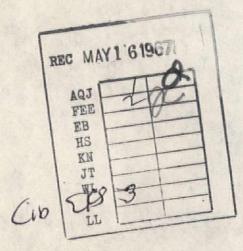
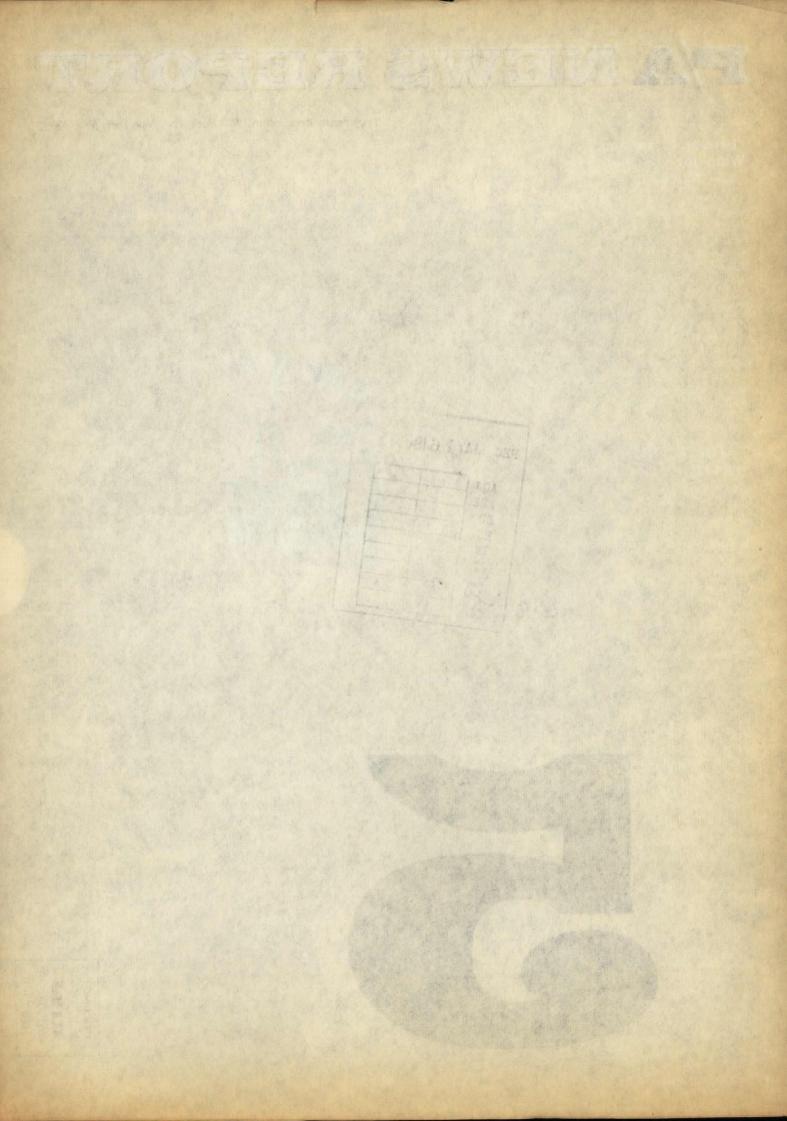


Progressive Architecture 430 Park Ave., New York, N.Y. 10022









P/A NEWS REPORT

Progressive Architecture's Monthly Digest of Buildings, Projects, People and Products

May 1967

Breuer to Design Wing for Cleveland Museum

CLEVELAND, OHIO. Following closely the success of Marcel Breuer's Whitney Museum in New York, an announcement was made last month that Breuer's firm will design an addition to the Cleveland Museum of Art. Although details of the design are not yet available, a spokesman for the museum says that the new wing will be designed to house the museum's educational activities and will include a TV studio, an auditorium, a special exhibits hall, and offices.

THE ROAD TO APATHY IS PAVED

MILWAUKEE, WIS. Apathy runs a lot deeper than beer in Milwaukee, or so it seems. Their beautiful lakefront threatened with the blight of 3.3-mile freeway extension, Milwaukeans dribbled to the polls early last month and voted, in small numbers, for the blight.

No one seemed to care much, least of all the two newspapers, both owned by the same company, which carried hardly a mention of the referendum, then, after it was over, said the freeways had already eaten up 100 acres of Milwaukee parkland and that such waste should stop. It certainly should. But it won't, of course.

Milwaukee, like Mrs. Wentworth Brewster in the Noel Coward song, is off in search of excitement. After 30 years, during which construction activity in the downtown area barely stirred, it is awakening to a binge of building. The attitude seems to be that, if it is to be built, it must be all right — never mind how or where.

Strangest of all is the tale of the referendum. Last fall, 48,000 supposedly irate citizens signed a petition to bring the Lake Freeway to a vote. Last month, the vote was held and only 35,712 voters marked their ballots against

May 1967

it. They were outvoted almost two to one. In Milwaukee, it is a lot easier to vote if someone brings the ballot to you.

Meanwhile, in New Orleans, the Bureau of Public Roads, which strikes with equal lugubriousness on many fronts, is revising its plans for the expressway, which will knife between the river and the Vieux Carré. For that particular stretch, it will outfit the expressway with a wrought-iron railing and connect its supports with concrete arches.

This flagrant cosmetic sop was thrown up in an attempt to bring a vocal New Orleans anti-elevated expressway group to heel. Although the vast misguided self-interests of downtown commercial groups, which are pushing the expressway, have much of the power in the palm of their hands (including the Mayor, the State Highway Department, and the local newspapers), a valiant band of resistors keeps sniping away with new studies and new alternate plans. Maybe they are gaining ground; they evidently have Washington a little worried.

Building Suppliers Form Mortgage Company

AUSTIN, TEX. Six major U.S. corporations have pooled resources to form a piggy-back lending organization, primarily for new homes. Known as Home Capital Funds, Inc., the corporation is backed, at this point, by Andersen Corporation, Armstrong Cork Co., Kaiser Industries, Masonite Corp., Reynolds Metals Co., and U.S. Plywood-Champion Papers, all suppliers of building materials. What Home Capital will do is participate in loans with an institutional mortgage lender to make possible a lower down payment loan than the institution can make alone. With this cooperation available to the borrower as a single package, down payments may be reduced to 10% of property value. Although lending volume during the first year is expected to be moderate, one spokesman for the group says, "This joint loan program will continually expand and eventually could be a substantial factor in the home mortgage field."

REFUSE: CIVILIZATION'S BY-PRODUCT



Melted and baled car bodies.

Yong Song Kim is one of the wealthiest, most powerful men in Uijong-bu, a small South Korean community about an hour's drive south of the 38th parallel. His home is constantly filled with persons seeking favors; his mahjong games last long into the night. Kim's wealth and prestige spring from a single fact: He has the trash concession at the nearby U.S. Army base. Almost everything the Army throws out and Kim collects - tin cans, bottles, waste paper, food scraps - is saleable to the sadly under-nourished Korean economy. Kim's situation, although exalted, is not unique, for the amount of salvable waste thrown out in many parts of the world is reaching monumental proportions, bolstered by sometimes alarming gains in populations and prosperity. Even in New York City, an entire subculture of garbage scavengers exists men and women who ravage trash baskets to scratch out a living by selling their findings. One such man told a newspaper reporter not long ago that he could make \$100 a week if only he had a bicycle.

Perhaps if all the world's trash could be collected and resold by people like Kim, the gigantic garbage disposal problem, which literally threatens to engulf the U.S., would not exist. In New York City alone, which spends \$10 million a year more on trash collection than any other city in the world, it is estimated that 6 million tons of garbage are collected each year, enough to bury Manhattan Island 16" deep. This mass of trash is collected by an army of 9675 sanitation department workers - one trash collector for every 835 New York City residents.

Each U.S. resident disposes of 4.5 lbs of refuse a day. California collects 12 million tons of municipal refuse each year. Garbage and trash, of course, are not the only waste. In California, for instance, an estimated 3,300,000 tons of sewage is generated in a year. And throughout the U.S. the obsolete discards of an affluent society dot the countryside: car bodies, refrigerators, dishwashers, construction rubble.

Landfill — As the shear bulk of our waste increases, so does the urgency of deciding either to do something about it or to live with it even more intimately than we do now. For many years, New York City and other metropolises have been using waste as landfill. Bottles, tin cans, and incinerator ash, layed in layers with earthfill covers between them, make adequate landfill. Kennedy International Air-port and Lefrak City (the housing development for 40,-000 people in New York) are built on landfill, for example. But space for landfill is not everywhere available. Despite a recent offhand remark by New York City Sanitation Commissioner Samuel J. Kearing, Jr., that "looking at infinity, the answer will of course be the Atlantic Ocean," Kearing himself predicts direly that the city will



Civic Center / National City, California / Architect: Freeland Bird & Associates / General Contractor: Raymond A. Whitwer

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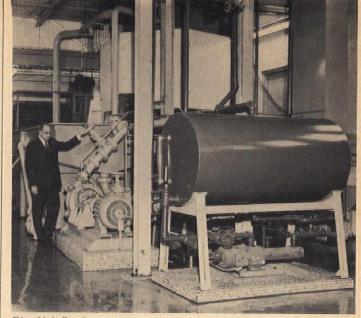
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The Melt-Zit Destructor.

run out of landfill space in eight years. For one thing, dumping at sea has been halted by a U.S. Supreme Court ruling since 1934. For another thing, any time a new landfill site is selected, a giant protest arises from conservationists and from people living in the area. Right now, five landfill sites are used regularly for refuse dumping in New York. When these are filled, no one knows what will happen. "New York," Kearing says, not entirely metaphorically, "is in a real crisis." So is San Francisco. Bay Area marshes are now being used for landfill there, with what many warn can be dire consequences to wildlife and even climate. In 10 years, these marshes will be filled if dumping continues at its present rate. By the end of the century, according to a Bay Area planner Robert Cornish, enough refuse will have been carted into the Bay to cover 50 square miles to a depth of 20'.

