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ral Record (combined with American Architect and Architecture) is pub-
lished monthly by F. W. Dodge Corporation, 19 Ferry Street, Concord, New Hamp-
shire, with editorial and executive offices at 119 West 40th Street, New York 18, New
York. Western editorial office, 2577 Shasta Road, Berkeley 8, California.
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are making "big plans," of which a few are quickly shown here, just to start
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AN ARCHITECTURAL STUDENT describing a house: "It's an old house with hand-hewn timbers and amortised joints."

CONSTRUCTIONISING: Taking a tip from other fields and their approach to a returning "buyer's market," the Associated General Contractors of America has coined a word and plans to put it to work. "Constructionising," A. G. C. explains, is a name applied to the process of construction merchandising in competition with other items for the purchaser's dollars. A. G. C. has been sponsoring a competition among its members in search of the best plan for an all-out constructionising program — although the construction industry, which set an all-time record for the first quarter of 1954, seems to be doing all right anyway.

ARCHITECTURE FOR ADOLESCENTS: The jury for the third annual school building competition of The School Executive Magazine (see page 24) remarked "a sharp difference in the quality of design between elementary schools [31 of them] and secondary schools [38]" submitted in the competition. Why? — the jury thought lack of clear educational leadership in the field of secondary programming might be the most significant reason: "While the substantial number of large secondary buildings were contemporary (in the sense that they were free from traditional detail and formalized plan), very few showed substantial difference in program concept from the high schools of the mid-1920's. They are basically conventional buildings — big, impersonal ones at that — in reasonably modern dress." Another suggestion was that the greater dollar importance of the secondary building might make for approach "in a spirit of greater caution."

Finally: "Perhaps still another explanation is our greater affection for and understanding of children than of adolescents." Lawrence B. Perkins of the Chicago architectural firm of Perkins and Will was chairman of the jury, which included Donald Bartheleme, of Donald Bartheleme and Associates, Architects, Houston; John S. Cartwright, Allentown, Pa., Superintendent of Schools; Assistant Superintendent of Schools Wilfred F. Clapp, State Department of Education, Lansing, Mich.; and J. Stanley Sharp, of Ketchum, Gini and Sharp, Architects, New York.

ATOMIC POWER DEVELOPMENT is the only way "to balance the energy books, to close the gap between what we have and what we need," and commercial development must be undertaken despite the high initial costs, the recent annual American Power Conference in Chicago was told. A. C. Monteth, vice president in charge of engineering for the Westinghouse Electric Corporation, pointed out that present world energy consumption shows a 400 per cent increase over the average rate of energy used in the period from 1860 to 1947 — and in those 87 years consumption was roughly half the amount consumed during the entire preceding 1860 years. Mr. Monteth, whose firm is building the atomic reactor for the nation's first civilian atomic power plant, warned that "we can sink into primitivism through exhaustion of power resources as well as through war."

ARCHITECTURAL INTELLIGENCE: "The foremost disciples of the brownstone school of architecture, near as Mr. De Koven could pin it down, were a Calvin Pollard, who did loads of brownstone fronts from 1830 to 1850, and a Henry Holson Richardson, who did brownstone Romanesques in the Seventies and Eighties."


AUGUSTE PERREUX died in Paris on February 25. His passing was not much noted in this country — indeed, two weeks after his death The New York Times solemnly assured a caller that according to its records he was still alive — but in his own, where he had during the last war achieved belated official recognition, it was treated as a national bereavement. From the apartment house in the Rue Franklin to his latest work in the rebuilding of Le Havre, he had produced a monumental bibliography (see pages 10-11) on the uses of reinforced concrete. Writing in the English weekly, The Architects' Journal, the commentator Astragal says: "He was a giant figure, who towered above official neglect and the occasional spite of those who owed much to his inspiration and influence. He believed passionately in the future and in the beauty of the concrete frame, and has left an indelible mark on the architecture of this century. He has been with, rather than of, the Modern Movement, and although he had clearly little sympathy with some of the more vehement of his pupils, that does not make him a member of the reactionary camp." Or, as Turpin Bannister has put it, "He was a rugged individualist, who, even while accepting modern programs and materials, never sacrificed the integrity of his designs to mechanistic clichés."

The American Institute of Architects, giving him its 1952 Gold Medal, hailed him as "great master of architecture whose resounding fame echoes to honor all members of our profession; firm disciple of the creed of truth to materials, honesty of structure, sincerity of form..."

There was a briefer tribute last month from Antonin Raymond: "The last great architect died six weeks ago."
AUGUSTE PERRET: 1874–1954

Architect, Teacher, and—Not Least—Aphorist,
Pioneer in Reinforced Concrete Construction—
His Buildings and His Maxims Speak For Him

1903 — 25 bis Rue Franklin, Paris (the first all-reinforced concrete building)
"Construction is the mother tongue of the architect. An architect is a poet who thinks and speaks in terms of construction"

1919 — L’Atelier Esders (sewing factory)
"Architecture is the art of dramatizing the point of support"

1923 — Notre Dame du Raincy
"It is by the splendor of truth that a building attains beauty"

1905 — Garage, Rue de Ponthieu, Paris
"Movable or immovable, everything which occupies space belongs in the realm of architecture"

1924 — Tower, Grenoble
"... to create from new materials buildings that would seem to have existed always"
1937 — Museum of Public Works, Paris
"Stairways are the criterion of a civilization."

1930 — National Museum, Paris
"That which is beautiful does not need to be decorated: beauty is its own decoration."

1925 — St. Thérèse, Montmorency
"One who disguises any part at all of a structure deprives himself of the only legitimate and the most beautiful ornament of architecture."

1949 — Reconstruction of Le Havre
"Architecture, of all expressions of art, is the one most subjected to material conditions. The conditions imposed by nature are permanent. Those imposed by man, temporal."

(Continued on page 306)
PRIVATE FIRMS MAY HELP TO SET CRITERIA FOR MILITARY BUILDING

Defense Department Seeks Benefits of Industry Experience In Formulating Standards for Various Building Types

The frequently-expressed determination of the Eisenhower Administration to bring the benefits of private business to the government and to use private resources whenever possible is beginning to be reflected in military construction planning. The Defense Department's new construction standards for barracks and bachelor officers' quarters are about to be promulgated as a military directive — they are being reviewed by the three services now; and the next set of standards, for warehouses, will be based on detailed studies of warehouse construction and use being made for the Department by the private firm of Giffels and Vallet, L. Rossetti, Inc., Architects and Engineers, of Detroit.

The present approach to formulation of military construction standards came in with the advent last fall of Admiral Joseph F. Jelley Jr., as director of construction for the Department of Defense and follows the concept of learning as much from industry experience as possible before drafting the military standards in final form, according to Fred Poorman, senior assistant to Admiral Jelley and chief of his technical division.

The division may make more contracts with private firms later on for similar studies on other building types, Mr. Poorman says, again to gain the benefits of industry experience. The areas showing greatest promise for this kind of treatment are being explored first, with the idea of moving into other types later on.

The Giffels and Vallet warehouse survey will be based largely on site studies and will contain firm recommendations for the Defense Department to follow in drafting the final standards. It is emphasized, however, that the actual construction standards will be prepared by Admiral Jelley's staff and not by the contracting firm.

The Jelley office recognizes that warehouses and warehousing cannot be separated in deciding on the new criteria, Mr. Poorman said, with an intimation perhaps that long-range use had not always been sufficiently taken into account in preparation of military construction standards. So the Giffels and Vallet survey will study the effects of various warehousing methods on requirements for everything from column spacing and aisle arrangement to fire resistance.

Officials do not expect to come up with a rigid standard for all warehouses, or for all types of structures for all the services. A structure for storing caterpillar tractors and a structure for storing medical supplies will not, they promise, be required to meet identical specifications.

There has been considerable emphasis throughout the standards project on leaving the architect on the spot enough flexibility for adaptation to local conditions. Admiral Jelley told Architectural Record last fall that he had no intention of freezing design, that he wanted to standardize not style but space requirements. "You must be careful not to tie the local man down with fixed criteria," he said then. Admiral Jelley's boss, Franklin G. Floete, Assistant Secretary of Defense in charge of Properties and Installations, has even said he thinks all military buildings of a given type ought not to look alike. All the Department is after, he notes, is to make general standards applicable to all services in the interests of saving money.

The forthcoming standards for living quarters have been nearly two years in preparation. They were the initial project of the Defense Department's first Director of Construction, Frank R. Creedon, after the office was established in the Department at the urgent direction of the Congress to attempt to coordinate the construction activities of the three services. Two sets of standards were originally prepared — one on three-story permanent structures and one on one- and two-story types. The final version, now circulating among the services for comment, covers two-story barracks only.

Admiral Jelley's office emphasizes that all criteria have been worked out in cooperation with representatives of each of the services and will be issued in cooperation with them. No major obstacles in the nature of inter-service differences are anticipated.
Little Drops of Water (Condensation)
Ruined a Fine Home ... Cost over a Million Dollars
to an Apartment Development

They thought they would move their fine country home to a new site. The state highway was coming through. They could not! Account of condensation inside the walls, the sills had rotted away.

The owners of a path-breaking apartment house development in a great city had to pay a repair bill of more than a million dollars for ripping out condensation-soaked insulation and replacing damaged, plaster walls.

Today's tightly-built, high humidity houses create new problems of vapor pressure and vapor retention within. Sometimes excessive flow of vapor into building spaces occurs, and the formation of destructive condensation is enhanced, where a vapor barrier is lacking from the insulation or there is one with too many breaks in it, or one which while waterproof is not vapor-proof.

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THE RECORD REPORTS

A.I.A. ANNOUNCES 1954 HONORS: NO GOLD MEDAL

The American Institute of Architects has announced the 1954 Medal Awards to be presented at its 86th annual convention in Boston June 15-19, and the Gold Medal will not be given this year.

Highest honor the A.I.A. can give an architect, the Gold Medal has been awarded 19 times since the first award, in 1907, to Sir Aston Webb of London, and most recently, in 1953, to William Adams Delano of New York. A list of 21 members to be advanced to Fellowship in the Institute has also been made public.

This year’s Fine Arts Medal, the A.I.A.’s top award in the fine arts other than architecture, will go to Sculptor Julian Hoke Harris of Atlanta, himself an architect and member of the Georgia Chapter of the A.I.A., “in recognition of his notable contribution towards furthering the alliance of sculpture and architecture.”

The Craftsmanship Medal, the Institute’s highest award for craftsmanship in metal, wood, glass, ceramics and allied arts, will go to Maria Montoya Martinez, “the potter of Sun Idelfonso,” a Pueblo Indian who, with her late husband, Julian Martinez, “not only revived the ancient forms and skills of their forebears, but added to them.”

Honorary memberships will be awarded to Morton O. Withy of Madison, Wis., immediate past dean of the School of Engineering at the University of Wisconsin and chairman of the State Board of Registration for many years, and Dr. Richard Eugene Fuller, director of the Seattle Art Museum.

Report on the Program

Edward A. Weeks, editor of The Atlantic Monthly, will be the convention’s “keynote” speaker. Highlights of the five-day program as so far arranged include:

Architectural education — Carl Feiss and Dean William Wurster of the School of Architecture of the University of California.


Government impact on architecture — Douglas Orr, A.I.A., New Haven, presiding; Michael Waterhouse, a past president of the Royal Institute of British Architects; and Miles Colean.


What’s New — Structural developments, Paul Weidlinger; Materials, Ben John Small; Lighting, C. L. Crouch; Homebuilding, Leonard Haeger.

The prospective Fellows are:


Also Samuel Eldon Homsey, Wilmington — Design; Eugene F. Kennedy, Jr., Boston — Design; Juan F. Nakpil, Ermita, Manila — Design and Education.

Correction

“Heating, Ventilating and Air Conditioning” is the correct title of the talk given before the Real Estate Board of New York by Alfred L. Jaros Jr., Jaros, Baum & Bolles, Consulting Engineers, New York City, as noted on page 195 of the April issue of the Record. The proportion of construction cost of air conditioning, heating and ventilation in the average New York office building in 1953 should have been given as 15 to 20 per cent.

(More news on page 16)

ARCHITECTURAL RECORD MAY 1954
New York's Metropolitan Museum of Art was host to the 85th anniversary dinner of New York A.I.A., when awards were presented to New York publication winners in the first national A.I.A. journalism competition. Right, Pietro Belluschi receives top award for professional architectural magazine article for "The Spirit of the New Architecture" in Architectural Record, October 1953 (first page reproduced below right). Below: photograph of Philip Johnson's house for Richard Hodgson, New Canaan, Conn. (Architectural Record, March 1953), won top architectural photography award for Ezra Stoller. Far right: 81-year-old Harvey Wiley Corbett felicitated by Chapter President Hugh Ferriss on receiving Chapter's 1954 Medal of Honor; the presentation preceded Mr. Corbett's death by just three weeks.

Architects got first look at Metropolitan's new auditorium, to be dedicated May 11. Voorhees, Walker, Foley and Smith were the architects; Bolt, Beranek and Newman, acoustical consultants. Above: Metropolitan Director Francis Henry Taylor gets key from Neil Horgan of the George A. Fuller Construction Co., builders.
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ARCHITECTURAL RECORD  MAY 1954  17
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1. Formwork partially completed. Edge beam forms were erected, then timbers forming concentric rings, followed by stringers from bottom to top. 2. Matched lumber was nailed to stringers to receive concrete. 3. Reinforcing in place. 4. Double forms with ports were used on steep slopes near supports; above these forms are platforms for workers. Below: the dome after stripping of forms

There are no two parallel lines in it.” This remark, while said half-face-to-face by one of the men on the construction work of Eero Saarinen’s M.I.T. auditorium, appears to reflect fairly well the major problems a new structural conception has presented for the builder from the time the foundation lines were laid out, starting in April of last year.

Oddly enough, according to the construction superintendent for George A. Fuller Co., Douglas Bates, erecting the thin-shell dome (actually it’s one eighth of a sphere) was easier than the rest of the superstructure. Establishing reference points—an exercise in spherical geometry—for putting up formwork for the floor of the main auditorium, its supporting structure, and the laying out of the small auditorium and rooms on the lower level, seems to have been the most difficult task.

The center of interest, though, is still the dome which has about 640 tons of structural concrete and 100 tons of reinforcing steel to support at only three small points. For 80 per cent of the dome, concrete is only 3/16 in. thick. Next to the abutments it is nearly 36 in. thick.

Actually the dome, for which structural engineering was done by Amman and Whitney, only rests on the abutments, and is not directly connected to them. A bearing arrangement is employed which has two castings shaped like inverted saucers, one fitting over another. The casting set into the dome is ground to a radius of 120 in. and the casting in the abutment has a 100-in. radius curve. The weight of the roof will keep the top casting bearing on the bottom one. This was done to take care of any movement of the dome due to changes of temperature, and possible settling of the dome when the forms were removed.

(Continued on page 318)
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ARCHITECTURAL RECORD MAY 1954 23
FOR BETTER SCHOOLS: SEVEN WINNERS

From a field of 139 entries a five-man jury headed by Lawrence B. Perkins of the Chicago architectural firm of Perkins and Will picked seven projects by five firms (photos on this page) to receive the top awards in the third annual competition sponsored by The School Executive Magazine "for better school design." The awards were announced and the winning designs exhibited at the annual convention of the American Association of School Administrators at Atlantic City in February (Architectural Record, April 1954, page 20).

White Oaks Elementary School, Annex, San Carlos, Cal.; John Carl Warnecke, architect. Each classroom has its own patio.


Double Oaks Elementary School, Charlotte, N. C.; A. G. O'Dell Jr., architect. This school for an extensive Negro housing development provides separate yards for glass-walled classrooms and library.

Deer Park School, Fairfax, Cal.; John Lyon Reid, architect. The beautiful site, a park of redwoods, oaks and bay trees, was a problem as well as an asset: limited level area, trees to block daylight.

Manor Elementary School, Fairfax, Cal.; John Lyon Reid, architect. Gabled roof provided fresh approach to bilateral lighting, gave each class a "house" of its own in structure designed for strict economy.


Sam Houston Elementary School, Port Arthur, Tex.; Caudill, Roulett, Scott, Neff & Associates, architects. Brick is left exposed on interiors for ease of maintenance.
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INDIVIDUAL

ARCHITECTURAL RECORD MAY 1954 25
WINNERS ANNOUNCED IN GALLERY COMPETITION

The commission for Canada's projected National Gallery in Ottawa went to the Winnipeg firm of Green, Blindstein, Russell and Associates, winners of the competition held by the Department of Citizenship and Immigration. The architects were awarded $10,000 as initial payment on the contract.

The winning design is for a three-story building (shown at right) which will cost an estimated $5 million. The site faces the banks of the Rideau River.

Judges for the competition were Alfred Barr, Director of the Museum Collection at New York's Museum of Modern Art; John Bland, Director of the School of Architecture at McGill University; and architect Eero Saarinen of Bloomfield Hills, Mich. The jury's report on the design said: "The design shows an extraordinary sense of unity and feeling of classic calm achieved through contemporary architectural means. The simple, rectangular building mass, set upon a colonnade, stands upon an impressive stone terrace. This fine architectural concept is carried through with control and sureness and a feeling for detail and proportion. The scale of the structure gives a sense of power and dignity. It is consistent, and there is no doubt the building will have great architectural distinction."

Situated on the first floor of the building are a foyer, gallery, auditorium and cafeteria. The second floor, scheduled to hold the gallery's painting collection, is a completely open area, where exhibits will be mounted on partitions. Administrative offices are located on the third floor, along with the library, the department of prints and drawings, and a 100-seat lecture room. A large part of this (Continued on page 30)

NEW SCHOOL DESIGNED FOR DOUBLE DUTY

Mincola Public School, to be built at Port Credit, Ont., has been planned to fulfill two functions—one wing is intended to accommodate 11 classrooms and offices for the school staff, the other is for the administrative offices of the local Board of Education. If further space for classes is required, however, the office wing can be converted for this use. Both wings can be expanded.

It is expected that the building will cost about $214,744, giving a per sq ft cost of $8.75. The architects, Craig and Madill, report that this figure is a new low for schools in this locality.
GOODYEAR PROUDLY ANNOUNCES

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Heavy Gauges, Superior Abrasion-Resistance, No Waxing—uniform color AND compounding all the way through!

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Every square inch of Goodyear HDH All-Vinyl Flooring is factory pre-polished to a natural, lasting luster—presenting a surface so dense it never requires waxing. There are 8 lastingly lovely colors in this new series—giving a wider selection of color to this heavy-duty All-Vinyl Goodyear Flooring—available in pre-cut tiles and full 45"-wide rolls.

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ARCHITECTURAL RECORD MAY 1954
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THE RECORD REPORTS

CANADA
(Continued from page 26)

Above: 20,000 sq ft warehouse and office designed by Marani & Morris, Toronto architects, for the Anthes-Imperial Co., Ltd., manufacturers of hot-water heating equipment, North York, Ont.

floor will be devoted to the reserve collection. The design also takes into account the possibility of future expansion. Two other finalists in the competition — Smith, Carter, Katesekoff and Ian Brown, of Winnipeg, and Vincent Rother of Montreal — each received awards of $5000 for their entries.

Non-Slip Aggregates

TERRAZZO made non-slip by ALUNDUM AGGREGATE provides walking safety even on stormy days in this lobby of the John Hancock Insurance Company building, Boston.

Announcement

The continually increasing popularity of terrazzo as a flooring material has resulted in increasing use of non-slip ALUNDUM AGGREGATE to insure walking safety even when floors are wet. Also the large expansion in industrial plant construction has brought widening use for ALUNDUM (C.F.) AGGREGATE to add safety and durability to cement floors.

As a result Norton Company has decided to concentrate all manufacturing facilities on the production of these two types of aggregates, and to discontinue the manufacture of ALUNDUM Ceramic Mosaic Tile and ALUNDUM Stair and Floor Tile.

Production of ALUNDUM Stair and Floor Tile but not mosaics will be continued, however, at the Norton Company plant in Hamilton, Ontario, Canada so architects may continue to specify these ALUNDUM non-slip tiles and obtain them from this source.

Large stocks of both ALUNDUM AGGREGATES for terrazzo floors and for cement floors will be carried in Worcester and in the Norton warehouses in Chicago, Detroit, Cleveland, Philadelphia and Pittsburgh. This means prompt service.

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COMPETITION GETS BIG INTERNATIONAL RESPONSE

Intention to participate in the $12,000 International Calvert House Competition has been announced by 644 architects. A breakdown of the contestants' home countries shows that the competition is indeed "international" — European entries outnumber Canadians by more than three to one. Responses were received from architects in these nations: Austria, 29; Belgium, 11; Canada, 148; Denmark, 24; Finland, 9; France, 31; Germany, 44; Great Britain, 190; Greece, 4; Holland, 35; Ireland, 14; Italy, 20; Norway, 8; Portugal, 13; Spain, 2; Sweden, 23; and Switzerland, 19. McGill University's School of Architecture is handling the competition.

Members of the jury, who will probably begin selecting the winners about May 20, include, as the European members...

(Continued on page 32)

In an attempt to solve the familiar downtown parking problem, the Toronto Parking Authority plans two garages — above the 575-car version; not shown, 400-car model. Blake H. M. Tedman, architect

See our Catalog in Sweet's

NORTON COMPANY
Worcester 6, Mass.

T94

ARCHITECTURAL RECORD  MAY 1954
WEATHERPROOF
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Easiest of all to install, wire and service

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ALBERTA ARCHITECTS HOLD 43RD ANNUAL CONVENTION

Alberta architects met recently in Edmonton for a two-day meeting of the Alberta Association of Architects. Members elected K. C. Stanley, of Edmonton, to the presidency; he succeeds George W. Lord in the office. Other officers elected were V. F. R. Berton, Calgary, first vice president; G. W. Lord, Edmonton, second vice president; H. L. Boney, Edmonton, honorary secretary; and G. R. Ascher, Edmonton, honorary treasurer.

It was announced at the meeting that the association had opened an office in Edmonton.

FEBRUARY 1954 CONTRACTS TOP 1953 BY $6 MILLION

Construction contracts awarded in February swung up $6,491,000 over the same month last year, according to the figures of the MacLean Building Reports, which give a total for the month of $91,094,000.

Though not a substantial upsurge, the trade publication points out this increase should reassure those who may have been apprehensive at the drop of $290 million reported for January. This decrease was attributed to the severe winter conditions prevailing across the country. As the weather moderates, suggests MacLean, work-start hold-ups should pick up and balance out the cumulative deficit for the new year.

(Continued on page 36)
226 SAFE SHOWERS in The University of Oklahoma
Boys and Girls New Dormitories Are Regulated by
POWERS MIXERS

Above: 4 of the 8 Modern Dormitories All Equipped with—

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Thermostatic WATER MIXERS

They make showers SAFE against scalding
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Architects; Peterson, Hoffman & Grow

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ARCHITECTURAL RECORD  MAY 1954  35
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**THE RECORD REPORTS**

**CANADA**

(Continued from page 32)

The month's increases showed up in three categories—industrial building, up 50 per cent; residential, up 14 per cent; and business building, up about 10 per cent. Engineering construction, however, showed a drop of about 49 per cent from last year's total for the month.

Dispersing a tendency in some recent Toronto apartment developments to "scrape" a site clean before construction, Venchiarutti & Venchiarutti designed this apartment development near Toronto with special attention to the natural features of the location. Buildings are planned to follow the contours of the site, and the road is placed to spare as many trees as possible.

**NEWS NOTES**

A Coronation Medal was awarded by the Queen to George Englesmith, Toronto architect, for his services in the Association of Canadian Industrial Designers, of which he is the founder; Mr. Englesmith is with the firm of John B. Parkin Associates... W. F. Holden has been appointed Commissioner of Buildings by the Toronto Board of Control; Mr. Holden, who is an architect, was formerly deputy commissioner of buildings... "Italy, Ancient & Modern" was the title of a feature presented recently to the Toronto Chapter of the Ontario Association of Architects; the presentation consisted of color slides taken by architects on trips abroad, and was prepared by W. M. Greed, a member of the chapter... Toronto's new $30 million subway had its first run on March 30; traffic capacity of the four-and-a-quarter-mile tube is 40,000 passengers per hour.

(More news on page 38)
Famous-Barr's new Southtown store in suburban St. Louis may prove to be a pattern for future store builders. Of an advanced design, the store contains every convenience for shoppers and employees, including a large dining deck, coffee shop, restaurant, employees cafeteria and a kitchen, which is the last word in modern efficiency and sanitation. Jamison stainless steel clad cold storage doors in this kitchen combine “hospital spotlessness” with a maximum of cold-sealing efficiency. Jamison Cold Storage Door Company, Hagerstown, Md., U. S. A.

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JAMISON Stainless Doors Selected For Store Setting Pattern For Future Building

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The Leader For Over 50 Years
WHITHER HOUSING? FUTURE GOVERNMENT POLICY IN DOUBT AS FHA INVESTIGATION ROCKS NATION

The future of government housing programs — and, indeed, of some other programs of government aid to construction — appeared to be in question as an early result of the Eisenhower Administration's decisive expose of Federal Housing Administration "scandals" that bridged the Truman era and its own.

Hearings on the Eisenhower housing legislation by the Senate's Banking Committee were immediately "postponed" for two weeks to allow the Committee's full-scale investigation of FHA irregularities to get under way and it was not hard to find Capitol Hill prophets who saw a clear possibility that the new Administration program might get entirely lost, for this session at least, in the shuffle.

The Administration-sponsored lease-purchase bill, under which public buildings would be constructed by private builders for lease to the government on a long-term purchase arrangement, also ran into trouble in the Senate imme­diately after the FHA imbroglio began, but in the end it was passed.

The abrupt announcement by Housing and Home Finance Agency Administrator Albert M. Cole that the resignation of FHA Administrator Guy T. O. Hollday had been "accepted" by the Eisenhower Administration so that "another man" could lead an investigation of "alleged serious irregularities and abuses" in the FHA Small Property Improvement Insurance Program (Title I) and "evidence of illegal or unethical actions" in the financing of privately-owned rental housing projects (Section 608, which expired in 1950) was followed by an investigative flurry notable even in present-day Washington. Within a week, at least six separate investigations were under way.

Norman P. Mason, treasurer of the William P. Proctor Company, Chelmsford, Mass., a widely-known leader in the construction industry, was expected to play a key role in the FHA investigation as the acting FHA administrator appointed to succeed Mr. Hollday.

The housing bill embodying the new Eisenhower program had passed the House of Representatives after a bitter fight on public housing provisos without the authority asked by the Administration for construction of 104,000 new units of low-rent public housing in the next four years. By what amounted to a parliamentary accident, the bill did not proceed with the 35,000 units already under contract with local authorities.

(Continued on page 282)
ONLY the
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Unit Ventilator
relates the fresh air inlet area
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by an ingenious
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STOPS FLOOR
DRAFTS AND
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All unit ventilators have a fresh-air inlet opening of a certain size designed to permit a percentage of outdoor air to be drawn into the unit and mixed by the fans with air drawn from the room.

On very windy days more outdoor air than is desired may be blown into the unit, resulting in a waste of the fuel required to heat it. With high winds, the outdoor air volume may tax the capacity of the fans... some cold air may "blow through" the room-air inlet and cause discomforting drafts.

The Nesbitt Air Volume Stabilizer solves this problem. Two aluminum vanes, suspended by end pivots below the fresh-air inlet, are operated by the very force of the incoming air to reduce the size of the aperture as required. The desired outdoor air volume is maintained. No fuel is wasted. Blow-through is prevented without affecting the economical recirculation of room air. (See diagrams.)

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<tr>
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## St. Louis

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<th>% increase over 1939</th>
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<td>Feb. 54</td>
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## San Francisco

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The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type—considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.: index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

\[
\frac{110-95}{95} = 0.158
\]

Conversely: costs in B are approximately 14 per cent lower than in A.

\[
\frac{110-95}{110} = 0.136
\]

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.
HOW CAN YOU USE Pella Wood Folding Doors to provide privacy and maximum utility of space? Specify as folding partitions between living-bedroom-den combinations. Use them between living-dining and kitchen-dining areas. Use them in regular door openings wherever inside closures are required.

Install across entire closet fronts. Create double-purpose rooms in schools, churches, hospitals, clubs and other buildings. Pella Doors fold accordion-like against door jambs or walls. Every inch of floor and wall space can be used.

Pella natural wood doors are solidly built. Laminated construction assures straight, true panels. Color and texture blend with furniture and woodwork. Stock doors in pine, finished or unfinished. Custom doors in natural pine, oak, mahogany or birch, clear varnished or unfinished. Packaged, complete with all hardware and concealing track mould. See Pella catalog in Sweet's Architectural File or mail coupon below.

MAKERS OF Pella
WOOD CASEMENTS • MULTI-PURPOSE WINDOWS
ROLScreens • VENETIAN BLINDS
Here's how they sell houses

TIP FOR YOU FROM:
Housing Development Corporation

"We're now building 600 houses in our new development, and each of them will feature a worksaving General Electric Kitchen—just as our other houses in past years have. No doubt about it, G-E Kitchens help to sell houses. To date, we have sold 2000 houses with G-E Kitchens."

At right: Munera, Anthony Campeolli and Nathan Breslow

"Sold 2000 Houses with G-E Kitchens"

"In order to keep our sales records high for 1954, we naturally try to give people what they want, yet keep the final price tag realistic... at a figure prospects are willing to pay."

"We're glad to say that our '54 houses are newer and bigger. The General Electric Kitchen in our 'Riviera' house, for example, includes: Refrigerator, Under-Counter Dishwasher, Speed-Cooking Range, Automatic Disposal, ample counter and cabinet space, and floor to ceiling picture window."

"Again this year, we believe we will have an extraordinary sales volume because we are offering extraordinary values!"

1079th PURCHASER, Mrs. James V. Bryant of the Housing Development Corporation's largest model "Riviera" Rambler says: "My husband and I selected this house because we felt it is an extraordinary value, has a good location and an excellent design. The conveniences of this house are truly emphasized in the de luxe, custom-type General Electric Kitchen, which means better living in any house."

Whether you plan to build a few houses or hundreds, get the facts from General Electric. Find out how we can help you (in so many ways) to sell houses faster in today's market. Call your General Electric major appliance distributor today. Home Bureau, General Electric Company, Appliance Park, Louisville 1, Kentucky.
(year after year) in Washington, D.C.

TIP FOR YOU FROM:
M. T. Broyhill & Sons

"We're now building 600 houses in our new development, and each of them will feature a work-saving General Electric Kitchen—just as our other houses in past years have. No doubt about it, G-E Kitchens help to sell houses. To date, we have sold 1500 houses with G-E Kitchens."

At right: Messrs. M. T. Broyhill, Jr.; Mr. M. T. Broyhill, Sr.

"Sold 1500 Houses with G-E Kitchens"

"Our houses sell in the price range of $13,950 to $35,000.

"Regardless of price class, however, we find that most women want all-electric, timesaving appliances in their new houses today—and I don't blame them.

"Above all, they express an overwhelming preference for General Electric appliances. Our custom-type General Electric Kitchen is one of our most potent sales features."

MRS. L. V. DRAVENTSADT in the G-E Kitchen of her new home. Mrs. Draventtsadt is mighty pleased with her General Electric appliances for she knows how efficient and dependable they are, having just moved from a previous home, built by Mr. Broyhill, which also was General Electric equipped.
REQUIRED READING

"JUST GIVE ME THE FACTS, MA'AM"
(an editorial note)

We're in a house-building boom, and a lot of house books have been published in the past few years. Almost all of these, and shelter magazines too, are aimed at selling contemporary design to the house-buying public — which is larger than ever, or we wouldn't be having the boom or the books. These books do a pretty thorough job of presenting the FACTS: cost per square foot; the many technical innovations created to "save" the housewife; the advantages of convertible rooms; new cost-saving construction methods. These are techniques which we recognize as essential today; nobody really wants to return to the black iron kitchen sink or the 1910 heating system. These facts are also thrust at the public by radio and TV home shows, ladies' home magazines, home furnishing shows and daily newspapers; the completely modern house just isn't traditional. The facts are generally accepted, but even in sum they seldom give prospective home owners the reassurance they need. The shutters on a Cape Cod house, divorced from modern function, retain a meaning for many people; for many they are part of the alphabet of grace, gentility and a connection with tradition. The glassed-in house, designed on a basis of formula and utility, is strange. The home buyer wants to appreciate it — often the very vigor of his defense of an uncertain choice betrays this; but what have architects contributed to help him transfer his understanding and affection from the old to the new? This need for identity with a tradition is not easy to satisfy honestly. The suburban movement in this country, now at a peak, is at least as old as Jefferson's belief in the desirability of every family having its own house on a plot of ground on the fringe of the city. Our society has forced its growth, though we may now question the righteousness of either agrarian austerity or quaintness as its characteristic domestic expression: the palatial Greek Revival, the gingerbreaded Queen Anne, the garden cottages of Andrew Jackson Downing. These are hardly compatible with the American ingenuity that also produced the central-chimneyed New England house plan or the Louisiana dog-trot house, the balloon frame or even the simple clapboard.

Of course the home buyer needs books on today's techniques. Perhaps even more, though, he needs — and he wants, judging by personal and reported experience — books that will help him understand and like more than the mere techniques of the modern house. He wants to feel at home in it.


Practical Houses for Contemporary Living. By Jean and Don Graf. F. W. Dodge Corp. (New York, N. Y.) 1953. 8½ by 10½ in., 165 pp., illus. $6.95.


REVIEWED BY
JOHN HANCOCK CALLENDER, A.I.A.

The latest additions to the current crop of books about houses are all aimed at the public rather than the profession. But architects practising in this field usually find it advisable to keep abreast of their clients' reading, and should add these three books to their list. The first two books are aimed at those people who are intending to build houses. Both do a workmanlike job of presenting many examples of reasonably well designed houses, salted with brief but sage advice to the prospective home builder. These books are practical, impersonal and non-critical, and they perform a useful service to the public. The third book has no such utilitarian purpose. It is intensely personal and unhesitatingly critical and is intended to be highly entertaining and incidentally instructive.

QUALITY BUDGET HOUSES "is a book about the things you have to know — and the things you have to do — to get a good . . . house on a limited budget." The text includes chapters on the Site, Use of Space, Expansion, Structure, Materials and Equipment, Ready Built Houses, Cooperatives, the Owner as a Builder, the Architect as a Builder. The text runs continuously through the book on the right hand pages. The examples are uniformly presented on the left hand pages and usually carry over to the facing page. Information about the houses is far more complete than is customary in books of this type. This data is organized under the following headings: Cost Facts (cost, date, area, cost per square foot); Materials; Plan Facts (the owner's requirements, nature of site, etc. described in detail); Economics; Budget Suggestions (possible further economies).

The authors are commended for their courage in tackling the troublesome cost problem and for the care they have taken to do it as fairly as humanly possible. They carefully explain what is included and what is not included. Cost figures are always accompanied by the date, and conversion factors are given for correcting to 1954 costs. The reader is also told how to correct (in a very rough way) for regional cost differences. The area of basements, porches, carports, etc. is given separately from that of the main house and an explanation is made of how the cost per square foot is derived.

The architectural quality of the houses is remarkably high, considering the $30,000 cost limit. This reviewer particularly liked the examples by Henry Hill, Richard Neutra, Hugh Stubbins, Crombie Taylor and Gyo Obata, Robert Rosenberg and Craig Ellwood. Some of the houses have been published before, but not so many as to make the book seem warmed over. The book is, incidentally, a remarkable bargain, offering 100 houses at five cents per house, if you want to look at it that way.

PRACTICAL HOUSES FOR CONTEMPORARY LIVING offers fewer houses (40) but presents them much more fully. Each house gets an average of four pages on which occur some eight photos (Continued on page 48)
Here is another excellent example where Stainless Steel Metal Walls have been employed to good advantage in dressing up a building which, because of its functional characteristics, would otherwise have been rather prosaic in appearance. The architects have achieved in this structure a result in modern design which has attracted much interest and many enthusiastic comments. The advantages of Metal Walls, however, are not confined to appearance and design effects obtainable... important building economies are realized through lower material cost, lower labor cost, and the cumulative savings resulting from reduced construction time... buildings can be quickly enclosed with Insulated Metal Walls—even under extreme low temperature conditions which would preclude masonry construction. Other important factors to be considered are the light weight of these modern curtain walls and the maintenance-free permanence of Stainless Steel or Aluminum exterior surfaces. Mahon Insulated Metal Walls are available in three exterior patterns... the Mahon “Field Constructed” Fluted or Ribbed Wall can be erected up to sixty feet in height without a horizontal joint—a feature of Mahon Walls which is particularly desirable in auditoriums, powerhouses and other types of buildings where high expanses of unbroken wall surface are common. See Sweet’s Files for complete information or write for Catalog No. B-54-B.

THE R. C. MAHON COMPANY
Detroit 34, Mich. | Chicago 4, Ill. | Representatives in All Principal Cities

Manufacturers of Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions and Permanent Concrete Floor Forms; Rolling Steel Doors, Grilles and Underwriters’ Labeled Rolling Steel Doors and Fire Shutters.

New Greyhound Terminal, Chicago, Illinois. 17,200 Sq. Ft. of Mahon Stainless Steel Metal Walls were employed in exterior surfaces. Skidmore, Owings & Merrill, Architects. John W. Harris & Associates, General Contractors.
...Swimming pool has unequalled versatility with Byrne Aluminum Sliding Doors!

The General George S. Patton Memorial Pool located at Patton Memorial Park in Detroit, Michigan was conceived with the thought of constant use 12 months per year.

It was desired that the pool would approximate, as nearly as possible, an outdoor pool during summer time use ... yet be weather tight and condensation free, for operation during the winter.

The architects, working with the Byrne engineering staff, developed the idea of using large sliding doors which nest in pockets to permit wide, unobstructed openings on two sides of the pool for summer swimming freedom. Aluminum, as a building material, was selected because of its non-corrosive qualities. Two sets of doors with heating space between them were constructed and these provide weather-tight condensation-free, winter operation. Bottom wheels, rolling on tracks, and freely running head guide rollers assure smooth, easy operation.

The pool was dedicated by General Patton's widow, Mrs. George S. Patton. It has been in constant use for several years, averaging over 90,000 patrons per year.

Unique in its field, it is felt that this new conception of an outdoor, indoor swimming pool will serve as a model for similar installations throughout the country.

For information regarding Byrne doors and facilities you may consult Sweet's Catalog or write direct for our brochure.

Architect—Giffels & Vallet, Inc.
L. Roselli—Associated Engineer & Architect
Detroit, Michigan

General Contractor—
The Krieghoff Company
Detroit, Michigan

BYRNE doors, inc.
1421 East 8 Mile Road, Ferndale, Detroit 20, Mich.
101 Park Ave., New York 17, N.Y.
Cafritz Bldg., Washington 6, D.C.

REQUIRED READING

(Continued from page 46)

graphs and a plan. Photographs are of good size and show to advantage on the coated paper. Informative captions tell most of the story.

The book is organized into six sections. Each section is headed by a nugget of wisdom from the authors and a bright drawing by Lowell Hess. A brief, well-written introduction is the only formal text. It includes remarkably apt quotations from Shakespeare and the Bible warning the man who intends to build to be sure to keep within his budget.

It is apparent from the above that this book, without placing any special emphasis on low cost, covers very much the same field as QUALITY BUDGET HOUSES. It is remarkable therefore that only one house appears in both books. Many architects' names appear in both books. Nevertheless the general architectural level is not quite as high and the stylistic center is definitely to the right of the Ford-Creighton line. PRACTICAL HOUSES includes Royal Barry Wills' own house, complete with old ship's knees and barn sash that have been chewed by a horse! It is only fair to note that this is the only aberration of this type in the book.

At the other end of the scale are houses by Kirk, The Architect's Collaborative, Matsumoto and Keck.

The editors of PRACTICAL HOUSES are commended for including full index service: by architect, by owner, by geographical region and by photographer; addresses are given for both architects and photographers. This in itself is rare enough, but another and unique type of index has been supplied. The "Concordance," as it is called, is an index of building details which lists everything from balconies and bars to window treatments and yards.

Both BUDGET HOUSES and PRACTICAL HOUSES were written by architects and published by architectural publishing houses. Yet the word "beauty" does not appear in either book. If architects themselves have forgotten or are ashamed to say, that beauty is their prime stock in trade, who can blame the public for not knowing it? One would gather from reading these books that an architect is an ingenious cost-cutter or a clever tailor who makes houses fit families. No where, even in

(Continued on page 344)
ARCHITECTURE IS ESTHETICS AND ECONOMICS

A national business magazine recently called attention to an apparent conflict between esthetics and economics in architecture, and stressed the increased "economic" responsibility of the architect to the feasibility of projects. This is good. That the business world can recognize the relationship between esthetics and economics in architecture may be a sign of an awakening to the real function of the architect.

There is really no conflict between esthetics and economics in architecture. True esthetic value makes a building more feasible economically. It means that there has been proper use of site, selection of suitable construction methods, materials, colors, and sound and temperature control. This makes for sound economics which, like esthetics, requires planning, design and vision.

A great many of the projects whose progress from inception to completion has been directed by the architect are functionally, esthetically and economically harmonious. They are buildings of lasting quality and continuing high value. The economic "problem children" among buildings are those projects conceived in ignorance and begotten in greed to make a fast buck. These are the slums of tomorrow, the financial flops of the immediate future. They represent no planning, no esthetics, no economics, no vision — in short, no architecture.

To be an architect takes courage. Generally, when given the opportunity, the architect has not refrained from assuming more responsibility for the economic feasibility of a project. But this opportunity is not often his. He is usually brought into a project too late to be of full service because the public lacks full understanding of his function. After the property has been bought and other factors have been decided upon, a large part of the architect’s service cannot be performed because the economic factors have already been determined.

