A Gralla Publication

SEPTEMBER 1978

Contract

THE BUSINESS MAGAZINE OF COMMERCIAL FURNISHINGS & INTERIOR ARCHITECTURE

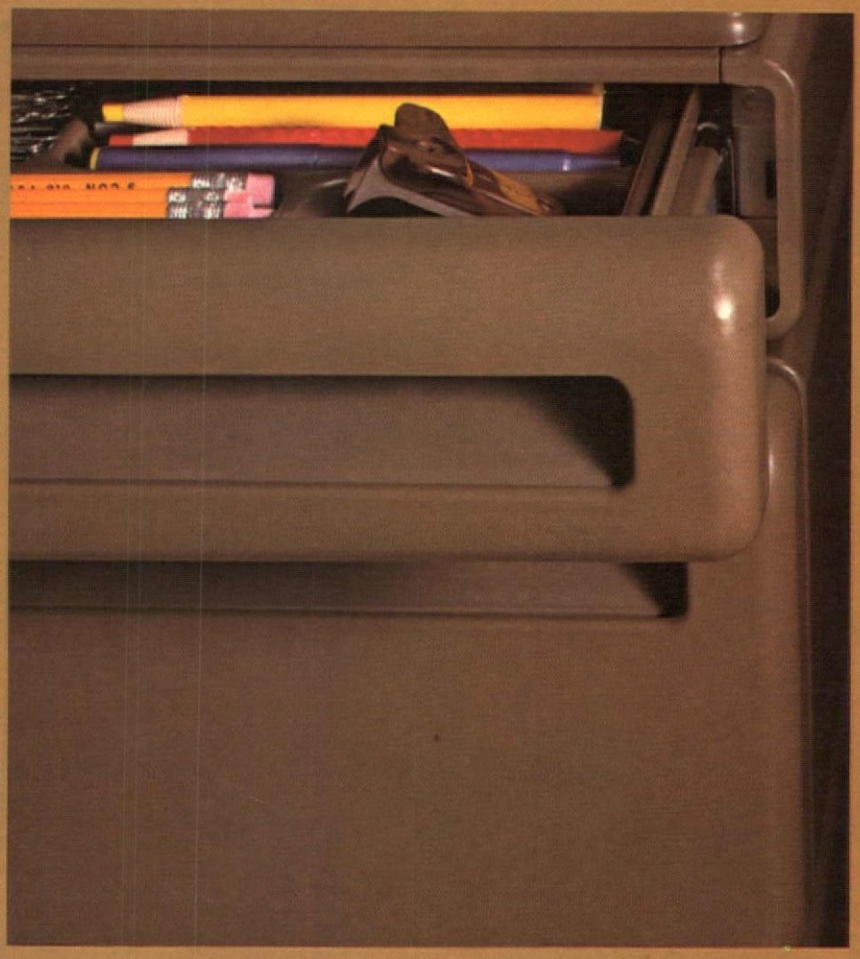
The Library
NEW YORK SCHOOL OF INTERIOR DESIGN
155 East 56th Street, New York City 10022

The World of Contract Chairs

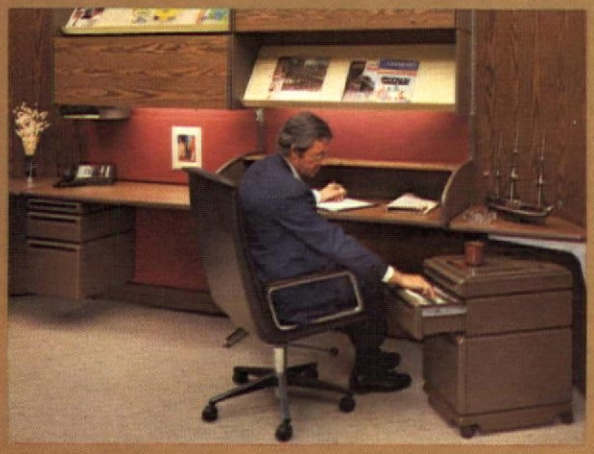
Anthropometrics • Flammability • Product Liability • Designer's Saturday • Scandinavian Fair

CHNA 810W G-7-Z
JANE F LLOYD-LIBEN
NY SCHOOL OF INT DES
155 E 56TH ST
NEW YORK NY 10022

The new case for drawers.



UniGroup's™ Modular Drawer System. It offers all the flexibility you're accustomed to with open plan systems. The optional castored base positions the work where it's most comfortable to reach and permits easy relocation. Or, the system can be suspended beneath work surfaces. And all-steel construction, with rounded edges and corners, lets it take abuse without dishing it out. Options, including endless drawer combinations, are plentiful. Summarily, it recognizes a universe of people requirements. With that we rest our case. Ask your Haworth representative for literature, or write Haworth, Inc., Holland, Mich. 49423.



HAWORTH™

Circle No. 1 on reader service card

NY SCHOOL OF INTERIOR DESIGN
007790

186 ASTRO CHAIR

pace®

NEW YORK: 321 EAST 62 STREET / LOS ANGELES: 8936 BEVERLY BOULEVARD
CHICAGO: 1248 MERCHANDISE MART / MIAMI: 47 NORTHEAST 36 STREET
BOSTON • DALLAS • DENVER • SAN FRANCISCO • SEATTLE

Circle No. 2 on reader service card

A LONG TIME AGO, AND FAR, FAR AWAY, AN ARCHITECT SAID, "WHY DOESN'T LA-Z-BOY® MAKE A HIGH BACK SWIVEL-TILT DESK CHAIR STYLED AND PROPORTIONED FOR OPEN OFFICE PLANNING?" OUR DESIGNERS HEARD OF THE ARCHITECT'S PLIGHT AND THEY RESPONDED WITH THIS CHAIR. MAY THE SOURCE BE WITH YOU.

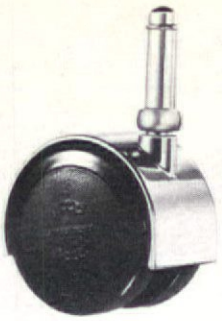
LA-Z-BOY® CONTRACT

Your #1 source in Contract Seating.

A Division of La-Z-Boy Chair Company • Monroe, Michigan 48161

Circle No. 3 on reader service card

p. 118



p. 98

p. 101

Len Corlin
Co-Publisher & Editor

Frank A. Rizzo
Co-Publisher & Advertising Sales Director

Anne Fallucchi
Managing Editor

Richard Zoehrer
Associate Editor

Alexandra Margolis
Assistant Editor

Leslie Hart
Special Features Editor

Maxine Yee
West Coast Editor

Phil Miller
Graphic Design Consultant

Morton L. Silverman
Business Manager

Neil Silverstein
Western Manager

Peggy I. Sholtz
Promotion Director

Steven Barth
Promotion Manager

Robert A. Leibson
Market Research Director

Barry Miller
Production Director

Carol Schlossman
Production Manager

Christine Troge
Assistant Production Manager

Lisa Hoff
Circulation Manager

Vol. 20 No. 9 SEPTEMBER 1978

Contract

THE BUSINESS MAGAZINE OF COMMERCIAL FURNISHINGS & INTERIOR ARCHITECTURE

The Library
NEW YORK SCHOOL OF INTERIOR DESIGN
155 East 56th Street, New York City 10022

SEP 2 71978

8 Letters
17 Contract World
20 Designed for Laughter by Michael Saphier
44 People/News
50 Coming Events

78 **THE WORLD OF CONTRACT CHAIRS.**
In pursuit of the seating ideal: CONTRACT's third issue devoted to contract chairs is a progress report on all aspects of seating.

80 **Product Liability Claims Forcing Human Factors Emphasis.**
By Charles Mauro and Hugh M. Bowen, Ph.D.
Systems approach needed in development of seating say specialists, who trace history of chair design.

86 **Seating Fits Human Variables.**
By Frank E. Peteroy.
Since there is no average human, percentiles permit a more realistic range of dimensions to be accommodated in seating.

90 **Posture Chairs Not Always Orthopedically Sound.**
By Daniel Krakauer, President of Kay Manufacturing Corp.
Two major false assumptions which may affect chair design as well as human anatomy design are studied by Krakauer.

92 **More Variety Needed in Design Say Chair Designers.**
Chairs specifically designed for women, rocking chairs, standup chairs, and other types add diversity to environment, according to top chair designers.

98 **Correct Chair Casters Can Protect Carpet Investment.**
Results of an extensive two-year testing program by Shepherd Products will aid the specifier in determining which casters function best on ten carpet systems.

101 **Chair Designs Interpret Pure Function in a Changing Culture.**
Book review of *Chair* by Ralph Caplan serves as introduction to new chair products.

110 **Furniture Flammability Standard Reflects Group Input.**
Based upon cigarette ignition, standard has been voluntarily adopted by members of the Business & Institutional Furniture Manufacturer's Association (BIFMA).

112 **Designer Beware: Damage Claims Can Hit You!**
By Norman Polsky, President of Fixtures Manufacturing Corp.
Product liability claims jumped from 60,000 to one million annually in the past 10 years, with 54 percent of suits favoring plaintiff.

114 **Scandinavian Fair is Celebration of Wood Craftsmanship.**
By Eric Norup.
Scandinavian designers continue doing what they do best: creating well detailed, spare-lined designs in wood and lately metal.

118 **Designer's Saturday: Two Days of Design Debuts.**
Twenty-nine member showroom exhibits previewed in New York City walking tour that ends with museum fest.

124 **Products & Services**
160 **Catalogs & Brochures**
162 **Classified Advertisements**
164 **Contract Sales Reps Wanted**
166 **Advertising Directory**

Cover—*Graphic Artist Tomoko Miho draws attention with her drawing of chairs to tell readers what this entire issue is all about—chair design. Articles start on page 78.*

Genuine Teak.

Regent Pattern Parquet of 12" x 12" blocks with slightly beveled edge and prefinished with penetrating sealer.

Genuine Teak. The most cherished wood in the world. The ultimate for floor beauty. Available in a vast variety of prefinished and job-finished patterns. See our catalog in Sweet's $. Write for Teak sample and color portfolio. Free to trade.

SYMBOL OF EXCELLENCE

BANGKOK INDUSTRIES, INC.
1900 South 20th Street
Philadelphia, PA 19145
215/334-1500

Circle 4 on reader service card

Contract

October: Update on Bank planning and design will be featured in this issue, which will have a bonus circulation to 5,000 top bank presidents and board chairmen. There will also be a full Product Review on the latest furnishings for bank use. A detailed coverage on Signage, the newest products on the market from departmental identification to directions. Plus—Previews of: Hotel/Motel & Restaurant Show, New York, Nov. 5-8; Design Assembly/Philadelphia, Nov. 10-12; Canadian Design Exhibition, Toronto, Nov. 14-16.

November: Announcement of winners of Institute of Business Designers and CONTRACT Magazine Product Design Competition. Offices, open plan and conventional, are concentrated in an issue that updates the ever-changing office design field. Special article on Social Space by behaviorist Dr. Winford E. Holland, University of Houston. Office furniture product review. Report on Fabrics and Wallcoverings. Preview of Publisher Peter Bradford's new book *Chair*, by Ralph Caplan. Review of the Milan Furniture Fair.

Advertising Representatives

New York:

Frank A. Rizzo, William Dahdah, Gary S. Puro, Gralla Publications, 1515 Broadway, New York, N.Y. 10036. Phone: (212) 869-1300.

Chicago:

Charles W. Chudek, Gralla Publications, Suite G-1, 3601 W. Devon Ave., Chicago, Ill. 60645. Phone: (312) 588-7622.

West Coast:

Neil Silverstein, Gralla Publications, 16200 Ventura Blvd., Encino, Calif. 91436. Phone: (213) 788-0271.

Gralla Publications

President: Lawrence Gralla.
Executive Vice President: Milton Gralla.
Vice Presidents: Frank A. Rizzo, Peggy I. Sholtz, Marshall D. Siegel, Morton Silverman.

Other Gralla Publications: Apartment Construction News, Bank Systems & Equipment, Catalog Showroom Business, Contract Direct Reply Cards, Health Care Product News, Health Care Week, Kitchen Business, Meeting News, Multi-Housing News, National Jeweler, Premium/Incentive Business, Professional Furniture Merchant, Sporting Goods Business, Supermarketing.

CONTRACT is published monthly by Gralla Publications, 1515 Broadway, 24th Floor, New York, N.Y. 10036. Phone (212) 869-1300. Subscription price one year $8, two years $12, for firms and individuals who specify, design, buy, or replace contract furnishings. All other U.S. subscriptions $20 per year. All Canadian and Mexican subscriptions $9 per year for qualified subscribers and $20 per year for non-trade. All other foreign subscriptions $30 per year. Single copy $2. The publisher assumes no responsibility for opinions expressed by editorial contributions to CONTRACT. The publisher reserves the right to reject any advertising not in keeping with the publisher standards. SUBSCRIBER ADDRESS CHANGES: Send old and new addresses to our New York office at least four weeks in advance. Controlled circulation postage rates paid at Pontiac, Ill. 61764.

BPA

FORMS+SURFACES

First National Bank, Hopkings, Minnesota. Designers: First Bank System, Inc.

Bonded Bronze™

The soft luster and sculptured textures of Bonded Bronze combine beautifully with other fine materials to enhance architectural interiors. Large, lightweight panels are easily installed on walls, doors, counters, columns, elevators and furniture. More than forty designs and textures are available in Bonded Bronze, Bonded Copper, Bonded Nickel Silver and Bonded Aluminum.
Forms & Surfaces, Box 5215, Santa Barbara, CA 93108 (805) 969-4767

Circle No. 5 on reader service card

CBI CONTRACT SEATING.

ONE SOURCE. THREE SYSTEMS. INFINITE POSSIBILITIES.

From reception area to board room CBI's complete seating systems allow you to create individualized seating for everyone without running yourself ragged between sources.

For CBI systems give you infinite flexibility in seating arrangements, in specified bases, shell designs, mechanism features, and in coordinated colors and covers. These executive chairs are part of our distinctive Comforto series.

Ergonomically designed in Europe, Comforto is rapidly gaining a great reputation for delivering new dimensions of built-in comfort to the premium customer.

Our other contract seating, such as the special Option group, provides similiar value in different price ranges.

So check CBI. It's the only source you need to provide perfect seating for every situation.

Consolidated Burris International, Lincolnton N.C. 28092

CBI

Circle 6 on reader service card

Room service begins with Cohama Specifier.

Served a little differently perhaps. But with uncommonly good taste. The recipe is simple. Begin with decorative drapery and bedspread fabric by Cohama Specifier, the basic ingredient of better guest room decor. Flavor with your own design creativity. Add a touch of our attentive service and professional staff expertise. The result? Pleased guests and a profit-making room.

The new Cohama Specifier book of contract Drapery and Bedspread Coordinates and bedspreads quilted with Kodofill™ polyester fiber fill, offers 19 à la carte designer patterns. Florals, stripes and geometrics. Correlating prints that mix and match with solids. Some designs in up to 11 colorways. Blends of 50% Fortrel® polyester/50% cotton and 100% cottons…all Scotchgard®-plus protected. Fit for silver platter serving because every pattern is a special treat.

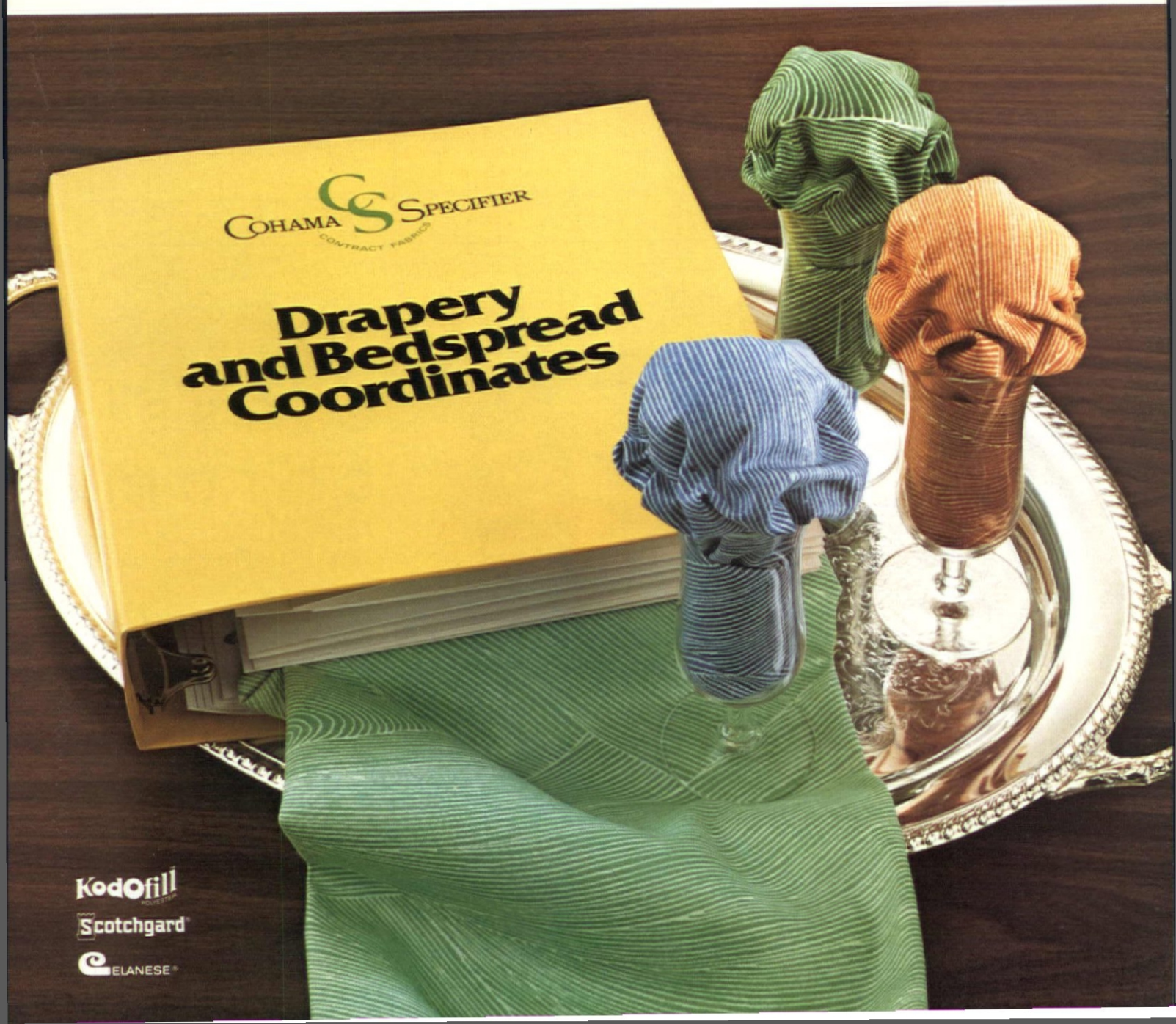
The Cohama Specifier representative in your area is ready to answer your "room service" call for a complete showing.

COHAMA SPECIFIER
CONTRACT FABRICS

295 Fifth Avenue, New York, N.Y. 10016 • 212-564-6000
UNITED MERCHANTS AND MANUFACTURERS, INC.

Circle No. 7 on reader service card

Kodofill™ is Eastman's trademark for its polyester fiber.



LETTERS

Anti-ERA State draws criticism from ASID member

Dear Editor: We recently returned from a very exciting conference for the American Society of Interior Designers held in Washington, D.C.

I am a professional corporate member of this society, and our firm, Scalamandré, is an Industry Foundation member. It was quite surprising to me to find out that a conference has been scheduled for 1981 in St. Louis, Missouri, a state that has refused to ratify the Equal Rights Amendment. We feel the press should make public the fact that it would be an impossible situation for an organization of thousands of members with such a high percentage of women to honor a state with a large conference that does, in fact, insult the majority of their membership.

There will soon be a National Board Meeting of the American Society of Interior Designers (ASID) to decide on future programs, and one of the major issues, I feel, that should be discussed is the above mentioned situation. Although I realize that the press should only state the facts and tell the truth, and good reporting is not necessarily giving an opinion, in this instance, it is not just an opinion I request, but a statement of fact—and the fact is that St. Louis has shown a bigoted position in the matter of the Equal Rights Amendment. A Society such as ASID, which has been one of the forerunners of equal rights for race, creed, color, sex, and nationality cannot become involved with backing the position the Missouri Legislature has decided to take.

ADRIANA SCALAMANDRÉ BITTER
Vice President, Scalamandré
New York, N.Y.

Editor's Note: Irving Schwartz, National President, ASID, responded to Adriana Scalamandre Bitter's letter with a polite refusal to comment on the grounds that the statement would be misinterpreted no matter what he said. He emphasized that the issue would be taken up before the ASID Board at its regular meeting in October and pointed out that the site selection took place two years ago, before ERA had become such a national issue. As reported elsewhere in this issue in coverage of the ASID National Convention in Washington, D.C., Schwartz called for more political activism by the Society and its members. The ERA issue may be the first test of the Society's entering the political arena on matters other than those directly affecting professional interior designers.

COMMENTS WELCOMED

CONTRACT welcomes comments and opinions from readers. Please send them to Letters Editor, CONTRACT, 1515 Broadway, 24th Floor, New York, N.Y. 10036

classic chrome

A complete group of seating, gracefully designed in softly cushioned, comfort-engineered contours, strikingly accented by classic mirror chrome.

EMECO INDUSTRIES, INC.
HANOVER, PENNSYLVANIA 17331
Circle No. 8 on reader service card

Another beautiful reason to design with Alma.

Series 3500 is one of the many Alma lines designed for efficiency and comfort. Alma offers the designer a range of styling from the traditional to the contemporary. For details write: Alma Desk Company, P.O. Box 2250, High Point, North Carolina 27261.
Or visit your nearest Alma showroom.

alma
ALMA DESK COMPANY

Showrooms: 280 Park Avenue, New York; 1140 Merchandise Mart Plaza, Chicago; Southern Furniture Mart Center, High Point.

For tough jobs, bold jobs, all jobs.

The Wellco Business Carpet.

You can have it plush, tough, stain resistant and even spike resistant. You can have it made of Nylon. Olefin. Acrylic. In the texture of your choice. Bold or understated.

You can have the Wellco Business Carpet any way you want it.

And you can have it fast. Wellco, with its huge inventories, computerized order entry system and national network of specialized contract carpet distributors, can get your carpet to you in days.

We want you to think of the Wellco Business Carpet as more than carpet. Think of it as a total service organization that concentrates 100% on contract carpeting.

No matter what the size of your project . . . or traffic requirements . . . regardless of your color, pattern or texture needs . . . the Wellco Business Carpet can handle the job.

Call or write for more information on the Wellco Business Carpet.

wellco
carpet corporation

P.O. Box 281 / Calhoun, GA 30701 (404) 629-7301
A wholly owned subsidiary of Mannington Mills, Inc., Salem, N.J.

Circle No. 39 on reader service card

KT FURNITURE

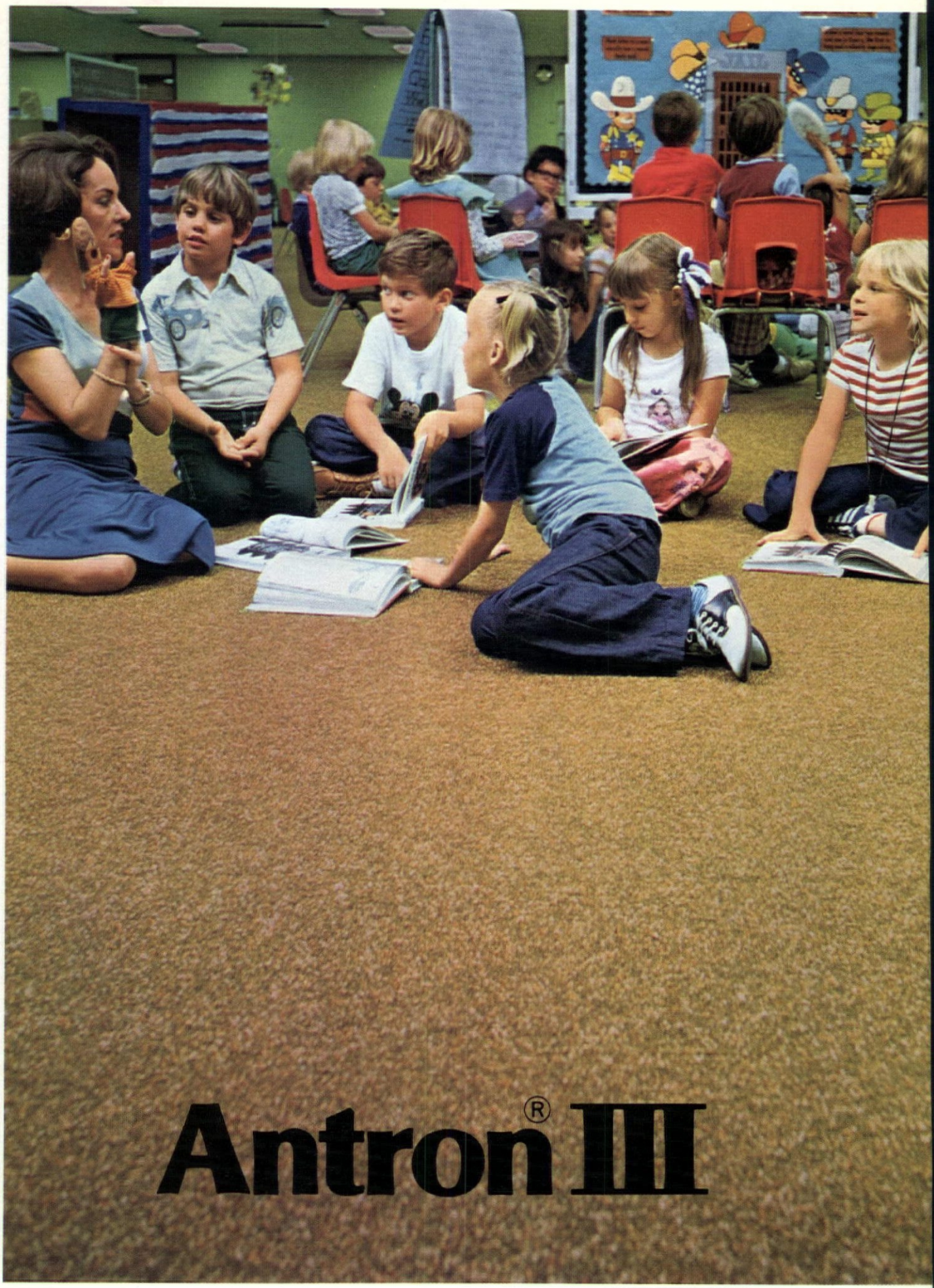
20100 S. ALAMEDA ST./P.O. DRAWER 8/COMPTON, CA 90224

INVESTOR GROUP
Design: Rich Thompson
Price: Realistic
Delivery: Reliable

DUPONT ZEPEL®
SOIL/STAIN REPELLER

GRAPHIC DESIGN: HOWARD GOLDSTEIN

Circle No. 10 on reader service card


Antron® III

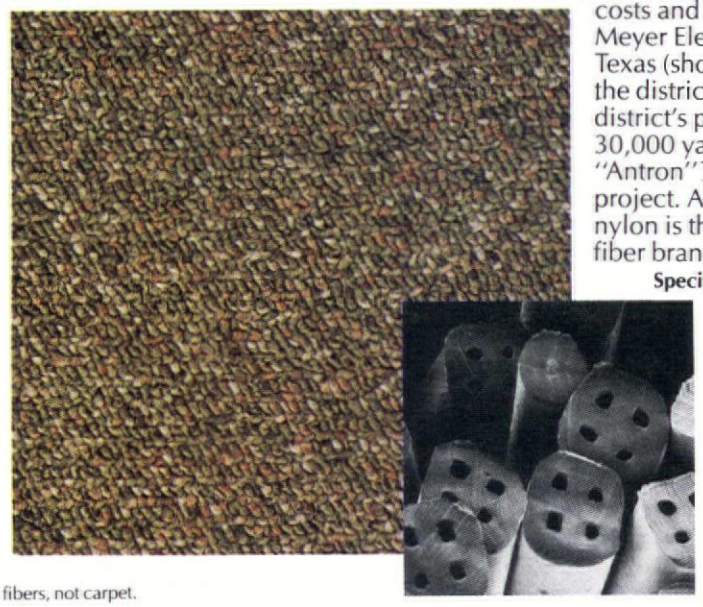
Antron® III hollow filament nylon. The carpet fiber with lasting good looks and durable static protection. At Spring Independent School District.

"Antron" III hides soil. Antron* III hollow-filament nylon is designed to mask the presence of soil. You can see the remarkable hollow-filament structure of this fiber in this 250X electron micrograph. The four microscopic voids optically scatter light to hide soil. This configuration also creates the effect of blending soil concentrations into the overall carpet look. The smooth exterior shape minimizes soil entrapment to facilitate cleaning.

"Antron" III controls static shock. "Antron" III nylon offers built-in protection against static shock. Its nylon sheath and core of polymeric conductive material is designed to control the generation of static electricity comfortably below the level of human sensitivity. This protection works well in all locations, including areas where relative humidity is extremely low. Extensive Du Pont tests confirm "Antron" III maintains effective static control even after 3 million traffics, repeated vacuuming and regular shampooing.

"Antron" III is durable. Fiber loss due to abrasive wear is negligible, in regular or heavy-traffic sites, with pile of "Antron" III nylon. And "Antron" III has a subdued luster which, unlike bright or sparkle luster fibers, does not dull rapidly in contained high-traffic areas.

Why the Spring Independent School District chose "Antron" III. They wanted carpet with low maintenance costs and durable good looks for the Meyer Elementary School in Spring, Texas (shown), and all 11 schools in the district. That's why the school district's planning office specified 30,000 yards of carpet with pile of "Antron" III nylon for the complete project. And that's why "Antron" III nylon is the leading contract carpet-fiber brand.



Flooring contractor: Contract Floors, Houston.
Architect: SHWC, Inc., Houston.

Specifiers' Information Kit— Write Du Pont Contract Carpet Fibers, Centre Road Building, Wilmington, Delaware 19898, for a manufacturers' resource list, an education specification guide, a maintenance manual and an "Antron" III anti-static brochure.

Magnification of 250X "Antron" III nylon showing hollow filaments and round, anti-static filament.

*Du Pont registered trademark. Du Pont makes fibers, not carpet.

MAN MADE FIBERS MADE BETTER

Antron® III

hollow filament nylon

The leading contract carpet fiber brand.

DU PONT

Circle No. 11 on reader service card

WE MAKE DESIGNER II FOR EVERY KIND OF ORGANIZATION.

RUBBERMAID COMBINES BEAUTY WITH EFFICIENCY.

No matter what the business operation may be, Rubbermaid's Designer II is just right for every desk.

Recently cited by *Industrial Design* magazine "For Excellence of Design," this superb collection helps make organization of any desk a simple task. Each individual piece has a rich, heavy feel—plus strong, seamless Rubbermaid construction for a look that will remain contemporary for years to come.

And now Rubbermaid introduces a brand new Designer II ashtray that's specially made to resist stains and mars.

And it won't scratch desk surfaces either.

Designer II is available in contemporary orange, smoke, dark brown, black, sand, or classic black and walnut—and is ideal for today's look in interior landscaping. Not only will it fit beautifully into every decor, but best of all, its moderate price structure will fit into virtually every budget. For example, two letter trays with risers retail for under $12.

For more information on this exciting line, see your Rubbermaid distributor, or write us at Winchester, Va. 22601, phone (703) 667-8700.

RUBBERMAID COMMERCIAL PRODUCTS INC.

©Rubbermaid Commercial Products Inc. A subsidiary of Rubbermaid Incorporated

Circle No. 21 on reader service card

JANSKO. A brilliant blend of reed and chrome. Designed for this moment. Priced incredibly right. Complementing glass-top tables also available. Write Jansko, P.O. Box 14486, Ft. Lauderdale, FL. 33302. Phone (305) 522-6791. NATURALLY.
Ft. Lauderdale, FL/Charlotte, MI/Carson, CA
Circle No. 15 on reader service card

ASID designers urged to become professional activists

Washington, D.C. — Irving Schwartz urged interior designers to become politically and professionally active in order to gain greater acceptance. "We are no longer considered second-class professionals. We are recognized by government, by clients, by other professions. Now that we have that recognition, we've got to gain acceptance. We must show clients that our interests are in their best interests," said the President of the American Society of Interior Designers.

Schwartz's remarks were made in the opening address at the ASID National Conference before a record-breaking attendance of 2,500 designers. The annual convention, which also had the largest number of exhibitors ever at its educational Expo of interior furnishings sources, was held at the Washington-Hilton in July.

Because architects are licensed and interior designers are not, "interior designers had been considered second class professionals to the architect. But this is no longer true," said Schwartz.

"In fact, it is almost the reverse, for interior designers have educational standards, a means of examination, and standards of practice. There are only five architectural schools in the entire country that have any interior design education curricula. We interior designers have two-day exams; the architects none."

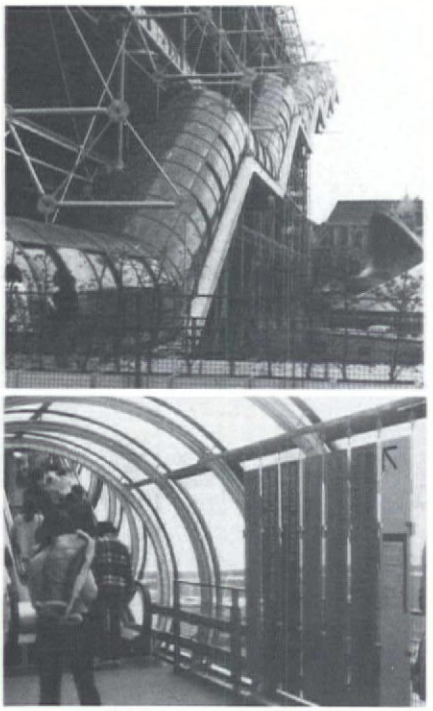
Schwartz also pointed out some of the programs that are nearing completion that will aid the interior designer in daily work. Among them are electronic means of source research and billing (see item on page 34).

The design directions emphasized by ASID were evident in the full program of seminars and workshops, which included such topics as furniture oriented lighting; designing for the handicapped; energy conservation.

Pompidou Center among winners of international awards

Washington, D.C. — Le Centre Georges Pompidou, the controversial cultural center in Paris, France, received eight awards in the 1978 International Design Awards sponsored by American Society of Interior Designers. These awards and others were made at a special luncheon during the National Conference.

The Pompidou Center awards went to: Renzo Piano and Richard Rogers, London architects; Jean Miller, Chairman of the Center; Claude Mollad, Secretary-General; Pontus Hulten, Director, National Museum of Art; Pierre Boulez, Director, Institute for Musical & Acoustical Research & Coordination; Blaise Gautier, Coordinator of Activities; Jean-Pierre Seguin, Director, Public Information Library.



Amid controversy, Paris's Pompidou Center receives eight awards.

Other awards were:

Quincy Market in Boston, to Kevin H. White, Mayor of Boston; Benjamin Thompson, FAIA, Architect; Walter Miur Whitehill, Historian and Director Emeritus, Boston Anthenaem; James Rouse, Developer, Columbia, Md.

Mrs. Eliot Noyes was presented with an award in honor of her late husband's achievements during his career as an architect and industrial designer.

Ricardo Bofil, of Taller de Arquitecture of Barcelona, Spain for his many contributions to cities and structures.

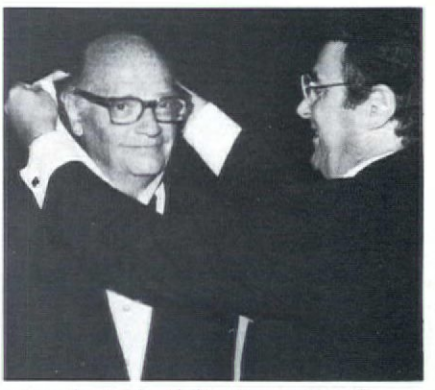
The Honorable William Donald Schaefer, Mayor, Baltimore, Md., as an individual in public office for his concern for the human and man-made resources of his city.

Cado, Levolor, Halo competition winners named at ASID conference

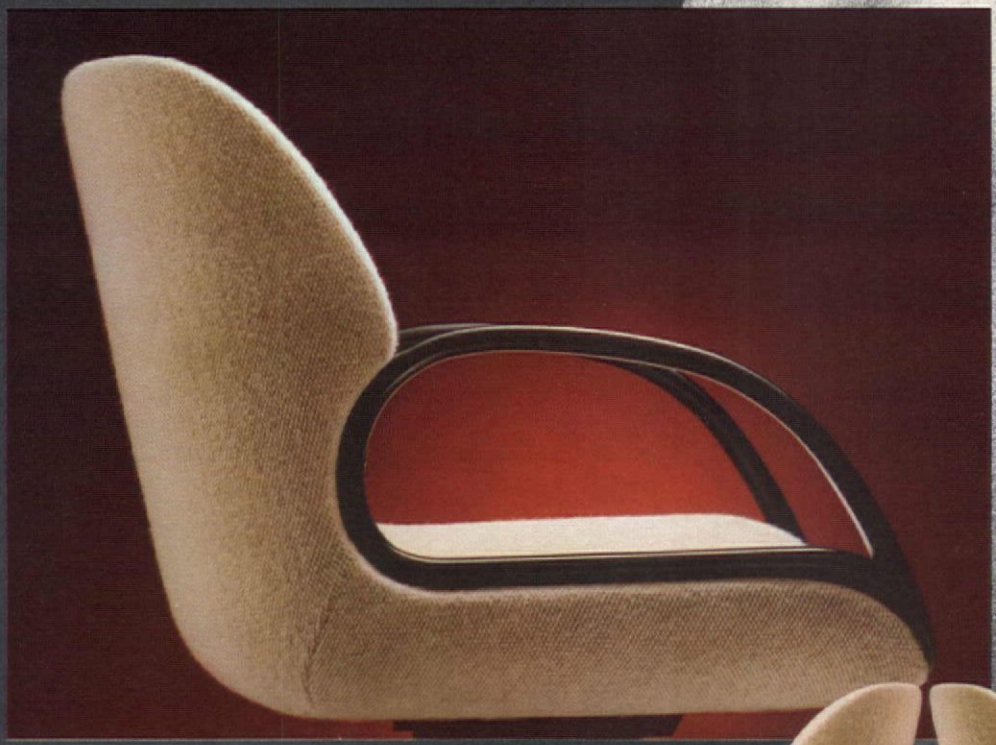
Washington. D.C. — Winners of three Industry/ASID competitions were named during the ASID National Conference.

- Cado/Royal System's first ASID Design Competition: Kay Fossick, Student Member ASID, O'More School of Interior Design, was the winner in the contract category. Nels Anderson, ASID, Appleton, Wis., and James DeMarco, Student Member ASID, Syracuse University, received awards for best residential design. Recipients had their choice of cash prizes ($1,500 for professionals; $1,000 for students) or a trip to the Scandanivian Furniture Fair in Copenhagen as Cado's guests. Severable honorable mentions were also given.
- Halo Lighting competition winners were: Jean H. Evans, ASID, Billings, Mont., $2,500 in Professional Category. Associate Award of $1,500 to Kathryn A. Mucik, ASID Associate, Danbury, Conn. Student awards of $500 went to J.J. Hill, Iowa State University, and to Kathleen Bolduan, Harrington Insititute of Interior Design. Four honorable mention awards were also given.
- Levolor Awards Competition winner in two categories, residential and contract, was Robert J. King, $1,000. An honorable mention award was also made.

Fields named Honorary ASID Fellow



Edward Fields (left), internationally renowned for his rugs, carpets and tapestries, was named an Honorary Fellow of the American Institute of Interior Designers at the 1978 Thomas Jefferson Awards Dinner. The black-tie event was a highlight of the ASID National Conference. The honor was presented by Irving Schwartz, ASID President.



THE ART OF THE PERFECT CURVE.
CONCEIVED BY SNODGRASS. CREATED BY GUNLOCKE.

The Alpha Chair System.
Molded contours cradle the body.
Paralumbar support
eliminates backbone pressure.
Consistent curvilinear design
in desk, secretarial
and conference swivel chairs
provides visual continuity
in office settings.
The hallmark of Warren Snodgrass:
fine design imbued with
a respect for the human form.

THE GUNLOCKE COMPANY
Wayland, New York 14572 (716) 728-5111
A Sperry and Hutchinson Company

Circle No. 16 on reader service card

The look you pick

is the look that lasts.

With the "Scotchgard" Carpet Protector System.

When the doors finally open to the public, that carpet will see a lot of traffic. Traffic that can make even the best lose its good looks.

Unless it's protected with the "Scotchgard" Carpet Protector System.

Carpets stay newer-looking longer because "Scotchgard" Brand Carpet Protector is a fluorochemical that surrounds and protects each carpet fiber. So spills and stains are easier to clean. And dirt, grit, and grime are held loose, near the surface. For vacuuming that's more effective. Cleaning that's less frequent.

To prove it, treated and untreated carpets were placed in a public building and vacuumed daily. After 30,000 traffic count, the untreated carpet needed cleaning. But the carpet treated with "Scotchgard" Carpet Protector didn't reach that stage of soiling until it was exposed to 121,000 traffic count.*

So not only does "Scotchgard" Carpet Protector keep the look you specify, it saves maintenance dollars, too.

And it contains 3M Brand Static Control to reduce static build-up.

Freedom of design—from lights to darks so now you can choose just about any color carpet you like. "Scotchgard" Carpet Protector will keep it good-looking longer.

And it works on all types of carpeting. From level loops to sculptures. From nylons to polyesters. In fact, "Scotchgard" Carpet Protector can help even the newest generation nylons keep their new look longer.

The "Scotchgard" Carpet Protector System for Contract Carpets starts with mill-treated carpet. A regular maintenance program, including cleaning with 3M Brand Soil-Retardant Shampoo and reapplication of 3M Brand Carpet Protector, maintains optimum soil resistance.

Next time you specify carpet, make sure it's from one of the over 100 mills now treating lines with "Scotchgard" Carpet Protector.

It'll not only save your client money, it'll keep your look looking good.

3M Company, Commercial Chemicals Division, 3M Center, St. Paul, MN 55101.

Scotchgard® Carpet Protector

3M COMPANY

*Test details available upon request.

© 3M Company 1978
"Scotchgard" is a Reg. T.M. of 3M Co.

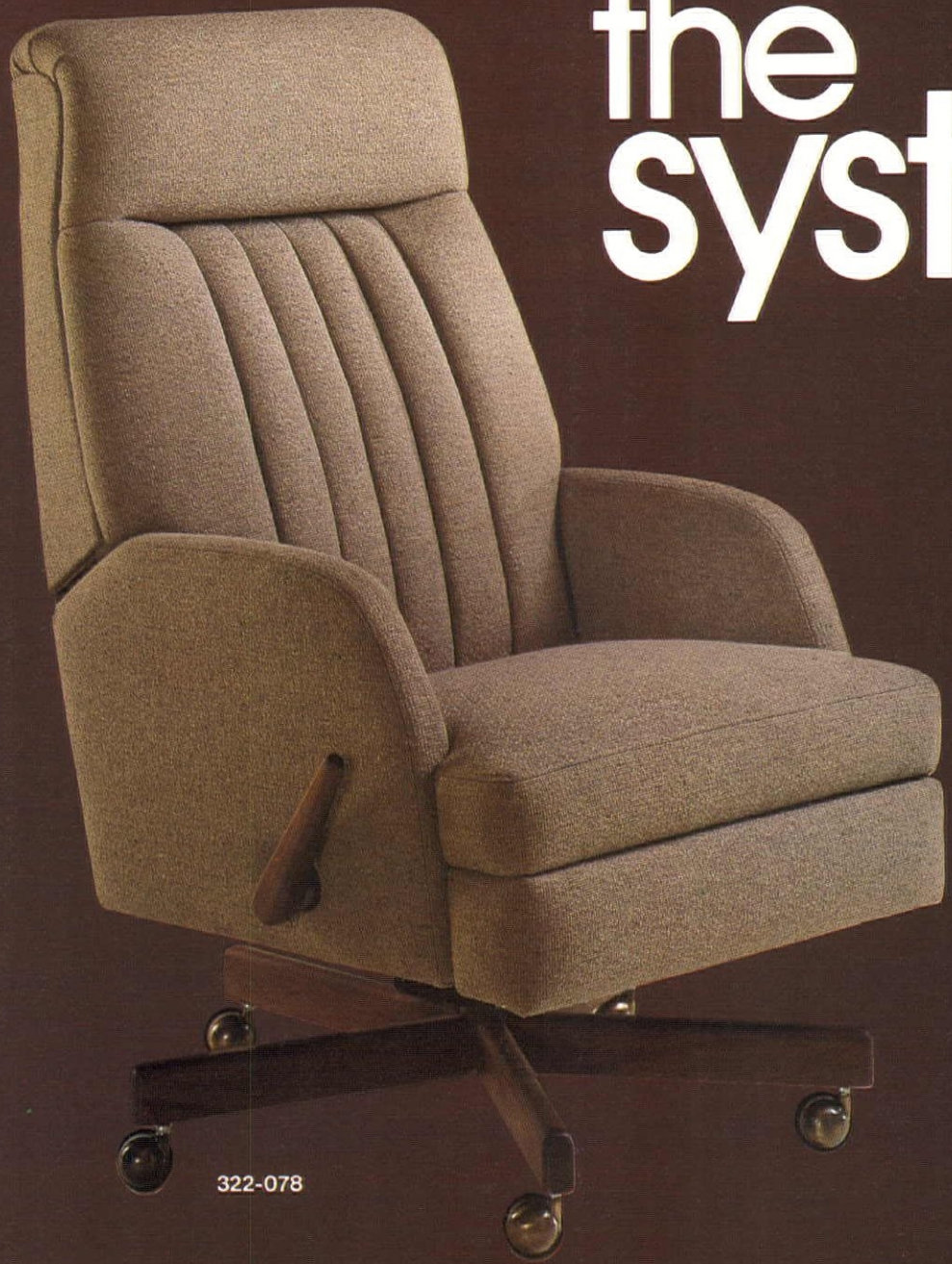
alex stuart design • A KIRSCH COMPANY

SHOWROOMS:
LOS ANGELES • HOME FURNISHINGS MART
SAN FRANCISCO • THE ICE HOUSE
DALLAS • TRADE MART
CHICAGO • MERCHANDISE MART
NEW YORK • AGD BUILDING
CANADA • HARTER FURN. LTD., GUELPH

FOR BROCHURES...
SEND TO DEPT. C
ALEX STUART DESIGN INC.
20735 SUPERIOR STREET
CHATSWORTH, CALIF. 91311
(213) 998-1332

MANUFACTURERS OF LUXURY FURNISHINGS FOR THE EXECUTIVE SUITE • DESKS • FILE CABINETS • OCCASIONAL TABLES • BOOKCASES • CREDENZAS • CONFERENCE TABLES

You can't beat the system*



*ECS

The Executive Care System

Monarch Furniture

a Mohasco company

ECS is available in several styles.
A wide selection of fabric, vinyls and leathers are offered to suit your individual needs and decor.

MEMBER OF BIFMA
MONARCH FURNITURE CORP., DEPT. CR, P. O. BOX 2516 HIGH POINT, N.C. 27261 SHOWROOMS: CHICAGO·1120 MERCHANDISE MART, NEW YORK· 345 PARK AVE. THE CONCOURSE

Carolina ASID chapter cited for role in theater preservation

Washington, D.C. — A preservation project submitted by the Carolina Chapter was one of five award recipients in the ASID/Scalamandre Historic Preservation Competition. The project was the Carolina Theater, Greensboro, N.C., and special commendation was given for the local ASID chapter's involvement in the restoration. Accepting the award was Sandra Cowart, ASID.

Other winning entries were: Schlegal Corporation Headquarters, Rochester, N.Y., with Beverly Lucks Hafner, Associate Member ASID, accepting.

Joseph Tillinghast House, Providence, R.I., Luigi Bianco, ASID, accepting.

Baltimore City Hall, Baltimore, Rita St. Clair, FASID, accepting.

Kent State University project, Robert Meden, Associate Member ASID, accepting.

The awards were made at a special reception at the newly restored Pension Building in Washington during the National Conference. An exhibit of winning entries was displayed.

A special photographic exhibit, "Radio City Music Hall—Keep it Kicking," was also previewed at the reception. The exhibit will remain in the Pension Building for viewing by the general public for an indefinite period of time.

The reception also marked the tenancy of the U.S. Department of Interior's Heritage Conservation & Recreation Service in the historic Pension Building.

LUMEX. Helping to create a better environment for the aged.

Lumex products are playing a major role in helping to reshape and improve the geriatric environment. Our Lumex patient seating systems, bathroom safety products and complete line of geriatric aids assist the elderly in their activities for daily living, comfortably and safely.

As part of our ongoing commitment to better patient care, Lumex is preparing an important new booklet dealing with improving the geriatric care environment. Summarizing the findings of numerous experts in the field in terms of facility, products, and individual patient ability, this work is *must reading* for every concerned professional. It will be available, along with Lumex products, from one of our Lumex Environmental Safety Specialists. He's the professional you can rely on for expert advice on specifying geriatric equipment. His recommendations can lighten your workload considerably. And contribute to safer, more enjoyable lives for your patients.

For additional information, mail this coupon today. Or call your Lumex Representative.

Lumex. Problem solvers in environmental safety.

LUMEX Inc.

Patient Seating, Geriatric, Home Care & Institutional Products.

100 Spence Street, Bay Shore, New York 11706
2960 Leonis Boulevard, Los Angeles, California 90058

LUMEX, Inc. 100 Spence Street
Bay Shore, New York 11706

☐ Please send me your informative booklet on improving the geriatric care environment as soon as it is available.

☐ Please have my Lumex Environmental Safety Specialist call for an appointment.

Name _____

Title _____

Firm _____

Address _____

City _____ State _____ Zip _____

Circle 19 on reader service card

Designers seeking more natural materials, says Linen Association

Washington, D.C. — Designers are expressing a greater interest in natural materials, reports Pauline V. Delli-Carpini, Director of the U.S. Belgian Linen Association, whose booth at the ASID Expo attracted a great number of inquiring designers. "During the past two years," says Delli-Carpini, "inquiries on linen in general went up about 70 percent. National distribution outlets had a substantial 49 percent increase, jumping from 390 two years ago to 794 outlets today."

The Belgian Linen Association was one of the nearly 200 exhibitors at the show. Linens displayed at the booth were from the prominent fabric manufacturers.

Judith Clark Bowie receives NHFL 1978 design fellowship

Dallas — Judith Clark Bowie, a graduate student in furniture design/woodworking at the University of Wisconsin is the winner of the $2,000 National Home Fashions League Design Fellowship for 1978.

Bowie's entry, children's modular furniture, can be used in variety of ways. The furniture includes table and chairs, a playhouse, train, and stairs.

Level

MANUFACTURERS OF FINE RESTAURANT AND
INSTITUTIONAL FURNITURE: BENTWOODS, COLONIAL
CHAIRS, STACKING CHAIRS, BAR STOOLS, TABLE BASES, TABLE TOPS,
FOLDING TABLES, AND CONFERENCE TABLES.

Circle 165 on reader service card.

LEVEL OF WINCHENDON 28 FRONT STREET, WINCHENDON, MA. 01475 617-297-1500

Pacesitter.

To be a pacesetter, it takes a kind of sixth sense about where design has been and where it's going. The kind it took, for example, to create Madison's new Pacesitter, designed by Arthur Umanoff. Solid, clean lines in natural or dark Oak. With plush upholstery, as shown, or with natural cane seat and back. Practically speaking, it demands surprisingly little floor space. In short, it's nothing short of a real pacesitter.

MADISON
FURNITURE
INDUSTRIES

Designed by Arthur Umanoff.

Madison Furniture Industries
Canton, Mississippi 39046
Phone 601-859-3771
SALES SHOWROOMS IN:
ATLANTA/CHICAGO/DALLAS
DENVER/LOS ANGELES
SAN FRANCISCO/SEATTLE

Circle No. 20 on reader service card

Revel in a rich textured rug (MIRA-ROMANTICA), linen draperies sketched in reds, blues and oranges (MIRA-CASTELLO I), and upholstery in bright orange (MIRA-OBJECTA).

Harmonize in blue: printed cotton draperies (MIRA-DECOR I), lush velour carpet (MIRA-CONTRACT II) and a touch of sheer voile (MIRA-VOILE PLAIN). Or add contrast: semi-transparent, lightly-etched casements in white (MIRA-FANCY) and grey upholstery (MIRA-FABRIC).

Warm the room with autumn colors: yellow, rust and brown, print draperies in 100 per cent cotton (MIRA-CAMPAGNE II). It's your choice of carpet: chocolate velour (MIRA-CONTRACT II) or maize-coco (MIRA-PANAMA II).

The Elevation Ascend to new levels of interior design. A step above the conventional, we offer a multitude of ideas for coordinating draperies, carpets, upholstery weaves and much more. MIRA-X is a swiss-conceived textile collection that gives you the freedom to expand your decorating ideas in any home or office. Reach for the sky! Choose from any of our elevating combinations or create your own. The MIRA-X decorating concept never dictates, but allows you to create your own solutions in your own style. Select one color and match it with all its subtle tones (up to 50 hues in carpets and draperies alone). It's an uplifting idea.

MIRA-X International Furnishings Inc.
525 Executive Boulevard
Elmsford New York 10523
914 592 2462

MIRA

Chicago–St. Louis–Miami–Houston–Philadelphia–Charlotte–Cincinnati–Boston–Denver–Seattle–Los Angeles–San Francisco–San Juan–Toronto, Canada

Yes, I'd like to learn more about the MIRA-X collection. Please send me your 20-page color catalogue free (postage prepaid).

Name _____
Company _____
Street _____
City or Town _____
State _____
Zip _____

Circle No. 12 on reader service card

Mail to: MIRA-X, Elmsford, N.Y.

Weave a room around Naugahyde.®

It's the perfect beginning, when you want a happy ending. Because it's versatile. Adaptable. Elegant.

And always surprising.

One look at this Shelby Williams group tells you that. In fact, it makes you wonder why it took so long for wicker and Naugahyde® vinyl fabric to get together. (We see now they were meant for each other.)

Yes, that's our Spirit of '76 over there. Lending daring new character. With an adventuresome spirit that lies deep in its colors. Like Sun Yellow. Pimento. Sagebrush and Claret. Plus—are you ready?—six dozen more. Bold to sophisticated, each and every one is a stunning complement for Shelby Williams' best. Or, an easy start for any room.

What about softness? You can see it from here. In those luxurious ripples. The gentle tucks. And the smooth-as-silk hand. Proof-positive that Spirit of '76 holds as much soft comfort, as much coziness, as you could ask for.

Of course, the famous Naugahyde durability is here, too. With superior resistance to abrasions, tears, and soil. Plus, Spirit of '76 is carefully manufactured to meet the most stringent fire codes across the United States. That's a comforting thought in itself.

So if you're thinking about weaving together a special room, Spirit of '76 could be your starting point.

Ask your Uniroyal Representative for details. Just call. Or, write Uniroyal Coated Fabrics, Mishawaka, Indiana 46544.

We help you do it with style.

UNIROYAL

Naugahyde® Brand Fabric

Circle No. 22 on reader service card

Computers to spark electronic catalogs, billing, tax returns

Washington, D.C. — The use of electronics promises to play a big role in the interior designer's day-to-day practice, according to announcements made during the ASID National Conference and in displays on exhibit.

A fully operating computer retrieval system was set up to demonstrate first hand to designers how they can examine catalogs with the computer. The system supplies complete printouts (hard and soft) of available materials from suppliers. It is geared to give actual inventory figures, to confirm sales, and to give other needed data, all at the designer's fingertips.

A microfiche system is also available for designer use. This system provides a series of post-card size microfiche cards that, with a small projector, can display the entire line produced by a manufacturer. Wallcoverings, for instance, is one of the categories included.

A low-cost accounting system, which includes tax returns, will soon be offered through ASID with its Compufax system. It is promised at a nominal fee.

When seating problems stack up-- fold them away with Meco's

Dynamic Duo

NOW AVAILABLE! New Integral Ganging Device

It is truly hard to believe that a folding and stacking chair could be designed to offer a grace and elegance that will indeed compliment any room. Ideal for parties, meeting halls, libraries, schools, churches. You no longer need a large quantity of stacking chairs for those occasional large parties. Simply stock a basic supply of both chairs and fold away the extras til you need them. They match perfectly — at less cost — less problems too!
Both chairs feature attractive square tube design, deep 1½" hi-density foam seat cushions, Metallic Gold baked enamel finish and plush, washable Red, Gold or Lime nylon velvet or Black supported vinyl upholstery. Available with or without Meco's new integral ganging device that's simple, E-Z to use and located where it is least likely to pinch fingers or tear clothing.

