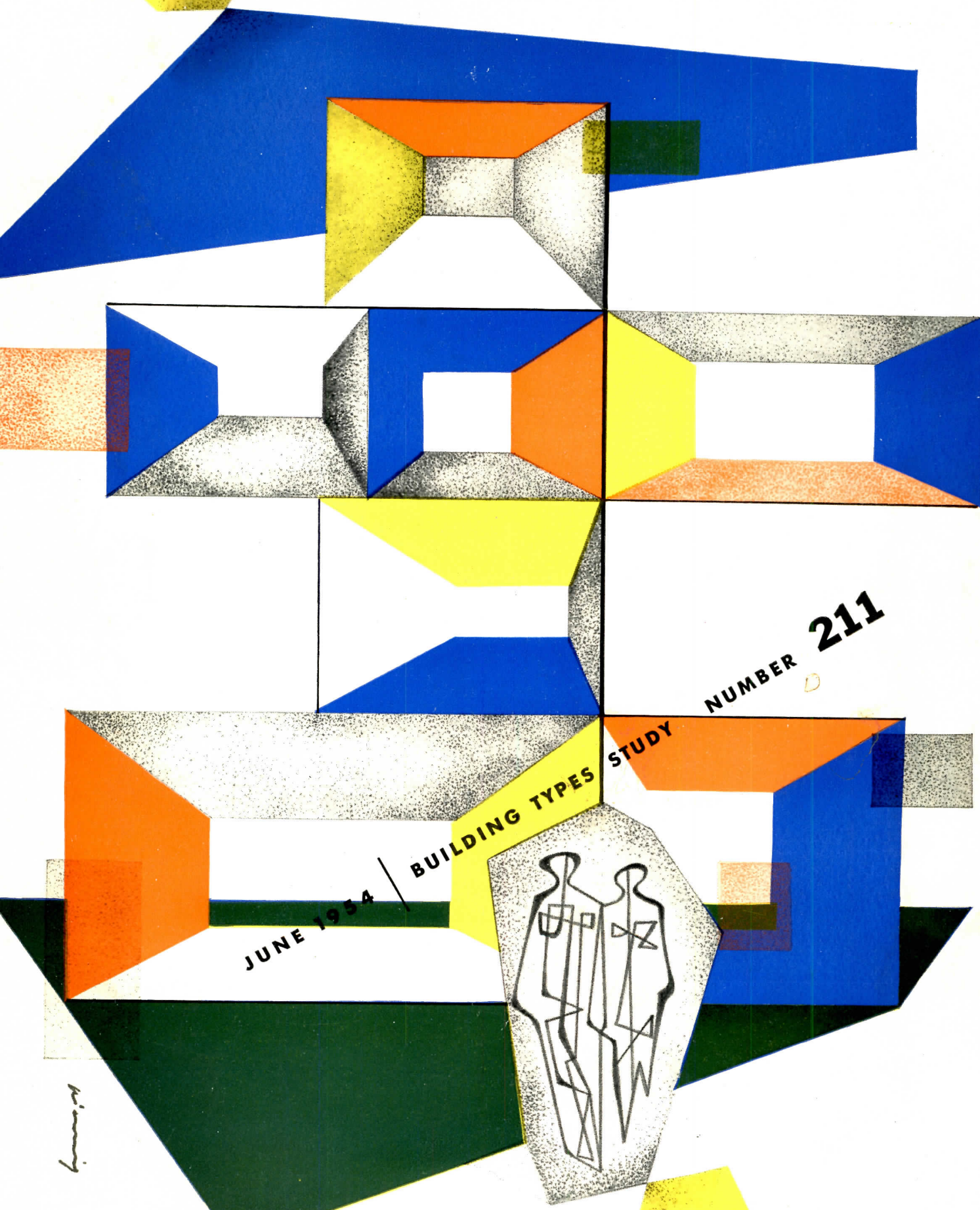


ARCHITECTURAL RECORD



NUMBER 211

JUNE 1954 | BUILDING TYPES STUDY

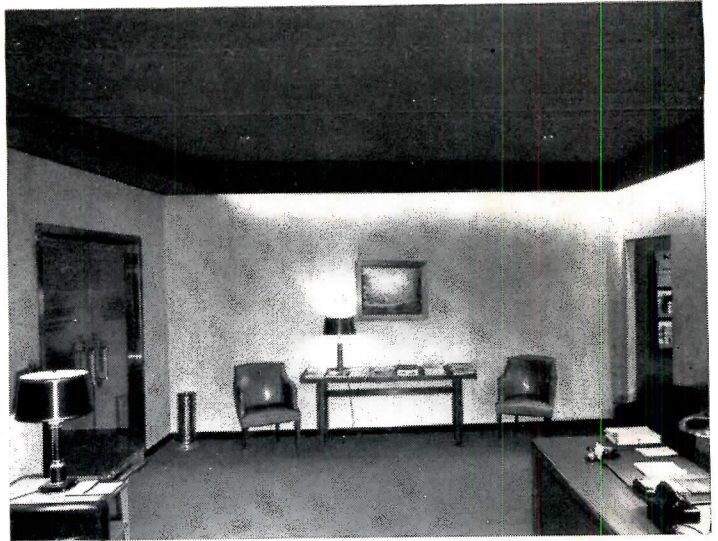
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June 1954 Vol. 115 No. 6

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Matthew Nowicki

An airplane accident in 1951 cut short the life of an architect who eagerly absorbed the teachings of all the leaders of the contemporary movement, but who, according to Lewis Mumford, went on to show a new direction, a new purpose for architecture. Mumford's article in this issue is the first of four, in a critical biography of Matthew Nowicki. "The Life, the Teaching and the Architecture of Matthew Nowicki." *By Lewis Mumford* 139

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"Programming the U.S. Naval Postgraduate School of Engineering." *By Walter A. Netsch, Jr., Monterey, Calif.; Skidmore, Owings & Merrill, Architects* 150

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What Does a Good House Cost?

If architects are the true professionals in the house field, how about the bugaboo of costs? Our houses this month were chosen to illustrate some other approaches to the cost problem than merely chopping the house down to piano box size, in short to work to a budget without sacrificing all the amenity value of architect-designed houses.

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Building Types Study Number 211—Multi-Family Housing

Multi-family housing, in its broadest sense, has not been well done in this country, for the total environment of our cities does not reflect our national prosperity or our standards of pleasant and healthful living. If it is a large order to improve our urban environment, it is one that cannot in justice be ignored. One, also, that challenges architects as nobody else, for who, if not architects, deals in matters of environment? Our study this month poses the challenge, and shows some steps architects have been able to take.

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P E R S P E C T I V E S

THE ARCHITECTURE OF NEW ENGLAND will get a lot of attention this month as architects from every part of the nation converge on Boston for the 86th annual convention of the American Institute of Architects June 15-19. Well-known monuments of the past and present will have to share the spotlight with a brand new one: a Bucky Fuller dome erected in the Boston Gardens as an exhibition pavilion for the architectural section of the Boston Art Festival. The exhibits have been selected from submissions by architects throughout New England to represent the area's contemporary architecture.

A BOSTON ARCHITECT visiting New Orleans not so long ago was inspired to a combination of admiration and lament: "Why don't the architects of Boston and New Orleans use, creatively, the great traditions they are nearly unique (in this country) in enjoying?" Writing in the New Orleans A.I.A. *Bulletin*, Tourist Robert Woods Kennedy noted that in these two cities where "the contemporary architect must compete with a great tradition," the competitive approach has taken two forms: "Traditionalism, or slavish imitation, is the most widely used and perhaps the most successful. But it is really more suited to those cities without an old, vital and true tradition — to the pathetic situation where ancestors must be created out of whole cloth because none already exist. Modernism, on the other hand, entirely rejects tradition in favor of a 'scientific' or 'rational' approach. It outrages us because it seems to declare that ancestors are unnecessary and worthless emotional baggage. Both approaches have failed to offer their proponents a tenable competitive position." Mr. Kennedy acknowledges that creative contemporary use of tradition is not an easy program to propose: "But the truth is that Traditionalism and Modernism have so completely usurped the architectural scene that no one to speak of, either in practice or in school, has made an attempt to work creatively and traditionally."

WHAT MIGHT A NEW ENGLAND REGIONALISM be like, if we ever got to it? "One can only give intuitions and guesses," says architectural historian Hugh Morrison. Some of the things — "more as qualities than as specifics" — that he senses as specifically New England: closeness to the ground; compact perimeter; wood (clapboards, shingles) — not brick or stucco; colors in browns, russets, whites, barn reds, maybe even yellow — but not pastels or any of the other strong colors; smallness of scale ("New England has always been a place of small land parcels and an intimate landscape"); a certain fineness and delicacy of detail: "Moderated sunshine and light permit this; desert sunshine does not. Think of the fine shadow-lines of clapboards, the delicacy of Adam detail. There is a certain prim Puritan tightness here, contrasted to the careless grandeur of the South, that can be made into an esthetic virtue rather than liability (that's all regionalism is, isn't it?)." Professor Morrison notes that some — "perhaps most" — of these things are part of New England's historical tradition and "somehow creative architects would have to give modern expression to them."

THE VIRGINIA TRADITION in architecture is sadly *misused* in present-day Virginia, said Marshall W. Fishwick, associate professor of American studies at Washington and Lee University, in a recent address before the Virginia Chapter of the A.I.A. "An obsession with the past," Dr. Fishwick declared, "continues, in our time, to hamper the development of new and meaningful traditions, and of an adequate modern architecture." Bemoaning "the restoration fad which has enveloped Virginia" in the wake of the Williamsburg Restoration ("We used to have the boll weevil. Now it's the Williamsburg blight"), Dr. Fishwick also pointed out that the responsibility is not alone with architects: "The architects in this state are strangled by their tradition — and by Virginians who are bold enough

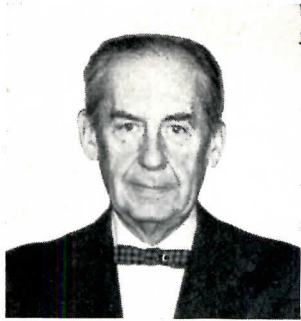
to hire them, but not bold enough to build as though this were the twentieth century."

THE CITY faces seven major challenges in the field of urban redevelopment this year, the Urban Land Institute believes. The seven: the problem of raising enough public funds to provide the rapidly-growing suburban areas with sufficient schools and other essential services without taxing home owners excessively; revision of zoning regulations to preserve and give positive protection to vacant land suitable for industrial use; adoption of performance standards in zoning regulations so as to specify for each industrial zone maximum permissible limits on air pollution, noise, odors, fire hazards, traffic volume, etc.; overhauling and rejuvenating of central business districts to enable downtown sections of cities to retain their appeal to shoppers and their position as the hub around which the rest of the city revolves; stimulation of sounder thinking about the number, size, design, makeup and location of neighborhood and regional shopping centers; making the best and most productive use of land from which slums are removed; and placing greater emphasis on the conservation and rehabilitation of urban districts where potential slums are in the making.

THE BELGIAN MAGAZINE *Ruimlé* has a go at the same general problem in an article in a recent issue, and in the words of its English summary, at once awkward and precise, puts it like this: "The big town is a detestable phenomenon because it destructs the family, its equilibrium and its rhythm of life. Urbanism doesn't want systematic destruction but organization of the city, place of human contacts, out of which civilization is made up. Which faults are to be averted and which ways that led us astray are to be avoided, so that the city of the future should not be called monotonous but human."

FIVE AMERICANS ARE HONORED IN SÃO PAULO'S

THE RECORD REPORTS

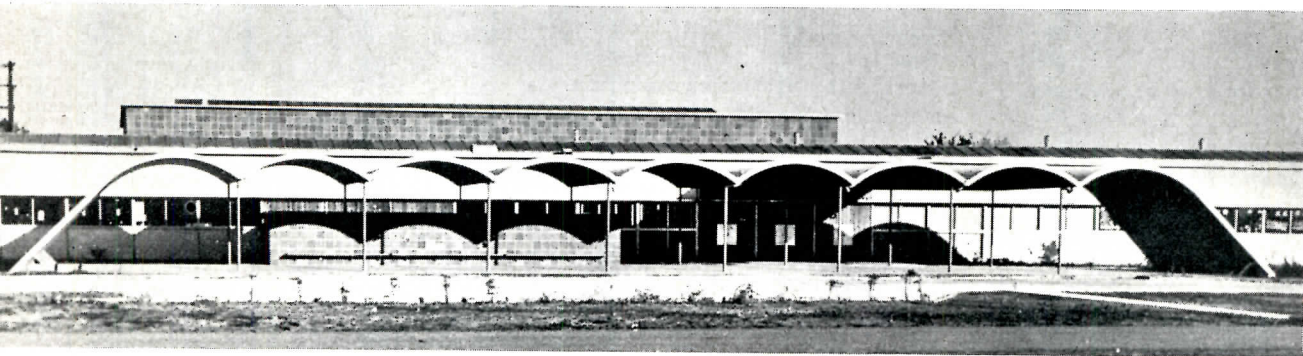


SÃO PAULO PRIZE established two years ago by São Paulo's Andrea and Virginia Matarazzo Foundation to give architecture its "Nobel Prize" went this year to Walter Gropius, U. S. A. Le Corbusier was the first winner in 1952

PRIZE FOR YOUNG ARCHITECTS (under 35) was given for the first time this year. The winner: Paul Rudolph, U. S. A. At right: Cabana Club (1953), Stiesta Key, Fla. (ARCHITECTURAL RECORD, October 1953), one of three projects submitted



© Ezra Stoller



SCHOOLS category prize was won by Donald Bartheleme, U. S. A., for his Elementary School in West Columbia, Tex. (1952)



© Ezra Stoller

INDIVIDUAL DWELLING HOUSES prize went to Philip C. Johnson, U. S. A., for Richard Hodgson Residence (1951), New Canaan, Conn. (ARCHITECTURAL RECORD, March 1953)

COLLECTIVE DWELLING HOUSES prize winner — Craig Ellwood, U. S. A., for "Courtyard Apartments" (left), Hollywood, Cal.

SECOND INTERNATIONAL ARCHITECTURE EXPOSITION

All photographs courtesy
São Paulo Museum of Modern Art



ARCHITECTURAL JURY included (left to right) Ernesto Rogers, Alvar Aalto, Gropius and (center, back to camera) José Luis Sert. Half hidden but facing camera at far right: Francisco Matarazzo Sobrinho, founder of the São Paulo Museum of Modern Art and "genie" of the Biennial



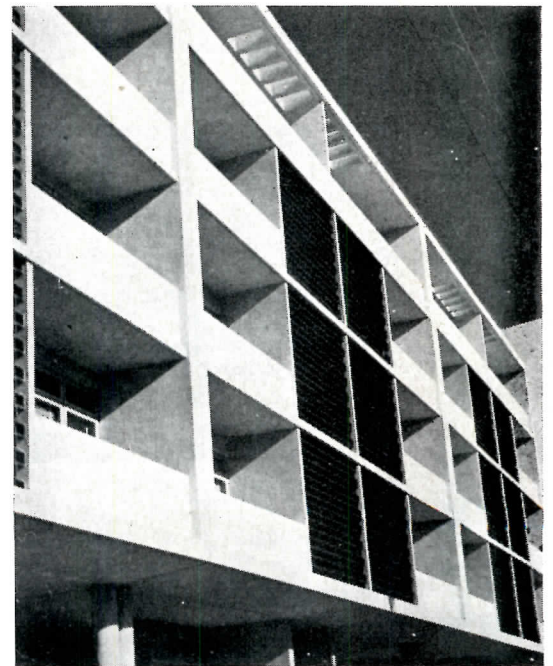
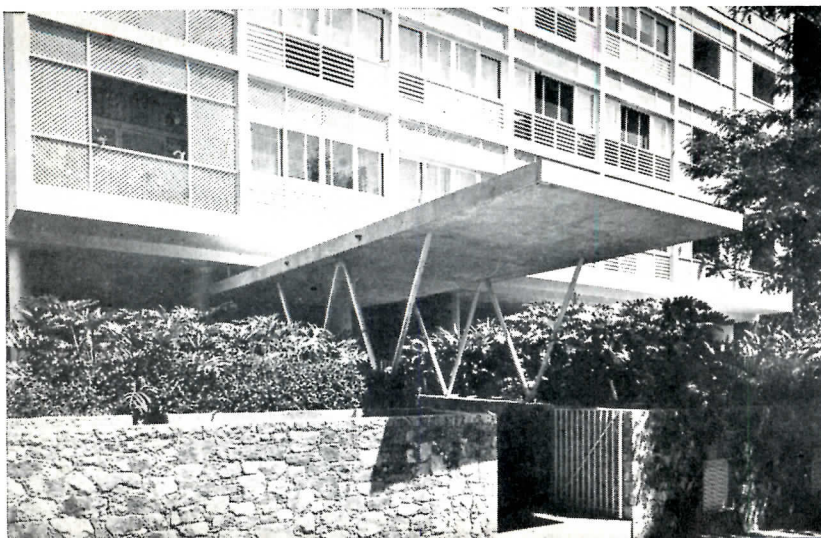
PALACE OF THE NATIONS, one of two buildings designed by Brazil's Oscar Niemeyer and associates to house the art exhibition as part of exposition park for São Paulo's anniversary year

THE SECOND BIENNIAL INTERNATIONAL Exhibition of Modern Art of the Museum of Modern Art of São Paulo December 12–February 28 was the opening event of São Paulo's year-long celebration of its 400th birthday. All the world's architects were eligible to submit work to the screening committee for the architectural section; the works of 129 architects or architectural firms from 19 different countries were chosen for the exposition: they included works of 44 American offices — Wright, Mies, Sa-

arinen and Belluschi among them. Of seven prizes given in the 12 categories of the exhibition, American architects received three. In addition to the prizes there were four honorable mentions; but in four categories — buildings for religious purposes, "playhouses," public buildings, and city planning — neither prizes nor honorable mentions were given. All of the prize-winning buildings are shown on these pages. Americans also received the São Paulo Prize and the Prize for Young Architects.



YOUNG BRAZILIAN ARCHITECTS prize (jury supplement to Prize for Young Architects)—Sergio Vladimir Bernardes, for Mario Carlota Macedo Residence (1953), Rio de Janeiro



COLLECTIVE DWELLING HOUSES: honorable mentions to Jorge Machado Moreira, Brazil, for (left) Antonio Ceppas real estate project (1952), Rio, and to Ray d'Athouguia and Formosinho Sanchez, Portugal, for (above) Lisbon apartments (1952)

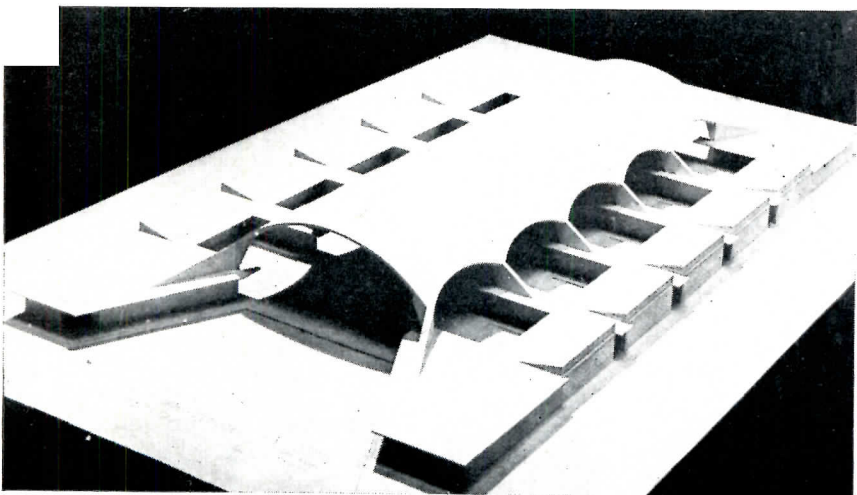
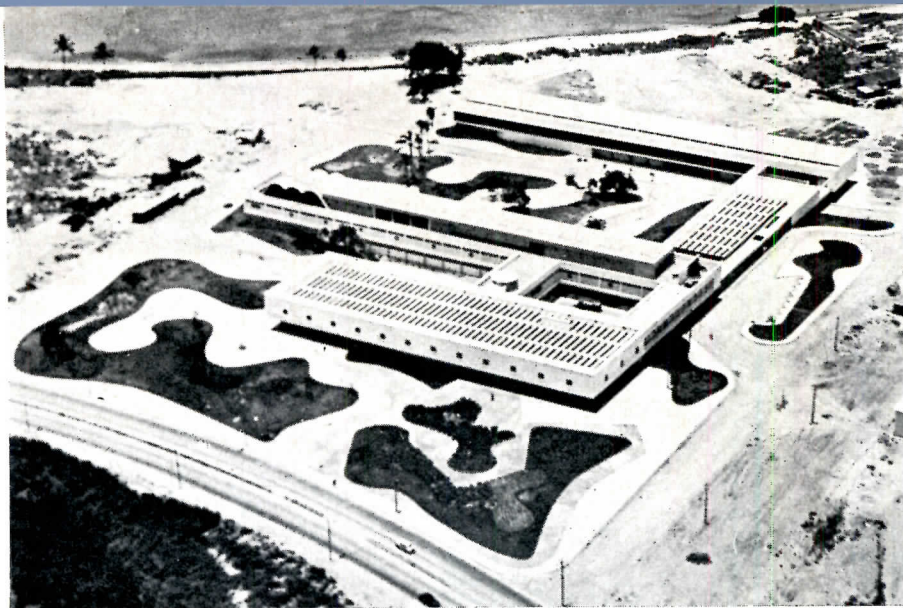
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THE RECORD REPORTS

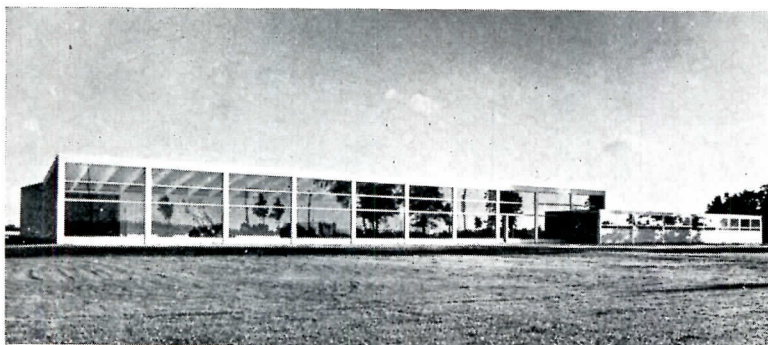
São Paulo Awards (continued)

HOSPITALS prize went to Jorge Machado Moreira, Aldary Henrique Toledo and Olando Magdalena, Brazil, for Child Care Institute, University of Brazil (1953)

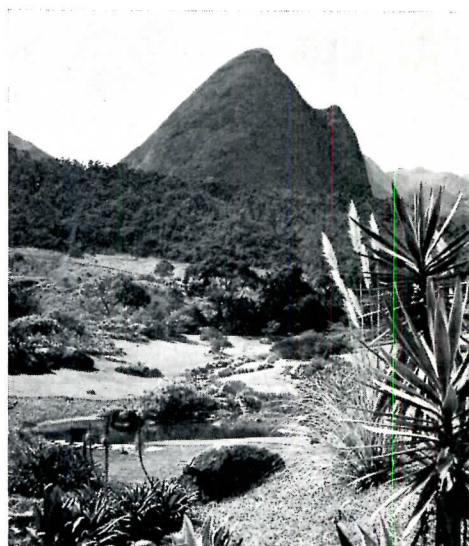
COMMERCIAL BUILDINGS prize to E. Gori, G. Gori, L. Ricci and L. Savioli, Italy, for (below) flower market, Pescia (1953)



All photographs courtesy
São Paulo Museum of Modern Art



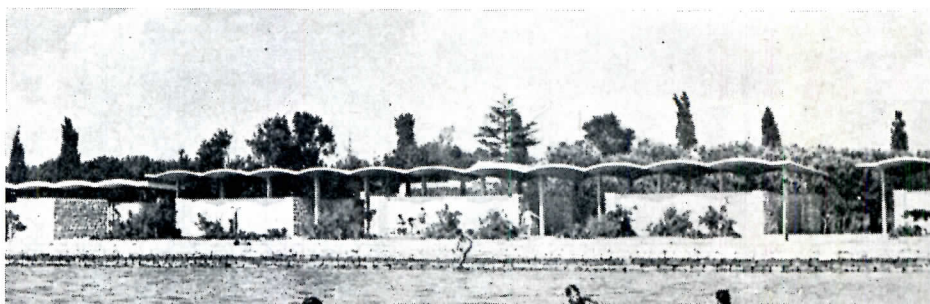
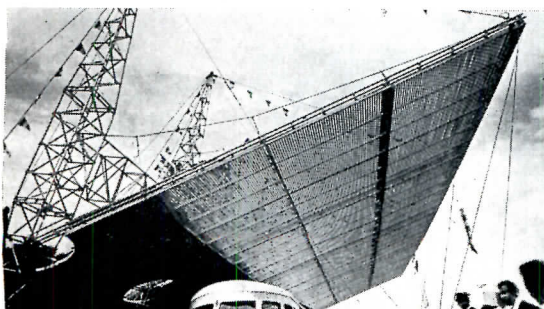
ANOTHER MISCELLANEOUS prize was made available, assigned to exposition projects and given to Renzo Zanavella, Italy, for the Pensilina OM Project at Milan Fair (1952)



MISCELLANEOUS category prize was assigned by jury to landscape architecture and awarded to Roberto Burle Marx, Brazil, "for his entire work" (sample above)

INDUSTRIAL BUILDINGS prize to Arne Jacobsen, Denmark, for Massey-Harris Plant (1953), Copenhagen

BUILDINGS FOR SPORTING PURPOSES: honorable mention to Zvonimir Pozgay, Yugoslavia, for "sea bathing establishment," Zadar (1948)



CONTEST FOR A.I.A. PRESIDENCY DEVELOPS

THE 86TH ANNUAL CONVENTION of the American Institute of Architects at Boston June 15-19 will be enlivened by an unexpected contest for the presidency. John W. Root of Chicago has been nominated to oppose President Clair W. Ditchy of Detroit, who is completing his first one-year term. Recent precedent had made a second term almost automatic. Also in an interesting situation is Second Vice President Howard Eichenbaum of Little Rock, who has been nominated both to succeed himself in his present office — without opposition — and for the office of first vice president, for which Earl T. Heidtschmidt of Los Angeles is also a candidate.

Pre-convention nominations, closed May 6, propose George Bain Cummings of Binghamton to succeed himself as secretary and, for treasurer, Leon Chatelain Jr. of Washington and Edward C. Wilson of Fort Worth. Candidates to replace the four regional directors whose terms expire are: Central States — Frank N. McNett, Grand Island, Neb.; Sierra Nevada — Donald Beach Kirby, San Francisco; South Atlantic — Herbert C. Millkey, Atlanta; and Texas — Albert S. Goleman, Houston. Election of officers and directors will take place at the convention. Additional nominations may be made from the floor.

An attendance of nearly 2000 is expected at this year's convention, which will have its official headquarters in Boston's Hotel Statler. The program will include addresses by Edward Weeks, editor of *The Atlantic*, and Governor Christian A. Herter of Massachusetts;

and there will be sessions on architectural education, hospital design trends, school design trends, government impact on architecture, architectural philosophy and new developments in structure, materials, lighting and homebuilding (for participants, see ARCHITECTURAL RECORD, May 1954, page 15). One additional program note, not previously announced: Architect Percival Goodman of New York is arranging a short panel discussion on architecture and the allied arts for the convention's closing session.

Awards and honors to be conferred at the 86th convention include the Fine Arts Medal, to Sculptor Julian Hoke Harris, A.I.A., of Atlanta, and the Craftsmanship Medal to Maria Montoya Martinez, Pueblo Indian "potter of San Ildefonso." The A.I.A.'s highest award, the Gold Medal in architecture, and the Edward C. Kemper Award for service to the Institute are not being given this year. Honorary memberships will be conferred on Morton O. Withey of Madison, Wis., immediate past dean of the School of Engineering at the University of Wisconsin and for many years chairman of the Wisconsin State Board of Registration, and Dr. Richard Eugene Fuller, director of the Seattle Art Museum. Twenty-one members will be advanced to Fellowship in the Institute (ARCHITECTURAL RECORD, May 1954, page 15).

RESIGNATION ANNOUNCED

JOSEPH B. MASON has announced his resignation as Executive Editor of ARCHITECTURAL RECORD as of May 1.

Construction Trends

It's still a record year. Four-month figures on valuation of construction contracts awarded as announced by F. W. Dodge Corporation show:

- An eight per cent overall increase over the same period in 1953.
- A 13 per cent increase in residential construction.
- A nine per cent increase in non-residential construction.

For details: page 338.

Effective as of the same time, Mr. Mason becomes Eastern Editor for *American Builder* and Home Planning Consultant for the magazine, *Family Circle*.

In his new capacities, Mr. Mason will continue to be identified heavily with every aspect of home planning and building, bringing to bear on his new assignments his rich previous experi-



ence with *American Builder*, *Good Housekeeping* and ARCHITECTURAL RECORD.

Joe, with the good will of his host of friends in building and in publishing, will make his new headquarters at 30 Church Street, New York 7, N. Y.

CORRECTIONS

• In the May issue of ARCHITECTURAL RECORD, Lathrop Douglass should have been credited as the architect of Wanamaker's Store-Shopping Center, Great Neck, N. Y.

• The architectural credit for the Socomy-Vacuum Building project, Lexington Avenue and 42nd Street, New York City, should have read as follows: Harrison & Abramovitz, John B. Peterkin, Associated Architects.



— Drawn for the RECORD by Alan Dunn
 "Well, you see, Laura wanted a split-level house so we had to excavate—"

BLIGHT PROBLEMS OF SMALLER CITIES GET MORE ATTENTION IN NEW PROGRAM

Renewal, Rehabilitation and Conservation Are the Keys to 1954 Approach to Slum Clearance and Urban Redevelopment

THE SLUM CLEARANCE and Urban Redevelopment Division of the Housing and Home Finance Agency has high hopes that new housing legislation this year will entice smaller cities into its Title I program.

This is one of the significant aspects of the 1954 housing measure, which suffered a time setback in the Senate after the FHA investigations began in mid-April. As the measure passed the House earlier, it would offer the smaller cities new opportunities for participation in Federally-aided slum clearance and urban renewal activity. James W. Follin, division director, explains that the great majority of cities under 100,000 population had been reluctant to use the previous law for developing their blighted areas because it was a bold program demanding the improvement of full block areas.

The smaller places display a natural reticence about sweeping away large areas within their boundaries. What they need, and may get under the new legislation, says Mr. Follin, is the opportunity for selective clearance of their wornout sections; the treatment of smaller areas with rehabilitation machinery available to handle other sections of these cities. He types it as a "combination program," an approach expected to bring the under-100,000 cities flocking in with their applications.

The table illustrates graphically the present limitations of the Title I spread. The number of incorporated places is taken from the 1950 census.

"Renewal" Is the Word

The new legislation firmly implants the word "renewal" in the urban planning lexicon. It turns attention to rehabilitation as well, as a preventive representing the only method of postponing the need for all-out clearance of deteriorating areas.

Mr. Follin describes rehabilitation as an attempt to minimize clearance needs. It applies largely to those areas immediately beyond the hard slum cores of American cities.

Renewal, on the other hand, embraces all avenues of approach to the elimination and prevention of blight. It can encompass total clearance of projects as practiced under the Housing Act of 1949, and can include rehabilitation as well.

"Conservation" Is Another

New emphasis also is being given to a third method of preventing blighting influences from gaining a foothold. This is conservation. It applies to areas of cities still farther removed from the central slum core; the better areas farther out. It means simply the maintenance and repair of structurally sound housing units to keep them from decaying, from becoming slum potentials.

It is hoped that under terms of the new bill cities will decide to carry on rehabilitation work along with slum clearance. They have not been in a position to do this under the earlier statutes, Mr. Follin says. Under the new approach, rehabilitation is expected to be the rule where it has been the exception.

The 1954 measure would permit HHFA to advance planning money to be used in preparation for voluntary rehabilitation and code enforcement activity for the area under question. Here, again,

it is a change from the preceding law which forbade such use of planning advances. Actually, the planning process for rehabilitation is much more complicated than it is for out-and-out slum clearance, and more costly.

More Federal Aid

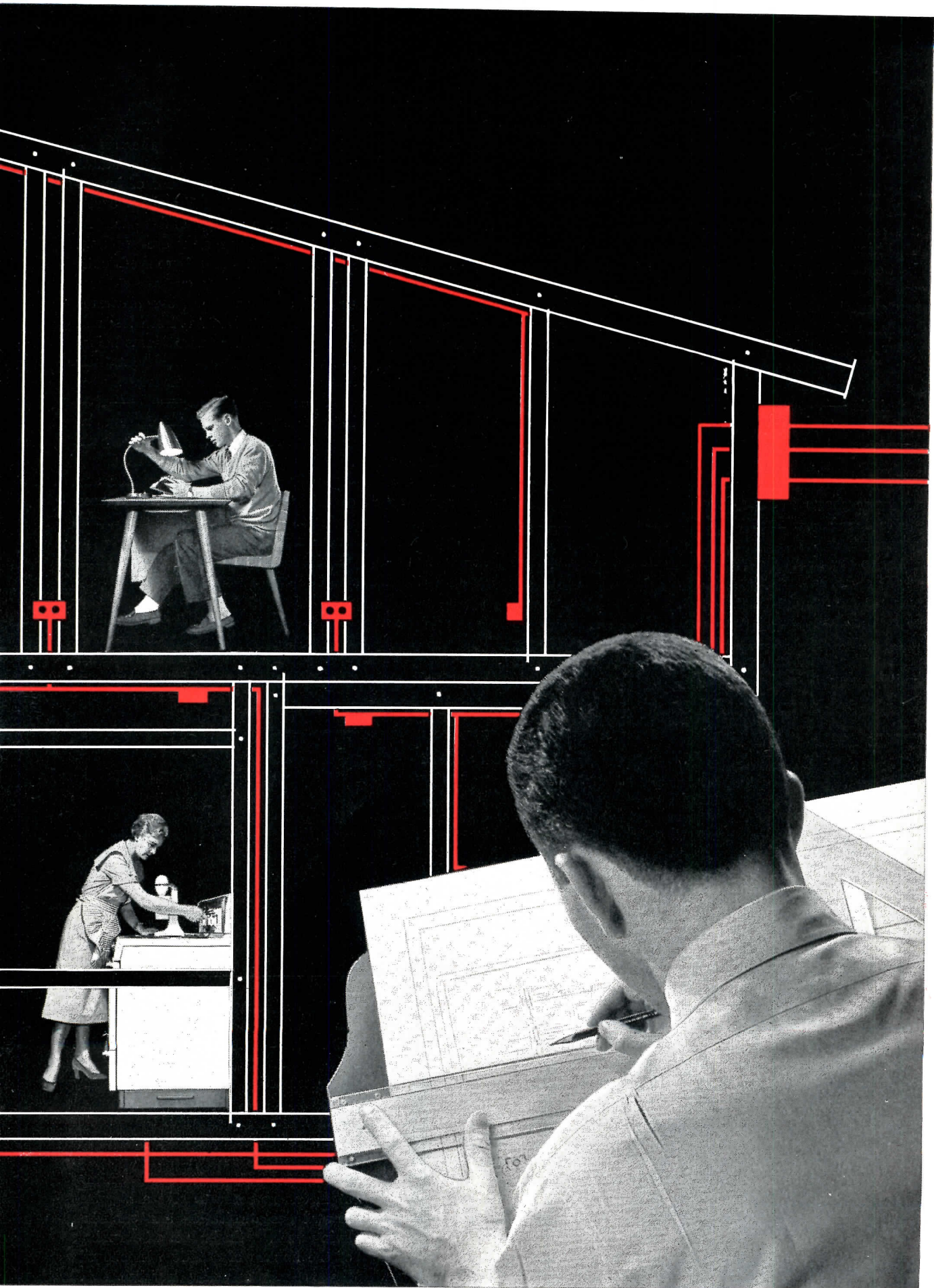
The key feature in the new legislation is that Federal participation in improvement of blighted areas is permitted to a greater degree. The base for Federal help in site improvements is broadened, for one thing. Municipalities presently are pretty much on their own as far as site improvements are concerned. And in most instances the advanced age of public works installations is a strong factor in holding back modernization of any given area. These projects were originally provided under lower standards than would prevail today and lack of local funds (often because of tax limitations) has forced cities to spend what funds they had farther out in newer residential sections, leaving older "inside" locations to deteriorate rapidly.

But under Title VII of the new bill, covering aid to community planning in cities of 25,000 or less, the Federal government could pay up to 50 per cent of the cost of such planning work where the aid is extended through state or regional planning agencies. These must be agencies fully authorized under state statute and cannot be simply voluntary bodies. This fits in with the additional

(Continued on page 266)

CITIES IN THE PROGRAM—POPULATION TALLY

Population Groups	All Cities (by Census)	Capital Grant Reservations	Reservation Only	Program Approval Outstanding
1,000,000 and over	5	5	0	5
500,000-999,999	13	12	0	12
250,000-499,999	23	14	2	12
100,000-249,999	65	38	4	34
50,000- 99,999	126	40	9	31
25,000- 49,999	249	32	5	27
10,000- 24,999	752	44	10	34
Under 10,000	15,885	22	10	12
TOTALS	17,118	207	40	167



"INTEGRATION" MAY SPUR SCHOOL CONSTRUCTION

MORE SCHOOL CONSTRUCTION in the South rather than less appeared to be the long-range outlook following last month's historic decision by the Supreme Court that "in the field of public education the doctrine of 'separate but equal' has no place" and "separate educational facilities are inherently unequal." Most educators seemed to agree that the process of "integration" in the District of Columbia and the 17 states which have had compulsory segregation and the four states which have had "local option" segregation would spur the replacement of outmoded and inadequate facilities — a process which has already been vastly accelerated over the past ten years.

The city school board of Charlotte, N. C., was among the first to direct its superintendent of schools to explore ways and means toward integration. This is what the superintendent, Elmer H. Garinger, has to say about the impact of the decision on school building:

"So far as we can see, the immediate effect may be to stimulate construction in the cities. In most of our urban communities the population is concentrated in community groups. Those centers of

population have their own school units in most cases. Wherever they are missing, the tendency should be to supply schools for them.

"In the rural communities the problem of integrating the two races will be somewhat more difficult. Perhaps in those counties where consolidation has not taken place the change will be less difficult. Our opinion is that we shall see a tendency for the people in the rural sections to congregate in villages where they can provide a school according to their wishes. Perhaps we may see in the South a shift to the type of rural life which has been prevalent in Europe and in the Orient all through history.

"This shift of population into more or less homogeneous groups will involve more building rather than less. In a short time we should not be surprised to see an increase in school building construction."

K. P. Walker, Jackson, Miss., superintendent of schools, sees the possibility of an acceleration of the trend of recent years for Mississippi's colored population to move to urban centers and to other states. Mr. Walker suggests this trend might now be expected especially

in areas of the state which are slow to provide desperately-needed new facilities.

In the short term, pending the presentation next fall by the affected states of briefs suggesting methods of implementation as invited by the Court's decision, some delays and difficulties in construction programs are probably inevitable. Gov. James Byrnes of South Carolina immediately ordered suspension of all school building programs where contracts had not been let; and there may be other moratoriums before the various states can work out their own approaches to the new era.

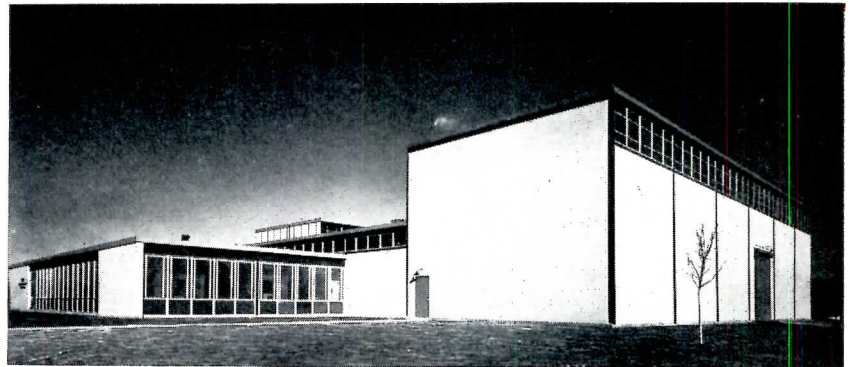
The consensus is pretty well expressed in a statement by N. L. Engelhardt Jr., of Engelhardt, Engelhardt and Leggett, New York educational consultants:

"Of course we cannot look for any overnight solution of the problems posed by this decision. Our main caution at the moment should be to continue the building of school facilities meeting immediate and impending enrollment increases to assure that there is no curtailment of educational opportunities for any American child and no disservice to any well-trained American teacher while the issues are being resolved."

"PEACEFUL ATOM" HAILED AS TRANE DEDICATES LAB

NONMILITARY USES OF ATOMIC ENERGY will be among the fields explored in the new Research and Testing Laboratory of the Trane Company, dedicated last month at LaCrosse, Wis. The "House of Weather Magic" was designed for research and product development in air conditioning, heating, ventilating and heat transfer; it has facilities for reproduction of climatic conditions from the Arctic to the Equator. Magney, Tusler and Setter were the architects.

The main speaker at the dedication press preview was Robert LeBaron, assistant to the Secretary of Defense on atomic energy matters and chairman of the Military Liaison Committee to the Atomic Energy Commission, who took the occasion to float what appeared to be an Administration trial balloon: a proposal for a peacetime "Manhattan Project" which Mr. LeBaron said could cut in half the time required to learn enough about atomic power plants to build them on a commercial basis. "If we could only recreate the Manhattan



Engineer District philosophy and the unique devotion for the military atom in a campaign for the peaceful atom," said Mr. LeBaron, "we could move into this great new era in five years instead of ten." The initial cost of such a project, Mr. LeBaron estimated later in answer to a question, would be twice the present Atomic Energy Commission reactor appropriation — something around \$180 millions.

Decentralization of industry and, indeed, of society in general is one major effect that can be expected from "the peaceful atom," Mr. LeBaron believes.

"The advent of commercial atomic power will be a great force for decentralization of industry," he said. "It has within itself the direct antidote for the destructive forces of the military atom. . . ."

"Decentralized power of the peaceful atom provides a new opportunity to decentralize our social pattern of living. . . . If the evil genie of the military atom can be made to give a big push toward decentralization and suburban living, perhaps the impact on our minds of the horrors of atomic weapons will have served a useful purpose. . . ."

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weight approximately 60 lbs. per 114 square feet:
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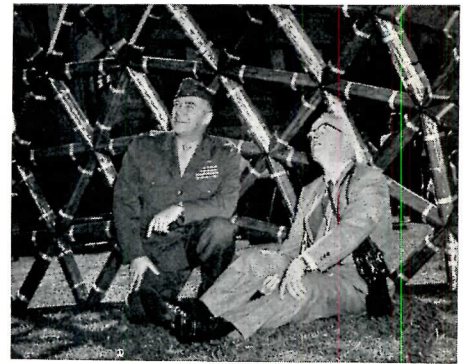
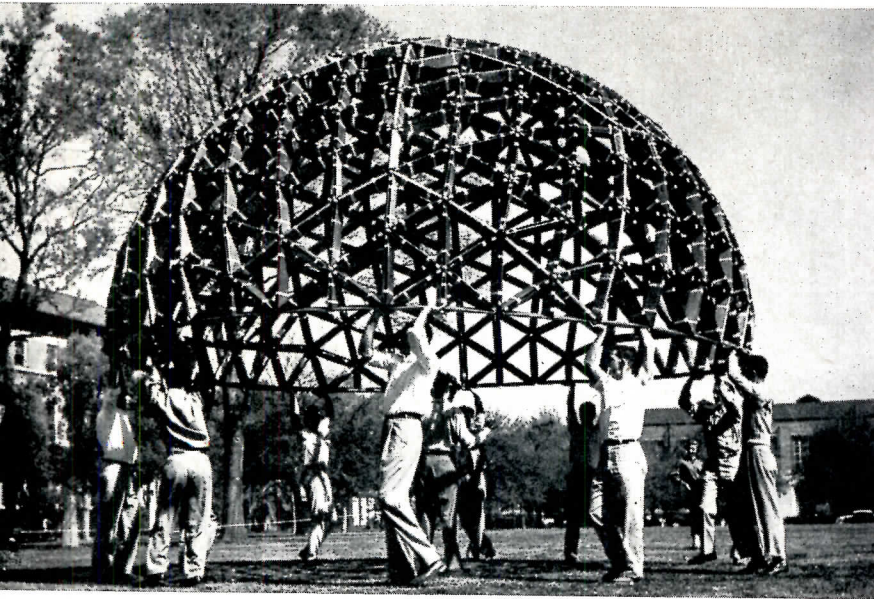
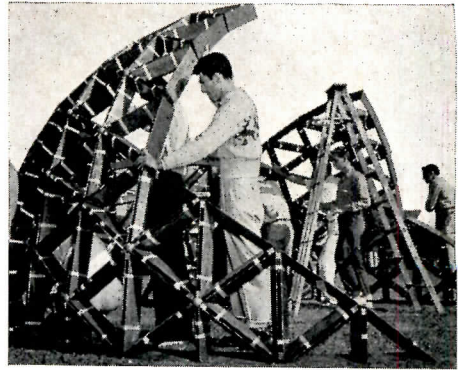
ADDRESS _____

CITY _____ ZONE _____ STATE _____

THE RECORD REPORTS

Tulane students assembling 18-ft model dome

Students raise completed model; a plastic "bathing cap" will enclose structure



Col. Henry C. Lane, of the Marines, and R. Buckminster Fuller

NEW "SITUATION" FOR THE MARINES: FULLER'S DOMES MAY SHELTER THEM

BUCKY FULLER'S GEODESIC DOMES may some day be going to war. This month, at Quantico, Va., the U. S. Marine Corps will hold a series of demonstration tests of a number of the lightweight structures — for men and matériel — developed in special projects conducted at three U. S. architectural schools under Mr. Fuller's close personal supervision.

To meet a pressing need for shelters quick and easy to transport, assemble and dismount, Col. Henry C. Lane, Marines head of aviation logistics, has been directing the Marines' study of a plan to airlift dome shelters, pre-assembled on aircraft carriers or in a rear supply area, to the battlefields. Mr. Fuller's geodesic structure, adaptable with few variations for use as hanger, barracks, motor transport shelter or office, is being considered as possible replacement for the present three-phase housing procedure of erecting tents, improving tents and, finally, building the more permanent Quonsets.

In creating these lightweight structures for the Marines, Mr. Fuller has found a new context for his long effort

to update the ancient principle of the dome by taking advantage of the most recent advances in the increase of tensile strength and by applying an entirely new structural geometry. A sphere (or hemisphere) encloses the most space with the least surface and is most resistant to external pressures. Since the triangle is non-distortable and the most indestructible geometric element, Mr. Fuller uses it as the integral part of the geometric frame.

Students Are Research Staff

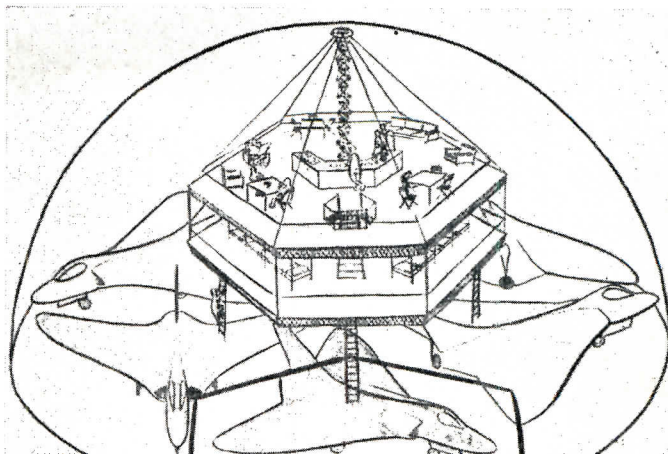
Architectural students the country over have worked on Fuller projects in

the last several years; and it was to architectural students that Mr. Fuller turned to "staff" his research for the Marines. Tulane University, Massachusetts Institute of Technology and North Carolina State College all participated; the photographs on these pages show the progress of the Tulane project.

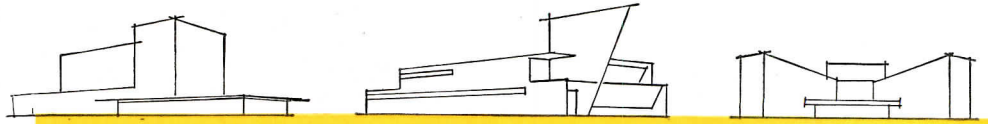
At Tulane, 23 fifth-year architecture students under Dean John E. Dinwiddie followed a tightly-scheduled four-week program similar to programs followed by Fuller students at other universities across the nation. The first week consisted of "marathon" lectures by Mr. Fuller. Then came a week of "tooling"

(Continued on page 316)

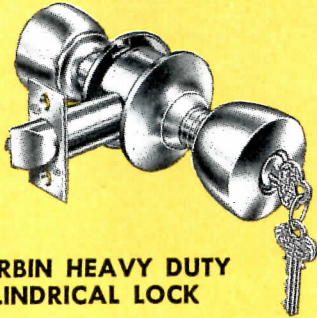
Sketch by North Carolina students shows possible use of dome as hangar which turns on wheels to let planes out. Living quarters above



For every building you design

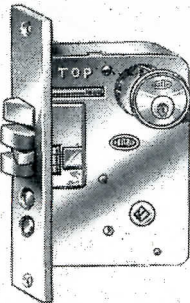


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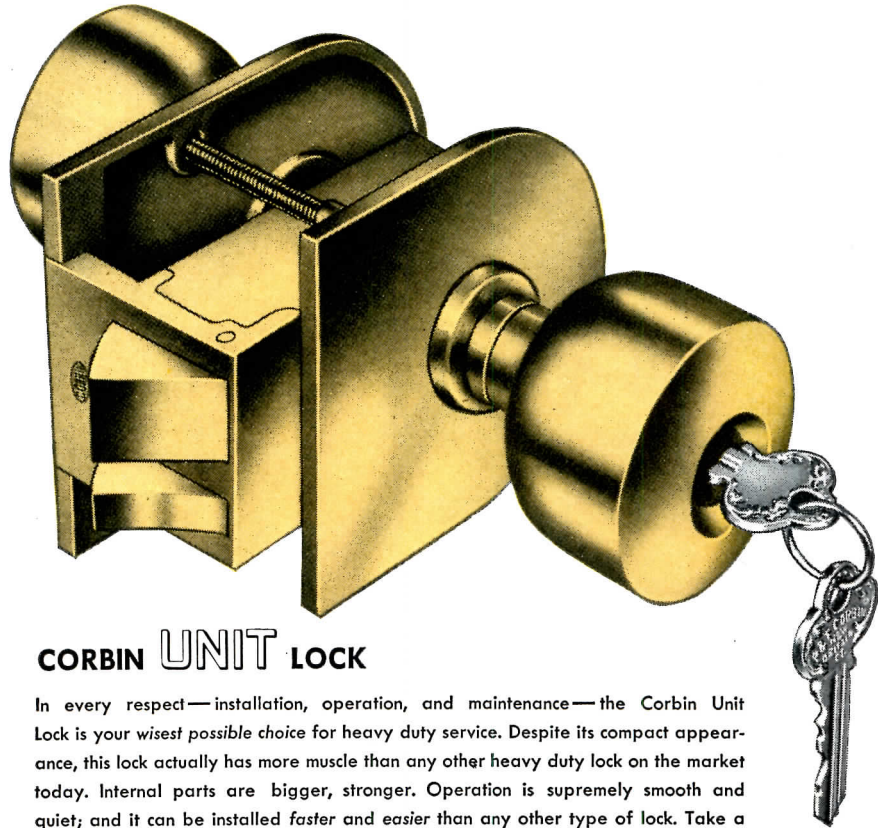
CORBIN "Defender" STANDARD DUTY CYLINDRICAL LOCKS

A major advancement in its class, the Corbin "Defender" has "Velvet-Glide" ball-bearing latch retractor action that is completely new to locks in the moderate price class. For any building where security and appearance must be combined with economy.

For more convenient service . . . for the time-saving, money-saving advantages of *one-source* hardware purchasing, *it pays to call your Corbin Architectural Hardware Consultant.* He is the man who can offer you a complete selection of locks for every

purpose — in every price range.

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CORBIN UNIT LOCK

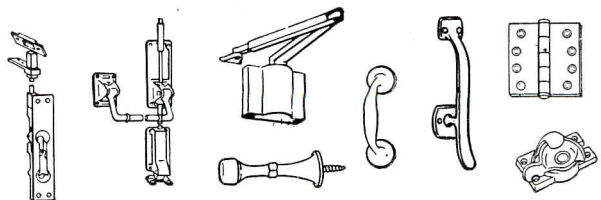
In every respect — installation, operation, and maintenance — the Corbin Unit Lock is your wisest possible choice for heavy duty service. Despite its compact appearance, this lock actually has more muscle than any other heavy duty lock on the market today. Internal parts are bigger, stronger. Operation is supremely smooth and quiet; and it can be installed *faster and easier* than any other type of lock. Take a long, searching look at the Corbin Unit Lock come next specification time. You'll be glad you did.



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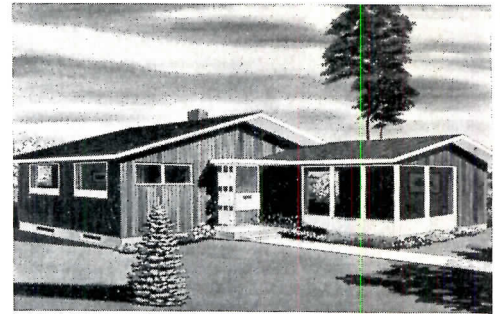
TEN ARCHITECTS ACROSS COUNTRY DESIGN TREND HOUSES

WITH THE DECLARED AIM of winning friends and influencing people for good house design, three British Columbia lumber associations called in ten architects from various parts of the country to design "Trend Houses." The associations, which include the B. C. Lumber Manufacturers Association, the Plywood Manufacturers Association of B. C. and the Consolidated Red Cedar Shingle Association of B.C., hope to set a standard of design for custom built houses which will eventually affect the design of houses built speculatively. They hope also to increase the domestic consumption of Western lumber, now trailing the consumption of Eastern woods.

After appointing the architects, the associations found buyers for each house before planning was started. Subsidies, varying from \$1000 to \$3000, were awarded to the owners. Instructions to the architects were to design a house appropriate to the owner and to the locale, and to develop design ideas slightly in advance of existing home building techniques in the area.

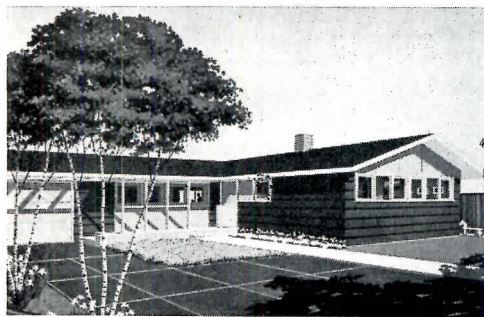
Ideas coming out of the Trend Houses, as observed by the associations, were: multi-sided house for "spacious feeling"; open-wall areas and sloping ceilings; built-in furniture and storage cabinets; random-width, tongue-and-groove siding; and open-beam ceiling construction.

(Continued on page 30)



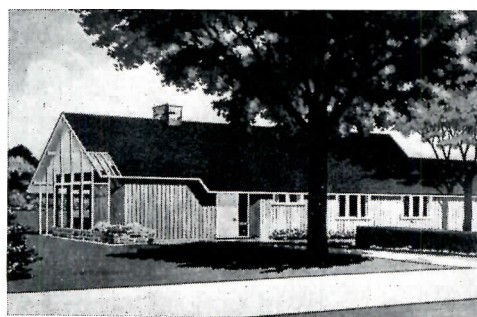
REGINA

Stock, Ramsay & Associates, architects



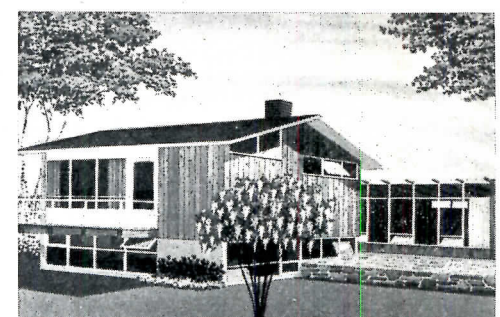
EDMONTON

Dewar, Stevenson & Stanley, architects



MONTREAL

Philip F. Goodfellow, architect



CALGARY

Rule, Wynn and Rule, architects



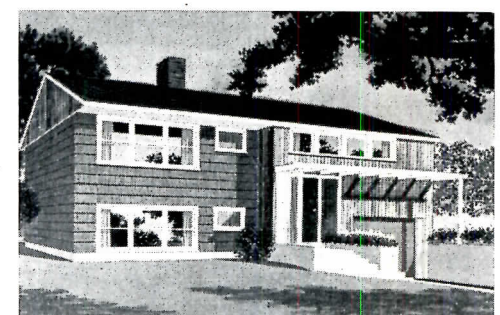
VICTORIA

John A. DiCastrì, architect



TORONTO

Fleury, Arthur & Calvert, architects

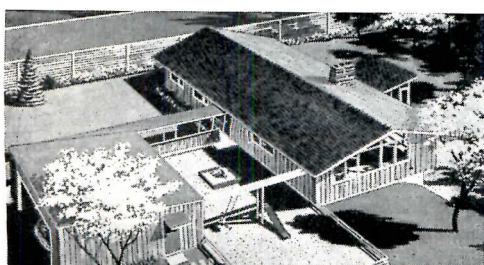


HALIFAX

Davison, Duffus, Romans & Davis, architects

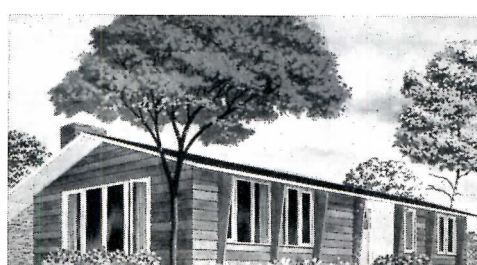
WINNIPEG

Smith, Carter & Katelnikoff, architects



LONDON

Philip Carter Johnson, architect



VANCOUVER

Davison and Porter, architects

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is your *written* and *signed* assurance that the lathing and plastering on specific jobs will be in compliance with this newly adopted Code. It is a *written* commitment to work schedules, job cooperation, work of craftsmanship calibre and nationally recognized standards of quality. It is yours for the asking from lathing and plastering contractors adhering to the Code of Standard Practices for Lathing and Plastering.



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PLEDGE OF PERFORMANCE

We hereby pledge that all lathing and/or plastering performed by us for _____ ON _____ will be (is) in accordance with the Code of Standard Practices for Lathing and Plastering, established by the National Bureau for Lathing and Plastering.

BY _____ DATE _____

We suggest a thorough reading of the Code of Standard Practices which appears on the back of every pledge. Ask your lathing and plastering contractor for a copy.

THE RECORD REPORTS

CANADA

(Continued from page 26)

R.A.I.C. ELECTS TWELVE TO COLLEGE OF FELLOWS

In advance of its 47th Annual Assembly, held May 7-11 in Montreal, the Royal Architectural Institute of Canada announced the election of 12



An \$8 million apartment project, to be started in Toronto this year, will contain 800 suites in the three 14-story buildings, and will provide underground parking for about 500 cars. Architect is Peter Caspari

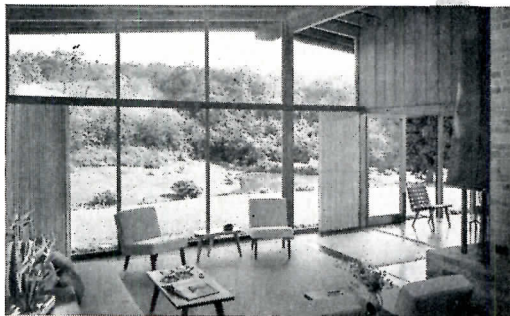
*Unique
Beauty*



Architect: A. Quincy Jones, Los Angeles, California

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Architects: Lemmon and Freeth, Honolulu

variety of contemporary colors

Cabot's Stain Wax brings out the natural beauty of wood grain and texture . . . gives interesting variety to interiors. Available in modern blond shades . . . Glacier Blue, Seashore Gray, Ivory, White, or Natural. Also traditional shades . . . Maple, Mahogany, Walnut, Redwood. Can be tinted with colors in oil.

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members as Fellows of the Institute. The new Fellows are: Gordon Sinclair Adamson, Toronto; W. Wallace Alward, St. John, N. B.; Henry Kenneth Black, Regina; John Bland, Montreal; Arthur Hunter Eadie, Toronto; George E. de Varennes, Montreal; Maxwell C. Dewar, Edmonton; John Stormont Porter, Vancouver; Earle L. Sheppard, Toronto; Jean Baptiste Soucy, Sillery, Quebec; Stan E. Storey, Regina; and Peter Muschamp Thornton, Vancouver.

Award to Landscape Architect

The 1954 Allied Arts Medal, announced the R.A.I.C., has been awarded to Howard Dunnington Grubb, a landscape architect. Mr. Grubb has practiced in Toronto for 30 years, and has been a lecturer in landscape architecture at the University of Toronto.

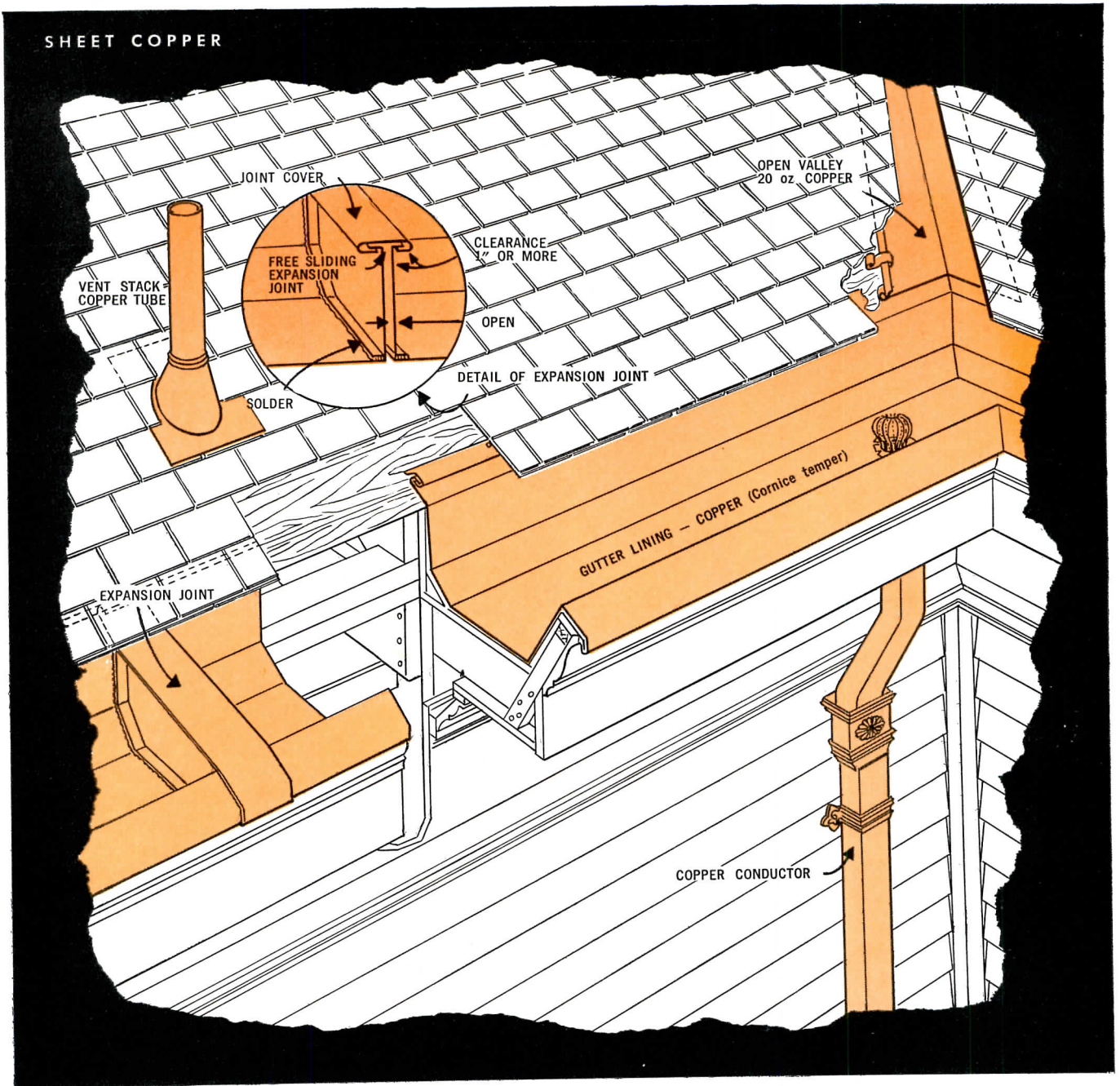
Fellows Scholarship Awarded

C. Ross Anderson, of Toronto, has received the institute's College of Fellows Scholarship for 1954. The scholarship is awarded every other year to a graduate of a Canadian architectural school. Mr. Anderson, who graduated in 1951 from the University of Toronto's School of Architecture, will apply the scholarship to a study of the architectural development of the St. Lawrence and Great Lakes region.

PLANNING SCHOLARSHIPS TO BE AWARDED BY CMHC

Twelve fellowships and three bursaries will be awarded to students of community planning, housing and urban de-

(Continued on page 32)



Built-in copper gutters: how to design and install them

Architects frequently prefer a gutter of built-in design so that the attractive architectural eave line of the house will not be hidden. Furthermore, a built-in gutter will handle more water and is not so easily damaged by sliding snow, ladders, etc.

A copper gutter of this type presents no problem to the experienced sheet

metal craftsman when accepted standards of design and installation methods are followed. *Copper should be of a gage corresponding to the scale of the work.* Examples: a gutter like that shown on the drawing with a bottom 8" wide—a size common on houses—may be of 16 oz. copper. A bottom 12" wide calls for 20 oz. copper . . . 18", 24 oz.

copper . . . and anything above, 32 oz. *Copper should be cornice temper. Gutters must have free sliding edges and expansion joints midway between the downspouts.*

If these points are kept in mind when you design or install this type of copper gutter you will be assured of a long-lasting, trouble-free installation. 5455



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THE RECORD REPORTS

CANADA (Continued from page 30)

velopment, the Central Mortgage & Housing Corporation has announced. These will be effective in the academic year 1954-55.

Two senior fellowships are offered for persons with professional and practical experience in the field of housing and residential development. These awards are intended to aid those who have already shown capacity for original work. Candidates for these awards must

be prepared to devote their full time to such work for a period of at least eight months.

The other 10 scholarships, each for \$1200, are offered for the study of community planning at the Universities of McGill, Toronto, Manitoba or British Columbia, and are open to graduates in architecture, civil engineering or the social sciences. Candidates are required to meet the academic qualifications of

the university to which application is made and to be prepared to undertake a prescribed course of study.

Three bursaries in the amount of \$800 each are offered to graduate students who may be specializing in the study of housing from the design, social or financial point of view.

WINNIPEG MEETING HELD BY MANITOBA ARCHITECTS

At their annual meeting, recently held in Winnipeg, the Manitoba Association of Architects elected to office: E. J. Smith, president; H. H. G. Moody, vice-president; C. N. Blankstein, D. H. Carter, P. M. Casey, A. J. Donahue, K. R. D. Pratt, E. G. Simpson, and E. W. Thrift, councillors.

Architect Harold Spitznagel, of Sioux Falls, S. Dak., was the guest speaker at the banquet. In his address he defined architecture as "a contemporary expression of human needs in terms of contemporary knowledge," and said that he felt commercial building had gone ahead of domestic building in this respect.

Members also heard addresses from Professor John A. Russell, director of the School of Architecture at the University of Manitoba, and from R. Schofield Morris, president of the Royal Architectural Institute of Canada. A seminar on school design was led by Dr. H. D. White.

FIRST QUARTER AWARDS SHOW 17% BUILDING DROP

According to MacLean Building Reports, building contract awards for the first three months of 1954 fell off 17 per cent from a comparable period in 1953.

(Continued on page 36)

New Life

LIBRARY furniture should inspire!

Worn-out or mediocre designs tend to create a barrier to most people. New Life library furniture has the touch of freshness and perpetual youth that is so important in a library.

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New Life



FREELINE 210



In Toronto this office and factory were recently completed for Westeel Ltd., manufacturers of steel building products. Shore & Moffat of Toronto were the architects

that can't be matched

DRAMATIZE OTIS ELECTRONIC LEADERSHIP

The Otis Electronic Door is the crowning achievement in the field of the Operatorless Elevator. Its unmatched "electronic politeness" is available only with AUTOTRONIC elevators. The successful development of this door insured the ability of operatorless elevators to move great masses of people in busy buildings with the greatest degree of safety.



Only AUTOTRONIC elevators have car and hoistway doors with an *electronic zone of detection*. It is a proximity zone that extends in front of the leading edges of both

the car and hoistway doors up to shoulder height. Naturally, it is invisible to the passengers. (See phantom drawing at the left.)

No time is lost. The doors close promptly after each stop. If the *electronic zone* detects a person's presence, the doors politely reverse—even before they can touch the passenger. But if there is no chance of passenger interference, the doors continue to close without unnecessary car delay.

This *zone of detection* politely helps to prevent passengers from delaying the elevator, too. If a talkative passenger lingers overlong in the doorway, a buzzer sounds and the doors slowly, firmly—but politely nudge the passenger out of the doorway so the car can proceed on its way.

And most important from a building manager's viewpoint, this *zone of detection* is on duty all of the time the elevators are in opera-

tion. Its electronic reflexes never tire or slow down. It is a most vital point of AUTOTRONIC elevating. Its unmatched superiority makes possible uniformly fast, regular service in Otis automatic passenger elevators.



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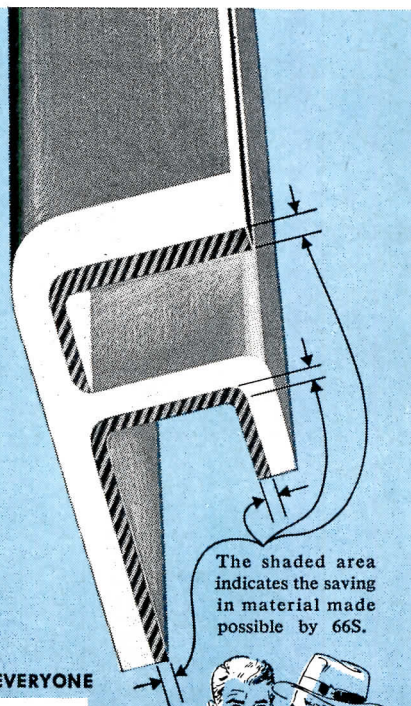
means that Harvey metallurgists have combined the essential qualities of many ideal structural alloys into a single new aluminum alloy—66S. This general purpose alloy is bringing real economy to many industries. It combines the high strength of 24S and the good corrosion resistance, weldability and economy of 61S. Alert

aluminum fabricators can now use 66S to reduce material costs, cut weight without sacrificing strength, and lower fabricating costs. You can reduce your costs at Harvey Aluminum . . . tooling service charges are nominal, and Harvey prepays the freight to your dock. Send for a 66S Bulletin today.



here's how you save

The high yield strength of 66S permits you to reduce the cross section of structural members. This means real dollar savings in material costs. The extrusion at right was made of 61S. By using the high yield strength of 66S its cross section is reduced as shown. The saving in material amounts to approximately 26%. Saving in cost, 21%.



The shaded area indicates the saving in material made possible by 66S.

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An independent producer of aluminum extrusions in all alloys and all sizes; special extrusions, press forgings, bar stock, forging stock, tubes, impact extrusions, aluminum screw machine products and related products.

THE RECORD REPORTS

CANADA

(Continued from page 32)

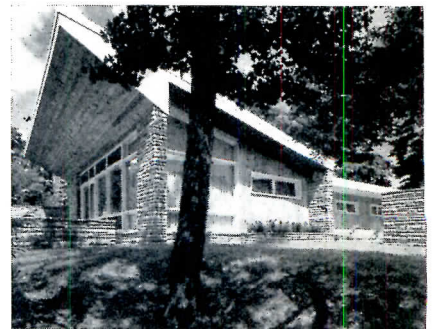
The bulk of the decrease occurred in March, and all types of building, with the exception of housing construction, shared in the decline.

The figures, suggest the reports, reflect a substantial drop in engineering construction, which was down almost \$39 million from 1953. Business building showed a drop of \$27.7 million, while industrial construction decreased about \$3.9 million. Residential figures were up by about \$12.3 million.

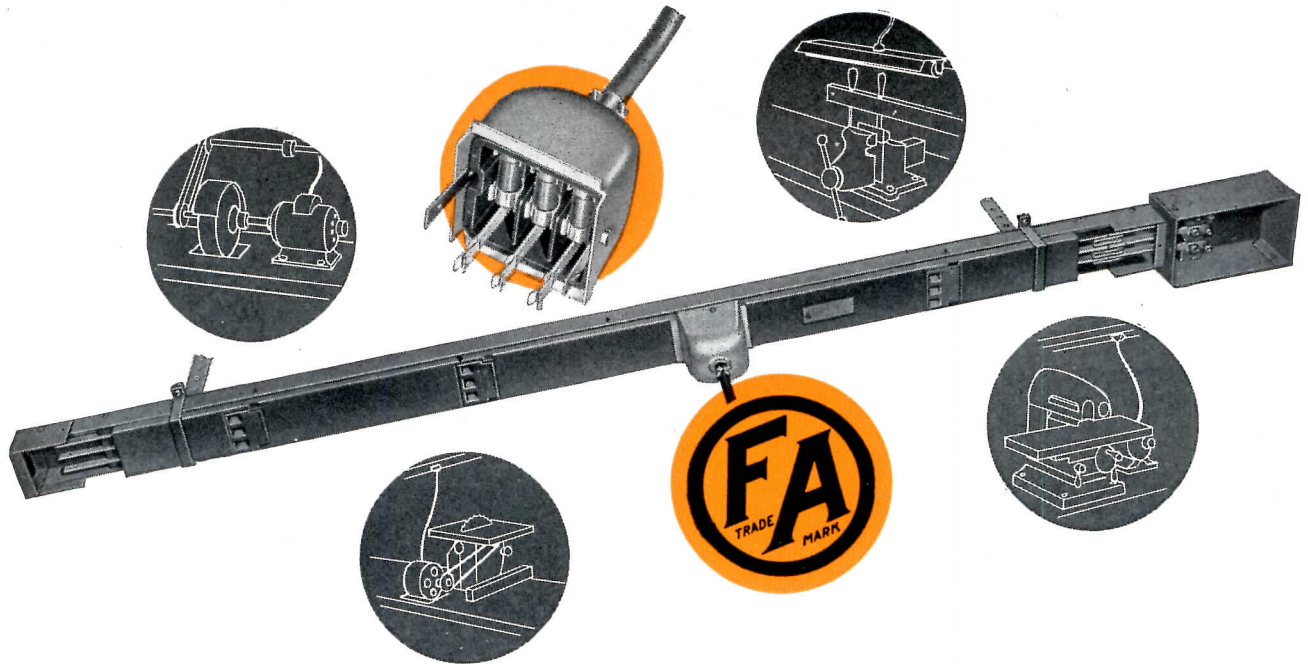
NEWS NOTES

The London Chapter of the Ontario Association of Architects recently elected to office: J. G. Magee, president; J. D. McCollough, vice president; R. E. Murphy, secretary; and David C. Stevens, treasurer. . . . A house is longer abuilding this year than it was in 1953, according to the Dominion Bureau of Statistics; average time of completion of a house in January 1954 was 7.6 months as compared to the 6.3 months required in the same month of 1953. . . . The cornerstone of the new headquarters building of the Ontario Association of Architects was recently laid in Toronto, with president Alvin R. Prack officiating; John B. Parkin Associates are the architects. . . . The O.A.A.'s Craftsmanship Award this year went to Eugene Turney, 21, a steam fitting apprentice with Howard Smith Paper Mills Ltd.

(More news on page 38)



This house was designed for J. L. Appel by architect E. C. S. Cox; it is located in Toronto



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NOW AVAILABLE IN 100 AMPERE CAPACITY
with plug-in outlets on 12-inch centers

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AIR FORCE EXPLAINS WHY STANDARD PLANS WON'T DO

A Congressional query about "heavy expenditures" for architectural work in Wherry Act military housing has produced what amounts to an Air Force essay on the function of the architect.

Rep. Harry R. Sheppard (D-Calif.) raised the question of standard plans at a session of the Air Force appropriations subcommittee of the House. By way of

reply, Air Force Undersecretary James H. Douglas promised that his staff would try "to avoid the duplication of design work that we find existing." Mr. Douglas also made the following points on this question:

(1) Since individual house plans are only a small percentage of the cost of designing a Wherry project, the use of standard plans is not practical. The major portion of design costs involves

surveying of the housing site to provide topography of existing conditions, design of site layout, including road and driveway system, water, sewer, gas and electrical distribution systems and design of proper grading, storm sewerage and landscaping and planting. All of these items are of necessity different at each base.

(2) Special house designs are required to provide proper orientation on the housing site, to take advantage of sun and prevailing breezes.

(3) Since the amount of acreage available is different at all sites, houses have to be specially designed to fit in properly with the ground available.

(4) Topography varies at all sites, thus requiring different foundation designs.

(5) Costs in different localities will dictate the size of houses and amenities to be provided.

(6) Appearance of houses should be varied to adhere to existing base or community designs.

(7) Heating, ventilating and insulation vary at different bases.

(8) Design costs are not borne by the government, as the advertisement for proposals requires the successful sponsor to reimburse the government at the time of closing of the project the amount expended by the government for architectural and engineering services.

(9) The plans used for the George Air Force Base (Victorville, Calif.) project were not the property of the Air Force, but the property of the sponsor, and therefore could not be used for other projects even if this method had been practiced. (Rep. Sheppard had noted that the Victorville project was a sort of guinea pig for other Wherry Act housing and being an early program project had worked some of the "bugs" out of this type of planning. He wondered why these plans could not have been used as prototypes for other Wherry jobs to be built under similar climatic conditions and for identical use.)

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THE FIRST PHASE of the Senate Banking Committee's investigation of the operation of the Federal Housing Administration's rental housing (Section 608) and home improvement and repair loan

(Continued on page 286)

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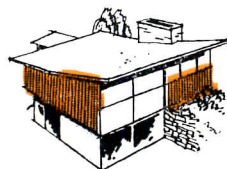
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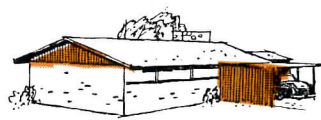
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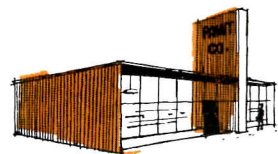
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... for handsome schools and commercial buildings

CONSTRUCTION COST INDEXES

Labor and Materials

U. S. average 1926-1929=100

Presented by Clyde Shute, manager, Statistical and Research Division,
F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr. Brick and Steel		Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr. Brick and Steel					
	Brick	Frame		Brick	Frame	Brick	Frame		Brick	Frame				
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6				
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1				
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7				
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	98.5	97.5				
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1				
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0				
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8				
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8	177.5				
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7	185.0				
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8	205.0				
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	210.1	214.3				
1953	281.3	277.2	281.0	286.0	282.0	223.3	224.6	221.3	221.8	223.0				
Jan. 1954	285.2	279.5	292.2	298.2	294.8	221.8	221.9	224.1	225.4	225.2				
Feb. 1954	284.1	278.2	291.6	297.7	294.2	220.0	219.7	223.3	224.8	224.4				
Mar. 1954	284.2	278.4	291.4	297.5	294.1	219.8	219.5	223.1	224.7	224.8				
Mar. 1954	% increase over 1939		130.1	127.5	123.0	123.0	126.1	% increase over 1939		154.7	164.1	134.6	130.7	137.4

ST. LOUIS

SAN FRANCISCO

1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4				
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7				
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5				
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5				
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0				
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9				
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1				
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1				
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6				
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1				
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7	249.6				
1953	263.4	256.4	259.0	267.6	259.2	255.2	257.2	256.6	261.6	259.7				
Jan. 1954	263.8	257.0	261.5	270.6	263.3	255.8	247.8	262.3	269.6	264.7				
Feb. 1954	262.0	255.8	260.7	270.0	262.5	254.0	245.6	261.5	269.0	263.9				
Mar. 1954	262.1	256.0	260.5	269.8	262.4	254.5	246.3	261.3	268.9	263.9				
Mar. 1954	% increase over 1939		137.8	139.3	119.5	125.2	120.5	% increase over 1939		141.0	148.0	122.6	120.6	126.5

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.

$$\frac{110-95}{95} = 0.158$$

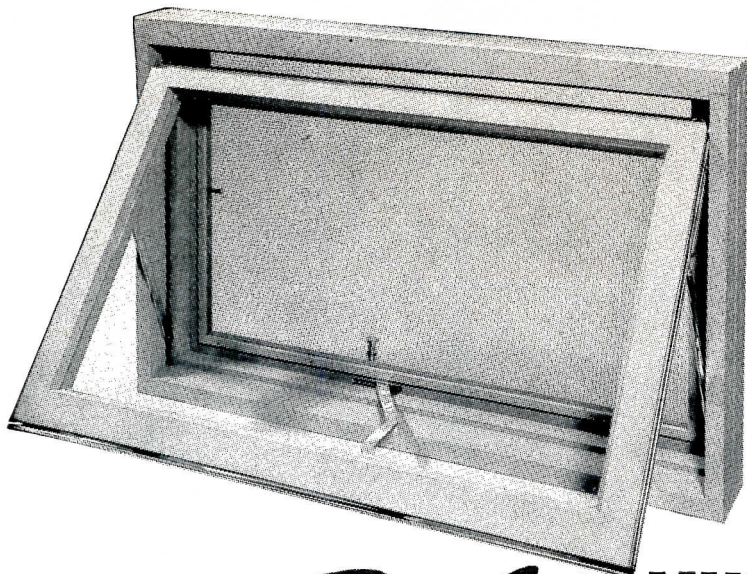
Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

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.