To overcome these methods and the resulting misunderstandings an educational program is necessary. It must be one which brings the architect face to face with his responsibilities to the public, which will also put before the public the truths of economic and esthetic harmony in architecture and the architect’s part in producing this. That is public relations in capital letters! The facts are available; the public is receptive; business even shows interest. The architect, by his training and talent for designing economically esthetic architecture, can be a catalyst in resolving this apparent conflict.

We can do it. What are we waiting for?

Walter R. Hagedohm
CARMEL RIVER SCHOOL PRIMARY UNIT

Carmel, California

Thomas S. Elston, Jr., Architect
Edwin Abercrombie Verner
Structural Engineer
Millar Clarke, Mechanical Engineer

This first unit of an eventual ten-classroom school houses the administrative offices and classrooms for the primary grades. Because the classrooms are to be used by the youngest pupils only, scale was an important factor in their design: lower ceiling heights give a closer relation between pupil and room.

South lighting through clerestory windows is diffused by a baffle which runs the length of the room cutting the view of the sky from below and reflecting light onto the recessed south wall so that the alcove under the clerestory can be used for special activity.

Exterior colors — gray-green stucco, yellow trim, coral eave soffit — reflect the sage and mustard growing around the building. Interior colors are soft: three walls of classrooms are painted light gray and the fourth is blue-green for accent; ceilings are off-white with yellow trim; floors are light gray except in kindergarten and in one other classroom where a red design is incorporated in the plastic tile.

Structurally, the building is simple. Its most interesting detail is the mullion columns at the clerestory. These structural members are used at the glass as Mullions; lower down they support the clerestory header. The horizontal thrust at the top of these mullion columns is resisted by the diagonally sheathed roof diaphragm acting as a horizontal girder. Another simple structural detail is the use of an equilateral A frame in the partitions between classrooms, instead of the conventional shear wall, to take horizontal thrusts and transverse seismic forces.

Asphalt paving was used on outdoor classrooms and corridor for economy, and it provided a quiet walking surface as well. Floors are vinyl tile on concrete slab. Walls are stucco (and redwood plank at one end) on the exterior, fiberboard on classroom interiors and plaster on office interiors. Ceilings are finished with acoustical tile. Roof is built-up tar and brown river gravel. Cost of the first unit was $67,857.11 plus $1140 for grading, for the 6950 sq ft (including corridors at one-half but excluding outdoor classrooms).
Baffles under clerestory windows reflect light to south wall surface producing intensity almost equal to that on end walls.
Located on hillside and completely underground, building is designed to withstand heavy over-pressure from blasts.

PROPOSED CONTROL AND COMMUNICATIONS CENTER

Portland, Oregon

Edmundson, Kochendoerfer and Kennedy Architects

Available information on civil defense control centers largely deals with conversion of existing buildings for emergency use and so far not much information has been assembled on the design of structures for specific control center use, as the architects for this proposed control center for Portland, Ore., found when they started research for the job. What data was available from the other cities which they visited did not fill the requirements of the Portland program. Consequently they started from scratch to find out how the building would function, what and who it would house and what its mechanical and structural requirements were.

To get this information they talked to local civil defense officials: the city communications officer (who has charge of radio communications for both fire and police departments); the city medical director; the chiefs of fire, police, public works and utilities departments (including the city engineer, water bureau head and traffic engineer); and the heads of the local power departments.

Data thus gathered was formulated into a chart showing the number of personnel (and their jobs in an emergency) who would be housed in a control center. In conferences
PORTLAND CONTROL CENTER — ORGANIZATION FACILITIES

Table: ORGANIZATION, NO. PERSONS IN ONE 12-HR. SHIFT

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OREGON CITY TO REPLACE "VERTICAL STREET"

Solutions to grade differences are many and various in the West where hills are a commonplace, but a "vertical street" is a rarity among such solutions. Oregon City, Ore., has had one since 1915, and now it needs replacing. A new tower and elevator were proposed last year, but bids on the submitted design came in over the available funds ($175,000) voted two years ago.

A new design has now been made by Stevens and Thompson, Portland engineers, which proposes a circular reinforced concrete structure, 120 ft high and 13 ft 6 in. in diameter, to house an elevator for carrying passengers from a street near the river bank to a level 90 ft above, where there is another street. Cost of this structure is estimated at $160,000, well within the budget. The new design locates the shaft of the tower next to a perpendicular bluff and so eliminates need for an overhead bridge such as the present one which connects the upper street with the existing tower. The new tower will have an observation platform at the upper landing.

A tunnel, to connect the base of the tower with the river side of the railroad tracks which run between the new tower location and the river, is included in the new design.

SAN FRANCISCO FIRES ITS REDEVELOPMENT DIRECTOR

There was good news late in January for the San Francisco Redevelopment program: a district court of appeals had ruled that the city's Redevelopment Agency was based on a valid state law and that it was functioning as it should under that law. This meant that the Diamond Heights and Western Addition redevelopment programs could go ahead, and that the Agency could apply for $27,000,000 in Federal funds (some as loans, some as direct aid) or land acquisition and clearing.

For the Agency's director, James Lash, this was the first big step toward realization of the plans for these two areas. The test case, in which the Agency argued in its own behalf to force its chairman, Dr. J. Joseph Hayes, to execute final contracts with the Federal government, made clear that the Agency, in condemning and buying private property, clearing and reselling it for planned redevelopment, would serve a legitimate public function.

Not everything at the Agency looked bright, however. Since a few months after Mayor Robinson had appointed Paul O'Dowd to the board of directors of the Redevelopment Agency in May 1952, the tension had been rising. First, O'Dowd thought the pace of the program was too slow; then he found the staff "visionary." Four months after his appointment, the board ruled that all letters from the Agency would be signed by its chairman, not by its director. Shortly after this, four board members (there are five in all) met in secret session and fired two members of the technical staff working under Lash without consulting him about the action.

Public outcry against such star-chamber proceedings was immediate and loud. But the Agency board went its troubling way without particular notice of this indignation. At about this time, the chairman laid down a new rule: only he would speak for the Agency.

Between the major crises there were minor ones. O'Dowd, who used to be a private detective, said that Lash's report on a proposed program in the South-of-Market area was full of "meaningless phrases" and "gibberish." He again charged that the program was "dragging," and his attacks on Lash increased in frequency. As James Stratton, another board member said later, "Ever since Paul O'Dowd has been on the Agency he's had these attacks to make. I don't care what man, however strong he may be, you get as director — he won't be able to function under this."

On March 2 the Agency held a regular board meeting. There had been rumors that a move was underway in the Agency to fire Lash. Tension was high, but the meeting ran its routine course, with restraint, for two hours. Then O'Dowd passed out to all board members — but not to Lash who was, as usual, present at the meeting — a three-page typewritten statement which board members read in silence. After a brief oral elaboration of the typed statement, the question was asked. Four to one, the board

(Continued on page 48-12)
At the Daves Avenue School in Los Gatos, California, a Crossing Guard Protects the Children . . .

but a SECOND schoolguard protects the TAXPAYERS!

Like other communities, Los Gatos, California, is in an area where both subterranean and dry wood (flying) termites exist. Schools and other public buildings have been attacked by these insects. For extermination, authorities have had to resort to periodic expensive fumigations—at an average cost of $150 per room. And fumigation does not protect the structure from a reappearance of the termites.

Faced with this problem in designing the new Daves Avenue School, the architectural firm of Evans & Lincoln, San Jose, California, evolved the solution of using pressure treated termite and decay resistant lumber throughout.

After a study of available wood preservatives, Mr. Evans specified that all lumber was to be pressure treated with Chemonite. This salt-type wood preservative leaves lumber clean, paintable, non-oily and odorless. It will resist all attacks by termites or rot organisms for the life of the building.

The cost for protecting the entire school structure with BAXCO Chemonited Lumber was about one and one-half times more than the cost of one fumigation, according to Mr. Evans. But since fumigations may be required every few years, the use of Chemonited (chemically preserved) wood will prove an economy in future years through lower annual maintenance costs.

BAXCO CHEMONITED Pressure Treated LUMBER

To protect against termite damage for the life of the buildings, BAXCO Chemonited (pressure treated) Lumber was used for sill plates, wall studs, rafters, and sheathing.

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Please write for "BAXCO Chemonited Forest Products," our new 30-page illustrated story-in-color on the values and uses of BAXCO pressure treated structural wood.
SOUTHERN CALIFORNIA ARCHITECTS HOLD DESIGN SYMPOSIUM

In its 60 years of existence, the Southern California chapter, A.I.A., like many another chapter, had never called a meeting to discuss Design. But this year this surprising deficiency was erased at its March meeting when a panel of architects and laymen were invited by chapter president Ulysses Floyd BIBLE to discuss the subject. The panel members were architects Henry Eggers, Richard Neutra, and Arthur Gallion, dean of the College of Architecture at USC, and laymen Dr. William Meyer of Immanuel Presbyterian Church, Los Angeles, Mahlon Arnett, vice president, Bullock’s department stores and William McAdam, Coldwell-Banker, real estate brokers.

George Vernon Russell, who was moderator for the discussion, said that discussions on design “almost without exception have given way to argument as to what are fair fees, how to build more cheaply, or how to establish ourselves in the public mind.”

The discussion revolved around four phases of design — architectural education, regionalism, spiritual values and intrinsic value to the community.

To the question “Is the profession convinced as to the job education is to perform?” panel members answered:

Arnett: What is really important is to know how the world lives. Acquaint the student with practical knowledge but really bear down on the spiritual.

Neutra: Education does not deal with the abstract, but rather the real, conditions. I think that what the consumer expects from the architect is important too, and a discussion of this comes under the heading of education.

Arnett: How far do you go into the liberal arts and philosophy?

Gallion: We don’t do enough; we never shall. It’s impossible to do enough in the way of cultural background. About 40 per cent of the courses are devoted to general study, 60 to professional. No man can study architecture without indulging in a philosophy. When he designs a building, an architect arouses some kind of response. He cannot therefore be indifferent to his surroundings.

Arnett: It is those intangible values we need in order to get the “plus” from the architect.

On regionalism, panel members indicated by veering from the subject that other factors were more basic to design:

Gallion: I don’t attach significance to regionalism. It is an illusion, as illusory as any other ism.

Neutra: Whenever regionalism comes up for discussion, it becomes very superficial. In these days of a shrinking world, local materials play little part in design.

Russell: What has happened to the “fun” in architecture?

Neutra: We don’t have architecture without enthusiasm, but we need to remember that it must last. We cannot have architecture without fun.

Eggers: At the bottom of that question is the seeming disregard of atmosphere. We need a great deal more of atmosphere in our buildings. The so-called International style has sameness; what we need is the quality of atmosphere which comes from the “human” approach.

On spiritual values the discussion centered on church architecture:

Russell: Can our spiritual guides indicate a warmed-over eclecticism — a Gothic false-front on a steel skeleton — as an expression of a living religion? Shouldn’t the truth of religion be exemplified in the design of its own temple?

The church has contributed a great deal to the formation of temporary environment. Must not the church come to terms with its own offspring?

Dr. Meyer: Design plays an important part in our world and has a tremendous influence on man’s inner life and inner balance. Personally, I am moved by Gothic architecture. If church design in the form of new design is dead, whose fault is it?

Russell: It might be the architect’s — perhaps he has taken a superficial approach to its design.

Neutra: Every creative design has to do with both the architect and his client. The architect must respect the liturgical needs of the congregation. The basis of all religion is truthfulness. The architect who designs a church must come close to reality.

Russell: Could the existing prejudice be based on the surmise that the criteria for the good in modern architecture are not yet established in the professional — let alone the lay — mind?

Gallion: Creativeness developed the Gothic cathedrals. If there had been only imitators the Gothic cathedral would have been a pyramid.

Meyer: Our standards and thoughts are in continual flux. There is no absolute final, but a continual evolutionary process that brings us new creative values.

Neutra: Religion must take the lead because architecture is only a camp follower and can never take the lead.

On intrinsic value of design to the community:

Arnett: As a business organization, we must have a project that is financially sound. We are not interested in a cheap building, nor in effect achieved by using costly and daring materials. Design itself must pay dividends.

McAdam: Rentals, resale, investments are our business. We have to show profit by occupancy of a building. Design to us is most important.

Russell: What is the value of good design as shown by shopping centers?

McAdam: Some are successful, some are not. The big question to me is what to do with our older, established communities.

Continued on page 48-24

ATHLETIC CENTER FOR CALTECH

California Institute of Technology’s new athletic field and center, under construction in Pasadena, is due to be finished in October of this year. The center includes a gymnasium, headquarters for physical education, heated outdoor pool, dressing rooms, showers and locker rooms. Cost of the center will be $575,000. Architects are Marsh, Smith and Powell, supervising architects for CalTech are Pereira and Luckman.
The Research Center of the Stanolind Oil and Gas Company, Tulsa, Okla., is one of the most modern and complete petroleum research laboratories in the world. Over 2450 Sunbeam fluorescent lighting fixtures of various types were installed in offices, laboratories and cafeteria. Most of the installation consists of Sunbeam's versatile, recessed troffers, #5600, T-Bar mounted at a height of 10 feet in acoustical tile ceilings, the continuous rows of louver shielded fixtures provide 55 footcandles of even illumination. Vapor-proof type units light the kitchen area in the cafeteria. For engineered lighting such as this, specify Sunbeam Lighting.
Efficiency begins, according to experts, with comfortable surroundings. Los Angeles' Tishman Building offers its fortunate occupants the utmost in cool comfort, thanks to the use of Utility Blowers in the air conditioning system.
“Now we can enjoy peace of mind... a Koppers Roof protects the Pasadena Playhouse”

says CHARLES F. PRICKETT
Executive Vice-President

Since a Koppers Roof was installed on the famous Pasadena Playhouse, the management no longer worries about possible water damage to costly interior fittings. As Mr. Prickett, Executive Vice-President, so aptly puts it—“We were finally relieved of this worry.”

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voted to dismiss Lash. The one dissenting vote was Stratten's.

Main point in O'Dowd's statement was an incident that took place only a few months after he joined the board. He charged that Lash had received an FHA estimate of the amount that the Agency might expect to get from resale of Western Addition property but that he had not turned it over to the board. O'Dowd thought Lash had "suppressed" the estimate because it was some $1,800,000 less than an earlier estimate made by the city's real estate department, and he contended that in "suppressing" the report Lash had jeopardized the city's chance to obtain the needed Federal funds.

Federal officials in San Francisco and Washington upheld Lash's own statement that the estimate was not a formal report, that it was tentative and subject to change, extremely conservative in land price evaluations; that it had been made at Lash's own request — a requirement of the Federal law — and that it had been given him informally.

Harry Sanders, chief planner under Lash, was selected to succeed the former director and was named temporary director by the board, but before he could be appointed to the position, he resigned saying that "under the present circumstances, there would be no way for me to serve in this capacity." Jack Davis, coordinator for the Diamond Heights project and Roy Cameron, coordinator for the Western Addition project, resigned with him. This left the Agency without director and without technical staff.

The city's mayor, who had announced that he would not intervene in the Agency's affairs, took swift action after this development, nominating Robert Dolan, a 38-year-old attorney, as director. Dolan had been chief assistant clerk of the Board of Supervisors and a city employee for 17 years. The Agency's board subsequently affirmed the nomination.

But the fuss didn't die down. Protests against the firing of Lash continued. They came from the president of the Board of Supervisors, the supervisors' city planning committee chairman, the Chamber of Commerce, the Real Estate Board, the American Institute of Architects, Northern California chapter. The Planning and Housing Association called for a Grand Jury investigation of the Agency, suggested that the Supervisors cut off city funds, and indicated that it would ask the Federal government to withhold funds until "the present intolerable situation has been cleared up."

The Junior Chamber of Commerce recommended that the mayor ask the resignations of the board.

Hardly had the furor finally simmered down, when the Diamond Heights Property Owners Association, which had tried to interject itself in the test suit, announced that it would test the program affecting their property in the U.S. Supreme Court. The Association's dispute over the program involves less than 20 per cent of the overall Agency program, but it is enough to throw a monkey wrench into the progress of the whole program. For, as a result of this action, the HHFA funds which were being sought in loans and grants, are being held up pending the settlement of the controversy. The Agency was asking for $16,022,000 in loans and $6,120,000 direct aid.

A third estimate of return from resale of lands is also in process of compilation and until that is completed no funds would be allocated even if the Diamond Heights dispute should be cleared up.

A Grand Jury investigation has been under way since mid-March but no public announcement has been made of findings.

NEUTRA SPEAKS AT FRESNO ART FESTIVAL

Survival through design," the title of his new book, was the subject of the talk by Richard Neutra at the opening event of the third annual Fresno Festival of the Arts. The talk, preceded by a dinner, included slides of his work.

"It takes optimists to plan," he said. "Architects — the men with a gleam in their eyes of what the future could be — are optimists. Planning is our only hope if we are to survive gracefully."

Need for regional planning in the Central Valley, he emphasized, is great because of the area's growth since the war and its anticipated growth as a result of the Central Valley Project, which has already brought water to a considerable part of formerly arid parts of the San Joaquin Valley. Nor can city planning be ignored, he said, if the new population of the Valley's towns and cities is to be properly provided for.

Fresno architects should have a part in this planned growth, said Mr. Neutra, "All who make design are interested in the subtle responses which come from human beings," he concluded. "The architect is not just a visual artist. He is concerned with all sorts of physiological and psychological factors."

ARCHITECTS, DOCTORS SPONSOR COMPETITION

To "stimulate interest of architects in designing, and applying suitable materials to, the living environment of cardiac cases," the East Bay chapter, A.I.A., and the Heart Committee of the Alameda County Heart Association are sponsoring a competition open to students in the three accredited architecture schools in California.

Representatives of the sponsoring organization, of the faculty and students at the schools met in March to discuss a program and determine necessary preliminaries to making such a competition a national contest. The plans call for selection of a student from each of the schools to "inter" at Berkeley, Calif., during the summer while consulting with doctors, time and motion experts, architects and cardiologists to find the requirements which must be met in houses and offices where cardiaics or other disabled persons work and live.

On the basis of the information they gather a program for a national competition will probably be formulated, according to Dr. Gordon Lamb, chairman of the Heart Association committee and Russell G. deLappe, chairman of the A.I.A. chapter committee.
TEXCON

precast concrete joists cut costs and
construction time on new Dallas Parking Garage . . .

After plans for the Dallas Parking Garage were drawn up in collaboration with Texcon Engineers, the steel-reinforced concrete joists were precast at low cost to standard specifications, then transported to the jobsite.

On location Texcon provided an experienced engineer to receive and inspect shipments, and to direct final erection—without duplicating in any way the services normally provided by the general contractor.

The superstructure for this 80,000 square foot parking garage was completed in 27 working days at a cost of only $2.20 per square foot . . . a substantial saving in both time and money. The architect was Jacob E. Anderson, Dallas, Texas.

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To help cut the time and cost of roof and floor construction, Texcon offers these integrated services to architects and engineers:

1. **Engineering**—Customer's drawings are analyzed and shop drawings indicating the exact placement of each piece of material are prepared, then routed for examination and correction to the contractor and through him to the architect or engineer in charge of the project.

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3. **Transportation**—Method of delivery, equipment, loading and schedule of transit is planned in detail before fabrication of material is begun. In addition to assuming responsibility for loading and transportation, Texcon also provides an experienced engineer who receives and inspects the shipments at the site.

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Pictured below are eight steps to a permanent and perfect installation.

1. Ceramic Veneer units must be soaked in clean water for one hour before using. Wall surface should also be damp at time of setting.

2. Immediately before setting, the back of the Ceramic Veneer unit should receive a brush coat of neat Portland cement and water.

3. To insure permanent bond between Veneer and structure, the wall surface is also brush-coated with the same Portland cement mixture.

4. Next, slightly more than 3/4 of an inch of mortar is applied to the C.V. unit. The same amount is also applied to the wall area.

5. The C.V. unit is then set in place. Excess mortar will be forced out of joints from the back, leaving a 3/8 inch mortar bed.

6. It takes the mason only a few seconds to position the C.V. unit and check it with a level. This insures a true wall plane.

7. He then taps the unit with a rubber mallet to fill all voids, forcing the excess mortar out of joints. Spacers are removed after initial set.

8. Face joints may be raked out and pointed with fine mortar. To complete the job, surface is washed with clean water.

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BUILDING CONTINUES AT HIGH RATE IN WEST

The first quarter of 1954 indicates that for that period, at any rate, the building rate in Western States will be ahead of the similar period last year. The Los Angeles Chamber of Commerce figures for February were more than bright; not only were February permit valuations some $10,000,000 higher than in January, but for those two months the combined total of permit valuations was 11.3 per cent higher than in the same two months of record-breaking 1952. Since 69.5 per cent of the February permits were for residential work, the figure represented a greater volume of work than if there had been several very large projects involved.

In the Northwest, the picture was equally encouraging. Building permit valuations for the area's 47 largest cities was $3,555,303 ahead of the first quarter of 1953, according to figures compiled by the Equitable Savings and Loan Association. In the Northwest the increase in dollar valuation is due to a large number of commercial, industrial and public projects, and a smaller number of residential permits.

Denver's building boom, begun last year, gave signs of continuing unabated, but not at quite the rate as last year's record-breaker. Totals for the first three months were down $2,334,928 from last year, gave signs of continuing unabated, and public projects, and a smaller number of very large projects involved.

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The first quarter building permit valuations for the city's chief building inspector yielded (1954 figures, but even those three months February) ahead of the first quarter of 1953, according to figures compiled by the Equitable Savings and Loan Association. In the Northwest, the increase in dollar valuation is due to a large number of commercial, industrial and public projects, and a smaller number of very large projects involved.

February dollar valuation of building in Salt Lake City was much higher for February of this year than it had been for January, when there was a decided fall-off in valuation, and higher in all categories except the alteration and repair of non-residential buildings than it had been in February 1953.

CALIFORNIA SETS UP FIRST LANDSCAPE LICENSE OFFICE

The first landscape architects registration board ever authorized in California has been formed according to provisions made in the bill passed by the last legislature. After June 30 anyone who applies for a license as a landscape architect must take written examinations.

Board members are Lynn M. F. Harriss, Oakland, Harry W. Shepherd, Berkeley, Raymond E. Page, Beverly Hills, George C. Huntington, South Pasadena, and Jack W. Evans, Los Angeles. William E. Barbeau is the executive secretary for the board.

The office is located in Room 589, Business and Professional Building, 1020 N Street, Sacramento, Calif.

FORD FOUNDATION LOCATES NEW CENTER AT STANFORD

The Ford Foundation's new center for the study of the behavioral sciences will be located on Stanford University land west of the University's campus at Palo Alto, Calif. The decision climaxed a search for a site which had interested a number of Bay Area cities — Berkeley, Hillsborough and Menlo Park — as well as Philadelphia, Pa., all of which wanted the center to locate in their precincts.

The site consists of 11 acres of land. Buildings to house the center are expected to be completed by September; according to Dr. Ralph W. Tyler, director of the center. Wurster, Bernardi and Emmons are the architects, Thomas Church the landscape architect, and Knoll Associates the furnishings coordinators.

The center will select about 50 scientists and scholars a year to come to Palo Alto to study aspects of human behavior in such fields as psychology, economics, anthropology, political science, psychiatry and social psychology.

PUGET SOUND AREA GETS PLANNING COUNCIL

To coordinate planning activities in the counties bordering on Puget Sound, a council has been formed with Victor H. Vine, chairman of the Pierce County Planning Commission, as first chairman of the group. Other officers elected at the first meeting of the council are Perry B. Johanson, Seattle architect, vice chairman, and Harold Silvernail, secretary-treasurer.

The formation of the council resulted from a meeting called late in January by the Washington State chapter, A.I.A., to explore possibilities for setting up such a group. Talbott Wegg, Seattle architect, was named temporary chairman.

Planning commissions of Pierce, Snohomish and King Counties, Washington, have been asked to appoint representatives to the council; other counties adjoining these three can be invited later to participate in council activities.

"HOUSING THE AGED" — PRINCIPLES AND STANDARDS

The latest publication of the Housing Research Council of Southern California, Inc., is a booklet on Housing the Aged, a study of the principles involved in providing housing for old persons, both well and sick. The scope of the book is that of a preliminary report on the means of providing a "safe, pleasant environment with adequate, convenient facilities and equipment" so as to "open up new horizons for positive action towards a meaningful life for older adults."

Among the factors which contribute to this kind of environment are site, space relationships, living arrangement,
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*From Notes by C. M. Deasy, A.I.A., Architect
The Institute expects to launch a research program on problems of long range development of Pacific Northwest power and water resources. One of the first studies to be made will be of Oregon's resources and potential industrial growth, according to Dr. J. E. Hobson, director of the Institute. This study will be a part of the Institute's Western Resources Handbook service.

LOS ANGELES SELECTS AREA FOR REDEVELOPMENT

An eight block area has been designated as blighted and its redevelopment will be undertaken by the Community Redevelopment Agency of Los Angeles as the first in its program of such work. Until the recent decision in the Court of Appeals on the San Francisco Redevelopment Agency's program, there had been no legal ruling as to the authority of such agencies. Once the ruling had been established, there were no legal deterrents to executing the program.

The area selected as blighted is northeast of Los Angeles' city hall. It is zoned entirely for industry, but contains many deteriorated residences as well as factories. The plans call for immediate clearing of 123 buildings which include 203 dwelling units. Residents must be relocated before the work can proceed, according to the State Redevelopment Act.

The Los Angeles City Council recently appropriated a revolving fund of $500,000 so that the Agency could begin acquiring and clearing the blighted property. Once cleared, it will be resold to private investors and the proceeds will revert to the city for use on some other area.

Hearings will be held before any of the necessary processes get under way for the area's redevelopment.

MEL FERRIS APPOINTED CCA EXECUTIVE DIRECTOR

Mel Ferris, former San Francisco newspaperman and advertising account executive, has been named executive director of the California Council of Architects, succeeding Fred Chase who resigned to open a public relations office.

With the appointment of the new director, the offices of the council were moved to San Francisco. Ferris had been a Bay Area resident, and this was a factor in the move.

Interim studies begun by Chase will be continued during the current year as Chase has been retained for that period.

PROFESSIONAL NEWS

Appointments and Elections

Vern Bogut, vice president in charge of tile at Gladding McBean & Co., Los Angeles, and national director, Producers' Council, has been named national chairman of the Tile Council of America.

Malcolm Reynolds, Oakland, Calif., was elected president of the California Council of Architects at the annual meeting in February. Other officers are Henry L. Wright, Los Angeles, vice president; George Lind, Newport Beach, secretary and John Bomberger, Modesto, treasurer.

Andrew T. Hass, Alameda, Calif., architect, Frank Burrows, South San Francisco contractor, and Ernest C. Hihlan, Jr., Los Angeles structural engineer, have been appointed to the newly-formed California State Building Standards Commission. The commission was instituted in June 1953 to eliminate duplication of state building regulations. The three new appointments complete the commission's membership. First on the agenda is preparation of a new building code manual for the state.

Lewis A. Storrs, Ventura, Calif., has been elected president of the Santa Barbara chapter, A.I.A., Lah Maria Biggs, retiring president, is the new vice president. Robert Ingle Hoyt is secretary and Roy Chessman, treasurer.

Robert Fisher, Grants Pass, Ore., was appointed to a four-year term on the Grants Pass city planning commission by the city's mayor.

Earl T. Heitschmidt, Los Angeles architect, has been reappointed to the California State Board of Architectural Examiners.

Fredric H. Porter, Cheyenne, Wyo., has been reappointed to a three-year term on the Wyoming state architects' board.

Michael Goodman, Berkeley, Calif., architect and professor at the School of Architecture, University of California, has been elected president of the East Bay Metropolitan Council, an organization made up of planning commission members of the 14 cities on the eastern shore of San Francisco Bay.

Waldo B. Christenson, Seattle, Wash., has been named chairman of an archi-

(Continued on page 48-22)
How Rome Cable Corp. makes rigid conduit from USS Hot Rolled Sheets

Making rigid conduit in sizes ranging from 1/2" on up to 2", strips of hot rolled steel are fed through a series of forming rolls on this tube mill (left). The seam is closed by electric resistance welding. Because of Rome Cable Corporation's unique process for producing rigid conduit, they can use hot rolled sheet steel and thereby achieve remarkably uniform inside diameter measurements and weight.

Hot-dip galvanizing is done by the Sendzimir Process (right). Under atmospheric control, all dirt, oil, etc., is burned off in the flame preheater, which also produces a uniform blue oxide on the pipe. In the reducing furnace the pipe is annealed and the hydrogen atmosphere reduces the blue oxide to a smooth, stainless surface. The pipe is then fed directly into the molten zinc bath (no pickling or fluxing is required) and, after emergence, excess molten zinc is removed by an air and superheated steam wipe.

Final inspection takes place after the product has been threaded and lacquered. Electrical metallic tubing, another Rome Cable Corp. item, is being inspected in this photo (left). The finished product is just one of the many examples of United States Steel at work. From start to finish...from open hearth to rolling mill...steel from USS is designed to do the best job for you. For additional information, or technical assistance, call your nearest Columbia-Geneva District Sales Office, or write Columbia-Geneva Steel Division, 1403 Russ Building, San Francisco 6, Calif.

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<td>No. 4 Pattern</td>
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PROFESSIONAL NEWS

(Continued from page 48-20)

lect and real estate committee to study available sites for a civic center. On the committee with him will be Seattle architects John Morse, Robert Dietz, Roland Terry, and Gayne Jones.

Walter Stromquist, Palo Alto, has been elected president of the Coast Counties chapter, A.I.A. Other officers are Frank C. Treseder, vice president, Victor K. Thompson, secretary, and William Higgins, treasurer.

S. B. Barnes, Los Angeles structural engineer, has been appointed to the California Board of Registration of Civil and Professional Engineers. He fills a vacancy left by the death last August of Paul Jeffers of Los Angeles.

New Firms, New Addresses

J. Lorel Mullett and Ralph Karlberg, Denver architects, announce the formation of a partnership to practice architecture. Their offices are at 973 Lincoln Way, Denver, Colo.

Raymond Nordquist and Leonard Sundell have recently opened offices at 512½ Avenue G, Billings, Mont., to practice architecture.

A. J. Loubet and W. B. Glynn, associates of the late W. D. Peugh, San Francisco architect, have taken over his architectural practice and have opened new offices at 400 Montgomery Street, San Francisco, Calif.

Maynard Lyndon, Los Angeles architect, announces that he has moved to 3460 Wilshire Boulevard, Los Angeles, Calif.

LETTERS TO THE EDITOR

(Continued from page 48-1)

are the individual architects who produce a creative and thoroughly realized solution to the problem at hand. When I see a wonderful job by any architect I feel proud to be a member of the same profession as the man responsible for it. Only secondarily, if at all, could I be concerned about this architect's ethical conduct.

I have the impression that the most competent architects are usually ethical in their operations, as a matter of course. The reason for this probably lies in the fact that the accomplishment of first

(Continued on page 48-24)
stripped down to bare luminosity There are no retaining structural members to garble the luminosity of Globe's revolutionary new "Challenger"—an all-plastic luminaire with an overall depth under four inches.

Side panels and bottom are connected by an interlocking system of construction, engineered to prevent bowing or distortion.

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LETTERS TO THE EDITOR
(Continued from page 48-22)
rate work in any field is tremendously demanding of time and energy, and any architect trying for the highest design and technical performance would have no time to waste cooking up shrewd deals and tricky practices generally.

Walter Gordon, Architect
Portland, Oregon

PORTLAND CONTROL CENTER
(Continued from page 48-5)
and police departments will have radio dispatch rooms adjacent to their alcoves, and other departments will have similar but smaller facilities in sound-proofed alcoves at the rear of the operations room. Offices for the CD director and the communications officer are strategically located for observation and control of operations. Conelrad and press and news services will be located away from the operations room for seclusion and privacy. Office space for the mayor and city council is to be located on the second floor. Bunk rooms, mess hall and an emergency food storage room (stocked to make the center self-sustaining for seven days in an emergency) will also be on the second floor.

Primary communications will be by telephone; if this system should be knocked out, two-way radio will fill in, field men calling in to their specific department operators at headquarters and receiving directions from department heads.

Since the building is to be entirely underground, the mechanical and electrical systems are of vital importance; standby auxiliary power will be provided for heating and ventilating and electrical systems. A well is to be drilled near the mechanical room to provide water independent of the city water system. A filter system for elimination of noxious gases is included in the mechanical equipment.

Estimated cost is $421,000.

DESIGN SYMPOSIUM
(Continued from page 48-4)
ties. This should be a big problem for architects. I think it could be solved by doing three things: good design, adequate parking and concerted advertising. Property owners in our established communities will have to realize that they will either have to modernize or they will fail.
As a result of BASALT's "ofF-the-job" pre-casting methods, the walls of this building were erected in just 16 hours. Pre-casting of all wall panels was done at the BASALT plant and delivered to the jobsite (in Sacramento) for immediate erection after steel columns were placed.

The advantages and economy of "ofF-the-job" casting saves time, labor and money. Rigidly controlled production under ideal casting and curing conditions guarantees each BASALT PRE-CAST WALL PANEL a higher uniform quality than is attainable by any other casting method. Specially constructed steel casting tables insure dimensional accuracy as well as smooth wall surfaces which accept any finishing out. In the building illustrated, both wall surfaces were delivered with a smooth finish.

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SIMULATED STORM
TESTS NEW WINDOW UNIT

A full-size window unit panel, typical of those to be used on the new Equitable Life Assurance Company building in San Francisco, was tested last month in Emeryville, Calif., with a man-made, hurricane force wind and a 40-gallon-a-minute rain, and was reported to have come through without visible damage.

The panels combine developments by two companies, Reynolds Aluminum Company's weatherproof window sash and the Kiewal Company's press-formed spandrel pan, both of which were worked out for the Equitable building. Sash and spandrel are of aluminum; mullions are of stainless steel.

The 25-story Equitable building is under construction. The firm of the late W. D. Peugh, now Loubet and Glynn, was the architect. F. W. Kellberg was the structural engineer.

CALENDAR OF WESTERN EVENTS

- May 20-21 — Conference on school building design and construction, sponsored by Los Angeles Chamber of Commerce and Southern California chapter, A.I.A.
- June 10-20 — Los Angeles Home Show, Pan Pacific Auditorium, Los Angeles.
- June 21-August 13 — Summer session in Arts and Architecture, University of Oregon, Eugene, Ore.
- July 13-15 — Western Plant Maintenance Show and Conference, Pan Pacific Auditorium, Los Angeles.
- August 31 — Renewal date, California State Architects' License.
- September 30-October 2 — Annual convention, California Council of Architects, Hoberg's, Lake County, Calif.

WESTERN SECTION
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See Sweets for complete catalog and nearest Rust-Oleum Industrial Distributor, or attach coupon to your business letterhead.

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What comfort has Houston in common with cities like New York, Washington and Dallas? The Conduit Weathermaster* System serves their finest buildings. This air conditioning, perfected by years of unmatched experience, permits the occupants of each room to dial their own climate. Operation is quiet; there are no moving parts within the room. Maintenance is simplified; all operating equipment is centralized. And installation requires a minimum of space. Carrier Corporation, Syracuse, New York.

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The beautiful Theodore Roosevelt High School in Williamsport, Pa. is considered by many to be the best school building built in the entire area since January 1, 1946.

In commenting on the interest in this school, architect D. H. Grootenboer, A.I.A., said:

"While I take deep satisfaction in the great interest and many favorable comments about one of my buildings, I must point out that architectural concrete made it possible for me to design a modern, completely fire-resistant building at the astonishingly low cost of $0.763 per cu. ft. when fire-resistant buildings of other construction were costing from 10 to 40 cents more per cu. ft."

Fire resistance and low cost are only two of the outstanding characteristics that make architectural concrete the choice of more and more architects. Architectural concrete also offers great durability and strength. It requires little maintenance and delivers low-annual-cost service.

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For more information about designing beautiful architectural concrete structures of any size or style, write for free illustrated literature. It is distributed only in the United States and Canada.

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A national organization to improve and extend the uses of portland cement and concrete through scientific research and engineering field work
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Anaconda Copper Tubes and Fittings made to standards of highest quality are sold only through recognized wholesalers. The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

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CAMEL-BACK TRUSSES AND STEEL JOISTS
COMBINED IN UNUSUAL ROOF STRUCTURE

An unusual roof construction—applying bridge engineering principles to a building, with a substantial saving in cost—is a subject of current interest in building-construction circles. The building is the new Fairchild aircraft production bay at Hagerstown, Md.

The designers wanted a 200-ft-wide production area. By using camel-back trusses of structural steel, a column-free area of the desired width was obtained. But the unique feature of the construction was covering the structure with a flat roof at what would correspond to the deck level of a bridge, rather than enclosing the arched trusses, which, in the completed building, are left exposed. By so doing, a saving estimated at 18 pct was made in the cost of the roof construction. At the same time, heating, lighting, and future maintenance were simplified.

For the flat roof, precast concrete planking was laid over sturdy Bethlehem Open-Web Joists used as purlins, which easily carry the weight of the concrete roofing. Further, construction costs were reduced because of the ease of installation of the joists, which required only field welding to secure them firmly in place. They reached the job site completely fabricated and clearly marked.

White cement flooring and white interior paint, covering the exposed joists, give excellent lighting quality to the production area.

Bethlehem supplied the structural steel and 155 tons of Open-Web Steel Joists.

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Here's the ultimate in good taste—a recessed holder with a gleaming chrome cover that lifts at the touch of a finger! Hall-Mack Catalog No. 378

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ARCHITECTURAL RECORD MAY 1954 79
The new E. C. Glass High School in Lynchburg, Virginia, is an impressively large building. In its thoroughly up-to-date design, architect Pendleton S. Clark has reflected the dignity and charm of this conservative southern city.

The school's quiet atmosphere is largely due to careful planning before construction. Foreseeing the possibility of serious noise problems, the architect selected sound-absorbing ceilings of Armstrong's Perforated Asbestos Board, Perforated Hardboard, and Cushionstone.

Perforated Asbestos Board and Perforated Hardboard, backed by mineral wool, are unusually efficient noise absorbers. Used in the auditorium, they were especially adaptable to the complex acoustical treatment this area required.

In the school's three cafeterias, band room, library, and corridors, ceilings of highly efficient Cushionstone absorb as much as 75% of the noise that strikes its surface. Surprisingly low in cost, Cushionstone is a logical selection where large areas must be sound conditioned economically.

No single material can solve every kind of sound-conditioning problem. That's why Armstrong offers a complete line of acoustical materials, each with its own special features. For full details, call your Armstrong Acoustical Contractor. For the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4205 Rock Street, Lancaster, Pennsylvania.
the band room, sound-absorbing Cushintone covers the ceiling and upper walls. This acoustic treatment helps prevent build-up of distracting noise levels and provides proper acoustics.

Easily washed or repainted, Cushintone ceilings in the corridors are simple to keep clean and new looking. A perforated, white painted fiber tile material, Cushintone soaks up noise efficiently, economically.

undisturbed quiet in the library is essential to concentration. This quiet is assured by the Cushintone ceiling. Easily nailed or cemented in place, Cushintone does not interfere with the installation of recessed lighting and air conditioning.

EASILY WASHED OR REPAIN TED, CUSHINTONE CEILINGS IN THE CORRIDORS ARE SIMPLE TO KEEP CLEAN AND NEW LOOKING. A PERFORATED, WHITE PAINTED FIBER TILE MATERIAL, CUSHINTONE SOAKS UP NOISE EFFICIENTLY, ECONOMICALLY.
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The weather-tight superiority of Barrett Specification® Roofs is the result of a century's experience in the perfection of the finest roofing materials and methods. Architects can continue to select Barrett with the same confidence which the past performance of Barrett "SPECIFICATION" Roofs has inspired.


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84 ARCHITECTURAL RECORD MAY 1954
Milton L. Grigg, FAIA, Architect
R. E. Lee & Son, Inc. General Contractors
An important feature of the restoration of Monticello, home and monument of Thomas Jefferson, is the thorough treatment of all exterior masonry with a silicone water repellent.

Alden B. Dow, AIA, Architect
Arvo Nurmi, Painting Contractor
Silicone treatment protects the entire masonry walls of this modern woodland residence exposed to high humidity, rain, and sub-zero weather.

A water repellent treatment made with Dow Corning Silicones preserves the beauty, cuts maintenance costs

On new construction or restorations, leading architects agree: above grade masonry walls are made more weatherproof, and retain their original beauty longer when treated with water repellents made with Dow Corning Silicones. Completely invisible and non-plugging, silicones do not change the color or porosity of treated surfaces. Water washes dirt off, not into, the surface. Staining, streaking, spalling and efflorescence are minimized or eliminated entirely. And the treatment costs very little; remains effective for years.

Dow Corning silicone-based water repellents are now available from formulators and their distributors in every part of the country. Write Dept. DD-17, for more information and a list of suppliers. Dow Corning Corporation, Midland, Mich.
EXCLUSIVE NEW CHANNELING

has no equal in guarding against

1. Blistering
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This shows how Celotex Channel-Seal Roof Insulation prevents build-up of high-pressure air pockets. Pressures due to temperature differences are constantly being equalized by movement of air through the channels. This channeling principle of roof protection has been proved effective by years of use on jobs of every type and size.

Celotex Channel-Seal Roof Insulation gives Positive Protection!

Installed, Celotex Channel-Seal Roof Insulation forms a network of channels that permit free circulation of air beneath roof surface. In this way, an extra margin of safety against costly roof damage is provided. These built-in "safety releases" equalize pressure of air trapped in the roof, give protection found in no ordinary roof insulation.

