

# WHAT MAKES A 1940 STORE OBSOLETE?

How glass, air conditioning, high intensity lighting,  
better acoustics, new fixturing,  
costlier labor, shopping centers and more  
prosperous customers have re-shaped the modern store  
—a study made in collaboration with Victor Gruen,  
Morris Ketchum, Morris Lapidus,  
Kenneth Welch, Daniel Schwartzman

Gruen



Ketchum



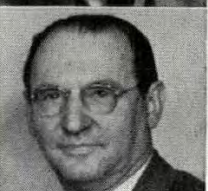
Lapidus



Schwartzman



Welch



In the last ten years more has happened to downtown store design than happened in the previous hundred. At the same moment, the downtown store was socked on one side by profound change in income distribution and in buying habits and on the other by the emergence of a dozen new building technologies.

Each one of these precise new technologies called for major re-thinking of store design. Air conditioning alone can be said to have re-shaped every element of the modern store beginning with the building front and ending with the display case. Modern lighting, low cost acoustic materials, lightweight curtain walls, flexible ceiling and partitioning—none of the tools were yesterday at the disposal of the store planner. Today they have made almost every 1940 store obsolete.

These changes have come so fast that even expert store architects have had a hard time keeping abreast of all the implications. When changes come slowly they can be mulled over and digested. But when everything about a store changes overnight, considerable mental indigestion is inevitable. As a result many stores that look contemporary really have nothing but a skin deep coating of "modernistic" design. To sort out the manifold impacts of these economic and technological changes, and to show why store design must always be more than "looks," the FORUM asked the help of the five top store architects listed at the left. The review on the following page (illustrated, for the most part, in the expert laboratory of the specialty store) has been done with their collaboration.

Although the pace of store building and modernization has been rapid since the war, increase in buying power over the last decade has actually come faster than additional store space could be built to accommodate it. While the downtown merchant joyfully counted the onrushing customers, he also had to face the fact that the automobile was carrying an increasing number of them to the outlying suburban shopping centers which enterprising developers were already putting up by the dozens. Merely to hold their own in the sharpening fight for the shopping dollar, downtown merchants were now obliged to re-plan and modernize as they never had before.

If the customer was on the move at a rate to make even the chain variety stores nervously reshuffle their old confidence in "100 per cent location," he was also a new kind of customer. The over-riding fact about store planning today is that more people have more money to spend for more things than they have ever had before. The great war and postwar redistribution of income has brought profound changes in retailing methods. The once clear-cut distinction between mass merchandising and luxury selling is no longer quite so clear. The "mass" seems to have moved up from the basement and into the fashion-conscious specialty store while the tax-ridden "class" market occasionally can be seen at the bargain counters. Fashion itself, only yesterday the prerogative of the upper-income group, is now demanded by all buying groups, and this requirement has spread from apparel to almost all merchandise lines.

While the customer has more money to spend for shopping

than ever before, he also has less time. This is not only because the sheer numbers of him that now occur in city centers reduce his net exposure to almost anything he seeks or because the journey to the suburbs further cuts the time available at either end. It is also because he—or, more importantly, she—may now prefer to look at television or even plant a garden around her suburban house to that once pre-eminent diversion of “shopping.” By and large, the customer seems to have transferred his demand for the leisurely and personalized shopping attention that yesterday recognized “quality folks” to a demand for the quality merchandise which mature mass production has made widely available.

### **The great vanishing act**

It was these factors—more people with more money and less time—and no mere caprice executed on architectural drafting boards, which took the wall off the street side of the downtown store and produced the well-known “open front.” The same factors, more clearly recognized and exploited by skilled architects, are now producing what Architect Morris Ketchum calls the “great vanishing act” in store design. This simply means that, one after the other, the traditional elements of the store interior have literally disappeared in favor of maximum visibility for the merchandise itself—the building line vanished into the recessed store front, the sales counters shrunk to hook strips in the wall, island fixtures were reduced to skeleton forms clothed in merchandise, the lighting fixtures were recessed into the ceiling, the ceiling and walls themselves began to be replaced by easily removable, drybuilt panels.

For retailing's new customer, with little time and less interest in the old *haut couture* type of selling, the vanishing store has had the happy result of putting as few obstacles between him and the merchandise as possible. For the store owner, the vanishing store has had the equally happy result of cutting many costs. What you don't build, you don't have to pay for and you don't have to maintain. Moreover, most retailers found that the new expertly lighted “self-selection” counters and racks enabled them to sell twice as much with half the clerks.

### **Rise of the specialty chain**

Credit for sponsoring the rapid design changes that have shaped the modern store goes to the specialty merchandiser. The rise and development of the specialty store over the last decade is in itself a mirror of what has been happening to downtown retailing. While the specialty store was an early answer to the problem of congestion in the big department store, for a long time merchandisers believed that only the rich could afford the greater ease of shopping in a smaller store where considerable pre-selection of lines had already been made. Thus the specialty store for a long time connoted “personalized” or luxury sales methods as well as specialized merchandise lines.

The rise of the big specialty chains demonstrated that there was more than one price target for this kind of merchandising—that the specialty store could, in fact, pick any one of the three major income divisions and plan its store and merchandise accordingly. Meantime, as the sharp divisions between income groups themselves wobbled, some enterprising specialty stores began to make the best of both merchandising worlds—that is, they found out how to use the myriad resources of modern design to put even very high-priced merchandise out where the customer could see it and feel it.

Self-selection—the chance to see and compare all the types of stock available—has moved out of the bargain basement and on to the \$10 tie counters of elegant Fifth Ave. men's wear stores. The architects are showing that cost-cutting self-selection and self-service methods can be accomplished without sacrifice of the ease and elegance demanded by even a luxury store. This is one of the biggest increments of the last decade's revolution in store design—the skills of modern design have substituted the luxury of a controlled physical environment for yesterday's luxury of service. Modern design has also been able to extend this new kind of luxury—the luxury of service by *things* instead of by *people*—to a shopping environment for practically all income groups.

### **Mechanical revolution**

By last year the specialty store was taking 51 cents out of every dollar spent for women's apparel and 67 cents out of every dollar spent for men's wear. Struggling to hold on to their dwindling share of the apparel dollar, the big department stores were adopting the design innovations pioneered by the specialty store and creating a series of “stores-within-a-store” to offer their customers the same advantages. Moreover, the department stores were busy with another kind of building revolution.

If the specialty stores were responsible for the great vanishing act in store design, the department stores, on their part, had been forced within the last few years to initiate an equally fundamental change in their methods of handling goods. This perhaps can be said to have begun when Fred Lazarus of Federated Department Stores saw his No. 1 merchandising problem as cutting down on the 10 cents out of every buying dollar which goes for the cost of warehousing and delivering bulk goods. Lazarus hired the Austin Co. to build him a mechanized warehouse. This was so successful that experts now say that the place to start department store design is in the warehouse. Since then, the mechanical revolution has been widely extended into the store itself.

Chances are that the revolution in department store planning has just begun. Says Victor Gruen: “Downtown merchants must now cooperate with city planning boards and other real estate interests in rehabilitation of the whole downtown area. There must be cooperative effort among merchants to provide parking and off-street unloading and to clear the slums that are choking the business center.”

# THE VANISHING STORE FRONT

Gottsch-Schleisner

When does an open front cut inside visibility?  
 How can you help shoppers see in the window?  
 Can the open front move to the suburbs?

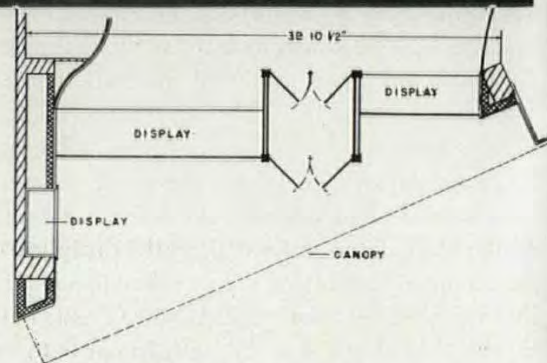
There was a good reason why the specialty merchandiser was so quick to assist the architect in opening up the store front. Unlike the big department stores, many smaller merchants do not buy radio and newspaper advertising to bring customers into the store. They have to start selling right on the street, and they were only too happy to enlarge their display windows to cover the whole store front. They also saw the advantage of recessing the building line into an exterior lobby where skillful display would draw window shoppers right to the entrance door.

On what should be seen through the open front, the merchants suffered—and still suffer—some conflicts. By dropping the bulkheads and carrying glass right down to the ground, the architects had converted the whole store interior into one brilliant display case. But the non-advertising store owner believes that nothing else works so well as merchandise in getting customers into the store, and he still wants a place where he can “play fast-sellers on the nose.” It is interesting to note that practically all first-rate current examples show how thoroughly the open front has been re-worked to meet the merchant’s varying needs. Small movable display cases precisely planned for all-small-goods items are now being moved up against the large windows. The skillful architect disposes these cases with immense care to retain the look-into-the store picture above and around them. Screens or drapes are now often provided for completely closing the open front for occasional display variation. Where the store operation calls for careful selection of high-priced merchandise, the direct view may be blocked, with openness introduced only above eye level.