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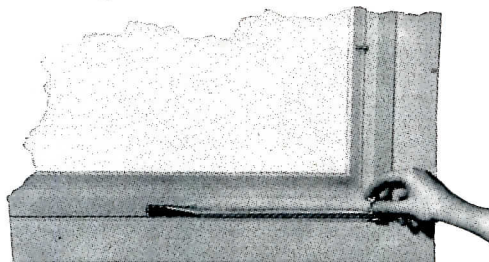
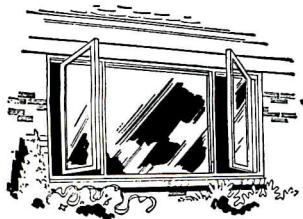


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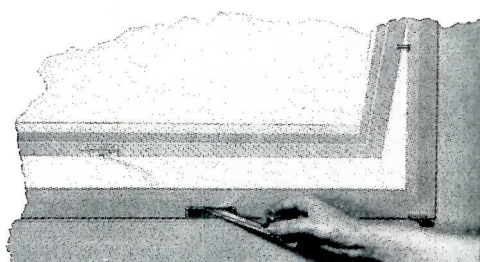


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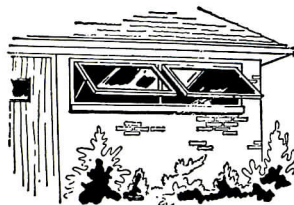
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IF VITRUVIUS SHOULD SURVEY ARCHITECTURE TODAY—

Editorial Note: *One of the significant recent events in the architectural world is the issuance of the Final Report of the 1950 Survey Commission. Undertaken by the American Institute of Architects with a grant from the Carnegie Foundation, the 1950 Survey set out to analyze the entire profession, from student through seasoned practitioner, A.I.A. and non-A.I.A. members alike. Its preliminary report, issued in 1951, contained statistics which seemed to promise much. Now the Final Report, just published, is at hand. Architectural Record, aware of the Report's importance to the profession whatever its strengths and weaknesses, here presents not only a review of it by one of America's distinguished architects and educators, but also individual evaluations of the Commission's work by several Commission members.*

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The Architect at Mid-Century: Volume I — Evolution and Achievement. Ed. by Turpin C. Bannister. 7 by 10 in., 560 pp. \$8.75; Volume II — Conversations Across the Nation. Ed. by Francis R. Bellamy. 7 by 10 in., 272 pp. \$5.00. Reinhold Publishing Corp. (330 W. 42 St., New York, N. Y.) 1954. \$12.00 for set.

by **BUFORD LINDSAY PICKENS**
Dean of Architecture
Washington University
St. Louis, Mo.

When Vitruvius wrote his remarkable 2000-word statement on the training of architects, he defined certain basic principles which are as valid today as they were in the first century B.C. His primary concern with quality causes one to question our increasing reliance upon the quantitative statistical survey techniques for the solution to our current professional problems. Within the creative fields, how much do statistics add up and how much do they cancel out? Does a cross section of opinion lead to progress in either art or science? How valuable to a non-reading profession is a two-volume report of 300,000 words?

In order to answer these questions before 1960 the long awaited Final Report of the 1950 Survey Commission deserves to be widely and carefully read. Its authors have seriously attempted to apply the statistical method of analysis to our loose-jointed and rapidly growing profession. In depth, in breadth, and in pages of thickness the Final Report goes far beyond the scope of the two previous surveys made

in 1930 and 1940. In all these dimensions it should stack up impressively with similar statistical studies of engineers, chemists, nurses, and lawyers. The first ten of the twelve chapters in Volume I fill in the background and provide discussion intended to support a series of 43 Specific Recommendations and a statement of General Conclusions. These are neatly arranged as the eleventh chapter, giving the light reader a predigested capsule. Appropriate references guide the more serious reader back to pertinent paragraphs in the body of the Report. Only six of the first ten chapters relate directly to the Recommendations. One concludes that the other four demonstrate the editor's perfectionist attitude. For him this work must truly have been a labor of love produced with considerable personal sacrifice.

In reading through the text one gets the notion that earlier drafts may have been more succinct and positive. It seems probable that during the discussions later drafts have been so modified that the editor did well to salvage as much as he did. There is little evidence to show that the authors of Volume I considered the suggestions put forward in Volume II. Indeed, an impartial lay reader might easily get the impression from Volume I that the A.I.A. is a minority engaged in the same kind of regimenting, "collectivist" activity that is set up as a target in Volume II. While protesting against the "laissez faire" professional attitude, the Commission Report seems to point in the

direction of greater centralized organization and authority in registration and education rather than to encourage a diversity of progressive experiments. The latter course would seem to be more consistent with the regional make-up of the country, the profession, and in line with the suggestions from "Conversations Across the Nation."

"In order to escape the hazards of opinion and preconceptions," the Commission has limited its considerations for the most part to its own statistical survey material and the historical background related to it. Ideas which might have suggested a broad re-examination of the profession and architectural education but which did not emanate from the Commission itself were either summarily dismissed or consigned to the footnotes. Some evidence suggests that the 13-man Commission indulged in a certain amount of "horse trading" in the moderation of all points of view. Only one Recommendation (No. 39) out of the 43 contains a minority report. In the final draft the qualifying and limiting provisions add undesirable roughage which deflects the glimmers of light which occasionally filter through a text overloaded with statistics.

Frequently the Commission's pious hopes are presented as accomplished facts. For example, in the discussion of candidate training:

"While it is no doubt unreasonable to expect that offices can ever satisfy educational criteria completely, several approaches to the problem do promise

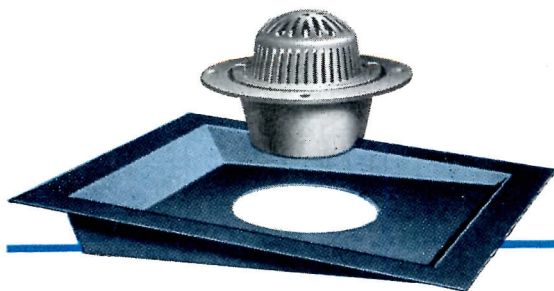
(Continued on page 46)

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M A H O N

REQUIRED READING

(Continued from page 44)

improvement. First is the general recognition by the profession that it must strive for heightened competence among its members. Second, this in turn has led the individual practitioners to realize more fully their responsibilities in the training of candidates, to think more often in terms of educational patterns."

Apparently even the Commission could not swallow this one, for the Report continues:

"Nevertheless, the Commission firmly believes that much remains to be done in ordering candidate training to secure more effective use of the efforts of trainees and practitioners. Indeed, the Commission considers this problem to be one of the most urgent confronting the profession today."

This is a typical example of one paragraph cancelling out another.

In contrast to the conservative tone of Volume I, "Conversations Across the Nation," although uneven, is lively and interesting, partly because the panel discussions are uncensored opinions of selected individuals and partly because non-architects speak up and make value judgments about architects and their place in the scheme of things.

Question 1: "What kind of a society

do you foresee in the future, collectivist or democratic free enterprise?" did not always lead up, as it apparently intended, to Question No. 2: "How will the social organization of the United States of the future affect the physical form of buildings and the growth of cities, towns and rural areas?" Both of these questions invite crystal ball gazing and seem to be based upon assumptions which the panel members were not quite ready to accept. The resulting bull sessions were stimulating only to the degree in which the participants contributed creative ideas.

But it was Question 3 which really focused attention on the purposes of the Report and related directly to the subject matter in Volume I: "What should be the basis of preparation of men and women for professional leadership in such a society, with reference to the place of architecture in that society?" In most cases the various panel members had to be retrieved from their speculations about the future society and directed rather forcibly to a critique of the leadership role for architects and the implications for their education. Although there was little real carry-over from the previous questions, they served to generate a head of steam, and many fine suggestions and comments were freely offered.

Walter Taylor has written an excellent summary in the Epilogue, but he could not be expected to retain the "kick" contained in the best of the original statements. One wonders why, after waiting three years, the Commission did not bring itself to incorporate some of the recommendations which could be drawn from Volume II. Read for yourself what the Chicago banker, the Houston newsman, the Bishop from Syracuse, and many other laymen and women have to say about the architectural profession!

One finishes the Report with mixed emotions and certain misgivings. How long will it be until the leaders in our profession face the task of making qualitative evaluations as well as quantitative measurements? Perhaps the answer is implied in a quotation from Mr. Taylor's Epilogue:

"Under present conditions the factual equipment of the graduate will soon be outmoded in any field, and unless the professional graduate has motivation and habits for continuous self education, he will soon be obsolete and ineffectual, if not harmful."

Assuming that this statement is also retroactive, it would explain why the original survey was instigated and to whom it might appropriately be addressed.

OPINIONS FROM SEVERAL COMMISSION MEMBERS

Architectural Record is glad to present the reactions of several members of the Commission to their own work. The viewpoints of course are varied; it is necessary to understand this in order to comprehend the values of their Final Report.

Members of the Commission were chosen on the basis of the personal contribution that they were likely to make. It so happened, however, that they did come from widely scattered areas, namely, the Northwest, California, Gulf Coast, the Middle West, New England, and New York and they represented the teachers, the practitioners and the registration boards. They participated by their presence in eight or ten meetings, which were held in various parts of the country. All evaluations, conclusions and recommendations were the joint action of the members of the Commission. There was only one item in which there was not complete unanimity and that was with respect to the licensing examinations as to whether or not it should include material that the candidate studied in architectural school. The deans felt that the vast majority of

candidates who had been to college and presented academic degrees should be examined only in their three years of practice and those who come up from the rank without college degrees would take a more comprehensive examination. The practitioners held out for one examination for all and were in the majority. This divergence of opinion will be fully discussed in the report.

The fact that the Carnegie Foundation financed the study so handsomely made it possible to bring these ten or twelve men together several times for three- or four-day conferences. Without this joint participation, the study would have taken on the views and hues of the one or two people who might have done all the work. This report is safeguarded from such single-track leadership and is absolutely unique among professional surveys in this respect.

Edwin S. Burdell, Chairman
*Commission for the Survey of
Education and Registration*

In beginning its work in December, 1949, the Commission immediately

adopted a breadth of view and a standard of objectivity which was intended to minimize that hazard of subjective opinion which has so long plagued consideration of architectural education and registration. The first result was the *1950 Survey*, which gathered an unprecedented body of data about architects, schools, teachers, students and registration boards. Second, the Commission sought by a series of detailed functional analyses to isolate and interrelate the causal factors influencing the educational and registration processes. And third, it strove to use these data and analyses as guides in formulating creative and realistic recommendations for the improvement of their operation.

The tenor of the Commission's recommendations is primarily the strengthening, systematizing, intensification, refinement and deepening of professional education from recruitment to retirement to the end that the competence of all architects will be enhanced in their service to society. The Commission believes that architecture and the profession have reached a stage of develop-

(Continued on page 48)



A house for tomorrow

When Bill Miller first talked to the architect about his new home he stressed his desire to put into it the soundest materials and the newest conveniences.

"I hope my grandchildren will be happy in this house," he explained. "New improvements come fast these days, so let's try to be a few years ahead in our planning."

"What fuel would you like to use?" asked the architect when the discussion reached the heating plant.

"I would prefer to use coal," answered Bill, "I understand it is the most economical fuel here, as it is in most areas. But I don't want my wife

to be a furnace-tender."

"With a modern, bin-feed stoker with thermostatic control," said the architect, "your heating will be completely automatic, as well as clean and convenient. And coal has some big advantages — it gives a steady heat, not an off-again-on-again heat. Then there's this for the fellow who looks ahead: I don't know how long these other fuels are going to last. Every year they have to drill their wells deeper, and we are becoming more and more dependent on foreign supplies. As these other fuels get scarcer, they are going to get even more expensive.

"But coal is another story. There is plenty of coal right here in the United States to last us for hundreds—maybe thousands of years. That's something to think about when you're planning a house with the hope that your grandchildren will still be living in it."

Bring your fuel problems to C&O

As the world's largest carrier of bituminous coal, the C&O is intimately familiar with every phase of coal use. We have a large staff of experts who will gladly help you to locate the coal best suited to your needs; to help you use it most efficiently; to help get it to you promptly.

Write to:

Coal Traffic Department
Chesapeake and Ohio Railway
2104 Terminal Tower
Cleveland 1, Ohio



Chesapeake and Ohio Railway

REQUIRED READING

(Continued from page 46)

ment in which laissez-faire attitudes and methods have definitely become obsolete and in which the functional efficiency of these processes must be raised through coöperative effort to entirely new levels.

This theme recurs again and again throughout the report. Perhaps it is most dramatically revealed by the need for the expansion of professional personnel — practitioners and students — which is clearly demanded by the inexorable growth of population. It appears no less compelling in the need to explore and exploit methodically and energetically the potentialities of architectural research. In turn, the need for effective dissemination of new knowledge calls for more systematic conduct of professional education not only at the academic level, but also during candidacy and at advanced levels for mature architects. Thus the Commission emphatically believes that professional frontiers are far from closed and that the years ahead will present a degree and quality of opportunity, challenge, and significance worthy of the greatest traditions of the art and of the boldest and hardest spirits among us.

Turpin C. Bannister, F.A.I.A.
Editor of Volume I of the Report

I wish first to salute Turpin Bannister for a scholarly re-writing of the various sections which were prepared by different members of the Commission. The value of the report to the architectural profession and society will depend upon the extent to which it is considered by the officers of the Institute and individual architects. There is much source material for the work of committees and for individual studies.

With this report as a guide, I believe it would be profitable to undertake a similar study every ten years (following publication of U. S. Census Reports), or at most, every twenty years. I would suggest a slightly smaller Commission with perhaps two representatives each of the National Architectural Accrediting Board, the National Council of Architectural Registration Boards, and the Association of Collegiate Schools of Architecture, with the Director of Education and Research of the A.I.A. and the President of the A.I.A. as ex officio members. These eight members should be chosen for geographical representation and age distribution, as well as proven competence. If possible, some members of a previous Commission should be appointed as members of each succeeding Commission, and one

member should be a member of the A.I.A. Committee on Education.

It was found by the Commission, whose duties are coming to an end, that it was advantageous to have a small Executive Committee whose members reside near Washington. This and other committees should be set to work promptly. An adequate appropriation should be provided at the outset. Time, as well as available funds, should be budgeted carefully to the end that publication of the Commission's Report could be accomplished within three years. Statistical data requested by questionnaires should be less voluminous than that requested by the outgoing Commission, the reduction being mainly an elimination of opinion questions.

The budget should provide for holding meetings in different sections of the country, some at architectural schools, some with A.I.A. chapter meetings and some with Registration Boards. Outstanding architects and members of other professions in each region should be invited to meet with the Commission.

C. H. Cowgill
Head, Department of Architecture
Virginia Polytechnic Institute,
Blacksburg, Va.

The A.I.A. Survey Commission report is the result of a representative group of architects turning the spotlight on themselves and their associates and recording for contemporary appraisal and future reference the characteristics and activities of their professions. Linked with this is an attempt to prognosticate the direction of the profession's evolution.

The conversational groups across the nation offer a broad extra-professional résumé of the forces which appear to be influential in the nation's progressive development, their impact upon the construction industry, and the design professions.

Time may show the Commission members timid in their evaluation of the future growth and expansion of the profession, and probably too reluctant to influence more positively the direction which professional expansion should take. A certain conservatism was inherent resulting from the lack of earlier objective reports by which the course of the profession's development might be established. Two previous surveys of architectural schools, in 1930 and 1938, assisted greatly in ascertaining the direction taken by architectural education. No such reference points existed to assist in the analysis of the profession itself, nor in the study of registration and licensing procedures.

Fred L. Markham, A.I.A.
Provo, Utah

It is difficult for me to read the two volumes of the Report of the Survey Commission hypercritically. For three years the Commission met, discussed and decided with such a degree of unanimity that I am prepared fully to approve the report. This was the effort of three practitioners, three educators and three members of registration boards, the President of NAHB, Ralph Walker, President of the Institute during the first two years of the labors of the Commission; Walter Taylor, Director of the Department of Education and Research of the Institute; Andrew Fraser, eminent statistician; and Dr. Burdell, esteemed President of Cooper Union. No holds were barred and every avenue of suggestion was explored to its termination. In the invitation to 100 citizens of the country with whom we conversed, extreme care was taken to consult all kinds of people and shades of opinion. Although the work has been laborious and has taken longer than we had thought, we can offer the report with confidence that it will be found to be thorough, scholarly and constructive. The 43 recommendations brought together in Chapter II of the main volume can be read by the busy person with stimulating effect. He can refer to the portions of the text which establish the backgrounds of the recommendations, further to understand each matter. The statistical charts and tables, vouched for by the statistician and derived in part by Turpin Bannister, are for those with sufficient time for scholarly understanding and evaluation of the report. The Commission is tremendously grateful to its two perfectionists, Turpin Bannister and Walter Taylor, for their patient insistence upon scholarly integrity in presenting the report. We shall hope that an evaluation of the profession may be conducted decennially so that evolution and achievement can be scientifically measured as we go along.

George Bain Cummings, F.A.I.A.
Secretary, A.I.A.
Binghamton, N. Y.

... As a member of the Commission I find it difficult to sit in judgment on its quality. It represents the most sincere effort of those responsible for it. Since it is the first reasonably thorough analysis of the profession as a whole, its value will be greater if later comparative studies can be made at ten year intervals. The members of the Institute will have to judge whether it is worth the time, money and hours of work that went into it.

B. Kenneth Johnstone
Dean, College of Fine Arts
Carnegie Institute of Technology
Pittsburgh, Pa.

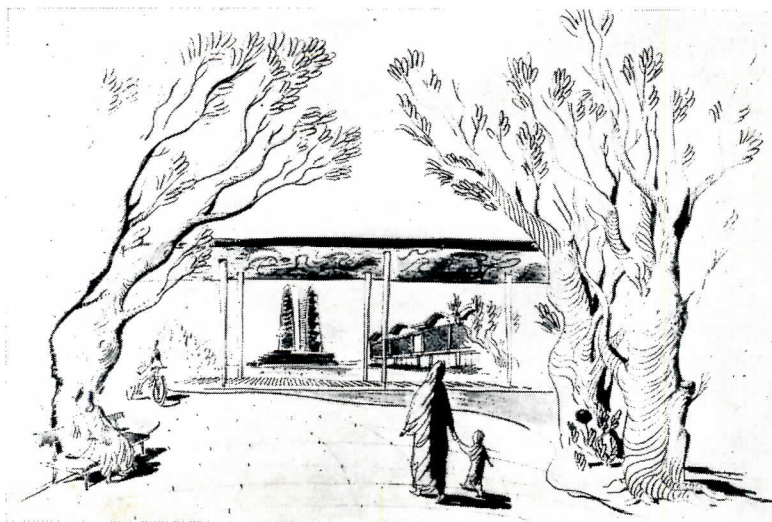
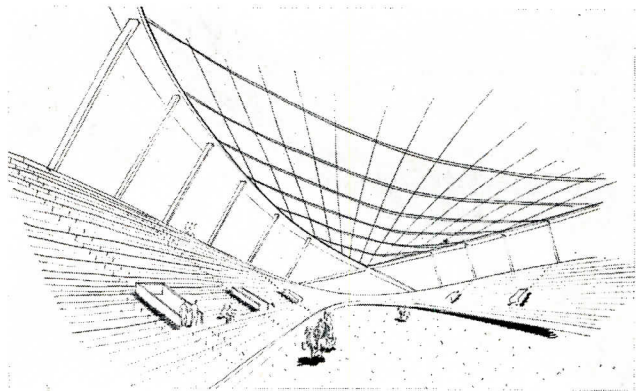
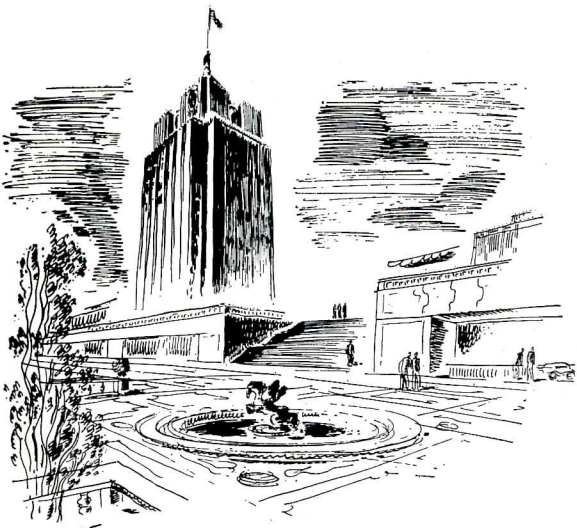
(More books on page 330)

"Perhaps the life of no other architect so well reveals the dilemmas and choices that have presented themselves to the modern architect; or so sensitively indicates the direction that a more humane culture must take, if it is to save itself from the sterility and dehumanization that now threatens our civilization."

The Life, the Teaching and the Architecture of
MATTHEW NOWICKI

By Lewis Mumford

This, the first of four articles, deals with Nowicki's early background and education



MATHEMATICIANS AND POETS often do their best work before they are thirty; but in the nature of things, the discipline of architecture requires a longer apprenticeship and it is a rare architect, like John Wellborn Root or Frank Lloyd Wright who gives the measure of his genius before he is forty. Matthew Nowicki * belongs in this special group. Though he left behind even fewer buildings than Root or Wright at the same age, he created at least one structure, the Arena at the State Fair in Raleigh, that establishes his place as definitively as the Monadnock Building establishes Root's. In addi-



Matthew Nowicki

tion, a wide variety of designs, culminating in his plans and sketches for Chandigarh, and a few succinct but brilliant papers on the nature of architecture all add to the impression he made upon those who knew him: that he had every prospect of becoming the outstanding architect of the coming generation.

The impression that Matthew Nowicki made as a man, his sensitiveness to his environment, his depth of feeling, his self-discipline and humility, raised even higher one's estimation of his potentialities as an architect. In him one felt that a new type of man had taken form: one capable of overcoming the barbarisms and automatisms of our time, one who would bring order and beauty, human purpose and the human scale back into daily life. At the time of the wanton plane accident that brought his life to an end, Nowicki was still growing. His Indian sketches, the work of a lonely summer in the foothills of the Himalayas, were already carving new channels through which the currents of his own creativity could flow. Long before, these currents had carried him beyond the well-explored territory of tradi-

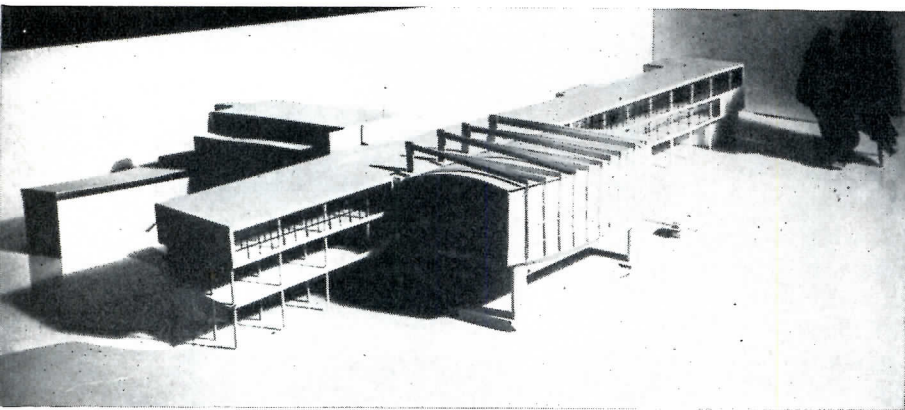
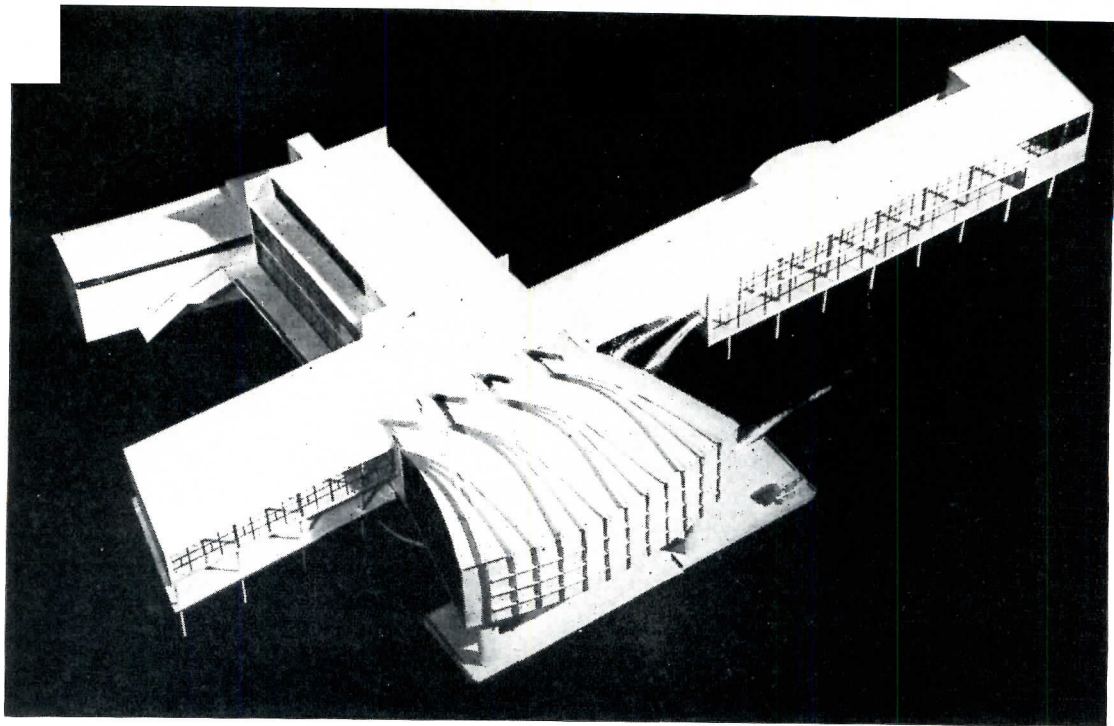
* *Pronounced Novitski*

tional forms; and now they promised to take him just as far beyond the fashionable stopping places of the contemporary mode.

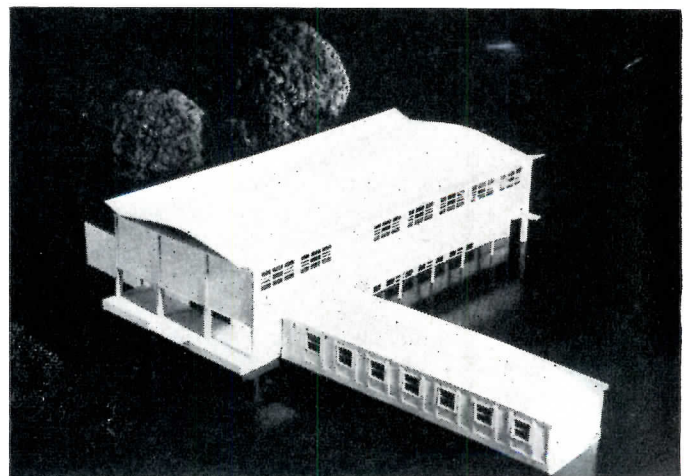
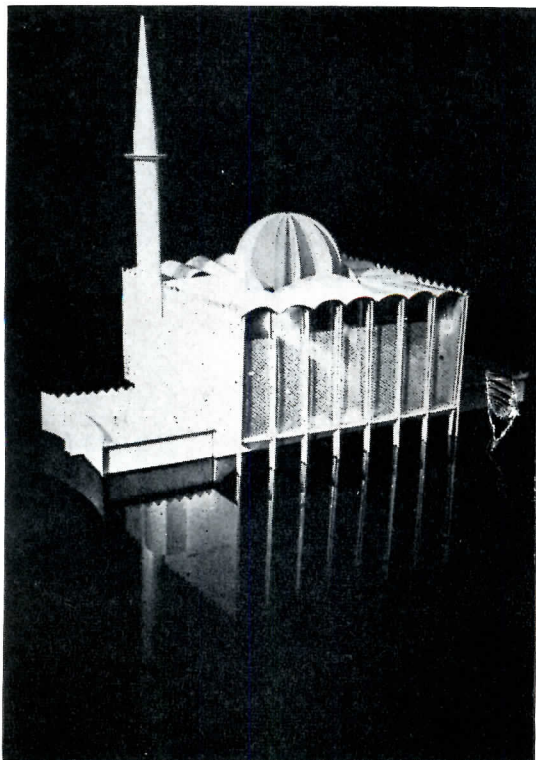
Perhaps the life of no other architect so well reveals the dilemmas and choices that have presented themselves to the modern architect; or so sensitively indicates the direction that a more humane culture must take, if it is to save itself from the sterility and dehumanization that now threatens our civilization. Nowicki's work already showed greatness; but his potentialities go far beyond his visible accomplishment. To understand his life, to follow the process of his education, to evaluate his work, is to have a better grip on one of the great problems that every architectural school is now wrestling with. What are the essential elements in an architect's education? Though genius cannot be manufactured, it may be malformed by bad feeding and it can be nourished by a good diet. Hence Nowicki's reflections on education, which were brought to a focus when he became senior Professor of Design at the School of Design at the State College in Raleigh, N. C. are not the least of his contributions. Fortunately, on these matters, I have his prepared papers and lectures, as well as the testimony of his wife and co-worker, to supplement my own memories of numerous conversations.

1. The Background of a European Modern

Matthew Nowicki was born on June 26, 1910, into a Polish family that belonged, like so much of Poland itself, to an older day: a family with sufficient means to disregard extraneous economic pressures and sufficient social status to disdain any serious effort to seek wealth and power for their own sake. This is the group, now getting smaller in every country, from which the gifts of detachment, large-mindedness, devotion to public service and high causes, so often come. Though the Nowickis lived in Warsaw, they were attached to the country; and Matthew's father was for long the leader of the Agrarian Party, though in his earlier years he had served as legal expert or Consul in areas as far apart as Siberia, where Matthew happened to be born, and Chicago, where, happily, he spent a couple of formative years during his adolescence, acquiring his knowledge of the English language, and his love for the disarming friendliness and the free ways that characterized American life. When he entered the Warsaw Polytechnic in 1929, Nowicki's main aptitude seemed to be in drawing, rather than in architecture proper, and this school, though affiliated more to engineering than the fine arts, gave him plenty of scope for his talents. His professors in art distinguished here between the needs of the



The daring and imagination of Nowicki showed in his earliest work. Model photos above and left show his college thesis, done in 1936, representing an architects' building for Warsaw. The model for a mosque (lower left) and the one (below) of a sports center are also examples of work done before the war changed everything in Poland, including architectural thinking. The sports center was completed in time to be destroyed by the first bomb to hit Warsaw. It was built, incidentally, without the little projecting wing; in fact, the model was actually done to show how awkward this part of the specifications would be



NOWICKI'S WARSAW WORK

FOR NOWICKI, as for most of the young architects of Europe in the nineteen-thirties, Le Corbusier had found the answer to the problem of modern form. But during the desolate period of the war, he and the architects about him in Poland underwent an experience Le Corbusier had not prepared them for, the resurrection of national sentiment, the desire to recapture the ties — once so easily tossed aside — with their own national past. As a result, the structures Nowicki designed during the war, offices in the Warsaw business quarter, were outwardly classic buildings: classic in feeling if not in detail, with individual

windows treated in a repeating pattern, severe and well ordered.

This mode of architectural treatment contrasted with the boldness of the urban pattern; for here Nowicki had willingly absorbed all that modern planning could give: the superblock, the pedestrian scale within that block, buildings only four stories high to reduce congestion, with only an occasional tower for vertical accent; and he had conceived of using the dismaying heaps of rubble of ruined Warsaw, by placing these buildings on a mound formed of this very rubble, with the avenues running in channels below the levels of the

blocks. The structures themselves, it is true, were conceived on a modular basis; but then classicism itself, strictly interpreted, always had a modular basis.

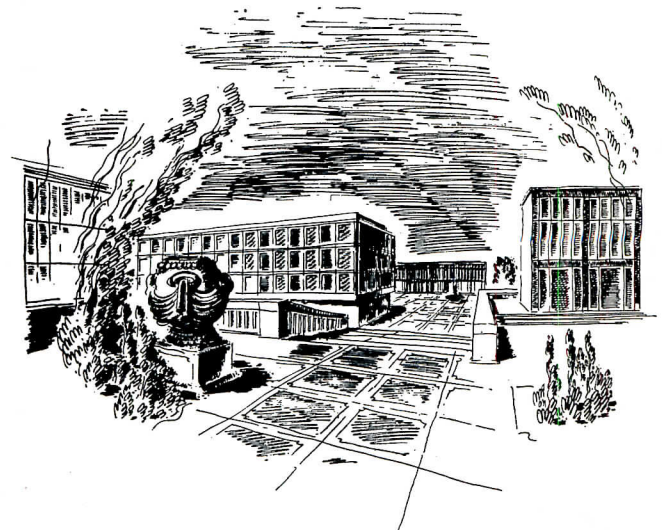
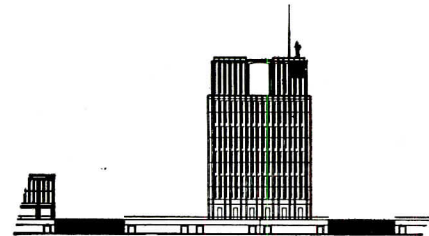
This return to classic order gave Nowicki practice in the planning of free-standing buildings, visible on four sides, set apart by gardens and pedestrian malls. But even at this period Nowicki's inventive genius could not rest content with a classic solution, however well it fitted the modular necessities of prefabrication. In his sketch for a public forum, a connecting link in space between the business quarter and the Cathedral across the river, he indicated a circular

painter and those of the architect: they were interested in drawing, not as symbol and expression, but as a means of opening the young architect's eyes "to the nature of his surroundings," as Nowicki recorded, and to "teach him to see things as structures. To this end a drawing was built, with skeletons of structural lines exposed. In many instances even the use of shades and shadows was forbidden." In other words, drawing, as practiced in the Warsaw Polytechnic, was primarily a means of exact analysis, intellectual as well as visual, and in the end an organ of structural synthesis. In each case, the purposes of architecture defined the method of teaching. That discipline was one of the solid foundation stones of Nowicki's education, and his skill with pen and pencil made it possible for him in later life to translate his architectural ideas swiftly into the third dimension, treating plan and elevation as one, a trait he admired in Frank Lloyd Wright's freehand sketches.

Nowicki's talent as an architect matured slowly, or perhaps it would be more accurate to say that his singular aptitude and originality were at first only slowly noted by others. So many personal qualities were in his favor that his professional potentials were perhaps overshadowed by his social graces.

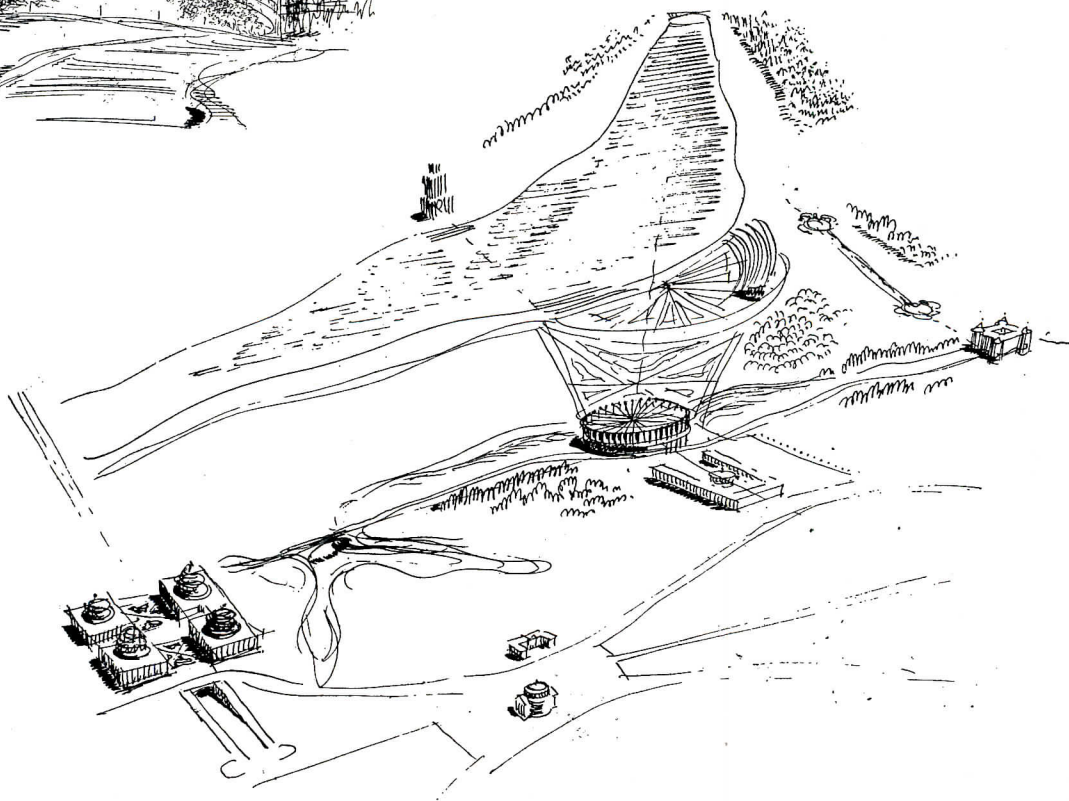
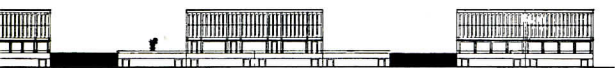
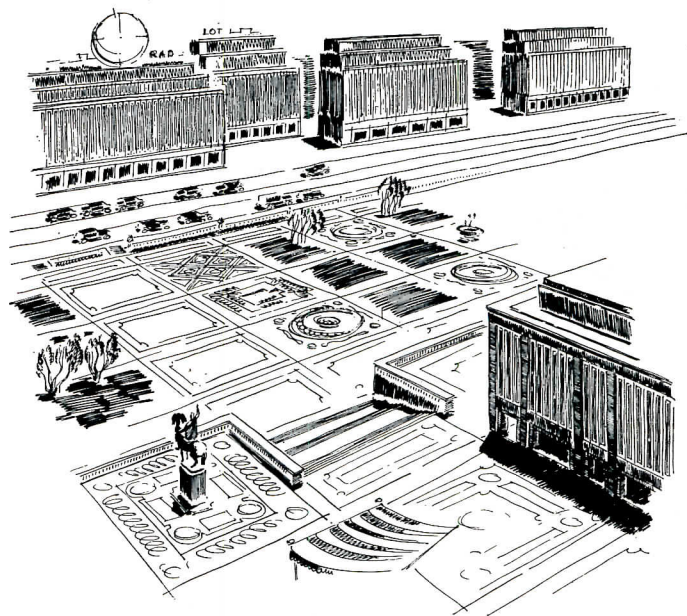
When his future wife met him at school she had no doubt of his architectural genius; but, as so often happens in academic life, it was she who often carried off the prizes, and it was to her, rather than to her future partner, that her professors looked as to a future architect of distinction. And perhaps her teachers were not altogether mistaken, for from the beginning to the end of his professional career theirs was the closest of partnerships; so close that they had a common signature for the work they did together in illustrating books and designing fabrics. As sympathetic critic and catalyst, if not always reagent, the wife played a productive part in the husband's work.

Nowicki's years of professional study were punctu-



building, with its roof held in suspension from the steel posts about the perimeter, placed like the candles in a birthday cake. These Warsaw designs are notable, not only because their human scale contrasts with that of Le Corbusier's City of the Future, extravagantly emphasizing its man-dwarfing heights, but because they are conceived in four dimensions, with a constant change in relationships due not merely to pedestrian movement itself but to changes in levels and angles of approach.

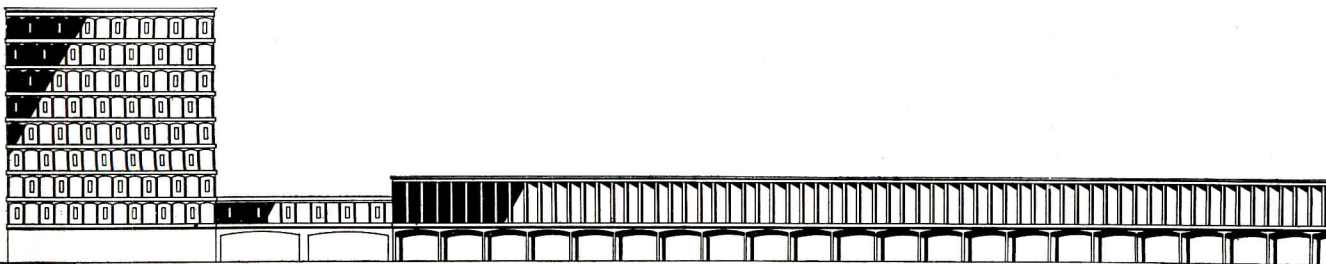
— Lewis Mumford



ated by wide travel. Before he was graduated in 1936, he had travelled, sketchbook in hand, over most of Europe, as far as Athens. He even visited Brazil before it became an architectural exhibition piece. His first-year course in Greek and Roman history caused him to spend a whole vacation in Rome, confining his explorations wholly to the historic ruins of the Forum. After that his prescribed course gave a year to medieval history, and two years to contemporary history, starting with Bramante and ending with Le Corbusier: all this in addition to the history of Polish architecture, in which much attention was paid to the traditional wooden structures with their ingenious and highly wrought forms. So thorough was this teaching, so well knit was it with personal explorations, that Nowicki had, as a constant standard of reference, the entire architectural and civic past of Europe, and not a little of America. There was nothing in his education that would confuse originality with

enough money to go travelling. This strenuous professional training was mixed with an equally strenuous and dashing social life: brilliant formal dances, elegant rather than Bohemian, or skiing parties in the Carpathian mountains over long weekends. The pace was swift; the training rugged; the vitality high — all facts that stood Nowicki in good stead during the grim days of the occupation and the even darker days of the “premature” uprising — that uprising the Russians prompted and then betrayed, so that their political rivals, liberal or socialist or conservative, should all be liquidated before their occupation.

The Warsaw Polytechnic in the nineteen-thirties was, like almost every similar school in the West, in process of transition; but that very fact perhaps gave Nowicki the best of both worlds. On one hand was well-knit curriculum uniting traditional architecture, with its humanistic background, and engineering with its scien-



Modular design was a principle much stressed in Nowicki's work, as a basic discipline of architecture. This is a textile mill building for the mill town of Zrardow, Poland

deliberate illiteracy, or would treat contemporary forms as if they existed in an architectural void, like a space ship cut loose from the gravitational pull of history. From the beginning of the course, the students of architecture at the Polytechnic had both a sound and exhaustive training in engineering, and they were encouraged to work on building projects or find a job in a professional architect's office. To make this “work-and-learn” program easier, the students were not kept to the close time-schedule of an American school. Instead of a series of short problems, they had only two or three designs to work on each year, at their own pace. What counted was the finished work. Their professors set the problems and criticized the results. What happened between was the student's business.

So effective was the general education of the architects that in competition with regular Beaux Arts students the architectural students walked away with the honors in poster-making and other forms of commercial art; indeed, it was in this fashion that many of them eked out their wages or allowances and got

tific and technical methodology. At the same time the students' minds were opened to a new flood of critical ideas, esthetic images, social projects advanced by the new leaders of architecture, Le Corbusier, Oud, Gropius. As happened in America, it was the students, rather than the faculty, that clamored to be released from archaic historical patterns: Le Corbusier, in a series of eloquent books and a few buildings that photographed rather better than they functioned, had opened up for them a new world of form. Their professors, when the students submitted a new design might say indulgently, as one of them habitually did: “This is an interesting solution. It contains many good *and* original elements. Unfortunately, what is good is not original, and what is original is not good.”

As with most of his fellow students, Le Corbusier was at first Nowicki's god: the house he designed for his parents in the country was pure Le Corbusier, almost to the last detail. Le Corbusier gave this generation a formula, almost as elementary as a painting by Mondrian, for achieving modern form: the result was crisp,

elegant, photogenic, easily identifiable without reference to any quality except the esthetic one. One built in concrete, or covered brick with stucco to make it look like concrete; one divorced the building from the ground by setting it on columns; one used a flat roof and flat windows that formed a continuous surface with the wall; one avoided ornament and one ostentatiously used a machine form, like a chickenwire fence, as a final symbol of emancipation from the past, of identification with the mechanized present. If the result could not always stand up under inspection as architecture, it was at least identifiable as a symbol of the modern. A machine for living. Was not a truly modern life one dominated by scientific principles and dedicated to the machine?

Nowicki never wavered in his personal loyalty to Le Corbusier, and the esthetic appeal of Le Corbusier's formalism, the latest expression of a cartesian logic that had been born in Alberti and Bramante, long before Descartes himself, never ceased to appeal to him. So it says something for Nowicki's early maturation as an architect that after passing under the discipline of Le Corbusier, he followed exactly the opposite course to that of his master: he sought out the work of Auguste Perret, to pick up all the threads that Le Corbusier had dropped in his attempt to carry into architecture the painter's esthetic of the Cubist and the Purist.

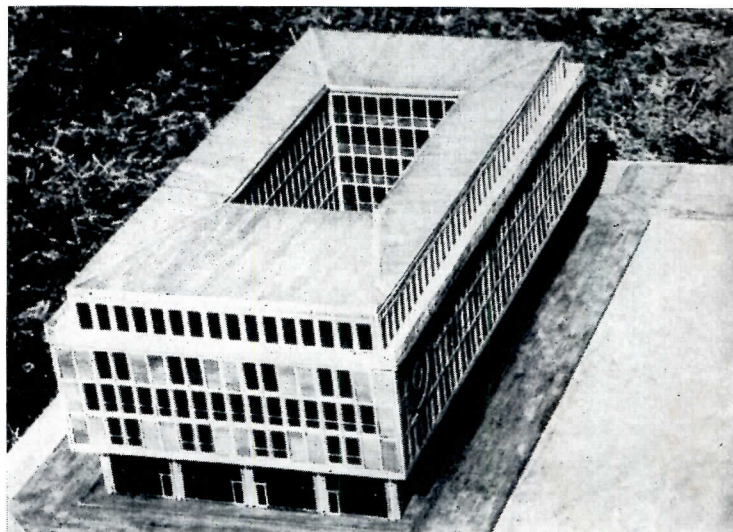
As a beginner Nowicki sought release from historic forms in the two-dimensional freedoms of the painter; then he returned, with Perret, to the four-dimensional problems of architecture, and submitted to the discipline of the structure itself as a work of engineering, not scene painting, and to the highly articulated plan for the orderly and economic arrangement of the functions to be served. Nowicki admired in particular Perret's use of ferro-concrete, and saw in his work the true continuation of the great Gothic builders whose adventurous engineering had been dismissed in the formal designs — usually so unadventurous, if not regressive, in their technical demands — of the Renaissance painter-architect. In both Le Corbusier and Perret, Nowicki was attracted to the spirit of discipline: but in Le Corbusier it was the discipline of the eye, while in Perret, so-to-say, it was the kinesthetic discipline of the hand and the body as a whole, with the eye cooperating, not dominating. Loving Le Corbusier, he could understand the contemporary meaning of a Palladio, a Vignola, a San Gallo: their buildings, when he beheld them in Italy, exactly met his highest expectations.

Through Perret, coming after Viollet-le-Duc, Nowicki achieved a new insight into the Gothic, a moment in architectural history to which Le Corbusier, in his earlier days, was characteristically blind. By this means Nowicki was prepared for the revelation that came to him when finally, in 1947, he visited Frank Lloyd Wright at Taliesin in Spring Green. For here was an architecture, he confessed to his wife, for which neither Le Corbusier nor Palladio had prepared him. Though as a student he knew every detail of Taliesin by heart,

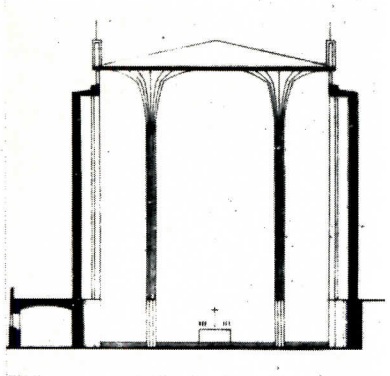
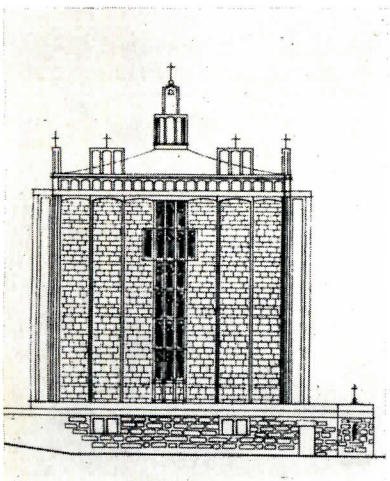
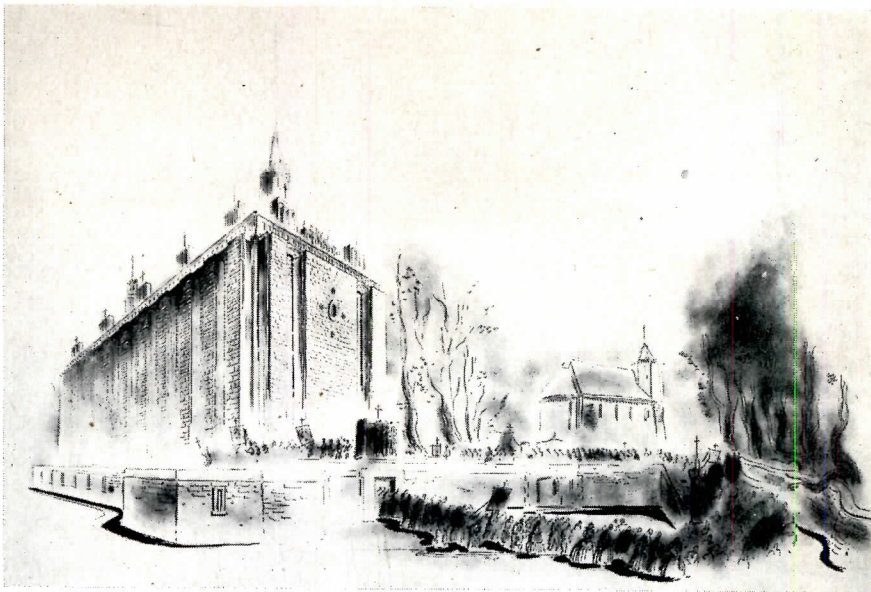
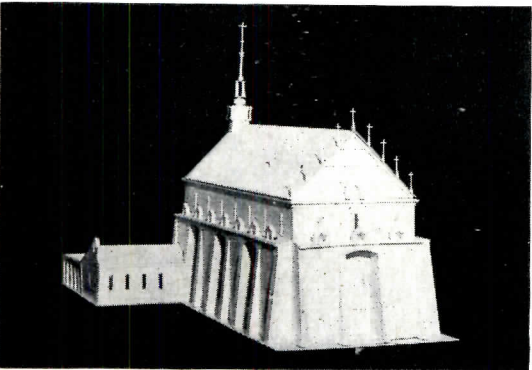
the living reality overwhelmed him. Le Corbusier's buildings, at best, lived up to their photographs: Wright's masterpieces in their richness of organic form, went far beyond anything that two-dimensional reproduction could convey. What Perret had begun in Nowicki's life, Wright was to complete, though to the end he would be irritated by Wright's idiosyncrasies in detail, and by the same token for Le Corbusier's kind of formal elegance was perhaps deepened by his later acquaintance with the formally impeccable buildings of Mies van der Rohe, in Chicago.

2. The Ordeal of the Occupation

From his professional beginning, in 1936, things went Nowicki's way. He not only became an associate professor of architecture at his own Polytechnic, but his private practice soon was an important one: he received

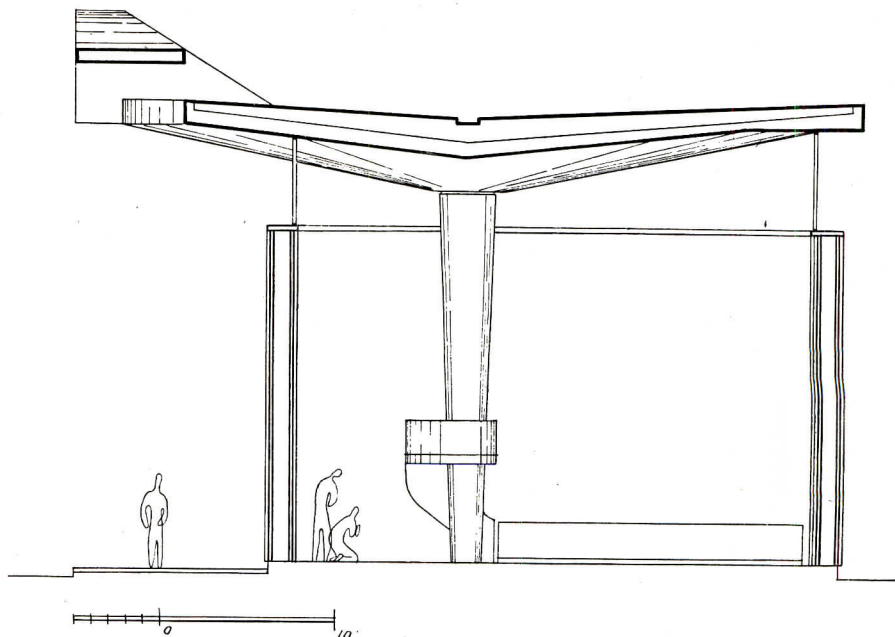


Prefabrication was another principle taken seriously by Nowicki. This model of an office building was a study of design possibilities in prefabrication



METAMORPHOSIS OF A CHURCH DESIGN

Nowicki's first church design (upper left) is not too far from traditional churches seen in Poland. The larger one (above and left) is a great step forward. Though modular design again introduces a classic note, the wall is entirely separate from the roof, which is supported on tall mushroom columns from within the church. Outwardly the building maintains a sympathy for the traditional church already on the site, and the symbolism of the cross is strongly brought out. Third in this series of churches, designed in Nowicki's Warsaw days (opposite page, section below) represents a still more imaginative use of the mushroom column, and a freer interpretation of church symbolism

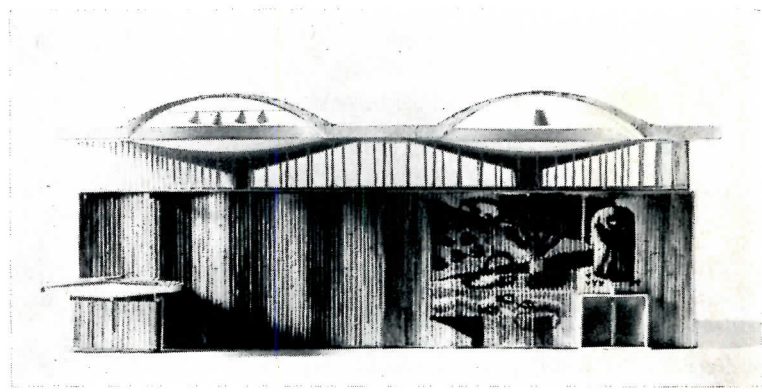
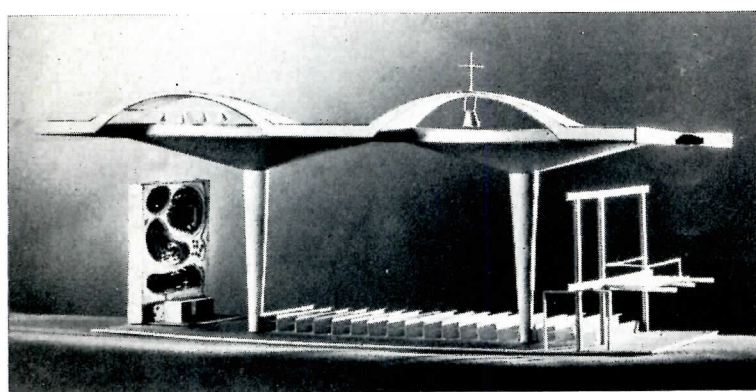


prizes in competitions for office buildings, housing units, houses of worship, the Pavilion for the World's Fair in 1939.

Still, Nowicki had only three years in his professional career, when war came. In September 1939, he was in fact on training maneuvers, as a lieutenant in charge of an anti-aircraft battery. Even at that late moment, in the country immediately menaced by Nazi Germany, war still seemed an absurd impossibility. Nowicki once told me how, on the day it broke out, the Polish army watched hundreds of German bombers fly over their lines, in the direction of Warsaw, bombers easily identifiable as German, without anyone's believing what his eyes saw sufficiently to give the order to fire on them: In the debacle that followed he made his way back to Warsaw, and during the occupation, he conducted underground classes in architecture and town planning, in the face of the Nazi ban upon such activities, while officially he taught bricklaying — an art he had first to master — in a permitted trade school. Those days

Polish occupation, which had its parallel in other countries, notably in the Netherlands. Cut loose from international life, oppressed by their enemies, deserted by their friends, the Poles turned to their own national traditions, and sought in their own past to find a precedent for the new buildings the nation would one day erect again. Esthetically, the results were formalistic, even archaic; mainly a return to the spirit of eighteenth century classicism; but humanly, this understanding of the national and the regional elements, disregarded in the evolution of machine forms — though they themselves, in fact, often demand regional adaptations for functional reasons — brought them closer to the underlying human needs they served. Perhaps without this wartime evocation of sentiment, Nowicki would not have so easily come to terms with the pride and folk feeling of the people in North Carolina, and not a little by his personal warmth and understanding prompted them to respond so quickly to the call of modern design.

The final lesson of Nowicki's ordeal was that which



and nights were so filled with horrors that only once did he even give me a glimpse into them: but this sensitive spirit, on whose face every feeling seemed instantly mirrored, underwent daily danger and trial without self-betrayal. This ordeal culminated in a period of guerilla fighting in the woods around Warsaw and finally in his escape to a distant mountain region with his wife and his little son, born during the occupation.

No one can undergo such experiences without being deeply affected by it. Such an ordeal burns away residual weakness and brings out unexpected sources of strength. In Nowicki it deepened his dedication, both to his art and to the needs of his fellowmen; partly perhaps as a refuge from his macabre memories, he threw himself into architecture, as into an asylum and a sanctuary.

But in addition something else had happened in the

his father had taught by his own life: the lesson of citizenship. Nowicki had grown up under a semi-fascist regime, which had felt too much kinship with the phobias and hatreds and repressions of Nazi Germany to alert itself against its intentions and defend itself successfully. In that state, as in America today, the student generation had become non-political, lest too great a concern for freedom and democracy should interfere with their careers. To the end of his days, Nowicki's father reproached himself for not having dedicated himself more completely to warning his fellow citizens of the dangers he himself had clearly seen. By the end of the war, Matthew Nowicki himself realized that there was no escape from politics: the architect, first of all, had a responsibility to his community, to understand its needs and to create forms for their highest fulfillment. That is why, in his program of education, he not merely

stressed the value of a humanistic approach to architecture at North Carolina State College but prefaced it with the declaration that "we expect our graduate to become a citizen first and a professional later."

Since, in a totalitarian state, only the members of the party even partly exercise the full prerogatives of citizenship, the transformation of Poland into a colonial dependency of Soviet Russia would automatically have exiled Nowicki, for the claims of communism, with its know-it-all Marxian ideology and its contempt for freedom were foreign to every part of his nature. Nowicki made his escape to America, as it were, through an open door; for his opportunity came before the communists had achieved their coup d'état, which removed all pretext of Poland's being permitted to exist as a free, multi-party state. Even before this, the communists were numerically strong enough and sufficiently concentrated in their aims to be the dominant political group in Poland. But so great was Nowicki's devotion to his country's good, so unsullied his record in the Underground, so undisputed his genius as architect and planner, that those in authority made him chief of planning for the central area of Warsaw and let him work on his own terms: that is to say, at his own office, at his own time, without stopping when the official day ended. Seeing how poor were the prospects of genuine cooperation, Nowicki seized the chance offered him of coming to the United States as technical adviser to the

leaders in business and government: re-enforcing sympathies and intuitions acquired in youth. As a consultant to the Director of Planning on the Board of Design, Nowicki came into direct contact with the leaders of the modern movement, a highly diverse group of men, from Le Corbusier to the Uruguayan architect, Vilamajo, whose work independently paralleled that of Perret. As the youngest member of this group, with a more limited achievement in buildings actually built, his influence on his seniors was, unfortunately, negligible: yet perhaps his own development had not, at this point, gone far enough to make him ready to challenge the parti at which their combined talents arrived.

For Nowicki, indeed, the great lesson of this U.N. cooperation was the fact that in spite of the diversity of approach, there was unanimity as to the end to be sought: he felt that in this very unity was proof of the fact that modern architecture had come of age. His own insight into the thousand difficulties that beset this design — an imperfectly formulated program, an insufficiency of funds, the pressure of time that deprived the architects of the benefit of second thoughts — all this would probably have made him lenient toward the defects of the original conception, and generous especially toward that part of the work he had no part in. But in a few years, Nowicki was to indicate, in his sketches for the Parliament Building at Chandigarh, the quality of imagination that was lacking in the design for the entire U.N.

Perhaps the best part of Nowicki's association with the United Nations, in its formative state, was not alone the sense of confidence it gave him as an architect, measuring his own powers against his elder colleague's abilities: rather it was a further lesson in citizenship. Thenceforward, he was no longer merely a Pole, or any other purely national citizen: he felt himself a part of that One World which the United Nations exists to bring to birth. Stirred by his mission in India, one of Nowicki's final thoughts, as reported by Albert Mayer, played with ways of overcoming the architectural disabilities of that country. Out of this came his proposal that America should as a gesture of friendship set up a complete architectural and engineering school in India. This would be part of a larger movement that would bring men of the highest calibre, adept in human relations as well as professional services, on such missions as his own, to devote a few years of their lives to the helping of other peoples, and being enriched, as Matthew Nowicki himself was enriched, by the lessons they would in turn teach him.

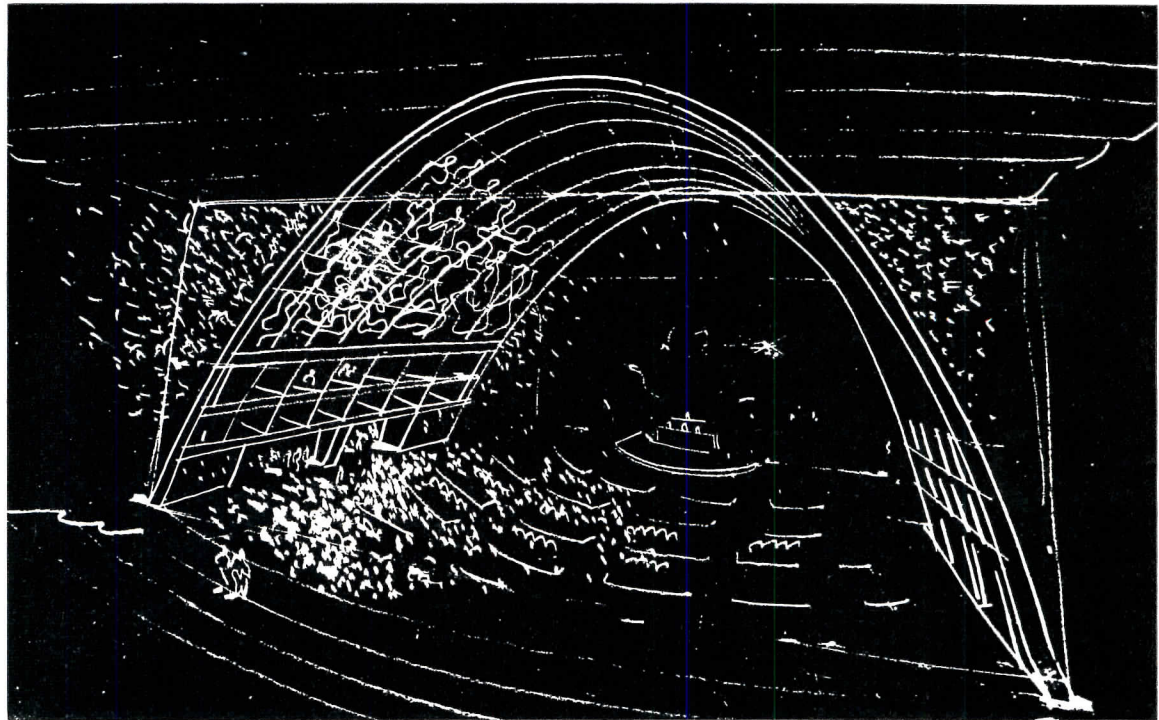
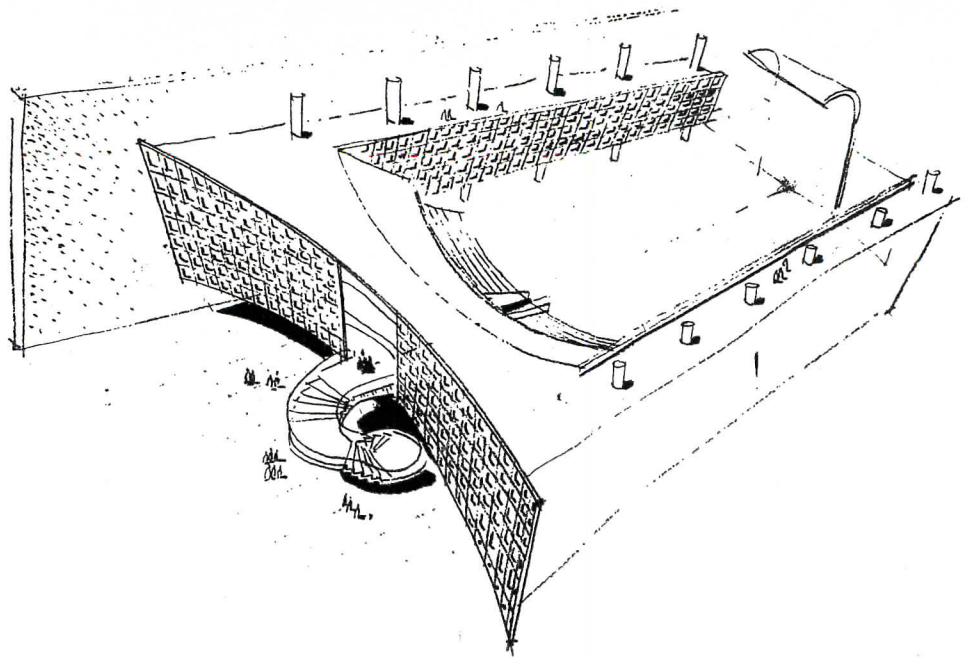
That dedication to the service of a United World makes Nowicki, not merely a man of his generation, but a man of the century to come. Meanwhile, his services to the United Nations, as architect, gave him the means to sever his official relations with Poland and to start on a new career as architect and teacher. It is to his ideas as a teacher that the next article in this series is addressed.

"The study of the well-being of contemporary man, which has been introduced into the language of architecture continues to be the inspiration for our work but this time the quality is differently analyzed. It is no longer 'the machine to live in' that stirs our imagination. It is the eternal feeling of a shelter to which we subordinate our creative ideas."

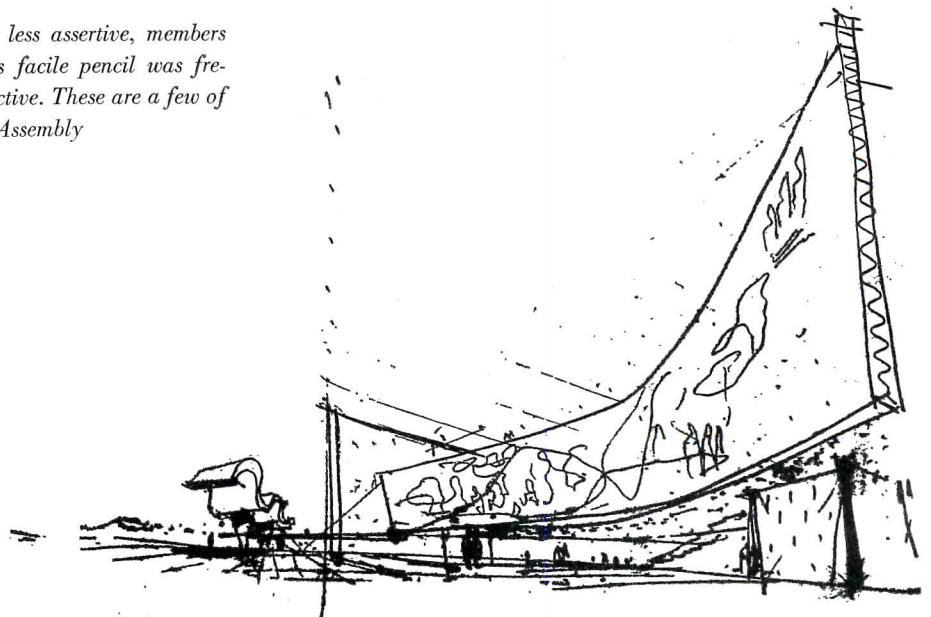
Matthew Nowicki

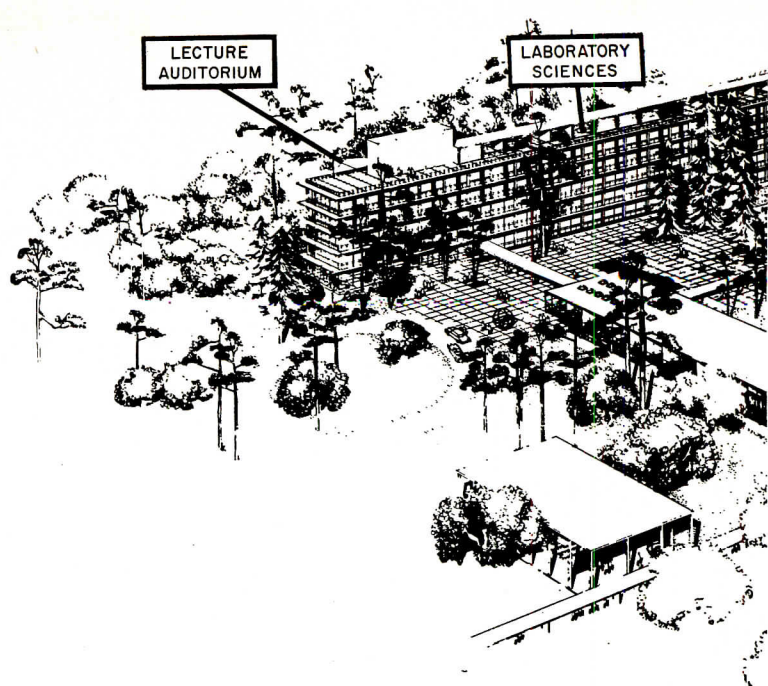
Polish Embassy, to enlist American interest in the re-building of Warsaw, and to establish contacts with the advances in building, engineering and urbanism that had been made since war had blocked communication.

I shall pass over Nowicki's brief period of work as Polish representative in America, first in Chicago, where he devoted himself mainly to awakening public interest in the plans for re-building historic Warsaw, and then in the United Nations, where he was selected to represent the Polish government in the choice of a site for the United Nations. This last responsibility, which took him across the continent to San Francisco, gave him a certain opportunity to show his capacity for leadership, but what was more important, it gave him a first-hand view of the country and some of its



Nowicki was one of the younger, perhaps less assertive, members of the U N Planning Commission, but his facile pencil was frequently busy, and his imagination always active. These are a few of many sketches done for the problem of the Assembly





Architects:

Skidmore, Owings & Merrill

Location:

Monterey, California

PROGRAMMING THE U. S. NAVAL POSTGRADUATE SCHOOL

by Walter A. Netsch, Jr., Associate Partner in Charge of Design, San Francisco Office

THE PROGRAMMING PROCEDURE which must underlie any architectural venture is both a subjective and an objective undertaking; it requires thorough analysis of the particular needs of the client and of the potentials and limitations of the job, and a gift for transforming the dry statements of the program into the dynamics of structure, the special needs into line, volume and mass. Not only must this transformation fulfill the requirements of function but, if it is to qualify as architecture, it must also satisfy, visually and emotionally, the users of the structure — whether or not they are aware of this satisfaction. The program makes of architecture a purposeful art; without it, a project has about the same direction as a child's building of blocks.

When the Navy began its studies for the expansion of its Postgraduate School of Engineering it faced programming problems for which there seemed to be no immediate answers. Since its founding in 1909, the School had been housed at Annapolis in buildings which had become increasingly inadequate partly because enrollment had been greatly expanded to meet the Navy's needs, and partly due to a broadened scope of instruction. Consequently there was little to indicate what was essential in type and amount of space or in the relation of one kind of space — laboratory, classroom or office — to another; there were few clues even to what might be desirable.

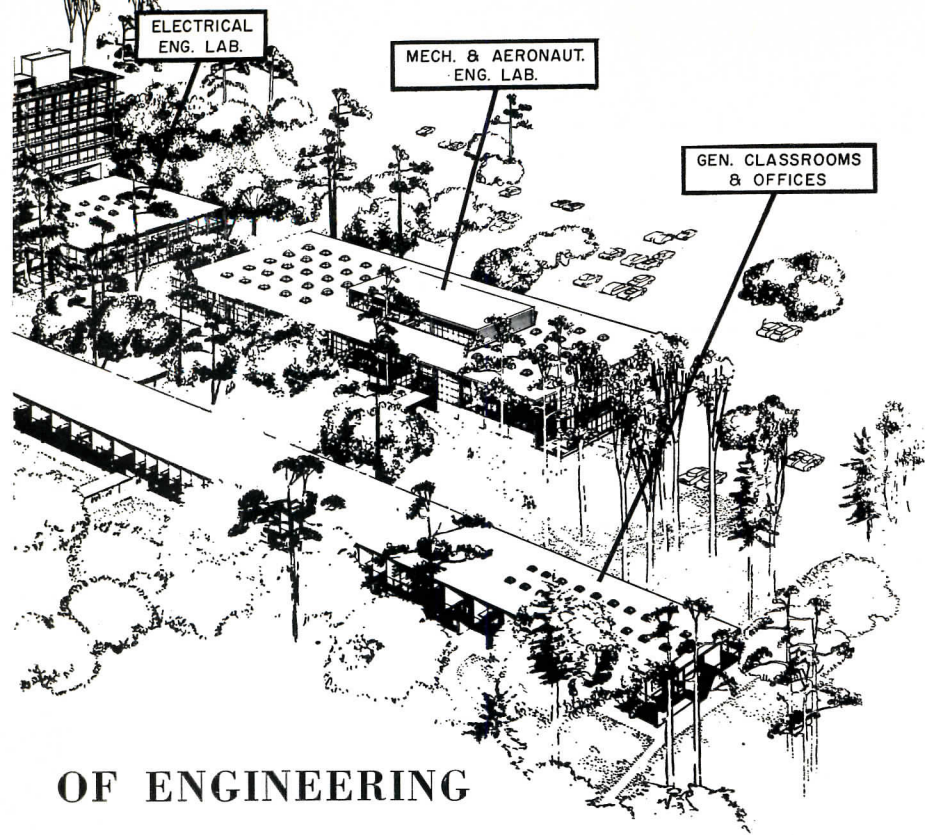
This project was sponsored by BuPers and BuShips of the U. S. Navy and is being constructed under the contract authority and administration of the Chief of the Bureau of Yards and Docks, represented by the District Officer in Charge of Construction, Twelfth Naval District.

The Bureau of Yards and Docks had nevertheless been able to work out a schematic for the development of part of the site at Monterey, Calif., which the Navy had bought in 1948 as the new location of its Postgraduate School. The site was the Del Monte Hotel property, on the California coast. In addition to the hotel buildings, the site contained a number of other structures, and many unusually fine trees and shrubs.

Analysis by a Team

Funds for the first new buildings at Monterey — to house the School of Engineering — were appropriated by Congress in 1951, and shortly afterward our firm was selected as architects for the project. Since no program as such existed, a team of architects from our staff — Lawrence Lackey, project architect, William Dunlap, John Hoops, Stanley Panski and myself — was sent to Annapolis to make an on-the-spot analysis of the requirements and from them to derive the actual program. There was barely one month in which to do this. The analytical procedure was so intensive and unremitting an effort to determine all the implications of the school's courses of instruction that the essential design, in the form of schematic space allocation studies, emerged simultaneously with the completed program.

Although a master plan was not originally included in this phase of the project, it became clear quite early in the analysis that this was not only a necessary but a natural accompaniment of the programming since another group of buildings — the School of the Line — was some day to be built on the site. The interim



OF ENGINEERING

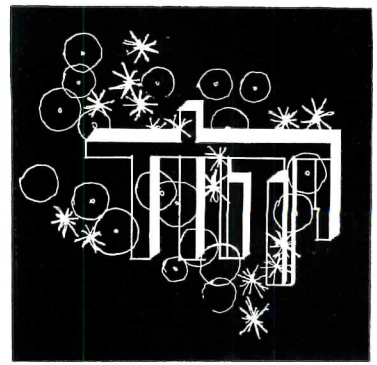
master plan which was prepared was a valuable aid in respecting, and taking advantage of, the natural assets of the site, a goal which we had set as an inherent part of the project.

Faculty Needs plus Catalog Requirements

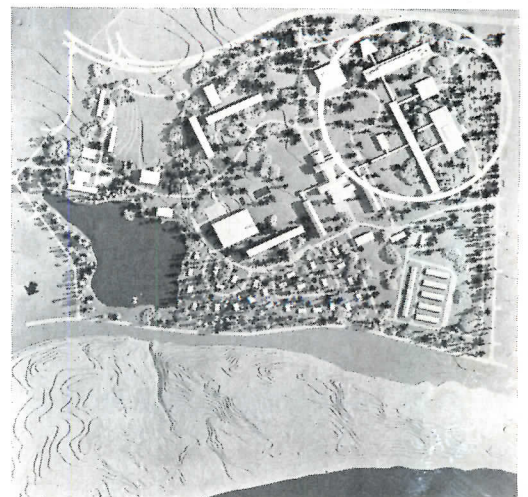
The analysis which led to the program had two parts, one an investigation of the faculty's wants and needs in terms of space and function, as well as of interdepartmental relationships, which would make for sound functioning of the school; and the other an examination of the school's catalog of courses.

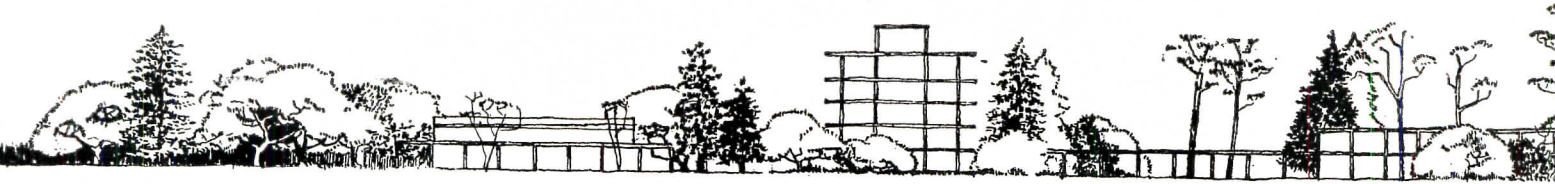
A close collaboration between the architects and the faculty was essential if a solution that was appropriate both to site and to academic requirements was to be achieved. This took the form of numerous discussions with the faculty members and of questions and answers (in questionnaire form) on the specific wants and needs of each department in space, equipment, utilities and room-to-room relationships. To make this basic information as helpful as possible, and as realistic, the faculty was encouraged to think in terms of the kind of quarters and facilities which would fully answer their teaching needs rather than of the cramped quarters to which they had had to adapt their teaching methods.

