



january 1952





interior design data

largest architectural circulation in the world

Super-Ex — provides strong, straight nose held true by two semi-solid flanges.

Super-Ex — combines expanded wing with solid sections. Note alternate perforations in solid portion — for better plaster key.

Super-Ex—requires little or no plumbing; corrugations assure rigidity.

Super-Ex — can be wired, stapled, spotted, or nailed to wall—no clips necessary.

> Firesafe construction at its best: improved Milcor Super-Ex Corner Bead, Milcor Metal Lath, and Milcor Steel Stud

Improved Milcor

for longer plaster life, lasting plaster beauty

Super-En Bead

now provides for greater depth of plaster adjacent to the bead — regardless of the plaster grounds!

Improved Super-Ex Corner Bead, with its exclusive design, combines the rigidity of a solid wing with the added plaster reinforcement of expanded metal.

Super-Ex wings are formed at a minimum angle of 60° (max. 70°) for spring fit on a 90° corner, and easy adaptability to specified plaster grounds, whether $\frac{3}{4}$, $\frac{5}{8}$, or $\frac{1}{2}$.

Milcor Super-Ex goes on fast ... reduces erection costs ... protects corners against cracking, chipping ... assures straight, true-edge beauty.

Standardize on Super-Ex in your specifications.



Here's why Super-Ex corners are strolast longer: note greater depth of pladjacent to bead area ... spring fit vadapts easily to any specified depiplaster ground — whether it be $\frac{3}{4}^{"}$, or $\frac{1}{2}^{"}$... and solid metal that procorner at point of greatest strain.

*Reg. U. S. Pat. Off.

< NLAND> STEEL PRODUCTS COMPANY

4109 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN BALTIMORE 24, MD. — 5300 Pulaski Highway • BUFFALO 11, N. Y. — 64 Rapin St. • CHICAGO 9, ILL. — 4301 S. Western Avenue Bivd. • CINCINNATI 25, OHIO — 3240 Spring Grove Ave. • CLEVELAND 14, OHIO — 1541 E. 38th St. • DETROIT 2, MICH. — 690 Amsterdam Ave. • KANSAS CITY 8, MO. — 5, W. apartment hotel for brasilian resort

PROGRESS PREVIEW



When Oscar Niemeyer designed the apartment hotel shown here and on the following pages, he created a structure of such scale that it can more properly be termed a vertical city. Six thousand apartments, with related facilities and amenities, are contained in a block approximately 57 feet by 1334 feet—37 stories in height. (The much publicized superblock at Marseilles, designed by Le Corbusier, contains 400 apartments.) Niemeyer's "Condominio Hotel" is served by four semi-detached elevator towers (see aerial view of model, right), each containing nine elevators.

On the ground floor, pedestrian and motor traffic are completely separated. A shopping street is provided here as well as a market for the vertical city, several car and truck parking areas, a restaurant, a bar, swimming pools for adults and for children, playgrounds, (Continued on next page)





1 21





etc. On a mezzanine are located barbershops, beauty parlors, and medical services. On the third floor there are lounges, reading rooms, a large restaurant (over a city block), and a children's restaurant.

Niemeyer has planned four types of apartments (plans acrosspage). To achieve cross-ventilation a sunken corridor is used, not unlike Pingusson's design of the early 30's for his hotel at St. Tropez. Nine steps lead from the corridor to each apartment. Apartments of Type A are designed for two levelsliving room, kitchenette, and terrace on the lower level with sleeping area and bath on the upper level (up nine steps). Type 2A is twice as large and similar in plan. Apartments B and C, which do not have cross-ventilation, are located on either side of the corridor; and as the corridor is not centered on the building, depth of Type C is less than that of Type B. The Type C plan represents a minimum apartment but offers a terrace as well as the combination sittingbed room, with shower bath.

Such amenities as the theater (top, acrosspage) emphasize the large scale of the concept. The location of the building in a scenic spot makes it possible to offer outdoor recreation for the residents, similar to the customary country club features, and the curve of the mas-





sive block affords a sense of shelter for the playgrounds provided, while visually lightening the mass of the structure.

social club

Among the various projects Niemeyer reports on-the-boards is this club building at Belo Horizonte, capital of Minas Gerais, notable for its structural excitement as well as the comforts provided for relaxation. All services are centralized in the semi-basement (*see section below*), leaving the entrance level and the upper level (half deck) for members' enjoyment.





Numbers on the plans above designate the following areas: 1—entrance; 2—game room; 3—desk; 4—private dining room; 5—restaurant; 6—toilets; 7—barbershop; 8—private game rooms; 9—roof garden; 10—lounge; 11—bar; 12—service; 13—reading room; and 14—toilets.



preview OF PROGRESSIVE ARCHITECTURE FOR 1952

What progress in the planning and construction of buildings can we hope for in 1952? Never has a prognosticator held such a clouded crystal ball, because no one can predict what the various federal agencies (about 15 of them with some influence on construction decisions) will decide to allow or disallow in the way of construction permits during the year.

In preparation for this Preview issue, P/A sent out questionnaires to active practitioners, as it did last year. After predicting 1951 activity, uncertain as *that* situation was at the beginning of last year, the magazine has found that its synthesis of estimates from 609 architects who responded to the questioning resulted in a surprisingly accurate forecast. This year, 996 architects replied to the questionnaire.

Again, as many of you know, P/A asked architects to send visualizations and preliminary plans of work-on-the-boards likely to reach construction stage during 1952, which they considered significant for some reason or other. A sampling of these fore*tastes* along with the fore*casts* is presented on the following pages. This year, the Editors asked a "jury" of three advisors to go over the drawings and select the ones *they* thought most significant and most worthy of being shown to the other readers of the magazine. It was not a matter of awards or prizes—Edward D. Stone and Morris Ketchum, Jr., architects, with Talbot Hamlin, historian and critic, simply acted as advisory editors, and in that capacity helped decide which projects should have major emphasis and which others also deserved to be shown. (The Editors themselves have pulled a project of Ketchum's and a project of Stone's into prominence, without their sanction or knowledge).

We know, realistically, that not all these designs shown will be built during the year. However, if at least some of the schools and hospitals and apartments and office buildings and housing projects that appear in this issue become finished structures during 1952, the physical environment will have been improved to that extent. Let us hope that more of these desirable steps in the progress of architecture will become realized than now seems likely.

The first question that interests everyone in a survey of business possibilities, is the volume of work anticipated. In answer to P/A's query on this, it appears that the average firm expects \$3,230,000 of work to reach working-drawing stage during 1952 (compared with \$4,114,000 last year); and the same average firm expects \$2,900,000 of work to reach the construction stage in 1952 (compared with a prediction of \$4,138,000 last year). These drops are significant in several respects. In the first place, it is obvious that a great deal of the work that was on the boards a year ago, ready for the letting of contracts, was stifled by various regulations and restrictions during the year. In other words, not only is *new* work being stopped—there must be a great backlog of *designed* work simply put on the shelf.

Second, the drop in both figures does not represent an across-the-boards recession. While 29% of the respondents said that their volume of practice had increased over last year's, with an average increase in those firms of 66%; 46% of them reported a decreased practice, with an average drop of 50%; and 25% indicated that there was no great change in the quantity of their work.

Munuas H. Ciengletan



The general statistics quoted on the previous page indicate a greater concentration of work in fewer offices. This is further attested by comments attached to the questionnaires: " . . . the prospects for a practice of sufficient size to justify continuing in business are slim and I am therefore seeking employment elsewhere. The small architect is going to have rough sledding for a while." And, " . . . had to dissolve partnership and go to work for a larger firm." Another man reports that "approximately 20 smaller offices in my area have been forced by restrictions to go to work for the large firms," and scattered throughout the returns is the inevitable, "Recalled to Service."

Regional differences are also apparent in the rise or fall of business. The average volume of business is reported to be rising in only three regions—the Northwest, the Northeast, and, surprisingly, the Rocky Mountain area. Every other area is losing work compared to last year, with the Southeast, Texas, and the Upper Midwest suffering most. Remember that these are business reports from individual firms and both the Texas and the Michigan areas, for instance, are apparently going through the concentration spoken of before: twice as many firms reported loss of business as reported gains in each of these regions, but the *total* holds up to fairly close to last year's report because of staggering commissions in comparatively few offices.

What are the active building types on the architects' boards? In asking this question, one also is curious to know how this year's report compares with last year's, and what the actual construction statistics for the first ten months of 1951 are. Here is the *order* in which the various lists show activity:

Architects' Reports		Actual construction		Architects' Reports		
January	1951	JanNov.	195	1	January	1952
Housing	251/2%	Housing	60	%	Housing	23 %
Education	19	Industry	15		Industry	18
Health	17	Education	9		Education	17
Public Use	141/2	Health	5		Defense	15
Commerce	$13\frac{1}{2}$	Public Use	43/4		Health	14
Industry	9	Commerce	41/4		Commerce	$6^{1/2}$
Religion	11/2	Religion	2		Public Use	5
					Religion	11/2

Several comments and conclusions might

be drawn from these figures, remembering that \mathbf{P}/\mathbf{A} 's reports are from *architectural* firms. In the first place, Department of Commerce and Bureau of Labor Statistics figures (from which such construction as public utility, highway, sewer, etc., has been omitted for this comparison) show a greater proportional volume of housing than the architects reported last yearobviously due to the fact that much speculative house work is done without benefit of architect. Second, the fact that industrial construction played greater roles than had been anticipated is partly due to the same fact-a certain amount of this design is accomplished by engineering construction firms rather than by registered practicing architects. Since, this vear, architectural firms report industrial design in second place, the total volume of industrial construction may well push housing for first place in dollar volume.

The regional variations in building-type activity are also interesting. Using the areas designated on the map (*above*), the greatest activity reported is in the following building types: 1. U. S. Signal Corps School and Barracks: Fort Monmouth, New Jersey. Kelly & Gruzen, Architects-Engineers; Weiskopf & Pickworth, Structural Engineers; Gangemi, Levine & Shumavon, Site Engineers. Detail of administration and recreation area (right). Permanent military installation for training 5000 men. Barracks design to be prototype for similar requirements elsewhere. \$16,-000.000.

2. Elementary School: Needham, Massachusetts. Hugh Stubbins, Jr., Architect. \$600,000.

3. Plan of Pascack Valley Hospital: Westwood, New Jersey. Robert A. Green, Architect. Economical, practical design to meet budget requirements. \$600,000.

1

10

Illustration credits: page 129

2

7

8



Region 1 Education, Defense 2 Commerce, Industry 3 Defense, Health 4 Housing, Health 5 Health, Housing 6 Defense, Industry 7 Education, Industry 8 Industry, Defense 9 Defense, Housing 10 Education, Housing

0

Remember, however, that while industrial design is the type occupying architects in Region 8 more than any other, that is not necessarily the region in which the largest volume of industrial work is being planned. Looked at in comparative volume by regions (multiplying the averages reported in each region by the number of practicing architects in the region), the building activities stack up as follows:

	Highest \$ volume	2nd highest \$ volume	3rd highest \$ volume	
Housing	4	3	10	
Industry	8	4	6	
Education	4	10	3	
Defense	6	4	3	
Health	4	3	10	
Commerce	2	4	10	
Public Use	4	2	3	
Religion	4	7	10	

In the 1951 listings, Defense construction was combined with Public Use in the 1951 categories. This year it has assumed such prominence that it is given a separate place in the list.

Finally, P/A this year asked the architects which factor of the several restricting and restraining handicaps had most influenced their planning for the year ahead. Replies, nationwide, were as follows:

Building	type	restrictions	affected	74%
Materials	shortages			61%
Financing	restrictions			45%

It appears, then, that the mortgage regulations have not bothered the business side of architecture as much as either the NPA, CMP, and other regulatory government measures, or the increasing difficulties in obtaining certain desired materials.

On a regional basis, every section of the country reported the prime headache to be government restrictions. The entire Midwest, and the East Coast, as well as California, reported materials shortages to be nearly as great a difficulty. (Regions 2 and 7, a great chunk out of the upper center of the country, reported least difficulties with materials).

There were, it is true, other "significant factors" mentioned. For example, more than one man pointed out that it was the *uncertainty* of federal regulations, rather than the rules themselves, that has upset things most. Another, from Oklahoma, listed "shrinking practice due to poor crops." And, again, the man popped up who said that the factor most influencing his planning for 1952 was "recall to active duty with the U. S. Navy."

We hope that some of you will be able to draw conclusions from this report as to the direction in which to look in 1952. There is no question that it will be a hard year for many—especially the smaller, less secure firms. And yet, without desiring to sugarcoat the rather bitter pill, we believe that architecture will go forward this year. Since the early '30's, architecture has progressed despite one difficulty after another. As a young architect from the state of Washington wrote us: "The office is only three years old, so the fight to keep going couldn't be any tougher than the fight to get started. (We hope.)"

3

PROGRESSIVE ARCHITECTURE FOR HOUSING-1952

Housing—primarily in multiple-unit projects—bulks largest among the building types in \mathbf{P}/\mathbf{A} 's survey. Housing appears to be the one architectural and construction activity that will not suffer to a major extent next year. In his third quarterly report to the President, Director of Defense Mobilization Charles E. Wilson estimated that there would be "around 850,000 starts in 1952," a statement that seems to have satisfied the home-building industry. The starts for 1950 numbered 1.4 million—a record—and for 1951 there appear to have been slightly over one million units started, so the drop has been gradual.

How many of the 850,000 units will be individual small homes which can proceed by self-allocation of materials and how many will be multiple units is difficult to foresee; steel restrictions will tend to reduce the number of large structures, but housing needs in "defense areas" will tend to justify permits for many low-cost medium-rise projects. In 1951 about 11% of the total housing volume was for public authorities, and it is probably a good guess that a slightly higher percentage may be in this category in 1952.

Designers of many of the larger projects reported to P/A are trying to get their permits by a minimum use of steel; over and over again the note is appended to comments about an apartment house project: "non-critical materials," and at least one, \$2 $\frac{1}{3}$ million, apartment in the Midwest will try the Youtz-Slick slab-lifting method of concrete construction. Another conclusion that can be drawn from the reports is that many architects are now involved in large builder projects of individual houses. Most of them seem to be in the \$10,000 to \$12,000 class, but every effort is being made to keep prices down. Several semi-prefabricated groups are reported, and one architect is doing 100 houses of post-and-beam modular construction to sell for \$5000. Many of these projects are classified as "defense housing," and in that classification range from a new mining community of which the architect is proud, to a \$5 million job in California that the designer describes as "just junk!"

On the pages that follow, 1952's architecture for housing is illustrated by private residences, apartments and hotels, and multi-unit housing projects.



Public Housing Project for the Memphis Housing Authority: Memphis, Tennessee. A. L. Aydelott and Associates, Architects and Engineers; B. I. Brown, Architect in Charge of Design; Charles Jen, Eldred M. Brunson, Jr., Design Team. A slum-clearance project, it consists of a combination of row houses and three-story, gallery-access apartment blocks. Approximately \$5,000,000. Deemed the most distinguished multiple-housing project submitted for review, the project was praised for the unit plans and also the site planning. One jury member commented on the desirable variety gained by contrasting building types; another found distinction in the differing setback lines, that produce subtle variations and interrelationships.



housing 1952





Co-operative housing group: Colorado Springs, Colorado. Jan Ruhtenberg, Architect. Plot plan and renderings of two typical units. Twenty houses around a one-acre playground. \$180,000. The Jury found this to be the best of the groups of detached houses submitted.





U. S. Public Housing Project: Mechanicville, New York (right). Reisner & Urbahn, Architects; Joseph Hammer Associates, Structural Engineers; Mechanical Engineers, Site Engineer and Landscape Architect. Nine two-story units.

Ivy Hill Park (FHA): Newark, New Jersey (below). Kelly & Gruzen, Architects. Five, 14-story buildings of reinforced concrete construction; 2095 dwelling units. \$20,000,000. Particularly admired for its site plan.



housing 1952

House: East Liverpool, Ohio. James Nessly Porter and John Terence Kelly, Architects. Designed for Porter's own family. Of all the work submitted for consideration this year, this house won the Jury's most unqualified praise. Approximately \$50,000.







Planned for a family consisting of parents and two children, the house will be located on a south slope with views to south and east. Native gray sandstone; red-fir framing, siding, and plank ceiling; cedar-shingle roof. Basement contains utility room, laundry, dark room, and shop.

housing

1952





House: Lafayette, California (right). Roger Lee, Architect. Designed for an engineer-owner who is building it himself. Concrete gravity walls used to conserve steel.



House: Providence, Rhode Island (left and below). Conrad E. Green, Architect. Small city house to be built of wood in an established neighborhood made up of 50' x 100' lots. Although wholly contemporary, the design consciously conforms to certain neighborhood standards, such as setbacks, an essentially rectangular plan, and height of roof line.





House: Sanibel Island, Florida (right). Twitchell & Rudolph, Architects. Floor plans and perspective rendering. Rectangular plan, with main floor raised up to gain a better southern view of the water; the entrance element is a landscaped, screened patio at grade.







Plan of house to be built in Orinda, California (left). Alvin Fingado, Architect. "Use of integrated curves to exploit panoramic view, except in the east quadrant." Estimated cost: \$65,000. Juror Hamlin especially wished to have this plan shown, arguing that its unorthodoxy suggested some challenging new approaches to design for pleasant living.

housing | 1952





Typical Floor

Although new hotels and private apartment houses, as commercial structures, will presumably have hard sledding during at least the first half of the year ahead, P/A's survey turned up so many examples of projects on the boards that it seemed reasonable to make a sub-category of them in this issue. As a matter of fact, many of the hotels reported are well under way, and will apparently constitute the first big flush of new construction in this field for a number of years. The well-publicized ones, such as the Los Angeles Statler, are not the only examples of interesting modern planning and construction. Spokane has a new \$2 million, welded, light-weight steel job under way; Madison, Wis., a large glass-and-aluminum apartment-hotel; Wilkes Barre, Pa., a 100-room "suburban" hotel; other reports come from Oklahoma, Texas and, of course, Florida. Florida, incidentally, is apparently witnessing a new wave of motel building, judging from our reports.

Not all of the apartment houses submitted for this issue were as handsome as Stone's (*above*) and it is sad, if a little instructive, to see the number of imitations of Mies van der Rohe's skeleton esthetics. In planning, the influence of the "openbalcony" schemes is apparent; in structure an interesting development is a liftslab project reported for Kansas City by Kivett & Myers. Apartment House: Asbury Park, New Jersey. Edward D. Stone, Architect. Karl J. Holzinger, Stanley M. Torkelsen, and Lloyd Flood, Associate Architects. Since Stone was one of our Jurors, this job was considered hors de concours in their selection, but the Editors decided its excellence merited top place in this classification, in any case.





