a spring-loaded switch that opens the circuit to extinguish the lamp immediately if the outer glass jacket is shattered, thus preventing exposure to potentially harmful UV radiation. / GTE Sylvania Inc.

846 SUN STICK / The 20W Sun Stick, combining lamp, ballast and plastic housing in a single unit, provides extra lighting in such areas as kitchens, workshops and bathrooms. Installed with pressure tape, mounting tabs and screws, it is 25 in. long and weighs 19 oz. / GTE Sylvania Inc.

847 FLOOR LAMP / The "Kate" model of floor lamps are 75 1/4-in. high and vary from cone shape to pyramid shape. The lamp provides diffuser stretched over a metal frame. / Flos (distributed by Atelier International).

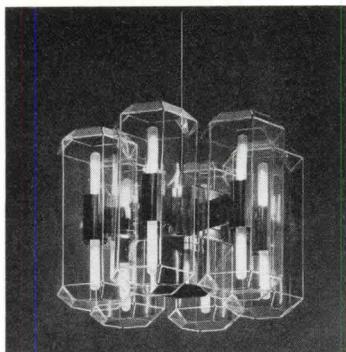
848 HIGH-RISE LIGHTS / New "Universal 2" lowering device incorporates two cables to eliminate snarling and twisting when assembly is lowered for maintenance. Each cable is independently supported and can carry the entire weight of the luminaire assembly. / Millerbernd Manufacturing Co.

849 OUTDOOR HID LAMPS / The manufacturers have expanded their Pericline series of outdoor lighting to include HID lamps from 100W and 1000W, either pole-mounted (up to 50 ft) or wall-mounted and as luminaires only for retrofit projects. / Moldcast Lighting.

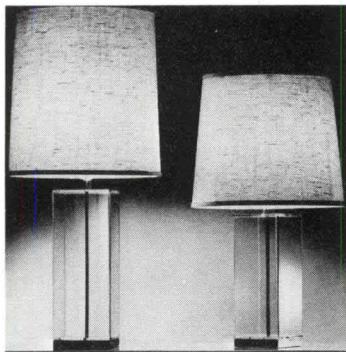
850 OUTDOOR LUMINAIRE / HID Paracyl unit, with an extruded aluminum and hydroformed specular aluminum reflector system, has field-adjustable optical system that allows precise beam cutoff control. Both flat and projecting lenses are available. / Moldcast Lighting.

851 DESK LAMP / The 410A desk lamp has a polished aluminum cylinder for the light source, supported by a vertical column of black anodized aluminum and a polished aluminum base. The light cylinder houses a full-range dimmer switch. / Robert Long, Inc.

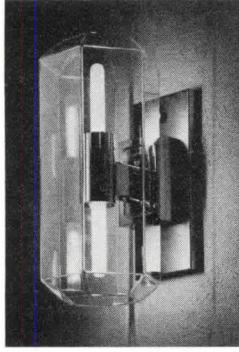
852 LOUVERED HOOD / The manufacturers have added an optional louver to their 8000 Series hood group. The aluminum louver is painted white and is contained in a black anodized aluminum ring. / Robert Long, Inc.



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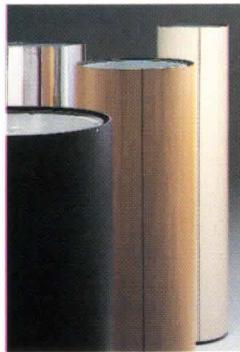
853 CHANDELIER / Designed by Georgine Aasen, chandelier fixture has a hexagonal highly polished chrome hub that houses a downlight, and six hexagonal crystal acrylic chimneys that carry the light sources. / Robert Long, Inc.

854 TABLE LAMP / Table lamp is supported by a seamless square cylinder of clear acrylic. Model 4431 is 16 in. high, 6 in. square; model 4441 is 19 in. high, 7 in. square. Both have small metal bases and white linen shades. / Robert Long, Inc.

855 WALL FIXTURE / Polished chrome wall bracket and fixture-mounting support a clear acrylic hexagonal fixture. The bracket was designed by Georgine Aasen. / Robert Long, Inc.



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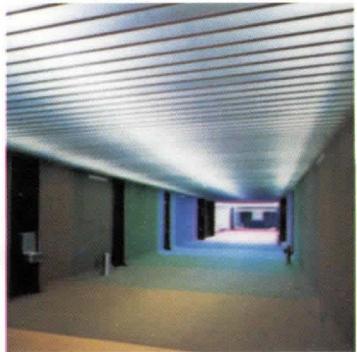


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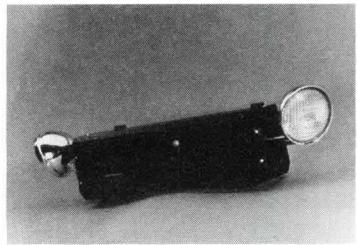
856 DESK LIGHT / Designed by Achille Castiglioni, this table lamp has an enameled die cast aluminum base in which the transformer is housed together with switch and fuse. "Ipotenusa" has a 12 volt system, allowing one to touch the arm without the hazard of a shock. Finished in beige, black or dark brown base and chrome or red/black arm. / Flos (distributed by Atelier International).

857 LIGHT COLUMN / An HID illumination for office interiors, the light columns are designed to have an extra wide light distribution pattern to avoid ceiling hot spots. Available in oak, chrome, and high-pressure laminates in white and brown. / JG Furniture.

858 LUMINOUS CEILING / The "lean-to" is a luminous ceiling that functions like a skylight in areas where one is not advisable. It spans ceiling openings from 2 to 4 ft in width and any length. It is recommended for perimeter or cornice lighting applications. Lighting is provided from 2, 3 or 4 fluorescent fixtures. / Integrated Ceilings, Inc.



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859 SUSPENDED CEILING / An open baffled suspended ceiling uses 8-in. deep roll formed aluminum baffles spaced 12-in. on center to establish a crisp, linear horizontal ceiling plane. The baffles can be easily removed for access to upper ceiling utilities. "Linea" may be installed without disrupting existing air-conditioning diffusers, sprinklers, public address speakers, etc. / Integrated Ceilings, Inc.

860 EMERGENCY LUMINAIRES / The *Holophane* M-10 emergency luminaire has a black anodized housing and is available with a variety of lamps to meet specific emergency lighting needs. Fully automatic, it is constructed of solid-state electronics for rugged construction. Meets UL, NEC, OSHA, Life Safety Code requirements. / Johns-Manville Sales Corp., Holophane Division.

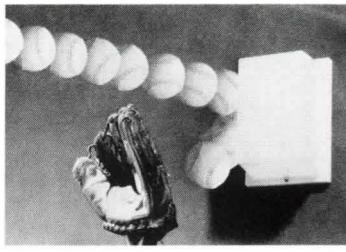
861 TWIN-BEAM LIGHTING / The *Holophane* II fluorescent luminaire combines energy-efficiency with twin-beam lighting for maximum task visibility. It is designed to decrease glare. It is available surface-mounted, in coffers or as part of integrated ceiling/lighting system. / Johns-Manville Sales Corp., Holophane Div. GB, I*



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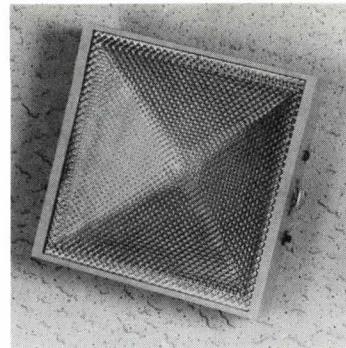
862 STREET LIGHTING / Consisting of an outer sphere made of bronze or black aluminum top canopy and an acrylic or polycarbonate lower hemisphere, the *SSL* luminaire incorporates prismatic optical system with a choice of light distributions. Aluminum or steel poles are available, with mounting arrangements of 1 to 4 lights. / Johns-Manville Sales Corp., Holophane Div.

863 LOW-MOUNT LIGHT / The *Trailblazer* luminaire provides a vandal-resistant low-mount fixture for lawns and walkways. Enclosed and gasketed, it utilizes an injection-molded polycarbonate refractor compounded with UV stabilizers. Its housing is heavy-duty cast aluminum with a smooth surface. Can be mounted horizontally or vertically. / Johns-Manville Sales Corp.

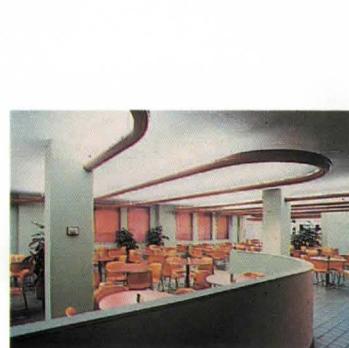
864 IMPACT-RESISTANT LIGHT / An impact-resistant light for outdoor use or interior recreation applications is recommended where vandalism is a problem. The "Non-Destructable" fluorescent wall/ceiling-mounted fixture is 10-in. square with a Lexan diffuser. / Progress Lighting.