The catalog, on the other hand, offered an opportunity to explore the potentials of department needs on a different basis — that of the courses of instruction. The catalog listed 16 "curricula" — courses of study — given in the nine departments of the School. Some departments offer only one course of study: Metallurgy has one such, metallurgical engineering. But others,



Above, first schematics: BuDocks (top), Skidmore, Owings & Merrill (center and bottom). Below, interim master plan developed after conferences at Annapolis



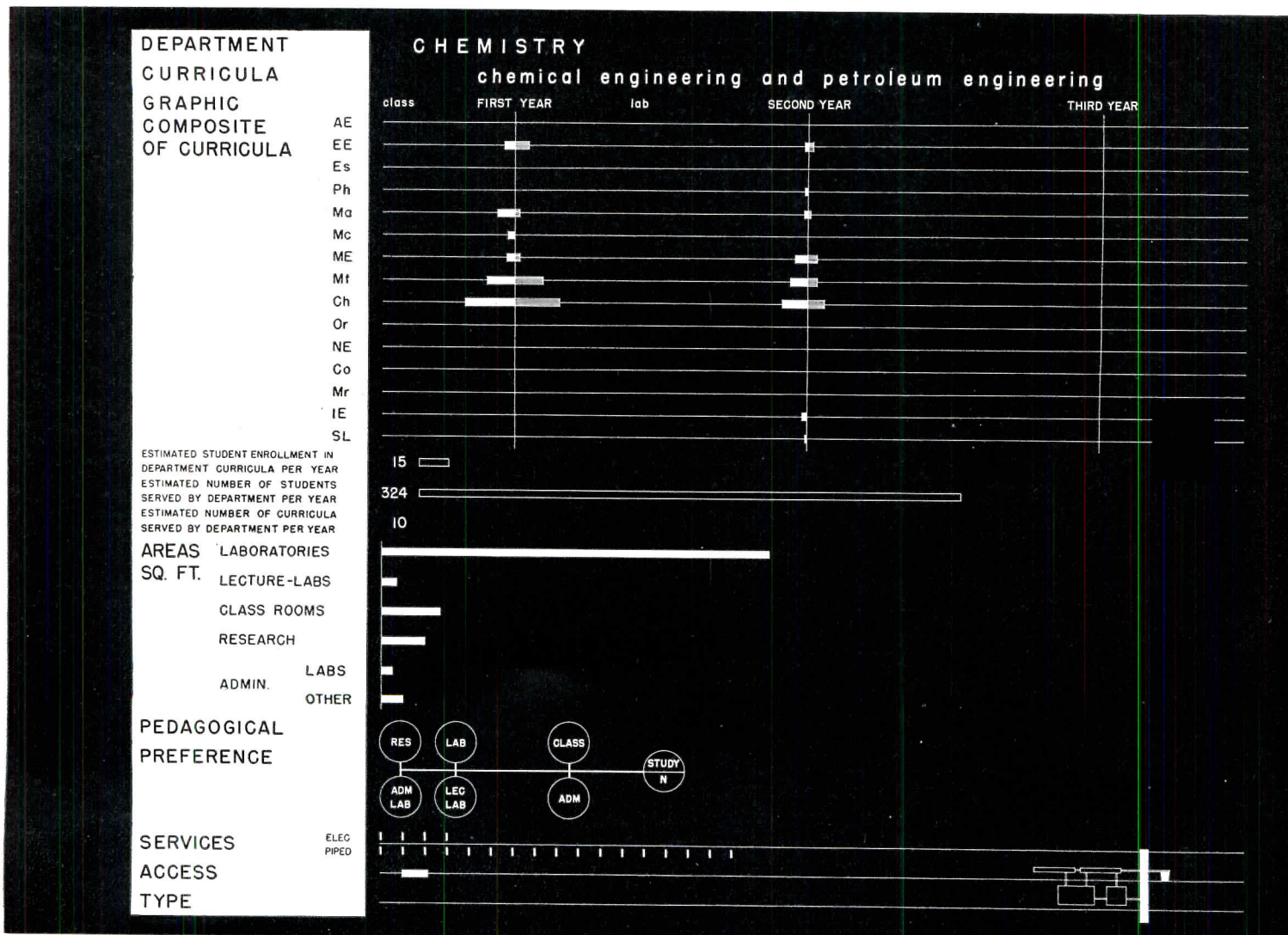


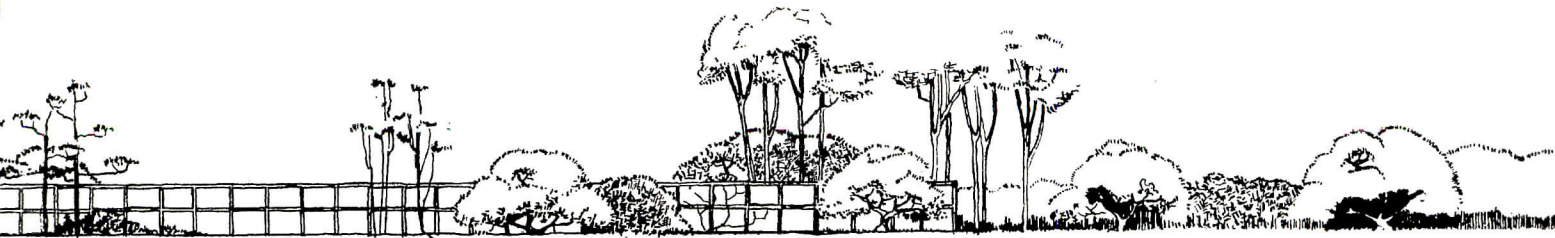
like Aeronautics, which has courses in aeronautical engineering, jet propulsion and gas turbines, offer several curricula. Requirements in some curricula are wholly within the department itself (except for such subjects as mathematics and electrical engineering which are required of all students at the School); some require courses in other departments as well.

The information in the catalog describing the functions of the nine departments, the relationships existing among them, and the 16 "curricula" given by these departments, was converted by the architects into a graphic analysis of the School's whole program of instruction. The charts — one for each department — which resulted from this graphic analysis gave detailed information on the number of hours spent

in laboratory and classroom by the student in each curriculum; number of students in each department and in each of its curricula; and the curriculum in which the student is primarily enrolled. These figures provided the information needed for arriving at the number of classrooms and laboratories required. The area requirements were included on the charts not as absolutes but relative to one another, and a diagrammatic arrangement of these areas, based on the preferences of the department's faculty, was shown on each chart.

Last, but of equal importance, the charts showed the specific utilities which each department needed and indicated whether or not direct access to ground or to roof for special experiments was desirable.





Design Determinants Emerge

The data from questionnaires, discussion meetings with the faculty and the graphic analysis of the catalog pointed to a number of conclusions. One was that certain departments could be grouped together because of their similar requirements in size and shape of space, utility services and equipment. Special considerations supported the logic of such an arrangement. Trends in the electronics field, for instance, indicated that there would be more and more collaborative work between the electronics department and the departments of physics, chemistry and metallurgy. These four departments are laboratory sciences with many similar requirements. Two of them, however, had special needs. The physics department needed basement space for vibration-free foundations, anechoic chamber research and controlled laboratory space; the electronics department had to have an elevated location, above tree-tops, for unobstructed radar and other antennae installations.

Mechanical engineering and aeronautical engineering also seemed to combine well. Both would have to be located in a relatively isolated area because of the noisy equipment used in their courses; both needed clear-span laboratory spaces. These two departments might be housed in one structure if the special structural requirements peculiar to each could be solved: mechanical engineering needed a ground floor location for large water basins, heavy equipment, a large trench system to provide flexibility in future utility requirements, cranes to move heavy equipment, and reasonably high head room. Aeronautical engineering needed clear-span, high-ceilinged space for its huge testing equipment, wings and fuselage sections, and wind tunnels, with cranes to move this equipment.

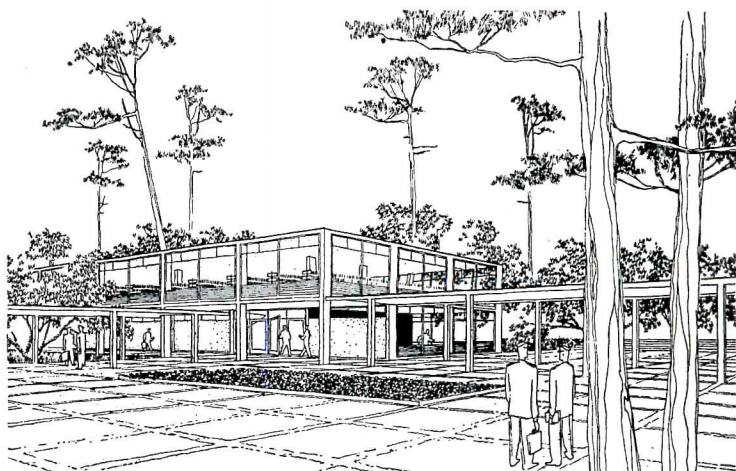
But combination was not the solution for all departments. Electrical engineering was one which did not lend itself to grouping with any other department. It required large unobstructed laboratory spaces and an extensive floor trench system to permit flexibility in electrical circuiting; its heavy electrical loads and generating equipment had to be provided for. Mathematics, which needed only classroom space for its teaching functions, was another department that could not be combined with any other.

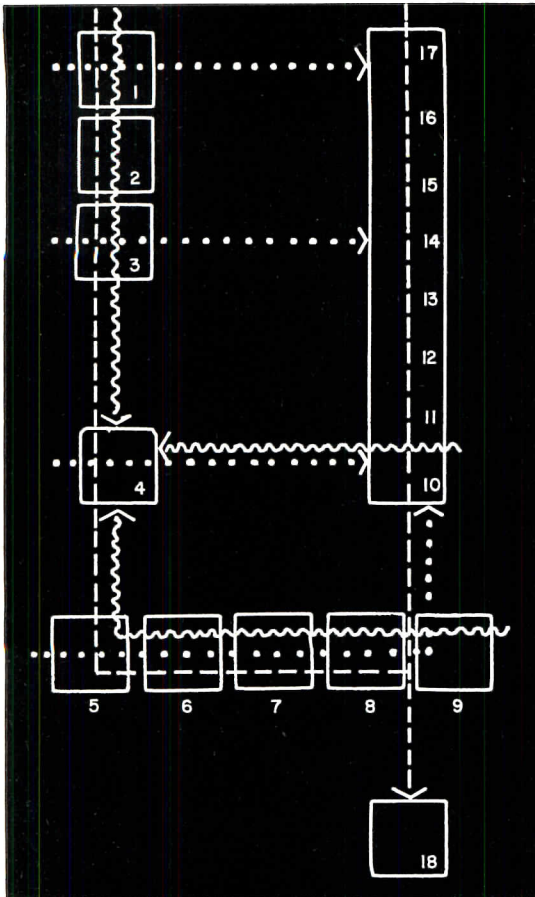
There were, of course, other controlling factors in the execution of the schematic design. The funds appropriated by Congress allowed an approximate cost of \$15 per sq ft for construction, a low figure considering that the size and teaching requirements of the project might normally have been expected to cost \$21 per sq ft. Since a new boiler plant had to be built, and

basic utilities had to be installed, the amount of money available for the school buildings was reduced substantially. This extremely tight budget necessitated economy in every phase of the design, especially in the structural solution, and indicated the value of using repetitive elements wherever possible. Multiple use of classroom and similar space, if it could be worked out, would give a greater elasticity to the budget; and in fact became an important means of obtaining the amount of floor area — which the graphic analysis showed to be greater than the budget could otherwise provide — required by the School's program of instruction. Besides these considerations, the Navy had stipulated that the School of Engineering had to be designed to function as a self-sustaining unit.



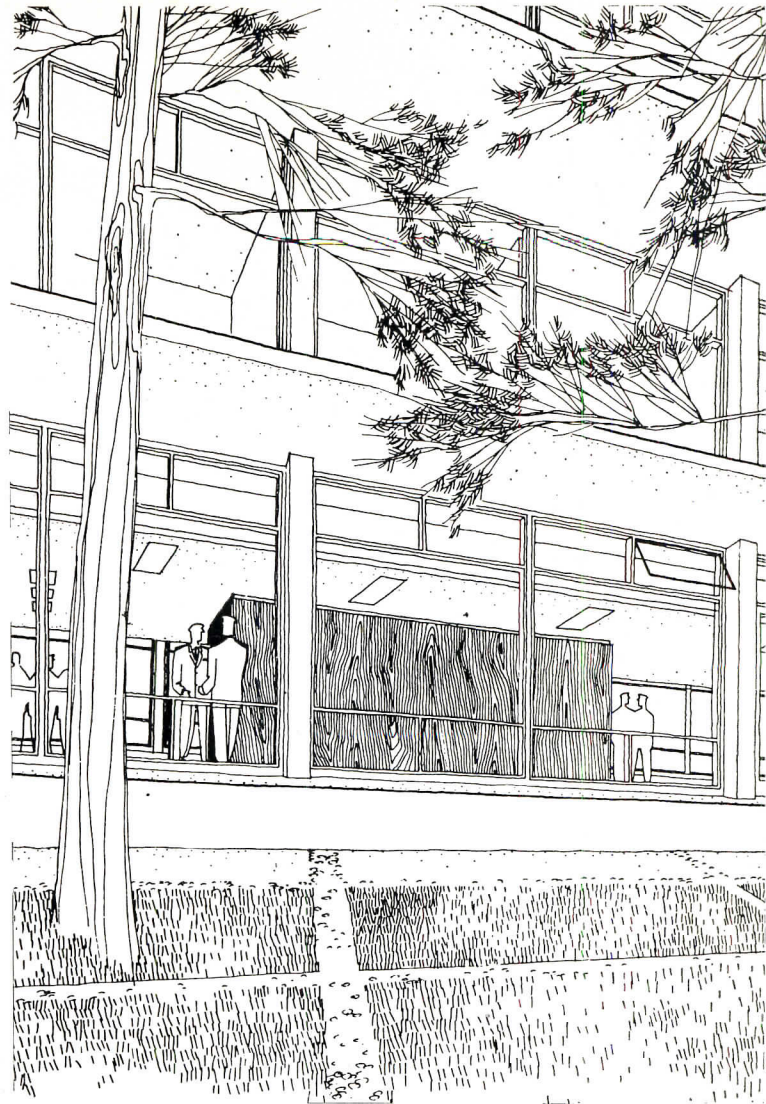
Mechanical and Aeronautical Engineering Building (above), General Classroom Building (below)





