Completely fed up with their treatment by Commissioner John Taylor Egan's office, 13 of 16 members of the Architects' Advisory Committee to the Public Housing Administration resigned on November 5th, with a letter which expressed their continuing "loyalty to the ideals of public housing" but which stated that they desired to make the group resignation "official, public, and conclusive, for the reasons that the very existence of such a committee implies support for present policies of the PHA which, far from supporting, we unanimously condemn."

The 13 who resigned—Wurster, Haskell, Kennedy, Stubbins, Wettmore, Churchill, Kahn, Whittlesey, Manley, Rowland, Kock, Ford, and DeMars—are annoyed that no meeting of the Committee has been called for 18 months "despite repeated suggestions," but even more with the fact that "the evidence has become unmistakable" that Egan himself "in conversation with Senators, Congressmen and others in authority (has) laid major responsibility for rising costs at the doors of 'architects' extravagant ideas."

The letter points out that a more obvious reason for high bids was the slowness, during a period of rising costs, of PHA processing.

The principal reluctance on the part of the three who did not resign (Neutra, Saarinen, Teare) was a fear that the group resignation would be publicized as a slap at public housing as such. The letter makes very clear that this is not the case.

The Architectural League of New York announced on November 16 that Walter Gropius had won the Howard Myers Memorial Award for the best writing contributory to public understanding of architecture. The piece which won was "Not Gothic but Modern for our Colleges," in the "New York Times" of October 29, 1949. Two mentions were given: to Walter Creeks, for "Architecture and Learning: A Collegiate Quandary," in "The Magazine of Art," April, 1950; and to Jean Murray Bangs (Mrs. Harwell Hamilton Harris) for a piece on Maybeck called "Prophet Without Honor," in "House Beautiful" for May, 1950.

Department of Commerce's and Department of Labor's construction report for the first ten months of the year discloses the following statistics: total new construction, $26 billion, against $23 billion in 1950; private construction, $17.5 billion (up $1/3 billion); public construction, $7.7 billion (up $1 2/3 billions). For the ten month period these went down, compared to 1950's first ten months: new private dwelling units, 15%; private, social, and recreational, 29%; public highway, 4%. With the exception of small "miscellaneous" categories, all other types went up: industrial, 10%; religious, 15%; educational, 22%, etc.—and military and naval, 496%. CMP will, of course, alter these totals by year's end.

It becomes increasingly evident that work considered non-essential will be further restricted next year. Recent pronouncements by NPA that commercial permits will be almost nil comes as no great surprise. Promises of an easing off later in the year now begin to sound a bit hollow. Several fingers have pointed in recent weeks at one of the great weaknesses in the present system—the fact that no realistic screening of...
either civilian or defense requirements—for quantities and for timing—is now taking place. Inflated requests and inaccurate timing of delivery needs have been reported from both defense and non-defense projects. NPA replies that it has been screening, and that the trouble is caused by some padding of quantities in applications, but more by applicants asking for materials in one quarter when they will not be needed until later.

- Confusion as to which products are in the "A" list and which in the "B" list of NPA's Reg. 6 has caused headaches for some manufacturers. Kawneer Co., for instance, points out that its storefront materials now are classified as "B" products under CMP, and therefore need not be listed on CMP-C4 application forms. Accurate lists can be had from Dept. of Commerce field offices.

- As we go to press, word comes that the Honor Awards judgment of the Southern California Chapter, A.I.A., resulted in Victor Gruen's Mid-Wilshire Building (published in this issue) receiving an Honor Award. Top honors went to a school designed by Bob Alexander.

- Particulars about the 1952 Roth Traveling Scholarship, given by the Boston Society of Architects, can be had from William Emerson, Secretary of the Scholarship, 107 Massachusetts Avenue, Boston 15, Mass. Selection will be made in April, from candidates who are citizens over 31 years old. $3200 is available for travel and study abroad.

- Civil Aeronautics Administration has announced that 226 airport projects costing over $28 billion will be started before June, 1952.

- A. Naughton Lane, Vice-President of Monarch Metal Weatherstrip Corp., has been re-elected President of Producers' Council.

- American Institute of Decorators announces its 1952 Design Competition, with a closing date of February 1st, 1952. Designers and manufacturers of fabric, furniture, floor and wall covering, and lighting items not offered for sale before January 1st are eligible.

- Georgia A.I.A. Chapter set up a Special Committee to study registration problem spotlighted by failure of all 20 applicants last May. Committee polled Chapter members, found that large majority felt Georgia Tech instruction was adequate; stylistic exam question was unfair; present registration requirements inadequate. Committee then wrote P/A saying recent P.S. column reaching same conclusions had done a "disservice." and announced that the "State Board's readiness to co-operate has been most apparent."

- Syracuse Museum of Fine Arts, host to the 16th Ceramic National, announces that a new Award—an Architectural Ceramic Sculptural Citation, for the best use of ceramic integrated with architecture—has gone to Viktor Schreckengost, for work at the Cleveland Zoo's Bird Building, designed by J. Byers Hays of Conrad, Hays, Simpson & Ruth. Citation speaks of "ideal working collaboration."
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Within the Nesbitt Syncretizer heating and ventilating unit is the Comfort Control which "sees" and "feels" the outdoor air temperature at all times. This control automatically adjusts the temperature of the unit's continuous air stream so as to impose a protective thermal blanket——warm enough to shield room occupants from the chilling effect of cold windows, and cool enough to prevent overheating of the room air.

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December 1951
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MARRIAGE OF INTERESTS

Dear Editor: I have just received a copy of the September issue of your Journal and have found very great interest in reading "The Pros and Cons of Architecture for Civil Defense." I should explain that as Master of Works and City Engineer to the City of Glasgow I was responsible during the greater part of the war for the design and construction of air raid shelters, £4,000,000 having been expended for the purpose. With the advent of new weapons of attack however, there is evidently a need to reorient thought upon the matter of what would constitute effective shelter protection, it being clear that no structure of large urban centers would be able to withstand the blast and other effects of the new type of weapons likely to be used in aerial attacks. Accordingly while much shelter protection was afforded during the last war within buildings having load bearing walls it would be useless to attempt to use buildings of this kind in which to provide air raid shelter protection in any future emergency.

The economics of providing shelter protection however, become of increasing importance and it would appear to be necessary that the provision of shelters for emergency use must be considered alongside the provision of other facilities for peacetime use. The view I have always held in considering such a marriage of interests is that the urgent problem of car parking in large urban centers should be dealt with in conjunction with the provision of shelter protection. Some years ago I went into this matter very carefully and enclosed here with copy of Road International which contains a paper by me on the provision of car parks in large urban centers. You will observe that no reference is made to the provision of car parks as air raid shelters but it will be clear that the adoption of the proposals at ground floor level in framed buildings coupled with the construction at the appropriate time of closing walls with suitably protected entrances combined with the removal of the light division screens would result in the speedy transformation of such forms of car parks into adequate air raid shelters. It will be observed from perusal of the table on pages 14 and 15 of Road International that the arguments of cause and effect inherent in the composition thereof have almost parallel application to the problem of providing adequate shelter in large urban centers. For instance a large number of small car parks (air raid shelters) is preferable to a small number of large car parks (air raid shelters). I might add this would be unnecessary in order to carry the proposals into early effect to make use of all the proposed facilities. For instance the coin box and meter arrangements which eliminate the need for a cash attendant could be dispensed with and its absence made good by the employment of an attendant. It is quite clear that your Journal has sought to come to grips with this very real problem of finding the right answer to the question of providing protections against aerial attack and I could not read the views expressed by your various contributors without desiring to place at your disposal the result of my thoughts on the joint matters of air raid shelter protection and the provision of car parking in large urban centers. While I note that there is a considerable town planning background to some of the contributions made by the various writers in your Journal I have refrained from making any observations on this angle. As author of the Planning Reports for the City of Glasgow I agree with the terms of your summary on page 80 wherein you state "Urban redevelopment along with a planned decentralized program based on regional power development, social need and transportation is to us a much more defensible concept."

A. SPROUL
per Robert Bruce
Glasgow, Scotland

NOT QUALIFIED

Dear Editor: May I congratulate you for your frank expression (P.S. October 1951) and state that I fully concur in your opinion that licensing bodies do not have the right nor are they qualified to give an examination in design or composition. Imagine Meade passing on Wright's design or vice versa! Examining boards should become realistic if they are to have public confidence. The most important qualifications for good architectural practice are experience plus unquestionably high ethical standards, two matters which seem to receive little consideration by examining boards.

CHAS. WELLINGTON WALKER
Bridgeport, Conn.

FLUNKED ON STYLE

Dear Editor: In view of your interest in the situation here in Georgia with respect to registration for the practice of architecture, I am forwarding a copy of a memorandum to President Van Leer. This was sent him in response to his request that I supply him with a suggestion as to how he could answer a letter he had received over the coals because I had spoken of classical architecture as obsolete. Apparently the issue is causing a good deal of emotional reaction.

HAROLD BUSH-BROWN, Director
School of Architecture
Georgia Institute of Technology

MEMO TO: President Blake R. Van Leer
FROM: Harold Bush-Brown
SUBJECT: Our approach to the teaching of architecture
Ref. Letter from Dr. F. McNeel, dated Sept. 10

Our problems issues to design classes are all contemporary in nature: that is buildings, groups of buildings, communities, the result of events that have occurred during the last twenty years. The fact that the student will later be confronted with when he gets out into practice, I don't think anyone can quarrel with. It's hardly fair to a student design an Egyptian tomb or a Roman triumphal arch or a classical temple. The conditions of the problem are specific, and the solution is left up to the student. Any criticism or guidance he gets from his instructor is in the form of trying to hold him to fundamental truths - functional planning, sound structure, economy and completeness of coverage, and the essentials of good esthetics. The style of architecture never imposed; the expression is an individual matter, and the student is free to use his framework - and he can even go against his teacher's criticism if he disagrees. The way he learns is through the creative process and this means freedom to make his own decisions. It happens that the youth of today are interested in an architecture which is of today and not of the past, and I could go on about this quite at length. Suffice it to say that we as teachers do not intend to put our students in a straightjacket or force them away from the new and changing fundamentals. Those which are emerging from what modern science and technology have to offer by reason of the new materials and processes we have been discussing.