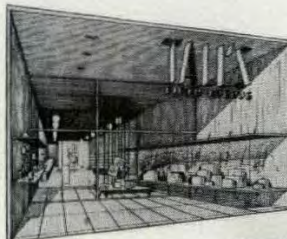
The recessed store front proved to have many advantages. It 1) pulled the sidewalk right into the store; 2) gave the window shopper a place to stand without blocking street traffic; 3) provided up to three times as much window display space as the old store front; 4) proved economic for the typical small store building lot, a narrow section with length usually in bad proportion to width; 5) caught the pedestrian’s eye better than windows parallel to the street.

The open front brought some new problems. Where glass expanse was very large, it was necessary to protect against window condensation and guard against excessive heat loss. In Ketchum, Gina & Sharp’s famous New York Florsheim store, for example, supply ducts were installed at the bottom of all glazed store front openings, and the base molding of the windows designed as a plenum, permitting hot air to rise all along the glazing. Because the lobby is now on the outside instead of the inside of the store, doorway heating grilles or heat sources in the ceiling are usually used to counteract the cold air stream from the opening door.

When the architects had succeeded in opening up the store front, they made one dismal discovery. On a bright day, all that the shopper could see in the splendidly open front might be a reflection of a passing bus or the building across the street. The open front had handed the architect a much greater glare problem than the old shallow windows had presented. Various devices—window lighting, awnings, covered sidewalks, dark painted overhangs—are used to



*RECESSED FRONT* must be adapted to specific site. Here the angle of slant places two main display windows (L.) to catch eyes of pedestrians approaching from hotel off right. Door is moved off-center to provide more unbroken display space, but in this case the architects have shielded it from adjoining service alley by smaller display window (r.).  
 I. Miller Shoe Store, Washington, Carson & Lundin.



*DEEP EXTERIOR LOBBY* is logical for this long, narrow lot. View-through front is combined with raised display window (r.), which puts luggage at best viewing height.  
 Tall's Travel Shop, Seattle, Tucker, Shields & Terry.



Dearborn-Massar



*CANOPY AT HALF-HEIGHT* permits daylight to filter through top half of open front into store interior. This brings interior brightness closer to exterior brightness, preventing obscuring reflections on lower part of glass front. Canopy overhang also protects lower front from sky and other bright reflection factors, while shading window shoppers. Main glass exposure is to north, while stair tower (L.) protects from western sun. Rattan Art Gallery, Honolulu. Wimberly & Cook.



Photos above: R. Wenkam

*SMALL, MOVABLE DISPLAY CASES* are placed along glass wall, with view-through above and around them. Entry is placed where pedestrians cut through corner lobby. Egg-crate ceiling provides over-all high-intensity interior lighting preventing too sharp brightness contrast from daylight admitted through large glass expanse. Florsheim Shoe Store, Chicago, Ketchum, Gina & Sharp.



*CLOSED-AND-OPEN FRONT* provides privacy on one side for customers selecting high-priced women's wear, provocative view-through on the other. Inexpensive wood siding is handled elegantly in facade to key-note shop's luxury appeal. Esther Foster Shop, Salem, Ore. Pietro Belluschi.



Photos above: Dearborn-Massar

Hedrich-Blessing Studio

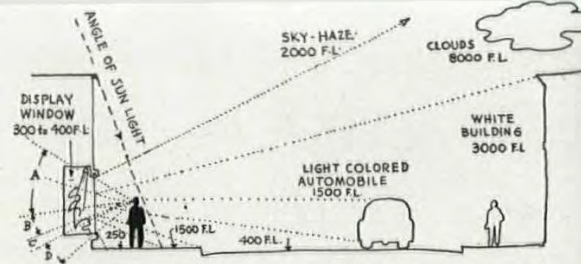


counteract the glare; none of them is entirely successful. Kenneth Welch estimates that the threshold of destructive glare is reached when reflected brightness is more than three times the brightness of the window interior. In an average shopping street reflected brightness can easily be from 10 to 30 times what can be economically created by store window lighting. The open-front, born on city streets, is currently being moved out to suburban shopping malls without any re-thinking of the reflection problem. In many cases, reflected sky brightness will render anything inside these glass fronts totally invisible. For Welch's own anti-glare method, still very little used in building practice, see cuts.

The open front also presents a problem in lighting the store interior to which few architects pay enough attention. Daylight entering the first floor needs to be measured out and directed with the same precision as artificial light. On the outside, awnings, overhangs, soffits, etc. are available to cut down entering light. Inside the first floor, the level of illumination must be stepped up to offset the front daylighting. Sometimes the merchandising plan may suggest closing the front entirely. Where it is necessary to sell "impulse" items on the shopper's way out, a closed front may work better.

A number of recently built stores show an open front extended up to the second story. While this device may be effective for catching shopper's attention and providing extra display space, inside the second floor it presents an almost insoluble lighting problem. Says Morris Ketchum: "Upper sales floors should never have a large expanse of window, for when the customer arrives at that floor he will see most of the merchandise in silhouette, if he sees it at all."

Many suburban stores are now opening their back as well as their front with glass because access from parking lot is more frequent than from the front of the store. Most of these show that their planners have not thought through the question of what glare from the open back will do to merchandise visibility inside.

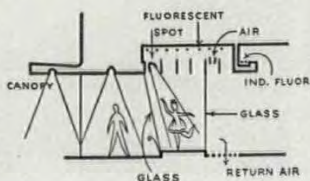


VEILING GLARE can completely block view if open front reflects clear sky or sunlit surfaces. Diagram b, Kenneth Welch shows display window, with daytime illumination of 500 foot-candles from skylight plus 300 foot candles artificial light. But range of reflected exterior brightness is up to 20 times this intense window lighting

Morris Bros.



GLASS CAN BE SLANTED to reflect lower brightness surface (street shaded by overhang), giving display better visibility. Diagram (L.) shows how high-intensity lighting is used inside store to counteract daylight glare. Morris Bros., Miami Beach. Kenneth Welch.



EVEN THE GLASS HAS VANISHED from this open front. Don Clever's mural is background for open-air display. Peterson Tractor Co., San Francisco. Goldstine & Heiser.

Gottcho-Schleisner



TWO-STORY OPEN FRONT in suburban store above is completely veiled by reflections. Inside second floor this much day-lighting creates obscuring glare. Macy's, White Plains.

CORNER STORE at crowded intersection (r.) makes more moderate use of second-floor window. Store stays open six nights a week, and main function of window is to draw night pedestrians' attention to bright store interior. Window is not used for display. Its daytime function is to introduce natural light into better dress department, and the owner reports that the light curtaining is successful in reducing daytime interior glare. Field's, Jackson Heights. Louis Shulman.



# THE VANISHING SALES COUNTER

Dearborn-Massar

**How can you double the life of your counters?**  
**How does self-service differ from self-selection?**  
**When are islands better than wall counters?**

The old general storekeeper who said, "When I want to get rid of stuff quick, I just leave it lying around half-unpacked," hit upon a fundamental of modern store design. But if, as one department store executive cracked, "Please handle the goldfish" is now the slogan of modern merchandising, few have realized how far competent store architects can now carry this approach to the store interior.

Says Morris Ketchum: "We used to build a series of coffins—even displays were built in at the top of these cabinets. Remaining space was used for glazed, built-in shelves, with drawers at the bottom intended for forward stock storage. The first step away from the coffin was to disengage the display, place it in the air as plaques or boxes, usually mounted on hook strips. This meant complete freedom and flexibility in mounting displays. Finally the wall fixture itself vanished, and the wall cabinet became simply shelves attached to hook strips. Now the only elements are shelves and brackets—everything cantilevered from the wall."

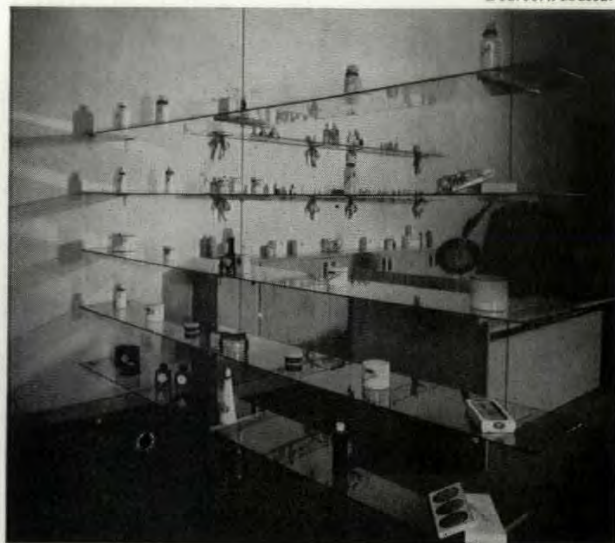
"Counters were then built at an appropriate height to hold necessary forward stock. The next step was to eliminate the built-in cabinet base; whenever the clerk had to stoop down and rummage in these base drawers for stock, selling time was lost. So the base flew out and legs came in, adding to the openness of the store. As a result the island fixture acquired the light, sturdy character of the best modern furniture."