Chopping, Shredding, and Pulping — Obviously, something else must be done to rid us of the debris of our civilization. Fortunately, a handful of persons are beginning to worry about doing just that. Kearing, for example, is trying several things. He recently asked the U.S. Public Health Service for \$1,300,000 to build a prototype shredding plant to chop up bulky waste from demolition and con-

struction sites. It could handle timbers 18" or more in diameter and up to 80' in length, chopping them into predetermined, more manageable lengths, perhaps 2' to 3'. "We also must dispose of . . . discarded household furniture. including dressers, tables, sofas, etc.," Kearing goes on. "In the lumber products industry, there is a well-developed technology which can convert logs fresh from the forest to pulp. But we are presented with heavy timbers to which are fastened a variety of tramp materials, such as heavy spikes, concrete, metal lath and plaster." Sheared into manageable lengths, these items can be shredded into chips, then fed easily to an incinerator or carted away as fill.

From Trash into Electricity - Used infrequently in the United States, but much in use in Europe, are plants that burn refuse to generate steam. Cost of fuel in Europe, where oil and even coal must be imported, make these plants economical; and because of the double service performed, the attractiveness is heightened, even though garbage is not an efficient fuel, and although the residue ash (sometimes as much as 45%) still leaves a disposal problem. Cost of incinerating refuse is around \$6 a ton. In New York City, with costs of other fuels being what they are, it does not seem economically feasible to burn garbage to create electricity.

Nonetheless, a delegation of representatives from the city Sanitation Department and the city's electric utility, Con Edison, recently completed a tour of refuse-steamelectricity plants in Europe, and a report of their findings is on Mayor Lindsay's desk. European plants in Rotterdam, Paris, Munich, Stuttgart, and Amsterdam burn refuse to generate electricity. One consideration that makes their operation especially attractive is the lack of sulphur in their smoke-stack fumes. For this reason alone, New York City Air Pollution Commissioner Austin Heller is pressing the idea. In the U.S., such plants have not always been so salubrious. In Atlanta, the Magnolia Street incinerator, which since 1939 has converted refuse into steam to be sold (500,000 lb of it a day) to the Georgia Power Company, is one of the city's worst sources of air pollution. Over the years, the plant has more than paid for its cost; this year, however the city is beginning improvements on it, including a complete filtration system that will cost about \$1,500,000.

The Diseases Have Side Effects — Pollution of both air (an optional addition) not much has been achieved except the conversion of a large amount of one type of waste into a lesser amount of another.

Fly ash from incinerator chimneys is another obvious pollutant. Both Con Edison in New York and Detroit Edison have installations in which they collect fly ash from their chimneys electrostatically and convert it, under heat and pressure, into building blocks. There is, however, little market for these blocks, and fly ash will probably remain a by-product of waste disposal until we have stricter antipollution laws.

Stricter laws are about to take effect in New York. When they do, Sanitation Commissioner Kearing expects to collect 10 million tons of garbage a year instead of the present 6 million. (He feels that apartment houses and office buildings, no longer able to meet pollution requirements and unwilling to improve their incinerators because of the cost, will shut them down.)

A Possible Palliative — But in the midst of this rather bleak picture is an area of possible hope. The American Design and Development Corporation in Whitman,



Furnace in France melts car bodies.

and water is a serious side effect of incinerators. Elmer Kaiser, a senior research scientist at New York University's School of Engineering and Science, has designed an incinerator which, outfitted with gas furnaces and an air blower, can achieve an efficiency of 90%. But if a water wash is added to form a slurry that is flushed down the drain Mass., has a pilot disposal plant that may be to waste disposal what the steel beam was to construction. According to the developers, the "Melt-Zit Destructor" acts a little like the Hulk, the current comic book favorite, who takes on all opponents and destroys them. It will, they claim, operate on any waste material, not just garbage. It will destroy glass, tricycles, refrigerators, rubber tires, and motor blocks, leaving only a 2% residue, compared to the 30% left by an ordinary incinerator. The secret of such efficiency is, of course, high temperatures. Operating above 3000F, the destructor will melt down anything that can fit through its 6'-sq receiving vault. The hard block slag that results can further be reduced in bulk by running it through a tank of water, where it precipitates out as sandlike granules. These are collected and perhaps can be used as sanitary fill, road construction material, or in shingle and brick manufacture. According to one estimate, a destructor capable of handling 600 tons of rubbish a day could be set up for \$2,500,000 slightly less than the cost of a regular incinerator. And disposal costs would run about \$3 per ton. So far, no community has put a Melt-Zit into regular operation.

What Will the Future Think?

- In the meantime, the most attractive way to dispose of waste is still an incinerator that finds an outlet for its energy in some important task, such as the production of electricity. In Hempstead, L.I., a refuse-burning plant uses its energy to convert salt water into fresh water. Using a water-spray method of collecting fly ash, its operators claim to produce only half a pound of air pollutants per 1000 lb of flue gas. In Saudi Arabia, the government has let out bids for a sewage-disposal plant that will reclaim 20 million gal of sea water a day. Other waste disposal efforts now in use are at best spotty. Elmer Kaiser perfected a furnace that burns down car bodies, which are then baled (see photo) and sent off to steel companies for reuse. Some tin cans can be reused as metal base on which to precipitate copper in that metal's manufacture. And, occasionally, one hears from the poets of press agentry that some client is doing his part to rid America of trash. He is, they tell us, using tire casings as the backing for carpets, or picking up wood scraps and making them into executive yo-yos.

It is probably not true that the degree of a nation's civilization is directly proportional to the amount of garbage piled up per capita. But American urban dwellers act as if it were. At the rate things are going, they may have claim to a degree of civilization that will make future historians sit in wonder.

POETIC INSIGHT

BOZEMAN, MONT. Located in the Rockies about 45 miles north of Yellowstone National Park, Bozeman, with its approximately 15,000 inhabitants, is far from an industrial center in both distance and fact. It has some string bean and pea canning, and some flour milling, but nothing that would mark it as a manufacturing hub. What little smoke does rise from the cannery stacks is soon swept away by the winds that whip through the mountains. One would imagine that the urban evils of air pollution would hardly ripple the thoughts of a Bozemanite. Not so. At least one citizen of this Gallatin County seat is troubled enough by it to turn to poetry. Mitch Olsen, an eighth grade student at Bozeman Junior High, calls his verse simply Smog. His English teacher, who was impressed by "his imagination, truth, humor and poetic form," sent it to us.

- The grit, the grime, the soupy fog
- Make up the slime we now call smog.
- People in cities have a grudge Against this problem causing smudge.
- The fumes and mist that make this solution
- Cause industrial cities' air pollution.
- The mills that produce this fabulous wealth
- Are now endangering everyone's health.
- Our physical well-being importantly priced
- Is forgotten when we are so enticed.
- Cities are now becoming enshrouded
- When smoke and fog become too clouded.
- Action must be taken or it will occur
- That all our clean air will become a blur.

ELECTRIC CAR PLUGS IN AT NIGHT



REOLINOS, CALIF. Westinghouse Electric Corporation entered the electric car stakes last month with the announcement of the availability of a homely, two-passenger, battery-powered car. Capable of trips up to 50 miles without a recharge at top speed of 25 mph, the car is being offered to the public as a means of dependable, short-range, urban transportation. According to Westinghouse the car, called the Marquette, should last for 10 years without a major repair, operating at a cost of about 1¢ a mile.

It is powered by a set of 12, conventional, 6-y lead acid

batteries, which are located under the rear package shelf. Weighing 66 lb each, the batteries should be good for a day's driving, and can be recharged by merely plugging the battery charger that comes in each vehicle into an ordinary 110-v electric outlet. Westinghouse maintains that each set of batteries can take up to 600 recharges without replacement, which would allow a Marquette owner to drive for about two years before sinking \$300 into a new set of batteries.

This year, Westinghouse plans to turn out only a few hundred of these vehicles.

LANDSCAPING STARTS AT OAKLAND MUSEUM



OAKLAND, CALIF. Landscaping, now under way at the newly constructed Oakland Museum, will turn the Kevin Roche John Dinkeloo & Associates-designed structure into a veritable cornucopia of verdure. With its three wings arranged on different levels, the roof of one becomes the garden terrace of the next. "It will be a warm friendly informal palace," comments

Roche. And it is probably, in great part, this concern for the land that led Arthur Drexler of New York's Museum of Modern Art to call it "The most brilliant concept of an urban museum in America."

Fronted by a large (200' square) garden plaza, with shaded walks and small courts, the museum will allow the visitors to pass directly

from galleries out into the garden, where they view sculpture in natural settings. Landscape architect Dan Kiley points out that "a definite landscaping aim is an overgrown effect of planting as soon as possible. This building won't be hurt by luxuriant growth." What Kiley plans is

a suffusion of groundcovers, flowering shrubs, flowers and, of course, trees. Already on the site are a cluster of 7 redwoods and 12 cedars.

The \$7-million museum overlooking Oakland's Lake Merritt is scheduled to open in 1968.



NEW P/A EDITORS

Two recent additions to **PROGRESSIVE ARCHITECTURE'S** editorial staff bring with them a sound background in architectural and engineering journalism.



Walter C. Kidney comes to the P/A staff from Random House, where for six years he was an editor on the Random House Dictionary, in charge of architectural, building, civil engineering, and furnishings terminology. Kidney, who has a degree from Haverford College, also spent two years as an editor with H.L. Yoah & Company, industrial consultants. His active participation in architectural matters is long standing, and he is a member of the Victorian Society in America, the Society of Architectural

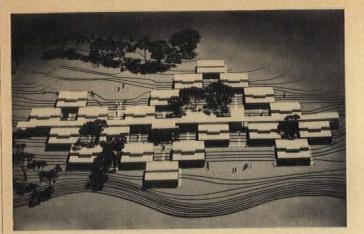
Historians, the Society of Architectural Historians in Great Britain, and the National Trust for Historic

Preservation.

David R.W. Teviotdale, who will edit the Materials and Methods section of P/A, received a degree in mechanical engineering from the University of British Columbia. For the past four years, he has been an editor with the weekly construction newsmagazine, Engineering News-Record, a McGraw-Hill publication. In addition to his editorial experience, Teviotdale served in the Army Corps of Engineers, was an application engineer for the Otis Elevator Company, and for a time was a management consultant.



CLUSTERS OF THE ELDERLY



ENFIELD, CONN. The first 4 apartments of a proposed 80 units of elderly housing are underway here in this small (15,000 population) town near the Massachusetts border. Arranged 4 apartments to a cottage, with the first 10 cottages clustered along a covered walkway (see site plan), the housing will consist of 75% efficiency apartments and 25% one-bedroom apartments. The clusters are so spaced that each three cottages share a garden. Also included in the clusters will be a common room, opening off the covered walkway. Financing comes from the state under Connecticut's elderly housing law. But the housing will be administered by the local housing authority, which will charge a minimal rent, with the state making up any deficit.