Perspective and rendering of an apartment house to be built in Yakima, Washington (right). Thomas F. Hargis, Jr., Architect. All units air conditioned, and each apartment with either a private garden or balcony; fourth floor to contain three deluxe apartments. West facade equipped with sun louvers.

> Hotel: Lawton, Oklahoma (left). Paul Harris, Architect. 150 rooms.



January 1952 6

PROGRESSIVE ARCHITECTURE FOR EDUCATION – 1952

At present writing, it appears that there will be more headlines about school construction than schools built during the first half of the year. The Office of Education in the Federal Security Agency has been a weak "claimant" for its share of the pie under CMP-weak in the sense that it was caught unprepared, with almost no technical staff for processing, and surprisingly few statistical arguments about school needs. The furore that has resulted from the shockingly small metal allocations for schools actually made during the last quarter of 1951 and announced for the first two quarters of 1952 has resulted in Congressional study and also such activities as the A.I.A. rushing to supply facts, and citizens like those in Quogue, Long Island, protesting so sharply at an application's rejection that a reversal of decision was made. The real need for more schools

is apparent and can be readily documented. And it is P/A's prediction that the first easing up in the materials situation will result in education being one of the major activities to profit.

The greatest dollar volume of educational design in any region is reported from the Northeast, next from the Upper Midwest, and third from the Southwest (California-Nevada) area. Smallest total volume appears to be in preparation in the West-Central section of the country, from Arizona straight up through Minnesota, and in the Southeast.

As far as the individual architects are concerned, the *average* amount of educational work on an architect's boards is heaviest in California, with the Gulf states area and the Great Plains states slipping in ahead of the Northeast in this respect.

Design trends in buildings for education

seem to be again in a state of experiment, after a fairly long period when certain tendencies (the single-loaded corridor, biand tri-lateral lighting, etc.) had become almost axiomatic. Stubbins is doing a New England school with double-loaded corridors (the only scheme that he feels can be justified economically in that area); Caudill, Rowlett & Scott expand a corridor into an indoor play area; various new sections and daylighting techniques are tried (several designs for classrooms lighted only from above were submitted, although not illustrated).

College buildings appear to be continuing the design progress begun only recently and it is good to see advance in such states as Georgia and Alabama, as well as more ambitious schemes, such as the proposed Engineering Center for Columbia University.



Elementary School: Glendale, Arizona. Ralph Haver and Fred M. Guirey, Associated Architects. Stephens & Hamlyn, Structural Engineers; M. M. Lowry, Mechanical Engineers. The Jury found this job excellent in every respect, commenting particularly on the child-related scale of things and the straightforward and economical use of simple materials. Wood frame; masonry curtain walls. \$153,800.















Elementary School: Salisbury, Con-necticut. Perkins & Will and Eliot Noyes, Architects. The Cafeteria-gym unit is separated from the classroom block by a landscaped courtyard, bordered on one side by a covered entrance-walk; on the other by enclosed ramps leading down to the gym and locker rooms and up to the cafeteria. Roof monitors provide bilateral lighting for most classrooms.

Greenbrae Elementary School: Marin County, California. William Corlett, Architect. Walter Steilberg, Consulting Engineer; G. M. Simonson, Electrical and Mechanical Engineer. Model and cross-section drawing. Estimated cost: \$180,000. An attempt to achieve a residential character that will harmonize with the architect-designed tract houses it adjoins.





Elementary School: New Orleans, Louisiana. I. Wm. Ricciuti and Herbert A. Benson, Architects. Classrooms organized in pavilion scheme, with outside corridors (in the case of the second floor of the upper classroom block, an open balcony sidewalk). Individual toilets for each classroom. Multi-purpose room, kitchen and cafetria planned for community, as well as school, use.

education 1952



Junior-Senior High School: McCandless Township, Allegheny County, Pennsylvania. Mitchell & Ritchey, Architects. Auditorium, art and music departments in wing at right-hand end of rendering (top); administration, library, homeeconomics classrooms and gymnasium in the main cross-block and at left a series of classroom wings and a utility wing, joined transversely by access corridors. The combined masses of classroom wings and corridors enclose open courtyards that the various classes will themselves landscape. Estimated cost: \$2,200,000.





West End Elementary School: Industry, Texas (right). Caudill, Rowlett, Scott & Associates, Architects. The rendering looks into one of the spacious, protected play areas. The design of the school includes provisions for the cultural, recreational, and social activities of the community, as well as for the educational program. A skylight well above the large, open play corridor provides bilateral lighting for the adjoining classrooms. The originality and practicality of the plan scheme won the Jury's special praise.



Campbell Hall School, North Hollywood, California (left). A. Quincy Jones, Jr., and Frederick E. Emmons, Architects. Chapel at left; kindergarten unit in background; junior high school classroom wings, joined by covered walks, at right. The extent of college construction ready to go ahead next year can be gauged from the fact that the approximately 1000 architects who reported to \mathbf{P}/\mathbf{A} listed specifically \$72 millions in work under this category (44 projects in 21 states) ranging from a number of major campus planning schemes each in the millions of dollars to a college chapel for which the budget is \$75,000. California seems to be far in the lead in average dollar volume of work in the architects' offices, and would also be ahead in total volume, except for one or two large proposals in the East, bringing that section to the top.

One interesting development in college work is the growing importance of the junior college (midway in the academic level between the secondary school and the 4-year college) both as an educational institution and as a building type for architectural study. P/A will document some of the completed buildings in this field in a later issue and can report not a large but a significantly increasing proportion of educational work in this category in several sections of the country.

Another activity called to our attention, which may not yet be common enough to be called a "trend," is the complete campus replanning job under architectural direction. When one new building is added to an existing Collegiate Gothic campus, it is difficult to argue for a contemporary approach; however, when there is a planned program to replace outmoded buildings, a fresh design start is much more reasonable. A number of major moves in this direction was reported.



Two-Company Barracks: North Georgia College, Dahlonega, Georgia (left). Aeck Associates, Architects. Paired, three-story dormitory blocks, joined by a central entrance lobby and recreation-room element. An enclosed bridge above the lobby joins the two wings at the second-floor level. The Jury gave special applause to the angled plan that respects the site contours.

Engineering Center, Columbia University: New York, New York (right). Voorhees, Walker, Foley & Smith, Architects. Designed to develop an increasing number of advanced engineerscientists, this proposed structure will house Columbia's School of Engineering, an Institute of Advanced Engineering Science, and a Division of Co-operative Research in Engineering which will work with industry on problems having educational value.







Union Building for Alabama Polytechnic Institute: Auburn, Alabama. Pearson, Tittle & Narrows, Architects. Michael M. Hare, Consulting Architect; Edgar A. Whiting, Educational Consultant. A \$1,000,000 center for students, faculty and alumni secretary's offices—particularly admired for its plan. On the ground floor are the cafeteria, kitchen, private dining rooms, physical education rooms, a bookstore, and service rooms; the partial second floor contains meeting rooms, student government offices, a study lounge, music rooms, and business offices. The assembly room, cafeteria and snack bar, and private dining rooms will be air conditioned. Concrete frame, with flat concrete slab floors; exterior walls, brick and limestone.

PROGRESSIVE ARCHITECTURE FOR HEALTH - 1952

The planning of hospitals and health facilities lags slightly behind planning for educational purposes, both in actual construction during 1951 and in proposed construction for the year ahead. The actualities for the first three months are likely to produce more of a lag since, as a spokesman for Defense Production Administration recently said in an interview, there is enough steel allotted to education to "support all of the elementary and secondary school projects under way" plus enough so that FSA calculates that it will permit something like 500 new starts, but on the other hand, for hospitals, "the amount of materials in the program determination is considered sufficient to meet the needs of construction projects under way, but there is comparatively little material there to meet new construction." (Approximately 50 new hospitals may receive allocations.) The same spokesman went on to say that "essential new starts" such as hospitals in defense areas might be permitted under a special agreement to use part of "a reserve held by the DPA for emergencies."

When hospital construction does proceed, it appears from P/A's survey that the eastern half of the country will build more than the western. All four regions east of the Mississippi are high in hospital projects, in the following order: Northeast, Gulf States, Southeast, Great Lakes district. The California-Nevada area comes next; lowest on the list is Texas.

This magazine surveyed trends in the

planning of health facilities in a special issue last July; there do not appear to be any radical departures planned for the near future, if we may judge from the projects submitted for inclusion in this issue. The small community hospital such as the one by Robert Green shown on page 55 is still the dominant type, and the principal change will probably be in construction methods-Green is planning his for wall-bearing masonry, with a minimum of structural steel. A number of proposed larger voluntary hospitals and an occasional great municipal facility such as the one on the next spread indicate real needs, which may not be met even with "starts" until later in the year. Smaller structures such as the many doctors' clinics on the drawing boards, may have easier sledding.





St. Mary Hospital, Pueblo, Colorado (left). Fisher & Fisher, Architects. Our Jury found this 250-bed hospital to be outstanding among the health facilities submitted. The paired corridor scheme either side of central service rooms (shown on third-floor plan) and utility core maintains also on the operating-room floor (second). Ambulance and receiving entrances occur at the rear of the hospital.



Child Guidance Clinic: Philadelphia, Pennsylvania (left). Carroll, Grisdale & Van Alen, Architects. Estimated cost: \$450,000. Consisting chiefly of a series of offices, this building will adjoin the Children's Hospital of Philadelphia, although it is an independent organization.



Coney Island Hospital: Brooklyn, N. Y. Designed for the Department of Public Works of the City of New York under the direction of Frederick H. Zurmuhlen, P.E., R.A., Commissioner. Andrew J. Thomas, Architect; Katz, Waisman, Blumenkranz, Stein, Weber, Associate Architects. V. L. Falotico & Associates, Mechanical Engineers; Farkas & Barron, Structural Engineers. \$14,000,000. Because of soil conditions, this great structure has no basement, merely pipe space beneath the floor shown. Hence elements usually found at basement level (storage, housekeeping, and maintenance) occur on the first floor; main kitchen and central supply are at the second-floor level; therapeutic departments on the third, and nursing units begin at the fourth level.





Clinic for three doctors: West Seattle, Washington (left and below). Paul Hayden Kirk, Architect. The Jury particularly admired the plan, with the centrally located area for receptionistnurses, which provides excellent general control. The clinic is to be built of nonessential materials. Estimated cost: \$60,000.



PROGRESSIVE ARCHITECTURE FOR PUBLIC USE - 1952

Architecture for public use, aside from that for the armed services, is certain to suffer along with private work under the present restrictions. It has dropped from an estimated 14% of the work on architects' boards last year to 5% being planned for 1952 construction. In the category of public-use structures, libraries represent the largest volume of work reported (as they did last year also) and present some of the most successful design solutions. Those illustrated on the following pages indicate the range of library programs—the university reading and research center, the large municipal library, and the smaller community type. The other buildings shown, from community centers (sometimes with "civilian defense" overtones) to a huge proposed courthouse (designed to use very little structural steel) indicate that many communities still hope for permission to build for the public weal.

Judging from the returns that P/A re-

ceived, the upper eastern quarter of the country—from Minnesota east to New England—is planning the greatest amount of building in this category. California comes next, and the state printing plant of Wurster, Bernardi & Emmons indicates the variety of work being planned there (and certainly sets a standard for quality). Lowest total volume and lowest office averages are reported from the West-Central section extending from Texas north to Nebraska.

Library Building, Georgia Institute of Technology: Atlanta, Georgia (acrosspage). Bush-Brown, Gailey & Heffernan, Architects. Considered by the Jury to be the best of the large libraries submitted, the design was particularly admired for its plan, not only from the point of view of control and operation, but with its excellent provisions for specialized study. At the ground-floor level (not shown) is another entrance lobby at the west end of the building, large stack area, faculty lounge, receiving room, and music departments. The upper two floors have additional stack areas — all of them arranged on the "open" principle — special collection rooms, and study areas.









Library for the University of California: Riverside campus (below). Graham Latta and Carl Denney, Architects. Needed to serve a new liberal arts college that U.C. is building near a 32year-old citrus-experiment station. Library to be built of reinforced masonry, with concrete columns and floor and roof slabs. Approximately \$600,000.





Library for Hibbing, Minnesota (left and acrosspage). Jyring & Jurenes, Architects and Engineers; Carl Graffunder, Associate Architect. The Jury found this to be the outstanding smaller library brought to its attention. Especially admired was the excellent arrangement of the control desk, with an extension to handle the children's room. On the basement floor is a story-telling room (under the children's room), additional stack space, and custodial, storage, and mending rooms.

Public Library: Cincinnati, Ohio (below). Frederick W. Garber and Samuel Hannaford & Sons, Associated Architects. Estimated cost: \$3,800,000. Reinforced concrete structure, with brick exterior wall faces. All bays and pans are arranged to accommodate the 3'-0" x 4'-6" stack construction that maintains throughout.





public use | 1952





Peoples Methodist Community Center: New Orleans, Louisiana. Curtis & Davis, Architects. Considered the best of the institutional type of public buildings submitted, this center was designed for a Negro slum area, for the care of children whose parents work during the day. Facilities will be used every day of the week and for Sunday School instruction on Sundays. The four classrooms may be thrown together into a community hall. The partial second floor contains an apartment for the Director, as well as offices, isolation room, and rooms for out-of-town guests.
Civilian Defense Building and City Auditorium: Corpus Christi, Texas. Richard S. Colley, Architect. In the Jury's opinion, this was the most noteworthy submission among buildings for public use. The auditorium (left of rendering) is planned for a seating capacity of 7600, with storage rooms and



broad concourses bordering the horseshoe-shaped arena. The 30,600 squarejoot area of the rectangular defense building is uninterrupted except for toilet areas and structural columns and may be subdivided as need indicates. The architect hopes to construct the latter by the liftslab method.

public use | 1952



Administration, Museum and Viewing Building: Stone Mountain, Georgia. Robert and Company Associates, Architects and Engineers. Although it has been denied a building permit by NPA's M4 Order, the Jury wished this job included, as an instance of good planning for public use. A park building for Stone Mountain Memorial Park, it will command a dramatic view of the sculptured mountain face.



Printing Plant for the State of California: Sacramento, California (below). Wurster, Bernardi & Emmons—Albert W. Kahl, Architects Associated for this job. A. V. Saph, Jr., Structural Engineer; James Gayner, Heating and Air-Conditioning Engineer; Nemec & Wright, Electrical and Plumbing Engineers. Selected by our Jury as the best of the large public buildings reviewed.





Jefferson Parish Courthouse, Gretna, Louisiana. William R. Burk, Associated Architects and Engineers. Uses very little structural steel. Cost estimate: \$5,000,000. The jail occupies upper floors of the taller unit at right.

PROGRESSIVE ARCHITECTURE FOR DEFENSE - 1952

Perhaps it is too early (and it may soon be too late) to hope for the appearance of much design excellence in architecture for the military services. It was late in the period of World War II before the few really well-designed projects appeared out of the welter of standard barracks and training schools. At least it is encouraging to hear some conscientious architects and engineers insist that thoughtful design is possible, and that the firm which simply takes the standard designs and adapts them is not doing the full job that can be done; and it is good to see a few illustrations of the possibilities appear. Many of the designs for the armed services cannot, of course, be released, which is another reason why it will be some time before the worthwhile

endeavors from this hectic period are publishable.

It is impossible to develop a statistical pattern of activity in this work because of its security nature—too many firms reported that they were doing military-facilities planning but could not reveal its nature or extent to make it possible to analyze the potential by regions or otherwise. It can be stated, however, that the largest volume of work *among those reporting it* is in the Gulf states area, and the smallest in the so-called Prairie states.

Design for the armed services does not ordinarily present a very exciting architectural possibility, and P/A's reports contain many comments indicating no great enthusiasm at the prospect of seeking this type of work to keep the offices going during 1952. "We are afraid that we will have to turn to war work," is a typical response, along with such ones as, "We are seeking Army and Navy work, but since we are not in a defense area it seems to be a hopeless quest." It is no secret that most of this work is being assigned to the larger firms and to architect-engineer combinations, and this fact also turns up often in comments on the returns, such as, "Unless an architectural firm is well-known or has the political influence to get some of the projects being planned, there is little chance in our area to get the hand-outs." It is apparent that if military construction takes the high place in dollar volume that seems indicated, it will not be an activity that brings joy to the hearts of many architects.



Chappo Flats Barracks and Messing Facilities, Camp Joseph H. Pendleton: Oceanside, California. Pereira & Luckman, Architects and Engineers for the Department of the Navy, Bureau of Yards and Docks, Eleventh Naval District P.W.O., San Diego, California. Permanent living area for 1000 Marine Corps trainees. Illustrations show the over-all scheme (top) with mess hall in background; detail of mess hall (center) and plot plan (bottom). Steel and concrete structures.







Maintenance Shop, Anniston Ordnance Depot: near Anniston, Alabama (acrosspage). Selected by the Jury as an outstanding architectural accomplishment, this building was designed by Sherlock, Smith & Adams, Architects and Engineers, for the Corps of Engineers, U. S. Army; Office of the District Engineer, Mobile, Alabama.



Base Operations Building with Control Tower, Bergstrom Air Force Base: Austin, Texas. Fehr & Granger, Architect-Engineers, for the Department of the Air Force, Directorate of Installations, DCS/M, Washington, D. C.

PROGRESSIVE ARCHITECTURE FOR COMMERCE - 1952

Commercial work, because of the various Federal restrictions, has of necessity fallen low in comparative dollar volume. Not typical, but indicative, is the report from one Texas firm that had been most active in the field of large commercial work-office buildings, department stores, and the like-that there is "not a single project in the office which is likely to go ahead next year." Some designers are not so pessimistic; where an argument can be made for vital community needs in new or rapidly growing regions, there is some hope of NPA approval. Reports of work-on-the-boards in this category may be valuable primarily as an indication of needs to be fulfilled some time later, if not in 1952; and of capital ready to invest if materials can be had.

In architecture for commerce the sec-

tion of the country centering around Chicago leads both in total dollar-volume and in averages in the architects' offices. Next comes California, the Northwest (primarily stores and shopping centers) Texas, and the Northeast, in that order. Least volume and lowest averages are reported from the Gulf states and from the Rocky Mountain region (where volume had been high last year because of activity in Denver and some other cities).

Most interesting building type in the commercial category is again the regional shopping center, of the type (but not always of the quality) shown below. Some of these projects may well go ahead, even during the first quarters of the year, because of their need as commercial establishments (especially in the areas that have recently grown) or because of perhaps tenuous arguments that they can be used as civilian defense centers in the event of an emergency. Design trends in this building type, which P/A will document with a special study later in the year, are toward a more cohesive grouping than the earlier centers managed, both in the functional matters of parking facilities and customer convenience, and in the over-all appearance with signs and displays unified, if not controlled.