The old store counter, backed up parallel to the wall with space for clerks behind, was a space eater. Now, in many cases, island units replace these counters. They are placed at right angles to the wall, and both clerks and customers can circulate freely around them. Scaled lower than the wall-hung shelves, they permit an easy view of wall-stocked merchandise. (Counters parallel to wall stock are still necessary where large stocks are required, e.g. for shirts.)

Although modern methods of air filtering and conditioning make it unnecessary, glass coverings are still generally used on store counters, adding a costly housekeeping item to the owner's cost of doing business. The Ketchum, Gina & Sharp new Wallach store in Jamaica drops a large percentage of glass from wall cases as well as from island cases. This not only makes it easier to illuminate the merchandise, but also eliminates the feeling of a barrier between customers and merchandise.

There is no clear line between self-selection and self-service, but in general the great discovery of the supermarket has been applied in its fullest extension only to hard or packaged goods, where it is proving an extremely economic way to do business. In its new Evanston store, for example, Weiboldt installed a self-service hardware department and now reports that here eight men can do the work of twice as many in non-self-service departments.

In soft goods, self-selection is more important because, as Morris Lapidus says, "somebody has to be there to put the stock in order after each customer has 'served himself'—you might as well let that person be a sales person." Self-selection simply means that the customer has a chance to see



*GRACEFUL HANGING GLASS SHELVES* give maximum visibility to cosmetic display intended to stop customers on their way out of high-priced women's wear store. *Esther Foster Shop, Salem, Ore. Pietro Belluschi.*



*GLASS HAS BEEN REMOVED* from all these display cases because air conditioning and filtering now makes it unnecessary to protect merchandise. Self-selection tie counter (r.) gets added visibility from glass shelves. *Wallach's, Jamaica, Ketchum, Gina & Sharp.*

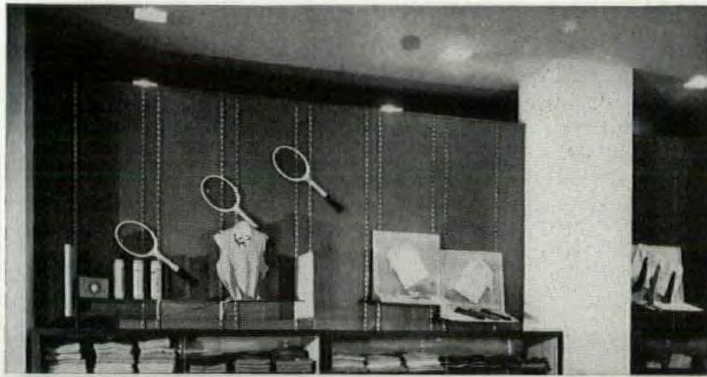


*SELF-SERVICE VARIETY STORE* in New York's dense Stuyvesant district. Elimination of space for clerks behind counters means more counters can be used. *Murray Store, New York City. A. Davis & Son.*

*Photos above: Lionel Freedman—Pictor*

*Bill Maris—Pictor*





Wm. M. Branham

*DISPLAY FIXTURES* have shrunk to hook strips in the wall in specialty store (above) in Bogota, Colombia. See-through screen defines space without cutting visibility in Davison Atlanta store. Both, Ketchum, Gina & Sharp.



*SMALL FREE-STANDING COUNTER* displays gloves and hose, has racks for umbrellas and belts in Peck & Peck stores. Frederick C. Peck designed fixture himself, says it has tripled sales of these accessories.



Pragat Studio

*DECORATIVE VALUE* of merchandise is imaginatively exploited in this small camera store in Cleveland by Architect Robert Little.

R. Marvin Wilson



an example of every item available before his contact with the clerk and to make up his mind what he wants. It not only means fewer sales clerks but more sales; the more a customer sees the more he is likely to buy.

This simple principle is of the first importance in all kinds of stores. Says Kenneth Welch: "In doing a high-price shoe store, we now attempt to get one example of every available shoe out on the floor—not just on the back wall but in the aisle space where the customer can see and even handle it." Although most shoe merchants still shudder at the prospect, some architects think the shoe store can move even further in the direction of the supermarket. Lester Tichy (who did the Hempstead store where Thom McA proved to its satisfaction that selling shoes in a single store to men, women and children is not only possible but profitable) now longs to plan a fairly luxurious shoe store where customers can actually try on their own shoes and thinks proper design can make this work like a charm. Tichy concedes, however, that it would be safer to start this with men's shoes.

Counter and stock units designed to put as much merchandise on display as possible were a logical device for the small store owner who had limited storage space. The typical small store owner gets weekly deliveries and carries no reserve stock. Paying high rent for ground floor space, he can't afford to warehouse and must gear every part of his operation to a quick turn-over. Thus every foot of the small store interior has to be utilized for merchandise display. Says Morris Lapidus: "We can't afford the luxury of an unused wall." But this stark necessity is anything but an invitation to clutter. The examples on these pages show how simply and directly the mature store architects are accomplishing their objective.

With a higher percentage of gross sales being eaten away by higher operating costs, store owners have asked their architects for fixtures which are low in initial cost as well as in maintenance expense. Daniel Schwartzman recommends use of new materials lending themselves to production methods not dependent on the fast-disappearing cabinet maker. He has designed completely flexible fixtures of pierced sheet metal and standard hardware components in a recent project for Macy's.

\* Low-cost shoe self-service is used in Wanamaker's big basement shoe department in New York City.

## THE FLEXIBLE PLAN

**What do women's hat sales do to layout?**

**Why is reserve stock disappearing?**

**What is traffic?**

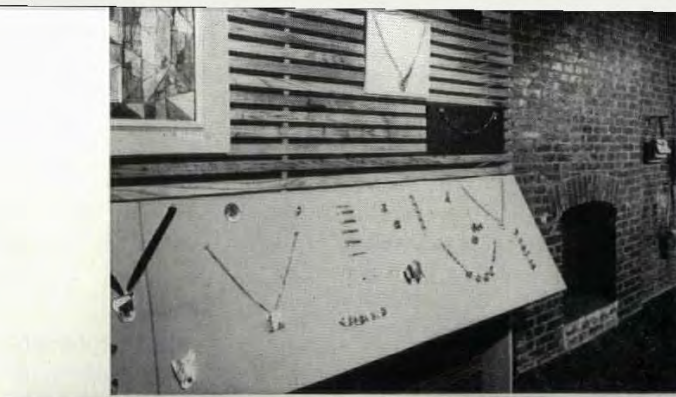
The biggest reason why stores are no longer warehouses chopped up into gridiron aisles is also the oldest fact in store operation. Despite the many elaborate devices now available for making the customer love you as much in May as he did in December, the customer, determined soul, still buys about two-and-half times as much in December as he does in the slowest month of the year, usually July. Where fixed counters have been used in the old gridiron plan, a summer day may discover a typical men's furnishing store with some 80 ft. of counter space surrounding a single despondent clerk.

Within the overall yearly fluctuation in the store's busi-



**MULTI-LEVEL DISPLAY CASE** gets three times as much merchandise on view as old island cases. Shelves are easily adjustable for height changes according to merchandise. Fixtures like these make self-selection possible in housewares departments. Daniel Schwartzman design.

**LOW-COST DEVICES** are ingeniously used to get a variety of merchandise on view in this small gift shop, housed on ground floor of remodeled brownstone. Idella LaVista Shop, New York. Norman Cherner.



Ben Schnall



ness, there is sharp season-to-season and month-to-month fluctuation in specific merchandise items. A typical men's store will do 40 per cent of total December business in scarves, only 10 per cent in hats. Women's millinery may amount to only 6 per cent of a store's sales in summer, increase tremendously in spring. Eddying briskly through these seasonal tides are the highly unpredictable currents of fashion. A large chunk of sales space may suddenly be demanded simply because women have taken to wearing boy's shirts—a notion that may or may not vanish as abruptly as it appeared.

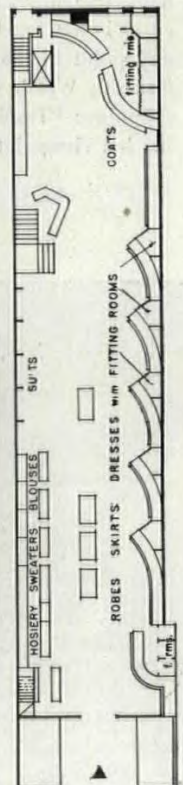
Nowadays these basic fluctuations in the merchandising operation are met by the most adroit modulation of floor plan, sales counter, lighting, ceiling and partitioning. Lightweight, easily movable tables, racks and counters mean that the floor plan itself may fluctuate with the shifts in sales. Multi-purpose sales fixtures are by now such an old story that most architects are currently concentrating less on infinite adaptability of fixture and more on a simplified design which can be adapted for a few changes in shelf or rack height by stock handlers who do not happen to be mechanical engineers. Above the shifting floor plan and fixture, a dry-built, flexible ceiling now provides for equally rapid changes in lighting or partitioning. (See page 71).