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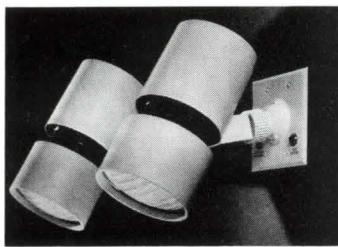
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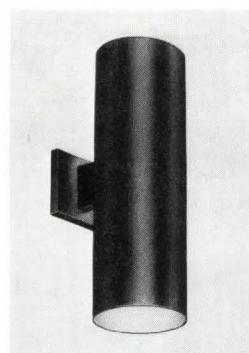
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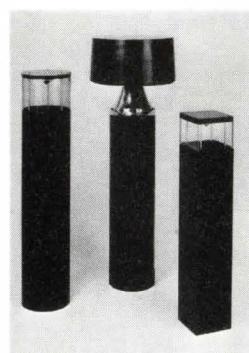
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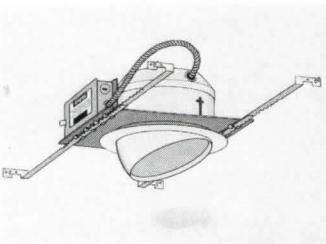
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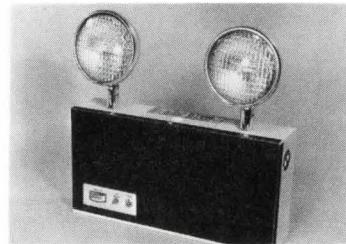
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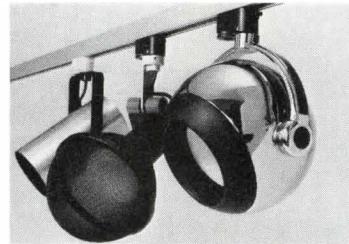
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865 OUTDOOR LIGHTS / *Holophane* Caribe outdoor luminaires feature a choice of contemporary shapes and colors, efficient prismatic light control and mechanical construction for simple installation. The shapes include smooth and prismatic spheres, "hard and soft" cubes, cylinders and lantern. Available in impact-resistant acrylic or polycarbonate, in clear or bronze or white. / Johns-Manville Sales Corp, Holophane Div.

866 EMERGENCY LIGHTING / The "Chloride-Lite Master" may be either surface or flush-mounted to a recessed junction box. Low-cost sealed lead calcium batteries or sealed nickel cadmium batteries can be used. Lighting is of high efficiency Tungsten Halogen lamps. / Chloride Systems, U.S.A. E*

867 AMBIENT LIGHT / A square wall washer has a hydroformed reflector for focusing light. An extruded aluminum deep groove matte black step baffle snaps in-and-out for easy lamp replacement. / Progress Lighting.

868 ELEVATOR LIGHT / An emergency light for elevators, the 2-lamp 4-hour "SPU-70" light has almost no maintenance. Tungsten Halogen lamps and rechargeable nickel cadmium batteries are used. UL-approved. / Chloride Systems, U.S.A. E*

869 DECORATOR LIGHTS / These cylinder wall-mounted aluminum lights can be used on the interior or exterior. Part of the company's first commercial fixture line, they are available as wall brackets, up/down lights, ceiling-mounted or hung from pendant. / Progress Lighting. E, I*

870 EMERGENCY LIGHT / A new 6-volt nickel cadmium series "100" unit has a wood-grain front and can be wall-mounted using slots on the unit's back. The unit comes with two Tungsten Halogen lighting heads, sealed long-life maintenance-free nickel cadmium battery, transformer and high-low charge indicator light with a "push-to-test" switch. / Chloride Systems, U.S.A. E*

871 DUCT LIGHTING / In a line that offers more than 100 configurations and connecting devices, this system consists of small or large diameter tubular fluorescent fixtures that can be connected in different configurations. Units up to 24-feet long can be painted, polished or anodized aluminum. / Peerless Electric Co.

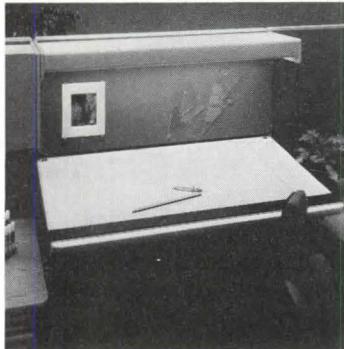
872 POST LIGHTS / A selection of bollards and compatible mid-level indirect post lights are designed for outdoor use. Round and square bollards are available. All units feature rugged cast and extruded aluminum weatherproof constructions, fully gasketed enclosures, impact-resistant diffusers and durable finishes. / McPhilbin Lighting, Emerson Electric Co.

873 TRACKLIGHTS / This system includes 2-circuit trackways of extruded aluminum, decorative tubular tracks and over 60 different models of track lights. Tasklights, spots, accent lights, and projectors are designed for variable illumination in all applications. / Omega Lighting, Emerson Electric Co.

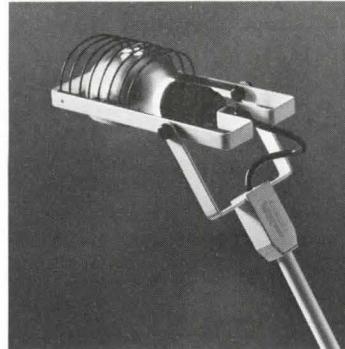
874 STORE LIGHTING / An indirect store lighting system uses an optical chamber which projects the light from two different lamps upward and spreads it out across the ceiling before reflecting it back on the lighted area. Used is a combination of high-pressure sodium and metal-halide lamps. / SPI highting, McGraw Edison Area Lighting Division.

875 LIGHT FOR RECREATION / A long linear fluorescent lighting fixture particularly applicable for recreational uses including tennis (shown) is mounted on vertical curved stands. This type of fixture evenly illuminates the playing field. / Crouse-Hinds Co.

876 FLOODLIGHT / A general purpose floodlight, the *Spec-360* is made of corrosion-resistant materials. It has a hinged ballast assembly that swings out from the luminaire, leaving a worker's hands free to service all electrical components. / Crouse-Hinds Co.



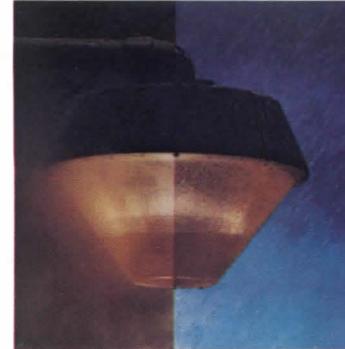
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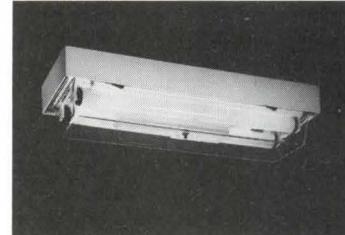
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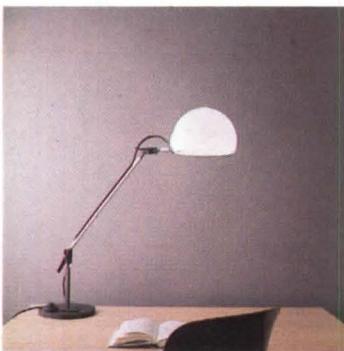
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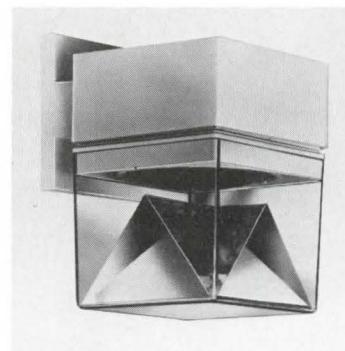
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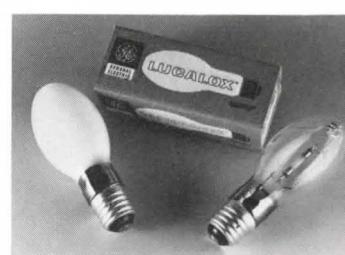
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877 TASK LIGHTING / A *TriAmbient* lighting system is part of the company's open office component furniture system. It consists of three lighting fixture groups: panel-mounted HID, panel mounted fluorescent and free-standing HID units. This provides flexibility for different work stations. / Haworth, Inc.