Units will have brick exteriors over masonry fire walls. Cost for the first 40 units is \$420,000. The architects of the project are Olson & Miller of Hartford, Connecticut.

REPAIR, DON'T RAVAGE, SAYS TASK FORCE REPORT ON CAPITOL'S WEST FRONT

WASHINGTON, D.C. The annual battle between architects and non-architect J. George Stewart, who carries the title of "Architect of the Capitol," is usually reserved for the last months of the yearly Congressional sessions. This year, however, it got a sudden and powerful early boost with the issuance, early in April, of a report by a special five-man committee of the AIA. In effect, the report called for junking of Stewart's entire \$34million plan for extending the Capitol's West Front (the side facing downtown Washington to provide nearly 4.5 acres of added space for restaurants, tourist accommodations, and committee rooms, and, incidentally, cover up the last remaining vestiges of the original building; see p. 61, AUGUST 1966 P/A).

The AIA committee recommended, instead:

□ Removal of the accumulation of more than 160 years of paint and other preservatives on the admittedly crumbling sandstone outer walls, to show the honorable scars of years of service.

□ Replacement of such of the stonework as has cracked or deteriorated beyond repair — but with original material.

□ Strengthening of foundations and other areas, which admittedly show signs of damage from frost, weather, and settlement, by existing or new techniques, such as "needling" (use of temporary steel beams to carry load while other areas are repaired); drilling of diagonals through the old masonry foundations, and reinforcing them with grout and reinforcing bar and the like.

□ Provision of any extra space for Congressional activities in other buildings through preparation of a proper master plan for the whole of Capitol Hill.

The committee made no estimate of the cost or time that would be required to carry out its recommendations, though it recognized that "patience" is necessary, and would be necessary even if Stewart's plan for extension were carried out. (Testimony of engineers and others before a Congressional committee considering extension a year ago produced estimates ranging between \$20 and \$50 million, as cost of restoration rather than reconstruction.)

The five-man AIA committee was appointed last year ---after it became apparent that Congress would take no action on Stewart's proposal - to make a study independent of any others previously conducted by AIA, and the more than 10 years of studies that have already been made. The committee included: Samuel E. Homsey of Wilmington, Del., who acted as chairman; Francis D. Lethbridge and John W. Stenhouse of Washington, D.C.; Louis Rossetti of Detroit; and Norman C. Fletcher of Lexington, Mass. Carl Hansen, a structural engineer, assisted the group.

After study of previous engineering reports, a one-day meeting, and a one-day visit to the site as a group, the committee found:

□ The West Front is in a state of disrepair. Numerous cracks are in evidence on the exterior, some window lintels and keystones have cracked and slipped; several of the architrave stones have sagged; the foundations, at some points, are not far enough below the finish grade to escape frost damage. "However," the report said, "none of the defects appears to indicate that danger of collapse is imminent or that correction is impracticable."

□ The recommendation to extend the West Front to provide members of Congress and visitors with additional space and facilities was made without first conducting an adequate survey to indicate need. "If modern facilities and office space are critical necessities, should a 19th-Century building be reshaped to meet 20th-Century needs?" □ The West Front can be restored and its structural weaknesses corrected. "Admittedly," notes the report, "it will be a job requiring skill and patience. But if the decision to restore the Capitol is made, our building technology is certainly adequate to meet the challenge. Restoration would be, however, a costly undertaking and would entail some inconvenience."

The committee found no direct evidence that lateral thrust in the present West Front has caused problems; the building is not out of plumb. Thus, while the structure is "experiencing" some vertical settlement, it is not "slipping down the hill."

The AIA's accompanying statement added that "doubt is cast on the need for a buttress, although this is one of the arguments made by those who favor an extension." And AIA President Charles M. Nes, Jr., noted: "The American Institute of Architects believes it would be a mistake to cover up the last remaining exterior portion of the original Capitol. We strongly urge that the greatest symbol of our country be preserved."

The committee, incidentally, disposed of the argument that the original sandstone was not a suitable material to begin with: "Though this stone is obviously inferior to some other stones for exterior use, so is marble. The difference is relative. The same quarry from which came the facing for the Capitol furnished the facing for the first wing of the old Patent Office (in downtown Washington, and now being restored as an adjunct of the Smithsonian Institution). There is no serious deterioration of that surface: however, the adjoining wings of marble are badly deteriorated. There is good reason to feel that inferior construction methods . contributed considerably more to deterioration than the facing material itself.

"The Task Force supports a program of preservation in the purest sense of the word. First of all, every bit of exterior paint should be carefully removed and the original stone exposed. Only those stones that are structurally unsound should be replaced, and those stones should be replaced with the same material as that of the original walls. It is not felt that a restoration of the West Front for 'cosmetic' reasons is either necessary or desirable. . . . After removal of the existing layers of paint and replacement of damaged stones, it will then be possible to determine whether the wall should remain exposed or should for aesthetic or protective reasons receive a coating that will not entrap moisture as before — i.e., will allow the stone to breathe.

"It has been stated in support of the extension that no restoration of the existing building would be permanent. Very little is permanent, not even the proposed extension. Constant maintenance is the only safeguard against failure of any construction...."

- E.E. Halmos, Jr.

It is doubtful that this latest flurry by the AIA will carry

any weight with the Capitol Architect, whose office has in the past been decidedly cool to informed professional comment. Already there are murmurs of pique about the irrelevance of a study based on two days of observation of actual conditions versus a plan for the addition worked out over a 10-year period. What the AIA is calling for, although belatedly, is the need for planning. Without it, any addition to the Capitol will merely be obsolete in 15 or 20 years, and covered by yet another addition. The nation's Capitol, it would appear to us, should be more than just another house that Jack built

"EVERY MAN SHOULD HAVE A GAZEBO"



SAN FRANCISCO, CALIF. Take a giant bird cage and a castiron spiral staircase. Put the cage on steel supports, with teak decking around it. Place the spiral stairs beneath it, so you can get up inside the cage, and from there out onto the deck. What you have is a moon-viewing platform. Architect Morton Rader of Chan-Rader & Associates built the one shown here, in the garden of the summer home of a Bay Area client, who supplied the cage and the cast-iron stairs. From the top, you can see a lot more than the moon; you can see out over the shrubbery, lawns, and walnut orchard to the mountains beyond.

So pleasing is the platform that the American Iron and Steel Institute cited it last month for excellence in residential construction design in its annual awards program.

BATTERED SYDNEY OPERA TOTTERS TOWARD FINAL BELL



from the beginning, since Joern Utzon won a 1957 competition for the design of a House for Grand Opera to be built here, in beautiful Sydney harbor, the house's construction has suffered a barrage of blows from political infighters. Neither the Opera nor the politicians have benefited from the sparring, but it looks now as if the fight will go the distance. For a while, shortly after architect Utzon was fired or walked off the job, the future of the structure was in doubt (see p. 57, APRIL 1966 P/A). Construction problems on the curved, winglike slabs that make up the structure's roof were monumental; so were pressures from politicos who had backed what they thought would be a striking, but modestly scaled, culture symbol for Sydney. Because of these pressures, construction went ahead before sound plans were available, leading to confusion, waste, and ballooning costs. An original cost estimate of \$7,500,000 (U.S.) rose by early this spring to more than \$50 million.

Latest cost boost came from a decision by the State Cabinet to use the 2800-seat main hall for concerts - not opera, as originally planned. Basis for the switch came from dissent among cultural groups in Australia about what cultural activity should take spatial precedence in the Opera House. Opera, it turns out, was down-graded. It will be staged in a smaller hall within the building, one seating 1500, despite protests by the opera company that it cannot afford to play to such a small audience. Further compounding

the opera's misery will be a stage, which, because of the narrowness of the space between the shell-shaped exterior walls, has practically no wings. Some \$5 million worth of equipment imported five years ago for use in the main hall will have to be scrapped - will it become landfill in Sydney harbor? - or sold, or used, in part, in the small hall. With some rearranging, experts feel the small hall's orchestra pit can be made to accommodate the 70- or 80piece orchestra needed for grand opera.

Actually, changes in Utzon's plans will increase total seating in the house from 4000 to about 6500, partially by increasing the number of auditoria from four to six. In addition to the main concert hall and the opera hall, there will be a drama theater seating about 700 to 750, an experimental theater for 400, a movie house for 700 to 750, and a hall for chamber music, seating 450.

So frequent and confusing have been the changes that New South Wales Minister of Public Works, David Hughes, who took most of the responsibility for Utzon's departure, now says that he wishes everyone could have stuck to Utzon's plan in the first place. But gloom is not all-pervasive in Sydney. Already the In-ternational Dairy Congress has booked this as-yet-uncompleted monument to culture for a 1970 convention. And artist Mervyn Smith, who has watched construction since it began and who is now painting what is completed of the exterior shells from a vantage point across the harbor, says

he loves the building. "No one could paint it," he points out, "who did not understand the structural aspects of the design — the tension and compression of the beams." Architecture and building are Smith's hobbies.

OBITUARY

Paul F. Pellicoro, senior member of the New York architectural firm of Rogers, Butler & Burgin, died in January at age 46. He was educated at Columbia University School of Architecture and Queens Royal College in Trinidad, W.I. For most of his professional career, he was associated with Voorhees, Walker, Foley & Smith. Later, he practiced independently and served as consultant to Columbia University, as well as other institutions.

PRATT ELEVATES INTERIOR DESIGN

BROOKLYN, N.Y. This fall, Pratt Institute will become the first major university in the U.S. to offer a master's degree program in interior design. It is not entirely accidental that the popular image of an interior designer is that of a hefty, middleaged lady in a floppy hat. For, at present, any housewife, after completing a few courses in home economics, can, and too often does, call herself an interior designer. She can ostensibly compete with the architect who, after five years of professional training, chooses to specialize in interiors. There is no official distinction.

In part, the Pratt program is designed to define this gap more sharply. In no other field allied with architecture is there greater need for competent educational standards. If successful, the Pratt program should help improve, by example, existing educational standards in that field. Also, since Pratt is a traditional spawning ground for interior design teachers, a generation of better-trained teachers may lead to a generation of better-trained students.