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High pressure areas, building up from rising surface temperatures, are relieved by air and vapor movement through the channels. This equalizes and reduces pressure—minimizes the danger of blistering, or separation of felt from insulation!

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Light and easy to handle, yet remarkably rigid and tough, Channel-Seal is low in both initial and applied cost. Resists damage from job handling. Quick, easy to apply. Smooth surface assures positive bond to both roof deck and roofing felt.

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ARCHITECTURAL RECORD MAY 1954 87
CHECK THE LOW, LOW COST OF THE NEW FLEXIVIEW

Now, Andersen brings you even lower over-all cost per square foot with the new Flexiview... low cost brought about through a fixed opening's savings on screen and hardware. Glazed with Andersen Double Insulating Glass, it offers an economical solution to the double glazing problem.

Flexiview units combine with either fixed or ventilating Flexivent windows to form windo-walls in endless variety. They make possible the picture window combinations that complete the versatile Flexivent line.

The Flexivent line, already a builder favorite for its low installation cost coupled with high quality, is now even more versatile, an even greater window value!

Write for Detail Catalog or Tracing Detail File, or see Sweet's files for specification data, window-walls sold by established millwork dealers throughout the United States including the West Coast.
Andersen Corporation announces 2 product improvements for the versatile Flexivent window.

The new Flexiview window.
Picture window partner to the Flexivent.

Roto Lock Operator.
New underscreen operator for the Flexivent.
Easy to operate! Operation is easy and simple. Friction hardware will hold sash in any open position. In awning or casement arrangements, just swing screen inward and push sash out. In hopper position, just pull the sash inward.

New Snap Lock available for Flexivents. Specially made for use with hopper vent units installed as transom or clerestory windows, or in any other close-to-ceiling locations. New Snap Type Sash Lock can be easily operated with any standard make window pull.
FLEXIBLE BUILDERS HAIL FLEXIVENTS FOR ECONOMY, FLEXIBILITY

"Flexivents are without a doubt superior to any other window we have," says William Pearce, executive vice-president of Pearce & Pearce Co., Green Acres Village near Buffalo, N. Y. "Workmen install group of Flexivents on Green Acres home.

"With Flexivents we can provide more window area at no extra cost," says William Coffman, president of W. I. Coffman Co., builders of 175-unit Prairie Village home in suburban Minneapolis, Minn. "Picture shows effective use of Flexivents in Prairie Village home.

"No better window for an architect than Flexivents due to ease and speed of assembly and installation," says Kornreich, president of Chestnut Construction Corp., builders of 450-home Hill Estates (above) near Newark, N. J.

ROTO LOCK OPERATOR
The new Andersen Roto Lock Underscreen Operator is designed for use with awning or casement installation. The centrally located rotary gear, dual-arm operator provides positive control, tight corner closing, self locking. Can be easily installed on existing Flexivents. Special pine stop furnished with each operator. Special screen available in aluminum frame only.

Andersen Window
Andersen Corporation
Bayport, Minnesota

Andersen Window
COMPLETE WOOD WINDOW UNIT
The true story of a "blind" call and a bothered architect

Attention Mr. Charles VanWetering

Gentlemen:

Too often rumors and incomplete publicity on construction projects cause architects and owners a great amount of time in answering questions and inquiries by salesmen and contractors. An absurd illustration was the inquiry of the salesman for Venetian blinds who tried to interest us in his product for the Empire State Building Television Mast addition. Your service in reporting current building work correctly and completely helps to obviate this condition.

Whenever possible we are glad to give you information on our projects for the benefit of the "trade" and indirectly for ourselves. The accurate reporting by Dodge Reports of construction projects designed by our office is greatly appreciated by us.

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DODGE REPORTS
Construction News Service

119 West 40th Street, New York 18, N.Y.
How much hinge does a door need?

It depends upon door weight and frequency of use

When the door is heavier than the conventional type, or is equipped with a door closer, or is a high-frequency door (over 400 times daily) in the entrance to a department store, office building, theater, school, or other public building, it should hang on the finest heavy-duty hinges available.

What are the finest heavy-duty hinges?

Stanley full-jeweled* ball-bearing hinges

The Stanley full-jeweled ball-bearing hinge is the only hinge that takes care of all wear solely through ball bearings. It is made so that both lateral and vertical stress are transmitted to the bearings — there is no direct pressure on the pin. The cutaway view shows how the specially built-up raceways shoulder the load to the bearings.

What does this mean to a building?

It means hinges that won’t wear out

They are moisture proof, dust proof, and squeak proof. They last for the life of the building and they COST NO MORE. When you specify hinges, specify Stanley and where needed specify Stanley full-jeweled ball-bearing hinges.

REMEMBER THREE HINGES TO A DOOR

STANLEY Hardware

For this modern parking garage, reinforced concrete was chosen because of its basic economy. Reinforced concrete provided a strong, rigid, vibration-resisting structure ... at a low cost. Since no painting is needed in this open, reinforced concrete structure, future maintenance will be low.

More and more architects and engineers are turning to reinforced concrete structures because reinforced concrete is less costly. Reinforced concrete goes up faster, too, and is inherently firesafe. It offers rugged strength that is highly resistant to wind, shock, and quakes. Furthermore, it permits great flexibility of design, and materials are readily available from local sources. On your next job ... design for reinforced concrete.

The architect says...

"ONLY REINFORCED CONCRETE could be used economically"

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Indianapolis, Indiana
John G. C. Sohn
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CONCRETE REINFORCING STEEL INSTITUTE
FIRST... AND ONLY

COMPLETE LINE OF HOT WATER HEATING PUMPS

Offering a range of heads and capacities which meet the circulation requirements of residences, apartment buildings, institutions, commercial and industrial buildings, regardless of size.

FEATURING...

Water-tight Mechanical Seal
Pioneered by B & G, this Seal has a long record of failure-proof performance. The extremely hard material from which it is made and its method of assembly assure long, dependable service.

Oil lubricating system
Genuine protection against wear! Oil is carried up by wool wicking from a reservoir and continuously keeps the shaft and bearings in a bath of oil.

Super-finished, hardened shaft
The shaft is big—oversized—affording large bearing surfaces. A specially heat-treated integral collar prevents end-thrust—deadly enemy of seal and motor bearing life.

Quiet, spring-type coupler
The arms of the B & G Coupler are held together with springs—a design which dampens vibration and noise...so successfully it is used on all B & G Heating Pumps up to 25 H.P.

Special motors
Motors are either built in the B & G plant itself or to rigid specifications. B & G Boosters up to 1 1/2" have smaller than usual motors—but have exactly the same capacity as previously. This motor is the first specifically designed to match the reduced size of modern boilers.

Forced hot water heating systems have expanded in application to buildings of every size and function...B & G Boosters and Universal Pumps have likewise expanded to satisfy all possible circulation requirements.

These pumps are designed and built specifically for forced hot water heating systems. In every detail, they are constructed to assure three things: First, quietness of operation...second, dependable, trouble-free performance...third, long life.

How successfully B & G Pumps achieve these goals is evidenced by the fact that more are sold than all other hot water heating pumps combined! For full information send for the B & G Catalog.
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Pictured here are some of the many models available. Active sinks are designed to fit your needs in space, capacity and beauty.

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ACTIVE QUALITY WARE sinks are coated with Acid Resisting White Titanium Porcelain Enamel on pressed steel.

ACTIVE QUALITY WARE STAINLESS STEEL Sinks are made of 18-8 Type 302 Nickel Bearing Stainless Steel and are the finest ever-enduring sinks money can buy!

WHATEVER YOUR NEEDS MAY BE . . . CHECK WITH ACTIVE!

ACTIVE QUALITY WARE  DIV. OF: ACTIVE TOOL & MFG. CO.

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SEE OUR CATALOG IN SWEET'S ARCHITECTURAL FILE 16A OR WRITE US FOR COMPLETE INFORMATION.

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the smooth-surfaced built-up roof—FLEXSTONE

which provides a flexible covering of stone

Because they are made of the mineral, asbestos, the felts of a Johns-Manville Flexstone Built-Up Roof assure lasting service and protection. They will not support combustion. They effectively resist the drying-out action of the sun . . . won’t rot, are weatherproof and need no periodic coating.

Flexstone Built-Up Roofs are smooth-surfac ed . . . permit thorough drainage . . . make damage easy to locate and repair. These superior advantages are also provided by the J-M Flexstone Special Built-Up Roof . . . developed especially for dead-level decks.

For complete information about Flexstone Roofs and J-M Asbestile Flashing System that provides thorough water tightness and effective treatment for critical roof areas, see your Approved Johns-Manville Contractor. He’s listed in the Classified Section of the telephone directory. Or send for folder BU-51A.

Write Johns-Manville, Box 158, New York 16, N. Y. In Canada, write 199 Bay St., Toronto 1, Ont.


Johns-Manville FLEXSTONE® Built-Up Roofs

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DECORATIVE FLOORS • MOBILE WALLS • ETC.
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"O-T"® STEEL JOISTS are adaptable to all types of building. Open web permits free passage of pipe and conduit, allows air passage in radiant heating systems. Write for "O-T" Open Truss Steel and Nailer Joist loading tables.

FERROBORD® STEELDECK provides interlocking units long enough to span three or more purlins. No scaffolding needed for erection; work is done from above. Can be clipped or welded to joint. Write Truscon for facts.
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Customer traffic flows easily from store to store—without leaving the building—in this Berwyn, Illinois, shopping center. Yet each individual store can lock up tight for the night, merely by closing these Modernfold folding walls. Plans for this modern shopping center were created by O. A. Keillor, president of Joseph Skorepa & Company, the builders.

Specify Modernfold and you specify extra quality—extra satisfaction, made possible by:

★ Modernfold's exclusive center-line design—same number, same type of balanced pantograph hinges—both top and bottom—for greater strength.

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In Canada: New Castle Products, Ltd., Montreal 6
Over an inch of Insulating Efficiency plus a positive vapor barrier—all in the ~\( \frac{7}{8} \) inch space of a furred out Masonry Wall!

**ALFOL TYPE 1A BUILDING BLANKET INSULATION**

There's an ALFOL Type equally efficient for every insulation need

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Alfol Type 1A Insulation is specially made for standard masonry construction. It is the only insulation that provides over an inch of insulation value plus a positive, continuous vapor barrier in the usual \( \frac{3}{8} \)" clearance available in 1' x 2' furred masonry walls. Refurring expense is eliminated!

Type 1A has proved effective in hundreds of installations in every section of the country. When applied the pure aluminum foil automatically "pops out" to form two reflective air spaces equal in thermal value to more than an inch of insulation. The heavy vaporproof duplex and kraft backing by which Alfol is applied across the face of the furring assures a positive, continuous vapor barrier.

Write for free literature and complete details — Address Dept. AR-1.
The CONEY ISLAND NEW GENERAL HOSPITAL is a good example of what AETNA and its divisions can do for a building, hollow-metal wise. For this project:

Aetna Steel Products Corporation is supplying all hollow metal doors and door frames;

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E. J. Boyle, division of Aetna Steel, is supplying AETNAWALL office partitions throughout.

Aetna versatility and leadership in hollow metal has developed over a period of 51 years of service to the building supply field. Today, you can look to AETNA and its divisions for ALL your hollow metal needs.
Today your clients are aware of the disastrous and far-reaching effects of a major industrial fire. More and more this new attitude toward firesafety is placing the burden of responsibility on you.

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Any qualified architect or consulting engineer working on industrial construction is welcome to utilize the benefits of our extensive fire protection engineering experience, as well as obtain a free copy of our comprehensive brochure entitled, "C-O-TWO Fire Protection Equipment (Code A/CE)" by writing on his letterhead. Get the facts today!

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IN ALL TYPES OF BUILDINGS

This installation was made by Continental Engineers, Inc., mechanical contractors, of Atlanta. Gas is supplied by Atlanta Gas Light Company.

Powermaster® Efficiency Pays Off

For example: Only $1.15 per month per apartment average fuel costs the year around for Heating, Hot Water and Air Conditioning for 535 apartments in Howell House at Atlanta, Ga.

These services in this new modern building are supplied by three Powermaster Packaged Automatic Boilers at this amazingly low cost for gas and oil fuel. Providing year-round services with the boilers result in maximum operating economy. Yet fuel saving is only one reason Powermaster is so popular with those who select, install and operate boilers for all types of buildings—offices, hotels, institutions, churches, housing projects, etc. Cost-saving installation, space-saving compactness, fast steaming, hospital-clean operation, dependability, maintenance-saving accessibility, fully automatic operating and safety controls, and smokeless combustion are others. Compare Powermaster with any other packaged automatic boiler and you’ll see why it is today’s best buy for schools, industrial plants, laundries, and other requirements as well as for all types of buildings. Send for latest descriptive bulletin.

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...installed at the vital point of air delivery in the nation's first aluminum skyscraper...ALCOA BUILDING

In the heart of Pittsburgh's Golden Triangle, the gleaming Alcoa Building rises thirty floors, a dramatic new concept in multi-story building design and construction. In Alcoa, as in other outstanding buildings from coast to coast—where the efficient performance and attractive appearance of air distribution equipment must meet rigid engineering and architectural specifications—Aerofuse Diffusers were selected for installation at the vital point of air delivery.
Woven Corrulux . . . LOF's new decorative panel that combines rich texture with uniformity of color

* Use Woven Corrulux for indoor planters (right) or for office partitions (below). It's shatterproof, strong, resistant to sharp blows, moderate in cost. Woven Corrulux comes in two weaves: bold weave for accent on texture, fine weave for lighting effects.

Woven Corrulux, offered exclusively by Libbey-Owens-Ford Glass Company, captures a new translucent texture and uniformity never before obtained with any other building material. It combines shatterproof translucence with the textured pattern of woven fiber glass fabric, creating a brand new, decorative building panel.

Woven Corrulux is perfect for room dividers, tub and shower enclosures, ceilings, decorative interior facings, movable screens, and countless other uses.

* Bath enclosures and shower stalls of Woven Corrulux add colorful translucent beauty.

FREE SAMPLE
For something really new in corrugated plastic panels, see Woven Corrulux at your Corrulux distributor, or write today for free sample plus idea folder. Contains technical details, use suggestions; shows seven Woven Corrulux decorator colors.

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The cost of using Medusa Waterproofings over a non-waterproofed cement is so small that it means practically nothing in the total home cost, yet assures home owners of dry basements and utility rooms for years to come.

Medusa Waterproofings are available everywhere in one of these forms—Medusa Waterproofed Gray and White Portland Cements, or Medusa Waterproofing Paste and Powder for mixing with regular portland cements. Contact your nearest Medusa sales office for further details.
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Official Rectangular Backboard of 1/2" Herculite tempered glass. Sturdy, rigid metal frame. (NOT ShOWN) Medart's wingedly-framed, thick plywood rectangular backboard, a favorite for practice.

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Supplying basketball's most rigid, vibration-free, strong and durable backboards is only part of the obligation Medart assumes. At the start, experienced engineers analyze structural conditions, play requirement and other factors to assure selection of the right backstop. Then each one is properly erected to guarantee a completely "Tailored-To-The-Job" Official installation. Before choosing any backstop, always consult Medart — The Nation's Most Experienced Authority.

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A FEW TYPICAL MEDART BACKSTOP INSTALLATIONS

No. 421 Modified Fixed Wall-Braced  No. 261 Self-Braced Forward Swing-Up  No. 271 Backward Swing-Up  No. 420 Suspended Fixed Wall-Braced
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A BUILDING Designed
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This is the BASIC ADVANTAGE when you design with
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TAKE THIS BUILDING FOR EXAMPLE — every structural
member is a cataloged item — ready to be designed by an
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You have complete flexibility as to dimensions, load carry­
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ENGINEERING  FABRICATING AND ERECTING

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you can rely on FACING TILE
... it's proved by years of varied use!

After 16 years of service, the glazed structural Facing Tile in corridors, stairwells, showers and gymnasium in Pittsburgh's Concord School shows no signs of wear and tear.

"We haven't had to spend a penny on Facing Tile maintenance," says H. L. Heilman, Director of Plant Operation and Maintenance, Pittsburgh Public Schools. "This material defies pencil marks and other natural hazards of school operation. It cleans easily—and it's just as good looking today as when the school was built."

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STRUCTURAL STRENGTH—No need to worry about material failures—Facing Tile provides the time-tested structural stability of burned clay products.

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For complete data, contact any Institute Member, or write us direct. Address: Dept. AR-5.

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Architects and builders constantly discover new uses for The "OVERHEAD DOOR"—America's first and finest upward-acting door. The big rural consolidated school at Royerton, Indiana, has two large doors serving efficiently as workshop portals. Classes work in comfort because of the weathertight closure of The "OVERHEAD DOOR."

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Hillside, N.J.   Cortland, N.Y.   Dallas, Tex.
Nashua, N.H.   Lewistown, Pa.   Oklahoma City
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LAVATORY-DRESSING TABLES by American-Standard will add beauty and convenience—and client appeal—to the homes you plan. Each fixture combines dressing table and storage cabinet in one compact unit. Shown here are the New Dresslyn, left; the Highlyn, left below; and the Merrilyn, at right below. The New Dresslyn and Merrilyn have genuine vitreous china lavatories . . . the Highlyn has enameled cast iron lavatory. Cabinets and lavatories come in a variety of color combinations. All units are available in straight front or kneehole models.

HEATRIM PANELS are the modern way of providing comfortable, even, convected warmth throughout an entire room. They are specifically designed for forced-circulation hot water heating. Taking the place of conventional wood baseboards, Heatrim panels save floor space, leave walls unbroken, permit greater latitude in designing and decorating. They can be installed against existing walls or recessed to the depth of the plaster. They are perfect for use under picture windows . . . are also much in demand for premium-space installations.

Without obligation on my part, please send me literature on:

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Vitrified Clay Pipe withstands not only the ordinary hot water from homes and industries, but extremes of temperature and heavy loads.

Actual tests, conducted at the N.C.P.M.I. research laboratories in California, prove that Clay Pipe stays round and true — wet or dry, hot or cold, under live or dead loads.

In one test, superheated steam is run through the pipe to raise its temperature. At the same time, a crush-strength testing device puts a severe load on the pipe. Careful calibration after the test proves that Clay Pipe does not change shape by the tiniest fraction of an inch.

The manufacturers of Vitrified Clay Pipe endeavor to make this fine product even better through scientific research. You can be sure you’re getting the latest and best when you use Vitrified Clay Pipe.
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Is your assurance of adherence to the rigid standards established by certified ballast manufacturers and maintained through the impartial testing of ETL to provide lamp operation for maximum lumen output, desired brilliance and longer life.

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Paine Solid Core Doors are backed by over a half century of installation experience in public buildings throughout the United States. Made by woodworking specialists. Hand matched face veneers, precision bonding, stroke sanding to a cabinet maker's finish, meticulous inspection — each step of exacting craftsmanship contributes to making them America's finest flush doors... the choice of architects who know there is no substitute for quality.

Write for details

PAINE
LUMBER COMPANY, LTD., Oshkosh, Wisconsin
Established 1853
Specify KENFLEX when you want a moderate-priced vinyl tile floor

KENFLEX provides specifiers with a low-cost opportunity to add the saleable advantages of vinyl flooring to every installation. In stores such as the bakery shown above, easy maintenance is of utmost importance. KENFLEX seldom needs scrubbing. Cleaning is easy and economical because dirt, grit, grease and grime can't penetrate the non-porous surface.

Specifications and Technical Data

INSTALLATION: Over any smooth, firm interior surface: wood, plywood, radiant heated concrete slab, concrete in contact with the earth—in or below grade.

THICKNESSES: Laboratory and in-use tests have proven the wear-resistance and durability of vinyl flooring. Consequently, Standard Gauge (1/16") is recommended for normal residential and commercial uses. Where traffic will be severe, 1/8" KenFlex is suggested.

SIZES: Standard tile size is 9" x 9"... also available are 9" x 9" decorative ThemeTile inserts, and 1" x 24" Feature Strip in four solid colors.

KenFlex is the floor your clients know and want...
BACKED BY MORE FULL-COLOR ADVERTISING THAN ANY OTHER VINYL TILE FLOOR

Approximate Installed Prices (per sq. ft.)

<table>
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<th>Standard (1/16&quot;) Gauge</th>
<th>1/8&quot; Gauge</th>
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<tbody>
<tr>
<td>KENFLEX all colors</td>
<td>40¢</td>
<td>65¢</td>
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KenFlex is available in 15 co-ordinated colors, all of which are marbleized. Costs shown are based on a minimum area of 1,000 sq. ft. over cement underfloor.

Samples and Technical Literature available on request from any of the Kentile, Inc. offices listed below. Or, contact the nearest Kentile Flooring Contractor. He's listed under FLOORS in the Classified Telephone Directory.
McQuay’s 24-page catalog No. 505 will give you a big assist in planning the installation of central station air conditioners that will meet requirements of the job in every particular.

Seasonmasters come in 14 models, in both horizontal and vertical types and in a wide range of Cfm and Btu capacities. All models have maximum flexibility in location of coil connections and air openings. A full line of cooling and heating coils and a wide variety of accessories are available.

The many practical combinations are another McQuay engineering achievement that make it possible for you to install custom-made systems, and the McQuay Seasonmaster catalog No. 505 gives you complete information on how to do it. Get your copy now and be ready to make the right recommendations . . . recommend McQuay Seasonmasters with complete confidence of quality and dependability. Representatives in principal cities. Or write McQuay Inc., 1605 Broadway St. N. E., Minneapolis 13, Minn.
Seasonmasters are adaptable to all year 'round demands—cooling and dehumidification, heating and humidification, positive ventilation, and air filtering. All models are available in both horizontal and vertical types.

**McQuay SEASONMASTERS**

**14 MODELS IN THE LINE**

Seamless copper tubes are expanded into wide, smooth collars of aluminum fins. Headers are heavy wall, seamless copper tubes.

**FAMOUS RIPPLE-FIN CONSTRUCTION**

McQuay Ripple-Fin Coil construction is your assurance of unmatched heat transfer efficiency and economical long-life performance.

**HEATING**

**AIR CONDITIONING**

**REFRIGERATION**
The Columbia Broadcasting System's clean-lined "Television City" in Hollywood, California is the core of an anticipated 25-acre, 24-studio expansion of the network's West Coast TV production facilities. Plans for future enlargement of the building specify that the present walls be easily demountable. Consequently, most of the exterior is composed of large, plain, movable steel panels and glass walls.

The sleek lines of the structure manifest the ideas of efficiency and flexibility upon which the design was based. With such key words as a guide to design, it is a foregone conclusion that the most efficient and dependable pipe and tubing should be chosen for the building's plumbing and heating systems. NATIONAL Steel Pipe got the nod.

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University of Arkansas Medical Center

ARCHITECTS: Erhart, Eichenbaum & Rauch
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A DESIGN STANDARD LIKE THIS DEMANDS USE OF MODERN POWER

The standards being set in today's office building design call for full utilization of modern electrical power. It's an important consideration—in view of such necessities as high-speed elevators and modern lighting, the heating, ventilating and air conditioning systems.

These devices, as you know, have placed greater demands on a building's electrical system. More power must be carried. And power quality has had to be improved to minimize outages, assure well-regulated voltage.

Thus, a modern, completely adequate electrical system is extremely vital if the service devices you design-in are to operate at peak efficiency. Literally, it's an integral part of the building's foundation. It should be considered in the study stage...keyed to the services that will operate from it...built with equally modern electrical power equipment.

By so doing, you'll be bringing the power facilities up to the standards you've set for design. And you'll be providing your client with a better building—economically sound and adequately equipped to handle the many functions it must perform.


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WHAT IS A MODERN ELECTRICAL SYSTEM? It's an integral part of basic design—not superimposed or considered after the building is under construction.

The modern system is planned around requirements for reliability, versatility and convenience. And it stresses electrical characteristics essential to building services. Therefore, system design will vary—based on the type of building involved.

The Spot Network System, left, is an example. It emphasizes "reliability"—an important requirement in large office buildings. Efficient, high-voltage power is brought close to building loads from two or more sources. An electrical fault at one source will not interrupt power to the loads being served.

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AIM:

MATCH PEAK TRAFFIC WITH PEAK POWER

High-speed elevator service—demanded when tenants must be moved quickly during heavy traffic hours—should begin at the electrical system planning stage.

The need for completely adequate power distribution makes this so. Not only do high-speed elevators require more power, but their drives are usually located in the penthouse—far removed from the power source. Thus, the electrical system must carry heavier loads greater distances. Yet, it has to hold voltage and power losses to a minimum.

A typical way: High-voltage distribution—carrying high voltage from power source in the basement close to the electrical center of load in the penthouse. This modern practice stabilizes voltage. It eliminates line losses that result from long runs of secondary lines. It assures adequate capacity for heavy electrical loads.

At the center of load, then, high voltage is stepped down to operating levels with a Westinghouse Dry-Type Power Center. It installs anywhere to feed the elevator equipment and other local loads. No need for a vault. And the dry-type transformers and air circuit breakers minimize maintenance.

WESTINGHOUSE DRY-TYPE POWER CENTER . . . a compact substation that permits high voltage to be carried close to elevator and other remote loads. Comes ready to install.
AIM:

MATCH MODERN AIR CONDITIONING WITH MODERN CONTROL

Modern air conditioning is another tenant demand completely dependent on the electrical facilities behind it. A number of motors and controls is involved in the modern air conditioning system. Thus, early steps should be taken electrically to assure continuous circulation of conditioned air—to the various building services. In many modern buildings, all control equipment is located in one spot. This brings about easier operation and simplifies maintenance.

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In addition, Westinghouse Control Centers meet future requirements. This flexibility is due to standardized design and modular construction of the units.

WESTINGHOUSE CONTROL CENTER centralizes electrical control for building air conditioning systems in a single enclosure. At right: Secondary control for wound rotor motor drives... typical of the Westinghouse complete line of air conditioning compressor motor control.

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AIM:

MATCH FIXTURES TO FUNCTIONS

Effective illumination demands this consideration: Lighting systems must be matched to functional requirements, yet blend harmoniously with building design.

This is particularly difficult in general office areas where sharp contrasts must be minimized. Thus, to keep contrast between fixture and ceiling down—to prevent specular reflection from shiny surfaces—indirect lighting is required.

When you select the fixture, you must balance the desirability for comfort—obtained with indirect lighting—with the requirement for efficiency, realized through direct lighting.

Other factors also affect the selection. Fixture design and proportion and the ultimate lighting layout must blend with interior design.

Above is an outstanding example of how these considerations have been met. A Westinghouse CD-80 Luminaire was selected. It assures both comfort and efficiency by providing direct and indirect lumination. It blends well with room proportions...gives quality light for detailed office work...maintains the same high level of balanced design that exists throughout the building.

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AIM:

PROVIDE MAXIMUM RENTAL SPACE

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ARCHITECTURAL RECORD  MAY 1954  137
How to roof a Nucleonics lab

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ASPHALT AND ASBESTOS BUILDING MATERIALS

Typical detail from Ruberoid Specification Book To Prevent Pitch Drippage
VIEWING CURRENT house architecture in a broad, objective sense one could easily find himself mumbling about "confusion." And, if he happened to feel in a negative mood, he could dwell upon certain inadequacies in the "modern" approach to house design; he might cite, with wrinkled nose, the supine acceptance of the cliché, and work himself into a nice tizzy.

On the more positive side, were he disposed toward cheerfulness, he might find much to nourish that mood. He might observe, for example, that the cliché work was done, as always, by the followers, not the leaders; he might even find grounds for encouragement in the fact that new ideas were gaining ground in this familiar way. He might then observe that much creative work was also being done. With his eyes thus turned upward, he would certainly find architects to whom the principles of contemporary design meant creative freedom, not restrictive dogma. He could find architects to whom the sweeping away of Victoriana did not mean sterile emptiness but rather preparation for new delights to go along with the "commodity and firmness." He might then, in exalted mood, mount his soapbox and proclaim that modern architecture was moving forward in many new and exciting and delightful paths. He might even shout, "Confusion? Let's have more of it."

For the following pages, RECORD editors have selected houses that must give their owners a full measure of "delight."
DEVELOPING THE “DELIGHT” OF A VERMONT SITE

Residence for Mr. and Mrs. James Parton, Dorset, Vt.
Carl Koch and Associates, Architects

It would be difficult to find a house that better illustrates the freedom of the contemporary architect to develop the theme of "delight" with full sympathy for the wishes of the owner and the assertive regional character of the site. The "restriction" placed by the owner was "that the house should not conflict in its appearance too radically with its local surroundings or in such a way that the conservative Vermont residents would throw up their hands in horror." The architect continues, "the house was designed to fit the slope of the existing mound to the southwest of the dam and was to be built on three levels. . . . We used a slightly pitched roof and board and batten siding both because of our own preference and in order to give the house a Vermont character."
Property is the site of an abandoned marble-cutting mill, comprising six and a half acres at the south end of a 15-acre pond. Mill is long since gone, but the dam of marble remains, and brook is faced with marble blocks.

At upper level, living room is cantilevered out over the brook. House follows contours as it recedes from the dam, dining room and kitchen being a few steps lower than living room, bedrooms at a still higher level.
Fireplaces and floors in dining and living rooms are of native marble from the site, also the terrace at dining-room level. House is for a retired couple whose desire for a contemporary house did not extend to stylistic notions such as throwing away their furnishings and possessions.
DESIGNED FOR BOTH FOREGROUND AND BACKGROUND

Residence for Mr. and Mrs. John Woerner, Kentwoodlands, Cal.
John Funk, Architect; Lawrence Halprin, Landscape Architect
A. Curley Henrikson, General Contractor
This house both defies its overwhelming site and defers to it, while developing its scenic possibilities to the full. The defiance may be seen in the assertive manner in which the house takes its own form, perhaps also in its insistence on a close-in landscaped beauty spot for outdoor living as well as for bowing to Mt. Tamalpais or scanning San Francisco Bay. The distant views are nevertheless terrific, and the house and its gardens together certainly do not neglect those stimulating items. The landscaping still develops the pleasures of myriad growing things, of paved terraces for both adult and children's outdoor enjoyment, for full participation with the outdoors. The landscaping offers both profusion and variety to delight the eye, and then, working outward from the house, tends to blend imperceptibly with the distant landscape.
A partly sheltered walkway leads (above) from parking court to entrance, with wisteria climbing the garage wall. Closer to the entrance (below) the walk widens into landscaped court.
House interiors, if more formal and severe than the gardens, have the graciousness of great spaciousness. Living room looks out at that all-pervading mountain, is partially screened from dining room by cabinets. Both dining and living room have plenty of glass facing the views. Bedroom wing faces the Bay, with low plantings in foreground, small trees off a bit farther to frame the view toward the water
Glass walls open the house to an intricate arrangement of paved terraces and garden beds and lawns. Many of the outdoor "rooms" are connected, sometimes by walks, sometimes only by planting boxes or beds. Other areas are closed off for privacy or for utilitarian purposes by board fences. There is seemingly endless variety in the plantings — flowers, shrubs, trees, grasses, vines. There is variety, too, in paving materials, in garden rocks and walls, in beds and stands, in colors and textures of inert and growing materials. But the varieties are blended and integrated by choice of textures and forms. Colors are also used in continuous blends and gradations to achieve continuity and to make the whole recede gradually into the hillsides.
AN INNOVATION IN OPEN PLANNING

Residence for Mr. and Mrs. John C. Telander, Hinsdale
George Fred Keck, William Keck, Architects

If anybody doubted the "delights" of modern architectural thinking, a single feature of this house might dispel his gloom. The view opposite shows the lower portion of a two-level living room, with a playful stairway joining the two portions and with a two-story glass wall offering a truly huge view of the woods. This innovation in open planning the architect designates in his notes as two different spaces — living room and recreation room. One can imagine, however, that on occasion the two would flow together more actively than in visual sense only. In general the house does not seem to be tied to style, unless creativeness itself is a style.
Bitlroom living is isolated from the rest of the house by a large entrance foyer (above) which, with its brick walls, stone floor, and planting, gives a sense of being outdoors, strengthening the feeling of separation.

Bedroom wing is isolated from the rest of the house by a large entrance foyer (above) which, with its brick walls, stone floor, and planting, gives a sense of being outdoors, strengthening the feeling of separation.
Dining room, as an open extension of the living room, has its own identity, but still adds to the spaciousness of the living room. Thus three spaces — dining, living, recreation — flow together spatially but still maintain their individual purposes.
What the client really wanted here was a tropical house on Long Island, and the architects have managed to transplant a number of tropical features, or at least reminders, without doing violence to the essential conditions. Without, moreover, merely contriving a stage setting. The owners, born in Panama, found New York winters especially trying, and the house subtly woos them to an enjoyment of the winter scene. There is a sense of protection, for example, in wide overhangs, which, psychologically if not physically, keep the snow and ice farther from the house. There is the same sense in the enclosed patio, itself a feature dear to the Latin-American heart. Radiant heat made its own contribution. And indoor planting certainly is a subtle reminder of a warmer clime. Perhaps more important than these more tangible things, however, is a general charm in the interiors — the fireplace wall, for example — which could scarcely be called romantic but which are obviously warm and appealing.
Main entrance is through enclosed patio. House has many subtle features to remind owners of their birthplace, Panama.
Patio enclosed at the front by 6-ft brick wall provides a sheltered area for outdoor living as well as privacy from driveway. Full height windows are used along dining gallery, high windows for bedrooms and bathrooms. Wide overhang is reminiscent of Latin-America, tends to keep snow away from glass walls.
Library and living room look out toward pond. A frozen pond makes a cold winter scene, but the Latin-American owners say that in their new house they enjoy cold winters for the first time in the years they have lived in the north.
The house pictured above does not look Colonial, and it certainly makes no pretenses in that direction. However, from the other side (opposite page, top) all one sees from the road is a carport and a blank white brick wall, this in deference to a generally Colonial neighborhood. The other side (above) is virtually all glass, facing a river that runs through the property. Here the house develops its own delights. The architect explains that the owners asked him to act as contractor in order to use some fairly inexperienced carpenters who were available. Thus the house is designed for especially simple construction. It is laid out on a 4-ft 3-in. module, with 6 by 12-in. long leaf yellow pine beams. The beams rest in steel straps welded to light structural steel T columns imbedded in the poured concrete foundation. Beams are 8 ft 6 in. on center, so that 4 by 8-ft mahogany ceiling panels would go in place without cutting.
L-shaped form of house screens terrace at living room and lawn sloping down to the river that runs through the property. Long porch on bedroom wing with trellis-type roof is useful for outdoor dining or for any other purposes that porches are for.
Living room is completely open on river side, completely closed on road side, with only shallow light windows between the roof beams.

Planting bed at far end of living room merges the indoors with the outdoors. Living room wall extends beyond and makes turn to screen room fully from road.
Dining room is positively removed from living room, is in fact part of bedroom wing; kitchen is behind entrance foyer without a door, thus disposing of any idea of eating in living room.
SPACE DEFINITION WITHIN THE HOUSE

ARCHITECTURAL INTERIORS
Design | Details | Materials | Equipment

The contemporary problem of handling living space is paradoxical. At one extreme the open plan confronts the architect with a large volume which, if not thoughtfully subdivided, assumes a barn-like character devoid of domestic scale and lacking in a sense of privacy and shelter. Contrariwise, a heavy-handed spatial division can result in a series of areas depressingly cramped and discontinuous. The solution frequently lies between these extremes, achieving a flowing succession of articulated spaces each defined yet part of the whole; each in scale and character with its function. The technology is usually very simple; the successful concept often subtle. On the next six pages are presented several adroitly managed examples, not a complete selection, but each successful for its specific purpose.

Due to its semi-transparent quality, the split bamboo screen by Architect Marcel Breuer, above, incorporates a strong element of intrigue as well as separation for the dining area. Result is a feeling of greater spaciousness with privacy.

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This teakwood unit by Ward Bennett actually serves as furniture for a one room apartment. Drop-down desk on near side; foam rubber sofa on far side.

Storage cabinet unit by Alvin Lustig (detail above) also serves to conceal undesirable elements at right. The black metal channel houses fluorescent light tubes.
By employing a freestanding walnut cabinet for dining separation, top, Philip Johnson has avoided the box-like character an entrance foyer so often assumes.

The center picture shows one of a series of wall-storage units devised for builders houses by Designs for Business. As shown, it is placed between breakfast room and living area. The pass-through shelf is of plastic; door pulls and hinges are black metal. Other units in the series contain storage space or bar or television set.

The bottom picture shows deft handling of interior space by Architect Carl Koch which employs a change in level, a fireplace, built-in furniture with opening above and pass-through. The general effect is one of both spaciousness and defined use.
The two photos below look from different directions at the dining space in Architect George Cooper Rudolph's own house. The space is marked by changes in level, by planting, and by the open screen at right.

A subtle change in character between open informality and a more sheltered kind of formality results from Carl Koch's interior arrangement below. The fireplace, low stone wall, railing, change in flooring, and skylight all contribute to the effect.
In the two examples above, furniture has gained in stability; the living area has gained in neatness and order through organization. Interior at left by Carl Koch; at right by Oskar Stonorov.

The simple device of a painted chest of drawers in a bedroom by Carl Koch provides an effective and pleasing separation of areas for sleeping, dressing.
The two fireplaces below offer an interesting contrast in concept. The one at left by John Johansen has brightly painted asbestos flues and a feeling of lightness as opposed to the more massive, almost traditional yet contemporary character of that at right by Nemeny & Geller.

In the house by Walter Bogner pictured below the tall, free-standing storage wall provides an unusual screen for the stair.
CITIES NOT FOR DYING: REDEVELOPMENT BOOM

Urban Renewal is the heart of the new housing program President Eisenhower has put before the Congress: and the President and his Housing Administrator, Albert M. Cole, have said repeatedly that the first test for Federal aid to any community that needs it will be the evidence of that community’s determination to help itself. Evidence of such determination has been turning up lately in so many big redevelopment schemes that it amounts to a nationwide trend. Two of the latest — and biggest — would transform vast areas of Chicago and Washington, D.C. St. Louis has a proposal for a huge central parkway in the downtown district, underground parking for 49,332 cars, a Federal office building, merchandise mart, bus terminal and helicopter taxicab landing port. Another elaborate scheme, announced late last year, would turn a 28-acre railroad yard in Boston’s exclusive Back Bay section into a Boston version of the Rockefeller Center concept. In New York, the latest of seven slum clearance projects has been planned to include a long-sought exhibition hall and an office building as well as housing. Philadelphia, Baltimore, Detroit, San Francisco, Indianapolis and Norfolk are among other cities which have projects well beyond the planning stage. The Federal government, which has authorized funds totaling $1 billion for land clearance loans and $500 million in cash grants for city slum aid under Title I (slum clearance and urban redevelopment) of the soon-to-be-defunct Housing Act of 1949, estimates 81 cities are in the final planning stage of urban redevelopment projects and 28 actually have projects under way. The dawn of the Hydrogen Age finds American cities at last coming to grips with the urban problems that arose in the wake of the Industrial Revolution.

A MONUMENTAL SCHEME for redevelopment of a 151-acre “blighted” area in the heart of Chicago has been proposed to city officials by a group of civic and business leaders headed by Real Estate Developer Arthur Rubloff, who conceived the project, and Nathaniel A. Owings, of the architectural firm of Skidmore, Owings and Merrill, who worked with him on design and development.

The “Fort Dearborn Project’ would include a 62-acre government administration center, a 33-acre downtown campus for the University of Illinois, 5000 apartments in high-rise elevator buildings and covered parking for 6000 cars. The site, on the north bank of the Chicago River, bounded by Rush Street on the east, the river and historical Wolf Point on the west, and Ontario Street on the north, was selected, say the sponsors, “after exhaustive studies proved conclusively that there was no other direction in which the Loop could be expanded and anchored at the same time.”

Financing of the project, to cost an estimated $400 million, would be arranged through private investors, except for site acquisition and clearance, which it is believed will qualify for Federal assistance under Title I of the Housing Act of 1949 and state and city assistance under the Illinois Housing and Redevelopment Legislation of 1947. The Chicago Land Clearance Commission, which would be expected to handle this phase, has already authorized an investigation of the project to determine its eligibility for such aid.

The local excitement generated by mere announcement of the proposal appeared to provide a contemporary endorsement of the well-known axiom of Chicago’s first master planner, Daniel A. Burnham — whom no Chicago newspaper failed to quote — “Make no little plans: they have no magic to stir men’s blood.”

CHICAGO: $400 MILLION PROJECT FOR 151-ACRE SITE

Fort Dearborn Project Would Rejuvenate Area Just North of Loop

Chicago: Real Estate Survey Co.

**LEGEND**
1. Apartment Buildings
2. Library
3. State Building
4. County Building
5. Consolidated Courts Building
6. City Building
7. Federal Building
8. University Center
9. Merchandise Mart
10. Chicago River
WASHINGTON: $500 MILLION PROJECT FOR 427-ACRE SITE
Zeckendorf Sees Southwest Area as Social and Cultural Heart of Nation

The Fabulous William Zeckendorf has turned his attention to the nation’s capital and from one of the worst slum areas in that slum-ridden city proposes to create a cultural, shopping and residential center which would make Washington a center of amusements and the arts, the social and cultural as well as the political heart of the nation.

A “memorandum of understanding” signed in March by Mr. Zeckendorf’s real estate firm, Webb & Knapp Inc., of New York, and the Redevelopment Land Agency of Washington, commits both parties to 12-month studies based on a Webb & Knapp proposal for a $500 million project that would include a residential area of “Georgetown-type” row houses and garden apartments to house 21,000 persons, a monumental South Mall to “reintegrate” the Southwest area and the greater city, a 20-acre “L’Enfant Plaza” for a national opera house, symphony, theaters and convention hall, and even an outdoor ice-skating rink.