The office buildings that are proposed for 1952 are impressive by their size and exuberance rather than any great design advance. In the total volume of work that may proceed during the year, it is probably the small remodeling and alteration job (which cannot very well be pictured in an issue such as this) which will occupy the average practitioner.

Town and Country Shopping Center: DeWitt, New York. Ketchum, Gina & Sharp, Architects; Fred B. O'Connor, Associate Architect. Severud-Elstad-Krueger, Structural Engineers; Syska & Hennessy, Inc., Mechanical Engineers. Since Ketchum served on our Jury, this project had to be rated H.C. Because of the excellence of the work, however, the Editors have taken the liberty of by-passing the Jury, to accord it First Mention Placed among the commercial buildings. A small regional shopping center designed to serve a considerable population, the site is 40 acres in extent; space is provided for 2000 parked cars, and 300,000 square feet of rentable area will be created. All service traffic will circulate through a depressed truck roadway, flowing into basement level, completely separate from pedestrian traffic at selling level.



commerce

1952





Office and Display Building for Youngstown Kitchens Co.: Warren, Ohio (above and left). Alfred T. Kurek, Architect. In the basement are a secretarial pool, supply, and utility rooms. The second floor consists of executive office suites and a conference room. \$175,000.



Office Building: Houston, Texas (below and left). Golemon & Rolfe, Architects. Designed primarily as the architects' own office, it also has a second floor that is rented. Among the smaller commercial structures, the Jury considered this job outstanding.



90 Progressive Architecture

Office Building for the Prudential Insurance Company of America: Chicago, Illinois, Naess & Murphy, Architects. Utilizing air rights above the Illinois Central Railroad east of Michigan Avenue and north of the Art Institute. Thirty-five story building; 800,000 square feet of floor space, of which the insurance company will use approximately half.



Office Building for The Texas Company: New Orleans, Louisiana. Claude E. Hooton, Architect. B. M. Dornblatt & Associates, Structural Engineering Consultants; De Laureal & Moses, Mechanical Engineering Consultants. Welded steel frame, with southwest and southeast walls largely of glass. Projecting aluminum fins at 3'-6" intervals govern the amount of direct sunlight.



PROGRESSIVE ARCHITECTURE FOR INDUSTRY-1952

Design for industry—both public and private—is, as everyone knows, taking a large part of the architect's and engineer's time and will use a major share of the construction dollar in 1952. As the figures quoted in the introduction to this issue indicate, the completed industrial work during the past year far exceeded what the design professionals reported on their boards at the beginning of the year—in other words, a great part of this work has been quickly programmed, rushed through the design stage, and speedily built, as many of the architects throughout the country can attest.

Expansion of basic industries as a part of the defense mobilization program is, of course, largely responsible for this industrial building boom. The government foresees a total new investment in "basic plant" of \$50 to \$60 billion over three years, and has speeded things in industries important to the military program by a tax amortization scheme (a write-off of part of the plant costs over a five-year period for tax purposes) as well as by direct loans and loan guarantees. Under the controlled materials plan, the Office of Defense Mobilization hopes to control more directly the *type* of industrial expansion and adjust the rate of growth of the basic industries by allotments or withholding of scarce metals.

Texas reports the largest total volume and the largest average volume of design for industry in P/A's survey this year brought up to that spot by extremely large contracts on the drafting boards of a few architects. (One firm alone reports \$165 million of work in five jobs.) Aside from this phenomenon, the areas that report the greatest over-all volume are the states around the TVA development, the Illinois-Wisconsin area, and the Northeast.

In design, we do not yet seem to have passed the stage of an "architectural" treatment for the offices, tacked onto a manufacturing or processing building which is usually much more interesting and handsome than the often pompous administrative space. TVA's lessons in the value of architectural-engineering collaboration have not been as widely learned as one might hope. However, with more, competent firms tackling this problem for the first time, advance may be looked for in this field during the year ahead.

Power House for the TVA Kingston Steam Plant: Kingston, Tennessee (acrosspage). Tennessee Valley Authority Division of Design. Most recent in the series of distinguished design accomplishments of TVA, this was unanimously selected by our Jury as the best job submitted in the industrial category. Harry B. Tour, TVA Head Architect, reports: "We have four major steam plants and two new hydro plants now under construction, another steam plant in the offing, and additional units going in some of our existing hydro plants."



industry 1952

Bird's-eye view and detail of administration building—Assembly Plant for the Lincoln-Mercury Division of Ford Motor Company: Wayne, Michigan. Giffels & Vallet, Inc.; L. Rossetti, Associated Engineers and Architects. \$20,000,000. Special auto body painting facility; garage; boiler house; reservoir; offices, etc. Railroad and truck receiving and shipping.



Burroughs Research Laboratory: Paoli, Pennsylvania. Carroll, Grisdale & Van Alen, Architects. The long wing (right) paralleling the Pennsylvania Railroad consists of laboratory units and offices on the top floor; administration on the middle floor, and services on the floor below. The projecting one-story wing contains shops which are accessible from lab floors. Cost: approximately \$2,500,000.



Wholesale Grocers' Warehouse: Detroit, Michigan. Louis G. Redstone, Architect; H. Banks, Associated. Warehouse and offices for Foods Warehouse, Inc.; 400,000 square feet; approximate cost: \$2,500,000. Building will include advanced material-handling equipment, centralized distribution activities, and refrigerated rooms for handling and storing perishable merchandise.

Research Laboratory Group for The Texas Division, Dow Chemical Company: Freeport, Texas (right and below). MacKie & Kamrath, Architects. Entire group to be air conditioned; reinforced concrete superstructure with tile curtain walls surfaced with special Dow stucco.





PROGRESSIVE ARCHITECTURE FOR RELIGION - 1952

Despite its comparatively minor importance in dollar-volume of construction, architecture for religion takes a high place in significance as a sort of design signpost. Through the ages, it is the religious edifice that has marked advance, flowering, and decay in the various periods of architecture. After man has learned to build utilitarian shelter, he has turned to brick and stone expressions of his spiritual and emotional hopes and fears. In our own period, the church building poses a particularly important problem, as we try to pass from the more negative, experimental stage of "modern" architecture to something which may be uplifting and inspiring, as well as expressive of contemporary building techniques.

That the problem is being approached by many architects in all parts of the country is apparent from P/A's reports. The largest total volume of church design, in estimated dollar cost, is in the Northeast (as it is, in fact, in all categories except defense and industry), and by far the largest average per office reporting is in the primarily agricultural section of the country-Nebraska, Kansas, Iowa, Missouri, Oklahoma. Otherwise, the ratio of church design to total work is fairly constant over the country, with office after office indicating one or two church jobs on the boards. It is interesting, in trying to analyze these statistics, to note that the earlier established areas-particularly the Southeast-have the smallest volume of

design for religion to report, while the sections with less background of established community seem to be catching up on church building. Last year, a large amount of church design was noted around Minnesota (and it was reliably reported to P/A that it was because the farmers had a good year and were contributing freely to church building funds); this year, the crops seem to have been better further south.

The advisory editors felt that nothing of supreme brilliance had been submitted this year in the category of religious structures, but did comment that the general level of design seemed to be reaching a maturity which promises well for the future.



First Free Methodist Mission Church: East Liverpool, Ohio. James Nessly Porter and John Terence Kelly, Architects. Auditorium and entrance vestibule constitute the main floor; classrooms and storage, the basement. Church to be built by congregation; hence simple in design—tan brick and natural redwood siding; plank roof deck; exposed rafters. Estimated cost: \$14,000. Trinity Lutheran Church: LaCrosse, Wisconsin. Thorshov & Cerny, Inc., Architects; Ralph D. Thomas & Associates, Inc., Engineers. Approximately \$250,000. In a second-floor portion, above the narthex area, is room for the choir and additional seating for 72. The nave seats 504. A parish hall with a stage occupies the basement. The Jury named this the best of the larger churches reviewed.





North Elevation_



Synagogue and School. Kivett & Myers, Kansas City, Missouri, Architects. The lower floor (not shown) includes a sidestreet entrance, connected to the main floor via a ramp; also a lounge, choir

room, meeting rooms, and storage space. Exterior of building to be generally of brick and concrete or stone, with three large exterior decorative panels of terra cotta.









St. Marcellus Church: Mather, Pennsylvania. Francis O'Connor Church, Architect. To be constructed in a mining community with limited funds, this church was selected by the Jury for its simplicity and economy of design. A series of laminated wood trusses form the structural framework for the main body of the church. In the basement is a social hall, with attendant facilities.



Jewish Communal Center: East Rockaway, New York. Morris Lapidus, Architect. In addition to customary facilities for worship, the building includes (in wings to rear of rendering) offices, eight classrooms, and complete gymnasium facilities. A sizable ballroom space with stage adjoins the auditorium and may be joined with it for special occasions.





Figure 1-wood ventilating sash being set in assembled framework (right).

Figure 2-two standard frames have been combined in this panel-window system (below) designed by Richard B. Pollman, Detroit builder.



prefab panel-window for residential construction

Of considerable interest to both architect and builder is the panel-window system developed by the Libbey-Owens-Ford Glass Company in collaboration with several other manufacturers. Because of the savings in labor and materials made possible by the use of prefabricated, easily assembled components, an architect can specify large or small areas of sealed double-glazing with little or no extra cost to his client.

The framework for this system consists of precut, rabbeted, 2" x 6" finished lumber (Figures 1 and 2). The nine different frames which are available can be installed individually or assembed in various combinations to fill practically any fenestration requirement of the home. Entire walls have been made up of these units. The largest prefabricated frame, designated as a 3-3 unit, contains three lights horizontally and three lights verticallyeach designed to receive 451/2" x 251/2" Thermopane units. This framework can be ordered from a number of prefabricators so that it arrives on the job with all accessories ready for immediate assembly. It can also be cut and rabbeted by the builder or the millwork supplier. Heads and sills are interchangeable as are jambs and similar mullions. It is claimed that two carpenters have assembled a 3-3 unit in 20 minutes without previous experience with this window system.

Many combinations of lights and ventilators are possible; ventilators can be installed individually or they can be arranged in groups to satisfy the particular ventilation requirements of a home. At present, both wood and aluminum ventilating sash are available-either type takes a standard 421/2" x 221/2" Thermopane unit. When wood ventilators are selected, air infiltration is effectively prevented by a nailless type of anodized and specially waxed aluminum weatherstripping applied to the ventilator stops at the mill. It has been estimated that the air infiltration around three unprotected ventilators would equal the amount which would enter a house if there were a hole the size of a brick in one of the walls. However, when the stops have been properly set, the weatherstripping effectively eliminates this type of heat loss. A strip of lightweight paper placed between a stop and a closed ventilator cannot be removed without being torn.

Cam-action hardware pulls the ventila tors closed. When the ventilators are placed in the top sections of the panel window system, little of the hardware can be seen from the interior. Because the greatest amount of air infiltration usually occurs at the lower corners of the ventilators, the bonderized latches are placed on the bottom of the ventilating sash at the quarter points.

A specially designed aluminum screen, hung on the interior side of the ventilator, can be easily installed or removed for winter storage. Flat wires in the selvage and tension in the screen cause the edges to fit snugly against the sash. An adjustable bottom rail makes it possible to take care of any misalignment of the screen within the ventilator frame.

If the client desires, aluminum sash car be specified. Although more expensive than wood ventilators, the sash manufac turer claims advantages for his produc including long life, crank-action of venti lators, and integral prevention of air in filtration.



Automatic nailing machine (right), known as Nu-Matic Nailer, hammers minimum of 100 nails per minute and 5000 sq. ft. per day $(1" \propto 6" \text{ on } 16" \text{ centers})$. Tool is operated by compressed air; operator guides it with foot stirrup, moving foot along to each nailing position and working handle up and down to set nails in place for hammer, which works by hand trigger. Equipment is available nationally on rental basis; contractor hires qualified operator recommended by manufacturer, Nu-Matic Nailer, Inc., 2900 Rowena St., Los Angeles 39, Calif.



Packaged heat pump (above), using no oil, gas, or coal, dispenses clean winter heat and dehumidified cool air in summer by means of electrically driven compressor operating on principle of reverse-cycle refrigeration—pump evaporates refrigerant to absorb heat, and condenses refrigerant vapor to give off heat. Automatic switch-over valve controls air conditioning seasonally, for single day or even hourly if necessary. General Electric Co., 5 Lawrence St., Bloomfield, N.J. air and temperature control

Brown Bayce Heet: baseboard unit designed for residential use, has unusually high output rating of 1100 Btu at 215F, made possible by new fin construction allowing more efficient air circulation. Unit is claimed to cost 20% less than any other I.B.R. certified baseboard. Brown Products Co., Forest Hills, N.Y.

Oil-Operated Air Conditioner: year-round unit incorporates low-pressure oil burner which heats compact steam generator that provides energy for summer cooling and winter warmth; unit also humidifies, dehumidifies, filters, and circulates air during every season in year. No motor, compressor, or other moving parts in cooling system. Heating output is 96,000 Btu; will air-condition 7- or 8-room residence containing from 17,000 to 27,000 cu. ft. of space. Servel, Inc., Evansville, Ind.

doors and windows

Aluminum Storm Sash: made of single glass panel with slender, neat aluminum frame and weatherstripping to provide complete insulation. Can be used with any make of casement window; applied to inside of sash. Steelcraft Mfg. Co., Rossmoyne, Ohio.

electrical equipment, lighting

Flolite: cold cathode fluorescent fixture, combining six "hairpin" shaped elements arranged in star fashion, distributes uniform light over working areas of large offices, reception rooms, etc. Extremely low surface brightness permits use without louvers or globes to shield glare. Available in white and off shades of white. Mobesco, Inc., Watertown 72, Mass.

finishers and protectors

Tub-Caulk: white plastic calking for waterproofing and calking around shower stalls, bathtubs, and sinks, and for filling cracks between window frames, tile, plaster, and wherever dampness or moisture is factor. Will remain elastic and sufficiently soft to expand or contract with joint it seals; does not yellow even under continued use of harsh scouring powders, grease, acids, or alkalis. Miracle Adhesives Corp., 214 E. 53 St., New York 22, N.Y.

Odorless Industrial Paints: enamel paints made especially for applications in food plants, dairies, restaurants, hospitals, and institutions where lack of paint odor, high washability, and resistance to food greases, fat, läctic acid, and other semicorrosive conditions are required. Fast-drying, non-yellowing, may be used over damp or dry, painted or unpainted wood. Available in gloss, egg-shell, or flat finish. Wilbur & Williams Co., 130 Lincoln St., Brighton 35, Mass.





A Complete GUIDE containing PRODUCT INFORMATION especially compiled for:

Architects Engineers Consultants Draftsmen **Plant Executives Electrical Contractors Superintendents** Work Managers Interior Decorators And all other people responsible for installation of proper COMMERCIAL, INSTITUTIONAL, INDUSTRIAL or OUTDOOR LIGHTING.

64 PAGES OF PERTINENT INFORMATION ... Containing many illustrations of Holophane products ... cross-sectional drawings ... candlepower distribution curves ... detailed information on a total of 270 lighting units ... Description, performance, application and dimensional data are given on equipment ... This book introduces the new Prismatic Control Board in the Light and Vision Institute, as well as many other new developments of Holophane research.

Please attach coupon to your firm letterhead.

HOLOPHANE COMPANY, INC. Lighting Authorities Since 1898 · 342 MADISON AVENUE, NEW YORK 17, N.Y. THE HOLOPHANE COMPANY, LTD., THE QUEENSWAY, TORONTO 14, ONTARIO

HOLOPHANE COMPANY, INC. 342 Madison Avenue, New York 17, N. Y.			
lease send your new DATALOG, without charge to			
FIRM NAME	_		
ADDRESS	_		



See Sweets $\frac{14A}{FO}$ for Formica information or write for Architectural catalog to FORMICA, 4633 Spring Grove Ave.,

Cincinnati 32, Ohio In Canada — Arnold Banfield & Co., Ltd.,

Oakville, Ontario



New York Port Authority Bus Terminal



Arnold A. Arbeit, Archilect Chairmasters, Inc., Fabricalors

interior design data

The architectural organization is being drawn more and more into the problem of interior design. We believe that this is a healthy trend, because only by total design integration through the skill of the architect can a completely successful work of architecture be achieved. Among the many letters applauding P/A's announcement of this new section, INTERIOR DESIGN DATA, there was only one small quibble—a query as to how *interior* design can be separated from the rest of the design problem. Of course it cannot be isolated in the designer's approach. But in the matter of data—standards, available products, market news, and exchange of information and experiences—it can, we believe, be treated as an additional facet of the editorial program. Just as one of Elmer Bennett's SELECTED DETAILS is pulled out of an integrated piece of architecture and presented, by itself, as a detail to be studied and analyzed, so the aspects of purely interior design will be removed from context, magnified, and documented in this new department. It is our hope that the architect-reader will find in this process something which he can then put back into its proper relationship in work of his own.

This month's story on OFFICES is a first attempt at this architectural-data approach to interior design, and we hope that our readers will be extremely critical of it. Although the staff of P/A and Suzanne Sekey, our consulting editor, have given a great deal of time and thought to the data to be presented and the manner of presentation, we know that it will not give all of you the information you would like to have. Please let us know how it can be improved in usefulness.

In being critical of this venture (which, we are flattered to hear, will almost immediately be copied by other magazines in this field) we ask only that you bear in mind the aims that we have set ourselves. For example, the interiors we show and analyze will not necessarily be, in a design sense, the *best* that we could find. They will rather be *well* designed illustrations of <u>common problems</u>, from which the greatest number of practitioners may presumably gain usable data. In each type of interior that we show, we will try to find examples of work done inexpensively and work in which the budget was liberal. We will also try to find instances of several design approaches—as, in this issue, we have what Miss Sekey calls the "domestic look" and the "business-like" look in offices.

Remember also that this is primarily a *data* section, with all interior materials and products listed (and illustrated at a larger scale or by means of drawings where size, texture, or detail is not generally familiar) and with manufacturers' addresses and prices given, where the last are available and do not vary from region to region.

A word about Suzanne Sekey. She comes to this assignment with a detailed knowledge of interior design and a sympathetic interest in architecture. She has worked with Donald Deskey Associates, George Nelson, and Warner-Leeds, among others. Many of you will be hearing from her, and you are all invited to correspond with her in the same helpful and informal way you have kept in touch with the other P/A editors. The next ten pages are hers.

The ESiton

design and furnishing of offices

By Suzanne Sekey

A private office can be anything from one desk on an acre of carpet to an engineered cubicle. The interior design problem may be set by an executive who in the course of his daily tasks requires the aids of bar, kitchen, and gymnasium; or it may involve an exacting concern with minimum distances between desks and partitions. It is likely that every private office will have a desk and a telephone, but there generalizations end. After that, the specific work tasks, conditions, and clients will determine the design requirements. Varied needs generate varied solutions. Let us examine some.

the domestic look

Recently, we had occasion to visit a vastlyofficed Insurance Company where, after viewing the period-parlors and the conference room—a dining room from Suburbia —we were told that these executives like their offices to look like home. This nostalgic approach to office design had provided facilities for relaxation and dining, but coziness was substituted for skillful solutions and an imaginative esthetic.