Model 213 Model 210 Model 200

Ask about our complete line of Meco folding furniture.

MECO Metals Engineering Corp., P.O. Box 3005, Greeneville, Tennessee 37743 (615) 639-1171

Circle 23 on reader service card

IBD/CONTRACT product designs award dinner to be held at Plaza Hotel on Oct. 6

New York — The annual Contract Product Design Awards Competition of the Institute of Business Designers in cooperation with CONTRACT will hold its awards dinner on October 6 at the Plaza Hotel.

Entries will be judged September 11, by Vincent Kling, The Kling Partnership; Howard Hirsch, Howard Hirsch Associates; Josephine Sokolosky, JCS Associates; Harold Leeds; and Karen Daroff, Daroff Design Inc. Grand prize winner will be featured on the cover of November 1978 CONTRACT, an office design issue.

Tickets are $35 per person. To assure seating, tickets must be ordered in advance from IBD National Headquarters, Suite 2705, 1350 Ave. of Americas, New York, NY 10019.

Knoll Internship winners represent three geographic regions

New York — This year's winners of the 1978 Knoll Summer Internship Program in Industrial Design were University of Illinois at Urbana-Champaign student Frank Eichstadt; San Jose State University student Diane Heggie; North Carolina State University student Harold Massey. The internship for Architecture was awarded to Yale University School of Architecture students Erica Ling and Heather MacIssac.

To insure nationwide participation, design schools representing the three geographic regions of the country are chosen on a rotational basis. The Knoll Summer Interns are granted scholarships to attend a special two-month study program to expand understanding of industrial and facilities design processes.

PRIZE: NOBEL
CIGAR: HAVANA
FURNITURE: STENDIG INTERNATIONAL

One of the pleasures of living really well is the presence of the rare and beautiful. Stendig International specializes in precisely this category.

Here is DAVOS, a unique lounge design in a club chair, 2 or 3 seat sofa and footstool. The upholstery is magnificent Toro bullhide leather with a clean natural hand and patina that grows lovelier with time. Toro is 5 millimeters thick and channel-stitched. Each DAVOS seat pulls out to provide extra depth and support: the very zenith of comfort.

The coffee table, of glass and polished stainless steel is DARIUS, a design by Sergio Mazza and Giuliana Gramigna. Also available in dining height.

DAVOS is part of the Stendig deSede Designer Collection, produced by deSede of Switzerland, grand masters of leather upholstery.

Tapestry by Nancy Guay: Ruth Kaufmann Galleries Accessories: Karl Springer Ltd Carpet: V'Soske

New York: 410 East 62 Street Chicago: 950 Merchandise Mart
Los Angeles: 201 Pacific Design Center Denver Miami Minneapolis Royal Oak, MI San Francisco Seattle

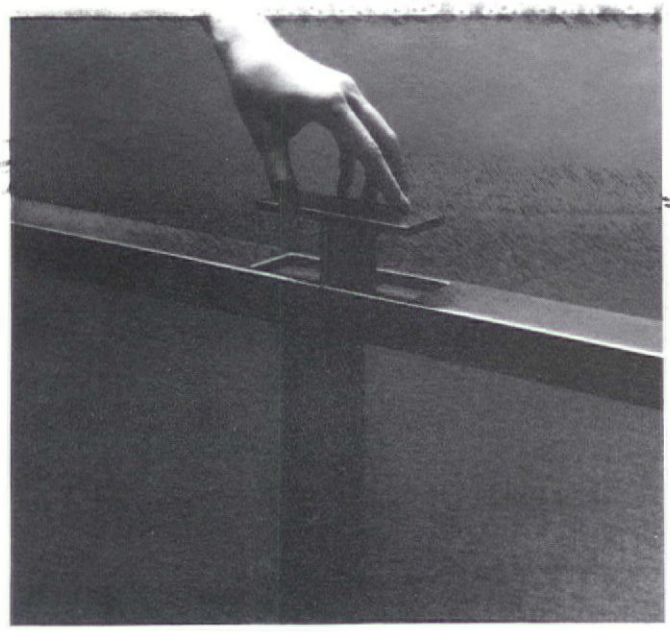
Representatives in all major cities. Refer to White Pages or write to Stendig Inc., a subsidiary of Stendig International, Inc., 410 East 62 Street, New York 10021 (212) 838-6050

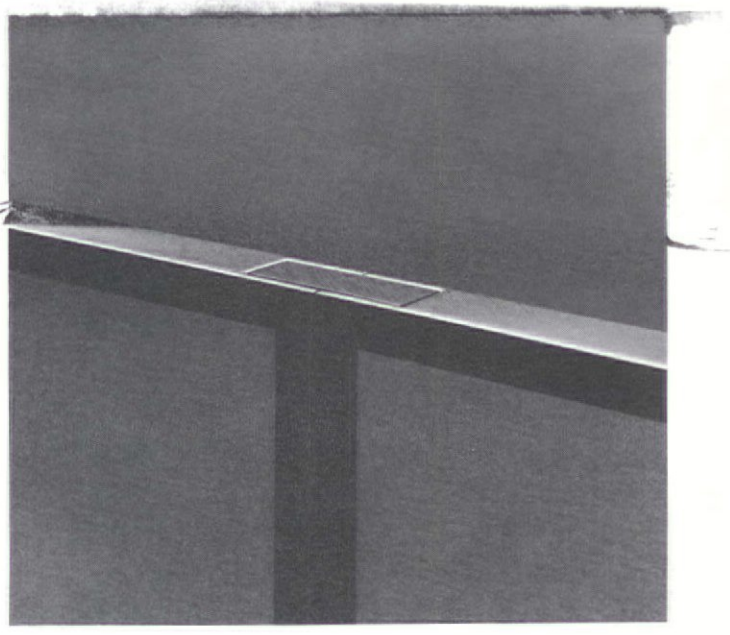
Stendig International

Thonet Classics:
Chrome Curves
Three design originals:
The M Chair (left) c. 1930
by Mies van der Rohe
The Club Tub (center)
1969 by J. Burgasser
The Lorenz Chair (right)
c.1929 by A. Lorenz
Rethink Thonet
A Simmons Company
491 East Princess Street
Post Office Box 1587
York, Pennsylvania 17405

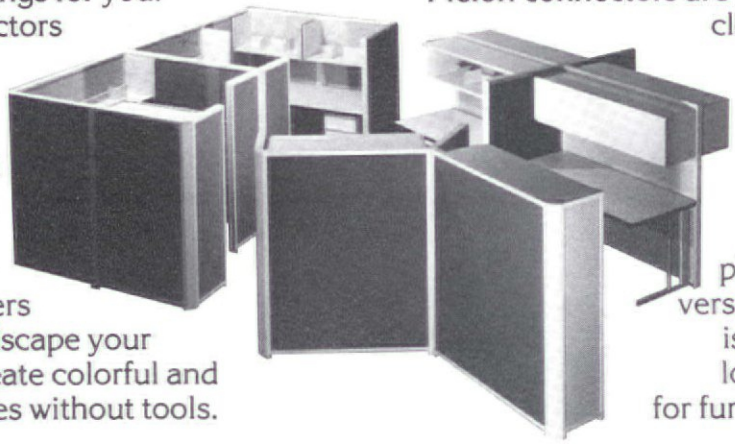
We've Got Connections

For Easy Installation...With Clean Lines





This means cost savings for you. These unique connectors make set-up and re-arrangement of Pleion panels fast and easy. The fastest in the industry! With our panels, shelves, work surfaces, modular desks and drawers you can quickly landscape your open plan office. Create colorful and attractive work spaces without tools.



Pleion connectors are inset to preserve sharp, clean lines. The patented Adjusta-Strip™ adds to this purity in style. It provides slots for hanging components only where needed. Our design philosophy? Simple. To provide versatility and function that is sensibly priced . . . and looks good! Call or write for further information today.

PLEION
CORPORATION

1402 E. Chestnut Ave.,
Santa Ana, California 92701.
Phone (714) 835-9101

Circle 25 on reader service card

The Genon® advantage

This is the General Tire Design Center in the woodlands of historic New Hampshire...one of the most comprehensive wallcovering design facilities in the world. This exclusive facility is where Genon Vinyl Wallcovering originates.

Headquartered here is a superb staff of stylists, designers, model makers, photographers and printers. Together, their expertise and innovation have made the Genon name synonymous with design leadership—whether you specify a ready-to-order pattern or designed-to-order style.

The book of 1,001 designer patterns.

Genon is also out front with one of the most complete collections of patterns and colorways in the business. High-fashion linen and woven textures. Natural woodgrain and grass looks. Elegant leather and suede effects. Approximately 1,001 styles in all. In economical lightweights and rugged heavyweights.

Chances are you'll find exactly what you need in the Genon book. But if you don't, our professional design center is at your command.

You're invited to work with our staff to create a one-of-a-kind design.

Come to the General Tire Design Center. Meet with our talented men and women. They'll help you create custom designs developed from our vast library of printings and embossings. Or show you how existing Genon patterns can be recombined any way you like.

For more information on Genon Vinyl Wallcovering, contact: The GTR Wallcovering Company, 979 Third Avenue, New York, NY 10022.

genon® vinyl wallcovering

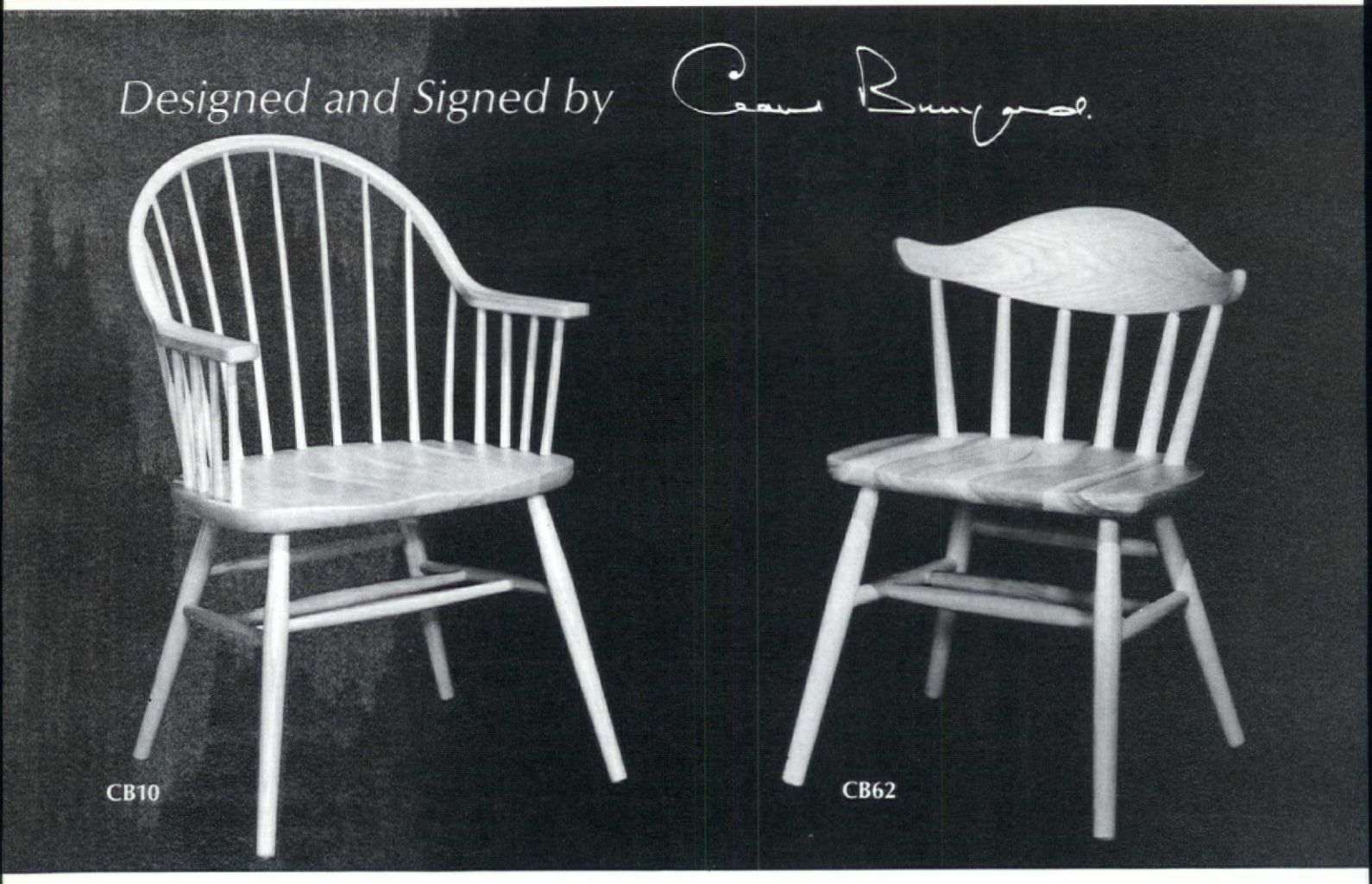
GENERAL TIRE®

ISD Incorporated retained by General Mills, Inc.

The Chicago office of **ISD Incorporated** has been retained by General Mills, Inc., to plan and design the interiors of new office space currently under construction within its Minneapolis headquarters complex. Hammel Greene & Abrahamson, Inc. is the architect for the project, scheduled to be completed in autumn, 1979. . . . The Community Redevelopment Agency (CRA) of Los Angeles has retained **Timothy H. Walker & Associates, Inc.** to do programming, site selection, and interior design for the fall 1978 relocation of its central administrative offices. . . . Tokyo Hotels International, Tokyo, Japan, has awarded the interior design and graphics contract for its international hotel in Dacca to **Howard Hirsch & Associates,** Beverly Hills-based design firm. According to Robert D. Zimmer, Vice President for Hirsch, the design firm will provide total planning, interior design and graphics for the 300-room hotel. . . . **3D/International,** Houston, says its New York-based Project Management Division has been awarded a contract by Americana Hotels, Inc. to provide project management, construction management, and interior design services for the 300-room Kyongju Chosen Hotel in the Republic of Korea. The hotel is scheduled for completion in March 1979. . . . **Robinson & King Interior Architecture,** Coral Gables, Fla., has been selected for space planning and interior design of the top floor of the new Ryder Systems, Inc., headquarters building in Miami. The firm will be responsible for both public areas and executive offices. . . . **Interior Incorporated** has been retained by Santa Fe Railway to redesign the Treasurer's Department at their Topeka, Kans., facilities. . . . **Executive Interiors, Inc.,** Jenkintown, Pa., has been retained by General Mills to handle the interior design and furnishing of its new corporate headquarters in Rockefeller Center, New York City. . . . The U.S. General Services Administration (GSA) has awarded **MOR-Tract, Inc.,** Liverpool, N.Y., a contract for railroad maintenance at the GSA Depot in Scotia, N.Y. . . . **Deco Purchasing Co., Inc.,** Orlando, Fla. has been retained to refurbish and redecorate the Sheraton Daytona Beach Motor Inn. . . . The Los Angeles-based design firm of **Dollie Chapman** has been retained by McKinsey & Co. to plan its 4,200-square-foot expansion at the Crocker Bank Building in downtown Los Angeles.

ABC's of insurance is theme for CPU annual meeting and seminars

Malvern, Pa. — "The ABC's of Insurance-1978: Affordability, Believability, and Change" is the theme for the 34th annual meeting and seminars of the Society of Chartered Property & Casualty Underwriters to be held Sept. 24-28 at the Plaza/Renaissance Center, Detroit. The program consists of educational seminars and panel discussions.



CLAUD BUNYARD DESIGN, INC. BOX 448 • GARDNER, MASSACHUSETTS 01440 • (617) 874-0557
Circle 26 on reader service card

AN EXECUTIVE LUXURY! FOR DE SEDE'S #210 ARM CHAIR, ONLY THE SOFTEST, MOST PERFECT ANILINE-DYED LEATHERS HAVE BEEN PAINSTAKINGLY SELECTED. NOTE DE SEDE'S INCREDIBLE ATTENTION TO DETAIL ... THE SEAMS ARE HAND-STITCHED. WHAT'S MORE, THE CHAIR ROLLS, SWIVELS, TILTS AND ADJUSTS FOR HEIGHT. AVAILABLE IN 12 COLORS. REQUEST FREE CATALOG, TURNER LTD., 305 EAST 63RD STREET, NEW YORK, NEW YORK 10021. TELEPHONE (212) 758-4744. DESIGNED BY DE SEDE OF SWITZERLAND.

TURNER LTD.

Circle No. 27 on reader service card

First Annual IBD national student competition gives national recognition

• The First Annual IBD National Student Competition is open to all undergraduate and graduate students enrolled in a two to five year program of interior, environmental, architecture or industrial design for the 1978-79 school year. An individual project award and a group project award make up the categories. Cash prizes for individual entries are $1,000 for first prize, and $500 for second. Certificates of Merit will be given for two honorable mentions, and for the group project. For further information: Michael Wirtz, Institute of Business Designers, 1350 Ave. of Americas, New York, NY 10019; (212) 586-4222. *Deadline:* May 31, 1979

• The Resources Council Inc., Southern California Chapter, has inaugurated Pacifica Awards, an annual competition for the professional designer. Categories include fabrics, floor coverings, commercial and residential furniture, graphics, lighting, room dividers, window treatments, and wallcoverings. Four finalists in each category will be awarded cash, plaques, and certificates of merit. For further information, instructions, deadline, and entry forms: Pacifica Awards, Resources Council, Inc., Southern California Chapter, 8687 Melrose Ave., Suite 471, Los Angeles, CA 90069. (213) 652-0122.

• The third annual ASID/Barcalounger design competition will judge its entries for innovative multi-functional interiors incorporating recliners or other motion seating. A first prize of $3,000, second prize of $1,500, and third prize of $500 will be awarded. The competition is open to all professional designers including contract, residential, retail store, and model room designers. All entries must be submitted to ASID National Headquarters in New York by March 1, 1979. For information: Regina Baraban, ASID, 730 Fifth Ave., NY, 10019. (212) 586-7111. *Deadline:* March 1, 1979.

Deadline for previously announced competition:

• *September 30.* ASID/Mannington Award Competition for contract and residential projects; $5,000 award for each. For information: Mannington Award, Box 1978, Salem, NJ 08079.

Steketee's Contract merges with Contract Interiors

Contract Interiors, with showrooms in Detroit and Grand Rapids, has merged its Grand Rapids operations with **Steketee's Contract Division.** Together they will be known as **Contract Interiors.** The combination will become more focused on the contract needs of the business/institutional facility market, and aside from supplying furnishings, will specialize in problem-solving space planning, design, project management and installation. Together they will be the largest contract furnishing resource in Western Michigan. Clement G. Nicoloff, Vice President of Contract Interiors, will head the new operation. Robert Bennett will become Assistant Vice President.

International Terra Cotta, Inc.
690 NO. ROBERTSON BLVD., LOS ANGELES, CALIF. 90069 (213) 657-3752 • (213) 657-1051
DALLAS:
Turtle Creek Business Center / 109,
1931 No. Industrial Blvd., Dallas, Texas 75207 (214) 744-1269
SEATTLE:
R. David Adams, 222 First Ave. South, Seattle, Washington 98104 (206) 622-5325
Circle 28 on reader service card

236 secretarial

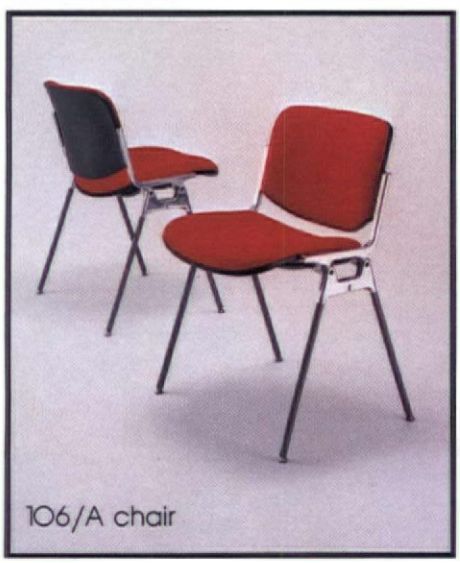
CASTELLI adds more comfort.

Introducing Series A Seating

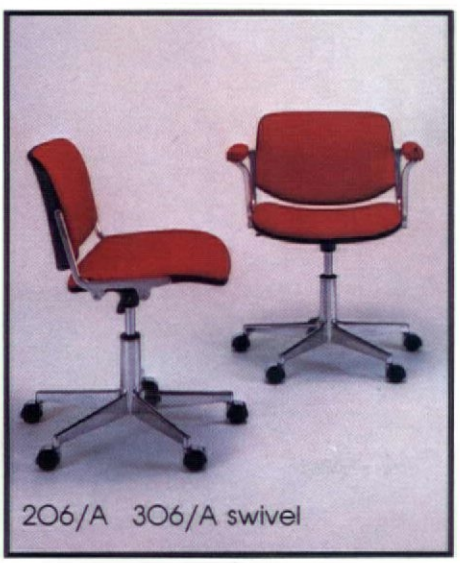
You no longer have to sacrifice comfort to get durability, quality and excellence in design. Injection molded seat and back panels combine with soft, thick, contoured foam. Add complete component interchangeability and flexibility to meet any seating requirement and you'll realize why Series A Seating could be the most comfortable choice you've ever made.

CASTELLI FURNITURE

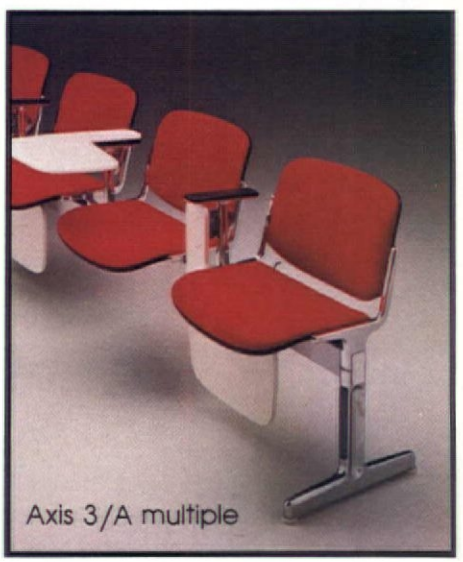
950 THIRD AVENUE, NEW YORK, NEW YORK 10022 212-751-2050
1150 MERCHANDISE MART, CHICAGO, ILLINOIS 60654 312-828-0020
267 PACIFIC DESIGN CENTER, LOS ANGELES, CA 90069 213-659-8302



106/A chair



206/A 306/A swivel



Axis 3/A multiple

Circle No. 29 on reader service card

PEOPLE/NEWS

Chicago designer **Janet S. Schirn,** ASID, has been re-elected President of the Illinois Chapter of the American Society of Interior Designers, to serve for a second 1-year term.

Donald L. Henry has been appointed Manager of Merchandising for the Fibers Division of Chevron Chemical Co. and its subsidiary, Vectra Corp.

H2L2 Architects/Planners, Philadelphia, is incorporating all of its non-architectural services, such as space planning and interior design, under a new subsidiary, **H2L2 Design Inc. Barry N. Eiswerth,** a partner in the parent firm, will serve as President. The new subsidiary will handle, in addition to interior design and planning, graphic design, corporate identity, brochures and feasibility studies.

Saul Morris (shown) has joined **Sheridan Carpet Mills** as National Accounts Manager, a new post. He will be in charge of sales efforts to nationwide carpet accounts. Sheridan is a division of Lancer Enterprises.

Morris

Alcan Aluminum Corp. has named **David A. Bergstrom** Vice President of the Alcan Building Products Div.

The Wool Bureau has three new appointments: **Dan Kressler** is Carpet Product Manager responsible for all areas of marketing, **Tom Haas** is Vice President in charge of advertising and public relations, and **Jim Ellis** has been promoted from Assistant Secretary Treasurer to Secretary Treasurer.

Lewis-Kaneko-Laff, New York designers and planners, are opening an office in Denver at 1624 Market St. **Robert Heraldez** will head the new office.

Drummond

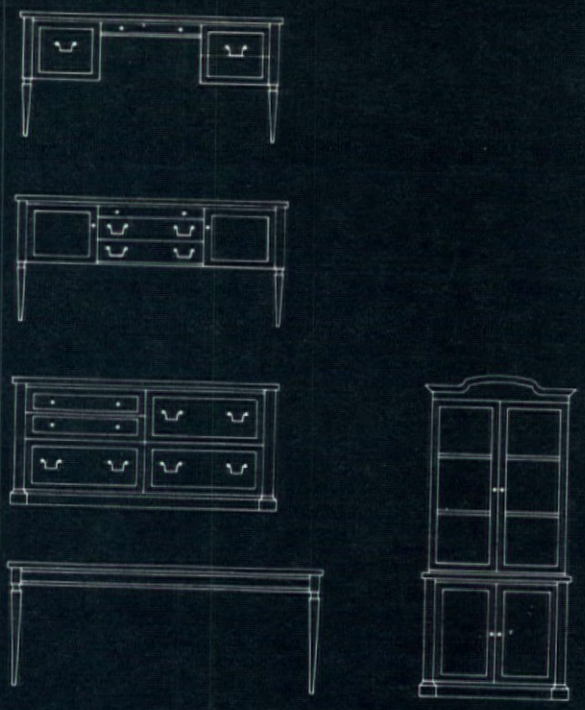
James J. Hoefer has joined the Seattle-based Bank & Office Interiors as Director of Design Planning. He will head the firm's design and space planning division.

C.H. Masland & Sons names **Robert J. Drummond** (shown) General Sales Manager. He will be based at the carpet mills' headquarters in Carlysle, Pa., and have full responsibility for national field sales.

Three sales appointments expand Eurotex Inc.'s West Coast coverage: **Donald M. Byham** will supervise and cover Northern California and Nevada. **James Geraghty,** will cover Oregon, Washington, Northwest Idaho, Alaska, Vancouver and Alberta, Canada. **Al Salvesen** will cover Southern California, Arizona and Las Vegas.

Charles P. Sniffen has been appointed National Sales Manager for Discovery Concepts, Carlstadt, N.J., according to O'Grady & Seigel, exclusive sales representatives for the line, which is a totally integrated system of modular office furniture.

Circle 30 on reader service card ►



4300
Italian Provincial Series

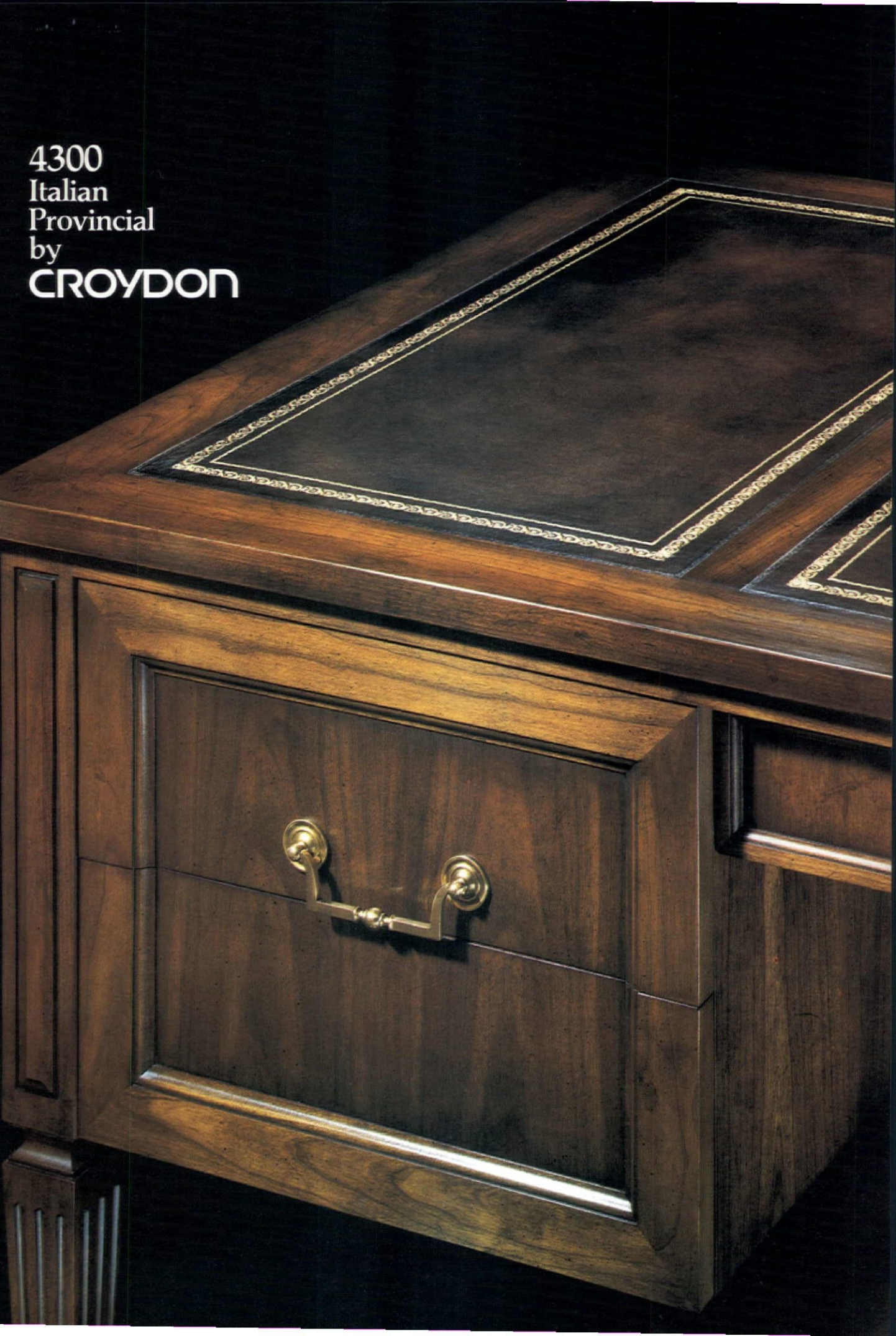
Some things remain steadfastly certain. One of these is the purity of Croydon's 4300 Italian Provincial Series. Evident in its meticulous detail work is the skill of the craftsmen . . . and the long hours spent to achieve its ultimate perfection. These, in combination with stringent engineering specifications, have resulted in a classic furniture line totally in tune with the needs of today's classic executive. The 4300 Series: truly a rarefied blend of timeless elegance and function.

Representatives & Showroom Locations

*Design Products Inc., Pennsylvania **215 561-2770**
*Design Products Inc., Maryland; D.C.; Delaware; Virginia **301 789-2800**
Design Products Inc., Western Pennsylvania; West Virginia **412 931-4580**
*O'Grady & Siegel Associates Incorporated, New York, N.Y. **212 688-4170**
*Davis & Associates, Ohio; Michigan; Indiana; Kentucky **216 333-9665**
Phillips Meyers Group, California; Nevada; Arizona **213 345-2266**
M.G.L. Associates, Minnesota; North & South Dakota **612 336-9331**
Edmund Kirk Associates, Texas; New Mexico; Oklahoma; Arkansas; Louisiana; Mississippi **214 744-0696**
*Ray Young & Associates, Inc., Illinois; South Wisconsin **312 329-1690**
Ray Young & Associates, Inc., Missouri; Kansas; Nebraska **314 469-7536**
* Showrooms

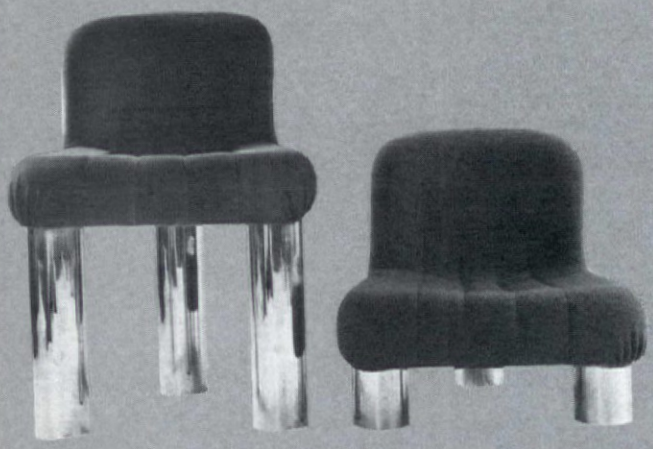
CROYDON
FURNITURE SYSTEMS INC.
Box 340, Cambridge,
Ontario, Canada

Croydon Showrooms:
306 East 61st Street, New York, N.Y.
Merchandise Mart, Suite 1038, Chicago, Illinois
Place Bonaventure, Montreal, Quebec
York Centre, Toronto, Ontario

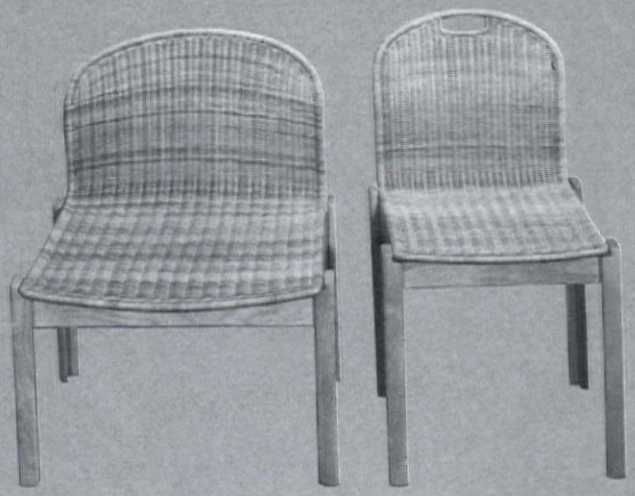

4300
Italian
Provincial
by
CROYDON

Beylerian relationships

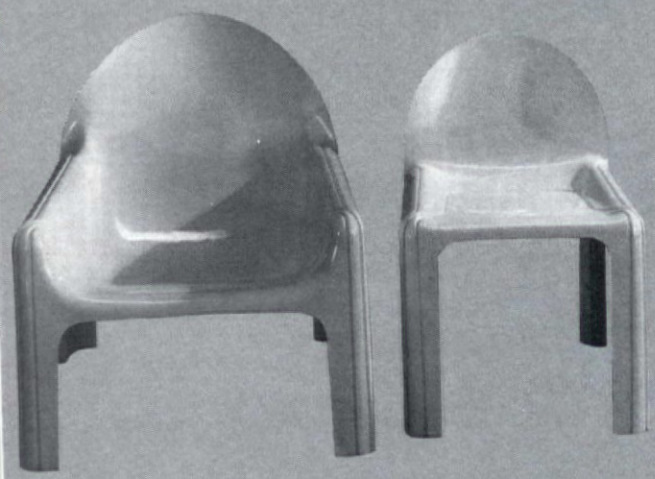
arflex



elco



kartell



polo

no, that's not all there is...

Beylerian

DESIGNER COLLECTION: 305 EAST 63 STREET, NEW YORK, N.Y. 10021 212/755/6300 TWX 710 581 4673

In other cities, the Beylerian Designer Collection may be seen at:

CHICAGO—SARAJANE INTERNATIONAL/903 MERCHANDISE MART, 60654; **LOS ANGELES**—JANUS ET CIE/PACIFIC DESIGN CENTER, 90069; **MIAMI**—DESIGNERS SERVICE BUREAU/95 N.E. 40TH STREET, 33137; **SAN FRANCISCO**—P.J. SVANFELDT ASSOCIATES/THE ICE HOUSE, 94111; **SEATTLE**—LUBY ASSOCIATES/200 DESIGN CENTER N.W., 98108.

SOLUS

DAVIS FURNITURE INDUSTRIES INCORPORATED

P. O. Box 2065, High Point, N. C. 27260 / Showroom, Merchandise Mart, 11-116A, Chicago, Illinois
Designed by Robert Bernard Associates / Solus Collection S-205½ (OB) Executive Chair

Circle No. 31 on reader service card

Ka-a-thunk!

Because students will be students, injury may be the price you pay for durability in conventional furniture. Rigid plastics, wood and metal frames are worse than uncomfortable. They can be downright dangerous.

But ModuForm lounge furniture was specifically designed to survive spills—of the student body or its midnight snacks, or even of an unquenched ashtray—without sacrificing safety, comfort and style. These leather-grained flexible modules have no frames, no springs, no seams, no exposed edges and no hard or sharp surfaces. Just cushiony comfort and classic design with the durability of a friendly hippopotamus. A full line of adult-size chairs, settees, sectionals and table benches that make comfort and safety cost-effective. Send for our color catalog and survive the Ka-a-thunks.

MODU FORM™ flexibility in furniture

ModuForm, Inc.
Joyce Industrial Park
P.O. Box 128
Acton, Massachusetts 01720
(617) 263-3555

Circle 32 on reader service card

PEOPLE/NEWS

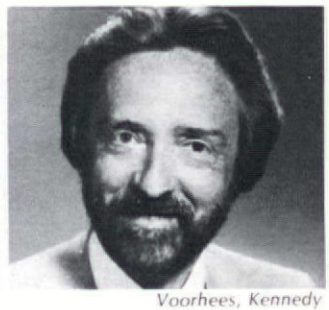
Brickel Associates announces that the Ward Bennett Textile collection will become a full and autonomous new division of the company and will be known as **Brickel Associates Textiles. Sina Pearson** will head the program and take full responsibility for its development.

David W. Meyer has been appointed Vice President of Marketing for Berven Carpets Corp. He has been with Berven since 1955.

Meyer

Marden Fine Arts has opened in an airy penthouse at 141 E. 55th St., New York, showing painting and graphics, as well as other works on paper by contemporary artists.

Decorator's Floor Covering Association has elected officers for 1978/79: President, Steven Stark (Stark Carpet Corp.); Vice President, Alan Meiselman (Saxony Carpet Co.); Treasurer, Joseph Sharkey (Dippel, Vogler & Sharkey); Secretary, Ben Givaudan (Givaudan Advertising Inc.).



Voorhees, Kennedy

Rodger N. Voorhees and **Donald W. Kennedy,** AIA, have been named to direct the San Francisco Office of Gensler & Associates/Architects. Both are Gensler Vice Presidents and have been with the firm for several years.

Ronald S. Sawicki has been promoted to Product Manager of Filing & Storage Equipment Systems for GF Business Equipment.

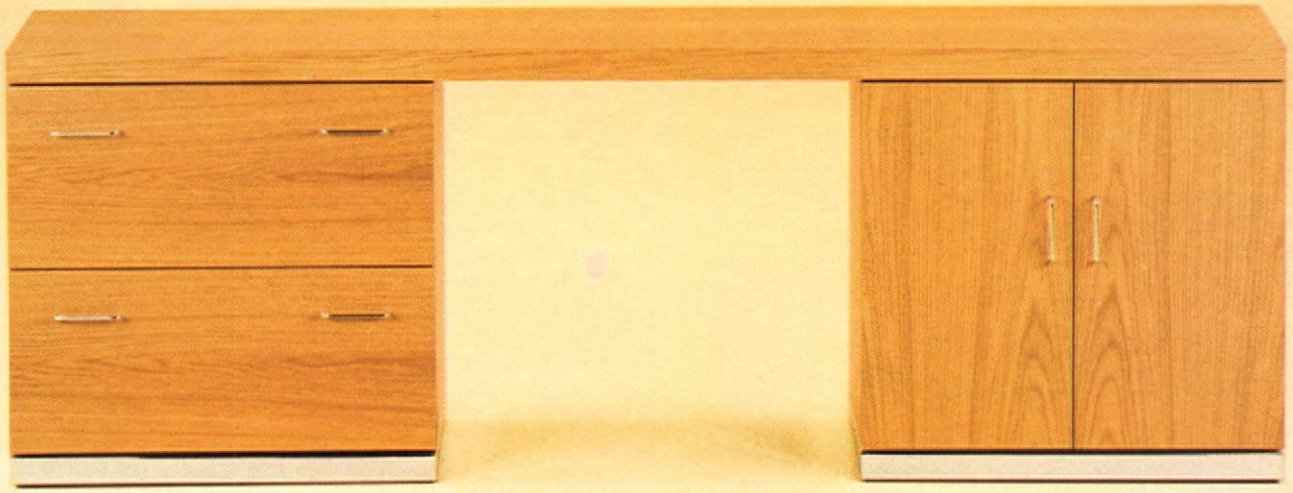
Doherty

Jay D. Doherty (shown) is new Director of Communications Department for The Merchandise Mart and Expocenter, Chicago.

Gus Melandow is new National Sales Manager of Patrick Carpet Mills International.

The Southern California (Los Angeles) office of **John Carl Warnecke & Associates,** Architects & Planning Consultants, has relocated to 2029 Century Plaza East, Los Angeles, Calif. 90067; telephone 213/552-3100.

New staff additions at Space Design/Interior Architecture Inc., Cincinnati: **David N. Fischer,** senior space planner; **Jon H. Bentz,** as industrial, interior, graphic designer; **Jeffrey L. Walden,** as project architect.



interiors international limited

contract furniture

Circle No. 33 on reader service card

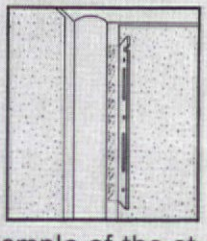
New York	Chicago	Houston	Toronto	Montreal
595 Madison Ave., New York, N.Y. (212) 759-3243	Merchandise Mart, Chicago, Illinois (312) 644-1551	4550 Post Oak Pl. Dr., Houston, Texas (713) 961-5031	180 Norelco Drive, Weston, Ontario (416) 745-4000	Place Bonaventure, Montreal, Quebec (514) 861-5865

Rosemount spotlights out-of-sight component mounting.

The end of slots and gaps in open plan systems.

You'll never see a slot or gap on Rosemount System panels.

That's because we tuck our component mounting apparatus behind the panel side frame. It gives our panels a clean look—with or without components—and doesn't let noise slip through from one side to the other.



And mounting is fast, simple, rigid.

It's just one more example of the attention to detail that runs throughout the Rosemount System. Other examples: all-acoustical .70 NRC panels; a patented Rotopost which makes the system easy to set up, easy to change; human-scaled components.

For more information, call: (612) 469-4416. Or write: Rosemount Office Systems, Inc., Box D, Airlake Industrial Park, Lakeville, MN 55044.

Rosemount

Circle 91 on reader service card

COMING EVENTS

1978

September 11-14. American Hospital Association and Association of Western Hospitals convention. Anaheim, Calif.

September 14-16. Floor Covering & Carpet Accessories Show and Design Conference. Pacific Design Center, Los Angeles.

September 15-16. Designer's Preview. Design Center, Troy, Mich.

September 16-20. International Woodworking Machinery & Furniture Supply Fair. Louisville, Ky.

September 21-22. Mid-West Fabric Fair, sponsored by American Mart and Furniture Fabric Men's Association. American Mart, Chicago.

October 4-8. National Office Products Association Show. McCormick Place, Chicago.

October 5-7. Student Rally. Sponsored by Institute of Business Designers, N.Y. Chapter and Designer's Saturday. New York.

October 6. ASID Northeast Regional Conference. U.N. Plaza Hotel, New York.

October 6-7. Designer's Saturday. Member showrooms, New York.

October 17-20. Tex-Italia Casa 78, Exhibition of Italian textiles. Waldorf-Astoria Hotel, New York.

October 22-24. IBD Office Products Show. Pacific Design Center, Los Angeles.

November 6-8. International Hotel/Motel & Restaurant Show. New York Coliseum, New York.

November 8-10. Office Landscape Symposium. Marriott Hotel, Denver.

November 10-12. Second Design Assembly. The Marketplace, Philadelphia.

November 12-14. New York Home Furnishings Council Market. New York Merchandise Mart, New York.

1979

January 7-12. NYMM Furniture, Lighting, Accessories Market. New York Merchandise Mart, New York.

January 14-19. Winter Furnishings Market. Dallas Market Center, Dallas.

January 21-25. Winter Furniture Show Market. Showplace Square, San Francisco.

January 21-25. Winter Furnishings and Floor Covering Markets. Atlanta Merchandise Mart, Atlanta.

June 13-15. NEOCON 11—National Exposition of Contract Furniture & Furnishings. The Merchandise Mart, Chicago.

June 17-20. Construction Specification Institute Annual Conference. Cincinnati.

July 8-19. Summer Furnishings Market. Dallas Market Center, Dallas.

July 15-19. Summer Furnishings and Floor Coverings Market. Atlanta Merchandise Mart, Atlanta.

July 15-19. Summer Furniture Show Market. Showplace! and Galleria Design Center, San Francisco.

Foreign Trade Shows 1978-1979

September 5-8. International Carpet Fair. Harrogate, England.

September 22-27. Salone del Mobile, 17th Italian Furniture Exhibition, and 2nd Euroluce/International Lighting Exhibition. Milan, Italy.

September 29-30. Canexus 78. Member showrooms, Toronto, Canada.

October 24-29. Orgatechnik, Cologne '78 Fair. Cologne, Germany.

November 14-16. International Interior Design Show, Toronto, Canada.

January 11-15, 1979. 10th International Furniture Exhibition, Salon International du Meuble. Exhibition Park, Porte de Versailles, France.

January 14-18. Second Canadian Lighting, Accessory and Furniture Show. Toronto, Canada.

January 17-23. German Furniture Fair. Cologne, Germany.

Photography by D. E. Wolfe

the company • condi

the designer · John Caldwell
the series · dynamic and multifaceted, The Formula
is based on a cast aluminum rectangular form
and is particularly appropriate for a wide variety of commercial applications.

condi
our furniture has a future

the condi collection:
Los Angeles · Space 219, the Pacific·Condi Focus at the Pacific Design Center; San Francisco · Space 449, the Pacific·Condi Focus at the Galleria/Design Center; Seattle · Space 222, the Pacific·Condi Focus at the Design Center Northwest; Mexico City · Consorcio Era S.A.; Chicago · Space 995, the Pacific·Condi Focus at The Merchandise Mart; Factory·Condi (a division of pacific furniture) · P.O. Drawer 12, Compton, California 90220 (213) 774·8300.

Circle No. 59 on reader service card

Allied Chemical introduces Noble NaturaLuster™...

with the enduring elegance of Anso-x® nylon.

NaturaLuster brings the classic look of wool to the commercial carpet market, in sturdy, easy care nylon.

NaturaLuster is the newest of ANSO-X commercial grade fibers, with the closest-to-wool look available in nylon. The attractively natural luster of fine wool — at much less than the cost of wool, but with the superior durability of nylon — and featuring the special depth and richness of color that sets all ANSO-X yarns apart.

NaturaLuster advances the scope and versatility of commercial carpet a giant step ahead, by combining the beauty of wool with the superior performance of ANSO-X nylon, the most durable carpet fiber available. Stubborn resistance to dirt, stains, and soiling. Remarkable resilience. And easy maintenance.

NaturaLuster is yet another facet of Fashionnation. A revolutionary new movement in floor design, brought to you by Allied Chemical and the leading manufacturers of commercial carpet.

But the real beauty of ANSO-X is that all commercial carpets made with ANSO-X nylon are engineered for superior performance.

- ANSO-X "reduced soiling" fibers for outstanding appearance retention.
- Permanent static control.
- Rigorous performance tests, including a 100,000 tread floor test for every cut-pile style.
- The strongest wear and static guarantees in the industry; a lifetime anti-shock guarantee as well as free replacement if any portion of the carpet wears more than 10% in 5 years. That's the Allied Chemical Guaranteeth™ . . . the Guarantee with teeth.

NaturaLuster for the look of wool. The toughness of nylon. And for everything else you specify carpet for. Available in posh plushes, tasteful tweeds and prestigious patterns.

Come . . . join the revolution . . . it's getting under way at all the best mills.

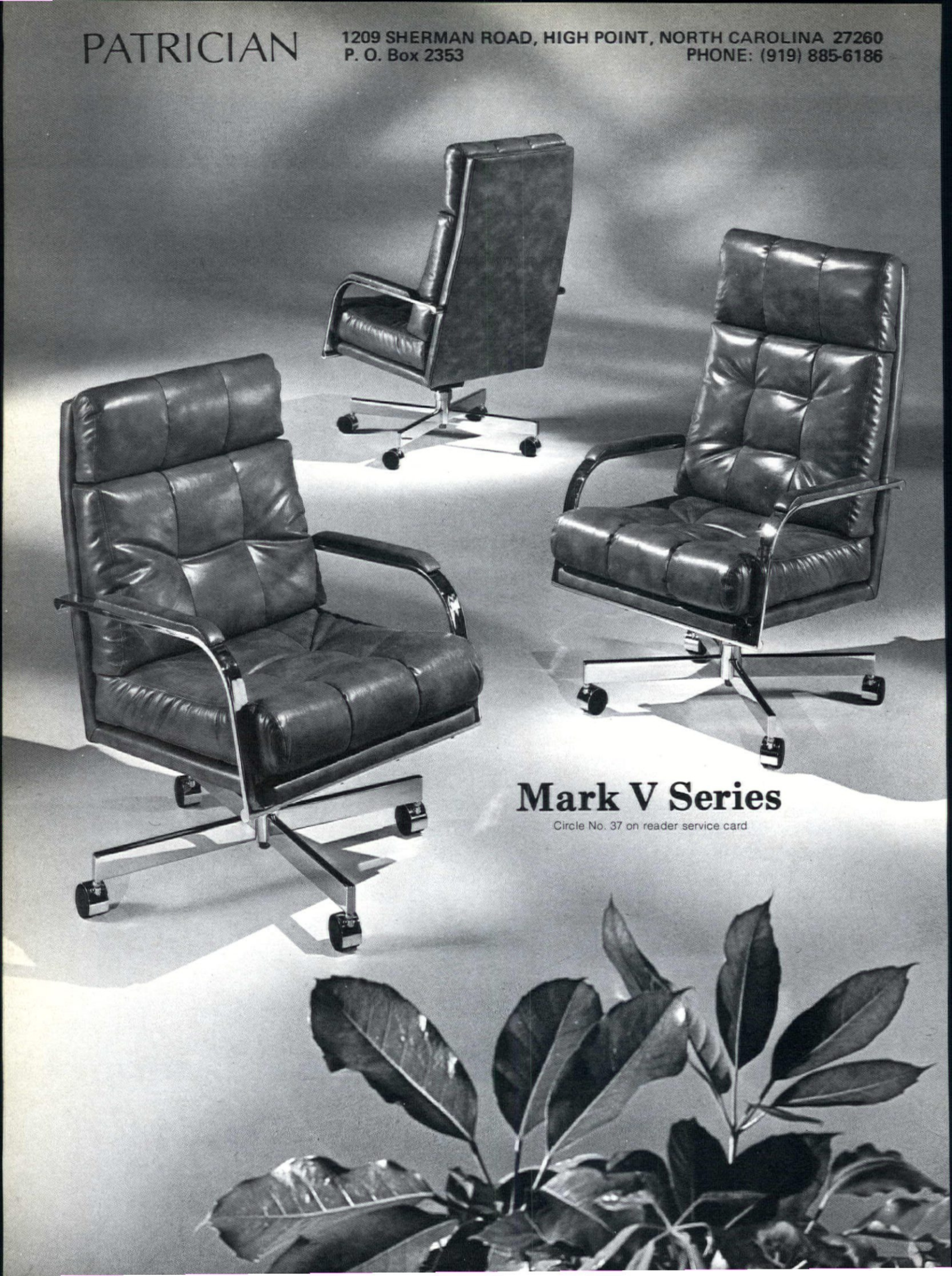
Ask your Carpet Resource or contact Allied Chemical Corporation, Commercial Carpet Specialist, 1411 Broadway, New York, NY 10018, (212) 391-5079

ANSO-X means enduring elegance

ANSO-X Guaranteeth™ The Guarantee With Teeth™ NaturaLuster™

Circle No. 36 on reader service card

PATRICIAN
1209 SHERMAN ROAD, HIGH POINT, NORTH CAROLINA 27260
P. O. Box 2353
PHONE: (919) 885-6186



Mark V Series

Circle No. 37 on reader service card

Three Dimensions of Solid Oak

This barstool, arm chair and side chair crafted from solid oak are appropriate for use where strong contemporary seating is needed. From the Falcon collection of tables and seating for contract use.

1192 Merchandise Mart
Chicago, Illinois 60654

9387 Dielman Industrial Dr.
St. Louis, Missouri 63132
314/997-5600
or 800/325-4077 toll free

falcon

Circle No. 38 on reader service card

With a Faultless Thinline Chair Control. We've replaced bulky springs and knobs with an aesthetically discreet control just an inch and a quarter thin. So inventive, it's patented. So original, it's as distinctive as a Harter design. Or yours. Faultless Chairware™: controls, bases, casters from one source. Call Ron Dame, Sales Mgr., Office Furniture Products, (812) 425-1011. In Canada: Faultless-Doerner, Waterloo, Ont.

Faultless

FAULTLESS DIVISION
Bliss & Laughlin Industries
Evansville, Indiana 47711

Circle 99 on reader service card

METAGLOW. Simply stated, there is nothing else like it. It is the end result of a painstaking search for the most innovative high pressure decorative laminate yet created. Evolving from a process that suspends tiny crystalline metal particles in a true high pressure laminate surface, METAGLOW is here. METAGLOW is now. Created to meet your specific needs and applications. Contract furniture. Store fixtures. Walls. Architectural millwork. And on and on. Three opalescent high pressure laminates in silver, true copper, and antique copper. Nothing else gives you the look of METAGLOW. Available exclusively from Lamin-Art. Just one more reason why discriminating designers look to Lamin-Art for extraordinary surface applications. To learn more about METAGLOW, call or write for literature and samples today.

See us at the International Woodworking Machinery and Furniture Supply Fair. Louisville, KY. Booth #EH-513

Anticipating Tomorrow

LAMIN-ART®

A Step Ahead In Custom Decorative Laminates

Division of Eagle-Picher Ind., Inc., 6430 E. Slauson Avenue, Los Angeles, CA 90040 • (213) 728-1276
Reps: Chicago, Dallas, New England, New York, Atlanta

Circle No. 121 on reader service card.

Host an AFS foreign student.

It could make all the difference in the world.

Through AFS International Scholarships, a student from any one of 60 nations can live with your family for a year while he or she attends high school in your community.

It is a unique opportunity for your family to know a young person from abroad. You share your world while learning about his. A special year of excitement, friendship, challenge and fun.

It all happens at home, and all you have to be is yourself. For more information, write AFS today. Or call (212) 661-4550. We will put you in touch with the AFS program nearest to you.

afs International Scholarships

313 East 43rd Street, New York, N.Y. 10017

◄ Circle 121 on reader service card for Lamin Art

, DELIVERY
, BOOTHS, TABL
BARS, QUALITY, T
STOOLS, CUSTOM FINI
ENTWOOD, STACK, TABL
LOUNGE, COUNTRY, WOOD

We have 'em all!