The Webb & Knapp concept includes 330 acres of the 427-acre “Southwest Survey Site” as designated by the RLA — the area bounded on the north by the elevated tracks of the Pennsylvania Railroad, on the south by Fort McNair, on the west by the Washington Channel and on the east by South Capitol Street — plus 18 acres north of the railroad which will provide the north end of the new South Mall over the railroad tracks. Not included are 76 acres already committed to “Project B,” a $30 million project which was the first to be undertaken by RLA, and 22 acres in the southeast portion of the site developed with housing of recent date in good condition.

Except for the Mall and the public buildings on L’Enfant Plaza, the entire redevelopment would be privately financed under arrangements to be made by Webb & Knapp.
LEGEND
Existing Buildings
1. National Museum
2. National Gallery of Art
3. Capitol
4. Department of Agriculture
5. Freer Gallery

Proposed Project
6. Produce Center
7. Proposed Expressway
8. Project Area "S"
9. Museum
10. Institutional
11. Guest-Public Offices
12. Office Buildings
13. Exposition Hall
14. Outdoor Restaurants
15. Opera House
16. Apartment Buildings
17. Residential Squares
18. Hotel
19. To Underground Parking
20. Library
21. Apartments Above Stores
22. Shopping Areas
23. Schools
24. Churches
25. Community Building
26. Waterfront Shopping Areas
27. Concessions
28. Wharves
29. Hoover Playground
30. Historical Buildings
31. Pool
32. Street Squares
33. Town Center
34. South Mall
35. L'Enfant Plaza
LONDON—SOUTH BANK: ESTHETICS IS RESPECTABLE
Development Joins Commerce and Culture for Public Enjoyment

The proposals of the London County Council for permanent development of the "South Bank," of the Thames—blighted first by slums and then by war, later site of the 1951 Festival of Britain, since a public park—illustrate the boldness with which a public agency in England may speak of matters that prudent public officials in this country most often feel must be swept under the carpet.

"The basic conception of the scheme," the Council notes, "is the grouping of a number of large public and office buildings in such a way as to give a feeling of spaciousness and vitality at a focal point on the south bank of the river, and to present to the roving eye of the Londoner a continuously interesting series of visual compositions, both in height and in depth. The buildings on the riverside in particular have been chosen for their liveliness in the evening so as to avoid the "dead" character so often associated with central office areas."

The present proposals are for an area bounded by Waterloo Bridge, York Road, Chicheley Street and the river and zoned for public buildings as the predominant use. Included in the development are a National Theater, a hotel, an office block to be built by the Shell Petroleum Company Ltd. as its main international headquarters—a 25-story tower with three 11-story wings, a central air terminal for London to be built by British European Airways, another office block to include ground level shops and underground parking, an international conference center and exhibition gallery, the existing Royal Festival Hall and underground quarters for the London Transport Executive.

The scheme has the general approval of the Royal Art Commission; the speed with which it is developed "depends mainly on the extent to which the Government will permit capital expenditures of this nature."
The overall scheme for the South Bank Permanent Development (model photos above, below and across-page) was prepared by a Reconstruction Group team in the Town Planning Division of the London County Council under the direction of the Architect to the Council, J. L. Martin; the Senior Planning Officer, Arthur Ling; and the Assistant Planning Officer, P. Johnson-Marshall.
PHILADELPHIA'S PENN CENTER GETS UNDER WAY
$100 Million Project in Rockefeller Center Tradition

Philadelphia's long-cherished dream of a "Penn Center" to rival New York's Rockefeller Center began to take shape last summer when a 20-story office building designed by Emery Roth and Sons for Uris Brothers, New York builders, got started on one block of the eight-acre site left vacant by demolition of the "Chinese Wall"—the old Broad Street station and tracks of the Pennsylvania Railroad. An architectural advisory committee consisting of George Howe, Philadelphia architect and former chairman of Yale's Department of Architecture, New York Developer Robert Dowling and Executive Director Edmund Bacon of the Philadelphia City Planning Commission assists the Pennsylvania Railroad in supervising overall architectural development and planning in accordance with the Dowling scheme for Penn Center, which grew out of the original plan by the City Planning Commission.

Above: "Chinese Wall"—view from City Hall dome just before demolition began. Below: model view of eight-acre Penn Center site 1. Between Pennsylvania Boulevard and Market Street, Broad and 18th streets. 2. Pennsylvania Railroad property across Pennsylvania Boulevard is being developed as complementary area. 3. City Hall

Closeup of model shows 1000-ft esplanade 80 ft wide that will be heart of project and (a) City Hall; (b) office building now under construction for Uris Brothers; (c) future Uris Brothers office building; (d) Walter H. Annenberg site once planned as transportation terminal, now being restudied for possible office use; (e) hotel; (f) Pennsylvania's suburban station; (g) city's future Rayburn Plaza and (h) offices
New York: Coliseum Plans in "Final" Version
Project Now Includes Offices as Well as Housing and Parking

New York's Triborough Bridge and Tunnel Authority, as personified by Chairman Robert Moses, has announced "final" plans for its oft-modified Coliseum project at Columbus Circle. As now presented, the Coliseum will be a vast four-level exhibition-convention hall with a 20-story office building and public parking garage adjoining and two 14-story apartment buildings opposite. Earlier plans for elaborate convention facilities fell by the wayside as "uneconomic." Triborough will underwrite the $30 million Coliseum-office structure; private developers are erecting the apartment buildings. Cost of the 6.3-acre site was $9.5 million — $2,182,000 from the city, $6 million from the Federal government in a slum clearance grant and $1,110,000 from Punia and Marx, the private builders of the apartment houses, for their 147,874 sq ft. Architects for the Coliseum are Leon and Lionel Levy.

The 6.3-acre site is bounded by Columbus Circle, West 60th Street, Columbus Avenue (Ninth Avenue) and West 58th Street. Views here are looking westward from Columbus Circle, with 58th Street at left and 60th at right. Left: Coliseum is the low building, tower the "integrated" office structure. Inset: model view of overall site; apartments at center rear.
Main Street, Small Town, U.S.A., is pretty well filled with small local shops

SUBURBAN BRANCH DEPARTMENT

Main Street, Big Town, was once the only possible big-store location.

The suburbs are acquiring new retailing facilities, urban in character, semi-rural in location, with few of the disadvantages of either. An appraisal prepared in collaboration with Daniel Schwartzman, A.I.A.
Since World War II the suburban branch department store has become established as an important retail facility. There are several reasons for its growth. The 1950 census showed that suburban population was then increasing five times as fast as urban, a rate that has since accelerated. Greater use of motor vehicles has made suburban stores easier to reach and shop in — and more profitable; at the same time it has helped to compound urban congestion and make downtown shopping less simple.

The U. S. Department of Commerce reports that store construction of all types is most active where population is growing fastest, in the suburbs. Considering also that in the period 1946-1952 this country's total store construction (in dollar volume) was 10 percent of private house construction whereas in the 1920's it was 14 percent, store building should remain active. In this activity the suburban department store is new. The store with a wide variety of merchandise for all members of the family and for the home, within a short driving distance of a suburban neighborhood, was until recently a luxury. Now, however, responsible planners and developers consider it an essential community facility; and — given reasonable sales goals, intelligently designed buildings and sites of reasonable size — it has established a pattern of success. Even when it has been part of a regional shopping center which may as a whole be something less than successful, the branch department store itself has done well. It would appear to be financially more sound than either the small individual shop or the very large shopping center. It has attracted the attention of most of the conservative operators of large department stores, and there are still many hundred downtown department stores in cities with growing residential...

Typical suburban branch department store: Bullock's Westwood, Westwood Village, Calif.
suburbs which could profitably build branches in the suburbs, where operating costs are low and net returns high.

This study is not a detailed critique, but an appraisal of trends in design and of certain points on which operators and designers agree. Many of the examples, existing and proposed, in the following pages have a striking similarity. This reflects their common purpose and conservative ownership. On the other hand there are some vigorous design innovations, based, as they must be in this field, on hard economic facts.


Bamberger's, Plainfield, N. J.; Abbott, Merkt & Co., Engrs.; Gimbel's, Cross County Shopping Center, Yonkers, N. Y.; L. Douglass, Archt.

A few general rules of thumb help to define the typical suburban branch department store. These cannot be considered more than approximations, since each store and each trading area varies. Of course parking space is required; what may be called the optimum parking area ratio is \(2\frac{1}{2}\) times the gross floor area of the store building, although the exact amount desirable in any given case may differ, depending on such items as accessibility of the site to residential areas within walking distance, or nearness to public transportation. The value of each car stall to the store can be estimated at \$7200 of annual sales, a figure arrived at from the following formula: average unit sale \(\times\) customers per car \(\times\) minimum car turnover \(\times\) selling days per year. In the average case this becomes \$4.00 \(\times\) 1\(\frac{1}{2}\) \(\times\) 4 \(\times\) 300 = \$7200. However, these figures vary radically and must be used with caution.

A suburban branch should carry a representative selection of all merchandise handled by the main store. It should have enough stock — which means storage space — to be self-sufficient for a period of time whose length depends on distance from the main store and warehouse, or on whether the branch will have facilities for receiving shipments directly from the manufacturer. If some major categories of merchandise are not carried the prestige of the main store may be lost to the branch, or the branch may lose its identity as a department store and become vulnerable to vigorous competition from neighboring specialty shops. The major classifications normally handled in a department store are:

- Women’s wear: dresses, coats, suits, etc.
- Accessories: handbags, shoes, hosiery, lingerie, etc.
- Men’s wear: complete
- Children’s wear: complete
- Dry Goods: linens, fabrics
- Small wares: notions, stationery, etc.
- Housewares
- Home furnishings: rugs, draperies, lamps, etc.
- Furniture
- Miscellaneous: toys, luggage, etc.
- Beauty salon
- Restaurant

**Size, Capacity, Costs**

Suburban branches which qualify as department stores with minimum adequate assortments of most kinds of merchandise usually have not less than 50,000 sq ft of total floor area. A more complete store has about 150,000 sq ft in a moderate-sized community or 200,000 sq ft in a larger community. In the most active trading areas branches of very high-volume stores are now providing over 300,000 sq ft. In all of these, the sales area (including behind-the-scene stock area immediately adjacent to selling) is usually 60 to 70 percent of total floor area, depending on amount of self-selection fixtures and volume of shipments directly from manufacturers. Average finished heights for ceilings are 13 ft for the street floor and 11 ft 6 in. for other floors.

The average branch store has annual gross sales amounting to \$70 to \$100 per sq ft of selling area, includ-
ing forward stock areas. Cost of the building, at current levels, varies generally from $15 to $20 per sq ft; cost of fixtures, $8 to $10 per sq ft. The typical suburban branch department store, then, has $7,500,000 of annual sales, 150,000 sq ft of area, a site providing 375,000 sq ft of parking space for 1250 cars. Variations from this average are as many as the various philosophies of merchandising and the sizes and types of communities.

**Location, Site**

Ideally the suburban branch is located in an area covered by the established prestige and reached by the advertising of the downtown store. This strengthens the obligation to carry a good selection of merchandise of most kinds carried by the downtown store. Ready interchange of items between branch and downtown helps but does not solve the problem; the suburban customer is a “take-with” shopper. When the size of the plot — and hence of the store — is restricted, this has led many operators to limit the categories of branch store merchandise to those which can be stocked in sufficient width and depth. A branch in a suburb which is primarily a dormitory for city workers does tend to draw some business from the main store, particularly if the residents are established customers or have the same buying habits as main store patrons. But the larger department stores with more than one branch are finding that their main city plants, with merchandise handling facilities and highly skilled executive talent, can serve the branches with only minor adjustments and become more productive pieces of real estate when the sales volume of the branches is added. Sometimes main store sales have actually increased as prestige of the branches has grown.

Branch locations are of three principal kinds: 1,
Saxone Shoe Shop, left, London, England (Michael Egan, Arch.), proclaims itself a small shop by nature of marquee, show windows, etc. Center.

BRANCH DEPARTMENT STORES: Entrances, Show Windows, Façades

Photos below: top left, Hutzler Bros., Towson, Md., (Office of J. R. Edmunds, Jr.; Ketchum, Ginâ & Sharp, Arch.) has two entry levels created by elevating a cross street and building out under it. Bottom left, see-through façade and sidewalk show cases, Bullock’s Westwood (Welton Becket & Assoc.) Top right, large window accenting the entrance is heavily curtained; Lytron’s (Shaw Metz & Dolio). Bottom right, Aux Dames de France, department store in Toulon, France, has the generous fenestration which Europeans prefer (de Montaut, Goetska, Lajarrige, Poata, Architects).
center-of-town in a smaller community; 2, independent location in a suburban area; 3, key location in a shopping center. Parking space is essential to all three. Of the first two types, the most successful examples have profited from a prominent site on the main street or thoroughfare with parking contiguous to the building on one or more sides. When the site has permitted, rooftop parking or adjacent multi-story parking has been used successfully. The third type, the key unit in a shopping center, requires extremely careful evaluation of potential customer traffic, both directly from the parking area and secondarily from adjacent stores.

**Entrances, Show Windows, Facades**

When the building fronts on a main street or thoroughfare, or when the parking plan places the building in back of an area of parked cars, monumental entrances are often employed. Sometimes this has been done by combining a two-story glass area with the entrance and obtaining an impressive night effect; but considering that, indoors, the store is simply a selling mechanism, the strong daylighting is disadvantageous; it tends to backlight and silhouette the merchandise so that color and texture are difficult to discern without excessive

*Bullock's Westwood, Westwood Village, Calif. (Welton Becket & Associates, Archts.)* has the windowless façade demanded by most American merchandisers, multiple entrances immediately accessible from the parking area.
artificial lighting. Yet generous, gracious entrances consistently characterize successful stores. The combination of show windows, both look-through and closed back, horizontally with the glass area of the entrances, has been used to this end. So also have inviting, protective entrance canopies which emphasize and identify the isolated store, and continuous covered walks which direct traffic and terminate logically at the main entrance. “Floating” marquees, supported at transom level, let daylight enter the store above them or provide a view out from within. The colorful laced awning has been used as a marquee to create an informal, gay atmosphere.

In suburban stores, display staffs are necessarily limited, non-selling area must be severely restricted, and the customer, who arrives by car, has little interest in window-shopping. The look-through window which makes the store interior the display is appropriate. When enclosed show windows seem advisable, the trend is to construct them as demountable units so they can be removed inexpensively when the space may be wanted for selling or for a look-through window. The freestanding show window, detached from the building, permits a free integration of the rich landscaping that is usually desirable with the store itself. The look-through window with a floor at selling floor level requires a sill or bulkhead at the minimum height needed for good maintenance; the partial look-through or enclosed window has a floor at bulkhead height, usually 12 to 20 in. Shadow boxes or freestanding show windows follow no set dimensional pattern, varying according to site or type of merchandise to be displayed. For all types the serious problem is lighting. In look-through windows, since lighting fixtures must be seen from all sides without glare, they are usually recessed in ceilings, which limits possible effects even if wide-angle equipment is used, and makes floor-lighting of low backgrounds essential. For enclosed windows, a sturdy, open, metal grid ceiling, preferably 2-way louvered, affords the needed flexibility for overhead lighting and for suspending props. Wing shields at both sides of the

(Text continued on page 191)
Plan models below show housewares in the basement, in a free arrangement of the gridiron plan; ground floor with 5 entrances, one at each corner and one in center of main front, wide aisles for free circulation, escalators in middle; first floor with piece goods, luggage, toys, charge accounts, etc.; second, tea room, beauty parlor, fashion theater, etc.

Bottom, left to right: Simple housewares imaginatively displayed; china department, continuous lights on inner and outer edges of shelves; second floor, continuous storage mezzanine; millinery on second floor.
Top photos, left to right: An entrance; merry-go-round in toy department; ground floor with bright yellow counter for special sales in foreground; slanted mirror allows full view of the body; pattern department with storage, desk and shelf for customers' parcels. Ceilings are usually darkest in tone, floors lightest; rich, sophisticated colors are used.
Open area in center of third floor (plan model at left) is for furniture pieces. Around this are flats for permanent displays which are changed periodically. Remaining area is for other household equipment. Photos: top left, upholstery fabrics in open shelved fixtures whose tops are kept free for cutting; storage is behind curtain display in background. Right, model apartment, one of the permanent displays. Below, left, space around escalator kept free, not used for sales; right, fixture and counter for selling upholstery findings.
window are also desirable for vertically adjustable lighting.

Opinion varies as to the value of window areas not used as show windows or combined with entrances. Color-corrected artificial lighting makes it unnecessary for the customer to see merchandise under actual daylight, but in some localities this habit persists. Where it does not, problems of fixtures and lighting are not complicated by the brightness differential between natural and artificial light; architects have welcomed the resulting windowless solutions, using uninterrupted masonry facades, introducing patterned relief in brick and concrete, and color in tile and richly veined marble.

Circulation. Vertical Transportation

A gridiron of aisles between fixtures is doubtless orderly but it does not always provide direct, graceful access from entrances and it is difficult to coordinate with the curving or angled walls often used to add interest or flexibility to the interior. In multi-floor stores the shortest possible aisles, generously wide, from entrances to escalators will increase customer traffic to other floors and add substantially to their sales. The completely “free-flow” plan complicates the fixtures, requiring costly wedge-shaped fillers for standard units or specially formed fixtures; it has been abandoned in most recent examples. Occasionally we find a curved aisle, introduced to meet a special condition in an otherwise straightforward pattern. Diagonal main aisles superimposed on a gridiron of minor aisles are now customary on street floors when entrances are at building corners; these are also used on other floors to feed customers directly into corner areas. Individual shops enclosed in high walls are used in stores designed for leisurely shopping and for such intimate departments as Maternity or exclusive salons for high-priced merchandise in high sales-volume stores.

The trend toward greater amounts of forward stock in reserve areas next to sales spaces, to enable the store to meet peak seasonal demands easily, affects circulation planning and increases the opportunity to create interesting interiors. Since these reserve areas are usually at the rear of the selling space, away from the aisle, and since their size varies according to the type of merchandise, the back wall of fixtures must change position from department to department. The resulting variety in depth of departments can be helpfully utilized in design.

In most large branch stores escalators are depended on for customer use. A passenger elevator is included only for the aged, the disabled, or the young mother with a baby buggy; many store operators believe the freight elevator can also serve these customers. Open stairways between floors now appear in smaller stores intended for leisurely shopping.

(Text continued on page 193)
BRANCH DEPARTMENT STORES: Vertical Circulation

Photos above, left to right: stair to mezzanine, Ciro's of Bond Street, San Francisco, Raphael Soriano, Arch.; stair to mezzanine, Scruggs, Clayton, Mo., Harris Armstrong, Arch.; reinforced concrete stair, ter Meulen, Wassen en van Vorst Store, Rotterdam, Holland, van den Broek & Bakema, Architects. Below, escalators in (left) La Rinascenti, Milan, Carlo Pagani, Arch.; and in Martin's, Garden City, N. Y., Frank Majer, Arch., Morris Lapidus, Assoc. Arch.; note selling fixtures. Two photos right, changes in level integrated by stairs and escalators, Harris Armstrong, Arch.
Store lighting schemes today are varied and ingenious; few designers agree on methods. However, there is a recognizable trend toward reducing the insistent patterns of directional lighting. Fully recessed circular and square fixtures accomplish this successfully. When rectilinear fixtures are employed, many designers recess them above the finished ceiling to reduce their dominance and reduce the contrasting brightness between the darker ceiling and the light source. This requires careful coordination with mechanical lines above the suspended ceiling or additional space, which can add expensive cubicage to the building.

Color-corrective lighting is wanted by most store operators; they have accepted the cost of combining fluorescent and incandescent sources in the same or adjoining fixtures. Also to be considered are the increased yearly cost of electricity and the cost of the additional load on the air conditioning system due to extensive use of incandescent lamps which emit more heat than fluorescent. Yet, though fluorescent lamps are economical, they are not now available in fully color-corrected types. Many architects, feeling that incandescent general lighting is the only means of providing flattering illumination of merchandise, are using it entirely for general lighting, with a minimum of fluorescent in show cases and baths of light on back walls.

Medium-level general lighting, combined with a few small departmental areas of high intensity where it is appropriate to the merchandise, is increasing. This helps to make the store interior more interesting in design and produces a desirable over-all economy. Strong spotlighting from hidden sources, so essential to good store illumination, requires careful planning of fixture layouts at the earliest stage of design of the building. The suspended, dry, acoustic ceiling has come into use as its flexibility and compatibility with changing lighting needs, its low first cost and other virtues, have become apparent.

**Fixture Design**

Recently completed stores are being evaluated on the quantity of self-selection fixtures they have used. These methods make it easy, through fixture design, for the customer to appraise, compare and select the exact size and pattern wanted, and to help complete the sale with a minimum of sales clerk assistance. There are as many opinions on the desirability of these various methods as there are store operators. There is nothing new about the technique. It dates back to the earliest market place or bazaar and was widely re-introduced by our most famous variety store operator at the turn of the century. The only new aspect is to make it graceful and acceptable to the department store customer who is used to full sales clerk assistance. It does require, however a re-study of the capacity, requirements and distribution of fixtures as well as proper use of signs, without which self-selection is ineffective. These in turn have affected the general appearance of the individual fixtures and can immeasurably affect the total appearance of the store. After some relatively timid introductions
of self-selection into new stores, we are beginning to see some violent swings in both directions, from wide general use in "high-volume" stores, to complete absence in the "prestige" store.

It is fortunate that the advantages of utmost flexibility and orderliness of merchandise display in fixtures have long been recognized by store architects. It takes a skillful designer to overcome the tendency to an over-mechanized appearance and yet to retain the efficiency and flexibility that are essential.

The influence of good architectural design, which employs structural materials to their full strength and expresses them frankly wherever possible, is being logically applied to fixture design and has an enormous effect on the general appearance of the store interior. Natural wood has been recognized as a precious material to be used in moderation and in sharp contrast with large areas of solid colors. Plastic laminates, which are more durable than natural wood for wearing surfaces and permit the use of light colors and subtle textures, have also strongly affected the design of fixtures.

Air conditioning and dust filtering devices now in almost universal use in retail stores have reduced the need for glass protection of even that merchandise which is normally accessible to the customer, and has simplified the details of fixturing, permitting more continuity of design and lightness of sections.

**Character and Design Quality**

This has become a matter of concern for the store executives as well as for architects. There is a strong wish to express the prestige and merchandising philosophy of the management and the nature of the community in the architecture of both exterior and interior.

Informality is the keynote of suburban store design, with a conscious attempt to express the difference between building for the casual living habits of the car-driving suburbanite and building for the city store where the only customers arriving by car are the chauffeur-driven "carriage trade." Landscaped areas are being used to give relief from the inevitable sea of asphalt resulting from the necessary parking requirement, and stores on restricted plots which have sacrificed all green areas to parking suffer badly in comparison. When the site permits, a small garden area for quiet relaxation will be deeply appreciated by the footsore shopper.

Interior merchandising departments should each be identified as separate entities, but at the same time should be in harmony with adjacent departments. Variety and change of pace can be obtained by judicious use of color, texture and materials.

In all these matters the architect has an important function. While his skill is no substitute for sound merchandising policy, the alert store operator today recognizes the value of the architect's contribution, of his resolution of the problems implicit in mercantile philosophy, operating policy, and the owner's desire for a totally successful establishment.
The branch department store of the immediate future exhibits few fundamental differences from its predecessors. The pattern is strongly established, so strongly that its effects are apparent in the very few downtown stores of recent construction, such as the new Macy's in Kansas City, Mo. (Daniel Schwartzman, Kivett & Meyers, Gruen & Krummeck, Archts.) Perhaps, as in Joske's store in Gulfgate Shopping City, Houston, Texas (John Graham & Co., Architects & Engineers), several levels may be used for parking and for access directly to selling floors; however, this, too, has been done before. Graham also designed the Stix, Baer & Fuller store at Richmond Heights, St. Louis County, Mo., which employs brilliant color and a delicately framed entrance motif to relieve the otherwise severely economical exterior; yet its shape is no less austere than the Altman White Plains, N. Y. store, top right (Kahn & Jacobs, Archts.). Bottom row, left to right: John Wanamaker Westchester, N. Y., is being built on 15 acres of the large Cross County Shopping Center, Yonkers, N. Y., will have multi-level parking (Lathrop Douglass, Archt.); Bon Marché Store, Eugene, Ore. (another by John Graham) is being built for $7.13 per sq ft including general contract, mechanical, electrical and sprinkler systems, elevators and escalators. At right are two views of J. W. Robinson's, Beverly Hills, Calif.; a bronze and brass fountain by Bernard Rosenthal in sunken garden, and Wilshire Blvd. entrance (Pereira & Luckman, Charles O. Matcham, Archts.)
Precast joist-slabs — they make a quick floor

Precast concrete joist-slabs are shown on the facing page for a small portion of a typical floor. The rest of the plan—of the ground floor—indicates spacing of columns. Precast joist-slabs are not used on the ground floor. First-floor offices are under ramp on the ground floor; man-lift elevator rises between ramps. Cross section above illustrates how the split levels are put to advantage for ramps. Magnified section shows 2-in. projection of precast joist-slabs into beam.

PARKING GARAGE DESIGNED FOR FAST, LOW-COST CONSTRUCTION

Jacob E. Anderson, Architect
John A. Murlin, Structural Engineer
James Stewart Company, Contractors

Whether or not an off-street parking garage pays off as a private venture depends largely — disregarding land cost — on how inexpensive the construction can be kept. A successful effort in this direction was this parking garage in Dallas, Texas, which was built primarily of precast concrete floor units. Once the foundation was in, the garage proper was put up in only 27 days — some sort.

View into ramp between two levels in the completed garage. Bottom of the precast joist-slabs can be seen extending into the beams. Note the wiring for electrical fixtures.
of a record for speed, says the structural engineer.

Construction costs were cut by three simple time-and-money-saving methods:

1. Precast, lightweight concrete floor units combining joists and slabs trucked to the site and hoisted by crane.
2. Lightweight concrete beams, poured into formwork built of standard-size lumber.
3. Lightweight concrete columns, poured into tubular fiber forms.

Since the main part of the open-construction garage is ramps and floor, the use of long-span precast concrete joist-slab units accounted for the principal savings. The prenumbered lightweight units, only 20 psf, were trucked to the site and hoisted two at a time in the exact order in which they were to be positioned on each floor.

In order that a nominal 20-ft-long concrete joist could be used, 5-ft 3-in.-wide beams were spaced a distance of 20 ft between sides. Each 20-ft precast joist-slab, actually 20 ft 4 in. long by 9 in. deep, extends 2 in. at each end into the supporting beam, tying the floor structure together.

Beams of lightweight concrete were poured into formwork of standard-dimension lumber, thus eliminating time-consuming on-site carpentry. The depth of the wide, flat beams was determined from the worst span condition, and that depth was maintained throughout the building. Dimensioned lumber was brought to the site and the formwork erected across the width of the garage on each floor. Beam lumber was disassembled and re-used on alternate floors. Finished beams leave a minimum clearance of 7 ft 2 7/8 in.

All columns, except the three supporting the center beam in the ramp, were poured into round fiber tubes, which were dropped over vertical and spiraled reinforcing steel rods. Holes to receive
these tubes were precut in the beam formwork. The three columns supporting the center beam of the ramp are 48 in. wide by 14 in. deep to support the extra load of the ramp.

The concrete pour was the last step on each floor after the framework of lumber, precast joist-slabs, and fiber tubes was positioned. The lightweight concrete used for beams, columns and topping was poured monolithically. Approximately 1265 yards of lightweight concrete were used in the entire superstructure, covering 64,000 sq ft of floor area. Six ounces of a viscol resin air entraining agent, plus \( \frac{1}{2} \) lb of a retarding agent were used per sack of cement. The weight of the reinforcing steel, including the wire mesh in the topping, was less than \( \frac{1}{3} \) psf of floor area.

Some juggling was necessary in order to lay out the garage for the most efficient use for parking cars, and at the same time to satisfy the demands of the structural components. Extending through a complete block between two existing buildings, the garage was planned in two rectangular sections: the larger 100 ft by 96 ft 5\( \frac{3}{4} \) in., and the smaller 62 ft by 96 ft 9\( \frac{3}{4} \) in. The ramp at the mid-section, joining the two sections of the garage, turned to advantage the 3-ft difference in elevation between the two streets.

Construction of the lightweight concrete superstructure took only 27 days from completion of the foundation and ground floor slab. And the garage was open for business just two months and a few days from the time the first corner stake was driven into the foundation. Today, according to the designer, the operation is proving the worth of the planning: A simply designed, simply constructed off-street parking garage is paying for itself.
**BASIC ELEMENTS IN THE PLANNING OF ELECTRICAL SYSTEMS**

**ARTICLE 3: STORES—WITH EMPHASIS ON SHOPPING CENTERS**

*By Felix B. Graham  
Chief of Electrical Department  
Syska & Hennessy, Inc., Consulting Engineers*

*Future articles in this series will be on industrial buildings, schools and hospitals. Article 1 in February covered general principles, and Article 2 in March, office buildings.*

The ultimate goal of a store's electrical system is to help provide an environment of sales stimulation, convenience and pleasantness. The components that make this possible, including lighting and all sorts of powered equipment are discussed in the text and listed in the check list, "Electrical Requirement for a Hypothetical Shopping Center," pp. 202-204.

**Electrical System Characteristics**

Here is a suggested order of importance of electrical system qualities:

1. **Safety** (minimum hazard to life and property); 2. **Flexibility;** 3. **Reliability;** 4. **Appearance;** 5. **Ease of maintenance;** 6. **Low initial cost;** 7. **Durability;** 8. **Small space requirements;** 9. **Adherence to owner's standards.**

By way of explanation—the top importance of safety, flexibility and reliability are obvious. Appearance—meaning lighting effects and concealment of equipment—rates near the head of the list. Durability is not so important, since store interiors are frequently changed. In chain stores, adherence to owner's standards is important, since these standards are established to fit particular needs.

**Size of Electrical Loads**

Electrical demand loads for stores vary greatly. A small apparel store may require only 3 watts per sq ft. Chain variety stores and department stores take about 7 w per sq ft. A men's wear store, a large drug store, and a jewelry store with elaborate lighting have loads of about 10 w per sq ft. (Air conditioning is not included in the above values.)

**What Does the Owner Install?**

There is no set pattern for how much electrical work is furnished by the owner. It varies not only with each shopping center, but even with different tenants in the same center. Occasionally this has caused misunderstandings and bad feelings. This can be avoided if each lease states clearly where the owner's obligations end and the tenant's begin. In practice there are three basic stages of completeness:

*Stage 1: Owner furnishes all electrical work for shopping center public spaces, and an electrical distribution system which terminates with feeder conductors brought into the store. The tenant installs everything inside.*

*Stage 2: The owner installs items in Stage 1 plus distribution panels and complete wiring of receptacle, ceiling and floor outlets. Since the location of these outlets is usually unknown when drawings are being done, the owner sets aside a sum of money for this work based on a predetermined schedule of a certain number of outlets per square foot of floor space. Unit prices are requested in the bid so that adjustments can be made if the tenant needs more or less outlets than the plans indicate. The tenant furnishes his own lighting fixtures and auxiliary systems.*

*Stage 3: Stages 1 and 2 plus all other electrical work. This is rarely done.*

**Pointers on Electrical Distribution**

These systems take various forms, depending on the practices and rules of the power company. Here, however, are some basic recommendations that apply to all systems:

1. **Keep the low voltage runs short.** These lines require a lot of copper. It is more economical, and more reliable, to distribute a number of transformers over a large area, each serving a small section, than to try to concentrate voltage transformation in a few spots. The 277/480-v system described in the previous article, although offering economies in office and industrial buildings, does not appear well suited to stores. This is because a large amount of power at 120 v is required for the abundance of incandescent show window, flood and spot lighting, as well as all fluorescent lighting less than 5 ft above the floor. Much confusion and error could occur in initial and future installations with a mixing of 120 and 277 v. Also, the 277/480-v system probably would not save much

---

*Economical compromise for outside wiring of a shopping center. Opposite highway, all wires are underground, for appearance. At sides and at rear (poles blend with trees) only high voltage conductors are overhead.*
ELECTRICAL REQUIREMENTS FOR A POWERED EQUIPMENT

DEPARTMENT STORE
Power outlets spaced high and low on columns • Floor outlets at selected counters • Audible paging system • Store opening and closing bells • Alarms: burglar, sprinkler, fire • Transportation: elevators, moving stairways, conveyors • Telephones: booths, telephones at selected counters.

NOTES: (1) Provide circuiting for maximum flexibility.
(2) Provide spare capacity for temporary high-intensity displays.

WOMEN'S AND MEN'S APPAREL SHOPS
Power outlets in tailor shop. Burglar alarm.

HOME FURNISHINGS STORE
Floor outlets for lamps. Alarms: burglar, sprinkler.

APPLIANCE STORE
Power outlets for appliance demonstration. Amplified antenna system for TV. Burglar alarm.

VARIETY STORE
Floor outlet for each sales counter • Multiple floor outlets for lamp sales. Soda fountain—see drug store • Sound system for music and announcements. Record players • Power for materials handling • Moving stairways. Alarms: burglar, sprinkler.

FOOD MARKET
Power outlets for: Cash registers • Check-out conveyors, bulk conveyors. Door openers • Refrigerated cases • Meat preparation • Coffee grinder • Soft drink machine. Sound system for music, announcements. Burglar alarm.

DRUG STORE
Power outlets for: Food and drug refrigeration • Food preparation and serving equipment • Dish washer • Cash register • Phone booths • Burglar alarm.

BARBER SHOP—BEAUTY SHOP
Outlets Barber shop: 3 receptacles on one circuit per chair; outlets for sun-lamp and dryer. Beauty shop: separate heavy-duty circuit for dryer.

RESTAURANT
Power outlets for each appliance (correct voltage, phase and capacity) • Infrared food warmers • Music distribution • Phone booth • Burglar alarm. Separate circuit for cash register.

NOTES: (1) Heat-resistant exhaust hood wiring. (2) Refrigeration power independent of master switch. (3) Handy location for exhaust hood fan switch.

PROFESSIONAL—OFFICE BUILDING
For basic requirements, see chart pages 206-207 March, 1954.

Loads to be added
For doctors: sterilizer, X-ray, diathermy, equipment for specialized medicine. For dentists: dental chair, X-ray, sterilizer.

Loads to be subtracted
Heating, cooling, water circulation if provided by a central plant (shopping center).
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<th>TYPES AND LOCATIONS</th>
<th>EFFECTS AND RECOMMENDATIONS</th>
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<td>Lighting for sales areas.</td>
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<tr>
<td>Lighting for featured displays.</td>
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<td>Concealed lighting (fluorescent) in racks,</td>
<td>For color rendition.</td>
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<td>shelves, show cases and niches.</td>
<td>For highlights on selected displays.</td>
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<tr>
<td>Downlights (incandescent).</td>
<td>Well diffused, warm.</td>
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<td>Mirror lighting.</td>
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<td>General lighting.</td>
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<td>Downlights.</td>
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<td>Valance lighting.</td>
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<td>Floods and spots.</td>
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<tr>
<td>Jewelry counter lighting.</td>
<td>For use on feature displays.</td>
</tr>
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<td>Stock room lighting.</td>
<td>Cool light.</td>
</tr>
<tr>
<td>Stock room lighting.</td>
<td>Illumination of 10 ft·c</td>
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<td>General lighting.</td>
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<td>Concealed lighting in refrigerated cases.</td>
<td></td>
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<td>Baked goods lighting.</td>
<td></td>
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<tr>
<td>Downlights over fruits and vegetables.</td>
<td></td>
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<tr>
<td>General lighting.</td>
<td></td>
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<tr>
<td>Continuous strips concealed in wall cabinets</td>
<td></td>
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<td>Spots on featured displays.</td>
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<td>Floor outlets for illuminated section signs.</td>
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<td>Lighting for food preparation and clean-up.</td>
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<tr>
<td>General lighting.</td>
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<tr>
<td>General lighting.</td>
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<tr>
<td>Display lighting.</td>
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<td>Spotlights for planting areas.</td>
<td></td>
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<tr>
<td>Kitchen and dishwashing area.</td>
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<tr>
<td>Vapor-proof hood lights.</td>
<td></td>
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<tr>
<td>General lighting.</td>
<td></td>
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<tr>
<td>General lighting, Valance lighting.</td>
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<tr>
<td>High intensity, cool white illumination;</td>
<td></td>
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<tr>
<td>large area, low brightness, semi-indirect</td>
<td></td>
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<tr>
<td>luminaries to avoid uncomfortable glare.</td>
<td></td>
</tr>
<tr>
<td>High intensity, warm white illumination;</td>
<td></td>
</tr>
<tr>
<td>luminaries similar to barber shop.</td>
<td></td>
</tr>
<tr>
<td>General lighting.</td>
<td></td>
</tr>
</tbody>
</table>
| Display lighting.                           | Low to medium intensity. Incandescent lighting suited for atmospheric; warm fluorescent lighting suited for high traffic. Avoid high intensity, glare, bright spots on diners. Adds life to green plants. Cool white fluorescent, recessed fixtures, with flat glass bottom and gaskets for easy cleaning.
### ELECTRICAL REQUIREMENTS FOR A HYPOTHETICAL SHOPPING CENTER

#### POWERED EQUIPMENT

**BOILER AND REFRIGERATION PLANT**
- Cooling, heating, water circulation.
- Equipment control and alarms of equipment.

(For complete list refer to page 206, March, 1954)

**SERVICE STATION**
- Outside service area: gasoline pumps, car entrance bell.
- Inside service area: garage door operators, fume exhaust fan, outlets for portable equipment, air compressor, battery charger.
- General: vending machines, unit heaters, phone booths.

**NOTES:**
1. Waterproof wiring for car washing.
2. Observe code requirements for hazardous locations.

**PARKING AREA LIGHTING**
- Projection booth: projection machines, film rewinding machines, amplifiers, TV projection.
- Auditorium: hearing aid system.
- Stage: loudspeakers, curtain operators.
- Lobby: vending machines, phone booths.
- Lounge: music system, coffee maker, clock.
- General: electric heater for ticket booth; vacuum cleaner system; telephones in ticket booth, office, projection room; fire alarm.

**THEATER**
- Incandescent, weather resistant, rust-proof; accurately aligned. Sufficient illumination for circulation, but not too much to detract from show windows.
- Tunnel lighting: dramatic, colorful illumination.

**MALL AND WALKWAYS LIGHTING**
- Traffic signals of entrance and exit.
- Power for ventilation.
- Carbon monoxide alarm.

**CENTRAL FEATURE**
- Water fountain, sculpture, etc.: illumination of 5 to 10 ft-c throughout.
- 100 ft-c at entrance decreasing toward inside.

**DELIVERY TUNNEL**
- Outlets for hand dryers.
- Toilet germicidal lamps.

**PUBLIC TOILETS**
- Air germicidal lamps.

### LIGHTING—TYPES AND LOCATIONS EFFECTS AND RECOMMENDATIONS

**PUMP ISLAND LIGHTING**
- Explosion-proof pit lights.
- Signs.

**FLOODS ON TOWERS DIRECTED TOWARD BUILDINGS**
- Street lighting standards: Incandescent, fluorescent or color-corrected mercury vapor.

**DIMMER CONTROLLED HOUSE LIGHTING**
- Aisle and step lights.
- Stage lighting.
- Clean-up lighting.
- Emergency lighting.

**TOILETS**
- Toilet germicidal lamps.

**INFORMATION SIGNS**
- Glass bottom fluorescent recessed in ceiling over sinks and stalls. Good lighting promotes cleanliness.
The trend away from even, overall illumination has been demonstrated in the new Hutler Brothers department store near Baltimore, designed by Ketchum, Gimé and Sharp. Morris Ketchum says, "Why supply a high level of general illumination and then build up still higher levels on displays of merchandise to make them stand out?" In this store, there are 60 ft-c directly on the merchandise, and the aisle receives 8 to 10 ft-c of spilled light. There is also niche, cove and perimeter lighting.

Luminous and louvred (eggcrate) ceilings have become very popular, but if used indiscriminately with large, unbroken expanses of the same material, they tend to become monotonous, and even hard on the eyes. Such areas should be broken up into large elements with solid ceiling separating them.

Luminous elements of different corru-gation sizes and louvered fixtures with different louver sizes can be mixed to add interest.

In order to avoid reflections of light sources in show cases or counter tops, fixtures should not be located directly over them.

When bare lamp fixtures are used, as in supermarkets, the lighting quality is better if fixtures are suspended rather than surface mounted (less brightness and shadow).

Outside Lighting of Shopping Centers

Walkway lighting should aid in unifying the shopping center. It should be sufficient for safety and comfort, but not too much to detract from show windows.

In a shopping center with a truck tunnel, lights will be operating almost continuously, so fluorescent units are recommended over incandescent for their lower power consumption.

If the tunnel is used at daytime, illumination at the entrance should be 100 ft-c or more, decreasing to normal inside intensity. If used at nighttime, intensity at the tunnel entrance should be reduced, or else the area outside the entrance should be intensely lighted to make the transition gradual.
PORCELAIN PANELS AND LIGHTWEIGHT CURTAIN WALLS EASE BUILDING LOAD

Texas Company Office Building
New Orleans, Louisiana

Claude E. Hooton, Architect
D. M. Cornblatt and Associates, Consulting Structural Engineers
Haase Construction Company, Inc., General Contractors

An 85- by 114-ft site of soggy New Orleans soil posed a difficult problem to the planners of the new Texas Company office building. Since the site was so small and narrow, a tall building had to be built to meet space requirements, adding to the difficulty. Lightening of the load on the foundation was accomplished by enclosing the building with curtain walls of aluminum and glass, and by facing with porcelain enamel panels the vertical section of the 17-story building which displays the Texaco sign.