However, an informal quality, without going to sentimental extremes, is often valid, as in the case of the offices for Architect A. L. Avdelott (pages 112-114). Much of the furniture designed for domestic use is perfectly applicable in this sort of office, but practical considerations will dictate the selection of mar-proof surfaces and hardy coverings. Many of the manufacturers of primarily domestic furniture are developing desks and chairs to suit the specialized needs of office work. Desks with provisions for typewriter, file, and stationery supplies are readily available, as are chairs with swivel action. Laminated plastic surfaces, hard finishes, and strong soilresistant fabrics have been applied to furniture that is casual but not frail.

In this sort of office, where business is conducted amid pleasant, almost domestic surroundings, the floor, wall, and ceiling surfaces must be specified with the same design criteria in mind. Painted, exposed brick, pleasantly textured and colored fabrics and plastic wall coverings, perhaps wall papers of an appropriate design, are preferable here to the metal-partitioned efficiency in, for instance, the U.N. offices (pages 110-111). There is no fixed requirement about floor finishes-Aydelott has used resilient flooring in the office areas and terrazzo in the reception room, carpeted where visitors sit and wait. In the same way, lighting fixtures must be chosen for consistency with the total design: notice in the Aydelott office spaces how freestanding fixtures in the waiting space (where the carpeting is also used) are supplemented by more efficient work-fixtures in the secretarial space and the private office. Again, easily maintained and "tough" surfaces can be chosen without destroying the air of informality.

the business-like look

For sheer durability and efficiency, specialized office furniture has a lot to offer. In steel desks, for instance, the strong shell with smooth-sliding, handsomely compartmented facilities is hard to beat. Standard equipment can be used creatively in office planning. Banks of files and cabinets can function as baffle or counter between work areas, as can standard steel shelving which, when handled strategically, also provides display surfaces and excellent two-way storage.

U.N. (pages 110-111) selected steel desks because of their sturdiness, and the particular make for appearance and flexibility. These desks have interchangeable pedestals of various arrangements which are slotted to engage with pins in the desk tops, a simple connection which allows for assembly on the site to suit given needs and preferences. Often, unfortunately, steel desks are gross in appearance or senselessly "streamlined." One wonders why some of our able designers have not been given a chance to tackle the problem in the way it has been done with steelframed cabinets by Charles Eames and with the application of "Unistrut" by others.

There is at least one manufacturer of swivel chairs who will adjust pitch, height, and tilt to suit your particular anatomy a service included with the price of the chair. Among these specialists, there is a deep interest in comfortable seating for work. Lately the manufacturers of general lines of furniture have been adapting the regular, well pitched chair-seats to swivel bases. If the chair happens to be attractive and comfortable in the first place, it is often selected despite lack of intricate adjustability. In the offices of Pomerance & Breines (*page* 115) the architects are fond of the old "Bank of England" chair, which they say gives them all the comfort and balance they require in a tilting chair.

In the same way that standard equipment may be used advantageously (and attractively) in an office, standard, inexpensive, and efficient-looking surfacing materials also can be utilized. Painted plaster walls, for example, will satisfy many needs without the use of textured wall coverings. The next step might be the use of the resilient or plastic sheet materials for wall surfacing-or the new sprayed-on plastics. The resilient flooring materials which are standard office floor-covering can be chosen with care for color and pattern. If the budget permits, there are many acoustical ceiling materials which range in design from pure perforated efficiency to tones and textures of their own.

standardization

There are two approaches to standardization of office design. One is the development of standards within an organization (or within that organization's office space) and the other is the use of units as nearly prefabricated as possible.

Last October, the magazine, Office Management and Equipment, gave its annual awards for "Offices of the Year" to the U.N., for offices in the Secretariat Building, and to Foote, Cone & Belding for their new offices in Chicago. In these two designs, the two points of view are well illustrated. Foote, Cone & Belding gave a stipulation to their architects (Friedman, Alshuler & Sincere) and the designer (Harper Richards) that all 170 private offices be exactly the same size. Aside from the necessity for economical use of space, several other theories motivated this policy:

1. Size of office was considered an undesirable symbol for status in the organization. Allocation, however, was dictated by individual



eeds for accessibility to visitors, best light for lose work, etc.

2. Conferences in offices were considered infficient. (A generous number of readilyvailable conference rooms was planted proughout the building.)

3. Finally, the use of a standard office gave he opportunity to develop a "perfect" office, which could be studied through careful exeriment and actual mock-ups, and then be conomically produced because of the numbers f similar units involved.

On the other hand, the U.N. design pages 110-111) is based on the belief that eeds will vary and that space subdivision nust be flexible. Here too, standards must e developed, but they must be standards hich will work with and fit to changes hich may be required. For this point of iew, the designer must select not only all and floor and ceiling finishes but maerials and methods of construction that dapt themselves to the program of flexiility. The prefabricated, movable partion (steel, or, in this day of shortages, ement-asbestos board or another nonritical material) is one answer to the eed. It is installed with speed and ease. or instance, in the U.N. 6000 lineal feet f partitions were installed by the E. F. auserman Company in only three days. eusability and surfaces which require no painting are other valuable features. hese partitions are available in a variety colors and pleasant finishes.

If partitions are likely to be moved, the bors and ceilings, and such items of menanical equipment as lighting fixtures, air iffusors, heating units, and outlets for lephones and other services must be codinated with the system. Some modular iling pattern, such as was developed in e U.N., where light and air outlets are baced regularly in the acoustical ceiling attern, is a logical answer, as is the use of flooring material that can run through, and on which a partition shoe can be aced anywhere without damage.

Much thought has recently been given to e design of desks that are, or almost are, efabricated offices. In the case of the exutive desk designed by George Nelson, have a thoughtful, handsome solution various work needs. A series of tops, cabinets, file compartments, trays, etc., is combined in multiple ways, as shown in the offices of Pomerance & Breines (*page* 115). Sometimes a lamp is assembled with the desk top and thus even the lighting becomes an integral part of the unit. If work and storage facilities are the hub, these assemblies of tops and cabinets would seem to solve a large part of the private office requirement.

Almost the ultimate in prefabricatedoffice design is the system developed by E. I. duPont de Nemours & Co., and offered in various versions through seven licensees. Here we have a method which incorporates the usually movable components with the actual shell. Partitions, tops, and cabinets are assembled on the site (again in variations) to make a small but efficient semiprivate office.

how to design offices

If the client has an understanding of his organization's needs and a point of view (not just a preference for rose over blue), that is a good beginning. Given the requirements—or data to interpret the requirements—and the budget, the designerarchitect can choose whether the best approach is to make the office informal and almost domestic in character, to maintain a business-like look by using practical surfaces and standard office equipment, to develop a standard of his own which can be repetitive, or to use prefabricated and modular products that are available.

The architectural problem of office design is not as simple as it might appear at first glance. Although it may be that the architect will often want to call in specialists for such problems as color, lighting analysis, furniture arrangement, etc., the purely architectural problems remain. These are: specification of basic materials, integration of the interior design with the total structure, synthesis of color and texture and form, and (finally) the co-ordination of fabrics and furniture; of wall, floor, and ceiling materials; and of lighting, heating, and ventilating equipment into one cohesive design. These are the parts of the job for which the architectural organization is responsible.



A creative use of standard equipment— "Unistrut" by Architects Sanders, Malsin & Reiman for their own Ann Arbor offices. Photo: John Reider

Prefabricated-office design offered by Korda Industries employs wood, steel, and aluminum. Partition is extension of desk top— 12 feet of uninterrupted work surface. Clear span of glass, linoleum tops, and slide-out shelves are other features.





The United Nations is a fluid organization needing maximum flexibility for growth and change. The Secretariat accommodates 4000 persons, with all floors planned for general and executive office use. Office space can be juggled at will because a four-foot plan module allows the introduction of a movable partition at any mullion line; and ceiling grid of lighting fixture, acoustical tile, and anemostat occurs once within each module. Frequent access plates connect with telephone and power grid under floor while air-conditioning and heating controls are located at alternate windows.

As UN can buy from any source, French desks were selected for cost, appearance, and (again) flexibility. The aluminum chairs, a choice of the Purchasing Department, are lightweight and comfortable, with removable padded arms and seats, covered in perforated blue plastic. Maintenance is a constant consideration, as evidenced by sturdy furniture and the washable baked-enamel finish on all doors and partitions. Gray—light, medium, dark—is the basic color for these offices and all doors are "United Nations Blue."

data

Chairs: Aluminum frame with rubber foam or rubberized hair/Cramer Posture Chair Co., 1205 Charlotte St., Kansas City, Mo. Covering: perforated blue "Naugahyde"/U. S. Rubber Co., Mishawaka, Ind.

Desk: Steel baked-enamel/gray/tops: gray linoleum/Sefamo, 120 Boulevard de la Liberte, Les Lilas (Seine) France. Bookcase: steel/baked-enamel gray/ adjustable shelves/Sefamo.

Lighting Fixtures: #UN-503-40/Fluorescent troffer/louvered 3-tube flushmounted/Globe Lighting Products Inc., 397 Seventh Ave., Bklyn., N. Y.

Partitions: CC-F/all-steel and steeland-glass 48" module/movable unit/



satin-chrome door knob





steel-and-glass partition

asphalt-tile floor

ay baked-enamel finish/E. F. Hauseran Co., 6800 Grant Ave., Cleveland, hio.

artition Glass: "Pluralite"/7/32" bbed/Mississippi Glass Co., 88 Anelica St., St. Louis 7, Mo.

loor Covering: Asphalt tile/special ray/#C 90 D-2/Johns-Manville Corp.

/indows: #DH-A-3 ''Permatite''/ ouble hung aluminum/General Bronze orp., Stewart Ave., Garden City, . I., N. Y.

anel Below Windows: metal/louvered/ eneral Bronze Corp.

/indow Glass: Heat-absorbing plate lass/green color/cuts down transmission of infra-red rays/Libbey-Owens Ford Glass Co., Nicholas Building, Toledo, Ohio.

Venetian Blinds: "Flexalum"/aluminum slats/baked finish/UN gray/Hunter Douglas Co., 150 Broadway, N. Y., N. Y. hardware: "Levolor"/Lorentzen Hardware, 391 West Broadway, N. Y., N. Y. tape & cord: UN gray/American Cord & Webbing Co., 374 Broadway, N. Y., N. Y.

Doors: Hollow metal/36" wide/bakad enamel finish/United Nations Blue/special for UN now stock item/E. F. Hauserman Co.

Baseboards: Baked-enamel steel/E. F. Hauserman Co. Anemostat: Type E/special for UN now stock item/Anemostat Corp. of America, 374 Broadway, New York, N. Y.

Ceilings: "Sanacoustic Ventilating Ceiling"/baked enamel steel/Johns-Manville.

Paints: Devoe & Reynolds Co., Inc., 44 St. and First Ave., N. Y., N. Y.

Door Hardware: L-5184 Latch/S-500SC knob/#29 rose/Lockwood Hardware Mfg. Co., Fitchburg, Mass.

Heating & Air Conditioning: Conduit "Weathermaster" System combination cooling and heating coil with individual controls/Carrier Corp., Syracuse, N. Y.



aluminum chair



wool-and-cotton fabric

visitor's chair





concentric-ring fixture

acoustic ceiling tile



secretarial desk



painted brick wall



	offices	
type	architect's offices, Memphis, Tenn.	
architect	A. L. Aydelott & Associates	
furnit <mark>ure</mark> layout	Knoll Associates	
lighting	Kurt Versen	

n/a interior design data

A recently completed single-story building houses the offices shown here and overpage. In Aydelott's private office, we have an example of the informal approach with appreciation for the unlabored—texture and color of white-painted brick and natural oak plywood, the simplicity of the generous storage cabinet. The quiet color scheme for the office is gray, brown, blue, white, and natural hues of grass cloth and bamboo.

For privacy and well directed daylight, casement windows are located above customary height, and light is filtered by a delicately textured curtain of matchstick bamboo. Portable lamps supplement the general diffused illumination of the concentric-ring fixture and the office is sound-controlled by an acoustical tile ceiling and a deep rug over the asphalt tile floor. The desk happens to be one with typewriter pedestal; a more typical choice for a private office would be the executive type also illustrated. The daybed, which opens to sleeping width at the touch of a pedal, seems a useful addition to an architect's office. *Photo: Lionel Freedman*



daybed



data

Secretarial Desk: #14 Knoll design/ natural birch finish/Knoll Associates, 575 Madison Ave., New York, N. Y./ list: \$375

Executive Desk: #16 Knoll design/ natural birch finish/Knoll/list: \$300

Swivel Chair: #44S Knoll design/list: \$168/fabric: K140/3 "Devil" brown/ 53" wide/Knoll/list: \$10.50

Visitor's Chair: #72U Saarinen design/ fabric: same as above/Knoll/list: \$69 Daybed: #700 Richard Stein design/ Knoll/list: \$270/fabrics: K407/2 blue and brown for mattress/plasticized "Pandanus" for back/28" wide/Knoll/ list: \$2.70

Cabinet: #123 Florence Knoll design/ natural birch with "Pandanus" sliding

doors/Knoll/list: \$225

Bamboo Curtain: matchstick core bamboo/Tropicraft, 535 Sutter St., San Francisco, Calif.

Concentric-ring Fixture: "Draco-cu"/ Kurt Versen, Englewood, N.J./list: \$16 approx.

Walls: natural oak plywood/brick painted white.

Floor Covering: asphalt tile #D300/ Armstrong Cork Co., Lancaster, Pa. Rug: llama wool/Peru.

Ceiling: acoustical tile/Celotex Corp., 120 S. LaSalle St., Chicago, III.

Windows: "Fenestra" Steel Casement/ Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit II, Mich. Glass: 1/4" polished plate glass/Pittsburgh Plate Glass, 632 Duquesne Way, Pittsburgh, Pa.

Doors: "Gibralter" flush doors/ General Plywood Corp., Louisville, Ky. Door Hardware: "Russwin" #2592 knob/chromium finish/Russell & Erwin Div. of American Hardware Corp., New Britain, Conn.

Curtain Track and Hardware: Grant Pulley & Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y.

Heating: Radiant hot water/floor and ceiling panel/gas fired boiler/ General Electric Co., 570 Lexington Ave., New York, N. Y./circulator/Bell & Gossett, 40-05 Crescent, Long Island City, N. Y.



terrazzo floor

Only a counter and a swinging gate separate Business Office from Reception Room, facilitating communication with visitors, adjacent drafting room, a conference room, and three private offices. Desks, counter, and cabinets were designed by Aydelott to provide generous, mar-proof work-surfaces and convenient storage. Colors for this open, daylight-flooded interior are the gray, yellow, and brown of fabrics, green terrazzo, natural bamboo, and red sand-finished brick.

Photo: Lionel Freedman

wool rug



data

Lounge Chair: #92 Jeanneret design/ natural birch & foam rubber/list: \$82.50/fabric: K140/3 "Devil" brown/ 53" wide/Knoll Associates, 575 Madison Ave., New York, N. Y./list: \$10.50

Reception Counter & Secretarial Desks: design by Aydelott/oak plywood and "Formica"/National Showcase Co., Columbus, Ga.

Bamboo Curtain: Matchstick Core Bamboo/Tropicraft, 535 Sutter St., San Francisco, Calif.

Concentric-ring Fixture: "Draco-cu"/ Kurt Versen, Englewood, N. J./list: \$16 approx.

Recessed Fixture: "Rejust" #63066/ Kurt Versen/list: \$13.75 Floor Lamp: #59013/coral red/Kurt Versen/list: \$30

Table Lamp: #4466-2/desert gold/ Kurt Versen/list: \$23.40

Wall Covering: "Fabricona" #181/36" gray burlap/H. B. Wiggins Sons Co., Bloomfield, N. J./list: \$1.75 yd.

Ceiling: Painter's canvas/H. B. Wiggins Sons Co.

Floor: Terrazzo/Cardiff green/Alexander Tile & Marble Co., Memphis, Tenn. Rug: "Loma Loom"/gray wool twist/ Knoll.

Wall: brick/Corinth Brick Co., Corinth, Miss.

Windows: Glass: Doors: Hardware: see preceding page.



architects' offices, New York, N. Y.

type

incandescent fixture







A desk can sometimes make an office. One for Pomerance, one for Breines, and one for a secretary provide all the requirements here for work surfaces and storage. Devise good lighting, provide pin-up space, control glare, put down a warm cork floor, paint—and you have it! We like the Venetian blinds for a sleek head detail and the fluorescent fixture which, in spite of its unhappy fluting, gives shadowless, even lighting to offices. The dramatic overhead domes can seem to make a ceiling disappear and the jointed, clamp-on fixture at the secretary's desk is always an aid. *Photos: Tom Leonard*

data

Executive Desk: George Nelson design/Herman Miller Furniture Co., Zeeland, Mich./list: \$450 to \$500 approx.

Visitor's Chair: DCM/walnut with metal legs/Charles Eames design/Herman Miller Furniture Co./list: \$31.50

Secretarial Swivel Chair: #C61,/Steelcase Metal Office Furniture Co., Grand Rapids, Mich.

Incandescent Fixture: "Domelite"/ Gotham Lighting Corp., 37-01 31 St., Long Island City, N. Y.

Fluorescent Fixture: "Spacialite"/Ainsworth Lighting Inc., 3810 29 St., Long Island City, N. Y.

Portable Lamp: "Dazor"/Dazor Mfg. Co., St. Louis, Mo.

Walls: painted cinder block and plastered masonry.

Floor Covering: "Corinco" cork tile/ square edge/factory finish/Cork Insulation Co., 730 Fifth Ave., N. Y.

Venetian Blinds: "Pella"/aluminum slats/Rolscreen Co. of Pella, Iowa.

Decorating trend!



English Oak Flexwood. Hotel Pierre Grill. New York City. Architect: Samuel A. Marx.

How FLEXWOOD SOLVES

CURVED SURFACE problems ...

More and more architects are utilizing the distinctive beauty of curved surfaces ... Flexwood* makes it easy to have rich, selected woods on practically any curve. For Flexwood is *choice wood in flexible sheets*. It gives walls a genuine, long-lasting wood surface—easily, economically. No structural changes, no fire problems, and the first cost is the last. Note in photo how Flexwood enriches curved walls, round column, door area—for a beautifully unified result. SEND COUPON BELOW.



NAME.

ADDRESS.

United States Plywood Corporation 55 West 44th Street, N. Y. 18, N. Y. In Canada: Paul Collet & Co., Ltd., Montreal Flexwood is manufactured and marketed jointly by United States Plywood Corporation and The Mengel Company.