This of course does not mean that we disregard history or dislike classical art and architecture. I personally feel that the teaching of history is today as important as it has ever been, perhaps more so, and I can also develop this theme at length if you desire. I happen to admire classical architecture and believe that no one has ever evolved a more nearly perfect architecture than did the Greeks. But we are not Greeks, and we do not live in 450 B.C.; and our architecture and the character of our cities are bound to be different, just as our art is different from the Renaissance, and as our music is different from that of Mozart. That doesn't mean that we don't like Mozart, nor does it mean that we do not admire the Parthenon, but if you give a young composer the task of writing a symphony, you would hardly expect him to compose sounds like Mozart; and in the case of an architectural problem, in addition to a matter of art expressing the spirit of an era, there are the practical facts of structure and purpose which are at variance with the past and are inevitably making our architecture different.

People don't like change, and that is the only reason architecture has not
changed more rapidly and why we still see about us the remnants of eclecticism. Incidentally, I am one who believes that the practitioner owes it to his client to find out what he wants and to give it to him (that of course does not preclude persuasion). There is bound to be a lag in any process of radical change and that is especially true in a practical profession such as architecture; but in my opinion there is no doubt that the change taking place is fundamental and will eventually be complete. I think we would be doing a disservice to our future practitioners if we try to warp them away from their natural bent, to try to hold back the hands of the clock, and artificially to try to change the spirit and character of our times.

It may be of interest to point out that not one of the 50 or more architectural schools in this country is any longer engaged in eclecticism. All students in all architectural schools are, without exception, so far as I know, designing in the contemporary manner.

With regard to the examination by the State Board, your statement which came out in the paper was right to the point. The exam was faulty in a number of respects. Very truly yours,

HAROLD BUSH-BROWN

EDITOR'S NOTE: My P. S. column for October, dealing with the fact that 20 applicants for an architectural license in Georgia had flunked, an examination which called for "classic" design, has drawn a number of interesting responses, including one from the President of the Georgia State Board for the Examination and Registration of Architects, and one from a Special Committee of the Georgia Chapter, A.I.A., both scolding me for what I wrote. I have requested from these gentlemen additional facts regarding points which they say I reported "inaccurately," and their replies have not arrived as this issue goes to press. Both letters will be published next month. In the meantime, we understand that Bernard Tomson will have something to say on the subject in our January issue.

T.H.C.

NEEDS OF THE CORE

Dear Editor: In October 1951 P/A, you have a note regarding the recent C.I.A.M. Conference that exhibits were prepared by students of Harvard, Yale, Illinois Tech, and Pratt. I would like to inform you that, in addition to these exhibits, an exhibit illustrating the needs of the Core was also prepared by the Planning Workshop, affiliated with the Building Industries Division, National Council of Arts, Sciences, and Professions.

SINDEY L. KATZ
Architects Associated
New York, N.Y.

THE BEST DEFENSE

Dear Editor: Was it Goering or was it a lesser Nazi light who boasted that when he heard the word "culture," he "reached for his automatic"?

It would seem that many of the associations that surrounded the word "culture" for the Nazis have come to surround the word "peace" for ourselves.

Hence our interest and hope in P/A's discussion of the atom bomb, and even more P/A's editors' forthright and cogent statement that the best defense against the atom bomb is the guarantee that it will not be dropped.

For the truth is that any talk of defense against the atom bomb cannot omit a discussion of defense against war itself.

Of course we do not intend to invalidate any steps in the amelioration of our cities that might be undertaken now or any other time. Our cities need redoling and need it desperately. But for heaven's sake let us not launch ourselves psychologically on the World War III bandwagon merely because it offers us as architects a chance to demonstrate this or that planning panacea.

For the real issue is a far bigger one. In fact it transcends mere professional considerations as much as our being men transcends our being architects. Let us remind ourselves that World War III, apart from whether it ever could end...
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LOF GLASS

December 1951
decisively or not, must necessarily wreak such a destruction of human lives and values as the last war could give only a suggestion.

We have a lot of atom bombs, but so presumably has Russia. As this letter is being written, we are officially informed that the Russians have dropped another atom bomb. Recently a member of the Senate-House Atomic Energy Commission announced that Russia could blast twenty to thirty of our cities at any time it chooses.

What is the answer? Assuredly it is not the manufacture on our side of more and better bombs. Unless we believe, as some of our powerful voices do, that World War III is inevitable, bigger and more ghastly armaments are not the answer. We may search history, but we will find no record of any armaments race leading to anything but war and the final utilization of those armaments. There is an answer though, and the members of the Building Industry Division of the Council for Arts Sciences and Professions firmly believe that for the preservation of peace certain immediate steps are of compelling necessity. First of all must come the rehabilitation of the word itself. Peace is not "appeasement," nor is it a surrender of American integrity. Peace is quite as honorable an American pursuit as war and it may be sought courageously and decently. In fact it must be sought for courageously, for to seek it one must be willing to defy McCarthy and McCar-
ran, Luce, Hearstlings, and the whole gang of self-appointed spokesmen for American thinking. The plain fact is that peace has almost become a bad word, and the pall of hysteria and witch hunt that has settled over the country has had its effect in silencing any but official opinion. And official opinion talks only of war and the inevitability of war.

Interestingly enough The New York Times which itself has never been backward in propogating the cult of conformity, nevertheless made a survey of 12 major colleges which it published last May under the title, "College Freedoms being Stifled by Students' Fear of Red Label." The article concluded: "A subtle creeping paralysis of freedom on thought and speech is attacking college campuses in many parts of the country, limiting both students and faculty in the area traditionally reserved for the free exploration of knowledge and truth."

Thought control is everywhere. The BID therefore believes, secondly, that if one truly wants peace, then side by side with the fight for peace must go the fight for the preservation of American liberties and the restoration of the rights of thinking, speaking, writing, and assembly guaranteed in our Bill of Rights.

Thirdly, we advocate a conference of the great powers that sincerely and with open mind would attempt to settle our international differences. This would be a conference of equals based on mutual understanding and not on the mechanical counting of numbers of economic or political allies, a maneuver to which the UN has descended.

Lastly, we advocate a disarmament conference that would include total prohibition of the manufacture of the atom bomb together with the destruction of all bombs existing. In this connection it is interesting to recall that our own Baruch proposal for the control of atomic weapons was explicitly based on our own monopoly of possession of the bomb and the means to manufacture it. Since that proposal was first announced, however, Russia has developed the bomb. Yet the official U. S. position still remains the same. We have said again and again that we will not depart from its principles. But even a casual reading of the Baruch plan will show its complete inapplicability to the present situation.

The best defense against the atom bomb is a workable policy that will outlaw the bomb and its threat of total destruction altogether, not plans for a "dispersed" population hiding, ostrich-like, from the consequences of its own folly. HENRY WRIGHT

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Working drawings now are being made in the Detroit office of Victor Gruen, architect*, for Northland Center, second project of the decentralization program of the J. L. Hudson Company of that city. An intensive economic, traffic and architectural research several years ago led to a decision to locate three (possibly four) shopping centers grouped around branch department stores, at strategic points on the perimeter of the present metropolitan district. Northland Center is the second to be designed and will be built, along with

* Victor Gruen, A.I.A., project architect; Karl O. Van Leuven, Jr., associate in charge; Edgardo Contini, structural design; H. E. Beyster Corp., associated engineers; Larry P. Smith, economic consultant; Homer Hoyt, market analyst; Lloyd B. Reid, traffic consultant; Fred Wilkins, associated, for Hudson Store interiors.
Spaciousness of the mall and courts comprising pedestrian circulation for the department store and surrounding shops on the upper level of Northland Center is suggested by the architect’s perspectives of features of the project. At lower left is shown the exit of the truck tunnel through the basement.

Eastland Center, when government regulations permit.

Size of the shopping cluster, which will occupy 184 acres of the 450-acre site bounded by two major traffic arteries and a secondary highway, was prescribed by the accessibility to the potential market, maximum parking capacity the traffic situation would permit, and other factors determined by the preliminary research. Because of possible traffic congestion at the intersection of the major traffic arteries, the project was located well within the site and secondary access roads were introduced. Less intensive uses (services and possibly a future medical building or other single-purpose structure) are thought valid for the traffic-bound tip of the property. Actual development is to be in two stages: approximately 80 acres in Stage I with property intended for future expansion developed as a greenbelt and garden area to serve as a buffer for adjoining residential properties.

In contrast to Eastland Center (a ring scheme), Northland Center is designed as a cluster of one-story stores, shops, markets, restaurants, etc., grouped around garden courts and a pedestrian mall surrounding a three-story Hudson department store.
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There is no rot, no rust, no disintegration.

— and for help with the temperature control, the architect talked to Honeywell!

It's plain to see cartoonist Sam Cobean's wacky characters have their own ideas on how to inspect a home.

But in one thing, at least, they're like everyone else—they place a high value on comfort. Moreover, they know you can't have real comfort without proper temperature control. And they're happy Honeywell was consulted on that.

Honeywell can help architects and their heating engineers provide the proper thermal environment for any client—anywhere—in any kind of structure. We have a lot of well informed control engineers—in our 91 different offices—who are experienced in doing just that. And we have 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 more information on how the Honeywell organization can help you solve your control problems, see the column across the page.
with mezzanine, basement, and penthouse. Tenant areas have storage facilities in related basement areas which are co-ordinated with freight-truck tunnels and loading platforms, service areas, etc. Thus the complex services for merchandising will be out of sight, sound, and smell of the shopper. Construction will be reinforced concrete throughout and the buildings will all be air conditioned.

In this plan the tenant buildings cluster around the major department store, completely enclosing it, rather than extending like wings in either direction, as they do in the typical mall layout," the architect points out. "The cluster achieves for the shopping center as a whole the maximum benefit of the pedestrian traffic the department store generates.

"With this plan, every location is Grade A, either because of its direct relation to the department store, or because it faces a passageway to the center courts, or because it has maximum access to the parking areas."

The department store will also have direct contact with the parking areas at the basement level on one side, where the parking area will be depressed. In Stage I, there will be provision for parking 5000 customers' cars and 1000 employees' cars.