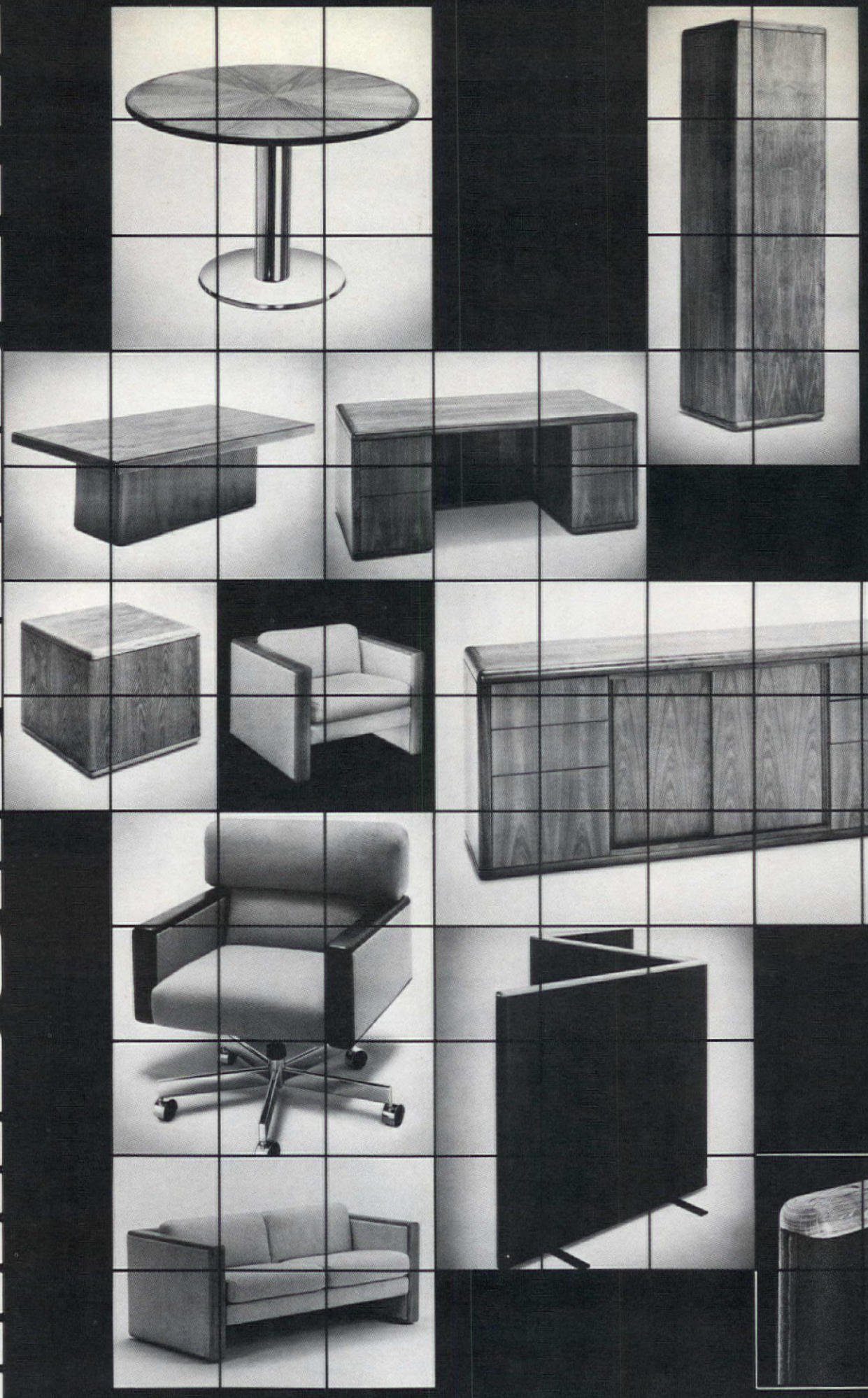
Visit us at the 64th
INTERNATIONAL HOTEL/MOTEL RESTAURANT SHOW.
New York Coliseum, New York, NY—
Nov. 11 - 14, 197 Booth 2221

EMPIRE STATE CHAIR COMPANY, INC.

Factories: Haverstraw, New York 10927—Atlanta, Georgia
Showroom and Sales Office: 305 East 63rd Street, New York, N.Y. 10021
1149 Merchandise Mart, Chicago, Ill. 60654

Circle No. 41 on reader service card

HABERDETRI



3011 East Pico Boulevard Los Angeles California 90023 Phone: 213 263-9761

Circle No. 42 on reader service card

Now, comes the Dawn.

Time was when the corporate seats of power were just as expensive as they looked.

Now, Haskell presents Dawn, the collection of elegantly new, comfortably priced chairs created to look at home in a Fortune photograph—without costing a fortune.

Never has oval-tube, mirror chrome steel flowed so gracefully to accommodate the contours of the comptroller.

Never has the man at the top found himself so handsomely supported by a five-star base at the bottom.

Never has the chairman of the board delivered an annual statement surrounded by such confidently understated hues in rich velour or Naugahyde®.

If you haven't yet seen the Dawn collection, you haven't seen how much chair you can purchase for the money.

See it soon at your Haskell dealer's showroom, or at our Merchandise Mart showroom (Suite 10-167) in Chicago. Or write for our brochure:
Haskell of Pittsburgh
P. O. Box 5373
Pittsburgh, PA 15206.

Haskell

ANY WAY YOU LOOK AT IT, IT'S STILL 1¾" THIN!

...it's a product of superior Collier-Keyworth technology.

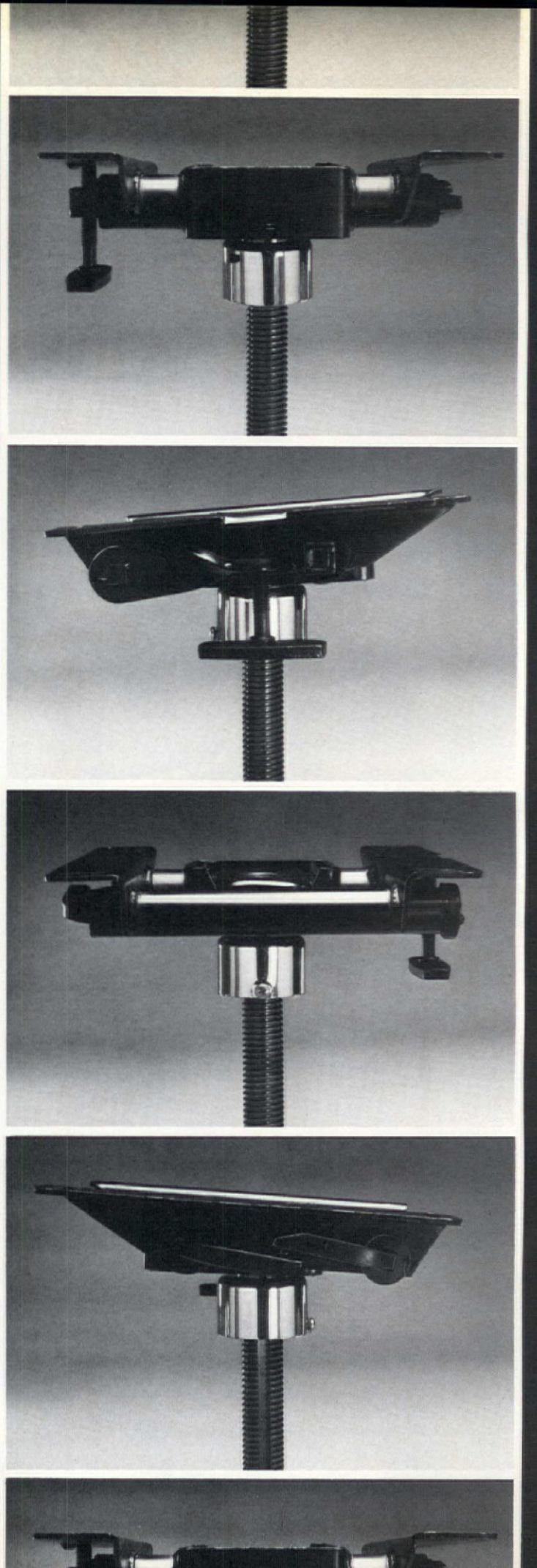
☐ Twin torsion bars, a C-K exclusive, allows a more compact design — added strength.

☐ Thoroughly laboratory and field tested.

☐ Smooth, quiet ride through the full range of tilt.

☐ Inherent built-in reliability with proven C-K performance.

Model 720. It may cost a little more but isn't the assurance of more than 60 years Collier-Keyworth experience and reliability worth it?



CK

COLLIER-KEYWORTH COMPANY

GARDNER, MASSACHUSETTS 01440 / 617·632-0120

Circle 44 on reader service card

Beauty with a Heart of Steel

Every Virco rattan chair is hand-crafted by a trained Virco employee. The natural rattan is artistically hand-woven over a tubular steel, all-welded frame for strength that lasts. Upon completion, each chair is signed by the craftsman. That's Virco quality, and it's quality that Virco can deliver on time from their own manufacturing facility.

For our complete catalog including rattan furniture write:

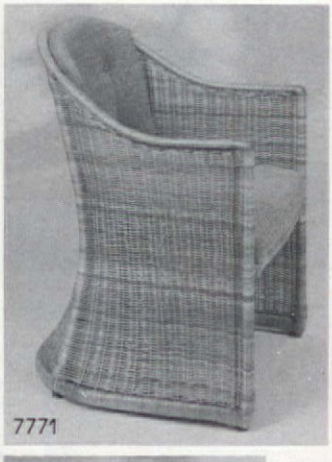
Virco Manufacturing Corporation
1331 W. Torrance Blvd. Torrance, CA 90501 (213) 532-3570

Circle No. 45 on reader service card

VIRCO

SHOWROOMS: CHICAGO • COLUMBUS • LITTLE ROCK • LOS ANGELES • PHILADELPHIA • SAN FRANCISCO • SEATTLE

SHELBY WILLIAMS, NATURALLY.



SW SHELBY WILLIAMS

Shelby Williams Industries Inc.
Executive Offices
P. O. Box 1028
Morristown, TN 37814
Phone 615-586-7000

Showrooms in principal cities worldwide. For complete catalog on wicker and rattan items, write Dept. A, P. O. Box 3442, Chicago, IL 60654

Circle 40 on reader service card

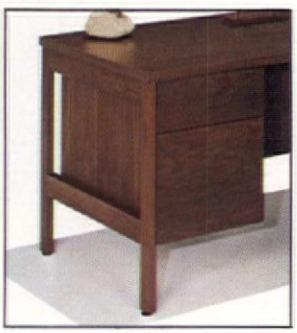
MODE IV

EXCELLENCE IN DESIGN WITH ADDED VERSATILITY
OF CHOICE OF LEG COMPONENTS IN FOUR MODES

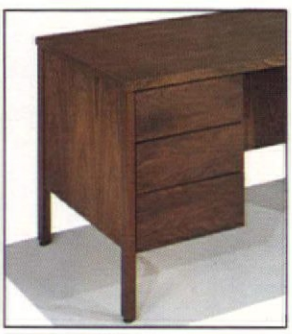
You can offer individuality with Indiana Desk series

Now you can offer your customers their choice of four different appearances to please personal preferences. And you need only a minimum inventory with easy-to-switch leg modes. Individuality is the key word of Mode IV.

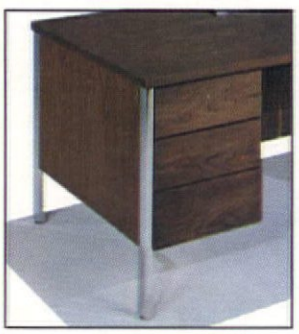
Mode IV also means excellence in design and construction. Walnut veneers in Oil Walnut finish and practical Masterpiece Walnut high-pressure plastic laminate tops. Mode IV includes lateral files, bookcases, and accessory pieces. Prestige at an inviting price.



OPEN LEG
Legs, rail and stretcher design in solid walnut



STRAIGHT LEG
Solid Walnut legs and Walnut veneered panel design



CHROME LEG
Chrome legs and Walnut veneered panel design

PANEL LEG
Walnut veneered end with chrome base

INDIANA DESK COMPANY, INC.
JASPER, INDIANA 47546

Circle No. 47 on reader service card

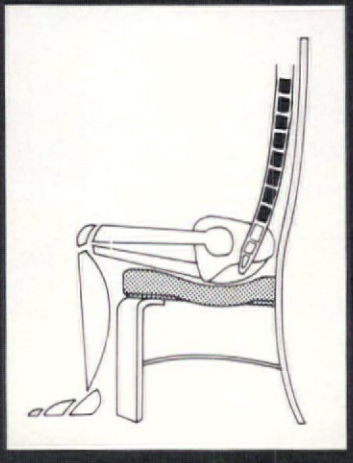
Request new color catalog and price list.

NOPA SPACE 435-436

Kay's anatomy.

Lesson 1. The SeKret™ Spring.

Proper back support in institutional, stacking and folding chairs. Everyone knows it's necessary for stress-free seating. Orthopedic research reports abound. But the low-cost secret of stress-free seating is simple. As simple as our remarkable SeKret Spring Concept. Find out how inexpensive it can be to improve your position in any market. Write: Daniel Krakauer, President Kay Manufacturing Corp. 175 Eileen Way, Syosset, New York 11791 (516) 364-2010



Sales offices and factories in: CA: Los Angeles and Oakland; IL: Chicago; MA: Boston; MS: Tupelo; NJ: Newark; NY: Buffalo; NC: High Point and Newton; OR: Grants Pass and Portland; PA: Pittsburgh; TN: Memphis; TX: Fort Worth and Houston; WA: Seattle.

Patent Pending

Circle 48 on reader service card

Bold simplicity.
Elegant IBD award-winning
lounge chair and companion
conference/dining chair.
Upholstered in soft leathers
with flexible back construction
that conforms to the body.
Heavy wall tubing with
high polished chrome finish.
Patented, cantilevered and
structurally supported
fire retardant foam
with removable covers.
Designer: Maurice Burke.

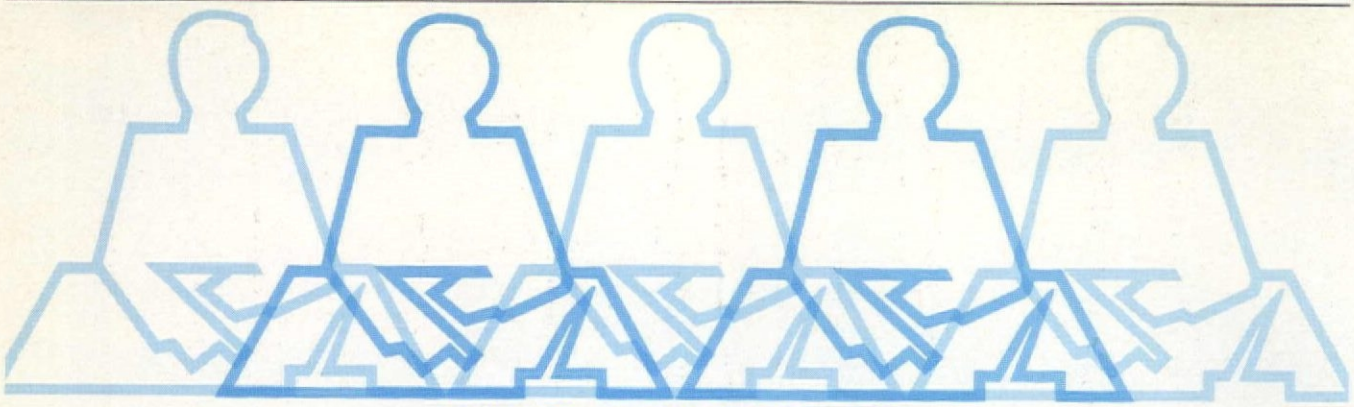
Loewenstein. Claverdon.

Catalog available by written request on professional stationery.

Loewenstein.

3260 Southwest 11 Avenue. Fort Lauderdale, Florida 33316. 305/525-8453 Telex: 514321

Circle No. 199 on reader service card



EXECUTIVE BUYER EDITION

Extra circulation to 5,000 office managers/facility planners

November CONTRACT's Office "Executive Buyer Edition"

Delivers more of the office market for 32,576 specifier/buyer readers and contract advertisers, too!

New office design techniques . . . latest office furniture and furnishings . . . a look at the office of the future and more . . . all in November CONTRACT's Office "Executive Buyer Edition." This issue's informative business editorial is designed to give both regular readers and 5,000 office managers and facility planners a better understanding of common problems and objectives — while bringing advertisers in closer touch with all 32,576 of these important specifier/buyers.

November/78 Advertising Space Closes Oct. 12; film, Oct. 17; inserts, Oct. 20.

Each CONTRACT "Executive Buyer Edition" features special editorial content and extra circulation to 5,000 hard-to-reach end users.

Health Care in February/79 — Health care editorial informs regular audience plus 5,000 health care executives. **Space closes January 12.**

Hospitality in April/79 — Impressive hospitality restaurant installation studies plus extra circulation to 5,000 end users. **Space closes March 12.**

Government in June/79 — Top government installations interest contract specifier/buyers plus 5,000 government purchasing executives. **Space closes May 11.**

Corporate Facilities in August/79 — 5,000 commercial building owners and facility planners join our regular readers. **Space closes July 12.**

Banks in October/79 — Bank design projects highlight editorial to regular audience plus 5,000 bank presidents and board chairmen. **Space closes September 12.**

Contract

A GRALLA PUBLICATION

1515 BROADWAY, 24th FLOOR, NEW YORK, N.Y. 10036, (212) 869-1300

FRANNY

A new seating system from

GORDON INTERNATIONAL
200 LEXINGTON AVENUE
NEW YORK, N.Y. 10016
212 532-0075

Circle No. 49 on reader service card

Zapf Plus for

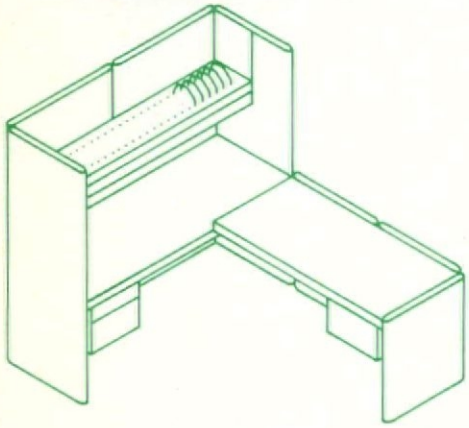
Knoll International **745 Fifth Avenue, New York 10022**

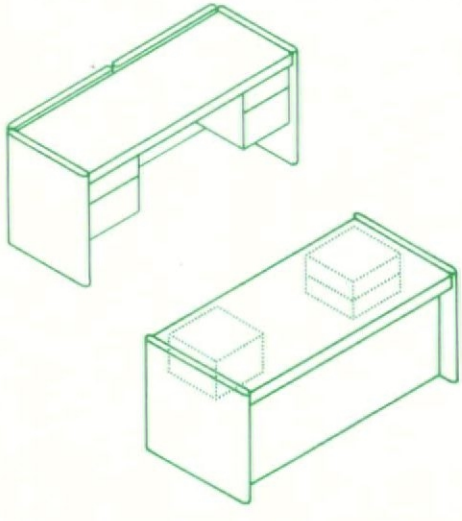
Change for Mobility Zapf Plus moves in minutes. No disassembly. No need to empty shelves or drawers. Just pick up the entire station and—zip—it's done. Even bantam secretaries can reposition up to 600 lbs. of Zapf Plus, with no strain or fuss. Unique Knoll "stay-put" construction makes it possible. Unique low-cost Lift-Dolly makes it easy.

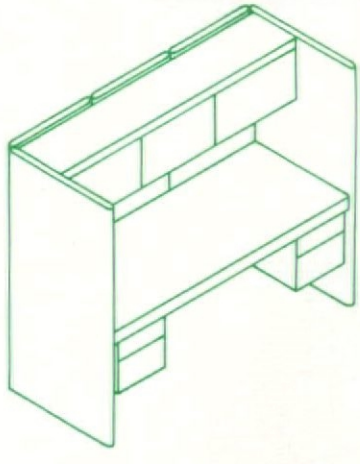
Knoll Mobility is a big plus. A Zapf Plus. Cuts down disruption. Cuts down labor. Cuts down-time. Eliminates the pitfalls of random linkage.
Change for Mobility with Knoll Independent Work Stations.

Change for Economy Zapf Plus cost-of-ownership is less. Initial cost is highly competitive. First installation cost is low. Cost of change frequently is below 10¢ per square foot. It all adds up to average maintained costs that don't upset budgets, don't upset top management. Even Knoll Task/Ambient Lighting saves big. With quality illumination that consumes significantly less energy. Often with investment tax credit rebates and accelerated depreciation.

Knoll Economy is a big plus. A Zapf Plus. Economy impossible with linked-wall systems that require break-down and build-up with every move.
Change for Economy with Knoll Independent Work Stations.







Change

Change for Simplicity Zapf Plus is simplicity. Tough, sophisticated simplicity. Handsome, modular simplicity. Knoll knows a work station is where people work. That's why Zapf Plus is few parts powerfully built. Panels with steel skeletons. Fabrics that are rugged, taut, acoustical. Veneer work surfaces with solid wood edges. Anodized aluminum hardware. Everything planned smart for daily punishment, frequent moves—from radius edges to fused-on finishes.

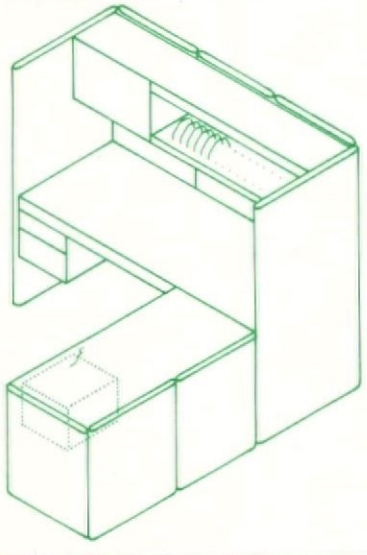
Knoll Simplicity is a big plus. A Zapf Plus. Simplicity you don't get with systems loaded with little-used gadgets.

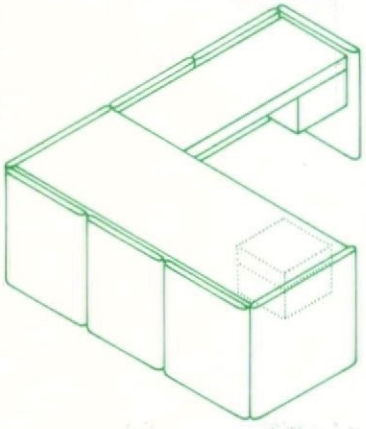
Change for Simplicity with Knoll Independent Work Stations.

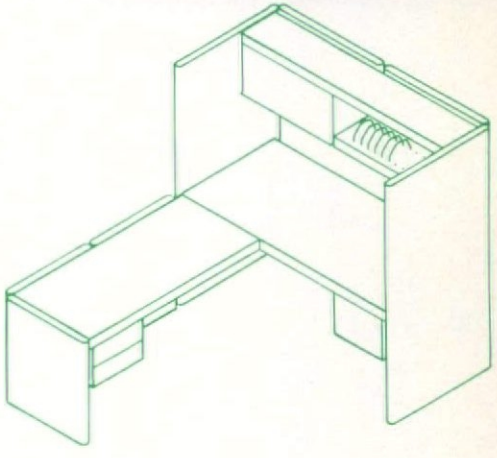
Change for Delivery Zapf Plus is 5-day delivery through Knoll's Zip Zapf in-stock program. You order. We ship within 5 working days. Specify complete in-stock work stations like the ones shown below. Specify separate in-stock components to meet unlimited custom needs. Everything is prepackaged with detailed installation instructions. The result: Knoll shrinks the order cycle from months to weeks . . . provides schedule insurance on emergency jobs that require yesterday delivery.

Knoll Delivery is a big plus. A Zapf Plus. Try us. Call (800) 523-5634 and say the magic words: "Zip Zapf order to go."

Change for Delivery with Knoll Independent Work Stations.

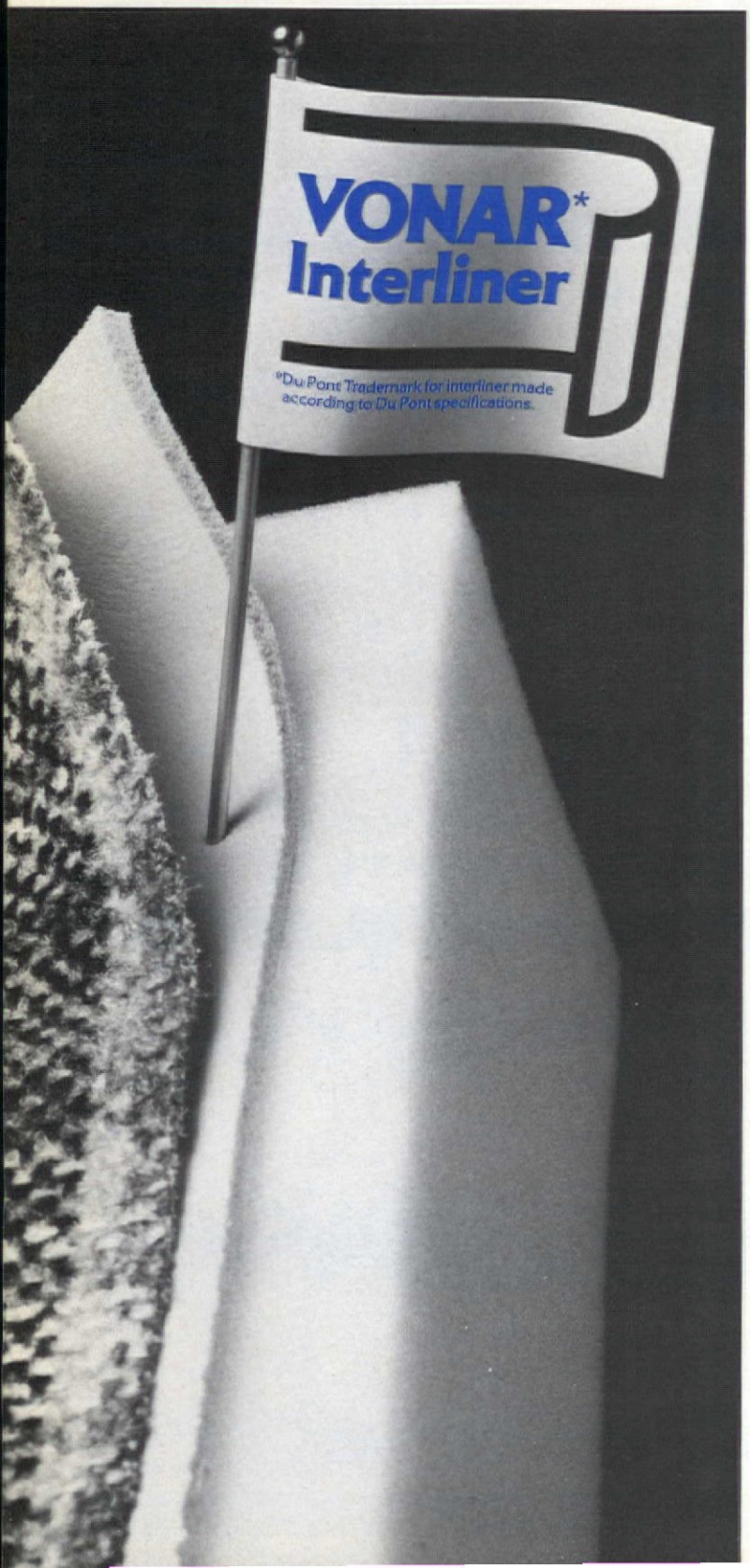






Circle No. 50 on reader service card

For improved flammability performance, without sacrificing design, specify furniture with VONAR interliner.



In response to increasing demands for improved flammability performance in upholstered furniture, Du Pont developed the VONAR* family of interliners. In limited ignition situations, properly used VONAR interliners can reduce the likelihood of ignition of furniture as a unit. Should ignition occur, VONAR can reduce the furniture burning rate.

VONAR can be used with a variety of fabrics and furniture constructions with little or no effect on comfort, aesthetics or hand. Best of all, VONAR can be added to many furniture styles at a modest increase in cost.

Why insist on VONAR?

Authentic VONAR interliner is made only by licensed interliner manufacturers according to Du Pont's rigid specifications for VONAR formulation and physical properties.

Du Pont is committed to protecting you and your customer against imitation interliners by regularly testing samples from licensees for proper formulation, specified thickness, physical properties, and restricting use of the VONAR trademark to those who meet Du Pont specifications.

Ask for VONAR. Make certain you use—and your client gets—authentic VONAR interliner. For more information, use the coupon below, or write: Du Pont Company, Room 35581A, Wilmington, DE 19898.

*Du Pont trademark for interliner made by licensed manufacturers according to Du Pont specifications. Du Pont supplies the basic elastomer to such manufacturers, but Du Pont does not make the interliners.

DU PONT
REG. U.S. PAT. & TM. OFF

Mail to: Du Pont Company, Room **35581J,** Wilmington, DE 19898
Please send me: ☐ further technical data and test results
☐ a list of furniture manufacturers using VONAR
☐ a list of licensed manufacturers of VONAR

Name _____ Phone _____
Title _____
Company _____
Address _____
City _____ State _____ Zip _____

Circle No. 51 on reader service card

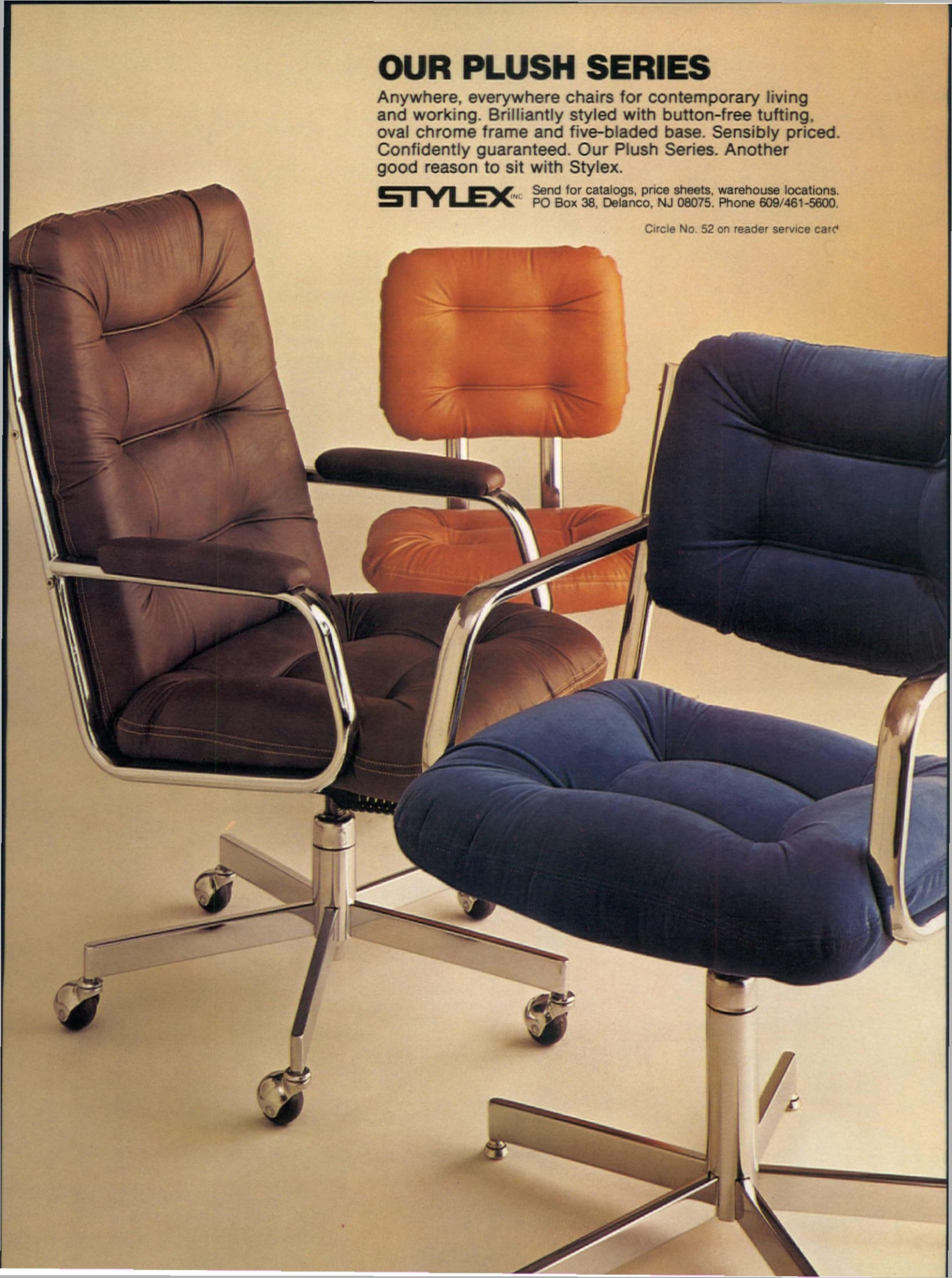
OUR PLUSH SERIES

Anywhere, everywhere chairs for contemporary living and working. Brilliantly styled with button-free tufting, oval chrome frame and five-bladed base. Sensibly priced. Confidently guaranteed. Our Plush Series. Another good reason to sit with Stylex.

STYLEX INC

Send for catalogs, price sheets, warehouse locations.
PO Box 38, Delanco, NJ 08075. Phone 609/461-5600.

Circle No. 52 on reader service card



When Moore Business Forms wanted a new mailroom designed and furnished, who did they contact?

Kwik File.

Moore Business Forms, Inc., is the world's largest manufacturer of business forms and forms handling equipment. When the firm moved its national headquarters to Glenview, Ill., the mailroom used by the former regional office required a major remodeling to serve as the communications hub for all U.S. operations.

What Moore Business Forms specified was a firm who had major corporate mailroom design experience; one who could also supply specialized sorting, filing and mail handling furniture systems.

Enter Kwik File's Mailflow Systems... Kwik File established itself as an innovator in the office furniture field with its desk-top organizers. Expertise in developing organizational furniture systems led to the introduction of Mailflow Systems—custom tables, sorting units, filing and handling systems designed to solve mailroom problems. Over the years, Kwik File has designed and furnished complete mailrooms for many of the country's leading corporations—Moore Business Forms, Inc., included.

Kwik File's Mailflow Systems combine total flexibility and durability with style. Shelving in sorting units, for example, is available in 11 standard widths, and offers one-half inch vertical adjustment. Multi-level tables will accommodate any mailing equipment or work situation. All units are manufactured from heavy 18 ga. steel. Work surfaces are steel or high pressure laminates in choice of decorative woodgrains.

If you are planning a new mailroom or remodeling one, call **Roger Howe at Kwik File's toll-free number: 800/328-5081.**

KWIK-FILE™

2845 Harriet Avenue South
Minneapolis, Minnesota 55408

Kwik File and Mailflow Systems are registered trademarks.

SERIES 8

The Jasper Desk Company
JASPER, INDIANA 47546

PERMANENT DISPLAY ROOM, MERCHANDISE MART, CHICAGO, ILLINOIS

The professional designation you should know about

...but probably don't.

CPCU: Chartered Property Casualty Underwriter
A symbol of professionalism in property-liability insurance

A symbol of professionalism... just what does that mean? It's a sign to the public that holders of the CPCU designation have met specific education and experience requirements.

CPCUs have publicly dedicated themselves to high ethical standards of business conduct.

CPCUs have successfully completed five national examinations, testing their knowledge of insurance principles and practices, economics, accounting, finance, business law, and management.

CPCUs are agents, brokers, risk managers, insurance company executives, underwriters, professors, consultants, claims specialists, actuaries, training directors, and serve in many other insurance positions.

The Society of Chartered Property & Casualty Underwriters provides its members with continuing education opportunities, promotes research, and publishes a professional Journal.

Now you know something about CPCU. If you'd like to know more, please write us: The Society of Chartered Property & Casualty Underwriters, Kahler Hall, Providence Road (CB No. 9), Malvern, Pennsylvania 19355.

CPCU
THE SOCIETY OF CHARTERED PROPERTY & CASUALTY UNDERWRITERS

Circle 57 on reader service card

◄ Circle 54 on reader service card for Jasper Desk

Your client is convinced you know more about outfitting his office than he does.

Prove it!

Specify Chromcraft.

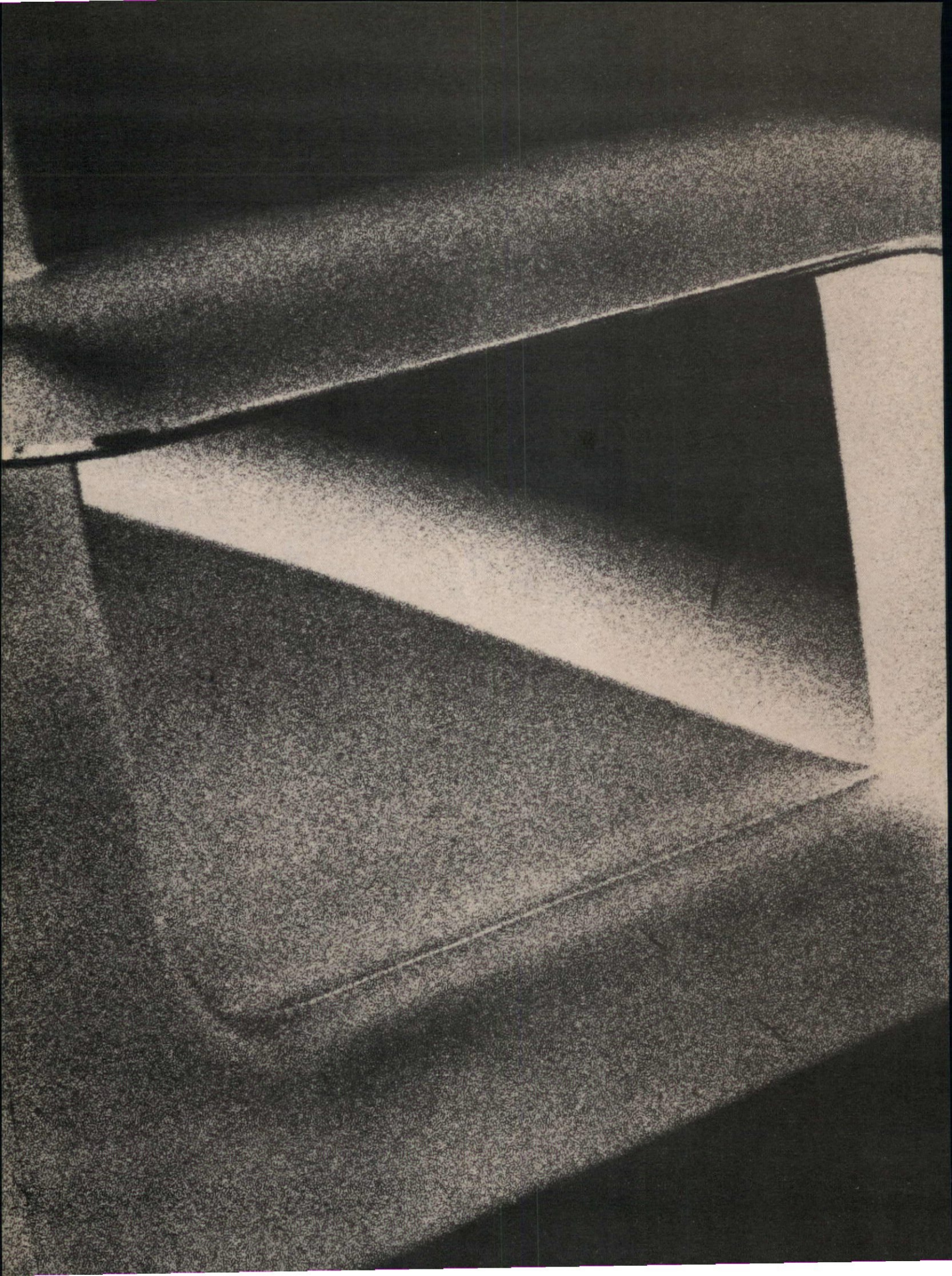
Chromcraft Furniture

a Mohasco company

SHOWROOMS
Space 1131, Merchandise Mart, Chicago; Space 638, World Trade Center, Dallas;
Space 1805, Merchandise Mart, Atlanta; Space 905, Western Merchandise Mart, San Francisco.

Design: Robert L. Wilson

Circle No. 55 on reader service card



THE WORLD OF CONTRACT CHAIRS

In pursuit of the seating ideal

This third World of Contract Chairs issue has captivated the minds of CONTRACT editors. For the chair is everywhere, and everywhere there is a chair there is an opinion on both its appearance and comfort. Especially is this true among space designers, who live and breathe chair design and specification.

Somewhere between the look of a chair and its comfortable use is a vast, continuing design experiment. It is aimed at achieving the perfect chair design: a chair that is the ultimate in beauty, that fits everyone no matter how slight or expansive the posterior or tall or short the body, that provides comfort interminably, and that is reasonably priced.

This then is a progress report on attempts to create the perfect chair. It contains pertinent information on the anthropometric, philosophical, safety, fire-retardant, legal liability, esthetic, and commercial aspects of chair design for the contract specifier.

We editors, however, caution readers that while chair beauty is in the eye of the beholder, its comfort is literally determined by the end user, its price by a profit-making institution, and its esthetic by a designer eyeing royalties.

Sit and enjoy. And then let us hear from you about ideas for future scrutiny of the ubiquitous chair.—**The Editors**

Detail of Paradigm chair by Richard Schultz for Stow/Davis.

Product liability claims forcing human factors emphasis

Systems approach needed in development of seating say specialists, who trace history of chair design

by **CHARLES MAURO** and **HUGH M. BOWEN,** Ph.D

Charles Mauro, President, Charles Mauro Associates, 135 West 41 St., New York, N.Y., 10036, holds a Bachelor's Degree in Industrial Design and a Master's Degree in Human Engineering from New York University, where he was a Research Fellow at the Rusk Institute of Rehabilitation Medicine. He is a Founder and Chairman of two special research committees on Civilian Anthropometry for the American Society of Mechanical Engineers. Hugh M. Bowen, Senior Human Factors Specialist for Charles Mauro Associates, is a graduate of Cambridge University, England, and Johns Hopkins University. He is author of numerous journal articles on Man's Relationship With His Environment. He has been an expert witness on the liability of prisons and has designed the controls and displays of nuclear power stations, as well as studying living beneath the sea for the United States Navy.

Designed and illustrated by Mauro Assoc.
Copyright: Mauro Associates 1978.
References: Mechanization Takes Command *by Siegried Giedian*

In a strict human factors sense, the goal of contemporary seating is to reduce errors in task performance. Today the predominant task is to process data, since we are a culture based on the efficient flow of information. Above all, seating must contribute to its effective flow.

It is obvious that the need to bring detailed understanding of the human being and his or her inherent limitations to the design of articles, products, and environments is essential.

But the problem is growing much more complex for two reasons:

1. Technology is becoming alarmingly more complex; the advent of the micro-computer has begun and will soon completely revolutionize the contract interior and its products.

2. People are growing much more sensitive to products and environments which are *not* designed with human needs and limitations closely taken into account.

This is supported by the staggering increase in product liability claims in the past five years and the increasing number of liability suits for defective design based on human engineering oversight. Recent court decisions indicate that manufacturers will be required to demonstrate, with objective proof, that their products meet human requirements of safety, efficiency, and comfort. A manufacturer of a chair, for example, who claims improved comfort and efficiency, may have to "prove" those claims. While in reality this problem is several years off, it is clearly on the horizon for product designers, interior and environmental designers, and architects.

A system's approach

To meet these cultural needs will require a much more thorough human factors approach to the development of seating; a systematic one, involving more objective cost/benefit considerations and objective research.

The system's approach is a determined, coherent effort to take everything into account. It involves the use of formal techniques, such as Operational Sequence Diagrams, Task Analysis, and Fault Free Analysis. It intends to avoid oversight and to avoid allowing one set of requirements to overshadow another set. It attempts to assess the relative importance of the various pressures acting on the design process and rank them in terms of benefits, costs, and other relevant consequences. It looks as much to the producer as to the user, while continually keeping in mind that the producer and user are interactive and parts of the "whole system."

Typically, a designer had specified very high quality, expensive, and "human engineered" chairs into a computer center. The chairs provided excellent postural support; they were: adjustable, comfortable, and esthetically pleasing. They also met the requirement for individual mobility between different work stations with smoothly rolling wheels. In a short while, however, the chairs were discarded into a corner by operators and replaced by inexpensive . folding

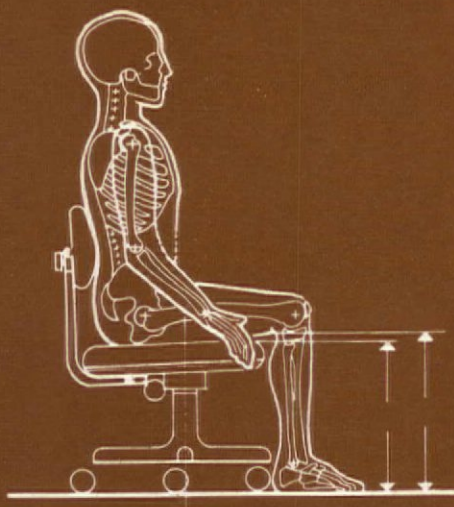


Figure 1

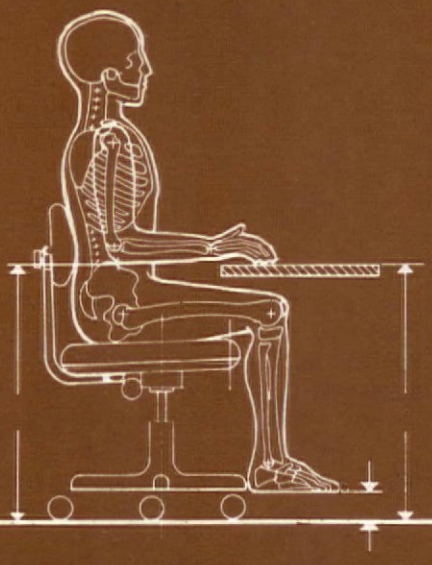


Figure 2

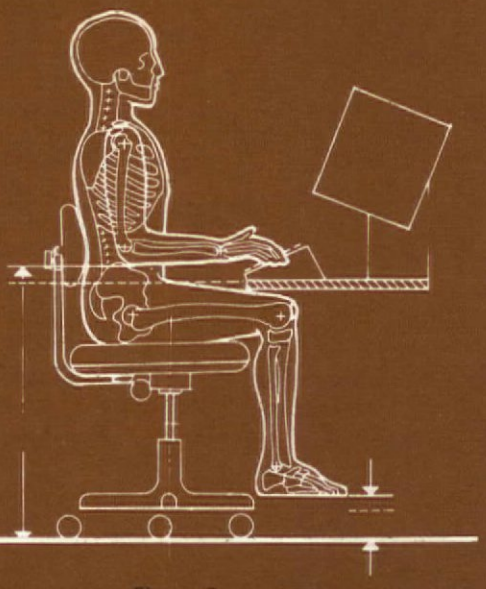


Figure 3

chairs.

At some point, the original plan to have the floor carpeted had been superceded and vinyl tile put down. The chairs rolled easily enough—too easily! When the operator used a key board, a seemingly minor task in terms of force, a sufficiently reactive force rolled the chair an imperceptible distance away from the key board. It was obvious to us, but not to the operator, that the effect was subtle, but highly irritating. Furthermore, it contributed to operator errors while the chairs met human requirements, they did not meet "system" requirement of accommodating to the floor and the computer terminal.

Consider the costs of such a system's oversight, if the cause had not been discovered: The manufacturer's reputation for supplying "human engineered" chairs would have been damaged; the reputation of the designer of the computer center would have been in question; worker inefficiency and fatigue would have been extended; and worker attitudes of dissatisfaction would have been perpetuated.

Seat of the pants

A much more simple human factors problem related to system development presented itself several times in our research. It relates to an examination of the wear-resistance characteristics between the seat pants of the individual and visually appealing chair fabric. While the fabric has just the proper amount of texture and color definition, it wears out expensive suit pants, which is not easy or inexpensive to replace.

A third example of whole industry oversight in systems planning relates to the proper adjustment of seating.

One of the most interesting human factors problems related to contemporary seating is the fact that most seating adjusts to fit only one person from a range of many. This fact, is bound up in the concept of the chair being part of a "system," which in the contract interior consists of the desk, chair, product (such as a typewriter), and person. All of these elements interact to perform a task. Let us examine from a system's point of view the proper adjustment of a chair used in writing and typing tasks.

Efficiency measured in errors

First, the chair is adjusted for maximum comfort while sitting, Figure 1, as would be the case in a showroom. The proper procedure is to set the seat height (A) low enough to remove all pressure from the under side of the leg. This reduces pressure on the femoral artery and nerves and allows for more efficient return of blood to the heart. Technically the seat height should be 1.5-2 in. lower than the individuals seated popliteal height (B). The back rest should also be adjusted to conform to the individuals lumbar curve; for simply sitting, the chair is now properly adjusted.

Now, let us combine the properly adjusted and comfortable individual with a desk for writing (Figure 2). Desks today are a fixed height. The individual now requires the use of arms and hands to perform the task. Proper procedure for determining maximum comfort and efficiency for the arms is to raise the seat so that the operators elbow height (C) is equal to or slightly greater than the table top height (D); this is necessary to reduce arm fatigue by allowing the upper arm to remain parallel to the torso when seen from a rear view. This reduces muscular effort and allows the musculature to perform at a maximum biomechanical efficiency.

Task efficiency, measured in errors (typing), and heart rate are reduced to a minimum with this adjustment. As the arms are brought into adjustment notice what happens to the leg adjustment (E). It falls completely out of adjustment unless the individual happens to be just the right combination of anthropometric dimensions, which is statistically and practically unlikely. The legs are now subject to pressure and discomfort.

Notice that neither the chair or the desk are at fault. It is the "interaction" which presents the system failure. This is what is meant by a system being greater than the sum of its parts, ie., comfort is measured not by the desk or chair, but by a third state created by simultaneous use.

Combine the seated operator and desk with a keyboard and display from word processing systems (Fig. 3). The problem is further complicated by an added increase in elbow height (Fig. 12a) to allow for the keyboard. The system is now further out of adjustment (G).

This problem of adjustability can of course be solved by providing either

Seating human engineering started in ancient days

a foot rest with the chair or making the table top easily adjustable by the individual. There are of course several systems available today which present adjustable desks, but nearly all require a special understanding of the system and tools, as well.

In a human factors sense it is important to realize that there is a wide range of users who will have to adjust the system. They have little or no understanding of how mechanical devices work. In human factors engineering it is customary to design the entire adjustment system based on the concept of the "least competent user" (LCU). That includes, written instructions, knobs and levers, location and actuating force, and feedback for acknowledging to the individual that the system has been properly adjusted. The systematic examination of seating adjustment would result in a much improved whole system user fit.

It is something of an oddity about human beings, as a biological species, that we are not well designed to be upright, either standing or sitting. We have evolved very recently (as time is counted in evolutionary terms) from four legged animals. Our skeletal structure is basically that of a quadruped and was designed to function as a sort of suspension bridge with the four limbs acting as the support pillars and the body organs slung from the arch.

Our ancestors rose on their two hind legs not because of any specific bipedal adaptation; but, probably, to get a better view and to free their forelimbs for manipulation of environmental objects. However, new problems arose. The upright position is inherently unstable, like a ladder rather than a chair. We are always just not falling. Various adaptations occurred; notabily, the development of the feet to give a more stable base to the column. The limbs and the pelvic girdle modified to bring the center of mass of the body more directly over the legs (Fig. 4). However, the most powerful adaptation was not in terms of bone or muscle, but of the nervous system; particularly, the "brain." What was needed was a new control system to cope with the unstable body and the opportunities now afforded to manipulate the hands. The brain "blossomed," partciularly, the neocortex while, relatively speaking, the body itself changed little. We made a successful adaptation by becoming brainy, not brawny.

A poorly evolved musculoskeletal system combined with tasks and products which do not allow for biomechanical weakness's surely contribute to discomfort. There is little wonder why back disorders are the number one cause of absenteeism from the work place. Back problems cost american industry literally billions of dollars each year.

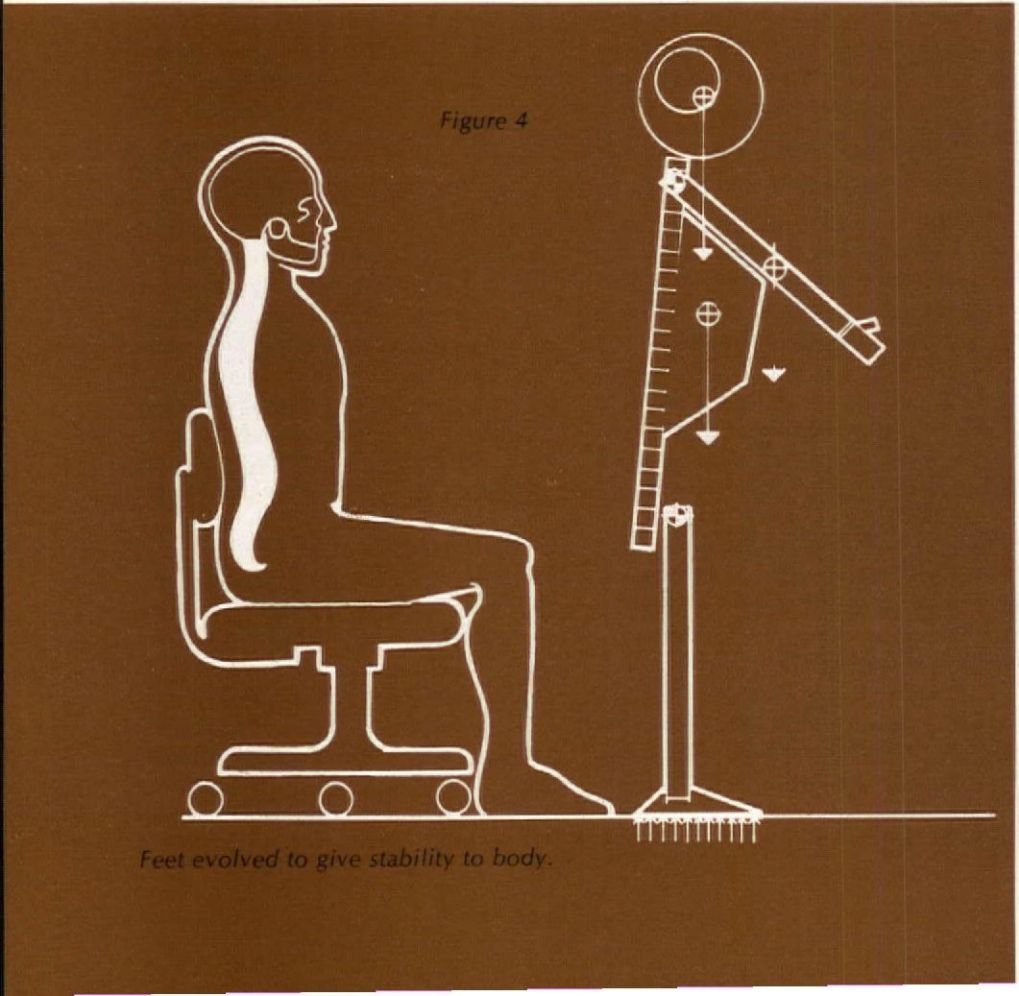


Figure 4

Feet evolved to give stability to body.

Mythical man concept

Seating design is an important variable in the problem of back pain and disorders, but is only one part of the larger system's problem.

Anyone who develops contract seating systems uses human body dimensions or anthropometrics. In fact, the use of three charts, Dreyfuss being the best example, represents to most people human factors engineering. Today however, professional human factors engineering is conducted by individuals with formal education in the subject, and usually involves a background in experimental psychology and physiology. The definition of human factors engineering has expanded well beyond anthropometry.

The interesting point about the use of even body dimension charts is that in reality they represent "the mythical man," the percentile figures presented are mathematical representations of a range of people. In reality not one person exists for all of the values given. In fact human body variations run contrary to the presented material for one very important reason: no one has all the same percentile dimensions as the material would lead us to believe.

"In its present form, seating has progressed very little conceptually since the middle 1800s."—MAURO

For example, when designing to fit the largest person we use the 95th percentile, that "mythical figure" has all 95 percentile measurements; hand and arm length, stature, seated eye level, etc.

Unfortunately, however, people are not nearly so well proportioned. If one were to actually measure an individual with 95 percentile stature one might find variations of significant proportion. While these variations may not be obvious, they represent important limitations on the use of anthropometry as currently presented.

What do we really know?

Furthermore, the data which is presented has been derived from military samples and statistically manipulated to represent the civilian population. There has not been a major civilian anthropometry survey aimed at creating design dimensions for more than 20 years; it is sorely needed. Present day design tools useful in creating contract seating are at best very general in nature.

What are the costs associated with *not* achieving this ideal? To what extent is seating comfort at the work station associated with efficiency, productivity, errors, low absenteeism, and worker turnover? Is the seat a good investment for the employer in the sense that it promotes effective information flow? Is it cost effective?