Of the hundreds of U.S. schools offering interior design courses, only about a

hundred have curricula that provide graduates with membership requirements for the American Institute of Interior Designers (AID). Professor Arnold Friedman, associate chairman of the Pratt Interior Design program and president of the Interior Design Council, maintains that even this figure is 10 times too high. When pressed, Friedman can list about 8 schools that, in his opinion, now offer acceptable programs.

The professional practice of interior design is further muddied by a lack of licensing and by the existence of two professional societies that cannot agree on what professional standards should be.

Perhaps by establishing acceptable educational guidelines, the Pratt master's program can make arguments on licensing redundant, for it will take more than licensing to turn interior design into a noncontroversial profession.

C. W. (BILL) NESSELL

C.W. Nessell, one of the bestknown figures in the heating

and air-conditioning industry,

died April 4 at the age of 72.

pert for the Honeywell Cor-

poration for more than 30

years. His reputation for abil-

ity, warm personality, and

gentle humor extended,

throughout his career, to the

several fields allied with his

Nessell's colorful career

was marked by his lively and

concerned interest in the wel-

fare of others. Before joining

the heating industry, he was

assistant pastor of a church in

Chicago. When illness in-

duced him to leave the min-

istry, he studied engineering,

own.

Nessell was top heating ex-

and, after obtaining his degree, he worked on the design of telephones until his invention of an usher-signaling device that was adopted by large theaters across the country led him to devote his time to his own business. During the Depression, business slacked off, and Nessell joined the Honeywell Corporation on a temporary basis. This temporary arrangement lasted until his death last month.

During World War II, Nessell served as liaison between the temperature control industry and the Government. Later, as chairman of the National Warm Air Heating & Air Conditioning Association, he did extensive research on residential heating and traveled widely through the U.S., gathering material for an industry-wide committee on this subject.

Nessell's books and dozens of magazine articles on heating and air-conditioning are considered authoritative works in the field.

WHAT THE

ARCHITECT SAW



When we told you that TV has an architectural star in "Love on a Rooftop" (p. 80, OCTOBER 1966 P/A), we received a letter from an irate reader who complained that TV-hero-architects were never up to the mark of other professionals like Perry Mason or Ben Casey — the suave bachelor who solves everyone's problems. Architects either play second banana to a talking horse ("Mister Ed"), or are so professionally incompetent that they move into an apartment with no windows ("Love on a Rooftop").

Well, the situation has been rectified somewhat with the debut of "The Invaders" on ABC. True, the architect hero (David Vincent, played by Roy Thinnes) is still something of a dummy: He can't seem to convince anyone that we are being taken over by the little green men from another planet; but at least he is handsome, single enough for a romantic alliance each week, and pretty handy with his dukes. Probably the situation of an architect being unable to convince others of impending doom will not be a new one to most professionals, but it makes for pretty much sameness of plot week to week.

In the episode we saw, Vincent found out that The Invaders were perfecting a species of carnivorous butterfly that would be released from all points of the country and head for dead center in Kansas, laying the United States waste as it went, a form of urban demolition not even Robert Moses has thought of. The architect managed to thwart this menace before the final commercial, but we know that They will pop up with a fiendish new device next week, just like a client. Makes you wish for the peaceful old days of Stanford White and Harry Thaw.

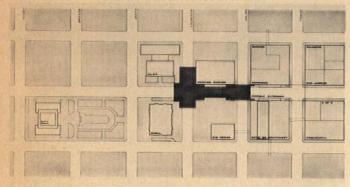
THE CONVERSION OF FLUSHING MEADOWS

NEW YORK, N.Y. Kenzo Tange, Marcel Breuer, and Law-rence Halprin, who were asked last fall to offer suggestions for turning Flushing Meadows into a sports and recreation center, submitted plans to the city late last month. Although drawings and other details have yet to be announced, a spokesman for the Parks Department said that the plans included an indoor basketball arena with seating for 5000 persons, indoor and outdoor swimming pools capable of holding 2500 swimmers, a ski and toboggan slide, a drag-racing track, several restaurants, a small theater, and an experimental complex of dance-rehearsal halls and arts-and-crafts rooms.

Flushing Meadows, site of the 1964–1965 World's Fair, has been slated for parkhood for some time. Since the Fair made no money, the city is putting up the \$81,500,000 thought needed for the conversion. Architects' fees of \$450,000, however, will come from a Federal grant. In all, 620 acres will be

turned to recreational use, and someday maybe, as former Parks Commissioner Hoving once hoped publicly, the site may become the home of a future Olympic Games.

MALL FOR HOUSTON



STREET LEVEL

HOUSTON, TEX. A feasibility study is underway here on the conversion of part of Main Street into an enclosed airconditioned mall. The plan was originally put forward last year, as one proposal in "Blueprints for the Future," suggestions by the Houston Chapter of the AIA on the growth of the city.

A tentative design for the mall, prepared by local architects Wilson, Morris, Crain & Anderson, consists of excavating Main Street down to present basement levels, three stories below grade. Present ground-level facilities would be maintained and reached from a balcony. Another balcony on the second level would lead to more shops. All automobile traffic would, of course, be banned in the mall, which will stretch along Main from Buffalo Bayou to Pierce. Cross streets bridging the mall would continue to carry traffic, and perhaps shuttle buses would operate in the mall it-



In the forefront of those expressing enthusiastic interest in the mall proposal is Mayor Louis Welch, who believes it would increase real estate values and shore up the tax rolls. Mayor Welch has noticed how people pay money just to go into the Astrodome and look around. The mall, he feels would offer much more to look at — for free.

CALENDAR

This year, the International Design Conference at Aspen, Colo., has been scheduled for June 18–23. Program Chairman is Craig Ellwood. Arrangements for accommodations and registration may be made by writing to: International Design Conference in Aspen, P.O. Box 664, Aspen, Colo. . . MIT's

May 1967

School of Architecture and Planning will sponsor a fiveday summer program, "Plastics in Architecture," to be conducted June 19–21 in cooperation with the Plastics in Construction Council of The Society of the Plastics Industry. Write to Director of the Summer Session, MIT, Room E19-356, Cambridge,

Mass. 02139 for application forms . . . Colloquium '67 -The Design of Theatres: A Colloquium on the Architecture and Technology of the Theatre in Relation to its Artistic Aims is the title of a conference planned for June 19-25. The session will be held at the Canadian Theatre Centre, 280 Bloor St. W., Toronto, Canada. Further information may be obtained by writing to that address . . . From June 19-28, the Sixteenth Session of the International Commission on Illumination will meet at the Shoreham Hotel in Wash-

ington, D.C. Attendence is by application only, through the Secretary, L.E. Barbrow, c/o National Bureau of Standards, Washington, D.C. 20234. In connection with the First World Congress of Engineers and Architects, the Association of Engineers and Architects in Israel has arranged a series of tours to Israel and other countries. The congress will run from June 20-27; tours will depart from New York from June 7-19. Information on both from Mrs. Z. Tennenbaum, 98-05 67 Ave., Forest Hills, N.Y. 11374.

NO MATTER HOW YOU ADD IT UP, IT STILL COMES OUT ZERO

WASHINGTON, D.C. Actual cost of the controversial Rayburn House Office Building on Capitol Hill will total \$99, 205,685 — plus or minus more than \$1 million worth of outstanding, unsettled claims. The figure includes about \$8 million for a twoblock subway to the Capitol.

That's a jump of more than \$35 million in total cost over the original estimates of \$64 million for completing the job.

According to a special report sent to Congress early in April by the General Accounting Office, the reason for the huge escalation of the costs is largely found in the more than 1450 changes in designs and specifications from the time the building was first put under construction — and in expenses caused by starting work on some segments of the structure before final designs were completed on others. The "changes" included such things as an \$880,000 cafeteria not included in original plans; \$490,000 for a gymnasium and swimming pool; and a \$665,000 item that reduced walking distance in the subway connection (at the Capitol end) by a total of approximately 80'.

□ A-E Fees Criticized: The accounting office's lengthy study turned up more than 1450 changes made in the designs and plans during the length of the construction period, and placed a cost of more than \$8 million on them.

GAO's auditors found "no questionable aspects" in the solicitation and awarding of contracts for the construction; but did find that architect-engineer fees were "probably" too high, and that conformance to specifications left something to be desired.

That's the meat of a lengthy, extremely detailed report prepared by GAO (Congress' fiscal watchdog agency) on the eight-year construction of a building that has quickly won the doubtful accolade of Washington's ugliest.

The result of the decision of the Architect to proceed with segments of the construction - principally foundations - before plans for other sections had been completed, added \$2,200,000 to the cost. Despite the Architect's claim that this procedure saved construction time, GAO commented that "proceeding with some segments before plans for other sections have been finalized is a procedure not generally followed in construction."

□ Construction Work: In actual construction work, GAO found a number of points of failure to conform with specifications, and huge overruns of time in completing various segments of the work.

The report pointed out, for example, that the initial relocation of city sewers (necessary before foundation work could begin) overran its allotted time by 446 days; foundation work overran by 511 days; structural steel work by 579 days. Although some of this overrun was attributable to natural conditions, most of it was due to changes in plans.

"Records indicate," commented the report, "that certain construction did not meet the standards in the superstructure contract.

"This involved the compressive strength of a reinforced concrete wall; the thickness of concrete slabs in the garage levels; uniform coloring of concrete walls in the garage levels; compaction of backfill; the condition of gypsum walls in some areas." The report included the Architect's contention that these aberrations were not structurally significant, but commented that inspection was slow, and that an inordinate amount of time seemed to have been devoted to settling disputes.

Among other things, the report chides Congress itself for its un-businesslike methods and its constant demands for reinserting matters not originally planned (or thrown out in early stages), suggests better accounting and better planning all around for the future.

Chances are that, outside of adding further fuel to the fire that some members of Congress like to keep hot under Architect of the Capitol J. George Stewart, little will come of the report. — E. E. Halmos, Jr.

PERSONALITIES

Alfred Easton Poor has been elected president of the National Academy of Design. At the academy's annual meeting, architects Francis Keally of New York, Nathaniel Owings of San Francisco, and Paul Thiry of Seattle were elected to the Academy . . . California Governor Ronald Reagan has named architect Charles Luckman to the Educational Commission of the States. The organization was conceived by Congress in 1965 as a liaison between government and educators . . . J. Carleton Jones was recently appointed director of information services for the AIA . . . On July 1, John C. Anderson, architect of Minneapolis, Minn., will take office as president of the Construction Specifications Institute . . . Charles H. Warner, Jr., of the New York firm Warner Burns Toan & Lunde, has received the President's Medal for excellence awarded by the Alumni Association of the School of Architecture, Columbia University.