The lightweight curtain walls are almost entirely of glass, with opaque spandrels, in some of which are aluminum air-intake louvers. Special windows for the air-conditioned building pivot vertically between aluminum mullions.

Aluminum Sunshades

On exposures subject to extensive periods of direct sunlight, the aluminum window mullions project to form 1 ¼-ft.-deep fins. These fins reduce glare, while affording maximum light, and decrease the heat load, affecting savings in air conditioning. The windows are specially designed, vertically pivoted sash, which permit cleaning from inside the building.

Porcelain Enamel Panels

The 22-ft-wide vertical sweep of green porcelain enamel panels displays the trade name “Texaco” at the top in 15½-ft letters of red plastic. The Canal St. side of the curtain wall, is outlined in porcelain enamel, and the penthouse is also faced with the panels.

As shown in section, the panels are secured very simply to special J-type furring strips which are attached to light-gauge steel studs. A mastic caulk seals the self-flashing panels together for watertightness.

As part of the all-welded steel framing, the diagonal wind bracing forms trusses at critical points of loading. At the narrow end walls, where the wind bracing is located, brick and concrete back-up form the curtain walls.

Heating and Air Conditioning

Porcelain enamel panels are used in the interior to encase the individual air conditioning units which are located beneath the window sills. As shown in the sectional drawing, fresh air is supplied to each unit through intake louvers.

Porcelain enamel panels are held by special J-type furring strips which are attached to light-gauge steel studs. Panel joints are caulked with mastic. Studs and furring strips holding panels are shown behind diagonal wind bracing in photo at left.
Porcelain enamel is employed also for covers of the individual window air conditioning units. Fresh air from aluminum intakes (photo right) is heated or cooled in window unit, then discharged through grille in slate sill. Small aluminum baffle at each window level (small sketch) catches any water seepage through casement and channels it into mullion.

mounted on the exterior face of the building. Chilled water is distributed to the unit from two 200-ton refrigerating machines, which may be operated together or independently, and hot water is produced by two gas-fired, low-pressure steam boilers.

The cooled or heated air is discharged through grilles installed in the slate sills. Air temperatures from the air-conditioning units are controlled automatically by a pneumatic control system. Each building exposure is considered a zone, and the temperature of the water supplied to each zone is varied with changing exposure and heat load. In addition to separate zone control, each of the fan-coil window units has a local three-speed switch which permits some individual variance.

**Basementless Foundation**

Even with the load savings resulting from the use of lightweight aluminum and porcelain enamel, a high-capacity foundation was a requirement. Cast-in-place concrete pilings were driven to a depth of 85 ft through two secondary sand strata and into a third extremely dense sand strata offering the required bearing capacity. Each piling was designed to withstand a 50-ton loading. Groups of pilings are concentrated in areas of heaviest anticipated load.

The building proper, structurally a one-piece welded steel frame, sits on top of the basementless foundation. Its combined engineering features add up to a sturdy structure that is unaffected by frequent shifts of the ground.

Note that slotted bolt holes are provided for expansion at each floor level. Vertical expansion of fins is allowed for by inside attachments shown in bottom vertical section. An aluminum angle fits across a ¾-in. break in the fin at each floor level and is wedged into aluminum clips on the inside wall of the fin.

(1) Windows pivot vertically about centers for washing. Stainless steel weather striping is provided between sash and casement.

(2) An aluminum mullion stiffener, set into the aluminum fin diagonally at a 45° angle, is shown in vertical section. The two top drawings show bolting of fins at a column and between columns, respectively.
CEILING AIR DIFFUSER AID TO FLEXIBLE OFFICE DESIGN

BLENDING DESIGN

Diffuser panels are designed to blend with the ceiling pattern and are produced in the same sizes as ceiling tiles (12 by 24 and 12 by 48 in.). A simple tool can be inserted into the hole in the face of the panel and turned to adjust air flow through the damper. (Acousti-Line ceiling tiles by Celotex Corp.)

Movability is the keynote of a new air diffuser designed by Connor Engineering Corporation. Connected by special metal and plastic tubing to the air supply duct, the lightweight diffusers form an integral part of the ceiling.

Engineered especially to fill the needs of continually changing office locations in buildings with movable wall partitions, the diffusers can be moved quickly and easily to the different ceiling locations required for the new office areas. Resting securely on a suspended framework of metal panels and channels, they can be pushed up and out by regular office help. Not only is accessibility an advantage of this diffuser as regards ease of relocation; lower maintenance costs are an important result.

The flexible pleated tubing can be turned, lengthened or shortened without materially affecting its uniform diameter. The tubing does not add to noise level, nor does it support combustion.

Designed to blend with ceiling patterns, the diffuser has a single orifice and a self-contained, concealed damper. The damper can be controlled from the floor by means of a simple tool, very much like a window pole, which fits into the face of the panel. Thus, not only can the diffuser location be varied, but also the amount of warm or cool air emitted in that location. Regardless of the amount of air discharged, however, the diffusion pattern, according to the manufacturer, remains constant—an important factor with variable cooling loads.

Available in 4-, 5- and 6-inch neck sizes, the diffuser can be used for both conventional and high-pressure types of air conditioning. Capacities are from 75 to 175 cfm. Connor Engineering Corp., Danbury, Conn.

(Easy to install)
The lightweight panels are easy to install and to remove. Ducts and tubing are instantly accessible.

FLEXIBLE TUBING

"Inside story" shows maneuverability of flexible, pleated tubing above ceiling level.
Another Adlake Aluminum Window Installation

- Minimum air infiltration
- Finger-tip control
- No painting or maintenance
- No warp, rot, rattle, stick or swell
- Wool woven-pile weather stripping and exclusive patented serrated guides

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Established 1857 • ELKHART, INDIANA • Chicago • New York
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HOME OF MR. AND MRS. ALLEN SILVERSTINE, HIGHLAND PARK, ILL.
ARCHITECT: Bertram A. Weber, Chicago • GENERAL CONTRACTOR: Albert Bork, Highland Park • PAINTING CONTRACTOR: Triangle Decorating Company, Chicago

On walls and woodwork — on floors and exterior trim — Pratt & Lambert paints, varnishes, enamels and stains were used throughout this distinctive residence.

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### NORTH AMERICAN BUILDING STONES — 7

Presented through the cooperation of the International Cut Stone Contractors' and Quarrymen's Association

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<td>Absorption of Moisture 2.10%</td>
<td>Crushing Strength — load parallel to rift — 20,400 lbs per sq in.</td>
<td>170 lbs per cu ft</td>
<td>Splitface. Heights 2&quot;-6&quot; Lengths 1'-4'</td>
<td>38 sq ft</td>
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<td>Load perpendicular to rift — 16,800 lbs per sq in.</td>
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<td>10</td>
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<td>Crushing Strength — 4,553 lbs per sq in.</td>
<td>145 lbs per cu ft</td>
<td>Dimensional; Splitface.</td>
<td>100 sq ft in 2.3 tons Splitface</td>
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<td>See also Veined Gray Rockrange, Rockwood</td>
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<td>Tests Not Completed</td>
<td>Tests Not Completed</td>
<td>Tests Not Completed</td>
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<td>42 sq ft per ton</td>
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<tr>
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<td>Acid Resistant Moisture Resistance meets all requirements of the U.S. Bureau of Reclamation for facing storage reservoirs and dams. Tests Not Completed</td>
<td>Crushing Strength— 64,000 lbs per sq in.</td>
<td>13½ lbs per sq ft—1 in. thick</td>
<td>Dimensional; Splitface; Ledgestone. All Heights and Lengths (1&quot;-3'; 10&quot;-12&quot; in dimensional stone)</td>
<td>40 sq ft per ton</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flagstones from 60 to 80 sq ft of surface area are obtained from this quarry.</td>
</tr>
<tr>
<td>13</td>
<td>Tests Not Completed</td>
<td>Tests Not Completed</td>
<td>Tests Not Completed</td>
<td>Dimensional; Splitface; Ledge. Heights 1'-12&quot; Lengths 1'-14' random</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Flagstone (sheets) 120 sq ft per ton, Splitface 4&quot; strips 40 sq ft per ton</td>
</tr>
</tbody>
</table>

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**ARCHITECTURAL RECORD MAY 1954 211**
This building is **LIFE conditioned** with **Plasteel**

**PROTECTED METAL INSULATED PANELS**

No other insulated panel can give you the protection and thermal properties of LIFE-conditioned Plasteel. Panels available in lengths up to 25 feet for field assembly—with interior wall-sheets of steel, a layer of glass fibre insulation and exterior wall of protected metal with Mica coating. Plasteel cuts heat loss, prevents harmful effects from condensation and effectively insulates against outside heat in summer. Result: closer temperature and humidity control.

**ROOFING • SIDING • ROOF DECK**

Tested and classified by Factory Mutual Laboratories and Underwriters' Laboratories. See Sweet's File.

MICA makes the difference.

Plasteel PRODUCTS CORPORATION
WASHINGTON, PENNSYLVANIA

- Please send details on Insulated Panels.
- Please send new Engineer's Handbook.

Contact your nearest Plasteel representative before you specify your next Insulated Panels—Roof Deck—Roofing or Siding. Or, mail coupon for details.
### NORTH AMERICAN BUILDING STONES—8

Presented through the cooperation of the International Cut Stone Contractors' and Quarrymen's Association

<table>
<thead>
<tr>
<th>NAME OF STONE</th>
<th>COMPANY NAME</th>
<th>QUARRY LOCATION</th>
<th>GEOLOGICAL DESIGNATION</th>
<th>TEXTURE</th>
<th>COLOR</th>
<th>CHEMICAL COMPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cordova Cream</td>
<td>Texas Quarries, Inc.</td>
<td>Austin, Tex.</td>
<td>Oolitic Limestone</td>
<td>Fine, close grain</td>
<td>Cream</td>
<td>silica 0.32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Iron and Aluminum Oxides 0.38%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Calcium Oxide 55.88%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sulphuric Anhydride 0.16%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Loss of Ignition 43.73%</td>
</tr>
<tr>
<td>Cordova Shell</td>
<td></td>
<td></td>
<td></td>
<td>Shelly</td>
<td>Light Golden</td>
<td>silica 0.25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Iron and Aluminum Oxides 0.42%</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Calcium Oxide 56.08%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sulphuric Anhydride 0.13%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Loss of Ignition 43.88%</td>
</tr>
</tbody>
</table>

**NOTE:** Pertinent figures are listed for three grain variations of Conco Lannon stone: North, South, Deep.
Since 1946 Berger & Tilles have completed 12 shopping centers to serve Long Island residents. These projects total 220 stores ranging from super-markets to gift shops . . . if fronted on one highway, they would comprise two continuous miles of stores.

When asked about his preference for Janitrol gas-fired equipment, Mr. Berger stated, “Over a twelve year period renters and store operators have experienced trouble-free service, high heating efficiency and eliminated their maintenance problems.”

Whether you plan to heat a store, warehouse, or industrial plant of any size or type, Janitrol Unit Heaters using any type gas including LP can lower initial installation costs and assure your clients dependable performance.

Write today for “Businessman’s Blue Book for Better Heating” for information on unit heater performance and best installation methods.

Mr. Irving Berger (standing) and Mr. Gilbert Tilles, leaders in shopping center design and construction, check plans for new project.

2 Miles of Stores Standardize on Janitrol Unit Heaters

Janitrol
GAS-FIRED UNIT HEATERS
SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO

Also makers of Surface Industrial Furnaces and Kathabar Humidity Conditioning
LIGHTING FOR SHOPPING CENTERS

Lighting Shopping Centers is a comprehensive guide containing information on lighting shopping centers, stores and supermarkets with incandescent or fluorescent lighting — recessed, suspended, surface attached, concealed in coves or on "floating clouds." There are also suggestions for relighting where present facilities are inadequate. The booklet, well illustrated with store installation photographs, layout plans and numerous diagrams, devotes several pages to exterior lighting for parking courts, service yards and the mall. A section on lighting fundamentals explains the manner of determining lighting requirements. 80 pp., illus. Holophane Co., Inc., 342 Madison Ave., New York 17, N. Y.

WOODWORKING GUIDE
The Architectural Woodwork Institute has published a brochure, Architectural Woodwork, Millwork A.I.A. File No. 19-E as a general introduction in a series of brochures that will be issued bi-monthly to architects. Each brochure will be devoted to a separate element of architectural woodwork such as "Paneling," "Cabinet Work," "Doors," "Window," etc. This brochure deals with "How to Counteract the Inevitable but Reversible Movement of Wood in Buildings." Architectural Woodwork Institute, 332 South Michigan Ave., Chicago 4, Ill.

SWIMMING POOL DESIGN
Those interested in building swimming pools will find ideas on basic planning, pool shapes, lounging areas, wading pools and both houses in Trends in Swimming Pool Design. This booklet covers various types of construction: modern trends in pool lighting: color in the pool; data on filtering, recirculating and chlorinating systems; and the newest developments in pool fittings and accessories. 20 pp., illus., Elgin-Refinite, Swimming Pool Department, Elgin, Ill.

*PLANNED LIGHTING
Bulletin A, issued by the Pittsburgh Reflector Co., tells the story of planned lighting. It covers the essentials of good lighting, indicates the recommended illuminating levels of all types of interior installations, explains the difference between fluorescent and incandescent light sources and outlines the procedure for selecting the proper light source, as well as the proper equipment, for each particular job.

Another section of the Bulletin covers the services offered to lighting equipment users and specifiers by the company, together with an outline of the designing and production procedures followed in the company plant to manufacture silver-mirrored reflectors and other equipment. 8 pp., illus., Pittsburgh Reflector Co., Oliver Bldg., Pittsburgh 22, Pa.

FURNITURE PRICE LIST
Knoll Associates have put out a price list of their chairs, tables, chests, cabinets, cabinet accessories, desks, beds, lamps and letter trays. In addition to the list price the booklet includes a description of the pieces, specifications, size, delivery charge — and, for the chairs, yardage required for covering. 25 pp. Knoll Assoc., Inc., 575 Madison Avenue, New York 22, N. Y.

*PRESSURE TREATING STRUCTURAL WOOD
Baxo Chemonited Forest Products A.I.A. File No. 19a3 tells of the advantages of pressure treating structural wood with chemical preservatives. Examples are given showing the use of the product for industrial use, home building, farm, marine, road and highway construction. 32 pp., illus. J. H. Baxter and Co., 200 Bush St., San Francisco, Calif.

*RESTROOM FACILITIES
Practical aid in the selection of modern restroom and shower facilities is provided in the Sanymetal Catalog No. 91, A.I.A. 35-H-6. The catalog contains descriptions and illustrations in color of the complete line of Sanymetal toilet compartments, shower stalls and dressing rooms, supplemented with detailed engineering data and architectural specifications. A selection chart enables readers to determine quickly the types of units that will best serve their needs. This chart is accompanied by color chips of the 22 available colors in "Porcelain," a vitreous porcelain on steel, and "Tennac," synthetic enamel on galvanized, Bonderized steel. The catalog also illustrates Sanymetal Hospital Cubicles. 20 pp., illus. Sanymetal Products Co., Inc., 1705 Urbana Rd., Cleveland 12, Ohio.

(Continued on page 270)
Insulite combines
Insulation and
...in a single money

New 3 in 1
Insulite Roof Deck
saves up to $300
per M sq. ft.
on exposed-beam
ceiling jobs
in any climate*

Exclusive vapor barrier
protects against
condensation within the unit

*Why it can be used in any climate

Exclusive Vapor Barrier protects against condensation within the deck in any climate. Continuous vapor barrier combines a membrane laminated into each unit, plus a rubber gasket that seals carefully machined T & G joints. (Also available without vapor barrier for use in moderate climates.)

1. It's Roof Deck... Two by eight foot unit cuts application time as much as 45%. Only one material to handle. New Insulite Roof Deck eliminates need for separate roof board, insulation, lath and plaster and ceiling finishing. Roof Deck can save 12 man-hours per 1000 sq. ft. of surface compared with 2' x 6' D&M roof sheathing.

Insulite Roof Deck saves money, speeds completions on jobs like these...

Homes  Motels  Schools  Restaurants
Roof deck, Finished ceiling saving product!

2. It's Insulation... No need for other insulation. Two-inch Roof Deck is comparable to 2' wood deck plus 1' fiberboard insulation and meets F.H.A. heat loss requirements for roof and ceiling construction. Absorbs sound better than wood or plaster... makes homes quieter and more livable. Exclusive vapor barrier protects against condensation within the unit in any climate.

3. And Finished Ceiling. The underside of Insulite Roof Deck is finished with a white flame-resistant surface at the factory. Simply lay Roof Deck over prefinished beams and the ceiling is done. No need to plaster, paint, stain or wax. Reduces labor and material costs. Insulite Roof Deck is available in 2' x 8' units, 1⅜", 2" and 3" thick with or without Insulite's exclusive vapor barrier.

Send for complete information now! Actual on-the-job pictures and construction details show how to use new Insulite Roof Deck to build better for less. Write Insulite, Minneapolis 2, Minnesota.

Build and insulate with double-duty

INSULITE
The original structural insulation board

INSULITE DIVISION, Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota
Identical Finishes...

RUSSWIN
BUILDERS' HARDWARE

... a feature of outstanding architecture

Among the reasons given for the selection of Russwin Builders' Hardware is its uniform finishes... within a single line of products and throughout the complete line. The overall matching effect adds finesse to the appearance of any building.

The finishing of builders' hardware occupies an important place in the production of Russwin Builders' Hardware. Even though methods and equipment have changed over the years, accumulated knowledge and experience help assure the maintenance of high standards associated with the Russwin name. Uniform finish is one of the advantages gained by specifying Russwin throughout. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.

VENTS FOR DAYLIGHT AND VENTILATION

The Wasolite Ventdome, a plastic and aluminum roof vent with motor-operated air exhaust, provides both top-lighting and ventilation through one roof opening.

Formed from a single sheet of acrylic plastic under pressure, the smooth-surfaced dome is shatter-resistant and lightweight, yet has a load-supporting capacity greater than the usually required 40 psf. Said to be virtually maintenance-free, the domes are available in white translucent and clear colorless plastic. With flanges resting between neoprene cork gaskets and protected by the aluminum supporting frame, the dome can expand and contract under wide temperature ranges.

Looking through clear plastic dome of vent shows air-intake louver

The curb frame, with double walls of extruded aluminum insulated with Fiberglas, has a self-contained condensation and seepage gutter, with a slope for positive drainage to the roof. The outside curb skin is both a structural and self-flashing member.

From one to four motor-operated built-in air exhausts are supplied in the curb frames. Light-duty exhausts for intermittent use and heavy-duty exhausts for continuous use are available. Both types are protected by insulated weather doors that keep out snow, rain, dust, etc. The motor-operated doors open when the exhaust is turned on and close when it is turned off.

The Ventdome can be secured to the roof deck by means of an extended roof flange. Wasco Flashing Company, 89 Fawcett St., Cambridge 38, Mass.
**WATER-RESISTANT INSULATION**

Development of a new water-resistant insulation has been announced by the Magnesia Insulation Manufacturers Association, representing the producers of 85% Magnesia insulation and related products. The new form of 85% Magnesia for hot piping and equipment offers a solution to the important problem of insulation damage resulting from severe water exposures.

Exhaustive tests by an independent laboratory, the Association reports, indicate that immersion in boiling water for 378 hours with intermittent drying on hot pipes caused only slight roughening of the insulation surface with no loss of insulating values. Following the tests, the new product was still in serviceable condition.

**After 30 cycles of boiling water immersion and alternate drying, plus 168 hr of continuous immersion, water-resistant 85% Magnesia (pipes labeled E) shows only slight roughening of surface**

Said to be especially useful for underground pipelines subject to flooding, process equipment and piping requiring hosing or washing down, the new insulating material was developed under the sponsorship of the Technical Committee of MIMA.

For all practical purposes, the water-repellent additive in the new material does not affect the conductivity, density or other vital properties of the insulation. However, the Association advises that the new material will be offered only where severe moisture problems exist or where specified by the user. The Magnesia Insulation Manufacturers Association, 1317 F Street, N. W., Washington 4, D. C.

(Continued on page 222)
NOW! the new Modine

A modern room unit for cooling and heating hotels, apartments, motels, offices, hospitals, schools, homes.
Ideal for new construction and modernization.

The new Modine AIRditioner* provides cooling with chilled water, heating with hot water... filters, dehumidifies, circulates and introduces fresh outside air. All functions are subject to individual room control. Here is healthful summer-winter comfort for multi-room installations within reach of the most modest air conditioning budget.

Modine AIRditioner design assures excellent performance on cooling or heating plus unusually quiet operation. Four-speed motor control provides maximum flexibility in meeting comfort requirements.

Choose from four types: The beautiful Console (illustrated) for exposed or partially recessed installation... the Concealed... and the Overhead types with and without casings. Each type is available in three sizes rated at 2/3, 1-1/2 and 2 tons of refrigeration (220, 440 and 640 cfm respectively).

Distinctive appearance and versatility are combined in the Console type styled by Jean Otis Reinecke, nationally known designer. This unit may be installed against a wall—or recessed to a depth of 5 inches, leaving less than 6 inches exposed in the room. Use of square edges at junctions of top and sides eliminates need for cutting rounded contours in wall recess... or preparing specially formed trim strips. Square edges blend gracefully into rounded corners in forward part of top.

Modine AIRditioners are Parker-Bonderized and finished in a semi-gloss Marine Green primer selected for high resistance to humidity. The factory finish is so attractive that further decorative treatment will frequently be unnecessary.

High-capacity coil has brass tubes, electro-plated for protection against electrolysis with aluminum fins. All tube-joints are brazed. Coils are reversible for right or left-hand piping connections.

Outlet grill is integral part of 18-gauge cabinet top. Adjustable louver grill optional at extra cost.

Manually adjusted fresh air damper for regulation of fresh and recirculated air mixture.

Access doors are provided on both ends of unit to allow reversal of motor control location. Alternate door usable for water-flow or other controls.

Quiet operation is assured by ample use of glass fiber insulation plus sound-deadening mastic throughout. In addition, fans and motor are resiliently suspended.

All electrical connections within cabinet reversible.

Air filter readily removed for cleaning or replacement. Access to filter by manually removable front panel. No tools needed.

Motor and fan assembly easily removed as unit by taking out four bolts and disconnecting electrical plug.

CONSOLE TYPE WITH FRONT AND END PANELS REMOVED

Modine AIRditioners
Concealed and Overhead Types

Other AIRditioners available include: Concealed type for built-in installation behind a finished wall. Overhead type with casing for exposed ceiling installation. Overhead type without casing for use with ducts above a false ceiling or in a closet.

(Above) Console type is installed against finished wall. A ¾-in. thick sponge rubber strip around perimeter of back serves as wall seal and as plenum for fresh air inlet. All piping and wiring are concealed in enclosure.

(Left) Because all rear corners are square, AIRditioner can be recessed faster, at lower cost. With overall depth less than 13 in. and up to 5 in. of recessing permissible, AIRditioner takes far less floor space.

MODINE MANUFACTURING COMPANY
1510 DeKoven Ave., Racine, Wisc.

Please send me a free copy of bulletin describing the new Modine AIRditioner.

Name __________________________
Position ________________________
Firm ____________________________
Address _________________________
City _____________________________  Zn  State ______________________________

ARCHITECTURAL RECORD  MAY 1954  221
HERE is a brand-new data file that will prove mighty helpful in your preliminary planning. In it you will find detailed entrance information and specifications ... scale drawings and actual photos of installations ... facts, figures and descriptions of special features. In short, here is your guide to the newest and best in complete building entrances: of "always open—always closed" Revolving Doors; of International-engineered Swing Doors; or of a combination of both in a broad range of materials. Your personal copy of this valuable reference book is being reserved for you. Mail the above coupon now.

International Van-Kannel
Revolving Door Entrance to the smartly modern Fedway Store at Amarillo, Texas.

AUTOMATIC GAS LAUNDRY

The new gas Duomatic (Model CEV) is a combination laundry unit that dries as well as washes in one continuous automatic operation. In appearance the gas model resembles closely its electric counterpart. According to the manufacturer, the new model can wash and dry an average 8-lb mixed load in about an hour. It is operated by two simple controls and a water temperature selector switch which governs the Magic Heater.

Space-saving gas Duomatic washes and dries in one continuous operation

The Duomatic uses the patented Bendix tumble-action washing method. An optional automatic speed soak period can precede the washing. The wash period is followed by three alternate rinse and spin dry cycles. Following the last spin, the unit halts, then fluffs the clothes, preparing them for drying—which starts automatically. Room air is drawn into the unit, heated, passed through the clothes and exhausted outdoors. The unit is 36 in. wide. Bendix Home Appliances Div., Aero Manufacturing Corp., 1329 Arlington St., Cincinnati, Ohio.

STEEL DOOR WITH TORSION SPRING MECHANISM

A new, upward-acting all-steel door offers the installation and operating advantages of the Crawford Marrel-Lift Mechanism—not previously available on steel doors. This compact mechanism is installed entirely above the door. The

(Continued on page 226)
Approximately 125,000 Owens-Illinois Light-Directing Glass Block are in the new buildings at International Paper Company's huge Moss Point, Mississippi, plant.

Glass block are laid up with regular masonry material. They are inexpensive to maintain... hard to break... can't rust or rot. Glass block are impervious to corrosive effects of chemicals.

Kraft paper manufacture requires closely regulated plant temperatures and humidity levels... chemicals used in pulping and bleaching are highly corrosive. That combination of problems makes glass block a natural choice.

Owens-Illinois Light-Directing Glass Block permit the use of entire glass areas for the transmission of an abundance of cheerful, quality daylight into the farthest corners of plant or office. Daylight is controlled so efficiently that buildings virtually "turn with the sun" to make maximum use of free daylight from early morning to late afternoon.

Whenever you have a problem involving daylighting plus other operating considerations, be sure to investigate the many advantages of Owens-Illinois Glass Block.* For information write: Glass Block Division, Owens-Illinois, Dept. AR-5, Box 1035, Toledo 1, Ohio.

*Formerly known as INSULUX
Completely NEW Line of

Now! Wider range, exclusive new features

20 new Trane Climate Changers for any capacity, 600 to 29,000 cfm! Complete line of factory-built units for flexible application, easy installation!

Now, a brand new, more complete line of Trane Climate Changers with an even wider range of capacities—20 new models for more flexible application.

Designed for easier installation, full accessibility and less maintenance, these new Trane Climate Changers are the most modern factory-built air handling units in the industry!

Wider capacity range simplifies selection. Ten sizes cover entire range of capacities from 600 to 29,000 cfm. You can select a unit with just the capacity you need for maximum system operating efficiency.

New fans are more efficient, quieter. Every fan designed especially for its unit for highest efficiency, quietest operation. Low outlet velocity—approximately 1,500 feet per minute. Climate Changers are rated by fan capacity in the unit.

Increased design flexibility, more accessories. You get any or all of 24 practical combinations of heating, cooling, humidification, dehumidification, ventilating and filtering. Three types of heating coils for steam or hot water—five types of cooling coils for chilled water, wall water or Freon. Three types of humidifiers, three kinds of filters. Matched face-and-by-pass dampers and mixing boxes. No other air handling unit offers such versatility!

Installation simplified. Fan outlets, for example, are quickly reversible on job—three ways on vertical units.

6 climates from one Climate Changer! Trane Multi-Zone Climate Changers give individual temperature control in one to six zones. Units are quality constructed. Sectional construction if desired. 1,600 to 23,400 cfm.

A Trane Product for Every Air Conditioning Need

CentroVacs, Centrifugal Water Chillers 45 to 400 ton capacity.

Trane Room Units for air conditioning multi-room buildings.

Cold Generators, packaged water chillers, 10 to 100 tons capacity.

Self-Contained Air Conditioners from 3 to 20 tons capacity.

one source
one responsibility

Completely NEW Line of

Now! Wider range, exclusive new features

20 new Trane Climate Changers for any capacity, 600 to 29,000 cfm! Complete line of factory-built units for flexible application, easy installation!

Now, a brand new, more complete line of Trane Climate Changers with an even wider range of capacities—20 new models for more flexible application.

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Installation simplified. Fan outlets, for example, are quickly reversible on job—three ways on vertical units.

6 climates from one Climate Changer! Trane Multi-Zone Climate Changers give individual temperature control in one to six zones. Units are quality constructed. Sectional construction if desired. 1,600 to 23,400 cfm.
**Trane Climate Changers**

*in industry's most modern air conditioner*

two ways on horizontal units. Motor mount adjustable four ways. All units will clear 36" door except sections of largest unit which will clear 40" door.

**External bearings cut maintenance time and cost.** Bearings can be serviced in minutes instead of hours. All bearings are self-aligning type.

**Sloping drain pan for positive drainage.** Side drain connection for minimum head room. Pan under entire unit. From top to bottom, new Trane Climate Changers are designed for efficiency, built for long service!

**Specify TRANE Climate Changers.** For complete details and roughing-in dimensions, call your TRANE Sales Office or write TRANE, La Crosse, Wis.

---

New TRANE Climate Changers with sectional construction are designed to meet close space requirements, a wide variety of capacity needs. Horizontal models (below) can be ceiling suspended or installed on platform. Vertical models are floor mounted. Fan outlets are reversible on job... 3 ways on vertical units, 2 ways on horizontal. Units deliver the capacity you select—Trane Climate Changers are rated by fan performance in the unit, from 600 to 29,000 cfm.
You can confidently specify Roly-Doors for every commercial or industrial building you design. Their clean, modern, distinctively simple lines blend with any style of architecture . . . their functional design ensures safe, easy, trouble-free installation and operation (manual or electrical) . . . and their all-steel construction provides a durability that defies weather and years of hard use. Available in 112 standard sizes, there's a Roly-Door for every overhead door requirement.

And, Roly-Doors cost no more than ordinary wood or metal doors for the same purpose.

WRITE TODAY for the Roly-Door Technical Data File. It will give you complete information on all Roly-Doors' unique features . . . their sectional design and construction . . . the reasons for their durability and ease of operation . . . Morrison's nationwide sales and service organization . . . and the many other features that will enable you to fit Roly-Doors into any of your plans. For commercial or industrial buildings, specify Roly-Doors.

Roly-Doors come in a complete range of sizes for every residential, commercial or industrial application.

In Canada, Roly-Door Distributors, Ltd., 1330 B'oor, W., Toronto 4

Also manufacturers of MOR-SUN WARM AIR FURNACES and CARRY-ALL TRUCK BODIES
Wheeler

LIGHTING FIXTURES

A BASIC PRODUCTION TOOL OF AMERICA'S LEADING INDUSTRIES!

Where good lighting is a "must," you'll find Wheeler on the job! In industry after industry... where modern progressive thinking rules... Wheeler Lighting Fixtures are the logical choice for maximum lighting efficiency!
Parking in the sky... on floors made 40% lighter with Ceco-Meyer Steelform Construction...
Planning makes entire building site income-producing.
Ceco cuts dead load in floor system.

A tenant in the Cafritz Building, Washington, D.C., has no parking problems. He just drives to his floor—even if it's 10 stories up—parks, steps into the corridor—then into his office.

Morris Cafritz, building owner, has reason to be happy, too: his whole land plot produces income. When planning the building, the problem confronting him and architect LeRoy L. Werner was... how to eliminate areas of no income on the plot. Windowless space won't rent... court design means waste areas. The solution: a square building with a garage in the core, with a ramp spiraling 10 floors up. Thus layout design made all the land rent-producing. And structural design kept the floor system light and economical. This was accomplished with Ceco-Meyer Steeiform Concrete Joist Construction. But let architect Werner tell the story:

“I know of no other floor framing that would have been more suitable for this job,” Mr. Werner said. “Structural engineers Beall & LeMay designed panels of the building for various types of concrete systems, including joists with tile filler, beam and slab construction, and flat plate construction. They found that reinforced concrete joist construction formed with Removable Steelforms offered savings in floor weight of 40% compared to flat plate construction.”

When you plan your next project call Ceco product specialists. They will help you save through product engineering. Consult Sweet's File for address.

Ceco-Meyer Steeiform construction saves steel, concrete, lumber and labor

Fastest-to-erect and most economical electrified floor system

Why Concrete Joist Construction Saves Material

Shaded portions show concrete eliminated by concrete joist construction.
Call a FIAT representative near you — available on short notice. He has the answers to specification and installation problems that may help you... save you time—save your clients money.

Here's how this installation problem was solved

Large concrete window base presented difficulty. Bottoms of filler panel A and end plaster were cut to fit diagonal slope of base. Room dimension was too short for six compartments; too long for five. Filler Panel B was added, creating neat appearance.

NEW FURNITURE COLLECTION

Parzinger Originals, Inc., a designers' showroom, presents its first collection of contemporary furniture, lamps and accessories. Each piece in the collection, which includes entrance, front room, back room and bedroom furniture, has been hand-crafted, as demonstrated by details and inlays. Parzinger Originals, Inc., 451 Madison Ave., New York 22, N. Y.

COMPARE FIAT ON THESE POINTS

ADAPTABILITY APPEARANCE QUALITY PRICE DELIVERY

WHEN YOU SPECIFY FIAT, YOU SPECIFY QUALITY

All metal compartments are made of stretcher-leveled furniture steel, cold rolled or galvanized bonderized... laminated filler cemented in place under pressure. Hardware and connections supplied. Compartments are finished with a baked-on primer coat and two coats of baked-on enamel in a choice of eight colors.

SEE SWEET'S 24c ARCHITECTURAL...

... for detailed compartment information and the address of your nearest FIAT representative.

FIAT METAL MANUFACTURING COMPANY

THREE COMPLETE PLANTS—ECONOMY • CONVENIENCE • SERVICE

FIAT

TOILET COMPARTMENTS
DRESSING COMPARTMENTS
HOSPITAL CURICLES

MADE BY

FIAT FIRST IN SHOWERS

In Canada: FIAT COMPARTMENTS are made by Porcelain and Metal Products, Ltd., Orléans, Ontario.

COMPATIBLE PAINT TINTS

Exactly the same shades of color can be produced in all types of paint and for all types of surface by using the new Key-Tint Customiz Color System.

Key-Tint colors are compatible with all Keystone paints — oil, rubber, alkyd, or varnish base — according to the president of the Keystone Paint & Varnish Corp. Keyed by color number to a color card, the tints are available in three container sizes: 1-pint cans, 4-oz tubes and 1-oz tubes. The tints are simply added to any white Keystone paint or enamel to obtain the desired shade.

Said to be nonfading and limeproof, thus permitting their use on all exterior and interior finishes, the Key-Tint colors can be used for an entire building, inside and out, for a coordinated color scheme. In addition to matched colors, two-tone effects of the same color can be obtained in the same or different finishes by varying the amount of Key-Tint added to the base paint. Keystone Paint & Varnish Corp., 75 Otsego Street, Brooklyn 31, N. Y.

(Continued from page 226)

(Continued on page 234)
Note to ARCHITECTS who are preventing emergencies before they happen

In all parts of this country leading architects are preventing later emergencies by urging their clients to install the best possible materials. In the plumbing drainage system, and in the house sewer, this means **cast iron soil pipe and fittings**. The advertisement reproduced at the right is one of a series placed in consumer magazines by the Institute in the interest of architects who are seeking constantly to raise the standards of home sanitation.

---

**Suppose YOUR bathroom goes out of service**

Between your house and the street is a buried pipe line — your house sewer. If that fails, so does your bathroom. During the war cast iron, the time-proved material for soil pipe, was hard to get. Non-metallic substitutes were used, and frequently they fail through crushing, settling, root-penetration. Note the picture of non-metallic pipe crushed out of shape by soil settling. Today there is plenty of cast iron, and you do not have to use any substitute. Read the illustrated story of plumbing drainage in the booklet offered below. Prevent the failure of your home sanitation. If you build a new house or replace a house sewer, always insist on

---

**USE PERMANENT CAST IRON SOIL PIPE AND FITTINGS**

Take Advantage of These Added Helps for ARCHITECTS

You will want to show the Institute's sound movie "Permanent Investment." This 20-minute educational picture acquaints the public with the importance of hidden plumbing, the part of the system which is so vital to health, comfort and safety. For information on the film and a copy of the consumer folder "What You Should Know About Plumbing Drainage," use the handy coupon.
You can solve more problems with

**MOBILEX**  ...less expensively...

than with any other recessed lighting fixture

How many times in your experience have you wanted to use the good design advantages of recessed lighting—only to see your plans go by the boards because over-all ceiling costs got out of line?

You have an answer to that bottleneck now. MOBILEX. It fits more types of ceilings—without the need of expensive custom made adapters than any other recessed lighting fixture on the market.

That means MOBILEX gives you a broader range of price, ceiling, and recessed lighting combinations than you've ever had to work with before. And that means a far greater opportunity for you to deliver good design and de luxe lighting—even to clients who must limit you to a modest budget.

Because we know you are always interested in new products that really help you do a better job, we think you'll want to see and hear more about MOBILEX. We'll be happy to arrange a MOBILEX demonstration any time you say. We promise you this: you'll find it well worth-while.

**CALL OR WRITE YOUR NEAREST DAY-BRITE REPRESENTATIVE**

**MOBILEX FITS GRID-TYPE SUSPENDED CEILINGS.** Fixture is inserted into grid opening, rests on "tee" rails, locks into place. Reduces installation costs up to 50%. Acoustical ceiling boards, MOBILEX units are interchangeable, permitting quick, low-cost revisions of lighting pattern whenever desirable. WRITE FOR BULLETIN OD-567.

**MOBILEX FITS EXPOSED SPLINE SUSPENDED CEILINGS.** Fixture hooks onto universal 1 1/2" ceiling carrying channels. Multiple use of same supporting members saves material and labor costs. Acoustical tiles, MOBILEX units may be rearranged any time after initial installation. WRITE FOR BULLETIN OD-506.

**MOBILEX FITS CONCEALED MECHANICAL SUSPENDED CEILINGS.** Flange type MOBILEX for acoustical ceilings using concealed metal spline, screw or adhesive methods of supporting mineral tile. This MOBILEX unit is listed with simple-to-install Day-Brite suspension strips which clamp to ceiling carrying channel.
This is MOBILEX with molded plastic panels. Also available with Ribbed Skytex glass panels and BOXCO® louvers, MOBILEX can be supplied in 2, 3 or 4 lamp arrangements for 2' x 2' fixtures or 2' x 4' fixtures. Enclosing element frames have separable hinges and can be hinged from either side or completely removed for quick maintenance.

LOOK AT MOBILEX... FEEL THE DIFFERENCE... BEFORE YOU SPECIFY.

MOBILEX FITS SNAP-IN TYPE ACOUSTICAL CEILINGS. Fixture snaps into the same "Tee-bar" rails that receive metal pan ceiling tiles. Day-Brite designed spring retaining clips snap "home" above the Tee-bars for added security.

MOBILEX FITS PLASTER CEILINGS. Simple, rugged Day-Brite plaster frames and suspension straps frame the opening and support the MOBILEX for plaster and acoustical tile-on-plaster installations. Extra long studs in suspension straps allow maximum adjustment for positioning fixture.

DAY-BRITE LIGHTING, INC.
5465 Bulwer Avenue, St. Louis 7, Missouri.
In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.
BLIND EXPANSION FASTENER

Neo-Grip, a new blind expansion fastener, secures objects to practically all building and construction materials without tearing or shattering them. Of particular application where there is access from only one side of the material, Neo-Grip can be located anywhere since it needs no interior support and eliminates, in many cases, the need for penetration of the material.

Neo-Grip inserted in transparent block shows rubber base and tightening notches

Neo-Grips are installed by first drilling a hole, then inserting the fastener and twisting it in with a special tool. When completely flush, the fastener is anchored securely. Its neoprene-base rubber sleeve exerts great pressure without tearing soft objects or shattering frangibles.

Two sizes of Neo-Grip are available: The P110 has an over-all length of \( \frac{3}{4} \) in. and an outside diameter of \( \frac{3}{8} \) in. The P125 has an over-all length of \( \frac{5}{8} \) in. and an outside diameter of \( \frac{1}{4} \) in. Minimum material thickness required is \( \frac{3}{8} \) in. for the P110 fastener and \( \frac{5}{8} \) in. for the P125. Neo-Grips are packed 100 to the box, with special tool for tightening included. Star Expansion Products Co., 147 Cedar Street, New York 6, N. Y.

HORIZONTAL GAS FURNACE

Designated as “Tuck-Away” models, the new horizontal gas-fired furnaces are recommended for homes without basements or furnace rooms. Available in models having Btu input capacities of 60, 80, 100, 120 and 140 thousand Btu per hr, they may be installed in attic space, under the floor, in a regulation basement or suspended from the ceiling of a utility room.

“Tuck-Away,” new horizontal gas-fired furnace, features enclosed controls

These furnaces are delivered as package units, shipped completely assembled with controls including the thermostat and thermostat wire. Controls are fully enclosed. There are dual flame outlets, either of which can be attached to the flue, which has a cap to be used when the flame outlet is not in use. The multi-blade centrifugal-type blower is mounted on rubber for quiet operation. The motor is the continuous-duty type mounted on adjustable brackets. Tuck-Away models comply with national safety requirements and have American Gas Association approval. Perfection Store Co., 7609 Platt Ave., Cleveland 4, Ohio.

(Continued on page 238)
Choose the floor that’s NATURALLY beautiful!

BRUCE BLOCK

Perfect combination for modern homes!

No other floor can match Bruce Hardwood Blocks for an ideal combination of modern beauty, natural charm, and lifetime durability.

This patterned oak floor gives added style to even the most modern interior. Its interesting grain and rich coloring will never fade nor wear away.