878 INDUSTRIAL LIGHT / A non-metallic incandescent lighting fixture is designed for general purpose indoor and outdoor applications, particularly suited for marine areas. Each is custom molded from glass-filled thermoplastic polyester. Fixtures are available in junction box ceiling type, pendant type and wall bracket mounting. / Midland-Ross Corp.

879 TABLE LAMP / An adjustable table lamp with an optional and interchangeable diffuser is available. The diffusers offered are a metal cone, opaline cone, opaline sphere or an opaline hemisphere (shown). Of anodized aluminum, bases and fixing devices are offered in dark gray lacquered metal. / Artemide (distributed by Castelli Furniture).

880 TASK LIGHT / The "Sintesi" is an adjustable and extendable table or wall lamp. The diffuser of anodized aluminum allows light to filter upward while protecting the bulb. Available in white, black and red. / Artemide (distributed by Castelli Furniture Inc.)

881 VAULTED LIGHT FIXTURE / The Conwed Bv48/48 fluorescent light fixture features standard 2- by 4-foot lay-in acoustical ceiling panels for its vaulted sides, eliminating cutting of panels. Designed specifically to fit a 48-in. square module using standard inverted T-bar suspension installation. / Conwed Corp. GB*

882 OUTDOOR LIGHTS / Equipped with an optical louver, the system provides broad areas of illumination while the louver cuts off light in normal viewing angles. It is a low-profile, high-efficiency site light. Standard finishes are black, dark bronze and medium bronze. / Kim Lighting, Inc.

883 EMERGENCY LIGHT / The model 420 uses high-efficiency Tungsten Halogen bulbs that produce double the lumens per watt of power consumed as compared to conventional sealed beam lamps, the company claims. The unit is small: 3 1/4-in. deep and 9-in. long. An "on" pilot light and test switch are conveniently located. / Tork.

884 EMERGENCY LIGHT / Suited for new construction and renovations, this unit houses an emergency power pack to power a completely self-contained specialty fluorescent unit for emergency conditions, while also usable in normal conditions. The fixtures slightly hang down from the housing but are covered with a transparent guard. / Dual-Lite Inc. ICR*

885 REMOTE-MOUNTED LIGHT / Designed specially for remote-mounted applications, the "Beamsplitter" is compact and features a multi-directional reflector and lens system that can be field-adjusted to project light in up to four directions. / Dual-Lite, Inc. ICR*

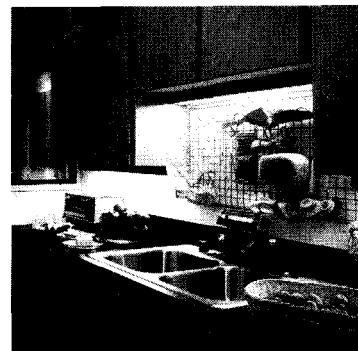
886 LIGHT FOR WET LOCATIONS / *Light Watt II* is designed for hazardous and wet locations. The unit uses low wattage (70W and 100W) high-pressure sodium lamps. Factory prewired, it can be mounted on stanchion, wall bracket, pendant, or thru-wire. / The Miller Co.

887 FLUORESCENT TUBES / The *Maxi-Miser* lamp/ballast system produces the same amount of light, the company claims, as conventional 40 watt systems, with 19 per cent less watts and 24 per cent gain in system efficiency. The system combines the company's *Watt Miser II* four-foot fluorescent lamps with electromagnetic ballast. Recommended uses include offices, schools, factories, stores and hospitals. / General Electric Co.

888 SODIUM LAMP / A 50-watt *LuCalox* high-pressure sodium lamp has been designed that produces twice as much light as a comparable mercury lamp, the company claims. Uses include decorative post-top luminaires; low-mounted residential street-lights; alley, tunnel and walkway lighting, etc. / General Electric Co.



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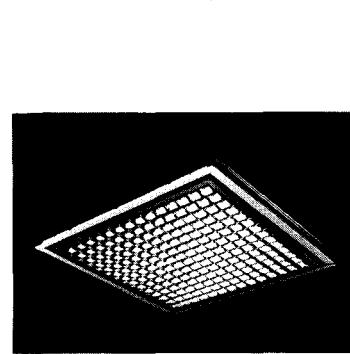


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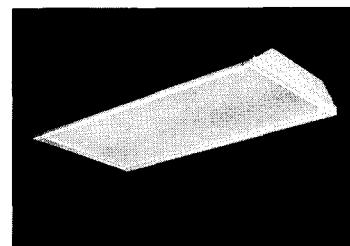
889 REFLECTOR LAMP / A 50-watt elliptical reflector lamp is claimed to provide up to 15 per cent more light and operates on one third less electrical power compared to the 75 watt reflector flood lamp in deep baffle downlighting applications. / General Electric Co.

890 RESIDENTIAL LIGHTS / A complete line of "soft white" fluorescent lights for residential use have been introduced. It is claimed to use 50 per cent less electricity than ordinary incandescent bulbs providing about the same amount of light and lasts 26 times longer. / General Electric Co.

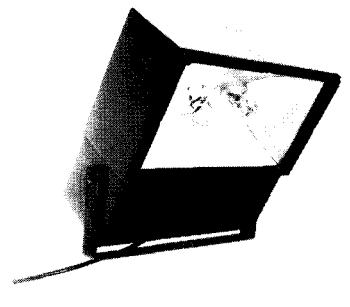
891 GROW LIGHT / A light fixture unit that houses bulbs of the intensity to facilitate plant growth has been stylistically designed to fit office or residential use. It is a freestanding unit, and plants are simply positioned underneath. / General Electric Co.



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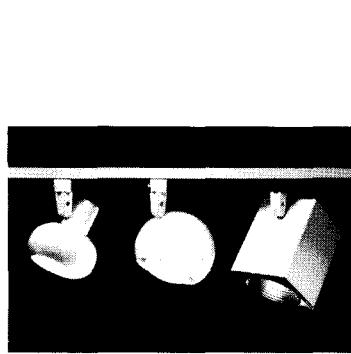


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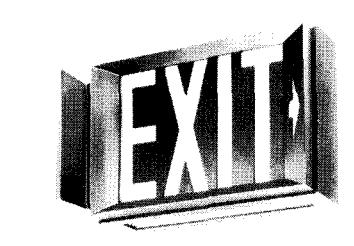
892 LOW-BRIGHTNESS LIGHTING / For lobbies, board rooms, etc., a low-brightness light has been designed, called the "Microcube." It utilizes 1½- by 1½- by 1-in. deep vacuum-metalized injection molded Parabolic Louver in styrene or acrylic materials, with lacquer coated silver finish. The louver appears to "float" unsupported within the ceiling opening. / Keene Corporation, Lighting Division.

893 TROFFER / Vertex/ST is an ultra-thin static troffer designed to fit shallow grid ceiling plenums. Featured are reversible hang-free hinges, positive action spring-loaded door latches, and mechanical light stops that eliminate light leaks. / Keene Corporation, Lighting Division.

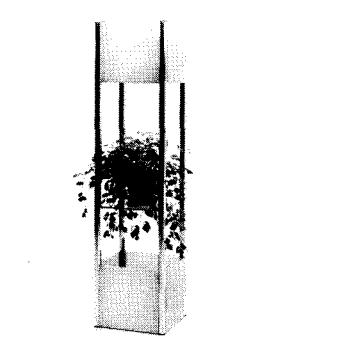
894 FLOODLIGHT / A new low-wattage HID luminaire is made of heavy-gauge extruded aluminum and comes in a satin-polished bronze-color finish. The lens frame is die-cast aluminum, and the reflector is anodized in either specular or diffuse surface. Yoke-type mounting is standard for mounting atop parapets and poles. / Keene Corporation, Lighting Division.



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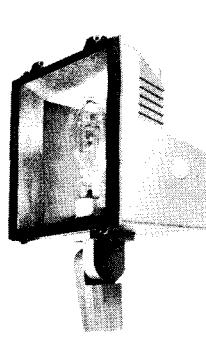


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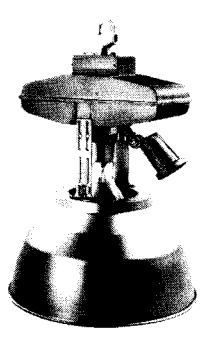
895 TRACK LIGHTING / Designed for residential and light commercial applications is a system of low-wattage track lights. A thin-line, mini-track system holds 7 kinds of fixtures. Plug-in assembly is possible with all components prewired. / Keene Corporation, Lighting Division.