In Stage II, two more "junior" department stores will be added at ends of the center, grouped with additional tenant areas. Parking facilities will be increased to accommodate 9000 customers' cars and 1500 employees' cars. Anticipating this additional load, the architect has set mechanical requirements — steam, electricity, chilled water, sanitary and storm sewers, etc.—for the ultimate development.

Features of Northland Center as described by Gruen include:

"All of the buildings, including the department store, will be surrounded by a colonnaded walk to permit sheltered shopping in all seasons of the year. The colonnade will be sufficiently high so that complete store fronts for each tenant can be developed under its protective shelter. No signs will be allowed on the face of the colonnade, the building area above, or hanging from the colonnade ceiling.

Consult your nationwide "Honeywell Staff"

In planning schools, factories, offices and other large buildings no doubt you often run into this problem:

What's the best way to get coordinated technical help with a multitude of control systems—for temperature, ventilation, air conditioning, refrigeration, industrial process?

The answer is simple:

Call in your local Honeywell representative.

He can give you unbiased advice on equipment, because he has a complete line of controls—pneumatic, electric, electronic. And to help you meet special problems, he can bring in specialists from 91 Honeywell offices.

When you standardize on Honeywell, all control applications can be treated as one project. And you'll be designing an integrated system that can be serviced simply by consulting one company. The Honeywell service organization—with its wide scope and flexibility—is positive assurance that your controls will perform efficiently for a lifetime.

So plan to standardize on Honeywell. And call in our local representative often. He's the key man on your nationwide "Honeywell Staff."

Send for your personalized cartoon

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

For your personalized, free 8½" x 11" reproduction of this Coburn cartoon, write to Honeywell, Dept. PA-12-207, Minneapolis 8, Minnesota.

Honeywell

First in Controls.
"The buildings will all be connected by covered walks. These walkways will repeat the character of the colonnade and provide uninterrupted, all-weather shopping throughout the center.

"The two large courts which break up the mall pattern will be landscaped and contain minor merchandising units, such as soda fountains, snack bars, and small specialty shops. They will have shaded resting pavilions connected with the landscaped areas to provide sheltered waiting for the relaxation and ease of the shoppers.

To break up the vista through the courtyards and along the colonnade, sections between columns will be screened off here and there by trellises or by solid mosaic panels. Directories to orient the shopper will be combined with these visual breaks, as well as small, decorative fountains, drinking fountains, mail boxes, waiting benches, etc.

"The entire shopping center will be air conditioned. Steam and chilled water for the individual tenant units will be provided from a central utility plant.

"The basement receiving and loading system will effectively separate truck and service traffic from vehicular and pedestrian shopping traffic, contributing to the convenience and safety of both the shoppers and the service personnel.

"In front of the first-floor entrance and directly over the basement entrance to the department store, a bus stop has been located to serve the entire center.

"A music shell, or outdoor stage, is located in the courtyard in front of the department store. In addition to its use for summer outdoor features, this stage, together with the other two court areas, will be available for general promotional activities for the entire shopping center."

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NOTICE

Citation

UNITED NATIONS SECRETARIAT and FOOTE, CONE & BELDING were cited as Offices of the Year by the magazine Office Management and Equipment, sponsor of the awards, at a luncheon held October 22.

To stimulate high standards of office design and equipment, the awards are given annually to the winning offices in each of two categories—offices employing more than 500 persons, and those employing less than that number. Architects for the above mentioned offices are HARRISON & ABRAMOVITZ and FRIEDMAN, ALSHULER & SINCERE, respectively. HARPER RICHARDS was the designer for the F., C. & B. offices.

Other architects receiving honorable mentions were BENHAM, RICHARDS & ARMSTRONG for the Farm Bureau Insurance Co.; REINHARD, HOFMEISTER & WALQUIST for Dun & Bradstreet, Inc.; RICHARD J. NEUTRA for the Northwestern Mutual Fire Association; and CARSON & LUNDIN for the First National Bank of Tulsa.
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It works like rays of light

When you are asked how a radiant heating system warms a room, it may be simpler to explain if you think of the heat rays from radiant panels as being similar to light rays. The only difference is that they heat instead of illuminate every object they strike.

To simplify this illustration only a single point-source of heat is used. Actually, there are countless millions of such points on every radiant heating surface.

Radiant rays travel in straight lines in all directions

Point-Source \(\rightarrow\) one of millions

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These Pittco Premier Sashes—and the other members in the complete line of Pittco Store Front Metal—give you materials to create strikingly beautiful modern design. See your Pittco representative for complete information.

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PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS

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says CARL KEMM LOVEN
Nationally-known Architect, Glen Rock, New Jersey

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December 1951
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Carrier's blower-type Heat Diffusers are flexible that way. Specify them today for heating or ventilating a factory or a warehouse...a garage or an armory. Years from now they'll still do a complete heating job no matter how much the building's been changed.

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Venetians made with LEVOLOR Orange Line (De Luxe) enclosed heads, 88 slats and bottom bars, are installed in the new Atomic Energy Commission Building at the University of Rochester. Waasorp & Northrup, Architects; Stewart & Bennett, Inc., General Contractors.

Architects for centers of learning have learned to specify LEVOLOR-equipped Venetians

On the basis of their sound design, efficient operation and long service-life, LEVOLOR-equipped Venetians were installed throughout the new Atomic Energy Commission Building at the University of Rochester. They feature enclosed metal heads; gleaming durable plastic-coated metal slats for easy cleaning; and slender, well-tailored bottom bars that conceal all tape ends!

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Design choice is unlimited when you specify Flor-Ever floorcovering made of VINYLITE Brand Resins. Twenty-one lighter, clearer colors in tile form or by the yard make possible more different patterns and effects...more individualized beauty!

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These impressive qualities are reason enough for the ever-growing use of flooring made from VINYLITE Resins in homes and public buildings. Defense needs are cutting into civilian supplies, but available materials are as carefully formulated and quality-controlled as ever. Let us send you a list of suppliers. Write Dept. LJ-58.
...When designing the Methodist Hospital Nurses' Dormitory in Dallas, Texas, architect George L. Dahl searched out the window requirements with the diagnostic thoroughness of a doctor. He knew that the busy life of a nurse made it necessary to have a window that virtually "took care of itself" and could be left open at all times, even when it rained. He recognized that health-conscious nurses would appreciate the value of a window that would provide draft-free ventilation plus sealed-like-a-refrigerator closure. Mr. Dahl naturally specified Auto-Lok -- The Perfect Window -- as it is the only window that combines the best features of all window types.

Architect: George L. Dahl  
Dallas, Texas  
Contractor: Inwood Construction Co.  
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- Ventilation -- even when it's raining.
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Thousands of Rusco Prime Windows are being used to speed the completion of these permanent quarters for personnel at Ft. Campbell.

ARCHITECT: E. W. Augustus, Louisville, Ky.
BUILDER: Algernon Blair, Montgomery, Ala.

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Burt Huff, the builder, has used 1,332 Rusco Prime Windows on his Barkley Square and Sunshine Homes developments. He says, "We find Rusco very easy to handle during construction and recommend it to anyone interested in eliminating delays and adjustments."

ARCHITECT: E. W. Augustus, Louisville, Ky.
BUILDER: Algernon Blair, Montgomery, Ala.

BUILDER: Burt Huff, Santa Ana, Cal.

HARVARD AVENUE APARTMENTS, BROOKLINE, MASS.

The builder states, "We are exceedingly satisfied with the appearance and ease of installation of the Rusco Prime Windows, and we now know that maintenance will be practically nil."

ARCHITECT: E. W. Augustus, Louisville, Ky.
BUILDER: Algernon Blair, Montgomery, Ala.

BUILDER: R & S Construction Company, Boston, Mass.

BARKLEY SQUARE DEVELOPMENT, SANTA ANA, CAL.
RUSCO Hot-Dipped Galvanized Prime Window

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INSTALLED IN MINUTES in many types of construction—because it is a complete window unit. Comes finished painted, fully-assembled with glass, screen, built-in weather-stripping, insulating sash (optional) and wood or metal casing—all ready to place in the window opening!

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ARCHITECTS: Drummey & Duffill, Boston, Mass.
CONTRACTOR: Concrete Construction Co., Chelsea, Mass.

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2. ONE SIDE of the partition is temporarily braced with horizontal and vertical channels. One centered horizontal channel is needed on walls up to 9 feet. Wood studs or metal can be used for this temporary bracing.

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General Manager of Sales
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December 1951
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"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION"
Why is the scrap situation so critical?

An interview with J. L. MAUTHE, President
The Youngstown Sheet and Tube Company

Why are you concerned about iron and steel scrap, Mr. Mauthe?

Our inventories are critically low and the present scrap flow is not sufficient to maintain capacity steel plant operations. Furthermore, if the flow of scrap is not increased, a curtailment of steel production is inevitable.

The industry is using all the pig iron and all the home scrap that is available. The balance of our metallic requirements must be made up through procurement of purchased scrap. Every ton of scrap that we do not get represents a ton of steel that we cannot make.

How much scrap does the industry need?

In 1950, 96,700,000 tons of steel ingots and castings were produced, requiring over 61,000,000 tons of iron and steel scrap.

In 1951, over 65,000,000 tons of scrap will be required, and even more will be needed in 1952.

Where does scrap come from?

About 58% of the total scrap required is produced by the ingot and casting makers, and is known as "home" scrap; the balance of 42% is "purchased" scrap and is procured from outside sources.

Purchased scrap generally falls into two categories: Scrap from current fabrication and that which is the result of obsolescence.

There are three important sources from which we get obsolete scrap, much of which is dormant:-

1 - Obsolete machinery and equipment in every industrial plant, at the oil fields and on the farms.

2 - Battlefield scrap, obsolete ships and war material, surplus machinery and equipment, which government can make available.

3 - Countless old automobiles and trucks, which are rusting away in automobile wrecking yards in every section of the country.

What can be done to increase tonnage of purchased scrap?

This scrap must be made available immediately! All industry and government must awaken to the critical nature of the situation. They must realize that if we do not get the scrap, they will not get the steel!

YOU CAN HELP - YOU MUST HELP!
NO SCRAP - NO STEEL

The Youngstown Sheet and Tube Company - Youngstown, Ohio
there’s more to a view than meets the eye!