Bruce Blocks are prefabricated for modern construction—can be laid in mastic over concrete or blind nailed over wood subfloors. The factory-applied “Scratch Test” Finish saves time and money on the job . . . eliminates guesswork as to how the finished floor will look and wear. (Blocks can also be purchased for on-the-job finishing.) See our catalog in Sweet’s. Write for booklet.

E. L. BRUCE CO., MEMPHIS 1, TENN.
WATER IS CHILLED by Worthington centrifugal refrigeration units in subcellar, then fed through riser (dotted line — "up" arrows) to interior fan rooms. Water returns to sub-cellar (dotted line — "down" arrows) to complete circuit. Solid lines show condenser water circuit. Double lines show chilled water system (one in each face of building) for room units.

New building trend set by air-conditioned skyscrapers

This 26-story structure at 99 Park A is distinctly different from anything built in Manhattan.

It's completely sheathed in self-cleaning aluminum, with reversible windows and heat-resistant glass.

99 Park is also going to set a new standard in comfort for its tenants. Dependable air conditioning is provided by a Worthington system made up of two 665-ton centrifugal refrigerating units, which supply chilled water to 38 Worthington-equipped interior fan rooms. These distribute cooled, humidified air to the interior offices on each floor. The centrifugal units also feed chilled water for individually controlled room conditioners enabling tenants to control the outer offices to select their own climate.

For more than fifty years, Worthington engineered air conditioning installations have been serving business and industry. Whether large or small, Worthington systems are all Worthington-made, not Worthington-assembled. For the full story, contact your nearest Worthington office, or write to Worthington Corporation, Air Conditioning and Refrigeration Division, Harrison, N.J.

WORTHINGTON

CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME

236 ARCHITECTURAL RECORD MAY 1954
"A salute to those who made it possible"*  

SILENCE IS REALLY GOLDEN . . . HERE!

Noise, Noise, Noise. Nagging, hammering, screeching, deafening. In plant after plant, workers complain, work lags, men stay home until their heads stop ringing. Industrial noise causes a reported $4,000,000-a-day loss in worker efficiency.

But there's an answer—in a new Fenestra* building idea: A combination acoustical-structural roof that costs as little as 75 cents per square foot . . . installed.

In one compact unit you get: (1) perforated light-gauge Fenestra Holorib Steel Deck which provides a smooth-finished, metal-faced interior ceiling; (2) sound-absorbing element which is also efficient heat insulation; (3) strong steel surface for support of wood fiber insulation and finished roofing.

Holorib is lightweight. It saves you building time, labor, materials and money. It's practically maintenance free. But you can wash it or paint it time and time again without hurting its acoustical efficiency a bit. And, it's noncombustible!

General Motors Technical Center, Warren, Michigan; Standard Pressed Steel Company, Jenkintown, Pa.; Simmons Saw & File Company, Fitchburg, Massachusetts . . . these are just a few of the companies taking advantage of this great Fenestra development.

Write us for complete information—or have your architect write—and check on Fenestra floor panels and wall panels. Fenestra Metal Building Panels speed building and cut costs because they are a multi-purpose building material. Write Detroit Steel Products Company, Dept. AR-5, 2252 E. Grand Blvd., Detroit 11, Michigan.

*Trademark  

* Your need for a practical way to make a factory quieter encouraged us to develop Fenestra Acoustical Holorib.
MORE NEW KNOLL FURNITURE

Knoll, internationally known manufacturers of contemporary furniture and textiles, introduced seven new pieces at the Winter Furniture Market. The Knoll collection includes pieces in every price range, based on the actual cost of materials used and the application of mass production or hand finishing or both for the particular design.

Chairs by Bertoia combine sturdiness needed for heavy wear and a light transparent look. The chairs, created for flexible indoor-outdoor use, have many special features, including a special rust-resistant finish and removable slipcovers for easy cleaning. They are made of steel wire on seat and back and are supported on a sturdy steel rod base.

The high-back lounge chair (No. 423), 38½ in. wide, 33½ in. deep, 41 in. high, and ottoman (No. 424) are designed with seat and back formed to the contour of the body and cushioned with foam rubber. They are available in two versions: black oxide seat and base and white lacquer seat with a black oxide base.

Cocktail table available with surface of melamine with walnut strip or all walnut

- A new large lounge chair (No. 422), 44½ in. wide, 30¾ in. deep, 28½ in. high, of an expansive soft diamond shape, also comes in two versions: No. 422 is black oxide seat and base; 422-1 white lacquer seat and black oxide base. Both high back and diamond chairs are covered with Prestini, a richly textured all-cotton fabric in gray, charcoal, yellow, red and camel.
- Florence Knoll has designed two new tables—a coffee table and an extension table—both with plastic laminate burn and stain-resistant finishes.

The round coffee table (No. 402) consists of four clear maple sections divided with a walnut strip. The legs are also of walnut. The table, 42 in. in diameter and 15½ in. high, is also available in all-walnut plastic.

CONSTRUCTION DETAILS

for LCN Overhead Concealed Door Closer Installation

The LCN Series 200 CP Closer’s Main Points:
1. Efficient, full rack-and-pinion, two-speed control of the door
2. Mechanism entirely concealed; arm disappears into door stop on closing
3. Ideal for batteries of center-pivot-hung doors without mullions
4. Hydraulic back-check to protect walls, furniture
5. Hold-open (optional) set at any one of following points: 85°, 90°, 100°, or 110°
6. Used with wood or metal doors and frames.

Complete Catalog on Request—No Obligation

LCN CLOSERS, INC., PRINCETON, ILLINOIS
MODERN DOOR CONTROL BY LCN • CLOSER CONCEALED IN HEAD FRAME

THE BROCKTON, CHICAGO, ILLINOIS

LCN CATALOG 11-E ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS
MORE COMFORT WITH LESS HEAT. No complaints are heard about cold drafts near windows. Yet the thermostats are set several degrees lower in the new building, with Thermopane windows, than in the original John Hancock Building with single-glazed windows.

A 5-Year Performance Report on 1487 Thermopane windows in Boston's John Hancock Building

Five winters and four summers have passed since the John Hancock Mutual Life Insurance Company Building in Boston was first occupied. To find out what's been learned from this experience, the building management was asked:

What do you and the 5,400 people who work in your building think of Thermopane's contribution to air-conditioned comfort?

ANSWER:

Building management is well pleased with the Thermopane windows and feels they very definitely aid in the satisfactory operation and balance of the air-conditioning system. Occupants of the building never comment on the windows, probably aren't even aware they are Thermopane.

The fact that occupants never comment on the windows is perfect testimony for Thermopane insulating glass. It plainly means there is no discomfort from drafts near windows. With single-glazed windows in the company's original quarters, recently renovated, it is necessary to keep thermostats between 75° and 76° for comfort. However, 73° thermostat average setting adequately cares for needs of the new addition.

HEATING

Assume that the heat losses due to infiltration, cracks, etc., will be the same whether single glass or Thermopane is used. This will leave the direct transmission through the windows as the only variable.

From the latest issue of the ASHVE Guide, the rate of heat transfer through a single glass is 1.13 B.T.U. per hour per square foot per degree Fahrenheit temperature difference between the air on the two sides of the glass and the rate of heat transfer through Thermopane is 0.5 B.T.U. per hour per square foot per degree Fahrenheit temperature differences.

The heating design conditions for Boston are zero degrees outside and 70 degrees inside, or a temperature difference of 70 degrees.

The windows measure 5'0" x 7'0", or 35 square feet of 35 x 70 = 2,769 B.T.U. per hour loss per window for single glass.

2769 x 1487 windows = 4,116,760 B.T.U. per hour, or heat loss for single glass.
Building management's appreciation of Thermopane stems from three benefits. First, the air-conditioning system, of which they consider Thermopane an integral part, has operated most satisfactorily.

Second, Thermopane keeps the offices notably quiet in spite of heavy traffic on streets outside. Even on the lower floors, fire sirens are muted and ordinary traffic din is reduced. Absence of such distractions is invaluable.

Third, management can measure in dollars the savings in steam for heating and power for air conditioning that Thermopane yields—and will continue to yield for the life of the building. A highly reputable, independent firm of air-conditioning engineers and contractors has calculated that Thermopane saves John Hancock $8989 annually, that's $6.04 per window per year, nearly $45,000 saved in five short years. Details of the engineering firm's calculations are given below.

The two great benefits of Thermopane, comfort for occupants and lower operating costs for owners, are inseparable. Thoughtfully considered, these combined values make the greater cost of Thermopane a sound investment for any building that is heated in winter and cooled in summer, as an investment that is certain to pay off.

**SUMMARY**

The estimated annual savings in operating costs due to the use of Thermopane versus single glass is as follows:

- Heating Season = $6,530.00
- Cooling Season = 2,459.00
- Total Annual Saving = $8,989.00

---

**Single glass and Thermopane, John Hancock Mutual Life Insurance Company, Boston, Mass.**

<table>
<thead>
<tr>
<th>Single Glass</th>
<th>Thermopane</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 x 0.61 = 1,495 B.T.U. per hour loss per window for Thermopane.</td>
<td>960 x 70 - 0 = 65,020,000 B.T.U. per hour, total heat loss for Thermopane.</td>
</tr>
<tr>
<td>116/670 - 2,222,320 = 1,894,440 B.T.U. per hour, total saving from use of Thermopane at a 70° differential.</td>
<td>1,126,400 K.W.H. of electrical energy saved due to the use of Thermopane.</td>
</tr>
<tr>
<td>1,272,780 K.W.H. of electrical energy which would be consumed if single glass were used.</td>
<td>146,380 x $0.01680 = $2,459.00—Approximate annual savings during the cooling season from use of Thermopane.</td>
</tr>
</tbody>
</table>

**COOLING**

The owner's log of cooling compressor and pump operation shows that, for a typical year, one or more of the compressors and pumps is in operation for 935 hours between April and October. A total of 1,126,400 kilowatt hours of electrical energy were consumed during that period at an estimated cost of $0.01680 per K.W.H.

Best available information shows that there is an approximate 11.5% saving in transmission of radiant energy from the use of Thermopane versus single glass.

If, S.G. = Amount of electrical energy using single glass

Therm. = Amount of electrical energy using Thermopane

S = per cent saving due to use of Thermopane

Then, S.G. = (S.G. x S) = Therm.

S.G. = (S.G. x .115) = 1,126,400

S.G. = 1,727,780 K.W.H. of electrical energy which would be consumed if single glass were used.

1,272,780 - 1,126,400 = K.W.H. of electrical energy saved due to the use of Thermopane.

146,380 x $0.01680 = $2,459.00—Approximate annual savings during the cooling season from use of Thermopane.
The new Prudential Building will soon rise 600 feet above the shore of Lake Michigan, and become a distinguished addition to Chicago’s skyline. This mid-America headquarters of the Prudential Insurance Company will contain more space than any other building used exclusively for offices in Chicago.

As a building, it will take its place among our country’s finest structures and is a perfect example of the features a well-informed investor is willing to put into the space he plans to use and rent. For instance, to prevent future obsolescence and to meet the increasing requirements of modern electronic office equipment, architects Naess & Murphy have prepared the new Prudential Building to handle the highest electrical load of any office building yet built. To do this job easily, and to permit layout changes and additions at minimum cost, Robertson Q-Floor construction is being used. This strong, light-weight, steel, cellular structural floor is the only construction material available which provides easy electrical access over every 6-inch area of the entire exposed floor. For more good reasons why fine new buildings all over America have turned to Robertson Q-Floor construction, see the opposite page.

Robertson Q-Floor

a product of H. H. Robertson Company
2404 Farmers Bank Building • Pittsburgh 22, Pa.

World-Wide Building Service

A&E PRODUCTS

(Continued from page 238)

Lounge chair in expansive soft diamond shape covered with Prestini

- Kurt Nordstrom has employed simplicity in the design of the Scandinavian Side Chair, of molded teak plywood seat and back with natural finish. The chair, 18½ by 19½ by 30 in., has wooden tips on the foot of the chair legs which are made of tubular steel with black oxide finish. Knoll Associates, Inc., 575 Madison Ave., New York 21, N.Y.

COLOR FOR PLASTIC WALL TILE

Seventeen new related colors in a new color-styled line of polystyrene molding granules are being offered by the Dow Chemical Corp. to manufacturers of plastic wall tile made of Styron.

The Styron tiles reportedly have “depth of color,” a direct result of the inherent translucent nature of plastic. Because the light travels into the tile instead of striking a single plane on the surface, walls have a soft appearance and remain pleasing under any of the common types of lighting: incandescent, daylight fluorescent, or cool white fluorescent.

Dow’s color stylist, working in cooperation with color stylists in all other fields of home furnishings, has developed 17 related colors which will harmonize with any scheme of color in the home.

Styron wall tiles are about 0.060 in. thick except through the bevel edge which measures about ½ in. thick. The popular sized 4½ by 4½ in. field tile is available as well as other sizes. Trim tiles are available in 2½ by 4½ in. and in narrow strips. No special metal trims are needed with the plastic wall tile. All standard aluminum and plastic moldings can be used.

(Continued on page 243)
Styron tiles can be installed by using the field tiles in a conventional way and trimming with straight borders, or patterns with contrasting tiles may be worked out. The tile can be staggered, placed in line, pointed or unpointed.

The tiles are suitable for application on plaster, plaster-board, wood, plywood, and a number of other surfaces. The wall must be true in order to insure satisfactory installation. Tiles may also be heat-formed on the job and used for convex or concave surfaces in archways, recesses and under stairways.

Styron tiles are most frequently used in kitchens, bathrooms, breakfast nooks, hallways, recreation and utility rooms.


dow Chemical Corp., midland, Mich.

LIGHTING FOR COMMERCIAL INTERIORS

Sunbeam No. 3800 Series offers "large area source" of high intensity, low brightness lighting for large commercial interiors. The manufacturer recommends these units as most effective for glareless, balanced illumination in areas with high ceilings. Almost like a prefabricated ceiling cell, these Sunbeam luminaires offer new design possibilities in ceiling patterns. These recessed light cells take four, six, eight or ten fluorescent-type lamps providing a choice of illumination intensities. A choice of egg-crate louver or molded plastic diffusing elements is also available.

Large-area, recessed, 4-ft (nominal) square light panels

The plastic shielded light square, No. HDP 3800, has translucent white Plexiglas. This panel is a single 4-ft sq (nominal) element molded into a sturdy, per-

Beyond the fact that Q-Floor offers the greatest electrical availability of any structural floor in existence (as indicated in the above illustration), there are several other vital reasons why it has become a part of the finest new buildings in America.

Q-Floor saves construction time and money. The steel cellular units come on the job cut to fit so that two men can lay 50 square feet in one minute. In the case of the U. S. Steel-Mellon Bank Building in Pittsburgh, forty floors were installed in four months. Because Q-Floor provides a perfect platform for work and storage, 1,000 men were able to operate on the job without interfering with each other. Q-Floor saves steel as a result of its favorable ratio of weight to strength. Footings and structural steel can be lighter than with ordinary construction. Moreover, Q-Floor saves drafting room time since completely predetermined wiring and mechanical layouts are not necessary. Because no combustible forms and shoring are required, there has never been a construction fire on a Q-Floor job. Add these features to low cost on wiring changes in the years to come, and it's easy to see why Q-Floors are a feature of America's finest new buildings.

The Robertson Technical Library contains data books on Q-Floor which should be part of every architectural and engineering library. Write to us.
save time
save labor
save materials

Cutaway view of the assembly, showing stud (A), clip (B) and plaster base (C).

Lather ties steel shoes which hold the TRUSSTEEL stud rigidly in place.
specify
the industry's fastest-erecting
fireproof hollow partition system

- TRUSSTEEL* Studs
- ROCKLATH* Plaster Base
- STRUCTO-LITE* Perlitid Gypsum Basecoat Plaster
- IVORY* Finishing Lime

One-package STRUCTO-LITE mill-mixed, perlited gypsum basecoat plaster is lighter weight, more fire-resistant, adaptable and economical. Pre-mixing at the mill saves labor and materials, and eliminates variable sets caused by variations of aggregates mixed on the job. STRUCTO-LITE places 50% less weight on framing members. In certain constructions it holds back flames up to twice as long as sanded plaster. Finished cost compares favorably with plaster sanded on the job.

IVORY—the modern, double-hydrated finishing lime is more than 92% hydrated during manufacture, eliminating troubles from delayed hydration, expansion, and separation from the wall. Develops high plasticity immediately when mixed with water; may be mixed by hand or machine, eliminating overnight soaking and speeding job operations.

You take no chances when you specify U.S.G. methods and materials. U.S.G.'s hollow partition systems have proved superior on job after job. When you specify TRUSSTEEL stud, ROCKLATH partition system... STRUCTO-LITE plaster... IVORY lime, you specify with confidence—because you're sure of top performance backed by one dependable manufacturer—United States Gypsum. Ask your U.S.G. Architects' Service Representative for complete details; or write Dept. AR-2, 300 W. Adams St., Chicago 6, Ill.


UNITED STATES GYPSUM
the greatest name in building
low upkeep — inside and out—
marks new pre-fab skyscraper

The Southwest's largest building—Republic National Bank of Dallas
—will require an absolute minimum of maintenance. Thanks to its
aluminum "skin," there will never be a need for exterior painting,
blasting, or pointing. And, thanks to Wright Rubber Tile inside—
floors will retain their lustrous new-look beauty for many decades
with only periodic light waxing and buffing.

Wright Rubber Tile—America's original rubber tile—is right at
home in Dallas' newest office building. No resilient flooring is easier
to clean and keep clean. Its dense, compact surface resists dirt, acids,
alkalis and abrasion... yet it is comfortable and quiet underfoot.
And Wright's outstanding wearability makes it ideal for heavy-
traffic areas.

Available in 50 rich colors; 6-inch to 36-inch squares; 1/8", 3/16"
and 1/4" thickness. Send for samples and architect specifications.
Wright Manufacturing Co., 5205 Post Oak Rd., Houston, Texas.

(Continued from page 243)

TILE SQUEEZED FROM TUBE
New Stop Gap caulking compound looks and feels like white tile, can be squeezed
from a tube to fill in cracks and crevices around sinks and tubs. It is reported
that this new plastic rubber compound has been so formulated that it will never
shrink, crumble or discolor with age. Simple to apply because of a new type
nozzle spout container, it dries overnight to a smooth flexible inlay. Its tile-
like surface can be easily repainted any color. It is waterproof and helps stop
rust and rot. The product, available in 8 oz tubes, is also recommended for use on
frames, counter backs, moldings, sills, glazing repairs, flashing, casing and
joints. Sapolin Paints Inc., 229 E. 52 St., New York, N. Y.

RESTAURANT EQUIPMENT
• An "Economy" counter stool (number
241) consisting of a 3½-in.-diameter
center column and a balloon one-piece
steel seat ring, has been added to the
Lion Brand line. All parts are triple
chrome plated for long-lasting, easy-to-
care-for performance. The 241 center
stool is shipped knocked down and is
quickly and easily assembled.
• The 1700 series features an octagonal
stamped steel table base with a 3- or
4-in. center column. It is available in a
variety of finishes including black crackle
with chrome column, all chrome, baked

(Continued on page 250)
TOLERANCE:

\[
\frac{1.5}{1000} \text{ INCH}
\]

MEANS:

no sagging...no warping lifetime satisfaction!

There's nothing vague about the superior quality that's built into every Curtis New Londoner Hollow Core Flush Door. For instance, the core and grid are manufactured to such precision standards that permitted tolerances have a plus or minus margin of only \( \frac{1.5}{1000} \) of an inch!

That's typical of the skill and care that make these better doors famous for their dimensional stability. The patented hollow core of the New Londoner is locked into the stiles, rails and lock blocks. Every New Londoner Door is a completely joined unit with nothing to get out of place.

Time works for you—not against you—when you choose Curtis New Londoner Doors—because these doors give LASTING satisfaction to the homeowner. That's been proved by more than 4,000,000 installations. When the doors have to be good, specify "Curtis New Londoner"—and be sure.

Door designs shown here—and many others—are available either with Curtis New Londoner hollow core construction or Curtis American solid core. These are only a few of the many Curtis offers, both for exterior and interior use. These doors are available in wide widths for schools, hospitals and public buildings.

Curtis Companies Service Bureau
200 Curtis Building
Clinton, Iowa
I want to know more about Curtis New Londoner and Curtis American flush doors. Please send literature.

Name: ..................................................
Address: ..........................................................
City: ........................................... State: ..............................


Why building designers in Pittsburgh today specify Steeltex Floor Lath for reinforcing concrete floors.

Pittsburgh, City of Vision, is one of the most progressive cities in America today. Once dirty and smoky and threatened constantly with floods, Pittsburgh, now undergoing a renaissance, is one of the country's cleanest cities.

A vast network of dams in the headwaters of the Allegheny and Monongahela make damaging floods virtually impossible. A stream purification program is well under way. A new $5-million-per-mile east-west parkway, partially completed and in use, will speed traffic through the city's heart without cross streets or traffic lights. New skyscrapers, new research centers, new industrial plants, new parks, new off-street parking garages have brought about a boom in new apartments and public housing, new schools and hospitals, new shopping centers.

When buildings of this type are being designed, poured concrete decks are most desirable and when you pour concrete, it is only natural to specify Steeltex Floor Lath, the galvanized steel wire reinforcing which carries its form on its back (see cross section below left).

Steeltex requires no additional form or pencil rod reinforcing. It costs less to install than other types of forms.

One man can roll out a 125' roll of Steeltex in a few minutes. Steeltex provides both waterproof form and steel reinforcement for concrete floors, roofs.

New 3-story addition to Shaler Township High School added 20 classrooms, upped accommodations from 750 to 1400 students, cost $1.35 million, has gym, auditorium, three shops, offices and locker. Steeltex Floor Lath on all floors. Charles M. & Edward Stotz, Jr., Architects. Geo. H. Chilli, Contractor.

NOTE: In the cross section the weight of the wet concrete forces the backing away, which permits the galvanized steel mesh to assume its proper position in the slab. Steeltex floor lath also performs two other functions: It permits work on the floor below while pouring is in progress and retains moisture to assist proper curing.
The $3.5-million nurses home at University of Pittsburgh towers 14 stories, completely air conditioned, contains library, recreation room, reception rooms, cafeteria seating 400 — comfortable living quarters for 600. Steeltex in upper floors. Ingham, Boyd & Pratt, Architects. Trimble Company, Contractors.

Pittsburgh specify STEELTEX® floors and roofs

and reinforcement for concrete because Steeltex can be rolled out like a carpet, stretched with a special tool, and clipped tightly in place by one man (see photo below left).

Steeltex with its waterproofed backing also prevents waste of concrete by reducing leakage to a minimum from the freshly poured slab — craftsmen can continue working on the floor below without getting splattered. Expensive clean-up time is eliminated.

Steeltex insures a strong floor because embedment of steel reinforcing takes place automatically (see note below left). Steeltex allows concrete to cure slowly, properly — guards against excessive cracking — can be installed over any type of joist — will support ample safe loads from 109 to 886 lbs. per square foot depending on spacing of joists and thickness of slab. No wonder Steeltex has been the choice of architects, engineers, contractors, and building owners alike, not only in Pittsburgh but wherever concrete slabs are poured over joists.

If your building plans call for poured concrete floors, roofs, plaster walls or ceilings, masonry veneer or Portland cement (Stucco) exteriors, there's a type of Steeltex reinforcing that will do the job better, faster, with less effort at lower overall cost.

For complete details see the Steeltex catalog in Sweet's or write for your free copy of a new 24-page illustrated booklet "Pittsburgh Steeltex, Backbone of Concrete, Plaster, Mortar." It's yours for the asking.

**STEELTEX®**

manufactured by the

Pittsburgh Steel Products Company

a subsidiary of Pittsburgh Steel Company

Pittsburgh 30, Pa.

St. Clair Hospital, Mt. Lebanon Township, Pa., serving the growing South Hills area has 116 beds — cost $1.34 million. Steeltex used in all floors. Kuhn & Newcomer, Architects. R. A. Zern, Structural Engineer. H. Busse, Contractor.

Brentwood-Whitehall Shopping Center built on two levels has 25 shops in 210,000 square feet—80% are air conditioned—parks 1,000 cars. All floors reinforced with Steeltex. Forsyth & Blezard, Architects. Leland Cook, Structural Engineer. Landau Bros., Contractors.

Mammoth decks in this fabulous $10-million terminal building at $42-million Greater Pittsburgh Airport, were poured on Steeltex Floor Lath. Last year 2.5-million people including travelers spent $20 million at ticket counters, restaurants, nightclub, theater, hotel and shops. Joseph Hoover, Architect. Leland Cook, Structural Engineer. Dick Construction Co., Contractors.

Here are other recent buildings in Pittsburgh and vicinity using Steeltex:

Amberson Gardens
Bedford Dwellings
Center-Negley Apartments
Greentree Apartments
Hebron Grade School
Kennilworth Apartments
Pennsylvania College for Women (Administration Building)
Shadyside Presbyterian Church (Chapel)
St. Augustine's High School
Talbot Towers (Housing Project)
Union Railroad (Office Building)
Westinghouse Educational School
Westinghouse Electric Corporation (Atomic Project Buildings)
enamel or baked porcelain enamel base with chrome column. A flat rim on the base permits chairs to fit under the table. The 1700 series is made in all sizes from oblong end base to 22-in. diameter for a 36-in-square top. L. & B. Products Corp., 232 Nevins St., Brooklyn 17, N. Y.

**IS DAMPNESS A PROBLEM?**
A ½-hp dehumidifier, known as the Aqua-Sorber HC 20, features automatic control by means of a humidistat mounted on the cabinet. This instrument is activated by means of the moisture content in the air and sets the dehumidifier into operation only when needed. The Aqua-Sorber is reported to evaporate 50 percent more water from the air by means of its ½-hp compressor. Hose connection is readily accessible hooking up to the drain for those who want completely automatic dehumidification. This unit is recommended for enclosed rooms and will serve an area up to 1,500 cu. ft. maintaining normal humidity conditions. The manufacturer suggests that this product is especially useful for use over weekends and vacations. Walton Laboratories, Inc., 1186 Grove St., Irvington, N. J.
Servel Air Conditioning protects Notre Dame's art treasures


Only the most perfect "weather" is good enough! Fine old paintings that can never be duplicated must be carefully guarded from changes in temperature and humidity.

The valuable collection in the University of Notre Dame's O'Shaughnessy Hall Galleries is safely kept in a constantly controlled environment of optimum temperature and humidity. Selected for the job: two quiet, vibration-free Servel 25-ton Water Chillers. Low-cost operation is achieved by using steam from the central power plant.

You will find Servel Water Chillers ideal for many such installations. Since water is the refrigerant, simple piping replaces expensive ductwork; zone control is easy. No moving parts means quiet, vibrationless operation with less wear. Light floor loading permits installation almost anywhere.

And—perhaps most important—Servel Water Chillers operate on steam from any source . . . even waste heat! Send the coupon for information on Servel Air Conditioning for residential, institutional, industrial, or commercial applications.

The Servel 25-ton Water Chiller operates on the absorption principle of refrigeration—quietly, with no moving parts to wear or vibrate. It is light, easily installed. 5-year warranty.

The name to watch for great advances in AIR CONDITIONING & REFRIGERATION

SERVEL, INC., Dept. AR-54, Evansville 20, Indiana

Please send information on Servel Air Conditioning for . . .

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- Commercial
- Institutional
- Industrial

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Address:
City ____________ County ______ State ________

ARCHITECTURAL RECORD MAY 1954 251
fuel and maintenance costs are lower in this building

... with Nurses' Home, Meadville, Pa. Architects: Wilbur Watson Associates Cleveland, Ohio

Fleetlite YEAR-ROUND ALUMINUM DOUBLE, DOUBLE-HUNG WINDOW UNITS

NO STORAGE PROBLEMS FREE FROM DRAFT AND STORMS EASY CLEANING FROM WITHIN

In Meadville, Pennsylvania, Spencer Hospital Nurses' Home installed over 300 Fleetlite Aluminum Window units more than three years ago. Mr. Noel Poix, President of the Board of Trustees, says, "We... find the windows entirely satisfactory, both in appearance and operation and are specifying them in a new addition to the hospital which is now being planned." Other hospital administrators, inspecting the Fleetlite installations at Spencer Hospital, were "very favorably impressed and expressed appreciation of the advantages" of Fleetlite Windows. Storm sash and screens are self-stored in each unit and are cleaned from inside. Double-window protection keeps out cold and exterior noise, lowers fuel costs by tight insulation. Sash can be adjusted for draft-free ventilation. Aluminum construction means no painting or puttying required.

For full information and detailed literature on how Fleetlite Windows can keep building expenses down, WRITE TODAY.

Made by... Territories open for representatives and dealers.

FLEET OF AMERICA, INC. 407 Dun Building, Buffalo 2, New York

LUXURY IN DRAFTING TABLES

A new type of drafting table has been designed to keep all working areas of large drawings within comfortable reach. The drawing board is covered with a wide belt of flexible Krene (a product of the Bakelite Division, Union Carbide and Carbon Corp., N.Y.) attached to rollers mounted on the top and bottom edges.

Reference table, drawers and bookshelves are built into back of drawing table

Turning the bottom roller brings the drawing, taped to the belt, closer to the front board. Pressure from pen or pencil points will not make permanent grooves or ruts on the drawing surface — drafting tape adheres well yet is easily removed in re-usable condition from Krene, which resists most chemical action as well as wear, abrasion and moisture and can be cleaned with a damp cloth. A reference table, two large drawers for instruments and file folders, two bookshelves and a large shelf for rolled or flat drawings are built into the rear of this drafting room furniture. The 36- by 60-in. drafting board is adjustable for height and slope and adaptable for drafting machine, parallel line attachment or T-square. A reference table slides out on cantilevered supports at regulation desk level. Drawers and other moving parts are mounted on ball bearings. The table, constructed with welded steel tubing frame, permits easy cleaning of the floor under the table.

Tecnibord Co., 83 South St., Boston 11, Mass.

(Continued on page 256)
Vina-Lux catches the eye and captures the heart with its high-style colors and lustrous shining surface. It is the perfect backdrop for today's fabrics and furniture. And Vina-Lux floors add greatly to streamlined living. You can clean them without hard scrubbing, and be proud of their appearance without waxing them. After working on Vina-Lux, your legs will tell you how resilient and foot-easy this remarkable floor can be. It's as tough as fine leather, too — virtually unaffected by greases, oils, and most common household products. More and more architects are finding Vina-Lux the final answer to their clients' floor problems.

Why don't you investigate America's leading vinyl-asbestos tile — Vina-Lux!

For a closer look at this superb flooring, write today for Vina-Lux Color Chart. Your nearest Azrock dealer will be glad to show you samples. Write for his name.
Electric Automatic Controls

...provide individual room temperature controls for guests at BRIKCRETE MOTEL in Grand Rapids, Michigan

Smart, modern Brikcrete Motel in Grand Rapids attracted so much traffic a fourteen-room addition became necessary. Original building shown above houses lobby, office, and eleven guest rooms, plus manager's quarters on second floor. Zone control in this building will be changed to individual room control as used in new addition (right).

Restful main lobby of this unique motel provides guests with comfortable seating arrangements, plus television. Entire motel is constructed of Brikcrete, called "the world's most modern masonry."

Color-personalized guest rooms have attractive, modern appointments, including adjustable control of heat radiated from baseboard. Mrs. Marie Degi, manager, adjusts Barber-Colman Thermostat mounted on soundproof wall.

Simplest possible type of heating control was installed in this excellent example of present-day motel design. Individual room thermostats, motor-operated valves, and a power box are combined in an electrical system which has proved highly satisfactory. As Mrs. Degi, manager, states: "The individual control of heat in each room allows our guests to select the temperature they like best. It also allows us to turn off the heat in unused rooms during our slack season. We are impressed with the efficiency of operation and hope to install Barber-Colman units in our original building."

Moreover, Mrs. Degi is considering a central time clock for reducing heat supply during sleeping hours, when many windows are open.

Flexible Barber-Colman electric controls solve a wide range of heating, cooling, and ventilating problems efficiently and economically. Phone your nearest Field Office or write for expert engineering help on your application.

BARBER-COLMAN COMPANY, ROCKFORD, ILL., U.S.A.
Dept. E, 1304 Rock St. • Field offices in principal cities

Automatic Controls • Air Distribution Products • Industrial Instruments
Aircraft Controls • Small Motors • Overdoors and Operators • Molded Products • Metal Cutting Tools • Machine Tools • Textile Machinery

Oil-fired boiler provides hot water (two-pipe system) for heating, washing, bathing, and laundry facilities. Barber-Colman equipment illustrated provides simple, dependable, individual room comfort. Inside Power Box Cabinet are a transformer, disconnect switch, and an overload circuit breaker.
You’ll Make Your Plans More Acceptable
By Adding an Engineered Color Study!

THE importance of the effect of color environment on people is today recognized by practically everyone who owns or operates an industrial, commercial or service enterprise.

That’s why you can make your plans more acceptable to clients by including a detailed color program.

Why not let us submit engineered color recommendations to go with your plans? These recommendations are based upon the principles of COLOR DYNAMICS®. This modern system of painting has demonstrated its ability to improve productive efficiency, morale and well-being in many fields.

We’ll be glad to make such a detailed study without cost or obligation. Simply call your nearest Pittsburgh Plate Glass Company branch and arrange to have one of our color consultants see you at your convenience. Or mail this coupon.

For additional information on COLOR DYNAMICS see Sweet’s Architectural File, Section 14/PL.

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Paint Division, Dept. AR-54
Pittsburgh 22, Pa.

Gentlemen:

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PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED
NEW GARBAGE DISPOSAL UNIT

The Bard-Matic Garbage Eliminator system offers a new method of solving the garbage disposal problem. The system is contained in an upper cone-shaped steel unit and a lower open-ended steel cylinder, installed in any convenient spot in the yard by digging an 18-in.-deep round hole for the lower section. Unwrapped garbage, including bones, eggshells, meat scraps and fruit rinds, is placed in the transfer container, which is kept near the sink and can be transferred to the Eliminator when necessary. Galalystic starter, furnished with the system, is used to start the disposal action. It is to be used on the first garbage deposit only — no additional starter need be added at any time. Control chemical, a liquid concentrate known as San Elixir, not essential to the operation of the Bard-Matic Eliminator under normal conditions, can be used to combat offensive odors and insects.

The manufacturer warns that glass, metal, cloth or paper should never be placed in the unit. Bardmatic Corp., Muskegon, Mich.

METAL VENTILATING LOUVER

Luv-O-Metal is a new interlocking structural shape which can be integrated to form ventilating panels. Solid on top to keep out weather and insects, and ventilated on the bottom, the panels can be used as gable louvers and other sheathing sections where ventilation is desirable.

Travellers from all over the world enjoy luxury living at the famous Waldorf-Astoria Hotel on New York's Park Avenue.

Contributing to this luxury is a dependable source of clean hot water—enough for a town of 10,000 people who fill the Waldorf's 2200 guest rooms and public halls. Abundant, pure, rust-free hot water is always on tap direct from p-k copper-lined hot water storage heaters.

These heaters are really two heaters in one. Inside a heavy steel shell is a complete copper heater. Thus all the non-corrosive and durable qualities of copper are combined with the superior strength of steel. Water touches only non-rusting copper.

p-k's 73 years of experience gives you two things—a satisfactory product and a sound guarantee. Why not learn more about p-k copper-lined heaters. Write on your company letterhead for p-k bulletin No. 18.

the Patterson-Kelley Co., inc.
1950 Burson Street, East Stroudsburg, Penn.

Lightweight aluminum louvers interlock securely, protect against weather and insects while providing ventilation.

In appearance like the conventional wood slat louver, Luv-O-Metal is said to be stronger and more weatherproof, especially against rain and snow blown by high winds. Made of aluminum and produced in standard lengths of 2, 4, 6, and 8 ft, the louvers can be cut with ordinary woodworking tools. Marvin W. Coleman, 4150 Syracuse, Dearborn, Mich.
Ford "dream shop" has built-in climate!

This "dream shop" at the Ford Engineering Staff's Advanced Styling Section is just one of many styling areas which depend on clean, conditioned air.

For example, in 12 roomy studios clay-modeling teams work under lights which produce shadowless illumination — and intense heat! To absorb this heat and provide the proper climate for working with clay models, specially designed air-conditioning systems were installed for each studio and drafting room. American Blower Air Handling and Air-Conditioning Equipment was used for this unusual assignment.

The expert know-how of American Blower engineers is on tap for industry at all times. If you have an air-handling or air-conditioning problem, phone your nearest American Blower or Canadian Sirocco Branch Office.

Air for drafting rooms and modeling studios is conditioned by 24 specially built, automatically controlled American Blower Air-Conditioning Units. Each unit contains heating and cooling coils and capillary air washers.
THE STRONGEST ENDORSEMENT
EVER GAVE AN ARCHITECTURAL

Almost twenty-six thousand architects and engineers now subscribe to Architectural Record.

Never before has an architectural magazine made accessible to advertisers so many of the architects and so many of the engineers whose designs and specifications determine which building products four out of five of the nation's building dollars will buy.

Periodic checks of Dodge Reports of building activity (available exclusively to Architectural Record), show that over 85% of the total dollar volume of all architect- and engineer-designed building, nonresidential and residential, small and large, is currently in the hands of Architectural Record's architect and engineer subscribers.

This unequalled and verifiable market coverage results from an editorial service that is unique.

Architectural Record balances and times its editorial content with the aid of Dodge Reports to be of constant maximum value to architects and engineers in terms of the work on their boards—serves the full range of architectural design, nonresidential and residential, that comprises the practice of architects and engineers—edits every page of every issue specifically for architects and engineers.

That is why architects and engineers have voted Architectural Record their preferred magazine in 55 out of 62 readership studies sponsored by building product manufacturers and advertising agencies. (Ask for the interesting new summary of these studies.)

Advertisers, too, endorse Architectural Record above all other magazines in its field.

In 1953 Architectural Record carried 2,931 pages of advertising—an all-time high for architectural magazines—and again in 1954 advertisers are placing primary reliance on Architectural Record.

F.W. DODGE CORPORATION

Architectural Record

"Workbook of the active architect and engineer"

F. W. Dodge Corporation, 319 West 42nd Street
New York 18, N. Y. • OXford 5-5000

258 ARCHITECTURAL RECORD MAY 1954
Total Architect and Engineer Circulation

<table>
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<th>Magazine</th>
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<td>Progressive Architecture</td>
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<td>Architectural Forum</td>
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*Based on December 1953 A.B.C. Publisher's Statements*

Comprising all "Subscriptions in Company Name, Owners & Corporate Executives, General Managers & Managers" in Classification 1 ("Architectural, Architectural-Engineering Firms & Architects & Architect-Engineers in Private Practice") and Classification 2 ("Consulting Engineering Firms & Engineers in Private Practice"), plus "Registered Staff Architects" and "Staff Engineers" in all Business & Industry Classifications.

**Loss from June 1953**

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*According to A.B.C. Publisher's Statement*
NEW BELLS LIKE OLD

Cast bronze bells with an "old-time" quality are molded according to new methods and tuned in the modern manner — by means of electronic measuring instruments — by Eijsbouts-Lips in Holland. In addition to modern methods of production, Eijsbouts supplies electrical bell-ringing apparatus which re-creates tones exactly as if the bell were being rung by hand. The ringers are designed for ringing when desired or they are attached to clock mechanisms for ringing the hours. Eijsbouts-Lips also makes tower clocks, electrical master clock systems for regulating and setting tower clocks, and electrical playing devices for carillons. Nederlandse-Klokkenkouterij B. Eijsbouts-Lips, Assen, Holland.

PLANNING AID FOR DAYLIGHT INCIDENCE

The Horizontoscope — a handy semi-spherical device only 4 1/4 in. in diameter — is a novel planning aid in determining sunlight and daylight conditions and solar heat in existing and projected buildings. The scope, with circular charts corresponding to the latitude under the transparent plastic cover, is held horizontally at the site to be investigated and viewed from above. The sky area which is mirrored in the cover, as read on the charts, provides information which answers the following questions:
1. When and how long does a site get sunlight?
2. What insulation does a projected building receive through the window when the sky is clear?
3. What shadows do neighboring buildings, trees, etc., cast?
4. How much daylight should be expected on a level or vertical surface in a room when the sky is overcast?

When plans are being made for projected structures, the mirrored images to be expected at the real site can be obtained on the model or with the aid of an auxiliary chart. Friedrich Tonne, Dipl.-Ing.-Architekt, Stuttgart-N, Robert-Hau-Weg 9, Germany. (F. H. Paul & Stein Bros., Inc., 100 Gold St., New York 38, N. Y.)
Sheathing of West Coast lumber — the building material with an outstanding record of performance — assures walls that are strong, rigid and long lasting. Lumber offers high insulating value, real nail-holding power. West Coast lumber is time-tested in conventional construction. And, as always, it remains the natural choice of the day's most creative designers.

For dependable lumber, specify the West Coast species...Douglas Fir, West Coast Hemlock, Western Red Cedar and Sitka Spruce.

Send for folder describing free literature available for your reference files.
West Coast Lumbermen's Assn., 1410 S.W. Morrison St., Portland 5, Ore.

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thanks to Viking SPRINKLER HEADS

The Chicago Tribune is insured against "four alarm" fires with a Viking Automatic Sprinkler installation. Each Paper Storage Area, Reel Room, Press Room, Mailing Room and other vulnerable points in the Tribune Tower and Plant are protected by VIKING Sprinkler Heads.

Expert Viking engineering beats the problem of narrow space between ceilings, machinery and equipment with a highly efficient sprinkler installation.

The entire Sprinkler System was prefabricated and installed by Viking so it would not interfere with high speed Reel and Press Room operations.