*Reg. U. S. Pat. Off.

United States Plywood Corporation, Dept. W-12 55 West 44th Street, New York 18, N. Y. Please send me, without obligation, Flexwood's Case-History Book; shows how Flexwood helped solve 17 actual architectural problems.

← Prima Vera Flexwood.







1. "Rush-Wai:" checked reversible fibre rug, one of a group of moderate-priced floor coverings in simple patterns designed by Katherine Kinnane and John Gerald/ 12" squares in natural color/ standard rug sizes/ Retail: \$27.95 for 9' x 12'/ Waite Carpet Co., 295 Fifth Ave., New York 16, N. Y. 2. "Ravenna:" one of a new line of carpets designed by Marion V. Dorn/ one-length pile in either "Avisco" yarn or wool, or a blend of both on predominating background color/ sizes and color combinations to order/ Retail: \$265.00 for 6' x 9' size/ Edward Fields, 509 Madison Ave., New York 22, N. Y. 3. "Linkrusta:" three-dimensional wall covering with scrubbable, resilient surface. It is applied like paper, can go directly over scratch coat, is said to toughen with age. Shown here is "Wood Bark" #3004/ brown, tan, natural/List: \$10.50 per roll/ 291/2" wide, 5 yards/ Wall Trends, 509 Madison Ave., New York 22, N.Y. 4. "Techniplan:" a system of prefabricated units for assembly on the site to make free-standing offices/ approximately 51/2' x 6'/ partitions channelled for wiring and modular wood units are available in variety, as shown in an excellent catalog that gives complete data/ The Globe Wernicke Co., Cincinnati, Ohio.



KNOX COLLEGE MEMORIAL GYMNASIUM, Galesburg, III. Architects: Skidmore, Owings & Merrill, Chicago

5,948 <u>Extra</u> Square Feet Of Usable Floor Space With

Take a close look at the pictures above. At the top, all the Medart Seats are in open position ready to comfortably and safely accommodate a packed-to-the-rafters <u>audience of 3.200</u>! The inset shows side seats closed, and seats at one end still open.

These two pictures explain why this gym, with seating capacity for 3,200 persons, requires a <u>building virtually no</u> <u>larger than one without seats for spectators</u>! Imagine what the size of this building would be, and the startling extra cost, if 3200 expensive fixed seats had been in-talled!

Here is an example proving how Medart Telescopic Gym Seats actually regain the use of <u>5.948 square feet</u> of extra floor space for daily class activity—evidence of the tremendous savings in building costs made possible by better utilization of space.

MEDART TELESCOPIC* GYM SEATS

<u>Convenience and Ease-of-handling</u> are important factors too. Because of Medart's exclusive "Floating Motion" design, it takes little effort and only a few moments to completely open or close Medart Seats. If all the seats are not needed, only one row, or as many rows as required, can be provided and remaining rows left closed.

<u>Safety</u> is assured, even under loads of 400 Lbs. per lineal foot. Medart's steel understructure is a complete freestanding assembly. Solid, one-piece wood seats, risers and footboards add <u>extra</u> strength and are not used to tie together the steel understructure members. Each row of seats is supported from the floor by four vertical steel members.

<u>Many Other Exclusive Features</u> make Medart Telescopic Gym Seats a "best buy". If you have a seating problem, write Medart.

> *Medart Telescopic Gym Seats are fully protected by U. S. Patents



FRED MEDART PRODUCTS, INC. 3576 DE KALB STREET ST. LOUIS 18, MISSOURI World's Only mplete Single Source For Gymnasium Equipment Telescopic Lockers & Wire Lockerobes Basketball **Physical Fitness** Basketball & Football **Physical Therapy** Gym Seats **Basket Shelving** & Grade-Robes Backstops Apparatus Scoreboards Equipment

Send for The NEW Medart Catalog



p/a interior design products



1. From "Modern by Singer:" a new line of furniture by Italian and American designers, is this cocktail table designed by Gio Ponti, architect and editor of "Domus"/ Materials: glass, walnut, and brass/ Size: 40" dia. x 14¹/₂" high/ Price: on request/ M. Singer & Sons, 36 East 19 St., New York 3, N. Y.

2. A new photograph by Charles Eames of his

storage cabinets in multiple arrangements/ units can serve the needs of office as well as home/ uprights: plated steel/ tops and shelves: natural or plastic-coated plywood/ side panels and sliding doors: lacquered "Masonite" in yellow, red, blue, white, black, or gray/ doors also in dimpled plywood/ List: \$25.00 to \$145.00 (desk \$55.00 and \$90.00) Herman Miller Furniture Co., Zeeland, Mich.





TYPICAL VIEWS OF FURNACE BROOK ACRES HOMES, QUINCY, MASS.

Rusco Prime Windows with insulating sash are being used exclusively on the 100 fine Colonial and Ranch Style homes in Furnace Brook Acres. Purchasers will enjoy homes that are warmer in winter, cooler in summer — never have screens or storm windows to change.

A. J. Spinelle, Builder and Trustee, says: "As you know, I am using the Rusco Prime Window and Insulating Sash with Wood Surround exclusively in all my new ranch homes.

"I find that my construction cost has lowered a great deal and, in addition to that, your windows offer great sales appeal to prospective home owners. The Rusco Prime Window certainly enhances the appearance of my homes and the buyers are particularly pleased with the easy operation and convenience in washing the windows.

"I highly recommend this window for any type of residential construction and in many cases I am sure it would be ideal for industrial types of construction also." as lowered a great deal"

nables You to Provide Quality at a Saving...

COMPLETE, PRE-ASSEMBLED UNIT MAKES SUBSTANTIAL SAVINGS IN INSTALLATION TIME, LABOR AND MAINTENANCE

All across the nation, architects and builders are inding the Rusco Prime Window an important actor in curbing rising construction costs.

A complete unit-finished-painted, fully-assembled with glass, screen, built-in felt weatherstripping, nsulating sash (optional) and wood or metal casing -the Rusco Prime Window can be fully installed in 5 minutes or less on many types of construction!

But construction savings and speed are only part of the story. Minimum maintenance, exclusive elling plusses such as year 'round, rainproof, araft-free, filtered-screen ventilation, and many ther advantages, make the Rusco Prime Window utstanding. For catalog of data and specifications, ee the Rusco Prime Window distributor in your rea or mail coupon below.



GEBHART HOUSING PROJECT, BALTIMORE, MD. A total of 887 Rusco Prime Windows was used in the 87 units of this sizable building development.

ARCHITECT: Hal A. Miller & Associates BUILDER: Alan Construction Company

GLASS AND SCREEN INSERTS EASILY REMOVED FROM INSIDE FOR CONVENIENCE IN CLEANING. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.





roduct of IE F. C. RUSSELL COMPANY CLEVELAND 1, OHIO Id's largest manufacturer of all-metal combination windows

THE F. C. RUSSELL COMPANY			
Dept. 7, PA-12, Cleveland 1, Ohio			
In Canada: Toronto 13, Ontario			

Gentlemen: Please send me catalog of informative data and specifications on Rusco Prime Windows.

Name	Title
Company	
Address	
City	State
TRANE ADDS __ NEW PLANTS..



New buildings completed in recent Trane construction program. Arrows indicate: 1) Tool Building, a separate unit immediately north of the Main Plant, 2) a complete plant for assembly of standard heat transfer surface, 3) Brazed Aluminum Plant, 4) Special Heat Transfer Products Assembly Building.



More Unit Heaters—Plant additions permit expansion of unit heater assembly lines—more heat for army camps and defense plants.



More Unit Ventilators — With more schools being built, demands are high for the warm, fresh air produced by Trane Unit Ventilators.



More Fans — Trane introduced a new lin of centrifugal fans recently. Popular ac ceptance and increased sales make mon manufacturing space necessary.

O INCREASE PRODUCTION SPACE

More Room to Manufacture a Complete Line Heating, Ventilating and Air Conditioning Products

Yrane builds again. To manufacture more and better heating, tilating and air conditioning equipment, Trane is completing a major ansion program. Four new buildings have been added at La Crosse. Total tory space has been increased substantially. Many workmen have been ed to Trane payrolls.

Auch of the new space will be used to turn out more Trane products er. With defense construction increasing sharply, the demand for standard ne heating equipment is at an unprecedented high level. At the same e, the popularity of recently announced products has required itional capacity to produce them. More room will, therefore, be devoted he manufacture of fans, refrigeration products and special heat transfer

ipment. Il the space in one of the new buildings will be used to produce the dies jigs used in the manufacture of Trane products. This ultra-modern shop will have twice as much machinery and will, thanks to newest making methods, produce three times as many tools. The new tool ding will help increase production two ways. It will make more tools ilable quickly and on schedule. And, by pre-testing each item, it will e hundreds of hours of production time.

With these new buildings to expand and improve production, Trane is ter able to serve the architect, engineer, contractor and the armed forces h a complete line of heating, ventilating and air conditioning equipment.



anada, too! Expansion has not been limited to the La Crosse plant. At nto, Trane Company of Canada, Ltd., has completed a new suburban factory, irst step in enlarging and consolidating its manufacturing facilities.



At Scranton, Pennsylvania, the Eastern Manufacturing Division, The Trane Company has not only added more manufacturing space, but also more production equipment.



ore Climate Changers—As industry nds new ways to use air in speeding nanufacturing processes, the need for rane air conditioning units increases.



More Refrigeration Units — More centrifugal and reciprocating compressors will be made in space furnished by the Trane expansion program.



MANUFACTURING ENGINEERS OF HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT THE TRANE COMPANY, LA CROSSE, WIS. Eastern Mfg. Division . . . Scranton, Pa. Trane Company of Canada, Itd. . . . Toronto OFFICES IN 80 U.S. AND 14 CANADIAN CITIES



Nail down building costs with PlyScord Subflooring

THE REAL STORY of construction costs isn't always shown on the bill of materials. It's the *applied* cost that counts! PlyScord sub-flooring can be laid in less than half the time required for lumber subflooring. Big, work-speeding panels are light, easy to handle ... cover large areas quickly ... fit standard joist spacing without wasteful sawing and fitting ... require far fewer nails.

PlyScord subflooring means *better* construction, too. Plywood's rigid plate-like action protects against violent racking action of wind or earthquake. Strong, rigid panels provide a solid, squeak-free base for finish flooring . . . protect against drafts from below. PlyScord subfloors won't cup, shrink or swell. Result: finish floors look better, last longer.

Plan now to include PlyScord in your next bill of materials for better construction, for building economy.

Booglas Fir Plymood PLY CORP SHEATHING DJ PA DJ P

PlyScord is the unsanded construction grade of Interior-type plywood bonded with highly water resistant glues. For subflooring, sheathing, backing, one-use forms. PlyScord is a registered grade-trademark identifying quality plywood manufactured in accord with U. S. Commercial Standards and inspected by Douglas Fir Plywood Association (DFPA).

PANEL DISCUSSION

Plywood Creates Unusual Home

An excellent example of how well Douglas fir plywood lends itself to contemporary design is this award-winning California home by Architect Gordon Drake of Carmel and San Francisco.

"Because plywood is at once a structural material and a finish material, offering both strength and beauty, plywood made possible many building economies in the house," explains Architect Drake. "The material permits new architectural concept which enables the designer to concentrate on essentials without sacrificing beauty, charm or utility."

Plywood imparts needed structural strength and rigidity to the seemingly fragile structure and also serves as attractive exterior siding and interior wall

paneling. The isometric shows elements of post and girder construction which employs plywood as structural diaphragm for floor and roof and as a structural skin for walls.

Shelf-Door Wardrobe

Complete plans and bill of materials for the shelf-door wardrobe which was awarded first prize in the national architectural contest for plywood built-ins may be obtained free of charge from Douglas Fir Plywood Association, Tacoma 2, Wash. Designed by Edward Hanson, Stillwater, Minn., the plywood built-in makes use of shelves and bins on the inner door faces to provide extra storage space. Drawer space is provided both below the main unit and inside the roomy wardrobe section.

Prefabricator Cuts Costs With Plywood

Douglas fir plywood, which has been synonymous with prefabrication since 1935 when the first "stressed skin" plywood house was built by the U.S. Forest Products Laboratory, today remains the leading material for line production of modern housing.

Evidencing this fact are the comments of H. Arthur Tucker of Southern Mill & Manufacturing Co., Tulsa, Okla. The firm is one of the nation's pioneer prefabricators, having mass-produced houses for over 32 years-largely for petroleum industry housing projects. Says Tucker of plywood: "Plywood wall and roof sheathing and subflooring are, of course, far stronger and more rigid than other materials. But it cuts costs, too. Plywood wall and roof sheathing cost about 85% as much as 1" boards and can be installed in 40% fewer man hours. Considering time, labor and material savings, plywood subfloors cost less, too. Plywood's light weight means an average savings of \$30 to \$50 per house in shipping costs and greatly speeds site assembly."

New Panel Material

West Coast plywood manufacturers are now mass-producing a new panel material which combines smooth, hard, wear-resistant hardboard surfaces with a backbone of Douglas fir plywood. Named Plyron, the material has already proved successful for such diverse uses as cabinets, concrete forms and flooring. Faced

with hardboard which provides an ideal base for smooth paint finishes, Plyron relies on plywood inner construction to furnish the "muscle," making it puncture-proof, dimensionally stable and relatively light weight. The material has excellent nail holding properties and retains the easy workability of plywood. Rigid industry quality standards have been established for Plyron, similar to those for Douglas fir plywood.

(Advertisement)

Bargain Basements-Easy with Double-Duty PlyScord® Forms

PUT a *two-way* squeeze on building costs by using the PlyScord grade plywood first for concrete formwork, then for sheathing or subfloors. PlyScord saves form-work time and labor costs . . . creates attractive, fin-free concrete surfaces—especially important for inner basement walls, retaining walls and exposed concrete on hillside homes.

After use as form panels, use PlyScord for strong, rigid wall and roof sheathing . . . tight, firm subfloors . . . or backing for thinner, more-expensive wall paneling. PlyScord cuts costs here, too. Big panels speed application of subflooring by 50% . . . wall and roof sheathing by 25%.

The highly water resistant (but *not* waterproof) glues used in PlyScord easily withstand use as one-use forms or other occasional wetting on the job. PlyScord is light, strong, amazingly tough. Won't split or puncture. Big, exact size sheets reduce waste . . . work with ordinary tools.

PlyScord is the unsanded construction grade of Interior-type plywood bonded with highly water resistant glues. For subflooring, sheathing, backing, one-use forms. PlyScord is a registered grade-trademark identifying quality plywood manufactured in accord with U. S. Commercial Standards and inspected by Douglas Fir Plywood Association (DFPA).

... and for the temperature control, we'll insist on Honeywell!

You'd think cartoonist Tobey's famous couple would be discussing something else in a setting like this!

However, the *one* thing the gentleman above wants to make sure of, in planning his new home, is *comfort* ! And he knows that the best way to get it is to ask his architect or heating engineer to specify Honeywell temperature controls.

If you have a control problem, Honeywell can help provide the proper thermal environment for any client -anywhere-in any kind of structure. A large staff of well informed control engineers—in 91 different Honeywell offices across the nation—are experienced in doing just that. Or—there's a lot of literature that's yours for the asking—on the automatic control of heating, ventilating and air conditioning.

So, why not talk to Honeywell? Why not write to Honeywell about your control problem? And why not do it now?

For help with any control problem, talk to Honeywell

Specify Honeywell Electronic Air Conditioning Control !

Give your clients the ultimate in comfort and increased efficiency, lower maintenance costs

Here's an entirely new type of air conditioning control! Its many new features make it *easy* to achieve results never before possible.

You see, this new Honeywell system electronically "feels" temperature changes as they occur and then gives *fast*, accurate modulating control over heating and air conditioning dampers or valves.

And because it is *electronic*, it's 100 times more sensitive than conventional systems! This means faster reaction to changes in load; no temperature "overshoot"; no waste of either warm or cool air.

Honeywell electronic thermostats are greatly simplified for lasting service with little or no maintenance costs, for they have no moving parts to wear or get out of adjustment.

So be sure to specify the new Honeywell electronic air conditioning control to give your client the ultimate in comfort. At the same time you'll be giving him a system that helps pay for itself through increased efficiency and lower maintenance costs.

...and for help with the temperature control, we'll talk to (your firm name)

FREE – personalized cartoon. For your $8\frac{1}{2}$ " x 9" reproduction of this Tobey cartoon (incorporating the name of your firm), fill out and mail coupon today.

Space Thermostat. No moving parts to wear out or get out of adjustment.

Duct and Immersion Thermostat. Measures temperatures accurately from -50 degrees to 300 degrees F.

Electronic Relay. Here's the famous "brain" that measures thermostat signals, operates the valves and dampers.

Modulating Motor. Slightest temperature fluctuation causes motor to change valves or dampers.

MINNEAPOLIS-HONEYWELL REGULATOR CO. Dept. PA-1-05, Minneapolis 8, Minnesota

Gentlemen:

- Please send me your booklet "New Horizons of Comfort with Honeywell Electronic Air Conditioning Control."
- Please send me a free personalized reproduction of the Tobey cartoon.

Name____

Firm Name

City

Zone____State_

Opens eyes <u>wide</u>... Shuts fire off tight!

One glance can tell you more than a bookful of words

- ... about the soft, luxurious beauty of the Weldwood Fire Door
- ... and the warm, welcoming atmosphere it imparts to a reception room or office.

But you can *take our word* for THIS: Weldwood Fire Doors have much more than *appearance* on their side!

When *they* are on the job, *no fire can pass* or spread! The secret of this great protective quality lies in Beautiful Weldwood Fire Doors, in the offices of Arthur Anderson & Co., New York City. Architects: George B. Post & Sons.

And Now . . . WELDWOOD PARTITION PANELS

Like Weldwood Fire Doors, Weldwood Partition Panels have all the beauty of luxurious wood...offer positive protection against fire.

Like Weldwood Fire Doors, these partition panels have the incombustible Kaylo* Core.

They are made in 2 types — with either non-treated or fireproofed wood edge banding.

Readily adaptable to low railing and full ceiling height partitions — and easily movable — they are ideal for use in offices, hospitals, schools and other institutions.

Can be obtained with such choice veneers as ash, avodire, birch, elm, gum, Korina, oak, mahogany, prima vera and walnut.

Write for illustrated new booklet — just off the press.

*Reg. Trade-mark Owens-Illinois Glass Co.

the door's unique construction. Choicest domestic and imported wood veneers are bonded to an incombustible mineral core — winning for the Weldwood Fire Door the Underwriters' Label for Class B & Copenings.

In addition, the Weldwood Fire Door offers exceptional stability . . . extraordinary durability . . . and is proof against rot, vermin and decay. It's unusually *lightweight*, too.