FOR INSTANCE—quality that the home-owner never sees is built into Curtis Silentite windows. The double-hung Silentite windows which flank this big Curtis picture window have the famous “floating” weatherstrips that assure a snug fit, yet permit easy operation. There are spring bronze leaf type weatherstrips at the meeting rail and also at the bottom rail. Double “Z” type spring bronze weatherstrips at the sides give uniform pressure on both sides of the window in all positions of opening.

TROUBLE-FREE CASEMENTS—Tests made by a nationally known independent laboratory show that Silentite wood casements will reduce by 16.4% the heat loss that usually occurs with ordinary casements, under comparable conditions. Silentite casements are the most weathertight casements made. They will not stick, bind or warp. The sash cannot rattle or vibrate, cannot swing in the wind. Condensation is reduced to the minimum by the use of insulating glass. Screens are furnished.

QUICK INSTALLATION—Because Silentite double-hung windows are precision-made, they can be installed in an average time of 3 minutes per opening. Silentite units provide easy operation, which they maintain throughout their lifetime. Each part of Silentite is specially designed with relation to all other parts so that all parts harmonize perfectly and fit properly. Remember, the Silentite window is a complete unit, consisting of frame, sash, lock, trim, screen and storm sash.

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Complete technical information about Curtis Silentite windows and Curtis Woodwork is yours for the asking—mail the coupon!

December 1951 49
Famous-Barr says, "Southtown is a famous first—the only retail store designed around the 'Magic Core'! It's the most efficient merchandising machine in the country. We predict it will set the pattern for stores to come. Southtown, which opened August 24th, is the third store in Famous-Barr's design-for-service in the St. Louis area. Floor space? Over 300,000 sq. ft. Probably the country's largest suburban store!"

All elevators, escalators, telephones and public rooms are efficiently compacted within the "magic" service core in the center of the building. Departments are arranged in "shallow" design, providing wider open entrance areas and easy traffic flow. Every floor gains 300 lineal feet of wall space for merchandise display and stock. Less walking for sales people should raise their sales volume and improve their peak hour service.

Otis engineers worked closely with the architect and the Famous-Barr management in planning free-flow escalator service from parking areas to basement and UP and DOWN to all four sales floors—which are also served by an Otis passenger elevator. Incoming stock is carried by an Otis freight elevator from the basement to "Stockroom Mezzanines" located between each sales floor. All stock is then checked, marked and sent by chute to the selling floor below.

**Otis**

*free-flow ESCALATORS* increase store-wide sales

**Otis Free-Flow Escalators** are spacious inclined aisles. Their continuous movement attracts people instinctively to upper floors and basements. They have been designed . . . to provide a moderate cost, standardized escalator that is suitable for installation in any type of building . . . to reduce the amount of building framing or altering because they're lighter, more compact . . . to reduce installation time and to permit business to continue as usual. Otis quality prevails throughout for safety, reliability and attractiveness. A new Otis data booklet BM-59 covers layout, location and construction requirements.

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Residence of John P. Matthews
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Build by areas instead of inches!

...Save time, labor, materials, money

Now you can zoom a building up—instead of inching it up. You can save time, labor, materials and money as never before!

Fenestra* steel "C" Building Panels quickly and simply interlock to form strong, solid walls. Your building is enclosed in a hurry.

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A FEW DETAILS ON FENESTRA "C" PANELS

Size: Standardized 3" deep, 16" wide, 7' to 12' long, 18 gage painted steel. They weigh only 6.50 lbs. per sq. ft.

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engineered to cut the waste out of building
The sharply-defined motifs so essential in modern architecture are greatly enhanced by the graceful design of Truscon Residential Steel Casements, as shown in striking photograph of the new Brockton Apartments, Chicago.

Credit: Architect, Robert S. DeGolyer  Contractor, A. L. Jackson Company
Truscon Residential Casements are equipped with Roto Operators which open or close the ventilators without the necessity of moving the screen. The ventilators are held securely in any open position. The concealed-latch locking handles provide positive cam action, drawing the ventilators tightly closed and weathertight.

See SWEET'S for complete details on the entire line of Truscon Steel Windows for every purpose; and write for detailed literature on all other Truscon Steel Building Products.

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HERE IS A REAL BOON TO ARCHITECTS, A FASTER, MORE EFFICIENT WAY OF CHOOSING THE RIGHT ROOF SPECIFICATION EVERY TIME, NO MATTER WHAT TYPE OF BUILDING IS ON THE BOARD.

With this Selector all you have to do is set the type of roofing desired opposite the type of roof deck being used and then read off the necessary incline limits and specification numbers.

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See the Ruberoid Built-Up Roofing Catalog in the Sweet’s Architectural File for 1951—Section 8 a/R.
Traffic flow is one of several factors that distinguish a truly modern washroom from one merely equipped with up-to-date fixtures.

This small washroom is modern in both design and function. Its users move progressively from urinals to wash basin, paper towel cabinet, waste receptacle and mirror, then out the door. The plan eliminates congestion—actually reduces man-hours spent in the washroom. It reduces your client's paper towel costs, too. The staggered towel cabinet and waste receptacle arrangement keeps users moving, gives them little chance to use more towels than actually needed.

At no cost or obligation, you can call in the Scott Washroom Advisory Service to make use of the know-how of trained consultants who have serviced well over 300,000 washrooms. Your Scott Washroom Advisory Service man is equipped to give you the latest answers on all-around modern washrooms as an integral part of new and old buildings. You'll save your clients countless employee man-hours, help them build good personnel relations by installing the newest sanitary improvements.

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Quick, easy, fast... that’s the installation story on Tuff-Tex, the attractive, unit-laid industrial floor. And, it more than lives up to its name. It is tough!

Every plant operator wants economy. Well, he gets it when he puts in a Tuff-Tex* floor... three-way economy.

Installation is quick. You don’t tie-up space for long. Put in unit-laid Tuff-Tex, and traffic travels over it in a few hours. Economical installation, plus moderate material prices mean first cost is low.

Maintenance is simple. Daily sweeping to remove loose dirt, periodic washing, water-waxing (if desired)... that’s all. Repairs are quick and inexpensive because they can be limited to damaged tiles. That lowers operating cost.

Tuff-Tex is highly grease-resistant (you can use it even in machining areas) and so tough it withstands constant traffic of heavy materials handling trucks with ease. That means service life is exceptionally long.

There’s your three-way economy... low first cost, low operating cost, long service life. And, you get many other advantages in utility and appearance.

A Tuff-Tex floor is attractive. You have unusual versatility in design... either decorative or functional.

You can inlay your own trademark in the floor... or use the unit-laid feature of Tuff-Tex to outline traffic aisles, shipping areas, material bays, and the like.

Get this three-way economy... plus Tuff-Tex’s other advantages... whether you’re building a new plant or remodeling an existing building.

Your local Tile-Tex contractor will give you product data, samples and complete information on our design counsel and floor layout services... for the asking.


*Registered Trademark, The Flintkote Company
The architect who knows Redwood knows the necessity of using uniform quality Redwood in his specifications. That's why he specifies CRA Certified Dry Redwood—seasoned with care, graded with accuracy, milled with precision. You build with confidence when you build with CRA Certified Dry Redwood.
In the sixteen years of its existence, the office of Edward D. Stone of New York City has increasingly become one of those firms to which one regularly looks for both structural refinement and design progress. Residential work now occupies only about half of the office’s energies yet Stone considers that the most gratifying part of his practice since “each problem is unique and personal. It also offers the opportunity to do more buildings numerically so that we can evaluate ... our ideas.”

The Stone office varies in size from 6 to 20 persons, depending on the volume of work. “Most of the men are registered architects,” he tells us, “and capable of handling a project from beginning to end. We usually develop about half a dozen preliminary schemes for a house, but after the design is set, the drawings and supervision are done by one man— with criticism from all, including our office boy.”

Presentations generally consist of drawings and simple perspective sketches, “but if the budget allows, we like to have models made.” Most of the work is contracted on a fixed-sum basis.

A difficulty with house design as a field of practice, Stone admits, is “the rather substantial fee that must be charged to do a really thorough and conscientious job ... The owner is frequently working to a close budget, and our costs go up proportionally as the budgets go down.” Nonetheless, even though he has not found house design “particularly profitable” in a material way, he believes that “an architect can survive on a completely residential practice.”

Edward D. Stone received his training at the University of Arkansas, Harvard University School of Architecture, and the Massachusetts Institute of Technology. After periods of working for Coolidge, Shepley, Bullfinch & Abbott in Boston, and with Schultze & Weaver and the Rockefeller Center Architects in New York, he established his own practice in 1935. Among the well known buildings credited to the Stone office are the Museum of Modern Art in New York (in collaboration with Philip L. Goodwin); the Food Building and New Zealand Building at the New York World’s Fair; El Panama Hotel, Panama, and the Fine Arts group for the University of Arkansas. In the past ten years, the office has designed and built about fifty residences, ranging in cost from $30,000 to $200,000. During World War II, Stone was Chief of the Planning and Design Section, Air Installations Division, of the U. S. Army Air Forces.
Exterior walls of the house are surfaced with horizontal, red-cypress siding. A remarkable plan element is the bath plunge, with full window wall (SELECTED DETAIL on page 65.

Photos: Lionel Freedman

house I  “an attempt at extreme architectural simplicity”

program Urbane home for a husband and wife. The program included quarters for a maid and provision for a very occasional overnight guest.

site Top of Westchester County hill that is all but inaccessible by road. Hot, humid summer weather. Good views both northeast and southwest.

solution Views to both sides exploited by large window openings in alternate rooms. Built on a four-foot module, the house is of simple post-and-beam construction. The roof is built-up, gravel surfaced. Heating is accomplished by a radiant system in the floor slab, using an oil-fired boiler; outside temperature control.

Edward D. Stone, Architect Karl J. Holzinger, Jr., Roy S. Johnson, Associates
FIELDS OF PRACTICE: RESIDENTIAL DESIGN

Floor and Plot Plan

[Diagram showing the layout of a residential design with labeled rooms such as bedroom, living room, dining room, kitchen, maid's room, study, and entry. The diagram also includes a terrace and a driveway.]
The architect strove to provide a dignified, simple background for the owners' varied possessions. Above is the entry. The partial wall that shields the dining room was specially designed to accommodate a painted sculptural plaque by Joän Junyer.