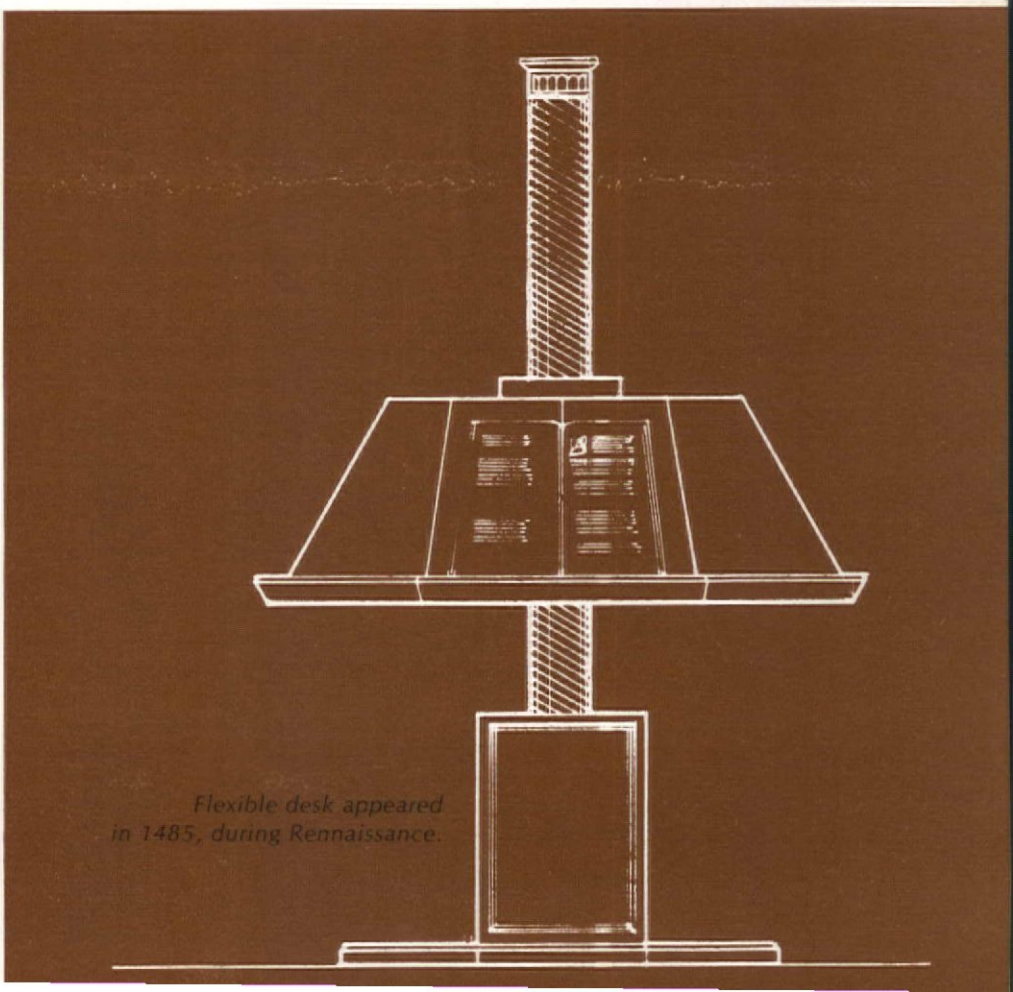
While we have only begun to address these problems and more research is needed, some objective information is available. We do know that the human has different roles in different systems, so that, for example, an error in one context has minimal consequences, while the same error in another context may have major consequences. We know, in general, that seating discomfort tends to produce negative work attitudes and errors, especially in very exacting work needing patience and care, or positive attitudes. Thus, it is though worthwhile to provide computer operators with "super" chairs, because a seemingly trivial keying error, like leaving out a comma, can have an enormous cascade effect. Anything that can be done to minimize such occurrences is deemed to be worthwhile.

We do not really know the contribution of seating comfort to overall productivity. Some studies suggest that there is a wide range of seating which is acceptable and that productivity does not vary as long as the seating remains within this range. However, other studies suggest that "ideal" seating may be critically important, as in the case of an aircraft pilot who must absorb critical information from banks of displays and controls instantaneously. The cost of the pilot's seat is very high, because it is a highly developed human engineering design. But it is worthwhile, because we need virtually perfect productivity from the pilot.

Human factors literature suggests that seating can detract, but not add to, comfort and effectiveness. That is, once the seating is sufficiently matched to the person and the task, the dependent variables of experienced comfort and work efficiency reach a certain point and stay there. When the seating is inferior, however, comfort and efficiency fall off. Assuming this to be true, we should expect seating to be of sufficient quality to *avoid* discomfort and inefficiency, but not more than that in terms of other factors.

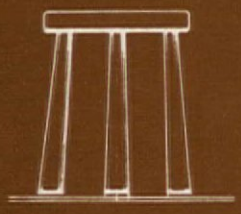
In its present form, seating has progressed very little conceptually since the middle 1800s. Only the application of new material technologies and sophisticated sales techniques have advanced seating in the contract interior. The next generation of seating remains undefined. It will have to be more thoroughly researched and tested than ever before.

Inherent in future needs will be a systematic approach combined with more sophisticated human factors en-

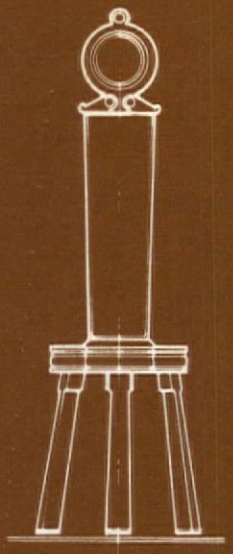


Flexible desk appeared in 1485, during Rennaissance.

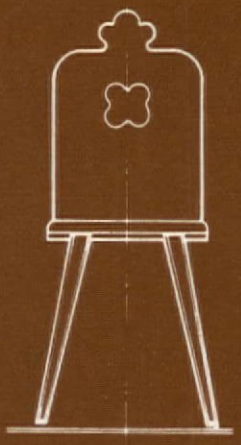
FUNCTIONAL EVOLUTION
OF CONTRACT SEATING



Three-legged milking stool, Circa 100 B.C.



Three-legged chair from Florence, 1490.



Peasant Chair, Circa 1600.

Thomas Jefferson American Revolving Chair, Circa 1700.

Chair-related back disorders are prime cause of absenteeism

gineering testing techniques. The seated individual, using new technology, will require finely developed seating to ensure maximum efficiency.

Human performance will be *the* measure of whole system efficiency. To meet these future demands requires an increased awareness that everything we design must be part of a "system" greater than the sum of its parts. That is, efficiency can result only from considering all components of the contract interior.

We also need to recognize that human engineering, ergonomics, and environmental psychology have a very real place in all design decisions which effect human efficinecy, comfort, and safety. Our problems are growing too complex for the designer's intuition alone to represent human characteristics. The need is to combine facts, logic, and intuition into a successful solution to the overall design problem.

In considering these and similar questions, one is reminded of H.L. Menchen's remark: "To every human question there is a simple answer—which is wrong!" There is a great deal of talk today about human factored seating, so much so that one might be led to believe that human factoring contract seating is a recent development. A review of the historical development of seating reveals, however, that human factored seating has been with us for at least the last 1,000 years. In fact, there is evidence to suggest that at certain times in history we have produced seating systems that were superior in some way to what we have today. I view contract seating as a system consisting of a seat, desk, task, and individual.

The wide range of easily adjustable tables and chairs designed in the Rennaissance and the beautifully contoured seating of the Greeks are in certain ways better human factors solutions than we have today.

Looking through some magazines (circa 1920), one is surprised at the effort made to meet physiological requirements. "Comfort, convenience and adaptation to health," an advertisement in 1869 read. "are the chief ends to be secured in the construction of a seat." In introducing a new lounge chair, 70 different postural positions were claimed even then.

Seating reflects the times

Furniture, especially seating, is a reflection of any culture. Seating has developed a basis for expressing political, social, and task roles throughout history. By analyzing the seating of any age, one can draw extensive insights into the workings of that society. What cultures or societies or even individuals define as important in terms of those needs varied widely. Ego gratification, a critical human factor consideration, was very important to a feudal lord—comfort was not. He had very tall, straight-backed seats with no cushions. In the Middle Ages, discomfort was a way of life.

We are accustomed to sitting in chairs which by design separate us from one another. They are unlike Medieval benches, for example, where people often sat touching, because chairs as we know them did not exist, and proximity kept them warm.

In fact, the one person chair was reserved for royalty, and did not develop as a common product until 1490, when it surfaced as a refinement of the three-legged milking stool. It is light and easily carried in one hand. Its tripod design is most effective in providing stability on uneven surfaces—far superior to a four-legged design.

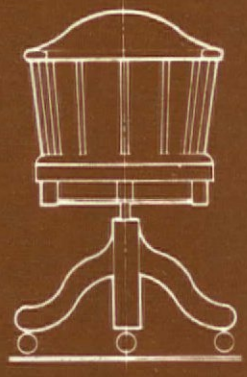
Designed for fast escape

In the Middle Ages, the primary human factor consideration in seating was quick, efficient movement of the seating from one place to another. This is a direct reflection of the political climate of the period. No one, least of all the noble or fuedal lord, knew when his kingdom would be attacked. It was necessary to execute a quick get-away when times grew very bad. Our whole range of contemporary folding seating, especially the folding chair, have ancestors extending directly back to the Middle Ages.

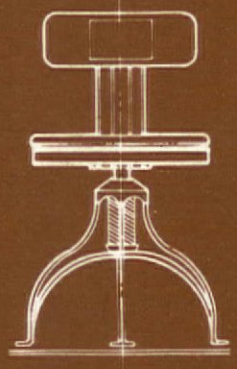
Better desks in Renaissance

The writing desk, an important element in determining seating comfort, found its most important refinement during the Renaissance when

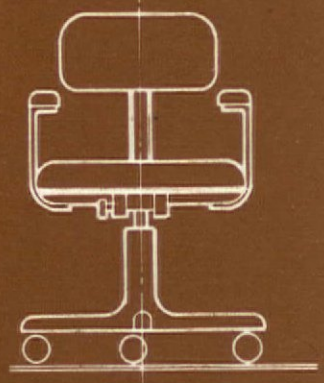
Windsor Rocker, 1800.



Sitting Chair, 1850.



Typewriter Chair, 1890.



Contemporary Contract Seating, 1978.

writing and reading became great interests. Renaissance writing desks had sloping tops and were in many respects a better human factors solution than the flat top desks of today. They effected a high degree of flexibility in use. Most important, however, they were easy to adjust. Table height adjustment was provided by a central wooden screw, which allowed the entire desk to be raised or lowered. This design appeared around 1485 and has not been surpassed since.

Tables during the 15th century were "demountable." They were taken down directly after use to increase the openness of the room and to allow for easy transport.

Flat top desks, which we use today, evolved from English library tables of the late 18th century, when printed material was presented in very large engraving portfolios that could be studied only on flat table tops.

Office chair has Gothic roots

Among early variants of chair design, the swivel chair appeared around the 14th century; the rocking chair appeared a century later. Today's modern office chair is, in fact, a decendant of Gothic rocking cradles and chairs.

It is worth noting that the rocking chair was a significant human factors improvement. Only slight effort requried by the legs to produce the rocking motion aided significantly in the return of blood to the heart. Leg muscles act very much like additional auxiliary hearts. As they flex and contract, they force oxygen-poor blood, which has a tendency to pool in the legs back to the heart.

The first spring-supported chair was developed to prevent sea-sickness around 1850.

Perhaps the most ingenious "chair" is the shooting stick—a walking stick which converts into a seat for the portly hunter who tires of the chase!

Sitting down on the job

During the Industrial Revolution, nearly all workers stood at their jobs. Only owners and managers were privileged to sit down. To some extent it was also functional. Many jobs required the worker to be mobile.

An interesting variation of seating design was the stool provided to workers in early chemical plants. One task was to observe the heating of dyes in a vat through a spyhole.

Working days were long and the task most tedious and boring. The worker tended to nod off. Management thoughtfully gave him a one-legged stool to sit on, so that if he fell asleep, he would fall off the stool!

With the development of industrialization, more and more jobs became sedentary. Office workers increased as did assembly workers. Today, approximately 75 percent of the work force sits while working. Even those who primarily stand at their work also have seating requirements of one kind or another for part of their day.

No-chair chair

Sitting on chairs while working is far from universal, however. In much of the Orient, squatting and sitting on the ground was (and still is) the usual mode of resting from the standing position. Chairs or benches were few and were reserved for royalty and special occasions. In general, there are still few chairs in many parts of the East.

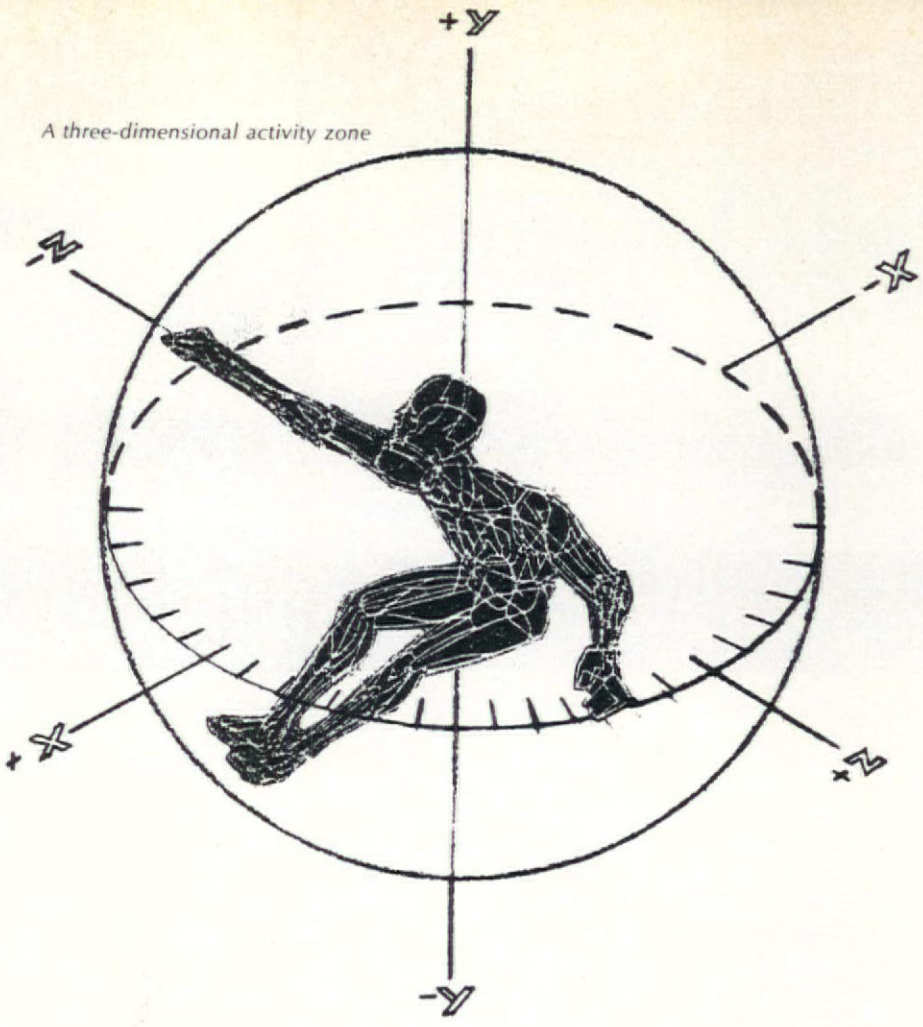
The Industrial Revolution brought about the segmentation of the chair for the first time into rigid planes. Seat cushion, back, and arms were linked together by ingenious mechanisms.

At this point, the chair became flexible. It conformed to varying changes in posture. It served many different users and uses. These developments reached refinement around 1850 and have not been surpassed since.

In 1850 the combined rocking and swivel chair was introduced. This concept provided comfort by relieving pressures by motion—the dynamics created comfort. People were not restricted by solid chairs or confined to a fixed sitting position. This type of seating was found mostly in the home.

About 1870 we first see the adaptation of seats for specialty uses. The typing chair, for example, is seen in patents around 1890. Around 1870 the first posture chair aimed at solving the back rest problem by providing a constant pressure between the backseat and the user appeared.

From a historical perspective, the development of seating has been an attempt to satisfy the psychological and physiological needs of people—then as now. □

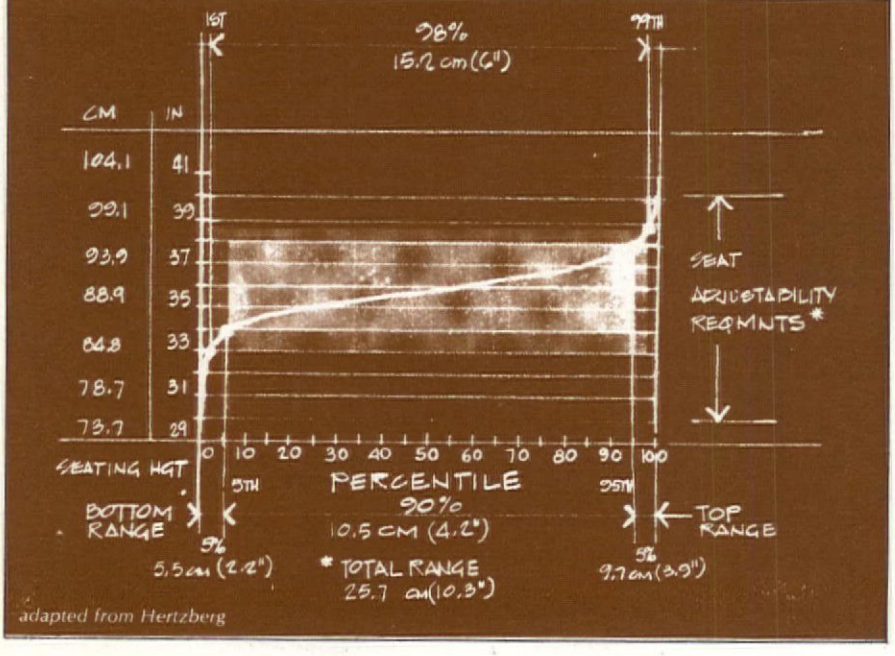


A three-dimensional activity zone

Since there is no average human, percentiles permit a more realistic range of dimensions to be accommodated in seating

SEATING FITS HUMAN VARIABLES

Figure 1



adapted from Hertzberg

by **FRANK E. PETEROY**
New York, N.Y.

Bio-mechanics deals with the mechanical aspect of human motion. It gives consideration to range, speed, and strength of body movement, even when the body is seated. It is an attempt to fuse engineering with biology and physiology.

In developing any anthropomorphic data, however, it should be understood that humans are not uniform. They vary. Measurements are generally for the average; yet, for humans, there is no average. McCormick defines average as a numerically derived arithmetic mean of such quantitative measures as height, weight, girth.

In order to account for the variance in humans, statistics are developed to reflect the percentile values of particular quantitative measures.

Percentile values are designed to provide some dimensional frame of reference during design analysis.

An example of percentile values and anthropometric dimensions is represented in Figure 1. The chart indicates the cumulative percentiles (at top and bottom) of persons having a sitting height range of 30 inches (76 20 cm) to 39 inches (99.06 cm).

In order to accommodate all users, seat adjustability would total 10 3 inches (25.7 cm). It would accommodate 98 percent of users at 6 inches (15.2 cm), and 90 percent of the users at 4.2 inches (10.5 cm). Adjustability differences are disproportionate at the extremes of the percentiles accommodated.

Beyond 'average' range

The 50th percentile reflects the average value of a particular dimension in a study group of humans. Half the group have values below, and half the group have values above that point. It becomes obvious, then, that half the group will be inconvenienced if the 50th percentile is used. Designing for the average is a mistake.

The goal is to accommodate the greatest range possible, preferably 98 percent. A percentile of 98 percent would indicate that 98 percent of the population is included, and only the extreme one percent at each outside range is excluded.

The human being represents an element occupying a physically real space and functioning within zones with dimensional limits—a sphere of influence (see illustration top, left), a flexible and three-dimensional measure of the limits of the body's extensions. It creates a zone of operation, physically and psychologically.

Sphere includes three zones

The physical zones required are divided into three parts: space for human, equipment, and passage. Human space needs are determined by the area actually used and will vary with each activity. The space required is distinct vertically and horizontally.

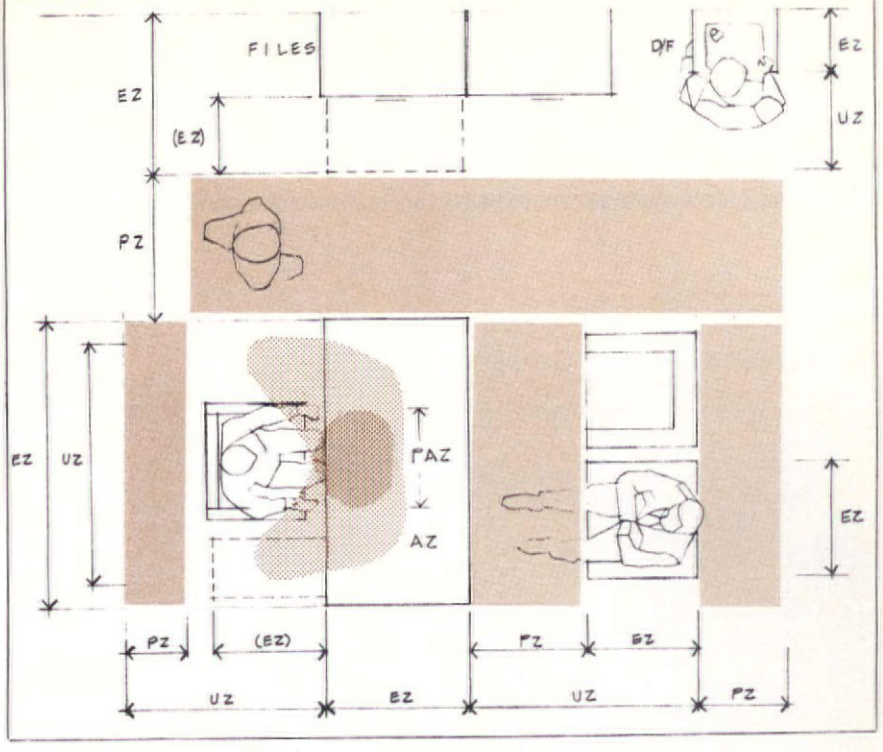
Equipment zones are occupied by components necessary for a particular activity, along with expansion components, such as file drawers and the like.

The passage zone is that area that allows for comfortable intrusion, and passage, of a secondary human being within the zone already occupied.

Violation of the various zones, whether by intrusion of another human or equipment, will most often result in an overlapping of the user zone limits, and discomfort will result. Passage zones are particularly affected by intrusion of expanding equipment, and often passage gets reduced to minimum tolerances, if that zone is not accommodated with careful prior consideration. (See Figures 2 and 3.)

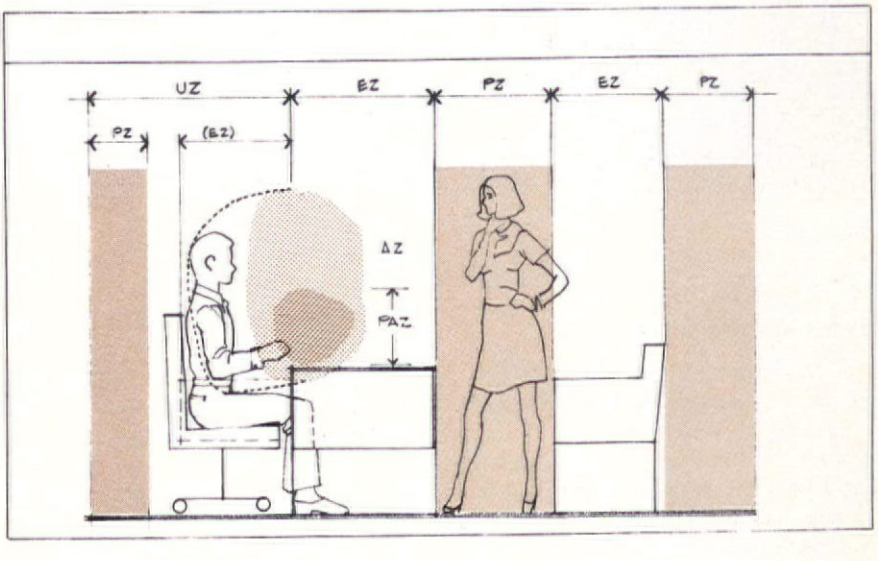
Mechanical stress is another factor that should be taken into consideration in designing for human comfort. The human body is subject to stress. The body may exceed its limitations in the performance of an activity, and that will affect its ability and efficiency at particular tasks. When the body extends beyond its limits, mechanical

Figure 2

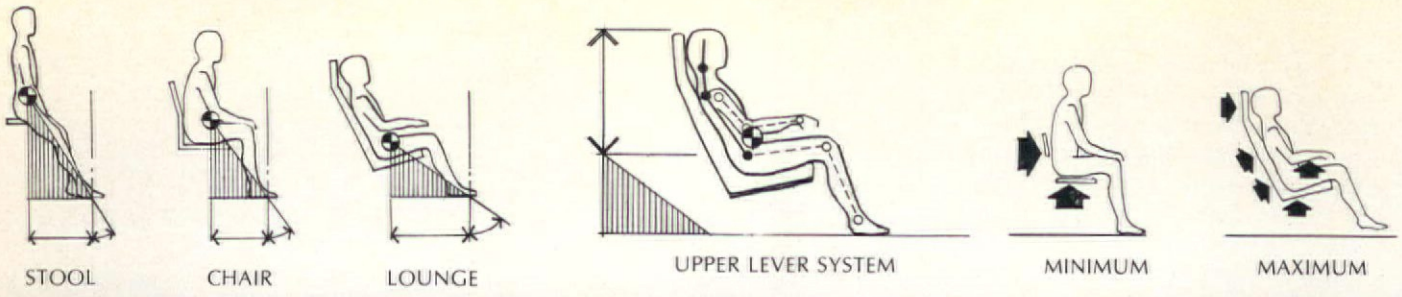


Legend for Figure 2 (plan) and Figure 3 (elevation):

UZ—User Zone
EZ—Equipment Zone
(EZ)—Equipment Zone Expansion
PZ—Passage Zone
PAZ—Primary Activity Zone
AZ—Activity Zone



©copyright by Frank Peteroy

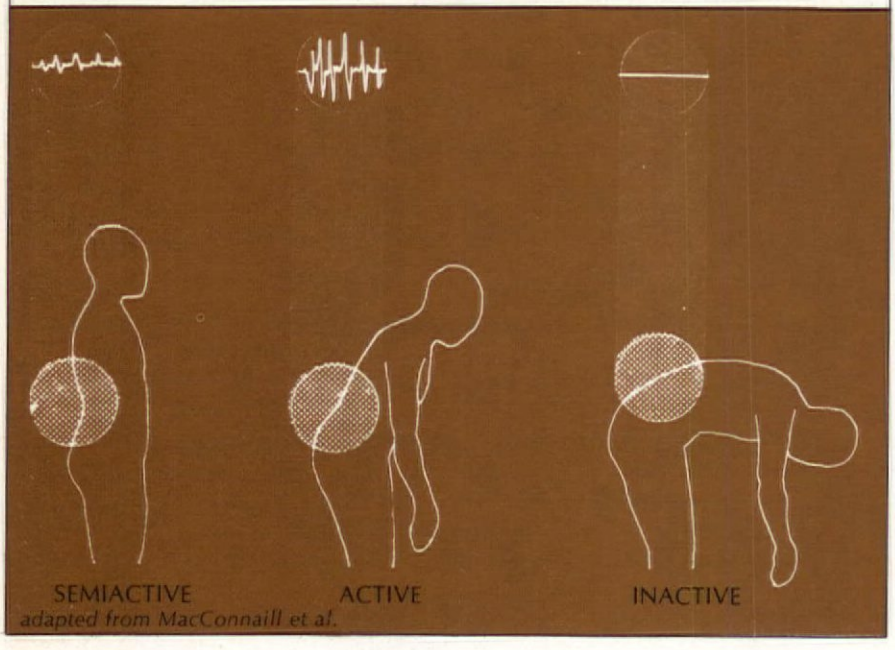


Schematic drawings (above) suggest how seating influences posture on (l. to r.) stool, chair and lounge (stabilizing base variations); back support for upper lever body system, and with minimum and maximum support.

SEATING VARIABLES

Stress extends performance limits

Figure 4



adapted from MacConnaill et al.

stress causes discomfort, fatigue, and strain.

Stress has two sources

Mechanical stress develops from two basic causes: The sudden execution of force, which causes strain, and the continuous improper use of certain muscles a length of time, which results in pain, discomfort, and/or fatigue.

Muscle aches from repetitive tasks generally affect the upper segments of the body, causing strain in the neck, shoulders, and back. Cramps, such as habit spasms and functional incoordination, are usually felt in the wrists, hands, and/or fingers. Such types of discomfort are usually the result of a poorly assumed posture, taken in the approach to the task, in addition to the theoretical stress of the operation itself.

The most common area of discomfort and strain is the lower back. Misuse of the lumbar is usually the result of an overload. The source of overload stress may be as simple as a poor sitting posture, or it may come from some external act, such as lifting a heavy object improperly.

By not utilizing the greater leverage force of the lower limbs, a person, when lifting an object, places a strain on the ligaments of the back (see Figure 4). As a total mechanism, the spine is a very flexible element, involving many smaller individual elements, the vertebrae, which have limited flexibility.

Vertebrae are small levers

The spine functions to protect the spinal chord and the thoracic and abdominal muscles. It is a link system of small levers—the vertebrae—in compression with the larger limb structure of the body. Each pair of vertebrae creates a small lever with substantially less strength than that of the larger levers of the body. Each is, therefore, more susceptible to stress.

The vertebrae are maintained in proper alignment by the constant effort of the ligaments and occasional muscle control. In proper alignment, the line of gravity will pass through the center of each joint formed by the invertebral discs and the vertebrae. This is the optimum condition. It is quite transitory and occurs briefly at best.

The spinal column is divided into three segments, each with a limited degree of flexibility:

1, Cervical—The upper group of five vertebrae, the most mobile, with the least joint limitation.

2. Thoracic—The middle seven vertebrae. They have the most limiting movement, though they are generally involved in any major action of the backbone.

3. Lumbar—The lower 12 vertebrae, which are moderately limiting and second to the cervical in movement ability. The limitation of this group, compared with the cervical group, is its ability to bend (see Figure 5).

Joined together, these three segments are capable of two major movements, bending and twisting. Bending includes bending forward from the trunk (flexion); returning backward (extension or opposite flexion), and the backward bend, beyond an erect posture (hypertension). Twisting (scoliosis) involves torsion or rotation on a vertical axis, and engages the entire spinal column in diminishing degrees from upper to lower segments.

Figure 5

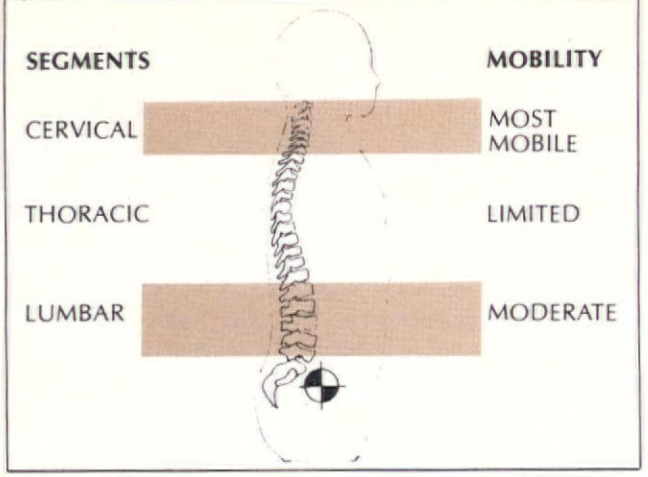
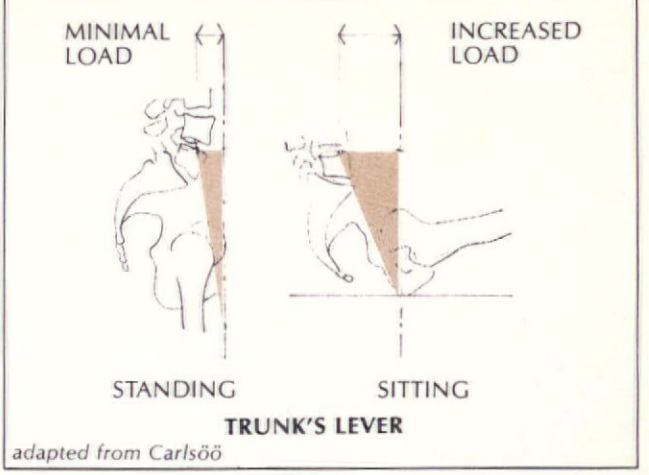


Figure 6



adapted from Carlsöö

Stress varies by movement

The postural muscles (the erector spinae) maintain the body in the proper position with the spine forming the structural column. In the sitting and standing positions, the stress on the lower back muscles will vary according to the degree of flexion. In effect, the erector spinae maintains the body at its center of gravity.

In a standing position, the human body maintains stability by the constant ligament and occasional muscle controlled reflex activity. As the body assumes a forward bend (flexion), the muscles become more active. Once flexion is complete (see Figure 4), the ligaments assume the load, and the muscles are no longer active. In extreme flexion, the stress of lifting a heavy load is placed on the ligaments initially, and the erector spinae muscle remains inactive.

The leveraged posture of the trunk affects the distribution and the amount of load to be sustained in any one position of the pelvis and the lumbar shape. That accounts for the correlation between back disorders and stress caused by mechanical load. The lever of the trunk increases in length from a standing to a sitting position (see Figure 6).

The forward rotational movement of the trunk causes compression of the intervertebral discs of the lumbar spine as the pelvis rotates backward, increasing the length of the trunk's lever.

Backbending reduces the load

Reducing this load can be accomplished by backward bending of the lumbar region. This position is suggested for long periods of sitting without armrests, even though muscle activity is greater.

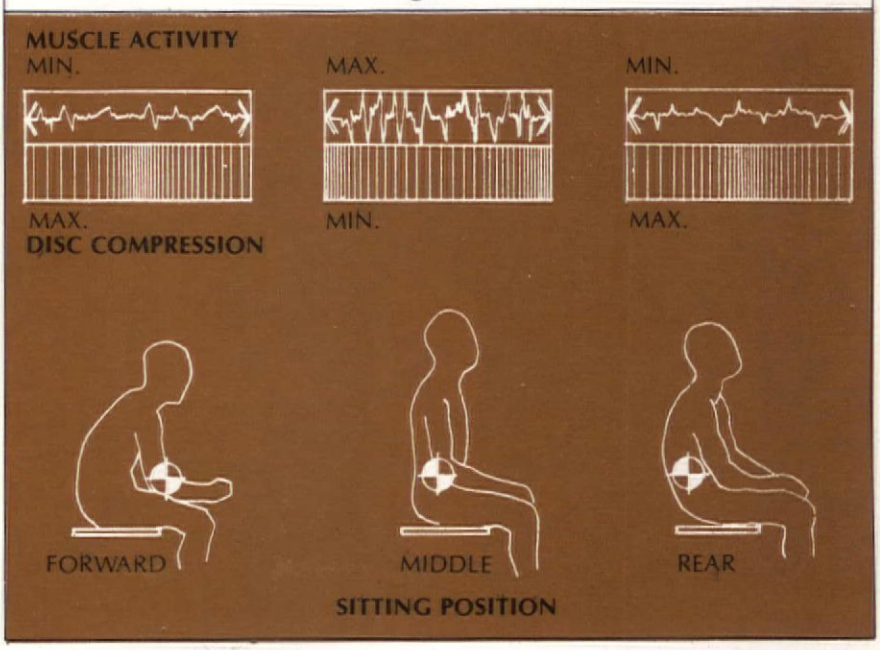
Three sitting positions—forward, middle, and rear (see Figure 7)—describe the stress on the lower back. In the forward and rear positions, very little load exists on the deep back muscles while the discs are in compression. In the middle position, sitting upright with a comparatively straight back. the deep back muscles assume an increased load as the trunk's lever movement decreases.

In terms of mechanical stress, the middle sitting position effectively reduces the load on the lumbar discs, even though greater muscular effort is required to do it. This indicates that the middle position is the least tiring over the longer time span. This is generally assumed to be the best position for typing tasks.

The characteristics of a human being, when considered in the contexts of space, equipment, and environment, represents a total condition. None of the components is isolated.

Their interdependence must be considered. In office and in seating design, there is need to constantly recognize and pass judgment on all the conditions that affect each element of the human body, and then recognize the consequences of meeting each need in terms of the total integrated mechanical system—the human body. □

Figure 7



POSTURE CHAIRS NOT ALWAYS ORTHOPEDICALLY SOUND

Daniel Krakauer, President of Kay Manufacturing Corp., zeros in on two major false assumptions that he feels influence chair design

Many posture chairs on the market today do not provide good sitting support. The reason, according to Daniel Krakauer, President of Kay Manufacturing Corp., is that their designs are partly based on orthopedically unsound assumptions.

Krakauer feels that two major false assumptions have led designers and manufacturers astray: First, the assumption that the human body must be supported and cradled from the back of the knees to the back of the neck. Second, that the seated posture should be fully upright.

"The first fallacy, that the spine must be fully supported, is simply untrue. If the middle back is supported, for example, the upper back and shoulders perch on it easily and retain a desirable freedom of movement."

Lower back must find own support

Krakauer feels that support-free space is of particular importance to the lower back. Since the lower (lumbar) spine is normally self-supporting, an open back posture chair is orthopedically preferrable. He demonstrates this in Fig. 4 where a person lies across four stools. There is no support between the hips and the mid-back, and the knees are bent to obviate extra support from leg muscles. Yet the spinal column bridges the span without muscular effort. A fully upright position when seated may cause lower back pain, as it frequently exaggerates the forward curvature of the lower back, thus overstretching the front ligament and hamstring muscles.

Therefore, Krakauer contends that the posture chair must be designed to let the lower back find its own support.

In this position the two spinal support ligaments, as well as the hamstrings, are under minimal tension. This position also results in good clearances for the emerging nerve endings in the lower back, so that any sciatic pain is relieved. Although the lower back must be encouraged to slump slightly, the upper back presents a different story. This should be held erect, in a "chest out, shoulders back" posture.

Sitting still is self-hypnotic

Disadvantages to full body support includes the fact that a fully contoured chair cannot possibly fit everyone. This approach tends to encase and confine the body, impairing efficient functioning. The human body needs to move around. Also, sitting absolutely still encourages a self-hypnotic effect which makes one feel sleepy. Contoured seats, with low back support, have been known to cause excess forward curvature of the lower spine (lordosis).

Seating that provides deep, all-foam cushions also inhibits movement, as it is difficult to shift about when sunk into foam. Krakauer contends that one must sit *on* a cushion, not *in* it. On the other hand, too thinly upholstered seats are uncomfortable as well. Since the human skeleton was evolved some 400 million years before chairs were invented, it only makes sense, he says, that chairs should accommodate bones. Too thinly upholstered chairs cause seat bone pain, when the lowest parts of the pelvic girdle contact flat surfaces. □

Fig. 4. *The lower back finds its own support and does not necessarily need a posture chair to do its work.*

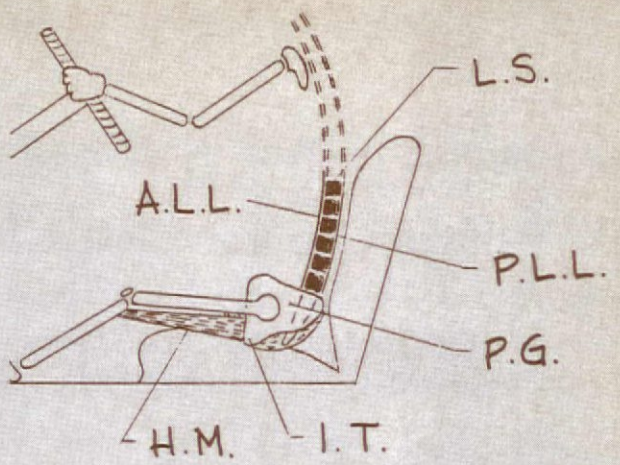


Fig. 1. *Sitting with outstretched legs. The straightened knees pull on the powerful hamstring muscles, which are attached at their upper end to the ischial tuberosities.*

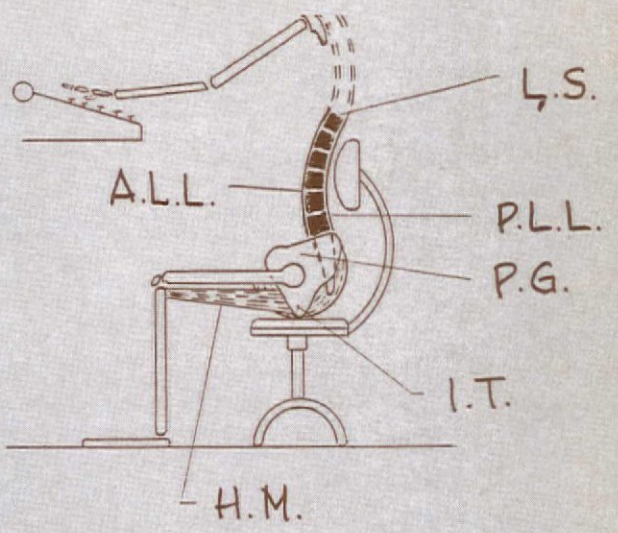


Fig. 2. *Built in exaggeration of low back curvature. The dimensions and relationships of this common office chair overstretch the anterior longitudinal ligaments, which may cause lower back pain.*

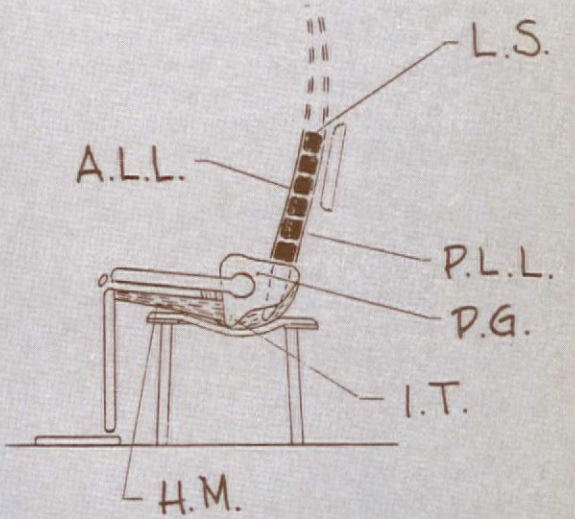


Fig. 3. *Good posture seat. Buttocks tucked under slightly. Lower back finds its own neutral position. Upper back, poised and flattened. Seat adjusts under seat bones.*

Major anatomical factors in three common seating positions. A.L.L.: Anterior Longitudinal Ligament. H.M.: Hamstring Muscles. I.T.: Ischial Tuberosities. L.S.: Lumbar Spine. P.G.: Pelvic Girdle. P.L.L.: Posterior Longitudinal Ligament. Drawings modified from Cailliet Low Back Pain Syndrome, *F.A. Davis Co., Philadelphia, ©1968.*

MORE VARIETY NEEDED IN DESIGN SAY CHAIR DESIGNERS

Chairs specifically designed for women, rocking chairs, standup chairs, and other types add diversity to environment for space designers

ROUND TABLE PARTICIPANTS

Richard Schultz
Don Albinson
Robert DeFuccio
O.J. Holohan
William Stumpf
Don Chadwick

FOR CONTRACT MAGAZINE

Len Corlin
Anne Fallucchi
Richard Zoehrer

CONTRACT brought together six independent chair designers at NEOCON X to explore the field of chair design—where it came from, where it is, and where it might go. All have been or are associated with some of the country's best known furniture manufacturers, although their views are their own.

Albinson

CONTRACT: As furniture designers generally and chair designers specifically, do you perceive a direction that chair design has taken in the past few years?

SCHULTZ: We are probably going into a period where we will be reaching the ideal—beauty and utility. In effect, good seating. During the past three to four years, designers have been concerning themselves not only with the outside look of chairs, but also with the inside and how it works. I had a school professor who talked about the inner and outer constants of design. Today, more attention is being paid to the inner constants—how the person fits into the chair. This year particularly, the concern is on how the chairs fit into an environment, which is an important functional consideration. Now, more people involved with chair design are looking at both sides—beauty and utility.

CONTRACT: Ergonomics is a term that has become very fashionable these days. Bill Stumpf's Ergon Chair for Herman Miller is even named for the discipline. Have you designed chairs with scientific ergonometric practice?

STUMPF: I really have a problem with the word. It is one that I don't like very much, but it is the only word that refers to a body of knowledge. The efficiency meaning of the word bothers me a great deal. In effect, a chair is designed as a tool to make man more productive. There is much more to chair design than just that.

HOLOHAN: If you took the design of Eero Saarinen's Tulip Chair, the back of that chair is fantastic. It is almost a perfect example of what kidney support and back support should be, yet it is lovely in shape. It was an absolute requirement that the chair be as com-

fortable as possible, and nobody knew what the word "ergonomic" was at that time.

CONTRACT: Do you think that a lot of early chair designs were instinctively ergonomically correct?

STUMPF: The Egyptians looked at the human body and arrived at well designed chairs. Today, I think we are deciding consciously to pay attention to that kind of detail.

CONTRACT: One of our editors here at NEOCON was asked to sit in a new chair. He did and immediately began to slip out of it. The salesman, either jokingly or seriously, told him to hang onto the desk. But the chair looked good.

HOLOHAN: I think all industries have products that don't work. Take the Edsel as a case in point. It had all the money in the world behind it, but it just didn't work.

CONTRACT: That is interesting, because the Edsel was very, very carefully researched before it was put into production. Are we saying that perhaps research can kill a project?

STUMPF: No. You can do research and come to whatever answer you want. The same set of statistics and the same set of human factors can produce vastly different designs. It is all in how you want to interpret the design. Ford decided that it wanted to build the Edsel many years before they completed their research, which proved that it was a car that was indeed needed. Perhaps they put the wrong name on it, but the computer can only give you the answer that you want.

CONTRACT: Are you implying that the Ergon chair was not designed according to scientific principles?

STUMPF: No. What I mean is that data from books and research can be interpreted differently. With the Ergon chair, there were some fundamental things that I wanted to solve. I wanted to create a live chair, rather than a fixed structure. But I didn't want to have a flexible back. There were a lot of design principles that I was following based on a lot of research that has been done.

When I say "non-scientific," I mean that it is not a hard science in the sense that some other sciences are. It is dangerous to assume that it is. If ergonomic chair design were a hard science, chairs would tend to look more alike than they do now.

CONTRACT: Does the designer design with a particular public in mind?

DeFUCCIO: I knew in the design of the Triangle Chair for Stow/Davis that there would be two chairs, one with arms and one armless. I tried to make a chair that I felt at the time was very comfortable. It accommodates a good range of people. There was no attempt to have the chair work for everybody. There are no adjustments.

CONTRACT: What was your motivation?

DeFUCCIO: To make a chair that looked good and sold well.

CONTRACT: It makes a good dining chair.

SCHULTZ: I would not even call it a dining chair. It is a dining/posture chair.

DeFUCCIO: It is configured to allow a person to slouch, to sit sideways. And it works well, depending upon the function

ALBINSON: There basically are two types of chairs. One kind of chair is like Bob's, a stacking chair, a dining chair. It must of necessity fit different people at different times. It is a chair that many people are using. Therefore, you make the best compromise in the size and shape of the chair, to accommodate functions to satisfy the optimum number of people.

CONTRACT: How specific can chair design get?

ALBINSON: One needs a general condition rather than a specific condition. You can establish parameters so tight that all of a sudden you have a lump on which to sit.

STUMPF: In Europe, I find a lot of "pilot syndrome" design—ergonomics. The chair is designed on the basis that the user sit exactly straight on the chair, facing forward. The furniture is fine, but there is no accounting for how one really sits on a chair, with one leg over an arm, or in a slumped position, and so forth. I think chair variety should be provided, not necessarily a chair that fits everybody. Maybe we should have rocking chairs again, maybe we should have more sofas in offices, more stand-up opportunities. This business of one chassis doing everything is like the concept of a saddle. One saddle for all horses. It is a machine principle concept. If any-

CHAIR DESIGN ROUNDTABLE

Adjusted chair seldom changed

DeFuccio, Holohan, Fallucchi

Albinson

DeFuccio, Holohan

thing, I would opt for greater simplicity in interior design, with good ergonomic principles, and much more variety in chair type in one office.

SCHULTZ: One gets that variety of seating in the home, where there are sofas, side chairs, plush chairs and so forth. In my shop, I have a stool. Sometimes I get on that, sometimes I sit down in the lounge chair to do a different kind of work, which may be snoozing, or thinking. That means a variety of sit-in situations, rather than a variety within the same chair.

CONTRACT: A human engineering behaviorist recently commented that there are so many adjustments to be made on chairs that the person using it easily can get confused on how to make the adjustments. Do you find that to be a problem?

STUMPF: You are pointing at a very serious problem in Europe. In Germany, for example, the rules have been changed. Now chairs that had required multiple adjustments, are being, in some cases, pre-adjusted for certain kinds of usage. In every building, a certain number of chairs will be pre-adjusted, because people either do not want to or are confused about how to make the adjustments. So the rule is now that there must be a certain number of chairs that are pre-adjusted when delivered.

ALBINSON: Historically in America, chairs are delivered to the job, they are uncrated, placed at a desk, and the person sits on it. No one else gets involved with the chair.

HOLOHAN: Or a dealer makes one adjustment as part of his service in setting up the equipment and then after that, nobody. Even if someone else takes over that position, there are no changes.

STUMPF: The worst thing that I found is that when a woman sits on a chair long enough even when it is improperly adjusted, she becomes accustomed to it. When you try to put her

back in the proper position by adjusting the chair, she wants it back the way it was originally.

CONTRACT: It has been said that chairs generally are designed for men, not women. Do you, in fact, design them that way?

ALBINSON: Armchairs are still designed for men. Chairs for women basically are left out of the arm chair, swivel, desk chair design area. That is because women have always been typists, clerks, secretaries. We have not really completely embraced the fact that women really are administrators, directors, and group heads. So the woman sitting in a chair designed for men may tilt back, but the spring tension is difficult for her to overcome. If she releases too fast it might just catapult her out of the chair.

CONTRACT: Just how different are men and women—when designing chairs for them?

ALBINSON: A woman's weight is distributed differently. Men have their weight in the upper regions of their bodies, women in the lower regions. When a man tilts back, the weight is over the pivot point and the chair holds back. With a woman, the pivot plane is different, and she must work to hold the chair back in a tilt position.

CONTRACT: But why aren't chairs designed specifically for women in the office environment?

HOLOHAN: If I were a woman, I would be insulted with that strategy. It's like designing baby furniture, or children's furniture, or furniture specifically for old people—unsuccessful most of the time. We are all a part of the same group, in a sense and I don't think a woman wants to sit in a woman's chair.

CONTRACT: One woman we know ordered a new chair for her office. Within a day or two she had to get a pillow to provide her with the proper support. Why shouldn't she have a chair that fits her needs?

SCHULTZ: A small man needs a small chair too.

STUMPF: All this is part of the design process. A designer asks many people of different sizes to sit and try a new design. The designer doesn't ask women to sit in one chair and men to sit in another. I think you have to consider a good cross section of the population.

CONTRACT: Yes, but what do you do with the small person?

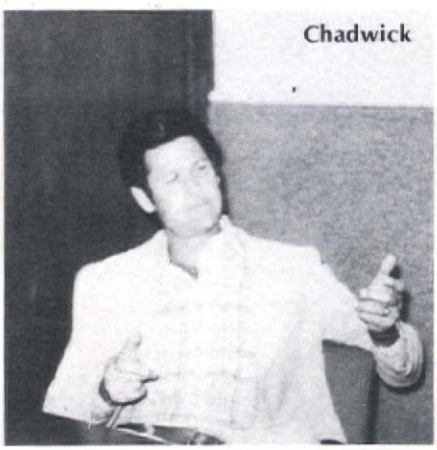
STUMPF: This problem does not extend to small persons only. However short or long you make a seat, there is a problem. We had a man in a telephone company office in New York who was 6-ft. 7-in. tall. So we sent him a special shaft that was 21 inches off the floor.

HOLOHAN: I think we are all starting to scale furniture down. We are beginning to think that bigger is not better. Unfortunately, the American manufacturer is meeting the dealer's desire to sell the biggest piece at the lowest price. Reduction in office space as the result of the open plan is forcing a smaller scaling of seating.

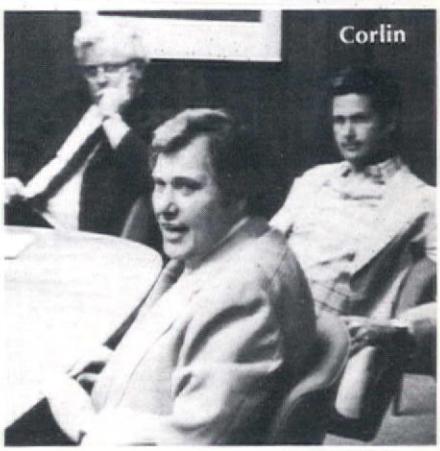
SCHULTZ: It's just like the automobile industry. Bigger was better and cars kept growing. Now they are scaling them back to what a normal car was like in 1940.

HOLOHAN: The auto industry now is terribly proud of cutting 1,000 pounds and four feet off a car.

Schultz



Chadwick



Corlin

Stumpf

CHAIR DESIGN ROUNDTABLE

Different type chairs needed in offices

Holohan

DeFuccio

STUMPF: Yes. It is a question of sizing. That's a word the automobile industry is using. It is not just a matter of down, but of appropriate sizing. Now they've gotten to the point where things have gotten too small and they don't work, so they are going back in the other direction.

CONTRACT: What about fully articulated chairs, where there are many possible adjustments that can be made? There seemed to be an influx of them from Germany last year.

STUMPF: If you are constantly sitting on a moving object, your muscles are saying to your brain: Where am I? Where is my chair? Where am I placed? All this is more fatiguing than sitting on a semi-rigid chair. A good example is the rocking chair. The center of gravity is always changing. While one is talking, that is fine. But if someone is trying to do some serious work, it could be very distracting. An articulated chair with too many moving parts is like trying to stand and talk on roller skates.

HOLOHAN: A ball caster on a hard floor completely involves someone in trying to get the chair to react to the sitter's needs.

DeFUCCIO: In truth, a chair should have about 12 places to sit on. Because one shifts around. That doesn't mean that it needs 12 adjustments.

CHADWICK: We need a new, imaginative way of figuring out how to buy furniture for people. We are trying to make people more efficient in the landscape. There are horrendous problems in logistics. The right work surface has to be matched to the right storage. And underlying it all is the need for a properly sized chair to provide the most efficiency. We are trying to do that by giving people a variety of different sizes and shapes in chairs. The problem now becomes one of ordering different types of chairs.

HOLOHAN: That's true in terms of how we as designers of chairs would deal with the problem. However, the interior designer designs space and doesn't want to worry about these things, about providing a variety of seating. The designer wants to set up a total standardization program for the next five years, with the company buying 10 of these, 20 of those, and so forth.

CONTRACT: Will the office of the future, with CRT's and computers, require a new type of chair?

STUMPF: Specificity of design is a bothersome thing. I hope that we don't have to get that specific in chair design.

CONTRACT: What is the relationship between the manufacturer and the chair designer?

ALBINSON: There is a very special relationship between the manufacturer and the designer. I don't think that there is another manufacturer in the industry that could have brought Bill Stumpf's concept to market.

STUMPF: I think that the client/architect relationship is the same type as the manufacturer/chair designer relationship. There has to be a sympathetic relationship between the two, a willingness to work through the most incredible design problems, and to have people who are willing not to cut corners.

CONTRACT: How does this happen?

STUMPF: The client has to be an extremely good friend—a friendship relationship, not a business relationship. Herman Miller is a very special company, and there is a constant necessity to make it a special company. Knoll was like that. They would say, "We are going to rework this until it is right!" I think too many designers lay down and let trucks roll over them in their relationship with the factory.

CONTRACT: How do you feel about knock offs of your basic design?

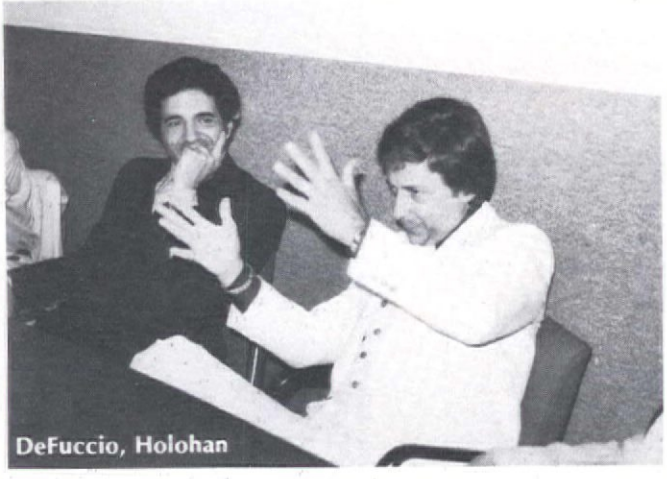
DeFUCCIO: I can just hope that the parent company will try to litigate against them. Unfortunately, it costs too much and is a very slow process. And nothing gets done. We're used to that.