Send for complete information about the Weldwood Fire Door today.

United States Plywood Corporation carries the most complete line of flush doors on the market including the famous Weldwood Fire Doors, Weldwood Stay-Strate Doors, Mengel Hollow-core Doors, Mengel and Algoma Lumber Core Doors, 1%" and 1%" with a variety of both foreign and domestic face veneers.

WELDWOOD[®] FLUSH DOORS

Manufactured and distributed by **UNITED STATES PLYWOOD CORPORATION** 55 West 44th Street, New York 18, N.Y. Branches in Principal Cities • Distributing Units in Chief Trading Areas Dealers Everywhere

PREVIEW OF PROGRESSIVE ARCHITECTURE FOR 1952

the illustrations

Page 54

U. S. Signal Corps School and Barracks-model: Theodore Conrad; photos: U. S. Signal Corps. Elementary School, Needham, Mass. — rendering: Hugh Stubbins, Jr.

Page 57

Memphis Housing Project-rendering: Robert Schwartz.

Page 58

Cooperative housing group—renderings by H. A. Dieter Kiebel.

Page 59

Mechanicville Housing Project—Aerial perspective: Robert Schwartz; ground level view: Vincent Furno. Lvy Hill Park Housing-rendering: Floyd Yewell.

Pages 60-61

House, Ohio—elevations: Porter & Kelly; rendering: Al Goodwin.

Page 62

House, Lafayette, Calif.—rendering: Jack Anderson. House, Rhode Island—rendering: Conrad E. Green.

Page 63 House, Florida-rendering: Paul Rudolph.

Page 64 Apartment House, New Jersey — rendering: Robert Schwartz.

Page 65 Apartments, Washington - rendering: Thomas F. Hargis, Jr.

Hotel, Oklahoma—rendering: Leslie G. Braver. Page 67

Glendale Elementary School—renderings: Dean Coff-

Page 68 Salisbury Elementary School—model: Eliot Noyes' office; photo: E. J. Cyr.

Page 69

Greenbrae Elementary Sch Models; photo: Ernest Braun. School-model: Workshop

Elementary School, New Orleans — model: G. A. Rideaux; photo: Orleans Parish School Board.

Page 70

Junior-Senior High School, Pennsylvania—renderings: architects' office.

Page 71

West End Elementary School—rendering: William W. Caudill, Bob Reed, C. C. Bellamy and H. S. Ram-som, Jr.

Campbell Hall School—rendering: A. Quincy Jones,

Page 72

Two-Company Barracks—rendering: David Murphy; model: Aeck Associates; photo: Gabriel Benzur. Engineering Center, Columbia University — model: Lefter Associates.

Page 73

Alabama Polytechnic Institute Union Building-rendering: Byrd LeRoy.

Page 75

St. Mary Hospital-rendering: William C. Muchow. Child Guidance Clinic-rendering: John B. Applegate.

Page 76

Coney Island Hospital — rendering: Katz Waisman Blumenkranz Stein Weber.

Page 77

Clinic, West Seattle-rendering: Paul Hayden Kirk.

Page 79

Library, Georgia Institute of Technology—rendering: Paul M. Heffernan; model: Bush-Brown, Gailey & Heffernan; photo: Georgia Tech Photographic Laboratory.

Page 80

Library for University of California—rendering: Chris Choate Kibbing Public Library—rendering: John Rauma.

Page 81

Cincinnati Public Library—model: F. W. Garber's office; photos: Cliff Schaten.

Page 82

Peoples Methodist Community Center — rendering: Robert Schroeder.

Page 83

Civilian Defense Building-rendering: Harrison Whitney.

Page 84

Stone Mountain Museum — rendering: Edward A. Moulthrop.

Page 85

State Printing Plant—rendering: Donald Olsen. Jefferson Parish Courthouse - rendering: James R. Lamantia, Jr.

Page 87 Chappo Flats Barracks-renderings: VAL.

Page 88 Bergstrom Air Force Base—rendering: Langford O. Griffin, Jr.

Page 89 Town & Country Center-rendering: Robert Schwartz.

Page 90

Youngtown Kitchens Office Building-rendering: Alfred T. Kurek

(Continued on page 130)

POINTS OF EXCELLENCE (1)

P ERMANENCE Second to None

The structural strength of ROMANY Buff Body Tile has proved its value as a wall covering in buildings of all types. This permanence is achieved by the use of specially selected clays and skilled technical supervision. And ROMANY is fireproof, non-fading, water and stain proof, with a cushion edge hard glazed surface that assures easy cleaning.

> **Every Architect should** have our Sample Tile Chart No. 6. It's free.

TED STATES JADDY TILE CO

> Member: Tile Council of America 217-G FOURTH STREET, N.E. CANTON 2, OHIO

REVIEWS

(Continued from page 129)

Architects' Office Building-rendering: Chris Choate.

Page 91

Prudential Insurance Company Building — model: Barnes & Reinecke; photo: Hedrich-Blessing. Texas Company Building—rendering: architects' of-

Page 93

TVA Steam Plant-renderings: F. G. Roth.

Page 94

Assembly Plant, Wayne, Michigan—rendering: E. G. Gebrecht. Burroughs Research Laboratory — rendering: Raoul Ibarguen.

Page 95

Detroit Warehouse—rendering: Ulrich Weil. Dow Chemical Laboratories—rendering: Karl Kamrath.

Page 96

East Liverpool Church-rendering: Porter and Kelly.

Page 97

Trinity Lutheran Church, LaCrosse-rendering: Newton E. Griffith.

Page 98

Synagogue, Missouri-rendering: H. Scharhag.

Page 99

St. Marcellus Church—model and photos: architect's office.

East Rockaway Jewish Communal Center—rendering: Vincent Furno.

BOOKS

MEASURES FOR DESIGN

Anatomy for Interior Designers plus: How to Talk to a Client. Second Edition. Francis de N. Schroeder. Whitney Publications, Inc., 18 East 50 St., New York 22, N.Y. 96 pp. illus. \$4.00 This book is loaded with information good vital statistics useful in the planning of interiors and the design of furniture. Dimensions needed for working, dining, entertaining, seating, sleeping, storage—and more—are given in easily comprehended diagrams, some of which have appeared in issues of Interiors.

Besides dimensions most likely to be required, the author did not rest until he also figured such beguiling bits as the length of a babe in arms, the depth of a fencer's lunge, and the space required by a lady doing reducing exercises. So, if you are one of the many overworked architects or designers, and even if you aren't, you may welcome pertinent dimensions needed for spaces, furniture, and average humans. That is, you will welcome them if you can find the right page in less time than it would take you to make the measurement yourself. For a book about graphic statistics, this is certainly a most ungraphic presentation. It is hard to locate the time-saving information and while hunting, you are likely to get well entangled in de N. Schroeder's running narrative (which may have been the intention). This is alright if you happen to like the style; but for us it is unnervingly worked with merriment and the forced simili.

Nino Repetto, Henry Stahlhut, and Mario Carreño contribute clear enough diagrams but similarly humorless cartoons. Alvin Lustig contributes the cover. There are facts and good sense in *Anatomy for Interior Designers*. See the section "How to Talk to a Client" for some moments of fun and practical pointers. Lots of hard work has gone into this book. It needs a better package. S. S.

PLAN SUGGESTIONS

14 Split-Level Houses Designed for Solid - Fuel Heat. Rudard A. Jones, A.I.A. Small Homes Council, University of Illinois, Urbana, Ill. 16 pp., illus. 50¢

Interest in the splitting of house levels is reflected by this special research report which presents 14 house plans, all of them designed with three staggered floor levels—living, utility, and sleeping levels. Any number of plans can be further developed from the 14 illustrated here.

The booklet outlines the advantages of the split-level system from the standpoints of cost, livability, and solid-fuel use. The research was carried out in the University's Department of Architecture by Professor Jones, in a project sponsored by Bituminous Coal Research, Inc., the Anthracite Institute, and the American Coke and Coal Chemicals Institute. E. T. THE UPJOHN COMPANY'S new manufacturing buil ling in Kalamazoo, Michigan. Auditorium, cafeteria, employee lounge and offices are air conditioned and use Kno-Draft Adjustable Air Diffusers throughout. The Austin Company, Engineers and Builders.

fum kno-draft adjustable air diffuser

No. 1 reason why so many Kno-Draft *Adjustable* Air Diffusers are being specified and installed these days is because they do their job right. Soundly engineered and uncomplicated in operation, they distribute air evenly and *without drafts*.

No. 2 reason is beauty. Dynamically simple in design, Kno-Draft *Adjustable* Air Diffusers are "at home" in any surroundings—whether left in their natural spun aluminum finish or painted to match the ceiling.

No. 3 reason is adjustability after installation. This

TRADE MARK "KNO-DRAFT" REG. U. S. PAT. OFF.

W.B. CONNOR ENGINEERING CORP. Danbury, Connecticut AIR diffusion • purification • recovery In Canada: Douglas Engineering Co., Ltd., 190 Murray Street, Montreal 3, P. Q. saves an enormous amount of slide rule figuring. A simple screw-driver adjustment balances temperature and air distribution throughout the conditioned area.

No. 4 reason is customer satisfaction. Users *like* the results they get with Kno-Draft *Adjustable* Air Diffusers. There are types and sizes to meet every need.

NEW EDITION! KNO-DRAFT DATA BOOK now in new 32page format. Complete up-to-the-minute specifications, engineering and installation data on Kno-Draft *Adjustable* Air Diffusers. Bring your files up to date. Mail coupon today.

W. Dept.	B. CONNOR ENGINEERING CORP. V-12, Danbury, Connecticut
Ple Da	ease send me the <i>new edition</i> of the Kno-Draft ta Book—without obligation, of course.
Να	me
Pos	ition
Cor	mpany
Stre	eet
City	yZoneSta.e

out of school

by Carl Feiss

Just a year ago, I began the first of two columns for the January and February issues of PA on the effect of the American Beaux Arts system on our architectural schools and the difficulty which many of our schools had found in creating an alternate system. I would like to report progress in this direction, and will cite two of several institutions which are making a real contribution to the thinking on a co-ordinated training program within their own four walls. Not long ago, I had the pleasure of sitting down with Prof. John Knox Shear, Head of the Department of Architecture in Dean Kenneth Johnstone's College of Fine Arts, at Carnegie Institute of Technology. I was so interested in that school's exhibition of its five years' experiment in a completely integrated program that I asked Professor Shear to be guest on the column this month to explain what the Carnegie Plan consists of. Simultane-

of a Hillyard Maintaineer are of-

fered Architects without obligation

HIL-TEX[®] SEAL

MAKES

on any job, large or small.

ONLY 110

school made a wise decision—called a Hillyard floor expert (Hillyard Maintaineer) for advice on floors while building was in the blue print stage. The Maintaineer, schooled to work hand in hand with architects, made his survey, prepared a plan to assure protection to all floors throughout the building, (even to specifications for the marking of the new gym floor). Now in daily use, the new school follows laborsaving Hillyard recommendations for a lifetime of beauty.

ously, I had a letter from Donald Barthelme, which you will find in this month's "Letters to the Schoolmaster," telling of a similar program developing at the University of Houston under the direction of Richard W. Lilliot, Jr., Head of the School of Architecture. I am very much encouraged, because what is beginning to show up is a method of undergraduate architectural training which may be proved sufficiently sound as a method to survive faculty changes and the impact of the prima donnas. In fact, with such systems it may be possible to successfully control the prima donnas and convert them into useful teachers as well as drawing cards.

Here goes for Professor Shear:

The Carnegie Plan of Professional Education in Architecture A Brief Review

As the Carnegie Plan of Professional Education in Architecture continues to develop, there are certain external characteristics of content and method which have become apparent. Although a list of these characteristics would in itself be meaningless, it may serve as an introduction to an examination of the underlying educational objectives. Some of these characteristics are common to many schools of architecture; some are unique; all are approaching the stage of full development for students now enrolled at Carnegie.

These characteristics are:

An inversion of the liberal arts program in which the student is led through his specific interest in the problem of sheltering man into a general interest in the manifold problems of man. (We teach architecture because we are an architectural school; we teach man because we are a school.)

Teaching teams for each of the five years in which all the teachers of architectural or architecturally related subjects join in teaching the core course: architectural design. (Of 14 teachers, 14 are design teachers.)

A five-year sequence of design problems which stem directly from a progressive examination of man in relationship to his natural environment, to his family, to his neighborhood, to his town and region. (Secluded cabin to state capitol.)

Design problems which always demand immediate application of structural, drawing, and historical knowledge as it is acquired in theory courses, but which never demand use of knowledge or principles before their introduction. (Ideas are retained to the degree that they are applied.)

Teaching which tries to balance emphasis on problem solutions with equal emphasis on methods of reaching solu-

"Costs CUT 44%

with Westinghouse MERCURY lighting

A typical customer's problem: "To provide high illumination levels at a reduced operating cost."

Westinghouse recommendation: "To change from incandescent to Westinghouse Mercury Lighting."

Results: "36 fewer fixtures to maintain; 216 fewer lamps to replace; a total reduction of 44 % in annual operating cost."

This is only one case out of hundreds of "time-tested" installations. All show evidence that Westinghouse Mercury-Vapor Lighting is a fast-growing industry favorite. Investigate the complete line: 400, 1000 and 3000-watt units for either low or high-bay areas . . . open or closed fixtures for clean or dirty locations...high or low-voltage ballasts for any distribution system. Send for B-4727, "Westinghouse Lighting at Work" in every industrial area. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

you CAN BE SURE .. IF IT'S Westinghouse

LIGHTING DIVISION Edgewater Park, Cleveland

this booklet gives you complete information on VENTING OF GAS APPLIANCES

 WILLIAM WALLACE COMPANY, BELMONT, CALIFORNIA

 Please send me, free of charge, ______ copies of your booklet,

 "VENTING OF GAS APPLIANCES."

 NAME

 COMPANY

 ADDRESS

 CITY
 ZONE

METALBESTOS DIVISION, Dept. U

out of school

(Continued from page 132)

tions. (50% on what is done; 50% or how it is done.)

Instruction in history, drawing, eco nomics, philosophy is instruction in problem solving. (Every course consists of solving a series of problems.)

A correlation in subject matter a well as teaching method of all the courses in any given year in order tha the student may learn to use all hi learning simultaneously in the solution of all his problems. (Each year con sists really of one course; architecture and man.)

Equal emphasis on verbal and graphi communication. (An English teache who spends all his time with architec tural students; half of it in the draft ing rooms.)

Senior students are used as teaching assistants in the elementary classes where they must formulate and com municate ideas and principles they learned. (To learn: teach.)

Collaborative work in every year in cluding collaborative senior thesis (Architecture is team work.)

The foregoing are samples of some of the more immediately apparent char acteristics which, together with less apparent ones, have grown out of our continuing attempt to answer six basis questions about education for architec ture.

These questions are:

1. How can we teach the subject of man to students who have enrolled to study architecture?

2. How can we be sure that we are teaching only those things which are fundamental in the study of man and architecture?

3. How can we increase in our stu dents the ability to learn?

4. How can we increase the ability to correlate learning?

5. How can we increase the ability to communicate and receive ideas?

6. How can we develop professiona attitudes of service and responsibility

These questions are in themselves an expression of our objectives. A brie account of our attempt to answer these questions may serve as a description of the Carnegie Plan of Professional Ed ucation in Architecture.

Our developing answers to the siquestions:

1. We believe that we can induc that degree of interest in man fror which understanding will follow b employing these means: teaching architecture as homo-centric; creating a one course curriculum; and using a grac ual, progressive shift which places ap parent emphasis on architecture in th first years and on man in the late years.

We teach architecture as a man-cer (Continued on page 13

EXPERT COUNSEL AND ADVICE ON POWER AND LIGHT DISTRIBUTION PROBLEMS

COMPLETE LIST OF REPRESENTATIVES

Yours for the asking.

is shown in Sweets' Architectural-Engineering and Builder files.

• These men are strategically located in major cities of the country. They are within a few hours of almost any community.

• So don't hesitate to call on them for help and assistance.

DEVELOPMENT of an effective system of power and light control for an industrial or commercial plant or other building — one that is not only adequate for present-day needs, but allows for future expansion — is an extremely technical job, as any architect and engineer will agree.

That's why Frank Adam Electric Company maintains a coast-to-coast organization of sales engineers — specialists in power distribution and control.

These men will gladly assist you in your planning, will furnish latest engineering data on (?) products, or render a complete survey and report on individual problems.

The next time you have a job that involves lighting and power control, consult your nearest () representative.

Frank Adam Electric Co.

P.O. BOX 357 ST. LOUIS 13, MISSOURI

Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER Our 61st Year

out of school

(Continued from page 134)

tered activity of service in which the man at the center is not the architect but the man who will use the space that the architect organizes. From the first year, maximum emphasis is placed on the necessity of understanding the man for whom and with whom the architect will plan. Each architectural experience throughout the curriculum is calculated to sharpen interest in man In order that our students will not lose sight of the man for whom they plan, all the major design problems are related in a sequence which places emphasis first on man as an individua in relation to his natural environment then on man in relation to his family then on man in relation to his neighborhood; and finally on man in relation to his town and region. In each of these experiences it is man, as home dweller and parent, as shopper or clerk as teacher or student, as worshipper of worker, who is the focus of studen attention. When the study of archi tecture is approached in this way, and with this emphasis, understanding o man will follow from understanding o architecture.

The ideal curriculum in architecture would consist of one course in which the study of man, even in the precise terms of such specialized areas a psychology, literature, history, socia economics and philosophy, would be s completely integrated with the study of architecture that the student could not pursue the one without the other In aiming at this ideal, we have created teaching teams which work together to achieve in the teaching of the whole of the subject of man and architectur what is impossible of achievement for the individual teacher who is necessari ly limited by physical capacity, range of interest, and ability. Thus in each year, for individual teachers teaching separate subjects separately, we have introduced a team of teachers who, by planning together all subject matter and teaching methods, can assure unified course; and who, by reason of their individual abilities, can assure depth in the penetration of the severa specialized areas which make up the unified course. There is a separate teaching team for each of the five year and to insure effective cohesion between the years certain members of each tean belong also to the team of the following year.

We are able to have unified teaching teams instead of individual teacher planning and teaching their course separately, because Carnegie is a pri vately endowed institution in which high degree of autonomy is afforde each college and each department. W are not asked to teach students from other departments and we are not re quired to send our students to othe e Terrace Hotel, Miami ct — Albert Anis, A. I. A.

MIAMI AWNING WINDOW

ONS

EEEE

ALLAT

THE

THEFT

EF

EDE

ENE

EST

B

S

С

A

From Miami's beautiful Biscayne Boulevard to swank Sunset Strip in Hollywood...in buildings that line magnificent thoroughfares everywhere, you'll see allaluminum Miami Awning Windows.