CITIBANK OFFICES ON MANHATTAN SKYLINE



NEW YORK, N.Y. The downtown Manhattan skyline, altered so radically by the construction of the headquarters building of the Chase Manhattan Bank, will receive another contemporary jolt from another bank. This time the tenant is the First National City Bank, which plans to lease three-quarters of the space (the first 17 floors and the twenty-fourth floor) in the 24-story building from the builder-owners, the Uris Buildings Corporation. To be constructed on a 49,000-sq-ftsite on Wall Street near the East River, the structure will have plazas on three sides and will have white precast concrete pilasters extending the full height of each façade. Between the pilasters will be tinted glass windows and spandrels. Citibank plans to maintain its downtown headquarters at 55 Wall Street, but will consolidate some operations facilities, such as the corporate trust department, in the new building.

In all, there will be 870,000 sq ft of space. The project, for which Emery Roth & Sons are the architects, will be completed in 1968.

WANTED BY THE FBI



George Ben Edmondson, alias Benny Edmondson, alias Alex Gadsdorff, is currently one of the FBI's 10 most wanted men. Following conviction for armed robbery, Edmondson, who will be 30 years old in August, escaped, and a Federal warrant has been out for his arrest since August 17, 1965. What makes Edmondson of interest to the architectural profession is that he has worked as a draftsman, and



may try to find that kind of work again. Among his other occupations, the FBI lists civil engineer, computer operator, electrician, office worker, and soil analyzer. Edmondson, who has a round scar on his outer right forearm and may have a mustache, has an avid interest in firearms. He is considered very dangerous. Anyone with information concerning Edmondson should inform his local FBI office.

THE TWO CULTURES



When the above photograph arrived in P/A's offices, no one could quite place the city. With the well-lighted' superhighways arching past the obviously new high-rise buildings, it could be Omaha, or Oklahoma City, or Newark, or even part of New York. It isn't any of these, of course; it's Moscow.

When Nikita Khrushchev came to the U.S. in the fall of 1960 to bang his shoe on a desk at the United Nations, he observed disparagingly that Americans tore down perfectly good buildings to put up new ones. He deplored, as almost everyone does, all the concrete in New York. Now, Moscow, it seems, is following the same path. Although the wrecker's ball does not yet play the same role in the U.S.S.R. as it does in the U.S., the cityscapes are obviously becoming more and more identical. Muscovites are putting up high-rise buildings with the same frequency as they put up space satellites. In the foreground, work is proceeding on a 60-story building to house the Ministry of Power. A 30-story building at the right will house the Council of Economic Assistance. All that's missing is a jam of Detroit-designed traffic and a blur of neon signs reminding one of the delights of capitalistic products, like mouthwash, cigarettes, and detergents.

It might do the job at first. But gradually there's a loss of insulation efficiency in low-cost, watersusceptible insulation. Heating bills and cooling costs go up, and up, and up.

Here's what happens. The bargain insulation gets water-logged and loses its insulation value. Vapor barriers aren't enough. Movement of a building will split them, allowing moisture-laden air to penetrate the insulation. Moisture forms through condensation, reducing insulation efficiency. What to do?

Specify STYROFOAM® brand extruded foam. It's the finest, most modern insulation you can buy. Never loses its effectiveness. Always stays dry. Requires no vapor barrier. Doesn't rot, mold or deteriorate. Flame retardant. Lightweight and easy to install.

As for application, you can use the



Miller System; apply paneling or decorative wallboard directly on it; use as a base for wet plaster; or as a perimeter insulation for foundations and slabs.

The next time why not specify STYROFOAM brand insulation ... one of a family of rigid foam insulations offered by Dow. For more information, write to The Dow Chemical Company, Construction Materials Sales, Dept. 71300, Midland, Michigan 48640.

No one will know you installed bargain insulation.

(until the owner heats up) On Readers' Service Card, Circle No. 338

WASHINGTON/FINANCIAL NEWS

by E.E. HALMOS, JR.

Regulation Tightening Affects Architects — The construction industry — particularly its professionals — wasn't through with a series of nasty surprises resulting from investigations by Federal agencies into practices of procurement.

As of the beginning of April, the industry was still awaiting a report from the General Accounting Office on the whole question of fee schedules for architect-engineers, and on whether or not existing law requires what amounts to bidding for such services (see p. 66, APRIL 1967 P/A).

Now the Army's Corps of Engineers added another worry: It decided that it had the authority to shift much of the responsibility for inspection and quality control to the contractor. Net result, it seemed, would be less "Title II" work for A-Es (who are hired under this title to aid the Corps in its inspections), and a shift of this function to the contractor, who will either have to place engineers and architects on his own staff, or employ consultants.

Actually, the requirement to place quality control responsibility on the contractor has been part of "ASPR" (Armed Services Procurement Regulations) since 1961, but has seldom been enforced. Early this year, however, the Corps issued a new regulation (1180-1-6), setting out details for "improved inspection and testing services by construction contractors."

Said Lt. Gen. W.F. Cassidy, Chief of Engineers: "Rather than wait for a Department of Defense directive . . . we issued [the] regulation requiring contracts to stipulate in detail what would be expected of contractors to carry out the intent of the ASPR provision. . . . We do not intend to stop our own inspection by any means. . . . We anticipate . . . that we may have fewer but higher-qualified inspectors, with perhaps greater emphasis on verification of the contractor's performance.'

The regulation brought an immediate protest from some

professional groups.

Said the Consulting Engineers Council (in a letter to Cassidy): "We are concerned that the Corps' assignment of increased inspection responsibilities to the contractor places the [engineeer] in the untenable position of being subject to the direction of the party which he is, in turn, expected to direct. . . . Can the Corps expect the same unbiased and objective viewpoint from an engineer on the contractors' payroll that it might receive from one of its own staff engineers, or from an independent consulting firm retained directly . . . ?"

CEC added that its members have already been approached by contractors, who want the engineer to quote a fee that the contractor can include in his bid; thus engineers are already being put in the position of bidding.

Another serious point: Staffs of engineering or architectural firms so employed might be forced into unions, once they become part of the contractor's organization.

With two other reports on construction practices also due (on the Rayburn House Office Building construction, and on implementation of Public Law 86-753, the "Truth in Negotiation" act), it promised to be an exciting spring for the industry and its professional members.

Government Pushes Systems Analysis — Pushing its attempts to provide a "systems" approach to building construction, the National Bureau of Standards has started work in an effort to develop performance criteria, rather than product specifications, for products, systems, or services purchased for the Federal Government in its office space program.

The work is being conducted by a new Building Systems Section under NBS' Building Research Division, headed by Robert W. Blake as section chief.

The criteria project is being funded by the Public Buildings Service of the General Services Administration, and industry is to be "invited" to develop new designs and construction solutions for the required performance. Hopefully, the analysis is to be completed and performance specifications prepared by June 1967.

In the course of the work, NBS noted that a "number of key questions" were to be examined: What segments of the building products industry have research and development capability; what are general and specific requirements for manufacturers; what groupings of manufacturers might be possible for systems component development.

(The idea of applying "systems engineering" to other national problems, particularly that of full utilization of manpower, is embodied in a batch of bills already before Congress: notably S. 430, S. 467, and HR 20. Idea is "to mobilize and utilize the scientific engineering manpower of the nation to employ systems analysis and systems engineering to help fully employ manpower resources and solve national problems." This would be accomplished. among other things, by grants-in-aid to Governmental units with which to carry out studies.)

Procurement Policies Could Affect Architects — If Congress goes along with Senator Jackson's (D. Wash.) idea (S.1145) for a "Commission on Government Procurement," still another change in policies affecting employment of professionals by the Government, could result.

Jackson's point: With Government spending well over the \$100 billion a year mark — \$70 billion of which goes for "goods and services" — it is time for "a broadscale, sweeping study of Government procurement policies and practices." The proposed "commission" would have a two-year life and report its findings and recommendations to Congress.

Tax Benefits? — Professionals would benefit in their tax payments and in their pension and welfare fund rights from two measures now before Congress.

The tax measure was inintroduced by Rep. Claude Pepper (D. Fla.), to "correct an overzealous exercise of bureaucratic discretion." He pointed out that, under long-standing court decisions, "associations" of professional people may be considered corporations for tax purposes, so that the members may take advantage of corporate tax benefits. But, he added, the Internal Revenue Service issued new regulations in 1965, under terms of which most such professional service corporations lost their eligibility for special tax treatment. The bill spells out a requirement ordering IRS to consider such groups as bona fide coporations for tax purposes.

The second bill (S.1103) by Senator Jacob Javits (R. N.Y.), would establish a "portable pension" for all workers, making possible payment into a special fund to be maintained by a new "U.S. Pension and Employment Benefits Commission," so that workers could move from job to job, or area to area, without losing vested pension plan rights.

Finanicial - Key financial fact in Washington at the moment is the increasingly obvious fear of the Administration of a prolonged leveling-out period, or even a slight decline, in current economic conditions. Though it assigned "subsiding inflationary pressures" (not continuing Congressional pressure) as the reason for planning to release a very large share of highway money previously withheld, the Administration was rather obviously doing a little pump priming as well. Prospects of further reliance on construction spending to keep the economy on an even keel were brighter.

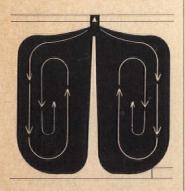
One reason for Washington's concern over the economy were Census Bureau figures on construction for February: Total put-in-place was set at \$4,300,000,000 -down 9% from Feb. 1966. And, despite efforts to pump new money into the field, Housing showed another decline in February, running at a seasonally adjusted rate of 1,089,000 units, compared to 1,374,000 a year ago. Builders were inclined to blame a bad winter, rather than money shortages entirely, for the poor performance.