-> Departments requiring access to classroom building
- ~~~~~> Departments requiring access to electrical engineering department
- > Departments requiring access to lecture auditorium

- | | |
|--|------------------------------------|
| 1. Wind Tunnel Laboratory (Aeronautical) | 10. Mathematics and Mechanics |
| 2. Aeronautical Structural Laboratory | 11. Electrical Engineering |
| 3. Mechanical Engineering Laboratory | 12. General Classroom and Seminars |
| 4. Electrical Engineering Laboratory | 13. Mechanical Engineering |
| 5. Aerology | 14. Ordnance |
| 6. Electronics | 15. Communications |
| 7. Metallurgy | 16. Naval Engineering |
| 8. Chemistry | 17. Aeronautical Eng. |
| 9. Physics | 18. Lecture Auditorium |

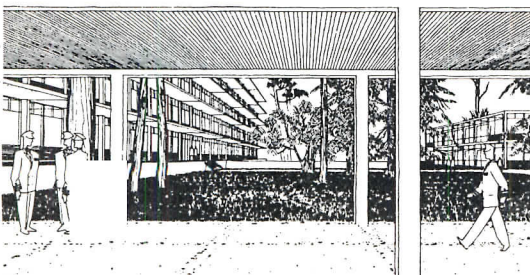


Technical Decisions Reached Early

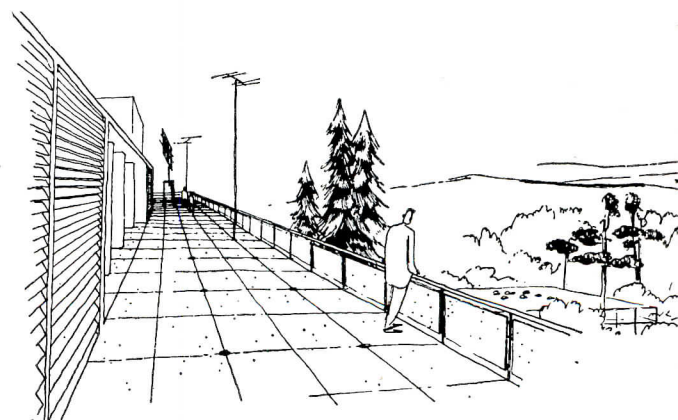
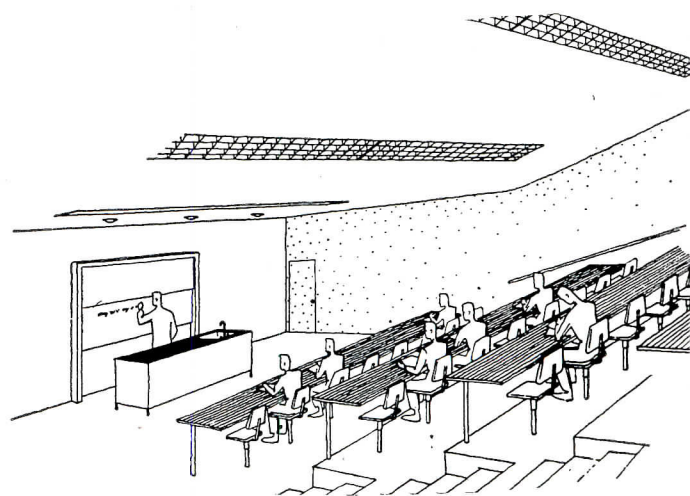
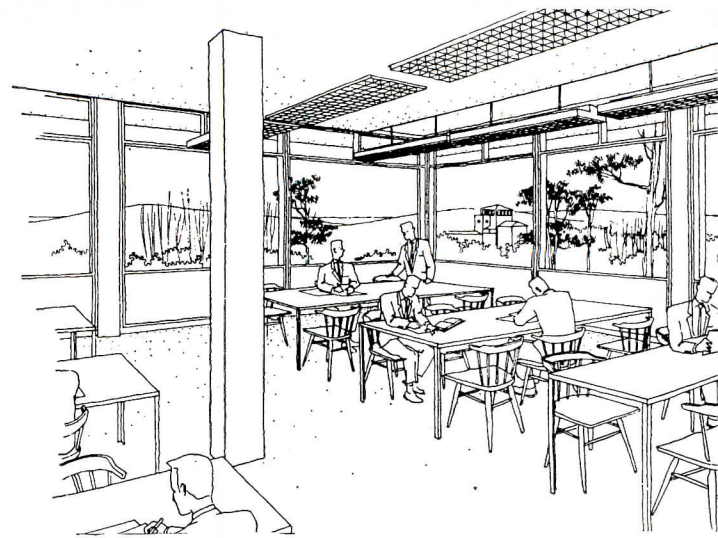
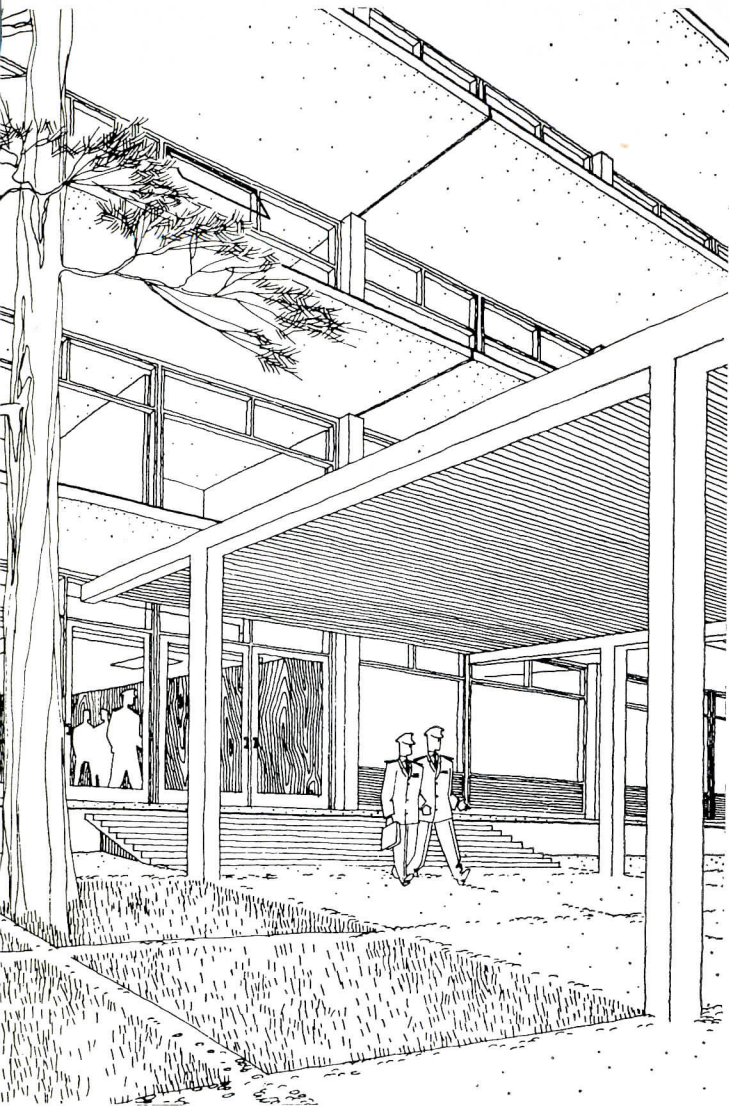
During the course of the programming, technical questions came up which demonstrated the impossibility of divorcing one part of the design process from another. Even at this presumably preliminary stage, certain technical decisions were made which proved valid throughout the execution of the project. These decisions, along with the program analysis, became the basis for the schematic solution which evolved simultaneously with the actual program.

Schematic Plans Follow Analysis

The schematic solution follows closely the groupings by departments which the analysis had pointed out. For the laboratory sciences, whose requirements (laboratory, classroom, lecture-laboratory, research and office space) were so similar, a multi-story building became the appropriate solution. There were advantages to a multi-story solution which were important, even vital, to the project. One was the economical site utilization it made possible; another was the economical construction which stacking the laboratories, with their



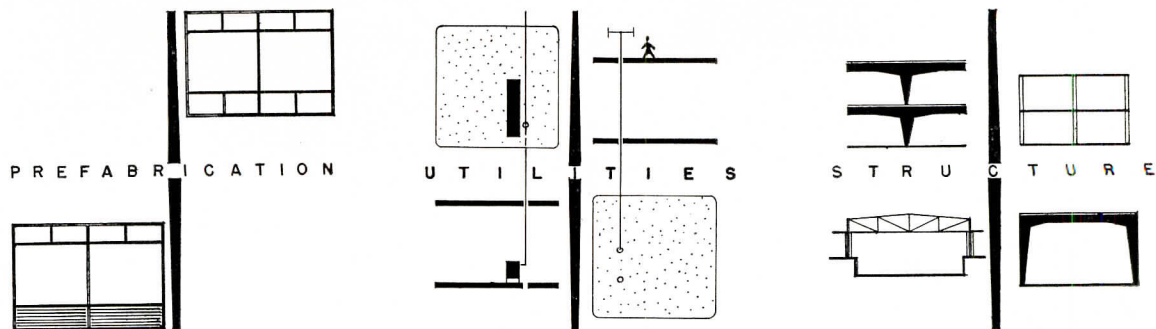
Laboratory Sciences (left) and Electrical Engineering (right)



expensive utilities, one on top of another would mean. Eventually the building became a five-story one, the added floor housing some of the administrative offices, conference rooms and faculty rooms, for which a central location was desirable.

The roof deck areas of a five-story building are clear of the treetops in the School's grounds, and this elevation could satisfy the requirements of the electronics department for unobstructed installation. Aerology, which needed a high elevation for its experiments, could also be located on the roof. Other decisions were also made at this time: the piped services to the laboratories would be suspended in racks from the ceilings, for ease of maintenance, access and possible future expansion. Knockouts in the floors would simplify floor-to-floor access for piping, wiring and research, and similar knockouts in the roof would give access to antennae, wave guides and experimental laboratory equipment in the fourth- and fifth-floor electronics laboratories. Floor trenches could accommodate the great variety of electric wiring in the electronics department. Flat plate construction would eliminate all beams and girders which otherwise would have interfered with the mechanical and laboratory distribution system.

Laboratory Sciences Building (top left), Study room (top right), Lecture-laboratory (center), Electronics and Aerology on roof of Laboratory Science Building (bottom)



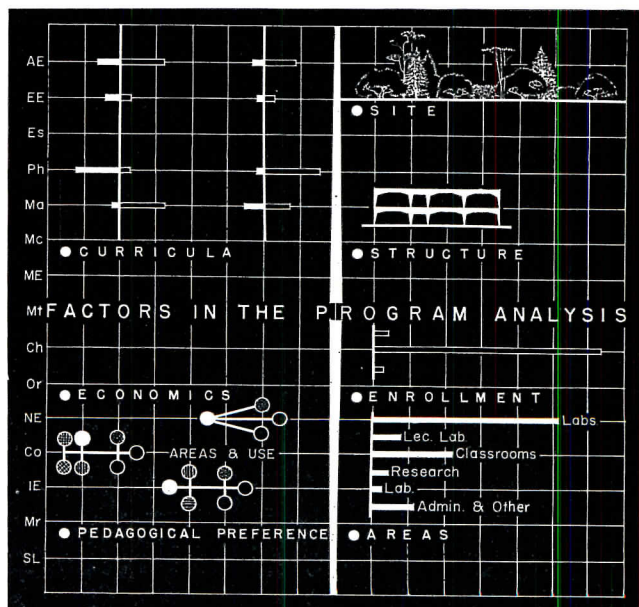
In the actual design process these ideas were refined and expanded as necessary, but the basic decisions were not changed. The real determinant was the provision of optimum working and teaching conditions within the framework of the structure and mechanical services, not only in the laboratory sciences building but in the others as well.

The requirements of the electrical engineering department added up to a two-story building in which long-span concrete arches could provide the large unobstructed floor areas it needed. Logic dictated the use of floor trenches for electrical wiring and for flexibility in its arrangement, and the same suspended racks for piped services as were suggested for the Laboratory Sciences Building. Mechanical engineering and aeronautical engineering requirements also resolved themselves into a need for a two-story building. Broken down into three units separated by expansion joints, the building could provide the work spaces of varying sizes and clear heights needed for equipment both bulky and small. Special structural requirements could be solved separately since the building was actually to be three units. These buildings were primarily laboratories; their specialized space could not be used for general classroom teaching. Since most of the departments needed just such classrooms, and it was not practical to locate classrooms near laboratories where noisy equipment would be used, the idea of a separate classroom (and office) building developed, and became a long, two-story structure located so as to act as a link between the individual laboratory buildings and the laboratory sciences building — a relationship worked out from the catalog analysis. The classrooms in this building can be scheduled by any department, a multi-use feature which helped keep the whole job within the budget.

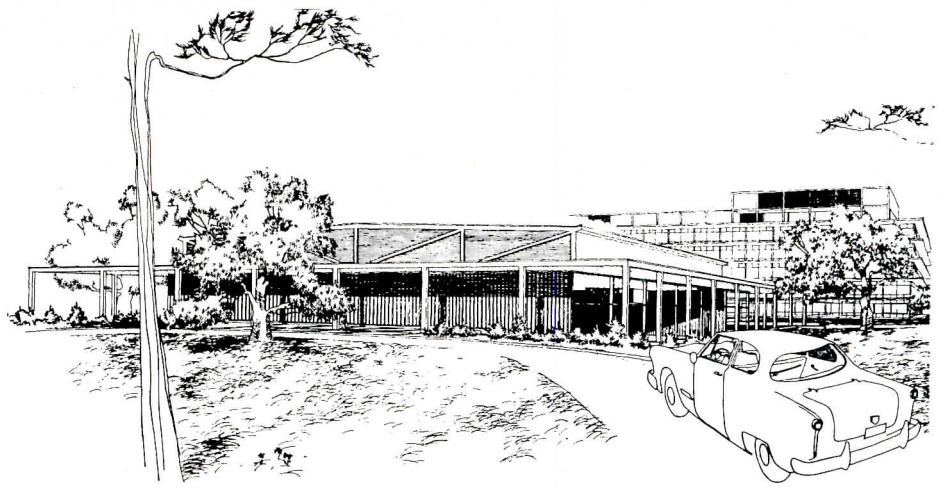
Still another kind of space was needed. The catalog analysis indicated that an auditorium should be provided for special lecture courses and for public and semi-public occasions. This building was not programmed at the same time as the others described here but its need was determined by the same processes that produced them, and its location was set on the preliminary master plan.

Other Factors Influence Design, Too

An undercurrent in all our discussions of the project was the matter of the design character of the buildings. We felt that harmony between building design and the area's regional architectural character was as much a factor to be considered as full utilization of the potentials of the site. Instead of trying to achieve a harmonious relation by following local tradition, we decided to work toward it by relating the mass and volume of the buildings to the site on which they were to be placed, and in a way, the site itself was the key to this solution. The contours of the land and the three-dimensional qualities of the many kinds of trees (eucalyptus, pine, redwood, oak and others) on the site were a natural parallel to the same qualities in the buildings. The balanced and at the



Lecture Auditorium



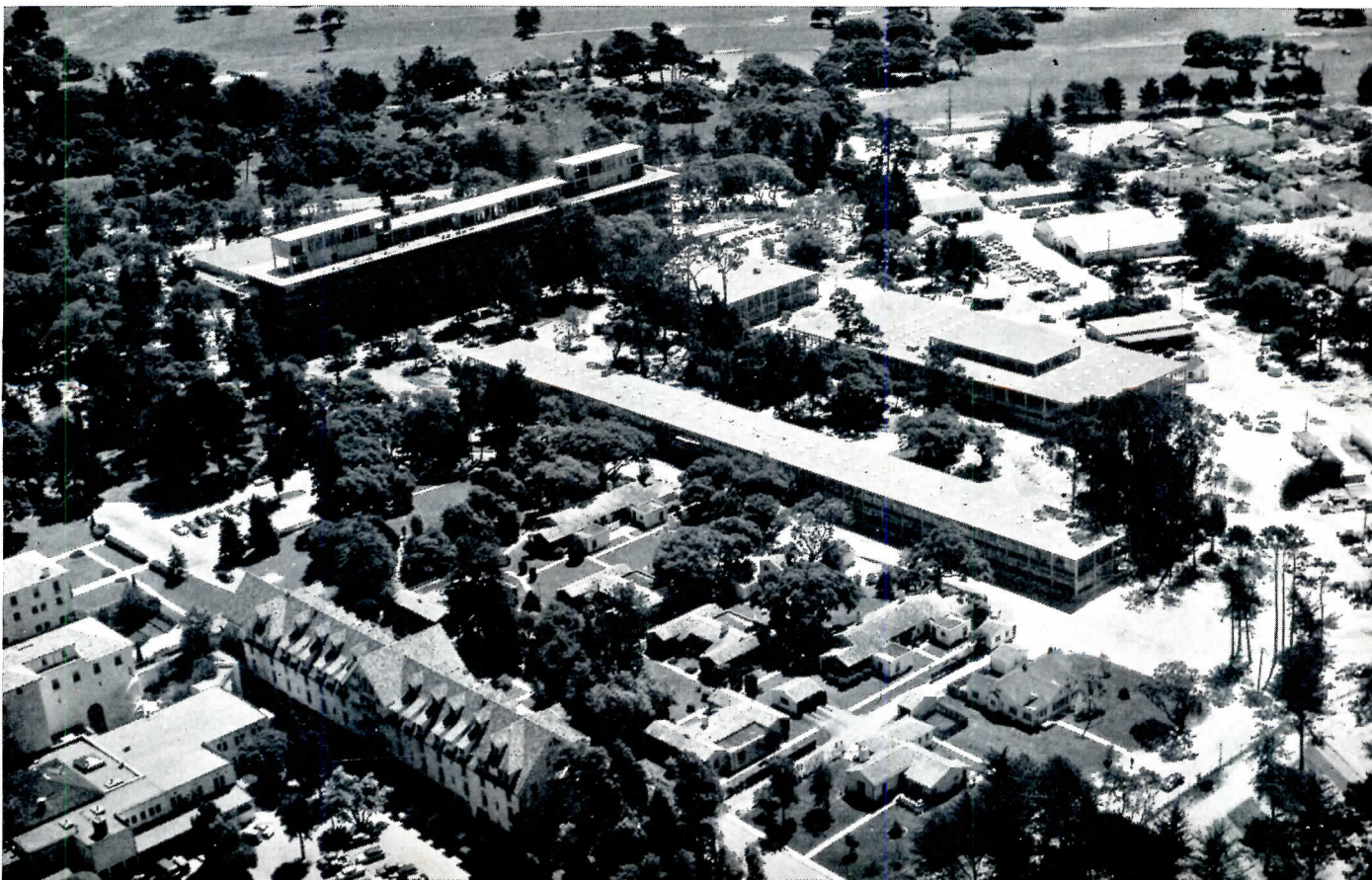
same time free relation of the natural forms to each other suggested a similar plasticity in the architectural forms. But too much plasticity would be inconsistent with the architectural, educational or economic disciplines which the School should express, so a definite, intentional order was injected into the design, in the form of a basic column spacing of 18 ft 3 in. and a standard unit of fenestration.

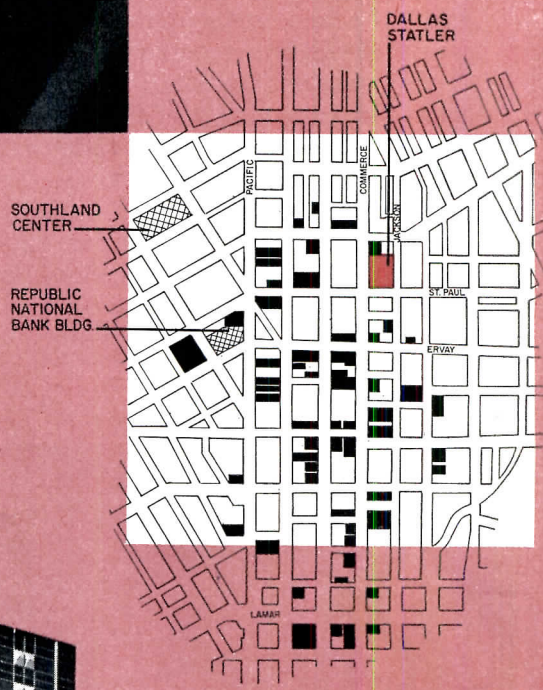
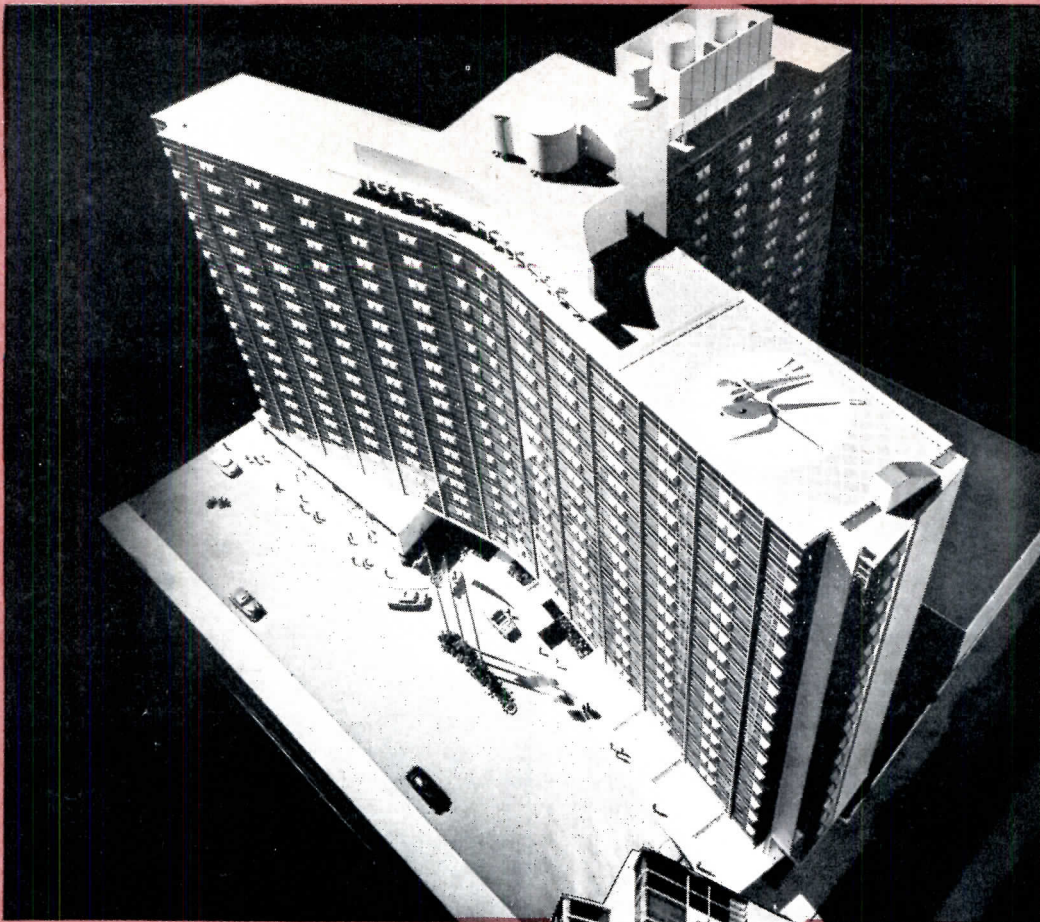
The program, therefore, became the basic instrument for the resolution of the design. No matter how well annotated or analyzed, however, the program is only one factor in the synthesis which becomes an architectural composition. The technical aspects of the structures themselves, the environment, the master planning of the group, the existing buildings on the site, and the detailed development of the individual technical problems were all factors in the eventual

resolution of the design problems at Monterey. The ultimate value of a project, not only as something useful but as something which is creative of an environment, depends on the proper order and degree of all the facets of design.

The interest and cooperation of Navy personnel and the School's faculty, which made possible the programming of this project, have continued throughout its execution; as a result, the design data developed from the program analysis has been further crystallized and refined.

The School of Engineering is scheduled for completion in the summer of 1954; those other factors whose careful consideration is necessary to a full realization of the program can be evaluated only when the project is finished. The completed School will be published in ARCHITECTURAL RECORD.





Photos: Louis Checkman; top photo from Assoc. Press. Model by Theodore Conrad

ON A 56,510 SQ FT SITE on Commerce St. in downtown Dallas, Hotels Statler Co., Inc. is building a 1001-room hotel, the 18-story Dallas Statler. Currently a hole in the ground with columns beginning to rise from footings, it is expected to be completed in mid-1955 at a cost of \$14 to \$15 million. Billed by its proud owners as "the first multi-storied building in the world to make full use of flat-slab cantilever construction," and as "one of the largest projects of its kind developed anywhere in the world in more than a quarter of a century," it will have an exterior skin of glass, aluminum and prefabricated porcelain enamel panels. Its high-velocity peripheral air conditioning system has insulated vertical supplies exposed on the building's exterior, resembling half-round multi-story pilasters which discipline the patterned façades. This system will serve the guest rooms; public areas on the lower floors will have conventional low-velocity air conditioning.

(3,106,480 cu ft or 50.5 per cent) and public and service areas (3,038,520 cu ft or 49.5 per cent) as compared with the 50-50 ratio considered optimum for a large metropolitan hotel.

Completed, the Statler will embody a number of other "firsts" for Dallas: its Terrace Room and Cafe Rouge will be separated by a curtain whose position can be changed so the Terrace Room can serve more people than can be accommodated in any present Dallas supper club or nightclub. Its two principal ballrooms will be divided by a new type of folding partition; united, the area will seat 2000, which Statler says is 400 more than any other west of Chicago. 3,029 persons can be accommodated on the function floor at one time. If all goes well, on the roof will be the Statler Heliport, first of its kind (Fort Worth's Western Hills Hotel has its own ground heliport) — though the city fathers hesitate to agree.

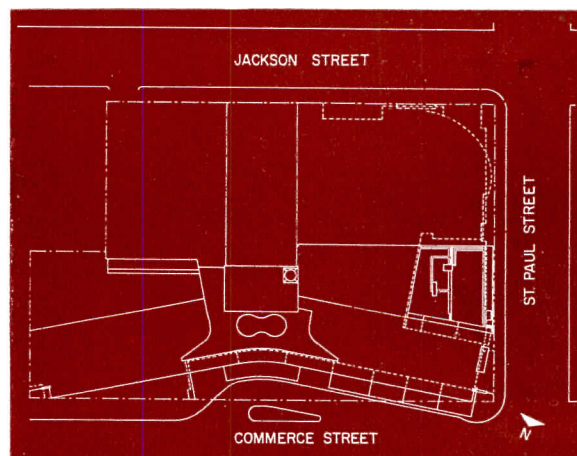
THE STORY OF THE NEW DALLAS STATLER

Behind the undertaking were months of deliberation, by Statler's Building Committee and their architect, which culminated in certain decisions: to build a large commercial hotel during 1953-54 when few others were scheduled and those few generally smaller or of the resort type; to select a potentially successful city and site; to employ sound structural and mechanical techniques whether or not these might be conventional; to determine the amount and disposition of public, rental and guest spaces in wings widely spread so guest rooms would not face each other across courts, and to set the actual number, size, equipment and decoration of public areas, guest rooms, service areas and administrative offices. The results now taking form in the Dallas Statler are a natural consequence of the company's experience in Boston, Buffalo, Cleveland, Detroit, New York, St. Louis, Washington, D. C., Los Angeles, and Hartford, Conn., where another new Statler will open shortly. Unlike some of these, the Dallas Statler will contain no rentable office space. However, it follows evolving Statler tradition in its cannily chosen site, in the heart of the theater and shopping district near Neiman-Marcus' department store and two emerging Dallas landmarks, the Republic Bank's skyscraper (A. R., April 1954) and the just-announced Center now being designed for Southland Insurance; a block from a proposed express highway; easily reached from air and railroad terminals and bus lines. Statler experience is evident, too, in the grouping of public areas on lower floors; in the gardened court with its reflecting pool; the 17,620 sq ft of space for stores and shops; the balance between guest rooms

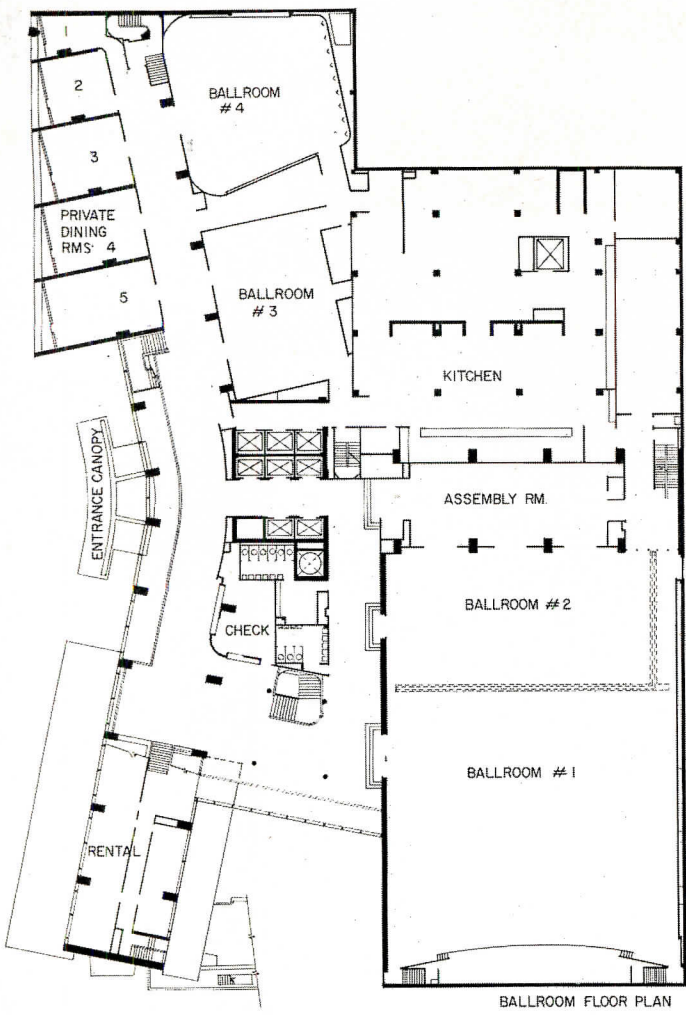
Architect: *William B. Tabler*

Engineers, Structural: *Seelye, Stevenson, Value & Knecht; Mechanical, Electrical:* *Jaros, Baum & Bolles; Electrical Associates:* *Smith & Silverman*

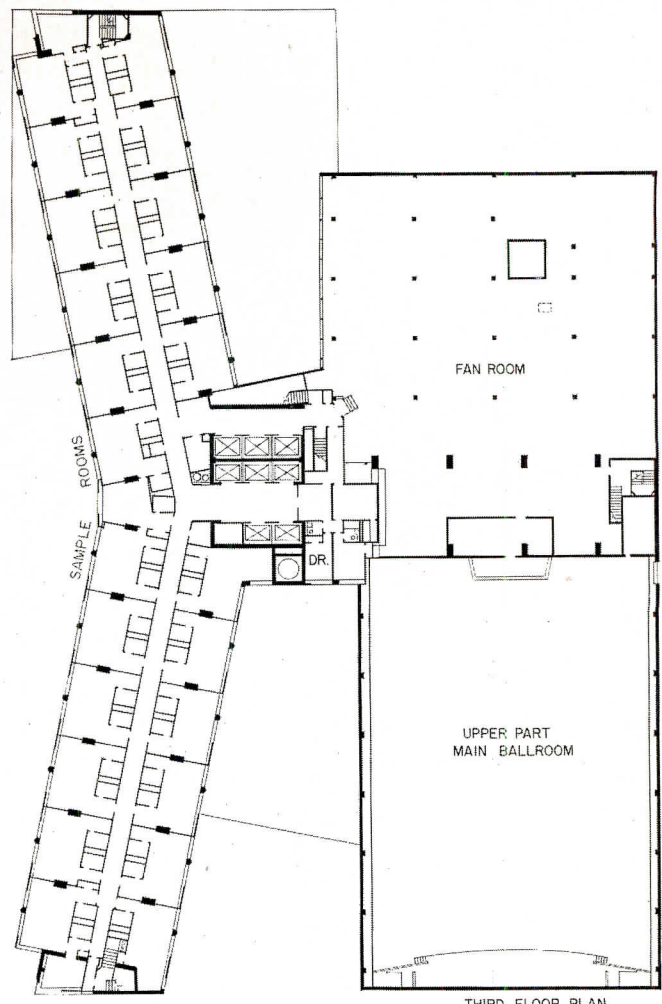
Builder: *Robert E. McKee, Inc.*



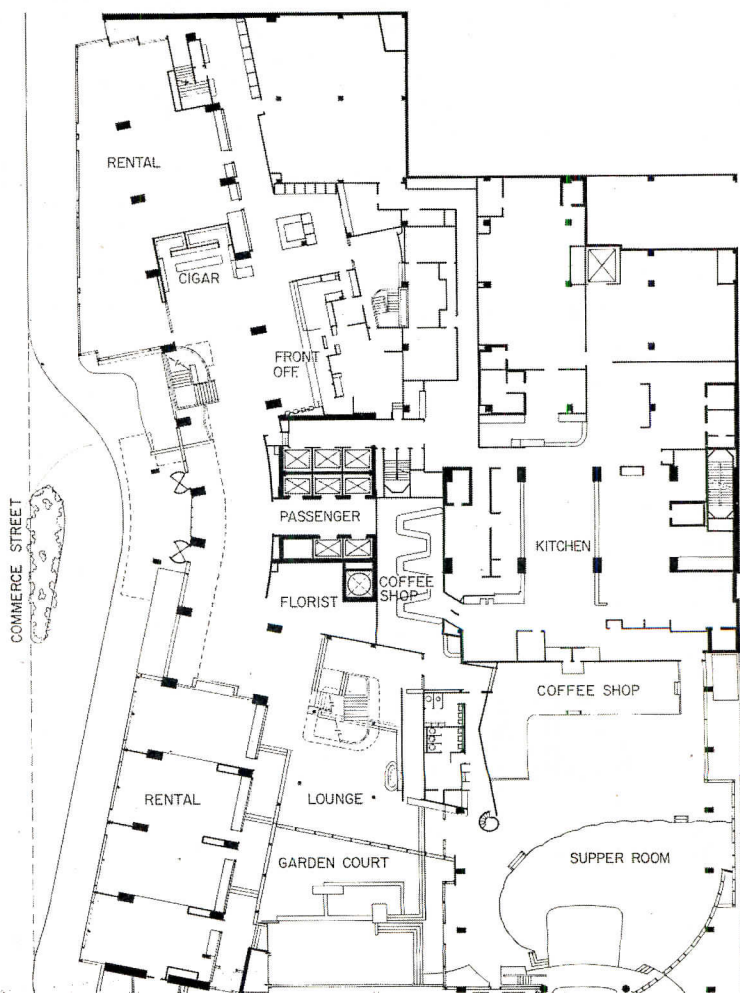
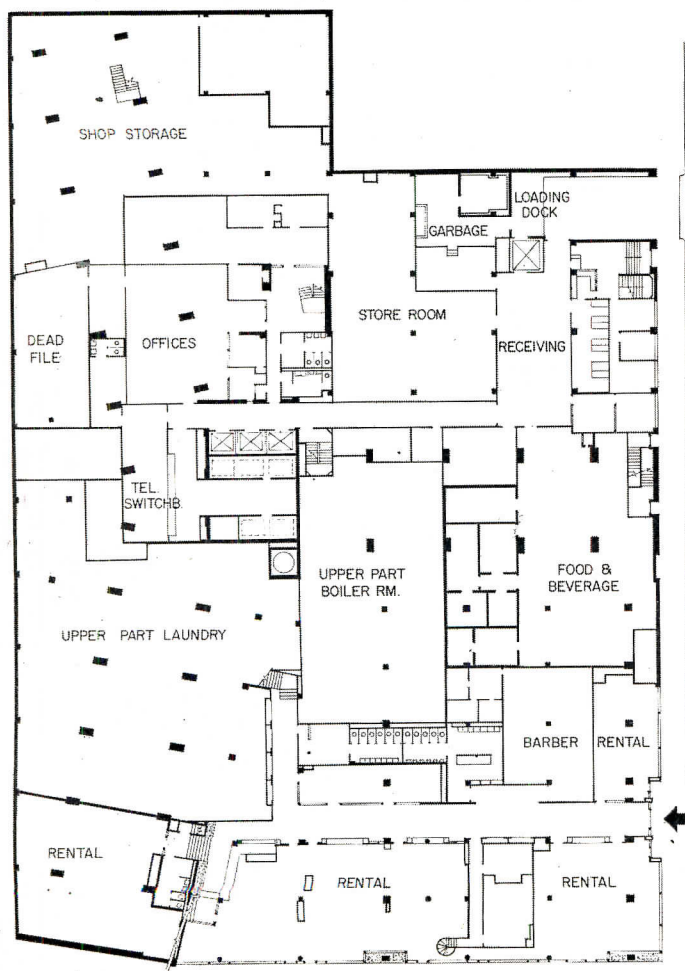
Statler Building Committee: *William L. Marcy, Chairman of the Board; Arthur F. Douglas, President; Harold B. Callis, Senior Vice Pres. Decoration:* *Statler Studios, Inc., Ernest Wottitz, head designer. Food and Beverages:* *John B. Grande, Vice Pres. Kitchens, Laundry:* *W. Randolph Leber, Vice Pres. Financing:* *Robert L. Sussieck, Vice Pres. and Treasurer; financing by Aetna Life Insurance Co.*



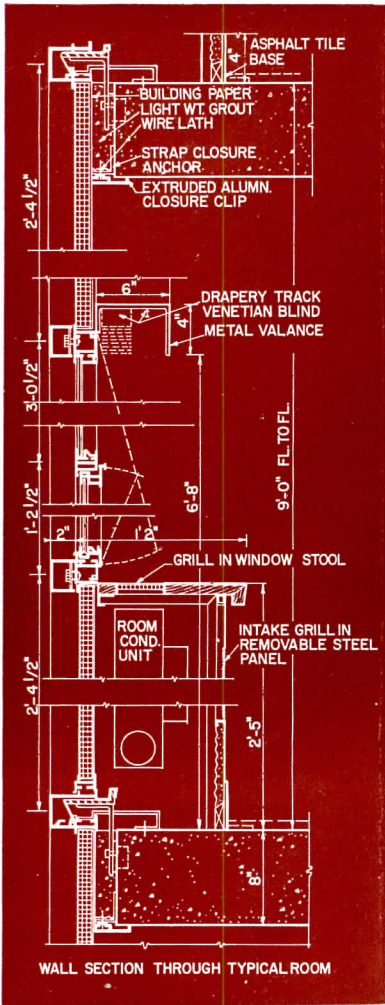
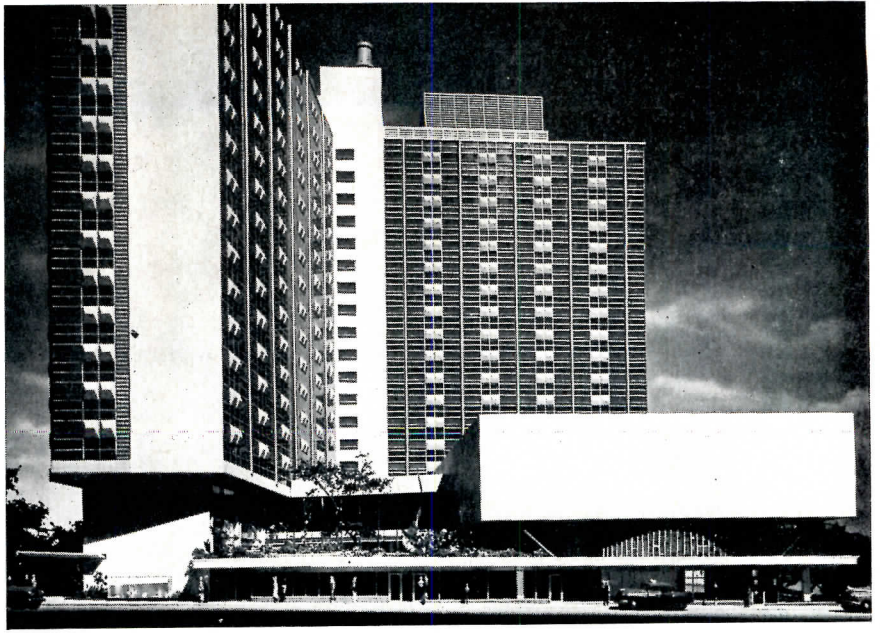
BALLROOM FLOOR PLAN



THIRD FLOOR PLAN



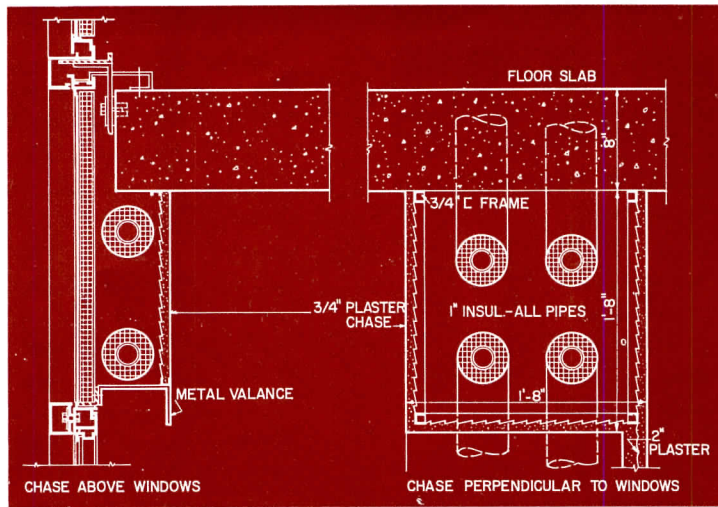
DALLAS STATLER



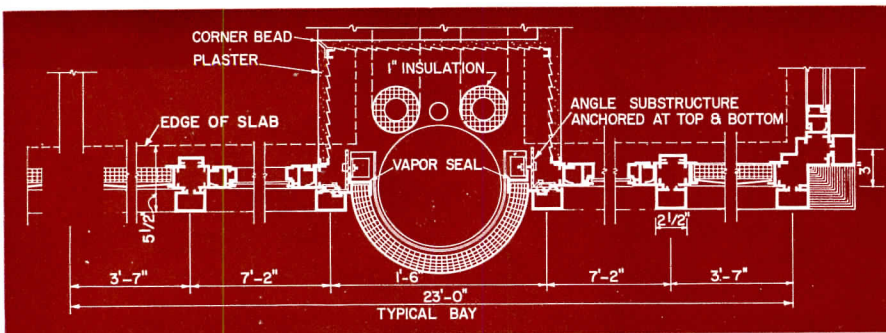
The Statler will be Dallas' only Commerce St. building not built out to sidewalk; landscaped main entrance drive will minimize interference with street traffic. Function floor, up broad stairs from lobby so elevators won't be needed, will provide, with other Dallas facilities, enough space for the largest convention. Main ballroom area is to be a steel-framed, windowless, air conditioned cube with specially designed cold-cathode lighting.

EQUIPMENT: Main kitchen will serve the two restaurants; another, the banquet and function rooms; a third, employee's cafeteria. Kitchen location, equipment and traffic flow are designed for efficiency: raw materials from truck dock in one end, finished meals out the other. Terrace Room dance floor will raise for floor shows, lower to form skating rink. Elevators will be high speed automatic (700 fpm), radio equipped

Air supplies, heating and chilling water and returns, all in vertical mullions, supply the individual room conditioners. Midway up building (9th or 10th floor) are piping expansion loops (right)



WALL CONSTRUCTION: glass areas (picture windows and vents) hinge at top, swing in as units for washing when unlocked with a key. Solid panels are porcelain enamel backed with glass fiber board and asbestos-cement interior surface, held in light aluminum glazing sections

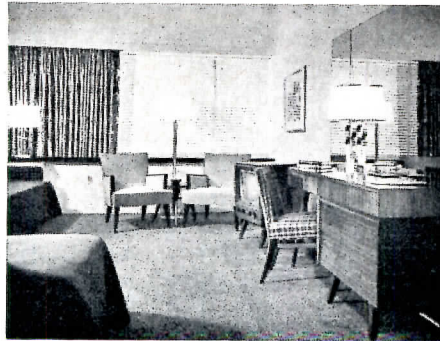


Louis Checkman

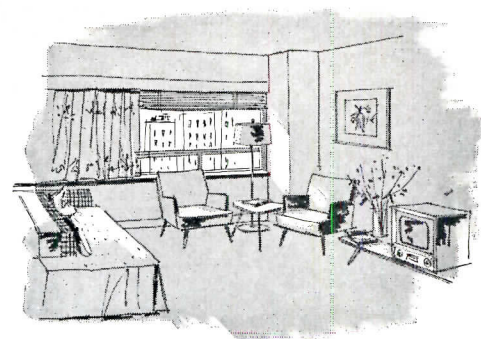
Left, Hedrich-Blessing; center, Shulman



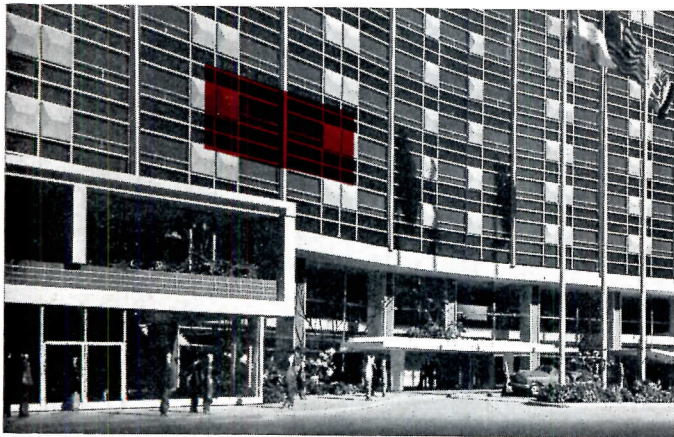
Typical rooms: Washington, D. C.



Los Angeles, Calif.



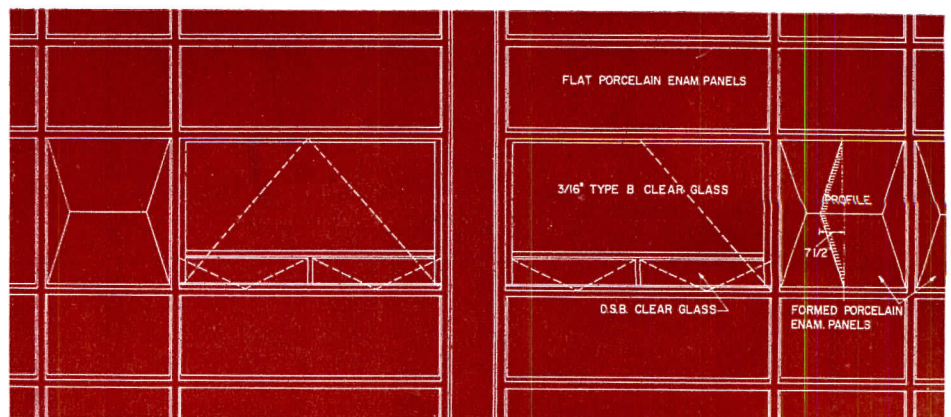
Hartford, Conn.



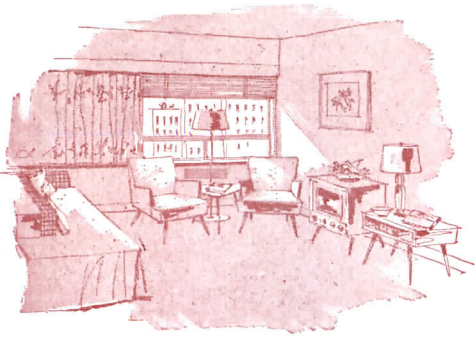
FAÇADE DETAIL above, pair of rooms emphasized in color; at right, exterior elevation of typical bay fronting a pair of rooms, one single, one double. Square porcelain enamel panels are to be shaped to increase rigidity.

STRUCTURAL SYSTEM is reinforced concrete in guest room wings, with flat slab floors cantilevered from a double row of interior columns. There are to be no exterior columns at all; insulated metal and glass skin is to be hung from slab edges. Rectangular interior columns will increase in thickness on lower floors, are 23 ft on centers, determine placement of thin partitions (see plan g, facing page)

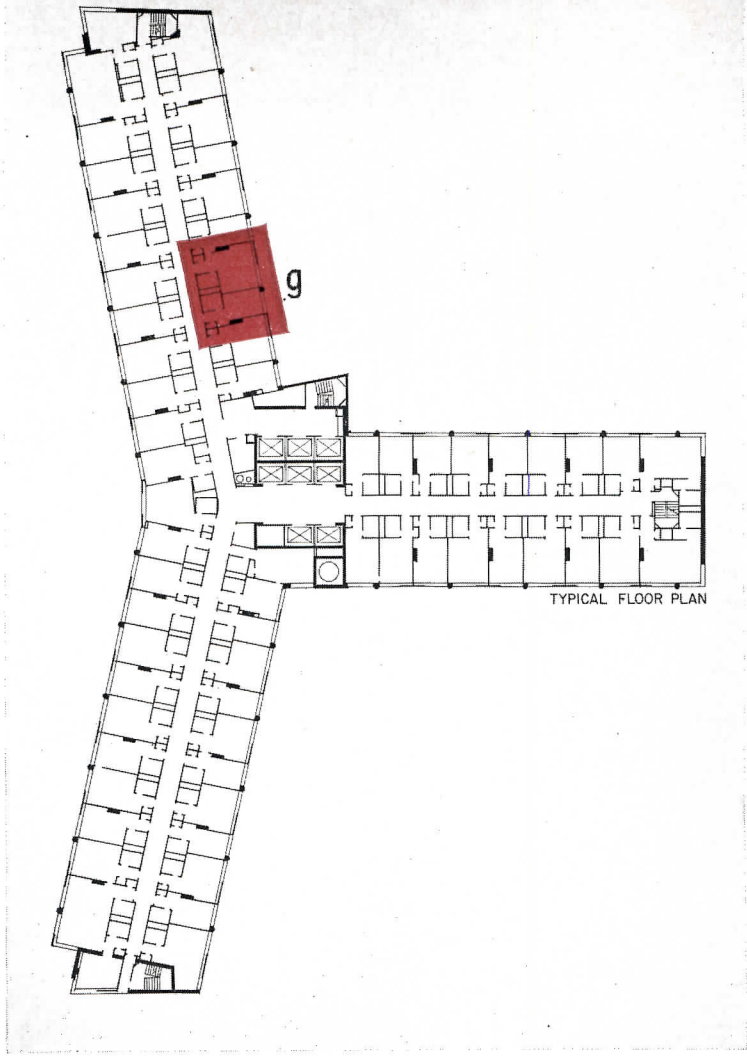
The guest room wings' unusual structural system, exterior skin and air conditioning layout have been studiously integrated; their flat slab floors, carpeted above and painted on the underside, are both structure and finish. This leaves nowhere to bury utilities, nor do the 2-in. plaster partitions provide room for anything more than electrical conduit. Air conditioning supply lines, then, are literally pushed outdoors where, as previously noted, they look like structural elements. Such a demonstration of ingenuity is forced by the high construction costs encountered today if a reasonable cost per room is to be realized; instead of accepting the smaller rooms which conventional construction might have entailed Statler has chosen to maintain the quality of its accommodations. As now planned, most Dallas guest rooms will have studio beds and furniture designed by Statler Studios, individual air conditioning units, "Servadors", TV-radio sets, venetian blinds, drapes. Bathrooms, like those in Hartford and Los Angeles, will have lavatory-dressing tables, toilets angled to become dressing table seats, wide mirrors, oversized medicine cabinets (backs removable for access to plumbing shafts), incandescent lights, and the Statler towel hook — which the Company expects to cause a saving of \$15,000 a year in laundry and linen replacement.



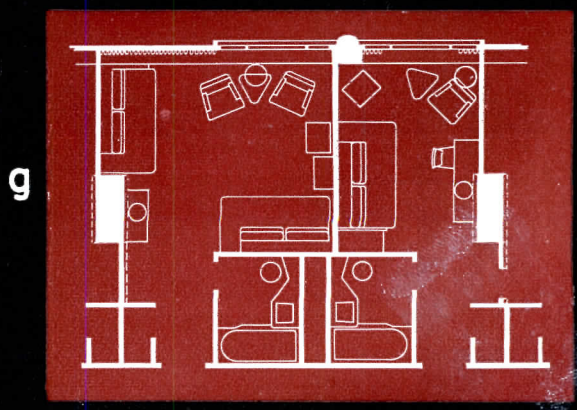
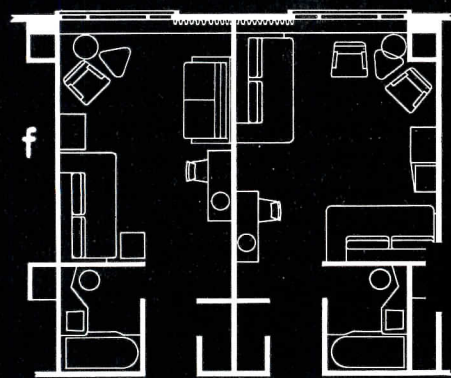
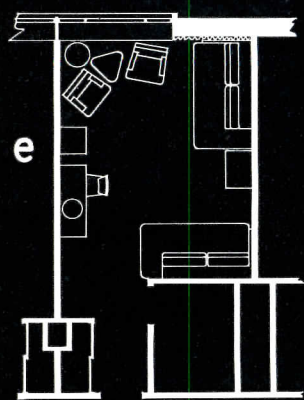
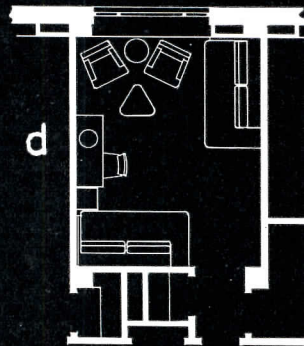
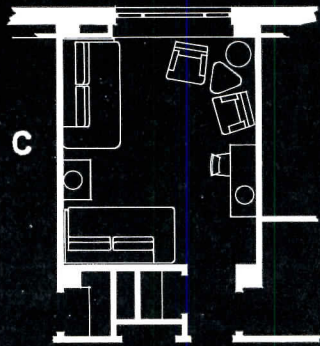
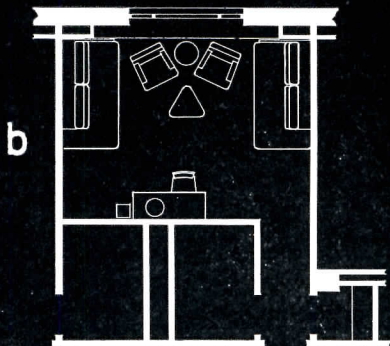
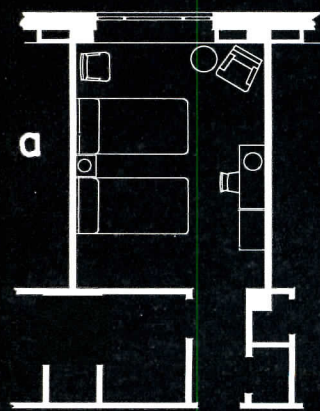
Louis Checkman



Dallas, Texas



Evolution of Statler studio bedroom: interiors above and left, plans below. Early conventional bedroom (plan a), 11 to 12 ft wide, was cluttered with furniture. Turned 90 degrees (b), furniture arrangement improved but amount of exterior wall increased. c and d show first rooms designed as studios (Washington); e is Los Angeles; f, Hartford where single and double rooms were paired; g, Dallas, where the designers' ingenuity will produce rooms slightly larger than recent examples



WHAT DOES A GOOD HOUSE COST?

Three Approaches to the Budget Problem

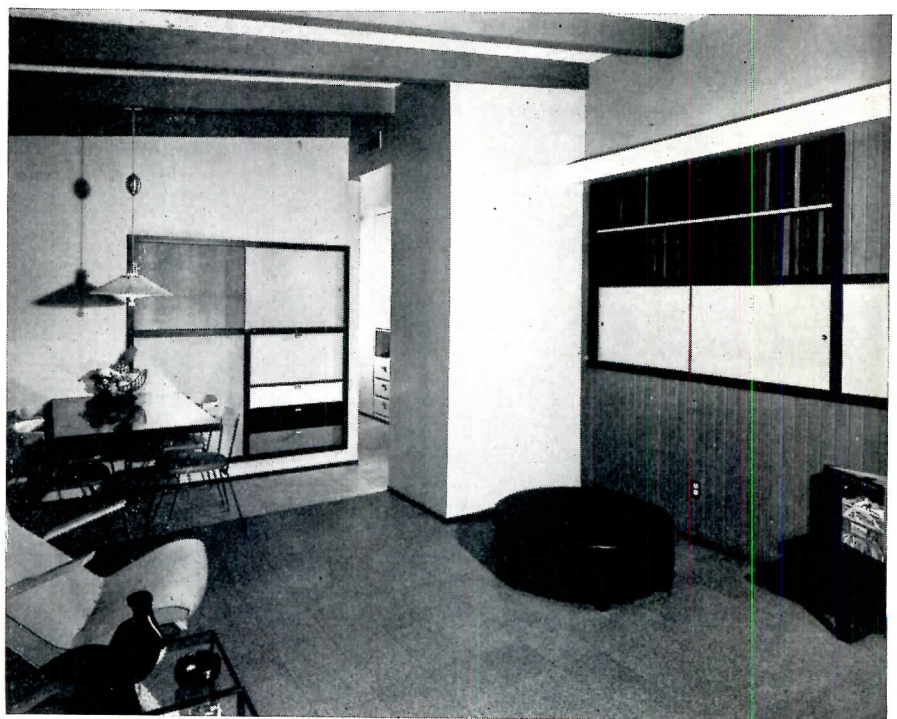
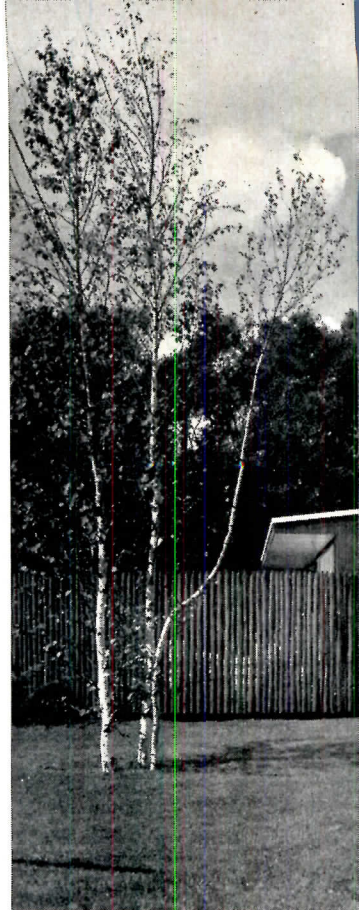
Cost control in house design starts, as architects often have to explain to their clients, with the owner's analysis of his needs, his desires and his budget. If the analysis is thorough, even a low budget can result in a good house.

There are, of course, innumerable ways of keeping the costs down once the requirements have been established. The three houses shown here — all owner-designed — suggest varying approaches to the problem:

1 An Irregular Lot in a Good Neighborhood Is Inexpensive
Zimmerman House, Ohio

2 A Rectangular Plan is the Most Economical
Bissner House, California

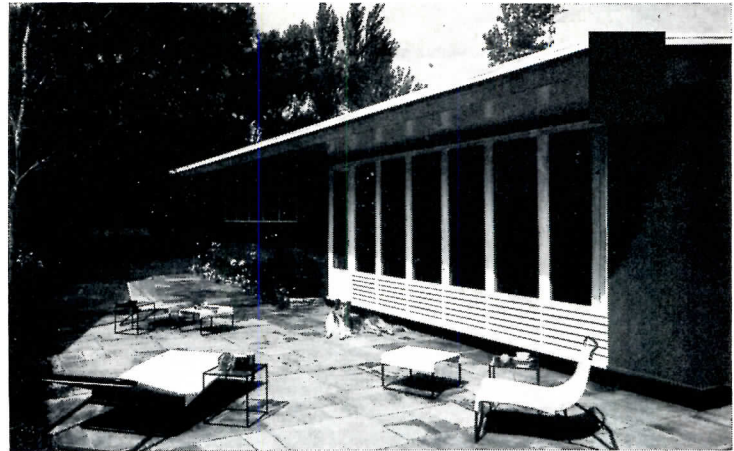
3 For Maximum Space at Low Cost Choose an Open Plan
Small House, North Carolina



Space-saving built-ins throughout Zimmerman house kept decorating bill (including fee, all other furniture, fabrics, china, crystal, tableware, etc.) to a total of \$1416.93. Dust allergy of one son prompted cork floors, no carpets and no curtains; this helped budget, increased ease of maintenance. Sculpture on living room wall is family group by Bernard Rosenthal



Despite odd shape of lot, architect-owner achieved full privacy for terrace and children's play area. A studio-drafting room is planned for addition at north of lot

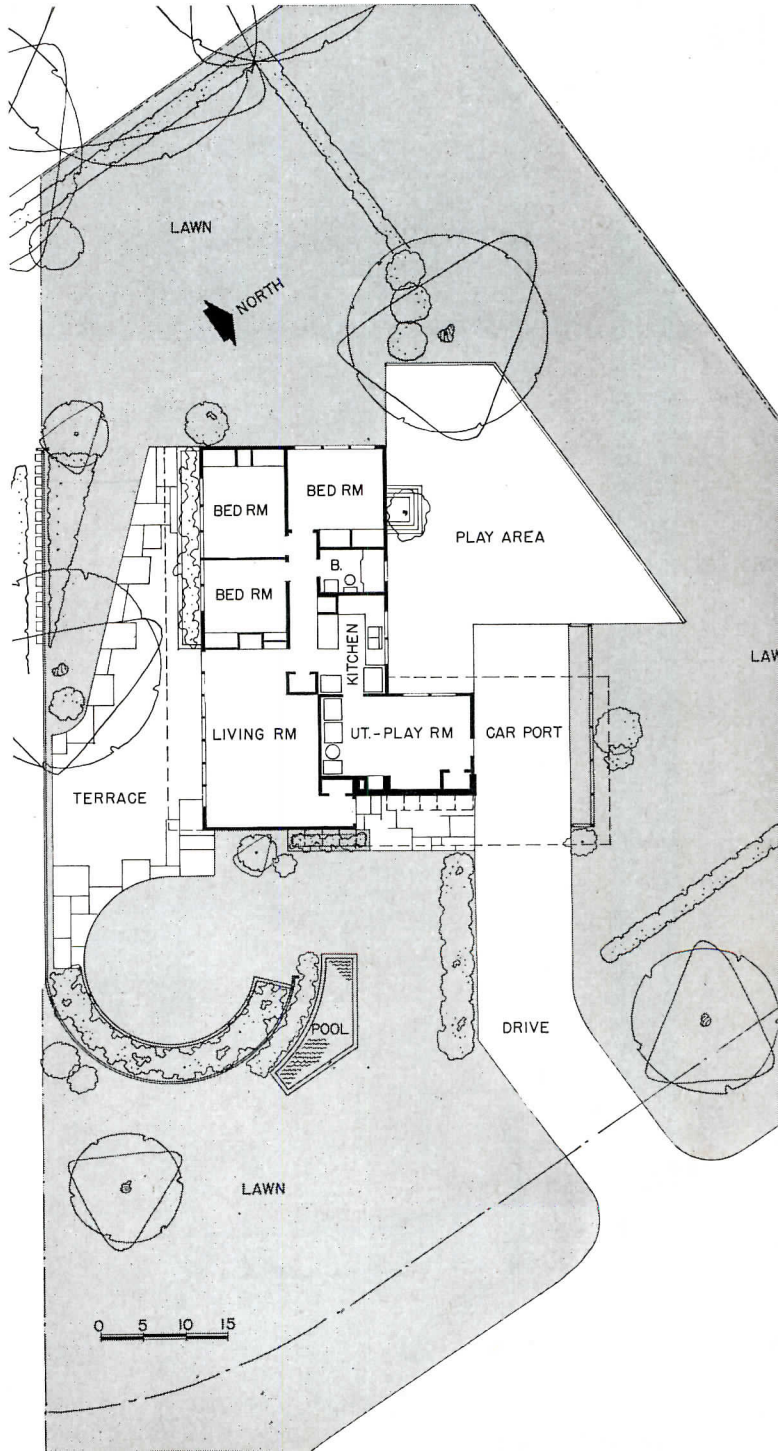


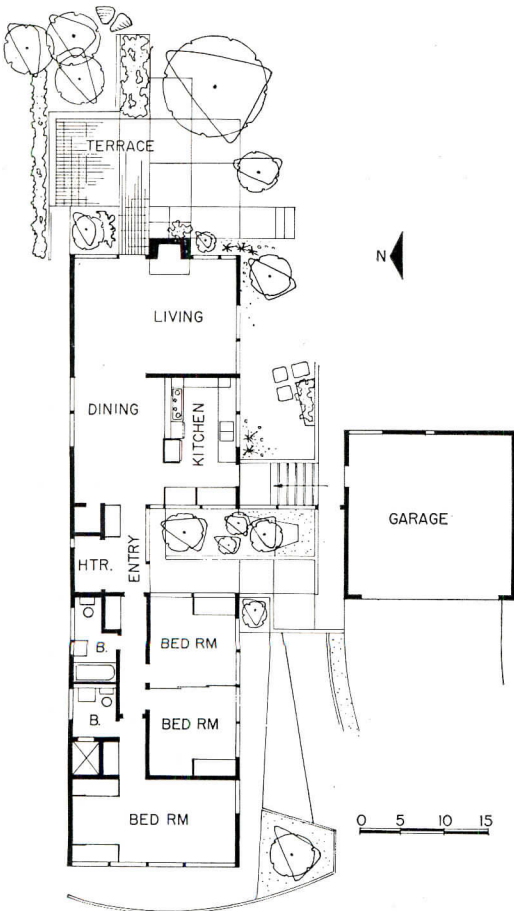
1 INEXPENSIVE IRREGULAR LOT

Ralph W. Zimmerman, Architect and Owner
A. G. Britsch, Landscape Architect

IN A GOOD NEIGHBORHOOD in Toledo, Ohio, a 90- by 131-ft lot, shaped roughly like a wedge of pie, remained vacant because the developer wished to avoid the design problem it presented. Architect Zimmerman bought it for \$1250, \$2550 under the selling price of the adjoining property. He was immediately on his way toward meeting the \$20,000 budget which he had established for the house he and his family desired — a budget which included not only lot and construction, but landscaping and complete furnishing. Since the Zimmermans' requirements were far from modest (they wanted, for example, a living room with maximum cubic volume and acoustic treatment to allow operation of the record player at concert hall level), the final per-sq-ft cost of \$14.95 was remarkably low.

How did the architect achieve that figure? He reworked his original plans until the area was cut down from 1840 to 1100 sq ft; the children's bedrooms were provided with all built-in furniture, to permit absolute minimum size; the play room and utility room were combined; a shed roof added the necessary cubic volume to the living room. Says Mr. Zimmerman: "Some of this . . . was a sacrifice, but . . . [it] has proved that with study a good house can be designed on a strict budget."





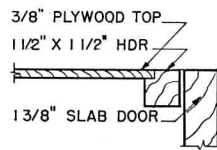
2 ECONOMICAL RECTANGULAR PLAN

*Harold J. Bissner, Jr.,
Owner and Designer*

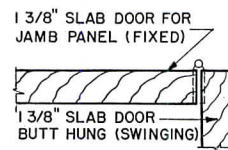
THIS STRAIGHTFORWARD small house in Altadena, Calif., its designer-owner reports, "was conceived on the spur of the moment and built in less than three months." The major problem was a limited budget which was met by a combination of economical plan and the owner's ability to serve as contractor and do much of the interior finishing. Result: a per-sq-ft cost of \$8.50 for a total area of 1200 sq ft.

The house is basically a long narrow concrete floor slab with the bedrooms at one end, the living area at the other, and the entrance in the center. All rooms are directly accessible from the entry and all except dining room and baths have southern exposure. The "railroad flat" character which could so easily result from such a plan was eliminated by the central entrance and the liberal use of glass in the living areas. Construction materials throughout are low cost, and the color scheme is simple.

Access to living room from entry is through dining area — not an ideal arrangement, but a small price to pay for advantages of a central entrance and a living room opening to a secluded terrace at rear of lot



HEAD

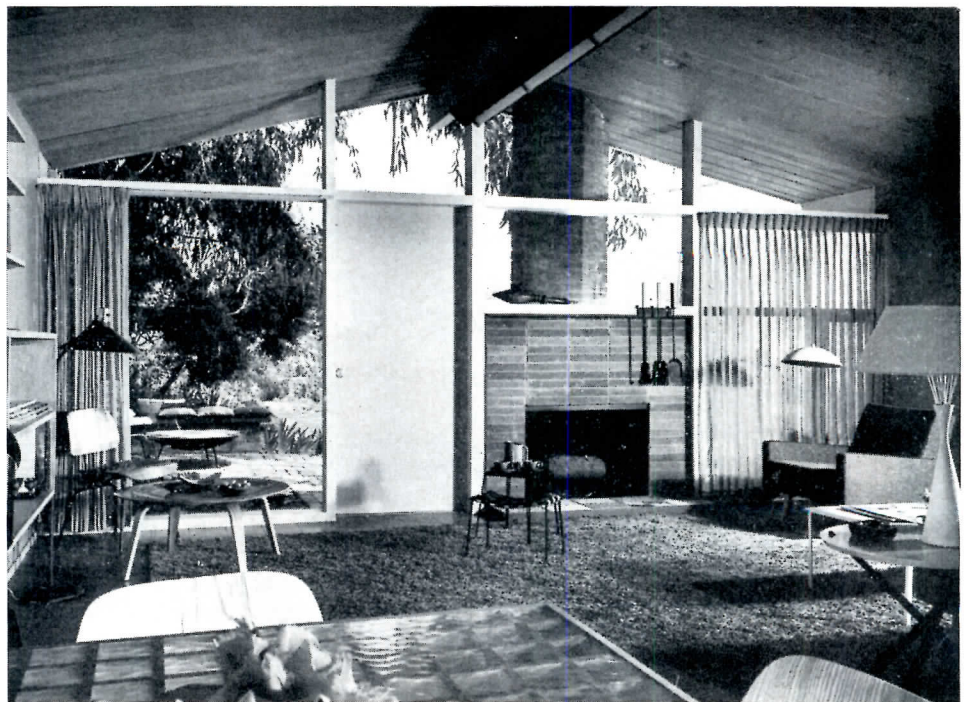


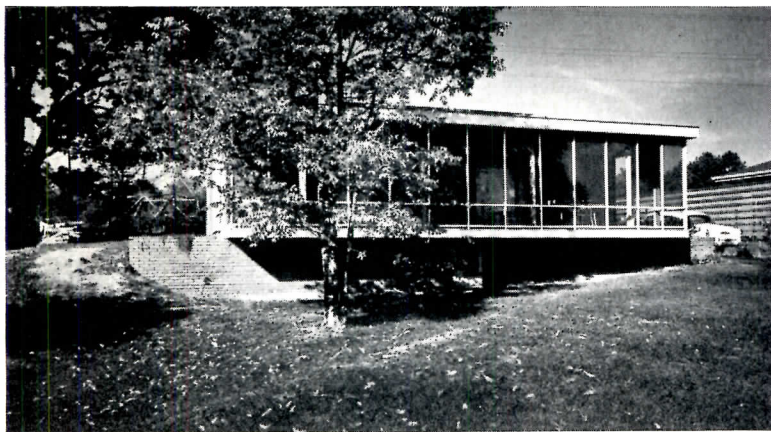
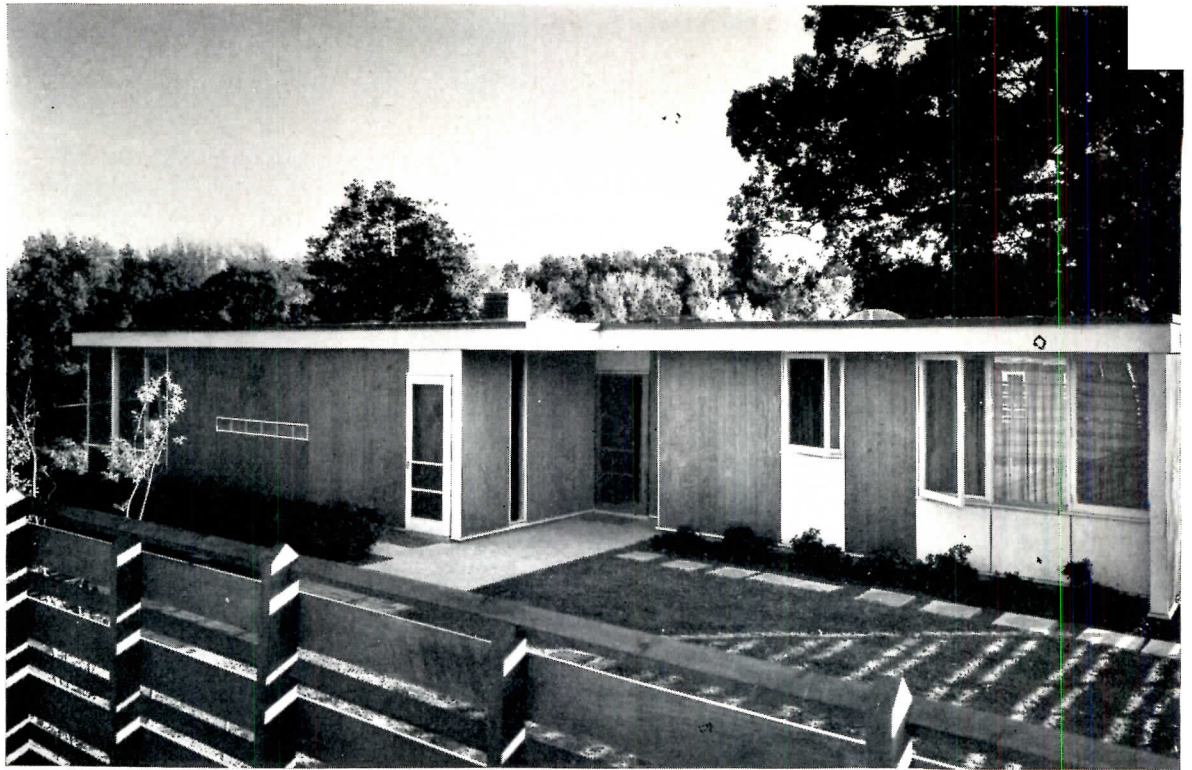
JAMB



BOTTOM

House looks and feels spacious despite relatively small size of rooms: living room has large areas of glass; entrance hall is glass-enclosed; children's rooms can be combined into large play area. Cost-saving features include wardrobes built of hinged slab doors (detail above right)





Joseph W. Malifier

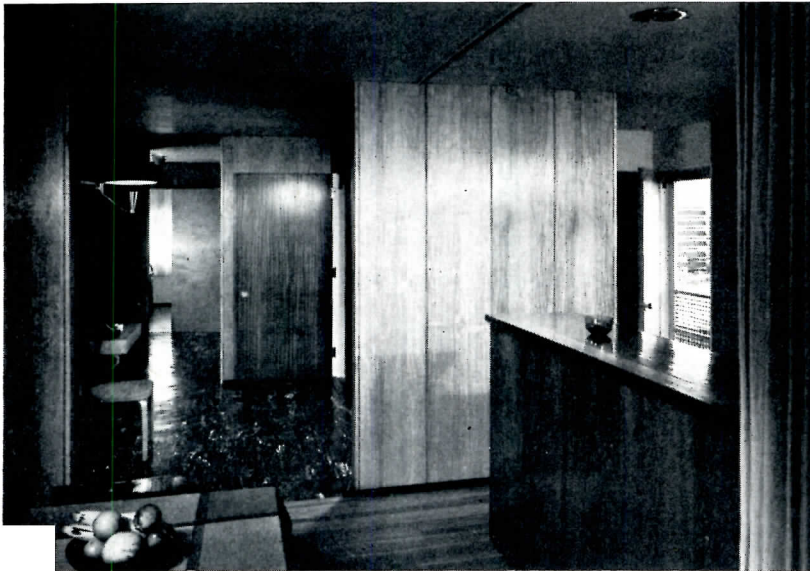
The Smalls "like to have all the protected view possible and prefer to live where it 'feels' high." So, with budget in mind, they chose a medium-sized lot sloping downward toward the east and the view, placed their house at the highest point, and added an enormous screened porch facing the view. Contractor was Frank Walser



3 SPACIOUS OPEN PLAN

G. Milton Small, Architect and Owner

SAYS THE ARCHITECT-OWNER of this house in Raleigh, N. C., "Since cost was a very limiting factor we decided to have space if nothing else and this is the entire key to the low [\$8.00] per sq ft cost." The emphasis on space came from a family liking for informal entertaining and resulted in a completely open living-dining-kitchen area which, of course, cut down the cost of partitioning, wiring, etc. It was the screened porch, however—which the family considers the chief characteristic of Raleigh house architecture—that really gave the house the required spaciousness: for seven months of the year it adds 400 sq ft to the living area, and even when it can't be used it adds space visually.



Mrs. Small does all the cooking for the family. She likes to take part in family activities, and does not want to be relegated to the kitchen. Open plan of living area allows her to participate in family doings even while getting dinner. Built-in cabinets for china and glass separate kitchen and dining areas



MULTI-FAMILY HOUSING

ARCHITECTURAL RECORD'S
BUILDING TYPES
STUDY NUMBER **211**

HUNDREDS OF THOUSANDS, perhaps millions, of American families can afford better housing facilities than those they now occupy, if they choose to spend their money that way." That quotation introduced an article four years ago by Thomas S. Holden, vice-chairman, F. W. Dodge Corp. (ARCHITECTURAL RECORD, Sept., 1950). He went on to demonstrate with detailed statistics that this idea was not dreamy-eyed, that in fact the average family spent a much smaller proportion of its income on housing than, say, forty years ago. That indeed the average family spent more on "liquor, tobacco and amusements" than on housing. If we want better housing, we can pay for it.

It's as simple as that. Or is it?

Certainly the ability to pay for better housing is Fact One. But it is also true that any individual architect trying to improve multi-family dwellings finds difficulties. No need here to recite the list of those difficulties; suffice it to say that "standards," regulations, codes, street patterns, and habits of thinking are restrictive. The individual family is similarly beset. True, the family may move to the country, buy a half acre, build the house it wants. But if they must live in an apartment, it is pretty

A PLEA FOR PERSPECTIVE

By Charles K. Agle *

WE ARE BLESSED with an incredible wealth of natural resources and ingenuity to get them out of the ground and put them to use. While much of this has had to be devoted to international conflict, there has been enough surplus to provide us with an abundance of material things, and our greatest domestic prosperity.

However, our living environment has not kept pace. Relative to the progress of other measurable wealth, it has actually receded. Our progress may have been so large and rapid that it has engulfed us, and we have not yet read its full significance or implications. We may be provided with opportunities that we have not yet appreciated and with tools that we have not yet learned how to use. In all humility, it may be wise for all of us soberly to re-examine our opportunities, the shortcomings of our immediate past, the forces at work, and see what to do with them.

THE FORCES AT WORK

An appreciation of the major factors influencing our physical environment includes at least these items: (1) continuing increase in population, and widespread need for small dwelling units; (2) the automobile as the major factor in circulation and land use design; (3) a powerful and prosperous economy, in which it is tragic to accept less than a decent standard of space and living quality; (4) four stages of family life, engendered by our mobility

and economic freedom, which require separate types of housing.

1. *Population change, both in numbers and composition, requires corresponding change in shelter and circulation.*

Our population has doubled in 50 years, and is still going strong (75,000,000 in 1900; 150,000,000 plus in 1950). Medical progress in conquering infectious diseases has lengthened life expectancy from 42 to 68 years — more than one-third — which means that more middle-aged and older couples survive beyond the marriage of their children, and return to a "two person family" status, with special housing needs.

2. *The automobile is here to stay.*

The number of automobiles has almost doubled in ten years (30,000,000 in 1943; 53,000,000 in 1953; and possibly 80,000,000 by 1975). It is no longer a vehicle of pleasure and luxury; it is a beast of burden for daily necessities of survival, and the sole significant means of transportation outside the centers of our largest cities. The environment for the automobile is now a large component part of the environment for the whole family. We must design for the automobile's smooth and efficient flow; for its storage; but even more importantly, against its hazard.

3. *Our building is permanent. Our physical standard should be based on needs, not merely immediate cost.*

The out-of-pocket cost of World War II, which did not hurt us economically, in spite of the fact that it produced no tangible asset, was about \$300 billion. Its total cost, by the time we finish financing it and taking care of the veterans, has been estimated at over \$1 trillion. There are about 50 million dwellings in this

* Chairman, Development Committee, National Association of Housing and Redevelopment Officials; Member, A.I.A. Urban Design Committee

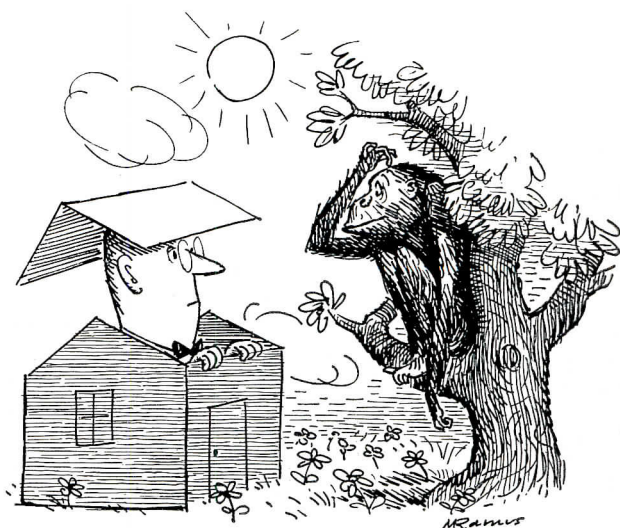
difficult to find such human necessities as adequate space, privacy, contact with the outdoors, healthful environment.

Of course, "healthful environment" is an order of staggering proportions, involving most aspects of urban life. The President's new housing program, now before Congress, contains a proposal for an "Urban Renewal Administration," as part of HHFA, which presumably would address itself to improving our urban environment.

A big assignment, yes, but who if not architects is going to do something about it? Who else, but architects, deals so continuously or so consciously in matters environmental? Who, in his own workaday activities, can do so many things, however small?

And architects have been pretty persistent in their efforts, in spite of FHA regulations, financial strings, scandals, even fee chiseling. Architects are forever trying to sharpen their own thinking, as witness the article, below, by Charles K. Agle. They keep pecking away also in individual buildings, as illustrated by projects in this Building Types Study. Whether dealing with "urban renewal" or single building designs, they will keep their sights high. Always remembering Fact One — we can afford better housing if we decide to spend our money in that way.

Cartoons by Michael Ramus



country. In terms of real property, this means that, had we devoted an effort to housing equivalent to the effort we expended on the war, which we tossed off so briefly and ably, every family could have had a new \$20,000 house, including a one-third down payment.

It seems to me that we have indeed lost our perspective when we absorb astronomical figures for armament without question, and at the same time reduce the space of our shelter, which is a trivial cost consideration by comparison.

It does appear that *there is no compelling economic reason for not getting what we want. If we can make up our minds what we want.*

4. *There is no average family. There are four major groups with different needs.*

It has already been noted that the group of people in search of a place to live is not necessarily the average natural family of five and a half people (two parents and three and a half children), but rather a median group of 3.1 persons. But beware of averages and medians.

The economic and geographic freedom noted above has given more practical significance to the fact that the "family" is not at all a constant, but a group of people whose composition and architectural needs change drastically at different stages. A study of census and other data indicates that there are at least four stages: (a) the formative period beginning with marriage plus about six years, when the couple are deciding where to live, how many children to have, and what they hope their income will be; (b) the production period of perhaps twenty years, when the children are all home and growing up; (c) a dissolving period when the children

marry and leave home; and (d) a static period of around fifteen years when the couple has the means to live well, but lacks the energy and the need for the old mansion. This last stage, of trivial importance only a few decades ago, now constitutes the largest area of need for which no specific solution has yet emerged.

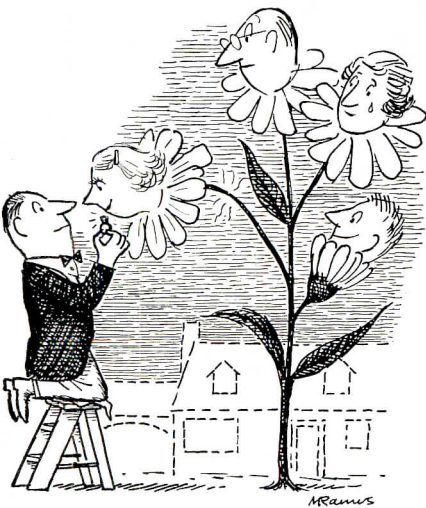
THE SHORTCOMINGS OF OUR PAST

Much of our pre-war heritage no longer fits our changed circumstances. Even much of what we have done in the past ten years, while excusable because of the pressure of post-war population and need for shelter — any shelter, may return to plague us. It is also true that we probably have provided somewhat better shelter for *more* people than was done between 1900 and 1930, but the question still remains, is it as good as we can and should do?

What have been our shortcomings and difficulties?

Room sizes and unit planning

Our room size standards, as promulgated by both the FHA and the PHA in both houses and apartments, are such that it is impossible to walk on both sides of the



"The family is not a constant . . . but a group . . . whose . . . needs change drastically at different stages"

bed to make it. There is rarely any interior space left over for members of the family to get away from each other: in our middle and less expensive contemporary products, the house has virtually been fitted around the family like a corset — here is a tiny room (70 sq ft) you *must* sleep in, a nook to eat in (maybe) and a 150 sq ft living room where everyone must get together. Rooms are almost the same size throughout the unit and ceiling heights are uniform. In the mass of units, there is little attempt or success in really relating outside space to inside space through fenestration, grade levels, or design and landscaping of a private yard. The end product is a tight and monotonous series of little artificial cells in which there is no escape from social congestion and boredom, short of television or the corner beer parlor with juke box.

Site planning and common space

Most site plans, room placements, and side yards are such that we all live practically in our neighbor's laps. Cities have not kept up in providing parks and playgrounds and other open spaces to compensate for the absence of usable open space for the children on small lots. Any charm that streets once had is blotted out by double lines of parked cars without so much as a bush to hide their collective naked ugliness.

Failure to design a distinction between minor and arterial streets makes survival a sporting proposition with low odds.

Because of the black magic of finance and questions of title, it is ironic that the private housing program seems less conscious of the need for social space than the public housing program. In reducing room sizes and number down to the barest animal essentials, both programs have long since wrung out of the "unit" every inch of usable social space. In the public programs, at least an attempt has been made to provide *some* space in community halls, day nurseries, and kindergartens, and something in the way of playgrounds. In private developments, whether of single, or row houses, or apartments, this is seldom the case, because of the difficulty of communal ownership.

Misuse of building types

We have a tendency to miss the point of relating

building types to the various family programs. In the center of our cities, we force all families into high rise buildings because of land cost, but in the suburbs or in small towns we are usually forced by archaic zoning to scatter them all in cracker boxes. A clearer appreciation of family programs, and an understanding of the merits and demerits of various building types might help us steer around fallacies and confusion.

1. *The High Rise:* Both the children and their parents are underprivileged when the children do not have direct and immediate access to the ground, and playgrounds of adequate size and basic equipment and some sheltered play space within attractive range — not on the other side of town or down the elevator shaft. Without these facilities, the pressure and tension inside the dwelling is apt to run high if the children are healthy. The provision of these facilities in a high rise structure is just plain impossible. Density and land cost be damned: a child in an apartment is underprivileged, whether on Park Avenue, Lake Shore Drive, or the lower east side. The high rise building does have its merits, but not for active children.

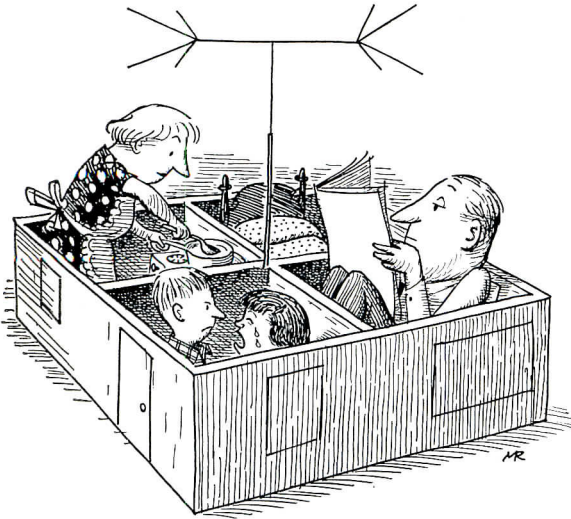
2. *Row Houses, Garden Apartments, and Walk-ups:* We should first define our terms. A row house is an individually owned unit between plane party walls on a separate lot; a garden apartment is a collection of units in common ownership, in which each unit has a private outside door; a walk-up apartment is a group in which two or more units are entered from a common hall and outside door.

Most row-house developments, of which Philadelphia and Baltimore contain perhaps the dreariest examples, are characterized by rigid street patterns, complete waste of front yard space, which is too small for insulation from traffic noise or any private or individual use or landscape treatment, but which, nevertheless, consume enough of the lot area to rob the rear yard of any potential value. Rear yards either serve as junk heaps or are paved for parking off an alley. We thus have traffic and noise, fore and aft, no usable open space, no privacy, no view, and only the joy of ownership: but of what? While it may be acceptable for a sound-sleeping couple, what about children? Where do they play? Where can they even walk in safety?

The garden apartment has some better features than the row house, but generally fails to provide private open space related to each unit. Common ownership does make it possible for parking and garages to be grouped, and achieve some quiet near the living unit. Children at least can walk in the common open space, and some left over space may be available for playgrounds. However, the cost of retiring the owner's mortgage is a heavy price for the tenant to pay for the privilege of parking his car away from his unit and looking at a bit of landscape he can neither dig in nor sit on.

3. *Single-Family House:* Most fringe or suburban communities still hang on to the romantic fallacy that only a single-family house is good, and force all families into it, regardless of basic need. Proceeding from this vicious premise, it then becomes necessary to prostitute

lot and structure sizes in an attempt to serve families which, because of small size or economy, could be better served by other means.



"The end product is . . . a series of little artificial cells in which there is no escape . . ."

There is not much that can be said in praise of such developments of the minimum two-bedroom single house on a narrow lot, other than that it is a cheap and temporary expedient. Temporary, for two reasons: first, when hemmed in by narrow side yards and standard front and rear yard set-backs occasioned by obsolete zoning practice or lack of imagination on the part of the developer, its appearance can be as deadly as the usual PHA or 608 "Project," and it enjoys the privacy of a goldfish bowl. In standard examples there is little more private use of the open land than in row houses, and it fails to exploit its inherent advantages. Secondly, if we do not give the owner enough land to put up a carport and add a couple more rooms when children start arriving, he will soon have to abandon it. Although he may have had no choice, and was forced to buy in a seller's market, he isn't dumb, and won't spend a nickel on upkeep while he is waiting for something better.

It is therefore my fear that the too-small house on the too-small lot creates an inherently unstable neighborhood from the point of view of cold cash, disregarding quality, and that much of what has been built in the hysterical boom of the past 10 years is potential slum.

City Planning

There have been still other difficulties: the city plan (or lack of one) and the fast-buck subdivision. The first has inherited largely obsolete codes, ordinances, regulations, and concepts. When compounded with the best old-fashioned engineering and real estate thinking, this concoction has nicely supplemented the past neglect and indifference, or helplessness, of the architect, to give us our urban heritage: gridiron streets of uniform dimensions for all purposes in all directions and conceived

only for horses; sugar-lump houses of uniform size, height, set-back, and side yards so narrow that even a cat has trouble negotiating them, all nicely strung together in a tight row, with no outlook — past, present, or future; central business areas that are strangling because the automobile can neither get to them, or park once it gets there, all overlaid with flashing neon signs that give it the calm dignity and charm of a juke box.

Economic fears

Restlessness and insecurity may be aggravated by the mediocre quality of our three-dimensional life. This means more than the design of the house or apartment: we find that the city is no place to raise children because of the lack of play space, the over-burdened schools, congestion, traffic hazards; so we pull up shallow roots and fly to "the country." Then we find that commuting takes so much time and personal wear and tear that one parent is of dubious value to the family. Maybe it works, or maybe we can't find a suitable house in a good neighborhood within our means, and we move on to the southwest, or west coast, and try again. This rolling around may be aggravated because we can't find anything (collectively, house, neighborhood, schools, shopping, transportation to work, "atmosphere") that is good enough for us to want to hang onto.

WHAT TO DO?

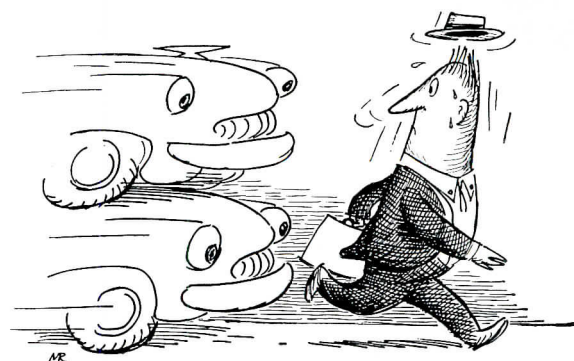
What is quality in living? If occasionally we have stumbled in our quest, what improvement can we make? What opportunities have we missed?

The designers of living environment cannot stop with four walls. A few hundred years ago, when the major and compelling reason was shelter, the igloo plan of the Cape Cod cottage was an excellent solution to the immediate problem, and even the urban huddle was understandable. Today, however, we have the tools to do better.

What do we need? *Response to family personal and social programs.* This involves more than a listing of spaces of various minimal sizes: a psychiatrist's insight, an understanding of social habits, sleeping space for children, and space for them to lead their private lives.

It boils down to the major consideration of space. When there are a lot of human beings cooped up in one place, they get to be like the molecules of oil in the head

"Failure to design a distinction between minor and arterial streets makes survival a sporting proposition . . ."



MULTI-FAMILY HOUSING

of a high compression diesel. The internal pressure is in indirect ratio to the space, and when the space gets too tight the heat and pressure make them explode. If the piston is stuck and the exhaust valves don't open, the head blows off. This is my basic sociologic case for the one-story house on a quarter acre of ground for a full family, with at least one spare room to absorb the pressure on rainy days or winter nights, whether you call it a study, library, hobby shop, or just sparking space, to double for the youngster's jalopy when the roads are icy — and for the small family, at least a pleasant outlook to mitigate the tightness of a still smaller enclosure.

It is also highly desirable, in composing a neighborhood, to provide a balance of facilities for various family sizes. Only in this way can continued residence and the preservation of social ties be preserved as a family progresses from one stage to another. It also provides the best opportunity for architectural variety and interest through the use of proper building types for each family group.

Use of proper building types

The high rise, of course, has certain advantages which the low structure never can get — whether in a row or on an acre lot: fine light, magnificent views, and a feeling of great space. This suggests that it is really a superior building type for small families, whether it is located in the middle of a large city or on the outskirts of a village. Generally speaking, young married couples, either with no children, or children under, say, two, do not need the same access to the outdoors as larger families, and can do well without the worry of individual heat and utilities and the burden of landscape and structure maintenance. Except for differences in economic level and the ability to afford luxurious equipment, the needs of older couples line up quite well with the very young, and there is a legitimate use for high rise for these two groups. I only want to beg a balcony for everyone so that there can be some direct escape from the constant pressure of completely enclosed space.

Where land is not at a premium, a good case can be made for the garden apartment for these same two groups, the young and the old. For both groups, rental tenure has certain advantages over ownership, because no long financial commitment is involved, there is no responsibility or burden in upkeep, and its flexibility offers a good springboard into more permanent quarters for the young, and freedom for travel for the old. When nicely landscaped and built at low density, that type of short, but good, view is a worthy substitute for the distant view of the high rise.

Where the feeling of personal security is enhanced by ownership, or where private landscaping and sitting out terraces are wanted, a legitimate case can also be made for the often deplored row house — properly designed.

This "row house" needs brief explanation. Let us start backwards from the free-standing house and lot. I feel that walls with facing windows should be at least 20 ft apart, or the windows are worse than nothing

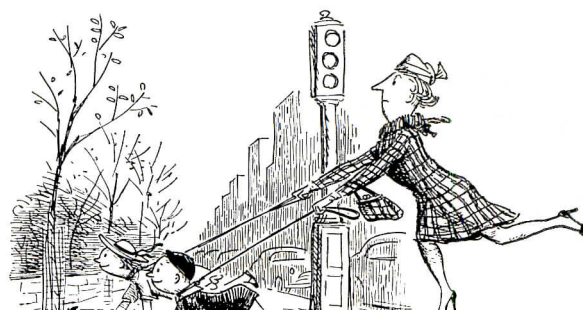
and should be somewhere else. This means minimum 10 ft side yards. The average small house that is habitable now has a breadth of about 35 ft, and we have to do something about attaching a car, for another 10 ft. Ergo, any lot narrower than 65 ft is small for a free-standing house, and it appears that about six dwellings to the net acre is tops for the houses that people want to build now. The hiatus between this six and the 15 where we can build an acceptable garden apartment is untenable. The first step in increasing density without losing any of the quality of the free-standing plan is to twin the garages with a party wall and save 10 ft. The next is to put a party wall on the other side and have all the windows front and back, still with the same one-story plan, for a width of 45 ft, but with still no serious loss in quality. With the sacrifice of one-story quality, and going to two, we still can have our car in the structure and have private and usable open space in the rear on a width of 25 ft, or a top net density of about 16. Beyond that the loss in quality is so abrupt that other building types — the garden or multi-story apartment should be used. Thus, with access, parking, and service on one side only, private usable open space related to interior planning on the other, and the superior privacy of a party wall over a narrow side yard, I feel that the row house can be quite acceptable on lots up to 50 or 60 ft wide, but that on lots narrower than 25 ft we ought to forget about it.

In my Utopia, this leaves the field of the three or more bedroom dwelling exclusively to the free-standing house, whether the floors are of teak or bare concrete. Quantitatively, this would be appropriate for half of the term of the average family cycle, and should be about half the total supply.

Site selection and full use of site planning opportunities

The architect, regardless of building type chosen, is constrained to design the immediate open space surrounding the shelter as part of it, and to relate his room sizes, shapes, fenestration, and circulation to the larger environment. It is not enough to provide the minimum of light and air essential to physical survival, as apologetically specified in building codes and zoning ordinances. We must have, as well, the variety and interest of something natural to look at, space we can see and sense outside our caves, and room to move about in a

"Both the children and their parents are under-privileged when the children do not have direct and immediate access to the ground . . ."



natural environment. As mentioned before, this presents a case for the honest "picture" windows, as distinguished from the current showcase; freedom of access to the ground; and a balcony for at least one room in every high rise unit.

Even all this is futile if a poor site is chosen, or one in which that ogre, land value, is such that there is pressure to overcrowd people.

With decent transit planning and installation, I see no theoretic, practical or economic reason for using a bad site.

The best site for housing is not flat, even though it may be cheapest to develop. Our thinking is handicapped by our heritage of easy walking on the valley floor. The flat valley floor is for farming, industry and commerce. The opportunity for light, air and outlook lies in the hills or along the water courses. Where neither hills nor water is available, the use of different building types in the same development becomes even more important.

Once we have a good site we must settle for no less than the satisfaction of four objectives: 1. The interrelation of structures so that they do not cut off each other's light, view, and privacy. The close juxtaposition of high rise buildings of equal heights in cities ranks with four foot side yards in the suburbs as being twin inexcusable stupidities; 2. Proper control of scale: specifically, the avoidance of long sight lines along streets where too much can be seen at one time and the visible repetition of many similar structures produces monotony. It is important that we have curved streets to control sight lines and a progression of scales on the way home, and that the last should be a quiet loop or cul-de-sac; 3. A modern articulated street pattern, in which *arteries* have no parking, limited intersections, and give no access to abutting property; in which *collectors* have no parking, give no access to abutting property, and serve only to distribute traffic to the minors; and in which *minors* are short and give the sole access abutting property, and serve only for designation traffic; 4. One or more focal points giving identity to the neighborhood as well as functional convenience: the elementary school, shopping center, the church and social facilities.