896 EXIT SIGNS / Diecast aluminum emergency exit signs feature a "picture frame" design. An emergency power "pod" contains rechargeable batteries, automatic charging circuitry with pilot light and test button. / Keene Corporation, Lighting Division.

897 AUXILIARY LIGHTING / An HID luminaire for indirect ambient lighting comes in six models including a rectangular unit (shown). There are two heights; each is offered with three different wattages using metal halide or mercury lamps. / Steelcase Inc.



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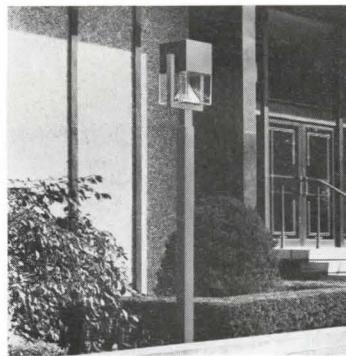
898 FLOODLIGHT / A compact, die-cast high-intensity discharge floodlight is available for commercial and industrial lighting applications. The "Power-House-Plus" aluminum light features a tri-specular reflector, deep heat-sink housing and tempered, break-resistant, tight-gasketed sealed lens. / Keene Corporation, Lighting Division.

899 WORK BAY LIGHT / An emergency option for industrial applications automatically activates whenever an accompanying HID lamp fails. / Keene Corporation, Lighting Division.

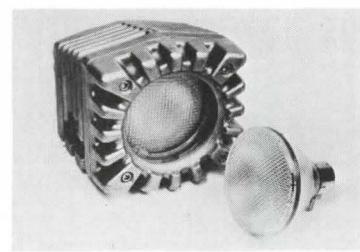
900 SODIUM LAMP / The 880-watt Unalux high-pressure sodium lamp is claimed to reduce electrical energy use for industrial and commercial lighting applications. It is designed to substitute for many 1000-watt mercury vapor HID lamps commonly used in factories. / GTE Sylvania Inc.



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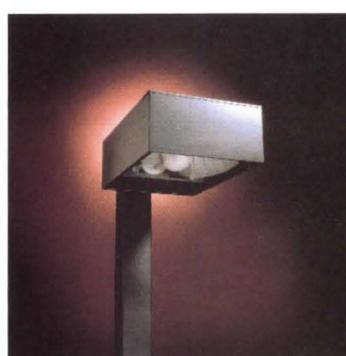
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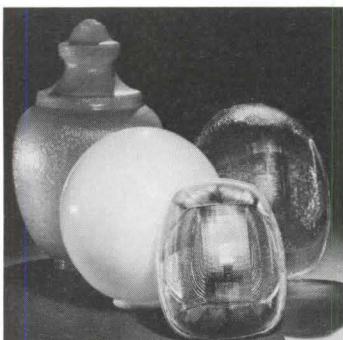
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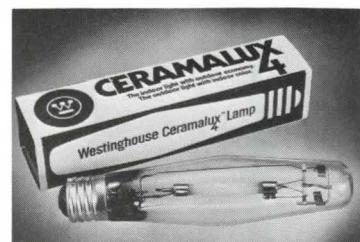
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901 ENERGY SAVING LAMPS / A new series of energy saving lamps, the company claims, provides up to 7 per cent more light per watt of electricity consumed. It uses a phosphor blend called Lite-White that delivers 6,000 lumens of light in an 8-foot, 60-watt lamp. / GTE Sylvania Inc.

902 FLUORESCENT LAMPS / The Thrift-Mate lamp is claimed to reduce by one-third or one-half the energy requirement of standard fluorescent systems without disturbing existing light patterns. It is designed to replace one lamp in a standard two lamp, rapid-start, 40-watt fluorescent fixture. * GTE Sylvania Inc.

903 DIFFUSERS / Light diffusers made from Lexan polycarbonate resin are claimed to be able to withstand the impact of a 40-ft-lb test, thus making them stronger against vandalism. / Formed Plastics, Inc.

904 OUTDOOR LIGHT / The "New Yorker" luminaire is designed for exterior lighting applications. It features a one-piece watertight aluminum housing and high-impact clear acrylic lens. / J.H. Spaulding, Subsidiary, Walter Kidde & Co. Inc.

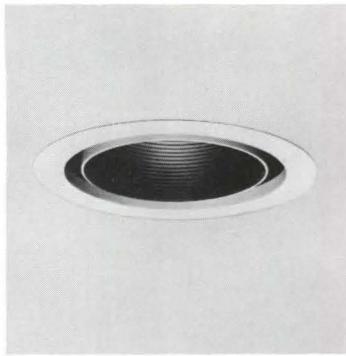
905 EXTERIOR DOWNLIGHT / The "Spectra VIII" downlight is suited for parking areas, roadways, walkways, malls, etc. While designed for glare control, there is a reflector which is claimed to yield more light-per-watt from efficient high-intensity discharge lamps. / Wide-Lite Corp.

906 HANGING LIGHT / The "industrial" line of hanging lights for office or residential applications use incandescent fixtures. The housing is of heavy-gauge, porcelainized steel. / G.J. Neville.

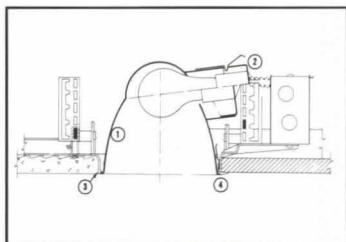
907 SODIUM LAMP / A newly-designed light bulb which utilizes the efficiency of sodium lamps reflects almost all of the light produced by the bulb but permits most of the heat generated to escape through the rear section of the lamp. / Westinghouse Electric Co., Lamp Commercial Division.

908 FLOODLIGHT / The "Dayliter II" HID floodlight is designed for use in indoor arenas, outdoor stadiums, race tracks, buildings, signs and industrial locations. It is available with ballasts to handle high pressure sodium lamps of 400 and 1000 watts and metal halide or mercury lamps of 1000 or 1500 watts. / Westinghouse Electric Co., Lighting Division.

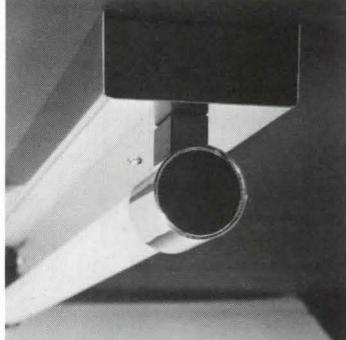
909 SODIUM LAMP / A high-pressure sodium lamp is claimed to greatly enhance the color rendition of these lamps, creating new applications, including indoors. / Westinghouse Electric Co., Lamp Commercial Division.



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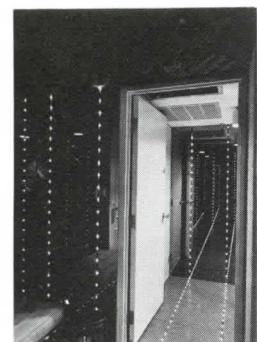


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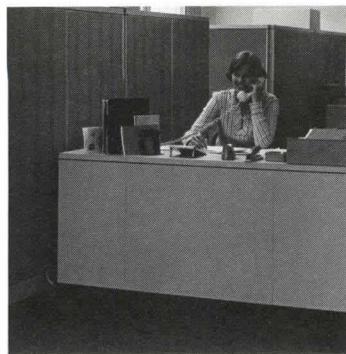
910 ACCENT LIGHT / A highly versatile unit that serves as an accent light is the "elbow" light. It is adjustable and retractable so it can be positioned to highlight any wall or object. / Lightolier Inc.

911 RECESSED LIGHT / The "A" downlight series has an aperture of 4 1/2-in. and uses 40 to 100 watt bulbs. The reflector unit is designed to provide the maximum light and direct it to the proper area. / Lightolier Inc.

912 FLUORESCENT LIGHT / The "Lytestrip" fluorescent lamp unit is recommended for use in dormitories, multiple dwellings and other public corridors and utility spaces. Available in white, polished chrome and brass. Wattages include 15, 20, 30 and 40. / Lightolier Inc.