Right—dining room, with sliding doors pushed back to open to the flagstone-paved southwest terrace.

Below—a corner of the spacious living room.

Acrosspage—details of storage elements and the plunge in the bedroom-dressing room area.
selected details

Section at A 1/4" SCALE

Elevation at B 1/4" SCALE

Key Plan 1/16" SCALE

Residence, White Plains, N.Y.

Edward D. Stone, Architect
Karl J. Holzinger, Jr., Roy S. Johnson, Associates
To design and build a house for a large family, as economically as possible.

Sloping, wooded hillside in Westchester County, with the downslope toward the south.

House planned within simple L shape, with four bedrooms and two baths in the longer leg; the entrance, kitchen, dining and living spaces in the shorter. Of mill construction (to reduce number of parts and lower labor costs), the structure is laid out on a 4-foot square grid, and the frame also serves as the finish, eliminating trim. Cost: $16 per sq. ft.
All exterior wall surfaces are of dry construction. Exterior vertical siding is red cypress. Windows are pine casements (or fixed) with ¾" plate glass. The house is heated by an oil-fired boiler serving a radiant system in the floor slab.

Photos: Lionel Freedman

Edward D. Stone, Architect/Karl J. Holzinger Jr., Roy S. Johnson, Associates
Following the site slope, the living area is five steps down from the dining space. At either side of the living-room fireplace (top photo), openings look through to the dining space (left). At this latter level (below), a cooking grill is recessed into the chimney masonry.
house 3  “simple over-all shape; five-foot module”
program Home for parents, one child and a nurse.

site Westchester County, New York, with fine view to the south.

solution Worked out within a simple rectangle—plus the north-extending carport—the plan divides roughly at the center, with living rooms, to the west; bedrooms in the east portion. Modular like the other houses shown in the group, this house is designed on a 5-foot module, with 4" x 4" posts on this centering. Roof framing is of 4" x 10" beams, with 2" plank roof decking. Framing is exposed on the interior. Fenestration consists of select northern white pine sash and polished heat-absorbing glass.
The dining room (left), one end of which is used as passage space, is three steps above the living room (across page). Below are details of the carport area and (bottom) a view of the bedroom wing.

Photos: Lionel Freedman
Three views of rooms in the bedroom wing—the owners' room (top, left) at the east end of the house, and the child's room (top, right, and immediately above) alongside. In the latter, plastic tile is the flooring; birch plywood surfaces the walls, and there are ample built-in units to care for possessions.
These spirited panels, "Sacrifice of Isaac" and "Cycle of the Zodiac," in 21 hues of stone and glass adorned the nave of a ruined, ancient synagogue uncovered in 1928 by pioneers of Beth Alpha, Israel, digging a channel for water. Well preserved, they are thought to be post-Roman Occupation but their exact age is unknown.

*Photos: Eleazer L. Sukenik*
On the face of it, the Mid-Wilshire Medical Building is simply a six-story building on a 57-foot lot on the north side of Wilshire Boulevard. Delving into the program requirements, budgetary and site limitations, however, one discovers that its design called for extraordinary ingenuity on the part of both planner and structural designer.

Chief problems, in addition to providing a flexible typical floor that would accommodate a wide variety of specialized offices, were (1) that a parking garage be incorporated and (2) that the job be built as economically as possible. To solve the latter, the engineers took advantage of a recent local code revision that permits exterior walls with a two-hour fire rating and selected a lightweight steel-framing system, with thin, precast concrete panels for enclosing walls (page 77).

The need for including a parking garage required some method of reducing interior columns to a minimum within the garage space. This was accomplished by transferring loads from the five upper stories of the rear wing of the building (rigid frames supported on two columns with paired-channel horizontal members cantilevered beyond columns) to a single pier, centered under the columns (diagram, facing page).
Frames are carried (at second-floor) on trusses through which vertical reactions are transmitted from the columns, then down through diagonal struts to a central pier. To cope with differences between loads on the pier and that on the columns, footings are designed as inverted cantilever beams, anchored at ends on basement walls, the latter acting as continuous longitudinal beams.

Photo: George Hayashida
The lightweight-steel framing system, making wide use of the cantilever principle, reduces dead loads, eliminates heavy wall construction and columns in exterior walls, allowing maximum plan flexibility for office layouts. For enclosing walls, 2-inch-thick precast concrete panels are attached by bolts to 4-inch steel supports—to vertical cantilever channel sections on the front of the building (details, acrosspage); to floor-to-floor channel members on the windowless side walls, and to expanded steel studding cantilevered from spandrel beams in the rear side walls where continuous strip windows occur (photo above). Light floor construction consists of metal decking topped with 2-inch lightweight aggregate concrete supported on open-web junior joists.
At the front of the building, the precast wall panels with integral crushed-stone facing, are left exposed; inside finish is plaster on metal lath which is attached to the inside face of the channels, leaving an insulating air space. On the rear side-walls, a 1-inch coat of cement plaster forms the exterior facing; vermiculite is used on the interior.

Photos of the garage area show the diagonal struts which transfer building loads from the truss and framing above to the central basement pier. Above are exterior and interior views of the main-floor pharmacy.  

Photos: Harry H. Baskerville, Jr.
Above—a typical corridor, along the east wall of the rear wing and (right) a compact office for a secretary-receptionist.

Below—the ground-floor elevator lobby (left) enclosed by walls of wire glass; terrazzo floor; and (right) a typical office reception room.
Below — a laboratory (left) and a dentist's operating room (right), both on the west wall of the rear wing, with steel sash protected from unwanted sun by operable vertical louvers.

LOS ANGELES, CALIFORNIA

Left — a doctor's office on the south (front) of the building, with operable horizontal louvers for sun control. The rooftop penthouse (above) commands a broad view of the city.
MacKie & Kamrath, Architects
Walter P. Moore, Structural Engineer
Harris Construction Company, General Contractor

Houston, Texas
Crutcher-Rolfs-Cummins, owners of this one-story office building, are the world's largest suppliers of equipment to pipeline contractors. Formerly occupying downtown offices, they not only felt that an away-from-the-center location would be no detriment to their business, but they liked the idea of having a well designed office building of their own to serve as a public-relations medium. The new building stands in front of the company's extensive shops and warehouses, on the south side of a much-traveled highway near Houston's city limits.

The plan is arranged within a rectangle, with possibility of extension to the south at some later date. Private offices occupy the west wing; general offices, the east. Although framed in wood, the building is surfaced with materials selected for their fire-resistant qualities—corrugated asbestos cement and brick exterior walls; and standing-seam sheet aluminum roofing. The offices are completely air conditioned; heating is by gas-fired, forced-air units. Ceilings have acoustical finishes, and there is acoustical material in all interior partitions, which are surfaced with various plywoods. Interior lighting is chiefly fluorescent.

The basementless structure is built on a reinforced concrete slab. Flooring throughout is of asphalt tile, waxed. The exterior corrugated asbestos cement is dark red; the brick, a grayish-pink. Steel sash have 3/4" plate glass. The building is floodlighted at night.

*Photos: Wilbur Seiders*
Miami, Florida

Robert Law Weed and Associates, Architects and Engineers
Jorgensen & Schreifler, Structural Engineer
R. L. Duffer, Mechanical Engineer
J. Y. Gouch Co., General Contractor
This extraordinary office building, built for a group of co-operative tenant-owners—including the architects—is notable on numerous counts:

Structural system employing interior columns, cantilevered floor slabs, and lightweight curtain walls, the whole supported against wind stresses of hurricane force by an almost monolithic, vertical service shaft at rear of building (above, left).

Selection of materials and surfacing systems for minimum upkeep and long life.

Special thin, precast concrete panels used for a curtain wall that steps outward from the first to the sixth floor, something in the fashion of giant, overlapping shingles (page 85).

Operable aluminum louvers on openings in east, west, and south walls; fixed vertical fins at the western edge of openings in north wall (above, right) to minimize entrance of direct sunlight, thereby reducing the air-conditioning load.

Photos: Rudi Radzi.
The precast wall panels were delivered to the job by truck, placed vertically around the base of the building below their permanent location, and raised into position. As shown in the selected detail (across page) the overlapping panels sit on three clip angles at the base and are attached to the floorslab above by two %" bolts, which are cut off after installation. Vertical joints are left open on the face, and closed from the back by snapping into a dovetail joint a spring aluminum strip, well caulked from behind.

Since the owners of the 550 Building would also be tenants—eleven doctors, three lawyers, one architect, and one medical-laboratory technician—they were exceptionally budget- and maintenance-conscious. Hence, all of the initial design thinking went into finding a structural system and materials that would require least upkeep and have the longest life. Because of the large medical tenancy, provision of extensive plumbing lines was essential, and the owners wished to obtain office floor space that would allow the greatest freedom in partition placement. The site is just across the Miami River from the main business district, on the west side of a broad, esplanaded street.

The structural solution consists of paired steel columns (see plan) placed 10'-6" back from the exterior wall line. Adjacent to each column is a slot for plumbing soil and vent stacks. Floors are of flat, plate construction of reinforced concrete, with two-way reinforcement. Steel grillages at column heads take all the shear stress and obviate the necessity for bell capitals and drop panels, resulting in completely flush floor slabs. This made feasible a story height of only 11'-3", which, in turn, meant sizable savings in building cubage.

The utility shaft at the rear of the building not only centralizes the service elements but acts as a structural anchor for the entire building, since all wind-load stresses are carried in its reinforced concrete walls, making it unnecessary to include deep girders and windbracing at the columns of the main part of the building.

With the deep cantilever of the floor slabs, a lightweight enclosing wall was obligatory. To cope with this, the precast reinforced concrete-panel system highlighted on these two pages was developed. Since continuous fenestration was not wanted, the designers adopted a standard window opening centered in each wall panel, a device that allows wide choice in partition location. For corners, L-section panels were used. The overlapping of the slabs automatically provides a continuous, horizontal, weathertight joint. Precast under controlled conditions, by the Maule Industries of Miami, the slabs are of pumice concrete, with an integral white-cement-and-quartz aggregate facing that requires no painting or other continuous care. To meet the city building-code requirements of a wall with a four-hour fire rating, the panels are backed with 2" facing tile, which also serves as interior wall finish.
OFFICE BUILDING: exterior wall panel

selected details

ROBERT LAW WEED & ASSOCIATES, ARCHITECTS AND ENGINEERS
Robert Law Weed & Associates, architects of the building, occupy the north end of the top floor. A view of the drafting room is shown (above): terrazzo floor; facing-tile walls; acoustic-tile ceiling.