The atmosphere of the city

It should not be necessary to labor the point of esthetics with the architects and planners who design our environment. Suffice it to say that composition, variety, interest, and even beauty, are possible in our cities, and the need for these is more practical and compelling than is evident from our neglect. In other commercial fields, it is the practical support for success: the buyer of a car is much more concerned with its appearance than he is with the ratio of the differential. From that hard-headed point of view, again, a "good address" is synonymous with stable property values and atmosphere.

Some useful tools are already at hand, and others can be found, only for the price of looking. Starting at the center, we *can* have a village green, nicely planted,



"The igloo plan of the Cape Cod cottage was an excellent solution to the immediate problem . . ."

maybe with a fountain and flowers instead of a surplus World War I howitzer; shops with sheltered arcades such as have been standard in Europe for centuries; a pleasant outlook and surroundings for our office or factory; a conveniently located parking lot with screen planting; an arterial parkway without billboards and neon lights.

Thus we can have a variety of changing and pleasant experiences: the view from our office, the shaded arcade (maybe even a cup of coffee at a sidewalk cafe); the green with its flowers; the parkway along the brook; the easy collector where houses begin to appear between the trees, and the small scale peace of our own secluded street. Add to that a private living space where the sheltered and open spaces are both part of a single composition, there is some variety in the scale of rooms, there is a playground nearby, and we have space to live, indoors and out.

While this concept obviously should be accompanied by soft music, it is also possible that is the best approach to a sound long-term investment — regardless of whose money we use, or on what terms.

In all of the foregoing I have tried to outline some of the specific aspects of the quality of total environment, as distinguished from the usual fractional preoccupation with a building. I have also tried to point out some of our past inadequacies as a means of searching for improvement, and have tried to simplify a statement of our problems and opportunities. I have no illusions about the existence of practical obstacles, the cold clammy hand of stratified government and financial interest rates, or the confusion and inertia inherent in specialized interests, professional, as well as business and social.

However, this is America, and we are strong enough to shape our own destinies if we can achieve a common understanding and desire. Our living environment has not kept up with our material wealth. Architects and planners can explain what we *can* have. We can get what we want. The next 10 years will determine the physical future of the country for a century. With a change of administration, we have a golden opportunity for fresh determination. The time for decision is now, and indifference and inertia are negative votes.

What do we want?



CHICAGO: WIDE VARIETY OF APARTMENT SIZES

The Pioneer Cooperative, Inc.

CONCEIVED in an effort to provide better housing at reasonable cost in Chicago's Hyde Park area, near the University of Chicago, this project has proved successful in reaching that goal and in two other respects as well: first, as an example of good apartment house design; and second, in acting as a key factor for the coming redevelopment of an old neighborhood sliding downhill.

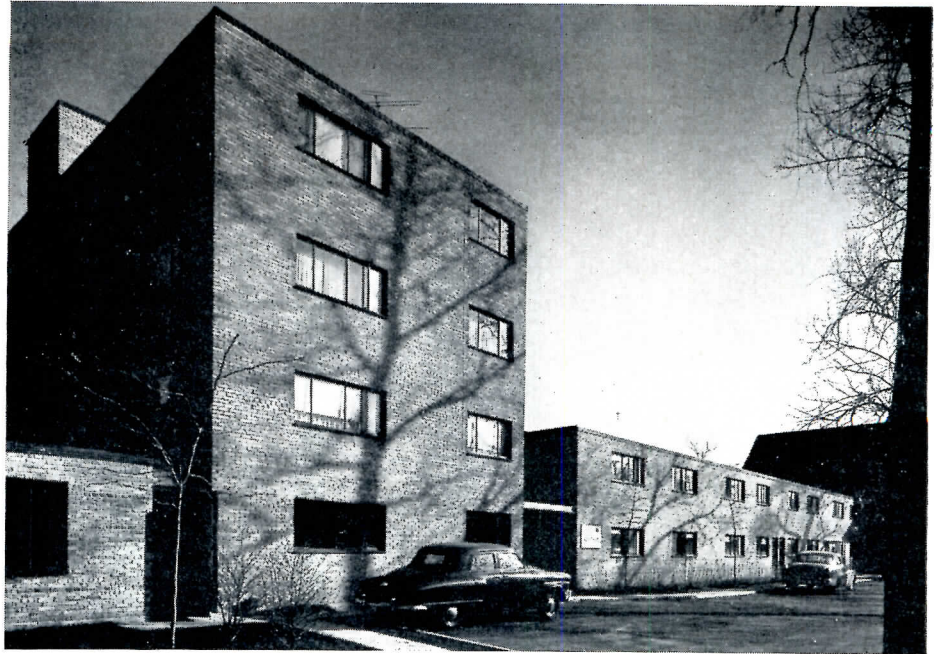
With the help of architect and builder, the venture was started by a like-minded group, each owner holding shares in proportion to the size of his apartment. Costs were held to a minimum; there were no promotion fees in the early budget. Although a wide variety of apartment sizes was required, no particular number was specified, the idea being to keep land cost per unit in line with reasonable rentals in a non-profit setup. Study of all factors resulted in a scheme housing 23 families in units ranging from one bedroom suites to 6-room row houses. A typical tenant-owner in a 4-room apartment, for example, made a down payment of \$5470 and pays a \$95 fixed monthly charge, which entitles him to a tax deduction of roughly \$380. The fixed charge covers amortization, taxes, insurance, maintenance and required reserve. Individuals pay for electricity; do their own decorating. As rents rise, the owner-occupants' relative advantage becomes more apparent daily.

The neighborhood is an old one containing pockets of blight and is practically 100 per cent built-up. However,

this particular plot was vacant, tax delinquent, easy to acquire and is convenient to public transport, the University of Chicago, an elementary school and a shopping center. In spite of these favorable factors, private financing sources shied away from the generally deteriorating character of the area so that financing had to be arranged through FHA. This caused changes, which, according to the architects' estimates, probably increased cost as much as 10 per cent. However, the project was completed for \$268,000 or \$1.15 per cu ft exclusive of land cost and the architects' fee.

The architects' hope that rebuilding would help reverse the downward trend of the neighborhood has been reinforced by the recent start of a master plan for the area's redevelopment by the University of Chicago together with two neighborhood groups under a Field Foundation grant. The Pioneer project will form an important key in such a scheme.

The two-building, L-shaped arrangement (see plans) covers 32 per cent of the land, provides paved off-street parking for 60 per cent of the tenants, orients to a garden area, and provides both indoor and outdoor play space for the children. The fireproof structures are supported on a combination concrete frame and brick bearing wall system; the floor slabs contain hot water heating coils; sub-partitions are 2-in. solid plaster; finish floors are asphalt tile; ceilings are painted exposed concrete.



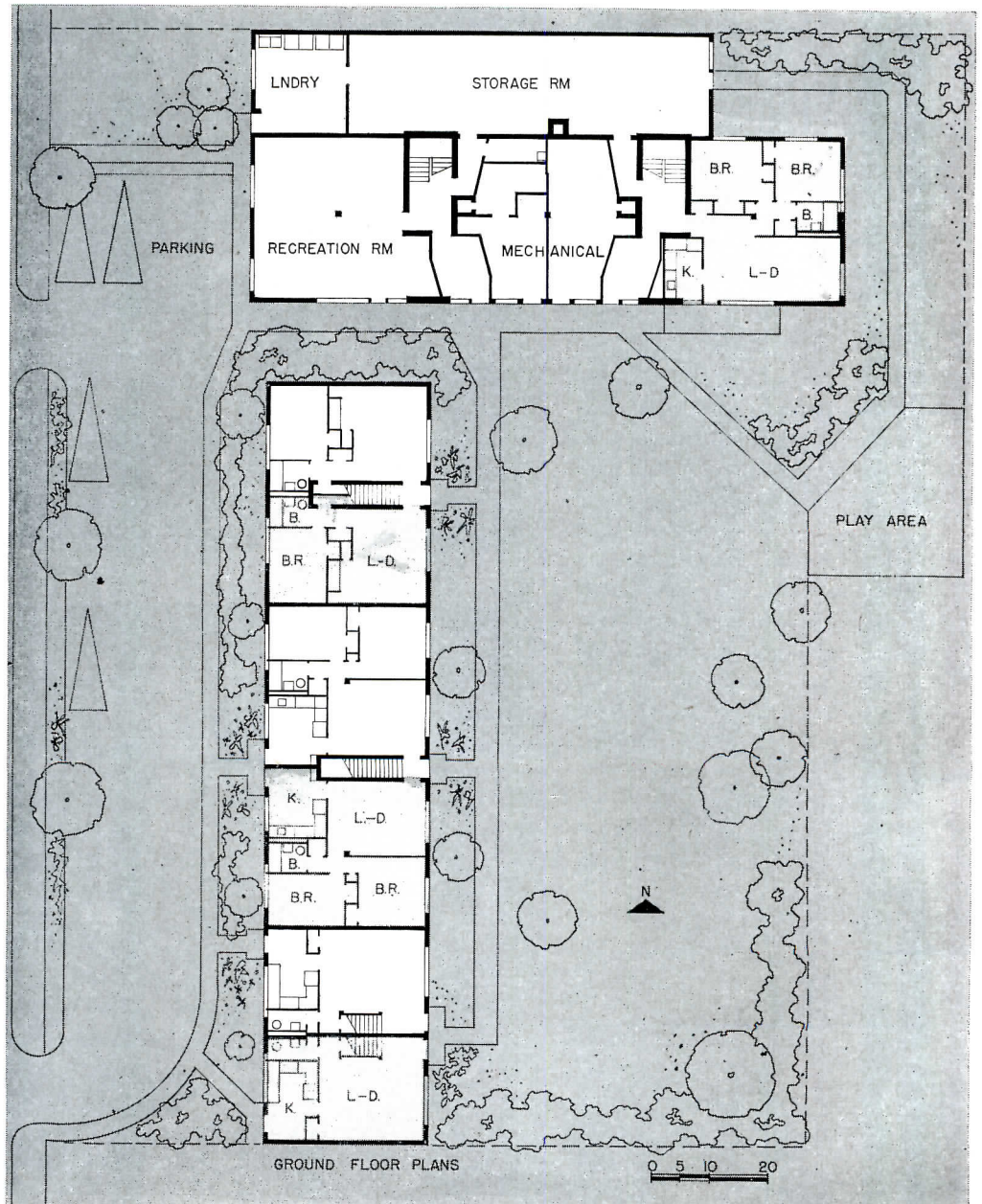
*George Fred Keck —
William Keck,
Architects*

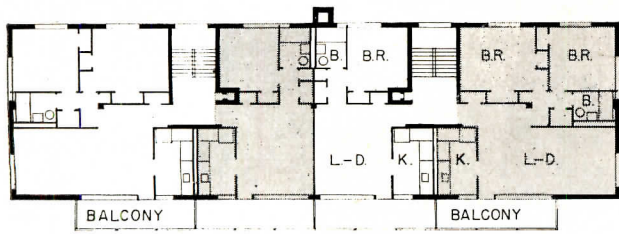
*Robert Bruce Tague,
Associate Architect*

*Frank Kornacker & Associates,
Structural Engineers*

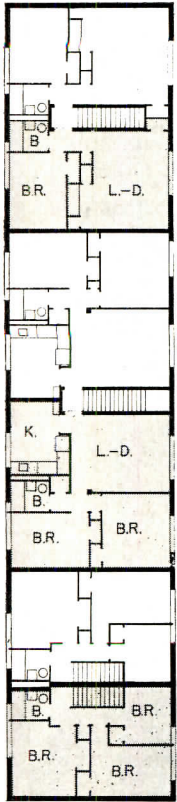
*William Goodman,
Heating Engineer*

*Perry Construction Company,
Builders*





TYPICAL UPPER FLOOR



SECOND FLOOR

PIONEER COOPERATIVE, CHICAGO
George Fred Keck — William Keck, Architects



The upper photo shows the projecting balconies on the north building, which shade the large glass areas in summer but permit the sun to penetrate inside in winter, and provide private outdoor space for each apartment. The railings are of typical chain link fencing, supported on galvanized standard structural sections. The lower photo looks out over a typical apartment balcony



Heidrich-Blessing

LONG ISLAND: STATE-AIDED SUBURBAN HOUSING

Harbor Homes, Port Washington, L. I. and Spinney Hill Homes, Manhasset, L. I.

William Lescaze, Architect

Claude R. Engle, Electrical Engineer

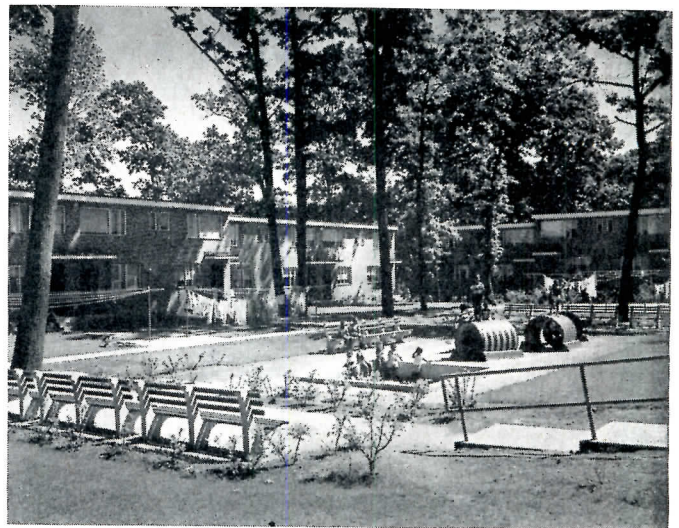
Leo A. Novick, Landscape Architect

Morris Shapiro, Mechanical Engineer

IN THESE PROJECTS, plot coverage is low (13 and 16 per cent), the buildings are judiciously placed among trees and planting, residential scale is emphasized both by the 2-story height and the fire-wall projections at 65-ft intervals. A restful horizontal line is created and carried through all the houses by the device of covering the second floor exterior with redwood siding in contrast to the brick below. The foregoing are some of the factors that lend these 2-story row houses their pleasingly residential character. The projects are designed for low-

income families and are located on Long Island's north shore; were made possible by a combination of local and state funds.

In executing such a project, the first action comes from the local group (in this case the North Hempstead Housing Authority), which is, of course, acutely aware of the need and makes application to the New York State Division of Housing for assistance. The State agency then surveys the situation, verifies the need, and sets up a tentative proposal according to their standards



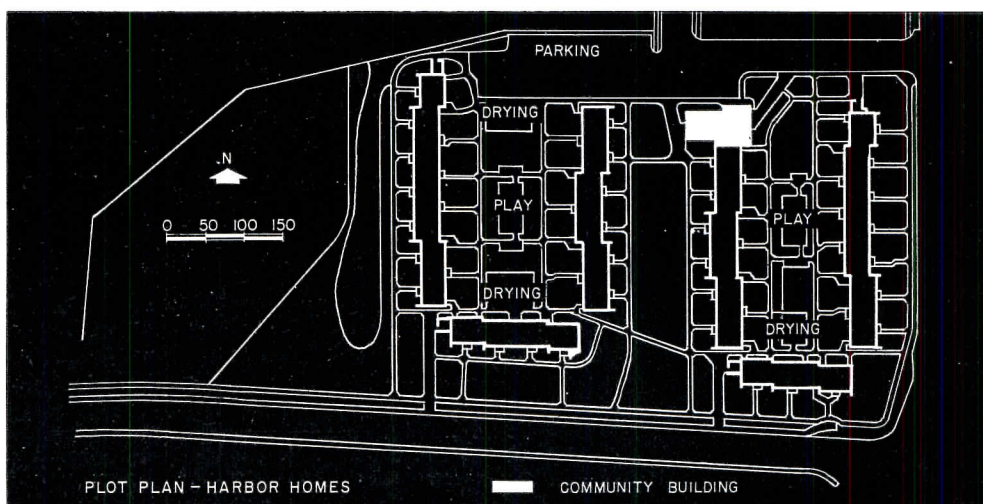
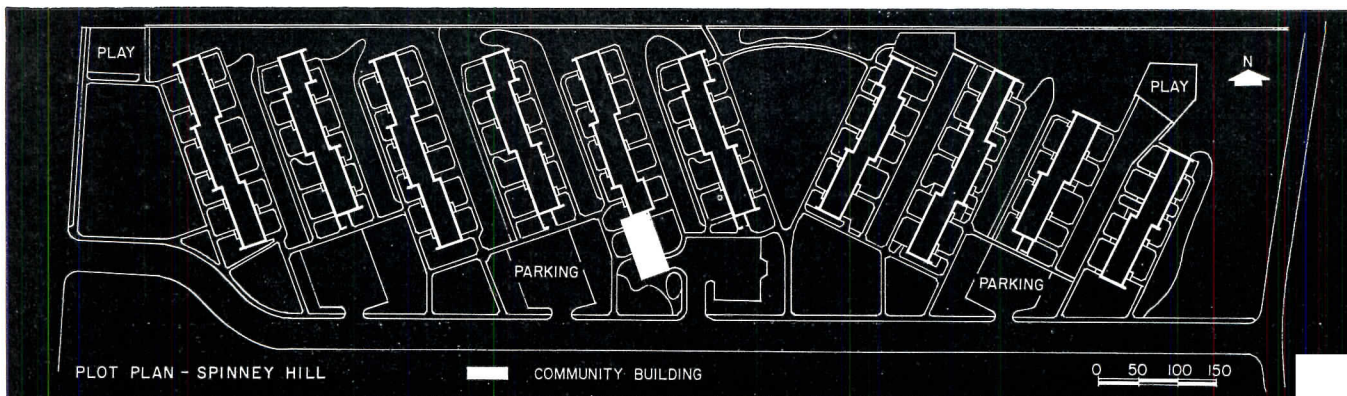
Joseph W. Molitor

and procedures. Should the two concepts be at variance, the differences are mutually adjusted, agreement reached, and the State is then prepared to lend assistance. There must be a local contribution (usually restricted by the legal limits on borrowing) to which is added the State aid, which assumes the form of part loan, part subsidy. The project then moves ahead, mostly under local supervision, with consultation and advice from the State agency, and with certain approvals required.

Two to three years ago, when these projects were built, the policy was to keep rentals below \$9 per room

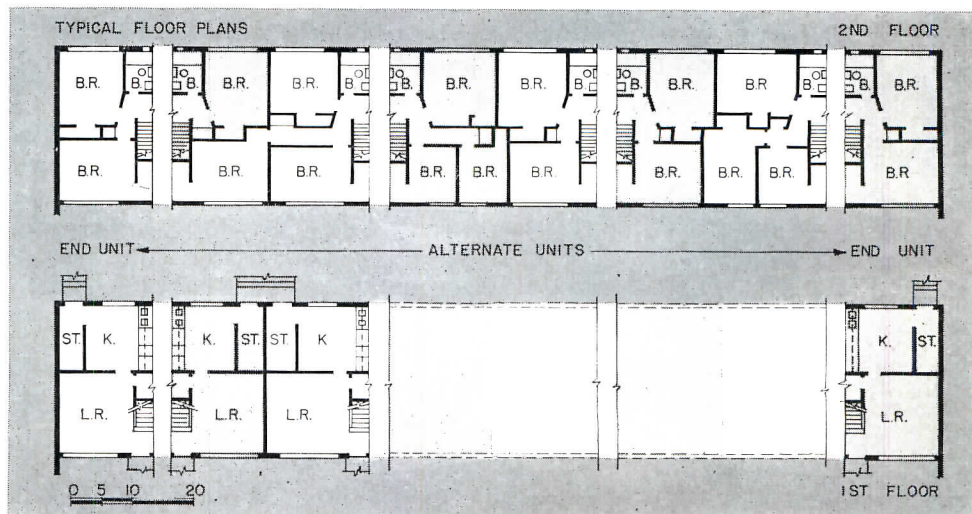
per month, based upon units averaging 4.2 rooms or less which cost approximately \$10,000, excluding landscaping but including a proportionate share of the community building. In general terms, these figures were substantially maintained in these particular setups.

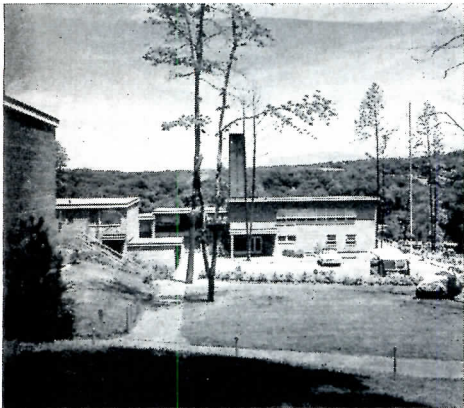
There are a total of 168 units in the two projects; 102 in Spinney Hill and 66 in Harbor Homes. The units range from 3½ to 6½ rooms, a large percentage being 4½ rooms; the density per acre is 58 persons in 14 units at Spinney Hill and 49 persons in 11.8 units at Harbor Homes. The project is designed for families which range from middling to large in size.



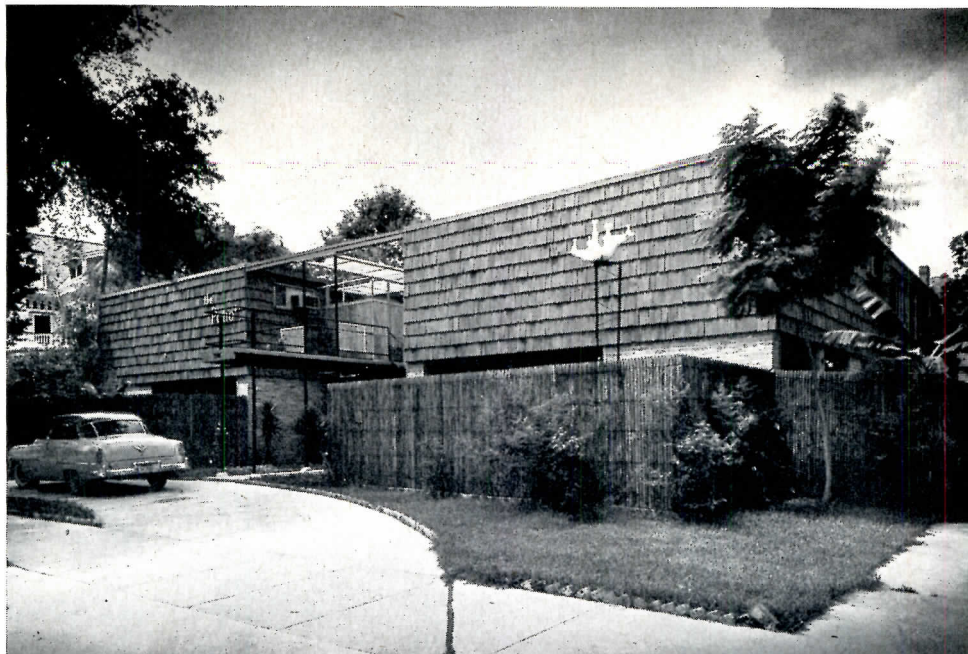
The plot plans — Spinney Hill above, Harbor Homes at right — show the relationship of the houses to lawns, play spaces, drying yards, parking areas, and the community building

The alternate arrangements possible within the repeated module of the fire-wall divisions are shown in the unit plans, right. Note how, for economy, plumbing is back-to-back in plan; also "stacked" vertically





Joseph W. Molitor



Frank Lotz Miller

NEW ORLEANS: RENTAL FLEXIBILITY AND PATIOS

The Patios Apartment, New Orleans

Curtis and Davis, Architects

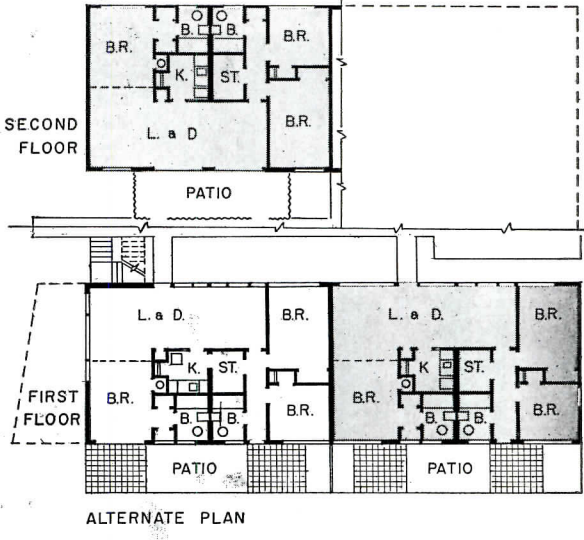
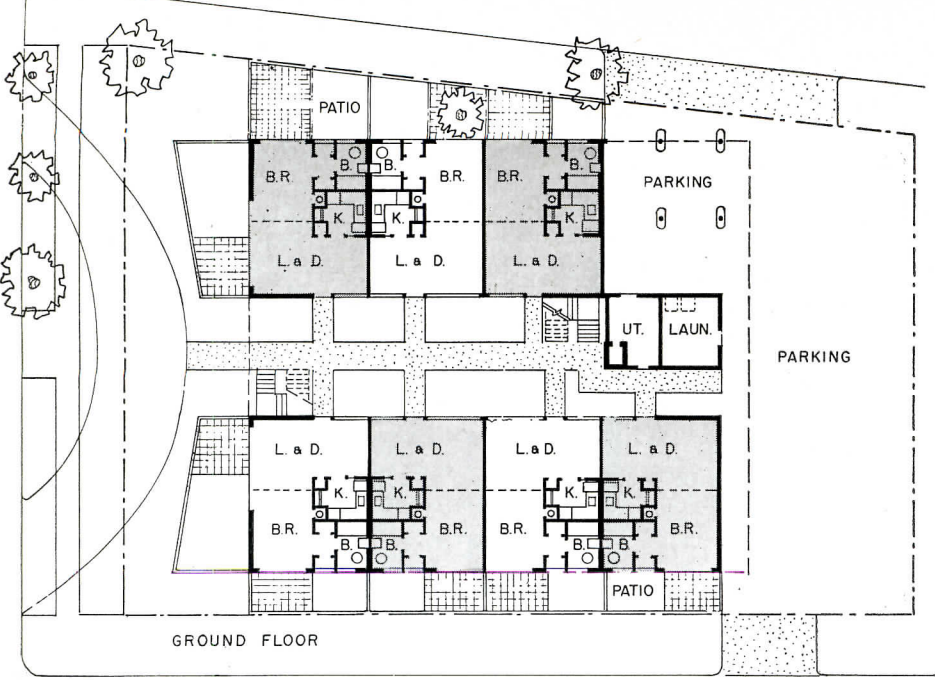
TWO INTERESTING FEATURES characterize this two-story, 15-unit apartment. There is an unusual three-dimensional concept providing a private patio for each apartment, the second floor opening in, the ground floor opening out. And, rental flexibility is provided by an alternate plan in which two small efficiency apartments — each consisting of living-dining space, kitchen, bath and subdivided sleeping space — can be combined into a suite comprising living-dining space, study or guest room, kitchen, storage, two bedrooms and two baths. As actually built, all the apartments are small units except two, but the provision for possible future change is built-in; planned.

Located on the edge of a high class residential neighborhood, the site is bounded on three sides by streets, on the fourth by houses, and was described by the architects as "very tight." Since few small apartments are available in the area and the demand for them is brisk, this project was aimed at the "luxury-efficiency" rental market, consisting of either young childless or older retired couples of middle income or above. Although *not showily* expensive, the use of such materials

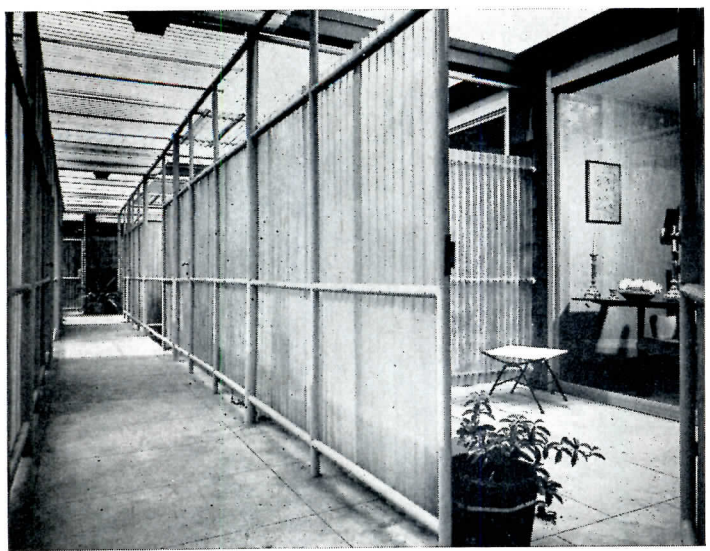
as cork floors, mahogany panelling and acoustic ceilings places the building in the medium or slightly above rental scale. It has been solidly leased at planned rates since completion, yielding the owner a good profit.

The structure was limited to two stories in order to utilize light construction and avoid the requirement of elevators. Economies were effected by duplication of framing, use of standard lumber lengths, and by repetition of standard details, e. g., similar window-wall units assembled in the mill and simply secured in place on the job. The second floor patios are enclosed by corrugated plastic panels which are pleasantly translucent, economical, and easily supported on the light steel frame. Air conditioning was justified only on the basis of individual units, operated or not at the tenant's discretion. In actuality, they are nearly all in use constantly.

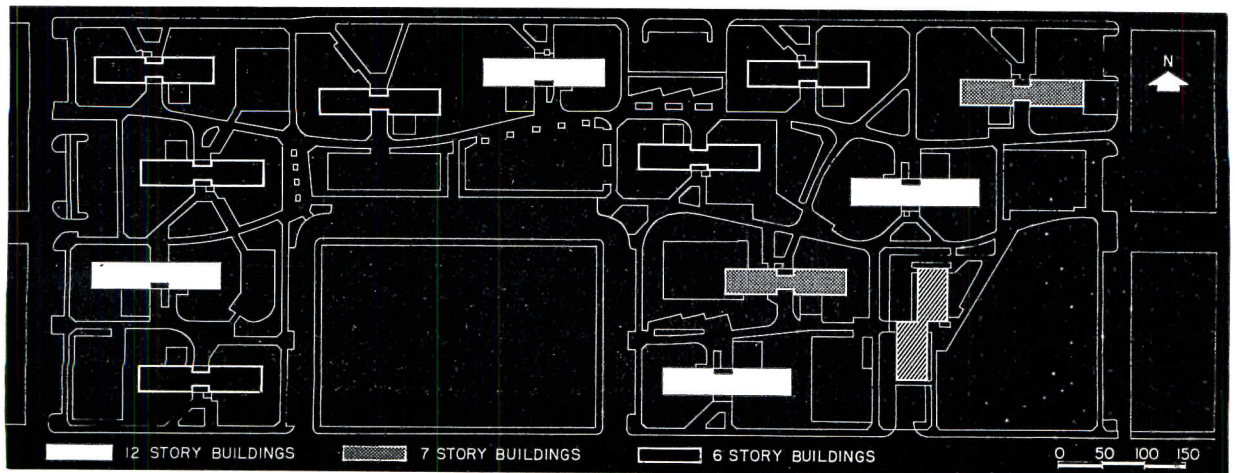
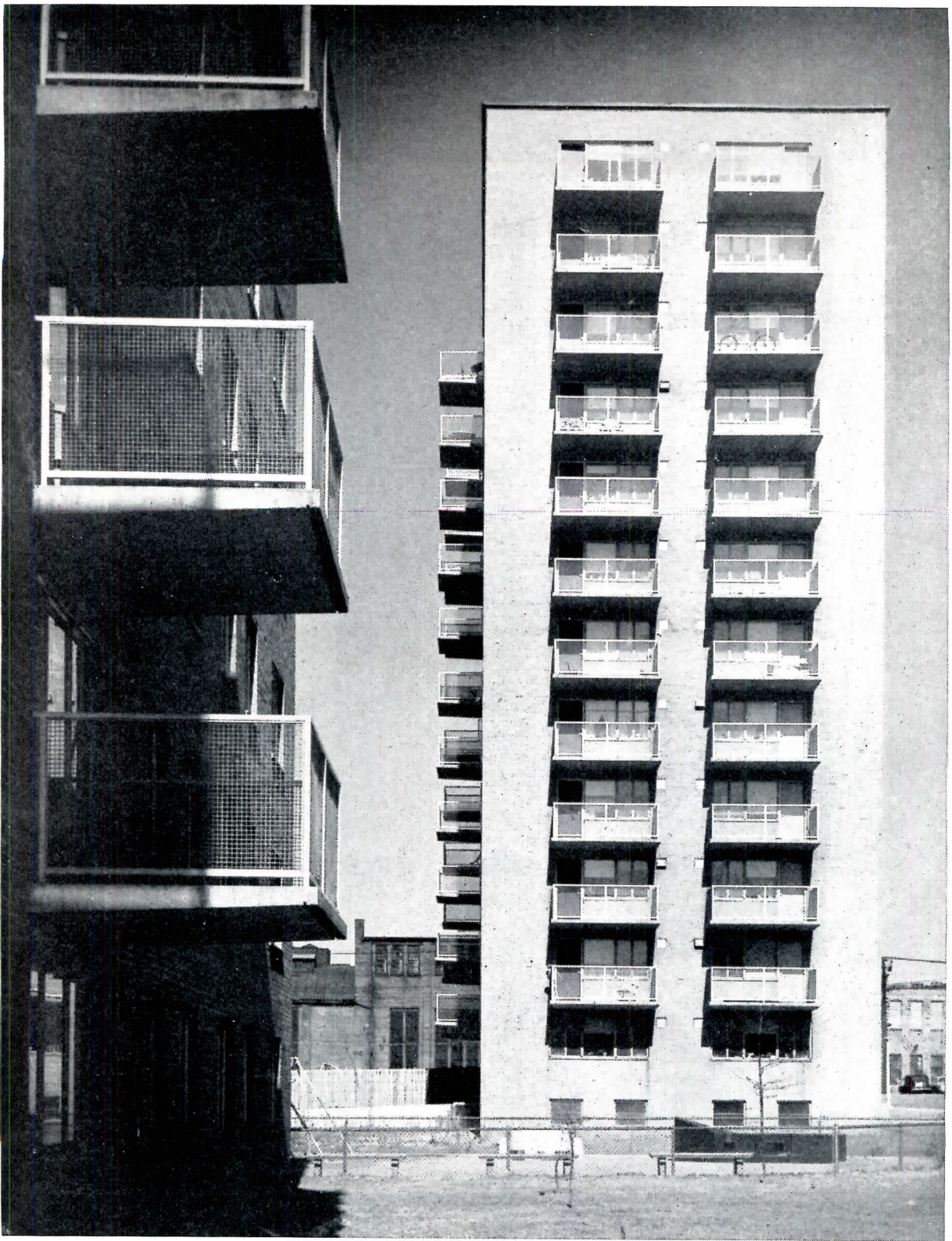
The building cost was slightly less than \$12 per sq ft late in 1952. Maintenance has been very inexpensive, probably due to the natural wood interiors and to an exterior of cedar shakes, brick, natural wood fencing and plastic panels.



The alternate plan, directly above, shows the manner in which two small apartments can readily be converted to a larger suite. At left, entrance from street; bottom left, view of the second floor corridor looking into a private patio; bottom right, typical apartment living area — note natural wood wall finishes



Mec Mizuki



ST. LOUIS: HIGH RISE BUILDINGS AND BALCONIES

John J. Cochran Garden Apartments for the St. Louis Housing Authority

Hellmuth, Yamasaki & Leinweber, Architects

*John D. Falvey, Mechanical
& Electrical Engineer*

Wm. C. E. Becker, Structural Engineer

Horner & Shifrin, Utility Engineers

*Harland Batholomew & Associates,
Landscape Architects*

Millstone Construction, Inc., Builders

THIS BUILDING GROUP, awarded both the Gold Medal of the St. Louis Chapter, AIA, 1953 and an Honorable Mention, Architectural League of New York, 1953 Exhibition, was designed with the primary idea of trying to achieve a residential quality combined with openness of site and to provide a maximum of social and communal facilities within the economic and planning requirements of the Public Housing Administration. The project was designed for low income families, eligibility being determined by income and number of children.

The architects say, "To achieve our goal we tried to eliminate the stigma often attached to such projects, and it was imperative to avoid a feeling of regimentation. To help accomplish this, the spaces between the buildings were as carefully studied as the units, building heights were varied, design details such as entrances were individually considered, and primary colors were used on balcony doors. This emphasis on residential quality seems to help eliminate some of the institutional aspects common to such projects and appears to justify

a design approach rather than a statistical approach as a basis for planning."

The site, in a blighted area only six blocks from the central business district, was restricted in area so that openness could be achieved only by high-rise units. The land coverage is 11.3 per cent and density is 44.3 families (149 persons) per acre. In addition to outdoor recreation areas, play spaces and drying yards, the plan provides laundries, tenant storage space and storage for wheel toys at either ground floor or basement level.

An opportunity to exhibit a full size mock-up of a typical dwelling unit at a civic exposition resulted in a chance to gather the comments and criticism of the thousands who attended, and consider these in the development of the final scheme. As built, the buildings provide a maximum of privacy by means of the typical in-line plan, and are carefully oriented to catch the summer breezes important in St. Louis. Each apartment above ground level has an individual balcony to serve as a private "front porch."



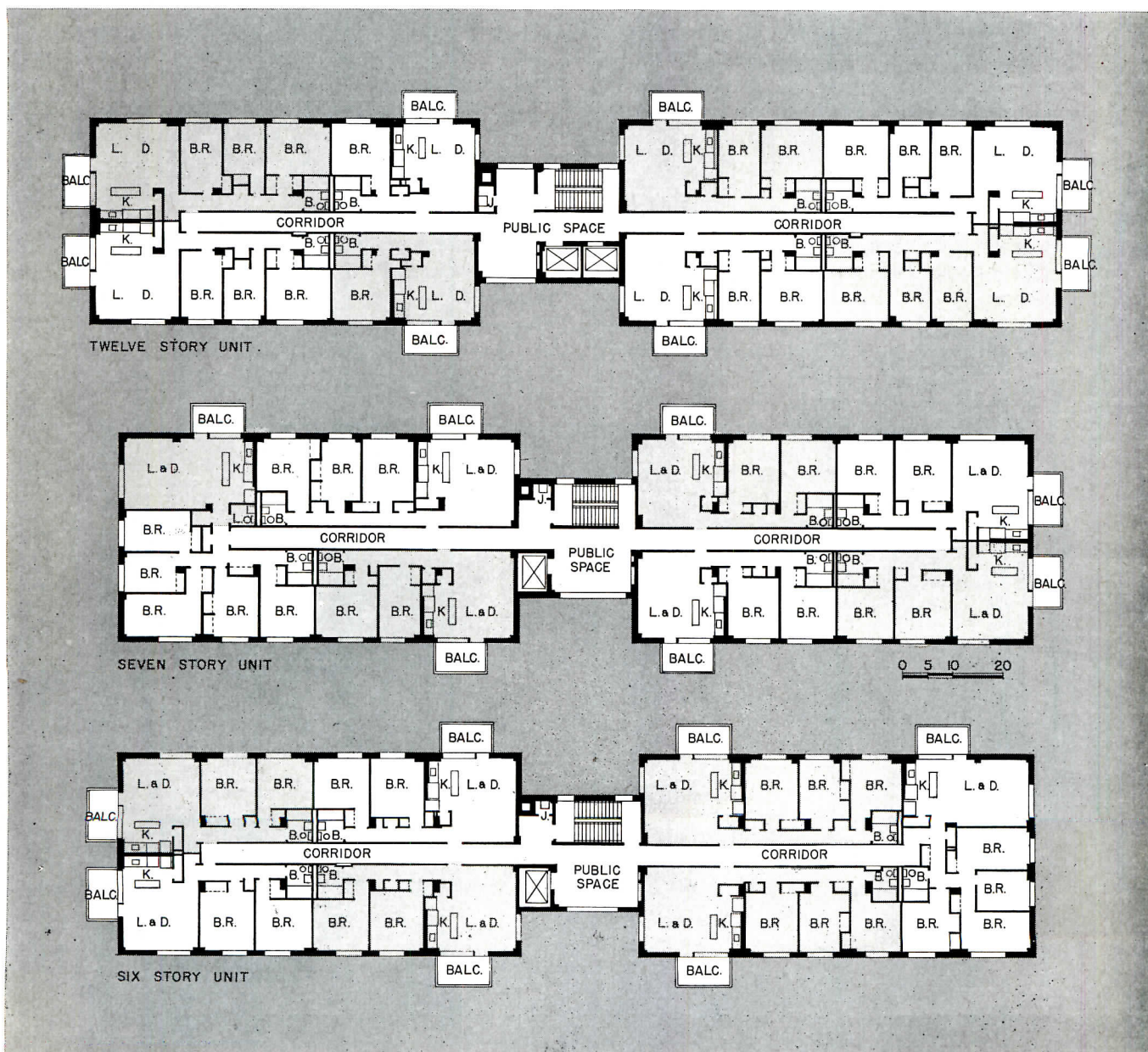
Paget Studios

JOHN J. COCHRAN APARTMENTS
Hellmuth, Yamasaki & Leinweber, Architects

Three basic types of buildings 6, 7 and 12 stories high house 3,070 persons in 704 units apportioned thus:

96	.....	1 BR Unit	.....	13.65%
284	.....	2 BR Units	.....	40.30%
276	.....	3 BR Units	.....	39.30%
36	.....	4 BR Units	.....	5.13%
12	.....	5 BR Units	.....	1.72%

The average dwelling unit contains 4.91 rooms, including 2.42 bedrooms. The project has fulfilled income expectation; has maintained a long waiting list since completion. Bids were received in the spring of 1950; the cost was about \$4.65 per sq ft. No unusual methods or materials were possible under the PHA regulations so economies were sought through planning rather than by other and less orthodox means.

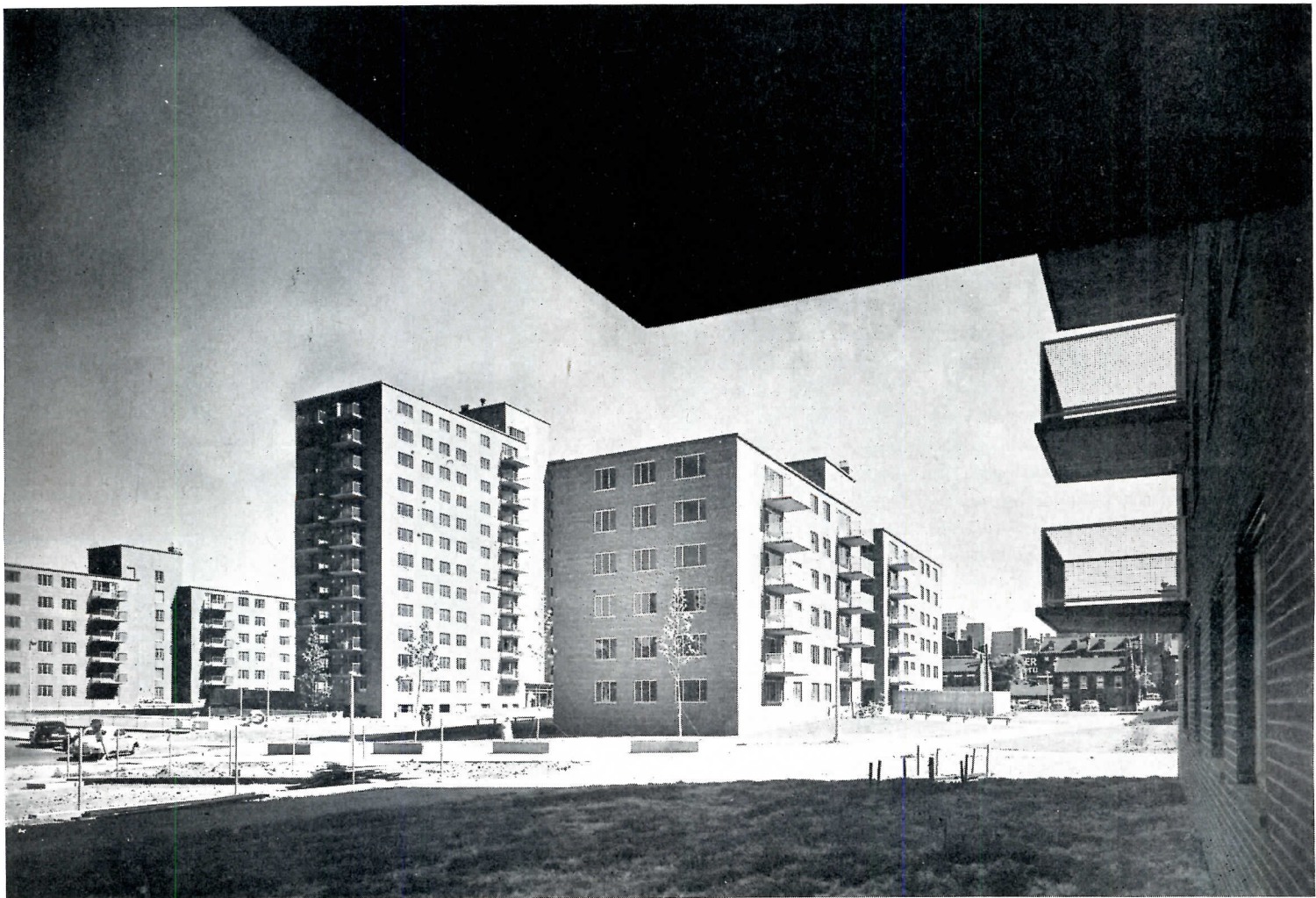


Mac Mizuki



Piaget Studios

Piaget Studios

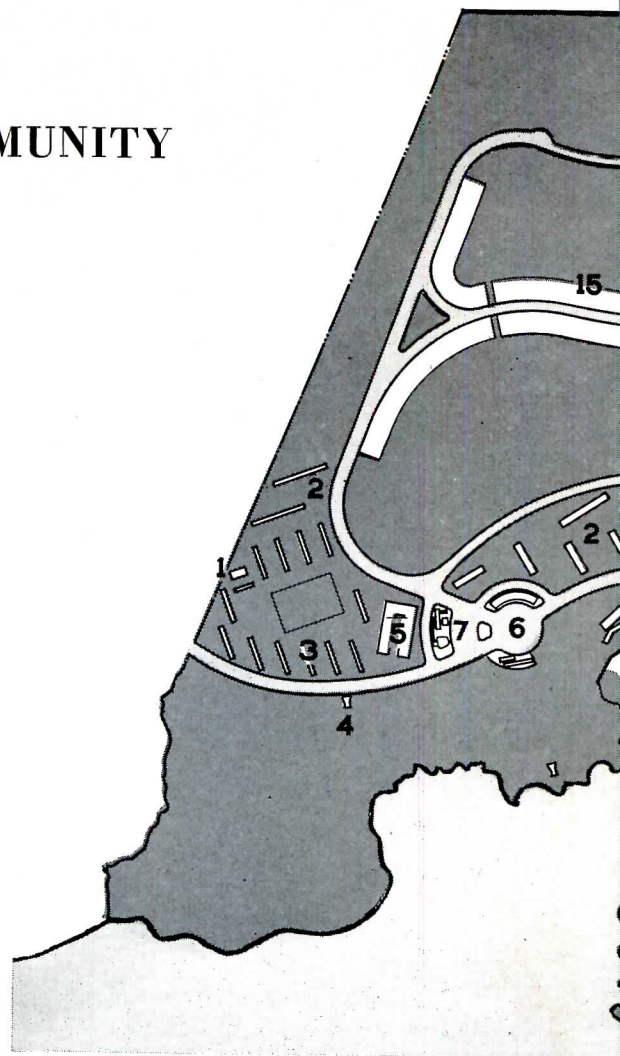


BRAZIL: A NEW OCEANSIDE COMMUNITY

High Rise Apartments and Houses Integrated
Pernambuco Beach Development, Guarujá, Brazil

Henrique E. Mindlin, Architect

Marjory & Jorge Prado, Developer-owners

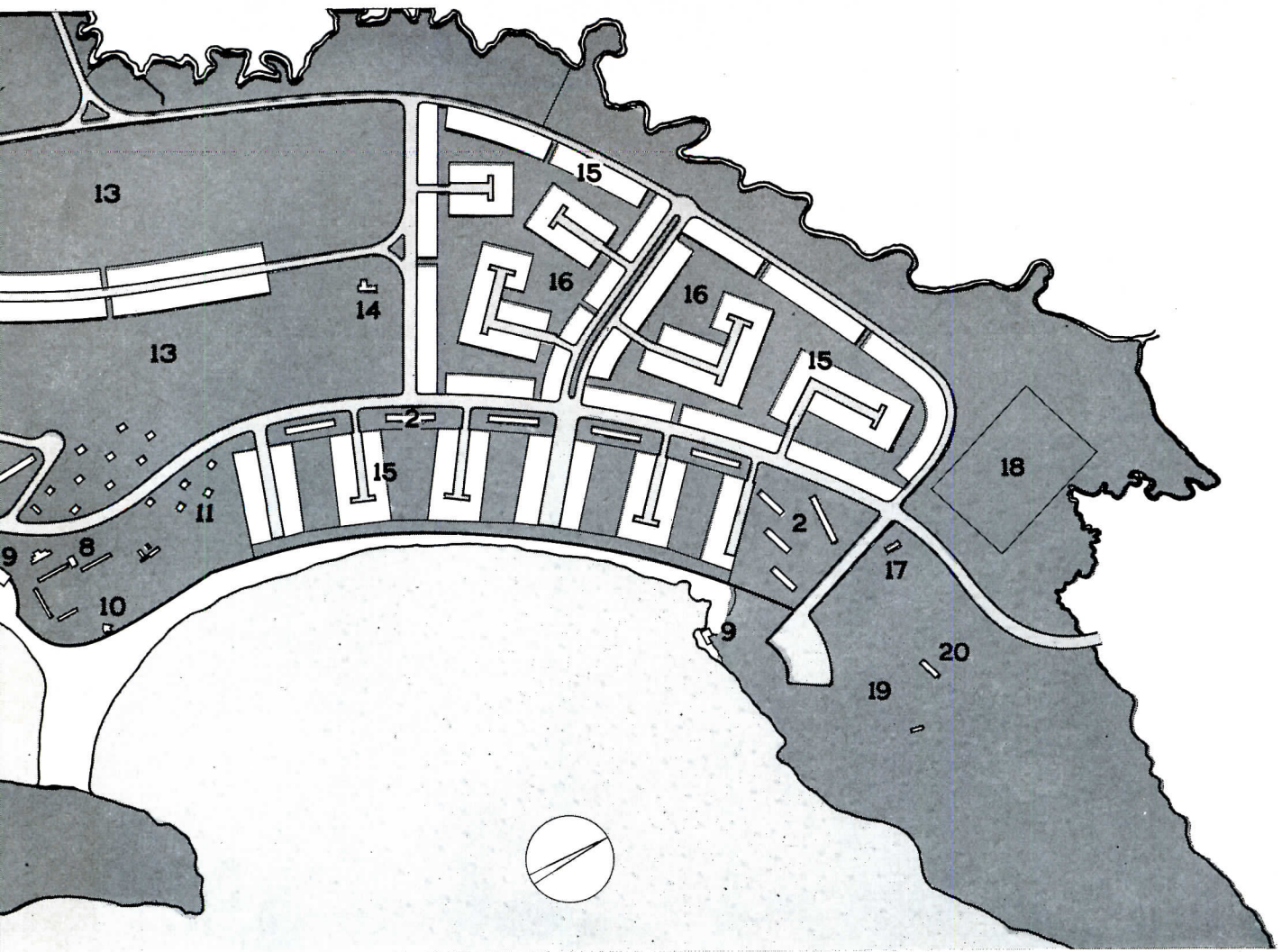


TWO-THIRDS of the population in this new community near Santos and 35 miles from São Paulo will live in high-rise apartment buildings, five of which will become a visual focus in the scheme. The design illustrates the architect's two-fold interest in achieving a careful organization of various buildings, open spaces and circulation for the most favorable sun, view, breeze and intercommunication — and in creating a pleasant environment for living. There was in addition a strong concern for preserving the native character of the site — a magnificent one-and-one-quarter mile stretch of beach facing east to the Atlantic and bounded on the west by a river, rugged hills and a wild forest.

The community plan calls for one through highway, located nearly 1000 ft from and parallel to the beach, creating two main areas. The part nearest the ocean is restricted solely to pedestrian traffic and is given over to gardens, beach clubs, hotels, apartments and houses. Toward the hills, a secondary loop-road feeds a larger segment containing a golf course, shooting club, polo field, tennis club and house-building plots. Note that traffic in all residential areas has been channelled into dead-end streets, thereby both restricting and slowing it. The relatively small amount of commercial activity will center about the traffic circle (far left in plan). It is significant that the completed project will be 87 per cent green, 6 per cent buildings, 7 per cent roads.

Note particularly the plan for the development of the five large blocks fronting on the beach. Cul-de-sac roads feed the residential plots (shown white on the plan) which in turn open to a large common garden. The ten-story, 80 unit apartment buildings adjacent to the highway also face this garden and look over it to the sea. The land area between and about the pilotis for

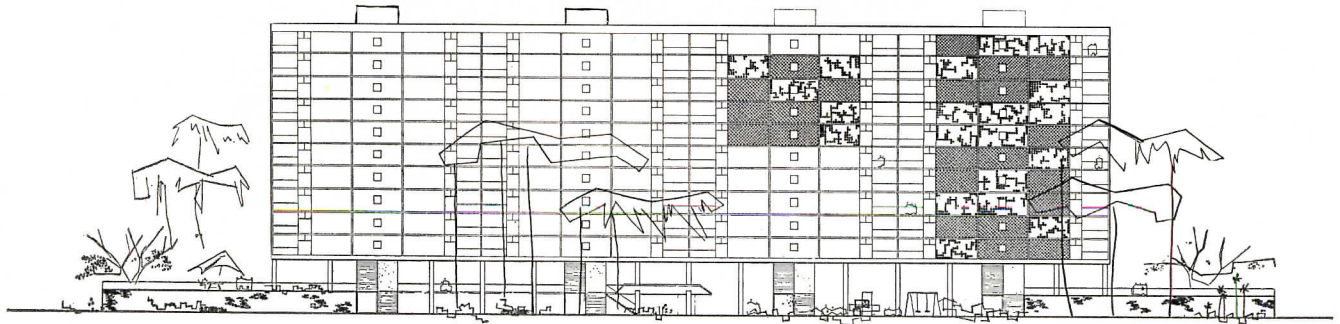




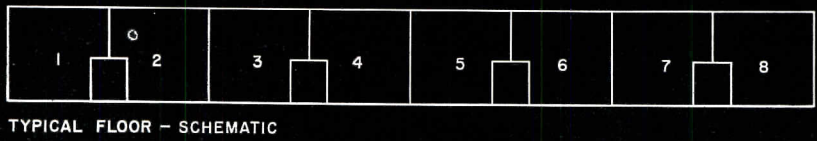
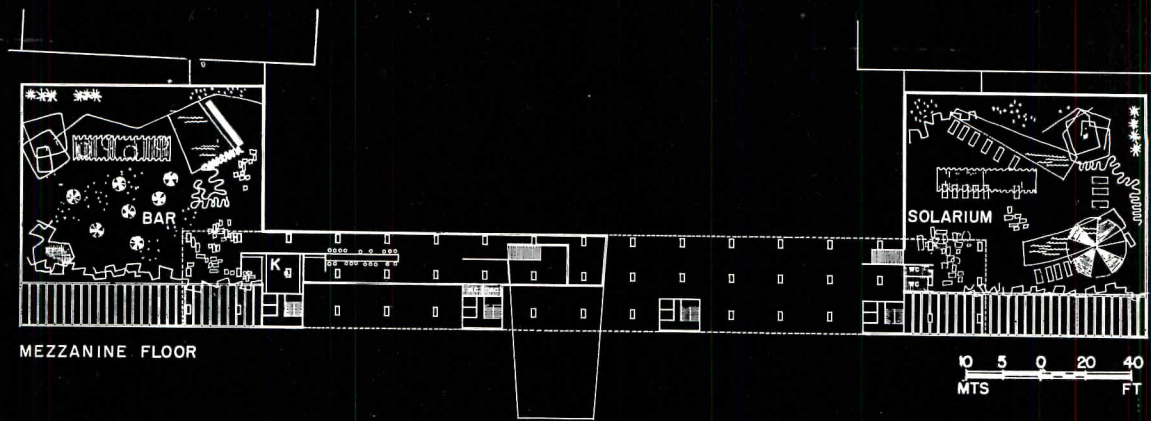
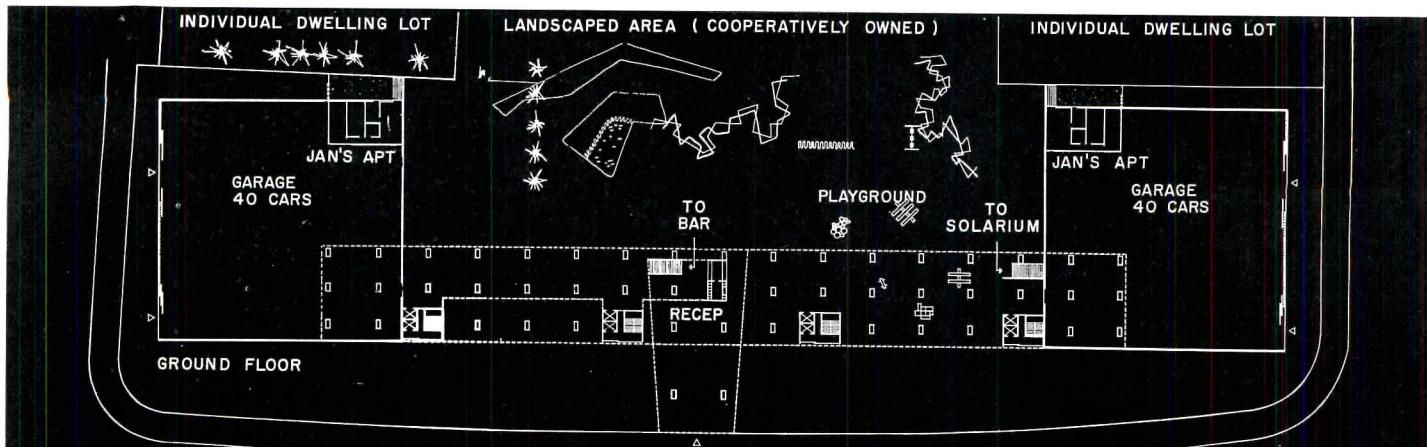
LEGEND

1. School
2. Apartment Building
3. Low Cost Rental Housing
4. Church
5. Commercial
6. Shopping Center
7. Community Center
8. Hotel
9. Beach Club
10. Pavilion
11. Cottages
12. Shooting Club
13. Golf Course
14. Golf Club House
15. Residential Lots
16. Tennis Courts
17. Tennis Club
18. Polo Grounds
19. Riding Course
20. Riding Club

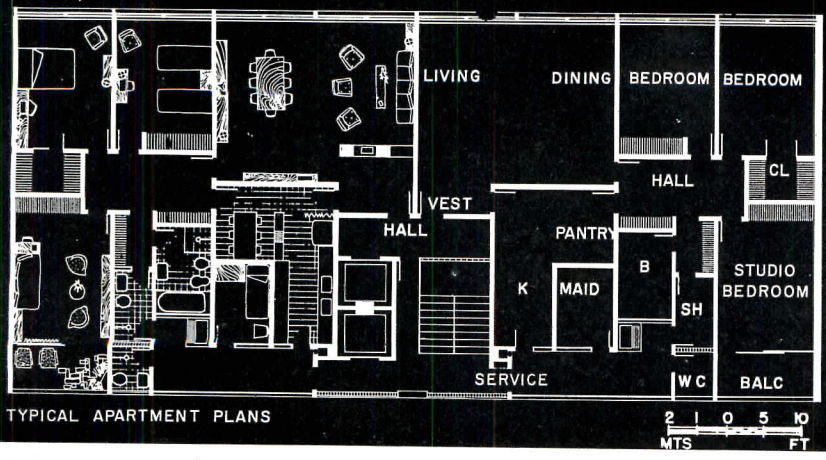




Elevation from the highway



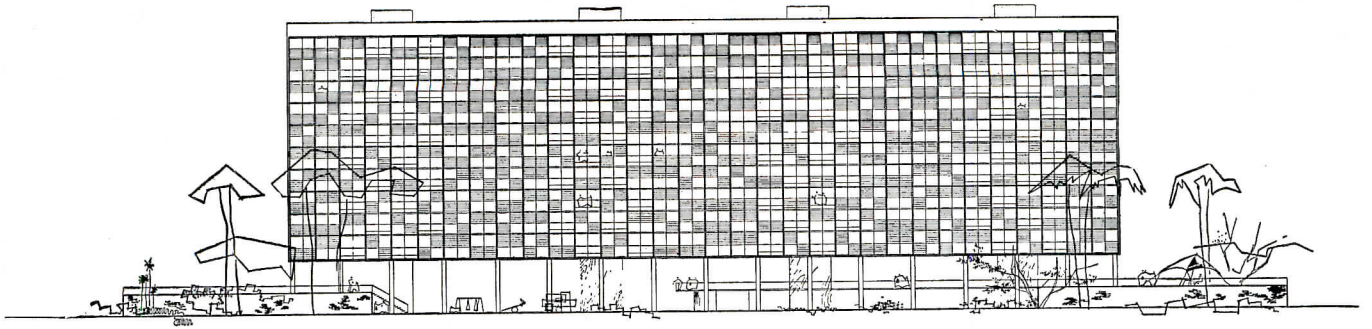
TYPICAL FLOOR - SCHEMATIC



TYPICAL APARTMENT PLANS



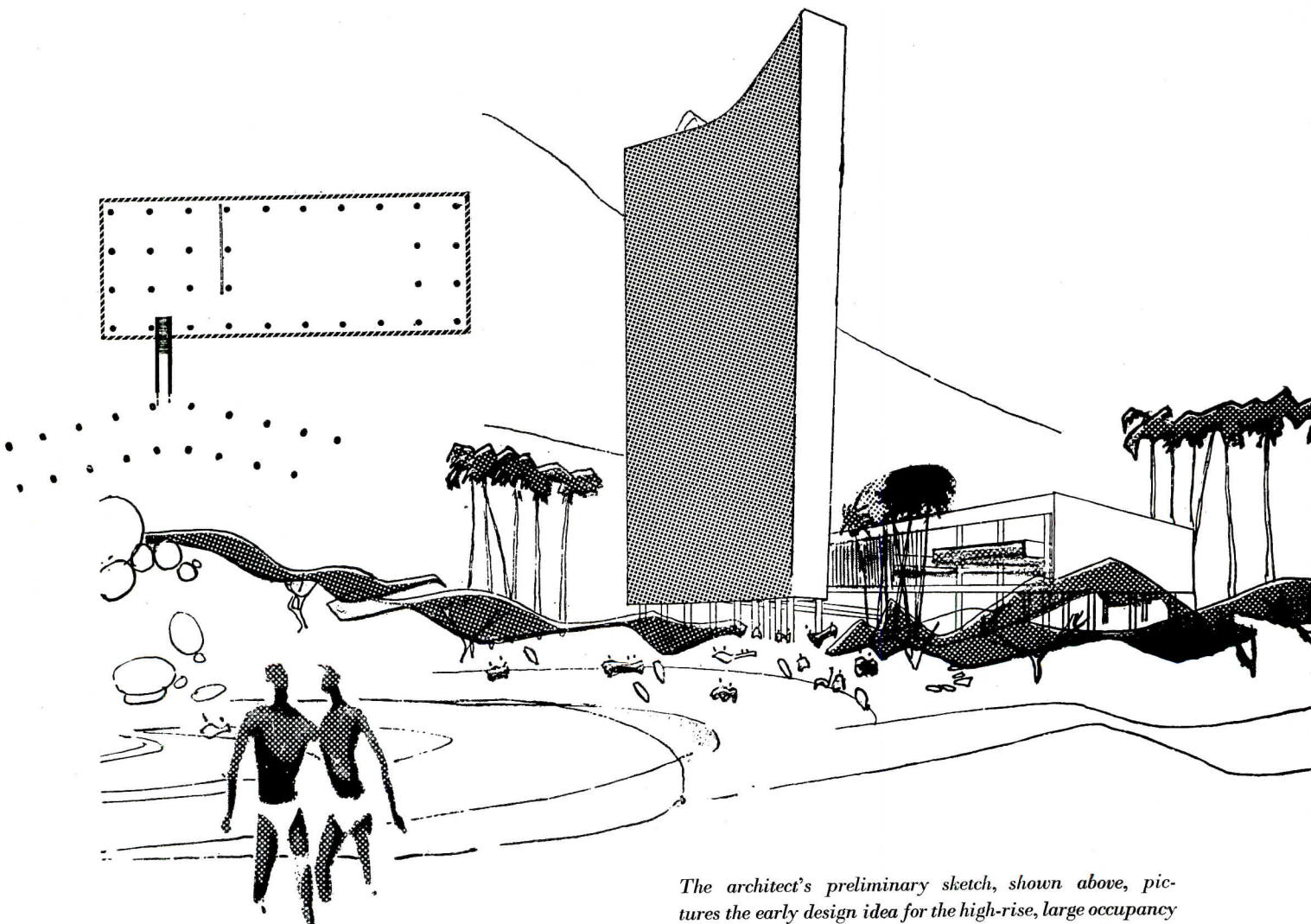
In order to provide a sheltered area at ground level, the five 10-story apartment buildings will be built on pilotis. The vertical circulation cores serve two apartments per floor and divide the 360 ft long block into four independent groupings. All apartments have at least two exposures; those at the ends have three. Architectural details, as developed, will be rigorously subordinated to the over-all concept



Elevation from the sea

each of these tall apartments will be devoted to parking, gardens, and playgrounds; will comprise a total area of approximately 90,000 sq ft. The individual plots for houses are small for two principal reasons: first, because each opens to the large communal park — second, to make for easier landscape maintenance.

The restrictions necessary in order to carry out the concept have been readily accepted by the individual lot owners. Everyone concerned seems to understand why the architecture must be modern, that certain required alignments are necessary, and that free spaces next to individual lots must be preserved.



The architect's preliminary sketch, shown above, pictures the early design idea for the high-rise, large occupancy hotel located on the beach. Further study may either reinforce or change this original conception

PLANNING FIRE SAFETY FOR HOSPITALS

By Julian Smariga, Structural Engineer and
Fire Safety Consultant, U. S. Public Health Service*

IN FEW TYPES OF INSTITUTIONS are people so dependent upon someone else for their safety as in hospitals. Because the illness and treatment of patients may render them helpless, in varying degrees, greater emphasis is necessary to promote fire safety in hospitals than other building types. Therefore, the basic principles of fire safety should be clearly understood and appreciated by every architect, and incorporated in the design of every hospital.

The practice of fire safety begins in the designer's office. Unless adequate provisions for fire safety are considered in the original planning and design stages of a building, they may never be fully realized. The cost of installing safety features, although relatively minor at the time of construction of the building, may be so prohibitive at a later date as to permit only partial compliance with generally accepted standards.

1. PLANNING TO MINIMIZE THE CHANCE OF A FIRE STARTING

The causes of a great many fires undoubtedly lie outside the responsibility of the building designer. Accidental fires which may be abetted by poor house-keeping techniques and the improper maintenance of equipment are certainly

* Prepared under the direction of John W. Cronin, M.D., Chief, Division of Hospital Facilities, Public Health Service, Department of Health, Education and Welfare.

factors over which the architect has no control. A sufficient number of fires, however, can be attributed to some feature of the basic construction where the architect does have influence.

Fire-resistive Construction. The greatest contribution which the building designer can make toward minimizing the chance of a fire starting is in the selection of the materials and equipment. All material used in the construction of the hospital building should be incombustible in nature. The necessary fabrics, wood trim and finishes should be properly treated to reduce their combustibility. All structural members should be constructed to maintain their required strength and stability for a specified time in the event of prolonged exposure to fire.

Where local codes may be antiquated or incomplete, the architect should refer to the recommended code of any of the established national organizations dealing with construction and safety.

Equipment. Proper selection and installation of equipment is very important in promoting high standards of maintenance and operation, thereby removing many chances of accidental fires. Sufficient space should be allotted around and above all mechanical equipment and electric services to permit safe operation and encourage good maintenance. It is good hospital design practice, therefore, to increase ceiling heights

in kitchens, laundries, boiler rooms, mechanical equipment rooms, and other areas which may contain such equipment.

Fuel-fired equipment should be properly designed, adequate in size, and correctly installed. Electrical devices, appliances and equipment should be of approved types, and installed and used in accordance with the manufacturers' recommendations.

2. PLANNING FOR DISCOVERY OF FIRE

Almost all large fires start from small ones, so it is important that fires be discovered and extinguished as soon as possible. In areas where someone from the hospital staff is on duty at all times, the fire is likely to be discovered early and prompt action in applying proper extinguishing techniques will put it out with minimum excitement and loss.

Certain hospital areas, however, are not under constant staff supervision. Other hospital areas may be fire hazards due to their content or use. In such cases, it is highly desirable to consider installing automatic fire detection and alarm systems.

Automatic Fire Detection and Alarm Systems. There are several types of automatic fire alarm systems which may be used in hospitals. These include:

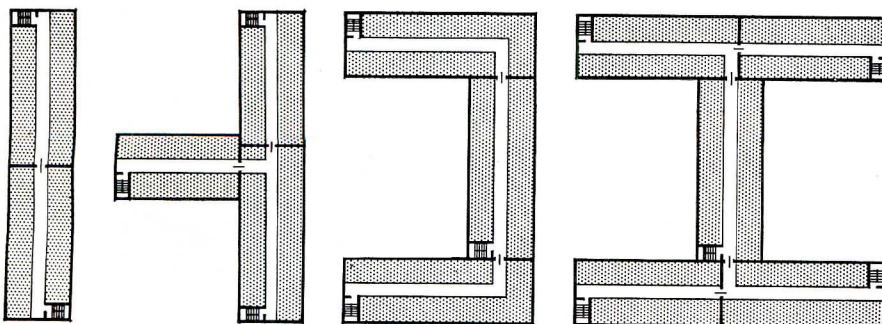


Fig 1: Each floor should be subdivided into two compartments or more by fire-resistive partitions, as in these plans, to prevent spread of fire

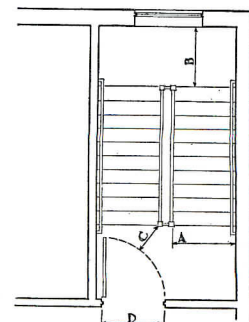


Fig 2: Minimum dimensions of an exit stair: A, B and D = 3 ft 8 in.; C = 1 ft 10 in.

- (a) Automatic sprinkler systems with waterflow alarm.
- (b) Automatic chemical extinguishing systems with alarm.
- (c) Heat actuated fire alarm systems.
- (d) Smoke detection systems.

Several factors enter into the selection of the proper type of automatic alarm system. For example, rooms containing intricate machinery or expensive supplies should be protected by a system which will not damage the contents of the room. For conditions which may lead to a rapid spread of fire, an automatic sprinkler or chemical extinguishing system would be very desirable, since it discovers the fire, applies an extinguishing medium and sounds an alarm as well. Table 1 indicates appropriate systems for various "critical" areas in hospitals.

Local Fire Alarm Systems. All hospital plants should be equipped with a local fire alarm system, which is an internal signaling system arranged to sound an audible alarm in one or more places in a building, primarily for the notification of occupants. The minimum fire alarm should be a manually operated, non-coded, internal alarm. For a building consisting of several wings or several stories, however, a coded system is preferred. If possible, the alarm system should be interconnected to transmit an alarm to the municipal fire department in order to eliminate any possible delay in notifying them. In addition, a municipal fire alarm street box should be located adjacent to the main entrance of every hospital building for emergency use.

Alarm Sending Station. As a general rule, manually operated fire alarm sending stations (fire alarm boxes) should be located so that no point on any floor is more than 100 ft from a station. These stations should be placed in conspicuous positions near main exits in a natural path of escape.

Alarm Sounding Devices. The audible alarm signals should be located so as to be heard in every room above all other sounds. The sounding device should be used for fire alarms only.

Some hospital authorities believe that an audible fire alarm signal may have an adverse effect on many types of hospital patients. Under such circumstances, distinctive visual alarm signals may be substituted for the audible signals in the nursing unit. Enough visual signals should be distributed throughout the nursing unit to provide an adequate warning. Visual signals should be located in the corridors, nurses stations,

utility rooms, pantries, and other work rooms where there may be nurses.

3. PLANNING TO RESTRICT THE SPREAD OF FIRE

The most comprehensive protective measures can be incorporated in a hospital, yet fires will still occur because of the human element. It is necessary to make sure that any accidental fires will be controlled in time to avert a major catastrophe.

Confinement of Fire Within a Room. If a fire starts in a room, it should be possible to keep it within that room until it burns itself out or until it is discovered and put out. To accomplish this, all walls and floors should be built of noncombustible materials. Concealed spaces behind finish materials or within the wall construction should be suitably blocked and fire-stopped to preclude the passage of smoke and gases from one room to another, or from one floor to another.

Openings through walls and floors should receive particular attention. Metal door frames are widely used in today's institutional buildings and are highly desirable for fire safety. Wood doors, if of heavy or solid core construction, are suitable for all patients' rooms and other locations where fire doors are not specifically required. The use of louvered panels and ventilating transoms in interior doors should not be permitted since they would allow the passage of

smoke and flames out from a room.

Subdivision of Each Floor into Compartments. It may not be possible to confine all fires to an individual room or other small area before they are controlled by organized fire fighting services, so it is recommended further that the designer subdivide each floor into at least two compartments or separate areas. This may be readily accomplished by simply providing a fire-resistive partition extending across the building from side wall to side wall and from floor to floor.

Where these transverse barriers cut across corridors, a pair of close fitting fire doors of the automatic type should be installed (see definition of automatic type fire door below). At least one such fire resistive partition should be used at each floor level of every building; additional ones should be used for larger buildings so that their spacing would be from 100 to 150 ft apart. Figure 1 indicates how various typical building layouts can be divided into convenient compartments.

Isolation of Each Floor Level. In addition to the hazards due to actual fire itself, there is perhaps as great a danger from asphyxiation on floors considerably removed from the floor on which the fire occurs. Many lives have been lost this way. To isolate each story in an effective manner from the danger of fire, smoke or gases which may originate in another story, it is important to enclose all stairways, elevator shafts,

TABLE 1

SUGGESTED LOCATIONS FOR EXTINGUISHING AND AUTOMATIC ALARM SYSTEMS

LOCATION	SPRINKLERS OR CHEMICAL EXTINGUISHING SYSTEMS WITH ALARMS	HEAT-ACTUATED OR SMOKE DETECTION ALARMS
Mechanical Equipment Room		■
Fuel Storage Room	■	■
Basement Corridors	■	■
Carpenter Shop		■
Paint Shop	■	■
Trash Collecting Room	■	
Combustible Storage Room	■	
Laundry Chute	■	
Accessible Attic	■	
Range Exhaust ducts	■	
Gift shop, snack bar, etc.		■

dumbwaiters, and ventilating shafts in properly constructed fire-resistive walls.

Door and access openings into these enclosures should be protected by approved doors of the self-closing or automatic closing type. Similarly, fire stopping should be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire and smoke barrier between stories and between a top story and the roof space. The following specific locations should be carefully detailed to provide adequate fire-stopping measures:

1. At floor and ceiling levels of all stud walls.
2. In furred masonry walls.
3. Around all edges of sliding door pockets.
4. At holes in walls, floors and ceilings where pipes and pipe shafts pass through.
5. Space between suspended ceiling

and structural floor on roof construction above.

Fire Doors. These doors are especially designed to resist the passage of fire through the openings in the walls or partitions in which they are installed. They have been classified according to the degree of protection necessary, according to the character and location of the wall.

Class A openings are in division walls separating buildings or compartmentalizing a single building into important fire areas. Doors protecting such openings are generally required on both sides of the wall.

Class B openings are in enclosures to vertical communications through buildings (stairs, elevators, hatchways, etc.), and in walls isolating areas of great hazard from the hospital proper. Doors protecting such openings are required on one side of the wall only.

Class C openings are in corridor and room partitions.

Class D, E and F openings are those in exterior walls which have severe, moderate or light exposure, respectively, from outside the buildings.

Several types of fire doors are available for each of the classifications listed above. Care should be taken in selecting the type of door acceptable for each location, using, if possible, the consultation service of the inspection department having jurisdiction. Doors should be labeled or otherwise indicated as meeting the standard requirements for the various classifications of openings.

Fire doors on openings which are used as a means of exit should be of the swinging type, and should open in the direction of exit travel in such a manner as not to obstruct the passage or the operation of other doors.

Properly installed swinging doors are easier to operate, especially under emergency conditions, than any other type and offer less resistance to rapid and emergency egress. These doors should be self-closing or automatic types. A *self-closing door* is one which is normally kept in a closed position by some mechanical device. An *automatic door* is one which is normally kept open and is arranged to close automatically when released by the action of heat or can be readily closed by manual controls.

Fire doors should be mounted on a labeled door frame and equipped with labeled hardware. Table 2 indicates various locations in a hospital where fire doors may be required.

4. PLANNING FOR EXTINGUISHMENT OF FIRE

Fire Extinguishers. A fire extinguisher is designed to cope with fire at an early stage. The architect should specify the sizes and types of portable extinguishers required, and indicate on the drawings just where each should be located in order to be ready for immediate use.

Several types of fire extinguishers are available, but all are not equally effective upon different kinds of fires. Thus, consideration should be given to the kinds of fires which may occur in the various departments of a hospital and to the proper type of extinguishers required.

Three general classes of fires have been established:

Class A fires may be defined as fires in ordinary combustible materials (wood, paper, fabric) where the quenching and

SUGGESTED LOCATIONS FOR FIRE DOORS

TABLE 2

LOCATION	CLASSIFICATION		
	A	B	C
Stairways		■	
Fire walls	■		
Boiler Room	■		
Fuel Storage Room		■	
Maintenance Shop		■	
Paint Storage		■	
Refinishing Shop		■	
Carpenter Shop		■	
Mechanical and Electrical Shop		■	
Laundry Room			■
General Storage			■
Records Storage		■	
Furniture Storage			■
Pharmacy Stores			■
Anesthesia Storage		■	
Kitchen			■
Alcohol Vault		■	
Elevators		■	
Dumbwaiters		■	
Trash Collecting Rooms			■

TABLE 3

FIRE EXTINGUISHER LIST FOR HOSPITALS OF VARIOUS SIZES

ADJUNCT DIAGNOSTIC AND TREATMENT

DEPARTMENT	FIRE CLASSIFICATION			EXTINGUISHER* SIZE AND TYPE	SUGGESTED QUANTITY† FOR			
	A	B	C		25 BEDS	50 BEDS	100. BEDS	200 BEDS
Administration	■			2½ Gal Water		1	1	1
Laboratory		■		5 lb CO ₂		1	1	1
Radiographic Suite			■	5 lb CO ₂		1	1	2
X-Ray Therapy Suite			■	5 lb CO ₂	1			2**
Pharmacy		■		5 lb CO ₂			1	1
Nursing	■			2½ Gal Water	2	4	8	12
Nursery	■			2½ Gal Water		1	1	1
Surgical		■		10 lb CO ₂	1	2	2	2
Obstetrical		■		10 lb CO ₂	1	2	2	2
Emergency		■		5 lb CO ₂		1	1	1
Kitchen		■		10 lb CO ₂	1	1	1	2
Central Storeroom	■			2½ Gal Water	1	1	1	1
Laundry	■			2½ Gal Water		1	1	1
Laundry			■	10 lb CO ₂		1	1	1
Maintenance		■	■	10 lb CO ₂		1	1	1
Boiler Room		■	■	10 lb CO ₂	1	2	2	2
Outpatient	■			2½ Gal Water		1	1	1

SERVICE

* This column lists one possible combination of sizes and types. Other types of extinguishers of equivalent size and function may be used.

** These extinguishers may be omitted if the two units listed for the radiographic suite can be available to both radiographic and x-ray therapy.

† The number of extinguishers listed is an approximate distribution of extinguishers for an average hospital. The actual number required will depend on the physical layout of the particular hospital, and minimum requirements will be determined by the inspection department having jurisdiction.

cooling effects of water or solutions containing large proportions of water, are of first importance.

Class B fires may be defined as fires in flammable liquids and greases (oils, gasoline, paint) where a blanketing effect to suppress combustion does the most good.

Class C fires are fires in electrical equipment (motors, controls, panels, wiring) where the use of a non-conducting extinguishing agent is of major importance.

Table 3 indicates the classes of fire which may be expected to occur in the various hospital departments and suggests the size, type and number of fire extinguishers which may be needed in the different-sized hospitals.

Arrangement of Fire Extinguishers. Fire extinguishers should be located so that a person will not have to travel more than 100 ft from any point to reach the nearest unit, and at least

one unit shall be required for each 5,000 sq ft of floor area. Additional units of suitable types may be required for protection against special hazards.

The usual requirement for mounting fire extinguishers states ". . . shall be hung on hangers or set on brackets or shelves so that the top of the extinguisher is not more than 5 ft above the floor."

Because the weight of the unit (about 35 lb each for 2½-gal. water type, or 10-lb CO₂ type) may make it difficult for a nurse to remove it from the wall when hung at the maximum height listed above, some authorities suggest that such an extinguisher be located as low as possible on the wall. If this is followed the extinguishers should be mounted on the wall so that the bottom of the extinguisher is located about 1 ft above the floor to permit uninterrupted operation of the floor cleaning and waxing machines.

5. PLANNING FOR EXITS

Among the leading causes for loss of life in institutional fires is the lack of sufficient and adequate exit facilities. When the fire persists, it may be necessary to remove patients who are endangered. Proper exit facilities should be available to expedite rapid evacuation.

There is one factor which complicates the evacuation problem in hospital buildings. Because many patients are physically incapacitated, normal evacuation methods would be very slow. It is believed by many authorities that proper compartmentation of the building will serve as a means of rapid evacuation from the scene of fire.

Compartmentation. The principle of compartmentation applied to buildings offers a *simple and effective means* of providing a high degree of safety to the occupants in case of fire. Compartmentation simply means the division of

a floor area into two or more sub-areas by the use of transverse fire-resistive partitions.

Here is how compartmentation simplifies and speeds up the evacuation process in a hospital. Let us assume a fire originates in a patient's room. That patient is removed and the door to the room is closed to isolate the blaze. All patients within the compartment where the fire originated are evacuated to adjoining compartments. This can be done easily and quickly, since it involves only the horizontal movement of patients for a relatively short distance. They are now safe from immediate danger and may stay there until the fire is extinguished.

If the fire persists or shows signs of spreading, it may be desirable to remove the patients to a lower floor or to a place of refuge outside the building. Then, with the patients in the safe compartment and out of immediate danger, a longer time may be available for an orderly evacuation either by elevator, if it is available or else down the stairs and out of the building.

As mentioned earlier, each floor housing patients should be divided into at

least two compartments. The number of compartments would depend upon the size and layout of the individual building. The length or size of each compartment would depend on the conditions which affect the time it takes to evacuate the area, and may vary from about 100 to 150 ft.

For difficult conditions of evacuation, when the majority of patients are bedridden or physically incapacitated, or where a very small night-time staff is on hand, it is necessary to reduce the size of each compartment in order to permit evacuation from the danger area within a reasonable time. On the other hand, with better conditions for evacuation, a correspondingly larger spacing may be used for the compartments.

Exit Stairways. Another important feature relating to exit facilities is the exit stairway. Figure 2 shows the pertinent dimensions in plan of a typical stairway which will permit evacuation by stretcher or mattress. There should be one stairway in each compartment to facilitate evacuation from one floor to another. It is not desirable to move patients laterally through one or several compartments in order to reach an exit

stairway. There should also be a stairway located at the end of each corridor so that there are no pockets or dead ends in which occupants may be trapped. For one-story buildings, an exit would be used at the end of each corridor.

Exit stairways should preferably discharge directly to the outside or they may lead into a safe corridor on the first floor which in turn would have convenient access to an exit doorway leading to the street.

Exit stairways perform an additional function which is sometimes overlooked. They serve as a means of access for firemen, permitting them to fight an interior fire from close quarters within the building as well as by the customary use of outside ladders.

Corridor Widths. A corridor width of 8 ft is usually recommended for hospital structures to accommodate the stretcher, bed and cart traffic within the building. This dimension is ample for evacuation requirements.

Door Openings. All exit door openings should have a minimum clear width of 44 in. to permit the evacuation of patients on beds, stretchers or mattresses.

(Continued on page 326)

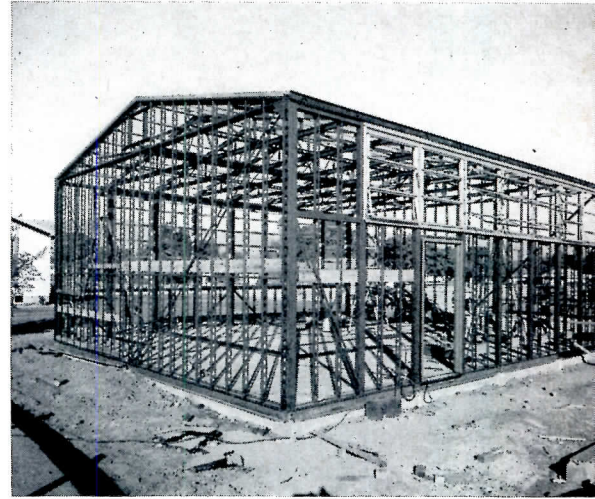
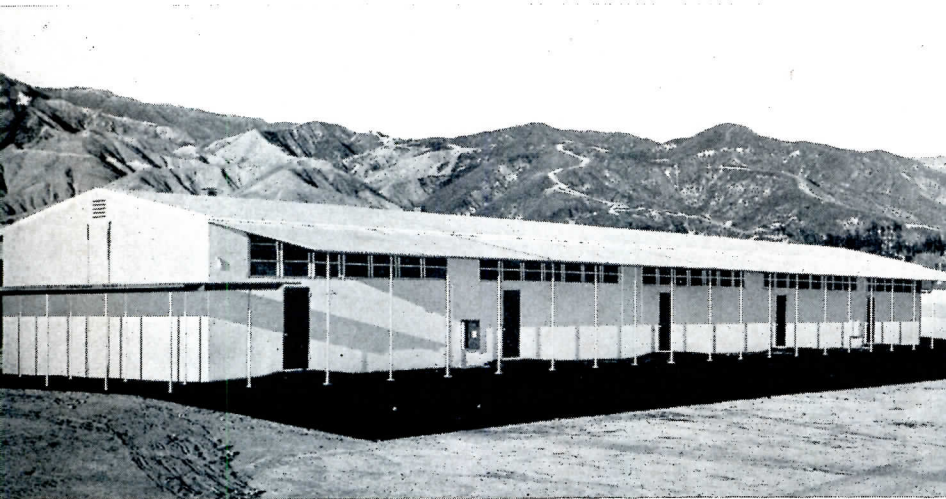
TABLE 4

PERFORMANCE CHARACTERISTICS OF SEVERAL TYPES OF FIRE EXTINGUISHERS

EXTINGUISHER	CLASS OF FIRE	DESCRIPTION	APPROX CAPACITY	APPROX TIME OF DISCHARGE	APPROX WEIGHT
Chemical Solution	A	Commonly called soda-acid extinguisher. Has powdered chemical (usually sodium bicarbonate) dissolved in water, and liquid chemical (sulphuric acid).	1½ gal 2½ gal	½ min 1 min	20 lb 35 lb
Water	A	Uses hand operated pump or stored pressure cartridge to expel the water through the nozzle.	2½ gal	1 min	35 lb
Foam	A-B	Mixture of foam producing agent with sodium bicarbonate and aluminum sulphate creates pressure to discharge foam through nozzle.	1½ gal 2½ gal	¾ min 1 min	20 lb 35 lb
Loaded Stream	A-B	Utilizes a solution of an alkali metal salt.	1 gal 2½ gal	½ min 1 min	20 lb 35 lb
Vaporizing Liquid	B-C	Uses specially treated non-conducting liquid (carbon tetra-chloride) which is pumped on the fire and is vaporized by the heat to form a blanket of gas.	2 qt 1 gal	1 min 2 min	16 lb 30 lb
Carbon Dioxide	B-C	Discharges carbon dioxide gas to smother an exposed flame by excluding oxygen from the combustible material.	2½ lb 10 lb	¼ min 1 min	9 lb 35 lb
Dry Chemical	B-C	Discharges specially treated sodium bicarbonate which smothers the flame.	4 lb 10 lb	¼ min ½ min	10 lb 20 lb

SCHOOLROOMS MOVE WITH POPULATION

Prefabricated lightweight steel frames are trucked to the site and assembled into self-contained units which can be disconnected from the foundation and hauled intact to a new schoolyard



C. K. Allen, Architect
Carl B. Johnson, Structural Engineer

Bakker Construction Company,
General Contractors

MOVABLE CLASSROOM UNITS, framed by prefabricated lightweight steel and served by above-floor wiring and plumbing, have been designed to alleviate a problem in San Bernardino, California, which no doubt has bothered many school officials and architects. As large segments of the population move to newly developed communities, the mobile schoolrooms are shifted with them so that the school system meets the needs of every area.

The basic schoolroom is a compact 28-ft, 7½-in.-wide unit which can stand alone or be connected in a line of as many other units as are needed. Kindergarten and toilet units are similar to the basic unit in construction and width, differing from it only in length and interior design.

The main requirements in the planning of the 47 San Bernardino school units were:

1. The buildings were to be strong, termite-proof, exactly duplicated and as nearly fireproof as possible.

A steel structure seemed to be the answer to most of these requirements. All frames and roof trusses of light-gauge steel were welded at the shop and carried by truck to the school site. Buildings were dimensioned so that the frames and trusses for a complete unit could fit on one truck. At the site the steel frames were lifted off the truck by crane and lowered into position. Almost all field connections were bolted, as shown in the diagrams. At floor level, bolt connections secure the frames to wide-flange steel beams fastened to the concrete foundation.

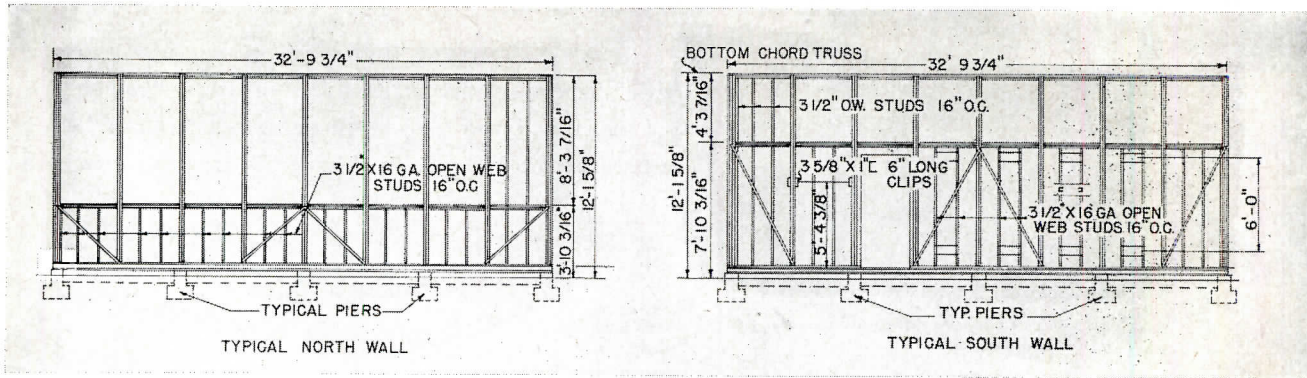
The actual finish floor of a unit is about 10 in. above the exterior finish grade, thus eliminating the need for steps. This type of close-to-ground construction was practical because of the

nature of the materials used, which afforded protection from termites and dry rot. The minimum use of wood in the schoolrooms makes them very fire-resistant.

Pre-cutting and small assembly work, such as forming of window and door frames, was done in the shop before welding of the wall frames and trusses. Once this preliminary work was accomplished, units could be delivered from the shop at the rate of two a day. Actual job-site erection of a unit, with a crew of five men, required only about 1½ hr.

2. Each building was to be completely self-contained and independent of the others, with its own electricity and plumbing, so that it could be moved without disturbing the other units.

All wiring and plumbing is above the roof trusses and in the walls, so that they



White circles on gray drawings indicate enlarged vertical sections; white rectangles indicate horizontal sections. Strap connection at typical end is shown in elevation (right). Connection to foundation beams between straps is shown in vertical section at far right. Plan view (left) is typical for any corner. Truss below is typical

can be left intact when the building is moved. Nothing is run below floor level.

A service entrance for electric power is located at the end of each unit, as shown in the photograph of the five completed units. Connection is made at the service entrance either by a riser from an underground power cable (as in the photograph) or by a service drop from an overhead supply. Conduits are run from the service head through the roof trusses of the unit to supply the various panelboards, electrical outlets, bell systems and fire alarm systems. Actually only one power connection is made for a series of units, with connections between service heads of adjoining units continuing the conduit from the power source. When a unit is moved, the connection at each service head is severed, and the first unit in the new series is supplied from the power source. When the unit is added to a group of units on another site, the service head is

connected again without any additional wiring.

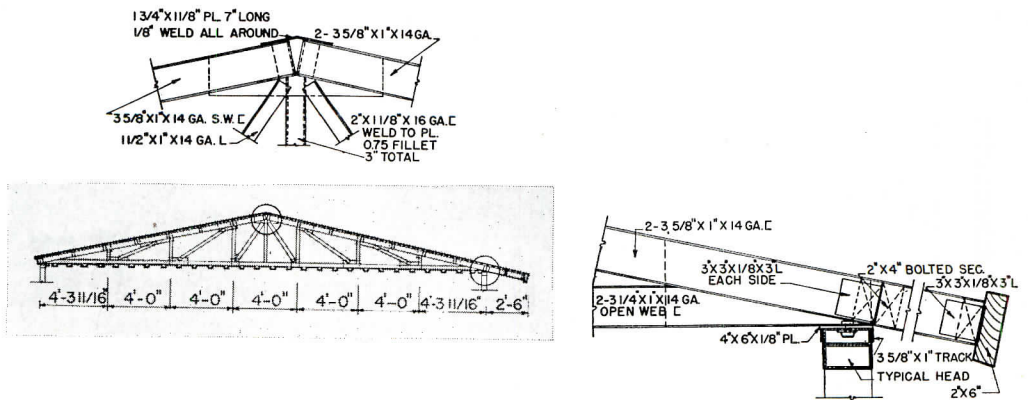
Separate connections for water, gas and sewerage are made at the north side of each unit. Self-contained gas-burning steam radiators are supplied from the gas connections. All connections are made when the unit is erected and simply disconnected when the unit is moved, without any disturbance to the other units.

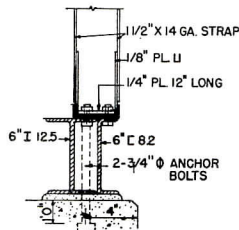
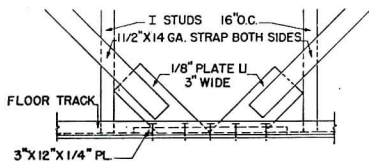
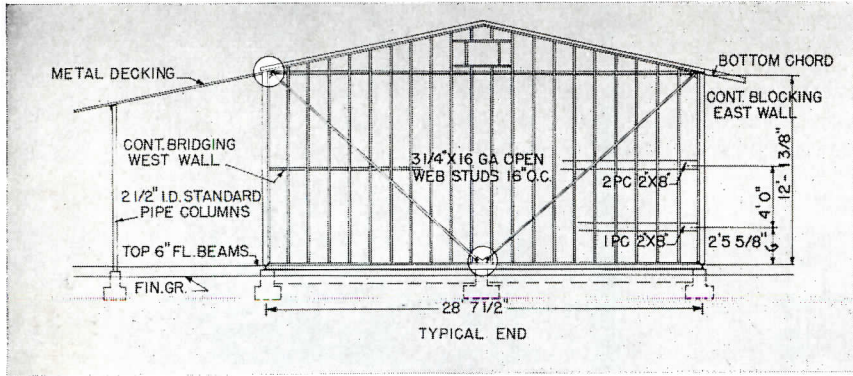
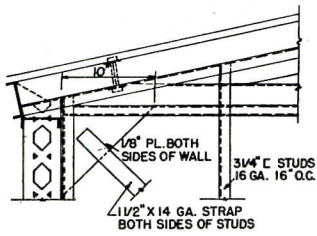
3. Each building was to be of such dimensions that it could be moved with a minimum of difficulty, and yet was to incorporate the maximum number of features found in permanent schoolrooms.

The standard width of all units is 28 ft 7 1/2 in., a size which can be moved easily through all streets in the vicinity of San Bernardino. Disconnections are made very easily when a unit must be moved. After the electricity and plumb-

ing are cut off and the galvanized iron closures which are fastened to adjacent units are removed, the steel straps projecting from the concrete piers are unbolted from the steel floor beams. Steel angles, with one vertical leg and one horizontal leg, are then bolted to the beams and jacks placed under the horizontal legs. When the unit has been raised high enough, a set of dollies and movable beams are inserted under the steel beams. Cables for pulling the unit are attached to the dollies, and the complete unit is rolled away, with floors, wiring, piping and furniture undisturbed.