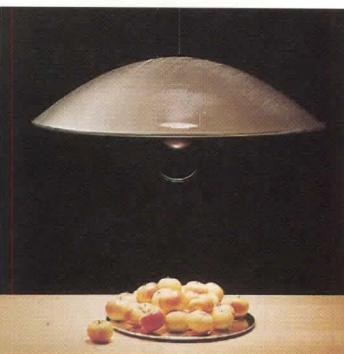
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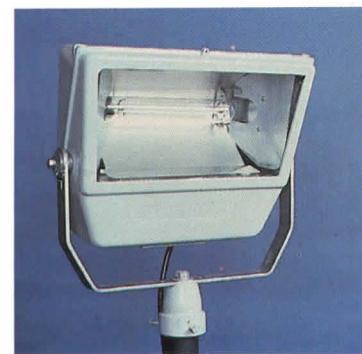
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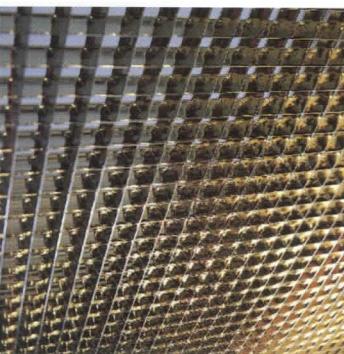
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913 HOTEL LIGHTING / The "Love Lite" is composed of strips of lighting fixtures inserted between the floor tiles and continuing up the wall. / Gruen Lighting.

914 FLOODLIGHT / The "Power-flood" luminaire focuses a beam of light wherever the unit is positioned in outdoor situations. Automatic dusk-to-dawn control is optional with a photoelectric receptacle. / General Electric Co., Lighting Systems Department.

915 OUTDOOR LIGHTING / The *Decaflood* luminaire is of heavy-duty construction with corrosion-resistant external hardware and flat tempered door glass. Internal components are kept clean by the unit being sealed and a charcoal filtered optical assembly. / General Electric Co., Lighting Systems Department.

916 TASK LIGHTING / A lighting system design for placement on the top of shelves and filling cabinets has been designed to focus light where needed. Each model features an optical chamber which channels light over a wide area, creating ambient light for desk areas. / McGraw Edison, Area Lighting Division.

917 BATHROOM LIGHTING / A system of extruded aluminum fixtures, particularly for use in the bathroom, features specially-designed optics that provide an even, glare-free illumination. / Peerless Electric Co.

918 CLASSROOM LIGHTING / Four 24-ft-long extruded aluminum channels provide a Lighting Quality Index of 75, in a typical 30- by 30- by 10-ft space. The units are available anodized or painted; and utilize standard fluorescent lamps. / Peerless Electric Co.

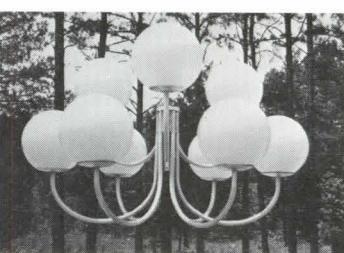
919 LIBRARY LIGHTING / Extruded aluminum forms that curve according to design requirements come in lengths up to 24-ft and have specific optics that provide even light distribution over the full length and height of a library stack. / Peerless Electric Co.

920 SUSPENDED LIGHTS / The RLM light fixtures are reminiscent of industrial-designed light units. Both the Dome and Bowl models are furnished with a socket, 72-in. drop cord and white canopy. Colors available are red, yellow, blue, green and white. / Thomas Industries.

921 DESK/WALL LAMPS / The "Por-senna" lamps are pyramidal shaped for contemporary designs. Available in both the table or wall versions, the base in white lacquered metal. Diffuser is opaline polyethylene. / Castelli Furniture Inc.



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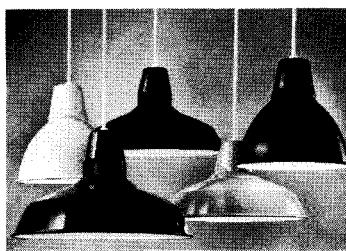


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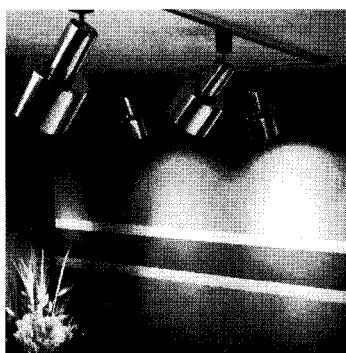
922 SPOT LAMP / As part of the Artemide collection, this suspension lamp has adjustable light intensity. The diffuser is perforated steel and matte nickel plated. / Artemide (distributed by Castelli Furniture Inc.).

923 LOUVERED CEILING / Parabolic series offers the option of three cell sizes of louvered panels for ceilings, thereby deflecting light for a highly luminous ceiling. Finishes are silver, gold and copper. / ALP Lighting Products. GB, E, I*

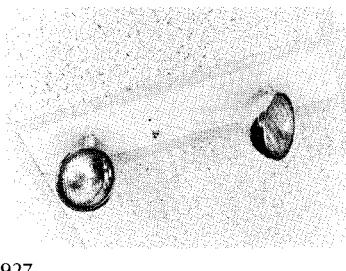
924 OUTDOOR LAMPS / The "Atlanta Chandelier" is a multi-globed outdoor post-top light fixture, designed to create a "flowing pattern of light sculptures" around plazas. Poles are brushed aluminum, fixtures of brushed extruded aluminum with globes of opal or clear materials. / Trimblehouse Corp.



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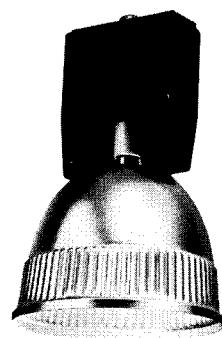


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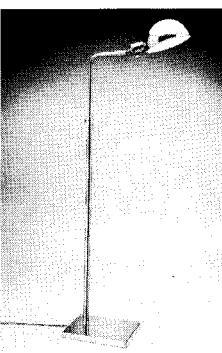
925 HANGING LIGHTS / A variety of designs and colors are available in this series. Reflective white porcelain on the interior reflects up to 200 watt lamps. / Thomas Industries.

926 TRACK LIGHTS / The use of "power cubes" each only $1\frac{1}{16}$ in. sq and $\frac{1}{4}$ in. deep, is said to take the place of up to eight components needed in other systems. "Premier" line offers a straight track, joiner and the possibilities of L-shaped, T-shaped or X-shaped configurations. / Thomas Industries Inc.

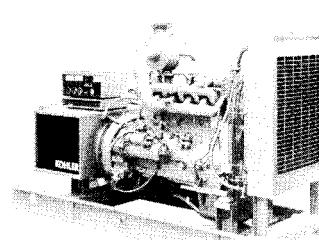
927 EMERGENCY LIGHT / A recessed and flush-mounted emergency lighting unit fits into the ceiling conveniently and inconspicuously. Twin lights may be positioned as needed. / Johns-Manville Corp., Holophane Division.



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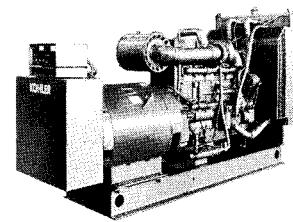
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928 INDUSTRIAL FIXTURE / An HID industrial light fixture, called "Hyliters," is available in 250/400-watt high-pressure sodium, and 400-watt metal halide, and 400-watt mercury vapor lamps. An installation hub permits complete hanging and wiring in little time. / Guth Lighting.

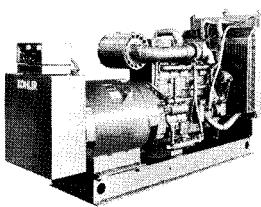
929 FLOOR LAMP / This adjustable lamp comes in polished brass or polished chrome. It features clutching device and swivel and a break-proof non-separating socket. A dimmer is also available. / Koch + Lowy.

POWER GENERATION

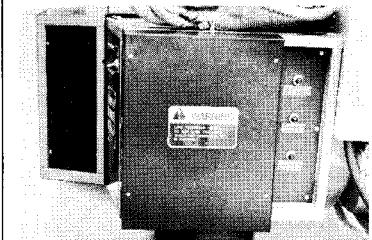
930 VOLTAGE SELECTOR / A Multi-Voltage Selector can supply the *Fast-Response* generator from 30KW through 100 KW. An interlock switch causes the voltage to drop to zero if the warning labels are ignored and the door is opened while the unit is operating. / Kohler Co., Generator Division. E*



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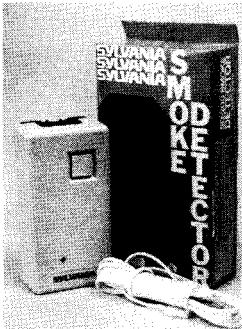


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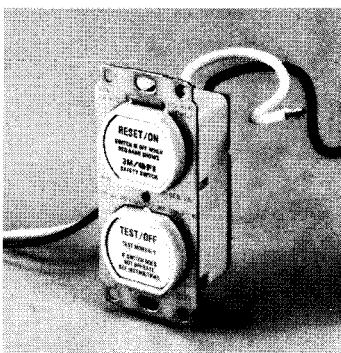
931 STANDBY GENERATOR / The 300 KW Standby/Prime Power generator is a 4-pole revolving field type with a rotating exciter. It meets NEMA, IEEE and ANSI standards for temperature rise and NEMA Class F insulation. / Kohler Co., Generator Division. E*