Constructed from extra-heavy aluminum alloy sections (63-ST5), the Miami Awning Window is available with or without plastic weather-stripping.

For fine installations in schools, hospitals, office buildings and small homes, specify the all-aluminum Miami Awning Window. Available for immediate shipment.

MIAN

awnin

WINDOW

For further information, see Sweet's Architectural File $\frac{17A}{Mi}$ or — write, wire or phone Miami Window Corp.

Ready to Install wiley factoryassembled recessed troffers

Wiley Troffers are factory assembled units . . . no separate channels, side flanges, caps, etc. to assemble on the job.

These troffers, clean and simple in design, and sturdily constructed, are 11¹/₂'' wide for standard 12'' width opening, accommodating either 2. 3 or 4 lamps, fluorescent or slimline, in a variety of lengths: 24'', 36'', 48'', 60'', 72'' and 96''. Only 6³/₄'' headroom is needed.

Units may be erected individually, in continuous rows, side-by-side, or in patterns such as squares, rectangles, tee, ells, crosses, etc. and (or) combined with Wiley Troffer Adjustable or Fixed Lens Spots for accent lighting. Number of lamps, types of shielding — louvers or glass of various types may be added or interchanged without removing troffer from ceiling.

Welded ends assure squareness and rigidity. Abutting ends of connecting units (in continuous runs) form continuation of louvers to give effect of a single unit the entire length. Adjoining units are rigidly coupled by a simple "U"-sleeve. End flanges bolt on. Flat or "T"-bar flanges are optional. Plaster frames and saddles available.

To service — just raise shielding device, slide to either side and

drop open to replace starters, tubes or to clean; unhook to remove completely. All wiring is instantly accessible by removing reflector. Socket straps "snap" in place without tools and Reflectors are interchangeable.

All Wiley Fixtures are approved by underwriters, have the I. B. E. W. label and all components are E. T. L. certified.

Careful packaging in sturdy, individual cartons eliminates shipment breakage. There's no time lost filing claims and waiting for replacement shipments.

District Engineers are available near you to lend assistance in installation plans and estimating costs. A few territories are open for qualified representatives.

For full information, write R. & W. Wiley, Inc., Dearborn at Bridge Street, Buffalo 7, N. Y. or see Sweet's Architectural Catalog. Member Fleur-O-Lier Mfgs. Ass'n.

out of school

(Continued from page 136)

departments for any of their work. We can create our own schedules, use our own classrooms and our own teachers. We have our own structural, drawing, mathematics, verbal expression, and philosophy teachers, each of whom continues to draw strength from close association with teachers of similar interests throughout the institution.

The third means we employ to achieve the goal of teaching man is through inverting the emphasis of the usual college curriculum. The liberal arts curriculum functions to help a student find a particular area of interest by leading him at first through a broad survey of the cultural and development of mankind. scientific Later, through the device of the "major" he is urged to concentrate his interests. On the contrary, since our entering students have already developed a primary interest in one particular phase of man's activities, that of sheltering man, it becomes our function as a professional school to broaden that interest. Thus while educating our students in the concepts and principles of architecture we should lead them into the study of the whole of man and his experience. To accomplish this we employ a shift of apparent emphasis, placing a maximum amount of attention on architecture in the first year and gradually shifting the emphasis throughout the following years.

2. We believe that there is one effective test of what is fundamental knowledge; that is whether or not it is useful in later learning. As a fac-ulty we have been engaged in examining the content of our curriculum in the light of its usefulness for future learning. In turn we believe that the best test of usefulness of learning is use. Thus we have been concerned on the one hand with teaching only those fundamentals useful in later learning and on the other hand with insuring our students repeated opportunities to use those fundamentals already learned in situations which point up the need for learning still others. In carrying this out we have taken great care that each educational experience should do three things: (a) allow full examination of a new principle; (b) afford an opportunity to use previous learning; (c) serve to prepare the student for subsequent learning.

The success of such educational experiences depends in great part on their being limited to basic ideas and principles. In consequence we are engaged continuously in re-examining the activities of the architect in order that we may identify those principles useful to the architect. From these ex-

CONSTRUCTION'S MOST INTERESTING TREND TODAY

The application of Light Steel Framing members seems unlimited if the diversified uses we have engineered and fabricated to date are any criterion of 1952.

These nailable steel framing members work as well in the high pitched roof of a church as they do in the low and rambling plan of the modern elementary school building.

As each project is individually engineered to the load and dimensions of a particular need, we invite your contact on any specific project for cost analysis.

TO BUILD FIRE-SAFETY INTO SCHOOLS, APARTMENTS, HOSPITALS, STATE AND FEDERAL FACILITIES, ETC.

STANDARDIZED STEEL BUILDING PRODUCTS **MACOMBER • INCORPORATED** CANTON, OHIO

V BAR JOISTS • LONGSPANS • BOWSTRING TRUSSES • STEEL DECK

... and lots of it INSTANTLY makes **ELECTRIC** - **AIRE** the fastest Hand Dryer in the field

It is the VOLUME of INSTANTLY hot air that makes a dryer fast and efficient. Electric-Aire dryers deliver almost double the air volume of other types.

NOTE THE OTHER EXCLUSIVE FEATURES THAT HAVE MADE ELECTRIC-AIRE THE LEADER IN THE FIELD

- Automatic Louvers protect heater from vandalism
- Low speed motor insures long life and quiet operation
- Enclosed switch points insure safety and freedom from "frozen" contacts
- Entire mechanism floats in rubberprovides protection against shocks 1
- Narrow design—only 7" wide—requires minimum space 1 Backed by finest quaranty in the industry

Keeps washrooms attractively clean and SAVES 90% over towel expense.

out of school

(Continued from page 138)

aminations we have tentatively determined a small number of architectural principles which may be defined as fundamental. These form the basis for instruction in the first year and through their constant application and re-examination the basis for instruction in all the five years.

3. We believe that the best way to develop a student's ability to learn is to afford him carefully planned opportunities to learn from experience; that learning how to learn from experience is the most positive assurance that a man will continue to learn after graduation. Believing this we have undertaken a program in which all our teaching is inductive and proceeds from the student's analysis of specific problems to the student's precise formulation and useful statement of the concepts or principles involved. As much emphasis is placed on how the problem is solved and what the student learns from its solution as on the solution of the particular problem itself. Emphasis on dealing with problems inevitably lays stress on the techniques of problem definition, research, analysis, and synthesis. These techniques are vital for the architect. Practice in their use is begun on the first day of the first year. It is appropriate, we believe, that the first problems should be relatively simple in scope and involve relatively familiar situations. By keeping the problem simple, maximum attention can be focused on the general method of handling a problem rather than on the particular details of the problem. By keeping the problems short more practice in problem handling can be afforded at the time when it is most needed and when the student's interest span is most limited. As he progresses into the middle years and becomes more able in handling problems and has mastered more architectural techniques, and is also more able to sustain interest, the problems are made longer and increasingly difficult. In the last year a single design problem may occupy an entire semester and involve completely unfamiliar situations. But in the first year they are short, simple, and designed to lay maximum emphasis on fundamental concepts and processes.

4. We believe learning is best correlated when all of it must be used simultaneously in the solution of problems. A student will learn best how to correlate his knowledge and abilities if he is placed repeatedly in situations where he must use them in correlation. Continuing experience in such crossfertilizing situations will tend to develop that awareness of inherent relationships in all phenomena which is one of our chief educational aims. We are attempting to insure this correlated

(Continued on page 142)

HANDIER! Longer lived! Better looking! . . . You get everything with Roe Steel Tapes! They're extremely easy to read . . . and stay legible. Black markings are etched into the steel which is then nickelplated to give a lus-trous background. An added transparent plastic coating assures maximum durability.

1013

-

5

A — Steel tape B-White nickel C - Black etched markings D - Plastic overcoat

Shown here is Roe Steel Tape #202A with leatherette metalband case. Other models feature cases in handsewn leather, and in metal-banded leather. All have a reinforced rust resistant liner, flush-folding handle, press button center and roller mouthpiece. Available with 25, 50, 75 or 100-foot tapes; feet in inches and eighths, or in tenths and hundredths . . . also, with unique retractable hook for long one-man measurements.

Get Roe Steel Tapes from your hardware dealer - or send us his name and address.

NOT YET PAINTED but ... SAFE!

NEW Crawford Magi Cote PROCESS

seals all surfaces (including those not usually painted) against moisture, fungus, molds, dry-rot, insects, etc.

E ACH section of each Crawford-built door (east of the Rockies) now undergoes a 3-minute Magi-Cote Process immersion in colorless liquid chemical seal which closes wood pores to all destructive elements.

Magi-Cote penetration is such that a 10' x 10' door drinks up five quarts of liquid. Sections are then air dried. Magi-Cote effectively seals all surfaces (including those usually left unpainted) against moisture, fungus, molds, dry-rot, insects, etc. It protects the door against soiling during erection and against moisture while it is waiting for whatever finish is to be applied. Because it controls the porosity of the wood, it is an excellent base for varnish or paint, and gives these finishes superior stand-out and durability because their binders are not absorbed but stay where they belong, in the material, on the surface.

When you specify Crawford-built doors (Marvel-Lift, Fleetwood, Stylist or Doormaster, all sizes, all models, east of the Rockies) your client gets Magi-Cote Process protection as standard.

A sample of Magi-Cote treated wood is yours for the asking.

BOOTH 64 NAHB EXPOSITION STEVENS HOTEL—CHIGAGO JANUARY 20-24

CRAWFORD DOOR COMPANY

Main Plant: 84-401 St. Jean Ave., Detroit 14, Michigan

FABRICATING PLANTS in Portland • Tacoma • Los Angeies San Francisco • Dallas • Kansas City • Chattanooga • Milwaukee Hudson • Cadillac • Williamsport • Ottawa, Canada. DISTRIBUTING WAREHOUSES in 79 major cities. SALES AND SERVICE companies everywhere.

SPECIFY:

or **FLUSH** type SIAMESE

This Siamese minimizes projections from face of building. Body, with two independent self-closing clapper valves, can be inside or even built into wall. Extra heavy bronze, lasts for life of building. Siamese (inlet for F. D.) or wall hydrant (outlet for F. D.), with or without sill cock, full range of sizes. Complete line of standpipe equipment.

Whatever your wants in interior fireprotection equipment, you'll find ALLENCO provides the most reliable and economical product. See Sweet's Architectural Catalog File.

A. I. A. ARCHITECT'S 29e2 DATA BOOK-Allen on Interior Fire-Protection - packed with con-

cise and complete specifi-A cations and practical working data to make your work easier. Available A without cost to architects and engi-A neers. Write for your copy or for a call by our Consulting Service . . A now.

out of school

(Continued from page 140)

A

A A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

use of learning, and the ability to transfer, by integrating our subject matter and teaching methods.

For instance, in the third year the teaching team consists of a design teacher, a visiting specialist for each of the design problems, and teachers of materials, structural theory, drawing, history of architecture, and general history who also participate in design instruction. An account of the first, eightweek major design problem will illustrate how all subject matter is integrated, how teaching is unified and how simultaneous correlated use of learning is emphasized and insured.

The sequence of experiences in the first two years has brought this class to the place where in the study of materials they are ready to attack the characteristics and use of fire-resistant materials; in structural theory they have completed their first steel beam analyses, but have not yet tackled column design; in drawing they are ready for experience in the precise use of color, particularly involving the techniques of opaque or tempera color; in the history of architecture they are starting into the Italian Renaissance with its examination of new building types and its particular emphasis on the subtleties of expression involved in carefully adjusted proportions and scale; in general history the Renaissance man and the forces which shaped his activities and ideals may be examined; in design they are ready to examine a problem in which the space involved will be larger than that in their domestic problems of the previous year; in which some function of mankind as an element of the neighborhood social complex will be pointed up, and in which a study of the expressive devices in public architecture will demand emphasis. It has been the task of the teaching team to find a realistic architectural situation which will demand direct, simultaneous, correlated use of learning in all the several areas of their experience. As an aid in planning their work the team has had a constantly maintained exhibit of all the work which this class has done in their two previous years as well as an exhibit of the work of the previous third year class. A NEIGHBORHOOD STORE is decided upon as an architectural problem which will permit maximum use of all the student's learning up to this time and which will best serve to stimulate his continued learning in all the areas of his course. In the program or general statement of the design problem which is issued the first day the student is advised that at the end of the eight weeks he will be required to submit general architectural drawings (plans,

(Continued on page 148a)

COLFAX, IOWA

CHURCH STREET

FIRST on all counts!

The NEW "Lo-Loss" Feeder Bus

was designed for the transmission of electric current up to 4000 Amperes at 600 Volts or less. Ideal for welding and other low power factor loads.

Efficiency

Insulated copper bars mounted on close centers provide low reactance, low voltage drop, minimum temperature rise.

Toughness

No. 12 gauge channel frame supporting insulators makes it *toughest in the business*. Recent independent, unbiased tests prove "Lo-Loss" can take it—100,000 RMS Amperes at 440 Volts! Details on request.

Compactness

Composite drawings comparing size of "Lo-Loss" with other busways prove why it is ideal for remodeling jobs where space is at a premium.

Flexibility

Can be installed in any position with bars in vertical or horizontal position. Readily adaptable to industrial or commercial installations. Approved for vertical mounting when used for risers.

Installation Ease

Factory built, ready for installation.

Write for the new Busway Catalog and Sample Specifications National Electric's

FEEDER BUS

All bar ends bent outward at 45° angles to facilitate joining. Vertical mounting supports assure perfect alignment.

EVERYTHING IN WIRING POINTS TO

PITTSBURGH 19, PA

S CORPORATION

1328 CHAMBER OF COMMERCE BUILDING

JOBS AND MEN

SITUATIONS OPEN

ARCHITECTS AND DRAFTSMEN-experienced in architectural, electrical controls, lighting and power, structural, ventilation, heating, piping or material handling work, for Con-sulting Engineer's Office. J. Fruchtbaum, 633 Jackson Bldg., Buffalo, N. Y.

WANTED — senior and junior architectural draftsmen, experienced in detail working drawings for position with Mid-South firm doing institutional, commercial and industrial work. Salary open. Give complete information in first letter. Box 404, PROGRESSIVE ARCHI-TECTURE.

EXCELLENT OPPORTUNITY-for an architectural designer to become affiliated with a progressive manufacturing organization in Northern Indiana. Must have had several years experience specializing in small house design. Degree in architecture is preferable but not required. State age, family status, present income and photograph with application. Box 406, PROGRESSIVE ARCHITECTURE.

CHIEF DRAFTSMAN WANTED-must be experienced in managing drafting room of large commercial architect's office. Located in Pacific Northwest. Submit full resume, stating experience, education, age, and salary expected. Box 410, PROGRESSIVE ARCHITECTURE.

SITUATIONS WANTED

ARCHITECT-now executive designer in prominent New York firm, seeks association or responsible position in smaller office. All around man, capable, personable, good back-

Advertising Rates

Advertising kates Standard charge for each unit is Five Dol-lars, with a maximum of 50 words. In counting words, your complete address (any address) counts as five words, a box number as three words. Two units may be pur-chased for ten dollars, with a maximum of 100 words. Check or money order should accompany advertisement and be mailed to Jobs and Men, c/o Progressive Architecture, 330 W. 42nd St., New York 18, N. Y. Insertions will be accepted not later than the 1st of the month preceding publication. Box number replies should be addressed as noted above with the box number placed in lower left hand corner of envelope.

ground, well versed in best design and construction, experienced in client relations and project coordination. Minimum compensation in five figures. Write Box 407, PROGRESSIVE ARCHITECTURE

ARCHITECTURAL DRAFTSMAN-DESIGNER with long experience in various types of buildings. Recent excellent experience on immense defense plant. Public buildings, auditoriums, churches and other types. Accom-plished renderer. Registered by examination architect. Write 6046 Dorchester Avenue, Apt. 3B, Chicago 37, Ill. for Architect.

SPECIFICATION WRITER-expert on hospitals, industrial work, schools, steel frame and concrete construction. Rapid, accurate, dependable. Thoroughly conversant with defense work and government procedure. Permanent connection with large office desired. Location: Chicago preferable but not essential. Will furnish detailed information upon request. Box 408, PROGRESSIVE ARCHITECTURE,

ARCHITECT & STRUCTURAL ENGINEER-41, registered in Ohio (by examination), 18 years' varied experience, especially industrial,

commercial and institutional buildings, desires associateship or partnership with busy firm. Box 409. PROGRESSIVE ARCHITECTURE.

MISCELLANEOUS

ARCHITECT-ARTIST AND DELINEATOR-of long experience, offers services for freelance architectural renderings and perspectives. bird's-eye views of real estate developments, city-planning projects, engineering structures. highways and bridges. Construction of "perspectives in lines," without rendering. In-struction in Perspective and Rendering. Theodore A. De Postels, A.I.A., 644 Riverside Drive, New York 31, N. Y. AUdubon 6-0160.

CAREER BUILDERS PLACEMENT SERVICEfor Architects, Architectural Designers, Interior Designers, Industrial Designers, Draftsmen and Office Personnel. Interviews by appointment. Plaza 7-6385, 35 West 53rd Street, New York 19, N. Y.

ARCHITECTS-DESIGNERS—don't be burdened with the overhead of draftsmen and space. Let us do your preliminary sketches, details, working drawings, renderings and engineering on houses, institutional and commercial work. All work is done under the supervision of architects and engineers. Architectural Drafting Service, 35 So. Dearborn St., Chicago 3, Ill.

MURIEL FEDER-ARCHITECTURAL & DESIGN PERSONNEL AGENCY—a personalized place-ment service for top-level architects, design-ers, engineers, draftsmen, estimators, and interior designers. Selective contacts arranged in a confidential and professional manner. Interviews by appointment. 724 Fifth Ave-nue, New York, Judson 6-5877.

tative literature on plumbing drainage products. It's often difficult to attract your attention to this service in a small size advertisement, but we want you to know that the information below is available to you without obligation. Simply check "Items Wanted" and mail as indicated.

 Folder on roof, floor, and shower drains. 	5. Folder on backwater and sewer valves.		
2. Folder on LEVELEZE adjust- able top floor drains.	6. Folder on Interceptors to handle Industrial Wastes.		
 Manual RA—specifications and roughing dimensions on all drainage products. 	 Manual SP-3 — a 32-page book on Swimming Pool Construction. 		
 Manual B—the complete trea- tise on grease interception. 	8. Folder on Shock Absorbers for Water Hammer.		
J CHECK "ITEMS WANTED"			
1 2 3 4 AND MAIL T	5 6 7 8		
JOSAM MANUFACTURING COMPANY Executive Offices and Mfg. Division – MICHIGAN CITY, INDIANA			

World's Largest Manufacturer of Plumbing Drainage Products

ARCHITECTURAL ENGINEERING

A Practical Course (HOME STUDY) by Mail Only

Prepares Architects and Draftsmen

for structural portion of

STATE BOARD EXAMINATIONS

For many this is the most difficult section of the examinations. Qualifies for designing structures in wood, concrete or steel. Successfully conducted for the past eighteen years. Our complete Structural Engineering course well known for forty-two vears.