With complete flexibility as the desired goal, the skilled architect now manipulates the basic elements of impulse, convenience and demand goods and of display, circulation.



Gottscho-Schleisner

**CURVED DISPLAY RACKS** draw customer to rear of store, conceal ample fitting rooms. "Impulse" goods are concentrated on the left, on shopper's way out. New plan made self-selection so easy that sales force was cut in half. Daly's, Trenton. Victor Bohm.





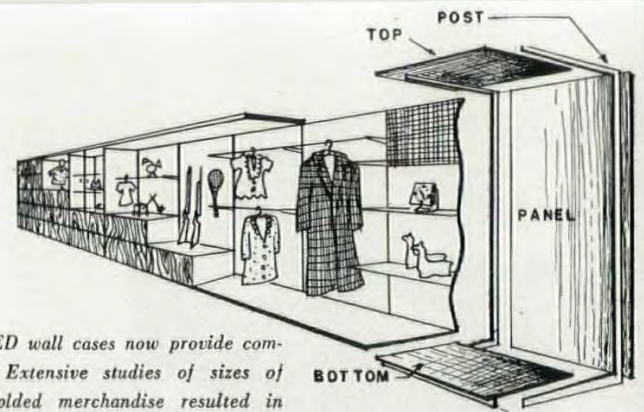
stock and service space with considerable agility. In general, such old rules as that "demand" items like shirts and underwear will be farther down the line than "convenience" belts, garters, etc. and that "impulse" ties shall be right next to the door still hold. But the architects also know that it is equally important for the purchaser of a new suit to get a glimpse of, say, the hat display and they have a number of ways of relating merchandise for such suggestive selling.

Another new factor influencing the floor layout is the trend to do away with "reserve stock." Stores now try to place as much reserve stock as possible right next to the space in which it is sold, either by peripheral storage space on the sales floor or by introducing small stock mezzanines. This means that the stock no longer can be classified as "reserve" since proper design of the storage unit makes all the stock immediately accessible at the point of sale. With all store owners now keeping a careful eye on indirect costs, peripheral stock storage has the additional advantage of making it possible, in dull hours, to use the sales force for remarking, storekeeping, etc. It also fits in with the trend to more frequent inventories, inspired by department stores' current fascination with cost control, and stock storage is now being designed for systematized inventory taking.

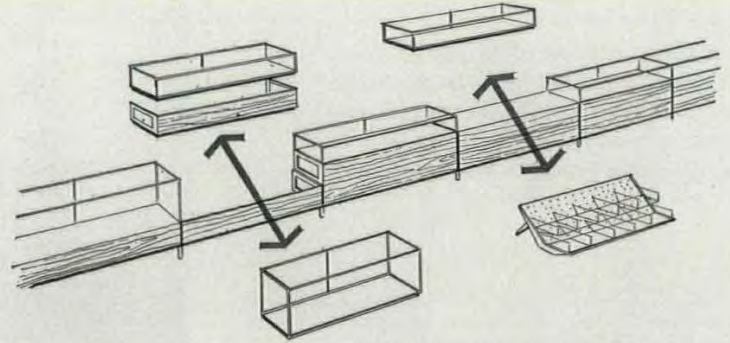
Some merchants still find it hard to cut into sales space with forward stock storage. But compact planning can accomplish this with very little sacrifice. In Kenneth Welch's remodeling of the Broadstreet store in New York, for example, forward stock capacity was increased 40 per cent with a sacrifice of only 5 per cent of counter selling space, resulting in a far more productive balance. Lavish use of glass, openness under counters, etc., made this small sacrifice unnoticeable.

In addition to the necessity for working out all these complex inter-relations of the floor plan, the store architect sets himself a further objective. Among building types, stores are uniquely designed for moving traffic. The art of store lighting and display is often likened to the design of a stage-set, but actually it is a much more demanding business. The shopper's viewpoint, unlike that of a theater audience, is not fixed—he must be given a dramatic view from any point in his path along the "indoor shopping street." Kenneth Welch sums up the importance of this aspect of planning: "Traffic—so necessary to retail success—is nothing but viewpoint in motion."

Goettscho-Schleisner



MASS-PRODUCED wall cases now provide complete flexibility. Extensive studies of sizes of packaged and folded merchandise resulted in basic 33 in. module into which all inserts lock.

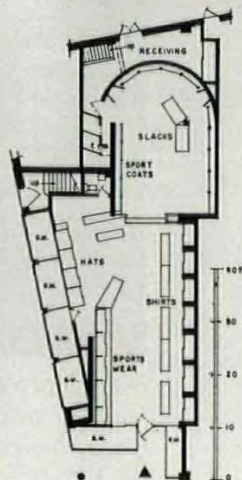


FLEXIBLE COUNTER CASES by same manufacturer also have variety of basic parts easily interchanged by unskilled personnel.

Ben Schnall



FLEXIBLE FIXTURES installed in corset department will provide for Christmas expansion of adjoining department. Counters will be moved to another department, shelves removed from wall fixtures and replaced by racks for hanging negligees. Macy's New York.



STORE-WITHIN-A-STORE is adroitly created within tight space confines of mens wear store by a slightly raised level, carpeting, change in lighting. Note how racks are curved to surround customer with easy-to-see merchandise. Manhattan Store, Cumberland, Md. Morris Lapidus.

# THE FLEXIBLE CEILING

When can you afford it?

How can it improve lighting?

"Yesterday's store ceiling supported a rich growth of elaborate lighting fixtures, ornamented electric fans, highly decorated brackets carrying wires on which packages whisked back and forth, exposed sprinkler pipes, assorted bells and clocks. Today the childish enjoyment of these mechanical gadgets has subsided. We are incorporating all mechanical functions as integral parts of the store building instead of attaching them later." —VICTOR GRUEN

The store owner, bent on rapid changes in store layout, had bumped hard against the rigid, plaster ceiling with lighting frozen therein. Now a dry-built, flexible ceiling makes it possible for him to change the floor plan overnight. This dry-built ceiling has brought a complete change in lighting technique. With a plaster ceiling, light was usually installed in an over-all pattern. Obviously this illuminated everything to the same degree: both sales fixtures and floors were being lighted almost as brightly as the merchandise itself. With flexible lighting, no light need be wasted on floors and furniture. The sales counters can be placed where needed and lights concentrated above them.

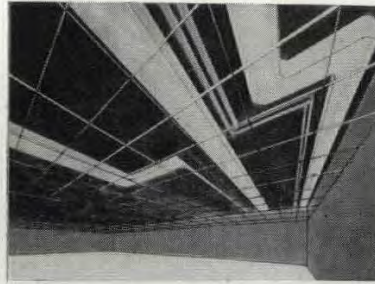
Flexible ceilings are of two main types: 1) the over-all louver or "egg-crate" ceiling, with lighting, air conditioning diffusers, sprinklers hung above the louver; and 2) the dry panel ceiling, with opaque panels (corrugated cement asbestos, acoustic tile, plywood, building board, metal pans, etc., are all used) alternating either with lighting panels or with incandescent lighting fixtures built into certain panels as required by the sales layout. Unlike the plaster ceiling, both provide instant access to all mechanical lines suspended from the floor slab. Both have acoustic value. Design simplifications have recently reduced the initial cost of these dry ceilings and made it easier to sell store owners on the long-range saving they promise over the cost of cutting into a rigid plaster ceiling.

The first steps to make the flexible ceiling practical for a large store area were undertaken by Ernest Born and Gruen & Krummeck in their collaborative design studies for Macy's San Francisco store. This panel system is illustrated in Victor Gruen's sketches (r.). It is now standard Macy practice to alternate dry panels with 4 x 4 ft. lighting squares.

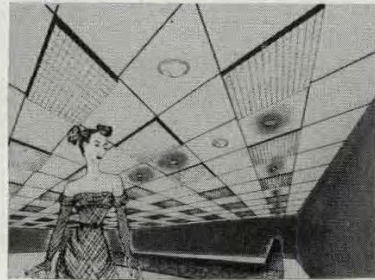
Ketchum, Gina & Sharp, in collaboration with Stanley McCandless, have recently worked out a flexible ceiling which makes it possible to direct light precisely where needed. In this system, panels equipped with light are spotted above the sales fixtures. Panels above aisles do not have built-in lighting equipment. This ceiling will be installed in a department store not yet under construction, but quotations already received show that its cost will compare favorably with any other type of dry-built installation.

The well-known New York Florsheim women's shoe store (Ketchum, Gina & Sharp) was one of the first to use an overall louver ceiling. Here both incandescent and fluorescent sources are hung above the ceiling, flooding the entire sales area and the outdoor lobby with intense but glareless light.