ALBINSON: Young designers are bothered most by knock offs. The thing to do is to just stay one step ahead of them and keep doing your thing.

CONTRACT: Do you think that laws

should be strengthened to protect furniture designs?

ALBINSON: We can't really extend copyrights to three-dimensional design. We are trying to make it more costly to infringe on copyrights and patents, but patent litigation can go on for two, three, or four years, until the entire market is gone and nobody is selling the original design anymore. One spends a lot of money and time trying to enforce something that is not enforceable.



DeFuccio, Holohan

Stumpf

HOLOHAN: Our industry accepts originality. We can have knock offs, but the contract industry is more likely to choose the original in large jobs. Good architecture demands good design.

CONTRACT: Quite recently, a leading furniture company called to ask about a table that was pictured in CONTRACT. The firm's designer had completed a table that was line for line the one pictured in the magazine. It was simply a coincidence of design. A decision was made, by the way, not to produce the table.

HOLOHAN: I had that happen. I've scrapped a line because it is advertised by another company and appears to be an exact copy. Charles Eames and Eero Saarinen were good friends, but they would never talk about furniture design together. If Eero had a really good idea, however, he would call Charles and tell him about it so that he couldn't get knocked off inadvertently by his good friend.

SCHULTZ: I think that this situation can be panicky, but that you can be damned sure somebody else is going to have the same idea or one close to it—like rounding an edge on something. But even if it is the next step, like using a different material, you can be sure one of your designer friends has already got it. There just aren't that many ideas.

CHADWICK: To have two designers do the same thing is terribly rare. But to do similar things—using new materials, techniques, or processes—happens all the time.

CONTRACT: Which came first, the design or the manufacturer asking you to design something?

DeFUCCIO: I wish I had the experience of a manufacturer begging me to do a design. It doesn't work that way. When companies are competing with one another, you have to come up with an idea that is at the right time, for the right company, in the right product line area. That is how the Triangle chair worked out for Stow/Davis.

ALBINSON: Westinghouse came to me and said that it wanted to get into the seating business to complement its lines. I suggested that they buy a company that made chairs, but the possibilities were not available. I then suggested that they hire a design staff and build a factory to produce chairs, which would put them in business in three years and cost a fortune. The alternative was to hire me to design, and the end result would be production of components that can be delivered to the existing factory and assembled. It worked out very well for them. It is rare if you can design something and then find out who wants it and when and how it will fit into their line in terms of price and market. All those things have to come together. Therefore, ideally, you get somebody to want something and design what they want.

CONTRACT: The new Paradigm series Dick Schultz designed for Stow/Davis is light in scale and is a total "family" that is visually related in the open plan. How important is this approach in chair design?

HOLOHAN: We are looking at chair design as not only the housing for the body, but also from the point of view of the space in which the chair is being used. We need to be aware of what is happening to the open plan, the function of things, the actual working environments. I think we are going to see even more interesting shapes and sizes because of it. Everything has to fit—design, manufacturing, and marketing needs, as it did last year for me with Gunlocke.

STUMPF: The manufacturing standpoint is important, but I think the fundamental responsibility has to be with design in general and the designer's ability to get involved not just with the scale of the furniture, but also with the architecture and all other aspects of the environment. Good design can't be developed from concentrating on chairs. There is a much larger perspective.

CHADWICK: I agree. It always has been the European tradition that the architect and designer are the same, not separated, so they do tend to get more into man-built environmental problems. I think the chair designer will get more involved in those problems, not just talk about seating anymore. We are talking about the total interior environment. □

CORRECT CHAIR CASTERS CAN PROTECT CARPET INVESTMENT

Selecting the proper chair caster is more than a matter of esthetics. The wrong caster, for instance, can dangerously thrust a user into a whiplash ride across a smooth chair mat. Or it can bring him to an abrupt halt as the caster bogs down on a thick and deep carpet pile.

The wrong caster can also be damaging to the carpet—one of the biggest investments made in a contract installation. Particularly destructive is the excessive abrasion on carpet fibers when an improper caster fights for every inch of movement.

Is there a way of achieving compatibility between carpet and caster—short of guessing? Yes, says Shepherd Products U.S. Inc., which recently completed an extensive testing, evaluation, and recommendation study on the relationship between casters and carpets. The results of Shepherd's two-year study have been documented in a new booklet, "Casters & Carpets: A Guide for Contract Specifiers."

The study categorizes carpets into 10 systems, and each was tested with various Shepherd casters. The Shepherd Laboratories used all types of carpets specified for commercial environments in order to give the specifier an understanding of the wear levels to expect during the lifetime of a particular carpet installation.

The testing results of each of the 10 carpet systems, plus Shepherd's traffic classification, are reprinted below. The casters listed are Shepherd model names, and photos are included of each model. Also reprinted is the suggested caster models chart for resilient thread casters for use on chair mats and hard floors.

Among other sections of the booklet not included here are: Installation Methods & Procedures; Caster Traffic Frequency; Carpet Maintenance; Glossary of Carpet Terminology.

Tests were carried out by Shepherd Products, working with G.J. Crean Associates, contract carpeting consultants. Ontario Research Foundation conducted the final analysis to determine the amount of carpet wear.

How to order free copy

"Casters & Carpets: A Guide for Contract Specifiers" is being issued this month by Shepherd Products and is available at no cost to contract designers. For a free copy: **Circle No. 208** on reader service card bound in this issue. □

Results of an extensive two-year testing program by Shepherd Products, issued this month, will aid the specifier in determining which casters function best on ten contract carpet systems

	Caster Model
	Planet 2½ in.
	Profile 2½ in.
	Pacer 2⅜ in.
	Regent 2½ in.
	Tapered Regent 2½ in.

SHEPHERD HARD-TREAD CASTERS FOR USE ON CARPETS

CASTER SELECTION GUIDE

CARPET SYSTEM #1

Manufacturing Process ..... Tufted
Texture ..... Level Loop
Fibre Content ..... 100% Continuous Filament Nylon
Stitches Per Inch .. Between 8 and 11
Gauge ..... 1/8", 1/9", 1/10"
Pile Weight ..... Min. 18 oz. Max. 30 oz.
Pile Height ..... Min. 1/4" Max. 1/2"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent	Pacer, Regent, Tapered Regent
Performance Rating	Excellent	Excellent	Good
B. Tackless, smoothedge	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Excellent	Excellent

CARPET SYSTEM #2

Manufacturing Process ..... Tufted
Texture ..... Level Loop
Fibre Content ..... Polypropylene Olefin
Stitches Per Inch .. Between 8 and 11
Gauge ..... 1/8", 1/9", 1/10"
Pile Weight ..... Min. 18 oz. Max. 30 oz.
Pile Height ..... Min. 1/4" Max. 1/2"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent	Pacer, Tapered Regent
Performance Rating	Excellent	Excellent	Good
B. Tackless, smoothedge	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Excellent	Excellent

CARPET SYSTEM #3

Manufacturing Process ..... Tufted
Texture ..... Level Loop
Fibre Content ..... 100% Acrylic Fibre
Stitches Per Inch .. Between 5 and 10
Gauge ..... 5/32", 1/8", 1/10"
Pile Weight ..... Min. 32 oz. Max. 45 oz.
Pile Height ..... Max. 1/2"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent	Regent, Tapered Regent
Performance Rating	Excellent	Excellent	Good
B. Tackless, smoothedge	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Excellent	Excellent

CARPET SYSTEM #4

Manufacturing Process ..... Tufted
Texture ..... Loop Ribbed Hi/Low
Fibre Content ..... 100% Continuous Filament Nylon
Stitches Per Inch .. Between 8 and 11
Gauge ..... 5/32", 1/8", 1/10"
Pile Weight ..... Min. 20 oz. Max. 35 oz.
Pile Height ..... Max. 1/2" Low, 3/4" High
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent
Performance Rating	Excellent	Excellent	Good
B. Tackless, smoothedge	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent

CARPET SYSTEM #5

Manufacturing Process ..... Tufted
Texture ..... Cut Pile and Loop Pile Combination
Fibre Content ..... 100% Continuous Filament Nylon
Stitches Per Inch .. Between 8 and 11
Gauge ..... 5/32", 1/8", 1/10"
Pile Weight ..... Min. 20 oz. Max. 35 oz.
Pile Height ..... Max. 1/2"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent
B. Tackless, smoothedge	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Excellent	Excellent

CASTER TRAFFIC FREQUENCY

Every installation is subject to different caster traffic frequencies. These can be categorized into three basic classes:

Moderate Slight to moderate caster abrasion.

Heavy Heavy abrasion in areas subjected to frequent caster movement consistently following the same directional pattern.

Severe Severe abrasion in areas subjected to exceptionally high levels of frequent and concentrated caster movement following same directional pattern.

CARPET SYSTEM #6

Manufacturing Process ..... Tufted
Texture ..... Cut Pile (Plush)
Fibre Content ..... 100% Continuous Filament Nylon
Stitches Per Inch .. Between 6 and 11
Gauge ..... 5/32", 1/8", 1/10"
Pile Weight ..... Min. 18 oz. Max. 35 oz.
Pile Height ..... Max. 1/2"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent
B. Tackless, smoothedge	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent

CARPET SYSTEM #8

Manufacturing Process ..... Tufted or Woven
Texture ..... Cut Pile (Plush)
Fibre Content ..... 100% Acrylic or 100% Virgin Wool
Stitches Per Inch .. Between 5 and 10 Woven
Gauge ..... Tufted 3/16", 5/32", 1/8" Woven Min. 216 pitch
Pile Weight ..... Min. 35 oz. Max. 60 oz.
Pile Height ..... Max. 3/4"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent
B. Tackless, smoothedge	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Good	Excellent

CARPET SYSTEM #7

Manufacturing Process ..... Tufted
Texture ..... Shag or Saxony Texture
Fibre Content ..... 100% Nylon, Filament or Staple
Stitches Per Inch ... Between 4 and 8
Gauge ..... 3/16", 5/32", 1/8"
Pile Weight ..... Min. 16 oz. Max. 32 oz.
Pile Height ..... Max. 1"
Primary Backing ..... Jute or Polypropylene
Secondary Backing ... Min. 7 oz. Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Planet, Pacer, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent
B. Tackless, smoothedge	Pacer, Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Excellent	Excellent

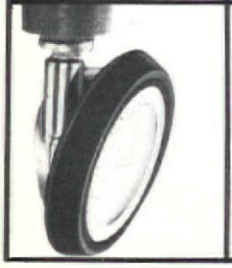
CARPET SYSTEM #9

Manufacturing Process.. Woven Wilton
Texture ..... Loop Pile or Combination Cut & Loop
Fibre Content ..... 100% Wool, 100% Acrylic or Blends using Max. 30% Nylon
Rows Per Inch ..... Minimum 5
Pitch ..... Min. 216 per 27"
Pile Weight ..... Min. 30 oz. Max. 60 oz.
Pile Height ..... Max. 1/2"
Backing ..... Usually Cotton or Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Excellent	Good	Excellent
B. Tackless, smoothedge	Pacer, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Excellent	Excellent

SHEPHERD RESILIENT TREAD CASTERS FOR USE ON CHAIR MATS & HARD FLOORS

	Caster Model		Caster Model
	Saturn 3 in.		Pacer-U 2⅜ in.
	Profile-30 3 in.		Regent 2½ in.

CARPET SYSTEM #10

Manufacturing Process ..... Tufted or Bonded
Texture ... Heavy Loop (Berber effect)
Fibre Content ..... 100% Wool
Stitches Per Square Inch .... Min. 18, Max. 30
Pile Weight ..... Min. 35 oz. Max. 70 oz.
Pile Height ..... Min. 5/16" Max. 1"
Backing ..... Usually Jute

TRAFFIC CLASS & SUGGESTED CASTER MODEL

INSTALLATION METHOD	Moderate Traffic	Heavy Traffic	Severe Traffic
A. Direct-cement-down	Pacer, Planet, Profile, Regent, Tapered Regent	Planet, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Fair	Excellent
B. Tackless, smoothedge	Planet, Pacer, Profile, Regent, Tapered Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent	*Use chair mats w/resilient tread casters:* Saturn, Profile 30, Pacer-U, Regent
Performance Rating	Good	Excellent	Excellent

CHAIR DESIGNS INTERPRET PURE FUNCTION IN A CHANGING CULTURE

As an introduction to this issue's extensive display of new chair designs, CONTRACT excerpts parts of *Chair* by Ralph Caplan, published by Peter Bradford Publishers. The book is a collection of illustrated discussions exploring the what and why of chairs, and how they got that way. It is based on a series of seminars conducted by the Cooper Hewitt Museum, the Smithsonian's new National Museum of Design, at which some of the world's notable chair designers explain how they perceive the chair and their art and craft in making one.

"The chair is not an artifact of service, it is an artifact of culture," says Caplan in the introduction of *Chair*. Included are the perspectives of well-known chair personalities: the human dynamics of Niels Diffrient, the taste influence of Ward Bennett and Charles Stendig, the pure esthetic of Nicos Zographos, the behaviorism of Mary Blade, and the spatial concerns of Joseph D'Urso.

In addition, *Chair* contains over 1,300 illustrations on 160 pages, as well as a prophecy of chairs-to-be gleaned from an extraordinary 1977 chair design competition sponsored by a grant from the National Endowment for the Arts and held by the American Institute of Architects. More than 800 submissions were made from all over the world. Here are some excerpts:

"Henry Thoreau lived at Walden Pond under the most stripped down, spartan circumstances in our history, in a cabin bare of any excess. But it had three chairs in it: one for solitude, two for friendship, three for society.

Many classic chairs are stubbornly functional. In one of the myriad Bauhaus declarations, Gropius wrote: 'In order to create something that functions properly—a container, a chair, a house—its essence has to be explored, for it should serve its purpose to perfection, i.e., it should fulfill its function practically and should be durable, inexpensive, and beautiful.

Designers sometimes talk about whether they ought to design for the way people sit or the way people ought to sit, but chair design is usually concentrated on neither, but on how chairs look.

Throughout the literature of chair design, whenever structure is spoken of it is always the chair's structure, never the sitter's structure. Designers who pride themselves on a disciplined focus upon understanding and forming materials, often neglect such materials as flesh and blood—although flesh is weak and the flow of blood has been greatly impeded by a number of prize-winning chairs.

No other animal requires a prosthetic device for regular ongoing use. A chair, after all, is a crutch for a condition that will not mend: walking upright. Designers like to speak of product evolution. But of course chairs have not evolved. We have. And once we came down from the trees or up from the sea or whatever—once we gave up the use of four legs for ambulatory purposes—we had to have a prosthetic device to rest on."

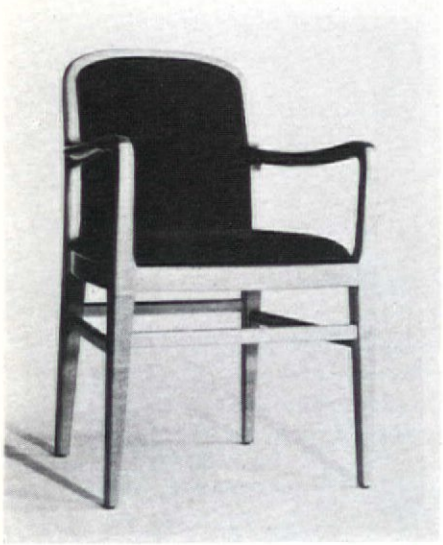
Some of those devices are shown on the following pages.

Back to basics— new rocking chair

Corner arrangement (above) by **Interiors International Limited** *consists of two and three-seat and corner units. Cushions are down filled. Other seating lengths and configurations are available.* **Circle No. 238.**

Swivel chair (near right) by **All-Steel** *is available in five or four leg polished chrome base. Shells are of durable molded plastic with vinyl edging to protect furniture and walls.* **Circle No. 239.**

GF *office chair (far right) is furnished in four- or five-leg models, with optional chrome-finish bases. Urethane arm and side construction provides resilient surface that will not damage surrounding furniture.* **Circle No. 240.**



Maple and wood armchair (above) by **Jack Lenor Larsen** *comes in five different finishes. Designed for public seating it can be upholstered in leather or fabric. Also available without arms.* **Circle No. 241.**

Lounge chair (above) by **Madison** *is constructed of formed oak plywood with solid oak moldings in the arms. Features a routed spring in the seat of the plywood shell.* **Circle No. 242.**

Public seating (right) by **Croydon** *offers choice of Naugahyde or fabric. Frame is either polished chrome or nylon coated with a chip-resistant finish.* **Circle No. 243.**

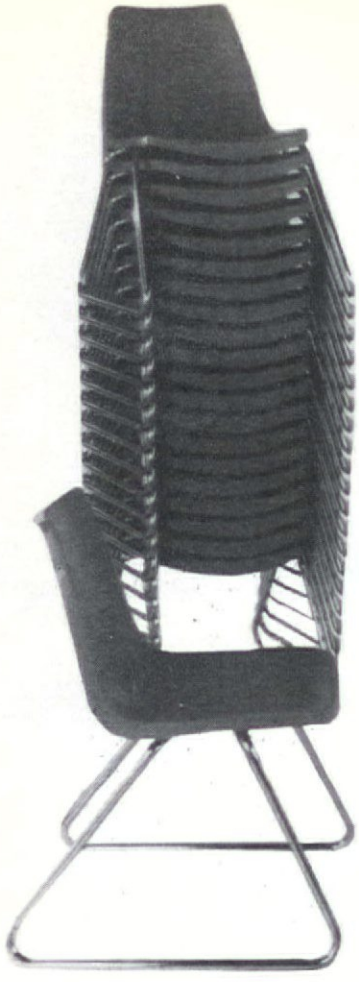
Chair by **Royal Seating** *(above near right) has large molded seat and back in six colors. Available with optional black nylon or vinyl upholstered cushions on seat or back.* **Circle No. 244.**

Chair by **Gunlocke** *(far right) has five-prong laminated bent-oak base. Optional gas cylinder adjusts height and tilt of chair to any position at touch of button.* **Circle No. 245.**

Gregson's *lounge group (above) includes center and corner sections on walnut legs. Ottoman has carpet casters.* **Circle No. 246.**

Conference room chair by **Probber** *(above right) has a rigid fiberglass shell encased in Proberon foam.* **Circle No. 247.**

Rocking chair by **Dependable** *(right) comes with optional stool. Contemporary design has a bentwood walnut frame with tight seat and back upholstery.* **Circle No. 248.**



Strippability speeds changes

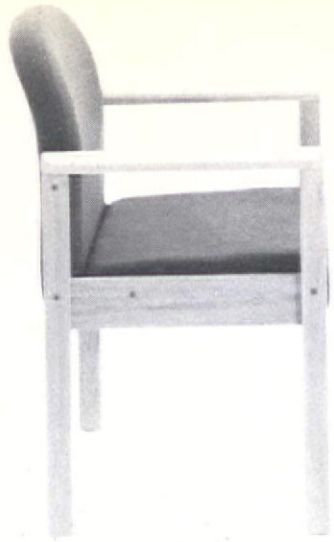
Fixtures Manufacturing *(above) has developed a self-extinguishing chair in its Astro stacking design. It is crafted totally in metal with wire mesh seat and back. The Astro chair can be ordered in bright chrome or a choice of epoxy colors.* **Circle No. 249.**

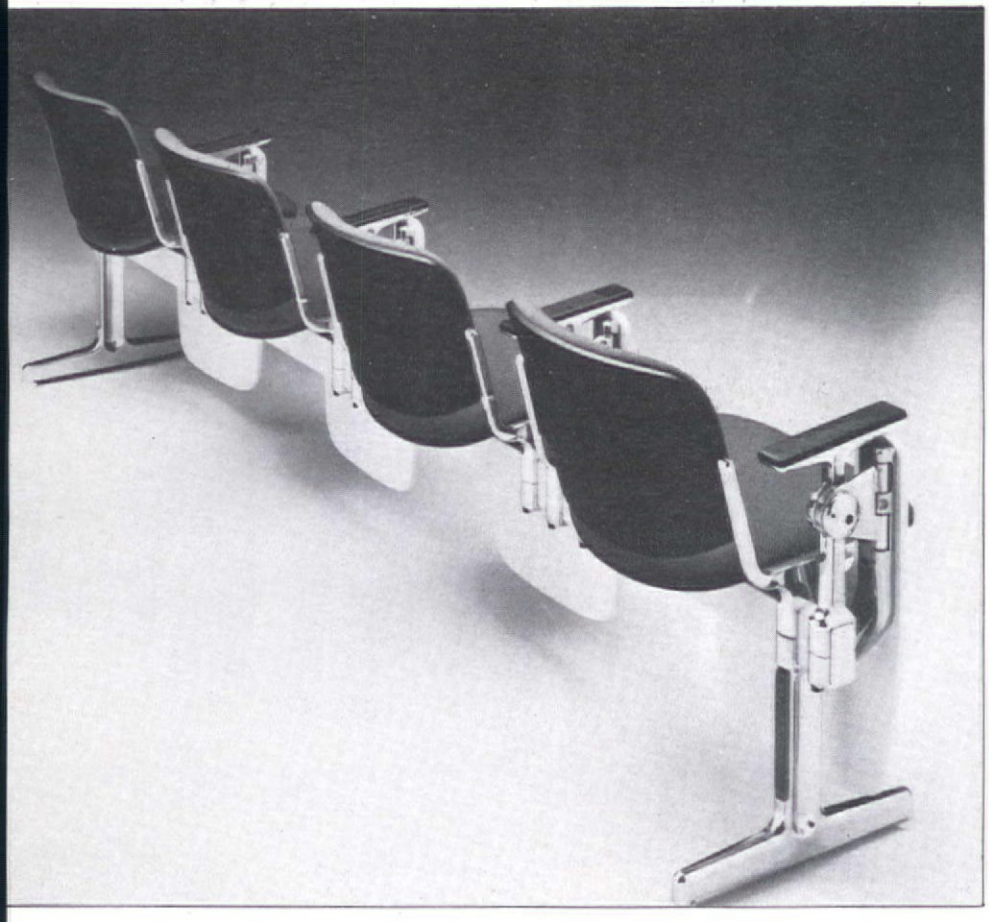
The Century II Modlok system from **Sauder** *(top right) is an all-wood, laminated product with individually upholstered back and seat cushions which can be removed for ease of maintenance. The system can be ganged in straight rows to function like a pew.* **Circle No. 250.**

Robert Deschamps designed an upholstered armchair for **Howell** *(center near right) to stack for easy storage in compact space.* **Circle No. 251.**

Jansko's *armchair (lower near right) can be used as a guest chair or in public areas. Cantilevered chrome frame has mirror finish. It is available in a variety of vinyls, fabrics, or in COM.* **Circle No. 252.**

Flex drafting stool (far right) from **Loewenstein** *has gas operated lift to adjust seat height. Device allows seat to tilt forward to relieve leg pressure. Back adjustable up/down and front/rear with simple controls.* **Circle No. 253.**





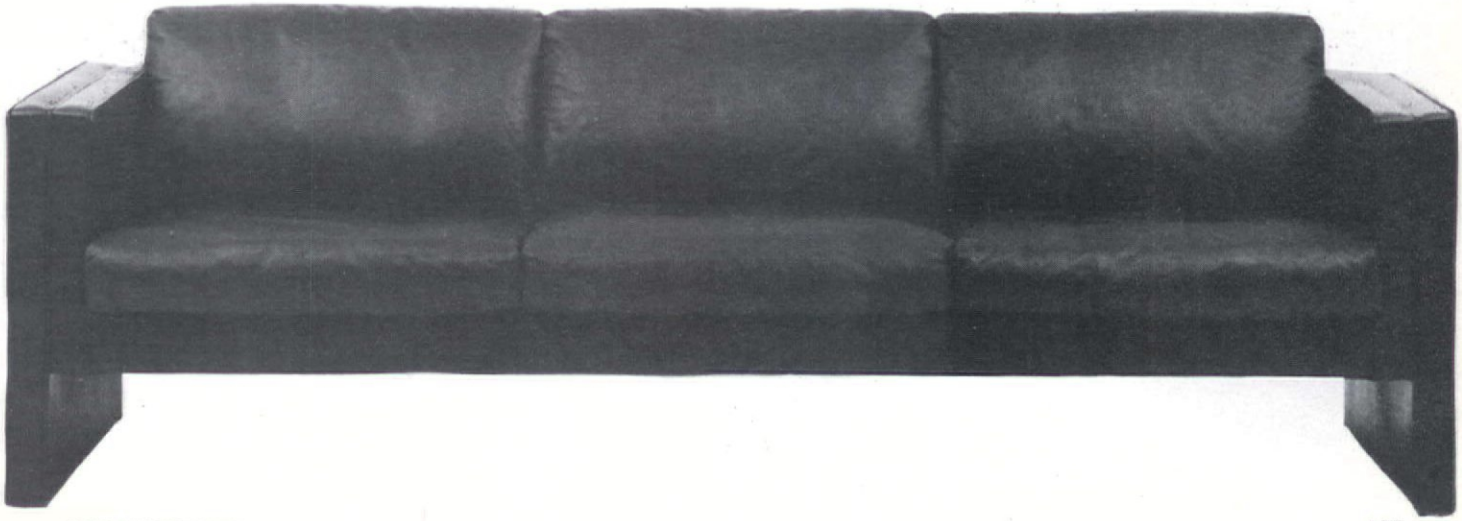
Upholstered solid elm chair (top left) from **Thonet** *also comes with arms or highback. Solid elm arm/leg frame is attached with removable exposed fasteners that ease upholstery replacement. Back is contoured for lumbar support.* **Circle No. 254.**

Mueller Furniture's *tubular-steel frame chair is available in mirror chrome, bronze, and polished brass. Constructed with cane inserts in the maple seat and back frame, it has a seat pillow which can be removed if desired.* **Circle No. 255.**

Padded armrests, button tufting, and foam cushions enhance swivel chair (above) by **Haskell**. *Comes in wide choice of fabric or vinyl.* **Circle No. 256.**

Castelli's *multiple folding seating (left) on support beam has seat and backrests with thick contoured polyurethane foam padding. Injection molded protective ABS seat and back panels are in black. Structural components are polished die cast aluminum alloy. Accessories include armrests, folding tablets, and audio apparatus holders.* **Circle No. 257.**

Brayton International's *Studio series (below) of armchairs and a small and large sofa is softly upholstered in selected leather grades. Studio has a seat height of 17 inches.* **Circle No. 258.**



Executive chair (above left) from **Myrtle** *has standard walnut sculptured swivel base.* **Circle No. 259.**

Auditorium seating (above right) by **Ducharme** *can be used for theaters, coliseums, and planetariums.* **Circle No. 260.**

Tapered chair (right) from **Rudd International** *is made from laminated beech or white oak cover veneer. Available as a side chair, arm chair, and soon a compatible office chair.* **Circle No. 261.**

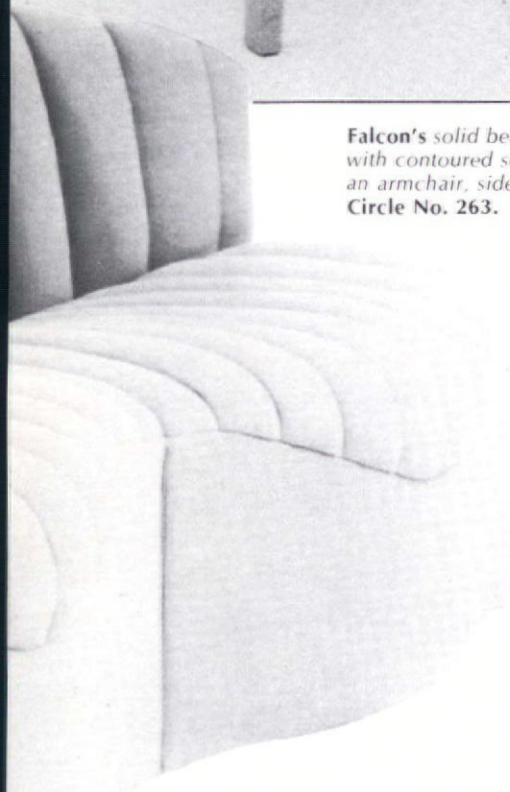
Laminated woods provide flexibility

Office furniture (above) by **Gunnar Schwartz** *is available in flat-cut oak or beech. Desk top has an inset that raises up to a reading or light drafting position and is offered in leather or wood finish.* **Circle No. 264.**

Falcon's *solid beech chair (above) with contoured seats is available as an armchair, side chair, or barstool.* **Circle No. 263.**

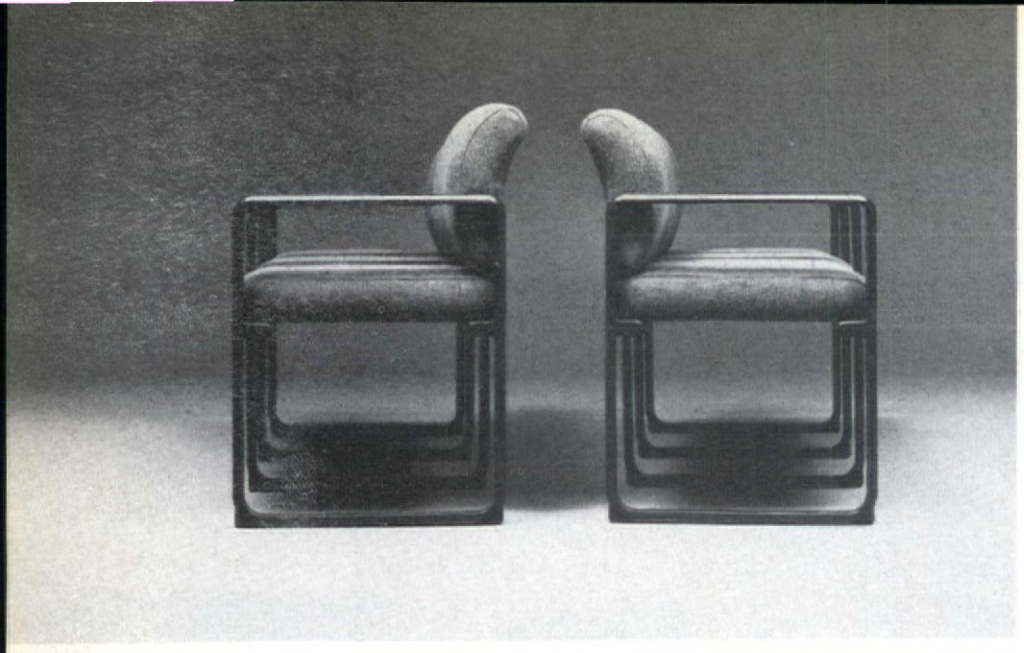
Guest chair (immediately above) by **KT Furniture** *has an upholstered perimeter bar which defines the entire chair. Frame is available in walnut or oak, and chair is upholstered in leather.* **Circle No. 265.**

Executive chair (above right) by **Vecta** *has seat and back which move independently preserving flexibility.* **Circle No. 266.**

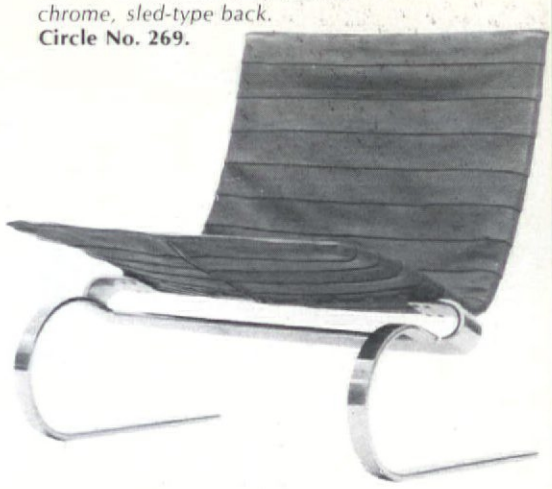


Modular chair (left) by **Intrex** *is constructed of polyurethane foam on a wood platform with glides. The curved design enables the chairs to be placed back to back for use in office or lounge seating.* **Circle No. 262.**

Armless modular chair (right) from **JG** *has interchangeable cushions to extend cover life to its maximum. Available in one, two, three and four seat versions that are easily convertible to other sizes.* **Circle No. 267.**



Leather chair (below) by **DSI** *has chrome, sled-type back.* **Circle No. 269.**



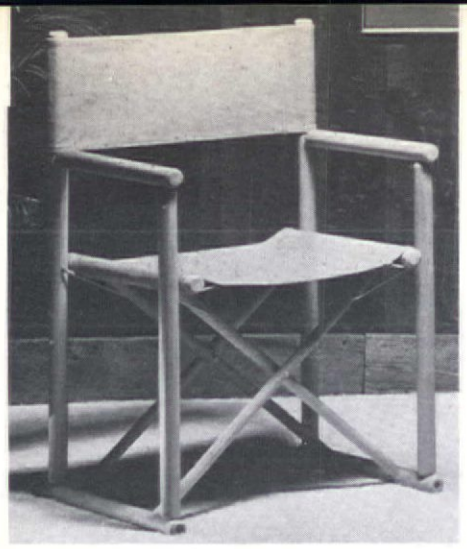
Chair (above) by **Condi** *has cast aluminum frame with nylon coated finish in 3 colors.* **Circle No. 268.**

New twists in tubular steel

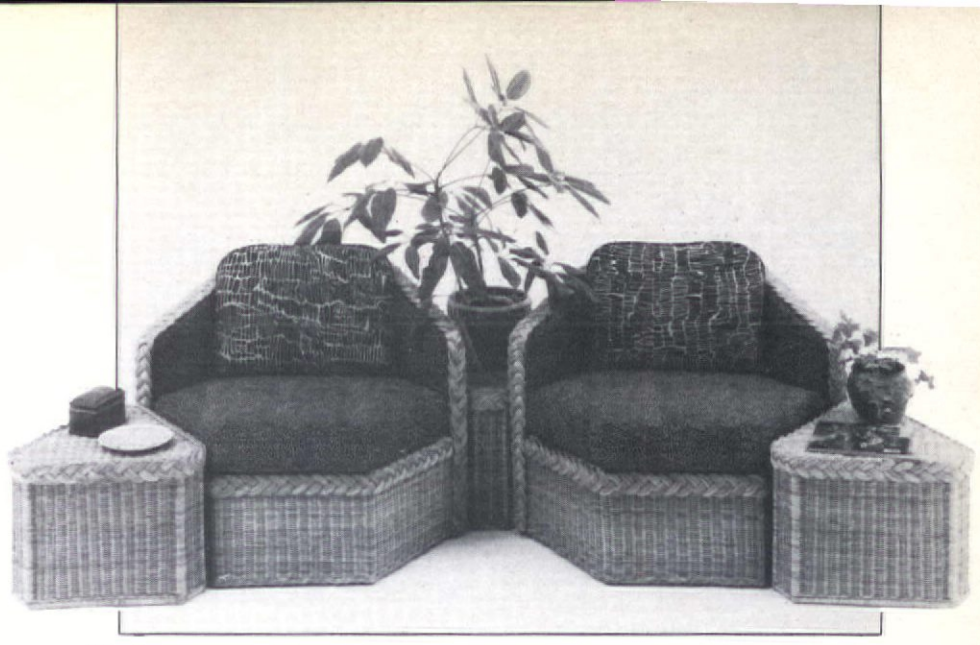
Lounge chair with ottoman (above left) by **Cosco** *has chromed steel frame and sling seat and back. Units are foam filled, with padded cushions and upholstered arm rest. Available in velvet, duck, and two types of vinyl upholstery covers.* **Circle No. 270.**

Acton chairs (above) from **AmSeCo** *display an attractive design when stacked. Integral arms provide definition of space and armchair comfort. Ganging option devices are located on the rear frame section and provide easy interlocking of chairs into rigid rows.* **Circle No. 271.**

Chair (left) by **Starr Skaalerud** *can be positioned two ways. Cushions are interchangeable.* **Circle No. 272.**



Constructed of solid selective hardwood, this **Gold Medal** *chair (above) folds for easy storage.* **Circle No. 276.**



Prelude (above) by **CalifAsia** *is handcrafted in the Orient of natural finish rattan core. Enhanced by meticulous weaving, the geometric design of the furniture works well for modular seating.* **Circle No. 274.**

DuBarry's *Steamer chair (above) is constructed of molded, laminated maple plywood. Individual slats are dowelled into curved cross-members. Frame folds after removing two nuts on underside of seat. Upholstered seat pad is reversible.* **Cirlce No. 275.**

Guest or conference chair (above) by **Cramer** *has sled-type base. Smooth chromed runners are easily moved on carpet and serve as glides on hard-surfaced floors.* **Circle No. 273.**

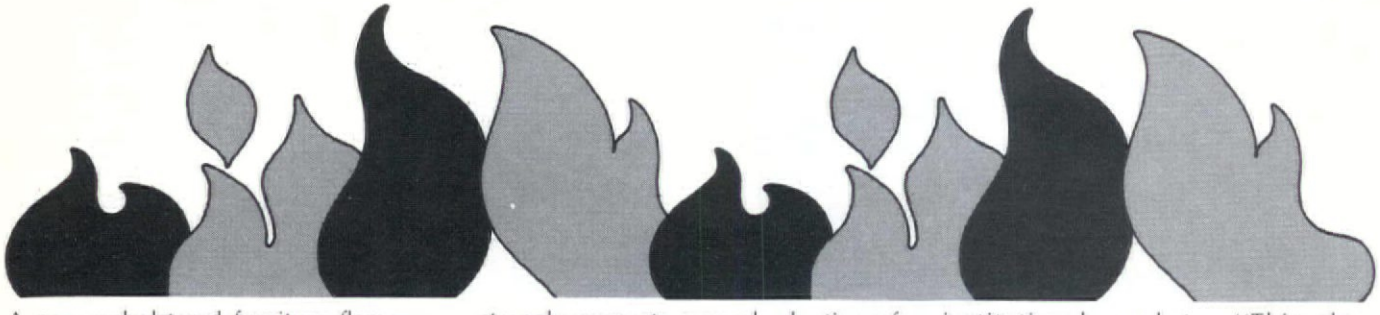
Natural rattan is combined with a tubular steel frame in this handcrafted chair (right) by **Virco.** *Rattan chairs are available in a variety of woven patterns over steel frames.* **Circle No. 277.**

Strong forms compose this group (left) from **Blockhouse.** *Designed by Brinton Studio, the solid oak series consists of sofa table, and chairs.* **Circle No. 278.**

BIFMA

FURNITURE FLAMMABILITY STANDARD REFLECTS INPUT OF VARIOUS GROUPS

Based upon cigarette ignition, Standard has been voluntarily adopted by Association members



A new upholstered furniture flammability standard has been voluntarily adopted by members of the Business & Institutional Furniture Manufacturer's Association (BIFMA). Written and published by BIFMA recently, the standard provides manufacturers, specifiers, and users with a single basis for assuring that upholstered furniture produced for captive consumers (office workers, for example) will be safe.

Based on cigarette ignition, the standard is the result of several years' work by the BIFMA Flammability Standards Subcommittee and an in-depth study by Underwriters Laboratories. As an independent research and testing firm, Underwriters Laboratories undertook the study with input from regulatory officials, material suppliers, manufacturers, and other representatives of public and private sectors.

Cigarette ignition is basis

Since cigarette ignition is the only current test procedure that correlates with actual furniture as recommended by UL and a BIFMA 45—deg. materials screening procedure, it was the basis of the new standard.

BIFMA maintains that no single standard can be appropriately applied to all types of furniture and conditions of use. However, the Association strongly supports general adoption of this voluntary standard for business and institutional furniture used by the "captive consumer." The latter is defined as users who work in offices, restaurants, and other public buildings and who are, therefore, captive consumers of those environments.

Since they have little or no opportunity to influence the selection of furnishings used in their working environments, they are considered to be in captive environments, according to Stephen D. Channer, Executive Director, BIFMA.

"Adversely," says Channer, "the free choice consumer has the opportunity to select products for personal reasons, including appearance, comfort, and safety."

Conflicting standards exist

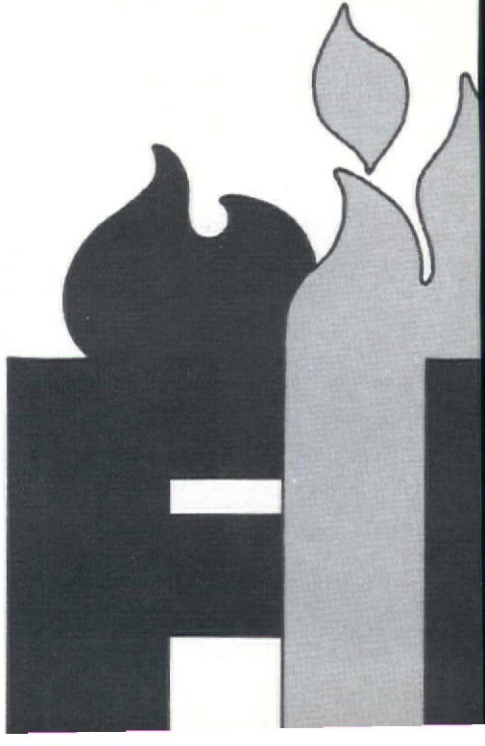
Channer points out that attempts to comply with conflicting standards around the country are counter-productive.

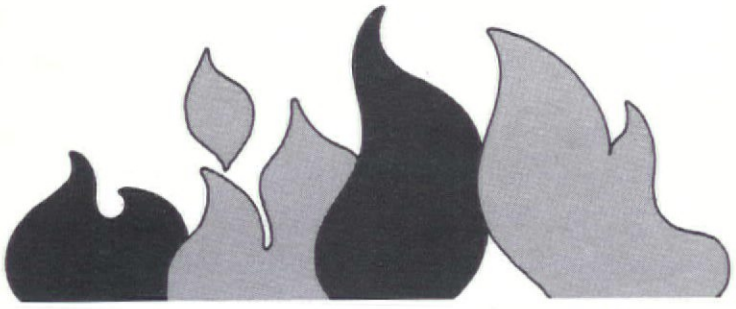
"Since the current BIFMA membership produces approximately 80 percent of the furniture sold within our industry," Channer comments, "voluntary adherence by BIFMA members provides substantial compliance."

He goes on to define the coverage as furniture intended for sitting or reclining purposes with the business and institutional markets. "This definition," he adds, "does not include mattresses."

White Paper issued

The BIFMA Flammability Standards were not promulgated lightly. Underwriters Laboratories first issued a "White Paper" which recommended the participation of an Advisory Committee consisting of regulatory agency representatives, specifiers, user



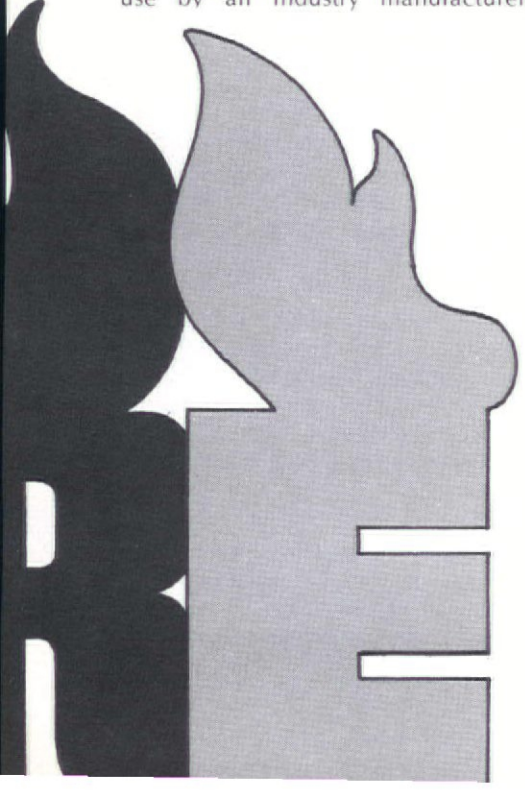


groups, academic specialists in the field, and material suppliers to review and critique the paper. It also recommended the adoption of the Consumer Product Safety Commission cigarette Ignition Test as a first generation standard, and additional research beyond the initial measures.

Accurate records responsibility

In addition to the Cigarette Ignition Test standard procedure and requirements, the Subcommittee also developed a system for classifying fabrics according to "char length" test properties. Also a screening test for component upholstery materials based on a 45—deg. open flame, burn-rate test procedure.

For ease of identification, a single positive label has been designed for use by all industry manufacturers whose products comply with the standard.



In promulgating the standard, BIFMA indicates that it is the responsibility of each manufacturer to keep accurate records regarding compliance with the standard for various product combinations. In general, records will be kept for product combinations of manufacturers' standard offerings.

When customer's own material (COM) or other special materials are specified, it will be the responsibility of furniture manufacturers to certify their compliance with the standard to the satisfaction of the specifier and/or customer. To provide such testing, fabric samples will be required and a cost to the customer may be incurred.

BIFMA believes that maximum fire safety requires a systems approach which considers the entire environment, according to Channer. "Accordingly," he says, "BIFMA, in addition to this standard, recommends that the user consider the following: a) specification of fire-restraining waste containers; b) sprinkler systems; c) smoke and heat alarms; d) heating and ventilation systems designed to isolate smoke and heat; e) provisions for escape; f) fuel load standards; and g) fire safety educational programs."

BIFMA further believes that it is in the best interest of all concerned that this standard can be implemented without the widespread use of possible harmful chemical flame-retardants. In the absence of appropriate standards for toxicity, carcinogenic potential, or other biological hazards, says the standard, it is possible that new side effects that may exceed the flammability hazard may be created by widespread use of such fire-retardant additives.

Finally, Channer points out, BIFMA supports further research which would continue to monitor fire hazard data, provide a better understanding of various furniture uses and their potential flammability hazards, and provide more meaningful test procedures and standards for smoke, flame spread, fuel loading, toxicity, and biological hazards. Also that would require the cigarette industry to manufacture cigarettes that would self-extinguish in a reasonable length of time when left unattended.

The manufacturer certifies that this article of furniture meets the requirements of the BIFMA First Generation Voluntary Upholstered Furniture Flammability Standard For Business and Institutional Markets. Care should be exercised near open flame or with burning cigarettes.

BIFMA exceeds CPSC standard

Recently, the CPSC issued a draft of its fire standard, which modifies and updates the cigarette ignition test. Although similar to BIFMA's standard, the CPSC draft does not include a screening procedure. BIFMA's standard, therefore, is more stringent and will, according to Channer, not be changed to comply to the CPSC draft.

Since BIFMA members comply with the BIFMA standard, all their fabrics meet the standard.

A full copy of the standard, designated "Underwriters Laboratories, Inc., Fact-Finding Report; A Study of Existing Flammability Tests and Requirements for Upholstered Furniture: File R8044, Project 76NK5338, June 20, 1977," is available at $4.25 each from: BIFMA, 2335 Burton S.E., Grand Rapids, MI 49606. □

DESIGNER BEWARE: DAMAGE CLAIMS CAN HIT YOU!

by **NORMAN POLSKY**
President, Fixtures Mfg. Corp.

Product liability claims jumped from 60,000 to one million annually in the past 10 years, with 54 percent of suits favoring plaintiff

My firm is currently involved in a court case in which an elderly woman claims she tripped on the rear leg of Fixtures' Astro 225 chair in a senior citizen recreation room. There was a six-foot clearance between the wall and the back of the chair.

We don't know what the outcome will be, and we, as manufacturer, are just one of several defendants. I do know, however, that court cases of this kind, involving product liability, are a growing phenomenon. And the specifier, along with the manufacturer, dealer, and end-user, have incurred vastly increased liability exposure in laws governing products.

Product liability covers the area of the legal responsibility of the manufacturer and seller, including the specifier and interior designer, to compensate one who has been harmed by a product. Forget all past history on this subject. The ballgame has changed. Rulings by the court have greatly expanded the circumstances under which a plaintiff can collect damages. And the amounts of damage awards seem to be almost without limit.

Though there is little specific precedent for the case we are currently involved in, recent case histories concerning product liability suits in all fields offer a chilling forecast.

Courts favor the plaintiff

In the decade from 1966 to 1975, the number of product liability claims in the United States jumped from approximately 60,000 a year to about one million. The general disposition of awards shifted decisively from the defendant's to the plaintiff's favor. For example, in 1966, 43 percent of all such claims were resolved in favor of the plaintiff. In 1975, 54 percent of the claims were resolved in favor of the plaintiff.

The average award, per claim, over the same time period, jumped from $11,644 in 1966, to $79,940 in 1975. The dollar amounts of awards have continued to climb. As a result, insurance premiums are skyrocketing, and, in some fields, have caused manufacturers to close their doors, since the costs of insurance on products exceeded all potential profits.

It is true that the high awards—the dollars themselves—are now probably encouraging a higher incidence of product liability claims. A portion of the public has surely become aware that the rewards of a product liability suit now exceed the dollars payable by other forms of insurance. There is a trend, too, toward naming everyone, no matter how remotely connected with the product (even suppliers of components and materials, in addition to specifiers), since the prevailing philosophy seems to be: The more you sue, the greater the chance of hitting pay dirt.

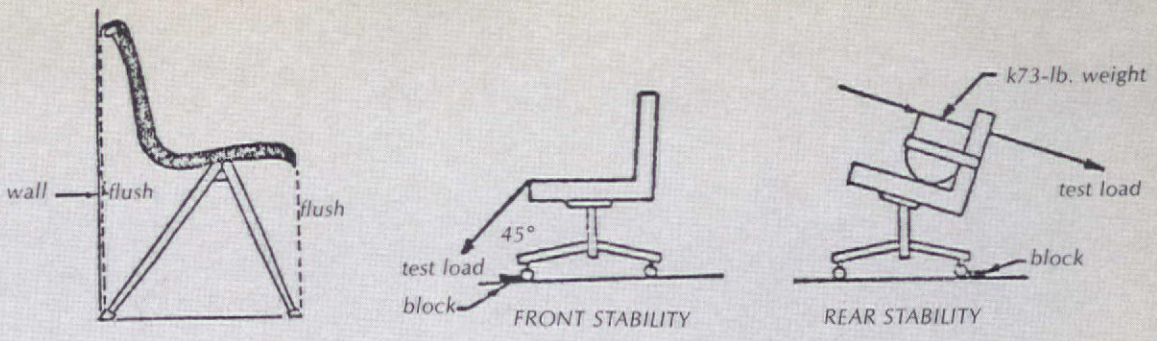
No doubt manufacturers and specifiers should be held responsible for designing and specifying with safety in mind. It would appear that tripping due to chair design will be difficult to prove, however, since chair design requires the consideration of other safety factors, such as rear and front stability to prevent tipping, and secure stackability.

Safety considerations conflict

Proper chair design has to achieve a balance among such factors as guarding against the hazards of tipping, of tripping, of protecting the wall, of saving space, and of stackability. Emphasis has been placed on developing designs

TIPPING vs. TRIPPING: Standards aim for leg, rear and front stability

Ideal leg pattern for stability on Astro 225 (left), introduced its possible vulnerability to causing tripping in current court case, underscoring conflicts of designing for safety. Emphasis of standards has been to prevent tipping, exemplified in ANSI proposed standard modifications (center and right).



that resist forward or backward tipping. Obviously, when a person leans back, which is a part of normal chair use, the chair must remain stable. Older people, in particular, have a tendency to slide to the front of a chair when getting up. Therefore, the chair should also be designed to resist tipping forward.

The single most important factor toward tip-resistance is the location of the legs on the floor in relation to the back and the front of the seat. The more the legs protrude to the rear and protrude forward to the front edge of the seat, the more resistant the chair is to tipping.

The Astro 225 conforms to this design principle. Its front legs rest on the floor at a position flush with the front of the seat. The rear legs rest on the floor at a position about ¼-inch beyond the rear of the back seat. The ¼-inch protrusion is a wall-saver, another important design consideration, though not a safety factor. In addition, the placement of the legs are designed for maximum stability when chairs are stacked. That is a safety consideration, insuring against collapse of the stack and possible resultant injuries. Leg placement also takes economy of space into consideration, since the models are often used in auditorium-like settings.

Despite its conformation to a number of potentially conflicting considerations, it does meet American National Standard Institute (ANSI) stability tests. New minimum requirements have been developed by the engineering committee of the Business & Institutional Furniture Manufacturer's Association (BIFMA) in conjunction with ANSI and have been proposed as modifications to existing standards covering tipping (see illustrations).

Tipping vs. Tripping

Yet, it now appears that resolution of the problem of tipping may introduce another condition which can be construed as a hazard—tripping. Tripping becomes more of a possible hazard when the legs protrude too far behind or too far in front of the seat. So, the safer a chair is made to eliminate tipping, the more vulnerable it becomes to playing a part in another hazard, tripping.

This conflict only serves to underscore the difficulty of developing standards that will eliminate risk or exposure to risk. While specifying products with a concern for, and consideration of, safety factors is an important step toward limiting your liability risk, it's just one of several steps you must take.

Attention to product liability now must be a pervasive part of doing business. Development of strict quality-assurance guidelines governing not only the products you specify, but the way you run your business, will help limit your exposure to liability claims and reduce the pace of spiraling insurance costs.

Here are some suggestions:

1. Be aware of proper furniture design to assure specification of products that are inherently safe. Use common sense and personal testing before specifying. Sit in a chair to determine its resistance to tipping.

2. Specify only furniture that is manufactured by a reputable supplier. Ask to see his testing procedures and scrutinize his quality control measures. Insist that the literature that accompanies products is truthful and adequate to support claims. Make sure the products meet existing ANSI and BIFMA standards.

3. Consult with an attorney regarding all supplier-provided documentation. Are warnings and disclaimers adequate? Who, in the chain of distribution, have "hold harmless" clauses, and how do they affect you? What additional documentation do you need to protect you and your firm?

4. Develop procedures for relating truthful claims to clients. Insist that all possible exaggerations regarding products and services be eliminated from discussions between your representatives and clients.

5. Make sure the user is properly informed concerning product maintenance and use.

6. Set up a complete Quality Assurance Program of management disciplines that cover all functions and actions of you and your employees or representatives necessary to determine that a product you specify will perform satisfactorily in actual operation. This type of program defies formula development. You must tailor it to your own organization. Ideally, it should contain formal guidelines for all procedures, including selling, specifiying, buying, installing, testing, training, and guaranteeing.

7. Support federal public insurance, presented to the House of Representatives under LaFalce proposal H.R. 11788, the Omnibus Product Liability Insurance Act, along with legislation that would provide tax deductions for self-insurance.

8. Encourage your trade associations to support the programs above and to investigate captive insurance programs for members.

9. Shop early and thoroughly for alternative insurance coverage before renewal dates, and consider co-insurance and policies that provide for deductibles on a claimby-claim basis.