This efficient protection was proved one day, when a molten piece of metal, from welding apparatus being used by an outside contractor, fell into the paper in a raceway between the paper reels. Within seconds a fire started. One VIKING Sprinkler opened and immediately extinguished the blaze. The presses were running again within ten minutes and a possible "four alarm" fire was stopped before it started. Without the VIKING protection it is probable that the entire Press and Reel Rooms might have been out of service for an extensive period of time, and the lower structure of the Tribune Building could have been seriously damaged.

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no other recessed lighting instrument offers all the practical advantages of Century’s series 930 ellipsoidal Downlite... compact, low in cost, uses general service lamps... bulb just screws in from below—no plate to open... eye comfort is assured by the extremely low brightness of the opening—which is small... the bottom of the unit is absolutely flat and smooth (no bumps in the ceiling plane) and the precision reflector is Alzak Processed for permanent efficiency.
SPLASHED WITH OIL...

ALGRIP
still remains Non-Slip!

It occurs every day. ALGRIP Abrasive Rolled Steel Floor Plate is installed—then insurance premiums tumble—slipping accidents stop.

The reason is tough steel floor plate impregnated uniformly with abrasive "grinding wheel" grain. Result: A truly non-skid surface that stays slip-proof, because wear only exposes new particles... a "safety extra" offered only by ALGRIP.

If your accident insurance premiums are too high, let ALGRIP bring them down. Mail this coupon today for the complete ALGRIP story. There's no cost or obligation.

Underwriters' Laboratories approved for safety. Note depth and uniformity of abrasive grain.

A.W. ALGRIP Abrasive Rolled Steel Floor Plate
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send Booklet AL-19 on how ALGRIP can cut costs and accidents:
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SHOP-FABRICATED BUILDINGS

A new all-steel building — the Utilimaster — is shop-fabricated and pre-designed for maximum speed, economy and simplicity in erection. The building features a "rigid frame" construction which eliminates overhead interference from trusses and braces and provides unobstructed clearance all the way to the roof for machinery, equipment and material storage. It is supplied in 40-, 50- and 60-ft clear spans, in any length and in single units or in side-by-side "multi-gable" arrangements. The basic Utilimaster framework can be used in combination with concrete block, brick and precast concrete walls and a wide variety of other building materials.

Shop-fabricated all-steel building is pre-designed for ease of erection

Standardized, mass-produced parts are used throughout the Utilimaster. All parts are shipped from the factory completely fabricated and cut to exact size so that no field cutting, burning or welding parts is required. The strong, lightweight rigid bents are lifted into position on hinged base shoes with a light-duty crane. Roof sheets and roof insulation are installed from above so that no interior scaffolding or crew is required. Interior structural members are shop-painted and all exterior steel parts are galvanized for rust prevention. Reports indicate that a typical 50- by 100-ft Utilimaster can be erected in 10 working days.

Standard glass fiber bat-type insulation is used in the Utilimaster. Roof insulation, which comes in rolls pre-cut to length, is installed over roof purlins and brace wires prior to roof sheet application. Wall insulation attaches to metal clips. Dresser-Stacey Company, Idecu Division, 875 Michigan Ave., Columbus 8, Ohio.

(Continued on page 268)
Flond and spotlight: for general and special lighting at the new State of Alabama Agricultural Coliseum are mounted on a catwalk 76 feet above the arena floor with a connected load of 222 Kw. Transformers and feeder panels are on the ground. ELECTRUNITE E.M.T. was used for both installations.

State of Alabama Agricultural Coliseum, Montgomery, Ala.
Electrical Engineer: James L. Phillips, Birmingham, Ala.
Distributor: Noland Co. of Montgomery

Where Safety Counts, You'll Find
Republic "Inch-Marked" E.M.T. Electrical Metallic Tubing

You want to be sure electrical wiring is safe and has the mechanical and electrical protection inherent in a steel conduit system. The contractor wants a job that goes in easily and adds to his reputation.

That's why so many buildings like the new State of Alabama Agricultural Coliseum contain a lot of Republic "Inch-Marked®" E.M.T. This lightweight, rigid steel raceway protects wiring circuits against fire, moisture and mechanical injury. It's inspected by Underwriters' Laboratories and approved by the National Electrical Code for exposed, concealed or concrete slab construction.

Corrosion resistance is unbroken, from end to end. There are no threads to cut. Connectors and couplings go over the tube to make tight joints . . . without disturbing the four-dip Preece Test Coating. Galvanized finish will not chip, peel or flake off. Get all the facts in Sweet's. Or write for Booklet SA-54.

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ARCHITECTURAL RECORD MAY 1954 265
get this NEW booklet about

THRUSH RADIANT HOT WATER HEAT

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FOLKS today want modern heating in their homes... even the smallest ones. Now you can give them, at low cost, Thrush Radiant Hot Water Heat with invisible heating coils in ceiling, floor or baseboard, convectors or conventional radiators. Thrush offers the most economical, efficient and completely automatic system of control for radiant hot water heating available today.

Thrush equipment not only saves fuel, but gives your clients, automatically, the comfort they are seeking. Radiant heat is always present. Temperature is constant, without noticeable fluctuation. Zoning is simple. Installation costs are reduced, too.

See our catalog in Sweet's or write Department J-5.

H. A. THRUSH & COMPANY
PERU, INDIANA
TOPS IN TOPLIGHTING

585 WASCOLITE SKYDOMES toplight the Master Operations Building of the new U.S. Army Signal Corps depot at Tobyhanna (Pa.). According to the Architects/Engineers, Gilboy & O'Malley, Philadelphia: "The size—680,000 sq. feet—and shape of this building were dictated by functional requirements. Because daylighting from exterior walls would not reach interior areas, we needed toplighting units that would provide maximum light transmission. Ease of installation was especially important in order to expedite construction. Maintenance, exterior cleaning and painting, and condensation control were other factors. Wascolite Skydomes met all these requirements."

PREFABRICATED SKYDOMES can be installed easily in a few minutes. Shatterproof dome is set between extruded aluminum frames. Built-in weepage arrangement provides complete condensation control.

LATEX COVERING protects Skydomes from scuffing or scarring in shipment and installation. Skydomes are available in Clear Colorless or White Translucent acrylic plastic, in three basic shapes and a variety of sizes.

Wasco offers architects a complete Daylight Engineering Service. Just send floor plan and elevation of project and lighting requirements. No obligation.

CREDITS: Gilboy and O'Malley, Architects/Engineers; Alfred Clauss, architect partner; Merritt-Chapman & Scott Corp., contractors; Columbia Cornice Company, roofing contractor.

See Sweet's Catalog or write WASCO FLASHING COMPANY, 82 Fawcett Street, Cambridge 38, Mass.
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IS ENDANGERED
AT THE FINAL POINT...

THIS FINISHING TOUCH PROTECTS YOU!

All the creative work that you put into designing a lovely panelled room, can be marred by the way it is finished.

Here are three products, recommended by United States Plywood Corporation, that can save you the despair of disappointments, insure a satisfaction of having a job turn out the way you imagined.

For blond or pickled effects Specify
WHITE FIRZITE
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To tame wild grain on fir plywood stain jobs, specify
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For a natural wood finish on all woods specify
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It brings out and preserves the natural grain and color beauty of any wood. Water-clear Satinlac avoids that heavy built-up look and does not turn yellow. Ask us to send you a blood Birch panel showing a Satinlac finish.

If you have any problems in wood finishing, let us help you. Write also for specification sheet.

UNITED STATES PLYWOOD CORPORATION
Dept. 102—55 West 44th Street, New York 36, N.Y.

FLOOR FOR OPERATING ROOMS

A new type of static-proof floor tile, made from vinylite resins produced by the Bakelite Co., division of Union Carbide and Carbon, is recommended for use in hospital operating rooms. Designed to reduce the danger from static electric explosions, Robbins Static-Proof tile equalizes the electrical potential of all objects properly contacting the floor, reportedly eliminating the danger of explosions from static discharge in the presence of explosive anesthetics.

Manufactured in light-reflecting colors, including white, this tile flooring is installed without the use of adhesives. Designed to meet the requirements of the National Fire Protection Assoc., the manufacturer guarantees installations for a period of five years. Due to the method of installation, it is reported that there can be no failure in performance caused by loss of conductivity in the adhesive, because no adhesive is required. Tests subjecting the tile to blood, alcohol, acids, alkalis, oils and other chemicals commonly found in operating rooms, have failed to damage it. Better results in maintaining a satisfactory range of conductivity is claimed by eliminating waxing and providing a non-porous surface, easily cleaned, preventing a build-up of insulating films over the floor surface. When installed in accordance with specifications, no grounding system is required unless specified by local code. Robbins Floor Products, Inc., Tuscaloosa, Ala.

PORCELAIN HARDWARE DRESSES UP

A new line of hand-decorated porcelain Decor hardware, made up of style elements to fit rooms ranging from modern to traditional, has been added to Yale & Towne's line of style-designed ceramic hardware. The variety of decorative accents include hand-painted floral arrangements on white backgrounds with green trim and gold applique; solid green, yellow, blue and muted Chinese red styles — some trimmed in gold and others plain; knobs, pulls and plates in black and green with speckled gold; black with gold spiral motif; plaid, and simple white and gold. S. P. Skinner Co., Inc., 225 Fifth Ave., New York, N.Y.
Could you change
YOUR plant layout
tomorrow?

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DISTRIBUTION ASSEMBLIES DEPARTMENT, PLAINVILLE, CONN.

From power line to production line, make it G.E. all the way.

GENERAL ELECTRIC
LITERATURE

For Industrial Roofing & Siding
specify Grade-Marked
Galvanized Sheets

for PEAK PERFORMANCE

Engineers and designers of industrial and commercial buildings know galvanized sheets to be superior building material for this type of construction—particularly for roofing and siding. They know that time-tested galvanized sheets offer:

• SHORT-TERM plus LONG-TERM ECONOMY
Low initial cost, low application cost, low per-year cost

• STRENGTH OF STEEL; RUST-PROTECTION OF ZINC
Withstand rough treatment, add structural strength and are fireproof

All galvanized sheets give years of useful service. But the heaviest the zinc coating, the longer the life of the base sheet. Because various weights of zinc coating look alike on the surface, it pays to specify a grade-marked sheet... Get the heaviest coating you can buy!

IT'S THE ZINC THAT STOPS THE RUST

For long, rust-free service, specify a heavy duty sheet such as the "Seal of Quality" with a zinc coating of 2 ounces per square foot. For heavier coatings order according to ASTM Specification A 93.

ATTENTION: MAINTENANCE DEPTS.

Get the facts on MZP (Metallic Zinc Paint) for structural steel and galvanized surfaces. Also, zinc for cathodic protection and grounding electrodes. Check coupon below.

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Company

Name of Individual

Address

City or Town Zone State

(Continued from page 215)

AIRFLOW FUME HOODS

CARPETING
So You're Going to Buy a Carpet! New booklet gives advice about colors, fibers, and weaves along with information on the type of rug for the type of room. Oriental rugs, carpet padding and installation are also described. 16 pp, illus., 8.10 per copy. Carole Window, Galotan Home Decorator, 295 Fifth Ave., N. Y. 16, N. Y.

LIGHTING
Plextile. Folio No. P-54. Booklet describes a variety of lighting units which have molded white plexiglas diffusers and eighteen gauge cold-rolled steel chassis finished in baked white enamel of 89 per cent reflectivity. Folio P-54 contains complete specifications on the wide range of units, squares, rectangles, rounds; varying deepness of the diffuser; and many sizes up to 4-ft sq and 6-ft round. Fully illustrated, it displays many application possibilities. 15 pp, illus. Graber Lighting, 125 So. First St., Brooklyn 11, N. Y.

SUSPENDED CEILING APPLICATION SYSTEMS
Advantages, engineering data and architectural specifications on two types of suspended ceiling systems, the Nailock and Screwlock, are contained in the Sanymetal Suspended Ceiling Catalog SN-6, A.I.A., 39-B-1. 8 pp, illus. The Sanymetal Products Co., Inc., 2093 E. 19 St., Cleveland 15, Ohio.*

INSTALLING TILE FLOORING
Recommended Specifications for the Installation of Vinyl Plastic Asbestos Tile Flooring, A.I.A. File No. 23-G (N.N.), is a three-page paper listing materials required for the operation and the application of the materials for sub-floor surfaces (concrete and wood) plus general recommendations. Asphalt Tile Institute, 101 Park Ave., New York 17, N. Y. (Continued on page 274)
When you want a showpiece floor... specify Gold Seal Rubber Tile. It's so resilient it puts wonderful comfort into footsteps... hushes every room to soothing quiet. This magnificent resilience helps it do the best job of resisting indentation from heavy furniture and leather heels... keeps it from chipping or cracking! Gold Seal Rubber Tile has a beauty that lasts its life through... needs little upkeep. Its clearer, truer, more beautiful colors suggest an endless variation of appealing design combinations. Now in 21 marbleized colors. Standard and 1/8" gauges. 6" x 6", 9" x 9", 12" x 12" tiles.

Our Kangaroo and the ball are made of thirteen Gold Seal Rubber Tile patterns

GOLD SEAL® Floors and Walls

CONOLEUM-NAIRN INC.

Kearny, New Jersey ©1954

Architects' Service Dept.
Congoleum-Nairn Inc., Kearny, N. J.
Please send me the illustrated booklet "Which Floor Goes Where in Commercial Areas" which shows the advantages and disadvantages of various floor coverings and recommends where each type should be installed.

NAME
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CITY
STATE

ARCHITECTURAL RECORD MAY 1954 271
Economical Architectural Concrete made with Duraplastic*
Rates an "A" in Appearance

THE NEW Theodore Roosevelt Junior High School in Williamsport, Pa., scores high in appearance as well as economics—construction costs are held down because architectural concrete serves as both structural and facing material. And lowest possible maintenance and insurance costs can be figured with durable, fire-safe concrete construction. For better concrete quality, Atlas Duraplastic air-entraining portland cement was used throughout.

Duraplastic aids proper placement with improved surface appearance because of its more workable, more plastic mix. It requires less mixing water for a given slump. And with Duraplastic, there's another big advantage—

The air-entraining feature, originated and developed by Universal Atlas, minimizes bleeding or water gain and segregation. Thus the finished concrete is fortified against the effects of freezing-thawing weather.

YET DURAPLASTIC COSTS NO MORE. These advantages are yours simply by specifying Atlas Duraplastic. It sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For more information, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Ave., New York 17, N.Y.

OFFICES: Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

**"Duraplastic" is the registered trade mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.
Here's a doorway that helps to open the way to reduced costs!

Doors open at a touch!

Its magic-like operation has made the Pittomatic Hinge "the nation's finest automatic door opener." Just a touch on the handle and doors open silently and smoothly. This diagram shows the operation of the Pittomatic. Hydraulic power is supplied by the power unit to the hinge under the door through \( \frac{5}{8} \)" copper lines. Oil lines are 3000-lb. test. A 10-volt circuit in the handle passes through the control box and activates the power unit. Since no power can build up, it is a safe door.

SPECIFYING a Pittsburgh Doorway is one of the important steps you can take to help cut on the-job costs. That's because these doorways are factory-assembled to precision standards. They come to the site in one "package"—ready for quick, easy installation. It's simply a matter of unpacking the frame and bolting it into the building opening. Then the Herculite Doors, for whose strength the frames have been especially engineered, are hung. That's all there is to it. No time-consuming calculations and fabricating at the site.

That is why we suggest: "In figuring on doorways, consider the total-installed cost—not just the list price." When you do, you'll find Pittsburgh Doorways winning hands down! You'll want all the facts. So, why not write today to Pittsburgh Plate Glass Company, Room 4192, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

Pittsburgh DOORWAYS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED
YOU GET MOST WITH AMPLEX SWIVELITES

The Amplex Swivelite line for accent lighting is absolutely unapproached for efficiency and dollar value. Look at these features: the adapt-a-unit principle that produces a completely different lighting fixture in minutes...superb styling...permanent, lustrous finish...finger-touch positioning...perfect ventilation that prolongs lamp life. Write for the full Swivelite story.

AMPLEX CORPORATION, DEPT. D-S. 111 WATER ST., BROOKLYN 1, N. Y.
You ought to read the sensational reports we're getting on the way RB&W high-strength bolts (ASTM Specification A-325) are speeding construction.

Listen to Jack Corchin, president of steel erectors Max Corchin & Sons, Inc., Philadelphia. His firm just put up the steelwork for the new Springfield (Pa.) High School. Here's what he says:

“Our records show that your high-tensile strength bolts saved two weeks in erection. Our cost was only 60 percent of our estimate for rivets. High-strength bolts offer easy and quiet installation, and they provide more strength at lower cost.”

These are facts. You can’t overlook them. You can’t argue about them. You can sit down and write for our catalog “High-strength Bolts for Structural Steel Connections.”

You can't overlook them. You can't argue about them. You can sit down and write for our catalog “High-strength Bolts for Structural Steel Connections.”

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RUSSELL, BURDSALL & WARD

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Plants at: PORT CHESTER, N.Y.; CORAOPOLIS, PA.; ROCK FALLS, ILL.; LOS ANGELES, CALIF. Additional sales offices at: ARDMORE (PHILA.), PA.; PITTSBURGH; DETROIT; CHICAGO; DALLAS; SAN FRANCISCO. Sales agents at: PORTLAND, SEATTLE. Distributors from coast to coast.
18,000 LBS. OF NON-RUSTING REVERE COPPER, IN THE FORM OF PREFABRICATED ORNAMENTAL TOWERS AND SHEET, IS SENT TO THE SOUTH SEA ISLANDS TO FIGHT THE BATTLE OF CORROSION.

When the question was broached as to what metal should be specified for the flashing, gutters, downspouts and towers of the 15 new chapels and 3 new schools to be erected in the Pacific Islands, there were no ifs, ands or buts. Architect, EDWARD O. ANDERSON (A.I.A.), specified copper ... the metal that has already proved its superior endurance under the most adverse atmospheric conditions throughout the centuries.

Also, copper was the ideal choice for the decorative towers as it is so readily fashioned into any desirable form and takes solder so well. This project, which covers schools in Tonga, British Samoa and Tahiti, and 15 chapels in various Samoan Villages, introduced the concrete block to the Islands. Roofs, interestingly enough, are corrugated Transite.

You may have few projects in the South Sea Islands, but it's a good thing to remember; whether you are designing buildings for a tropical clime or Main Street, U.S.A., the way to keep out of trouble is to use the metal that has already proved itself everywhere ... copper.

Protect your reputation. Give your jobs the many benefits of Revere Copper. There is a Revere Distributor near you who stocks Revere Sheet, Strip or Roll Copper for flashing and roofing. Ask him about the money-saving advantages of Revere Keystone Thru-Wall Flashing® and the new Revere-Keystone 2-piece Cap Flashing.** And, if you have technical problems, he will put you in touch with Revere's Technical Advisory Service.

*Patented **Pat. Pend.

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COPPER AND BRASS INCORPORATED
Founded by Paul Revere in 1801
236 Park Avenue, New York 17, N.Y.
Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.;
Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N.Y.—
Sales Offices in Principal Cities, Distributors Everywhere.

SEE "MEET THE PRESS" ON NBC TELEVISION, SUNDAYS
Here’s inside information on the finest Ice making unit ever made

Here’s the Ice Freezer. Ice discharges through base into bin.

Automatic controls govern all operations of the machine including shutting off when the bin is full.

On-Off toggle switch.

Selector switch for cylinder or crushed ice, as desired.

Electrical, water and drain connections provided on right hand side of unit.

STANDARD 2000 LB. CAPACITY UNIT

Saniitary, non-corrosive, polished stainless steel inside and out.

Operation of the Machine

1. Single toggle switch controls starting and stopping of unit. Ice discharges through base of freezer to patented ice sizing cutter.

2. A three-position selector switch provides automatic control of ice making unit to produce and store cylinder and crushed Tube-Ice consecutively (requiring two ice bin thermostats) or either type of ice exclusively.

3. Automatic blowdown in water pan maintains freshness and aids in reduction of concentrated solids.

4. An upper “scoop out” for small quantities of ice and a lower “shovel out” door are provided in storage bin.

HENRY VOGT MACHINE CO.
Louisville 10, Ky.

Minimum of 3” Fiberglass insulation between storage bin walls. Bin has removable partition if but one type of ice is desired.

Copper or brass tubes used for freezer, condenser and refrigerant piping.

Tube-Ice Units are completely self-contained and conform to A.S.M.E. Code. Require only the addition of the refrigerant charge, water and electrical connections.

WRITE FOR BULLETIN

Branch offices: New York, Philadelphia, Chicago, Cleveland, St. Louis, Dallas, Charleston, W. Va.
"Hush-a-Bye" Quiet

A NEW ACHIEVEMENT IN QUIET FAN PERFORMANCE

The new "Buffalo" Type "BL" Limit-Load Fan with the "Q" Factor* brings in a new era of low-decibel performance which will have a profound effect on ventilation in plants, hospitals, hotels, office buildings, schools, stores and auditoriums... in fact, in any building where "quiet" is important.

This superb smoothness and quietness have already earned for the "BL" the name "Hush-A-Bye Buffalo". Why not see the engineering reasons for this, in new Bulletin F-100.

*"Q" Factor — The built-in Quality which provides trouble-free satisfaction and long life.

BUFFALO FORGE COMPANY
145 MORTIMER ST. BUFFALO, N. Y.

Publishers of "Fan Engineering" Handbook
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

VENTILATING AIR CLEANSING AIR TEMPERING INDUCED DRAFT EXHAUSTING
FORCED DRAFT COOLING HEATING PRESSURE BLOWING

(Continued from page 274)

ALL ABOUT EAMES CHAIRS
The Eames Chair Chart was released by the manufacturer for use by architects, interior decorators and designers. It gives complete information on the five seating forms — bases, colors and upholstery fabrics. 4 pp, illus. Herman Miller Co., Zeeland, Mich.

VAPOR RISE PROTECTION
Tech Tips illustrates the use of Sealtight, premolded membrane that reportedly offers a positive vapor barrier, for on-grade-slab installations, joist-over-grade installations and perimeter duct installation. Complete with detailed diagrams, this folder gives specifications and applications of the product in such situations as concrete floors in basementless houses, the impermeable resilient core wall and deck, under slab duct installation and the wood floor on the grade slab. 48 pp, illus. W. B. Meadows, Inc., Elgin, Ill.

NAILS VERSUS STAPLES
Effectiveness of Nails Versus Staples for Fastening Underlayment was written by E. George Stern, Research Professor at the Virginia Polytechnic Institute, on an investigation sponsored by the Independent Nail and Packing Co., Bridgewater, Conn. The booklet gives data on several series of tests performed on the effectiveness of nails versus staples in fastening 1/2-in. thick underlayment (such as Douglas fir plywood and Masonite) over rough subflooring to serve as a smooth, flat base for linoleum, rubber tile, carpeting and other finished flooring. 8 pp, illus. Virginia Polytechnic Institute, Dept. of Wood Construction, Blacksburg, Va.

LITERATURE REQUESTED
The following individuals and firms request manufacturers' literature:
- Jacques Helio, Architect, 121 rue Faider, Bruxelles, Belgium.
- Julius Lusis, Architectural Draftsman, 3590 Park Ave., New York 56, N. Y.
- William Wesley Peters, % Frank Lloyd Wright, Architect, Taliesin, Spring Green, Wis. and also Taliesin West, Phoenix, Ariz.
World's Largest Maintenance Hangar

This mammoth building, dwarfing the planes on its concrete ramp, is Eastern Air Lines' new $5,000,000 maintenance hangar, largest and most modern of its kind in the world.

Built in the shape of a T, the three-story structure stretches nearly a quarter of a mile from end to end. The stem of the T provides fourteen work ports, seven on each side, while the huge hangar crossing the T accommodates two Super-Constellations. In addition, the 448,748 square feet of floor space contains maintenance offices, overhaul shops, stockrooms and a large, one-story warehouse.

The sturdy framework of this remarkable building consists of 3082 tons of structural steel, fabricated and erected by Bethlehem Steel Company. Erecting an average of almost 100 pieces of steel every day, Bethlehem completed the job in just 70 working days.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributors: Bethlehem Steel Export Corporation

BETHLEHEM STEEL

Plan view of ground floor. Thin lines indicate overhanging roof supported by cantilevered trusses. View of steelwork for 1219-foot-long hangar.
This striking WINDOW WALL, duplicated on the east facade and repeated by even larger ones on two elevations of the adjoining Harvey Ingham Hall of Science, demonstrates exceptionally well the practical benefits HOPE'S WINDOW WALLS constructed from Hope's pressed steel subframes and Hope's Intermediate Projected Windows. Observe that the system of fenestration completely covers the face of the building from grade to ceiling of the top story, eliminating sill-high masonry and exterior columns. Such a system is easily and quickly installed; saves time and cost in erection.

Inside, the complex needs of laboratories, classrooms, offices and corridors are met with ventilation and light in abundance, under good control. Hope's system of WINDOW WALL construction is weathertight; it permits infinite variety in design; upkeep expense will be low.

All types of ventilators can be accommodated in HOPE'S WINDOW WALL system and it can be applied to buildings of any length and height. Hope's Engineering Dept. is always ready to help you with details. Other installations are described in "Hope's Window Walls" (publication No. 134W).

HOPE'S WINDOWS, INC., Jamestown, N.Y.
THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS
"WE GET BIG SAVINGS BY BURNING COAL THE MODERN WAY!"

Other fuels would cost us far more!"

says
Mr. A. J. Monta,
Plants Engineer,
The Welch Grape Juice Company, Inc.,
Westfield, New York

"We analyzed the cost of coal and other fuels before modernizing our power plant. The result is this up-to-date coal installation that delivers steam at half the cost of competing fuels. For economy you can't beat bituminous coal burned the modern way!"

Modern coal-burning and handling equipment saves this plant more than 35% on labor alone! New stokers, boilers, controls and coal-handling equipment cut labor costs and save this plant $80 on fuel. The complete installation will pay for itself in about 6 years.

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Burning bituminous coal the modern way can save you money, too! Labor costs are cut to a minimum with up-to-date coal- and ash-handling equipment... modern combustion installations deliver anywhere from 10 to 40% more power from every ton of coal!

That's why, if you're planning to modernize or build a new plant, it will pay you to get the latest facts on coal. Let a consulting engineer show you how a modern coal installation designed to meet your specific needs can save you real money.

Here's something more! Today's bituminous coal customers get a better-prepared product—designed to meet their special requirements. And bituminous coal offers future dependability no other fuel can match. Reserves are virtually inexhaustible, and America's coal industry is the world's most efficient —your assurance of dependable supply of coal at relatively stable prices for years to come.

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BITUMINOUS COAL INSTITUTE
A Department of National Coal Association, Washington, D. C.
For shopping centers and for every public building, where appearance, sanitation and ability to stand the hardest usage are vital, Weisart toilet compartments are the logical choice. Their enduring serviceability has a triple protection: (1) flush steel construction with edges locked and sealed, galvanized surface smooth as furniture steel (2) Bonderized for additional corrosion resistance and positive adhesion of enamel (3) synthetic primer and enamel separately baked, combining highly protective surface with lustrous beauty in choice of 24 colors! Ceiling-hung Weisart compartments leave floor clear for cleaning.

For detailed information write

HENRY WEIS MFG. CO., INC. 503 Weisart Bldg., Elkhart, Ind.
New G-E Series and Lead-lag Ballasts

...Compare and Choose for Yourself

Here is a comparison of G.E.'s two new ballasts for operation of 96T12 lamps at 425 ma. Catalog No. 89G496 is the newly designed series ballast—smaller, lighter, quieter. Catalog No. 89G490 is the similarly redesigned lead-lag ballast.

BOTH BALLASTS ARE CBM CERTIFIED and contain that full measure of extra quality which G-E engineers into every ballast, but the series ballast, by its inherent design characteristics, gives you more value for your dollar. However, if you prefer lead-lag instead of series, the new lead-lag ballast has been designed to give you the most value compared to other lead-lag ballasts.

THE SERIES BALLAST gives you equivalent performance, in accordance with lamp specifications, and offers a substantial savings in cost and size. At right is a comparison of these two General Electric ballasts. The major areas of difference are printed in bold face. You can see that the series is less expensive, uses less line current, has less wattage loss, weighs less, has a quieter sound rating, is smaller and has less open circuit voltage.

For further information on either series or lead-lag ballasts, write to Section 401-6, General Electric Co., Schenectady 5, New York.

<table>
<thead>
<tr>
<th>SERIES 89G496</th>
<th>LEAD-LAG 89G490</th>
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<tr>
<td>73</td>
<td>Nominal lamp watts</td>
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<tr>
<td>110-125</td>
<td>Circuit voltage</td>
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<td>60</td>
<td>Frequency</td>
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<td>1.55</td>
<td>Line Current in Amps</td>
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<td>Lamp Current in Amps</td>
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<td>90%</td>
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<td>630</td>
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Progress is our most important product

GENERAL ELECTRIC

ARCHITECTURAL RECORD MAY 1954 283
THE "XYZ" OF DEPENDABLE ACOUSTICAL SUSPENSION SYSTEMS

The new improved Loxit VICTORY Acoustical Suspension System is really three systems in one—"X" Regular—"Y" Surface Applied—and "Z" Combination. Used individually or in combination, this system meets every acoustical tile-setting condition. Type "X", shown at the right, was engineered to care for conditions where furring channels are being used as the supporting structural members for the suspension system. It is simple and easy to use.

LOXIT Victory Regular System

Type "Y" at the right illustrates how the Loxit Victory Surface Applied Acoustical Suspension System was designed to meet those conditions where no suspension is involved, with the tiles being applied directly to the ceiling, or to the bottom chord of bar joist or other structural sections. Using Loxit channels AC-400 or AC-1000 with Loxit clips AC-421, this type of installation becomes both simple and practical. Using 3/8" tiles, the overall dimension from ceiling to face of tile is only 2-3/16".

LOXIT Victory Surface Applied System

Type "Z" shown here is the Loxit Victory Combination Acoustical Suspension System which embraces both Type "X" and Type "Y" and provides facilities for leveling the suspension members of the system by shimming between the Loxit channels AC-400 or AC-1000 and the furring channels. The Loxit channels serve to tie together the furring channels to add greater stability to the suspension structure as a whole. Because of its flexibility, Type "Z" can often be used to great advantage.

LOXIT Victory Combination System

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willing to bear any expense over and above that figure to hold a state conference on the subject.

States would use their Federal grants to bring together educators and others interested in educational problems, then try to come up with recommendations for action to be taken at local, state and Federal levels.

After the state conferences, opinion would be rounded up at a national White House conference on educational problems. The entire effort stresses cooperation at every level of government.

NEW EFFORT ON FOR AID TO LOCAL PUBLIC WORKS

There was a strong effort in the Senate to implement last year’s law providing for Federal aid to states, municipalities and other political subdivisions.

Enacted as part of the law dissolving the Reconstruction Finance Corporation, the authorization called for the expenditure of $25 million in Federal Treasury funds to aid in financing projects under Federal, state or municipal law, either through direct loans or through purchase by the Federal government of securities and obligations of the local authorities.

The 1953 statute left it to the President to designate an agency to carry it out. This was not done, nor had the Budget Bureau asked Congress to make appropriations to get the program started.

The lack of action disturbed Senator Burnet Maybank (D-S. C.), who introduced a new bill this year to designate the Housing and Home Finance Agency to handle the allotments and to increase the amount from $25 to $50 million. Senator Maybank claims the program could be a great stimulus to construction of non-Federal public works and go far toward providing community facilities needed to support new housing developments.

PHA TURNS ATTENTION TO PROJECTS’ ARCHITECTURE

The Public Housing Administration is engaged in a campaign to adjust its poli-
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(Continued from page 286)

pies and standards toward elimination of "unsightly projects" and is expecting "the same determined effort" on the part of architects — a development which is bound to elicit hearty (if somewhat incredulous) approval from architects — as well as some wry amusement.

Speaking rather as though only the architect's determined antipathy to the esthetic had heretofore blocked architectural progress in public housing, Commissioner Charles Slusser said in a recent speech:

"I concede that architectural design, like any other form of art, is subject to opinion. I concede, too, that to get the most for our money we must eliminate many esthetic touches. And finally, I concede that PHA must not undertake the role of arbiter of architecture. But let's be reasonable. Barracks are barracks. And we don't need a quorum of the American Institute of Architects to tell us so. We know — and in many cases it has been demonstrated spectacularly — that the will of architects and engineers to build attractively within any reasonable cost is possible."

Mr. Slusser then pledged that to whatever extent may be necessary, PHA policies and standards, "if they have contributed to the production of unsightly projects," will be corrected. In the same spirit, he added, PHA will expect "the same determined effort" on the part of architects.

Housing and Home Finance Agency Administrator Albert M. Cole has expressed complete agreement with Commissioner Slusser's views, telling the Congress that the greatest stigma on public housing has arisen from its exterior appearance, from which the general public gets its impression.

Commissioner Slusser, who has traveled extensively to visit public housing projects throughout the country, notes that many architects and builders find in the design and construction of public housing an opportunity far beyond the material reward: "They view it as a chance to contribute their highest skill to fellow humans denied so much for so long. And in doing their best, they benefit not only the tenants, not only the community, but themselves as well. The reputation for doing much with little is a good reputation to build."
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THE RECORD REPORTS

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(Continued from page 288)

Doing much with how little?
The average cost last year per room of public housing constructed was $1664. This was on the basis of cost of the dwelling and equipment, plus a five per cent contingency allowance, and was well under the $1750 per room limit specified in the law. (The law provides that with PHA approval a limit of $2500 is permissible wherever there is solid justification for high construction costs. As the Commissioner points out, the $1664 per room average shows that the high cost exceptions were few last year.)

In its new concept of public housing appearance, PHA stands for construction of projects rather than individual units scattered throughout a rundown city area, on the theory that the construction of many good and attractive houses at one location provides a decided advantage in changing the character of a neighborhood.

Mr. Slusser views it this way: "A complete public housing dwelling unit, including every cost, could be built last year for $10,800—that was the average in a study of 257 projects. Now, suppose that that much money could be dribbled out on scattered houses in a slum area. Individual houses would be at the mercy of the vicious forces that made the area sub-standard. On the other hand, a housing project of 200 units or more is the sort of sledge-hammer blow that makes blight retreat, that establishes a base of operations from which we can move on to rehabilitation, and a rebirth of the moral forces which make a city's run-down areas come to life again, take on new hope."

BRAB LAUNCHES SURVEY OF CLIMATE DATA NEEDS

The construction industry may soon join other industries making regular use of weather data. The Building Research Advisory Board has announced that its Climatic Research Committee has started a survey of its members' respective organizations to determine what kind of climatic information is needed in their practices.

The whole effect was initiated earlier this year in a meeting of the committee with Dr. F. W. Reichelderfer of the U. S. Weather Bureau and his staff. Dr. Reich-
Window Versatility in Contemporary Architecture

Gate City Wood Awning Windows are outstanding in the trend toward simplicity and functional beauty. Versatile, they can be used in almost limitless combinations. Their smart design and clean horizontal lines give any dwelling a distinct, modern appearance. And they provide the home-owner with advantages for year 'round comfort.

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Perma-Treated for long life . . . designed for economical installation and maintenance, the Gate City Wood Awning Window is steadily gaining favor with home builders everywhere. Complete information will be promptly furnished upon request.

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Extruded Mouldings can be made up in your choice of attractive patterns. For all the Pittco Store Front Metal profiles have been designed to enable you to combine these mouldings into many handsome patterns, a few of which are shown here. These mouldings are carefully extruded to produce a smooth finish, sharp lines and rigid construction. See Sweet's 1954 Architectural File 20/Pi (A.I.A. File No. 26-D).
Natco "6T" Series Vitritile in Shades Valley High School, Homewood, Alabama
Architects: Van Keuren, Davis & Company

Natco "8W" Series Vitritile in Wauwatosa High School, Wauwatosa, Wisconsin
Architects: Herbst & Kuenzle

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Architects, builders and contractors are sold on the many service advantages of durable Natco Vitritile. There's less labor, less cutting, less material waste at erection. This flexible unit adapts to any design idea—offers a wide selection of colors too. Put double-feature Natco Structural Ceramic Glazed Vitritile to work on your school building jobs. Time-tested installations prove it lowest in cost over the years.

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(Continued from page 292)

elderer told the BRAB committee that data could be furnished to all parts of the building and construction industry, just as it is now to agriculture, aeronautics and other pursuits, if the needs were discovered.

BIG DEMAND IS EXPECTED IN INDUSTRIAL BUILDING

The U. S. Chamber of Commerce analyzed plant and equipment expenditures over several past decades and concluded there is "a real and large demand" for additional construction of this kind. While industrial construction has topped $2 million for the past three years, expenditures for industrial plants have actually lagged far behind investments in other capital goods.

For example, after allowance for price changes the average amount of new plant construction for the eight years after World War II was $1.59 billion compared with $1.26 billion after World War I, a gain of 26 percent. By contrast, industrial production increased 156 per cent on a comparative basis. In these same periods, plant building also lagged behind the increase in gross national product.

In relation of over-all spending to capital goods, the Chamber said, the amount for new plants appears to be off as much as one third from the first postwar era to the second. It was believed the reason lay rather in the relatively greater increase in construction costs than in machinery costs. Another factor would be the ability of industry to make more efficient use of existing space by buying modern machinery and making improvements through installation of better lighting, air conditioning, etc.

PROPOSE LOAN INSURANCE FOR HOSPITAL BUILDING

The House Interstate Commerce Committee last month launched legislation proposing FHA-type loan insurance for the construction of hospitals and other medical facilities. It held hearings on Representative Wolverton's (R—N. J.) bill H. R. 7700 calling for a medical facilities mortgage fund to be used by U. S. Public Health Service in carrying

(Continued on page 300)
This combination GIVES GREATER FLEXIBILITY FOR PLANNING WASHROOMS...insures against untimely obsolescence.

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FLOOR WITH NORTHERN HARD MAPLE
BEECH AND BIRCH

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Meanwhile, Secretary of Health, Education and Welfare Oveta Culp Hobby told a Senate labor subcommittee there had been a net loss in number of acceptable hospital beds for patients with chronic diseases. The Hill-Burton hospital construction program, valuable as it is, has not yet provided a balanced answer to the nation’s needs for hospital and health facilities, she stated. The shortage is expensive in that it has led to the crowding of chronically ill patients into general hospitals which are more costly to operate and are needed for patients with acute conditions.

AIRPORT AID MAY RESUME WITH SOME MODIFICATION

There appeared to be good prospects that new life would be breathed into the dormant airport construction program. The Department of Commerce asked for new money for fiscal 1955—approximately $30 million—to pick up the program that was suspended last year.

The new plan, however, might exclude Federal aid for construction of air terminal buildings, thus narrowing the range of the architect’s participation.

A study has recommended several changes in the reactivated program. For one thing, it was suggested that the basic standards for determining eligibility of specific projects should be tightened substantially. Criteria of national aeronautical importance would be used. Also, it was proposed to increase the discretionary fund that can be spent by the Civil Aeronautics Administration without fixed geographical apportionment. This, it is felt, would permit more flexible administration of the program in accordance with over-all national needs.

The suggestion that terminal buildings be excluded was made to give the agency more opportunity to concentrate on facilities such as runways and lighting, it was said.

NO SPECIAL SHELTERS IN FCDA EVACUATION PLANS

The Federal Civil Defense Administration has no plans presently for new shelter construction to house persons evacuated from metropolitan centers in event of enemy attack.

This does not mean the agency is not giving attention to the problem. Under

(Continued on page 304)
Great Strength, Outstanding appearance

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the heading of welfare services, it is promoting the use of existing structures such as schools, armories, Army barracks and other institutional-type buildings where reception centers might be established to care for those who would be forced to abandon cities temporarily.

This planning was required when the Federal government switched its policy on civil defense from one of protective shelter within cities to near total evacuation.

FCDA also is counting on the probability that much housing in any given area could safely be reoccupied a short time following an attack. That's one reason the emphasis is on provision of temporary shelter elsewhere, rather than on new construction of more permanent housing.

**ADDENDA**

- President Eisenhower signed the bill authorizing establishment of a new Air Force academy comparable to the present service schools at Annapolis and West Point. The new law carries authorization for expenditure of $126 million, $26 million of it to be spent for "preliminary work" such as getting classes underway temporarily in substitute quarters. A five-man commission was appointed by Air Secretary Talbott to recommend possible sites for locating the permanent establishment. He must abide by the commission's selection if it turns out to be an unanimous agreement on one site; otherwise, he chooses from one of three locations it names.

- W. E. "Bert" Reynolds, widely known to the construction industry for his work with the Public Buildings Service, plans to retire as PBS Commissioner about June 30. He has been in the Federal Service for 21 years and at the age of 66 is considered a top authority in the public buildings field.

- Private U. S. engineering, contracting and consulting firms operating abroad received almost a quarter of a billion dollars for their services in 1952, the Commerce Department's Office of Business Economics reported. Service receipts of $99 million for 1952 reflected a gain of more than one fourth over the $77 million received in the previous year, and exceeded 1950's figure of $66.5 million by nearly 50 per cent, OBE said.

- Quotes from a House Appropriations Committee report on the Interior Department, with special reference to the Bureau of Reclamation: "The general practice of the Bureau to overdesign structures and facilities has been observed on some of the projects by the committee members and has been reported by competent engineers. The committee is also aware of the tendency on the part of some architects and engineers to sacrifice practical considerations and taxpayers' dollars by requiring specially manufactured equipment and nonstandard fabrication where standard items could be used. It is urged that the Commissioner interest himself in this particular problem in an effort to achieve economies in the program wherever possible. It should not be necessary for the committee or the Congress to have to direct attention to such items as this."