PRODUCTS

DESIGN INNOVATION IMPROVES AIR PATTERN



The critical component in a newly designed integrated ceiling system is the linear air diffuser. Its construction directs air flow uniformly into a room instead of throwing it forward in the direction of duct flow, as is the case with conventional slot diffusers. Air is turned down by a spine of small vertical vanes fixed above a center diverter, which then directs air out horizontally across the ceiling. This air pattern draws air up from the lower, or comfort, zone by aspiration, thus creating an even circulation and distribution of conditioned air. Vane height-to-spacing ratio is based on the theory of turning air in ducts that is presented in the ASHRAE



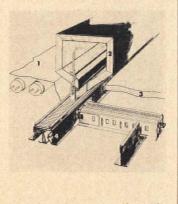
Guide. (Diagram shows vertical circulation pattern.)

The "Dimensionaire Ceiling System" has been tested in several large installations as well as in the lab, and has proved most economical and efficient in serving large open areas. The DCS system comprises the air bar, running wall to wall, and an interlocking grid of cross tees that support lighting fixtures and acoustical materials.

Air supply is through pen-

tagonal ducts fabricated from rigid Fiberglas that absorbs equipment noise and insulates against heat loss and gain. On air diffuser runs of up to 100', tests indicate little deviation in air delivery rates ranging from 10 cfm per lineal ft to 70 cfm/ lf. Noise generated at 60-70 cfm/lf is 40-50 decibels ----ASHRAE rated as satisfactory for supermarkets, large open office areas and light manufacturing plants. The pentagonal profile of the air tube permits installation in plenums as shallow as 12".

Ceilings can be troffered or flat, and will accept a variety of lighting fixtures and acous-



tical board (up to $4' \times 8'$). Spacing of air bars depends on room size and air delivery rates.

The DCS ceiling was installed in a 7000 sq ft university dining room (see photo), where it was substituted for a system that had already been bid. The original bid of \$2.07 per sq ft was lowered to \$2.04 per sq ft. It was felt, however, that the 3¢ saving would have been substantially greater had the system been originally specified. Operating results showed no drafts or dead air spots. Joseph Newman, spokesman for the builder (Tishman Realty and Construction Co. Inc.) commented, "It is not too often there is such good correlation between manufacturer's claims and factual performance.'

Cutaway view shows: (1) light fixture; (2) duct; (3) ceiling board; (4) air diffuser with vanes above air diverter. Owens-Corning Fiberglas Corp., 717 Fifth Ave., New York, N.Y. 10022. *Circle 100, Readers' Service Card*



Flat post-tensioning bundles save steel. "Prescon Type F" tendons are 1/4"-dia wires kept in a flat parallel pattern by clips spaced along the tendon length. These thinner tendons permit an increase in tendon drape as great as 34" over standard tendons while maintaining the same concrete cover. This increased eccentricity at points of maximum moment can save 10%-20% of prestressing requirements in flat slab design, reports manufacturer. The mastic coated tendons, sheathed in a double layer of asphalt-impregnated paper, come in bundles of up to eight wires. The Prescon Corp., 502 Corpus Christi State Nat'l Bldg., Corpus Christi, Tex. 78401. Circle 101, Readers' Service Card



Shaking the exterior. Panels for use on exterior walls are made from hand-split shakes bonded to an asphalt impregnated backerboard. The panels, 46" long by 16" high, have shiplapped edges, and are factory finished. Choice of colors. Shakertown Corp., Winlock, Wash. *Circle 102, Readers' Service Card*

Plywood/fiber glass panels. High pressure molding process laminates plastic faces onto plywood panels for concrete form boards. Boards produce a smooth concrete surface, will not discolor concrete, require no mold release, and are more economical per pour than other form boards, claims manufacturer. Among other suggested uses for "Lamiclad" panels are curtain walls, shower stalls, and counter tops for stores or labs. Standard panels are 4' x 8', white, with a choice of plywood and plastic facing thicknesses. Lamicor Plastics, 525 Davisville Rd., Willow Grove, Pa. 19090.

Circle 103, Readers' Service Card





Knobby waterproofing sheet locks into concrete. Polyvinyl chloride plastic is extruded with 3/8" knobs integrally molded into the material. Spaced $1\frac{1}{2}$ " x $2\frac{1}{2}$ " apart, these protrusions serve to lock the waterproofing sheet into the concrete of underground areas such as basements. "Nob-Lock" remains permanently flexible and has an elongation factor of 200%, thus giving it the ability to bridge cracks, says manufacturer. The 40-mil-thick sheets measure 44" x 54'7". Amercoat Corp., 201 N. Berry St., Brea, Calif. Circle 104, Readers' Service Card

Solution to the covered-stadium problem. Three years of research (prompted by the problems of Houston's Astrodome) have produced a bluetinted Plexiglas that will cut heat gain and glare from the sun, but will let through enough of the right rays to grow a healthy turf. Researchers found that one particular grass, Windsor Kentucky bluegrass, grown under the manufacturer's acrylic plastic, while not as durable as that grown under full sunlight, can stand up to the wear and tear of professional sports. Only 40% of the sunlight is transmitted, making it easy on the eyes of the fly-ball watcher, but there is maximum transmittance in the blue regions needed for growing grass. Rohm and Haas Co., Independence Mall West, Philadelphia, Pa. 19105. Circle 105, Readers' Service Card

DOORS/WINDOWS



Hospital accessory. Push-pull door latches designed for hospitals and nursing homes allow personnel to open doors easily despite full hands. The "Series 115" is available in stainless steel and bronze. Sargent & Co., 100 Sargent Dr., New Haven, Conn. 06509.

Circle 106, Readers' Service Card

Power door. Motor-operated revolving doors are activated by a slight push at any point on a door wing, and turn at walking speed. The door then slows and comes to a stop with all wings in contact with the door enclosure. "Revolvomatic" drive mechanism fits into a 3" high x 8" x 25" long space and can be concealed above or below the door. Separate control panel permits adjustment of starting pressure and rotating speed. International Steel Co., Revolving Door and Entrance Div., 1321 Edgar St., Evansville, Ind. 47707. Circle 107, Readers' Service Card

Matching beads for door and window frames. The popularity of bronze-anodized aluminum door and window frames has created the need for matching glazing beads, but anodizing the thin beads proved difficult and costly. Manufacturer now offers a close match achieved by a special painted finish, said to be durable and weatherproof. The majority of manufacturer's stock glazing beads are now available with the dark bronzelike finish. Pemko Mfg. Co., 5755 Landregan St., Emeryville, Calif. 94608. *Circle 108, Readers' Service Card*

FURNISHINGS

Plastics infinity. For today's vinyl scene, Amplast ("Almost everything in plastics") carries lucite (for tables, sculptures, and constructions), mylar in gold and silver (for walls and cushions), and assorted bubbles, bangles, and beads (for trim). Lucite tables are custom made to color and size specifications (18" cube is about \$55). Also available are solid blocks of plastic, and rolls of transparent acetates in lime green, hot pink, and tangerine tints. A metallic finish acetate (one side is silver foil, the other, rainbow metallic) gives a two-way mirror effect; one suggested use is for lampshades, since the rainbow comes through when light is turned on. Amplast, Inc., 359 Canal St., New York, N.Y. 10013.

Circle 109, Readers' Service Card



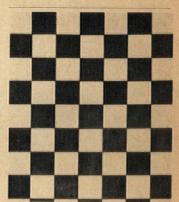
Plastic can, in some cases, also be used for wallcovering and for upholstery. Solid patents come in black, dark olive, red, brown, school bus yellow, and coral. Patterned patent vinyls are pin-stripes (pictured), bold polka dots, "oppy" distended squares, a yellow tattersall, a bold check in navy and chroma, and an uneven stripe, all \$1.50 per yd. Among the mylars are a gold moire, a gold-and-silver mixture, and various crinkly and nubby textures. Deitsch Plastic Co., Inc., 448 Broadway, New York, N.Y. 10013.

Circle 110, Readers' Service Card



Invisible chairs. Designer Philip Orenstein's invisible "overstuffed" easy chair has a lucite base supporting four inflatable, clear plastic cush-ions. Completely clear or in transparent tints, the air cushions are individually replaceable to permit mixing and changing color schemes or in case they have been damaged. Ultimately, lucite bases (two styles) will also be available in wood, and the clear cushions in polka-dot plastics. Chair packs into flat carton for easy transportation. Price: \$80 retail. Another chair of inflated vinyl on a base of tubular anodized aluminum is said to be completely weatherproof and portable. In the works are: an inflatable bed, a hanging lucite chair (shown) and perhaps a vinyl suit, for men, with inflatable cuffs. Mass Art, Inc., 234 Fifth Ave., New York, N.Y. Circle 111. Readers' Service Card

Patent vinyl upholstery. Especially suitable for upholsteries, Gilford's patent vinyl is backed with elastic to keep it from stretching out of shape. The collection of solid and patterned patents is also meant for wallcoverings. "Le Havre" (\$7.50 per yd) is solid patent available in about 15 shades and "St. Moritz" (\$8.85) is a two-tone patent that comes in more than 30 colors. Patterns (\$9.90) include "Tickertape," resembling a miniaturized Jackson Pollock "drip" painting, "Starfire," a gold splatter design, and "Acres of Gold," a gold splatter on darker gold. Widths vary from 53" to 54". Gilford Inc., 979 Third Ave., New York, N.Y. Circle 112, Readers' Service Card



Shiny vinyl walls. Adams carries a line of patent vinyls suitable for wallcoverings and upholsteries that consists of two-tone solids and two patterns, both in many colors. The two-tone vinyl comes in 23 colors and costs \$9.70 per vd. Patterns are a two-color bright checkerboard (pictured) and a three-color vertical stripe, each in four colorways. All 54" wide. Adams Vinyls, Inc., 225 E. 57 St., New York, N.Y. Circle 113, Readers' Service Card

Psychedelicacies. Ornamental diffraction gratings are thin, vinyl, irridescent mirrors that change appearance with the angle of light or of viewing. They produce an effect like kinetic sequins in the psychedelic idiom with their spectral colors and reflections. Used popularly for assemblages, sculptures, and jewelry, they give promise of more interior uses. The company has a workshop devoted to the technical and aesthetic development of experimental designs in diffraction mosaics. Designs to specifications will also be executed. The Diffraction Co., Inc., Riderwood, Md. Circle 114, Readers' Service Card



Four-point luminaire. Where high-level illumination is un-

May 1967



Time-defying Eljer plumbingware chosen for new state office building in Pennsylvania

Decades from now, the plumbing fixtures inside this recently completed building in Harrisburg, Pennsylvania, will look and perform like they did the day they were installed.