932 STANDBY GENERATOR / The 350 KW Standby/Prime Power generator has a continuous standby operation rating and the controller is solid state, remote and local starting. It meets NEMA, IEEE and ANSI standards for temperature rise. / Kohler Co. Generator Division. E*

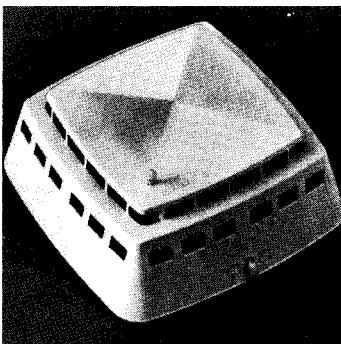
933 GENERATOR / The 75 KW *Fast-Response* generator is a rotating field, brushless type with a continuous standby operation rating. It meets or exceeds NEMA, IEEE and ANSI standards for temperature rise. / Kohler Co., Generator Division. E*



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PROTECTIVE SYSTEMS

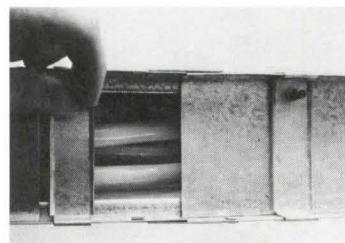
934 SMOKE DETECTOR / Available in two models, the device operates off the normal household electrical power, uses less than 3 watts of current and emits a loud, piercing alarm when smoke is sensed. / GTE Electrical Equipment Group. E*

935 SAFETY SWITCH / A combination ground fault circuit interrupter, safety switch and motor controller can be mounted in a receptacle box. It is suitable for any circuit up to 20 amps, and 125 volts where ground fault protection is needed. / 3M Co., Electro-Products Division.

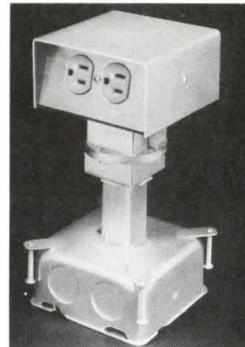
936 SMOKE DETECTOR / No wiring is necessary to install this unit that operates on 9-volt alkaline battery. A push-to-test button is standard. UL-listed and tested to UL 217 requirements. / Statitrol Division, Emerson Electric Co.



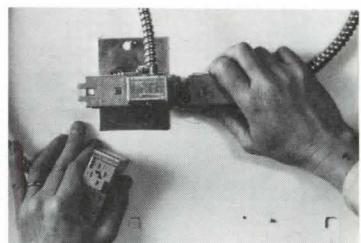
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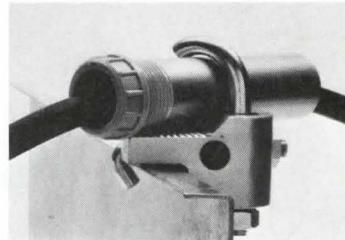
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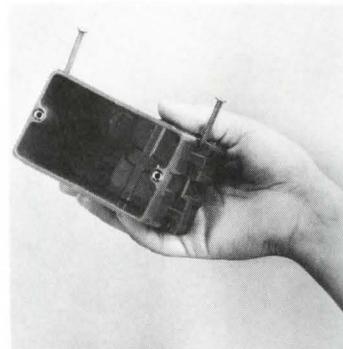
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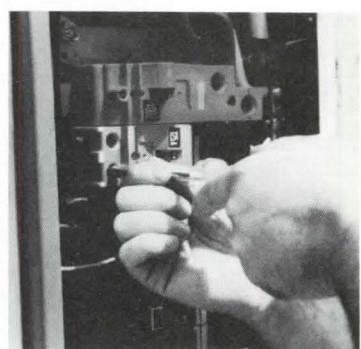
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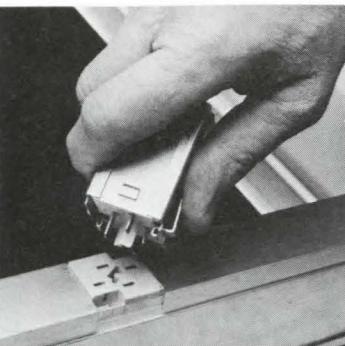
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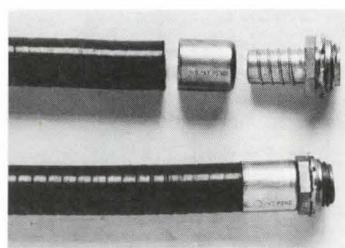
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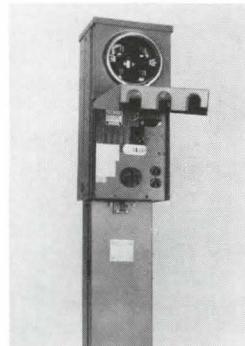
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937 CONTROL SYSTEM / A system of control switches for security needs for all building types is available. It includes bypass switches, remote monitor station and "slave" alarm. All feature brushed, anodized aluminum face-plates. / Detex Corp.

938 CIRCUIT BREAKERS / The *I-Limiter* current limiting circuit breakers come in various models, but all operate without fuses. After the breaker opens on a maximum rated fault current, it simply resets like a conventional breaker. / Square D Co.

RACEWAYS

939 RACEWAY / The Power-T-Duct system is a versatile, modular distribution system for electrical power. A series of extruded aluminum raceways come factory attached to the main runners of a T-Bar suspended ceiling. / 3M Co., Electro-Products Division.

940 FEEDER DUCT / A feeder duct for telephone cable distribution in commercial and industrial buildings is an enclosed, UL-listed feeder raceway for cables originating at a building's apparatus closet. / 3M Co., Electro-Products Division.

941 CABLE TRAY CLAMPS / Conduit clamps for cable have been specifically designed to secure metal conduit to inside-flange cable trays. It has an adjustable hook to facilitate installation from outside the trays. / Crouse-Hinds Co.

942 CONNECTORS / "Kap Whip" connector is a two-piece liquid tight connector for liquid tight flexible metal conduit. There are no "O" rings or grips or special tools needed for installation. / Specialty Connector Corp.

943 CONDUIT / The Fire-I model floor assembly is for poke-through wiring or receptacles and telephones in concrete floors. The fire-rated coupling contains material that expands when heated to form a flame, smoke and air-seal between top and bottom boxes. / Raceway Components, Inc. E*

SERVICE & DISTRIBUTION

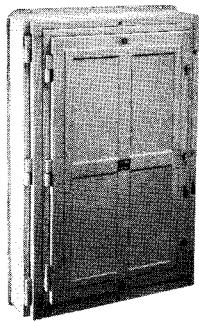
944 WIRING BOX / A thermoplastic box with a wiring capacity of 18 cu. in., is available with molded threaded device screw holes or the company's "Fast Trim" inserts. / GTE Electrical Equipment Group. E*

945 SERVICE EQUIPMENT / Metered service equipment for mobile home parks accepts all types of meters, including the larger demand meters. All units have exposed meters. This latest equipment is compatible with the company's earlier equipment. / GTE Electrical Equipment Group. E*

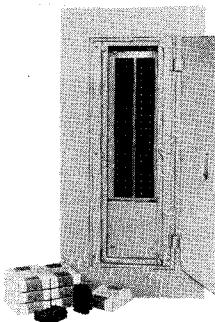
946 JUMPER CABLES / Jumper cables and accessories can be matched with the Power-T-Duct system or with hard wiring to provide power and lighting anywhere in a building. The unit is pre-wired and fully assembled for 120 or 277 volt service. / 3M Co., Electro-Products Division.

947 CIRCUIT BREAKER / A 125-amp magnetic circuit breaker is intended for the residential construction market. The breaker is tripped only by an overload or a short circuit; there is no nuisance tripping caused by momentary overload. / Crouse-Hinds Co.

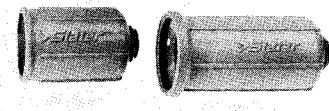
948 CONNECTION BOXES / A line of explosion-proof connection boxes are designed to protect electrical devices, terminal boards, splices and taps. They are MSHA-certified. The boxes are available in 14 sizes. / Crouse-Hinds Co.