Two recent big department store installations have yielded impressive evidence that the overall louver or flexible module ceiling can be had at a competitive cost. This ceiling was used throughout the Herpolsheimer store in Grand Rapids and the Jordan Marsh store, Boston. It was designed by Richard Ely, Allied Stores architect (both stores are Allied

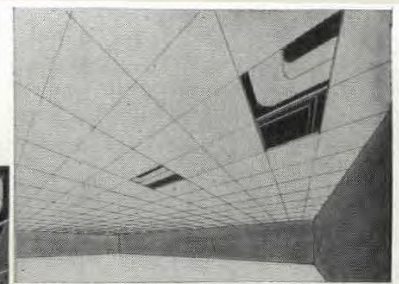


MECHANICAL SERVICES run above metal grid suspended from floor slab. Ceiling panels are clipped to this grid.

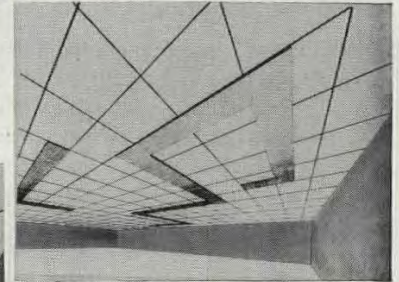


MANY LIGHTING PATTERNS and quick changes are possible. Here louvered fixtures alternate with flood-lights.

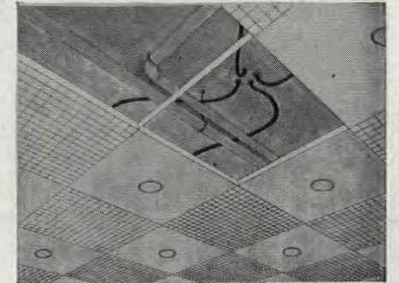
MULTIPLE OUTLETS, ceiling mounted, provide flexible wiring, making it easy to move light fixtures.



REMOVABLE PANELS give instant access to services and lights, permitting flexible space below.



NARROW fluorescent lamps could be inserted in flexible ceiling pattern for directional lighting.



Photos (below): Joseph W. Molitor



UN ADMINISTRATION BUILDING uses dry-built ceiling which incorporates air diffuser designed to ceiling module. Manufacturer has recently redesigned square diffuser to get a throw approximating 360° thus eliminating previous objections to square diffuser's tendency to streak ceiling.

affiliates) in cooperation with engineers of the lighting manufacturer. The ceiling was a 32 in. aluminum module, with 3 in. cells. It cost an estimated average of \$2.50 a sq. ft. installed and including lighting. (Plaster ceiling costs from 66 cents to \$1 per sq. ft., not counting lighting). The modular ceiling saved money in these ways:

1. Industrial fluorescent lighting fixtures and industrial type sprinkler heads were used, because they were invisible above the 45° louver cut-off.

2. Usual air diffusers were not needed; ducts terminated in hat-type outlets above the hung ceiling, with louvers acting as diffusers. (This saved about \$75 for every diffuser eliminated.)

3. Telephone wiring was suspended from the floor slab, eliminating expensive conduits. (In Jordan-Marsh, where there are 3,000 phones, this saving alone is estimated at several hundred thousand dollars.)

4. In Herpolsheimer's, building code approval was secured for simplified steel channels embedded in the concrete slabs of upper floors. Ducts, lighting fixtures, louvers, wiring, etc. are all hung from these.

One big objection to this kind of ceiling—the fact that glass counters reflect the light sources above the louvers—is being met in the Jordan-Marsh store by re-design of all counters to eliminate glass. Our collaborating architects also criticize this extensive use of the louver ceiling on grounds of monotony, and as failing to high light merchandise. Its sponsors argue that it can be considerably varied by replacing louvers with plastic or opaque sections, by stepping up lighting intensity or varying light sources.

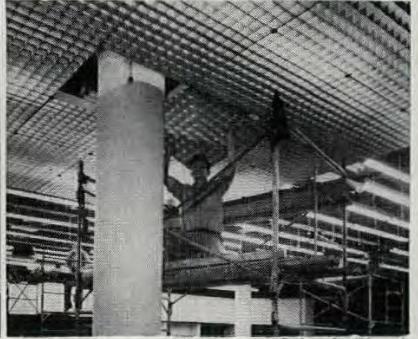


FLUORESCENT LAMPS hang from channels embedded in concrete floor slab.



LOUVERS are engaged by star-shaped leveling device and hung from 48 in. rods.

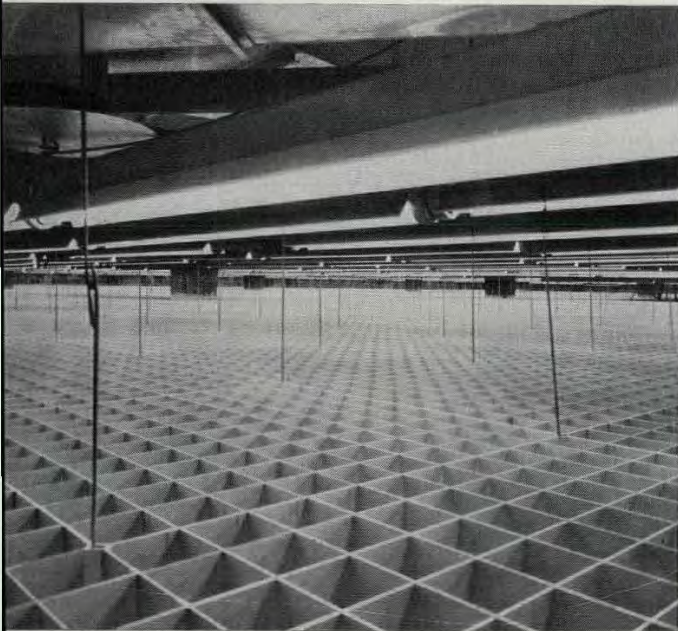
TROLLEY DUCTS run across on 16 ft. centers. Each fixture plugs in separately.



LOUVER SQUARES are snipped to fit around column. Installation proved easy.

Sylvania Electric

Herndon, Associates



VIEW above louver sections shows fluorescent lamps mounted in 16 ft. portable fixtures and hat-type conditioned-air outlets. Louver sections can be lifted up and slid to one side for instant access to lighting fixtures or other service lines screened by ceiling.



FLUORESCENT LAMPS above ceiling deliver 75 foot-candles to the sales space below. Shadowing could have been reduced by setting lamps at 45 ft. angle to louvers. All pictures: Herpolsheimer's.

FOUR MECHANICAL SHAFTS concentrate plumbing and other service lines and provide decentralized transformer stations at each floor. This kind of planning increased direct sales space to 75 per cent.



# AIR CONDITIONING

## Why zoned cooling?

### Have you considered the ceiling plenum?

### How can duct space be cut in half?

Without air conditioning, the modern store interior would never have been built. Modern lighting would be impossible—without an air conditioning system to offset the heat load. The open front would be impossible—yesterday's designer had to use a large part of the front for ventilation. Air conditioning has taken the store windows out above the first floor (at great saving in merchandise damage by dust and fading) and the glass off the display cases (making "tactile" selling and self-selection possible and saving the housekeeping expense of these large glass areas). Air conditioning has made it possible to replace the 8 ft. high partition, once necessary for air circulation, with full-length, lightweight wall sections hung from the grid of the flexible ceiling. Emergency control of air supply has been used to help make large stores fire safe.

If merchants were originally forced to air-condition to compete with the store next door, they have had the happy reward of discovering that air conditioning literally pays for itself—in relieving the usual summer slump, in greater personnel efficiency, in eliminating markdowns on sweat-damaged goods, in reduced cleaning bills.

Architects, on their part, must now consider the air conditioning system as integral a part of the building as the wall itself. This means taking advantage of the immense freedom which this technical advance yields in designing every element of the store. It also means considering such devices as the ceiling plenum (the flexible ceiling illustrated on p. 72 is an example) for reducing the cost of the air conditioning installation itself. Where diffusers or grilles are used, these must now be planned as a visual element of walls or ceiling. The demand for the flexible store interior means that ducts and grilles must be located to provide for future changes in partitioning or floor plan.

## Packaged units

Smaller one- or two-floor stores usually use the self-contained or packaged air conditioning unit, requiring no duct work. Most of these employ Freon as a refrigerant and range in capacity from 3 to 20 tons. Over recent years, all manufacturers have designed these units into compact, noiseless units occupying little space in the store plan.

Recent improvements in these self-contained units include a packaged heating and cooling unit (just now coming on the market) which operates with steam. In cities where a cheap steam supply is available, this unit may cut operating costs substantially. Several manufacturers now make compact packaged summer-cooling and winter-heating units, controlled by the same thermostat in winter and summer.

## Zoned cooling

In larger stores, especially in the multi-story department store, it is necessary to plan for air conditioning control by zones. Cooling load varies in different parts of the building as the sun moves; it also varies as shopper traffic moves from,

say, the sale in ladies' ready-to-wear in the morning to the tearoom at noon to the beauty shop afterward. Temperature and humidity requirements may also vary considerably according to the type of merchandise sold—food requires more cooling than dry goods. One manufacturer has developed compact "multiple zone" conditioning units to meet this need. These units are designed to handle up to six zones, with individual controls and dampers for each zone. This makes it possible for the same unit to heat in one zone while cooling in another—or to supply a properly balanced mixture of heated and cooled air to provide instant response during in-between-season periods.