(More news on page 308)
**HERE’S THE NEW ALL-WEATHER VARI-TEMP**

**NEW DUNHAM CABINET HEATS, COOLS, VENTILATES TO SUIT INDIVIDUAL ROOM REQUIREMENTS**

New Dunham “Vari-Temp” Cabinets now put year-round air conditioned comfort within reach of every budget... and within easy reach of every room occupant. For “Vari-Temp,” with twin blower fans, heats, cools, ventilates, filters and dehumidifies on an individual room basis.

Since there’s no need for central system duct work, Dunham “Vari-Temp” costs less to install and maintain. A single riser, connected to the unit, supplies hot water for heating—chilled water for cooling.

Units are also available for heating with steam coil, or heating and ventilating with non-freeze steam coil. In addition, these handsome, compact cabinets save space. One “Vari-Temp” delivers the same amount of heat as five radiators equal to it in size!

For further information about space-saving, money-saving, room-controlled Dunham “Vari-Temp” Cabinets... clip and mail the coupon.

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Please send your “Vari-Temp” Literature.

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Company

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City Zone State

ARCHITECTURAL RECORD MAY 1954 305
Once again...and for the life of the building...it's Clow “IPS”
...the pipe that never needs to be replaced!

Famous architects consistently specify Clow “IPS” (threaded) Cast Iron Pipe

With the world-famous architects of the handsome new Sinclair Building it is standard practice to specify Clow “IPS” (threaded) Cast Iron Pipe for all downspouts, vents, and waste lines three inches and larger. Over four thousand feet of Clow “IPS” pipe have been installed in the Sinclair Building and once installed, it’s there for good. Because of the corrosion-proof characteristics of cast iron, there’ll be no replacement, and no upkeep cost. Installation is fast, economical... and permanent.

*Iron Pipe Size O. D.

JAMES B. CLOW & SONS
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Clow “IPS” (threaded) Cast Iron Pipe has some O.D. as steel pipe, is available with plain or threaded ends, in 3, 4, 5, 6, 8, and 10' sizes in 18' random lengths. Also available with integral coupling hub on one end (other end plain) in 18' random lengths in 4, 6, and 8' sizes.

Clow Cost Iron Pipe can be...

on the job, with ordinary tools of the piping trade.

1929 — Auditorium, School of Music, Paris
"Perret promised me a violin; he did not say it would be a Stradivarius" — Alfred Cortot, Director

1929 — Perret’s Studios, Paris
"The art of architecture is not in materials; it is in the arrangement of materials"
These **RUSCO** Products Offer Unique Advantages
For Efficient Remodeling and Modernization

For Window Modernization—or Simplified Replacement

![RUSCO Prime Windows](image)

**RUSCO Hot-Dipped Galvanized Steel PRIME WINDOWS**
Fully Pre-Fabricated, Ready-to-Install Units

These windows offer exceptional characteristics of design flexibility, weather tightness and economy. Precision-manufactured in complete form—glazed, finish-painted with baked-on enamel, fully weatherstripped, complete with casing. Installation is extremely simple and fast. Units easily joined in series with streamlined non-load-bearing mullions. Available with insulating sash and Fiberglas screen, if desired.

![Before and After Photos](image)

Photos show how Rusco Prime Window units with insulating sash were used to replace old, worn wood windows in Hollenden Hotel, Cleveland, Ohio. Complete replacement effected in hours—room back in service some day!

For Attractive, Efficient, Controlled Window Shading

**RUSCO Adjustable VENETIAN AWNINGS**

A permanent treatment that gives truly effective control of shade, light and ventilation. Louvers are adjustable from inside with gear operator. You will find Rusco Venetian Awnings an ideal answer to the proper shade treatment so necessary to efficient air conditioning installations. Allow continuous air flow, insulate against heat and dispel it. Available in Bonderized, galvanized steel or alodized aluminum—finish-painted with baked-on enamel.

For Practical, Workable Window Unit Air Conditioning

**RUSCO Air Condition WINDOW**

The first window unit designed to accommodate any type of window air conditioner. Completely replaces conventional window. All glass panels, including flankers, are removable from inside for washing, eliminating window cleaning problems. An extra lower glass panel replaces air conditioner unit and flankers when unit is removed for storage or servicing.

![RUSCO Prime Windows](image)

**RUSCO Hot-Dipped Galvanized Steel PRIME WINDOWS**

For illustrated literature and specifications, write

**THE F. C. RUSSELL COMPANY, DEPT. 7-AR54**

Cleveland 1, Ohio • In Canada: Toronto 13, Ontario

ARCHITECTURAL RECORD MAY 1954 307
ON THE CALENDAR

May


3-4 Spring meeting, National Building Material Distributors Association — Hotel Statler, Washington, D. C.

3-5 Annual Meeting, Air Pollution Control Association — Patten Hotel, Chattanooga, Tenn.

3-7 Semi-Annual Convention, Society of Motion Picture and Television Engineers — Washington, D. C.

3-14 British Industries Fair — Olympia and Earls Court, London, and Castle Bromwich, Birmingham, England

4 Annual meeting, members and Board of Directors, Steel Joist Institute — The Boca Raton Club, Boca Raton, Fla.


5-7 Second Welding and Allied Industry Exposition — Memorial Auditorium, Buffalo, N. Y.

5-16 1954 Annual Exhibition, Philadelphia Chapter, American Institute of Architects — Philadelphia Art Alliance, 251 S. 18th St., Philadelphia


10-13 39th Annual Conference, Building Officials Conference of America — Bellevue Stratford Hotel, Philadelphia

10-14 Annual Assembly, Royal Architectural Institute of Canada — Montreal

16-20 Annual convention, Special Libraries Association — Netherland Plaza Hotel, Cincinnati

17-20 Second Basic Materials Exposition — International Amphitheatre, Chicago

18-21 American Planning and Civic Association Conference — Columbus, Ohio

24-27 35th International Conference and 1954 Office Machinery and Equipment Exposition — Kiel Auditorium, St. Louis

24ff New Work in Stained Glass; American Federation of Arts traveling exhibition; through June 14 — Chattanooga Art Association, Chattanooga, Tenn.


27ff Building Your Home, 1954: exhibition of building design, materials and products; sponsored by Architectural League of New York; through June 6—71st Reg. Armory, 34th St. and Park Ave., New York City

(Continued from page 306)
Lowest cost cooling
for any size house

List prices start at
$139.95

- EASILY INSTALLED
- GUARANTEED 5 YEARS
- OPERATES FOR A FEW CENTS A DAY

Hunter Attic Fan cools the entire house

The Hunter Attic Fan is the most practical and least expensive method of keeping a home comfortable on hot nights. It pulls cool, refreshing breezes through every room in the house... drawing out hot, stagnant air. This compact unit is easily installed in any new or old home. It requires only 18" attic clearance—ideal for low-pitched roofs. Fan comes complete with ceiling shutter and trim—no extras to buy or build. Sizes from 5000 to 15500 CFM (air deliveries certified) fit any home size and climate.

This new, improved attic fan has the same smooth, quiet operation and dependable performance that have made Hunter Fans famous for 67 years. Fan unit guaranteed 5 years; motor and shutter, 1 year.

Write for new 1954 Hunter Catalog

HUNTER FAN AND VENTILATING COMPANY
396 S. Front St., Memphis 2, Tenn.

HUNTER Attic Fans

SEE OUR CATALOG IN SWEET'S
THE RECORD REPORTS  
(Continued from page 308)  

31ff Canadian International Trade Fair; through June 11 — Exhibition Park, Toronto, Canada  
June  

Japanese House: an exhibition of a house designed and built in Japan by Junzo Yoshimura — Sculpture Garden, Museum of Modern Art, 11 W. 53rd St., New York City

7-8 23rd Annual Meeting, National Housing Conference — Hotel Statler, Washington, D. C.  
7-10 Sixth National Plastics Exposition, sponsored by the Society of the Plastics Industry, Inc. — Cleveland Auditorium, Cleveland  
10-12 Joint annual convention, New Jersey Chapter, American Institute of Architects and New Jersey Society of Architects — Berkeley-Carteret Hotel, Asbury Park, N. J.  
13-18 Annual Meeting, American Society for Testing Materials — Sherman and Morrison Hotels, Chicago  

14-18 62nd Annual Meeting, American Society for Engineering Education — University of Illinois, Champaign-Urbana, Ill.  
15-19 86th Annual Convention, The American Institute of Architects — Hotel Statler, Boston  
15-25 Special summer program in soil technology — Massachusetts Institute of Technology, Cambridge 39, Mass.  

19-20 Pre-Conference Library Buildings Institute, sponsored by American Library Association — St. Paul  
20 Good Design Anniversary Exhibition, sponsored by the Museum of Modern Art and the Merchandise Mart, opens in Chicago; to be on view throughout the year — The Merchandise Mart, Chicago  
21-23 Thin Concrete Shells, a conference jointly sponsored by the Departments of Civil Engineering and Architecture — Massachusetts Institute of Technology, Cambridge 39, Mass.  
21-25 Summer and Pacific General Meeting, American Institute of Electrical Engineers — Hotel Biltmore, Los Angeles  
24-30 23rd Annual Conference, American Institute of Decorators, and exhibition “Decoration 1954” — Palmer House, Chicago  

27ff 92nd Annual Meeting, National Education Association; through July 2 — New York City  

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Saves you time, money and mistakes, yet costs you nothing

There are two things you will always remember about the installation of Kewaunee Laboratory Equipment for your clients.  
First—the expert assistance you receive from the experienced Kewaunee Laboratory Engineer right at the start of the job without any cost or obligation. He brings right to your elbow such a storehouse of practical experience gained on work done for America's finest laboratories. He knows how to save money, too—how to lay out your client's laboratory to permit most economical future expansion. It's important to have him on the job early, as some of the important savings he will help you make may be outside the laboratory itself.  
The second thing you will remember is the painstaking way the Kewaunee people follow through on the job. That goes for the quality construction of every piece at the factory, and the expert installation to give day after day efficiency and convenience.

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1. Write for the Free Kewaunee Laboratory Equipment Catalogs for schools. Specify whether you are interested in wood or metal.  
2. Send us your client's laboratory floor plans and any other helpful information. Our staff of Laboratory Engineers will prepare a complete layout without cost to you. And if you will tell us when you would like to talk with the Kewaunee Laboratory Engineer, he will soon be "at your elbow" without cost or obligation.

OFFICE NOTES

Offices Opened

- Charlie G. Taylor, Architect and Engineer, and Harry J. Devlin have opened offices for the practice of architecture and engineering at 213 O'Michael Building, 300 N. Jackson, Odessa, Tex.
- Woodburn & O'Neil, Architects and Engineers, have announced the opening of offices at 215 Jewett Building, Des

(Continued on page 312)
Visitors are greeted in a pleasant, well-lighted reception area. Workers in the area beyond the smart panel find that Foto-Lite illumination is glare and shadow free.

A perimeter of Foto-Lite brightens this executive office, while a concentrated area over the desk provides excellent illumination for reading and writing. Foto-Lite is perfect for luxury lighting.

How modern offices can use Corning Foto-Lite to advantage

The rich setting of these new offices of a large oil company show how CORNING Foto-Lite is used best. Notice how evenly it distributes light.

Foto-Lite is richly rewarding to work with. It gives you all of the lighting advantages of louvered lighting plus the advantages of flat glass—easy cleaning.

Foto-Lite provides high levels of illumination with low brightness. The soft opal louvers afford diffusion at normal viewing angles. Vertical light, however, is unrestricted.

Foto-Lite is not color selective. You can use it freely for wonderful effects where colors form a mood or where color encourages a buying decision.

What is Foto-Lite?

It's fine crystal glass in which tiny opal louvers are created by a photographic process. Strong, lightweight, free of warpage, Foto-Lite encloses light sources with a minimum of bulk. You can use it for an entire luminous ceiling or for keying interest to relatively small areas. Foto-Lite offers rare value when it comes to beautiful lighting and lighting that is efficient. And the smooth glass surface permits easier cleaning.

You can get complete information about Foto-Lite and other Corning products just by signing and mailing the request slip below. We'll send you a free copy of Architects and Engineering Handbook of Lighting Glassware.

CORNING GLASS WORKS
CORNING, N. Y.

CORNING means research in Glass
The Record Reports

(Continued from page 310)

Moines, Iowa. Members of the firm are Chester C. Woodburn, Eugene C. O'Neil, and William M. Woodburn; Chester C. Woodburn was formerly a partner in the firm of Dougher, Rich & Woodburn.

Firm Changes

• Taylor and Fisher, Architects, have announced the admission to partnership of Warren Austin Bowersock. The firm's offices are in Baltimore.

New Addresses

R. J. Brocker, Architect and Engineer, 401 S. Maple Ave., Greensburg, Pa.
Katz Waisman Blumenkranz Stein Weber, Architects Associated, 551 Fifth Ave., New York 17, N. Y.
Slater & Chait, Architects, 244 E. 32nd St., New York 16, N. Y.

Every detail of this handsome structure in Washington, D. C. was planned to achieve the utmost in beauty, efficiency and luxurious comfort. It is the new home of the Perpetual Building Association.

Year-round air conditioning is an important feature of the progressive merchandising techniques which have made this 73-year-old company the leader in its field. Marlo Spray Type Dehumidifiers, Marlo Steam Coils and Marlo Water Coils perform a vital service in this winter-summer comfort-conditioning system serving this modern building.

In the complete line of quality Marlo equipment, you'll find the answer to any air conditioning problem. Marlo will be glad to give you complete details. Write today.

See our bulletin in Sweet's Catalog

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Manufacturers of COOLING TOWERS • EVAPORATIVE CONDENSERS • INDUSTRIAL COOLERS • AIR CONDITIONING UNITS • MULTI-ZONE UNITS • BLAST HEATING & COOLING COILS

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St. Louis 10, Missouri

Public Relations Notes

The Baltimore chapter of the American Institute of Architects doubles, collectively, as columnist. The column, called the "Architect's Corner," is published weekly in the Baltimore Sunday American in the paper's real estate section. Articles are written by various members of the chapter.

West Virginia State Magazine recently devoted an entire issue to the state's architecture. The issue contained several articles on architecture, some of them written by the architects themselves, and featured several pages of illustrations of current West Virginia architecture. The editors plan to make this the first time for an annual project.

The Kansas City chapter of the A.I.A. has acquired a weekly ten minutes of television time, which the Kansas City station, WHB-TV, offered free as a public service. The chapter considered a film program, but finally decided in favor of a discussion-type presentation. The program will run for 13 weeks.

Another television venture which boosted architects and architecture was WOR-TV's program broadcast from New York, "Design for Your Living." A series of four half-hour programs had Thomas Creighton, editor of Progressive Architecture, as master of ceremonies; three architects were guests each week to discuss such diverse subjects as house design, school design, and furnishings.

Public relations in the form of substantial civic service is being offered by the Chicago chapter of the A.I.A. Members of the chapter have volunteered to investigate possible sites for a Chicago city center — thus taking some of the burden from the overworked staff of the Chicago Plan Commission.

Full public credit was given to Washington architects John Hans Graham and Associates for their design for the Arthur Murray Dance Studios in that city. Mr. Graham was even invited to appear with Mrs. Murray on a number of television programs marking the studio's grand opening — notable since the architect is too often the forgotten man at such ceremonies.

(More news on page 314)
No Wonder More and More Specifications

Call For HANSOTONE

the PERFORATED ACOUSTICAL FORMBOARD for POURED GYPSUM ROOF DECKS

LOWER MATERIAL COST

LOWEST INSTALLATION COST

Here's an extra strong wood fiber board developed exclusively for use with poured-in-place gypsum roof decks. It's the only perforated Acoustical Formboard with a 32" span . . . which means lower material costs . . . and lower installation costs. HANSOTONE combines high thermal insulation with outstanding sound absorbing qualities to provide a permanent, rigid, and attractive base for the gypsum concrete.

- Thickness—1"
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ARCHITECTURAL RECORD MAY 1954 313
CONCRETE BUBBLE HOUSES COMPLETED IN FLORIDA

One solution to the problem of constructing houses quickly and cheaply has been put forward at Hobe Sound, Fla., where two concrete "bubble houses" designed by architect Eliot Noyes have been completed.

The houses are about 30 ft in diameter, giving an area of about 600 sq ft. The roof measures about 14 ft at the center.

According to the architect, the entire building can be built and finished in 18-20 days; five days are required for construction of the foundation and the concrete shell.

The contractor's estimate for the cost of complete foundation, slab and shell is $5.35 per sq ft, and it is hoped that a finished house can be produced for about $5.35 per sq ft.

(Continued on page 316)
Why did the Waldorf choose **TYPHOON** coils to triple its cooling power?

Tom Barrett, Building Superintendent of the Waldorf-Astoria, found himself with a whale of a problem. Seems that when the original air conditioning system was installed in the Grand Ballroom, over 15 years ago, they didn't reckon with full capacity crowds or the hot blasts of TV lights.

Now, the capacity of the air handling equipment had to be tripled in order to cool the ballroom adequately. This called for the installation of banks of chilled water cooling coils with new blower systems. To complicate matters, larger quantities of outside air brought in for ventilation purposes required new banks of pre-heating and heating coils.

The consulting engineers, Seelye, Stevenson, Value & Knecht, looked about for a firm that could supply custom-built coils meeting the rigid standards of quality prescribed by this world-famous hotel. After exhaustive checking of qualifications and past performance records, one firm stood out – Typhoon.

Banks of cooling and heating coils were tailor-made by Typhoon for the job. Many were 8 rows in depth and 10 feet in length—copper tubes with helically bonded fins for maximum heat transfer, especially designed to fit into extremely limited space. And Typhoon made delivery in record time.

Now it's really a Grand Ballroom—summer and winter—with enough dependable cooling to accommodate the full capacity of 3000. Tom Barrett is satisfied that the rugged equipment standards of the Waldorf have been met—and then some. "Those Typhoon 8-row coils really wring out the moisture," he says happily.

And so another great name is added to the long list of famous Typhoon customers.

Whether the job calls for a single packaged air conditioning unit or a custom-built central plant—you can count on Typhoon. Quality engineering, backed by over 40 years of experience, is your guarantee of trouble-free performance.

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**TYPHOON AIR CONDITIONING CO., INC.**

794 Union Street, Brooklyn 15, N. Y.

Specialists in Air Conditioning Since 1909.

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**Packaged Air Conditioning**

Units in 2.5-3.75-5-10-15-20-25 horsepower sizes

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**Packaged Water Chillers**

10 and 20 horsepower
THE RECORD REPORTS

$6000. Since the houses were built on an experimental basis, these figures might differ if the buildings were mass-produced.

Mr. Noyes’ design uses a structural system invented by architect Wallace Neff some 13 years ago. An example of Mr. Neff’s design was published in Architectural Record, July 1944, pp 81-83, and is shown on previous page.

The first step in construction is the pouring of a round concrete foundation; the reinforcing bars of this foundation are allowed to project and are bent into hooks. A steel cable is then run through these hooks and a balloon, made of neoprene and nylon, is attached to the cable.

An ordinary blower is used to inflate the balloon to a pressure of four and one-half oz. Precautions are taken to insure a constant pressure.

The lower part of the balloon is then wrapped in wire mesh which extends to a height of about seven ft and is reinforced by three-eighths in. steel rods. The top of the balloon is covered with chicken wire.

After this the balloon is covered with concrete which is sprayed on. The shell is about two in. thick at the bottom and about one and three-fourths in. thick at the top. This operation requires about a day’s time.

The wide openings on either side of the bubble are indicated by a template laid across the balloon, showing the workman the boundaries of the area to be sprayed.

The concrete takes about 24 hours to dry, after which time the balloon is deflated and removed. The shell is sprayed with a vapor seal and covered with an insulating blanket of glass fiber.

The concrete shell is covered with mesh and reinforcement, and a second coat of concrete is applied. The shell is finished inside and out by hand and by flash coating from a spray gun.

The absence of load bearing partitions permits free planning of the interior of the bubble. No ceilings are used except over the bathroom, which is covered with corrugated sheets of plastic glass.

Bubble houses are being developed in two larger sizes — one will provide 1000 sq ft of living space, the other 1600 sq ft.

Space arrangements in Hobe Sound houses, keyed as follows: (1) living room; (2) dining room; (3) kitchen; (4) bedroom; (5) bath; and (6) terrace.
New Edison Junior High School* takes full advantage of the beauty and utility of STAINLESS STEEL

*West Mifflin Borough
Allegheny County, Pennsylvania

Edison Junior High School has 18 rooms with a two-story main classroom section 60 feet by 210 feet. A 200-foot by 120-foot wing houses a 600-seat auditorium, a cafeteria, kitchen, shops and gymnasium.


Stainless Steel doors and inside trim fabricated by Trio Industries, Inc., Bridgeport, Conn.

Here is a fine, spacious, new junior high school building that sets a precedent in design and construction. For the architect has made extensive use of one of today's most beautiful and most functional building materials—Stainless Steel.

On the exterior of Edison Junior High School, insulated panels of Stainless Steel form the spandrels and the head panels. The spandrels are of 20 gage Stainless Steel, one foot wide and four feet high with six-inch face square corrugation. The head panels are one foot high. Panels are insulated with one and one-half inches of Fiberglas and attached to the structural framework with clips.

The combination of Stainless with masonry and glass block makes an extremely attractive building. But the benefit of Stainless panel construction doesn't stop there. Construction with the panels was fast and went forward in all types of weather. More complete utilization of floor space was possible through this curtain-wall type construction. Maintenance on the Stainless Steel will be negligible and life will be long.

These panels are extremely efficient from a heating standpoint. They have a low rate of thermal transmission (or "U" factor).

Stainless Steel also was used in this school for sills, mullions, windows, door canopies and trim, blackboard and tackboard frames, doors and door frames, column covers and other interior trim.

If you have a new school in the planning stage, now is the time to think about Stainless Steel and its many benefits. And think in terms of USS Stainless Steel. For more information on Stainless Steel panel construction, mail the coupon below. If you like, we will have one of our representatives call.

United States Steel Corporation
Room 4353, 525 William Penn Place
Pittsburgh 30, Pa.

☐ Please send me literature on Stainless Steel panel construction.
☐ Please arrange to have fabricators of Stainless Steel wall panels send me literature on their particular type of construction.

Name: __________________________ Title: __________________________
Address: __________________________
City: __________________________ State: __________________________

United States Steel produces only the Stainless Steel from which panels of this type are made; the panels themselves are fabricated by our customers.
"We reduce erection costs and install MOBILWALLS faster when we anchor with Ramset"

That's the experience of Virginia Metal Products, Inc., of Orange, Virginia, one of the leading producers of movable steel partitions. Frequently up against a tight time schedule, they find it far quicker and less costly to use RAMSET SYSTEM than conventional methods. Just set steel studs into concrete floors, walls and ceilings, with a split-second RAMSET JOBMASTER. Slip anchors over the studs, set the partition section into place and tighten with nuts. The job is done, in less than 1 minute per anchor. Erection is finished sooner so that space can be occupied, and cost savings are passed on to the owner.

These same advantages of RAMSET speed and economy can be gained for almost any work involving fastening into steel or concrete, for new buildings or modernization. Three RAMSET JOBMASTER tools are available for light, medium or heavy work, with 65 Tru-Set Fasteners in six different types to match the specific job requirements.

If you'd like to know more about how RAMSET saves time, money, and trouble, for fastening into steel or concrete, call your local dealer or ask for illustrated manual Modern Fastening Methods.

Ramset Fasteners, Inc. Olin Industries, Inc.
12147 BEREAL ROAD • CLEVELAND 11, OHIO

FIRST IN POWDER ACTUATED FASTENING

THE RECORD REPORTS

(Continued from page 20)

Dome Forming

Once the basic scheme for the formwork was figured out, reported Fuller's construction manager, Reino Laine, the job of erecting scaffolding and building the forms went very smoothly. After the special tubular scaffolding was up, beams and posts were set on top to carry the three-ply laminated timbers which ringed the dome from bottom to top. Then 2- by 4-in. stringers, extending from bottom to top of the dome, were nailed down. Finally, matched lumber was laid atop the stringers to receive the pour of concrete. Near the abutments, where the slope is steep, double forms with ports were used. Concrete was poured into them and vibrated. Above the double forms on the greater part of the dome a stiffer concrete was merely dumped on and vibrated.

Temperature of the concrete had to be carefully controlled for 72 hours during and after the pour. This was done by hanging tarpaulins from the three sides and keeping the inside warm with four space heaters turning out some three million Btu per hr. Forms were stripped in March, and then in April the tarpaulins were dropped since curing was done and they were no longer needed to protect workers from bad weather.

Roofing is now being applied which consists of layers of felt mopped with asphalt, glass fiber insulation, cinder concrete and finally lead-coated copper sheathing.

With the sides now open, it is easier to get an impression of the lightness of the dome. From the inside, it somehow suggests a huge concrete parachute that has only three corners.

Main Auditorium

The audience in the main auditorium, which will seat 1200, will not see any of the glass walls, since the room is to be enclosed by walls of vertical wood siding which rise to the top of the dome, following its contour. At the juncture of walls and dome will be a cove for cold cathode lighting.

Since the domed ceiling itself is not intended to serve for sound distribution, steel framework is now being hung for saw-toothed-shaped acoustical baffles, dubbed "clouds." There are two "clouds," one floating over the audience, and the other over the podium with a

(Continued on page 320)
A Line So Complete . . . So Modern . . .
So Functional . . . So Easy To Specify . . .
NEO-RAY LIGHTING FIXTURES

LUMINETTE
Fluorescent and Slimline, recessed and surface mounted fixtures - 24", 48", 96", also 2' sq., 2' x 4' and 4' sq. - featuring the famous one-piece Neo-Ray acrylic plexiglass shield that will not discolor.

ROTO-STRIP
An entirely new concept in accent . . . display lighting. The first . . . the only . . . complete compact shallow unit with built in, recessed roto sockets. Fingertip adjustment . . . swings 90° in all directions through a complete 360° circle. Stays put at any angle. Unlimited uses: window lighting, floor displays, stage, etc. Ideal for anything requiring high-lighting.

LOUVRED CEILINGS
Wherever plans call for patterns or complete louvred ceilings.
Specify ML for removable sections, continuous unbroken pattern between parallel runners (tracks).
Specify CU for hinged sections, continuous unbroken louvre pattern in all directions.

Complete Catalogs on each line available. Please mention the one that interests you.

See our catalog in Sweet's Architectural File sec. 30a NE

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Manufacturers of Louvred Ceilings • Incandescent • Fluorescent • Slimline
315 EAST 22nd ST. • NEW YORK 10, N. Y.
THE RECORD REPORTS

(Continued from page 318)

bit of "sky" between them. The "cloud" over the audience, besides operating acoustically, also holds lighting fixtures and long, thin diffusers for air conditioning. The baffle over the podium carries lighting as well as tracks for curtains. The back wall, for acoustic purposes, has wood slats backed up by a fabric screen and sound-absorbing insulation. Acoustical design was by Bolt, Beranek and Newman.

At the back of the main auditorium, near the top of the domed ceiling, is the projection booth. The acoustical baffle comes out from the top of the booth toward the front of the room.

Small Auditorium

Under the main auditorium, is a smaller one which seats 200, with a Cycorama screen. Since it was designed for use with scenery, it was necessary to provide for venting of smoke to meet fire regulations. Smoke can be drawn to the outside through two of the glass walls by means of special windows, pivoted at the bottom and held in place by fusible links. A good-size section of the glass walls is backpainted from bot-

Horn Equipment...for multi-gym use with ease!

HOW HORN INCREASES GYM USE:

Partitions open, gym seats closed...
- one gym for boys and one for girls,
or one gym for games and one for classes

Partitions closed, gym seats closed...
- team practice, intra-school contests,large group instruction

Partitions closed, gym seats open...
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Yes, now your every need for gym use can be met without back-breaking work. Just install Horn Folding Partitions and Gym Seats!

Electrically-operated Horn Partitions give you two gyms with a flick of the finger! In approximately two minutes, they unfold smoothly and silently, seal space between door and floor, lock securely in place without bolts. When the full gym is needed, they fold into compact, space-saving units...as easily as they are opened.

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Horn School Equipment Division of
THE BRUNSWICK-BALKE-COLLENDER COMPANY
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Above: a closeup of the dome casting which rides on buttress casting like a ball and socket joint. Below: buttress casting, later to be concreted

Above: looking at one of the supports from inside. Below: edge beam forms arching down to one of the abutments

Seen the big, new catalog on Horn Folding Classroom Wardrobes? Send for your free copy today!

(Continued on page 322)
PROVED ECONOMY prompts architects to specify USAIRCO DRK to air condition hotels, motels, apartments...

Central Station Package Air Conditioner cuts installation costs ... saves 95% in water consumption ... solves load variations and limited starting current problems.

The USAIRCO DRK completely processes and conditions air within a single "packaged" unit. Air conditioner, compressor and evaporative condenser sections are combined in this one assembly, housing two complete refrigeration circuits.

By continually recirculating water, the DRK evaporative condenser saves 95% of water consumption costs. This compact central station unit requires a minimum of floor space. For example, dimensions of the 30 hp. DRK are: Length: 137 1/2"; Height: 84 1/4"; Depth: 53 3/4".

The USAIRCO DRK is wired with a two-stage thermostat, which automatically starts one or both compressors, depending on load requirements. When full load capacity is demanded, both compressors function. When load is reduced, only one compressor is automatically activated.

In areas with definite limitations on starting current, the USAIRCO DRK is the ideal application because starting current requirements are only 1/2 of normal, due to the automatic time delay relay.

Each DRK is custom fabricated, tested and balanced at the factory, delivered for immediate operation after three simple connections: to ducts, water supply and drain, and power supply. 8 sizes are available, from 10 to 60 hp. By adding a heating coil, the USAIRCO DRK becomes an efficient heating plant.

These are only 5 of the beautiful buildings designed by Miami Architects Norman M. Giller specifying USAIRCO DRK and DRK air conditioners. Installations are by Airko Air Conditioning Co., Miami Beach, Florida. For further information on DRK's write Dep't R-54.

United States Air Conditioning Corporation

MINNEAPOLIS 14, MINNESOTA • Export: 13 East 40th Street, New York 16, N. Y.
tom to top to conceal the venting system and equipment mezzanines located near the front of the auditorium. One mezzanine is for an organ loft, and the other is for electrical equipment.

Also on the lower level are musical instrument and choral rehearsal rooms, a green room, carpenter shop, dressing rooms, mechanical rooms, and the receiving room at the back. Between the

---

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Michaels also manufactures a wide range of building materials in aluminum, bronze and stainless steel, Time-Tight display cases, and parking meters. Literature is available for these products.

**MICHAELS PRODUCTS**

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Above: forms have been laid for the main auditorium floor, orchestra pit and podium. Reinforcing is in place on lower portion of floor

Above: inside auditorium peering through scaffolding toward podium.

Below: stepped level of auditorium floor cantilevers toward lobby on girders to be partly exposed

receiving room and the back of the stage is an elevator.

Much of the air conditioning equipment has been installed. The refrigeration room which extends out underground from the main structure has been equipped. Fans are now going into the mechanical rooms which are located under the main lobby on the outside edges of the lower floor. Air intake and exhaust is through horizontal gratings set at ground level. There are no boilers since heat is by steam from the M.I.T. central plant.
INTEGRATED DESIGN, CONSTRUCTION and PERFORMANCE

ART METAL has achieved, in this unit, a rare and original combination of incandescent lighting properties. It was designed for wide application, constructed for ease of installation, and provides exceptional efficiency coupled with visual comfort. Complete data on four sizes, 120, 150, 200 and 300 watts, is on page 47 of ART METAL catalog. We suggest you write for a copy.

THE ART METAL COMPANY
CLEVELAND 3, OHIO
Manufacturers of Engineered Incandescent Lighting
NEW BUILDING REPLACES ONE-ROOM SCHOOLHOUSE

In place of an old one-room schoolhouse, Park Forest, Ill., now has a new $13½ million high school. The building, designed by Loebl, Schlossman and Bennett, occupies a 55-acre site in the planned Chicago community. The school can accommodate 750-900 students, and can be expanded to handle as many as 1500.

Among facilities provided in the new school is a homemaking suite which includes a living-dining area in addition to the foods and clothing laboratories and an area for instruction in child care and home nursing. An arts and crafts studio is completely equipped for activity in ceramics, textiles, metal work, graphic arts. For drawing and painting classes, of course, a north light has been provided.

The central library is lighted naturally by transparent plastic bubbles set in the roof. Conference rooms and browsing space are included in the library area. In addition to the central facilities, there are rooms throughout the school for book collections in the sciences, business, arts and other departments.

A communications laboratory is furnished with a glassed-in radio booth, a screened-listening room, a little theater stage, and complete sound and television equipment. Also provided in this lab are two additional stages for class work and special equipment for radio and television workshops.

Relaxation Part of Program

For the students' use during hours of recreation, an activities room is furnished with television, radio and a piano. Students can purchase soft drinks and ice cream at the snack bar. The room is also used for student meetings, and can be divided by a folding wall.

(Continued on page 326)
Design distinctive store fronts with Architectural Terra Cotta!

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THE RECORD REPORTS

This room, by the way, is operated and controlled by the students themselves.

Other special facilities include a music rehearsal room and broadcasting studio; individual practice rooms; laboratories for the sciences; laboratories for industrial arts; a business education department; club rooms; a reading clinic; a health clinic; and a book store.

Ordinary classrooms are designed to emphasize individual instruction and participation. To achieve this effect, students' tables are arranged in a serpentine formation (see illustration).

The cafeteria and kitchen can serve 350 students at a time. The cafeteria, which has stage facilities, can also double as an assembly hall seating 500 persons. This room overlooks, through a glass wall, a terrace and court.

The building is open to the entire community, and its rooms are already being used for an extensive adult education curriculum. Other community groups also use the school's facilities for meetings. Three religious groups congregate in various parts of the buildings for Sunday services.

Future Campus Planned

Facilities to be added to the plant in the future include a football stadium, track, amphitheater, band shell, play field, hard-surface multi-use courts and a lagoon.

WEATHER STRIPS FOR SLIDING DOORS

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Here's why more and more of America's famed buildings are installing the Yorkaire system of air conditioning.

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...Recent contracts include these famous buildings—Mile High Center, Denver; Netherland-Plaza Hotel, Cincinnati; Fulton National Bank, Atlanta; Equitable Life Assurance Society, San Francisco; Esso Standard Oil Company, Philadelphia. If you are not now enjoying this healthful comfort, perhaps you will, sooner than you think.
A foreword by George Howe, former chairman of the Department of Architecture at Yale, led off the issue. Mr. Howe also contributed the lead article, "Some Experiences and Observations of an Elderly Architect."

"The Responsibility of the Architect," discussed by a panel comprised of Philip Johnson, Louis Kahn, Vincent Scully, Pietro Belluschi and Paul Weiss, was a transcription of one of the school's "studio discussions." Mr. Johnson defended the thesis that "architecture is an art primarily and hardly anything else," while Dean Belluschi insisted that the architect must also fulfill the social and psychological needs of humanity.

A bow to the turn-of-the-century Catalan architect, Antonio Gaudi, was made in an article on his Casa Mila, an apartment house built in Barcelona in 1905. Gaudi combined the Gothic and Art Nouveau to achieve a fantastic unique architecture. The cover illustration showed the sculptured chimneys on the roof of the Casa Mila.

Carroll L. V. Meeks of Yale's Department of Architecture contributed a piece titled "Rome Ruined?" in which he protested against the current criticism in some areas that Rome's destruction has been completed by the "intrusion" of contemporary architecture.

A lengthy discussion of the projected plan for midtown Philadelphia was made by the architect, Louis I. Kahn, who is chief architectural design critic at Yale.

Architect Harwell Hamilton Harris contributed an article on "Rhythmic Integration of Panel Elements."

A report on the significance of the work of the Yale University Architect-Painter Collaborative in the fall of 1952 was given by R. Buckminster Fuller. The Collaborative had directed itself toward the problem of creating a prototype for an inexpensive, easily erected geodesic dome, using for the structure a corrugated paper board. Mr. Fuller's comments were followed by a report on the activities of the Fuller Study Group, a team of seven students continuing the work of the Collaborative, and by a description of the dome itself.

(Continued from page 326)
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**THE RECORD REPORTS**

(Continued from page 328)

EXHIBITIONS RESULT IN NEW LOOK FOR MUSEUM

In honor of the 150th anniversary of the signing of the Louisiana Purchase, the Louisiana State Museum in New Orleans sponsored two exhibitions, the design of which gave the interior of the old museum a distinctly contemporary appearance. In charge of designing the exhibits was Henry W. Krotzer Jr., member of the museum staff. Advising architects were James R. Laman- tia Jr. and Samuel Wilson Jr.

One exhibit, the Louisiana Purchase Sesquicentennial Exhibition, was dis-

In the Cabildo: above, Sala Capitular where Louisiana Purchase was signed; below, gallery

(Continued on page 336)

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Why does A.I.A. ask Construction News to do this? Because architects who have attended in the past have asked their committees for this service. They consider the editorial and advertising content well worth having. Many have saved these issues to take home and use. They have found their complete, well integrated items valuable for later reference.

The two special convention issues of Construction News offer a rare opportunity for all building material and equipment manufacturers to reach this once-a-year audience. These issues will give manufacturers full coverage of all architects in attendance and all other members of A.I.A. throughout the country. For you with a stake in construction, Construction News presents here the greatest opportunity of the year for promotion.

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CONSTRUCTION NEWS

Daily Tabloid Newspaper published by F. W. Dodge Corporation
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THE RECORD REPORTS

(Continued from page 332)

played in the Cabildo, New Orleans landmark; the other, called France-Louisiana, which included material on loan from the French government, was shown in two small houses in back of the Cabildo, the Jackson and Creole Houses.

Before and after: two views of the same room in the Creole house, part of Louisiana State Museum

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Before and after: a room in the Jackson House, below, as it appears housing French exhibit

(More news on page 340)
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BOMBAY OFFICE BUILDING HAS CONCRETE LOUVERS

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Construction of the seven-story building, which was designed by J. A. Ritchie, Bombay architect, was begun in June and is expected to be completed by the end of this year. The structure will be of reinforced concrete slab. Cost of the completed building is estimated at $1.25 million.

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THE RECORD REPORTS
(Continued from page 336)

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REQUIRED READING

(Continued from page 48)

directly, does one get the idea that the architect is an artist who can create a beautiful house, and that this above all else is what an architect is for. Recommended reading — THE HOUSE AND THE ART OF ITS DESIGN by Robert Woods Kennedy. HOMES OF THE BRAVE is a capsule history of American houses and interiors during the last 60 years. It is very brief — there are only some 50 pages of text divided into twenty chapters. It is brightly and satirically written and aimed at what is sometimes called the "New Yorker public." The jacket says that "this very funny book is really a serious criticism. . . ." Except for some exaggeration, this is a valid statement. The author is basically serious and feels strongly on the subject.

Those who know something of Mr. Gibbings' work in the field of interior design, may be in for some surprises. It appears that he is a devoted follower of Horatio Greenough, Louis Sullivan, Frank Lloyd Wright, Greene and Greene and the principles of "organic architecture." He shares Mr. Wright's vast contempt for everything from overseas — Art Nouveau, French "Moderne" of the 1920's, Bauhaus, Corbusier, the International Style, and "less is More." Mr. Gibbings is a greater admirer of the American way, the American woman and the American genius for mechanical comforts. He defends, if he does not exactly admire, Mission furniture because it was American and comfortable and sensible. The climax, for this reviewer at least, is attained when the author expresses his great admiration for the "ranch house," the vernacular modern which has succeeded Cape Cod and taken over many of its virtues.

Mr. Gibbings is more entertaining when he is attacking than defending. For most readers, his satirical quips aimed at the styles and fads that he doesn't like, will be the best part of the book. In addition to the architectural styles mentioned above, he also takes pot shots at "Aboriginal Modern," "Back to Nature Modern," "Low Life Modern" (the reactionaries' toast is "Bottoms up!"), "Movie Modern," "Dome Sweet Dome," and "Interplanetary Modern."

Mary Petty has contributed 24 drawings which constitute a major part of the book. They are uneven in quality, but some of them are the sheerest genius.

(Continued on page 348)
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316 ARCHITECTURAL RECORD MAY 1954
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REQUIRED READING

(Continued from page 344)

RECENT BULLETINS PUBLISHED


This paper is derived from a joint study of capital formation and financing in residential real estate by the Institute for Urban Land Use and Housing Studies, Columbia University and the National Bureau of Economic Research Inc. The study is part of a large investigation of trends and prospects in capital formation and financing made possible by a grant from the Life Insurance Association of America.


The authors outline and explain their approach for an attack on the forces that are causing the disintegration of major satellite shopping districts.


A record of recent civic advance in the fields of planning, parks, housing, neighborhood improvement and conservation of natural resources.

Speculations of Town Planning. By Paul Kriestis. G. S. Clisian & Son (7 Gernobta St., Athens, Greece) 1953

This work illustrates the close connection between planning proposals, speculations, the meanings attached to metaphysical concepts of the planning theorists. In the progress of this analysis the importance of the political factor emerges.


Design Research Report No. 1. An Investigation of Special Problems Involving Small-Dimensioned Douglas Fir and West-Coast Hemlock. School of Architecture and Allied Arts, University of Oregon (Eugene, Ore.) 1953


Proceedings of the 1953 AGC Building Plans Institute with a Special Bibliography, Ed. by Donald C. Davidson, Assoc. of College and Reference Libraries (University of Ill. Library, Chicago) 1953. $2.25

How to determine unit cost of house construction

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ARCHITECTURAL RECORD  MAY 1954  353
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