Literature without obligation-write TODAY

WILSON ENGINEERING CORPORATION

College House Offices Harvard Square CAMBRIDGE, MASSACHUSETTS, U. S. A.

Architectural Practice—Revised Edition

by Clinton H. Cowgill and Ben John Small

This comprehensive book covers the professional, business, and legal aspects of architectural practice. Commissions for professional services are traced in minutest detail from the day the client arrives to the last payment for work performed. The social and economic implications of contemporary practice are translated in terms of ready-to-use forms, guides, advice, graphic illustrations, and the like. Accounting procedures, bookkeeping systems, almost every procedural form an architect requires for his practice, agreements of every nature, specifications, insurance and bond requirements are all presented in orderly sequence.

430 pages, 9 x 12, illustrated, \$12.00

Send for a copy on approval **REINHOLD PUBLISHING CORPORATION**

Dept. M-280, 330 West 42nd St.

New York 18, N. Y.

BUILT

to withstand the centuries

The Holy Sepulchre Mausoleum, Oakland County, Michigan, is a superb and mighty combination of marble and bronze, with a beauty in every way appropriate to the solemn purpose of the building.

Noteworthy and complimentary is the large amount of ANACONDA Architectural Bronze used on the exterior and interior. Mr. Lawrence Michaels, President of The Michaels Art Bronze Company, Inc., Covington, Kentucky, reported that a total of 13,870 pounds was supplied.

Countrywide, bronze is time and again preferred for its warmth of character . . . its lasting ability to add grace and dignity to all types of structures. For information about ANACONDA Architectural Bronze,

In the central rotunda, bronze railings and grilles complement the other beautiful materials with which they are surrounded. Bronze Stations of the Cross are cast in expertly sculptured bas-relief.

write The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Ltd., New Toronto, Ontario.

NOTE: The use of copper and copper alloys is now subject to the regulations of The National Production Authority.

ARCHITECTS: Harley, Ellington & Day, Inc., Detroit, Mich. GENERAL CONTRACTORS: O. W. Burke Co., Detroit, Mich.

ANACONDA® architectural bronze

"Where's our heat come from Daddy?"

Steel pipe radiant panels provide "invisible heat"

Parents whose questioning children persistently ask for answers to such stumpers as "What keeps an airplane up?", may sometimes regard the conveniences of modern living as a mixed blessing! For what 6-year-old, snug and comfortable in a radiant-heated home, wouldn't wonder about and ask "where the heat is coming from?"

"Invisible heat" . . . the spring-like warmth from radiant panels concealed in floors, ceilings or walls . . . is here to stay, and its growing popularity will soon make it as understood by our children as was the polished parlor stove by our grandfathers.

Reliable steel pipe, proved in over 60 years of service in hot water and steam heating systems, is, of course, the first choice for these radiant panel heating systems. For it embodies *every* necessary characteristic—economy, formability, and weldability, and, durability that is satisfying beyond the life-span of the structure.

That's why those who design, specify, sell or install steel pipe radiant panel heating and snow melting systems are assured satisfied customers!

Write for a copy. A free 48-page color booklet "Radiant Panel Heating with Steel Pipe"

COMMITTEE ON STEEL PIPE RESEARCH AMERICAN IRON AND STEEL INSTITUTE 350 Fifth Avenue, New York 1, N.Y.

Special Kentile (greaseproof) is ideal for power rooms, machine shops, restaurants . . . wherever greases, oils, alcohol, alkalis, most acid solutions, or extra heavy traffic present a maintenance problem.

The practical and time-saving solution to any flooring problem is a call to the local Kentile Flooring Contractor

THE OBVIOUS advantages of a certain kind of flooring in a certain installation are often outweighed by disadvantages that can be foreseen only by the expert. To keep posted on the great number of products and materials available today would be so time-consuming that busy specifiers everywhere are learning to count on specialists for accurate and up-todate information. Such a man is the Kentile Flooring Contractor. Call on him as often as you wish...you'll find his extensive background makes him a valuable addition to your "staff."

KENTILE • SPECIAL KENTILE • KENCORK • KENTILE RUBBER TILE

KENTILE, INC., 58 Second Avenue, Brooklyn 15, New York • 350 Fifth Avenue, New York 1, N. Y. • 705 Architects Building, 17th and Sansom Streets, Philadelphia 3, Pennsylvania • 1211 NBC Building, Cleveland 14, Ohio • 225 Moore Street, S.E., Atlanta 2, Georgia • 2020 Walnut Street, Kansas City 8, Missouri • 1440 11th Street, Denver 4, Colorado • 4532 South Kolin Avenue, Chicago 32, Illinois • 1113 Vine Street, Houston 1, Texas • 4501 Santa Fe Avenue, Los Angeles 58, California • 95 Market St., Oakland 4, Calif. • 452 Statler Building, Boston 16, Mass.

From dispensaries to operating rooms they rely on smoothly operating LEVOLOR-equipped Venetians

Mount Zion Hospital, San Francisco, Calif., Architects: Skidmore, Owings & Merrill, N. Y.

Along with many other types of public buildings, hospitals enjoy advantages of LEVOLOR-built Venetians—their smooth, quiet per ance, their easy-to-clean (and keep clean) plastic-coated finish, and smart tailored heads and bottom bars!

When planning your next installation, specify Venetians equipped LEVOLOR quality parts.

Iowa Methodist Hos Des Moines, Ia., Arch Brooks & Borg.

Send for your free copy of the LEVOLOR Architects Manual for Venetian Blinds (AIA 35-P-3) ... 16 pages giving you all the factual and visual assistance you need for any installation. Levolor Lorentzen, Inc., 391 W. Broadway, N.Y. 12, N.Y.

Guaranteed by bod Housekeepi

Here are features that set LEVOLOR-built Venetians apart: smart, enclosed head that houses finest precision-built hardware; durable, springy plastic-coated metal slats; tape ends disappear in the sleek bottom bar. All are chip-, mar- and stain-resistant. And one gentle pull makes tilt-cords even, thanks to the LEVOLOR patented tilter mechanism.

See our catalog in Sweet's Architectural File, 19D-3A, and Sweet's File for Builders, 3E-5.

out of school

sections, elevations) indicating his proposed solution; full color tempera drawngs of interior and exterior; scale letails of construction and materials; structural steel framing layout; and a written presentation of his solution which he may be required to deliver orally to the jury. In addition to this ne will be required to submit from time to time during the eight weeks oreliminary analyses of historical store types and written analyses of the funccion of the store in the neighborhood ife.

These requirements furnish a high degree of motivation for the work in all areas and the store theme which runs through all the work acts as a strong unifying agent. In addition to having planned the work as a team the teachers further integrate their efforts through having each follow up his individual morning hours with the students, in which he has concentrated on a special area of theory, with hours of instruction in the design drafting room where he urges and supervises the application of the particular disciplines under his direction. The teacher of materials whose students during these weeks spend morning hours working with materials and details appropriate to stores follows his class into design where he criticizes the application of their knowledge of materials to the solution of the store problem. The structural theory teacher who is using the store as an opportunity for his stulents to apply their newly developed ability in beam design also goes into he design classes where he counsels on matters of structural design and vhere he prepares the students for the next phase of his special work by pointng out that the knowledge of column lesign and truss design will give them greatly wider range of choice in makng design decisions. The drawing eacher uses color studies of the store is vehicles for his instruction in techiques and along with the other teachrs follows through in hours spent in he design class. During the last week f the eight-week period all the work n all the hours under the direction of he entire teaching team is brought toether in completing the store design. Our experience indicates conclusively hat this kind of integration of subject natter and instruction produces a high egree of correlation of learning. In oncluding the eight-week series of ex-

rcises the student presents a written

or oral description of what he considers significant in his solution of the problem. This presentation forces the student to synthesize all his thinking and as an exercise is in itself expressive of the kind of correlation for which we are striving.

5. It is the conviction of our faculty that the architect must be able to communicate effectively if he is to be successful in his practice. This conviction has grown from observation of both successful and failing careers in architecture. No single ability appears to be as important as the ability to receive and communicate ideas. It seems imperative that we no longer take for granted our students' preparation in verbal communication skills. Heretofore we have been content with a freshman year of English Composition, after which we have let the student's verbal development take care of itself. This has not been true in drawing where an introductory year is followed up with additional work in the subsequent years.

In our present program we are attempting to place as much emphasis on the development of ability in verbal communication as is placed on the development of graphic communication skills. We are trying to accomplish this in these ways: Through basic freshman work in verbal communication; through the means of written analyses and descriptions in the design courses in all five years; through the oral presentation of design problems; through the reorientation of public speaking and literature courses.

Perhaps the most effective measures being employed in the freshman course are those which emphasize the complementary nature of verbal and graphic communication. This emphasis is insured through the English teacher's daily attendance in the design and drawing classes where he acts as counsellor. Every design problem involves at least one written exercise and customarily concludes with a written description of the student's solution. At each jury session several students are selected to present their solution orally to the jury.

6. Our constant effort is to lead our students to an understanding of the role of the practicing professional as one in which he must work sympathetically with people, recognizing, defining, analyzing, and solving their problems of spatial organization, but always putting their interests ahead of his own and always extending his concern to the social matrix out of which their problems have grown. Student recognition of the architect as a responsible team player is one of our principal objectives.

The nature of the problems in all the course work and the emphasis on the essential interrelationships in the various disciplines is placing great attention on the realities of architectural practice and the attitudes it demands. Emphasis on design as service and on the process of design as an orderly method of work rather than as pure artistic inspiration tend to underline the responsibility of the architect for fulfilling obligations on schedule; for constant effort in his client's behalf; and for rendering uniformly satisfactory service.

In addition to constant emphasis on this conception of the architect, we are trying to insure understanding of and ability in the role of the architect through the specific means of collaborative problem solving. For eight weeks in each of the first four years students are divided into teams of two or three or four in which authority is denied the individual and all decisions must be reached collaboratively. In the last or transition-to-apprenticeship year this collaboration occupies an entire semester. In addition the students in this year are assigned in four two-week sessions the responsibility of assisting first and second year design teachers in counselling and criticizing the students of those years. Finally, collaborative teams of fifth year students are required as part of their thesis work to develop and present some body of research material which will be useful for the younger students and their teachers. This insistence on the collaborative technique and on the students' sharing briefly the responsibility of instruction, along with the foregoing measures, is serving to encourage development of proper professional attitudes.

I know that Professor Shear would welcome comments on the Carnegie Plan. He has had five years of experience with it, and I am sorry that it is not possible to illustrate here the type of results which have been obtained. A sequence can best be described by the student work completed at the end of each stage. I hope to be able to give you other types of programs in future columns.

Best of luck for the New Year!

12-INCH PRISM A 55 BLOCK. For non-sun exposures. Transmits 30% more light than any other light-directing pattern. For use above eye level where generous light transmission really counts. (Perfect companion block for the 12-inch below-eye-level PC Saxon pattern.) 12-INCH SOFT-LITE PRISM B 55 LX BLOCK (with fibrous glass insert). For use above eye level on sun-exposed walls where light control is most important, this block transmits abundant daylight but with 20% less brightness than any other light-directing pattern.

12-INCH SOFT-LITE ESSEX B 55 LX BLOCK (with fibrous glass insert that forms a double cavity to reduce solar heat gain and make interiors more comfortable winter and summer). For light diffusing control. Matches new 12-inch Soft-Lite Prism B 55 LX Block.

announces

... new 12-inch functional glass blocks assure better control of daylight with more light ... lower brightness ... less cost per square foot

Now, from the PC Daylighting Research Center come three new 12-inch blocks that permit the architect far greater latitude in design. They supplement the widely accepted 8-inch "55" line functional patterns.

Two of these new blocks are for use on sun exposures, the other for use on non-sun exposures. And because of their larger size, any glass block panel composed of these 12-inch blocks will contain more glass, less mortar ... will transmit more light and control it more effectively ... will cost less per square foot than panels made up of smaller blocks.

Made of durable structural glass, these new blocks offer many advantages. Their spread-lens face corrugations insure a wide azimuth light acceptance on the outside face, and inside the building spread daylight into every corner.

Their dimensions are modular, and they therefore permit coordination with other building materials to achieve waste-free construction economy.

The "Big 3" also features: Soft-Lite edges, that reduce brightness contrasts; colored markings for ease of installation; and the PC Clean-Easy face finish to assure easier and quicker clean-up after installation, and maintenance economy over the years.

We invite you to write us today for complete information on the full line of 8-inch and 12-inch Pittsburgh Corning Functional Glass Blocks.

PITTSBURGH CORNING CORPORATION · PITTSBURGH 22, PA.

Distributed by Pittsburgh Plate Glass Company; W. P. Fuller & Co. on the Pacific Coast; Hobbs Glass Ltd. in Canada; and by leading distributors of building materials everywhere.

it's the law

by Bernard Tomson

Bernard Tomson's new book, "Architectural and Engineering Law," has recently been published by Reinhold. In order that readers of P/A may relate Tomson's monthly columns to appropriate chapters of the book, this column will indicate each month the portion of the book that the column supplements. The material this month, for example, supplements parts of Chapter 1, "Practice Statutes"; Chapter 2, "Architectural Registration Laws;" and Chapter 4, "Powers of Licensing Boards."

Q. Does a licensing body have the "right" to give an examination in design or composition?

A. Yes, if expressly or impliedly authorized to do so by the enabling statute.

Q. Can that body deny an applicant a license because its individual members disagree with him on "esthetic principles"?

A. No. If the solution of the problem would be given a passing grade by members of any generally recognized "school," then it should be deemed passing by any board. Any other result would be arbitrary, capricious, and an abuse of discretion, and subject to reversal by the courts, in my opinion.

It has often been repeated that the constitutional basis for professional licensing statutes is the state's police power protecting the health, welfare and safety of the populace. In upholding the constitutionality of the Architectural registration laws, as a valid exercise of the state's police power, a New York Court stated: (Bowen v. City of Schenectady, 240 N.Y.S. 784 aff'd 231 App. Div. 729)

"The Legislature is invested with a wide discretion in determining whether a business or occupation should be barred to the dishonest or incompetent. Generally it is for the Legislature to determine what laws and regulations are needed to protect the public health * ** The practice of architecture demands learning, skill, and integrity. The Legislature has the right to prescribe the qualifications of those engaged in this important work. The object of an examination is to ascertain whether applicants possess the necessary requirements. The layman must place his trust and confidence in the architect he employs. * * * In designing, planning, and supervising the erection of large public and private structures, tragic indeed are the perilous results of incompetence and ignorance. I am convinced that this enactment should be upheld as a legitimate exercise of police power."

There are two types of registration statutes in effect today. In the first type, the issuance of an architectural license by the board is a ministerial act, as the legislature sets forth requirements the applicant must possess, and if the conditions are met the applicant is entitled to a license. Most states, in the enactment of their first licensing law, included a "grandfather clause," which clause had the effect of permitting the licensing of practitioners if they possessed certain qualifications. A Michigan Court construed the powers of the board in this situation as follows: (Wair v. State Board of Registration, 303 Mich. 360)

"The board, in our opinion, in denying registration to the appellant, nullified the effect of the provision by substitut-ing its judgment for that of the legislature as to the requirements that an applicant for registration must possess. The legislature has prescribed that certain applicants - - - must also establish that they have had either practical experience or formal educational training, or both - - - before they can apply for examination. However, the legisla-tive body was of the opinion that one having at least 12 years of practice as an architect was conclusively presumed to be qualified to engage in the profession without regard to educational training, ability to pass an examination propounded by the board, or the opinion of the board as to whether he was a 'good' or 'bad' architect.

"If appellant submitted a specific record of 12 years active practice, the board was bound to grant the application regardless of their personal opinions."

The second type of regulatory statute empowers the board to examine applicants upon certain subjects to ascertain their qualifications and ability to practice architecture. The subjects upon which the examination is to be based are usually included in the basic curriculum of architectural colleges. Obviously, design and composition, courses which are part of the curriculum of all architectural schools, are included. It is discretionary with the board as to the nature and substance of the examination and the method of grading to be used. The courts will not interfere with the board unless it has acted arbitrarily or discriminately.

0

An interesting Louisiana decision (Sill v. Examining Board, 129 So. 427), demonstrates the courts' attitute toward discretionary steps taken by licensing boards. The applicant received a grade of 74.3 upon his qualifying examination, and, as the passing grade was 75, he was refused a license. An appeal to the courts was taken upon two grounds: (1) the action of the board was arbitrary; and (2) the method of marking was unfair. Both sides agreed with the universal proposition that the examination and the method of grading were purely discretionary with the board and "mandamus will not lie to hinder, regulate, or control their (the board's) actions in regard to such matters unless it manifestly appears that their actions have been arbitrary, unjust, or discriminating."

The Court surveyed the entire record and decided that there was nothing tangible in such record to conclude, as a factual matter, that the board acted arbitrarily. The court then turned its attention to the grading method of the board. There were three members of the group, one of them read the questions, the other read the applicant's answers, and the third kept a record of the grades. If the answer was partly correct, the members had a consultation and fixed the grade. If they differed, all three put down the grade which was thought proper and the average of the three proposed grades was taken.

The applicant claimed that this was unfair and only the two highest proposed grades should be considered. The Court held:

"It is purely discretionary with the board as to what method it should pursue in arriving at the proper grade or percentage an applicant should be given on his examination. The Court will not interfere and substitute its judgment for that of the board in such matters."

This decision expresses the policy of the courts not to interfere with the discretionary powers of the board concerning the matters upon which the examination is based, or upon the marking procedure followed, unless the board acts arbitrarily or unjustly. If the arbitrary action of the board offends the court's conscience, an appeal will lie. Some licensing statutes include procedures for appeal to the courts. In the absence of such a provision, the writ of mandamus is available to compel the board to act upon the application.

0

The problem whether a Board can examine upon questions of design or composition, does not concern itself with the legal right to examine, but with the fairness of the question and the manner of grading the answers. The prejudices of individual members of an examining board must not prevent qualified applicants from becoming licensed architects. No matter what "school" the examiner belongs to-"Classic," "International," "Contemporary" or other-he must impartially examine and grade all applicants. Evidence of such bias, partiality or unfairness, as will affect either the examination or the marking of the answers, will support an appeal to the courts, which would correct inequities.

Implicit in all this discussion is the question whether architects of one school trust those of another school to pass or each other's work and qualifications That issue, however, is not for me, but for the architects. It should be remembered that the public has a stake in the resolution of this distrust.