10. Learn about lobby for federal and state reforms of tort laws that move away from strict liability and toward responsible regard for consumer protection that does not harm the consumer by inflating the costs of doing business, and thus, inflating the costs of products. □

SCANDINAVIAN FAIR IS CELEBRATION OF CLASSIC WOOD CRAFTSMANSHIP

Scandinavian designers continue doing what they do best: Creating well detailed, spare-lined designs in wood, with some interesting metal collections as a plus

by **ERIK NORUP**

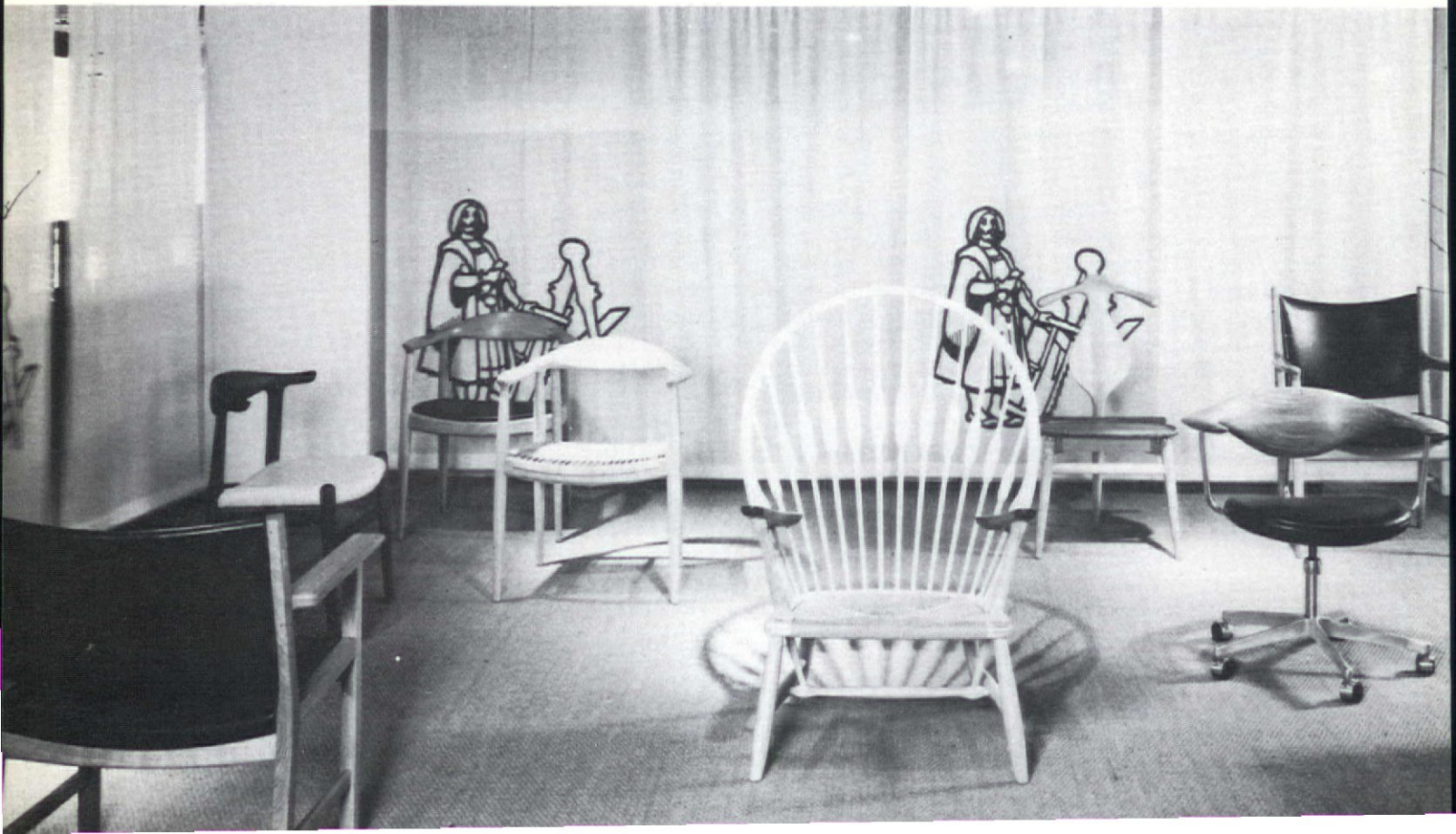
Craftsmanship in wood is what Scandinavian furniture manufacturers always have done best. This year's Scandinavian Furniture Fair in Copenhagen demonstrated that again. From superbly designed bentwood introductions to Poul Pedersen's Violin chair for Cado, the traditional workmanship in wood was everywhere in evidence.

Classic designs of the '50s and '60s by such masters as Alvar Aalto, Arne Jacobsen, Finn Juhl, Poul Kjaerholm, Borge Mogensen, and Hans Wegner, highlighted the Fair. And we hope that young designers can be inspired by and match these masters with their own, new statements in furniture.

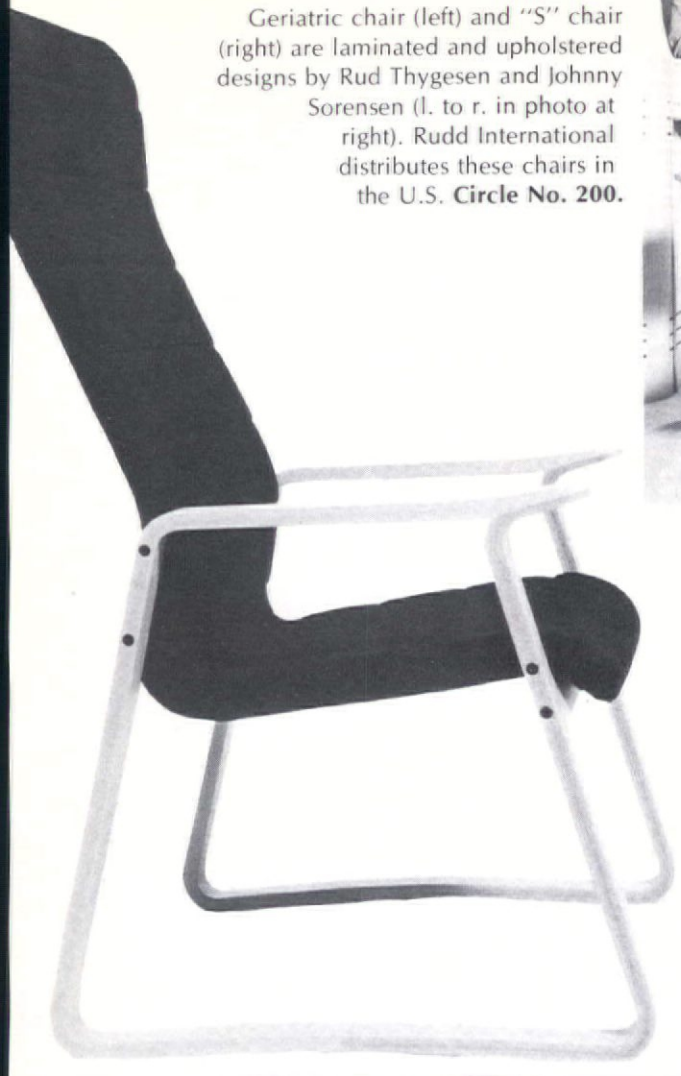
While overblown pillow chairs still were on display, the clean, spare lines achieved with wood continue to predominate in case goods, sofa groups, and general seating. Intricate joinery on all bent parts of woodframes in an ash wood seating and table design by Jorgen Gammelgaard for Karl Anderson & Sons, Huskvarna, Sweden, emphasize the care and attention to the finest details.

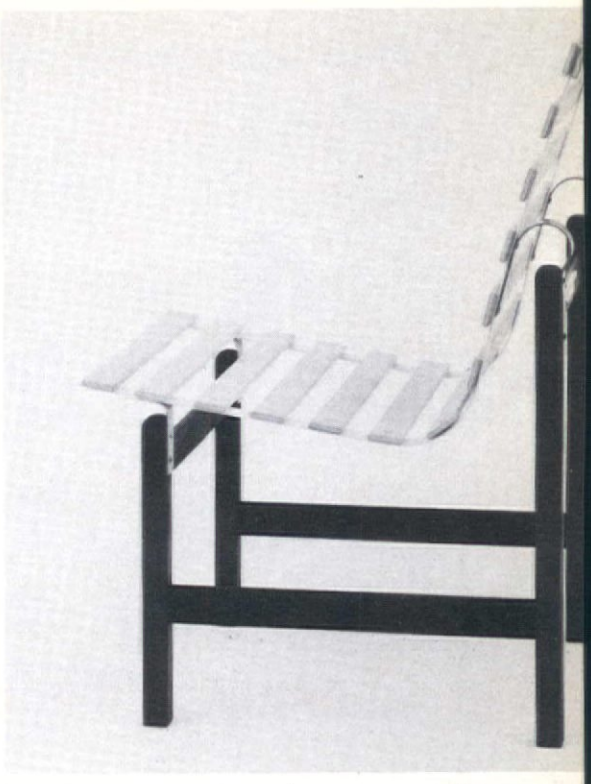
Two attractive designs, an "S" chair and a geriatric chair by designers Rud Thygesen and Johnny Sorensen for Rudd International, were equally acclaimed at the recent NEOCON.

Some of the Fair's best examples of light, simple, and well proportioned furniture are sampled in this report. □

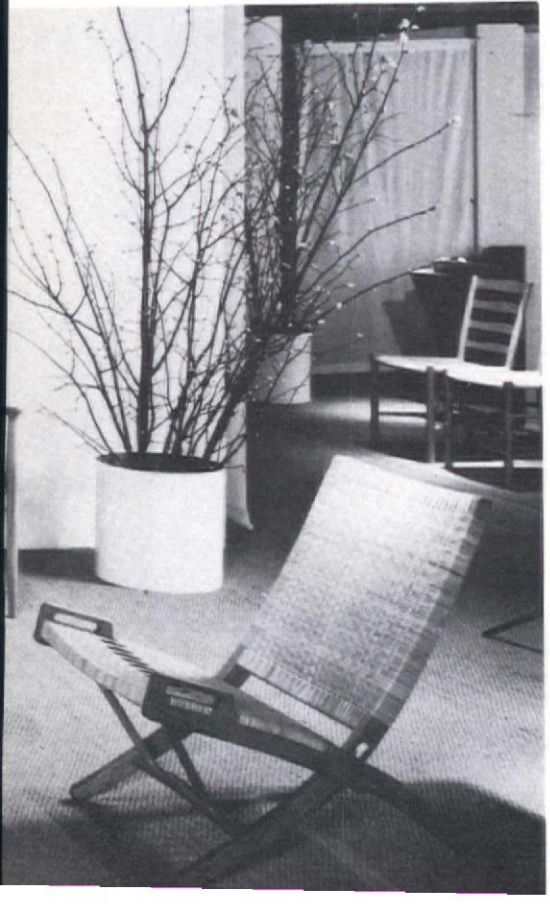


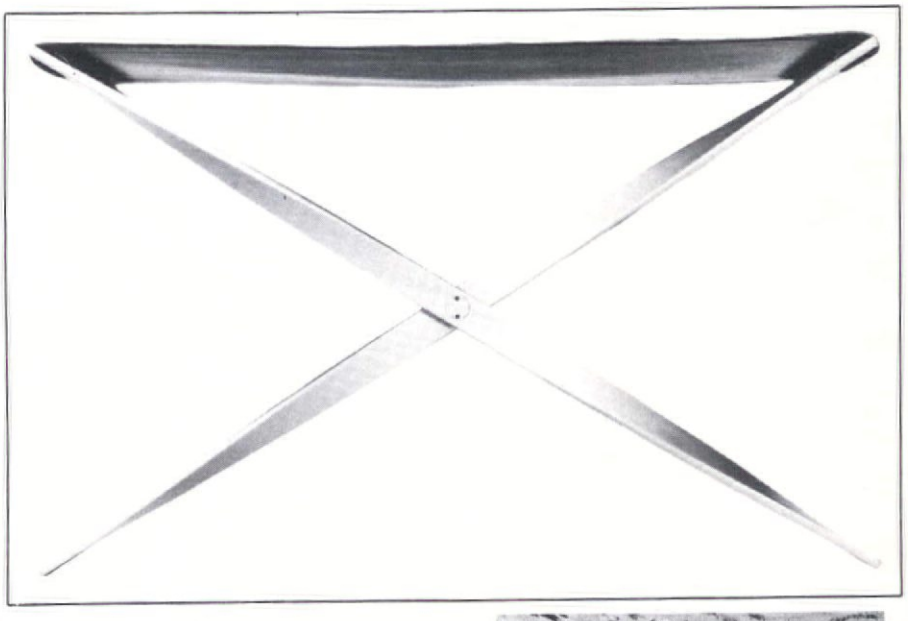
Geriatric chair (left) and "S" chair (right) are laminated and upholstered designs by Rud Thygesen and Johnny Sorensen (l. to r. in photo at right). Rudd International distributes these chairs in the U.S. **Circle No. 200.**





Swedish designer Ake Axelsson suspended a slat body chair on steel springs, mounted on a wood base. The design is first place winner in the 1977/78 Scandinavian Furniture Design Competition and was exhibited at the fair by the Nordic Furniture Manufacturers Council.

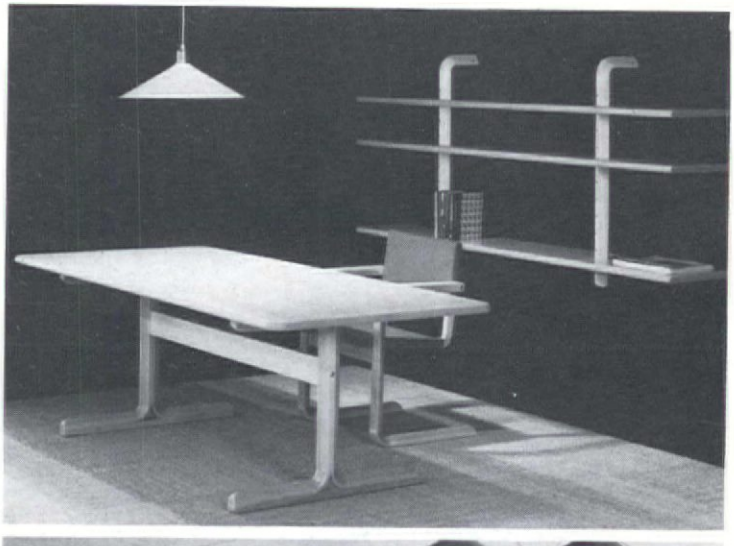




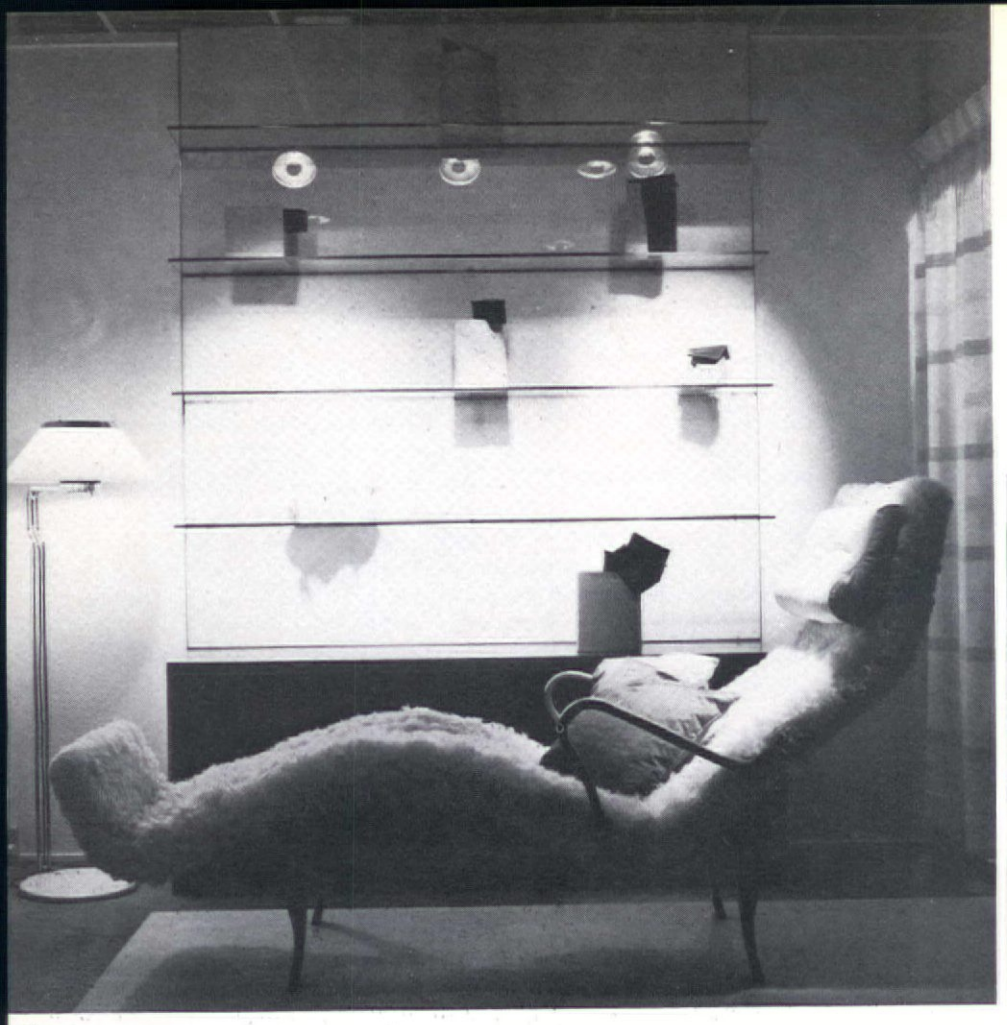
Classics scored high at this year's Fair: Hans J. Wegner's various sculptured chair designs (left) for Johannes Hansen Mobelsnedkeri, and available through Knoll in the U.S. **Circle No. 202**; Poul Kjaerholm's folding stool (above), and circular stool and table (right), distributed in the U.S. by Design Selections Intl. **Circle No. 203.**

Clean, spare lines pervade new and old designs

Wood, metal, and plastic are combined in Connector 80 office furniture line designed by Esko Pajamies, who also added laminated office chairs to the Askos Koivutaru series by Asko Furniture Div. Chair comes in high- and low-back models: U.S. distribution is by Stendig Inc. **Circle No. 204.**

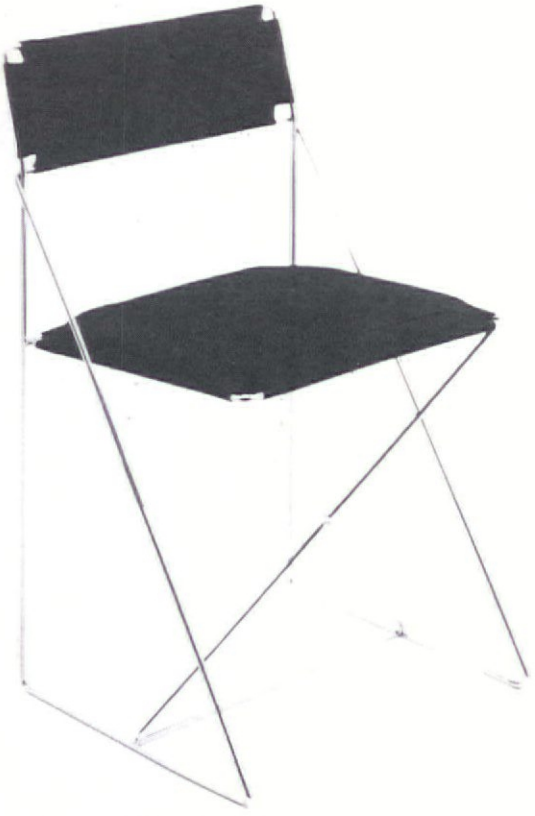


Ash wood seating, table and bookcase designs (right and lower right) by Jorgen Gammelgaard for Karl Anderson & Sons, combine simple sculptural designs with fine engineering. Zig zag fingerjoints at bends in wood frames and self-supporting shelves (see details) demonstrate form/function design relationships. **Circle No. 205.**

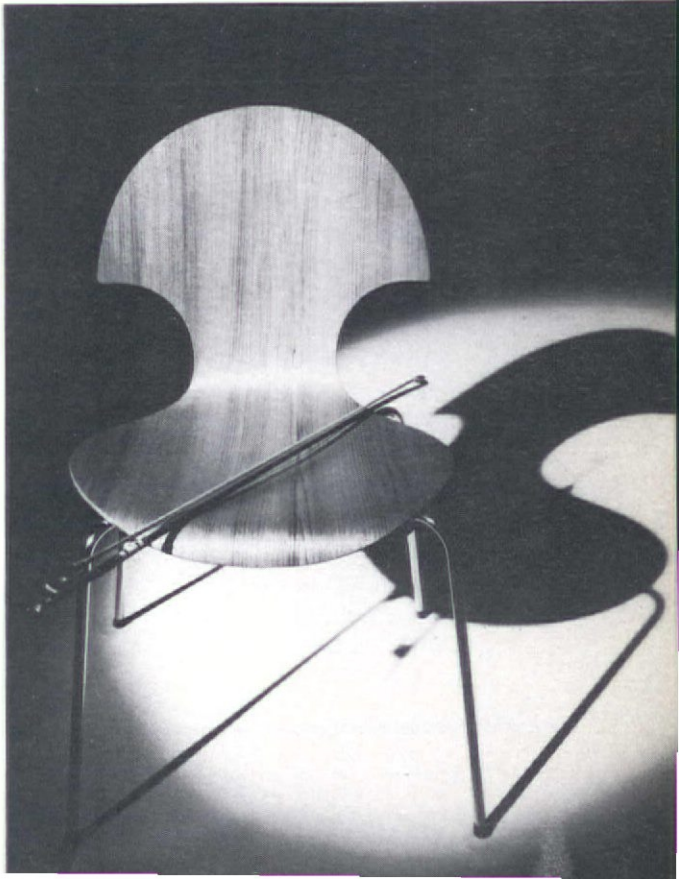


Illuminated display wall in Dux's Avanti storage system (left) consists of a milky white acrylic backpanel, lighted from behind with fluorescent tubes; an aluminum frame, and clear glass display shelves. It was displayed with a Bruno Mathesson classic lounge. Venus table and Galax seating (below), also from Dux, are distributed in the U.S. by Moreddi and Dux Interiors Inc. **Circle No. 206.**

A musical inspiration, the Violin chair (below), designed by Poul Pedersen for Cado/Royal System, has a laminated body of oak, teak, or mahogany, or white, brown, or black lacquer. It stacks and has a chrome plated steel base. **Circle No. 207.**



Industrial designer Niels Jorgen Haugesen, IDD, developed X-line chair and table for Hybodan Glostrup, Denmark. Line includes light stacking chair (shown), high-back chair, table/ottoman combination, and dining/conference table. **Circle No. 201.**



DESIGNER'S SATURDAY: TWO DAYS OF DESIGN DEBUTS END WITH MUSEUM FEST

With new products slated for debut at this year's Designer's Saturday, the 29 member showrooms in New York will become, in effect, a living catalog of contemporary furniture. Interior designers, specifiers, and architects—in short, all design professionals—will examine first hand each of the displays as they tour from showroom to showroom. Always eminently successful, the 2-day event is expected to draw a record attendance on Saturday, October 7, plus Friday, October 6.

This is the eleventh consecutive Designer's Saturday, established so that manufacturers and designers can meet on an informal basis to exchange ideas and discuss mutual problems. The designer is also given the opportunity to view new and old lines without the hovering presence of a salesperson's order pad and without the pressures of waiting office work.

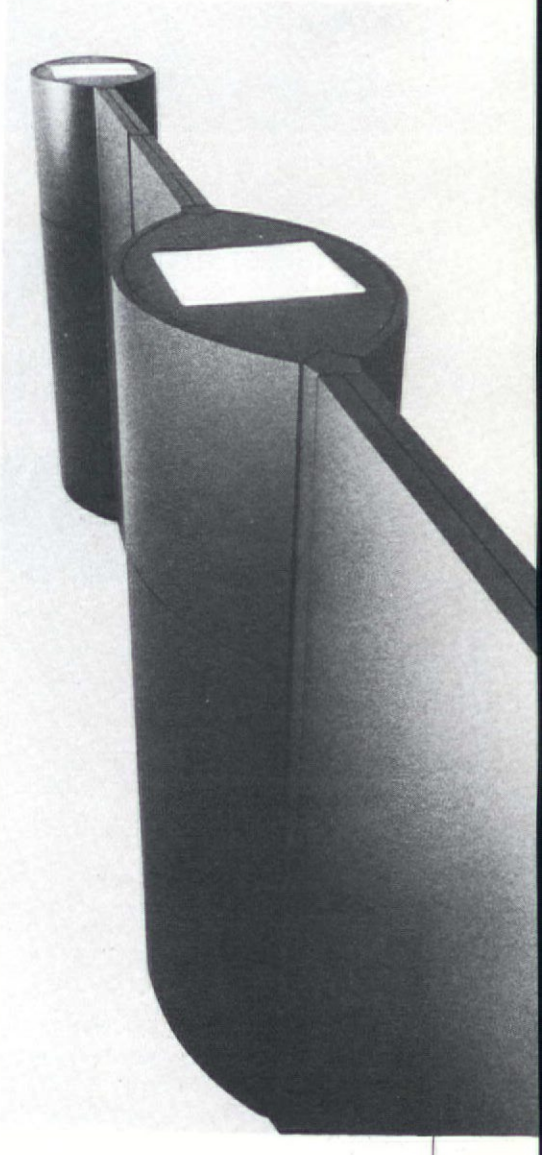
Designer's Saturday also involves itself on other levels. This year, it is working with The Institute of Business Designers, New York Chapter, on a Student Rally. To be held from Thursday, October 5, through Friday, October 7, the Rally will include a full program of seminars, workshops, showroom visits, luncheons, and even a Chinatown banquet. Fee is $20 before Sept. 15; $30 thereafter.

The two days of Designer's Saturday will be topped with a gala reception at the Metropolitan Museum of Art, Saturday, 7:00-9:00 p.m. The Leila Acheson Wallace Egyptian Collection and the Temple of Dendur will be opened for that event. All proceeds from the $10 reception admission tickets are contributions to the museum.

Len Eisen of Intrex, President of Designer's Saturday, will present a $3,000 scholarship award to the winner of the Fashion Institute of Technology student design competition sponsored by member companies of Designer's Saturday. □

MEMBER SHOWROOMS, DESIGNER'S SATURDAY 1978, NEW YORK

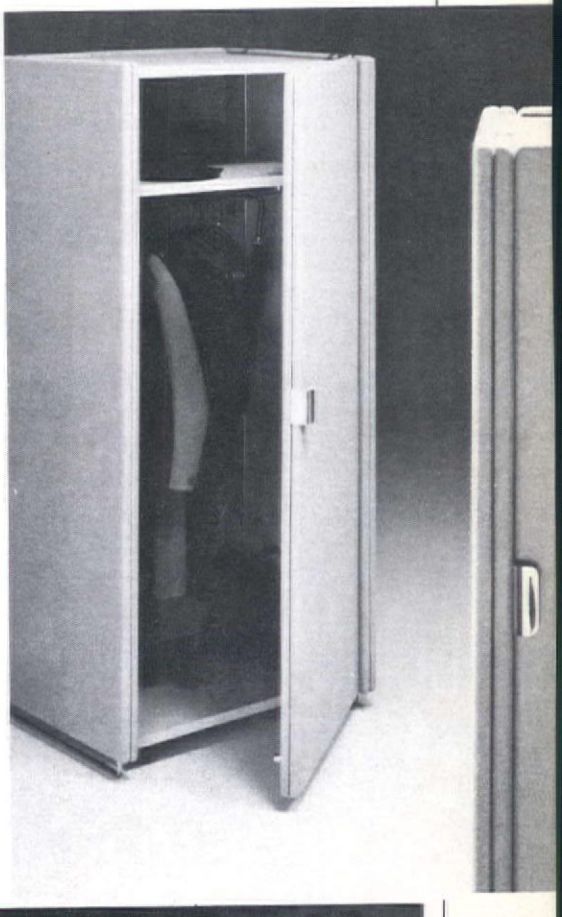
Airborne/Arconas Corp., 150 East 58 Street.
Atelier International Ltd., 595 Madison Avenue.
B&B America, 745 Fifth Avenue.
Beylerian Limited, 305 East 63 Street.
Brickel Associates, Inc., 515 Madison Avenue.
Castelli Furniture, Inc., 950 Third Avenue.
CI Designs, 136 East 57 Street.
Cumberland Furniture Corp., 40 East 49 Street.
Dunbar, 305 East 63 Street.
Harter Corp., 919 Third Avenue.
Helikon, 315 East 62 Street.
ICF Inc. (International Contract Furnishings), 145 East 57 Street.
Intrex, Inc., 150 East 58 Street.
JG Furniture Company Inc., 150 East 58 Street.
Knoll International, 745 Fifth Avenue.
Lehigh-Leopold Furniture, 150 East 58 Street.
Metropolitan Furniture Corp., 979 Third Avenue.
Herman Miller Inc., 600 Madison Avenue.
The Pace Collection, Inc., 321 East 62 Street.
Harvey Probber, Inc., 979 Third Avenue.
Edward Axel Roffman Associates Inc., 160 East 56 Street.
Steelcase Inc., 299 Park Avenue.
Stendig Inc., 410 East 62 Street.
Stow/Davis Furniture Co., 950 Third Avenue.
John Stuart International Inc., 979 Third Avenue.
Sunar Limited, 150 East 58 Street.
Thonet, 305 East 63 Street.
Turner Ltd., 305 East 63 Street.
Vecta Contract, 689 Fifth Avenue.

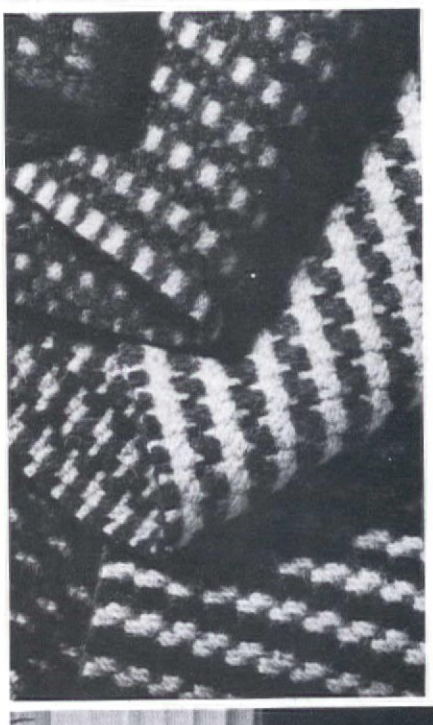


LEHIGH-LEOPOLD *(left): Warren Platner's Sculptures in Wood combines beveled edges and radiused surfaces in compositions of natural elements—wood, leather, granite. It ranges from reception to executive models.* **Circle No. 209.**

JG FURNITURE *(below): A place to hang your hat and coat, the UPS Wardrobe/Storage was designed by Dave Woods in several heights and depths; 34 inches wide. One version is topped with Up Light.* **Circle No. 210.**

BRICKEL *(center left): Ward Bennett designed his Irish Tweedcloth to offer user's choice—front or back. There are 18 yarn-dyed colors in the heavy, all-wool collection that is woven in Ireland at the mill owned and run by Sisters of Charity.* **Circle No. 212.**

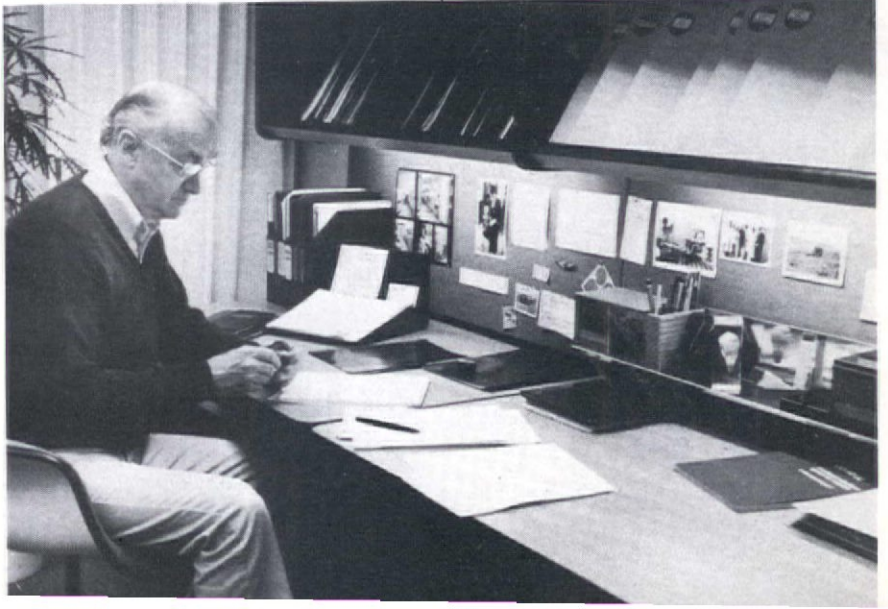




HARTER *(above): Helland-Thurston swivel-based chairs—armless, arm, high-back—have seat construction with a wire tension to keep upholstery taut.* **Circle No. 211.**

HERMAN MILLER *(right): Robert Propst, president of Herman Miller Research Corp. sits at his Action office furniture, which marks its 10th anniversary this year.* **Circle No. 213.**

PROBBER *(opposite): A pocket of light in an ovoid tower connects within the Advent III system, giving added stability without extra legs. It was designed by Harvey Probber and Charles Keane.* **Circle No. 214.**



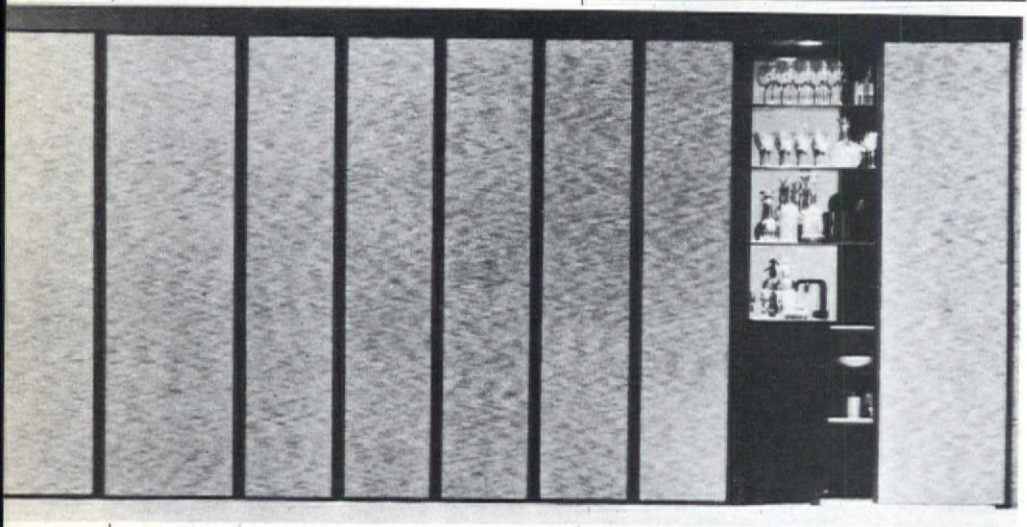
DESIGNER'S SATURDAY

Systems create work environments

SUNAR *(right): Race, a new work environment by Douglas Ball, brings the raceway to work-surface level and provides support structure for components, including desks and acoustical pillows. The system grows vertically and horizontally, according to need.* **Circle No. 215.**

CUMBERLAND/ORSENIGO *(center right): Knife edge accents gently rounded seat, back cushions, and arms. Chair is matched with a sofa and settee.* **Circle No. 216.**

ICF *(below): Clutter is disposed of behind panels that swing open 90 degrees and then push back on hinges into side wall. Interior of Functionwall are fitted for many needs; exteriors are fabric-wrapped, mirrored, or clad with choice of wood veneers.* **Circle No. 217.**



INTREX *(above): Robert Haussman re-designed the 20135 armchair slightly wider and deeper than the previous model. The open grain birch frame can be ebonized, stained in rosewood or walnut, or finished with Intrex Lo-Glare colors.* **Circle No. 218.**

AIRBORNE *(far left): A new 30-degree section gives greater possibilities in the arrangements of the Damier Series by Charles Bernard. All units are molded in high resiliency urethane around a one-unit steel frame, making the construction fire-retardant.* **Circle No. 219.**

STOW/DAVIS *(near left): Richard Schultz designed the Paradigm Series for the open plan, with appropriate scale and continuity of design in all six models. Shown is the desk swivel chair.* **Circle No. 220.**

CASTELLI *(right): Tablet arm, ashtray, audio apparatus can be specified on the Axis 7000 Series of multiple seating. Fully upholstered, the system has self-folding seat on a support beam.* **Circle No. 221.**

VECTA *(below): Charles Gibilterra's family of chairs—from side to executive models—are conceptually related to airframe construction, imperceptibly adjusting to user's change in seating position. Choice of 14 thermoset gloss colors and mirror chrome.* **Circle No. 222.**

THONET *(above): Continuous bentwood arm and front leg of the Robert Bernard armchairs have finger-joint construction between back leg and arm unit. There is also an upholstered arm insert version.* **Circle No. 223.**

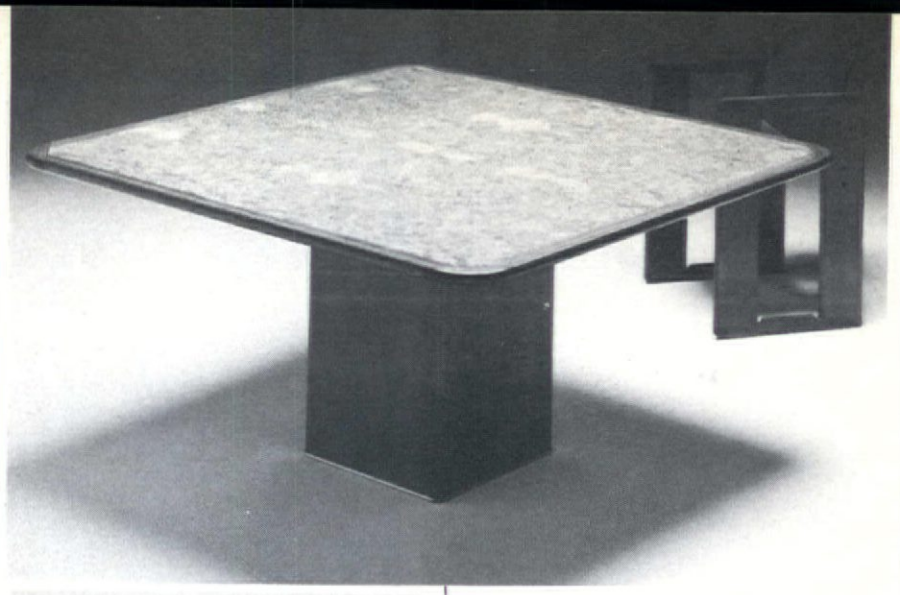
ATELIER *(center, far left): Nova S heavy-duty stacking chair has plastic shell on tubular chrome steel frame. Choices include upholstery and arms, plus numerous finishes.* **Circle No. 224.**

CI DESIGNS *(center, near left): The large executive armchair by Vincent Cafiero comes in two versions: tilt-swivel chair on casters and conference chair on 2-in. diameter chrome glides.* **Circle No. 225.**

KNOLL *(lower left): The Knoll Task Lighting has a louver said to be 45 percent more efficient than others. Its design makes use of trapped light generated by the fluorescent lamp for general up lighting.* **Circle No. 226.**

DESIGNER'S SATURDAY

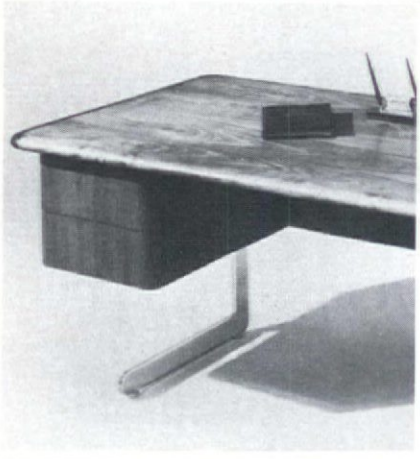
Fluid chair lines have deep-seated comfort



B&B AMERICA *(right): Italian design team of Afra and Tobia Scarpa brings elegance to the Artona square dining/conference table. The richly polished briar top is edged with a lamination of contrasting walnut and rosewood; the base parallels walnut and rosewood panels.* **Circle No. 231.**

JOHN STUART *(near right): Richard Thompson designed the compact Architective V desk on a cantilevered base, with choice of one, two, or three pedestals, in either walnut or burl.* **Circle No. 228.**

METROPOLITAN *(below): Seating system by Brian Kane has status alone or ganged, with the upholstered leg panel to end a row or used between units. Seats can be ganged to face in opposite directions, if whim or need so dictate.* **Circle No. 229.**



STEELCASE *(above): Silhouette captures the stately stance of the 454 series double-shell executive high-back, contoured for lumbar and shoulder support. The one-piece outer polypropylene shell is outlined by an accent reveal. Covering range is wide—fabrics, vinyls, soft leathers; five-star tubular steel base is finished in a polished chrome.* **Circle No. 230.**

TURNER *(left): Extra wide base in high lacquer holds softly shaped, neatly detailed armless seat. It's covered in choice of fabric or leather.* **Circle No. 227.**

PACE *(right): It's the Big Desk, designed by G. Falechini with black glass top and rust cowhide saddle leather bull nose edge. They're supported by black laminate sides. For the total look, back cabinets and desk chairs are part of the Big Series.* **Circle No. 232.**

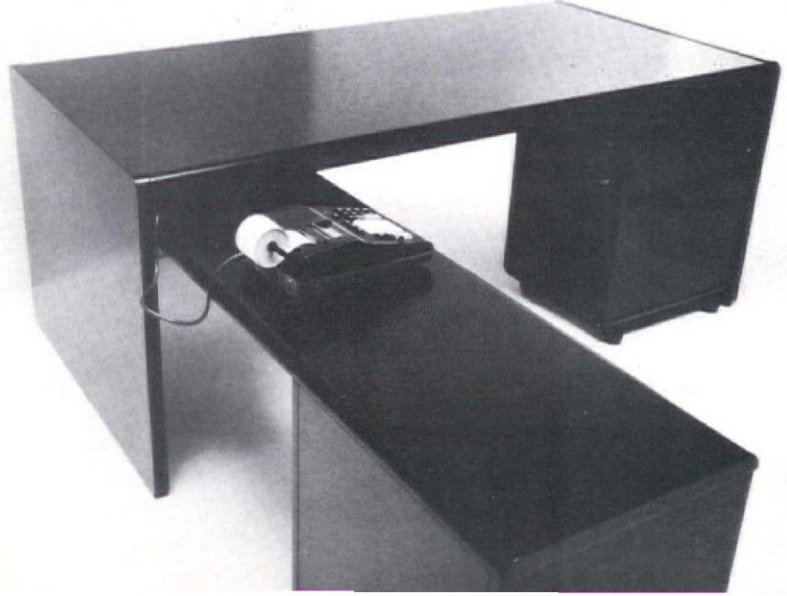
STENDIG *(below): Yon chair has a lean and soft look—the Allison series. Resilient flat-oval steel tubular frame cantilevers the seat and back on a sled base.* **Circle No. 233.**

HELIKON *(above): Udstad/Dandridge emphasize the graceful and flowing line of this armchair with a frame in walnut or oak. Coverings that enhance it are leathers, vinyls, fabrics.* **Circle No. 234.**

ROFFMAN *(center, far left): Ash frame in standard Roffman finishes outlines the stately form of this side chair, in open arm or closed versions. Among the many upholstery choices is Roffman Oxford Baggs in Espresso.* **Circle No. 235.**

DUNBAR *(center, near left): The fluid lines of the Task Group are shown in this finely detailed portion of the table desk by designers Jack Dunbar and Lydia de Polo.* **Circle No. 236.**

BEYLERIAN *(left): Elco linear desk is part of an office landscape system that has components in three different heights and four different finishes.* **Circle No. 237.**



No rivets, no rust in outdoor lines

A—A line of outdoor furniture for gardens, terraces, or recreation areas is available from **CI Designs, Inc.** Made from solid mahogany, the furniture is assembled with marine glue and features double dowel joints for added strength. Dacron wrapped cushions are covered with CI natural canvas. Available in either a natural finish or a hand-rubbed oil finish. **Circle No. 279.**

B—The Charmille arm chair from **Grosfillex** features flat tubing on the complete chair frame, and the seats are fastened without rivets. The frame is coated with white nylon to make it unrustable and maintenance free. The seat is injection molded polythelene. **Circle No. 280.**

C—**Hanno Furniture**, a division of Rotocast Plastic Products, offers this furniture designed for dormitory lounges. The line is reported to be low priced, comfortable, and virtually indestructible. The color is molded in, and washes with soap and water. Some lines are indoor/outdoor for versatile use. **Circle No. 281.**

D—All pieces in **Brown Jordan's** Nomad line, designed by Don Colby, fold for compact storage and easy portability. Versatility includes an ottoman that can also serve as a side table. A pigskin vinyl seating fabric is now available for indoor use.
Circle No. 282.

E—The dining-lounge chair and ottoman are a new addition to the **Stylume** collection of anodized commercial outdoor furniture. Frames are made of square tubular aluminum joined with aluminum aircraft-type rivets. Seating of vinyl straps is available in a wide choice of colors. An assortment of baked polyester enamel finishes is also offered. **Circle No. 283.**

Owens-Corning sound dividers. Designed so your design gets noticed. Not ours.

We don't expect people at work to appreciate the classic lines of our sound divider system.

They may not notice the handsome fabric covering. Or how beautifully the dividers fit together.

They may never see the electrical raceway hidden in the base or the shelf-hanging capability.

And they can't possibly know that their privacy comes from our special sound-absorbent Fiberglas* core inside each panel.

What they will notice is what really matters: the total landscape you've created.

For a free sound divider catalog, color selector, and booklet, "Speech Privacy in the Open Office," write T.E. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

Circle No. 56 on reader service card

OWENS/CORNING FIBERGLAS

*T.M. Reg. O.-C.F. © O.-C.F. Corp. 1978

Tamarac 512

Architect's Choice™. Beautiful enough to greet the public. Tough enough so it can.

Meet the ideal commercial floor. Architect's Choice from Mannington.

It's the commercial flooring you can recommend highly for contract installations for department stores, boutiques, hospitals, schools, or anywhere a floor must take rough treatment. And still look good.

Architect's Choice can take it. It has a hefty 25 mils of no-wax wear layer to assure long wear under punishing conditions. And for fewer seams and quicker installations, Architect's Choice comes in both 6 and 12 foot widths.

Because of its rugged specs and the no-wax wear layer, maintenance is easier and less expensive than other commercial floors. No more need for heavy duty scrubbing and waxing equipment.

And it comes in two designs in 12 beautiful colorations to meet the standards of leading interior designers.

Another big plus for Architect's Choice . . . it costs little more than VA tile, yet it delivers so much more value.

See us in Sweet's General Construction File or write to us for architectural specifications and a color brochure.

mannington
FLOORS FOR LEISURE LIVING

Mannington Mills, Inc., Dept. D77
P.O. Box 30, Salem, N.J. 08079
Over 60 years of fine flooring.

Others by Wellco Carpet Corp., Calhoun, Ga., a wholly owned subsidiary.

Architect's Choice exceeds minimum standards for Federal, FHA, and HEW requirements as follows: F.S.-L.F.-001641, Class 1, Type III and FHA Minimum Property Standards for Single Family and Multi-Family Units. Exceeds HEW requirements under the Hill-Burton Act with smoke generation of 450 or less. Flame Spread ASTM E-84 Tunnel Test of 75 or less, Class B rating with 0 Fuel Contribution, UL subject 992 flame propagation index 4.0 or less.

Circle No. 58 on reader service card

KRUG

The H. Krug Furniture Company Limited
111 Ahrens St. West, Kitchener, Ontario N2H 4C2
(519) 743-8281

Manufacturers of quality seating for office and contract requirements. Warehoused for immediate delivery in the following locations:

DETROIT: Hampton Products Inc., 500 E. Eleven Mile Rd., Royal Oak, Michigan 48068 (313) 547-0900

NEW YORK: Anthonsen & Kimmel Assocs., 440 Park Avenue So., New York, N.Y. 10016 (212) 684-4750

NEW ENGLAND: CCF Inc., 26 High Point Rd., Westport, Connecticut 06880 (203) 259-6522

BALT/WASH/PHIL: ASI Inc., 645A Lofstrand Lane, Rockville, Maryland 20850 (301) 340-8990

ATLANTA: WCFD Inc., 1270 Tacoma Dr. N.W., Atlanta, Georgia 30318 (404) 351-5111

MINNEAPOLIS: Office Merchandizers Assocs., 127 N.E. 5th St., Minneapolis, Minn. 55413 (612) 379-0660

Circle 53 on reader service card

Traditional seating can be customized

A—Falcon Products, Inc., adds this bow back dining chair, to its line of dining room seating. Available with either an upholstered or wood seat, the chairs are in a variety of wood finishes and upholsteries. **Circle No. 284.**

B—Solid beechwood chairs are available from the **Empire State Chair** in customer's own specification. Any standard wood grain, any solid enamel color, any translucent aniline dye, and any upholstery can be custom made. **Circle No. 285.**

C—Traditional and custom seating from **Chairmasters Inc.** includes Louis XVI (shown), with carved frame and available in a variety of finishes and COM fabrics; Art Deco armchair; Breuer chair; and others. All are custom manufactured. **Circle No. 286.**

D—From **Kittinger** is this adjustable swivel arm chair, which comes with a standard mahogany base, loose rubber cushion seat, and full nail-trim. It can be covered in either fabric or feather-soft leather. **Circle No. 287.**

E—Smith & Watson offers this Blackstone executive swivel chair for office or board room. Available in a wide choice of grain leather colors or COM. It can be had in either a 36¼ inch height or 40¼ inch height. **Circle No. 288.**

F—This stacking dining chair is available from **Gasser Chair Co.** It features the company's protective edge, which virtually repels most forms of destruction. Available in a variety of colors. **Circle No. 289.**

G—Shelby Williams Industries, Inc. has this wing back wicker dining chair, featuring hidden casters for easy mobility. The chair is handwoven over a tubular frame, and coated with a clear lacquer. **Circle No. 290.**

H—The Admiral's Arm Chair from **Level of Winchendon** is made from solid hardwood and comes in two stock oil stain finishes. They may also be ordered custom finished to customer's own specifications. **Circle No. 291.**

A CONTEMPORARY WALLCOVERING WITH GREAT DECORATIVE STYLE

FRET is a smartly tailored design which makes a most complimentary background for large scale graphics and modern furnishings. 2 exciting colorways on silver foil and 4 on white vinyl.

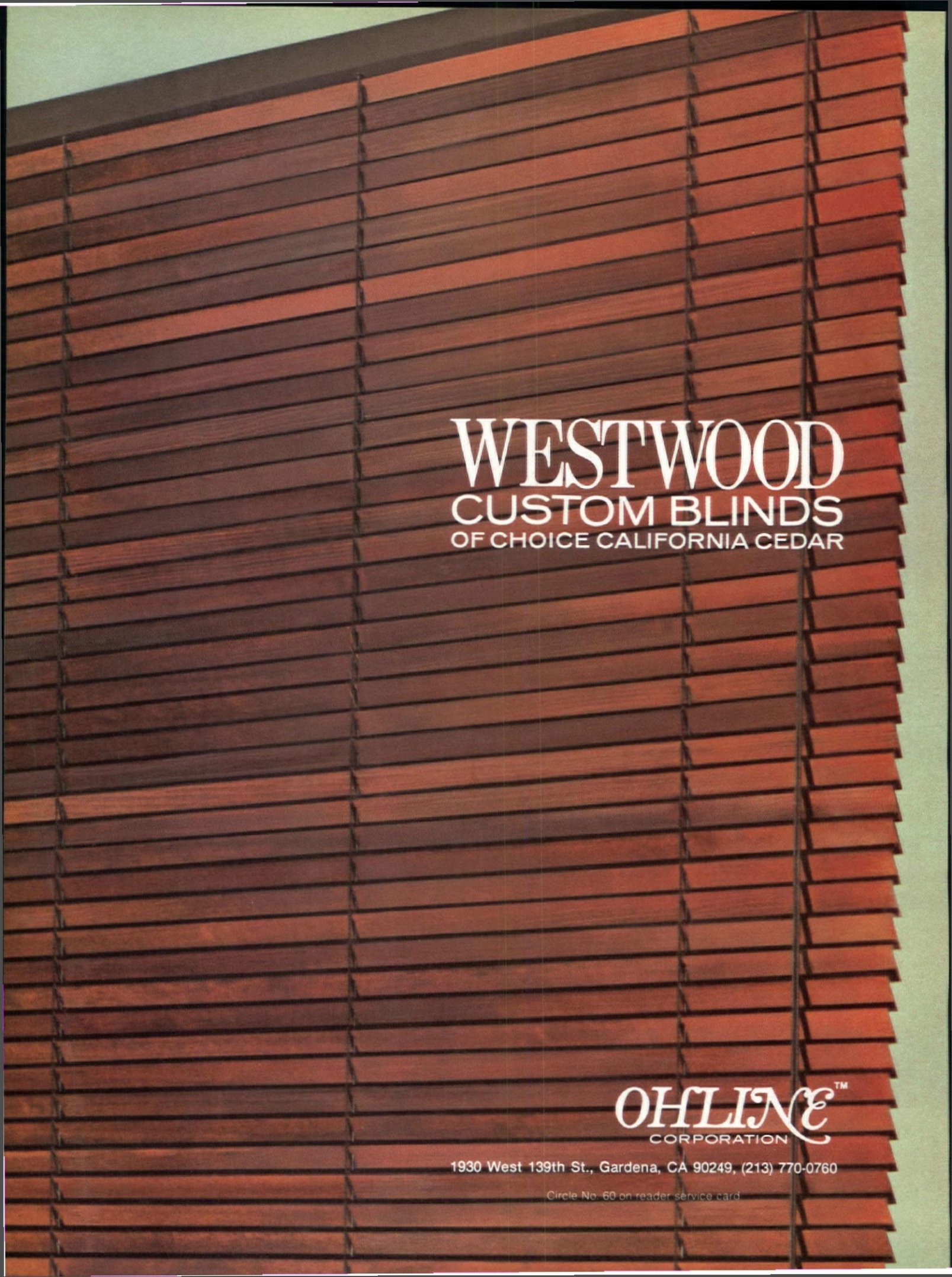
AT INTERIOR DESIGNERS & FINE WALLCOVERING RETAILERS

Albert Van Luit & Co.
WALLCOVERINGS
FABRICS

FROM THE EXCITING, NEW
Quintessence COLLECTION
Designed & styled by JOHN LEIGH SPATH

Office & Factory: Circle No. 69 on reader service card
4000 CHEVY CHASE DR., LOS ANGELES 90039
Van Luit showrooms:
NEW YORK/CLEVELAND/CHICAGO
LOS ANGELES/SAN FRANCISCO/DALLAS

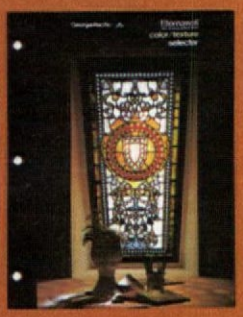
Interior by MAGGI MILLER


WESTWOOD
CUSTOM BLINDS
OF CHOICE CALIFORNIA CEDAR
OHLINE™
CORPORATION
1930 West 139th St., Gardena, CA 90249, (213) 770-0760
Circle No. 60 on reader service card

No sanding.
No laminating.
No painting.
No papering.
No repainting.
No repapering.

That's the beauty of Eternawall.™

Our easy to use, easy to maintain vinyl-covered gypsum board. Use it in offices, hospitals, hotels, motels and schools. In high traffic areas or in wall systems to meet fire resistance ratings. As a demountable partition or permanent wall. For complete specifications, send for our Eternawall color texture selector by writing to: Georgia-Pacific, 900 S.W. Fifth Ave., Portland, Or. 97204.



Georgia-Pacific

Circle No. 61 on reader service card

opus™

Opus casters.

One glance down will have you designing up. To a freshly innovative form. To smooth effortless function. To rugged performance.

There's a hooded Opus. There's an unhooded Opus. An Opus in two sizes, six basic colors, five metallic finishes, even six wheel trim colors. Certainly, there's an Opus to match your design themes. You can get prompt delivery with any combination of these options.

Mix Opus. Match Opus. Add Opus accent and *elan* to your office furniture, home furnishings, appliances, or hospital equipment.

Get your ideas rolling. Write for the Opus Catalog to Bassick, 960 Atlantic Ave., Bridgeport, CT 06602.

SYMBOL OF EXCELLENCE SW

Bassick *Division*
STEWART-WARNER CORPORATION
BRIDGEPORT, CONNECTICUT 06602

Circle No. 62 on reader service card

You are cordially invited...

to visit our beautifully appointed showrooms, where you will find fine furnishings for both residential and contract use.