Right—medical laboratory (above) on the fifth floor and (below) reception room and library for the three law firms that have offices on the second floor.

Below—rooftop view.
Four Telephone Buildings

Hervey Parke Clark
and John F. Beuttler, Architects

I. Sebastopol, California

Located in a residential neighborhood on a northwest corner site, this little building is but 37' x 48' in area and set well back from the street. In order to achieve a relatively domestic scale for the structure, despite a mandatory 12'-6" ceiling height for the apparatus room, the architects adopted a flat-roof scheme. R. C. Mosely, building engineer for The Pacific Telephone and Telegraph Company, tells us, "at the time the building was completed, comments by the public were very favorable, the general opinion being that the structure was a distinct asset to the community. The building features incorporated into the design are appropriate to and adequate for the operations for which the office is intended."

It is an anomaly that the telephone building—a structure whose chief function is the housing of complex modern mechanisms—has tended to remain in demure, conservative architectural dress rather than stepping forward in confident contemporary form to reflect the inherently progressive nature of its operations. On these next few pages, we show a shinier side of the coin—a group of small buildings wherein the architects were able to work with imaginative executives and engineers of the telephone companies involved to achieve a fresh design approach. Of collateral interest are the various design solutions worked out to solve difficult sun-control problems.

Photo above: Roger Sturtevant
2. Turlock, California
In addition to efficient organization of the customary functional areas—the business office; the apparatus room to house automatic dial equipment; a service center to supervise installation and test of service lines; heater room and stand-by power plant—the design of this main building incorporates a method of modifying the sun's heat by means of fixed, vertical, concrete louvers. The depth between windows and louvers provides not only a heat-dispersion zone for air-temperature reduction but also a passageway to facilitate window cleaning. The building has walls of reinforced concrete, with cement-stucco exterior finish. Interior vertical supports are wood posts, and the roof is wood framed. R. S. Chew was the structural engineer and H. S. Haley, the mechanical engineer. "Nearly everyone likes the appearance of the building," comments F. S. Strasser, manager of the Turlock building. "Customers often remark, especially in summer, that our office is very inviting as there is no glare from the outside, yet plenty of light."  

*Photos: Roger Sturtevant*
Other than providing a good disposition of the required work spaces, the most important design consideration in the case of this steel-frame and concrete building had to do with control of summer heat. As indicated (acrosspage), sun studies were made for various seasons of the year. From these, the fixed, horizontal, reinforced-concrete louver system was developed. The architects comment: "Together with the design for the building at Turlock (preceding spread), this may set a precedent for comfortable, therefore efficient, office space in areas where extremely high temperatures occur." The manager of the building, R. C. Sarver, is enthusiastic: "The horizontal louver construction is perfect in every respect. It blocks direct sun throughout the year and gives good natural lighting and also eliminates the use of blinds." R. S. Chew was structural engineer and H. S. Haley, mechanical engineer.

*Photos: Roger Sturtevant*
4. Taft, California

The three previous buildings were built for The Pacific Telephone and Telegraph Company. This reinforced concrete structure in Taft is for the Kern Mutual Telephone Company, a small privately owned company which serves the near-by oil-field area. The program involved an addition to the existing building, with relocation of functional areas. The air-conditioned apparatus room is windowless, because of severe heat and possible desert dust. Horizontal louvers control western sunlight in office areas. In this case, the louvers are of asbestos board set well out from the building wall in steel frames. “This system is somewhat less expensive than concrete louvers,” the architects point out, “but it does require periodic painting.” M. H. Alexander, plant superintendent, states that the building has met every expectation: “The louvers have produced ideal working conditions in the offices.” H. J. Brunnier was structural engineer and L.E. Patton, mechanical engineer.

Photos: Roger Sturtevant
Possibilities in Porcelain Enamel

By ROBERT A. WEAVER, JR.*

From the days of the great Chinese potters of the Sung dynasty to the present time, porcelain enamel has been in constant production as a decorative and protective finish; yet, in the process of its adaptation from a purely decorative to a functional material many of its possibilities have been lost sight of. The decorative aspects should be allied to, not replaced by, the durability made possible by today’s enameling techniques. If this is done, an economical, adaptable, contemporary material is created which might have been made to order for architectural uses.

Porcelain enamel is a glass surface fused to a metal base. It is commercially practicable when applied to steel, cast iron, and cast steel. Recent developments have also indicated that enameling on stainless steel and aluminum is a practical possibility. Porcelain enamel is, in a very real sense of the word, a permanent finish. It is acid-, abrasion-, corrosion-, weather-, and thermal shock-resistant, possesses texture and color flexibility, is reflectant and workable as well as being an electrical insulator.

*President, Bettinger Enamel Corporation, Waltham, Massachusetts.

In many ways the fact that porcelain’s potential is so little known, is due to the enameling industry’s own lack of flexibility and resistance to new ideas. When asked to do something new, the industry has only too often answered that it could not be done in porcelain because of the nature of the material. Porcelain has always been smooth and shiny; therefore, one could only use it where a smooth, shiny material was specified. It chipped; therefore, it would probably always chip. Large size building panels could not be made because of the problem of rigidity. This situation simplified production for the porcelain enameling industry but it did not encourage the use of porcelain or eliminate its drawbacks. With the entry into the porcelain industry of some young firms with a flexible, experimental approach, a more constructive policy is now being tried.

new approach

A flexible approach means that when an architect or an engineer would use porcelain but for one undesirable factor, the industry should then develop a porcelain without that factor. If porcelain is indicated and a shiny surface prevents its use, then the industry should find a way to make

Figure 1—the problem of providing rigidity for large panels has been solved by laminating porcelain enamel to any one of several core materials; with this method, flat rigid units as large as 8' x 10' can be fabricated to meet the architect’s specifications. A 50 sq. ft. panel (right) is about to enter a kiln which has been heated to 1530F.
it mat. If the drawback is that porcelain enamel is not a structural material, then the industry must find a way to make it a structural material. In the short time that this new policy has been put into effect, many improvements and new discoveries regarding porcelain have come into being. A mat-surfaces porcelain has already been developed; large panels can now be fabricated (Figure 1); colors can be matched with consistency and exactness; and installation solutions can be worked out to suit any specific type of construction.

Installation methods, gage specification, type of core, etc., are essentially items for the architect and porcelain fabricator to work out together. Size, correct gage, and type of installation to be recommended, depend on whether a panel is to be used decoratively or functionally. A good esthetic effect is often obtained as a by-product of expert texture treatment. Today, the Porcelain Enamel Institute specifies 16-gage metal for architectural porcelain.

This seems to be the same thinking which put porcelain into the drums, as such a rule of thumb applies only to conventional applications like gas stations. Just as an architect would not specify the same thickness of wood for shingles, clapboards, and railings, the porcelain enamel industry should not specify one thickness of metal for all architectural uses. A more appropriate type of specification would require that nothing lighter than 18-gage metal be used for panels larger than 2' x 2', unless the metal is laminated or rigidized in some way.

An architect has the right to expect that if he indicates on his drawings and specifications where he wants porcelain to be used, what

Figure 2—these spandrels (top) are prefabricated, porcelain enamel sandwich panels; several types of cores were used in this industrial-research structure.

Figure 3—as in this residential design (center), porcelain panels should be used in combination with indigenous materials.

Figure 4—porcelain panels for a Texas commercial building (bottom) were perforated to eliminate distortions which would have resulted from firing.
qualities he wishes it to have, and what effects he wants, the fabricator can take over from there and work out the details, specification, and problems of fabrication and installation. If he is willing to search for a competent manufacturer, the architect will be able to get this type of service. Porcelain enamel companies should have—and some do—a full-time architect and engineer whose services are at the disposal of any client for just such problems as these. This solution is an excellent way to bridge the gap which has caused such trouble in the past between the enamel fabricator and the architect.

The most important recent development in the porcelain enamel field as it affects architecture is lamination. When laminated to other materials, completely flat and rigid panels as large as 8' x 10' can be fabricated; panels with many architectural advantages result when this material is laminated to calcium silicate tiles, honeycomb paper, or plywood cores. A sandwich-type panel, composed of porcelain enamel and a core substance, forms a complete, prefabricated curtain wall material. Larger, non-cored panels can also be made if the metal is either rigidized, fluted, corrugated, or perforated to eliminate distortions which form when a large panel is subjected to the terrific heat (1530°F) needed for fabrication. Porcelain enamel can even be laminated to some structural insulating boards to form large, flat panels.

In the event that these new types of porcelain curtain wall, porcelain veneer, and large size porcelain panels are used, special attention must be given to construction. The average porcelain enameler installs a panel—frequently limited to 2' x 2' and 16-gage metal—on wood furring strips with interlocking clips. The industry limits itself by staying with this conventional installation, since it discourages the use of porcelain in buildings where the architect is not prepared to use wood furring because a maintenance factor might develop. Although porcelain is in every way a permanent finish, it is only as permanent as its installation. There are now special installation methods suited to structural porcelain which are absolutely permanent.

recent installations

One type of curtain wall material is made by sandwiching an insulating core between two porcelain enamel panels. Setting these composite panels in upright, slotted, or channelled sections permits quick installa-

Figure 5—Fireplace (above, left) was made for less than one half the cost of the cheapest conventional type. Success of experimental hood (right) suggests that porcelain enamel is suitable for many other components of the residence.

Figure 6—Hand-enameded owls, corrosion and weather resistant sunlouvers, and rigidized-metal frieze (below) are combined in a youth library patio.
96 Progressive Architecture

96 porcelain enamel

Figure 7—the installation of prefabricated, porcelain window sills and large, porcelain wall panels in bathrooms reduces both erection and maintenance costs.

was totally out of place. Architect Marion Manley has designed a house for Miami, Florida, which contains porcelain and local brick (Figure 8). Conventional pan-type panels were used on the exterior and some porcelain, where needed, can be found in the kitchen and bathroom. By combining these two materials, Miss Manley has produced an individual, warm-looking, economical house which avoids the assembly-line look of the Lustron House while costing very little more.