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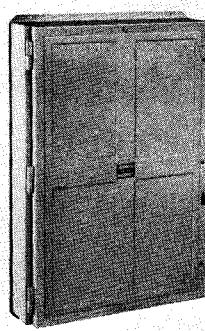
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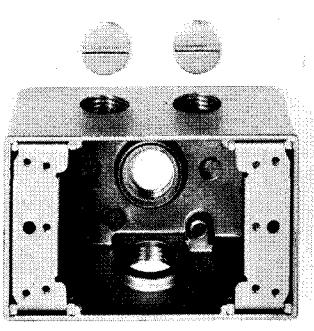
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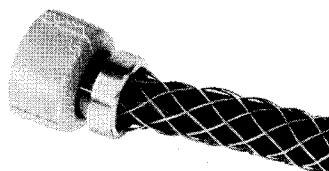
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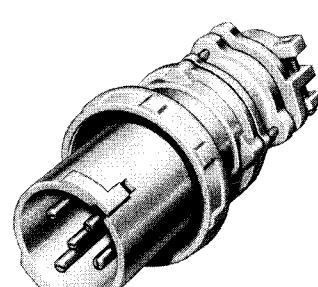
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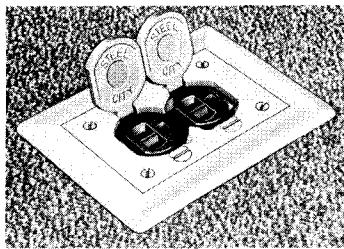
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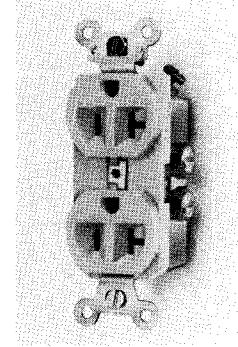
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949 POWER BOX / A line of corrosion-resistant enclosures that house panelboards for use in the central control and protection of a large number of feeder or branch circuit breakers is available. They are made of fiberglass-reinforced polyester material. / Crouse-Hinds Co.

950 CONTROL CABINETS / Corrosion-resistant cabinets designed to house electrical, electronic or instrumentation components and completely protect them from the effects of harsh atmospheres are available. / Crouse-Hinds Co.

951 FLOOR BOX / A flip-lid duplex floor plate for gang-type cast iron floor boxes is designed for quick access to the floor box receptacle. The floor plate is a single gang cover for gang-type cast iron rectangular floor boxes of one or more gangs. / Midland-Ross Corp.

952 PANELBOARDS / A Type NEHB panelboard provides, according to the manufacturer, superior performance in 277/480 VA lighting systems when used with plug-on or bolt-on circuit breakers. / Square D. Co.

WIRING DEVICES

953 WEATHERPROOF BOXES / A horizontal die cast aluminum box, containing two outlets in the bottom, one on top and one in the back, are corrosion-resistant and have baked-on paint finish. / Slater Electric Inc.

954 GROUNDING RECEPTACLES / Corrosion-resistant duplex grounding receptacles have been designed specifically for use in atmospheres with humidity and contaminants. / Slater Electric Inc.

955 CAPS & CONNECTORS / Available are environmentally protective Nitrile Rubber Boots which are used over the company's Medalist SST line of caps and connectors. They are soft, pliable, and resist abrasion, corrosive fluids and grease. / Slater Electric Inc.

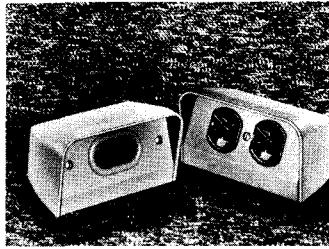
956 CABLE GRIP / A pre-assembled wire mesh strain-relief grip has been added to the company's line for the Medalist SSY screw cap. Used with 4 and 5 wire 20 amp locking and 3, 4 and 5 wire amp locking SST caps, it is designed to relieve strain on the cord and wiring terminals. / Slater Electric Inc.

957 ANGLE CAPS / Transparent angle caps of hospital and industrial grades are designed so the cord will lie flat to the wall or floor when the cap is inserted into a receptacle. / Slater Electric Inc.

958 CEILING BOX / A bar hanger ceiling box which is readily adjustable to 16- and 24-in. joist spacing is available. A quick mounting feature locks the fixture mounting screw in place in steel. / Slater Electric Inc.

959 INTERLOCKED PLUGS / Receptacles, interlocks and matching plugs and connectors are available, identified as "Max-Gard". They are used to supply power to portable electric machinery or equipment, indoors or outdoors. / Midland-Ross Corp.

960 FLOOR FITTING / Available are non-metallic service fittings for floor box applications. The two matching service fittings, for high- and low-potential service, are molded from polycarbonate. / Midland-Ross Corp.



960

Specify Onan standby power. Because trouble-free operation is the natural by-product of our total-system approach to standby power. That total-system approach means we match all components into an ideally-integrated package.

As a result, there are no weak links between the engine and the generator. Or the transfer switch and switch gears. And our regulators are the only ones in the business uniquely designed to optimize the total system performance.

Since we engineer a total system, we take total responsibility for that system. That's the Onan Difference.

Naturally, we wouldn't take all that responsibility

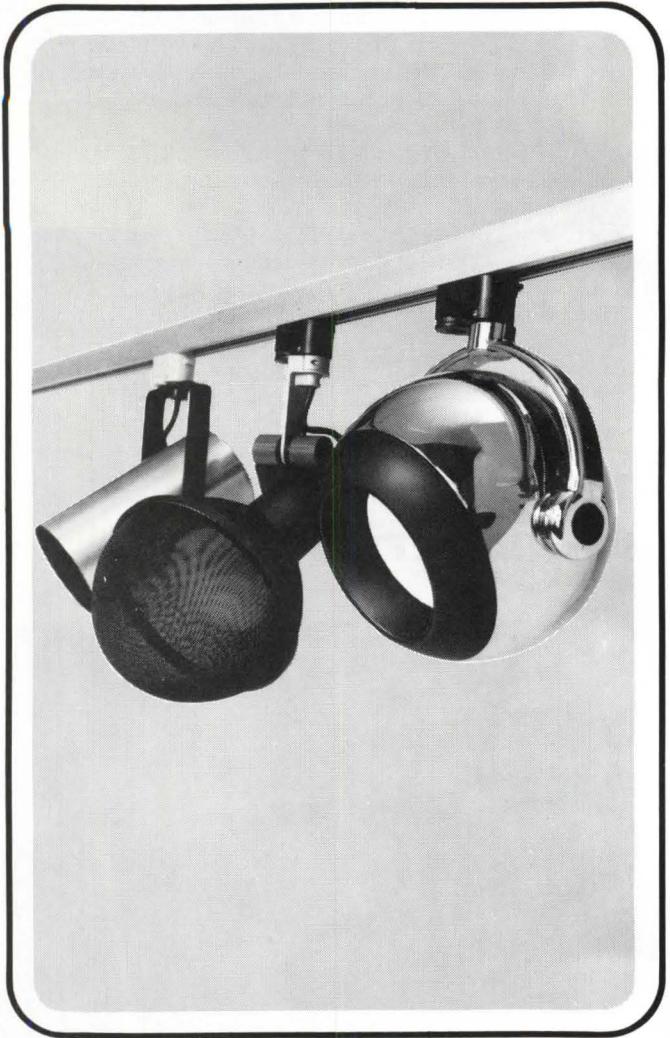
if we didn't have an unusual amount of confidence in our product. To gain that confidence, we test our systems. Extensively. In fact, the prototype system goes through hundreds of hours of painstaking tests. If it doesn't pass those tests, it doesn't get out of our testing facility. And that, too, is the Onan Difference. The result of over fifty years of learning, growing, experimenting and innovating.

To learn more about the nearly fifty different sizes of electric generating sets and systems we manufacture, call your local Onan distributor. Or write: Onan, 1400 73rd Avenue, N.E., Minneapolis, Minn. 55432. Telephone: (612) 574-5000. TELEX: 29-0476. TWX: 910-576-2833.

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now you can
have light
where you want it
as you want it...
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over 60 different models—

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3146 HOUSING COMMUNICATIONS / An illustrated brochure discusses the communications needs of retirement residences and similar multi-unit housing facilities, and shows how the *Telecenter* system provides instant 2-way voice contact between any resident and one or more control centers. / Rauland-Borg.

3147 DORMITORY SYSTEMS / *Telecenter* communications systems designed for dormitories are described in a folder. Features include a "Message Waiting" light in each room; wall-mounted stations may receive alarm signals and emergency broadcasts, as well as general announcements. / Rauland-Borg Corp.

3148 AMPLIFIERS / Five new amplifiers have been added to the "Precedence" line; units range from 20-to 100-watts RMS. Brochures describe the amplifiers, and illustrate rack or in-wall mounting options. / Rauland-Borg Corp.