The interior and exterior walls enclosing the steel frames are plaster, with all-metal interior lath and exterior lath of a welded wire fabric with waterproof paper backing. Steel floor decking is welded to the steel floor beams and is topped by plywood and the finish flooring of asphalt tile. Ceilings are of acous-



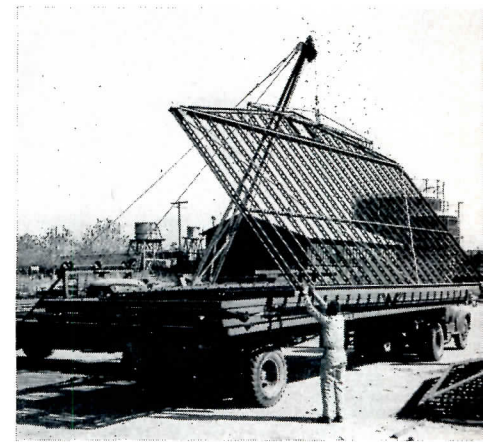


tical tile and are insulated with rock-wool. Awning-type windows are high on the north side of the unit to take full advantage of the daylight. On the south side, windows are raised above eye level, thus removing the possibility of distractions from the covered passageways outside. The passages, roofed with steel decking, are in sections and can be dismantled and moved with the units. Built-up composition roofing and gravel are used on roofs.

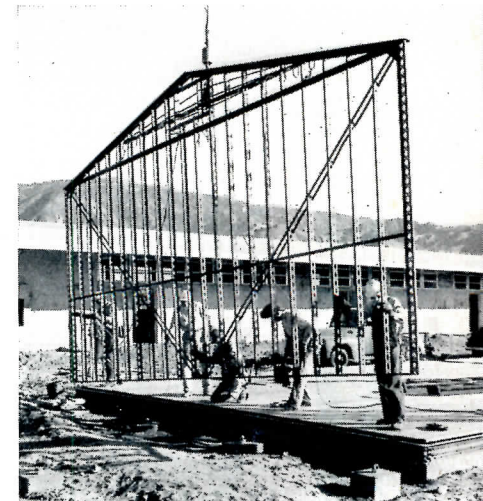
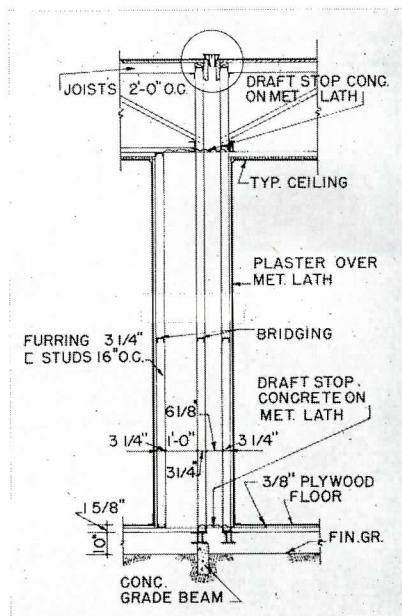
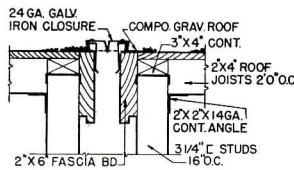
Kindergarten and toilet units can be added in any series of units if there is a need for them. The same basic construction is used for these units, with slightly different window and door arrangements. The length of a toilet unit is 24 ft 6 3/4 in., and of a kindergarten unit 40 ft 6 3/4 in. Toilet units contain girls' and boys' toilet rooms and a janitor's room. Kindergarten units include, besides the classroom, toilets for boys and girls and a teacher's workroom.



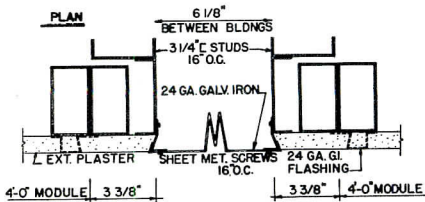
Steel frames are welded at shop



Hoisted onto truck and hauled to school site in complete units



Then lowered to foundation



A SURVEY OF COMMERCIAL FOOD

NEW CONCEPTS are emerging in the design of commercial food service equipment which are bound to affect planning and layout of kitchen and serving facilities. A survey of available equipment indicates these trends:

- Automatic operation and mobility of equipment are industry's answer to increasing costs of food preparation and service. "Pushbutton" operation, in such units as coffeemakers and dishwashers, pays off in valuable time savings. Mobile equipment replaces many pairs of human legs.

- More and more people — shoppers, travelers and business people — want to eat quickly and well. The resulting need for handling greater numbers with less labor by eliminating every duplication of effort possible has produced equipment which is more compact and

which provides easy access to stored foods and utensils. "Integrated" series of units are being offered to utilize every available inch of space. Food warming by infra-red heat speeds up service, since ready-to-serve plates of food can be set out as they are prepared without danger of cooling.

- Food preservation is more efficient with "controlled temperature" refrigeration units, which can freeze food, barely freeze it, or just keep it cool in separate sections. A variety of ice-making and ice-crushing machines can produce plentiful supplies.

- Sanitation, the bugaboo of the kitchen, is a subject that must be kept in mind both by the equipment designer and by the architect in order to comply with public health standards. The National Sanitation Foundation has done much

to standardize sanitary codes and to improve equipment design to meet sanitary requirements (see box, page 202).

On these and subsequent pages is presented a cross section of some recent developments in commercial food service equipment. It has not been possible to include every type of equipment. The scope has been limited to products which the architect would normally specify or would have to consider in his design of a food service area.

Institutional feeding, extending not only to schools and hospitals but also to churches and industrial plants, presents problems entirely different from those of commercial feeding. With the high cost of help, and large numbers of patients and pupils to feed, hospital and school kitchen facilities are becoming more mechanized. Churches, assuming the responsibility in many areas

VENTILATION ESSENTIAL TO SANITATION

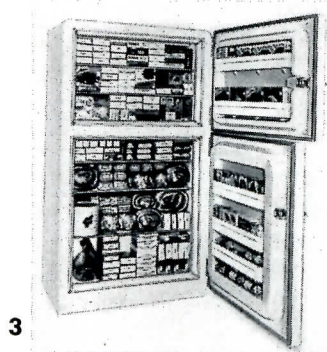
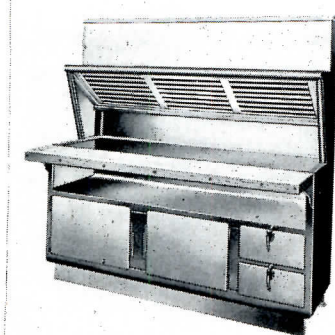
Ventilating hoods in modern commercial kitchens feature filters and interiors that are easily cleaned, satisfying rigid sanitation codes

1. Nathan Straus-Duparquet Inc. claims that 83 per cent of kitchen grease and oil vapors is extracted by baffles in Gaylord ventilating hood. Grease deposit is removed by wiping out grease trough. Front panel can be lifted out so that inside air exhaust system can be cleaned. (33 East 17th St., New York 3, N. Y.) **2. Dunhill Soda Fountain Corp.'s** refrigerated equipment stand is topped by ventilator with removable louvers for cleaning filters. Trough catches grease. (79-85 Walworth St., Brooklyn 5, N. Y.)

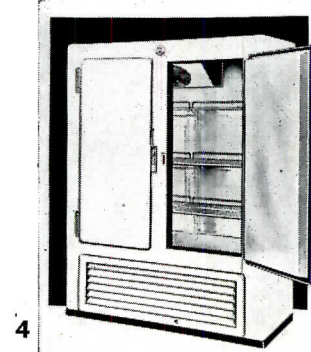


1. Kitchen Hoods

2. Smell Dispatcher



3



4

MAXIMUM STORAGE SPACE OFFERED IN REFRIGERATORS AND FREEZERS

With the large volume of food output in today's eating facilities, refrigerated and frozen products require much storage space

3. United Refrigerator Co.'s "Refrig-N-Freez" features refrigerator space above and freezer space below. Each compartment has a separate door, which is also utilized for storage. (Hudson, Wis.) **4. La Crosse Cooler Co.** presents a two-door model reach-in refrigerator with adjustable shelves. (2809-17 Losey Blvd. S., La Crosse, Wis.) **5. McCray Refrigerator Company Inc.'s** twin-door freezer stresses accessibility of foods—and removable middle shelf for large-package freezing. (Kendallville, Ind.) **6. Sherer-Gillett Co.'s** walk-in cooler is planned for maximum utility and volume storage. Manufacturer says that it provides largest and most efficient storage space per sq ft of floor space. (Marshall, Mich.)

SERVICE EQUIPMENT

of community centers, require well-equipped kitchens usually in very small spaces and on very tight budgets. Mobile cafeterias have been designed for in-plant mass feeding in industry.

Even with the best equipment, however, kitchen and serving facilities are only as productive and sanitary as their layout is practical. The planning, from the receiving of the bulk food products to the handling of the refuse, is of utmost importance for an efficient, well-integrated feeding center.

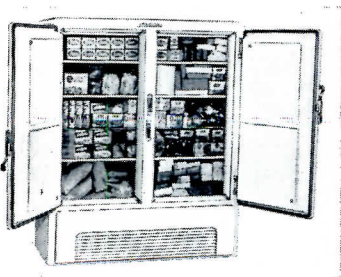
The RECORD is grateful for advice and assistance in the preparation of this round-up to Mr. Ned Greene and Miss Florence Leuthardt, Editors of *Restaurant Equipment Dealer*; to Mr. Arthur W. Forbriger of The John Van Range Company; to Mr. Ivan Stern and Mr. Ben Perlstein of H. Friedman & Sons; and to Mr. Harry Blumberg of Nathan Straus-Duparquet Inc.

Automatic Equipment	p. 216
Conveyor Belt Units	pp. 212, 213
Dishwashers	pp. 202, 212
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Food Warmers	p. 234
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Mobile Equipment	p. 232
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Portable Cafeterias	p. 242
Refrigerators, Freezers	p. 201
"Short-order" Equipment	pp. 224, 228
Ventilation Hoods	p. 200

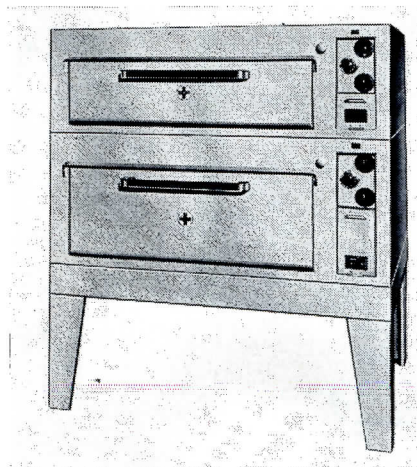
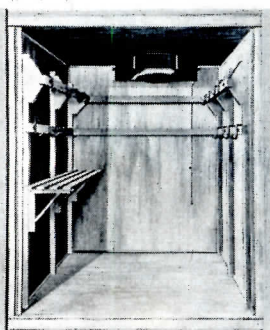
3. Double-duty Refrigerator

4. Two-door Reach-in

5. Twin-door Freezer

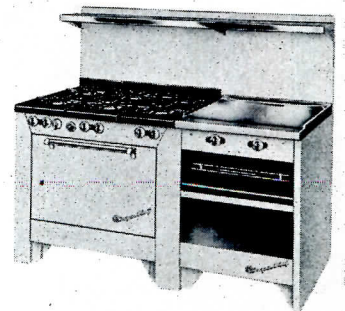


6. Walk-in Cooler



7. Bake and Roast Oven

8. Gas Range



OVENS, RANGES ARE EASY TO REACH—AND TO CLEAN

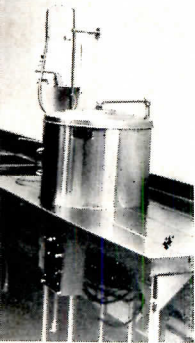
Manufacturers of ovens and ranges cognizant of the tight space conditions in many kitchens and also of sanitary requirements, are producing equipment that utilizes every inch of space—and makes every inch accessible for cleaning

7. Griswold Mfg. Co.'s newest "Aristocraft 54" bake and roast ovens are independently controlled, with possible preheating temperatures of 450 deg in 1/2 hour. Smoke and steam deflectors over oven doors aid sanitation. (1053 West 12th St., Erie, Pa.) **8. Magic Chef, Inc.** offers a gas range which includes six burners, an oven, a griddle-broiler and storage space. (1641 So. Kingshighway Blvd., St. Louis 10, Mo.)

VARIETY OF DISHWASHING EQUIPMENT

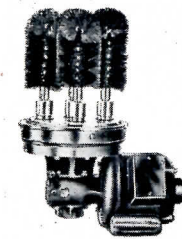
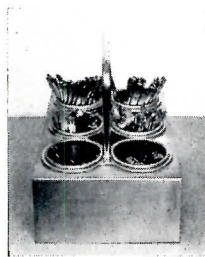
"Hands Off" is a practical rule of sanitation in eating establishments, and manufacturers are adapting as many devices as possible to it, especially in washing equipment

9. The Jackson dishwasher, with a mechanical capacity of 1200 dishes per hour, requires only 2 sq ft of floor area. The completely automatic washer can be supplemented with a pre-rinse sink complete with garbage disposal and booster heater. (3700 E. 93rd St., Cleveland 5, Ohio) **10.** The newest **Kewanee** dishwash model is recommended for cities and states whose health laws require a prewash or third tub operation in dishwashing. Available in both left-to-right and right-to-left operations, the washer comes with stainless steel or galvanized tubs. (Kewanee, Ill.) **11. The Steril-O-Matic** silver basket complies with the "Hands Off" principle in three ways: carries soiled silver to kitchen, through the dishwasher and back for serving. (4530 No. Keystone Ave., Indianapolis 5, Ind.) **12. Speedy Electric Glass Washer Co.** manufactures a portable electric rotary brush which can be used not only for washing glasses but also for scrubbing dishes, cups, etc., removing lipstick and caked material. (1920 W. Columbia Ave., Chicago 26, Ill.) **13. The Beaver** two-tub dishwasher has a self-contained unit which heats water with manual or automatic gas controls or electric controls. (Beaver Dam, Wis.) **14. The Cunningham** Model B-50 glasswasher, with three-compartment sink for pre-washing, brush-scrubbing and rinsing-sterilizing, uses a minimum of floor space for large hourly production. (500 So. Thropp St., Chicago 7, Ill.) **15. Gordon Hatch Co.** produces the "Hatco Electric Booster" to provide ample quantities of 180° F water for the sanitizing rinse of commercial dishwashers. A space saver (26 in. in diameter and 31 in. high), it has a 25-gal storage capacity. (531 W. Wisconsin Ave., Milwaukee 3, Wis.)

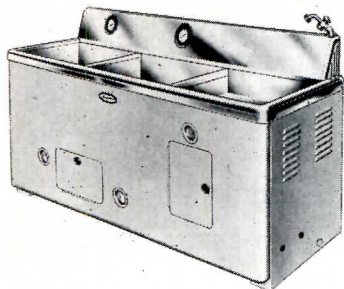


9. Automatic Washer

11. Silver Basket

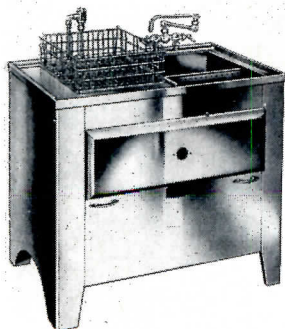
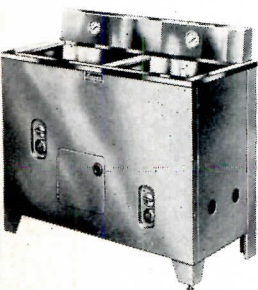


12. Glass Washer

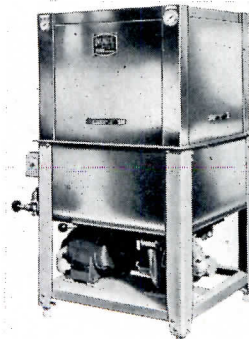


10. Three-tub Washer

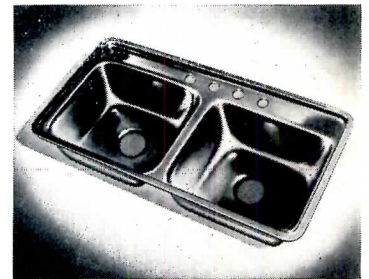
13. Two-tub Washer



14. Three-compartment Glass Washer

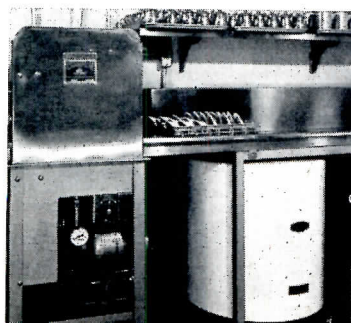


16. Semi-automatic Washer



17. Kitchen Sink

15. Electric Booster



FOOD SERVICE EQUIPMENT STANDARDS

The National Sanitation Foundation, an independent non-profit organization, is the sponsor of a program for standardizing, testing and approving food service equipment. The Foundation, which has headquarters at the School of Public Health of the University of Michigan, has already issued three standards on food service equipment and has three more in the planning stage. The three available standards are:

1. *Soda Fountain and Luncheonette Equipment*
2. *Food Service Equipment*
3. *Spray-type Dishwashing Machines*

The three standards being planned are: *Commercial Cooking Equipment, Hot Water* (a supplement to Standard No. 3) and *Steam Tables*.

The standards specify materials that can be used, design, construction, installation and maintenance.

The Foundation operates a testing laboratory similar to underwriters' laboratories for analyzing equipment submitted by manufacturers for approval. If the equipment meets the qualifications specified in the standards, permission is granted to use an NSF seal.

Before development of new equipment or design changes in standard equipment, manufacturers are urged to introduce their plans to the Foundation for discussion with business, industry and health authorities. The NSF acts as a clearinghouse for new ideas and coordinator of sanitary codes to help ensure that food service equipment incorporates the latest in sanitary and technological developments.

All corners, joints, connections, legs, etc., must be accessible for sanitary upkeep. Manufacturers are producing equipment with smooth surfaces and cove corners to make cleaning easy

16. Ininger claims that its newest semi-automatic dishwashing machine is "as easy to clean as a kitchen sink." (6245 State Rd., Philadelphia 35, Penna.) **17. The Active Tool & Manufacturing Co.** shows the kitchen sink itself—with stainless steel surface and cove corners. (Detroit, Mich.)

STRUCTURAL CLAY MASONRY—1: CHEMICAL-RESISTANT TILE AND BRICK

Presented through the courtesy of Structural Clay Products Institute*

Chemical-resistant clay masonry is used extensively in many industries for floors, vats and tanks, where conventional materials would deteriorate when subjected to acids, alkalis, petroleum products, vegetable oils, fats, etc.

Chemical-resistant or "acid-proof" brick and tile will withstand mild alkalis and all acids except hydrofluoric.

"Carbon" brick may be necessary for strong alkalis and for hydrofluoric acid and its salts.

MASONRY UNITS

Acid-proof brick or tile must be structurally strong and free of laminations. There should be no pores, and the surface texture should be sufficiently roughened to insure a strong bond with the joints.

Size. The brick and tile range in thickness from approximately 1 to 4½ in.; in width from 1¾ to 6 in.; and in length from 7½ to 12 in.

JOINTS

The life of a chemical-resistant installation depends greatly on the proper jointing material. For example, there are few chemicals which do not attack regular portland cement mortars. Although the bricks or tile may not be affected by acids or alkalis, the joints may be attacked, causing disintegration of the joints, and eventual loosening of the masonry units.

In the table on sheet 2 (page 207) are the types of chemicals to which the masonry might be exposed and the most common joint treatments recommended. Joints should be as narrow as possible to minimize exposed joint area and to reduce the amount of jointing material required. Instructions and limitations of any material, as recommended or noted by the manufacturers, should be observed explicitly.

* Information in these sheets originally appeared in "Technical Notes on Brick and Tile Construction," November 1953.

MORTARS**Type 1—Waterproofed Portland Cement.**

Application. Can be used in joints of masonry floors, vats or tanks subjected to excessive moisture or liquids which do not attack portland cement.

Resistant To: Lactic acid (milk or milk products), petroleum and vegetable oils, molasses, etc.

Preparation: Cement is available with waterproofing medium already in it, or the mortar can be made waterproof by addition of the correct amount of integral admixture. Also there are surface treatments which will make the joints more impervious to moisture.

Type 2—Special Admixtures for Portland Cement.

Application: Often used in dairies, breweries, etc., where the solutions do not appreciably attack portland cement mortar, and where there is little abrasion.

Resistant To: Very mild acid solutions and some other chemicals.

Preparation: Admixtures can be added on the job in either powder or liquid form.

Type 3—Sodium Silicate Cements.

Application: Used for acid-resistant mortar setting beds and joints of brick or tile-lined chemical structures—vats, tanks etc.

Resistant To: Hot and cold acids of all strengths except hydrofluoric, and temperatures as high as 1800 F.

Not Resistant To: Alkaline solutions; may be soluble in water. Impractical for ordinary floors. Should not be applied directly to setting beds of portland cement (attacked by alkalis), unless it is coated with asphalt first.

Preparation: Such cements should be quick-setting and self-hardening. They are usually prepared by mixing the sodium silicate binder with

a dry powder or filler.

Type 4—Synthetic Resin Cements.

Application: Excellent for setting beds and joints of masonry lined apparatus, as well as for floors and walls in chemical plants, pulp mills, oil refineries, food and beverage packing plants, dairies and breweries.

Resistant To: Acids (except nitric and chromic), water, steam, oils, fats, and weak alkalis. Highly resistant to abrasion and washing action, thermal shock and temperatures up to 300 F. The cements are quick-setting and self-hardening. When used with units laid in a bed of portland cement mortars, the open joints should be washed with dilute hydrochloric acid to neutralize the alkalinity of portland cement.

Preparation: Resin solution mixed with dry powder, and applied cold.

Type 5—Sulfur Base Cements.

Application: Used primarily for joints of masonry lined chemical apparatus, floors, tanks, etc., subjected to severe deterioration due to acids.

Resistant To: All acids.

Not Resistant To: Weak alkalis and oils. Limited to temperatures less than 200 F.

Preparation: Available in powder or brick form and must be heated to molten state and poured into joints while hot. As the joint cools and hardens, it is tooled to smooth finish.

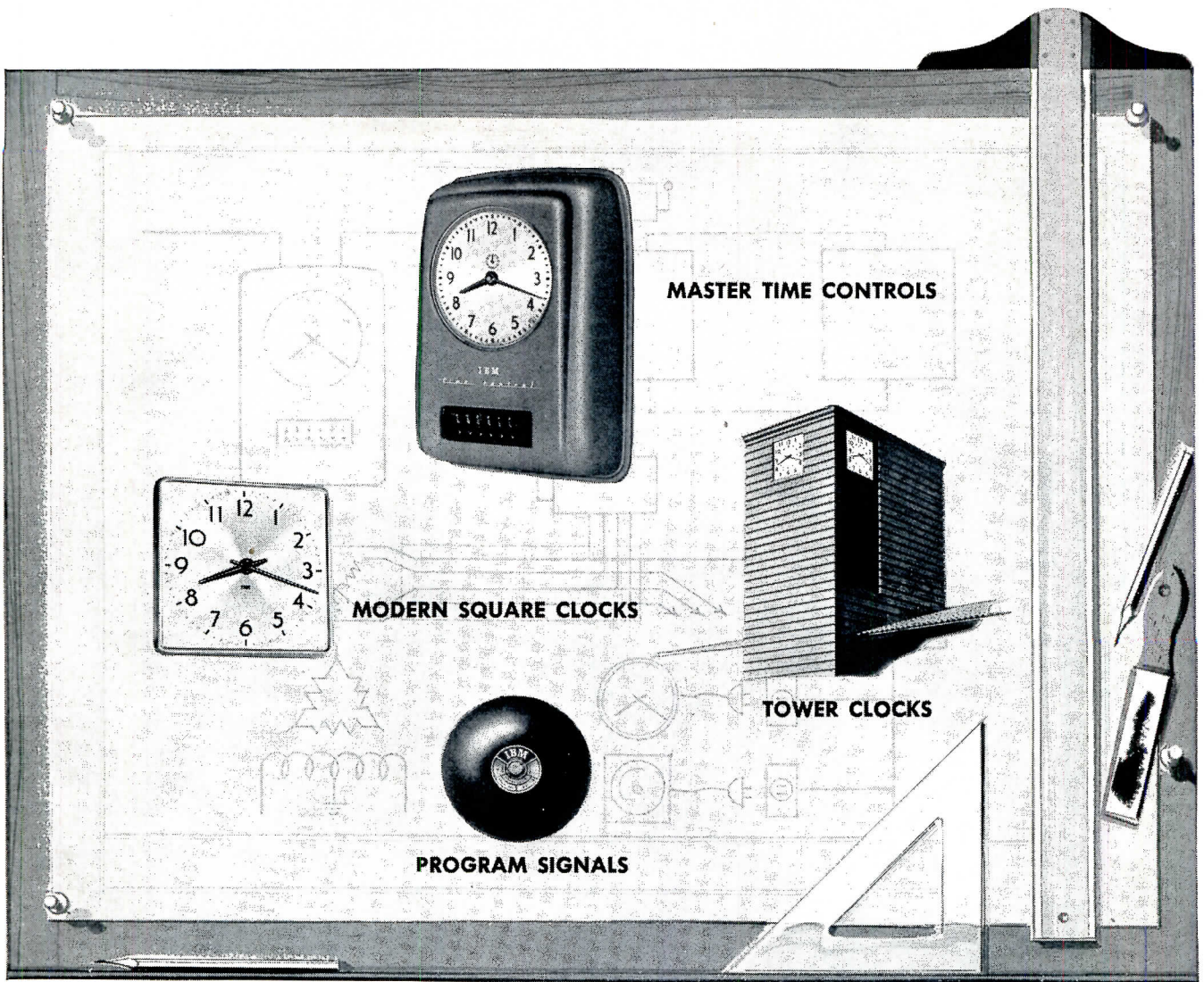
Type 6—Bituminous Mortars, Asphaltic Mixtures and Emulsions.

Application: Used as membranes, setting beds, grouting, and poured joints for certain types of chemical-resistant masonry installations.

Resistant To: Acids and certain alkalis.

Not Resistant To: Oils, fats, greases, and some organic solvents.

Preparation: Applied either hot or cold. Contain fillers such as portland cement, sand, asbestos, gypsum etc.



Simplify Planning . . . No Special Wiring Needed

- **IBM Electronic Time and Program Signaling Systems** eliminate need for special clock and signal wiring . . . synchronize clocks, recorders and audible signals . . . control utilities . . . all automatically.

- **Easy, economical to install** . . . clocks and signals connect with regular AC lighting lines . . . are supervised electronically.

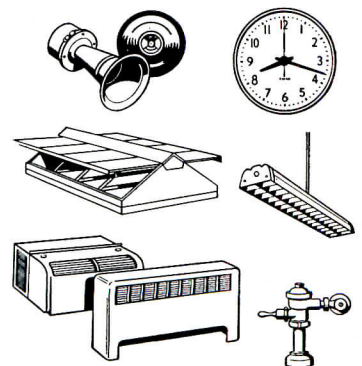
- **Self-regulating on 12-hour basis** . . . master control automatically checks—and corrects as much as 12 hours, if necessary—all clocks twice daily. Automatic self-regulation assures coordination of all time units.

- **Can be altered with little cost or effort** . . . system may be expanded, units relocated, without expense of additional controls or special wiring.

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IBM Electronic Time and Program Signaling Systems can save costs, conserve natural resources by automatically scheduling utility functions . . .

sound audible signals • open and close ventilators • turn heating and air conditioning systems on and off • switch light circuits on and off • open and close water flow valves.



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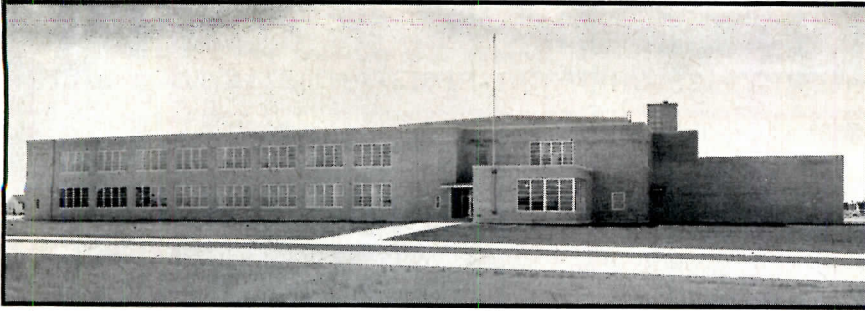
STRUCTURAL CLAY MASONRY—2: CHEMICAL-RESISTANT TILE AND BRICK

Presented through the courtesy of Structural Clay Products Institute

Type of Chemical		Action on Regular Portland Cement Joints	Suggested Type of Joint or Joint Treatment
ACIDS	Acetic	yes	2, 3, 4, 5, 6
	Acid Waters	yes	2, 3, 4, 5, 6
	Carbolic	yes	2, 3, 4
	Carbonic	yes	2, 3, 4, 5, 6
	Humic	Conditional	2, 3, 4, 5, 6
	Hydrochloric	yes	3, 4, 5, 6
	Hydrofluoric (1)	yes	Attacks brick or tile
	Lactic	yes	1, 2, 3, 4, 5
	Muriatic	yes	3, 4, 5, 6
	Nitric	yes	3, 5, 6
	Oxalic	Conditional	2, 3, 4, 5, 6
	Phosphoric	yes	2, 3, 4, 5, 6
	Sulphuric	yes	2, 3, 4, 5, 6
	Sulphurous	yes	2, 3, 4, 5, 6
Tannic	yes	2, 3, 4, 5, 6	
SALTS AND ALKALIES	Carbonates of: Ammonia Potassium Sodium	Conditional	2, 4, 6
	Chlorides of: Calcium Potassium Sodium Strontium	Conditional	2, 3, 4, 5, 6
	Chlorides of: Ammonia Copper Iron Magnesium Mercury Zinc	yes	2, 3, 4, 5, 6
	Fluorides	Conditional	2, 4, 5
	Hydroxides of: Ammonia Potassium Sodium	yes	2, 6
	Nitrates of: Ammonia Calcium Potassium Sodium	Conditional	2, 3, 5, 6
	Potassium Permanganate	no	2, 3
	Silicates	no	2, 4, 6
	Sulphates of: Ammonia	yes	2, 3, 4, 5
	Sulphates of: Aluminum Calcium Cobalt Copper Iron Manganese Nickel Potassium Sodium Zinc	yes	2, 3, 4, 5, 6
PETROLEUM OILS	Heavy oils below 30° Baume	no	1, 2, 3, 4
	Light oils above 30° Baume	Penetration	1, 2, 3, 4
	Benzine Gasoline Kerosene Naptha	Penetration	1, 2, 3, 4

Type of Chemical		Action on Regular Portland Cement Joints	Suggested Type of Joint or Joint Treatment
COAL TAR DISTILLATES	Alizarin Anthracene Benzol Carbozol Cumol Xylol	no	2, 3
	Paraffin Pitch Toluol	no	2, 3, 4
	Carbolineum Creosote Cresol Lysol Phenol	yes	2, 3
	Cotton seed	yes	1, 2, 3, 4
	Rosin	no	1, 2, 3, 4
	Almond Castor China-wood Cocoonut Linseed Olive Peanut Poppy seed Rape seed Soy-bean Tung Walnut	Conditional	1, 2, 3, 4
Turpentine	Penetration	1, 2, 3, 4	
FATS AND FATTY ACIDS (animal)	Fish oil	Conditional	1, 2, 3, 4
	Foot oil	Conditional	2, 3, 4
	Lard and lard oil Tallow and tallow oil	Conditional	2, 3, 4
MISCELLANEOUS	Alcohol	no	2, 3, 4
	Ammonium hydroxide	Conditional	2, 3, 6
	Baking soda	Conditional	2, 3, 4, 6
	Beer	Conditional	3, 4, 6
	Bleaching powder	Conditional	2, 3, 4, 5
	Borax, Boric acid	Conditional	2, 3, 4, 5, 6
	Brine (salt)	yes	2, 3, 4, 5, 6
	Buttermilk	Conditional	1, 2, 3, 4, 5, 6
	Charged water	Conditional	2, 3, 4, 5, 6
	Caustic soda	yes	2, 6
	Cider	yes	3, 4, 5, 6
	Cinders	yes	2, 3, 4, 5, 6
	Coal	Conditional	2, 3, 4, 5, 6
	Corn syrup	yes	1, 2, 3, 4, 5, 6
	Electrolyte	yes	2, 3, 4, 5, 6
	Formalin	yes	2, 3, 4
	Fruit juices	Conditional	2, 3, 4, 5, 6
	Glucose	Conditional	2, 3, 4, 5, 6
	Glycerine	no	2, 5, 6
	Honey	no	2, 3, 4, 5, 6
	Lye	yes	2, 6
	Milk	Conditional	1, 2, 3, 4, 5, 6
	Molasses	Conditional	1, 2, 3, 4, 5, 6
	Niter	Conditional	2, 3, 4, 5, 6
	Sal Ammoniac	yes	2, 3, 4, 5, 6
	Sal Soda	Conditional	2, 3, 4, 5, 6
	Salt peter	Conditional	2, 3, 4, 5, 6
	Sauerkraut	Conditional	3, 4, 5, 6
	Silage	yes	2, 3, 4, 5
	Tanning liquor	Conditional	2, 3, 4, 5, 6
Vinegar	yes	2, 3, 4, 5, 6	
Washing soda	Conditional	2, 3, 4, 5, 6	
Whey	yes	1, 2, 3, 4, 5, 6	
Wine	Conditional	3, 6	
Wood pulp	Conditional	2, 3, 4, 6	
Sugars	Conditional	1, 2, 3, 4, 5, 6	
Sulphite liquor	Conditional	2, 3, 4, 6	

(1) Special carbon resinous or carbon sulphur cements are recommended for use with hydrofluoric acid and its corrosive salts.

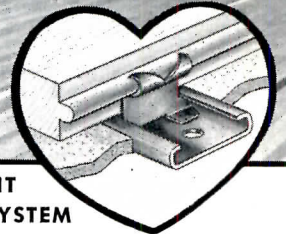
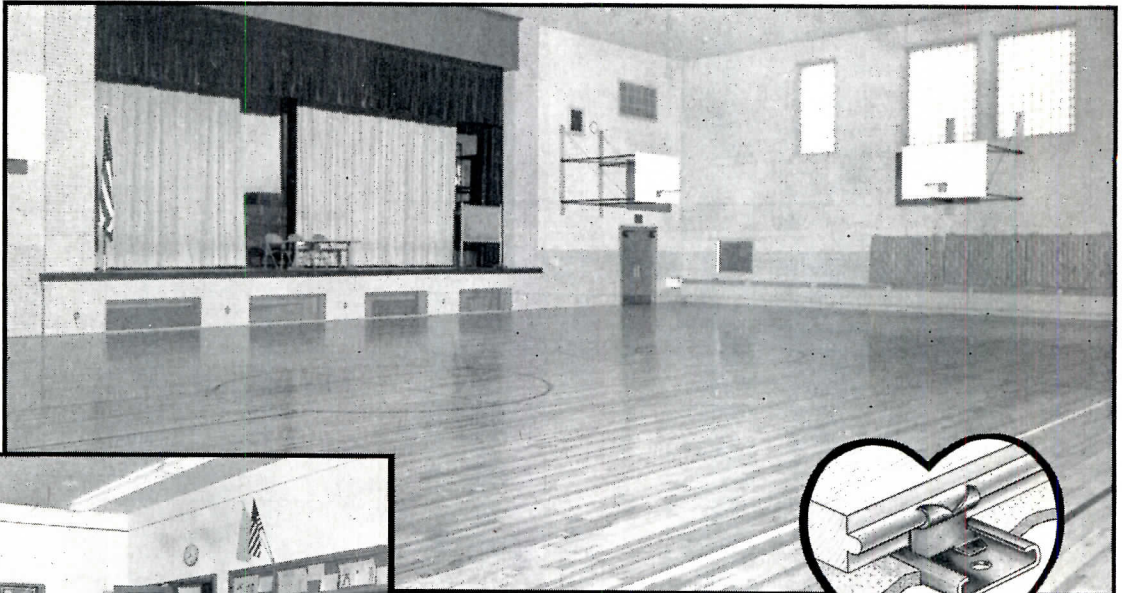


There are 16,880 sq. ft. of Loxit-laid maple floors in this Pierre Navarre School, South Bend, Indiana.

N. Roy Shambleau, Architect
Harry H. Verkler,
General Contractor

DO IT *Right* THE FIRST TIME!

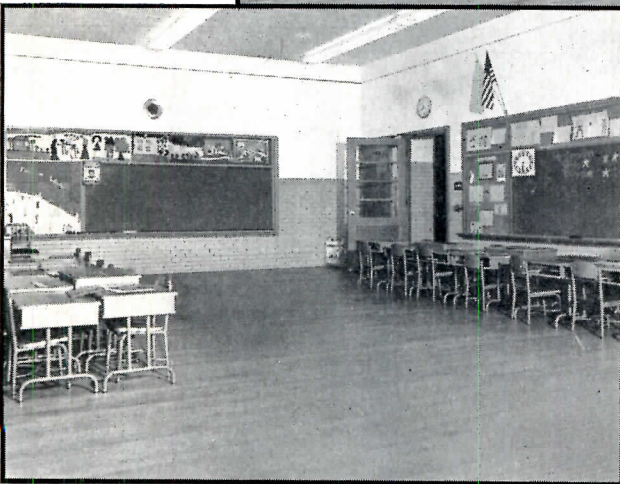
The Loxit-laid maple floors in the Pierre Navarre School will stay permanently beautiful with minimum maintenance.



THE HEART OF THE LOXIT FLOOR-LAYING SYSTEM

Three basic parts form the heart of a Loxit-laid floor: a channel with turned-in edges, the anchors which secure it to the concrete, and a uniquely-designed clip which fastens ordinary tongue and groove strip flooring permanently together and to the channel. Everything locks together! No nails, wood sleepers or adhesives are used. A Loxit-laid floor is easy to install. It is beautiful! It is permanent! Maintenance is simplified! The Loxit System limits expansion and compensates for contraction; vertical movement is eliminated and squeaking avoided. For a floor that is right—from the start, and stays right—always specify Loxit!

Literature, samples and catalogs are available. Write Today!



All classrooms in the Pierre Navarre School benefit from maple floors laid with Loxit wood Floor Laying System.

Floors are important. If you are not familiar with the Loxit wood Floor Laying System, consult your architect. His advice can save you money, time and trouble.

LOXIT FLOOR-LAYING SYSTEM

LOXIT SYSTEMS, INC.

1217 WEST WASHINGTON BOULEVARD, CHICAGO 7, ILLINOIS



BEST IN BUILDING PRODUCTS LITERATURE ANNOUNCED

Three Certificates of Exceptional Merit and 49 Merit and Honorable Mention winners will be announced this month out of about 180 entries in the Annual Building Products Literature Competition sponsored by the American Institute of Architects and the Producers' Council, Inc.

The jury of five A.I.A. judges, headed by Chairman Ben John Small, A.I.A., New York, increased the number of winners by 17 over last year because of the quality of the material presented. This fact indicates the success of the purposes of the competition, which are as follows: (1) to recognize excellence in product literature directed to the architect, and (2) to aid manufacturers in increasing the technical and informative value of descriptive product literature of assistance to the architect in the selection and specifying of building products for specific uses.

The following awards will be presented on June 14 as part of the one-day Spring meeting of the Producers' Council during the Annual Convention of the A.I.A. in Boston:

Class I (Manuals, Handbooks, Basic Information)
Certificate of Merit: CRSI Handbook — Concrete Reinforced Steel Institute; Manual of Automatic Controls — Minneapolis-Honeywell Regulator Co.; Reinforced Brick Masonry and Lateral Force Design — Structural Clay Products Institute.

Honorable Mention: Thermopane Manual — Libbey-Owens-Ford Glass Co.; Suggestions for Design Radiant Panel Heating with Copper Tube — Chase Brass & Copper Co.; A Catalog of Building Stone — International Cut Stone Contractors' & Quarrymen's Association; Design and Construction of Lintels for Concrete Masonry Buildings — National Concrete Masonry Association.

Class II (Literature on Particular Products)
Certificate of Exceptional Merit: Armstrong's Floors and Walls — Armstrong Cork Co.

Certificate of Merit: Armstrong's Acoustical Materials — Armstrong Cork Co.; Cofar Product Manual — Granco Steel Products Co.; Fiberglas Series — Owens-Corning Fiberglas Corp.; Folding Gate Catalog — Acorn Wire & Iron Works; Fenestra Blue Book of Drafting Room Standards — Detroit Steel Products Co.; Truscon Metal Windows and Doors — Truscon Steel Div., Republic Steel Corp.; X-Ray Protection — Light Proofing — Ray Proof Corp.

Honorable Mention: Richmond Engineered Tying Devices — Richmond Screw Anchor Co.; PC Glass Blocks — Pittsburgh Corning Corp.; Builders Hardware Specialties — Glynn Johnson Corp.; Structural Insulation — The Celotex Corp.; Foamglas-Rigid Insulation — Pittsburgh Corning Corp.; Fiberglas Industrial Insulations — Owens-Corning Fiberglas Corp.; Fenestra Steel and Aluminum Building Panels — Detroit Steel Products Co.; Mills Metal Partitions — Mills Metal Compartment Co., Div. of The Mills Co.; Mills Movable Metal Walls — The Mills

Co.; Fiat Precast Receptors — Fiat Metal Mfg. Co.; Drinking Fountains and Coolers — Catalog — The Halsey W. Taylor Co.; Chase Copper Roofing for Roofers and Architects — Chase Brass and Copper Co.; Architects and Engineers Handbook of Lighting Glassware — Corning Glass Works; Ceco Steel Windows, Aluminum Windows, Hollow Metal Doors — Ceco Steel Products Corp.

Class III (General Promotional Literature)
Certificate of Exceptional Merit: Ideas for Wall Patterns with Concrete Masonry — National Concrete Masonry Association.

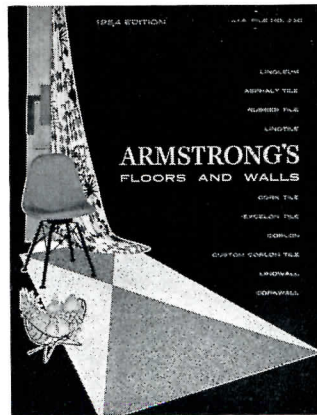
Certificate of Merit: A New Concept in Retail Merchandising and Ceiling Design — Owens-Corning Fiberglas Corp.; Type of Workmanship Recommended for Concrete Block Walls — Louisville Cement Co.; Mosaic Series — The Mosaic Tile Co.

Honorable Mention: Portfolio of Interiors — Armstrong Cork Co.; Modern Door Control — LCN Closers, Inc.; Curtis Kitchens — Curtis Companies Service Bureau; Brick and Tile Series — Structural Clay Products Institute; A Collection of Glen-Gery — Glen-Gery Shale Brick Corp.; Design of the Month — Pittsburgh Plate Glass Co.; Redwood News — California Redwood Association; Roddiscraft Architectural Plywoods — Roddis Plywood Corp.; Alcoa Architectural Achievements — Aluminum Company of America; Remotaire Systems Book — American Radiator & Standard Sanitary Corp.

Class IV (Space Advertising Directed to Architects)
Certificate of Exceptional Merit: New Pittco No. 17 Recessed Sash — Pittsburgh Plate Glass Co.

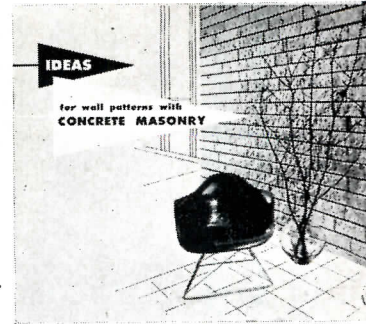
Certificate of Merit: Fiberglas Sonofaced Acoustical File — Owens-Corning Fiberglas Corp.; Honeywell Customized Temperature Control — Minneapolis-Honeywell Regulator Co.; Advertising Series — Stone — International Cut Stone Contractors' & Quarrymen's Association.

Honorable Mention: Bruce Strip Hardwood Floors — E. L. Bruce Co.; Pittsburgh Glass in Recent Construction — Pittsburgh Plate Glass Co.; Not How Thick But How Thermal — Owens-Corning Fiberglas Corp.; SCR Insulated Cavity Wall — Structural Clay Products Institute; Here's Proof — Ceco Steel Products Corp.



II.

Certificate of Exceptional Merit winners are pictured here for three of the four classes. No top award was made in Class I



III.



IV.

WINDOWS AND DOORS

* *Gale City Wood Awning Windows, AIA File No. 16-L* is a filing folder containing a brochure giving specifications and sectional drawings of wood awning windows, a sheet of installation suggestions and five detail sheets on metal horizontal weatherstripping, vinyl jamb weatherstripping, thermopane glazing, extension jambs and multi-unit assembly material. *Gale City Sash and Door Co., Box 901, Fort Lauderdale, Fla.*

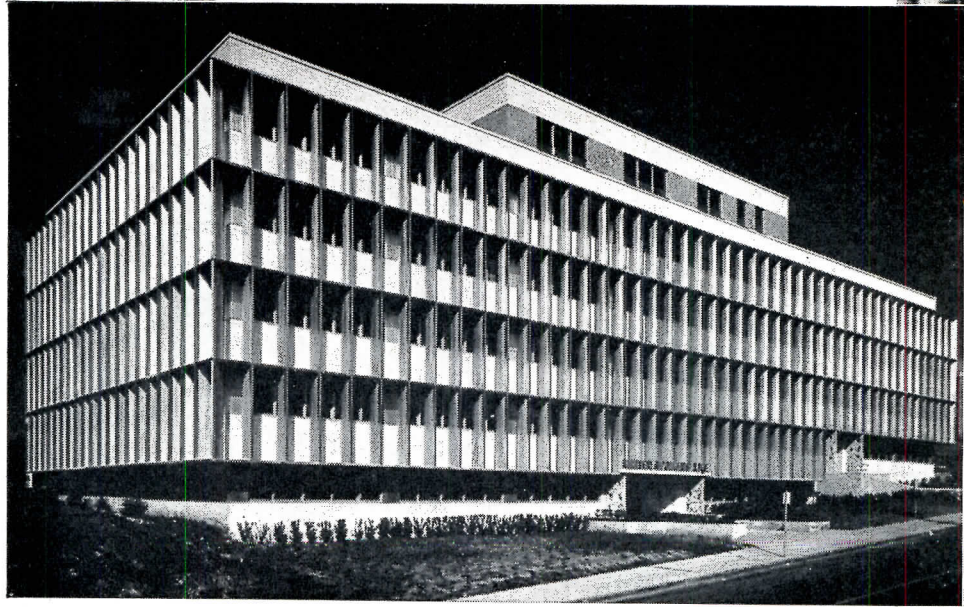
* *Fenestra Stock Products* describes Fenestra products for residential and commercial builders including casement windows, residential projected windows, installation accessories for windows, the outside-inside metal trimmed units, steel window wall units, basement and utility windows, sliding closet doors, hollow metal doors. 12 pp, illus. *Detroit Steel Products Co., 3113 Griffin St., Detroit 11, Mich.*

* *Roly-Door* contains illustrations and complete specifications of *Roly-Door* installations in various styles, sizes and types of homes. 8 pp, illus. *Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.*

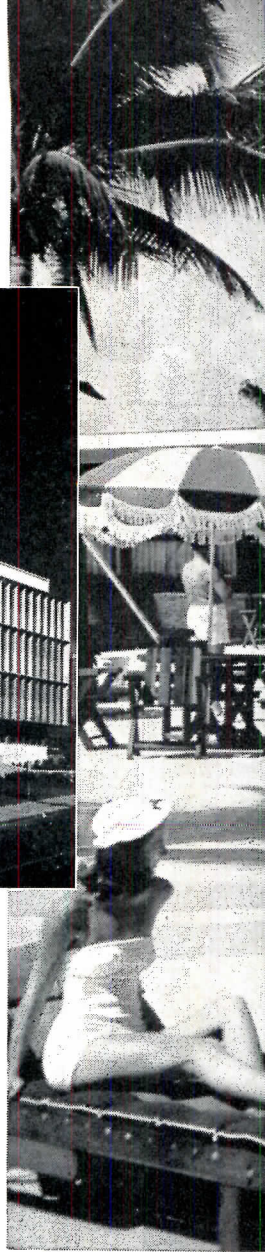
(Continued on page 254)

* *Other product information in Sweet's Architectural File, 1954*

PAN AMERICAN MOTEL
 Miami Beach, Fla.
Architect: Carlos B. Schoeppl
General Contractor: C. R. Clark Co.
 Rotary Oildraulic Elevator installed
 by Miami Elevator Co., Inc.



UNITED BANKERS
 LIFE BUILDING
 Dallas, Texas
Architect:
 W. W. Ahlschlager
General Contractor:
 T. C. Bateson Const. Co.
 Rotary Oildraulic Elevators
 installed by Hunter-
 Hayes Elevator Co.



Rotary Oildraulic®

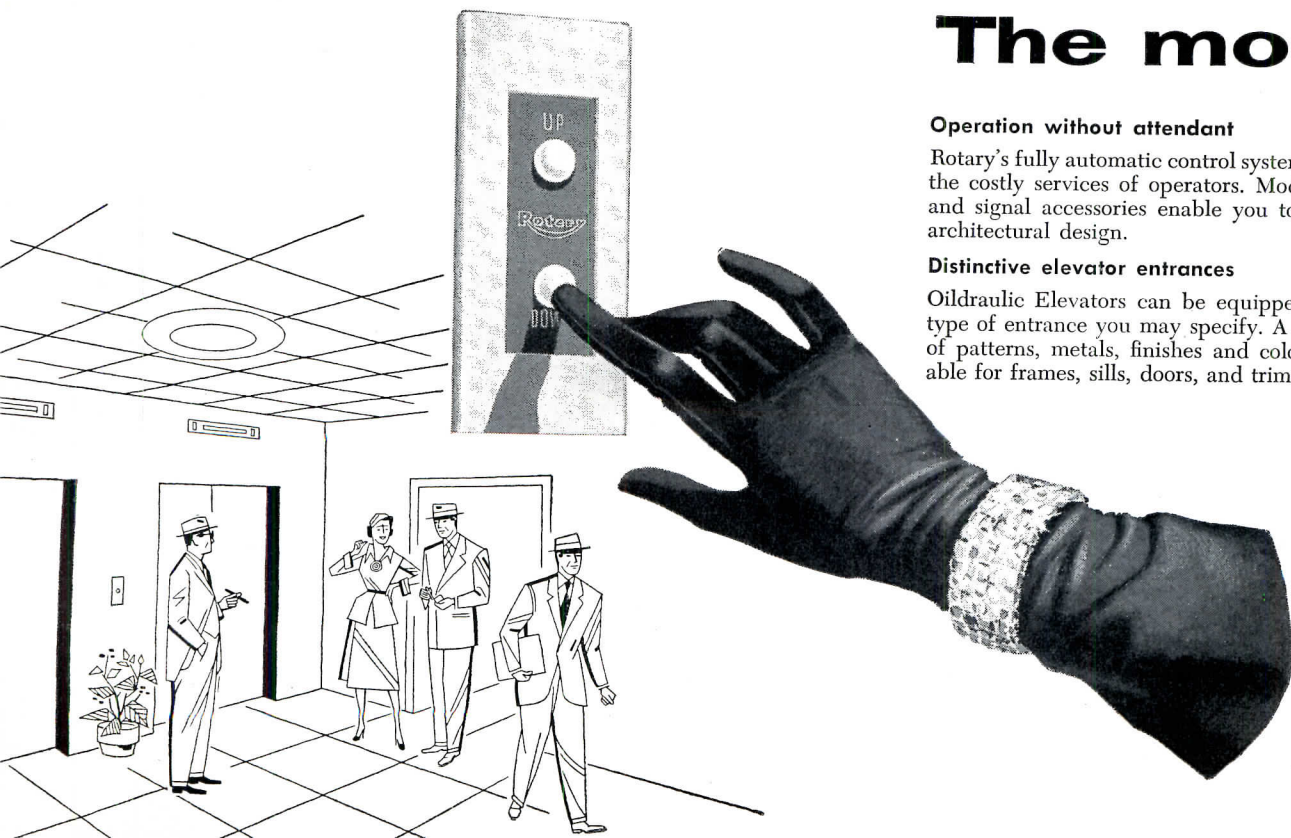
The modern

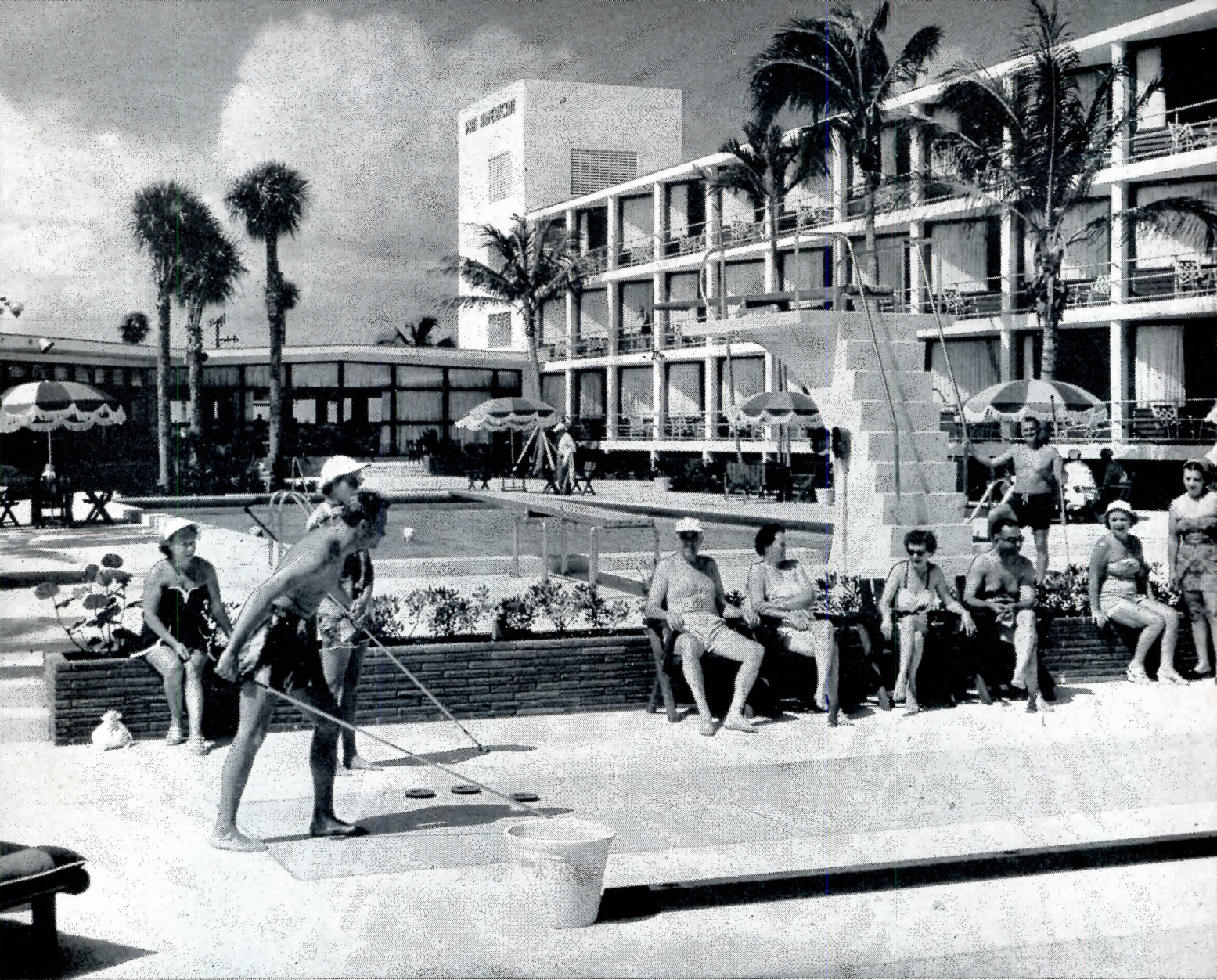
Operation without attendant

Rotary's fully automatic control systems eliminate the costly services of operators. Modern control and signal accessories enable you to match the architectural design.

Distinctive elevator entrances

Oildraulic Elevators can be equipped with any type of entrance you may specify. A wide range of patterns, metals, finishes and colors is available for frames, sills, doors, and trim.





elevator for modern buildings

The Rotary Oildraulic Elevator is moved and controlled by the smooth, dependable, economical power of oil under pressure.

No penthouse or heavy sidewalls—The elevator car and its load are supported by the hydraulic system—not by the building structure. This eliminates the costly, unsightly penthouse that interferes with modern architectural design. It also makes possible a substantial lightening of the hoistway structure.

Flexibility in power unit location—Rotary's compact power unit can be placed in any convenient location where a pipeline can be run from the unit to the hoistway. Thus it can be located in an area with other machinery for convenience in servicing and to save space. Or it can be

placed in a small machine room built to accommodate the power unit being used on the installation.

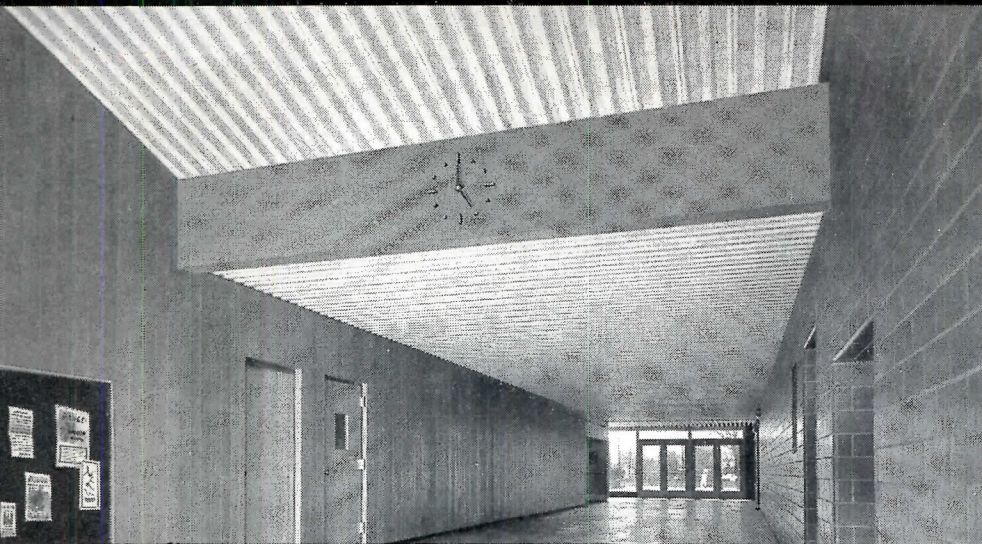
Smooth starts, accurate landings—The revolutionary Rota-Flow oil hydraulic power system gives velvet-smooth starts and cushioned stops. Oildraulic automatic floor leveling positions the car to each landing with exactness—1/4" accuracy guaranteed! The new patented Oildraulic Controller handles the functions of seven separate control valves . . . simplifies adjustments and maintenance.

Coast-to-coast service—Over 75,000 Oildraulic elevators and lifts have been installed and are serviced by Rotary's nation-wide distributor organization. Our Engineering Department will be glad to assist you on plans and specifications for passenger or freight elevators.






Write for new catalog RE-307 and complete architectural data
ROTARY LIFT CO., 1109 KENTUCKY, MEMPHIS 2, TENN.
SEE OUR CATALOG IN SWEET'S

How to acquire high acoustical value at low cost with Q-DECK



Without further treatment, the exposed fluted undersurface of Robertson's strong, long-span roof deck has a recognizable noise reduction effect. However, consistent demand for higher noise reduction in institutional, industrial and commercial applications has led Robertson engineers to develop a highly effective, low-cost acoustical treatment. Acoustical material (such as glass fiber) is placed in the cells of the Q-Deck and held in place by means of an adhesive. The ceiling may be repeatedly spray painted without impairing its value. The noise reduction coefficients shown in the table below were obtained through tests conducted by Dr. Paul H. Geiger at the University of Michigan, using accepted laboratory equipment and procedure.

	NOISE REDUCTION COEFFICIENT
 Type 3 or UK Deck with 1" of sound absorbent material . . . . .	.60
 Type 12 or FK Deck with 2" of sound absorbent material . . . . .	.72
 Type 12 or FK Deck with 4" of sound absorbent material . . . . .	.90

For areas where the more costly suspended ceiling is desired, any standard method of application can be used. For details concerning this or the new low-cost Robertson method of roof deck engineering data and structural details, use the coupon below.

Robertson Q-DECK

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pennsylvania

Please send the following free file material from Robertson's Technical Library: Roof Deck Catalog Acoustical Data Book

NAME _____

FIRM _____

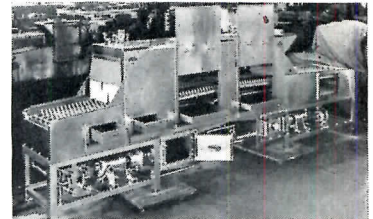
ADDRESS _____

A-E PRODUCTS

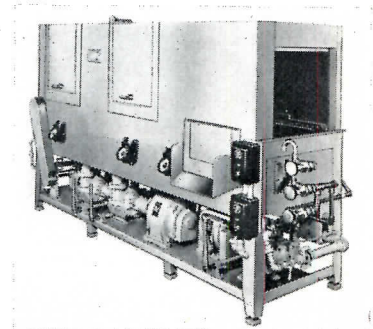
(Continued from page 202)

CONVEYOR-BELT DISHWASHERS

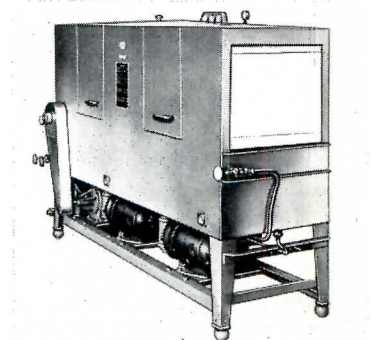
Conveyor-belt dishwashers ensure sanitation from washing through drying and reduce valuable stacking time and loss through breakage in large output kitchens



18. The G. S. Blakeslee & Co. conveyor washer includes 18-in. pre-wash compartment. Molded nylon links hold dishes upright so that they do not touch metal. (1844 S. Laramie Ave., Chicago 50, Ill.)



19. The Toledo Scale Co. dishwasher also features a pre-wash compartment. A "dwell" control permits dishes to be held in wash chamber a longer time if desired. (Toledo 1, Ohio)



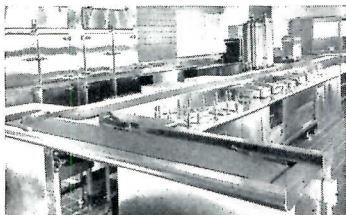
20. In The Fearless Dishwasher Co., Inc. rack conveyor, a safety disconnect clutch works automatically in case of jamming of racks. 175-179 Colvin St., Rochester 2, N. Y.)

CONVEYOR BELTS HAVE OTHER USES

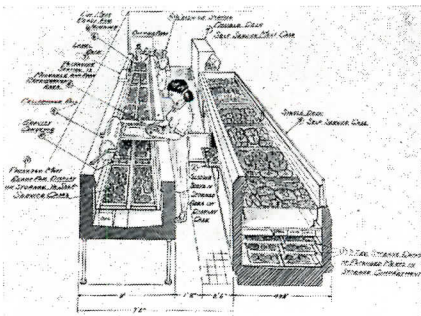
Conveyor belts have other applications in food service in addition to their use in dish-washing machines. With increasing attention being given to speed and efficiency as well as sanitation, conveyor belts are specified for many uses, especially in hospitals



21. Samuel Olson Mfg. Co., Inc. has installed a tray make-up conveyor in the Swedish American Hospital in Rockford, Ill. Patients' meals are prepared on a production line basis on a conveyor leading to a subveyor unit at the back. (2418 Bloomingdale Ave., Chicago 47, Ill.)



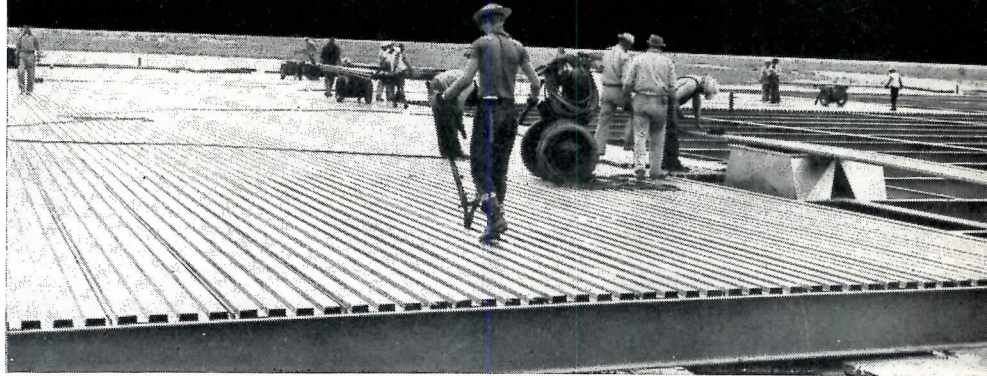
22. The S. Blickman, Inc. tray assembly is planned for rapid loading of patients' trays from nearby refrigerators and serving tables. (Weehawken, N. J.)



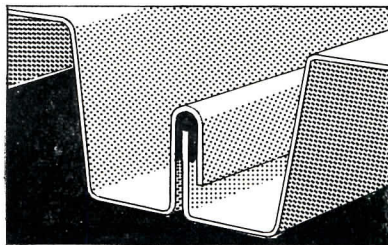
23. Hussman Refrigeration, Inc. produces a refrigerated packaging table on which food is carried over gravity conveyors under constant refrigeration. (2401 N. Leffingwell, St. Louis 6, Mo.)

(Continued on page 217)

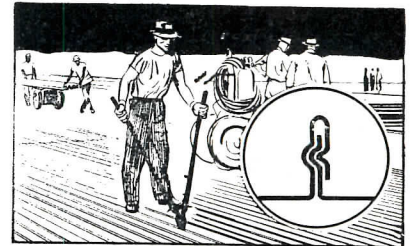
Quickly erected Q-Deck helps lower roof fire hazard



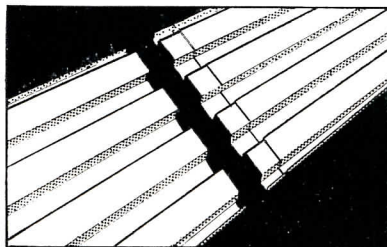
The many unique features of Robertson Q-Deck make it of special interest to the architect and engineer who is concerned about the fire hazard aspect of his flat roof design. To begin with, Robertson Q-Deck is designed with tight side and end laps to eliminate the need for an inflammable vapor seal. Its two-foot width and long span characteristics mean fewer joints, and its zinc-coated surface (or basic Galbestos) eliminates the need for field painting.



Robertson Q-Deck side laps are designed to form a standing seam. A seal in the form of a continuous caulking material assures a vapor-tight joint.



A special Robertson clamping tool mechanically fastens the side laps together, forming a steel fire barrier that remains intact as long as the structural supports are in place.



Ends of Robertson Q-Deck are sized and countersunk to produce a tight, smooth, two-inch lap joint. This lap, along with the tight side laps, provides a vapor-sealed roof construction.



Excessive amounts of asphalt are eliminated on Robertson Q-Deck because the adhesive is applied to the *insulation* . . . *not to the steel deck*. This also results in a better bond between the steel and the insulation.

Robertson Q-DECK

a product of **H. H. Robertson Company**

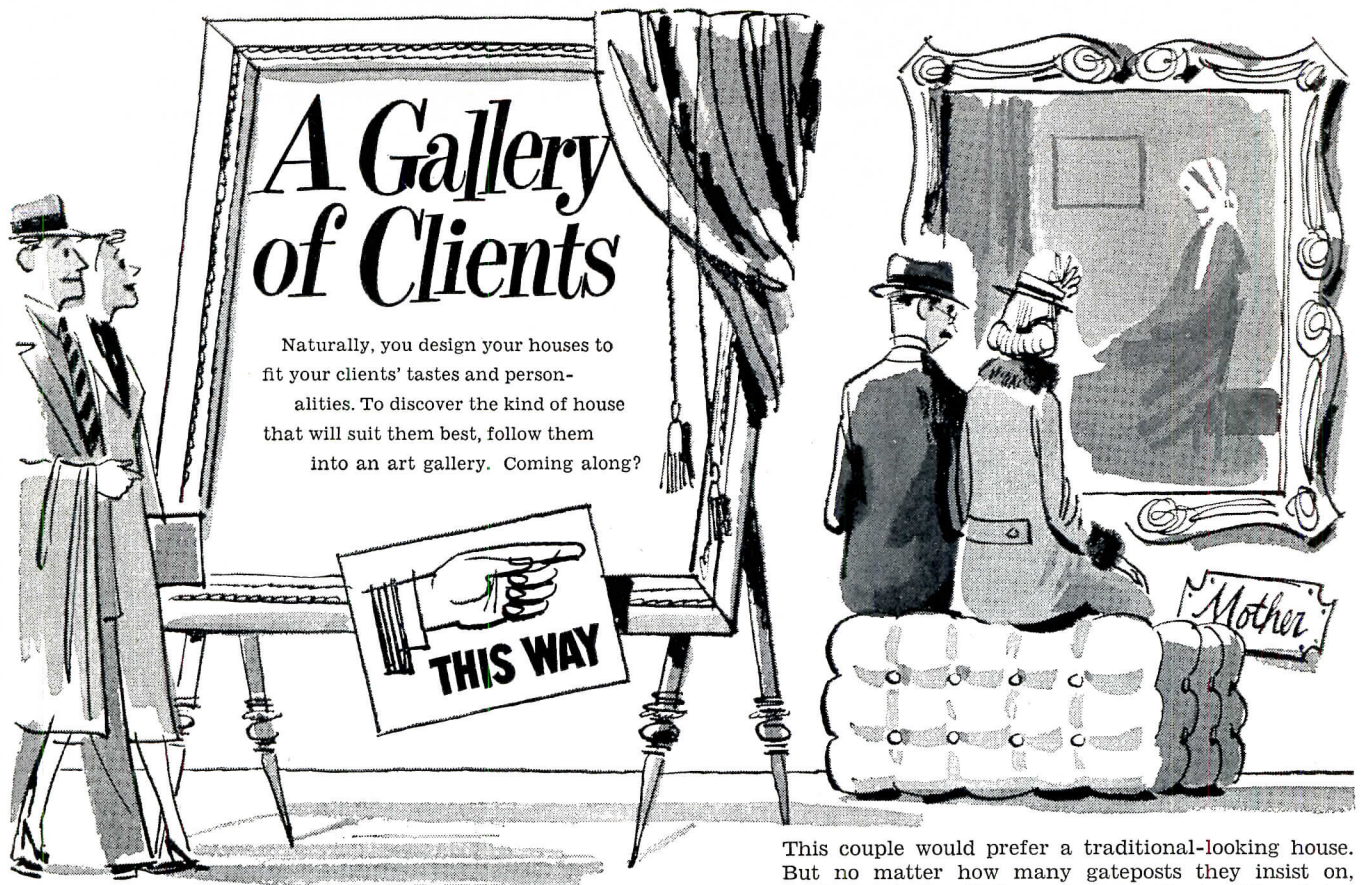
2404 Farmers Bank Building • Pittsburgh 22, Pennsylvania

In England—Robertson Thain Limited, Ellesmere Port, Cheshire

In Canada—Robertson-Irwin Limited, Hamilton, Ontario

World-Wide Building Service





A Gallery of Clients

Naturally, you design your houses to fit your clients' tastes and personalities. To discover the kind of house that will suit them best, follow them into an art gallery. Coming along?

THIS WAY

Mother

This couple would prefer a traditional-looking house. But no matter how many gateposts they insist on, don't think they'll be satisfied with traditional inconveniences. They'll want modern plumbing, modern lighting and Carrier Weathermaker air conditioning.



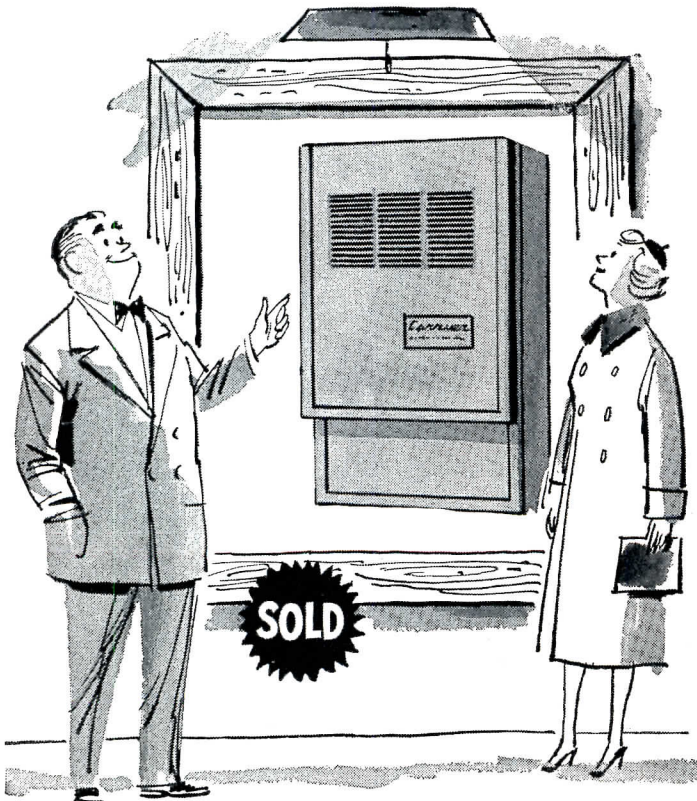
They like children. But they'll still be bound to appreciate the quiet and privacy that Carrier air conditioning brings with it. Their windows will be closed to neighborhood noises. And their children can romp about the playroom in perfect comfort, with the door shut.

New ideas interest this family. They recognize the advantages of the Weathermaker Home idea. They know that air conditioning allows you to develop a floor plan that's compact, to group windows, to eliminate them on some walls, to arrange the whole house for convenience.

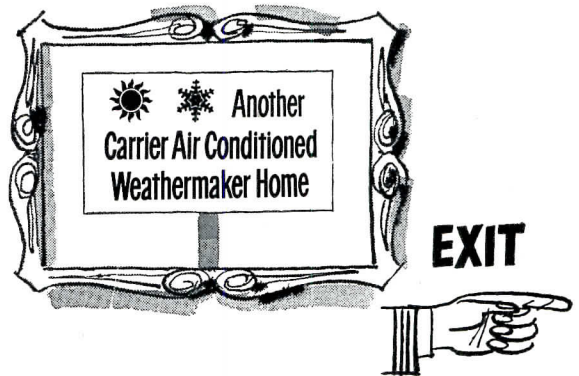


These are nature lovers. They admire trees and sunsets in paintings. Give them big windows. Let them look at nature to their hearts' content. And include the Carrier Weathermaker so they can do their looking comfortably—whether the weather is scorching hot or biting cold.

No gee-gaws for this couple. They demand logic and simplicity. If it isn't functional... out with it. They'll be fond of the Weathermaker Home idea of designing the house around the air conditioning. It lets them eliminate wings, screens, breezeways, porches and attic fans.



Well! Comfort is everybody's favorite! And this Carrier Weathermaker really delivers comfort. It heats and cools, keeps you comfortable in every season. Just 3 feet square and 5 feet high, it fits in basement, closet or utility room. It burns gas or oil, cools with electricity.



Carrier

air conditioning • refrigeration • industrial heating

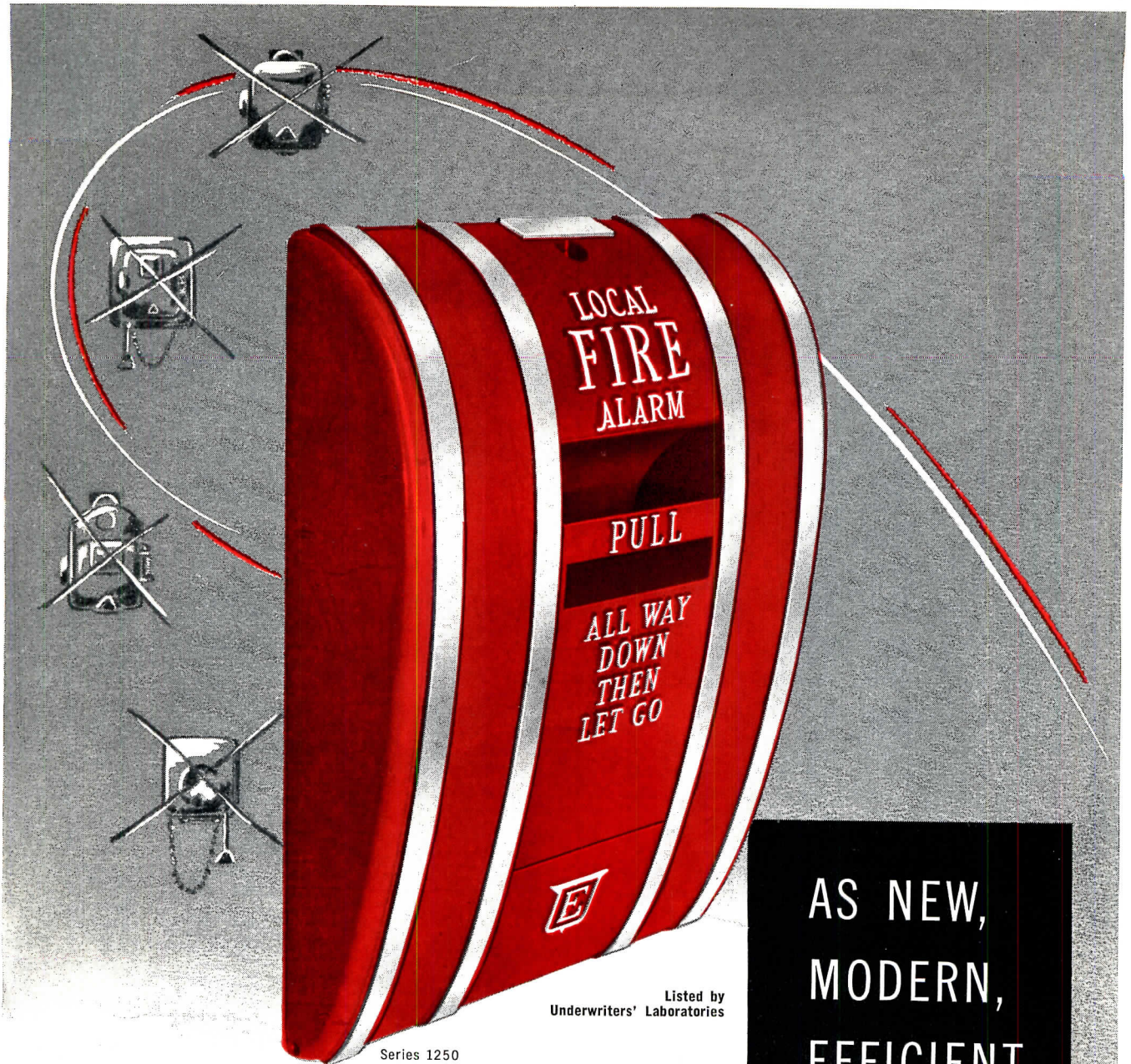
CARRIER CORPORATION, 312 S. Geddes St., Syracuse, New York

I recognize some of my clients. Please send me your Weathermaker Home idea booklets.

Name _____

Street _____

City _____ State _____



Listed by
Underwriters' Laboratories

Series 1250

AS NEW,
MODERN,
EFFICIENT
AS IT
LOOKS!

Today's architectural stress on long, unbroken wall areas . . . requires that essential equipment be *smartly designed*, as well as functional! With this in mind, the Edwards Fire Station has been *newly* styled to enhance and beautify *any* modern structure . . . Projecting only 1 7/8 inches, its tear-drop design literally hugs the wall! Nothing extends to cause accidental actuation—or spoil its smart appearance. In overall measurement, it's the smallest coded station available today! Single-action operation is simple, dependable, foolproof. One pull of the handle places the call—*never* the chance of a non-alarm!

Why not equip *your* buildings with the alarm station styled and developed in consultation with fire protection authorities, architects and electrical engineers . . . for use in any popular fire alarm system and for municipal connections . . . the Edwards Fire Alarm Station! Write for free illustrated bulletin. Dept. AR-6, Edwards Co., Inc., Norwalk, Conn.
In Canada: Edwards of Canada, Ltd., Owen Sound, Ont.

EDWARDS[®]
World's most reliable time,
communication and protection products

New Streamlined Non-Code Station Now Available



Listed by
Underwriters'
Laboratories

In line with its policy of providing the most modern signaling equipment for every purpose and condition, Edwards announces its new streamlined non-code fire alarm station No. 271.

Like the now famous coded station shown on the opposite page, this non-code station has the exclusive Edwards single-action mechanism that eliminates any possibility of non-alarm due to haste or panic. Just one motion actuates the alarm. No key to turn, no door to open before pulling handle. Also available in break-glass Model No. 270. Has tamper-resistant break-glass feature... the glass breaks when the lever is pulled.

Testing and resetting after alarm is easily accomplished with drop-front type of construction.

Station is die-cast in rugged zinc and finished in Fire Alarm Red. Small size and wall-hugging shape makes it suitable for any location. Only 3 1/8" wide, 4 5/8" high. Projects only 1" from wall.

Installation is a simple matter. Station mounts on standard square box with plaster cover. For surface mount, special Edwards conduit box No. PP. 27193 is available. Box is cast aluminum finished in red to match the station.

For complete information on Edwards Fire Alarm Systems write for Bulletin FA — or see Sweets Architectural File. Edwards Co., Inc., Norwalk, Conn. In Canada: Edwards of Canada, Ltd., Owen Sound, Ont.

EDWARDS

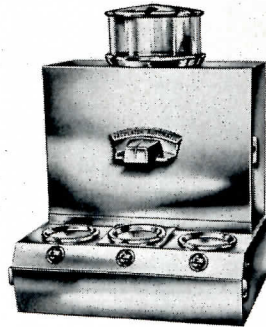
protects... everywhere!

AE PRODUCTS

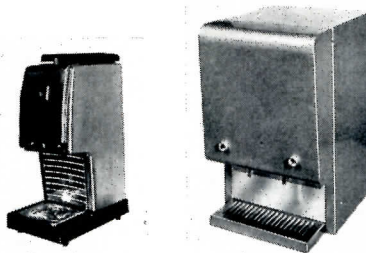
(Continued from page 213)

"PUSHBUTTON" OPERATION PAYS OFF IN LABOR SAVINGS

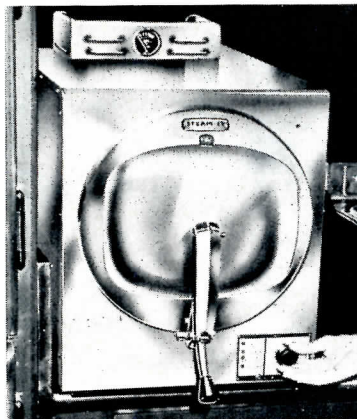
Automatic operation shows positive savings in labor and costs, reduces waste and obviates time-consuming training of personnel



24. The Hill-Shaw Co.'s "Vaculator" automatic coffee brewer makes a decanter of coffee every 3 min. with the push of a button. (311 N. Desplaines St., Chicago 6, Ill.)



25. The Silex Co. automatic coffeemaker (left) is a space-saving unit said to deliver 12 cups in a 4-min. cycle. (80 Pliny, Hartford 2, Conn.) 26. The Steel Products Co. automatic "E-Z Way Coffeemaker" (right), equipped with two push-buttons, dispenses coffee from one spigot and hot water from the other. (Cedar Rapids, Iowa.)



27. The Market Forge Co.'s automatic offering is a self-contained pressure cooker with automatic timer. (Everett 49, Mass.)

(Continued on page 220)

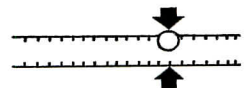
4 EXCLUSIVE ADVANTAGES

AT NO EXTRA COST WITH
WAL-LOK
Masonry Wall Reinforcing Mesh

DEFORMED — Gripping qualities are increased 4.6 times over plain wire. In pull-out tests, the 3/16" dia., 100,000 psi. tensile strength longitudinal bars break, under extreme stress, rather than pull out.

KNURLED — 150 indentations per foot .002" in depth grip the mortar like thousands of tiny claws. Improves bonding stress 3.2 times over plain wire.

CROSS BARS PROJECT — Welded across Stretcher Rods, Cross Bars project for maximum anchorage in mortar. Cross Bars are welded over Stretcher Rods without annealing Stretcher Rods or impairing tensile strength. **THICKNESS AT THE WELD ONLY 7/32"**



CORROSION RESISTANT

Cross Bars are galvanized for life-long durability but only that section which is exposed.

POSITIVE PROOF

Tests conducted by the Research Foundation of the University of Toledo offer positive proof of these statements. To our knowledge, Wal-Lok is the only masonry Wall Reinforcing based on scientific research.

WAL-LOK COMPLIES

Wal-Lok reinforcing now complies with the recommendations of the National Bureau of Standard Bulletin 3079, Requirements for Concrete Masonry Construction (Rev. of NBS Report 2462).

WRITE TODAY for your copy of the Adrian Peerless 4-page folder on Wal-Lok. It contains the data from the Research Foundation tests, specifications, additional advantages and further information about Wal-Lok masonry wall reinforcing mesh.



ADRIAN PEERLESS, INC.
1480 E. Mich. St., Adrian, Mich.

Case history
of CECO on-the-job
performance

Architect: Victor Gruen Associated
Architects & Engineers, Inc.
General Contractor: Bryant & Detwiler Company



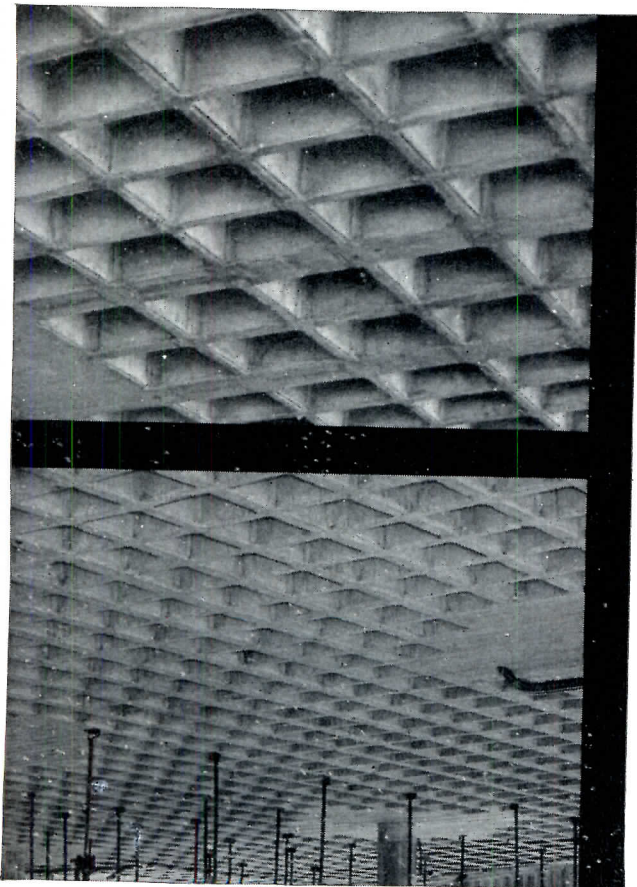
waffle construction **+** Ceco-Meyer Steelforms

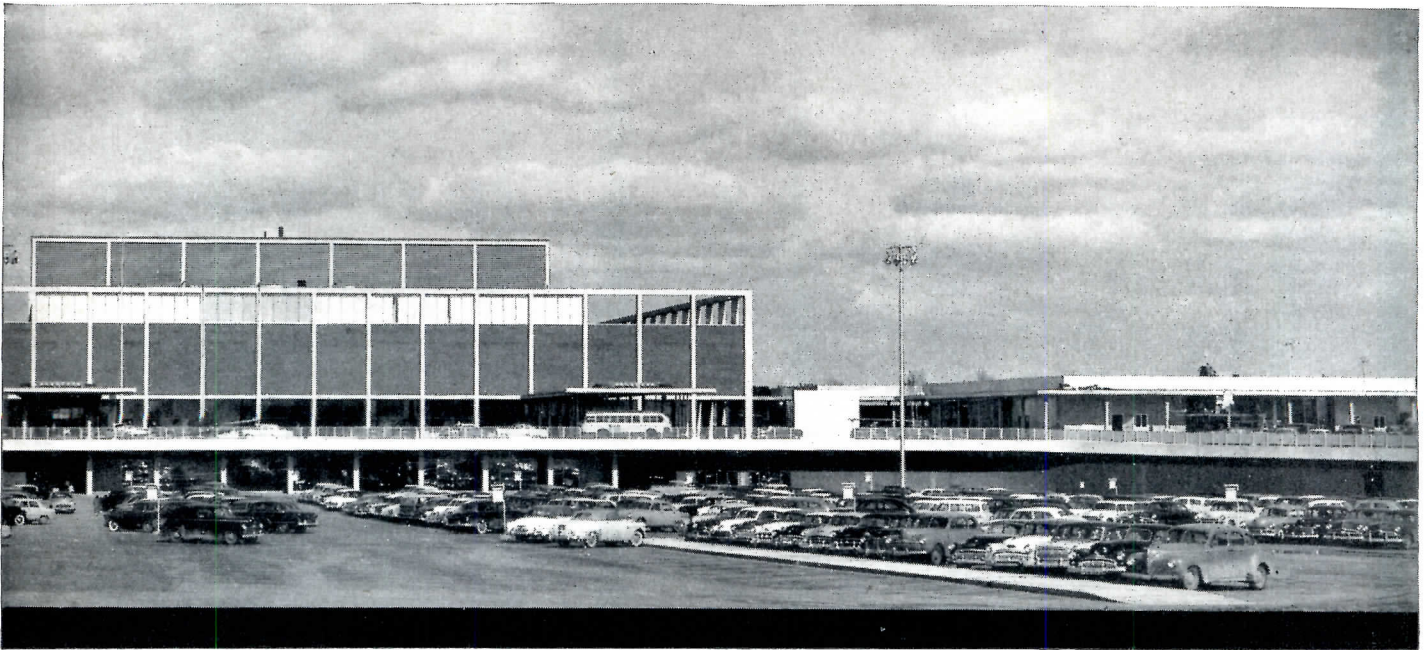
How Ceco methods saved materials

■ When architect Victor Gruen developed the original concept of Northland Center, world's largest shopping district in suburban Detroit, he had an eye for beauty and function. Beauty that would make the center a pleasant and even inspiring place to shop. Function that would make shopping as convenient and effortless as possible.

J. L. Hudson Company's branch department store is the core of the development—and here one of the major requirements was providing the greatest amount of usable space by keeping interior columns few in number and small in size. Typical spans were 29'-1" each way, and a waffle design using 14" deep Ceco-Meyer Steelforms provided a ceiling clear of beams, and kept steel, concrete and dead weight to the minimum. The saving in steel alone was 16% when compared with solid flat slab construction.

In other areas of the Hudson store and in the tenant and the service group buildings, one-way Ceco-Meyer Steelform floor





minus "lazy" concrete equals 16% steel savings

construction accounted for similar steel savings, eliminated "lazy, non-working" concrete, and kept dead load low.

Overall result in all buildings: wide areas of uninterrupted space—clear ceilings—a pleasing effect—highly functional. Ceko Engineering Service detailed placing plans for Ceko-Meyer Steelforms and reinforcing bars. This was a big project—5,000 tons of Ceko reinforcing steel delivered by truck to the job site—1,000,000 square feet of steelforms placed and removed by Ceko—a job requiring the service of a company skilled in its field and geared to deliver as the need dictated.

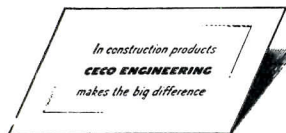
Here is another example of Ceko performing on the architect-owner-contractor-supplier team. On your next project call Ceko Product Specialists. They will help you save through product engineering. Consult Sweet's File for address. **CECO**



Two-way waffle design using Ceko-Meyer Steelforms permits longer spans, resulting in larger uninterrupted floor areas.



One-way Ceko-Meyer Steelforms also save steel and concrete, thus reducing dead load.

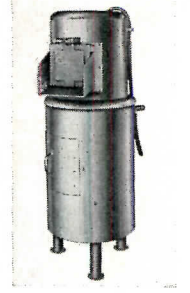
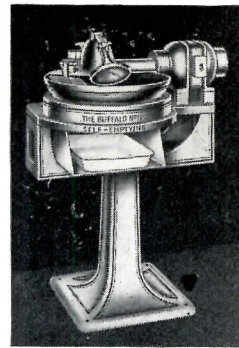
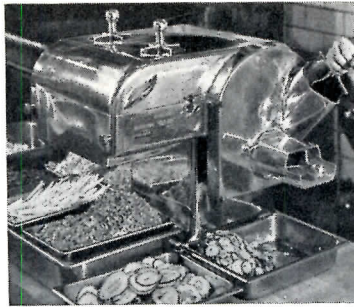


CECO STEEL PRODUCTS CORPORATION
 Offices, warehouses and fabricating plants in principal cities • General Offices: 5601 W. 26th Street, Chicago 50, Illinois

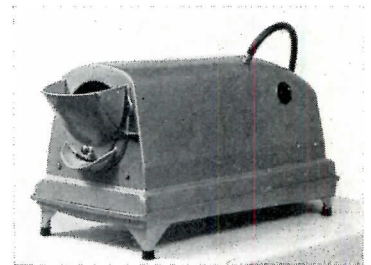
(Continued from page 217)

Automatic operation extends to the time-consuming area of preliminary food preparation also. Gone are the days of employee time wasted over potatoes or vegetables

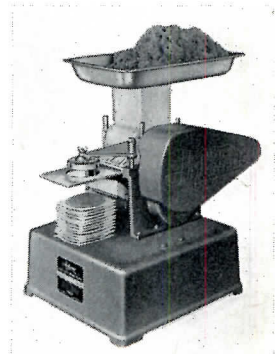
28. The Qualheim, Inc. electro-cut vegetable slicer and cutter slices, slaws, rough- and fine-chops, and cuts French fries and juliennes. (1228 Racine St., Racine, Wis.)



29. John E. Smith's Sons Co.'s "Buffalo" food chopper (left) chops raw or cooked meats, vegetables, fruits or nuts to any degree of fineness in a few minutes and then empties the batch. The machine can be cleaned by removing the top plate. (50 Broadway, Buffalo 3, N. Y.) **30. Colt's Manufacturing Co.'s "Autosan"** vegetable peeler (right) is designed to force vegetables to roll. Waste-free, fast peeling is assured by manufacturer. Flexible hose flushes every part of machine. (Hartford 15, Conn.)



31. The Veg-A-Peel Co., Inc. potato peeler cuts all shapes and sizes of potatoes simultaneously. An automatic timer can be set to turn the machine off at any time. (213-219 N. Walnut St., Creston, Iowa.)



32. The Hollymatic Corp. patty-molding machine makes round, square or chop-shape patties in any thickness. Said to produce 2100 patties an hour, the molder is completely automatic, eliminating time-consuming manual paper feeding. (433 W. 83 St., Chicago, Ill.)

"This client wants the best of everything, so we're going to specify Farlite plastics all the way through!"

FARLITE

ATTACHMENT OR A RETURN OF MONEY
 Guaranteed by
 Good Housekeeping
 FOR AS ADVERTISED THEREIN

... the very best in
PLASTIC LAMINATES