BEYLERIAN
Innovations In Design

CLARENCE HOUSE
Distinctive fabrics, wallcovering, leather and trimmings

DUX
Contemporary Furniture for Contract and Residential Use

EMPIRE STATE CHAIR CO.
Commercial Contract Furniture—Chairs, Tables and Banquettes

FICKS REED
Rattan Furniture and Accessories for Leisure Living

KITTINGER
Reproductions of Distinguished 18th Century Mahogany Furniture

LIGHTING ASSOCIATES
Contemporary Lighting, Lamps and Crafts

EDWARD PASHAYAN & CO., INC.
Fine French Reproductions and Compatible Contemporary Furniture

ROMWEBER
Furniture of Timeless Beauty

SMITH & WATSON
Makers and Importers of Fine English Furniture

THONET
Manufacturers of Contract Furniture since 1830

TROUVAILLES
French, English Reproductions, Antiques and Decorative Accessories

TURNER
A Showcase of Ingenious, Aesthetically Dramatic Designs

WOOD & HOGAN
Largest Wholesale Selection of Fine English Furniture

WYCOMBE, MEYER
Furniture
Upholstered, Steel, Plexiglas, Wood—Contemporary, Traditional

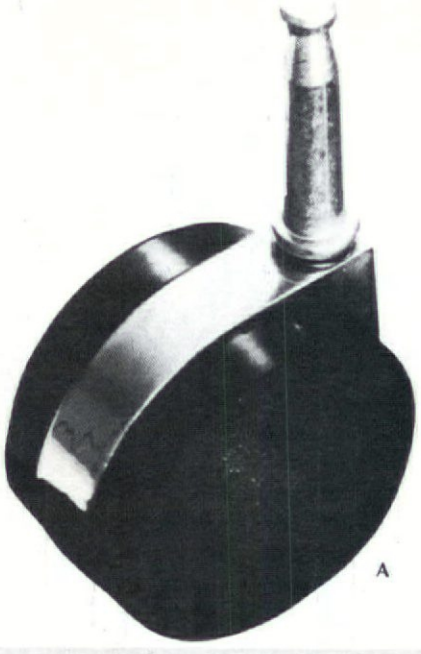
Decorative Arts Center
305 East 63rd Street
New York, N. Y. 10021

Even chair components come KD

A—The Fortress line of twin wheel casters by **International Glide** is a combination of a die-cast metal center portion with nylon wheels. It is designed without a hood to avoid snags from shags. The line is available in brass, chrome, and all black nylon. **Circle No. 293.**

B—**EST Division** of Leggett & Platt has added this oval tubular base to its line of office and contract bases. In nearly all desired dimensions, it can be supplied in either four-leg or five-leg versions. **Circle No. 294.**

C—From **Trendler Metal Products** is this 1020 base for commercial chair use. It is available in a full line of chrome or various colors. Knock-down design for compact shipping. **Circle No. 295.**

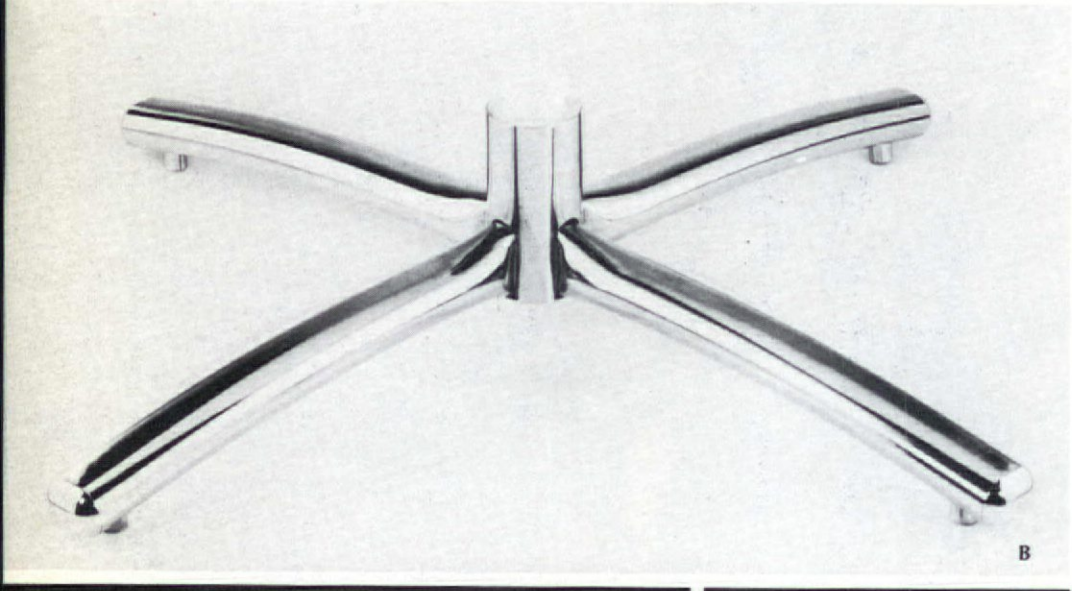


A

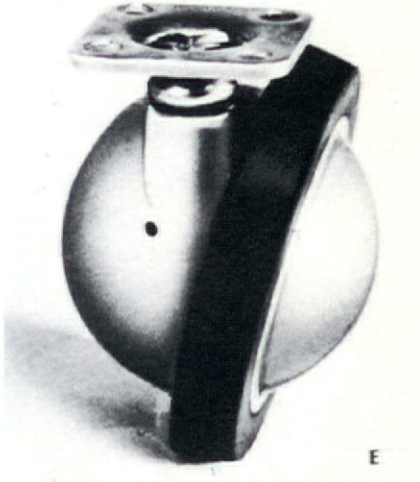
D—The Caster Selector, a new catalog from **Faultless Division**, Bliss and Laughlin Industries, shows the product in actual size, and in such a way that the customer can choose his own design from parts. Color pictures and all specifications are included. **Circle No. 296.**

E—A take-apart caster from **Shepherd Products** is designed to overcome problems of jamming due to lint, thread and other ravelings. Made of a die-cast zinc alloy, it has a 3-inch diameter rubber tread wheel for use on hard floors. **Circle No. 297.**

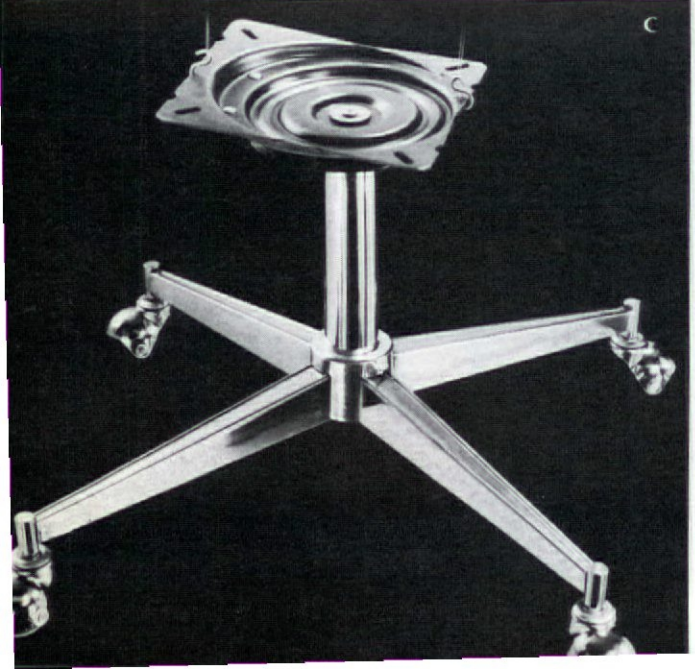
F—A combination of nylon and steel makes up Gemini, a new caster from **Plastiglide Corp.** Tested to exceed BIFMA and ANSI standards, the caster is offered in a variety of solid colors and electro-plated steel finishes. **Circle No. 298**



B

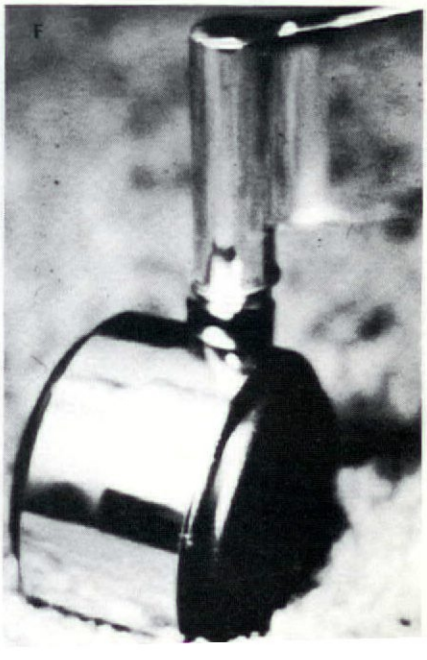


E



C

D



F

Announcing a new 100% wool fabric for upholstery.

Tipper 1

by Cascade Woolen Mills Inc.

"Tipper 1" is exclusively produced in WOOL, unquestionably the world's finest fiber. Unrivalled in its superiority. "TIPPER 1" Collection is manufactured by Cascade Woolen Mills, Inc. through the Woolen System—creating unparalleled texture and beauty. The result brings out to the utmost all the natural look, advantages, and bulk of the wool fiber.

A Full Color Palette Meeting Fire Regulations

Exclusive Distributor

HOMESTEAD FABRICS INC.
Contract Division
111 W. 40th ST., NEW YORK, N.Y. 10018 (212) 221-4700

Circle No. 63 on reader service card

THE 63RD INTERNATIONAL HOTEL/MOTEL & RESTAURANT SHOW.

New York Coliseum, November 5-8, 1978.

The sooner you send the coupon, the sooner you're set to see the whole, wide world of hospitality products and services. Yours to shop, sample and study first-hand. Over 500 exhibits, international as well as domestic. Full schedule of conferences and seminars. All at one time, in one place, under one roof. And all yours now—at our lower advance pre-registration fee.

Make check payable to:
INTERNATIONAL HOTEL/MOTEL & RESTAURANT SHOW
141 West 51st Street, New York, New York 10019

Name_____

Position_____

Company_____

Address_____

City_____ State_____ Zip_____

If additional badges are needed, give us names and titles on your letterhead and send $2 for each badge requested.

An activity of the New York State Hotel and Motel Association, Inc. and Hotel Association of New York City, Inc.

CON

CHECK ONLY ONE

K ☐ Hotel
M ☐ Motel
N ☐ Restaurant/Caterer
P ☐ Architect/Designer/Consultant
Q ☐ Club
R ☐ Dealer
S ☐ Education
T ☐ Employee Foodservice
U ☐ Food Broker/Distributor
V ☐ Hospital/Institution
W ☐ International Visitor
X ☐ Manufacturers Rep
Y ☐ Press
Z ☐ Wholesale
AA ☐ Exhibitor
BB ☐ Other _____

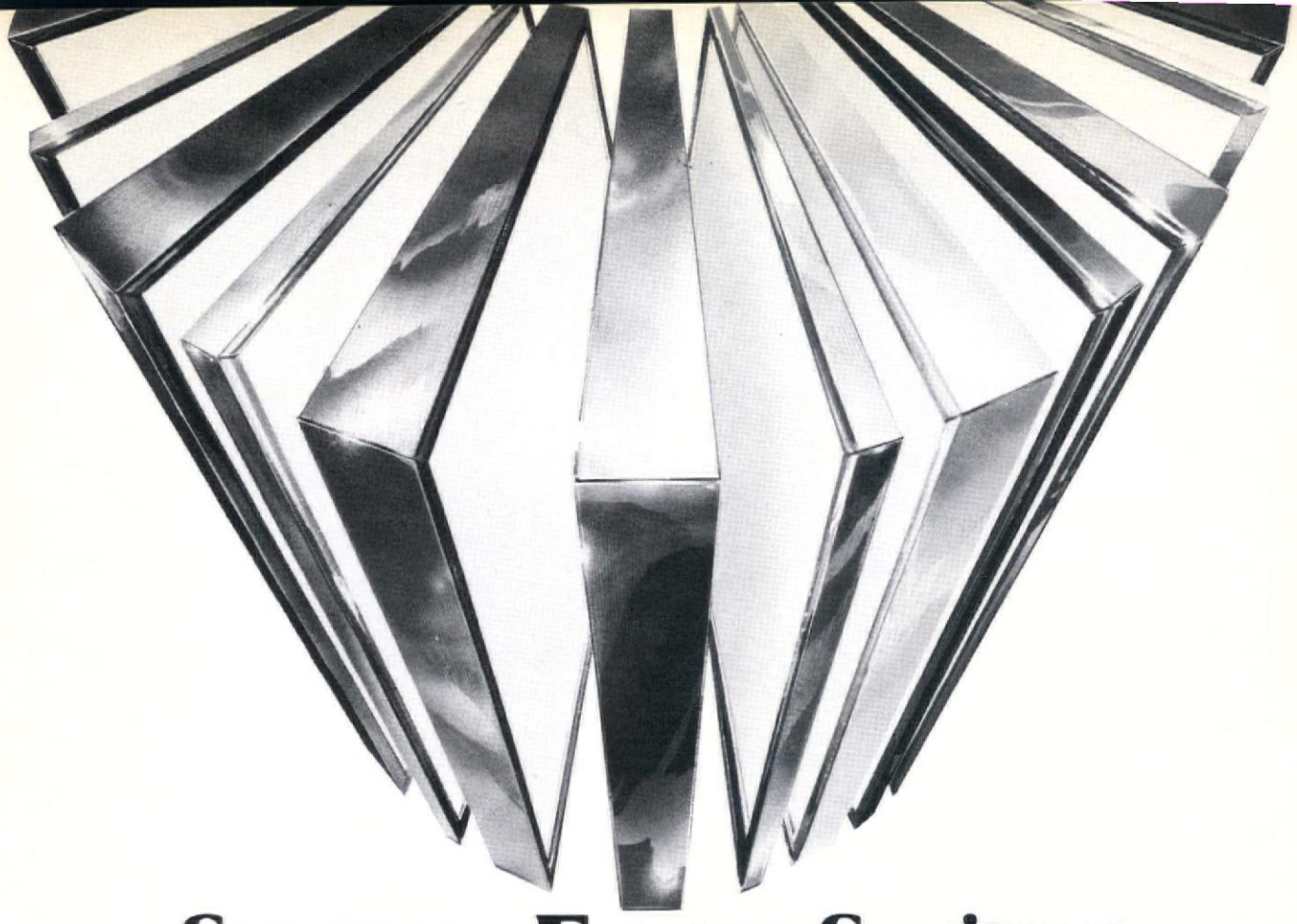
Show hours: Sunday, November 5, 10 A.M. to 2 P.M. Open exclusively for dealers, distributors, wholesalers, architects, consultants, food brokers, interior designers, manufacturers' representatives and the trade press. FROM 2 P.M. TO 7 P.M. OPEN TO THE ENTIRE TRADE.

Monday, Tuesday and Wednesday, Nov. 6, 7, 8 open to the entire trade from 10 A.M. to 6 P.M.

Open to qualified personnel from everywhere in the worldwide hospitality industry. Return coupon before Oct. 1 with a check for $2 and your pre-registration badge will be mailed to you. (Registration at show will be $3.)

Exhibitors: Still time to arrange for a booth. Call (212) 247-0800 or write. **Students:** There will be no student registration at the Show. To be admitted you must be enrolled in a bona fide lodging or foodservice course at a school of higher learning. Pre-registration only accepted by request from your school administrator.

Circle 64 on reader service card



Summer Frame Savings

ASFsales Prices Good thru September 30th.

Call 800-537-7083 Toll Free Now

Pair Length	Standard Width	Canvas Width	Pair Length	Standard Width	Canvas Width
7″	1.60	2.50	38″	4.70	5.60
8″	1.70	2.60	39″	4.80	5.70
9″	1.80	2.70	40″	4.90	5.80
10″	1.90	2.80	41″	5.00	5.90
11″	2.00	2.90	42″	5.10	6.00
12″	2.10	3.00	43″	5.20	6.10
13″	2.20	3.10	44″	5.30	6.20
14″	2.30	3.20	45″	5.40	6.30
15″	2.40	3.30	46″	5.50	6.40
16″	2.50	3.40	47″	5.60	6.50
17″	2.60	3.50	48″	5.70	6.60
18″	2.70	3.60	49″	5.80	6.70
19″	2.80	3.70	50″	5.90	6.80
20″	2.90	3.80	51″	6.00	6.90
21″	3.00	3.90	52″	6.10	7.00
22″	3.10	4.00	53″	6.20	7.10
23″	3.20	4.10	54″	6.30	7.20
24″	3.30	4.20	55″	6.40	7.30
25″	3.40	4.30	56″	6.50	7.40
26″	3.50	4.40	57″	6.60	7.50
27″	3.60	4.50	58″	6.70	7.60
28″	3.70	4.60	59″	6.80	7.70
29″	3.80	4.70	60″	6.90	7.80
30″	3.90	4.80	61″	7.00	7.90
31″	4.00	4.90	62″	7.10	8.00
32″	4.10	5.00	63″	7.20	8.10
33″	4.20	5.10	64″	7.30	8.20
34″	4.30	5.20	65″	7.40	8.30
35″	4.40	5.30	66″	7.50	8.40
36″	4.50	5.40	67″	7.60	8.50
37″	4.60	5.50	68″	7.70	8.60

Aluminum Section Frames

Quality: Our Aluminum Section Picture Frames are made from the finest extrusions available for the crisp look of contemporary metal frames. Order our fine frames for your fine art today.

Service: Our operators are waiting to assist you. Your call is toll-free, and we accept credit cards over the phone for immediate service. It's easy to order, so call now.

Savings: Remember, ASFsales low prices include all hardware, freight and choice of color. If you compare, you'll see that ASFsales frames really do cost less. Order now and save.

- 2 Widths . . . Canvas Width for canvas stretcher . . . or Standard Width for photographs, prints or watercolors.
- 5 Finishes . . . Anodized Silver, Gold, Pewter, Black, Copper Brown. (All necessary hardware, including hangers and spring clips is free.)
- Frames can be ordered to any fraction of an inch, priced to next inch.
- ASFsales pays all freight in Continental U.S.A.
- Check or Money Order must accompany order. Or Master Charge, Visa or Bank Americard are welcome.
- Minimum order . . . 2 frames or $10.00
- Ohio Residents add 4½ % sales tax.

Ask about these ASFsales Products

- Keeton mat cutter $289.00
- ASFsales Premium Colored Mat Board
- 75 Colors
  $2.00 per 32″ x 40″ board
  Call for color brochure
- ASFsales Polyester Film 40″ × 50′ × 3 mill roll $21.50

Prices Include Hardware, Postage, Handling & Finish.

ASFsales

P.O. Box 6026 Toledo, Ohio 43614
Call Toll Free 800-537-7083 (Ohio Residents) 800-472-7016*

Circle 65 on reader service card

Circle 66 on reader service card

STYLE 961-1

At Paoli® styling and craftsmanship go hand in hand. Years of experience in office chair production have made Paoli® one of the country's most sought after lines. For full information, contact your Paoli® representative or write to the factory. Make Paoli® your single source for quality office, contract and residential seating.

PAOLI CHAIR COMPANY, INC.
Phone: (812) 723-2791
Box #30, Paoli, Indiana 47454

Circle 114 on reader service card

Laverne®

38 East 57 St., NEW YORK, N.Y. 10022
telephone: (212) 759-9743, cable: Lavernint

divisions; Furniture, Textiles, Wallcovering;
+ Works of Art, Painting, Sculpture, Graphics

I WENT THERE TOO.

I went there to see everything that was new this year.
I went there to discover new ways of living.
I went there to touch, admire,
criticize, discuss, ask, estimate, calculate, work, buy...
I went there because a catalogue cannot substitute an Exhibition.
I went there because the ones who did not go have
got left behind.

International Furniture Exhibition

Milan Fair Grounds
22/27 September 1978

EVERYONE'S GOING. ARE YOU?

Circle 68 on reader service card

A Public Service of this magazine & The Advertising Council Ad Council

Your Business can be one, too.

Red Cross needs individual volunteers, and donors of blood and money, by the millions.

But we need even more help. We need the solid support of American Business. And we never needed it more.

If your business is already helping, by organizing blood drives, and by supporting payroll deductions—either directly for the Red Cross, or through the local combined fund drive—the whole community owes you thanks. And we thank you, too.

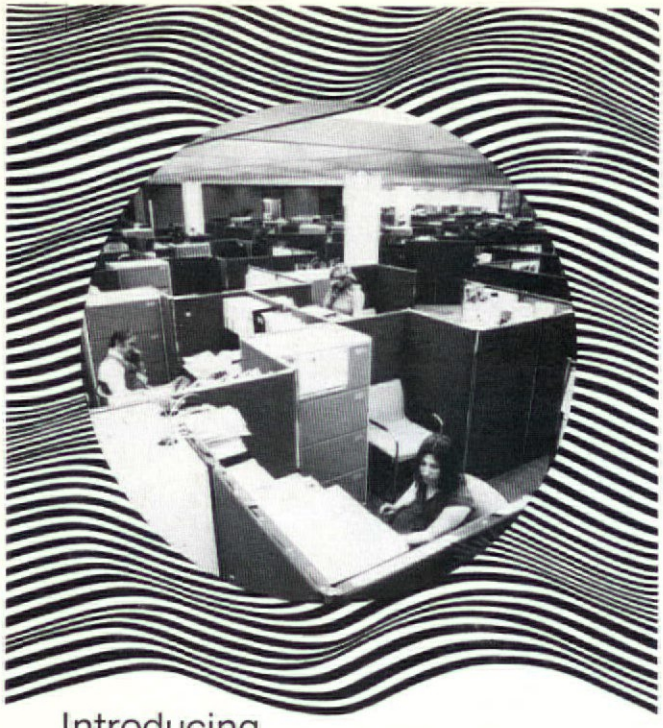
Last year, with help from our friends, we offered major aid at over 30,000 disasters—from typhoons, to local (but just as devastating) house fires.

We were able to help the elderly with practical programs, we helped veterans by the hundreds of thousands, we taught people by the millions to swim or swim better. And that's just the tip of the iceberg.

Think of America without The American Red Cross.

And you'll know why we need your business as a Red Cross Volunteer. In your community. And all across America. Contact your local Red Cross Chapter to see how your company can become a volunteer.

Red Cross is counting on you.



Introducing

SCAMP®

The sound masking system that increases productivity and efficiency in open office areas.

SCAMP is a Self Contained Audio and Masking Package which provides a convenient method for providing sound masking, music, paging and/or emergency tone bursts.

The SCAMP system provides speech privacy in most office areas by generating a unique sound spectrum which masks unwanted speech, noise and its directivity.

Standard or junction-box SCAMP units are economical, too. They're small and lightweight. Require less than 3 watts of power. They're solid-state with virtually no maintenance required. And they don't need complex wiring.

So, if you're considering ways to improve employee morale, productivity and efficiency consider the advantages of an environment that utilizes the SCAMP sound masking system. Write or call today for complete details.

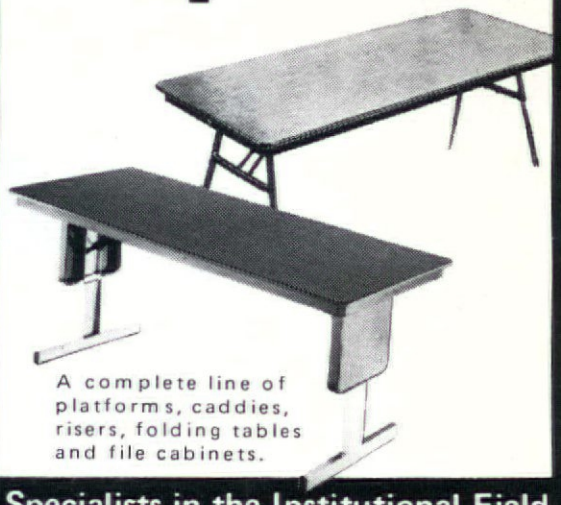
Control Electronics Co., Inc.

139 Florida Street, Farmingdale, N.Y. 11735 · (516) 694-0125

Circle 70 on reader service card

Circle 71 on reader service card

versatile AND adaptable



A complete line of platforms, caddies, risers, folding tables and file cabinets.

Specialists in the Institutional Field

midwest FOLDING PRODUCTS

1414 S. Western Avenue • Chicago, Illinois 60608
312/666-3366

CASTERS

Reliance standard-ball and non-marking black hooded ball metal casters are produced to exacting tolerances, utilizing the finest components and construction features. Models include the less-bulky "Slim-Line" for sleek, modern furniture and the large-wheel, wide-tread "Rite-Roll" for easier movement of heavier furniture. Choose from a wide array of finishes and fittings.

Same-day shipment (unless otherwise specified) on mailed, phoned or wired orders received by noon on "in-stock" items, or made to your specifications and included in the Reliance Import "Ready-Reserve" Program for Legs, Parts and Casters. Let us send you additional information, prices and samples.

WOOD LEGS CASTERS LEG PLATES T-NUTS

RELIANCE IMPORT COMPANY, INC.

P. O. BOX 84 15618 S. BROADWAY GARDENA, CALIFORNIA 90247 TELEPHONE (213) 321-9010

Circle 72 on reader service card

CONTRACT's Construction Lead Service –

bringing specifier/buyers and suppliers together

Valuable service for you
Specifier/buyers and product suppliers both benefit from CONTRACT's Construction Lead Service—a free monthly report on new and remodeled contract projects in the planning stage.

Free to CONTRACT readers:
the help they need from suppliers
Get the special literature, rep attention and manufacturer services that your current projects demand...just by filling out the "construction activity" portion of the reader service card in any issue of CONTRACT. Our Construction Lead Service is the free and easy way to explore products, supplies and services on a priority basis from manufacturers eager to meet your professional needs.

Free to CONTRACT advertisers:
exclusive leads to current projects
CONTRACT's Construction Lead Service gives you key details such as name of job, type of construction, location, purchase deadlines, projected budget, kind of furnishings, name of contact, and more on contract installations in the specification or purchasing stage. You get a free report for every month your ad appears in CONTRACT... or get a full year of reports with a six-time schedule. This free service helps you find immediate business, plus long-term new accounts!!

Construction Lead Service:
Another Industry-Wide Service from the All-CONTRACT Magazine

Contract
A GRALLA PUBLICATION
1515 BROADWAY, 24th Floor
NEW YORK, N.Y. 10036 / (212) 869-1300

Circle 74 on reader service card

European
art posters
We've got it all!

Selection:

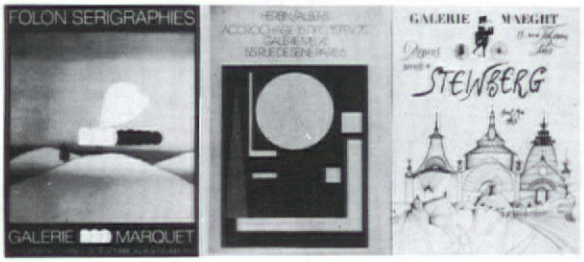
We offer the widest selection of lithographed or silk screened posters this side of Paris.

Price:

Practically unbeatable. That's because we're direct poster importers, with no middle man to increase costs.

Service:

Our staff will help you in your selection and arrange custom matting and framing for each poster.



ART FOR ART'S SAKE

253-13 Northern Boulevard, Little Neck, N.Y. 11362 (212) 423-2392

Write or call for color catalog—
or visit our showroom at any time.

THE WOODEN PEG, INC.

Supplier of cypress for all types of furnishings. Cypress bases available in standard heights and appropriate diameters for dining tables, end tables, cocktail tables, etc. May be used for barstools, pillars, etc.

the Wooden Peg, Inc.

Shown at Designer Products Ltd.—A.D.A.C.

MAIN OFFICE	DALLAS REP	N.Y. REP
P.O. Box 93425	Ginger Miceli Assoc.	Beautiful Woods
Atlanta, Georgia 30318	545 Oaklawn Plaza	230 E. 59th St.
(404) 351-0068	(214) 745-1970	(212) 759-7246

Representative inquiries invited.

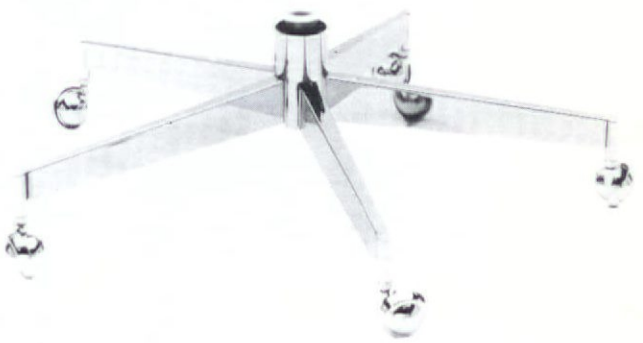
Circle 67 on reader service card

PRODUCTS & SERVICES

SOFT CURVES ELIMINATE WEAR POINTS

A new series of modular units from Marden, designed by Bob Balonick, have soft curves to eliminate wear points. Distinctive upholstered pads can utilize multi-color fabric combinations on a single seating unit. Pads are dacron wrapped. Base is black laminate; frame is wood.

Circle 317 on reader service card



STEEL BASES EXCEED ANSI STANDARDS

A new steel chair base by Glober Manufacturing, No. 3600 5L 26, with caster base, exceeds American National Standards Institute construction standards. Available in both four-leg and five-leg models, the base is Mig welded, with 14 gauge formed steel legs. All welds are concealed. Base accepts casters or glides. Variety of heights and finishes.

Circle 318 on reader service card

COMFORT CARVED FROM FOAM

Called Le Baron, a line of foam seating carved from blocks of foam is offered exclusively in the Western Hemisphere by R.S. Furniture. Upholstery is fabric or leather for chair, corner, or ottoman.

Circle 319 on reader service card

The hand that shaped this tuft made this chair a Gregson.

Each hand that makes a Gregson adds something to it. Each detail of workmanship adds a measure of integrity to the finished chair. The result is a chair that lasts for years because it's a Gregson right down to each tuft.

Discover the pleasure of getting together with a Gregson.

BIFMA Member

Gregson Furniture Industries . Liberty, N.C. 27298

Showrooms: Chicago Merchandise Mart/Dallas World Trade Center/ Denver-1940 Blake Street/New York Furniture Exchange/Seattle-915 Western Avenue/Liberty, North Carolina

Circle No. 89 on reader service card

Circle 97 on reader service card

leaf DESIGNS

Designers and Manufacturers of Fiberglass Planters, Landscapers and Furniture. Also Aluminum Containers.

QUALIFIED REPS PLEASE INQUIRE
LEAF DESIGNS MANUFACTURING: 4865 N.W. 37th Aven.
Miami, Florida. 33142. (305) 635-9491.

18TH CENTURY CHAIR FOR MODERN EXECUTIVE

A tufted swivel/tilt executive office chair from Baker is covered in luxurious suede. It is button-tufted on a wood base, with upholstery tacking on edges.

Circle 320 on reader service card

A Complete "Turn Around" In Design Freedom

TIMES TWO filing systems

- Fast Access. Back-to-back lateral files, rotates to open, close, and lock securely.
- High Capacity. Saves up to ⅔ floor space over conventional files.
- Next to Wall: As a room divider; and exclusive thru-the-wall applications for use in two offices simultaneously.
- Beautiful and Versatile with choice of color and internal accessories — stores any type of records made.
- A modular system that grows with your needs.

TIMES TWO SPEED FILES
GERARD METAL CRAFTSMEN, INC.
151 W. Rosecrans
Gardena, CA 90248
(213) 321-4713

ROOM DIVIDER NEXT TO THE WALL THRU THE WALL

Circle 93 on reader service card

Why every successful contract includes Chaircraft

- wide range of designs, finishes, fabrics (also C.O.M.)
- custom designs and construction to meet your requirements
- extensive production capacity
- reliable delivery schedules
- competitive pricing

Chaircraft
INCORPORATED
A SUBSIDIARY OF HICKORY FURNITURE COMPANY

For details on these and other **Chaircraft** services, call or write Dept. ID, Chaircraft, Inc., P.O. Box 3466, Hickory, N.C. 28601, (704) 495-8291

Showrooms: Chicago Merchandise Mart • Dallas Trade Mart • High Point, N.C.

Circle 73 on reader service card

COLORS THREAD THROUGH GLASS

Ornamental lamps for floor or table use, by Venini, recall glass making. Globe in the Murrhine Tessuto collection has a 14-in. diameter and height. Multi-color glass threads are interspersed in milk white glass. A smaller version, eight-in. high with a 14-in. diameter, combines the same craft and colors. Both take a 100-watt bulb.

Circle 324 on reader service card

COMFORTO OFFERS USE OPTIONS

There are six basic chair shells in CBI's Comforto ergonomic seating. Billed as "a comfortable, efficient, and productive chair for everybody," Comforto offers options that will meet needs for such uses as conference rooms, reception areas, executive offices.

Circle 310 on reader service card

Circle 75 on reader service card

Circle 76 on reader service card

FLEXIBILITY IN CANTILEVERED SIDE CHAIR

A cantilevered chrome frame provides flexibility for comfortable seating in Designers Furniture Center International's DFC47-394 side chair. Furnished in natural leather, the chair is 18-in. wide, 21-in. deep, 32-in. high.

Circle 311 on reader service card

Circle 77 on reader service card

BLOCKHOUSE

BLOCKHOUSE/22 LITTLE LANE/MEDIA/PA/19063/215-876-8122

Representatives in: Boston Dallas Detroit Louisville Los Angeles NYC Philadelphia San Francisco St. Louis Washington DC Write for catalog

X19 **ARMCHAIR** Solid walnut, swivel base available

contract bases

We manufacture a complete line of cast aluminum furniture bases and related parts for Contract, Office and Medical applications. Custom designs to your specifications are also available.

Write for complete information.

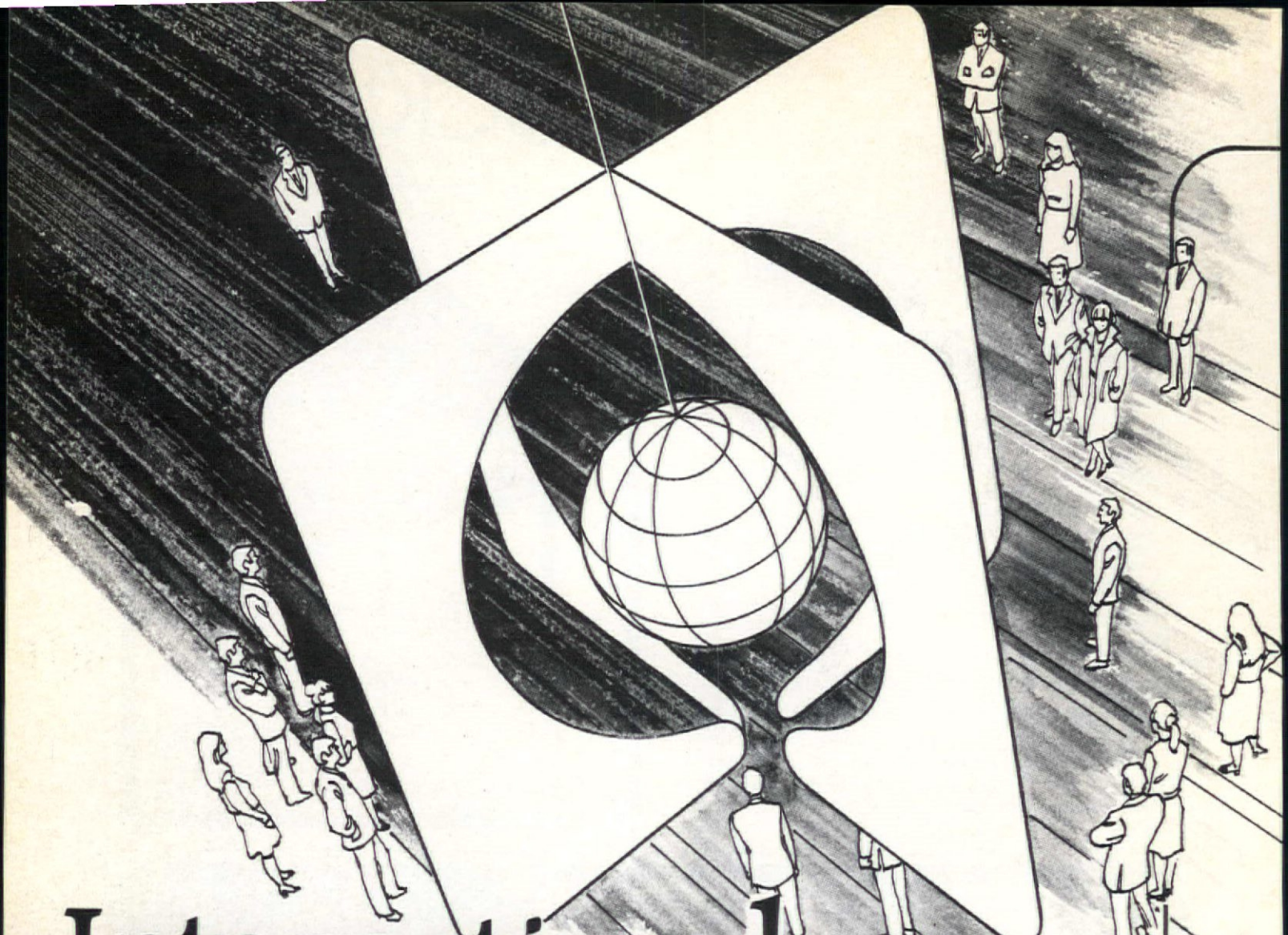
EST

EST Company, Box 25F
Grafton, Wisconsin 53024
(414) 377-3270

A BIFMA MEMBER

A DIVISION OF LEGGETT & PLATT, INC.

Circle 78 on reader service card



International Interior Design Show'78

NOVEMBER 14TH, 15TH AND 16TH.
AUTOMOTIVE BUILDING,
EXHIBITION PLACE,
TORONTO, CANADA.

EVERYTHING FOR THE INTERIOR ENVIRONMENT. BUSINESS, INSTITUTIONAL AND RESIDENTIAL FURNITURE, LIGHTING, FLOOR AND WALL COVERINGS. SHOW FEATURES: MODEL OFFICES DESIGNED BY LEADING CANADIAN FURNITURE MANUFACTURERS, SEMINARS ON COMMERCIAL INTERIORS, INTERIOR DESIGN STUDENT COMPETITION. THE PEKING COLLECTION, OFFERED EXCLUSIVELY IN NORTH AMERICA, INCLUDES MANY CERTIFIED ANTIQUES AND COLLECTORS' ITEMS OF EXQUISITE CRAFTSMANSHIP, FROM THE PEOPLE'S REPUBLIC OF CHINA.

Over 17,000 corporate executives and government officials, purchasing agents, architects, designers, educators, manufacturers and dealers are anticipated at this exciting international forum, endorsed by the Interior Designers of Canada.

For Hotel Reservations: Pat Boon, Exhibits Manager. For Show Invitations: Kathy Gawley, Show Secretary. Show Manager: Bernie Loveridge.

International Interior Design Show, 1450 Don Mills Road, Don Mills, Ontario M3B 2X7 Canada.

ENDORSED BY,
INTERIOR DESIGNERS OF CANADA,
DESIGNERS D'INTERIEUR DU CANADA

southex exhibitions

PRODUCED BY SOUTHEX EXHIBITIONS
A DIVISION OF SOUTHAM
BUSINESS PUBLICATIONS LIMITED

READER SERVICE CARD NO. 79

Visit these major I.I.D.S. exhibitors

Over 280 companies will be participating in the show. The following are confirmed as of July 17, 1978.

AARKASH CHAIR CO. OF CANADA LTD.
ACME SLATE & TILE CO. LTD.
ALGONQUIN COLLEGE OF APPLIED ARTS & TECHNOLOGY
AMHERST GREENHOUSES
ART EFFECTS
ATLAS RUG COMPANY LIMITED
THE AUSTRIAN TRADE COMMISSIONER
AXEWOOD COMPANY LIMITED
BAAS
BARRYMORE FURNITURE
BEAUTILINE SYSTEMS LIMITED
BILLBOARD PUBLICATIONS
BONAVENTURE METAL INDUSTRIES LIMITED
BRITISH CONSULATE GENERAL
JEFF BROWN FINE FABRICS LIMITED
WALTER L. BROWN LTD.
BURLINGTON CARPETS
CANADIAN INTERIORS MAGAZINE
CAPITAL IMPORTS
CARAVELLE CARPETS LTD.
CONESTOGA CARPET MILLS LTD.
CONESTOGA COLLEGE OF APPLIED ARTS & TECHNOLOGY
CONSTELLATION CONTRACT FURNITURE
CORDOUAL S.A.
CORONA DIVISION TEXTILE
CROWN WALLPAPER COMPANY
CROYDON FURNITURE SYSTEMS INC.
CROY-ROY DISTRIBUTORS LTD.
CURVECRAFT CANADA LTD.
CYANAMID CANADA INC.
ALAN R. DALY LTD.
DAYMOND LIMITED
DECORMAG PUBLICATIONS INC.
DOERNER FAULTLESS CASTERS
DOMINION DRAPERY'S
DOMTAR CONSTRUCTION MATERIALS LTD.
DONMAR CONTRACT FURNITURE LTD.
DOR-VAL MFG. LTD.
DU BARRY FURNITURE LTD.
DU PONT OF CANADA LTD.
ECLIPSE THREE
WM. ENGEL CO. LTD.
EUROTEX
THE FLINTKOTE COMPANY OF CANADA LIMITED
FUTURIC OFFICE FURNITURE DISTRIBUTORS LTD.
GAF (CANADA) LTD.
GALAXY OFFICE FURNITURE MFG. LTD.
GENERAL UPHOLSTERY SUPPLY LIMITED
GLOBAL UPHOLSTERY CO.
GRIFFINE-MARECHAL
HARTS UPHOLSTERED PRODUCTS CO. LTD.
HARTUMU INTERNATIONAL LTD.
HEESHADE COMPANY LIMITED
HEUGA CANADA LTD.
HOLMAN DESIGN ASSOCIATES
HUMBER COLLEGE OF APPLIED ARTS & TECHNOLOGY
I.P.A.
IMPERIAL FURNITURE MFG. CO. LIMITED
INDO-ASIAN CARPETS LTD.
INTEGRATED LIGHTING CANADA LIMITED
INTERHOME INTERNATIONAL FURNITURE
INTERIMPEX CENTRE INDUSTRIEL CANADO ITALIEN
IRWIN SEATING CANADA LIMITED
ERIC JENSEN GREENHOUSES LTD.
KIRSCH OF CANADA LIMITED
KOBE FABRICS LTD.
KODAK CANADA LTD.
KRAUS CARPET MILLS LTD.
THE H. KRUG FURNITURE CO. LTD.
LEATHER & SUEDE COLLECTION
LOUVER DRAPE OF CANADA LTD.
LUNDIA SHELVING SYSTEMS LTD.
LYONS WALLCOVERINGS & FABRICS INC.
MANDARIN INTERIORS
MARCO-POLO IMPORT EXPORT LTD.
McGUIRE CANADA
MONSANTO CANADA LTD.
MORETTE'S FURNITURE
NORTHFIELD METAL PRODUCTS CO. LTD.
OCTOPUS PRODUCTS LIMITED
ONTARIO COLLEGE OF ART
ONTARIO CRAFTS COUNCIL
ONTARIO WALLCOVERINGS
RICHARD OWEN
OXFORD PICTURE FRAME CO. LTD.
OZITE CORPORATION OF CANADA LTD.
PEERLESS RUG LTD.
THE PEKING COLLECTION
PHOENIX FLOOR AND WALL PRODUCTS
JEAN PIRAT S.A.
PRIDE OF PARIS FABRICS LIMITED
PROFORM FURNITURE INDUSTRIES LTD.
RAAK OF CANADA LIMITED
RAM PARTITIONS LTD.
REED DECORATIVE PRODUCTS
REED LTD. — SANDERSON FABRICS
GARY REVESZ LTD.
RODA WALLCOVERINGS
RUSCANA FURNITURE LTD.
RYERSON POLYTECHNICAL INSTITUTE
SAINT FRERES
SAMO TEXTILES LTD.
GORDON T. SANDS LTD.
SHEPPARD PRODUCTS LIMITED
SHERIDAN COLLEGE SCHOOL OF CRAFTS & DESIGN
SHOWROOM 41
SILENT GLISS
SINGER LIGHTING
SPECTRUM MARKETING LTD.
SPINNEYBECK ENTERPRISES LIMITED
STAUFFER CHEMICAL COMPANY OF CANADA LTD.
STEPTOE AND WIFE ANTIQUES LTD.
STORVIDERS CANADA LIMITED
STRATTON CARPET INDUSTRIES LTD.
SUPERIOR BLINDS COMPANY LIMITED
THAMES VALLEY BRICK AND TILE
THREE H. MANUFACTURING LIMITED
TORONTO ART LAMP
VAL-ABEL INDUSTRIES
VENTURE CARPETS CANADA LTD.
VICRTEX, L.E. CARPENTER & CO.
E. WOELLER FABRICS LIMITED
WORLD WIDE IMPORTING LTD.
XILA INC.
ALLAN ZACHARY COLLECTION
ZEST FURNITURE INDUSTRIES LIMITED

Total 1977 Audited Attendance 17,503
Interior or Industrial Designers 2,882.
Architects, Engineers, Consultants 1,290.
Dealers 2,033. Buyers or Purchasing Agents 1137. Manufacturers or Suppliers 1,623. Hospital Administrators, Educators, Government Officials, Corporate Official, Office Administrator, Press, Students, Miscellaneous, Exhibitors 8,538.

Circle 80 on reader service card

Over 100 ways to say "table."

Just say "Hamilton Designer Tables"—available in sizes and shapes for every need... contemporary pedestal or fixed-leg tables, plus folding-leg tables that don't look like folding furniture—because their positive leg locks have no springs, no sway, no ugly bracing. Write for catalog.

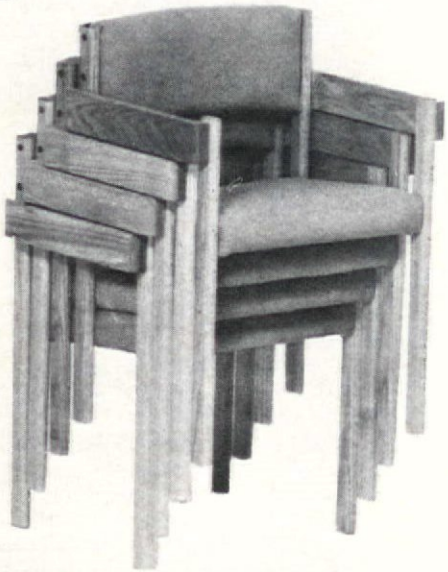
Hamilton INDUSTRIES
Two Rivers, Wisconsin 54241

SWEDISH DESIGN FEATURES FORMED ALUMINUM

Under license arrangement with the Mondo Collection of Sweden, Davis Furniture Industries is producing a series of high- and low-back side chairs and lounge chairs constructed of formed aluminum. Designed by Karl Erik Ekselius, the line is wet-sanded and polished, providing a smooth surface with strong resistance to wear. Allen-head assembly construction offers KD shipping possibilities.

Circle 312 on reader service card

Stack us up against the others!

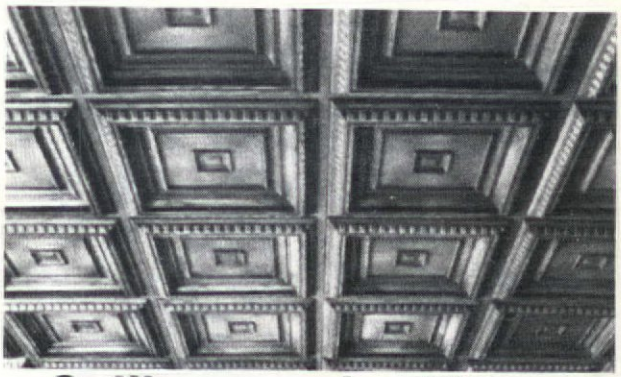


Great chairs in maple, oak and tawny oak, at a surprising price

hippopotamus

18314 OXNARD ST. TARZANA, CA. 91356
(213) 343-4693

Circle 81 on reader service card



Ceilings are looking up.

Create a ceiling masterpiece in any design theme. Traditional, Contemporary, or Old-world elegance. 24 magnificent designs install in standard 2'x2' grids (custom 2'x4' sizes also available) Ceilings accommodate lighting, air diffusers, sound systems, etc.

Entol also manufactures a broad line of exclusive designer products for the building industry . . . Uni-Panels®, ArtCarved™ doors, wall panels, moldings, rosettes, corbells, brackets, plaques, graphics and beams. Call Entol. We do it all!

Entol Industries, Inc.
6300 N.W. 74th Ave.
Miami, Florida 33166
(305) 592-5607

Ceilings by entol

Circle 82 on reader service card

CHAIR DESIGNED FOR WOMEN EXECUTIVES

HON recognizes the growing group of women executives with its HON "T" Series Seating—"Woman Executive Chair." It accounts for a woman's size, weight distribution, and back curvature, and is designed to fit most female frames comfortably. Design incorporates soft vinyls or nylons.

Circle 313 on reader service card

Circle 83 on reader service card

OFFICE 'LANDSCAPE' SYMPOSIUM DENVER COLORADO

The Office 'Landscape' Users Group, will conduct their 20th Office 'Landscape' Symposium in Denver, Colorado, November 8-10, 1978, at the Marriott Hotel. This two-and-one-half day symposium will feature tours and case studies of the 'landscaped' offices of the IRS in Denver and the international headquarters of the Navigators in Colorado Springs. In addition the Users Group and associated professionals will discuss; Planning for 'landscape,' acoustics, lighting and ongoing facilities management.

Workshop sessions will also be included to provide an opportunity for detailed discussions of the concept. For previous attendees, special advanced concurrent sessions are being planned.

For additional information on the symposium or the Users Group contact; Frank J. Carberry Managing Director, Office 'Landscape' Users Group, Box 11182, Phila., Pa. 19136 Phone 215 335 9400.

COR-STAK®, the revolutionary, low-density core material that can save you money 3 ways.

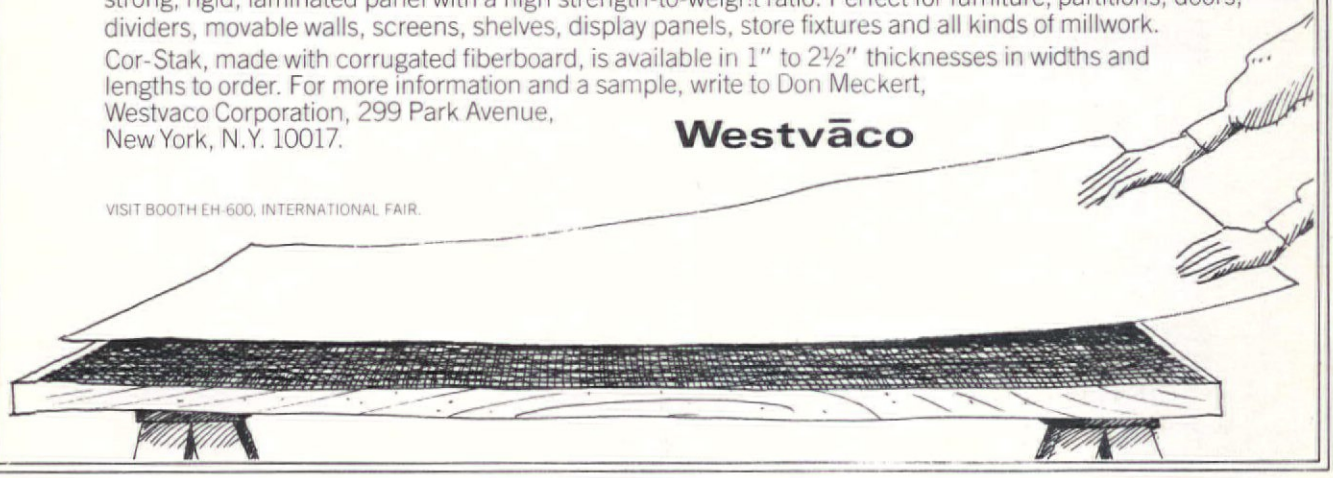
1. MANUFACTURING It's a matter of weight. The lighter a component is, the less it usually costs to phase into a woodworking operation. Like Cor-Stak core material. It weighs 39 pounds less than particleboard, per cubic foot. So, it costs less to handle, to work with, and to laminate.

Whether you face Cor-Stak with plastic laminate, wood veneer, hardboard or plywood, you get a strong, rigid, laminated panel with a high strength-to-weight ratio. Perfect for furniture, partitions, doors, dividers, movable walls, screens, shelves, display panels, store fixtures and all kinds of millwork.

Cor-Stak, made with corrugated fiberboard, is available in 1" to 2½" thicknesses in widths and lengths to order. For more information and a sample, write to Don Meckert, Westvaco Corporation, 299 Park Avenue, New York, N.Y. 10017.

Westvāco

VISIT BOOTH EH-600, INTERNATIONAL FAIR.



Circle 84 on reader service card

Catch up with Conn.y.

NEW YORK'S CONTRACT FLOOR COVERINGS SHOW

The Carpet Center • 919 Third Ave. • N.Y.C.

OCTOBER 5th & 6th

Enjoy New Freedoms in Design

Catch up with the *new* floor coverings. See the latest domestic and imported carpets, rugs, resilient coverings from the world's finest contract sources. Discover innovative styling and color effects that will give new scope to the imaginative things you do!

Gather Facts from Objective Authorities

Catch up with new facts regarding five critical subjects. Important seminars will up-date you on *Flammability* • *Maintenance* • *Fibers and Specifications* • *Lighting and Color* • *Installation* • Have questions answered personally by authoritative panelists.

FREE PRIZE DRAWING FOR VISITORS - VACATION FOR TWO IN FASCINATING CURACAO!

PLUS: Special theater-dinner programs *and* 20% discounts at some of New York's finest restaurants.

ARRIVE EARLY FOR CONN.Y. STAY ON FOR DESIGNERS' SATURDAY

For travel and hotel accommodations call **(212) 661-1606** or write Hilda Schiffres, Apex Travel, 230 Park Avenue, New York, N.Y. 10017

CONN.Y. IS SPONSORED BY THE NEW YORK FLOOR COVERING TENANTS' COMMITTEE THE CARPET CENTER • NEW YORK

Circle 86 on reader service card

CHAIR IS HAND TUFTED

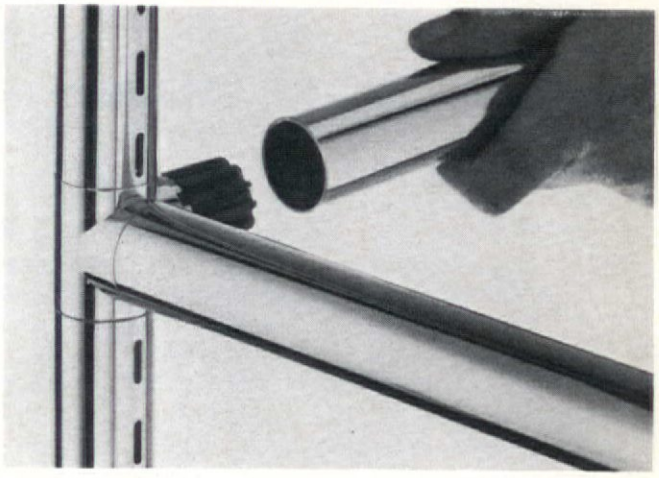
Hand tufting marks the quality of this No. 700 Donna Series Arm Chair from AGI Industries. Filled with premium polyurethan foam, the chair is finished in either polished mirror chrome or antique bronze.

Circle 322 on reader service card

UNICUBE®

SYSTEMS

available in 1/2", 3/4", 1-1/4" and 2" diameters



Please request catalog on your letterhead.

Unicube Corp
a subsidiary of Gordon Tube Products Co., Inc.
150 E. 58th Street, New York, N.Y. 10022
(212) 935-9430

Circle 87 on reader service card

Swan Solid Brass

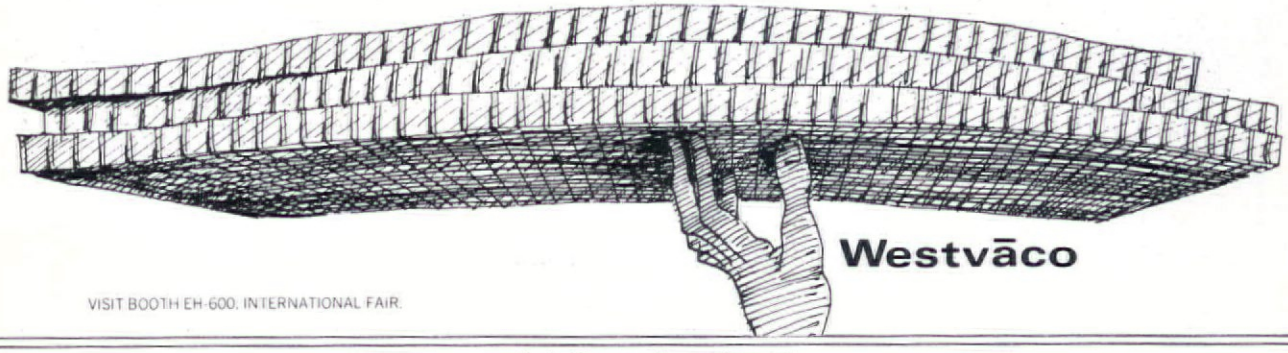
America's most beautiful line of solid brass beds. Most styles in twin, double, queen, and king sizes. Phone or write for full-color catalog and price list. Swan Brass Beds, 1955 East 16th Street, Los Angeles, CA 90021; (213) 748-5315. Nationwide toll-free: 800-421-0141

COR-STAK®, the revolutionary, low-density core material that can save you money 3 ways.