That's because they bear the name Eljer, whose Master Crafting builds quality plumbingware. And whose design refuses to be outdated by the calendar. No wonder more and more architects think Eljer when they think plumbingware. Too, they know that Eljer's full-line availability assures their client on-schedule delivery.

For all the facts, call your Eljer representative. Or write: Eljer, Dept. PA 7, P.O. Box 836, Pittsburgh, Pa. 15230.

Recently completed, this magnificient, 16-million-dollar, high-rise office building will provide offices for 4,500 employees of eight state departments. *Owner:* General State Authority. *General Contractor:* Consolidated Engineering Co., Inc. *Collaborating Architects and Engineers:* Altenhof & Bown: Eshbach, Pullinger, Stevens & Bruder; Jordan, McNee, Parnum & Yule. *Consulting Engineers:* Urban Engineers, Inc.; H. F. Lenz Company. *Plumbing Contractor:* Herre Bros., Harrisburg.



Eljer Plumbingware Division, Wallace-Murray Corporation

necessary, four-lamp "Area* Star" is lower in initial cost than other luminaires, claims manufacturer. Recessed light source and flat glass lens reduce glare, and patterned lens is tempered to resist impact. Unit takes 250w or 400w mercury vapor, or 400w metallic additive lamps. Steel or aluminum poles are available in 20' or 30' heights. Crouse-Hinds Co., Syracuse, N.Y. 13201.

Circle 115, Readers' Service Card

OFFICE EQUIPMENT



The run-about. Sturdy typewriter or business machine

stand is easily converted from stabile to mobile unit by special "stick-shift" mechanism, says manufacturer. It incorporates sound-proofing insulation, and features a walnutgrained laminate top. Size: $34'' \ge 20'' \ge 26\frac{1}{2}''$ high. Interstate Industries, Inc., 7–103 Merchandise Mart, Chicago, Ill. 60654.

Circle 116, Readers' Service Card



Shallow-wall cabinet. Fire extinguishers and hoses fit into cabinets that can be completely recessed in a 6" wall or semirecessed in a 4" wall. Cabinets accommodate a 10lb dry-chemical fire extin-



guisher, and can be used with or without a fire alarm. Frames are steel, aluminum, or stainless steel. Potter-Roemer, Inc., 2856 Leonis Blvd., Los Angeles, Calif. *Circle 117, Readers' Service Card*



Building maintenance. Oneman window-washing scaffold is roof-mounted, and moves vertically, horizontally, and toward or away from the building face. Movement is controlled electrically by the operator. Electrical conductors are encased in steel hoisting cable, thus eliminating separate control cables. Lifting speed is 40 fpm; and horizontal speed is 48 fpm. Patent Scaffolding Co., Div. of Harsco Corp., 38–21 12 St., Long Island City, N.Y. 11101. *Circle 118, Readers' Service Card*

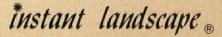


Ring around the telephone. Acoustical privacy in the "Carousel Acousti-Booth" is aided by sound-absorbing material in the dividing walls. Available for either stand-up or sit-down callers, the 5'-dia unit has six coin telephone panels. Sit-down model (shown) is equipped with movable outriggers and rotating seats. Burgess-Day Inc., Box 350, Libertyville, Ill. 60048.

Circle 119, Readers' Service Card



A new line of rubber stamps is now available for the architectural draftsman. Trees, shrubs, people, cars, buses, trucks, planes, birds, nomenclature and arrows are made in scales from 3" to 1/16". Stamps are fabricated in both plan and elevation from over 600 different illustrations. For information circle reader service card number or write to:



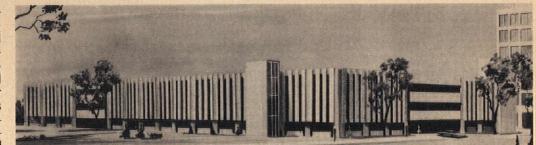
1115 Embarcadero, Sacramento, Calif. 95814

On Readers' Service Card, Circle No. 360



PARKING GARAGE 58' SPAN WITH POST-TENSIONED

Cost of this five level parking facility 304' x 174', including two large rental areas, added restroom facilities, mechanical, electrical, traffic control, and landscaping was \$6.20 per sq. ft. The structure uses Prescon positive end anchorage tendons for posttensioning prestressed



concrete and the Tube Slab System, a monolithic one or two-way concrete slab using uniformly spaced large diameter hollow paper or metallic tubes to create voids in the concrete.

Designed by A. J. Macchi, Engineers, Hartford, Connecticut, it provides for one-way directional traffic with one spiral movement upward, one downward, and a level portion at the center common to both movements. The 58' spans use 20-wire Prescon tendons stressed to 165 kips. Where the slab is 174' (3 spans), 16-wire tendons were stressed to 133 kips. Tie tendons in bridging members transverse to tubes and tendons were placed at $\frac{1}{3}$ span points.

The floor slabs are 23" deep with 18" round metal tube voids at $22\frac{3}{4}$ " on center positioned approximately at mid-depth of the slab. This forms a $4\frac{3}{4}$ " rib between voids and reduces dead load to 142 psf. With a 10' floor to floor height this gives 8' 1" clear headroom. Temperature steel is used at the top and bottom of the slab. Tubes were omitted at the periphery to form solid edge beams.

Three hundred piles were used in the foundation. The exterior columns are 1' x 4', and interior columns are 4' x 3'. Double columns were used at expansion joints. In level areas the slab forms were sloped a maximum of 3" for drainage. Basement walls and pile caps used 3000 psi



Tendons have been uncoiled on slab forms in foreground; in upper right, part of the concrete placement has been completed with additional concrete being pumped into place.

New Britain, Conn., Parking Garage.

concrete; columns, slabs, and beams used 4000 psi concrete.

Two parking rows plus a 22' wide traffic aisle is provided at every level. Parking is at 60° to the traffic direction. Column-free areas facilitate self parking. Monthly patrons have separate access to parking space in the basement level.

Architectural treatment consisted of exposed aggregate precast concrete panels 35%'' thick for the facade. The exterior columns and stair towers concrete has a board marked finish.

This parking garage, scheduled to open in March 1967, was built for the City of New Britain, Connecticut, A. J. Macchi invented the Tube Slab System used in this project. Angelo Tomasso Inc., New Britain, Connecticut, is the general contractor.



Pumping of concrete to form the slab. Temperature steel and tubes can be seen in place. Tendons are positioned in ribs between the tubes.

PARKING GARAGE BROCHURE AVAILABLE. Colorful 12-page brochure pictures and describes several different parking structures, plus listing 87 other parking garages using the Prescon System: Write for your free copy today.

THE PRESCON CORPORATION

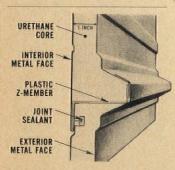
General Offices: 502 Corpus Christi State National Building Telephone: 512-882-6571, Corpus Christi, Texas 78401 © 1967 THE PRESCON CORPORATION



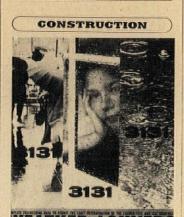
(AIR/TEMPERATURE)

Environmental primer. The basic facts of temperature control are spelled out in "The ABC's of Air Conditioning" under four major air-conditioning system types: all-air, air-water, all-water, and refrigerant. Subheads include heat pumps, centrifugal and reciprocating machines, etc. Well-organized booklet illustrates text with charts, diagrams, and photos. 24 pages. Carrier Air Conditioning Co., Carrier Parkway, Syracuse, N.Y. 13201. Circle 200, Readers' Service Card

Quiet ducts. Pamphlet discusses insulating and other advantages of manufacturer's "Micro-Aire" glass-duct systems — prethree fiber formed round with moldedin slip joints and plastic jacket, preformed round with embedded aluminum seal, and aluminum-faced duct board. Thermal and acoustical efficiency, cost, installation, and other factors are covered in text, charts, and pictures. 12 pages. Johns-Manville, Industrial Insulations Div., 22 E. 40th St., New York, N.Y. 10016. Circle 201, Readers' Service Card



Cost report. An independent study forms the basis for a report comparing heating and cooling costs in buildings using manufacturer's "Fwall and roof panels 103" with those built from conventional materials. The study shows savings in both operating and ultimate building costs, based on wall and roof maintenance over a 30year period. The F-103 is the first pre-engineered, metalfaced panel with a foamed-inplace urethane core, reports manufacturer; panels have a U factor of .10. Suitable for warehouses and other industrial applications. Charts, maps, text. 12 pages. Butler Mfg. Co., 7400 E. 13th St., Kansas City, Mo. 64126. *Circle 202, Readers' Service Card*



WEATHER LOUVE Air louvers. Exterior louvers for air intake or exhaust may be specified under two general types - one for applications where appearance is important; the other for commercial and industrial applications. Innovation in blade and frame design enables the "3131 Series" to withstand velocities up to 680 fpm. Sizing charts, performance curves, scale drawings, and guide specs are included in catalog 66-L. 12 pages. The American Warming and Ventilating, Inc., 1017 Summit St., Toledo, Ohio 43604.

Circle 203, Readers' Service Card

On top. Built-up roofing manual contains information on seven roofing systems, and includes changes and additions to the 1966 manual. Extensive specifications, cutaway views, and flashing details. 44 pages. Allied Chemical Corp., Barrett Div., 40 Rector St., New York, N.Y. 10006. *Circle 204, Readers' Service Card*

Wood truss specs. Truss plate manufacturers have compiled information based on tests by laboratories and universities as the basis for specifications for light metalplate-connected wood trusses. So that test results may be better evaluated, a discussion of detailed test procedures is included. Specifications give information to be included on engineering drawings; definitions of steel types; and species, grade, and quality control of lumber. 24 pages. Price: \$1.25, including postage. Truss Plate Institute, P.O. Box 253, Perrine, Fla. 33157.

Steel joist data. Specifications for longspan steel joists cover LJ- and LH-Series. Effective January 1, 1967, the load table for the new LJ-Series provides slightly higher capacities than those tabulated for the earlier LA-Series; load table for the LH-Series remains unchanged. Specs and load tables for J- and H-Series open web steel joists are also given. 52 pages. American Institute of Steel Construction, 101 Park Ave., New York, N.Y. 10017. Circle 205, Readers' Service Card



Wood on the side. Types and grades of wood siding, sizes and fastening methods are described in brochure that also includes tips on exterior staining and painting, and interior finishes. Color photos and charts. 4 pages. Western Red Cedar Lumber Assn., Dept. 18-L, 700 Yeon Bldg., Portland, Ore, 97204.