Veneer panels, prevented from warping by means of perforations, were designed by Raymond Loewy Associates to renovate Ragland's Department Store in Kingsville, Texas (Figure 4). The exterior load-bearing walls, a brick construction with a 150' frontage, 80' depth, and 50' height, were painted a dark pink. A light pink, perforated porcelain facade was suspended 8' away from the brickwork by means of a light steel framework bolted to the existing structure. The porcelain frontage, approximately 50' x 20', was composed of 3' x 3' panels separated by non-perforated 1" strips in the same color. As concealed spotlights play across the surface, the perforations provide textural interest and contrast to the deeper red of the brick appears through the holes. In this case, the textural interest developed from the function of the material, as the perforations were originally intended only to eliminate distortions in firing. This simple renovation gave an up-to-date, attractive appearance to an old building while involving no exterior rebuilding or added maintenance factors.

A most successful way to provide a permanent exterior surface is the method used for the Biscayne and Seagull Hotels in Miami. The architects wished to use porcelain as a protective veneer on parts of these buildings, and, at the same time, wanted to avoid the danger of maintenance problems arising from the hot, humid, Floridian air collecting behind a facade-type veneer. Pan-type units, each specially treated to obtain a rough inside surface, were half filled with a lightweight cement and stacked while drying to provide a flat, inside backing or core. The face of the building was prepared with a conventional cement and the pans set into it. The cement core of the pan formed a bond with the face of the building and a permanent, maintenance-free installation was achieved.

When Carl Koch designed his Acorn Houses, a housing project in Concord, Massachusetts, he wanted to include fireplaces; however, the budget did not allow for even the cheapest conventional ones. Enthusiastic architect-manufacturer collaboration produced a coniform porcelain fireplace which could be stood on legs or suspended from a wall (Figure 5). It needed only a flue as preparation for its installation and could be mounted quickly by screwing it into place. These units were made in three colors—black, gray, and red—and cost $89 each, less than half the cost of the cheapest conventional fireplace. An experimental porcelain enamel fireplace hood installed in a New England residence also proved a practical interior use of this material (Figure 5). Porcelain window sills and stools were designed for a high school in Weston, Massachusetts. After the installation problems were solved for this one structure, subsequent use of porcelain sills and stools in other schools and in office buildings became a simple matter. Experimentation is now going on with porcelain enameled window frames.

At the Fitchburg Youth Library in Massachusetts, porcelain was specified by Architect Koch for the frieze around the top of the building. For today, coloring for the rear, on the roof, and for the sun loungers in the patio (Figure 6). The panels for the frieze are 20-gage, rigidized steel and are hand-enameled in white, yellow, two shades of blue, rust, and black. They are bolted together and to the face of the building, with an air space at the back. The 3'-high owls were individually designed by Connecticut sculptor William Talbot; before being fired they were enamelled by Gyorgy Kepes, Professor of Visual Design at M.I.T. Top and bottom flanges of the sun loungers are bent slightly more than 90 degrees to provide smoothness and rigidity. There are no side flanges; the loungers are supported by metal clips spot-welded to the sides and bolted to wood outriggers projecting from the face of the building.

These sun loungers are only an indication of the many architectural products which can be efficiently manufactured in porcelain enamel, if both architect and fabricator take a dynamic view of its possibilities. There is a great need for a permanent, corrosion-resistant, maintenance-free material for the component parts of a building, and there is every indication that porcelain enamel is it. The enameling industry of today is essentially a young, growing one which has hardly scratched the surface of its potential.
Summer comfort may be described by this basic equation—Metabolism + heat removal = summer comfort—where:

\[ \text{Metabolism} = \text{the production of heat by the human body, varying from 400 Btu per hour at rest to more than 1400 Btu during physical activity.} \]

\[ \text{Heat Removal} = \text{what the designer does to dissipate these Btu.} \]

While the factors of odor, noise, color, bacteria, and air filtration still must be considered for the ultimate achievement of complete comfort. ("Comfort Factors Affecting Heating Design," October 1951 P/A), the problem of bodily heat removal is of first importance. A slight rise in body temperature as the result of faulty heat removal, is soon followed by a faster pulse, emotional irritation, skin rashes, mental sluggishness and, ultimately—if the body temperature is increased and stays seven degrees or more above normal—by death.

body mechanisms for heat rejection

Our problems as designers for comfort become sharply objective when we examine the body's equipment for heat rejection. In an ambient atmosphere of 72°F, we find that nearly half of the total heat production is dissipated by evaporation, illustrated by the 180 Btu of latent heat commonly assumed by designers in their cooling calculations. The remainder, termed "sensible heat," leaves the body by radiation and convection.

This ratio of latent and sensible heat obviously will vary as the ambient conditions vary. If the surrounding temperature comes into equilibrium with the temperature of the skin, then no heat dissipation by either radiation or convection can occur, and the burden of these two mechanisms is transferred in full to the body's evaporative system.

In this state we begin to perspire, starting usually on the face and neck, followed by a gradual spreading to all areas of the body as these additional surfaces are activated to relieve the continuing production of heat. The volume of perspiration emitted by the average person sitting quietly, amounts to approximately 50 cubic centimeters per hour, and the evaporation of this moisture relieves the body of about 110 Btu.

Unfortunately, we must expect the wet-bulb temperature at times to equal or exceed, at least on some areas of the body, the temperature of the skin, and during these periods no evaporation can take place. These 110 Btu then, if not dissipated soon, commence to lift the temperatures of our tissues and the possible result is illustrated by the dramatic Calcutta incident of June 20, 1756. On that night 146 persons, generating a minimum of 58,400 Btu per hour, were confined in a room that allowed less than two square feet of floor space per person. In the morning, only 25 remained alive.

humidity versus temperature

So long as the relative humidity remains at 50 percent or less, evaporation takes place at an adequate rate from the human skin. Control of the humidity for comfort, therefore, becomes essential as the ambient air temperature enters the high 80's and the 90's.

In many sections of the Southwest, evaporative cooling is practical with rather wide satisfaction, additional mechanical refrigeration often being judged unnecessary for comfort. However, we seldom can expect to cool closer than six degrees to the wet-bulb temperature, and in areas where a 78°F wet bulb is common, evaporative cooling will not suffice.

Humidity control in these humid regions therefore, is accomplished by mechanical refrigeration, or by the application of adsorption processes in silica gel machines, or by proprietary fluids that abstract moisture from the air as the air passes through a spray of the fluid. Either of the chemical systems requires temperature cooling as a supplementary aid to comfort.

The combination of chemical dehumidification and mechanical refrigeration versus a mechanical system that does both, is a problem of economics. Particularly where we have a strong demand for fresh air, (as in night clubs), chemical dehumidification followed by mechanical cooling, may show substantial economic savings over a straight mechanical system. This sort of arrangement is employed with notable success in the Hotel Willard, at Toledo, Ohio.

thermal shock

There is nothing we can do at the moment to eliminate the thermal shock experienced on entering a cooled room from a hot street, or conversely, on leaving the room for the street.

To limit the shock, we attempt to design cooling systems for a differential of 12 to 15 degrees, but unfortunately this differential often is inadequate to supply comfort to persons more or less permanently housed in the cooled space. The need for a much wider differential when the outside temperature is, say 95°F, is a direct result of humidity. An am-

* Consulting Mechanical Engineer, South Charleston, South Carolina.
bient of 83°F is literally too close to our skin surface temperatures for comfort, since radiation and convection largely decrease or stop, and the dissipation of our 400 or more Btu per hour becomes the complete responsibility of evaporation. In the circumstances, the rate of evaporation tends to be too slow; a feeling of discomfort soon develops, and being human we promptly set the temperature controls to give us, not 83°F, but 72°F. We thus re-establish radiant and convective cooling for our skins, but the newcomer to our room is met by an unintentionally chill atmosphere.

Undoubtedly we need practical research into the achievement of comfort at relatively high temperatures, when experienced in combination with controlled low humidities. We possibly may alleviate thermal shock by following this avenue, but meanwhile we need not worry about injurious effects, because there are none. During the recent war, this writer was responsible for the design and installation of air-conditioning systems in the sick bays and operating rooms of many warships in the South Pacific; and in numerous post-battle inspections, the doctors were questioned about thermal shock and its possible dangers. Invariably it was reported as being of no consequence.

drafts
The effect of air movement is mainly this: as the moisture on the surface of the skin evaporates, it saturates the air in contact with the skin and then evaporation stops. If we now remove this stratum of saturated air and replace it with relatively dry air, the evaporative process is re-established and cooling follows. This exchange of saturated air for dry air is readily accomplished by the winds of nature or the breeze of a fan.

Winds and breezes however, if not controlled, may become unpleasant drafts, and in this state will frequently cause pain in an occupant's neck. (Table I has been developed by various researchers as a guide to what is desirable in air movement; designers will do well to observe it.)

Direction also can be important in avoiding discomfort from drafts. For example, Figure 1 illustrates a common arrangement for summer cooling found in small retail stores. In this banking room, the certainty of chilled drafts striking the backs of clerks and tellers is obvious. In short, comfort has been purchased but only stiff necks have been delivered.

Figure 2 offers a better solution for cooling a room of this kind. Discharge velocities are reduced by half and in the front of the room, where the major load occurs, the large windows are blanketed by curtains of cool air emerging from ceiling-type diffusers set to blow upward from the window seats.

Air movement provides what is probably the cheapest of all means to summer comfort. Even the attic fan, or the window fan, both common in the small home, so aid the evaporation of moisture from the skin that considerable comfort is enjoyed by people not otherwise able to secure it.

comfort and solar impact
Here is a problem, aside from the delivery of heat from the sun to the human body, that must be solved by the architect. A Cleveland man once told this writer, after a winter visit to Florida, that the impact of brilliant sunlight gave him a feeling of such discomfort that he abandoned his trip and hurried back to the gray skies of Cleveland. Conversely, it is not difficult to find people who exhibit a facsimile of the sun-worshipper attitude.