More awareness of the zoning problem is reflected in another manufacturer's report of increased use of a multiple number of its self-contained conditioners. These are spotted at various locations throughout the store area, placed against or behind walls and used with or without duct work.

## Out of the basement

Where centralized units are called for, stores are getting interested in the new absorption machines. These steam-operated units are recommended by their manufacturer as light and vibrationless and therefore suitable for roof-top installation. Since basement area in large department stores is highly productive sales space and subbasement space is now often pre-empted for off-street delivery, getting this mechanical equipment out of the basement is important. The Kraus Department Store in New Orleans (where there are no basements) has just ordered three of these units.

Large stores which have not yet faced the problem of adding an air conditioning system to an existing building will be interested in the high-velocity installation now being made by Kaufmann's department store in Pittsburgh. Located in a roof penthouse, this equipment will cool 12 floors. High-velocity systems, now being perfected by several manufacturers, recommend themselves to large scale remodelers who can't find space for ducts. These systems make it possible to use smaller supply ducts, cutting required installation space and making it possible to avoid relocation of lights and sprinkler heads.

## Dust control

Practically all large stores now equip their air conditioning system with electrostatic filters, which remove air-borne particles of dust, lint, etc. Merchants have found that, like the air conditioning system itself, these filters pay for themselves in reducing damage to merchandise and cutting the cost of redecorating. Our architect collaborators point out that the trend to self-selection means that even smaller stores should now consider such air-cleansing devices a necessary outlay. Kenneth Welch recommends going so far as to install an electrostatic filter in a doorway floor grille—to draw the dust out of the customers before they finger the merchandise (or at least out of their shoes.)

Water shortage in some areas and the increasing drain upon municipal resources almost everywhere now means that planning for air conditioning must also be planning for water conservation. New York requires a cooling tower or evaporative condenser for any unit over three tons, and many other cities have followed suit.

# LIGHTING

When can a store be too bright?

Why won't direct light work for silverware?

Why is "combination" lighting necessary?

Since John Wanamaker installed the first electric light bulb in Philadelphia, store owners have always been among the first to pay up for improved lighting. The obvious reason for their alacrity is that shoppers won't buy what they can't see, and that there is no effective way to draw the shopper's eye to the merchandise except by making it the brightest object within view. Adequate brightness on all stock is imperative for today's trend toward self-selection.

The store interior probably presents a more demanding lighting problem than any other building type. Says Morris Ketchum: "Store lighting must combine the comfortable visibility vital to residential lighting with the high intensity illumination used on work surfaces in an office or factory. Both elements must be blended harmoniously into an overall effect without harsh glare or hard contrasts."

The tremendous development in both light sources and lighting equipment over the last decade has given the store planner a tool of remarkable flexibility. Today he can combine the warm, directional incandescent lamp with the cooler, diffused fluorescent to produce an artificial lighting environment which—in the case of the store interior at least—is more efficient than natural lighting. Moreover—economic flexible wiring installations combine with the flexible ceiling (see p. 71) to make future lighting changes possible at little expense. This means that the lighting pattern in the ceiling above can follow changes in display and in space use on the floor below with remarkable precision.

Over the last decade the architect has also learned how to exploit fully the possibilities of modern lighting by considering it from the beginning as an integral part of his building plan. He has learned how to use light as a fluid tool for molding and dramatizing architectural surfaces and he has also learned that the surfaces themselves must be handled as a part of the lighting job—that is, that their color and texture must function as calculated reflection and brightness factors.

Although the new lighting provides marvelous precision of effect, expert store planners have had, in many cases, a hard job selling its possibilities to store owners. This is because too many store owners still see lighting only as a means of "making my store brighter than the other fellow's." In the first flurry of experimentation with new lighting, brightly lit stores did prove extremely effective in drawing customers into the store. But this competitive advantage was usually lost on the inside because the lighting competed with the merchandise for the customer's attention. Today the expert store architect knows that the last thing he wants to do is to make the store interior as bright as he easily can. The store owner could much better sum up his lighting aims by saying—"Make my merchandise brighter than the other fellow's."

Modern store lighting aims to make the merchandise itself at least three times as bright as any surrounding surface. This is now most generally accomplished by direct illumination from shielded or recessed sources, supplemented by some indirect or diffused lighting. In most small goods areas, the redesigned and glassless counter (see p.



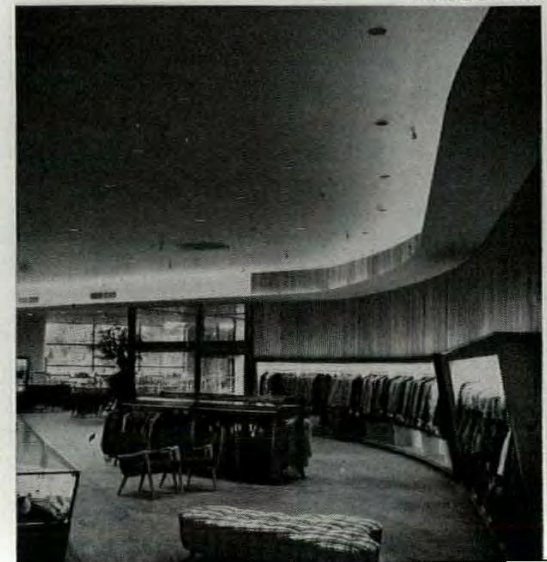
Herndon Associate.

*INTENSE LIGHTING* back of lowered ceiling is used to draw customers to hat bar at rear of store. Hollidge, Ltd. Boston.



Richard Garrison

*RECESSED* incandescent downlights and fluorescent cove uplighting used in Altman's, Manhasset. Edmund Kelly, lighting consultant.





**OVERALL LUMINOUS INTERIOR** providing general level of 50 foot-candles is here achieved by painting two walls and ceilings white for high reflection factor. Louvered ceiling sections (4 x 4 ft.) shield fluorescent down lights, supplemented by recessed incandescent spots. Valance at top of wall cases and racks conceals fluorescent tube, which throws light down on merchandise and up on ceiling. Meeting of two lights on white walls gives haze of diffused brilliance. Wallach's, Jamaica. Ketchum, Gina & Sharp.

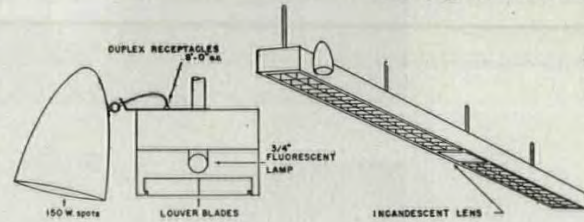


Photos (top) Lionel Freedman-Pictor

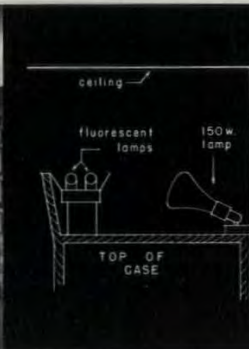
Pittsburgh Reflector Co.



**ECONOMIC SOLUTION** for general lighting, eight fluorescent lamps can be used separately from two incandescents in some 3 x 3 ft. fixtures. Gimbel Bros., Pittsburgh. William York Cocken.



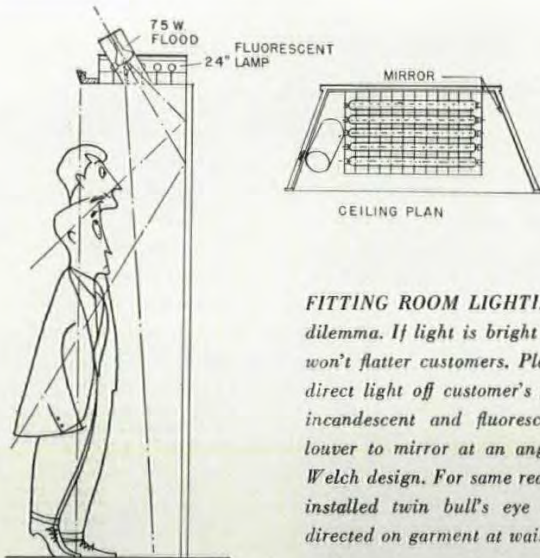
**LOW-COST REMODELING JOB** will employ these suspended fixtures which use large areas of fluorescent lamps. An incandescent element in distributing reflector is inserted every 8 ft. Fixture is also equipped with recessed duplex receptacle every 8 ft. to accommodate adjustable spotlight where needed. Max Grove, illuminating engineer.



**INCANDESCENT SPOTS** mounted over cases project light to center of ceiling, while fluorescent strips eliminate scallop shadowing. Average: 35 foot-candles.



**CENTER OF CHANDELIER** (William Pahlmann design) conceals eight floodlights. Both, Bonwit Teller, Chicago. Bernard F. Greene, lighting consultant.