Circle 206, Readers' Service Card



Garden walls. Brick in landscape architecture is the subject of a technical pamphlet that covers materials and

workmanship, design, and wall types (straight, pier and panel, serpentine). Drawings, and tables on steel reinforcing and pier foundations. Photo shows Thomas Jefferson's serpentine wall at the University of Virginia. 4 pages. Structural Clay Products Institute, 1520 18th St. NW, Washington, D.C. 20036. Circle 207, Readers' Service Card



Ideas for tiles. New uses for tiles in living and dining rooms as well as in bathrooms and kitchens are suggested in Pomona Tile's "Ideabook." Primarily for clients who are looking for slightly different ideas for their homes or offices, the Ideabook shows installations of sculptured, patterned, mosaic, and quarry tiles as decorative walls, floors, and fireplace borders, in addition to more standard uses. Four-color. 8 pages. Pomona Tile Co., Pomona, Calif. 91766.

Circle 208, Readers' Service Card

Accent. "Accent" office chairs come in eight models, with any of three bases, and a host of upholsteries. The seat is a bucket design with foamrubber cushioning on the seat unit, as well as a separate cushion (an optional feature is an insert for lumbar support). Styles range from the highbacked and wide "Executive Swivel," to the "Companion" armless chair. Booklet gives details, including dimensions and pictures (some color). General Fireproofing Co., Youngstown, Ohio 44501. Circle 209, Readers' Service Card

Desk Sets. "Executive Office and Building Accessories," a 20-page full-color catalogue,

What does Ceco do to help you deliver a pristine project?

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The reason for this is that somehow or other door handlers respect polyethylene. A bag made of it looks as if it might tear. So people seem to want to treat such a bag with kid gloves. Whatever's inside benefits. That's why we put your "Colorstyle" Décor Doors there.

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Colorstyle Doors cost no more than primed steel doors painted on the job. That's about what wood doors cost installed. So they're competitive and entirely practical to specify.

Better look into these doors now. Ask for catalogs. Or ask us to bring you a sample in a bag. The Ceco Corporation, general offices: 5601 West 26th Street, Chicago, Illinois 60650. Sales offices and plants in principal cities from coast-to-coast.



On Readers' Service Card, Circle No. 430

P/A News Report 67

shows a collection of desk accessories as well as floor, wall, and table ash receptacles, waste baskets, and wardrobe units. Accessories vary in style from those best suited to executive offices, either modern or traditional, to those more at home on receptionist desks. Desk sets come in metal (14 finishes), naughahyde (20 shades), and leather (8 grains). Dimensions, prices, materials, and weight information is given for most pieces. Duk-It McDonald Products Corp., Duk-It Building, Buffalo, N.Y. 14210.

Circle 210, Readers' Service Card



Links to the future. Chain-Mail reference kit contains 20 cuttings of Probber's five chain-mail patterns showing a

variety of the 9 available enamel colors (e.g., old copper, leafgold, statuary, and Roman gold.) Intended primarily for draperies, mail comes in aluminum or brass standard base metals (others on special order). Cuttings are mounted on cards that give name, metal, finish, and width. Brochure included in kit contains general information: history of Chain-Mail, its properties (fireproof, weatherresistant, reversible, maintenance-free), and details on finishes, sizes, installation, and price. Kit costs \$6, which is refunded with first order.



THE INCREDIBLE BARRIER

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Incredulous? Please write for SPEC DATA sheets and descriptive brochure, 4475 East 175th Street, Cleveland, Ohio 44128.



On Readers' Service Card, Circle No. 411

Harvey Probber Showrooms, Inc., 155 E. 56 St., New York, N.Y. 10022. Circle 211, Readers' Service Card



California customs. Berven of California offers architects and designers the custom service of executing rug designs submitted as sketches. A catalogue describing this capability also illustrates more than 100 suggested designs (variable in color or pattern to the designer's specifications). Catalogue includes examples of custom carving, accent tufting, textural combinations, and fringes. Full color. 24 pages. Berven of California, 2600 Ventura Ave., Fresno, Calif. 93717. Circle 212, Readers' Service Card



Ouad squad makes the scene. Dormitory desks, wardrobes, dressers, bookshelves, and bunks by manufacturer of varied campus furniture (also for lab, classroom, and library) are framed in kiln-dried hardwood. Simple, cleanlined, modular units have a tough plastic veneer available in birch, teak, walnut, or cherry grains; core material is either hardboard, flake board, or plywood. Photos, dimensioned drawings, size charts, construction specifications, and sample layouts. Educators

May 1967

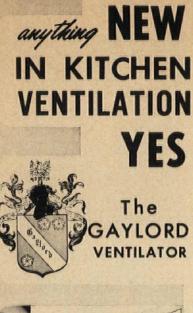
The new, thin 319 slide packs the muscle to carry 150 pounds.

PHOTO COURTESY OF ALEXANDERS

Grant's 319. It has everything you need for drawers which must support very heavy loads. Requires but $\frac{1}{2}$ side space. Provides full extension. 150 lb. load capacity. Part of the great Grant line. Get the facts today.



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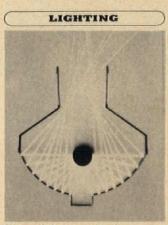
DESIGN SERVICE – The Gaylord Ventilator is adaptable to all equipment – upon request we will provide design services and layout drawings for each of your installations showing notonly our recommendations for the utilization of the Gaylord Ventilators but complete air engineering for the job – at no cost or obligation.



On Readers' Service Card, Circle No. 345

Mfg. Co., P.O. Box 1261, Tacoma, Wash. 98401. Circle 213, Readers' Service Card

Moving Partitions. "Wall Street" movable partitions shows its regular line of enamel-finished steel partitions, and also offers its new walnut textured laminate panels. The steel partitions, in four neutral colors, and the walnut panels come in heights from a chest-high 40" to 84". Wiring runs through the bottom channel of the panels and each post carries a leveling device that can adjust up to 21/2" for uneven floors. Booklet, 11 pages, color, includes specifications and ordering information. Interstate Industries, Inc., Merchandise Mart, Chicago, Ill. 60654. Circle 214, Readers' Service Card



Even lighting. "Gotham Recessed Silvered Bowl Downlights," low-brightness fixtures with Alzak reflectors, are suitable for use in large public areas. Well-designed, foldout brochure gives photometric information, ordering chart, and installation detail. 8 pages. Gotham Lighting Corp., 37-01 31st St., Long Island City, N.Y. 11101. *Circle 215, Readers' Service Card*



Spot and span. Clip-on lights and electrified track combine

to make the "Lytespan" lighting system. Tracks (recessed, flush- or pendant-mounted) will accept "Lytespots" of several geometric designs that perform two basic functions: washing a wall with light, or throwing a spot. One, using a quartz-iodine lamp, frames the light beam to produce sharp-edged patterns - either angular or round. Tracks are available in curved as well as straight modular lengths. Brochure has selection, spacing, and performance charts, illumination curves, installation details, ordering information, and photos. 32 pages. Lightolier, 346 Claremont Ave., Jersey City, New Jersey 07305.

Circle 216, Readers' Service Card

SPECIAL EQUIPMENT

Help wanted. Remote station receiving panels for fire alarm and security systems can be installed in fire and police stations, and in central control locations of multibuilding complexes. Power requirements, transmission facilities, standard and optional features, and possible applications are described and illustrated. 8 pages. Notifier Corp., 3700 N. 56 St., Lincoln, Nebr. 68504.

Circle 217, Readers' Service Card

Fence file. Kit of specification sheets and drawings on aluminum-coated steel chain link fences has been compiled as a design aid. It includes testing and ASTM reports, gate designs, detailed engineering drawings, and brochure describing eight basic styles for rust-resistant protective fences in industrial, recreational, and institutional applications. Wire Products Group, American Chain & Cable, First and River Sts., Monessen, Pa. 15062. Circle 218, Readers' Service Card

PROGRESSIVE ARCHITECTURE
NEWS REPORT
REINHOLD PUBLISHING CORPORATION
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430 Park Avenue, New York, N.Y. 10022 EditorJan C. Rowan Associate EditorE. K. Carpenter

NEXT Month In P/A

Expo-De-O-Do

Everyone and his Canadian brother will be publishing views of Montreal's important Expo 67 this year. P/A, however, will bring you the exposition from the architect's point of view. The nitty-gritty of how most of the significant pavilions were put together, told by editors who visited the job sites many times; the story on how Expo started out as a one-structure, one-world concept and became the collection of individual concepts it is today; the on-the-spot opinions and impressions of the exposition and its architecture after opening day; the possible future influence of Expo 67 on architecture and planning - the real, professional story illustrated with photographs during and after construction, detail drawings, and maps. An informed, pertinent coverage of an outstanding event.

Moorish Chimneys: A portfolio of the exotic chimneypots of the Algarve Province in Southern Portugal. Instant Interiors: Today's spreading use of color projection suggests to P/A's Interiors Editor a way to have the Sistine Chapel or a Maxfield Parrish sunset in your own home at your button-pushing beck. The Eye of the Bird: Italian and French villages seen in dramatic bird's-eye sketches that capture the town plans in the same way a fisheye photograph can make a model live. End Checking in Glued-Laminated Beams: An old problem solved. Plastic Structural Sections: A new process using glassfiber-reinforced polyester. Tension Surfaces: James Leefe examines their potential and mathematical principles for roof shapes.

Another issue of P/A brimful of ideas, information, and opinions. Whether you are going to Expo, planning some skiing, or busy turning out architecture, the June P/A, like all the rest of them, will be your good right hand. Subscribe now by filling in and sending in the subscription eard at the rear of this issue.



THE GOOF PROOF ROOF

Aside from getting caught in the middle, you couldn't go wrong with General Electric's new Silicone Rubber Roofing if you tried.

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coat. It's a snap. And in less than two days you've got a fully cured Goof Proof Roof to show off.

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Besides, the Goof Proof Roof is based on the very same silicone elastomer used for missiles and

space capsules. For more information on Silicone Rubber Roofing Systems, just write

Section Q5269, Silicone Products Dept., General Electric Company, Waterford, New York 12188.



May 1967