2. HANDLING It's a matter of weight. The lighter something is, the easier it is to handle. Like Cor-Stak core material. It can reduce your in-plant handling costs considerably because a cubic foot weighs only 6 pounds. Just think of the savings in handling furniture or installing a partition or assembling an open-plan office system with a lightweight core like this.

Whether you face Cor-Stak with plastic laminate, wood veneer, hardboard or plywood, you get a strong, rigid, laminated panel with a high strength-to-weight ratio. Perfect for furniture, partitions, doors, dividers, movable walls, screens, shelves, display panels, store fixtures and all kinds of millwork.

Cor-Stak, made with corrugated fiberboard, is available in 1" to 2½" thicknesses in widths and lengths to order. For more information and a sample, write to Don Meckert, Westvaco Corporation, 299 Park Avenue, New York, N.Y. 10017.



Westvāco

VISIT BOOTH EH-600, INTERNATIONAL FAIR.

Circle 90 on reader service card

The Ultimate Campaign!

A superb collection of *campaign* tables, chests, planters and pedestals are now available in unusually rich and varied materials. Natural woven copia grass, gleaming chrome and polished brass, all with brass trim, combine to make these tastefully designed units marvelous attractions. Beautifully hand crafted and *priced* to sell. For details contact:

Gilbert

Gilbert Plastics Inc.,
Box 68, Yorktown Heights, N.Y. 10598.
(914) 528-3537.

Manufacturer's representatives inquiries invited

Circle 85 on reader service card

Write Today For . . . Your HIGH SECURITY Door Hardware Catalog

This catalog includes: Electronic Digital Access Control Systems for computer rooms, Barricader® Bars for isolated doors and warehouses, Combination Locks w/Deadbolts for record storage areas, and other HIGH SECURITY HARDWARE.

You may also consult Sweets Catalog File 8.30/SAR. for further information.

SARGENT & GREENLEAF, INC.
1 SECURITY DRIVE • NICHOLASVILLE, KENTUCKY 40356
TELEPHONE: (606) 885-9411 TELEX: 21-8459

4200 SWIVEL CHAIR
4201 ARM CHAIR
4203 SIDE CHAIR

4200
SERIES

Contemporary design in genuine walnut or Northern birch with your selection of fine upholstery materials and hand-button tufting

JASPER SEATING

JASPER SEATING COMPANY
JASPER, INDIANA 47546

CONTEMPORARY

NOPA SPACE 629

Circle 92 on reader service card

MULTI CONTROLS OFFER EASY ADJUSTMENTS

Microdyne's ME chair series offers a number of design options combined with adjustability. Lever control on the side just below the seat permits easy height adjustment. Among other features: waterfall seat front, deep pan steel construction, die cast aluminum bases, and easy rolling casters.

Circle 323 on reader service card

EXECUTIVE SWIVEL OR GUEST CHAIR OPTION

Modern Mode has introduced it Series 3 Seating line available as an executive swivel or guest chair. Design is distinguished by a heavily radiused frame and softly curved upholstery detailing.

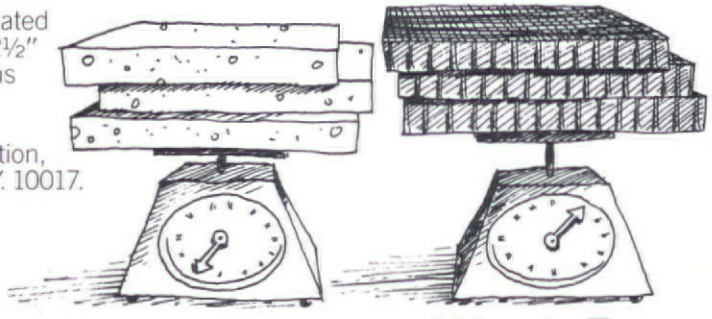
Circle 325 on reader service card

COR-STAK®, the revolutionary, low-density core material that can save you money 3 ways.

3. SHIPPING It's a matter of weight. The lighter something is, the less it costs to ship. Like Cor-Stak core material. A cubic foot weighs 6 pounds, while a cubic foot of particleboard normally exceeds 45 pounds. It's easy to see that a laminated panel with a Cor-Stak core can materially reduce your freight costs...whether shipped as a component or in a finished piece of furniture.

Whether you face Cor-Stak with plastic laminate, wood veneer, hardboard or plywood, you get a strong, rigid, laminated panel with a high strength-to-weight ratio. Perfect for furniture, partitions, doors, dividers, movable walls, screens, shelves, display panels, store fixtures and all kinds of millwork.

Cor-Stak, made with corrugated fiberboard, is available in 1" to 2½" thicknesses in widths and lengths to order. For more information and a sample, write to Don Meckert, Westvaco Corporation, 299 Park Avenue, New York, N.Y. 10017.



VISIT BOOTH EH-600, INTERNATIONAL FAIR.

Westvāco

Circle 84 on reader service card

Circle 94 on reader service card

STYLE 278-1

Paoli®'s ever popular traditional chair now comes in a variety of styles. Posture back, as well as plain back versions, and side chairs are now available to give you the widest selection possible.

Paoli® — All you need for quality desks and chairs.

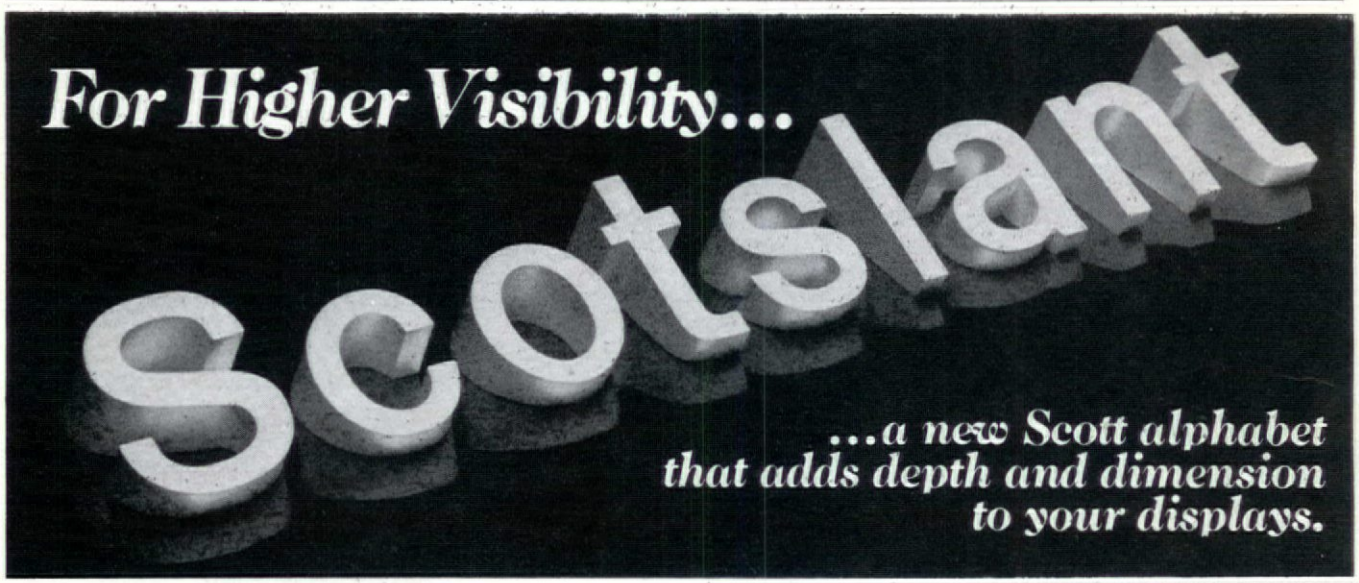
PAOLI CHAIR COMPANY, INC.
Phone: (812) 723-2791
Box #30, Paoli, Indiana 47454

PRODUCTS & SERVICES

GERIATRIC CHAIR OFFERS SOLID SUPPORT

A new geriatric chair is part of its Sitting Pretty contract seating series by Lewittes. Wood frame with removable upholstered seat back and seat are featured in a chair that provides solid seating for the aged.

Circle 314 on reader service card



Of strong urethane in 3" caps, lower case and numerals in black, white or natural tan. Other Scott alphabets in variety of styles, materials, sizes, colors and finishes. Send coupon for FREE Scotslant sample and catalogs.

Scott Plastics Co.
P.O. Box 2958
Sarasota, FL 33578
(813) 355-5171

Scott Distribution:

Akron — (216) 535-6121
Atlanta — (404) 458-9073
Houston — (713) 869-8331
Houston — (713) 228-5358
Indianapolis — (317) 634-2561
London — Denham 4493
Los Angeles — (213) 876-4022
New York — (212) 296-1138
Seattle — (206) 623-2233
Toronto — (416) 363-9459

TOLL-FREE ORDER NO. 1-800-237-9447

Scott Plastics Co. / P.O. Box 2958 / Sarasota, FL 33578

Please send me ☐ **FREE Scotslant sample & catalog**
☐ **FREE Full-Line catalog**

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY, STATE, ZIP _____
PHONE _____

Circle 95 on reader service card

2nd ANNUAL OFFICE PRODUCT DESIGN SHOW & CONFERENCE

October 22-23-24, 1978

PACIFIC DESIGN CENTER

EXHIBIT HOURS
11:00-5:00 DAILY

Architects • Designers • Space Planners
Contract Specifiers • Buyers • Dealers

You are invited . . .

to the 2nd Annual Office Product Design Show & Conference at the Pacific Design Center October 22-24, 1978. The exhibit will feature latest designs in fine office furniture from over 50 of the nation's leading manufacturers.

Products to be displayed include: Casegoods • Office landscaping systems • Accessories • Fabrics • Floor and wallcoverings • Laminates • Special office equipment • Cabinet File Systems • Seating • Chairs and lounge furniture • plus much, much more.

THE CONFERENCE

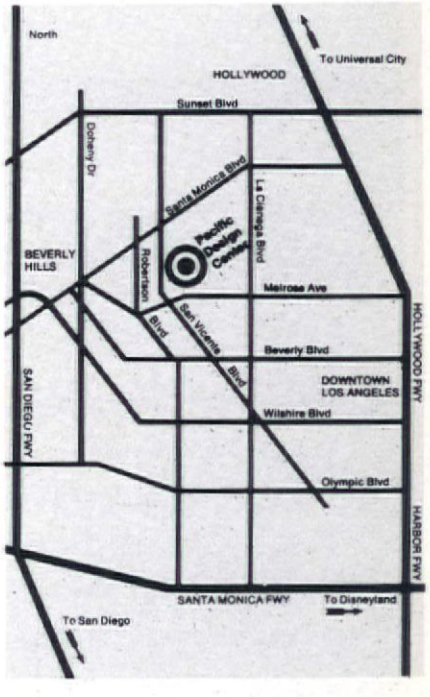
IBD, The Institute of Business Designers will sponsor the Conference in conjunction with the exhibits.

A series of stimulating seminars will be presented on Monday and Tuesday, October 23/24. Selected industry leaders will serve as guest speakers providing trends and developments throughout the office environment.

CONFERENCE SCHEDULE

- MON/OCT 23/10:00AM
  Accessorization in Open Office Design
  — Donald DeMars
- MON/OCT 23/5:00PM
  The Informing Game
  — Dale Ransom
- TUE/OCT 24/10:00AM
  All About The Design Moneymakers — Who, Why, How!
  — Carole Holman

Location



PACIFIC DESIGN CENTER

EXHIBITING COMPANIES / Airborne / Arconas / Alba Ind. / Alex Stuart Design / Ambiant Systems Ltd. / Artafax Systems Ltd. / Aurora Desk Mfg. Co. Ltd. / Biltrite Furniture Mfg., Inc. / Marty Brown and Associates / Canovan / Chairtex Manufacturing Ltd. / Commercial Chair Company / Contract Magazine / Corporate Communications Ltd. / Dapco Inc. / Discovery / Eastern Cabinet & Furniture / Egan Visual Inc. / Environmental Graphics / Fortress / Gerard Metal Craftsmen / Golden Oak Inc. /Gunnar Schwartz Associates / Holdings Ltd. / KT Furniture / Kimball Office Furniture / Klein Englander / The H. Krug Furniture Co. Ltd. / La-Z-Boy Chair Company / Metcor Mfg. / Metrix Wood / Nevamar / Pleion Corp. / Precision Mfg. Inc. / Ste. Marie & Laurent / Albert Salman Company / Structural Concepts / Supreme Equipment / Tandem Desk Company / Van Waters & Rogers / Wesley-Freeman / Xception Design Ltd.

Pre-register now for this all-industry event. No charge, No one under 18 permitted. Write to:
The Show Company International *(A Canners Exposition Group Company)* **8687 Melrose Avenue, Los Angeles, CA 90069 (213) 659-2050**

Circle 96 on reader service card

introducing
the chair
solution

DISTINCTIVE SEATING SELECTIONS IN RATTAN, WOOD, CHROME AND UPHOLSTERED LUXURY.

- UNIQUE DESIGN
- UNSURPASSED QUALITY
- ON-TIME DELIVERY
- TOTAL FLEXIBILITY

LOOK TO LEWITTES . . . FOR THE CONTRACT CHAIR TO MEET YOUR PRICE POINTS AND YOUR MOST DEMANDING SPECIFICATIONS.

YOU'RE sitting pretty® WITH Lewittes

WRITE OR PHONE US FOR FREE LITERATURE:
LEWITTES FURNITURE ENTERPRISES, INC.
INTERNATIONAL CONTRACT DIVISION
171 MADISON AVENUE
NEW YORK, NEW YORK 10016
(212)684-2255

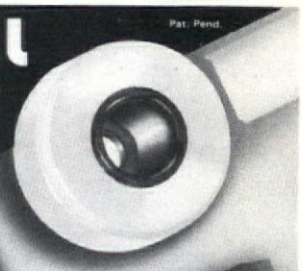
Circle 34 on reader service card

PETAL CHAIR CONCEALS CASTERS

Designed by John Saladino, Dunbar's No. 7814 Petal Chair has concealed casters for easy mobility. Loose knife-edge poly and dacron cushioning is provided in 28-in.-wide, 28-in.-deep, and 32-in.-high chair. Seat height is 17 in.

Circle 321 on reader service card

HOL-O-ROLL
PLASTIGLIDE'S NEW TUBULAR AXLE ROLLER ASSEMBLIES



A GREAT INNOVATION IN LOW-FRICTION, INEXPENSIVE ROLLERS.

Plastiglide's innovative new bearing assembly features a unique tubular axle rivet. Its polished smooth bearing surface is superior to headed or machined solid axles providing smoother, quieter function and longer bearing life. Plastiglide's HOL-O-ROLL tubular axle rivet assembly fastens more securely and achieves superior load bearing capability.

Used in a broad range of applications.

Much less force (push-pull) required to activate than comparable parts with screw machined or cold headed axles. Actually approaches the operational ease of ball bearing rollers costing much more.

Please request free samples and prices, or send your specifications for evaluation and quotation.

PLASTIGLIDE MANUFACTURING CORPORATION

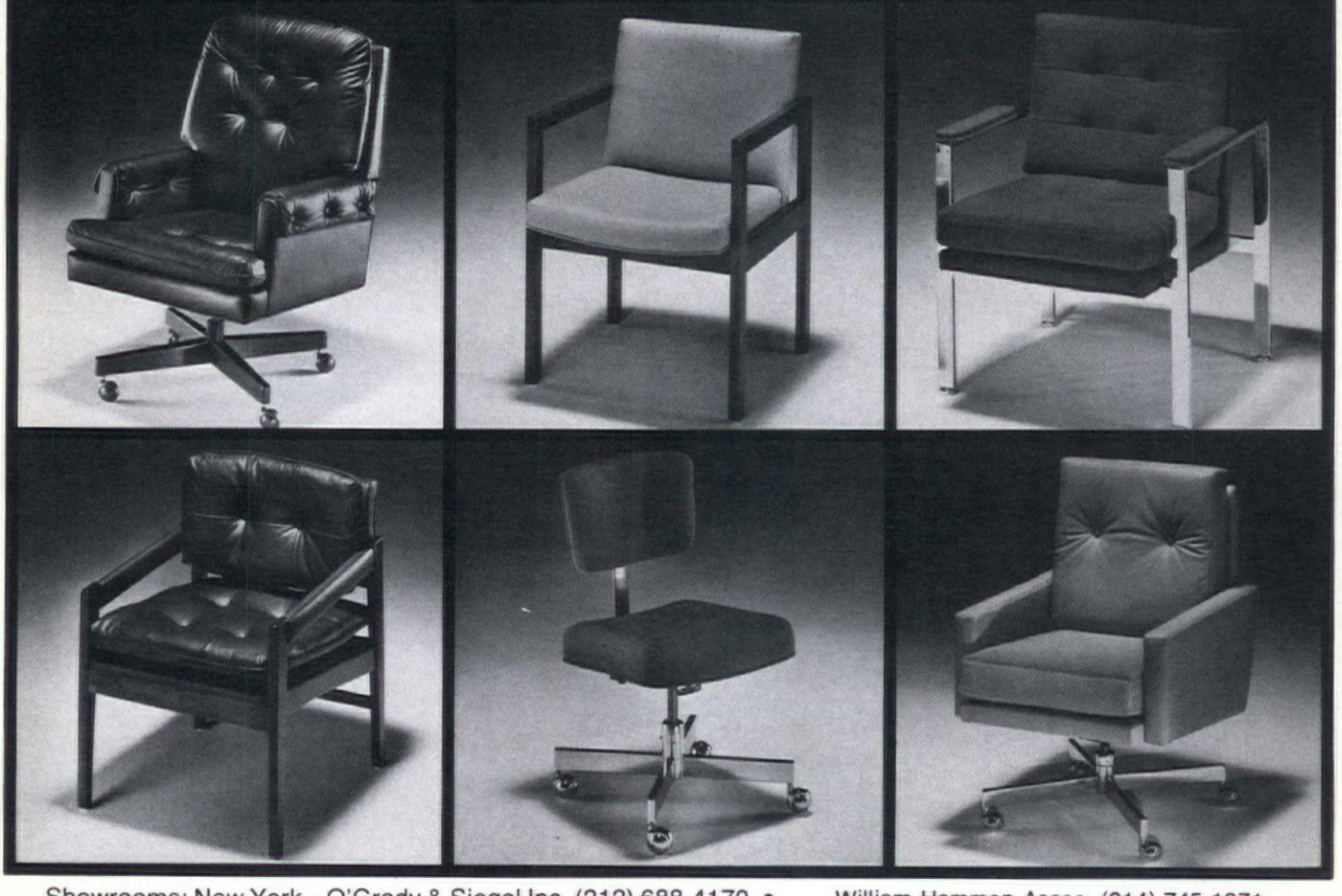
EXECUTIVE OFFICES: 2701 W. EL SEGUNDO BLVD., HAWTHORNE, CALIFORNIA 90250 (213)777 8108 OTHER PLANTS & OFFICES: WATERBURY,CT., CHICAGO,IL., HIGH POINT,N.C., TORONTO,ON

Circle 98 on reader service card

AGI
INDUSTRIES, INC.
1412 Trinity Avenue. P.O. Box 142, High Point, N.C. 27261
(919) 883-4821

QUICK-SHIP PROGRAM

A COMPREHENSIVE PROGRAM OF DESIRABLE SEATING AVAILABLE FOR
SHIPMENT WITHIN 5 DAYS FROM RECEIPT OF YOUR ORDER
WRITE FOR OUR COMPLETE PROGRAM BROCHURE



Showrooms: New York – O'Grady & Siegel Inc. (212) 688-4170 • William Hammon Assoc. (214) 745-1371
Phila. – Wm. P. Corbett Inc. (215) 666-9696 • Dallas – Edmund Kirk Assoc. (214) 744-0696

Circle 46 on reader service card

Circle 100 on reader service card

STYLE 601-2

At Paoli® we offer all types of office chairs — contemporary, traditional, and classic along with matching side chairs and tables. We also stock a full line of desks to simplify your search for quality office products.

Another good reason to make Paoli® your single source.

PAOLI CHAIR COMPANY, INC.
Phone: (812) 723-2791
Box #30, Paoli, Indiana 47454

Paoli

PRODUCTS & SERVICES

BEECH CHAIR OFFERS ARMS OPTION

Durably constructed of beech wood, this R-Way side chair is available both with and without arms. It is furnished in a range of conversion finishes and a variety of fabrics.

Circle 315 on reader service card

CHROME PANELS PROVIDE VERSATILITY

Homapal mirror chrome panels from the Diller Corp. are suited for a variety of interior applications, both horizontal and vertical. Reportedly cut and glue as easily as any regular melamine laminate yet do not ripple or chip. Also said to resist abrasion, alcohol and heat. Easily cleaned with a damp cloth.

Circle 316 on reader service card

More than a pretty face.

Durability. It's very corrosion resistant. Construction is welded nickel-stainless steel wrapped in pure PVC Stylestrap.

Long life. Ten year plus expected life means low, low cost per year. Lets you add to your outdoor furniture instead of replacing it.

Large selection. Complete set of 15 different pieces available in 5 strap colors. Styled gracefully for comfort.

Easy maintenance. Hose clean. Repair cut strap with heat to almost new strength. Leave it outdoors all year, won't blow away. Or stack in small storage space.

Proven performance. That's why SurfLine is used at more major motels than any other outdoor furniture.

Write for a full color catalog.

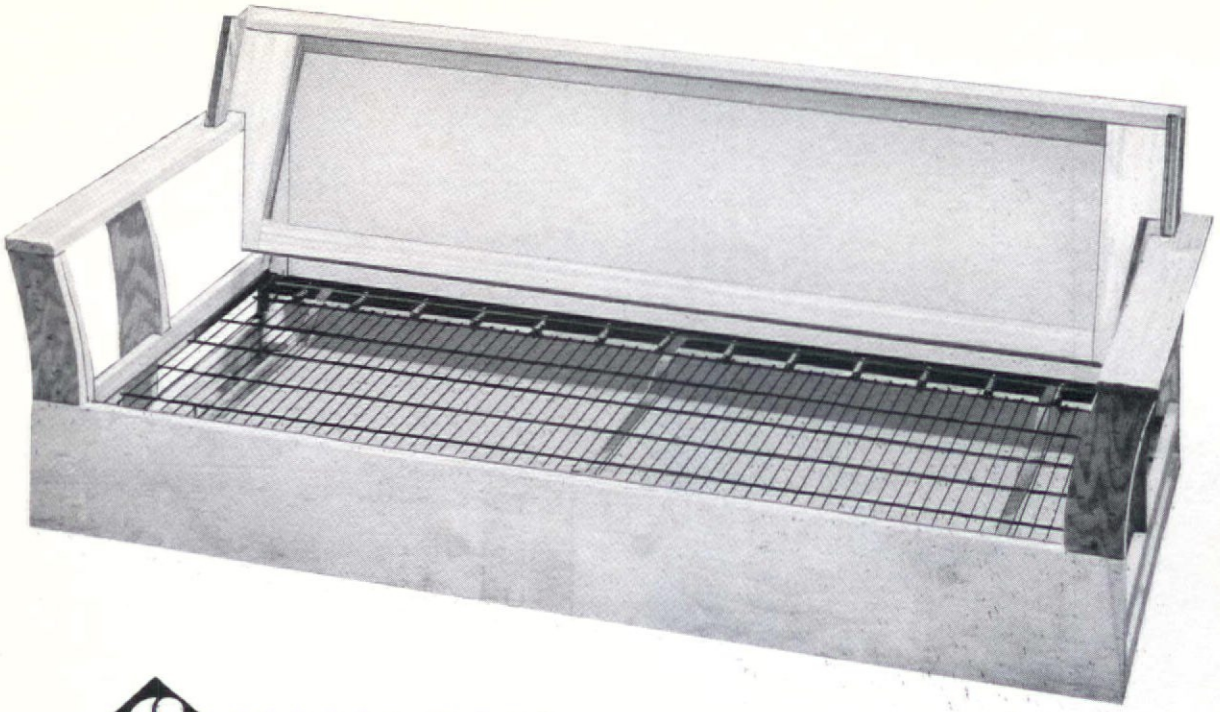
It stacks up as a pretty nice value.

SurfLine®
NICKEL STAINLESS STEEL CASUAL FURNITURE

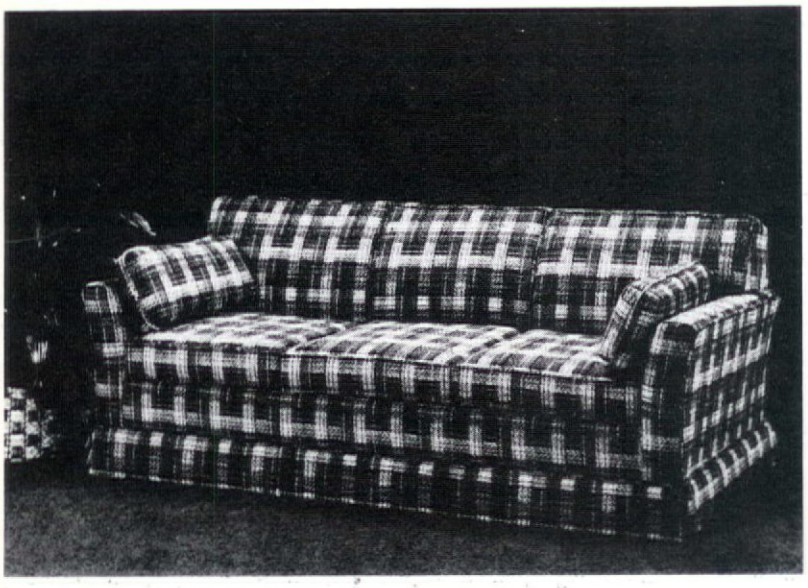
DEPT. A9
WALL TUBE & METAL PRODUCTS COMPANY
1200 KNOXVILLE HIGHWAY • NEWPORT, TN 37821

REG. T.M. Wall Tube & Metal Products Company, Newport, Tennessee.

Circle 101 on reader service card



SIMMONS
where **Perma-Mesh Springs** are a comfort feature!



As a leader in the industry, Simmons is always looking for ways to improve quality. And with Perma-Mesh Springs, they have a comfort feature to show their customers. Closely spaced wires provide the uniform suspension needed for superior seating comfort — plus durability!

SIMMONS
DALE UW-172-4 / Cover - 82017
Length - 78 / Depth - 33¼

PERMA-MESH SPRINGS
The Total Suspension Spring Exclusively From

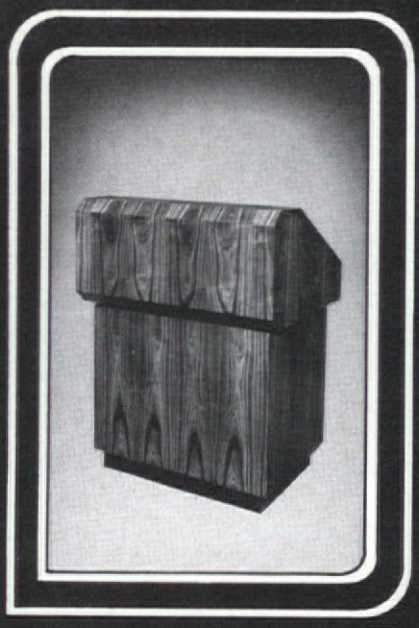
Flex-O-Lators, Inc.

P.O. Box 617, Carthage, Mo. 64836 (417) 358-4095
P.O. Box 2194, High Point, N. C. 27261 (919) 882-3330 / 2300 N. Merced, S. El. Monte, Ca. 91733 (213) 575-1015

Circle 102 on reader service card

Circle 103 on reader service card

VAN SAN LECTERNS SPEAK FOR THEMSELVES



Van San Corporation
1180 Centre Drive
City of Industry, CA 91748
(714) 595-7487 • Telex 67-0320

westnofa didn't invent the wood but we saw the possibilities . . .

LAMILUX designed by Sven Ivar Dysthe NIL. Handsome chairs framed in beech, to be used individually, ganged for multiple seating, and stacked for storage convenience.

westnofa u.s.a.

Specifications, prices and product literature is available on request.
1800 RIDGE AVENUE • EVANSTON, ILLINOIS 60201 • (312) 491-9000

Circle 104 on reader service card

CATALOGS & BROCHURES

Brass bed styling is illustrated in line drawings in a 12-page booklet by Brass Bed Creations. A composite of factory photographs illustrates workmanship, and the drawings of styles range from French Provincial to Early American.
Circle 299 on reader service card

Resilient flooring patterns from Mannington Mills cover a wide variety of tastes. Colorful illustrations and detailed descriptions fill its 1978 catalog.
Circle 300 on reader service card

Various window treatments for contract and architectural purposes are shown in a free, 30-page color brochure by Master Recessed Systems. Includes numerous examples of its innovative designs.
Circle 301 on reader service card

Sheet vinyl flooring is ideal for everything from hospitals to gymnasiums, according to Tarkett's new brochure. Heat welding process joins surface from top to bottom and guarantees strength and flexibility.
Circle 302 on reader service card

Product literature and technical information is available in a new specification guide from the Marlite Div. of Masonite. A fold-out product application chart invites customers to match their product with the appropriate Marlite brand product. Also includes a section for customer service.
Circle 303 on reader service card

Acoustical wall panels, an effective, flexible way to treat walls and office furnishings for sound control, are described in a new brochure by Owens-Corning Fiberglas Corp. Includes installation and assembly instructions.
Circle 304 on reader service card

Wall system components by Reff Products Ltd. are shown in color in a wide variety of configurations in a 16-page brochure. Specifications for the system, called Environment 3000, are also included.
Circle 305 on reader service card

Seating and other contract furnishings from Vicro Corp. are illustrated and described in a contract catalog that includes color photographs and prices. Fold-out pages delineate color choices and alternate materials.
Circle 306 on reader service card

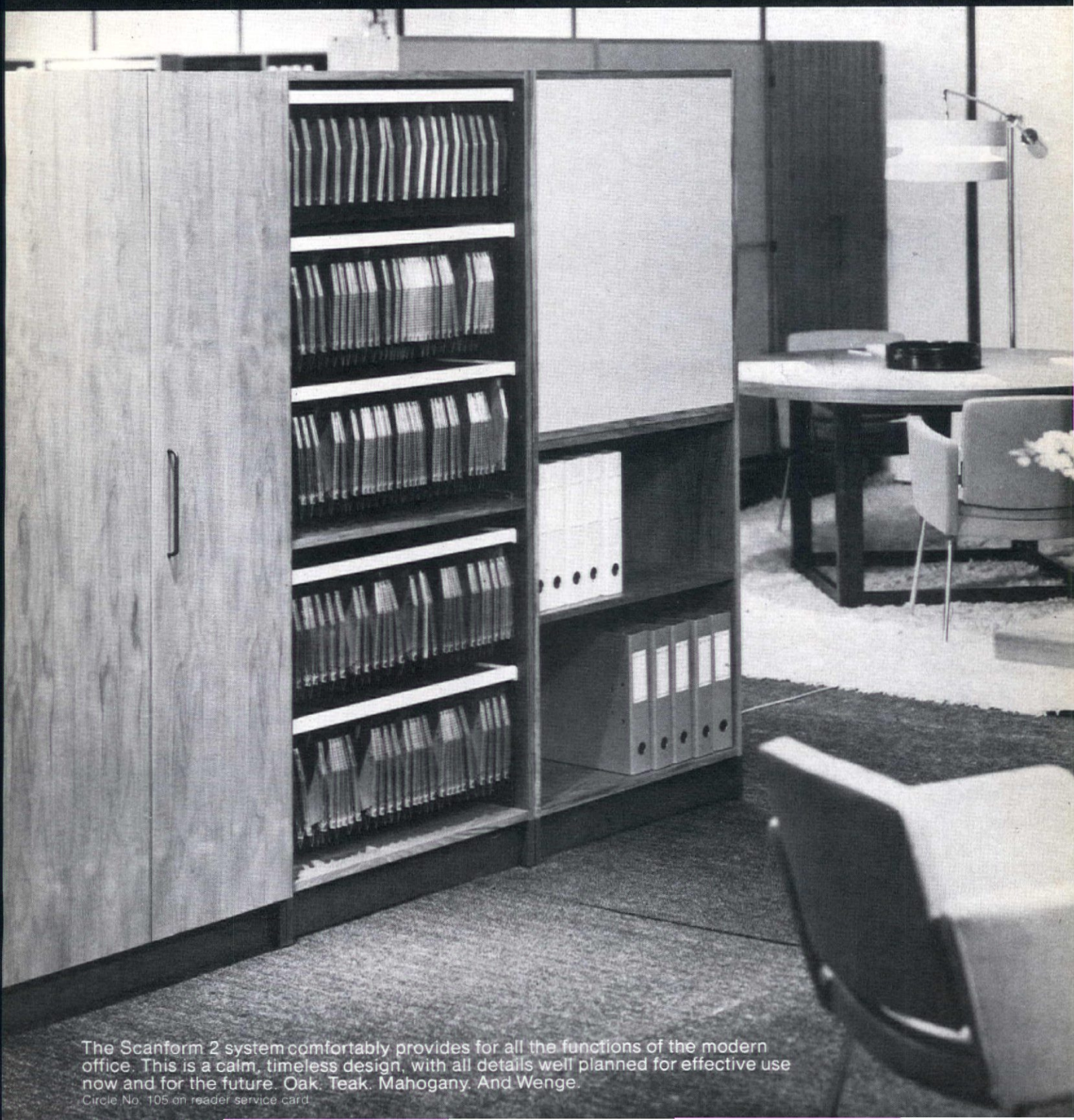
Increased profits with convertible rooms is the subject of Sico's brochure. It illustrates several room arrangements and outlines easy means of converting conventional rooms.
Circle 307 on reader service card

The application and use of sound masking, which facilitates speech privacy, is described in a seven-page booklet. Details on the Husher system are available from Sound Industries.
Circle 308 on reader service card

Self Insurance: A Risk Management Alternative is the second monograph in a series by the Society of Chartered Property & Casualty Underwriters. It features detailed analyses of the most critical areas of consideration in this risk management technique.
Circle 309 on reader service card

SCANDIA RANDERS

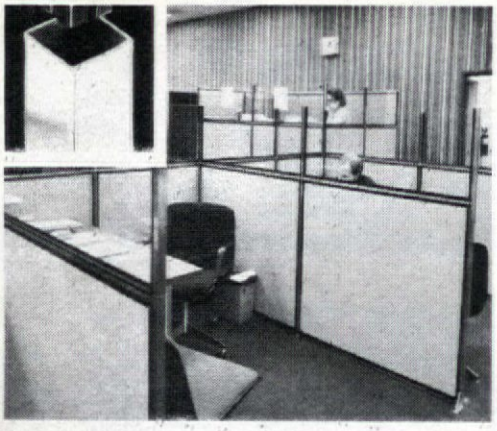
Scandia—Randers furniture division presents Scanform 2
Truly international contract furniture designed by Eric Ostermann
DUBAI • COPENHAGEN • LONDON • COLOGNE • LOS ANGELES
Gunnar Schwartz Associates, 4501 W. 1st. Street, Los Angeles, Calif. 90004 (213) 467-9609



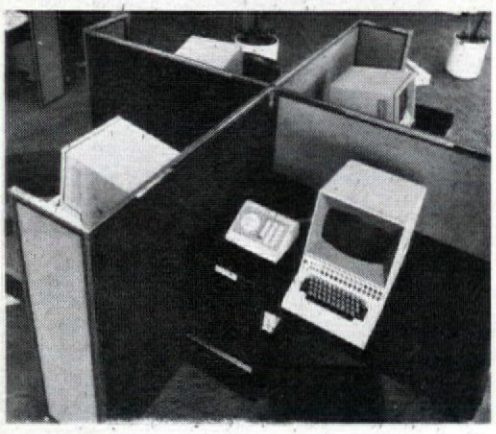
The Scanform 2 system comfortably provides for all the functions of the modern office. This is a calm, timeless design, with all details well planned for effective use now and for the future. Oak. Teak. Mahogany. And Wenge.

Circle No. 105 on reader service card.

Our sq. inch



Your sq. foot



RESULT...
A PLUSH, DECORATOR DESIGNED, EFFICIENT APTON MODULAR OFFICE

- **EXPAND IN YOUR CURRENT SPACE AT MINIMUM COST.**
- **TAILOR EACH WORK AREA FOR MAXIMUM PRODUCTION EFFICIENCY.**
- **QUICKLY MODIFY OR MOVE (EASILY DISASSEMBLED) TO NEW QUARTERS—YOU NEVER LOSE YOUR INVESTMENT!**

APTON's free standing partitions in rich carpet textures or vinyls offer new flexibility in office planning. Compare APTON's premium quality, beauty and cost. Contact your nearest APTON representative or Intra Systems Corp. serving the Western States . . . TODAY.

Advance Fixture Mart, Inc.
812 W. Jackson Blvd.
Chicago, IL 60607
Tel: (312) 454-1010

Ultra Systems, Inc.
P. O. Box 5375
Dearborn, MI 48128
Tel: (313) 756-1500

Design & Production Inc.
6001 Farrington Ave.
Alexandria, VA 22304
Tel: (703) 751-5150

To do it with STYLE . . . do it with apton

Division of Intra Systems Corp. 14700 Doolittle Drive • (415) 895-8570 San Leandro, CA 94577

Circle 106 on reader service card

CLASSIFIED ADVERTISEMENTS

Rates: *A classified ad costs $24.00 per column inch. Estimate a column inch as 7 lines or approximately 60 words, including headline and address. Please specify whether it is a signed ad or a blind box number. Add $5.00 to the cost if a box number is used. Payment with order is required for insertion of classified. Send ad and check to: CONTRACT, Classified Ad Dept., 1515 Broadway, 24th Floor, New York, NY 10036.* ***Deadline:*** *1st of the preceding month.* ***Regulations:*** *Classified ads may be used for help or situations wanted; salesmen, reps or lines wanted; business for sale; and any used or odd-lot products or items for sale on a one-time basis. Classified ads may not be used for extensive product descriptions; customer solicitation; or for the offer of merchandise or services continuously available to our readers, which is the function of display advertising. Publication reserves the right to reject, delete, or re-word copy that is contrary to regulations.*

Management Opportunities Nationwide ($20-50,000) — 7 years of specialized & confidential service to Contract/Institutional/Office Furniture, mid-management to executive level personnel—Sales/Marketing, Manufacturing, Engineering and Administrative. Our client Co.'s assume all costs. Contact: Rona Levin, Cook Associates, Inc., 35 E. Wacker Dr., Chicago, IL 60601. (312) 263-1119.

One of a Kinds — Antique wood rollers with brass inserts originally used to manufacture wallpaper designs circa 1920s. Uses: lamp bases, pedestals, plant stands, table bases, heights vary 22-30" and diameters from 3½" to 6½". As is $15.00 or sandblasted ready for staining or painting $20.00. Shipped United Parcel F.O.B. Chicago. Write: Alternate Angles, 9527 N. Laramie, Skokie, IL 60076.

Manufacturers Representatives — Wanted for direct sales to the College/University market by a manufacturer offering a complete line of student residence furniture. Send qualifications, lines now carried and territory covered to Operations Manager, Contract Division, Gem Industries, Inc., 314 Main. St., Gardner, MA 01440.

Reps Wanted — Experienced salespersons with following in Dealer, Designer, Architectural Market, needed by quality manufacturer of Executive Office Furniture, case goods and seating. Most U.S. Territories open for negotiation. Contact Harvey M. Meighan, Leif Jacobsen Ltd., 130 Yorkland Blvd., Willowdale, Ontario, M2J 1R5, Canada.

Sales Professional . . . Wood Office Furniture — If you can make effective sales presentations to office furniture dealers, architects, designers, specifiers, and corporate end users, read on—you could be the person we are looking for. The individuals we select will have full responsibility for sales and dealer development in: Delaware, D.C., lower New Jersey, Southeastern Pennsylvania (Philadelphia). Your background will include a thorough knowledge of, and successful marketing experience in, the wood office furniture industry. Should we consider you for this lucrative position with one of the largest and fastest growing manufacturers in the business? If so, contact, in writing only: Kimball Office Furniture Co., A Division of Kimball International, Inc., P.O. Box 460, Jasper, IN 47546. Attn: Ronald J. Werner.

Position Wanted — Sharp female, ten years experience in direct outside sales, desires position with commercial real estate development and design company, space planning retail sales areas. Experienced technical sale of carpet to architectural, designer market. Presently, and for over three years, involved in sales of accessories to large retail market. Would consider purchasing for hotel corporation. Dallas-Ft. Worth area only. Ad, P.O. Box 58486, Dallas, TX 75258.

Manufacturers Representatives — Growing manufacturer of middle market contemporary wooden desks and upholstered furniture seeks expansion beyond its present West Coast & Dallas markets. Good supporting literature and quick ship programs. Resume to: Frank Ellsworth, Executive Office Concepts, 1705 Anderson Ave., Compton, CA 90220.

Contract Furniture Lines Wanted — An experienced, mature rep now covering Ohio, W. Pa., W.V. seeks additional quality lines. Currently selling to Hotel/Rest. Eqpt. Dlrs., Office Furn Dlrs., Designer/Decorator, Contract Houses and Chain Acc'ts. All seating, case goods, or decorative lines considered. Let's get together. Write: Box 900, CONTRACT, 1515 Broadway, New York, NY 10036.

Sales—Designer — Highly experienced office furniture sales specialist/designer, currently employed, needs new challenge and incentives—appropriate to wide ranging talents. Thoroughly knowledgeable in all aspects of field. Desires New York area. Box 901, CONTRACT, 1515 Broadway, New York, NY 10036.

Sales Representatives Wanted — Manufacturer of successful line of contemporary furniture accessories seeks aggressive representation to the Contract Trade Only. Territories are open at present for representatives presently calling on contract designers and decorators. Excellent commissions. Box 902, CONTRACT, 1515 Broadway, New York, NY 10036.

Case Goods — All laminate, high quality, competitvely priced. Well designed for all phases of contract in hotel, motel, dormitory, nursing homes, hospitals, export. Send resume. Good territories still available. Excellent commission plan. Box 903, CONTRACT, 1515 Broadway, New York, NY 10036.

Office Furniture Salesperson — Large retail dealer in Northern N.J. seeks experienced person. Liberal salary + commission + profit sharing. Other benefits. For appointment, write: Box 904, CONTRACT, 1515 Broadway, New York, NY 10036.

Contract Representatives — are needed by a high quality, professional producer of custom, framed original color photography which compliments a wide variety of office and institutional furnishings. Experienced agencies with a solid reputation for quality and service should send a brief listing of areas and types of accounts handled to: Box 905, CONTRACT, 1515 Broadway, New York, NY 10036.

Contract Reps Wanted — Many important and new manufacturers ask CONTRACT Magazine for the names of qualified independent representatives who currently sell commercial/institutional furnishings and might be interested in an additional line. If you want us to include your name in a confidential list of reps, which we supply to manufacturers who have become new advertisers, write to the publishers of CONTRACT Magazine. State your name, address, type of lines you carry, number of associates or salesmen if you have any, and indicate product categories in which you have a particular interest. Also include area covered. This is a free service. CONTRACT advertisers who are interested in expanding sales coverage and finding additional reps are invited to inquire about this advertiser service. Write: Sales Manager, CONTRACT, 1515 Broadway, New York, NY 10036.

Attention: Contract furnishers, architects, designers, and dealers send us your brochures. CONTRACT Magazine is often asked by corporate representatives to provide them with qualified names. Mail to Sales Manager, CONTRACT Reader Brochures, 1515 Broadway, New York, NY 10036.

Molla seats them a little different – and a lot better

Festiva by Molla, a classic in casual seating comfort and design.

Chances are you've already had the pleasure of sitting on one of these Molla chairs at your favorite restaurant, patio, bar or ice cream parlor.

Its open, airy appearance brightens and lightens any room. And like all MOLLA ALUMALOY FURNITURE,® Festiva is lightweight yet sturdy. It's incredibly durable, practically maintenance-free and won't rust—ever! Available in an unlimited range of colors to match your decor.

alumaloy molla FURNITURE

Molla, Inc., Contract Division
110 State St., Westbury, N.Y. 11590 (516) 334-2885

Circle 107 on reader service card

CONTRACT SALES REPS WANTED

MANUFACTURERS

As a service to the commercial/institutional furnishings industry, CONTRACT offers space on this page FREE to manufacturers of contract furnishings that sell through independent representatives and that have display advertisements in this issue.

REPRESENTATIVES

The contract furnishings manufacturers listed here need you, in the territories they specify. If you are interested, write or call them direct. Manufacturers listed below have display advertisements in this issue. See these ads for additional product background.

GREGSON FURNITURE INDUSTRIES, P.O. Box 276, Liberty, NC 27298 **Contact:** Tom Wayman. **Product:** Office, institutional and contract seating. **Territories:** Inquire about territories open.

VICTORIAN D'LIGHT, 533 W. Windsor Rd., Glendale, CA 91204. 213/956-5656. **Contact:** Kent Erle. **Product:** Solid brass turn of the century lamps and lighting fixtures. **Territories:** Inquire about territories open.

GUNNAR SCHWARTZ ASSOCIATES, 4501 W. First St., Los Angeles, CA 90004. 213/467-9609. **Contact:** Shirley Asadorian. **Product:** High-quality chrome stacking chairs, office furniture. **Territories:** Seattle, San Francisco, Houston, Denver, Phoenix.

LEVEL, 28 Front St., Winchendon, MA 01475. 617/297-1500. **Contact:** Jim Moran. **Product:** Stacking chairs, bentwoods, bar stools, table bases, table tops, folding tables and conference tables. **Territories:** Kansas, Nebraska, Iowa, Illinois, Missouri.

CROYDON FURNITURE SYSTEMS INC., 1 Hespeler Rd., Cambridge, Ontario, Canada N1R 5V4. 519/621-6300 **Contact:** Ted J. Magier. **Product:** Quality wood furniture, steel case goods, seating and screen systems. **Territories:** New England, Southern and Northwestern states.

Circle 108 on reader service card

HARBOR BENEDETTI, 3011 E. Pico Blvd., Los Angeles, CA 90023. 213/263-9761. **Contact:** M.L. Heaton. **Product:** Wood & steel contract office furniture. **Territories:** Inquire about territories open.

LEAF FIBERGLASS INC., 4865 N.W. 37 Ave., Miami, FL 33142. 305/635-3455. **Contact:** Jackie Petchafnik. **Product:** Architectural planters, fiberglass and aluminum. **Territories:** Northeast, Midwest, Southwest, Northwest, West Coast.

NEO-RAY LIGHTING, 537 Johnson Ave., Brooklyn, NY 11237. 212/456-7400. **Contact:** Mitch Conn. **Product:** Priority designer lighting products. **Territories:** Inquire about territories open.

WEIMAN/WARREN LLOYD CONTRACT, P.O. Box 457, Christiansburg, VA 24073. **Contact:** Warren Lloyd Holtzman. **Product:** Executive Seating—lounge, office, desk reception areas. **Territories:** Many territories available, please inquire.

UNICUBE CORP, 150 E. 58 St., New York, NY 10022. 212/935-9430. **Contact:** Warren Berkson. **Product:** Modular chrome system of merchandising, display and exhibit structures. **Territories:** Selected territories available within U.S., Hawaii and Puerto Rico.

ROTARY FILING SYSTEMS, 522 E. Putnam Ave., Greenwich, CT 06830. 203/661-510. **Contact:** Ron D'Elia. **Product:** Rotary filing systems. **Territories:** Various.

BANGKOK INDUSTRIES INC., 1900 So. 20 St., Philadelphia, PA 19145. 215/334-1500. **Contact:** James P. Deely. **Product:** Teak parquet flooring. **Territories:** Select territories nationwide.

LAVERNE, CO., 38 E. 57 St., New York, NY 10022. 212/759-9743. **Contact:** William Laverne. **Product:** Divisions: furniture, fabrics, wallcoverings + works of art, printing, sculpture, graphics. **Territories:** Selected territories available.

MODU FORM, INC., P.O. Box 128, Acton, MA 01720. 617/263-3555. **Contact:** William L. Weissman. **Product:** Highly durable institutional lounge seating. **Territories:** Kansas, Missouri, Nebraska, New Mexico, Colorado, Wyoming, Michigan, Kentucky.

DONJON SALES, LTD., 5369 Maingate Dr., Mississauga, Ontario, Canada L4W 1G6. 416/624-0467. **Contact:** Frank Fox. **Product:** Sound control systems products; custom fabricated acoustical products. **Territories:** Selected territories available.

CONSOLIDATED BURRIS INTERNATIONAL, P.O. Box 735, Lincolnton, NC 28092. 704/735-0441. **Contact:** Gary L. McCammon. **Product:** Fully upholstered contract seating. **Territories:** Inquire as to open territories.

ROSEMOUNT OFFICE SYSTEMS, INC., Airlake Industrial Park, Lakeville, MN 55044. 612/469-4416. **Contact:** Jim Thompson, Barry Mayer. **Product:** An acoustical open plan office system, and two acoustical screen space dividers. **Territories:** Inquiries invited.

TIVOLI INDUSTRIES, INC., 1420 W. Fifth St., Santa Ana, CA 92703. 714/547-5656. **Contact:** Gayle Sweet. **Product:** Decorative low-voltage lighting light tubes. **Territories:** Montana, N&S Dakota, Oregon, Hawaii, Illinois, Southern Ohio, Maryland, Iowa, New England, upstate New York, Indiana, Kentucky, Tennessee, Mississippi, Alabama, New Mexico, Virginia.

Circle 109 on reader service card

BUTCHER BLOCK
AND OAK PARQUET

TABLE TOPS

FURNITURE
BY
BLOCK TOPS
INC.
530 HEMPSTEAD TPKE.
WEST HEMPSTEAD, NEW YORK 11552
516/489-5366

Circle 110 on reader service card

Get the right hardware for the job. And get it fast!

Choose your next standards and brackets from our dozens of time-tested designs. (Their long popularity proves their great reliability!) Available in special decor finishes. Our prices are low, but inventories are high. So when you need hardware, you get it. Fast.

Reeve Co.
P.O. Box 276 Pico Rivera, California 90660
(213) 949-2535 & 723-4791

Circle 111 on reader service card

Standard **Rotary**
DELCOFILES
FOR INSTANT ACCESS FILING

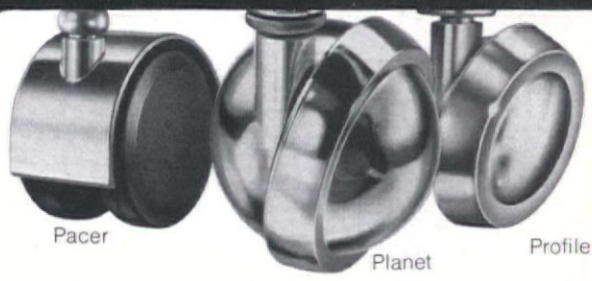
Standard Rotary tiers of 44" and 48" diameters are available to accommodate filing material of varying sizes, shapes and thicknesses as shown. Single or multiple tier units available. Tiers turn individually for multiple access and speedy filing and retrieval.

OTHER STANDARD AND CUSTOM ROTARY DELCOFILES AVAILABLE

CALL 800-243-8528
Conn. 203-661-5101 N.Y. City 212-697-5978

Delco Associates, Inc.
522 East Putnam Ave. • P.O. Box 423 • Greenwich, Conn. 06830
DEALERS THROUGHOUT THE UNITED STATES

Shepherd re-invented the wheel!



We have made the humble caster a thing of beauty—and downright dependability! From our famous ball casters to our sleek new Pacers, we have the big selection in handsome, hard-working styles, sizes and finishes.

Shepherd casters...good line, good looks, and good for a long, long time! Write for our Free Catalog today.

shepherd products
Shepherd Products U.S. Inc.
203 Kerth Street, St. Joseph, Michigan 49085
In Canada: 37 Esna Park, Markham, Ontario

Circle 112 on reader service card

ADVERTISING DIRECTORY

ADVERTISER	PAGE
ASF Sales	137
AGI Industries	157
Alex Stuart Design	26
Allied Chemical Corp.	52-53
Alma Desk Company	9
Art For Art Sake	142B
Bangkok Industries, Inc.	4
Bassick Div., Stewart Warner Corp.	132
Beylerian Ltd.	46
The Blockhouse	145
Blocktops	165
L. Paul Brayton	144
Claud Bunyard Design, Inc.	40
Castelli Furniture, Inc.	43
CBI/Burris Industries	6
Chaircraft	143
Chromcraft	77
Cohama Specifier Contract Fabrics	7
Collier-Keyworth	62
Condi/Div. of Pacific Furniture	51
CONTRACT/Executive Buyer	68
CONTRACT/Lead Service	142A
Control Electronics Co., Inc.	140
Croydon Furniture Systems, Inc.	44-45
Davis Furniture Industries	47
Decorative Arts Center	133
Delco Associates Inc.	165
Design Tex	18-19
DuPont/Antron	12-13
DuPont/Elastomers	72
Emeco	8
Empire State Chair	59
Entol Industries	148
Est Co., Inc.	145
Falcon Products	55
Faultless Div./Bliss & Laughlin Industry	56
Flex-O-Lators	159
Forms & Surfaces	5
General Tire & Rubber Co./Chemical Plastics Div./Genon	38-39
Georgia-Pacific	131
Gerard Metal Craftsmen	142D
Gilbert Plastics	152
Gordon International	69
Gregson Furniture Industries	142C
Gunlocke Company	23
Gunnar Schwartz	161
Hamilton Mfg.	148
Harbor Benedetti	60
Hardwood House	Back Cover
Harter Corp.	Inside Back Cover
Haskell Mfg.	61
Haworth, Inc.	Inside Front Cover
Hippopotamus	148
Homestead Fabrics	135
Indiana Desk Co., Inc.	65
Interiors International Ltd.	49
International Glide	144
International Hotel/Motel & Restaurant Show	136
International Interior Design Show	146-7
International Terra Cotta	42
Intra Systems Corp.	162
Jansko	21
Jasper Desk Co.	75
Jasper Seating Co.	152
Kay Mfg. Co.	66
Knoll International	70-71
Krueger	16
H. Krug Furniture Co. Ltd.	127
KT Furniture	11
Kwik File	74
Lamin-Art	57
Laverne	138
Lawrence Metal Products	164
La-Z-Boy	2
Leaf Fiberglas	142D
Level Of Winchendon	29
Lewittes Furniture	156
Hank Loewenstein, Inc.	67
Lumex	28
Madison Furniture Co.	30
Mannington Mills	126
MECO	34
Midwest Folding Products	140
Mira X/Moebel	31
Modu Form	48
Molla Inc.	163
Monarch Furniture	27
N.Y. Floor Covering Show	150
Office Landscape Users	149
OHline	130
Owens Corning/Sound Screen	125
Pace Collection	1
Pacific Design Center	155
Panel Concepts	10
Paoli Chair	138, 154, 158, 160
Patrician Furniture Co.	54
Plastiglide Mfg. Co.	156
Pleion	37
Reeve Company	165
Reliance Import Company	140
Rosemount Office Systems, Inc.	50
Rubbermaid/Commercial	14
Salone del Mobile/Milan Furniture Fair	138
Sargent & Greenleaf, Inc.	152
Scott Plastics	155
Shelby Williams Industries, Inc.	64
Shepherd Products	165
Society of CPCU	76
Stendig Inc.	35
Stylex	73
Swan Brass Beds	151
3M/Scotchgard	24-25
Thonet	36
Turner	41
Unicube	150
UniRoyal	32-33
Albert Van Luit	129
Van San Corp.	160
Virco Mfg. Co.	63
Wall Tube & Metal Products Co.	158
Weiman/Warren Lloyd Contract	15
Wellco Carpet	10
Westnofa, U.S.A.	160
Westvaco	149, 151, 153
Wooden Peg	142B

STYLE 120-1 WITH 122 TRAY

At Paoli® quality and function are built into every chair. Featured is the latest addition to our complete line of convalescent seating. Special design features, including optional lock-on tray, increase the versatility of every Paoli® Convalescent Chair.

PAOLI CHAIR COMPANY, INC.
Phone: (812) 723-2791
Box #30, Paoli, Indiana 47454

Paoli

Circle 113 on reader service card