Whatever the job — residential, commercial, or industrial — you (and your clients) will be better satisfied if you specify FARLITE when you plan new construction or remodel present facilities. It's the very best in plastic laminates for partitions and paneling . . . for counter, table, desk, bar, and soda fountain tops . . . for decorative interior treatments . . . for a host of other uses. Its glass-smooth, non-porous surface is sanitary, easy to clean, permanently beautiful . . . resists heat and burning cigarettes . . . is not affected by alcohol, grease, fruit acids, mild cleaning solutions . . . will not chip or fade.

SUPERIOR CONSTRUCTION . . .
FULL RANGE OF COLORS AND DESIGNS
 Farlite's superior 5-ply construction means extra smoothness and warp resistance. Over 50 new standard colors and patterns give you full decorative range. . . edges can be supplied with metal trim or natural wood finish. *Also available in standard sheet stock or can be made up to your specifications.*

Write for descriptive folder and name of nearest distributor.

PLASTICS DIVISION
FARLEY & LOETSCHER MFG. CO., DUBUQUE, IOWA

(Continued on page 224)

REMOTE ROOM AIR CONDITIONERS

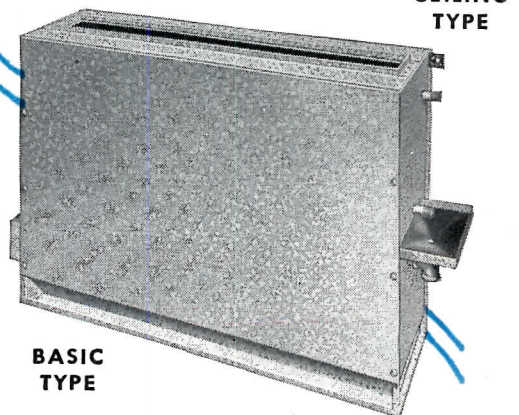
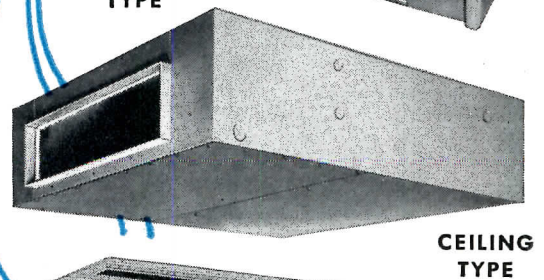
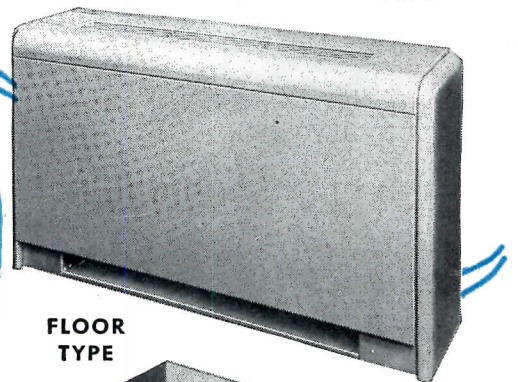
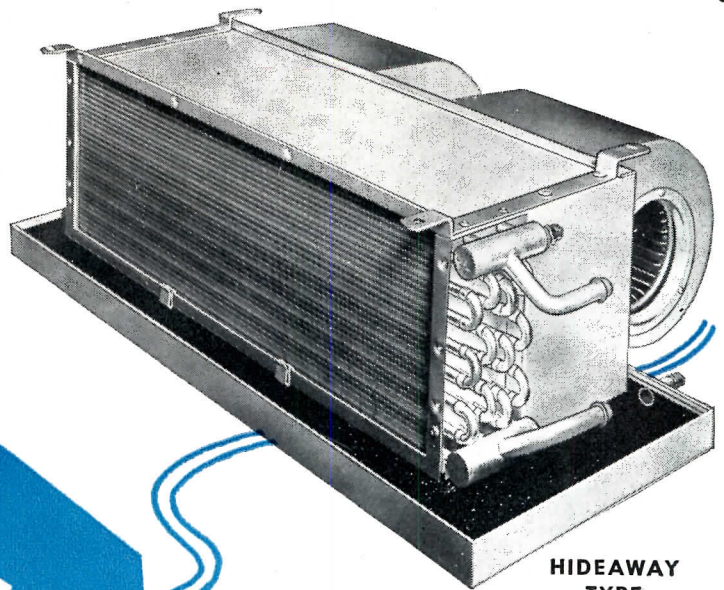
for existing buildings
or new construction



For hotels, tourist courts, apartment houses, office buildings, hospitals or residences—new or old construction, the famous family of McQuay Seasonmakers gives you widest flexibility in planning individual room air conditioning.

The popular HIDEAWAY, newest member of the Seasonmaker family, meets the requirement for a unit especially designed for concealed mounting, in furred ceilings, closets, vestibules and wherever space is at a premium. Available also in Floor type, for free standing mounting; Basic type, for fully recessed wall installations; and Ceiling type, for suspended mounting. The four types in three different sizes, 200, 400 and 600 CFM, simplify selection of the right unit for the job.

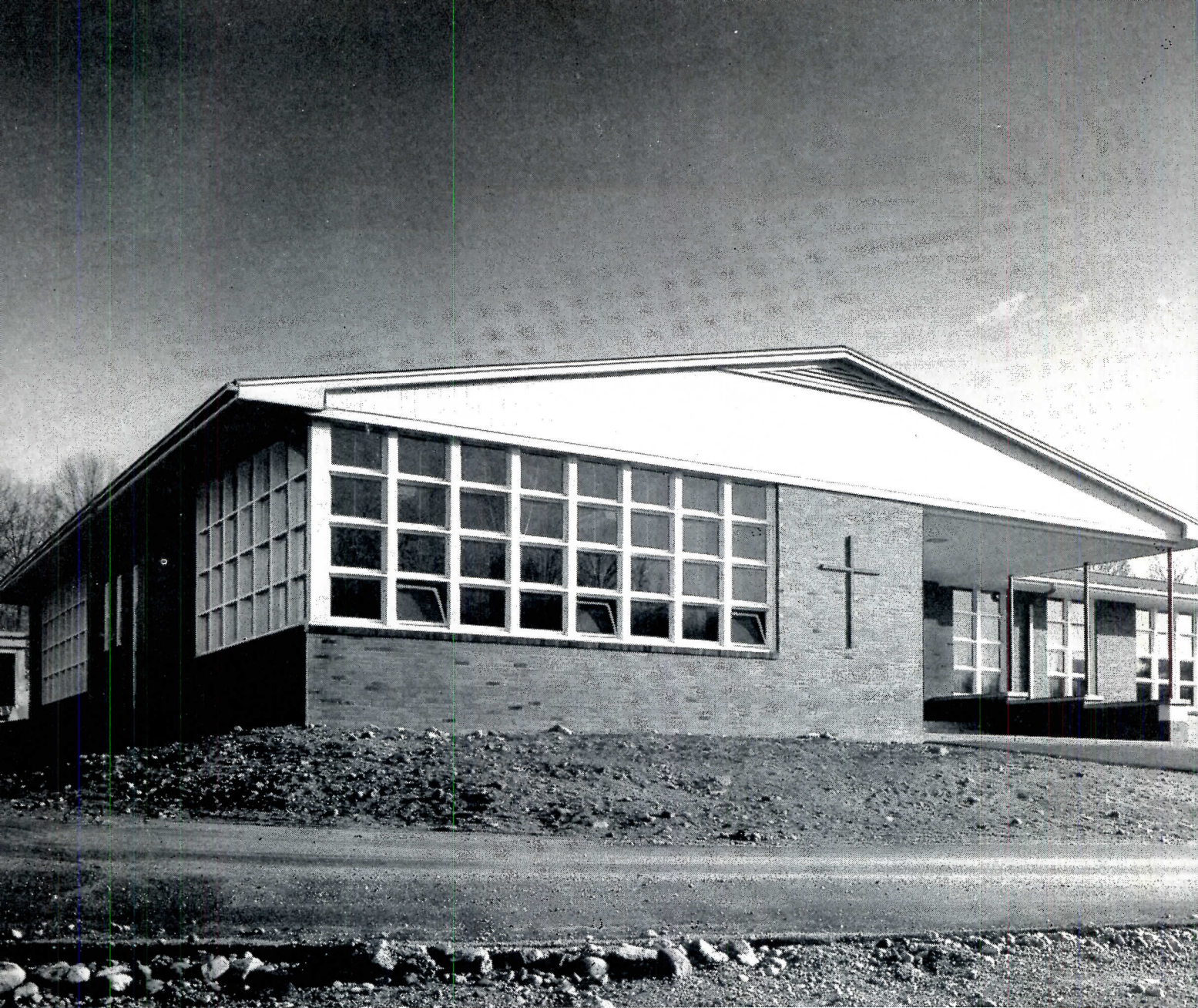
Exclusive Ripple-Fin coil construction assures long life and dependable service. All Seasonmakers are designed for quiet operation and for easy installation and maintenance. Get complete details on features and specifications in Bulletin 703. Representatives in principal cities or write McQuay Inc., 1605 Broadway N.E., Minneapolis 13, Minnesota.



McQuay INC.



★ AIR CONDITIONING ★ REFRIGERATION ★ HEATING



New Jersey school building for which architect specified 388 Flexivents Unit No. 218.

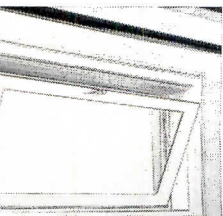
Versatile Andersen prove ideal for school

Combination of bright, airy classrooms contained in a building of pleasing design has been achieved through effective use of Flexivents in Holy Rosary School at Erskine Lakes, New Jersey. Flexivents were specified by Architect, Brother Cajetan J. B. Baumann, O.F.M., A.I.A. Builder David Stokem finds Flexivent's "price is right, installation is simple and there are no window failures." In Holy Rosary School the architect has used

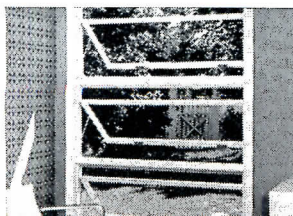
large, 32-sash groupings of Flexivents with bottom and third row vented hopper style, alternate rows fixed glazing. Dimensions of the Flexivent No. 218 used here adapt perfectly to the architectural style of the building. Utilization of both operating and fixed sash provide for the fresh air and sunshine so desirable in school rooms. WINDOWALLS sold by established millwork dealers throughout the United States including the West Coast.

FLEXIBLE IS THE WORD FOR *FLEXIVENT*

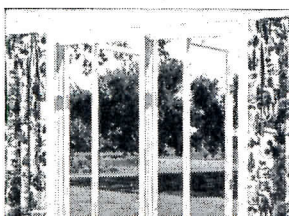
Hopper position



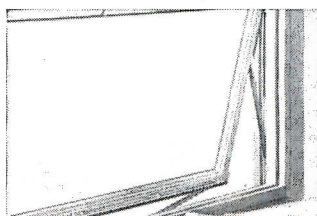
Awning position



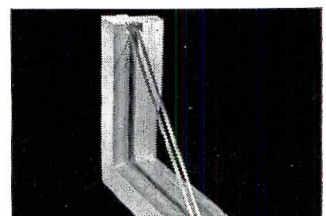
Casement position



New optional Roto Lock
Underscreen Operator...



Optional Andersen
Double Insulating Glass...

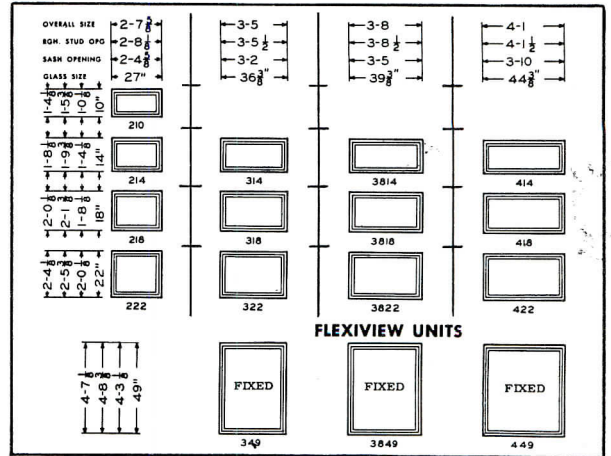




**New FLEXIVIEW picture units...
new 3'8" width make FLEXIVENT
more versatile than ever!**

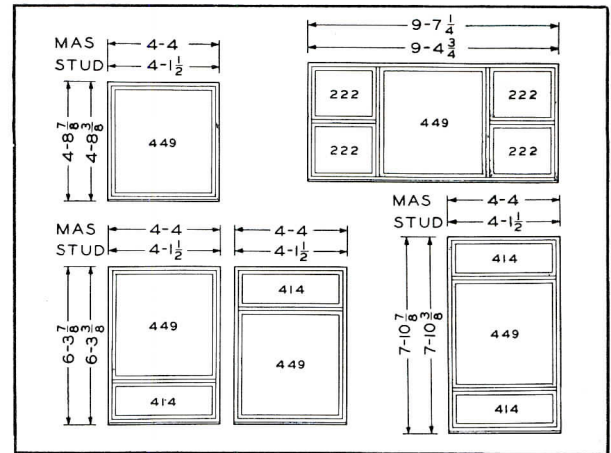
Even greater design possibilities now stem from the versatile Flexivent. New Flexiview Units, picture window partners to the Flexivent, can be combined with either fixed or operating Flexivent Units to form WINDOWALLS of remarkably low over-all cost per square foot.

Addition of the new 3'8" width to the Flexivent line, including the Flexiview Picture Units, makes the Flexivent perfectly adaptable to 4' modular panel systems of construction.



New table of sizes shows complete new Flexivent line. Flexiview Picture Units are glazed either DS with quality window glass or with Andersen Double Insulating Glass.

**FLEXIVENT units
construction**



Suggested combinations particularly adaptable to schools, indicate the wide range of picture window possibilities available with addition of new Flexiview Picture Units to the Flexivent line.

**Andersen
Windowalls**
COMPLETE WOOD WINDOW UNITS

TRADEMARK OF ANDERSEN CORPORATION

Andersen Corporation
BAYPORT, MINNESOTA

Andersen Corporation
Bayport, Minnesota

AR-64

Please send me detail information on Andersen Flexivent Windows including new Flexiview Picture Units.

Please check also send Detail Catalog
 also send Tracing Detail File

Name

Firm

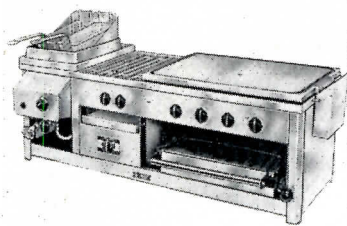
Address

City..... Zone..... State.....

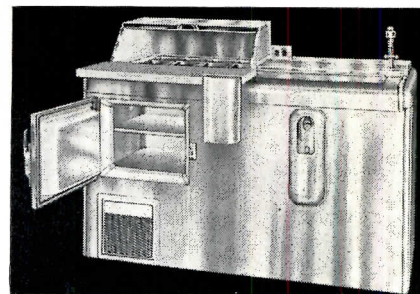
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COMPACTNESS FEATURED IN "SHORT-ORDER" COOKERY

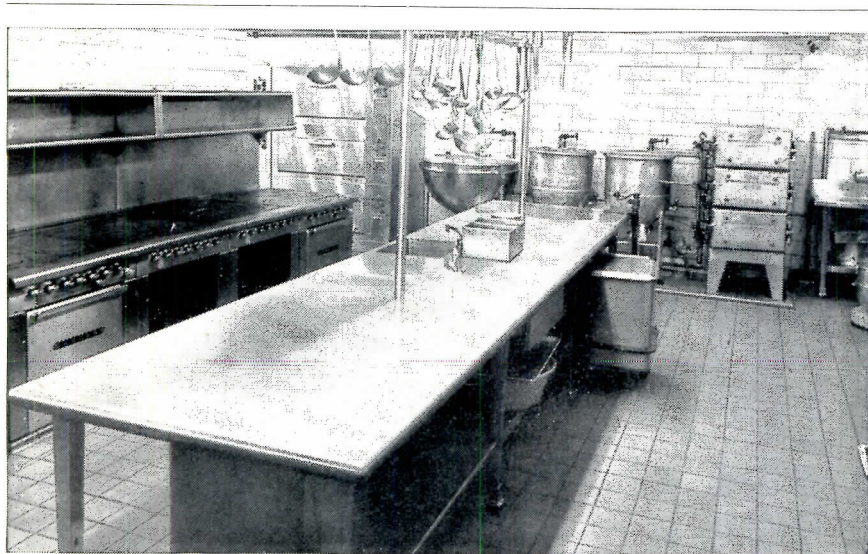
In soda fountains, cafeterias and luncheonettes, quick-service equipment is needed to provide the "quick bite." Compact, rugged construction and maximum accessibility are stressed in this "short-order" equipment



33. The Cecilware-Commodore Products Corp. "Fourway Broiler" combines in a single unit a fryer, a grill, an infra-red broiler and a cooker with time controls. (206 Canal St., New York 13)

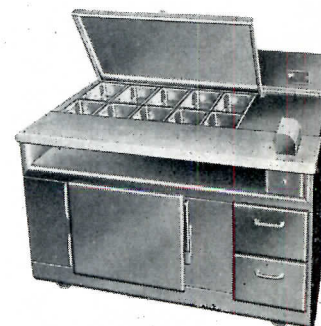


34. Howard Refrigerator Co., Inc.'s "Bain-Marie Elite" includes in a 60-in. length, eight stainless steel salad pans in a refrigerated compartment, a 4-cu ft refrigerator, stainless steel waste container, wood carving board, double electric receptacle, beverage cooler, water faucet, bottle opener. (4745 Worth St., Philadelphia 24, Pa.)



MILLS RESTAURANT • COLUMBUS, OHIO

ARCHITECTS • BENHAM RICHARDS AND ARMSTRONG



35. Dunhill Soda Fountain Corp.'s combination 48-in. bain-marie contains 10 salad pans, stainless steel refuse hood and drawer, maple cutting board and electric outlet over refrigerated storage. (79-85 Walworth St., Brooklyn, N. Y.)

eager appetites satisfied 42 years by Van customer

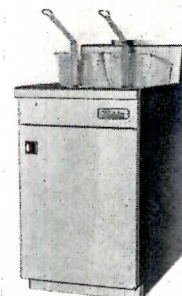
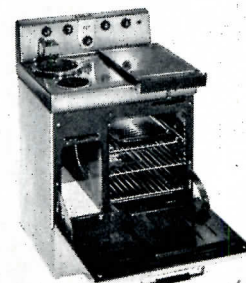
- When The Greenfield-Mills Restaurant Co. decided to rebuild their restaurant at 77 South High, Columbus, it was natural that Van, who had installed their other restaurants at Columbus, Detroit, Cleveland and Cincinnati, should furnish all the equipment.
- Evolved after careful study of self-service restaurants all over the country, limited only by the lot size, every idea for lower food costs, less food waste, greatest customer appetite satisfaction was incorporated.
- In the uniquely arranged single fast-serving salad counter and two hot food counters as in the heart of the restaurant . . . the kitchen . . . Van's gleaming stainless equipment serves as it has in this chain for a quarter of a century.
- Whatever your food service equipment problem, use Van's century of experience.

The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

Branches in Principal Cities

429 CULVERT STREET

CINCINNATI 2, OHIO



36. The Hotpoint Inc. "Quintette" (left) is a 30-in. cooking center — with oven, broiler, surface cooker, fry kettle and griddle. (227 So. Seeley Ave., Chicago 12, Ill.) **37. The J. C. Pitman & Sons, Inc.** "Friolator" (right) is a small counter model deep fat fryer which can be used with manufactured, mixed natural or liquefied petroleum gas. (Concord, N. H.)

(Continued on page 228)

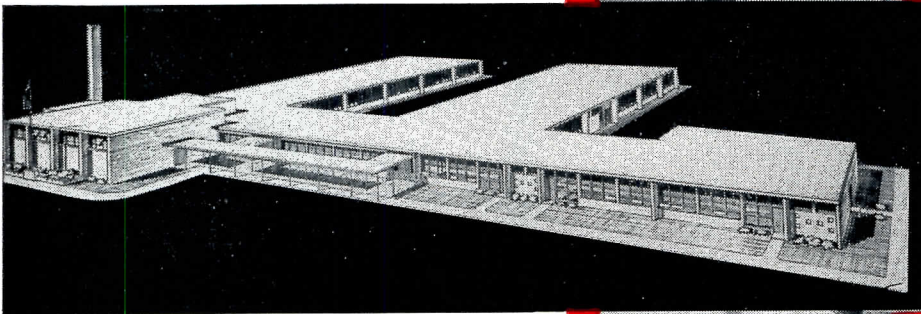
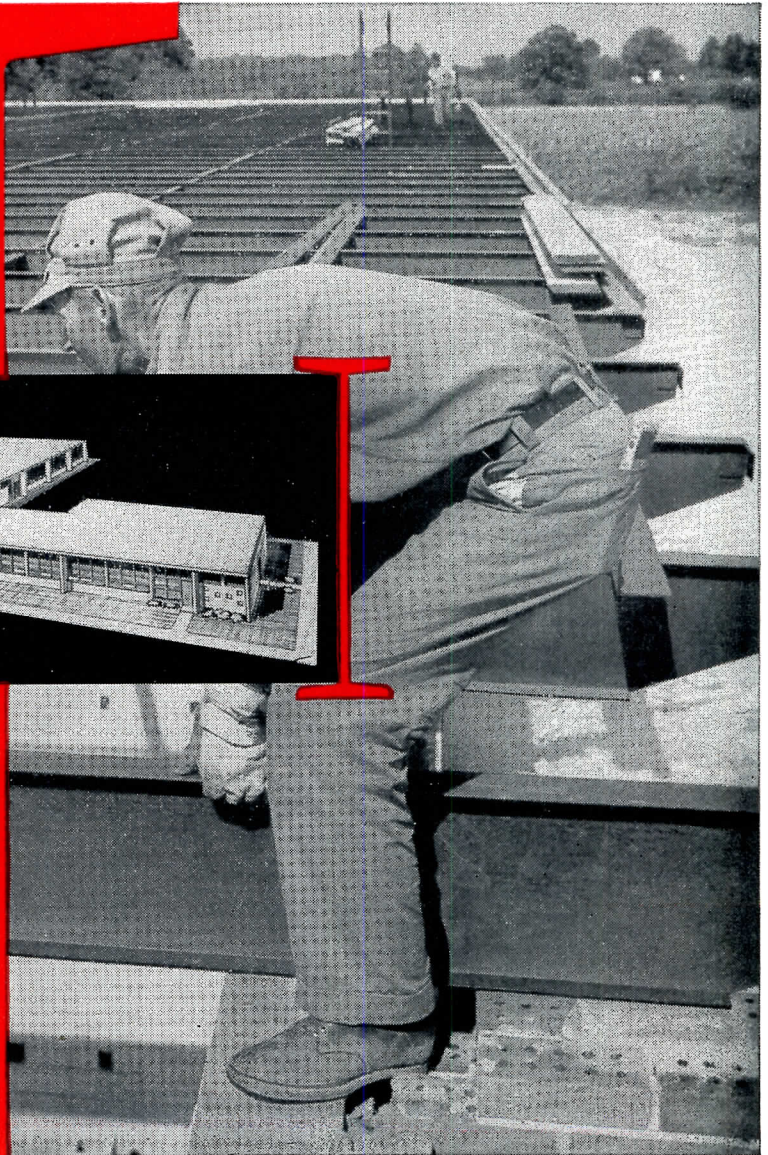


Junior Beams

fit modern design and building budget of Bascom Elementary School

*Today's new school must be functional,
permanent, safe and economical to build.*

To realize these features in the Bascom Elementary School, Leavittsburg, Ohio, Architect Arthur F. Sidells specified J&L Junior Beams for purlins throughout the entire roof area. These 12 in. Junior Beams—11.8 lbs. per ft., 29 ft. long—proved a good choice to keep material and handling costs to a minimum.



The Campbell Construction Company of Warren, Ohio was the general contractor and J. A. McMahon, Inc., of Niles, Ohio was the steel fabricator. On the job, both found Junior Beams easy to handle and quickly adaptable to the ultra-modern design of the building. The raising, positioning and fastening of these light-weight structurals required only 3 men and a portable gin pole.

At the eaves, the pre-fabricated Junior Beams were fastened atop the masonry walls and lintel beams and cantilevered four feet beyond the outside walls to support an attractive overhang as well as the main roof. Thus Junior Beams solved a difficult problem in modern design.

There are many other ways versatile J&L Junior Beams can help solve your design problems and facilitate construction. They're *easy to install, rigid, vibration resistant, shrink proof, and have the lowest deflection factor of any structural section of equivalent weight.*

Find out! Write today for our new booklet "J&L Junior Beams." It shows how Junior Beams are used as floor joists and roof purlins with loading and spacing tables for various spans.



Jones & Laughlin
STEEL CORPORATION — Pittsburgh

Jones & Laughlin Steel Corporation
Dept. 466, 3 Gateway Center, Pittsburgh 30, Pa.

Please send me a copy of the booklet entitled "J&L Junior Beams."

Name _____

Company _____

Address _____

Utica Mutual Insurance Company's in New Hartford, N. Y.,



HERCULITE DOORS, surrounded by large panes of Herculite Tempered Plate Glass, and the clear Plate Glass windows beyond, give this reception room a cheerful, open atmosphere.

new headquarters building features PITTSBURGH GLASS



THIS NEW, MODERN building of the Utica Mutual Insurance Company is glazed with approximately 400 large Pittsburgh Polished Plate Glass Twindow units—"the windows with built-in insulation"—for maximum efficiency, good employee morale and adequate lighting. The high insulating value of Twindow reduces the load on the air conditioning and heating system. Among the other Pittsburgh products utilized in this building are Polished Plate Glass interior partitions and doors, Pittsburgh Doorways, Mirrors, Pitco De Luxe Metal, Gunmetal Carrara Structural Glass for the reception desk. Architects and Engineers: Childs & Smith, Chicago, Illinois.

THIS PARTIAL VIEW of the private dining room shows the use of Twindow units. Here, as in the other areas of the building, Twindow is set in Pitcco Metal. Summer or winter, employees can eat, relax and enjoy the outside view, because of the exceptional insulating properties of Pittsburgh's Twindow.

Design it better with **Pittsburgh Glass**

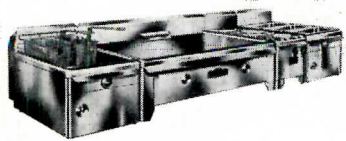


Your Sweet's Catalog File contains detailed information on all Pittsburgh Plate Glass Company products . . . Sections 7a, 13e, 15b, 16b, 21.
PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

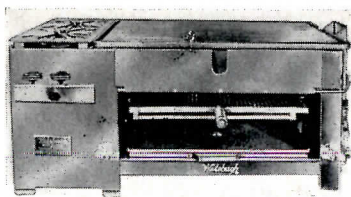
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

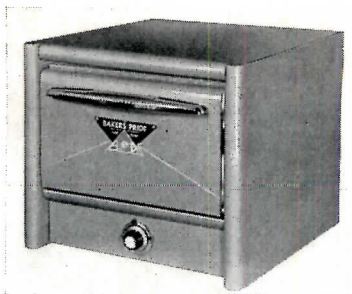
(Continued from page 224)



38. The Anetsberger Bros. Inc. complete matched counter unit includes a fryer, grill, hot plate and food warmer, all within 61 $\frac{7}{8}$ in. (166 N. Anets Dr., Northbrook, Ill.)



39. The Lyons-Alpha Products Co., Inc. "Welsbach Hotzone" two-burner broiler-griddle is equipped with combination food rack with grease deflector pan and grease pan, a handle that stays cool and an external adjustable device for raising and lowering food rack. (469 Broome St., New York 13, N. Y.)



40. The Baker's Pride Oven Co., Inc. 2-ft counter pizza oven turns out four 16-in. pies in 5 min., according to the manufacturer. (1641 East 233rd St., New York 66, N. Y.)

You get what you specify

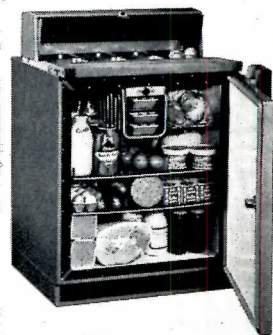
NOW — floor, shower, roof drains and expansion joints

- Specifically labeled
- Individually packaged

when you specify McDonald

When you want a certain size and type drain or expansion joint, there's one sure way to get it. SPECIFY McDONALD. McDonald pre-assembles, packages and labels them at the factory. They go through the wholesaler to the plumber and on the job factory fresh. Each assembly is packaged and clearly labeled so there can be no mistake. So be sure you specify McDonald drains on your next job. And make sure you get exactly what you asked for.

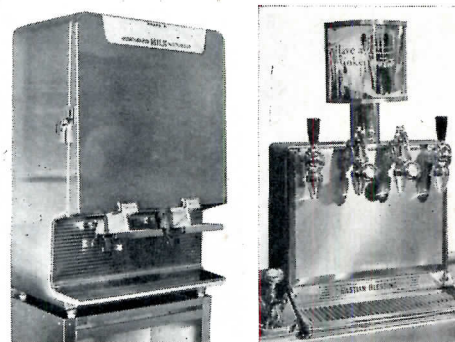
A. Y. McDONALD MFG. CO.
DUBUQUE, IOWA
 Plumbing Drainage Products Division



41. The Glascock Bros. Mfg. Co.'s 27-in. sandwich bar, with eight salad pans under a roll-down lid, a maple work top and detachable crumb box, covers refrigerated storage area. (Muncie, Ind.)

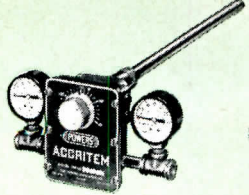
LIQUID DISPENSERS MODERNIZED

No longer is it necessary to open a bottle or mix ingredients for every beverage order. A flick of the wrist and a ready-made milkshake or soft drink is in the glass

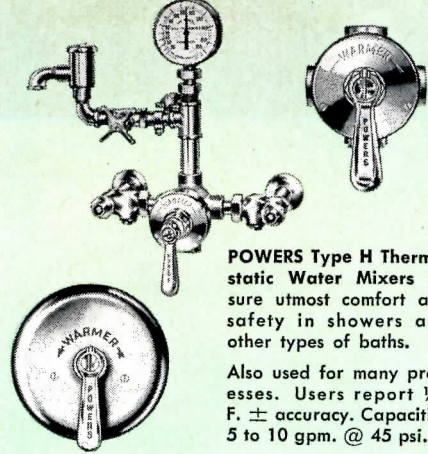
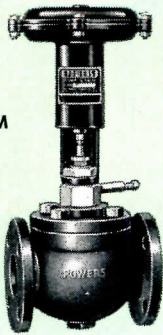


42. The Norris Dispensers Inc. "Deluxe" milk dispenser (left) eliminates the need for individual bottles of milk—saves labor, time and storage space. (Minneapolis, Minn.) **43. The Bastian-Blessing Co.'s** line (right) includes a "Coldpoint Cooler Draft Station" with four draft heads—usually two for ready mixes and one each for soda and water. (4201 W. Peterson Ave., Chicago 30, Ill.)

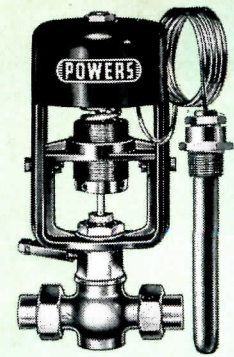
(Continued on page 232)



Above: **POWERS ACCRITEM** Temperature Regulator, is water or compressed air operated. Controls **FLOWRITE** diaphragm valve (right). Widely used for Water Heaters and Industrial Processes.

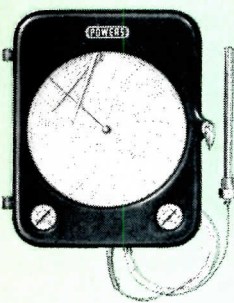


POWERS Type H Thermostatic Water Mixers insure utmost comfort and safety in showers and other types of baths. Also used for many processes. Users report $\frac{1}{2}^{\circ}$ F. \pm accuracy. Capacities 5 to 10 gpm. @ 45 psi.



Powers No. 11 Self-Operating Regulator widely used for water storage heaters, heat exchangers, fuel oil pre-heaters and many industrial processes.

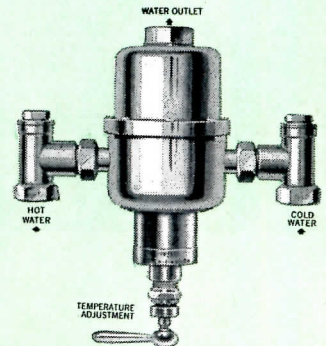
WATER Temperature CONTROL?



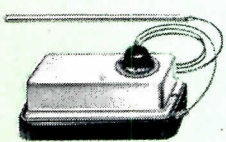
Powers Series 100 Recording Controller. Compressed Air Operated.



POWERS FLOWRITE V-Port-Characterized Diaphragm Control Valve.



Powers Thermostatic Water Controller for regulating temperature of multiple type showers, hydro-therapy and industrial processes. Capacities 22 to 125 gpm. @ 45 psi.



Powers Remote Bulb Type D Thermostat for Unit Air Conditioners.

POWERS PACKLESS VALVES



For controlling chilled, or heated water in unit air conditioners. No leakage. No packing maintenance.

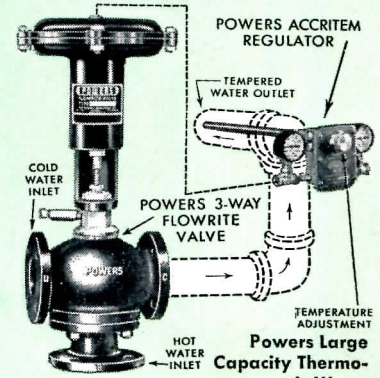


Call POWERS

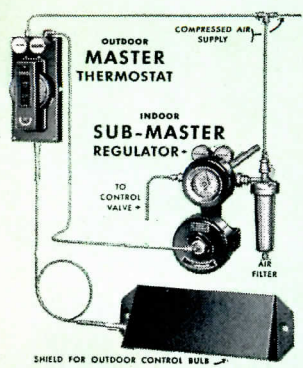
Most Complete Line of Controls Made
Only a few are shown here

for All Types of Baths, Water Heaters and Heat Exchangers

- Forced Hot Water Heating Systems
- Radiant Panel Heating Systems
- Air Conditioning Units using Chilled and Heated Water
- Cooling Water for Air Compressors, Diesel, Gas Engines, and Cyclotrons
- Many Industrial Processes: Photo Developing, X-Ray, Color and Ordinary Film, Lens Polishing and Grinding, Chocolate Enrobers, Plastic Molding Presses, etc.



Powers Large Capacity Thermostatic Water Mixing Valve Controlled by an **ACCRITEM** Temperature Regulator. Capacities 20 to 1200 gpm. @ 45 psi.

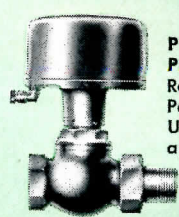
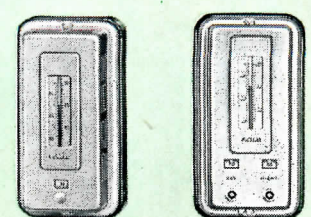


Powers MASTROL Control for regulating forced hot water heating systems.



Our More than 60 Years Experience will be valuable in helping you select the right control for your requirements. Contact our nearest office or Write us direct for Condensed Catalog Rb 24.

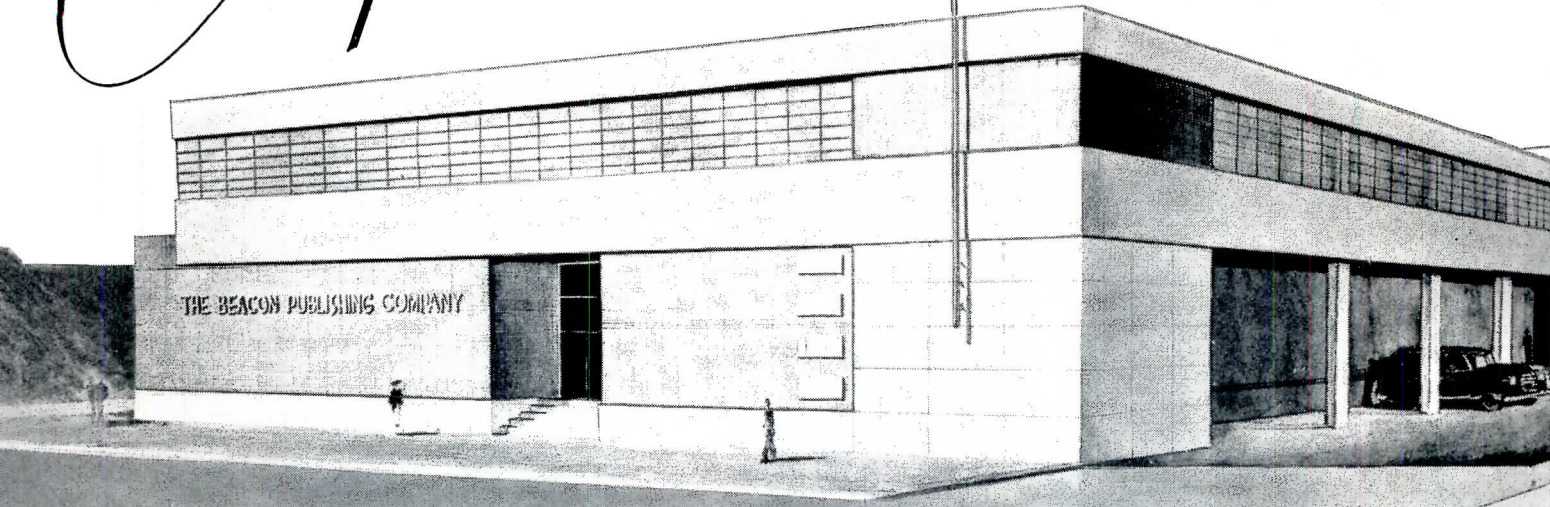
THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in Over 50 Cities in the U.S.A., Canada and Mexico



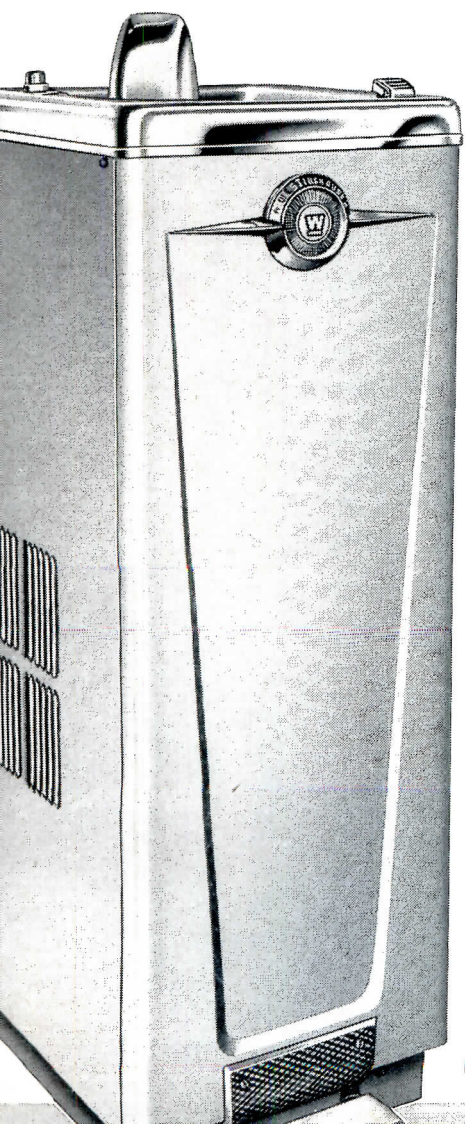
Powers Room Type Pneumatic Controls for Radiant Heating-Cooling Panels, Convectors and Unit Ventilators. Valves are packless. No more packing maintenance. No leakage.

Congratulations

TO ARCHITECTS:
*W. I. Fisher & Company
of Wichita, Kansas*



The Beacon Publishing Company's new plant in Wichita, Kansas.



From the roaring presses beneath this roof the latest news is hurried to the citizens of Wichita by The Beacon Publishing Company. The graceful structure offers the utmost in contemporary planning. Its design is distinctive; its appearance clean and efficient.

The architects have chosen Westinghouse Water Coolers to contribute to the health and morale of employees of the *Wichita Beacon* because Westinghouse gives you more cold water per dollar of investment. This is due to the increased cooling capacity and lower operating costs that the 1954 Westinghouse Water Cooler line provides.

Model WS5B . . . with a 5-gallon per hour capacity this unit is ideal for small commercial or industrial establishments. Has static air-cooled condenser which eliminates fan motor and fan noise.

WSB3B
3-Gallon,
Bottle Cooler

WS5B
5-Gallon,
Static Air Cooled

WS8B
8-Gallon,
Static Air Cooled

WA13B
13-Gallon,
Air Cooled

WA17B
17-Gallon,
Air Cooled

WW14B
14-Gallon,
Water Cooled



The Westinghouse Pay-Way Plan is a simple formula based on time and motion studies which proves that proper placement of water coolers in relation to work areas can save many payroll dollars every year.

right now little thought is given to the many dollars being expended on unnecessary employe steps caused by improperly placed water coolers. Much time is wasted, therefore efficiency is correspondingly decreased.

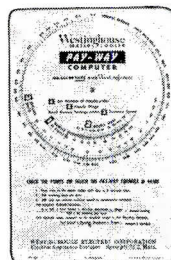
way up in the ranks of top management, there is a growing concern over waste and its causes. Let us demonstrate to you how utilization of this Pay-Way Plan can prevent this waste.

is the number of water coolers you now plan sufficient? Are they efficiently located? By using the Pay-Way Computer and Application Chart we can help you make specific recommendations on your client's water cooler requirements.

Pay - Way has been used by many industries of all sizes and types with great success. They would be the first to tell you that it is worth your time to drop us a card for more information on this absolutely free Westinghouse Pay-Way Plan.

FREE PAY-WAY COMPUTER

Send for this handy computer to help you select the proper number, type and location of water coolers which you now plan. Write today!



YOU CAN BE SURE...IF IT'S **Westinghouse**

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division • Springfield 2, Mass.

WW20B
20-Gallon,
Water Cooled



WSE8B
8-Gallon,
Static Air Cooled
Explosion-Proof



WWE14B
14-Gallon,
Water Cooled
Explosion-Proof



WAC2
Compartment
Pressure Cooler



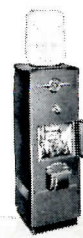
WAP7A
7-Gallon,
Remote Cooler



WWP13
13-Gallon,
Remote Cooler

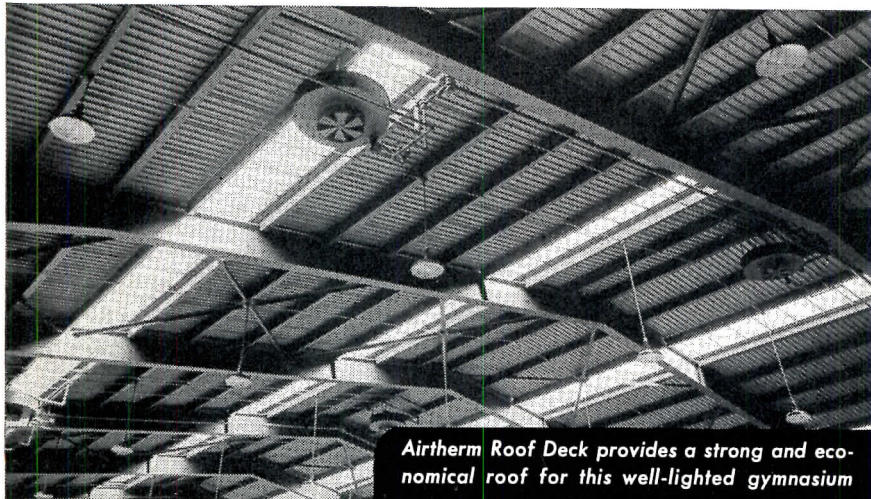


WBC1
Compartment
Bottle Cooler



WIDER

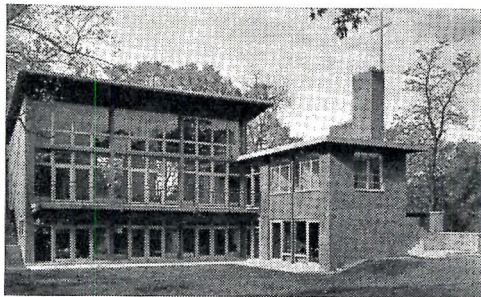
Airtherm ROOF DECK



Airtherm Roof Deck provides a strong and economical roof for this well-lighted gymnasium

designed for a wide range of applications

Airtherm Steel Deck Sheets are furnished in 30" widths (the widest in the industry) with five ribs spaced on 6" centers. These ribs, 1 5/8" deep, have a bearing surface of 5/8" and a top opening of only 3/4" wide. These wider, self-aligning sheets mean fewer longitudinal laps with resultant savings in construction time and costs.



In this church the attractive appearance of painted Airtherm Roof Deck adds functional beauty to the clean design

Airtherm Decking provides a strong, safe and durable steel roof in flat, pitched or arched construction. It has been proved in installations as side walls, partitions, canopies, and as a sub-base for concrete or aggregate flooring. This versatility, plus its attractive appearance, has led to many unique applications in a wide range of structures.

18-GAUGE AIRTHERM ROOF DECK

	PROPERTIES
Section Modulus (in.) 3	.220
Moment of Inertia (in.) 4	.263
Resisting Moment (in lbs.)	3960

To care for all contingencies relative to geographical areas and various purlin spacing, Airtherm Decking is also manufactured in No. 22 Gauge and No. 20 Gauge metal thicknesses.

FABRICATED
PRODUCTS DIVISION

Airtherm



For more complete information consult our catalog in Sweet's 2dAi, or write . . .

MANUFACTURING COMPANY

747 South Spring Avenue
St. Louis 10, Missouri

Member: Metal Roof Deck Technical Institute

AH PRODUCTS

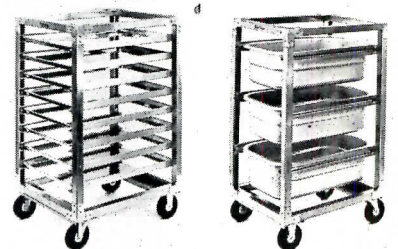
(Continued from page 228)

EQUIPMENT DISPENSERS, MOBILE RACKS SAVE STEPS

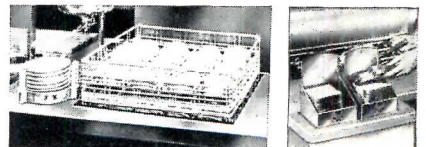
An important and effective development in the food service field has been the design of equipment on wheels and mechanized dispensing units. Portable equipment of all types saves restaurants and institutions miles of unnecessary travel in kitchens and dining rooms, reduces labor and breakage costs



44. The W. H. Frick Inc. "Dispensator" is loaded in dishwashing section and wheeled to dining area or to serving counter. Dishes, glasses, bowls, etc., can be stacked at comfortable working height. (1808 Union Commerce Bldg., Cleveland 14, Ohio.)



45. McClintock Mfg. Co.'s "Pan-L-Karts," equipped with foot brakes, rubber bumpers and tie bars for positive rigidity, hold pans for storage of meat and food products for space-saving and low-cost handling. (2700 So. Eastern Ave., Los Angeles 22, Calif.)



46. The American Machine & Foundry Co. manufactures easily installed "Lowerator" dispensers. Calibrated spring action raises racks of dishes, cups, glasses, etc., automatically to counter level. Bread or sandwich "Lowerator" has a slide-out crumb tray for easy cleaning. (485 Fifth Ave., New York 17, N. Y.)

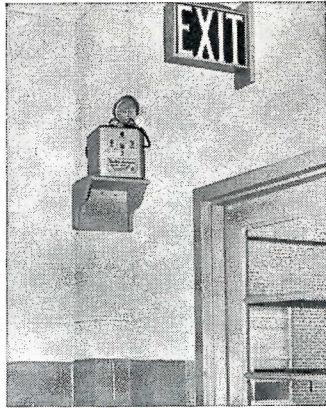
(Continued on page 234)

POSITIVE PROTECTION FOR PERSONNEL AND PROPERTY

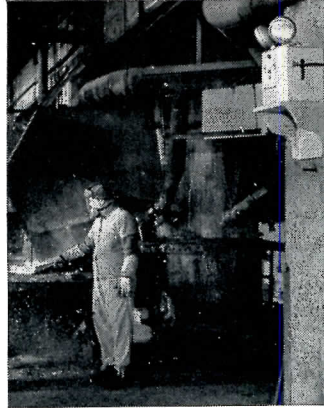
... with new Exide Lightguard emergency lighting units!



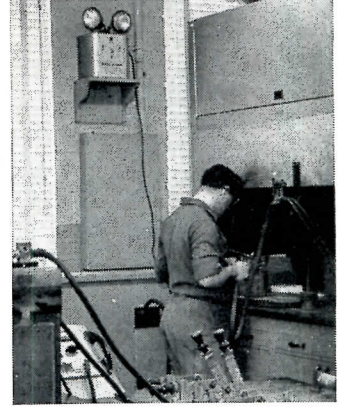
CAFETERIAS



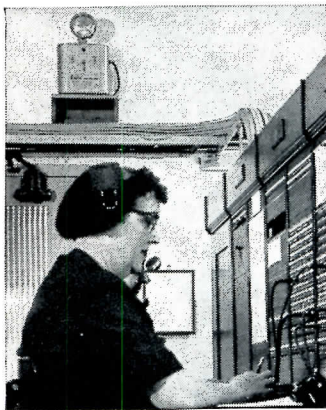
FIRETOWERS AND CORRIDORS



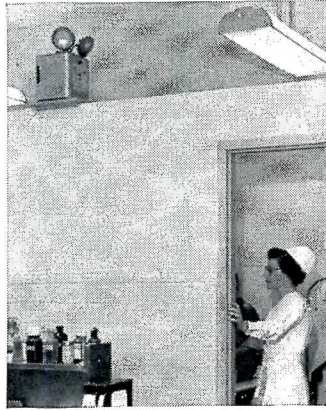
DANGEROUS OPERATIONS



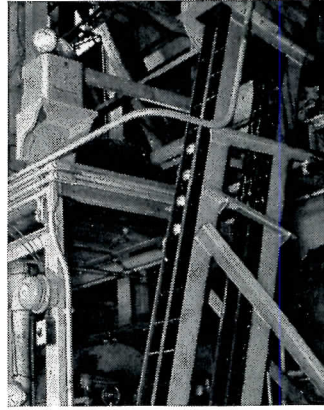
LABORATORIES



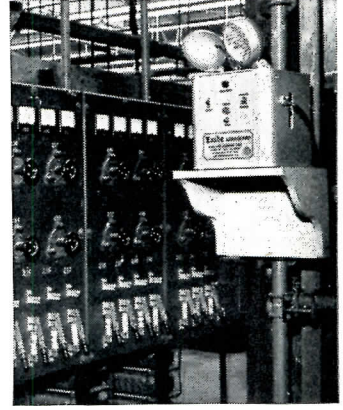
TELEPHONE SWITCH BOARDS



DISPENSARIES



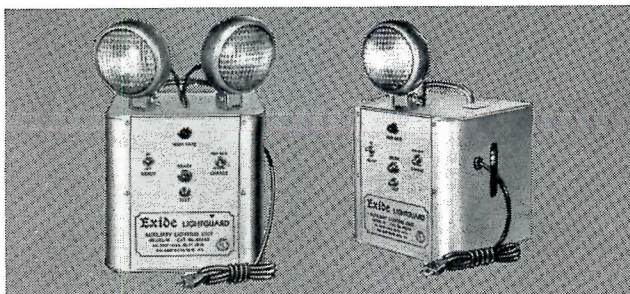
CONTINUOUS OPERATIONS



CONTROL PANELS

ALL OF THESE SPOTS need emergency lighting protection for workers and property in the industrial plants you plan to design or modernize. There are many more . . . in fact, large plants have required as high as 200 units to supply adequate protection against an interruption to the normal electrical supply brought about by storms, floods, accidents, fires or other causes beyond the control of the utility

companies. *When lights go out*, Exide Lightguards go on, instantly, automatically! They guard against injuries; they minimize property damage, pilferage, and enable control of vital processes to be maintained. For maximum emergency lighting protection, for long range economy of operation with a minimum of maintenance, specify genuine Exide Lightguard protection.



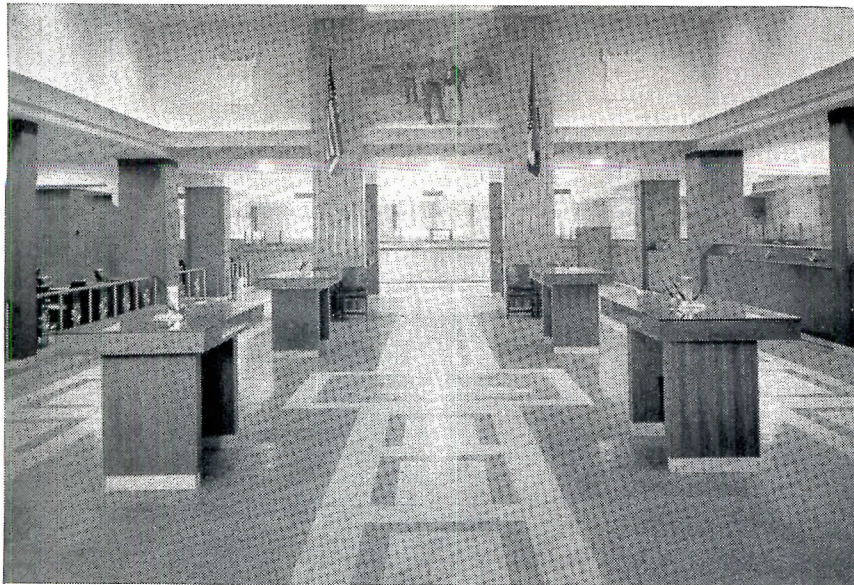
THE NEW MODEL M has a two-rate charger—*high rate or trickle*. After the emergency, automatic controls recharge the Exide battery specially developed for dependable operation, long life, less maintenance. UL-approved. Plugs into any 115 volt outlet. Single and double lamp units are available; each lamp illuminates up to 10,000 sq. ft.

WRITE for full details and specifications about new Model M Exide Lightguard units . . . the best automatic emergency lighting unit on the market. Write Dept. AR, Exide Industrial Division, The Electric Storage Battery Co., Phila. 2, Pa.

Your best buy for . . .
EMERGENCY LIGHTING

Exide[®]
LIGHTGUARDS[®]

Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa. • Exide Batteries of Canada, Limited, Toronto



This bank is indebted to *Terrazzo*

... for a good-looking, long-wearing, serviceable floor. This bank is also indebted to its architect for specifying Terrazzo, the versatile floor (or wall, wainscot or stairs) with these advantages:

- 1. ECONOMY** Moderate initial cost is followed by freedom from repairs, replacements, and excessive upkeep over a period of years. This is usually far less than the long-range cost of other types of floors, for which repairs, replacements, and upkeep substantially add to cost.
- 2. COMFORT** Finished Terrazzo is easy to walk on, less slippery than any waxed surface.
- 3. CLEANLINESS** Terrazzo can be sealed so as to be practically non-absorbent. Its smooth, unbroken surface cleans easily, harbors no accumulation of germs, paves the way to aseptic cleanliness.
- 4. COLOR AND DESIGN** Terrazzo has warmth and beauty. Specify any design, pictorial or geometric, in virtually any combination of colors.
- 5. DEPENDABLE INSTALLATION** This Association's objective is to see that Terrazzo installations turn out exactly as wanted. Write us today for complete information on the above points, or see our catalog in Sweet's.

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION, INC.

404 Sheraton Building 711 14th St., N.W. Washington 5, D. C.

Send free AIA Kit about Terrazzo to

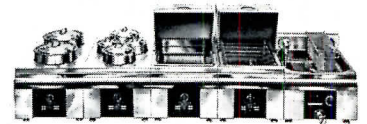
Name.....
 Firm.....
 Street Address.....
 City..... Zone..... State.....

AIA PRODUCTS

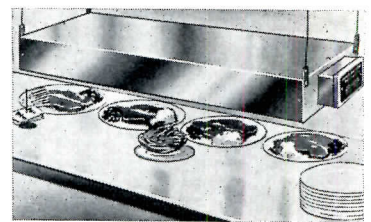
(Continued from page 232)

"DRY" HEAT KEEPS FOOD WARM

To meet the demands of rush hours and heavy order loads, more emphasis is being placed on mass food output and efficient warming. "Dry" heat keeps food palatable and eliminates need for time-consuming scrubbing of steam tables



47. In The Star Mfg. Co.'s matched counter line, electric food warmers help prevent food from thickening, discoloring or drying out. (6300 St. Louis Ave., St. Louis 20, Mo.)



48. The Merco Ray Corp. utilizes infra-red heat in its food warmer, offered in stainless steel or aluminum. Added uses include plate warming and silver drying. (726 Charles St., Seattle 4, Wash.)



49. The Mealpack Corp. turntable dish heater can warm Pyrex dishes for meal packing at the rate of up to 480 per hour. Of particular value in hospitals, heaters are available in two types for gas operation. (2014 Ridge Ave., Evanston, Ill.)

(Continued on page 238)

ARCHITECTS AND ENGINEERS

MAGAZINE



Total Architect and Engineer Circulation

24,642
**Progressive
Architecture**

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
A.B.C. Publisher's Statement
33

13,555
**Architectural
Forum**

LOSS
from June 1953
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381

(Continued from page 16)

requirement that all applicants must conform to a major project plan before they can receive Federal aid.

Still another provision of the 1954 measure would give the Slum Clearance and Urban Redevelopment Division free rein on the spending of \$5 million on experimental efforts as for pilot undertakings. The only limitation would hold HHFA to a payment of not more than two thirds of the cost. The money would be used to assist cities, and all public subdivisions, in developing, testing and reporting methods and techniques, and carrying out demonstrations and other activities for the prevention and elimination of slums and urban blight.

Wanted: Strong Zoning Codes

If American cities had kept their zoning and housing codes modern, and enforced them, there would have been no need for a Federal program of financial assistance because there would have been no major slums, Mr. Follin asserts, and he stresses the need for strong zoning codes as well as housing regulations.

He places a strong responsibility on the city itself, not only for drafting and enforcing strong codes, but for provision of municipal improvements. "Public improvements must be kept up if a neighborhood is to be kept up," he declares. "Old schools, for example, are an important factor. Lots of areas can be started on the upgrade toward improvement just by the addition of new schools. Also important are the playgrounds and new street patterns to regulate traffic flow.

"It is unfair to ask an owner to spend money even to bring his property up to minimum standards if the city at the same time does not bring up its own improvements."

Where Are We Now?

Where the agency had something over 200 localities in its Title I program as of March 31, 1954, it conceivably could have many hundreds under terms of the new legislation. But even without the stimulus of the new bill, slum clearance and urban redevelopment has been very big business in this country.

As of the first of this year, HHFA reported that estimated Federal capital grant requirements for the projects then delineated amounted to \$196 million. Local grants-in-aid in the form of cash, donations of land, site improvements and

(Continued on page 270)

MAIL THIS COUPON FOR YOUR NEW ENTRANCE-PLANNING MANUAL

**REVOLVING DOOR DIVISION
INTERNATIONAL STEEL COMPANY
2002 EDGAR STREET, EVANSVILLE 7, INDIANA**
Send me without cost or obligation my personal copy of the new International "Entrance-Planning Manual":

NAME AND POSITION _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

REVOLVING DOOR "LUXURY" LOWERS OPERATING COSTS



Arthur Tennyson, Pittsburgh: Architect

THROUGHOUT THE BIGELOW, only permanent dwelling-type apartments in downtown Pittsburgh, the emphasis is on comfortable and luxurious living. But this accent on "ease of living" is only one of many reasons why you enter the Bigelow through revolving doors.

Its twenty-story height plus a considerable front exposure . . . its wide impressive lobby plus a first floor primarily given up to service shops . . . its complete air conditioning plus its busy downtown location — all combine to make revolving doors a necessity, not a luxury.

Consider, for example, the problem of stack draft that always plagues a structure of this

height. Because they are "always open — always closed," revolving doors eliminate all stack drafts. By the same token, they seal out summer heat and winter cold. Outside dust, dirt, soot and grime are kept outside. All lobby space is made comfortably usable right up to the doors. Yet maintenance cost of a modern revolving door entrance is minimum.

These are typical advantages that make revolving doors a sound self-paying investment for long-range rentability . . . a specification that merits your consideration when planning any business or commercial building. The above coupon brings you a bookful of helpful data on both Revolving Door and Swing Door Entrances by International. Send for your personal copy now.

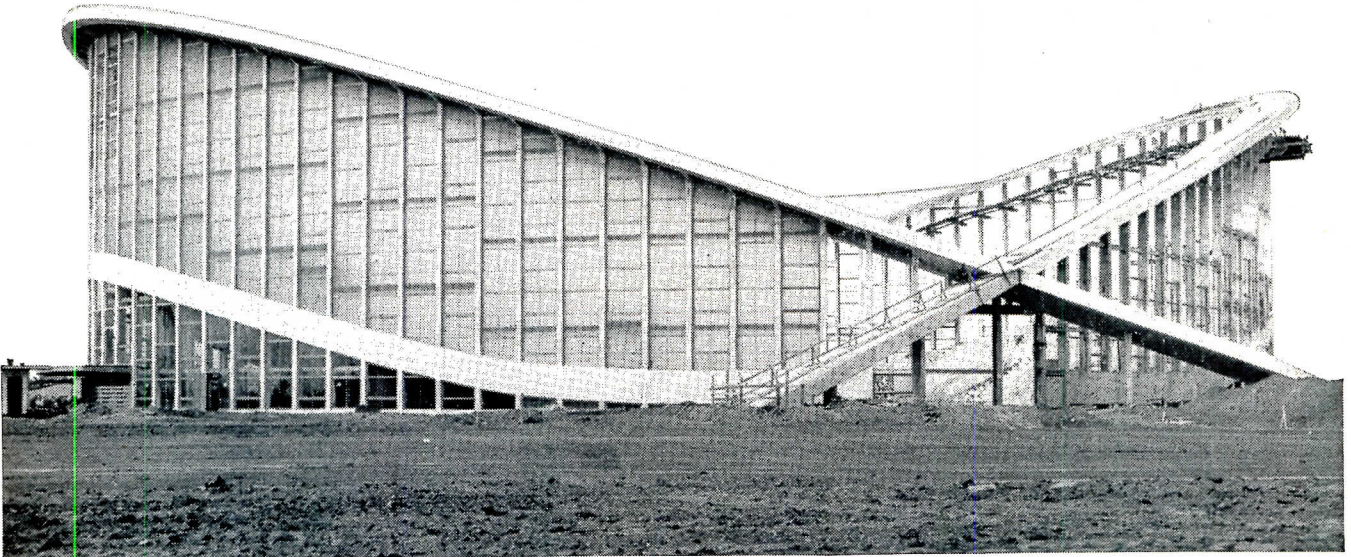
**REVOLVING DOOR DIVISION
2002 EDGAR ST. EVANSVILLE 7, IND.**



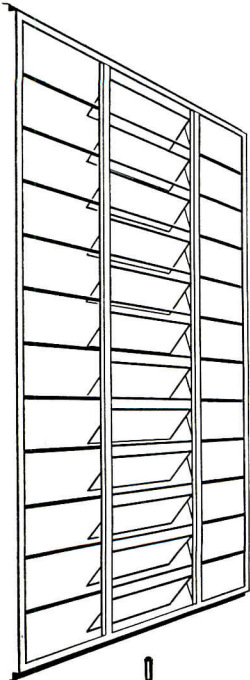
INTERNATIONAL STEEL COMPANY

Imaginative Design

INCLUDES TRUSCON STEEL DONOVAN WINDOWS



North Carolina State Fair Arena, Raleigh, N. C.
William Henley Deitrick, Inc., *Architect*
Wm. Muirhead Construction Co., *General Contractor*
Matthew Nowicki, *Arch. Consultant*
Senerud-Elstad-Krueger, *Engr. Consultants*



● It's a livestock judging pavilion. And, it represents a high degree of creative imagination. Twin intersecting conic sections sweep majestically, supporting a wide panorama of Truscon Steel Donovan Windows.

Unusual? Yes. But, this building illustrates the extreme *versatility* of Truscon Windows. It shows how well they combine with architectural imagination to inspire original and functional structures.

Donovan Awning Windows by Truscon offer unique lighting and ventilation advantages. The awning principle permits ventilation control in inclement weather. Ventilators operate in unison, either by mechanical or manual control. The design completely eliminates all unsightly connecting arms, screws and racks. Substantial jamb and sill sections (4.2 lbs. per lineal foot) provide adequate strength for satisfactory control of a large ventilating area in a single unit.

No other type of window so conveniently provides inconspicuous, yet adequate, large-area ventilator control. In no other window design is it possible to safely construct projected ventilators in widths up to 6 feet, or to couple as many as 16 large vents on one concealed operator. Where required, it is possible to construct a clear opening up to thirty-six feet in height with 100% ventilation, and with all vents mechanically controlled from the floor.

Let your imagination soar. Capture sun and sky, free from the limitations of conventional window usage. See details on all Truscon Metal Windows in Sweet's; or write Truscon for latest details and specifications.



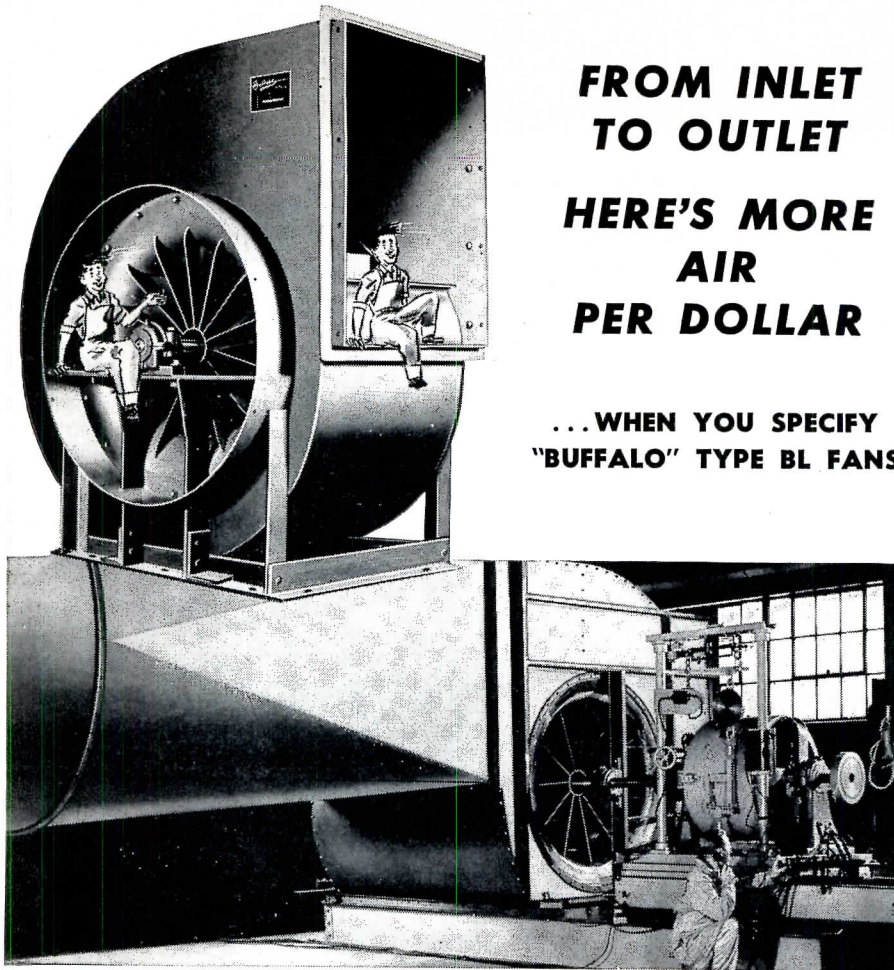
TRUSCON® a name you can build on

**TRUSCON STEEL DIVISION
REPUBLIC STEEL**

1062 ALBERT STREET • YOUNGSTOWN 1, OHIO
Export Department: Chrysler Building, New York 17, N.Y.



(Continued from page 266)



**FROM INLET
TO OUTLET
HERE'S MORE
AIR
PER DOLLAR**

**... WHEN YOU SPECIFY
"BUFFALO" TYPE BL FANS**

Even before incoming air reaches the wheel of the "Buffalo" BL Fan, it is guided in the most efficient path. The inlet bell is smoothly curved for absolute minimum friction; while the welded-on stationary inlet vanes reduce turbulence and assure rated air delivery even if inlet conditions are unfavorable. The "Buffalo" inlet is one reason why "Buffalo" air-moving costs are low.

The new improved "Buffalo" rotor, too, vitally affects performance. Here the full-curvature die-formed shroud and the backward curved blades move

the air through the specially shaped housing and outlet with smoothness, quietness and efficiency. In addition, the fan's performance is stable from shut-off to free air delivery.

Besides these and other features, there is an intangible in all "Buffalo" fans that has always made for high satisfaction. We call it the "Q" factor, or built-in quality which provides long life and freedom from trouble. This is the sum total of the 77 years of "Buffalo" experience and know-how that goes into every fan to leave our plant.



*For further details
on "Buffalo" Type BL Fans,
write for new
Engineering Bulletin F-100*

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 CLEANING AIR TEMPERING INDUCED DRAFT
EXHAUSTING FORCED DRAFT COOLING HEATING PRESSURE BLOWING

clearance work as well as supporting facilities were to be provided by localities themselves at a cost of \$110 million. This represents \$306 million in all. Construction outlays represented in these projects were estimated at nearly \$500 million. And this included only 52 slum areas in 32 cities.

This breakdown of the expenditure by type of construction was given: \$271.3 million for housing (\$257.7 million for private and \$13.6 million for public); \$53.5 million for commercial construction; \$48 million for industrial construction; \$107.7 million for public and semi-public construction; and \$16.7 million for site improvements.

A complete list of the localities having programs under Title I of the Housing Act of 1949 and their status as of March 31, 1954 is presented in the following two tables.

PROGRAM DIRECTORY

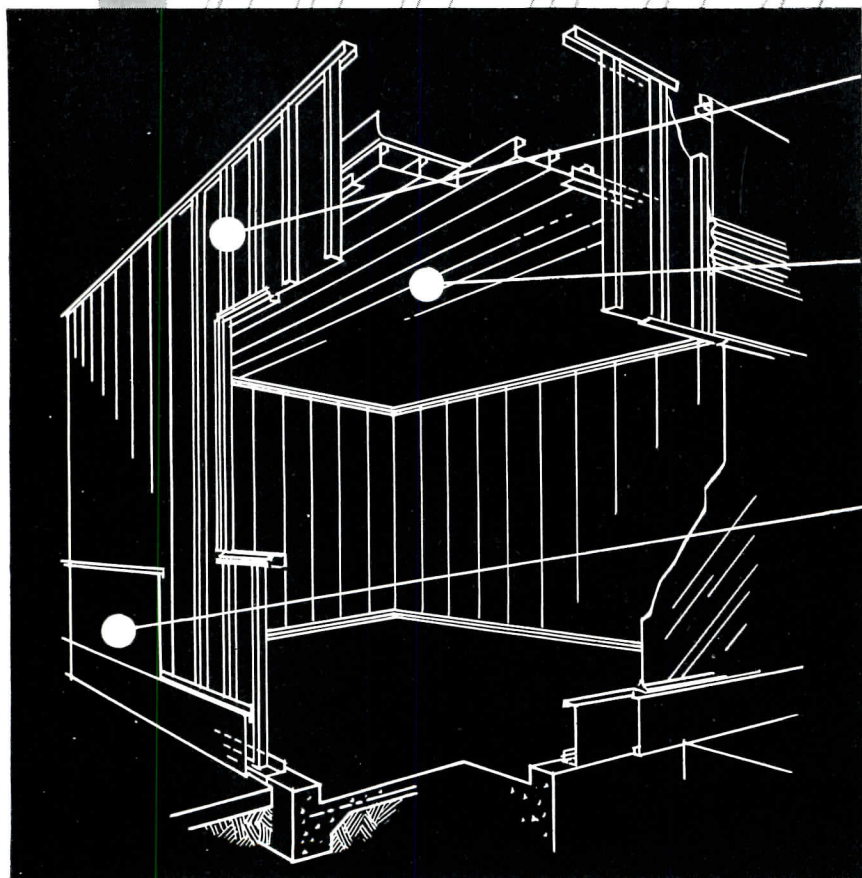
Locality	Capital Grant Reservation	Preliminary Planning Approved	Final Planning Approved
ALABAMA			
Auburn	\$ 39,830	2-54	
Birmingham	2,500,000	5-51	7-52*
Cullman	41,300	12-53	
Eufaula	98,980	3-54	
Florence	180,250	4-51	6-52
Gadsden	349,160	5-52	
Huntsville	124,110	1-51	
		12-53	
Mobile	967,765	6-50	10-51*
Montgomery	1,296,210	6-50	9-51*
Phenix City	218,680	3-54	
ARKANSAS			
Little Rock	1,275,000	6-50	3-51*
Texarkana	136,080	5-52	
CALIFORNIA			
Calxico	40,390	7-52	
Redlands	73,570	4-52	
Richmond	107,730	9-50	
Sacramento	364,630	4-51	
San Bernardino	179,340	1-53	
San Francisco	6,346,000	7-50	8-52*
Upland	35,070		
CONNECTICUT			
East Haven	58,800	5-51	
Hartford	832,000	11-50	6-52
Middletown	74,830	3-54	
New Haven	883,263	2-51	7-52
New London	213,520	10-51	7-53
Norwalk	163,660	12-50	
Norwich	164,173	4-51	
Shelton	127,800	9-50	11-52
Stamford	399,770	2-51	6-52
Waterbury	259,140	7-51	
Willimantic	70,420	11-51	
DELAWARE			
Wilmington	508,830	10-52	3-54
DISTRICT OF COLUMBIA			
Washington	6,385,186	10-50	1-52*
ILLINOIS			
Cairo	208,180	6-53	None*
Chicago	17,692,371	5-52	2-51*
Chicago Heights	132,860	7-50	3-52
Cook County	500,000		
Danville	333,970	4-51	9-52
East St. Louis	629,370		
Galesburg	182,140	9-51	12-52
Kankakee	102,830	5-51	
Lincoln	88,200	8-51	
Peoria	700,000	7-50	
Robbins	26,110	4-51	4-52*
Rock Falls	51,240	5-51	4-53
Urbana	99,400		
Waukegan	182,280	4-50	

(Continued on page 274)

* Approved for development

Avoncraft

The Finest Architectural Porcelain Enamel Products Ever Offered



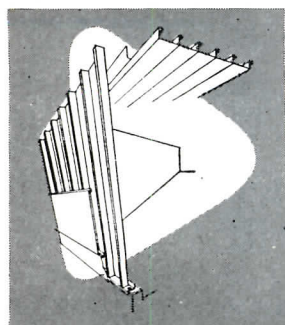
FRAMELESS LOAD-BEARING WALLS provide inner finished walls, structural ribs and insulation space.

LOAD-SPAN DECKING provides high safety factor over long unsupported areas, smooth ceilings and insulated roof.

CURTAIN WALLS are engineered for flexibility of architectural design.

For developing *frameless* structures for such buildings as:

1. Service Stations
2. Motels
3. Schools
4. Single story commercial buildings
5. Freight and bus stations
6. Maintenance-free industrial buildings



architectural products

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P. O. Box 1030 - New Orleans 8, U. S. A.

Present your requirements to Avoncraft Engineers.

SYLVANIA ANNOUNCES—

SONO-LUME*



Close-up of Sylvania Sono-Lume unit showing perforated metal wings backed with sound-deadening glass fiber batting. Fixtures may be also equipped with louvers instead of plastic shielding. Mounted singly or in continuous rows.

The Fixture which Controls Sight and Sound!

New fluorescent lighting fixture† has built-in sound-conditioning system . . . easily installed!

Now Sylvania introduces SONO-LUME . . . a new concept of sight and sound control!

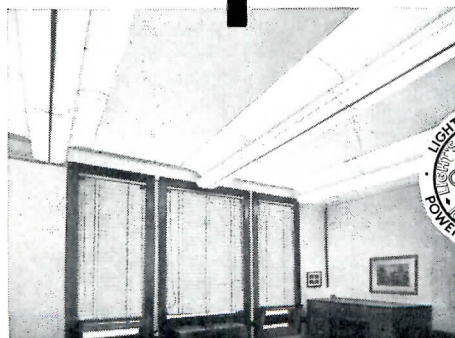
Basically, Sono-Lume is an attractive fluorescent fixture incorporating principles worked out by Sylvania engineers.

The perforated wings on each side of Sono-Lume fixtures are backed with glass fiber batting. This element has the excellent noise reduction coefficient of 0.85. Thus the fixture serves a double

purpose: (1) It provides high levels of clear, soft, all-over illumination for comfortable seeing. (2) It holds unnecessary noise to low levels for comfortable hearing.

Saves modernization costs! Sylvania Sono-Lume fixtures can be readily installed in any office, conference or consultation room. In instances where sound-proofing and better lighting are separate projects, this new combination fixture keeps costs well within modest budgets. A note on your letter-head will bring you detailed information. Simply address Dept. 4X-1306, at Sylvania.

*Sylvania Trade Mark
†Patent Pending



SYLVANIA

Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

In Canada: Sylvania Electric (Canada) Ltd., University Tower Bldg., St. Catherine Street, Montreal, P. Q.

LIGHTING • RADIO • ELECTRONICS • TELEVISION

THE RECORD REPORTS

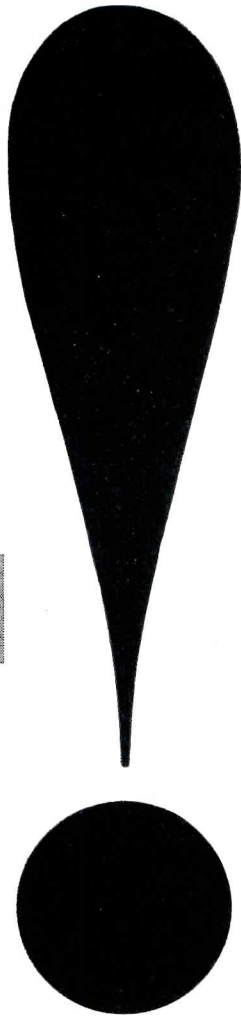
(Continued from page 270)

Locality	Capital Grant Reservation	Preliminary Planning Approved	Final Planning Approved
INDIANA			
Evansville	772,730		
New Albany	239,000		
KENTUCKY			
Covington	343,840		
Lexington	448,700	8-51	12-52
Louisville	2,469,320	10-52	
Middlesborough	128,030	4-52	
Newport	212,100	4-52	9-53
Owensboro	249,270	9-51	
Paducah	389,340	10-52	
Paris	61,950		
MAINE			
Portland	395,000	5-52	9-53
MARYLAND			
Baltimore	5,000,000	None	None*
MASSACHUSETTS			
Boston	7,675,147	9-50	10-52
Brookline	82,810	8-51	
Cambridge	450,000	12-50	6-52
Chelsea	125,300	1-54	
Clinton	81,550		
Haverhill	261,870	10-52	
Lawrence	214,550	1-53	
Lowell	436,380	2-54	
Medford	80,920	10-52	
Revere	81,900	10-50	12-53
Somerville	1,023,164	2-51	5-52*
Woburn	138,800	12-50	11-52
Worcester	816,450	10-50	5-52
MICHIGAN			
Albion	58,240	2-52	
Battle Creek	291,480	9-50	
Detroit	4,761,096	8-52	None*
Hamtramck	150,500		
Port Huron	753,086	11-51	3-54
Royal Oak	70,140		
MINNESOTA			
Duluth	687,540	4-53	3-54
Minneapolis	2,375,000	3-50	6-53
St. Paul	4,165,739	8-50	3-51*
MISSOURI			
Kansas City	2,490,180	10-50	11-51
St. Joseph	627,760		
St. Louis	5,196,000	4-50	12-51
NEBRASKA			
Omaha	1,195,320		
NEW HAMPSHIRE			
Dover	175,000	12-50	1-52
Laconia	100,000		
Manchester	380,000	8-51	
Nashua	315,300	11-52	12-53
Portsmouth	56,910	11-53	
NEW JERSEY			
Atlantic City	260,000	1-52	
Bayonne	251,370	10-52	2-54
Camden	544,110	3-53	
Elizabeth	409,850	2-52	12-53
Jersey City	3,028,000	4-50	3-51*
Long Branch	71,750	12-50	12-53
Newark	5,300,000	6-50	11-51*
New Brunswick	141,540	6-50	10-53
Passaic	593,550	4-51	1-53
Paterson	577,500	5-50	
Perth Amboy	452,810	6-50	10-51*
Plainfield	21,000	4-53	
Trenton	515,340	9-51	12-53
NEW YORK			
Albany	516,300	7-50	11-51
Binghamton	253,140	6-52	6-53
Buffalo	1,574,040	2-52	
New Rochelle	186,410		
New York	52,000,000	11-50	6-50*
North			
Tarrytown	40,140		
Port Chester	331,768	6-51	7-52*
Rochester	916,440	12-52	
Schenectady	438,000	None	8-51
Syracuse	633,300	9-50	
Tarrytown	15,240	2-53	
Troy	293,820	9-51	4-53
Utica	317,460	7-52	
Yonkers	753,750	10-50	3-52
OHIO			
Cincinnati	3,742,830	9-50	3-52*
Cleveland	3,000,000	9-50	8-53
Columbus	1,304,170	12-50	9-53
Hamilton	423,500	6-50	
Springfield	495,000	6-51	
Toledo	1,100,610	7-51	12-53
Warren	163,520		
Youngstown	822,780	8-51	

(Continued on page 278)

* Approved for development

Get
this report...
on the
**BIG
TRUTH**
about boilers



Out of 86 years of experience in designing and building quality steam generating equipment comes one of the most revealing reports ever written on boilers. We at Kewanee make that statement because these findings are based on fact and truth . . . on careful search and engineering exploration. In it we present:



Here you will discover a way to judge boilers so you can be sure of the lowest operating cost—highest efficiency—greatest dependability—maximum flexibility—longer boiler life. You will learn how to eliminate confusion in considering boilers . . . know how to compare like examples and not be misled by vague technical claims. You can be SURE you have made the best buy when you know the **BIG TRUTH** about boilers . . . and you will choose Kewanee boilers because you know you will save on fuel—get greater efficiency—cut repair bills.

YOU can depend on KEWANEE engineering

KEWANEE-ROSS CORPORATION—Kewanee, Illinois
Division of American Radiator & Standard Sanitary Corp.

Serving home and industry • American-Standard • American Blow Church Seats & Wall Tile • Detroit Controls • Kewanee Boiler Ross Exchangers • Sunbeam Air Conditioners

THE KEWANEE REPORT TELLS ALL . . .

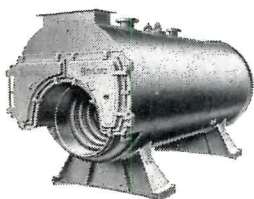
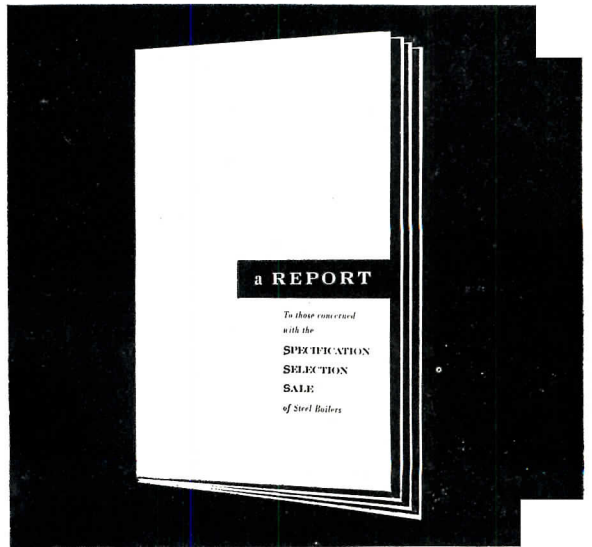
How to cut fuel costs.

Data on "cruising speed" savings.

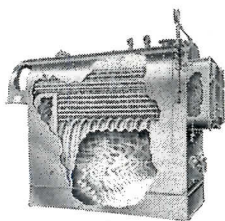
Facts on "nominal capacity" operation.

Why Kewanee Reserve Plus is the safe way to rate steel boilers.

Facts on fallacy of buying on "maximum capacity."



**KEWANEE
M-800 SERIES**



**KEWANEE
TYPE "C" SERIES**

**DISCOVER THE
BIG TRUTH
ABOUT BOILERS**

Send for this free booklet. You will be glad for 20 years if you act today. Use handy coupon.

KEWANEE-ROSS CORPORATION—Kewanee, Illinois
Please send me free book titled, "A REPORT to Those Concerned with the SPECIFICATION, SELECTION, SALE, of Steel Boilers"

Name _____
Title _____
Company _____
Address _____ City _____ State _____

AR



Sturdalite is the popular, new fiber glass plastic building panel you've been hearing about!

Once you see it, touch it, use it, you'll readily understand why it is fast winning the spontaneous acclaim of builders, architects and home owners all over the country.

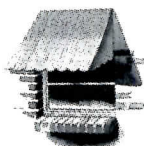
What other building material can do so much?

Use it for partitions, patio covers, porches, canopies, awnings, shower doors, cabanas, fences, skylights, overhangs, garages, breezeways, solarium, windbreaks, half-walls, clerestories . . . a hundred more.

Sturdalite can be worked with ordinary hand tools, like wood. It is light and strong, fire and corrosion resistant, requires no maintenance and transmits light, perfectly diffused. It is available in corrugated, flat or arched sheets, in pale green, dark green, blue, salmon, yellow, white, and neutral.

Use Sturdalite . . . prove for yourself its outstanding functional and decorative advantages.

For detailed, idea-packed literature, write to: Wright Manufacturing Co., 5200 Post Oak Road, Houston, Texas.



PUT SHATTERPROOF

STURDALITE

IN YOUR NEXT BUILDING JOB!

THE RECORD REPORTS

(Continued from page 274)

Locality	Capital Grant Reservation	Preliminary Planning Approved	Final Planning Approved
PENNSYLVANIA			
Allegheny County	1,795,150		
Beaver County	385,350		
Beaver Falls	181,200	None	6-50
Bethlehem	302,820		
Bradford	195,720	11-50	
Carnegie	85,540		
Chester	304,010	None	2-52
Clairton	238,950	2-51	
Delaware County			
	263,270	9-52	12-53
Duquesne	186,620	11-53	
Easton	203,490	11-50	
East Pittsburgh	28,420		
Harrisburg	866,250	3-51	8-52
Homestead	176,540		
Johnstown	511,210	6-51	12-53
McKeesport	538,300	1-52	
McKees Rocks	148,400	11-50	1-53
Munhall	106,890		
New Brighton	33,320		
Philadelphia	10,000,000	11-51	6-50*
Pittsburgh	6,100,000	None	9-51
Rankin	75,880	None	6-53
Rochester	33,040		
Scranton	957,390		
Sharon	146,020	12-53	
Sharpsburg	77,770		
Tarentum	93,660	2-54	
Turtle Creek	65,450	4-51	3-53
West			
Homestead	31,220		
York	520,000	10-50	3-52
RHODE ISLAND			
Newport	221,550	7-50	10-52
Providence	1,165,570	4-50	4-53*
SOUTH CAROLINA			
Columbia	499,380	5-52	
TENNESSEE			
Clarksville	35,700	10-53	
Johnson City	192,290	3-51	4-52
Knoxville	1,025,710	4-50	8-51
Lewisburg	35,700	9-53	
Memphis	2,942,660	8-50	
Murfreesboro	319,059	1-51	12-51*
Nashville	5,207,200	None	4-50*
Pulaski	63,490		
Tullahoma	51,100	12-53	
Union City	268,300	10-52	5-53*
Waverly	18,830		
VIRGINIA			
Alexandria	342,750	11-50	5-52
Bristol	822,320	1-51	1-52*
Danville	333,480	9-52	11-53
Newport News	280,000	4-50	10-53
Norfolk	3,799,801	1-54	4-50*
Portsmouth	1,050,600	12-50	3-52
Richmond	2,250,000	10-50	9-53
Roanoke	475,580	8-51	1-53
WEST VIRGINIA			
Charleston	419,860	12-52	
Clay County	25,690		
Fayette County	76,650		
Kanawha County			
	773,000		
Lincoln County	29,260		
Logan County	271,390		
McDowell County			
	257,110		
Monroe County	22,680		
Summers County	38,290		
Wayne County	132,860		
WISCONSIN			
Milwaukee	2,498,440	2-51	10-52

PROJECTS WITH APPROVED GRANTS

Locality and Project Name	Project Grant Approved	Demolition Started	Land Disposition Started
ALABAMA			
Birmingham	\$2,630,103		
Medical Center	858,780		
Mobile			
Broad St. — Beaugard	967,765		
Montgomery			
North Montgomery	803,558		

(Continued on page 282)

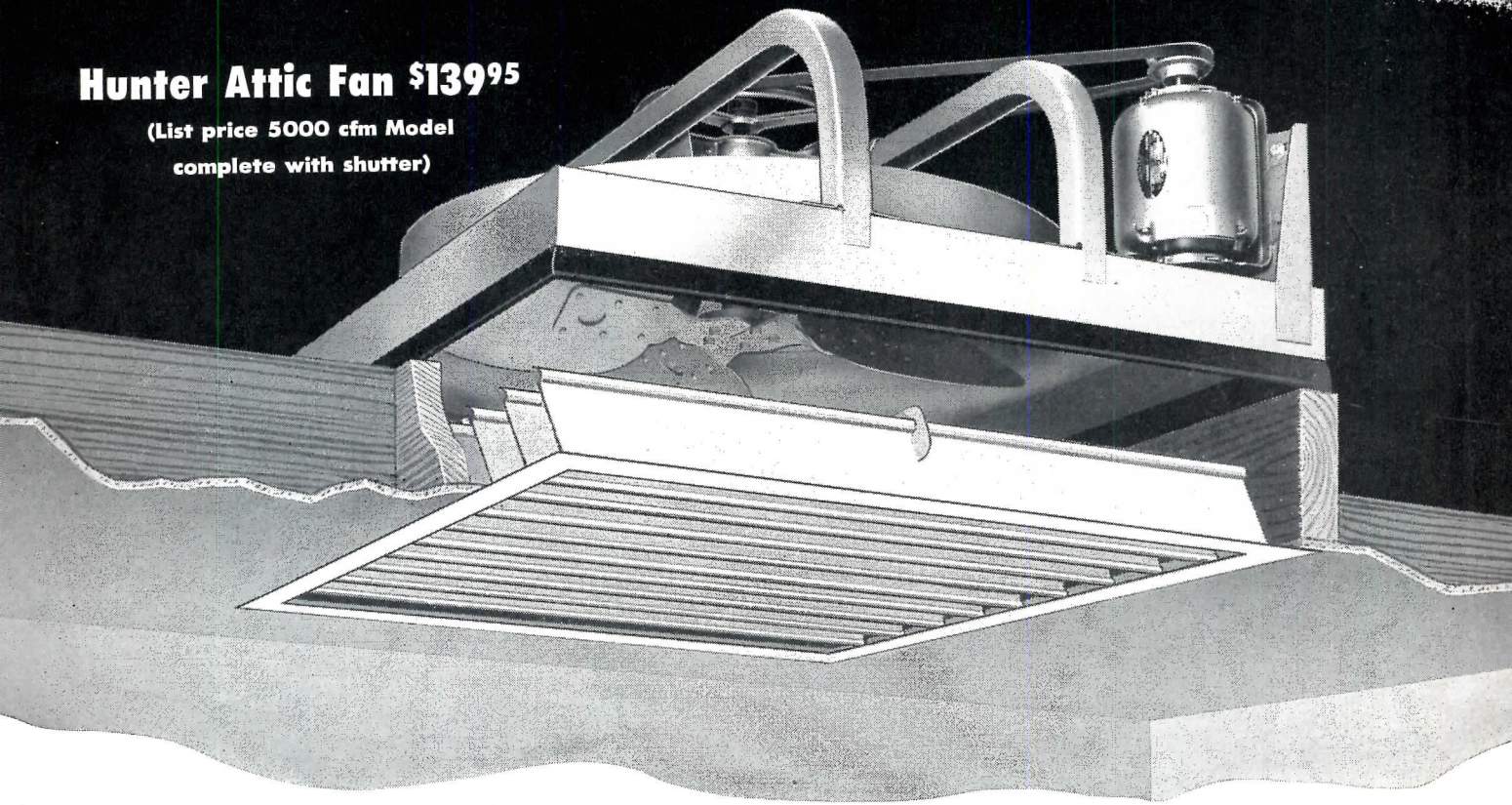
* Approved for development
† Data as of Dec. 31, 1953

Small investment pays cool dividends

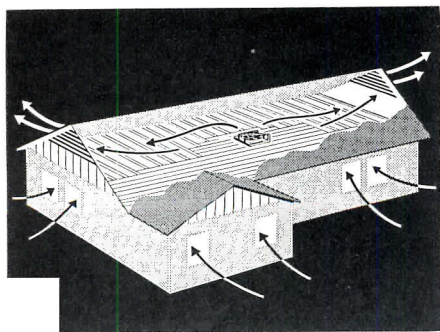


Hunter Attic Fan \$139⁹⁵

(List price 5000 cfm Model complete with shutter)



Hunter Attic Fan cools the entire house at lowest cost



Home buyers who want cool comfort at lowest cost are "sold on" the Hunter Attic Fan. Initial cost is low, operating expense is only a few cents a night, and there is no maintenance.

The Hunter Attic Fan's method of cooling a house is simple (see drawing at left). It drives out hot, stagnant air through the attic and creates a strong suction which pulls in fresh, cool air from outdoors.

This compact cooling unit, com-

plete with automatic ceiling shutter, is easily installed in any home. It requires only 18" attic clearance, so is ideal for low-pitched roofs. Certified air deliveries range from 5000 to 16000 cfm—for any home size and any climate.

You can depend on the same smooth, quiet operation that has made Hunter Fans famous for 67 years. Fan unit is guaranteed for 5 years, ceiling shutter and motor for 1 year.



For complete specifications, write
HUNTER FAN AND VENTILATING COMPANY
396 S. Front St., Memphis 2, Tenn.

HUNTER Attic Fans

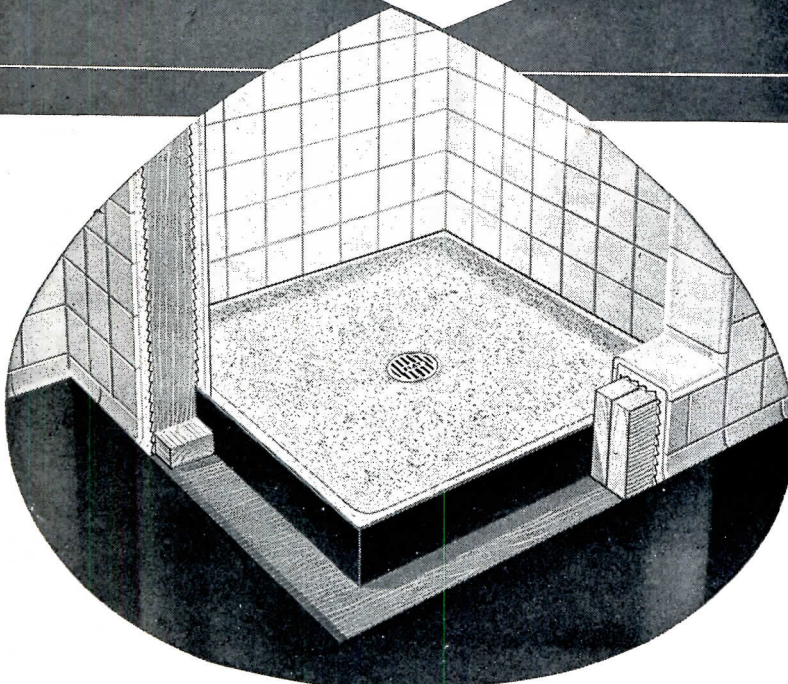
SEE OUR CATALOG IN SWEET'S

THE RECORD REPORTS

(Continued from page 278)

Now BUILD BETTER SHOWERS FOR LESS with **FIAT PreCast Receptors!**

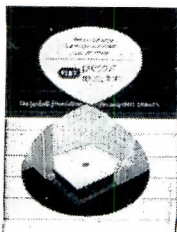
The ideal floor when shower walls are made of plaster, marble or tile of any kind—metal, plastic, ceramic!



Cut cost, save time—and eliminate one sub-contract by using FIAT PreCast Receptors. When you plan showers with plastic or metal tile walls you save labor—speed completion—by specifying a *plumber-installed* FIAT receptor. You will get a better shower floor . . . attractive . . . one-piece . . . permanently leakproof. There's no lead pan, no multi-layer construction—nothing that can be affected by building settlement. It's the modern, money-saving way to better shower construction.

SEND FOR FREE FIAT MANUAL—