*FITTING ROOM LIGHTING* presents a psychological dilemma. If light is bright enough to show off dress, it won't flatter customers. Planners meet this by keeping direct light off customer's face. This detail shows both incandescent and fluorescent light directed through louver to mirror at an angle to hit garment. Kenneth Welch design. For same reason, Bonwit-Teller, Chicago, installed twin bull's eye spots in each fitting room directed on garment at waist height.

Roger Sturtevant

*LIGHT FIXTURES* slide along trolley duct, meet art store's need for flexible lighting at low cost of \$1.50 per sq. ft. Note wood strip wall finish, designed to hang, not only pictures, but also desks, shelves. Raymond & Raymond Gallery, San Francisco. Francis J. McCarthy, architect.



Photography, Inc.

*LUMINOUS SHELVES* light crystal display with uniform wash. Fluorescent lamps, 40-watt, are used under frosted glass. Dayton Co., Minneapolis. Robert Hansen, Larry Haugan, architects.



*INTEGRAL WITH CEILING,* fluorescent sources give general illumination in this jewelry store plan. Incandescent spotlights are directed precisely where needed. Serge Chermayeff, architect.



67) now makes it possible to dispense with counter lighting and to put the direct light source in the ceiling. This means that when a customer lifts a tie out of a display case for closer examination in the "appraisal zone" above or around the counter it will be just as brightly illuminated as it was in the display case.

Where merchandise lighting is installed in the ceiling overspill from this direct source can be counted on to illuminate aisle space. This direct downlighting is usually supplemented by perimeter lighting to illuminate wall surface and by some indirect or uplighting to illuminate lightless portions of the ceiling.

Even with improved light sources, making the merchandise "three times as bright as anything else" is not so simple as it sounds. Brightness, as we all know by this time, is not simply the amount of light used (foot-candles), but amount of light times the reflection factor of the illuminated object. Store merchandise ranges from a reflection factor of 1 per cent (a blue serge suit) to a reflection factor of 8 per cent or better (silverware, other mirror-like surfaces). While the primarily direct lighting method described above will be efficient for most small goods counters (largely soft goods of diffuse texture), it will not be equally efficient in stores where silverware, housewares or other high-reflection factor items are sold. Here indirect or other methods achieving a more diffused surrounding brightness are needed.

Kenneth Welch says that a sound lighting plan must also appraise the lighting method employed against the sale importance of the merchandise being lighted. Thus the merchant should be encouraged to spend the greatest amount of money on lighting "impulse" counters, while cutting the budget may be prudent in lighting "convenience" counters.

The expert store planner prefers a combination of incandescent and fluorescent lighting to the use of either light source alone, and this preference is reflected in the number of products now on the market which combine both sources in a single fixture. Lower-wattage fluorescent means reduced air conditioning and operating costs, but incandescent must usually be added to give merchandise highlight and sparkle.

Color correction is no longer the main reason for combination lighting. Manufacturers have recently developed a phosphor which enables the diffused fluorescent to bring out a proper amount of red, and store owners are enthusiastic about this improved "warm" fluorescent. Our store architect collaborators agree that a combination of incandescent and fluorescent is necessary for other reasons. The directional incandescent creates high light and shadows to bring out form and texture; the diffused fluorescent illuminates detail in the shadows and prevents too great a brightness contrast between merchandise and surrounding area. (An interesting regional variation is in the deep South where a high proportion of daylight fluorescents are used in stores because their coolness is preferred to any amount of dramatic merchandise lighting.)

While the first rule of modern store lighting is "Don't hit the shopper in the eye with the lighting fixture," many store owners think they can save money by installing direct lighting fixtures suspended from the ceiling. This means that the fixture is the brightest object within view, and the customer's eye is drawn to it instead of to the merchandise. Says Morris Ketchum: "In such a lighting plan, glare and monotony tend to more than counterbalance low initial cost." Most of the examples here show, by contrast, such skillful integration of lighting with ceiling and other surfaces that the whole interior has become the lighting "fixture."

# MACHINES TAKE OVER

**What's new in warehouse methods?**

**How can marking costs be cut?**

Anyone who believes that big department stores are on the way out as a merchandising method has yet to reckon with such managers as Fred A. Lazarus, head of Federated Department Stores (an alliance which includes Filene's in Boston, Foley's in Houston, Bloomingdale's in New York and other blue-chip properties). Says Lazarus: "The department store has every advantage as a distributive institution, because it sells 275,000 items in the most economical place to shop from the standpoint of the customer's time." Since the war, Lazarus has devoted himself to the question which will determine whether the massive, centralized department store goes or stays: the high cost of doing business. Much of this cost is chargeable, not just to the size of the store itself, but to the city congestion which surrounds it. The fact that the downtown store spends 2 per cent of sales on delivery is, for example, directly chargeable to the fact that the downtown shopper cannot bring her car along.

Lazarus tackled the cost of doing business by recognizing that department stores had reached a size big enough to make industrial methods—both of work simplification and of materials handling—pay off. Lazarus' studies ranged from how many times the clerical force handled a sales slip to how many times the warehouse force handled a sofa. Proper planning, he found, could reduce handling in both cases and result in impressive savings. The warehouse planned for Lazarus by the Austin Co. is probably the most spectacular of these.\* Built on cheap outlying land at a distance from the Lazarus store in Columbus, the warehouse made use of all kinds of mechanical conveyors and especially of palletization of merchandise for handling by fork-lift trucks. Since then, many big department stores have built mechanized warehouses. Just last month Carson, Pirie, Scott in Chicago opened its one-story warehouse, covering 11½ acres, and figured it can handle 50 per cent more goods than in the old one at no increase in floor space. Fork-lift truck handling has proved so efficient in warehouse operations that many manufacturers are now pre-palletizing merchandise so that it can be shipped ready to be picked up at delivery point by the fork-lift truck.

As one of the few big department stores to be built from the ground up since the war, Foley's in Houston took advantage of its opportunity to introduce considerable mechanization in the store itself. This included: 1) spiral chutes cutting through five floors down which packages were dropped to a conveyor belt leading to a basement ring where they were sorted for delivery trucks or customer pick-up at the parking garage; 2) a conveyor belt for moving merchandise from unloading dock in the adjoining garage to the receiving and marking room; 3) peripheral stock space on each floor fed from a service core of freight elevators, dumb-waiter and automatic wheeler lifts.

Thalhimer's in Richmond has introduced one of the most elaborate mechanical systems for moving goods from delivery through marking operations. This system is based on the simple principle that it is cheaper to move the merchandise to the markers rather than to have markers moving back and forth in pursuit of small lots of merchandise.

\* This warehouse will be reported in detail in a fall issue of the FORUM.

Both the Foley and Thalhimer installations were designed by consulting engineer Edward Ashley.

In addition to these large scale installations, merchandisers now have at their disposal an ever-growing variety of devices which range from the U-Ask-It—a mike into which a customer seeking housewares can speak and get directions—to a Window Shopper which records the looker's buying impulses on plastic tape if he will merely speak them.

## PATH OF THE COMMUTER

**What about vending machines?**

**What do lunch-hour shoppers want?**

As the record rate of postwar housebuilding pushed the retailer's prime customer—the middle-income-family with children—farther and farther out in the suburbs, Main Street merchants began to revise their methods to accommodate the suburban customer when he came to town. Unfortunately, not all these suburbanites came at the same time and for the same reason. On the one hand, there was the large group of commuting business men and other office workers. To pull these travelers into Main Street stores on their lunch-hours or on their way to the suburban train meant special merchandise promotions: women office workers spend more for their "white collars" than do factory workers and quite a bit more than the average "homemaker."

The commuter forced stores to adopt selling methods geared to quick, efficient service and to seek locations near or in railroad or subway terminals. Filene's vending machine installation in the Greyhound Bus Terminal (which

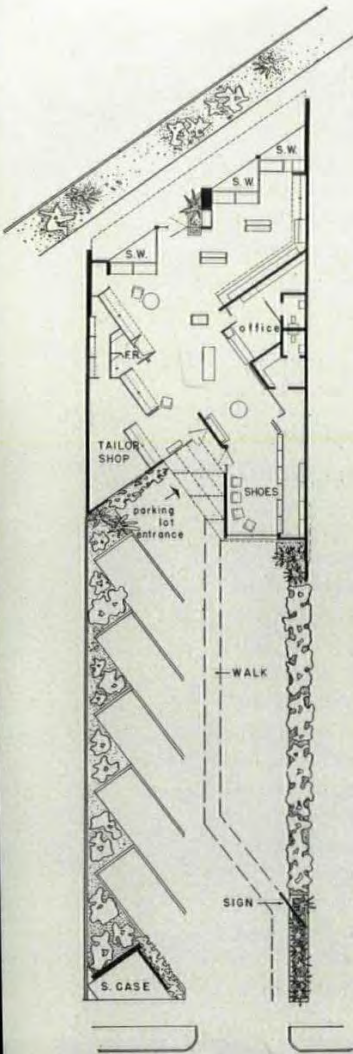
*Business Week*



practically every prominent retailer in the country has ogled over recent months) is only the first sign of how far the downtown merchant may eventually be obliged to go in getting on the path of the commuter. Over recent months several large department stores have taken official cognizance of the fact that the downtown customer is increasingly a lunch hour customer. These stores have taken the simple step of scheduling employees' lunch hours before 11 and after 2 so that the peak sales force will be on hand during the hours of peak shopping traffic. Evening shopping hours were, of course, a much earlier recognition that the downtown customer is no longer just a middle-class housewife with lots of shopping time on her hands.