3149 RADIANT HEATING / Low-temperature electric radiant heating panels lower energy costs and increase comfort, according to an 8-page brochure on Aztec panels. Photos show heating panels surface-mounted on walls and ceilings, recessed between 16- and 24-in. joists, or placed in suspended ceilings. / Aztech International, Ltd. E*

3150 STORE INTERCOM / The Market-Com MC-3 can page, carry conversations, and allow conference calls on either of two channels. A color brochure explains the system's features, and the "CS-24A" adaptor which supplies 24 volt DC power to Market-Com units. / Aiphon U.S.A.

3151 COMMERCIAL LIGHTING / Decorative styles ranging from contemporary satin aluminum pendants to traditional hand-cut lead crystal ceiling bowls are shown in a full-line commercial lighting fixture catalog. Energy-saving circline fluorescent fixtures are featured. / Progress Lighting.

3152 CEILING FANS / "Old Tyme" UL- and NEMA-listed ceiling fans are covered in a color brochure showing decorative applications. Installation tips, functional data, accessories, and details on the "Adaptair" feature are included. / Hunter Div., Robbins & Myers, Inc.

3153 EXTERIOR LIGHTING / A 6-page application brochure features diagrams of four typical exterior lighting installations: a truck terminal; a commercial office building; a branch bank; and a parking garage. A free computerized analysis of the own/operating costs of existing systems with more energy saving systems is available. / Guth Lighting.

3154' HIGH BAY LUMINAIRE / Data sheet introduces a series of options now offered for the industrial high bay "HyLiters" luminaires. These include a "Super-Quiet" low-noise unit; a "Twin Hyliter-S" for increased footcandle levels in inspection areas, etc.; and low-clearance mounting options for minimum headroom or remote ballast installations. / Guth Lighting.

3155 INDUSTRIAL LIGHTING / Color catalog describes lighting equipment designed for specific industrial uses, indoor and out. / Guth Lighting.

3156 FLUORESCENT LAMP / A lamp information bulletin describes how the *Ultralume* fluorescent provides light that matches the eye's ability to see colors; data on the 14 different *Ultralume* lamps includes color chromaticities, spectral responses, wattages, lumens, and useful life. / Westinghouse-Lamp Commercial Div.

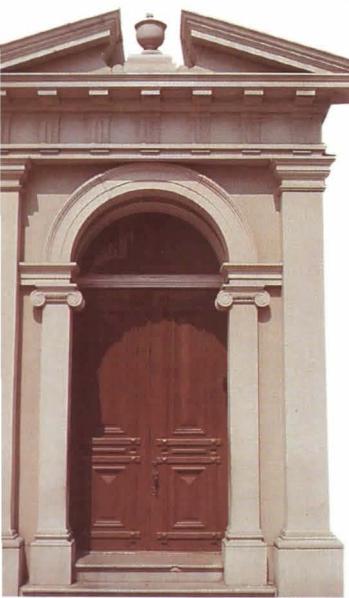
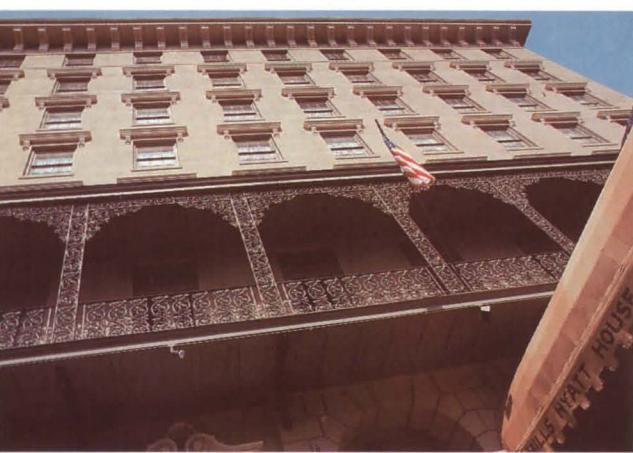
3157 ENERGY-SAVING FIXTURE / A fold-out color brochure describes the *Vertiflex* luminaire, which puts more light on vertical work surfaces than conventional fixtures. Dimensional drawings show options, including integral, remote, and wet location ballasts. / Westinghouse Electric Co., Lighting Div.

3158 AMBIENT LIGHTING / *Triambient* is a three-part office lighting system, combining panel-mounted fluorescent, panel-mounted HID, and free standing HID lights for maximum efficiency and economy. A design portfolio shows how the fixtures work with *ERA-1* panels, which allow quick internal or external connection from the fixture to the power source. / Haworth, Inc.

3159 AREA LIGHTING / High-mast lighting is discussed in a 12-page brochure, which uses photometric curve graphs and system drawings to describe such "total package" lighting systems as the "X-209" luminaire, service hoist, hoist motor and pole. / General Electric, Lighting Systems Dept. GB, LRC, E*

3160 INCANDESCENT DOWNLIGHTS / Full-line 90-page catalog contains photometric data, spacing and lamping information and product installation photos for downlights which produce a highly controllable range of lighting effects. *Calculite* fixtures for general illumination and special effects are featured in the booklet. / Lightolier.

3161 SPORTS LIGHTING / Product data sheet introduces the "Sports-Beam" fixture, designed for longer component life and quick maintenance, with capacitors, ballast and socket in separate sections. Fixture uses either metal halide or HPS lamps; rifle sight mounted on body facilitates proper aiming of light beam. / Keene Corp., Lighting Div.



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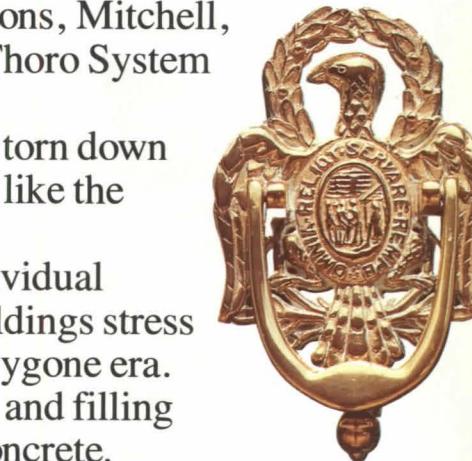
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For information write for circular #71. Or write, detailing your specific problem.

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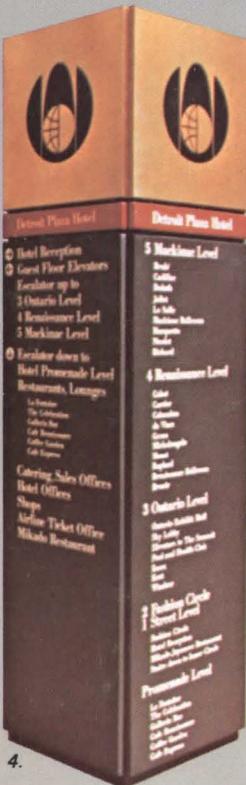
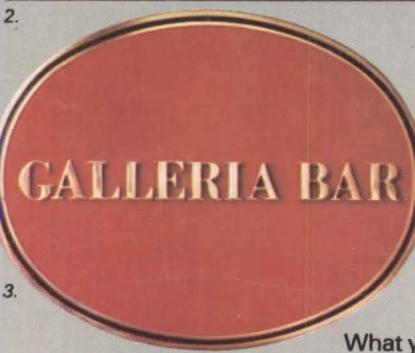


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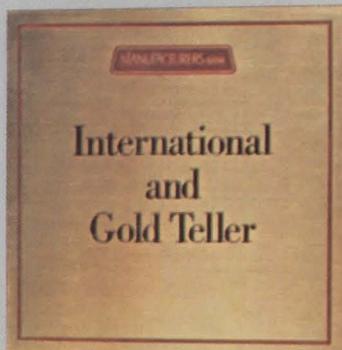


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2. Fabricated aluminum sign.
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5.



6.

What you might not know about Renaissance Center, Detroit, is that a totally integrated signage system keeps its thousands of daily visitors and occupants moving in the right directions.

Hauser Associates, Atlanta, designed the graphics for the vast five-tower hotel and office complex. And Matthews was appointed as subcontractor to manufacture the complete signage system. Continuity of the graphics is evident from the illuminated building directories and the seven-foot-high pylons down to the smallest door plaques and garage signs. Some of the most visually striking features are the numerous cast bronze plaques, letters and numerals.

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Project: *Renaissance Center, Detroit*

Owner: *Renaissance Center Partnership*

Architect: *John Portman and Associates, Atlanta*

Graphics Consultant: *Hauser Associates, Atlanta*

Contractor: *Tishman Construction Company*

Graphics Subcontractor: *Matthews International Corporation*