COMPARES methods of shower floor construction
ILLUSTRATES receptor applications with various walls
PROVES many PreCast Receptor advantages



FIAT METAL MANUFACTURING COMPANY
 9301 W. Belmont Ave. • Franklin Park, Illinois — Dept. C
 Please send me your new manual on shower floor construction as soon as it's off the press.

Name _____
 Address _____
 City _____ State _____

Locality and Project Name	Project Grant Approved	† Demolition Started	† Land Disposition Started
ARKANSAS Little Rock Central Area	980,385 980,385	✓	✓
CALIFORNIA San Francisco Diamond Heights Western Addition Proj.	6,346,000 334,000 6,012,000		
DISTRICT OF COLUMBIA Washington Southwest Proj. Area B	6,385,186 6,385,186		
ILLINOIS Cairo Area No. 1 Chicago Lake Meadows West Side Industrial	10,930,825 9,176,075 1,754,750	✓ ✓	✓
MARYLAND Baltimore Waverly Broadway	4,489,668 1,115,807 3,373,861	✓ ✓	✓
MASSACHUSETTS Somerville Linwood-Joy	\$1,023,164 1,023,164		
MICHIGAN Detroit Griot	4,761,096 4,761,096	✓	✓
MINNESOTA Eastern Project Western Project	4,165,739 1,865,376 2,300,363		
MISSOURI Kansas City Northside Area	1,179,631 1,179,631		
NEW JERSEY Jersey City Gregory Site St. Johns Site Newark Branch Brook Park Broad Street Perth Amboy Willocks Project Forbesdale	\$8,749,819 1,509,917 1,517,834 2,398,177 2,871,081 326,293 126,517	✓	
NEW YORK New York Morningside Corlears Hook Harlem North Harlem West Park Fort Greene Columbus Circle Pratt Institute Port Chester Project No. 1	37,969,105 3,026,935 3,000,810 3,766,024 2,729,258 10,703,084 2,754,603 5,919,523 5,737,100 331,768		✓ ✓ ✓ ✓ ✓ ✓
OHIO Cincinnati Laurel	2,473,171 2,473,171		
PENNSYLVANIA Philadelphia East Poplar Unit #2 Unit #3 Southwest Temple	5,709,625 274,697 794,881 4,640,047	✓ ✓	✓ ✓
RHODE ISLAND Providence Point Street Willard Center #1	901,738 433,738 468,000		
TENNESSEE Murfreesboro The Bottoms Nashville Capitol Hill Union City Black Bottom	5,794,460 319,059 5,207,200 268,201	✓ ✓	
VIRGINIA Bristol Sullins Street Norfolk Redevelopment Proj. #1	4,622,121 822,320 3,799,801		✓ ✓

† Data as of Dec. 31, 1953

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



PERMANENT CAST IRON SOIL PIPE AND FITTINGS



The Mark of Quality and Permanence

CAST IRON SOIL PIPE INSTITUTE

1627 K Street, N.W., Washington 6, D. C. Dept. BHG-4

- To help us prevent bathroom failure, send your 16-page booklet on Plumbing Drainage.
- Our _____ Club is interested in seeing your sound movie "Permanent Investment".

Name _____
No. & Street _____
City _____ Zone _____ State _____

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.



THE MARK OF
QUALITY AND
PERMANENCE

CAST IRON SOIL PIPE INSTITUTE

Dept. AR-6, 1627 K Street, N. W.
Washington 6, D. C.

- Send educational folder, "Plumbing Drainage."

Our local _____ Club wants to see your movie, "Permanent Investment." Tell us how to arrange for use of the film, free.

Name _____
Address _____
City _____ Zone _____
State _____

WASHINGTON

(Continued from page 38)

(Title I) programs was over by May 1 and the Committee settled down to an effort to rewrite the Administration's housing bill so as to eliminate the "loop-holes" which had made abuses possible. Senator Homer Capehart (R-Md.), committee chairman, hoped the rewritten bill would reach the floor of the Senate by June 1. Senator Capehart promised the second phase of his Committee's probe — "a real, honest-to-goodness, 100 per cent investigation of all irregularities and violations of the law" — would get under way immediately after the housing bill was out of the way.

The initial phase of the investigation produced testimony

(1) that 1149 corporations involved in FHA insured rental housing distributed to stockholders over \$65 million as the fruit of over-appraisals, resulting in a tax loss to the government of more than \$28 million because the corporations paid capital gains taxes rather than income taxes.

(2) that a list of some 3500 firms throughout the country had been "black-listed" by FHA for improper conduct under the home loan program (through Nov. 30, 1953. More names were to be added to bring the list up to date).

(3) that loose administrative procedures, which appeared to have contributed most to the "irregularities and abuses" under investigation, were in some measure at least due to Congressional refusal to appropriate funds to allow sufficient personnel for adequate policing of mortgages by FHA.

(4) that some FHA officials were guilty of fraudulent activities, the nature of which was not clearly spelled out in the early allegations. Housing Administrator Albert M. Cole said, however, that "relatively few" of FHA's 5065 employees were involved.

From the long procession of witnesses in the building and financing fields came repeated reminders to the committee that the possibility of "windfalls" was inherent in the 608 program because the enabling legislation encouraged FHA to act as promoter as well as underwriter — a situation the financiers pointed out was hardly conducive to the strict maintenance of sound underwriting principles. Testimony generally favored changing

(Continued on page 290)



"Glass Wall" Installation Dramatizes Advantages of Kinnear Rolling Doors



Heavily Galvanized Doubly Protected

Kinnear Steel Rolling Doors are heavily galvanized (1.25 oz. of zinc per sq. foot, as per ASTM standards) to provide a lasting weather resistance. In addition Kinnear Paint Bond, a special phosphate application, provides for easy, thorough paint coverage and lasting paint adhesion.

Light from a huge "glass wall" floods into the new engineering building at Howard University, Washington, D.C., shown above.

The Kinnear Rolling Door centered in this glass wall can be operated or left open without blocking off a single inch of glass area.

The rugged curtain of interlocking steel slats — originated by Kinnear — coils compactly above the opening. All surrounding floor, wall and ceiling space remains clear and usable *all the time.*

Notice also how the straight lines of the Kinnear curtain add to the modern appeal of this building.

In addition to this space-saving "self-contained action", Kinnear Steel Rolling Doors offer durable, low cost, all-metal protection against intruders, vandals, wind, weather, and fire.

Kinnear Rolling Doors are built in any size, with manual or motor operation. Write for full details.

The KINNEAR Manufacturing Company

FACTORIES:

1860-80 Fields Avenue
Columbus 16, Ohio
1742 Yosemite Ave.
San Francisco 24, Calif.

Offices and Agents in All Principal Cities



Here at low cost is filtered, natural daylight from overhead

with PC SKYTROL Blocks



Skytrol panels installed in the offices of W. Harold Tanner & Associates, Architects, Villa Park, Ill.

Toplighting is the easiest way to bring daylight into low, one-story buildings where lighting of the inner areas is a problem. And of all the toplighting methods, Skytrol blocks stand alone in their ability to give the highest quality daylighting, good insulation value and a trouble-free, low maintenance installation.

Skytrol blocks are a *flexible* building unit, giving the architect freedom to design practical toplighting panels of virtually any size. The panels can be flat or curved and are not limited by special orientation requirements. The blocks are bonded into a weathertight, reinforced concrete panel — the same method that has been used with success for many years in northern Europe.

But one of the best things about Skytrol panels is their cost. Actual installed costs are running between \$4.50 and \$6.50 per square foot of panel area. If you're considering toplighting, you'll do well to investigate the Skytrol method. Compared with methods giving comparable results, you'll find Skytrol out-performs, yet costs less.

Consult our section under "Skylights" in Sweet's, or write for more information. Pittsburgh Corning Corporation, Dept. C-64, One Gateway Center, Pittsburgh 22, Pa.

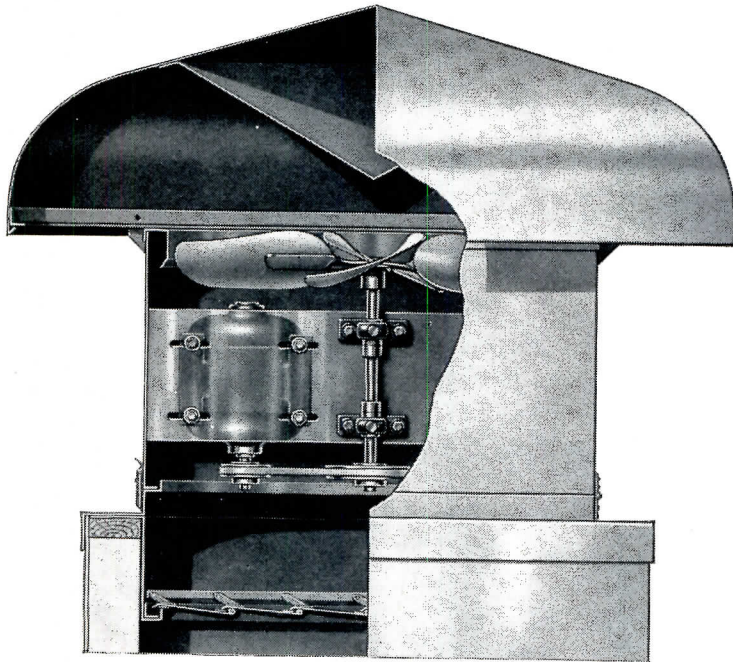


SKYTROL^{*}
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ALSO PC GLASS BLOCKS AND FOAMGLAS®

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INCONSPICUOUS IN USE**



**THE NEW
BURT LOW TYPE
FAN VENTILATOR**

This versatile Burt Ventilator is modern in engineering and design. Its quiet power-driven fan performs with equal efficiency to exhaust heat, smoke and fumes, or to supply fresh air. Low in height, the Burt Low Type meets architectural demands for an inconspicuous roof ventilator yet provides high efficiency and high capacity. Easy to install and service, the Low Type is available with fans from 12" to 60" in diameter—direct motor driven or V-belt drive. See Sweet's for further data or write Burt for Bulletin SPV-16.

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MEMBER POWER FAN MANUFACTURERS ASSOCIATION

THE RECORD REPORTS

WASHINGTON

(Continued from page 286)

the appraisal basis for government-backed housing loans to either a percentage of the actual cost or a percentage of the "economic value."

Administrative actions pointed toward "straightening up" included:

(1) Two advisory panels were named by Acting FHA Commissioner Norman P. Mason to recommend program and legislative improvements. First Vice President Norman J. Schlossman of the American Institute of Architects was named to the industry group.

(2) Housing Administrator Cole got Congressional approval of funds to set up a permanent division within the Housing and Home Finance Agency to handle investigations and compliance matters.

(3) Commissioner Mason named a special assistant to the Commissioner charged with directing a new information program founded on the premise that the borrower, the banker and the builder all have a right to know what FHA is doing at all times: FHA's "iron curtain" policy on release of information had long been a target of newsmen. W. Herbert Welch, 38, former West Virginia editor and publisher and recently executive director of the President's Advisory Committee on Housing Policies and Programs, was named to the new post.

As for public reaction, early indications were that the FHA "scandals" had by no means dampened the enthusiasm of either borrowers or lenders for the FHA loan program. FHA loan applications were seasonally up in April (about 1000 over March) and a survey of 25 major banks across the country early last month revealed no change in lending policies, though some banks noted they were investigating loans more closely before approving them.

**MILITARY HOUSING MAY
FACE A SENATE PROBE**

Senator Francis Case (R-S.D.) entered the housing investigation arena when, as chairman of the Senate Armed Services subcommittee on real estate and construction, he asked the military for detailed information regarding its housing programs.

(Continued on page 294)

PETERSON HORIZONTAL SLIDING ALUMINUM WINDOWS

The Windows That Have Won The Women!



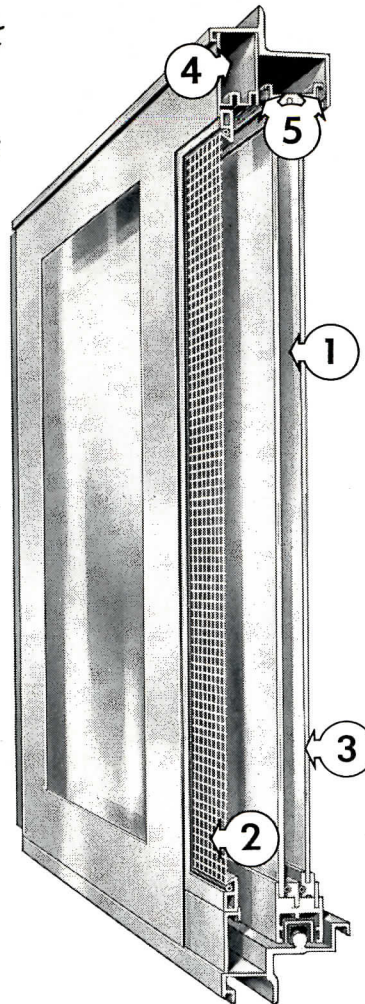
WHY WOMEN FAVOR PETERSON WINDOWS

Make window washing a lark. Sash (1) lifts up and out into room for quick, easy cleaning.

Save wear and tear on husbands. Non-rusting aluminum screens (2) never require painting or removal. Storms (3) stay up, too, are self-storing all year 'round.

Sturdy, hollow-type aluminum framing (4) bespeaks strength, security, permanence, so important to a woman's peace of mind.

Hi-pile water-and-wear-resistant weather stripping (5) prevents window rattle, provides the draft free comfort which women cherish.



WHETHER intuition or an innate sense of practical value is responsible, more and more women are insisting on Peterson windows for their new homes. So are firms erecting business buildings.

You will indicate clearly that you are abreast of this trend if you recommend Peterson windows for your clients. They're designed to contribute *the most* in the way of appearance, comfort and convenience to new structures. The contribution they make is a lasting one—insuring highest continuing value through the years.

Thousands of Installations from Coast to Coast . . .

Peterson Windows have a proven record of satisfaction in Hotels, Motels, Churches, Schools, Dormitories, Offices, Hospitals, Clinics, and other monumental and commercial buildings.



PETERSON HORIZONTAL SLIDING ALUMINUM WINDOWS

- **ROLL OPEN**—With effortless horizontal operation on grease-packed, dust-proof ball bearings
- **APPEAL ARCHITECTURALLY**—Enhance all design motifs
- **SAVE MAINTENANCE DOLLARS**—Require no paint; won't rust, swell, warp, stick or rot
- **INCORPORATE ADVANCED DESIGN**—Eliminate putty, sash balances, cranks, projecting hinges
- **CLEAN EASILY**—Sliding sash removes into room for easy washing
- **LOCK SAFELY**—Positive locking in closed, one, two and three inch open positions
- **EXCLUDE WEATHER**—Hi-pile, water-and-wear-resistant weather stripping cuts heating and air conditioning costs
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WINDOW CORPORATION

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WASHINGTON
(Continued from page 290)

FOR LIBRARY PROJECTS

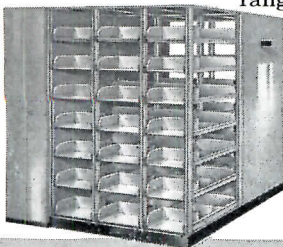
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Hamilton Compo Stack installation, Michigan State Library, Lansing, Michigan.

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It was not known right away just what importance the Case request would have; decision on a full-scale probe by his unit awaited the submission of the military reply.

It was clear, however, that if the Senator and his committee members felt that the Army, Navy and Air Force data warranted a close look at military housing activities, another investigation was to be added to the growing list.

Senator Case asked for (1) a list of all Wherry Act housing projects accomplished or under way; (2) a description of each project, including number of units, size of each, etc.; (3) contribution made by the servicemen assigned; (4) rentals applicable for the different sized units; (5) name of contracting firm and its officers who constructed the project or had the insured loans; (6) the name of the operating organization and its officers, particularly to determine whether or not a second corporation is handling the operation and management and whether or not there is an interlocking stockholder or director interest; and (7) the amount of the insured FHA loan and any figures of the actual cost of construction.

The Case letter to the military noted that reports on a certain unidentified project told of a loan for \$3.1 million to a contractor who accomplished the housing and turned it over to a new corporation to operate after an expenditure of only \$995,000. The new corporation allegedly charged rentals on a scale to liquidate the larger figure.

EARLY TESTIMONY FAVORS "FHA" PLAN ON HOSPITALS

Hearings opened last month on the "FHA" insurance plan for hospital construction. This proposal, made formally in a bill by Rep. Charles A. Wolverton (R-N. J.), would permit FHA-type mortgage insurance covering hospitals and medical facilities to be used in connection with voluntary prepayment health plans. Early testimony generally favored the plan.

Dr. Robert E. Tothenberg, chairman of the medical group council, Health Insurance Plan, New York City, cited

(Continued on page 298)

NEW

1/2" Tuf-flex® Tempered Plate Glass Doors

How do they differ from the widely used 3/4" Tuf-flex Doors?

1. **LIGHTER WEIGHT.** For example, for a 3' x 7' opening, the glass in this new 1/2" door weighs about 131 pounds, compared with 197 pounds for the 3/4" door commonly used in the past. That makes it:

**EASIER TO HANDLE—EASIER TO INSTALL—
EASIER TO OPERATE**

2. **LOWER COST.** Generally, list prices on the new 1/2" doors, complete with fittings, are comparably less than 3/4" doors of the same size. Many types of framed doors, which fail to carry out the transparency so desired in modern entrances today, are about the same price. This lower cost will enable many more building owners to add attractiveness and appeal of Tuf-flex Doors to their entrances.

How are they the same as the 3/4" door?

1. **TOUGH.** Like the 3/4" door used so successfully in thousands of buildings, these tempered doors are 3 to 5 times as strong as regular plate glass of the same thickness. Extensive laboratory and application tests have proved the strength of the 1/2" Tuf-flex Door.
2. **APPEARANCE.** In style and design, they look just like the popular 3/4" door. Here's an opportunity to carry out the Visual Front idea in storefronts with transparent doors of lower cost. Tempered Plate Glass side lights are also available to match these beautiful doors.

New, modern fittings are available

They're clean-lined—in keeping with the sheer beauty of the Tuf-flex Door. The drawing at the right shows the simple lines of the alumilited fittings which are at the top and bottom of the door. Push bars are also attractively designed. See your L·O·F Glass Distributor or Dealer for details.



TUF-FLEX TEMPERED PLATE GLASS DOORS

LIBBEY·OWENS·FORD GLASS COMPANY • 608 Madison Avenue, Toledo 3, Ohio

CUT INSURANCE COSTS WITH

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The non-skid flooring that can't wear out!



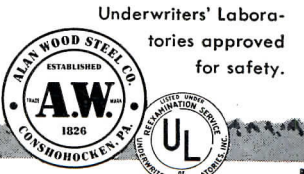
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Note depth and uniformity of abrasive grain.

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(Continued from page 294)

difficulties now experienced in obtaining construction funds for special medical facilities. A group medical center or diagnostic and treatment center is a "specialty" structure, so an unattractive mortgage risk in the eyes of most savings banks and insurance companies. Cost per sq ft of constructing a group medical center is almost double that of an ordinary building, he said. More plumbing is needed for treatment rooms; special wiring, special outlets and heavy electrical conduits must serve X-ray and other specialized equipment; an elaborate intercommunication system is needed, and an exceptional number of partitions are required for many treatment rooms, consulting rooms and nurses' stations. As a result, asserted Dr. Tothenberg, banks and insurance firms are discouraged from participating in such a venture or in advancing sufficient funds to do the job properly.

Some criticism of the Wolverton proposal was heard at the hearings. Those representing the American Association of Medical Clinics said they were dubious over some provisions. They called the bill "discriminatory" and "undesirable" so far as it would restrict its application to voluntary prepayment health plans. And they said the reference to a \$1 billion program set the scheme in a mold well beyond that of a pilot study. They questioned evidence justifying establishment of a mortgage insurance system of the proposed magnitude at this time.

Under terms of the bill, the Surgeon General of the United States would be charged with the responsibility for administering the loan insurance plan.

"FIX-UP MARKET" CITED AS BUILDING STABILIZER

At its recent annual meeting in Washington, the U. S. Chamber of Commerce revised its declared policy on construction matters. For the first time, the annual session recognized the need to encourage the so-called "fix-up market" as an industry stabilizer and as a means of conserving property values.

The Construction and Civic Development Department of the National Chamber has estimated that probable

(Continued on page 302)

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the vital **plus**

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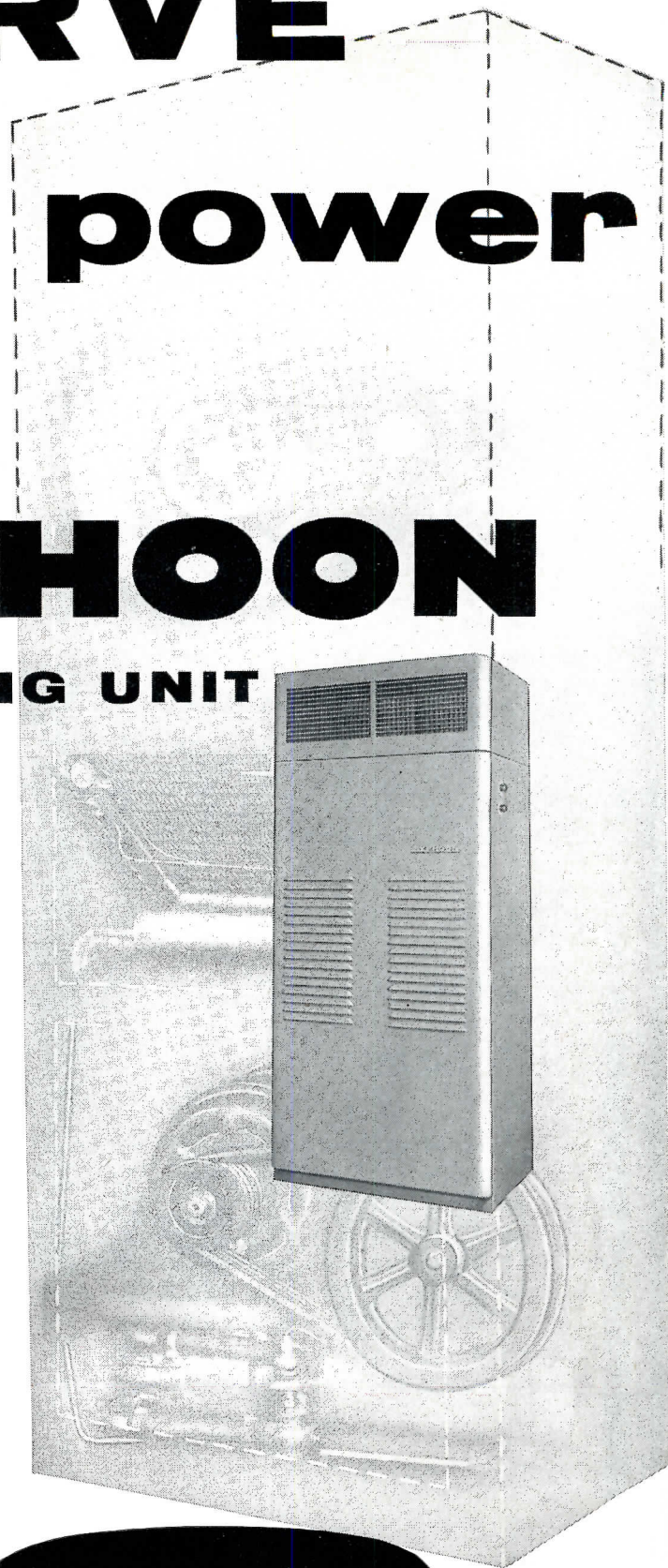
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TYPHOON AIR CONDITIONING CO., INC.
794 Union Street, Brooklyn 15, N. Y.



*The Industry's
Only Specialist in
Self-Contained Units*

WASHINGTON
(Continued from page 298)

annual expenditure for fix-up activities runs currently around \$6.6 billion and believes there is a possibility of raising this level by 30 or even 50 per cent.

The Chamber also voted a policy revision emphasizing the responsibility of state and local governments in meeting shelter requirements of needy families with housing of acceptable minimum standards. The present view places this responsibility solely on local welfare agencies. The Chamber insisted that this responsibility lies with local governments rather than with Federal agencies.

Also, that part of former policy relating to urban redevelopment was expressed in broader terms of local responsibility. The need for comprehensive city planning for this activity was emphasized.

HOME SHELTERS URGED AS
PRELUDE TO DISPERSION

The Federal Civil Defense Administration has been concentrating on dispersal possibilities since 1952. It still advises, however, that until dispersal plans are completed, the best thing for individuals to do under air attack is seek shelter close at hand.

Deputy Administrator Katherine G. Howard says that despite the hastened effort to devise a suitable dispersal plan "you still need a shelter area in or near your home."

No less than 40 cities now are making urban vulnerability studies to determine the evacuation plans and other measures that will fill their individual needs in case of atomic attack. FCDA stresses that all cities should be making such plans. Studies can be completed in from four to six weeks when local demand is great enough.

Commented Deputy Administrator Howard: "While it may be 18 months to two years before the military can assure us of enough warning time for evacuation, we need better local organization right now to make real use of that extra warning time when we get it." She points out that states and cities put up only about \$15 million in matching funds for the purpose of civil defense equipment in 1953 — less than the property

(Continued on page 306)



Ramset makes
fast work of installing
10,000 doors

Speed and economy resulted from the use of RAMSET SYSTEM to anchor 10,000 interior doors top and bottom in the low-rent housing project at Newark, N. J.

The struts and frames were guided into proper position, and anchored to the poured concrete ceiling and floor with a RAMSET JOBMASTER Fastening Tool and Tru-Set Fasteners. Less than a minute was required to provide a firm anchor.

Similarly, high-speed, low-cost RAMSET SYSTEM will solidly fasten almost anything into even the hardest concrete or mild structural steel up to 1" thick. Ask your RAMSET dealer to demonstrate how this most modern method will reduce costs and complete the work faster. Or, write us, for details in *Specification Manual*.



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12147 BEREA ROAD • CLEVELAND 11, OHIO

FIRST IN POWDER ACTUATED FASTENING



ENDURES LONG AFTER SUBSTITUTES FAIL

Because It's

ALL

STAINLESS

STEEL



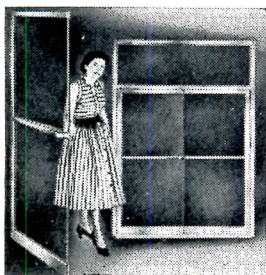
Schacht **TWINSTILE**

Many architects tell us that when they specify Schacht Stainless Steel Doors, there is no "or equal." Why? Because there is no substitute for their unhurried craftsmanship and honest material—they're fully welded of heavy gauge stainless steel throughout.

The optional concealed panic bolt becomes an integral part of the TWINSTILE door. Like the door, the panic bolt, too, is all stainless steel.

FRAMES

in stainless or bronze would complete the package



Schacht **FULITE**

1/2" plate glass exposed edge doors. Available in stainless steel or bronze.

Write for illustrated literature and data sheets

see our catalog in
ARCHITECTURAL FILE
or write for copy

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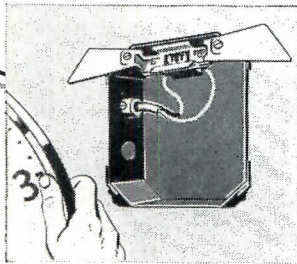
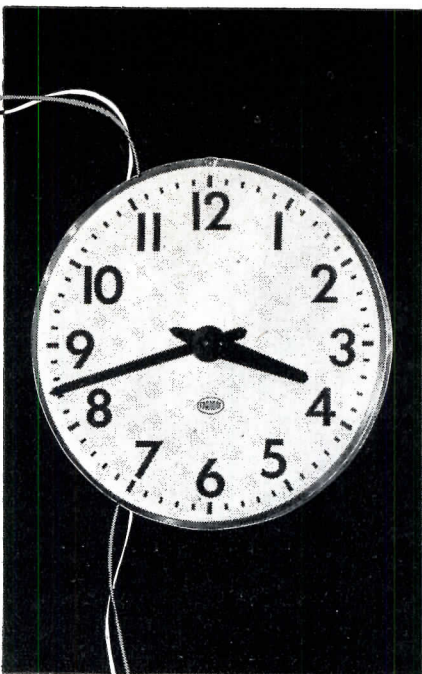
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SCHACHT ASSOCIATES, INC.
1175 E. 156th St., New York 59, N. Y.
Gentlemen:
Please send illustrated literature and data sheets on
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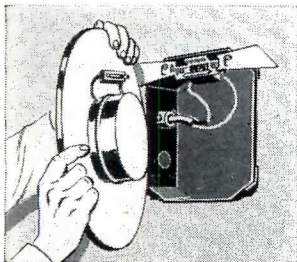
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COMPANY.....
ADDRESS.....CITY.....

FARADAY

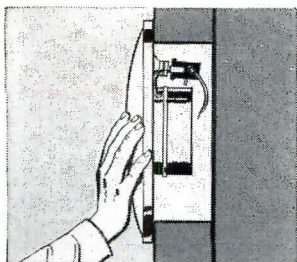
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NEW
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PLUG-IN*
FLUSH CLOCKS



Wall outlet pre-wired, permanently installed.



Clock plugs easily into outlet.



Clock securely mounted, yet easily removed.

● This ultra-thin Faraday clock incorporates design advances that greatly simplify installation and give it a distinctive beauty, unmatched in clocks of flush design. It is installed, securely and easily, by plugging it into a pre-wired wall outlet—yet it can be removed from the wall with equal ease. Once installed, its polished aluminum rim projects *only* 7/16"—and actually *looks* as though it were mounted in the wall.

The Faraday Flush Clock is unusually easy to read—from many angles—because of its special flat center convex crystal and crisp black numerals against a white face. It is operated by a high-quality, impulse or synchronous movement. Available in a wide variety of standard diameters as individual synchronous clocks or as a part of a complete program system. Write for details.

*Patent applied for.

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THE RECORD REPORTS

WASHINGTON

(Continued from page 302)

loss in a single tornado-stricken town. Then she asks: "Is it not fairly obvious that our home governments are under-insured in these troubled times?"

JET AIRPLANE IMPACT ON CITY PLANNING DISCUSSED

The Urban Land Institute of Washington has revised its Community Builders Handbook and in so doing takes note of the impact of the commercial jet airplane on community development.

"The main factors that govern the amount of adverse effect of airports on immediate and outlying neighborhoods are the nuisances arising from noise, vibrations, psychological hazard, and personal annoyance," says the new edition. "When property lies within the patten of plane approaches and take-offs, adverse influences on property are intensified. In the case of jets, the noise level and the area covered by their operational noise are about twice that of the conventional plane. (The width of noise area covered by the four-motored propeller driven airliner is about two miles from each side of the flight path.)

U.L.I. noted that since July 1951, FHA field offices have generally refused to insure mortgages on houses within four miles of a major airport if the homes would come beneath the normal landing and takeoff paths. Furthermore, the President's Airport Commission has recommended that local authorities, in laying out new airports, attempt to restrict all building within two and a half miles of the ends of principal runways.

ADDENDA

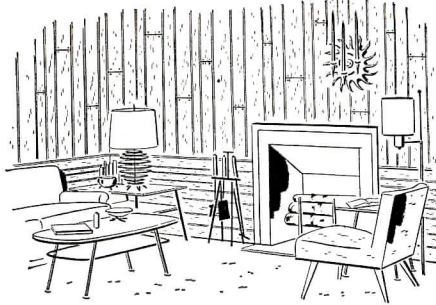
• Peter Strobel, New York City consulting engineer, has been selected for the position of Public Buildings Commissioner to succeed W. E. ("Bert") Reynolds, who plans to retire about June 30. Mr. Strobel is a graduate of the university at Copenhagen, Denmark, class of 1925. He has been engaged in private practice in New York City.

• The President has signed into law the judicial review bill, thus ending a battle

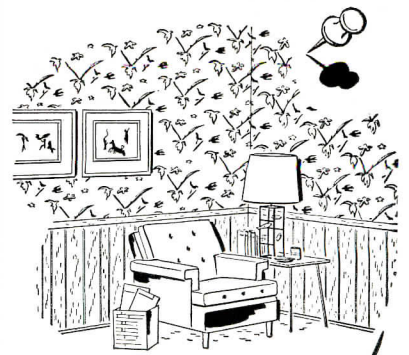
(Continued on page 310)



Floor to ceiling Craftwall adds height to rooms with its straight-lined beauty.



Horizontal Craftwall dado with its matching grooves gives round the room continuity. Craftwall above can match or contrast.



Paper or paint above a vertical Craftwall dado gives contrast in textures.



Sixty-four inch Craftwall panels permit plate rail heights without wastage of material.



Variety in design can also be achieved by mounting Craftwall horizontally, floor to ceiling.

For unlimited design opportunities..

NEW
Pre-finished

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The Plywood Paneling That Looks Like Solid Lumber Planking

Beautiful hardwood plywood paneling. In 7 woods, 4 styles, 3 sizes . . . lets you easily match, contrast or combine with other materials.

THERE'S no limit to design opportunities with new prefinished Craftwall paneling. It's produced in seven woods . . . Oak, Birch, Cherry, Maple, Mahogany, Walnut and Blonde Limba. With this wide selection of woods, plus the variety of styles in which Craftwall is available, you can now create interiors of outstanding interest . . . without incurring excessive costs.

To complete the job, Roddiscraft offers a complete line of hardwood trim in both traditional and contemporary designs. And, with Roddis Craftwall Finishes, you can perfectly match trim to prefinished Craftwall paneling.

Call your Roddiscraft representative for samples of Craftwall and moldings. Or send the coupon for complete descriptive literature.

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Cambridge 39, Mass. • Charlotte 6, N. C. • Chicago 32, Ill. • Cincinnati 4, Ohio
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Wis. • Miami 38, Fla. • Milwaukee 8, Wis. • New Hyde Park, L. I., N. Y.
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RODDIS PLYWOOD CORPORATION
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Yes, I want to learn more about prefinished Craftwall. Please mail complete information.

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Street No.

CityState

THE RECORD REPORTS

of two decades by the Associated General Contractors of America. For more than 20 years the A.G.C. has fought for legal rectification of abuses experienced under the old contract clause which permitted decisions of contracting officers and department heads to stand in some cases. This struggle was brought to a head by the Supreme Court decision in the Wunderlich case a few years ago. The Justice Department and the Comptroller General approved the language of the new amendment, which now gives contractors equitable recourse in the courts.

- The President's Committee on Government Contracts approved a revision in the non-discriminating clause, and the change was made effective immediately by order of the Attorney General. The new clause defines the prohibited discriminatory employment practice based on race, color, religion or national origin as well as providing for the posting of notice to employes. All construction under Federal government auspices is affected.

- Hearings on the Cooper bill began last month in a Senate Labor subcommittee. This legislation, introduced last year by Senator John Sherman Cooper (R-Ky.), would authorize \$100 million annually for three years in Federal aid to states for construction of public elementary and secondary schools. States with the smallest available revenues for school purposes would share to the largest extent in the proposed program. Fund allocations would be based on a formula including both proportion of school children of each state and the average annual income. The money would go to the highest educational authority of each state and be awarded to individual school projects through a master plan worked out on the basis of statewide inventories of existing facilities and surveys of need.

- CIO's Economic Outlook called for more Federal assistance for the construction of school buildings. It cited the National Office of Education surveys showing school plant deficiencies and emphasized the fact that the need for new schools is growing faster than the supply of new structures.

- Managers of the nation's major airports, members of the Airport Operators Council, unanimously endorsed the de-

WASHINGTON (Cont. from p. 306)

cision of the Civil Aeronautics Administration to seek funds for renewing the Federal-aid-to-airports program. The rejuvenation of this program, without aid for terminal building construction as was included in the earlier programs, has been recommended by the Department of Commerce in line with industry suggestions. Fred M. Glass, Council president, said some of the larger air-

ports are considering installation of conveyor belts for handling passenger baggage from parking lot to terminal building. This is because the lot areas are becoming so large, he explained. The Philadelphia terminal may be the first to install such a system.

- State governments last year spent almost \$2.8 billion on contract construction, an increase of approximately seven per cent from 1952.

(Continued on page 312)

CONSTRUCTION DETAILS

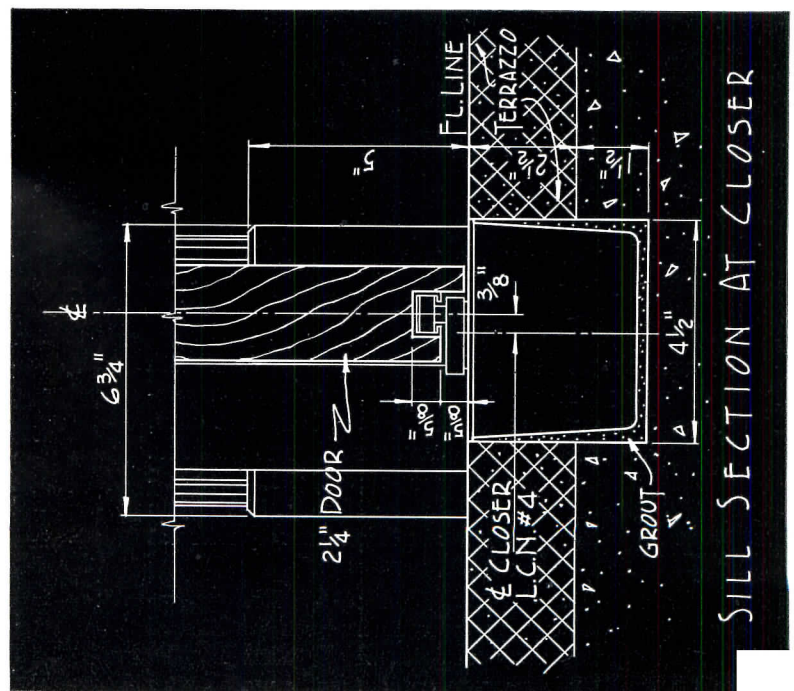
At Left, for LCN Floor Type
Concealed Door Closer Installation
Shown on Opposite Page

The LCN Series 2-4-6 Closer's
Main Points:

1. Effective, full rack-and-pinion, two-speed control of the door
2. Mechanism entirely concealed; lever arm disappears under door on closing
3. Door hung on regular butts, its weight carried independently of closer
4. Closer easily adjusted or serviced without taking door down
5. Installed with or without threshold; may be flush with threshold or with floor
6. Used with wood or metal doors and frames

Complete Catalog on Request—No Obligation
or See Sweet's 1954, Sec. 17e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS



GRAND BALL ROOM

MODERN DOOR CONTROL

BY *LCM*

CLOSERS CONCEALED IN FLOOR

HOTEL MUEHLEBACH,

KANSAS CITY, MISSOURI

Construction Details on Opposite Page

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Neville, Sharp & Simar, Architects



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ON THE CALENDAR

June

Japanese House: an exhibition in the Museum garden of a house designed and built in Japan by Junzo Yoshimura — Museum of Modern Art, 11 W. 53rd St., New York

- 3 Public Relations Workshop, New York Chapter, American Institute of Architects — Architectural League of New York, 115 East 40th St., New York
- 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
- 9-12 Twentieth Annual Meeting, Na-

- tional Society of Professional Engineers — Hotel Schroeder, Milwaukee
- 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.
- 10-13 Annual Meeting, Board of Directors, American Institute of Architects — Statler Hotel, Boston
- 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
- 20-28 Post-Convention tour of New England and Canada, cruising the St. Lawrence and Saguenay, arranged by U. S. Travel Agency for A.I.A. members and families
- 20ff Good Design Anniversary Exhibition, sponsored by the Museum of Modern Art and the Merchandise Mart, opens in Chicago; to be on view through 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, Mass.
- 21-25 Summer and Pacific General Meeting, American Institute of Electrical Engineers — 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; until July 2 — New York City
- 30 Playground sculpture competition: exhibition of prizewinning designs in a competition spon-

(Continued on page 314)

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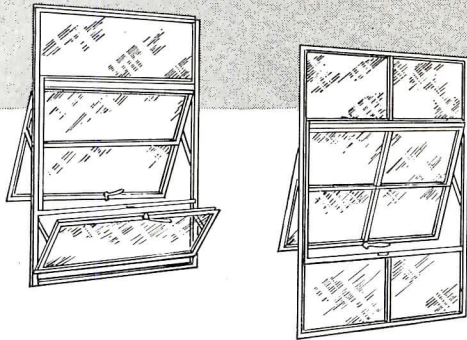
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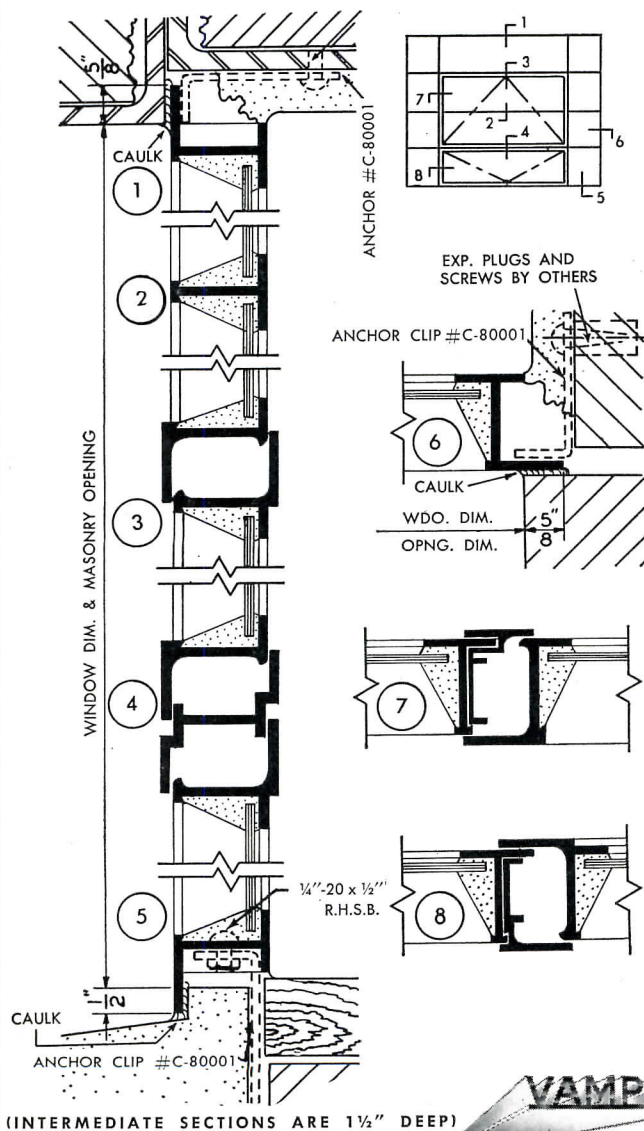
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THE RECORD REPORTS

(Continued from page 312)

sored by *Parents Magazine*, the Museum of Modern Art and Creative Playthings Inc.; until Aug. 22 — Museum of Modern Art, 11 W. 53rd St., New York

July

5ff Plants as Factors of Design: a summer course offered by the Department of City Planning and Landscape Architecture;

until Aug. 13 — Harvard Graduate School of Design, Cambridge, Mass.

27-30 Eighth Short Course on Hot Water and Steam Heating Systems — University of Illinois, Urbana, Ill.

August

17-19 Fire Protection Engineering, a conference jointly sponsored by the School of Architecture and City Planning, the School of Engineering and the School of

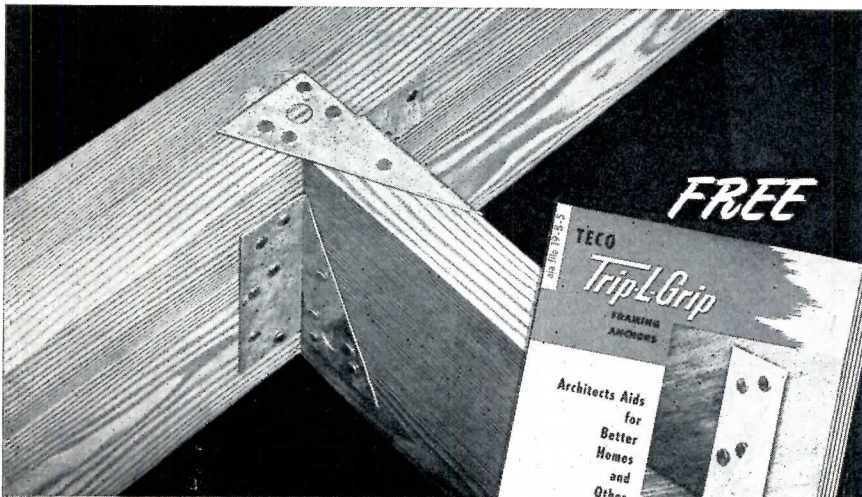
Industrial Management — Massachusetts Institute of Technology, Cambridge, Mass.

17ff The Modern Movement in Italy: Architecture and Design; until Sept. 6 — Museum of Modern Art, 11 W. 53rd St., New York City

19-21 Northwest Regional Conference, American Institute of Architects — Eugene, Ore.

23ff 16th Annual Summer Program in City and Regional Planning arranged in the School of Architecture and Planning; until Sept. 3 — Massachusetts Institute of Technology, Cambridge, Mass.

25ff Tenth Triennale di Milano; an International Exhibition of Architecture and the Allied Arts and Industrial Design; until Nov. 15 — Milan, Italy. For information on participation, address: Triennale di Milano, Palazzo dell'Arte al Parco, Milano



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OFFICE NOTES

Offices Opened

• Beck, Simon and Mantel, Structural Engineers, announce the opening of a branch office at 92 Liberty St., New York 6, N. Y.

• Raymond Brown, Jr., Architect, announces the opening of his office at 125 Trumbull St., Hartford 3, Conn.

• James Scott Rawlings, A.I.A., has opened his office for the practice of architecture at 3341 West Cary St., Richmond, Va.

• Gene E. Trotter, Architect, announces the opening of his office for the general practice of architecture at 219½ North Broadway, Billings, Mont.

• Harrison Lewis Whitney and Robert Scott Tomlinson, Architects, announce the opening of their office at 468 Palmero St., Corpus Christi, Tex.

New Addresses

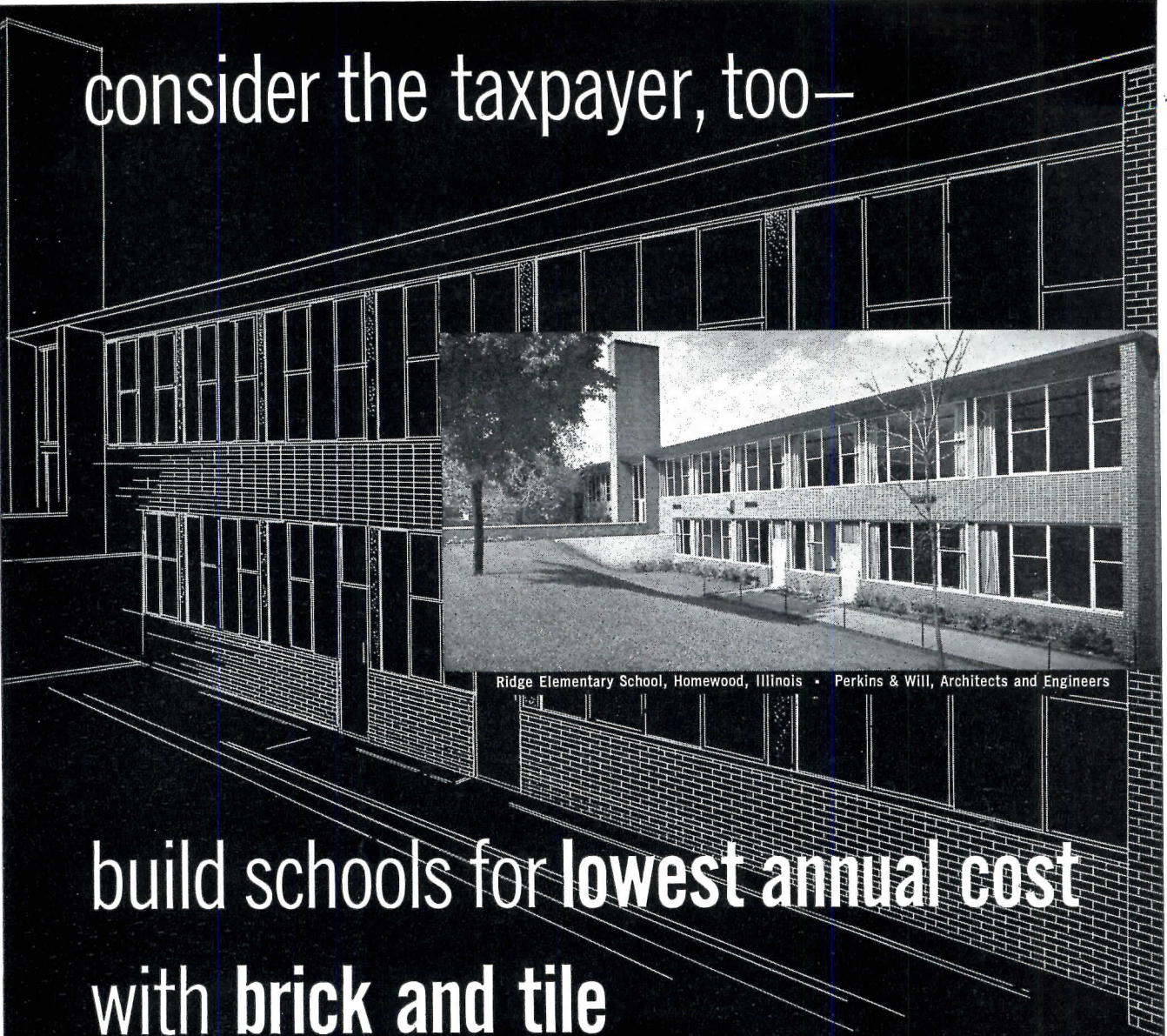
Curtis and Davis, Architects and Engineers, 338 Baronne St., New Orleans 12, La.

Earl W. Pellerin, Architect, 18317 Westover, Detroit 19, Mich.

Herbert D. Phillips, A.I.A., 470 Fourth Ave., New York 16, N. Y.

(More news on page 320)

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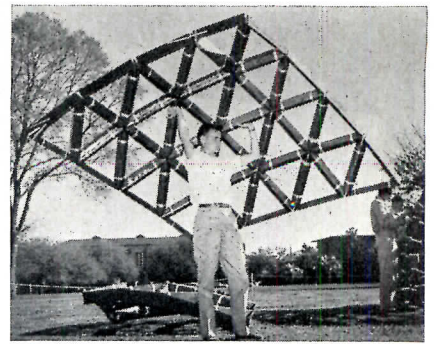
THE RECORD REPORTS

(Continued from page 24)

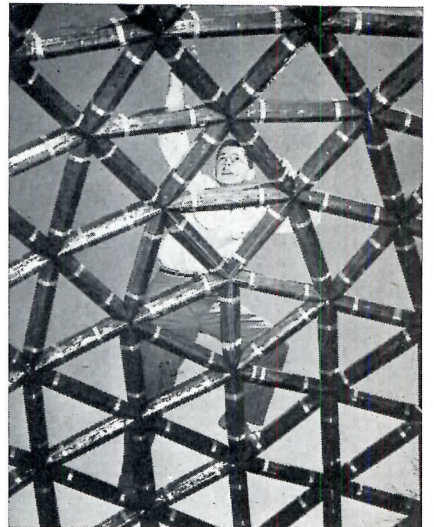
— developing the mathematical formulas, making dies, stamping and cutting the units to be assembled. The third week was devoted to production on an assembly-line basis; and in the fourth week the dome was assembled. At the end of the project the group made a complete report, including the advantages and disadvantages of their approach, to be used as a reference for the next Fuller group project.

The Tulane students organized on an industrial basis, with each person being responsible for a certain phase of the work, yet able to help with any other if he wished.

Requirements for the project were set: the mobile military structures must be extremely light; capable of rapid assembly by a crew inexperienced in construction; able to be inexpensively mass-produced of materials not easily



Above: parallelogram section, one of 30 used in dome, is lifted into place.
Below: close inspection by a student



Tulane student taping cardboard triangles for added strength

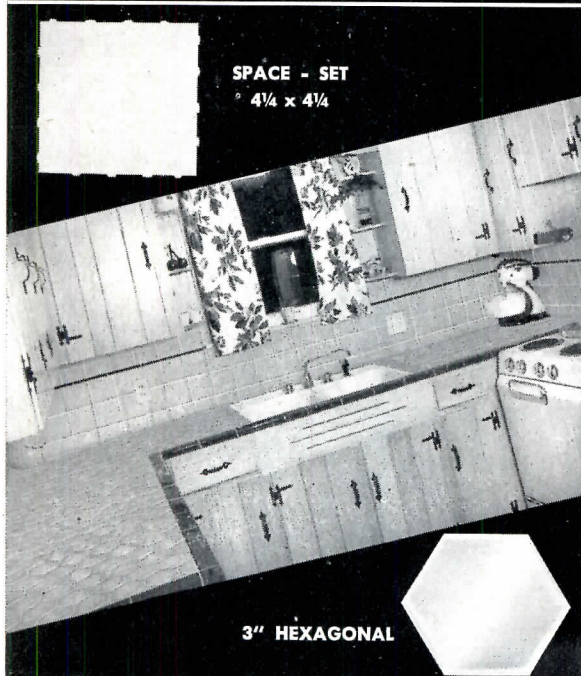
picked up by radar beams; able to withstand high wind, cold, rain and other natural elements.

The students used polyestered cardboard strips, folded into nine different basic triangular shapes bent into the

(Continued on page 318)

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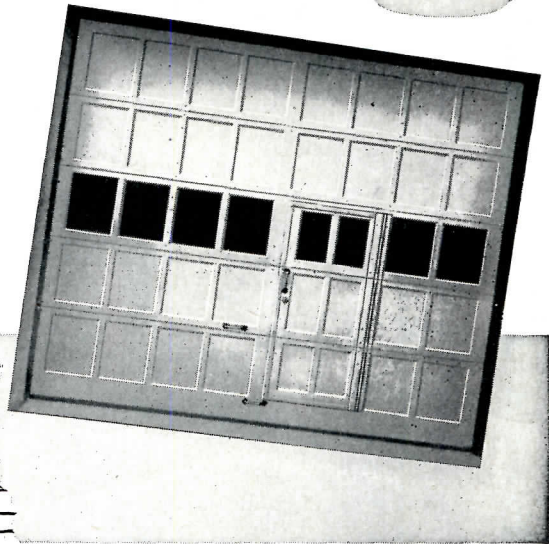
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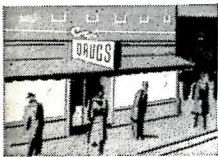
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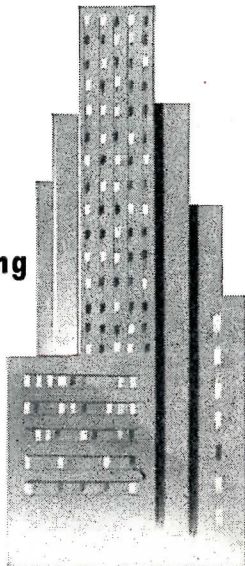
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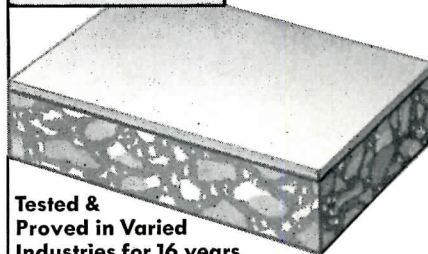


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THE RECORD REPORTS

(Continued from page 316)

488 triangles needed for the 18-ft model dome. The assembling procedure was broken into units of small diamonds consisting of two identical triangles (one positive, one negative) grouped in eights to form a parallelogram, 30 of which were used to form the dome. For ease of assembly the diamonds were keyed with colored tape at each of the four corners. Industrial filament tape, first used to hold the triangles together, was



Col. Lane, Mr. Fuller, Dean John E. Dinwiddie and Col. Paul J. Fontana (Marine's head of aviation operations) inspect Tulane project

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not found completely satisfactory and was later replaced with wooden pegs slipped into pre-punched holes. The students chose the moisture-proof materials for compactness, simplicity of application and strength.

The 18-ft model to be shown at Quantico this month along with the other models developed elsewhere will serve as a scale model for a proposed 36-ft housing shelter or a 108-ft hanger for six fighter planes. It is about one thirtieth the weight of an equivalent structure in steel; unskilled labor will be able to assemble the 108-ft structure in a few hours; structural members for the 18-ft model can be contained in a package 1 by 5 by 6 ft; cardboard triangles can be shaped on existing paper machines quickly and with little conversion in industry; the lack of metal in the dome makes enemy detection by radar more difficult. And, not least interesting to an economy-minded Defense Department, the estimated cost of providing dome shelters for one aircraft wing is \$657,000 — compared with \$5 million for conventional shelters.

While students at Tulane were completing final details of their dome for the Quantico tests, Mr. Fuller was working on his next idea for mobile military structures — a complete packaged unit dropped by parachute and landing as a sturdy dome.

Fuller domes will house the American exhibition at the Tenth Triennale at Milan this summer and a Fuller dome in the Boston Gardens shelters the architectural exhibition which is part of this month's Boston Art Festival. Mr. Fuller's dream of seeing his domes "bloom like flowers all over the world" may be coming true.

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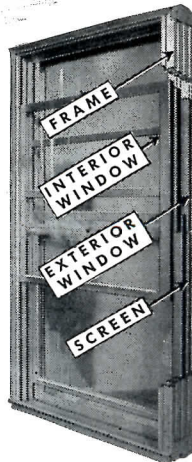
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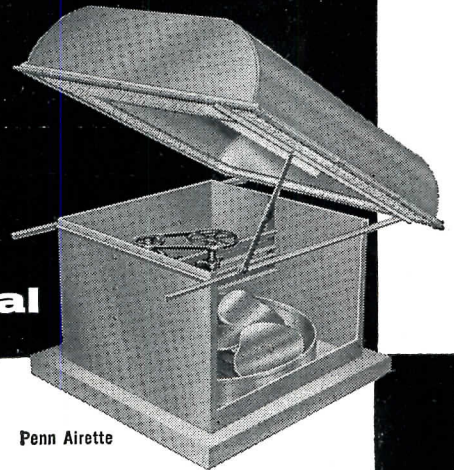
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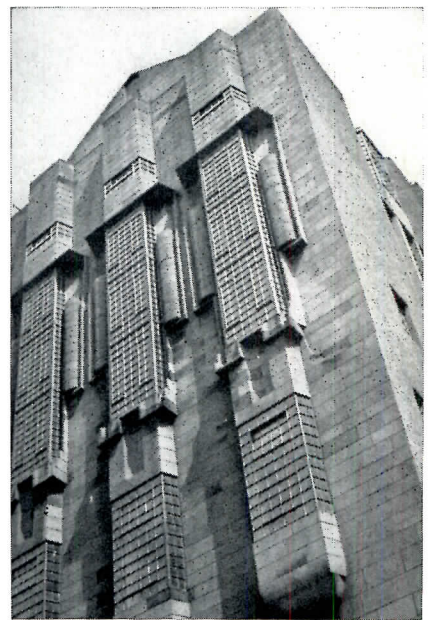
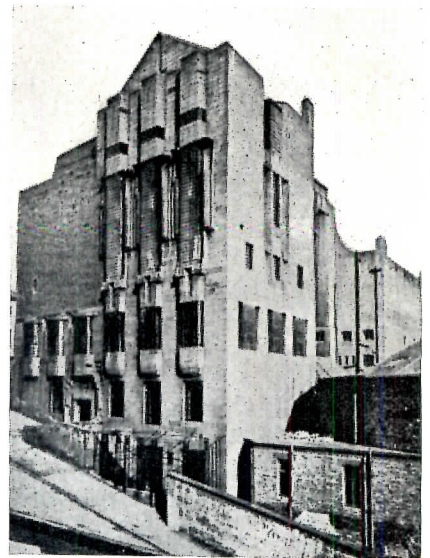
(Continued from page 314)

RENEWED INTEREST SHOWN IN WORKS OF MACKINTOSH

The University of Virginia honored the work of the Scottish architect and designer Charles Rennie Mackintosh when its Museum of Fine Arts presented what is believed to be Mackintosh's first one-man show in this country.

Mackintosh, who practiced in Glasgow around the turn of the century, is recognized now as a forerunner of modern architecture.

Included in this exhibit are photographs of his best-known work, the Glasgow School of Art, as well as photographs of the Ingram Street and Willow Tearooms, Queen's Cross Church, Hill House, his own house in Glasgow, Scotland Street School, and some examples of his furniture designs. In addition there are photographs of his drawings and paintings.



Top: the Glasgow School of Art, 1897-1909; the west façade, showing the long library windows. Center: a detail of the windows. Bottom: design for a private room in the Ingram Street Tearooms, c. 1916; there is a possibility that this design was done by an associate of Mackintosh



(More news on page 322)

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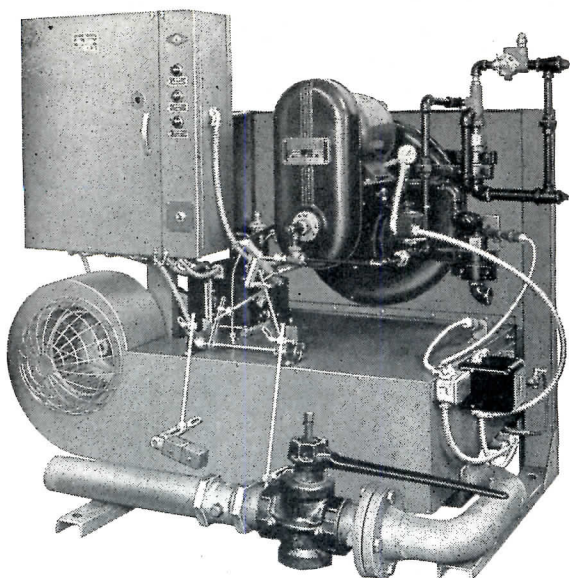
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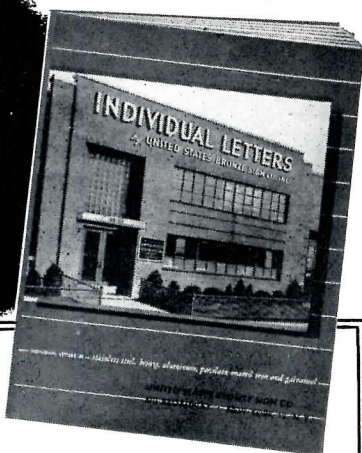
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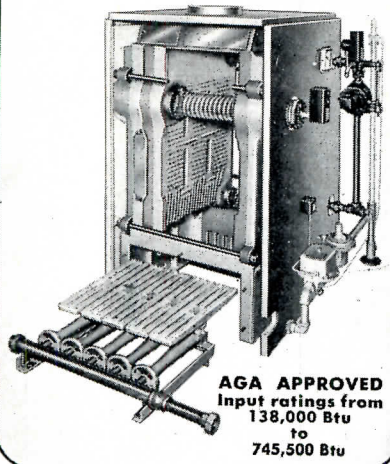
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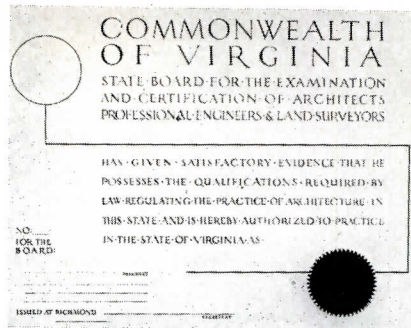
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THE RECORD REPORTS

(Continued from page 320)



STUDENT WINS AWARD FOR NEW CERTIFICATE DESIGN

Members of the Virginia Chapter of the American Institute of Architects, having decided that the appearance of the state's certificate of registration for architects, engineers and land surveyors was not esthetically appropriate to its importance, held a competition for the design of a new certificate.

The winning entry, from a field of 17, was that of Quentin C. Smith, of Alexandria. Mr. Smith is a second-year student in the School of Architecture at the University of Virginia. The first prize, of \$100, was awarded to Mr. Smith at the chapter's spring meeting, which was held May 28-29 at Virginia Beach.



From left to right, jury members Merrill C. Lee, F.A.I.A., chairman of the chapter's Competitions and Awards Committee; Pendleton S. Clark, F.A.I.A.; Robert F. Pile, from the land surveyors section of the state examining board; David J. Gibson, A.I.A., from the architectural section; and Turner A. Burton, executive secretary of the Virginia Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors

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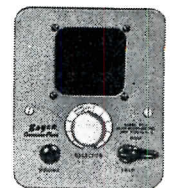


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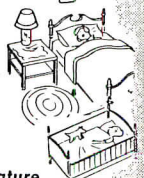
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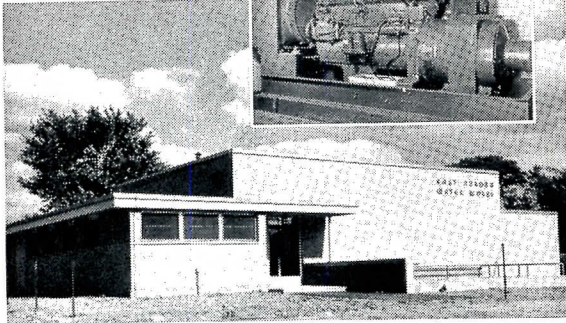
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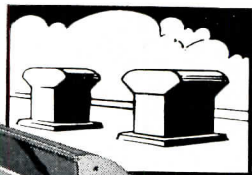
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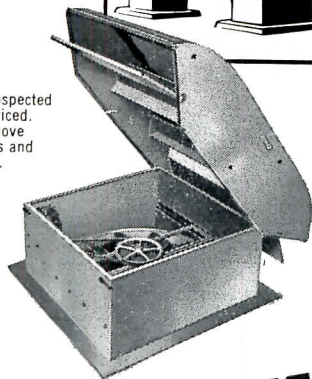
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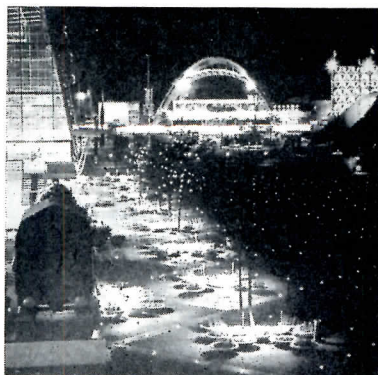
ON LANDSCAPE DESIGN

Modern Gardens — Masterworks of International Garden Architecture. By Peter Shepherd. Frederick A. Praeger (New York) 1954. 8¾ by 11½ in. 144 pp, illus. \$9.50

As did Andrew Jackson Downing of the 19th century, Peter Shepherd, British architect, town planner and landscape designer has written a book devoted to the subject of landscape architecture. Landscape design has once again become an important factor in architecture and the author, like his 19th century predecessor, has a sensitive eye for the integration of buildings with their surroundings — be they of a formal nature or of careful abandon; a 20-foot-square clothes drying area or the many square miles of public parks. That the subject of landscape architecture is an important one can be ascertained by organizations such as the American Society of Landscape Architects and by extensive courses on the subject offered at such places as the American Academy at Rome, Yale, Harvard, Cornell. University of Illinois.



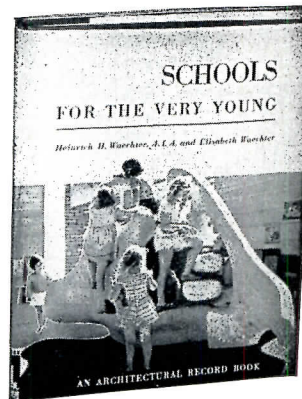
This book shows that garden architecture — whether on the scale of the little house in the suburbs of San Francisco by Thomas Church and Associates, or of the Festival of Britain (the author designed the area downstream of the rail-



(Continued on page 334)

Schools for the Very Young

by HEINRICH H. WAECHTER, A.I.A.
and ELISABETH WAECHTER



THOUGH many volumes have been written about school design, "Schools for the Very Young" is — so far as we know — the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school demanded for the proper training of the very young child.

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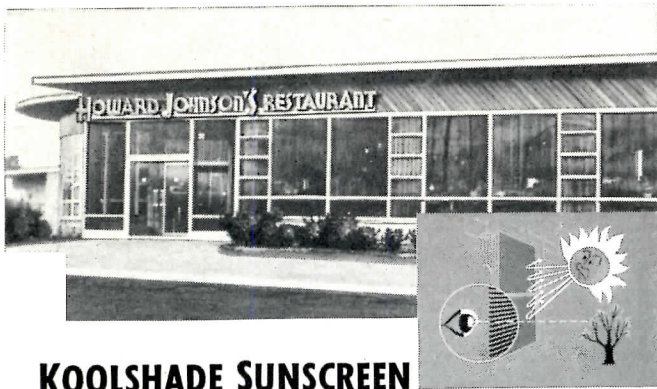
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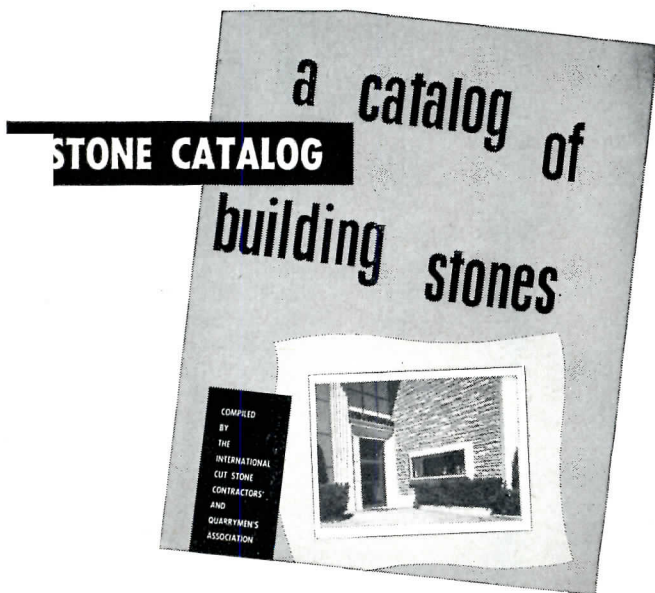
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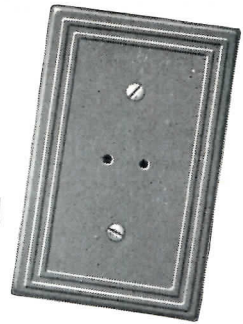
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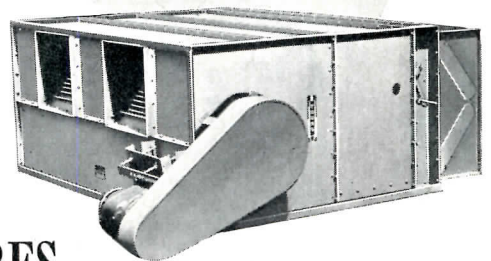
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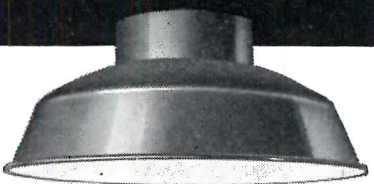
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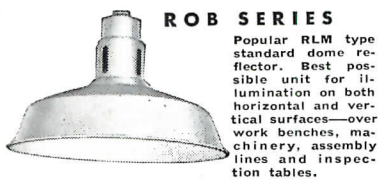
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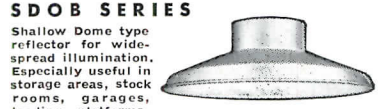
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REQUIRED READING

(Continued from page 330)

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problem of "immediacy" — of being able to go right down to the water, no commercial walks or forbidding walls to detour us; no wires or billboards blocking our view of the tower; of traffic; the pleasure of parks, inviting, private, sociable in a public place just a step off the rushing trafficked roads — is clearly apparent in Mr. Shephard's choices.



All photos from MODERN GARDENS

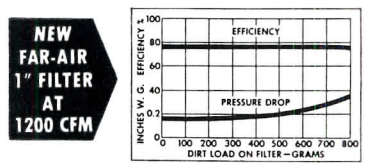
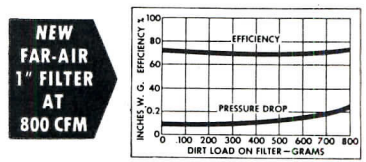
The book is provided with numerous excellent photographs and complete plans. The author gives details of the planting — even pointing out which plants are seen more advantageously at close view, and describes materials for pavements, terraces, walls and pergolas.



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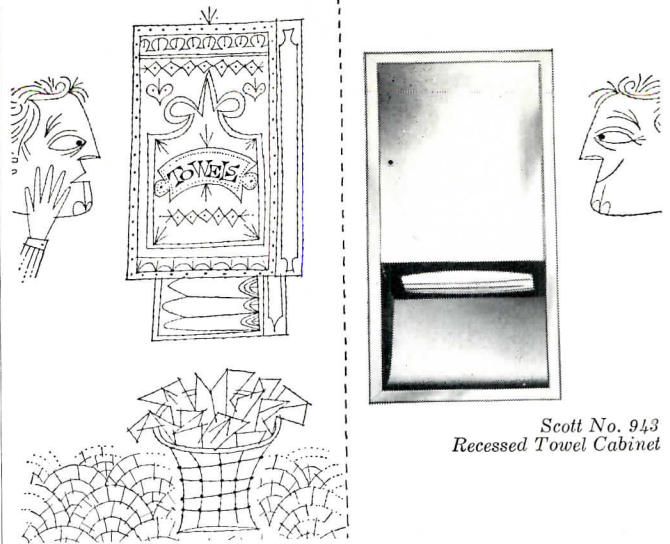
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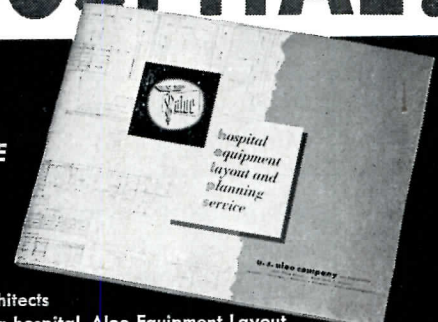
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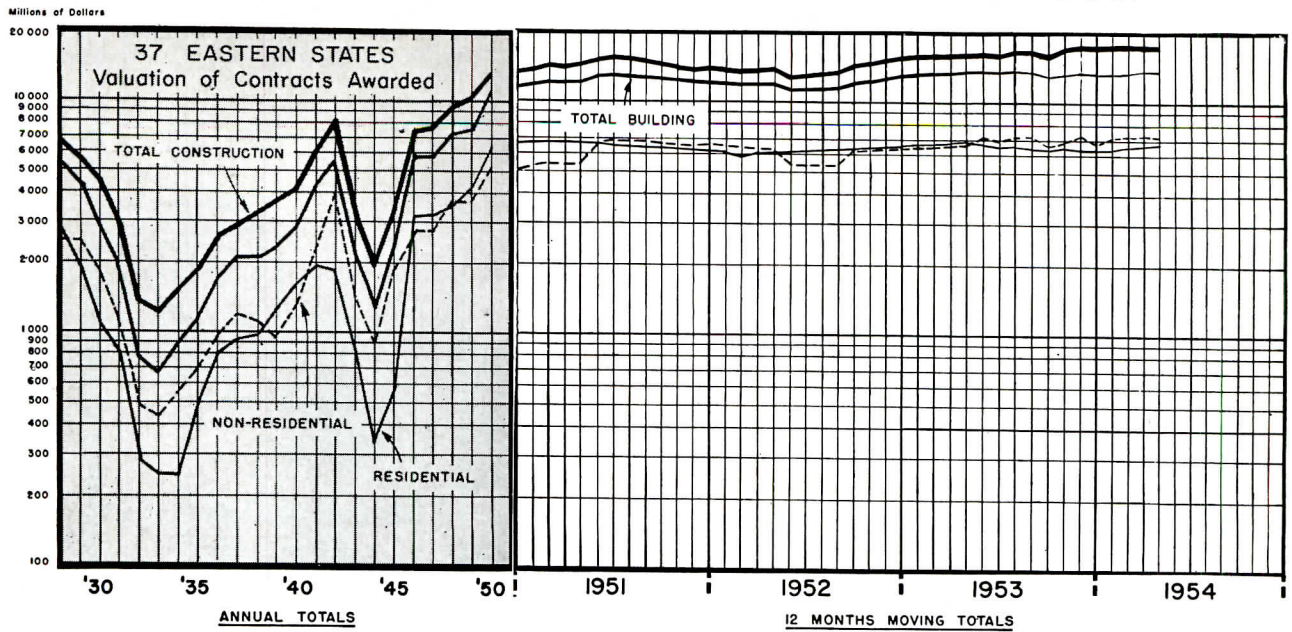
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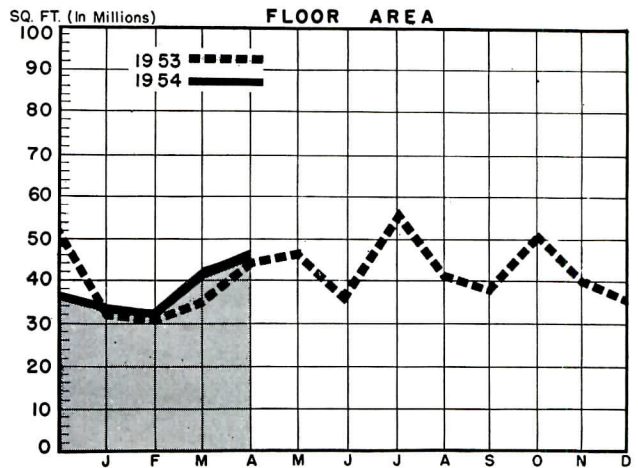


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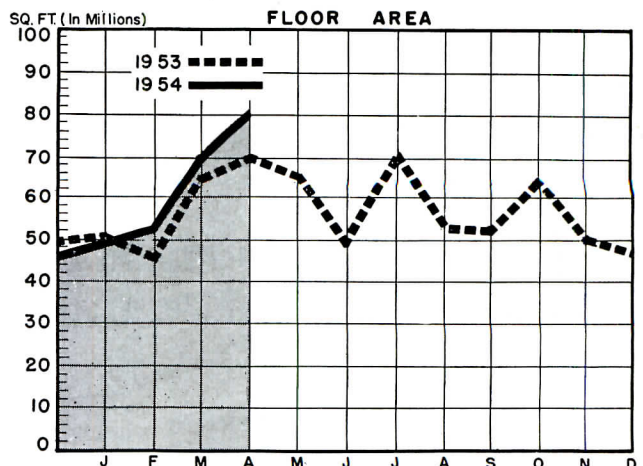
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37 Eastern States					
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1929	128,124	10,677	1950	149,301	12,442
1935	23,673	1,973	1951	127,812	10,651
1943	71,319	5,943	1952	107,776	8,981
1947	122,956	10,246	1953	79,487	6,624

Monthly Totals					
1953			1954		
Jan.	9307	July	10434	Jan.	4465
Feb.	8173	Aug.	2905	Feb.	6069
Mar.	5949	Sept.	6077	Mar.	5704
April	6766	Oct.	8338	Apr.	4045
May	8015	Nov.	4679	4 months	20283
June	3158	Dec.	5686		

* Multifamily Housing is the subject of RECORD Building Types Study No. 211 (pp. 170-191).

ARCHITECTURAL RECORD

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SEMI-ANNUAL INDEX • VOLUME 115 • JANUARY-JUNE 1954

BTS—Building Types Study • AE—Architectural Engineering • TSS—Time-Saver Standards • AI—Architectural Interiors

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