But quick, efficient—even vending machine—service will not entirely meet the needs of another important group of downtown shoppers. These are suburban housewives on regular shopping excursions in pursuit of fashion apparel of such "lifetime" purchases as furniture or major household appliances. Downtown merchants count heavily on having this customer around for a long time (but special



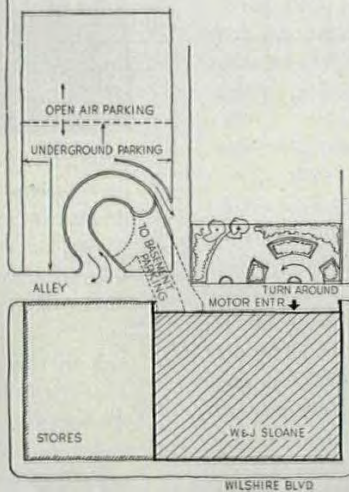


Photos (above): Garber Sturges

**PARKING LOT** access to this small store is planned with as much care as the store front. Parking space is screened by landscaping, and entry to lot is exploited by free-standing display case, which also helps to shield less attractive part of parking lot from street view.

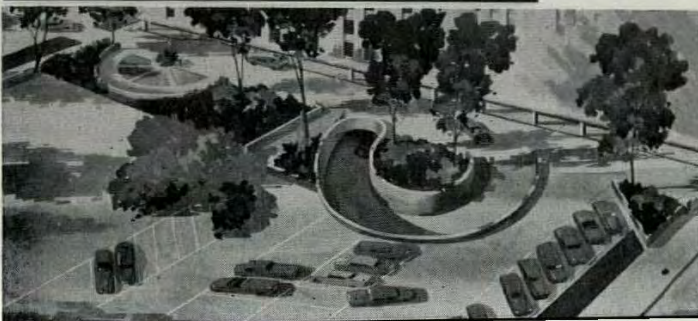
Victor Gruen says: "The small shop is the architect's greatest challenge. Expensive materials and construction must be replaced by ideas and imagination." He shows how to do it with this Los Angeles job. The whole building cost only \$22,000, including parking lot treatment. Stucco, wood, fir plywood, other economic finishes helped cut costs. All show windows were set in wood with the help of small galvanized iron channels. Exposed roof is whitewashed to exploit indirect lighting for high overall illumination.

Maynard Parker



**ADEQUATE OFF-STREET PARKING** and unloading is now so important to retail success that the W. & J. Sloane furniture store spent thousands to provide it in their new branch located on expensive Wilshire Boulevard frontage, Beverly Hills. Some 90 per cent of shoppers are expected to enter store through rear motor promenade, which is lined with show windows. Attendants take cars down ramp to basement garage accommodating 150 or to open-air parking which can be extended backward to take an unlimited number. A subbasement level holds three unloading docks and storage space. Trucks use same ramp as cars, but bear left into subbasement. View below shows motor entrance. Paul Williams, architect.

Del E. Webb



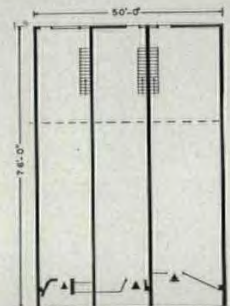
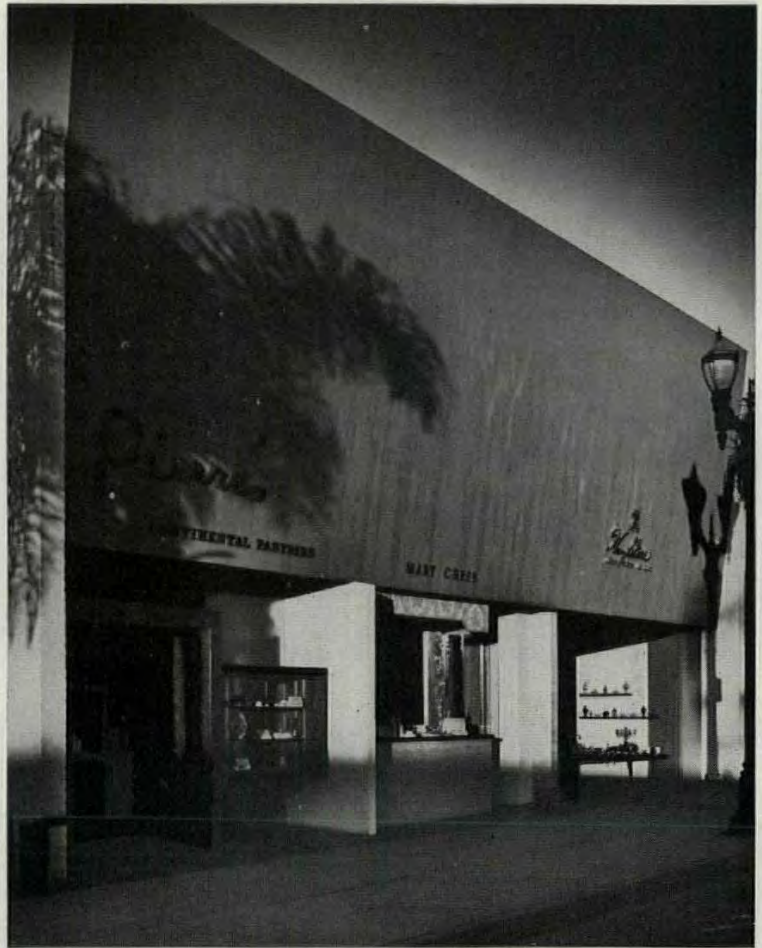
fashion promotions at suburban branch department stores have already showed that the suburbanite, in increasing numbers, is ready to settle for a fur coat or *couturier* model without bothering to come downtown.) The merchants argue that "high fashion" shopping and furniture shopping is comparative shopping—that is, a woman may buy a sports dress or some novelty curtains in a branch store, but when she makes a sizable investment in either clothes or home furnishings she still wants to see all there is to see. In New York, where downtown store congestion and downtown store investment are both at their highest point, merchants point out that the mass transit lines which serve this vast urban complex offer the suburban housewife at non-rush-hours a fast and easy way to reach the downtown store. Some of these men feel that the store must keep her interest in these excursions by spending money, not only to make it easier for her to get to the merchandise, but also to make it more fun. This philosophy is back of the current move among the department stores to create fairly luxurious restaurants in the place of yesterday's skimpy tearoom, to build in auditoriums (which can be converted to toy selling space at Christmas), for women's club meetings or simply to provide more pleasant places where the shopper can rest her feet.

The need to satisfy the requirements of a great variety of downtown customers—the everyday commuter, the once-in-awhile suburban housewife, the city dweller in all income groups—simply points to an old fundamental in store planning. This is that a crystallization of merchandising aims must precede even the smallest step toward a building plan. Now as never before the downtown merchant must know who his customers are, what their buying power is, what merchandise and what services will best meet their needs.

Daniel Schwartzman emphasizes that setting up building or remodeling requirements for even the smallest store means a comprehensive research program including "1) a study of the needs and habits and buying potential of the public in the marketing area; 2) the ratio of the expected dollar volume of yearly business and the sales area to be occupied by the various types of merchandise within the store; 3) the business background and aptitudes of the operating merchants."

In estimating hoped-for dollars of sales per sq. ft., the architect will, of course, start with such basic data as the figures published annually by the Controller's Congress of the National Retail Dry Goods Association. These reports give typical sales per sq. ft. for stores in various volume and regional groups. But Schwartzman emphasizes that these basic figures are only the beginning of the merchandising analysis. Average sales-per-sq.-ft. ratios must be carefully adjusted to the merchandising aims of the store under consideration. Ratios must be readjusted by the architect on the basis of whatever space economies he may be able to make. Thus if the architect can compress, say, the shirt counter to half the usual space by a careful forward stocking scheme, productivity per sq. ft. will be correspondingly raised.

Says Victor Gruen: "When merchandising needs have been analyzed and merchandising aims clearly stated, then and only then can the design of the structure or the design of alterations to a structure proceed. Never shall the structure or the building be permitted to make merchandising its slave, pressing it into spaces and shapes not suited for it. From the amount of needed sales fixtures, stock space and services, which have been established as a result of careful planning surveys, definite conclusions can be drawn concerning size, height and character of the structure."



Photos: Julius Shulman

*DISTINCTIVE IDENTITY* is here given to three shops—bakery, cosmetics, jewelry shop—by expertly varied entries and display within a unified building facade. Owner needed a mezzanine stock room but his sales space needed not to be over 9 ft. high. Architect Douglas Honnold reconciled both conditions by a steeply sloping roof that saved \$6,000 compared to a conventional flat roof. John M. Gibbons Store Building, Beverly Hills.