Unfortunately, many do not recognize these peculiarities in themselves prior to actual experience. The Cleveland man dreamed of Florida until he visited there; the successful salesman builds his dream home in the heart of a suburban woodland and then discovers that surrounding himself with trees instead of people gains him nothing but loneliness and discontent.

The significance of these emotional reactions is important to any evaluation of comfort, since nothing the mechanical designer can do will suffice to bring comfort where the architect has provided the wrong orientation for his client. For a good job all around, the architect must sense the psychology of the people who retain him, providing solitude for the introvert, giving the extrovert a bright place in the sun.

Often the house site is chosen before the architect is called in. In these instances, much can be done by the planting or removal of trees, and by skillful application of color.

the importance of floors
Chiroprists tell us that many pains and aches originate in some maladjustment of the feet. This writer has had clients who reported a swelling of the feet and ankles, with considerable pain, the cause of the trouble being ascribed to the cement floors in the home. That some truth exists in the claim is illustrated by the fact that, after wood floors were laid on the concrete, both the swellings and the pains disappeared. Some measure of resiliency in the floors seems desirable, but again, everybody is not adversely affected.
Table I: Effects of Air Velocity

<table>
<thead>
<tr>
<th>Velocity, feet per minute</th>
<th>Probable impact on persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 50</td>
<td>Unnoticed.</td>
</tr>
<tr>
<td>50 to 100</td>
<td>Pleasant.</td>
</tr>
<tr>
<td>100 to 200</td>
<td>Generally pleasant but causing a constant awareness of air movement.</td>
</tr>
<tr>
<td>200 to 300</td>
<td>From slightly drafty to being annoyingly drafty.</td>
</tr>
<tr>
<td>Above 300</td>
<td>Requires corrective measures if work and health are to be kept at high efficiency.</td>
</tr>
</tbody>
</table>

Note: These velocities are higher than recommended by the A.S.H.V.E. Guide, 1951 Edition. However, when walking through still air at 2 miles per hour, the speed of the walker, relative to the air, is 176 feet per minute and the sense of air movement at this rate is moderate and not unpleasant.

by a nonresilient floor. The phenomenon is a personal one but certainly should be considered when designing for comfort.

A cold floor in the summertime, likewise, can give rise to physical ailments. During the recent war, a ship in the south Pacific reported many complaints from a certain compartment in which colds, aching feet, even some suspected arthritis, indicated that an investigation should be made. This compartment was located directly above a refrigerator room and the steel deck was consistently cool, sometimes damp. The compartment deck was then floored with two inches of fiberglass insulation, sealed with a hot mopping of bitumastic, and finished off with a layer of cement. The complaints ceased. Incidentally, the steel decks of ships rarely cause foot trouble, since they normally are of thin plates and provide some degree of resiliency.

The problem of cool floors is not a common one, but it must be considered if cold water is run through the tubing of a radiant floor panel for summer cooling.

summarizing summer comfort

A summary of “dos” and “don’ts” for designers of summer comfort, is shown on Chart 1. Each is important, but in most cases a control of the humidity will be found the shortest road to a comfortable end.

Chart I: Summer Comfort Design Considerations

<table>
<thead>
<tr>
<th>Provide</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidity control</td>
<td>a—Mechanical refrigeration with sub-dew point cooling plus air mixing or reheating. b—Adsorption equipment, as silica gel or liquids. c—Air precooling with cold water coils or ice. d—A combination of a and b, or a and c.</td>
</tr>
<tr>
<td>Temperature control</td>
<td>a—Mechanical refrigeration. b—Cold water cooling. c— Either of the above plus air circulation and mixing. d—Evaporative cooling where the wet bulb permits. e—Insulation of building roof and walls. f—Adequate shading against the sun. g—Color selection to reject or absorb sunlight as desired. h—Proper use of natural orientation, to take advantage of exposure, trees, prevailing winds, etc.</td>
</tr>
<tr>
<td>Air movement and ventilation</td>
<td>a—Gentle air movement by fans. b—Correct location of air inlets, particularly chilled air. c—Screen or filter air intakes to eliminate dust, insects, and pollen as well as practicable.</td>
</tr>
<tr>
<td>Resilient floors</td>
<td>a—Finish concrete or cement with asphalt tile. Alternatively lay wood, either with or without sleepers. Reports are satisfactory on both methods.</td>
</tr>
<tr>
<td>Solar impact compensation</td>
<td>a—Consider sun effect when designing the structure, particularly residences where emotional reactions may sometimes follow.</td>
</tr>
<tr>
<td>Don’t permit</td>
<td>Method</td>
</tr>
<tr>
<td>Drafts</td>
<td>a—Maintain air velocities at less than 100 feet per minute, if the moving air impacts on persons. b—If the air is chilled before delivery, introduce it well above the head level.</td>
</tr>
<tr>
<td>Clamminess in conditioned spaces</td>
<td>a—Maintain the relative humidity at less than 50%.</td>
</tr>
<tr>
<td>Inadequate air change</td>
<td>a—See that at least 30 cfm of air is delivered to each person. b—In the total air delivered, provide at least 15 cfm per person, from outdoors.</td>
</tr>
<tr>
<td>An inexperienced person to design the system</td>
<td>a—Verify the record of engineers and contractors before making a commitment.</td>
</tr>
<tr>
<td>Odors, pollen, dust, etc.</td>
<td>a—Follow the methods described under the heating cycle, for comfort.</td>
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Streamlined Specifications: Interior Marblework

By BEN JOHN SMALL

As a part of this streamlined specification, the author has included a section entitled "Notes To Job Captain." This innovation was started with Small's specification for Asphalt Tile (June 1951 P/A) and has since been commented on favorably by The Construction Specifications Institute, Incorporated.

1. general:

(a) Applicable provisions of "General Conditions" govern work under this Section.

(b) These specifications are of the abbreviated or "streamlined" type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the drawings," "according to the plans," "as," or "the," and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings. Words "shall be" or "shall!" will be supplied by inference where column (1) is used within sentences or phrases.

(c) The Contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on the Drawings and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.

2. work included:

(a) Furnish labor and materials to complete interior marblework indicated, as specified herein or both.

(b) Assign marble subcontractor, without charge, adequate storage and working space for carrying on his work.

(c) Furnish without charge to marble subcontractor:
   1. Necessary scaffolding.
   2. Required safety barricades or weather enclosures.
   3. Adequate hoisting facilities during regular working hours.
   4. Water, light, and power at convenient locations on each floor.
   5. Temporary heat.
   7. Telephone facilities.

3. conditions at building:

(a) Marble: as specified; conformed to or within approved sample range and in accord with characteristics and working qualities set forth under their respective group, A, B, C, or D, in "Handbook for Use of Interior Marbles," issued by Marble Institute of America, Inc.

(b) Exercise care in selection to produce as harmonious effects as possible. Patch and wax marbles carefully where permitted under Marble Institute of America Group Classification in manner to conform to general character and finish of marble.

(c) Surface finishes: sand rubbed or wet sand finish, grit finish, hone or eggshell finish, polish finish, as indicated and specified.

(d) Marble in various spaces: (List in detail trade names of marbles and/or alternates, and finishes selected, and spaces where used. Describe extent of marblework required or reference may be made to "Schedule of Finishes.")


(f) Sand: clean, free from organic and other deleterious matter likely to stain finished work; selected as required.

(g) Portland cement shrinkage reducing accelerator (used with Portland cement to give cement quick setting character."

(h) Plasticized bonding cement (used in place of plaster or cement): plasticized synthetic resin base that will not stain thru marble; is unaffected by temperature changes or moisture; adhere with strong suction to clean surfaces.

(i) Calking mastic (for setting and pointing): non-staining, knife consistency, elastic, moisture-proof.

(j) Anchors, dowels or cramps: brass, copper or aluminum. Use special cramps, dowels and the like where indicated on shop drawings; elsewhere install ordinary wire anchors as indicated by building conditions.

(k) Cushions (to maintain joints, especially where non-staining mastic is used): aluminum or clear plastic.

(l) Submit samples of various kinds of marble proposed for use. Samples: 4" by 6" or 8" by 12"; represent approximate shade, marking, characteristics of variety of specified marble and finishes required. (Where required to show variations in color and markings, submit larger samples or range of samples.)

(m) Label samples on back; designate finished face, building name, kind of marble, group classification, Contractor's name.

(n) Where marble is required for ornamental carving, they shall show work in full scale, be furnished by others and delivered to marble subcontractor's plant without charge.

(o) Execute carving with skilled workmen, in accord with approved full size details or models. Drawings indicate approximate depth and relief of carving.

(p) In case of discrepancies, dimensions take precedence over scale sizes; large scale or full size details supersede small scale drawings; specifications prevail over all drawings.

(q) If measurements are not established and guaranteed in advance, marble subcontractor shall obtain and verify measurements at building.

(r) Lend all reasonable assistance to marble subcontractor, including services of engineers, if required, for establishment of levels and the like.

(s) Submit shop and setting drawings of work specified herein.

(t) Full size details shall show sizes, sections, marble dimensions, jointing, bonding, anchoring, connections with other work, other required details.

(u) Standard thickness for marble where one face only is finished: approximately 7/8"; returns of jambs, pilasters and the like: 5/8", unless otherwise specified. Install joints closely, not to exceed 1/16".

(v) External angles shall have butt joints, unless otherwise specified. (Quirk miter joints should be indicated and specified; use only above base.)

* Associate, Alfred Hopkins & Associates, Architects. The author acknowledges gratefully the assistance of the Marble Institute of America, Inc.
MATERIALS AND METHODS

12. base and plinths:
(a) Base: ½" thick unless otherwise indicated; extend 1" below finished floor line. Where marble border is indicated, extend base on top of border.
(b) Plinths: as indicated, set on top of finished floor.
(c) Risers and stringers: 7/16" thick, extend from top of one tread to underside of tread above, butt string; anchor securely.
(d) Bed in cement mortar treads and platforms on stain of metal frame or steel frame construction.
(e) Assemble stiles and partitions with concealed dowel fastenings or he cure intersections of stiles and partitions.
(f) Extend partitions 1" into floor.

13. floor marble:
(a) Size, tile, and border pattern, and laying of floor, as indicated; ¼" thick, unless specified otherwise.
(b) Floor mortar: cement mortar with water and cement. In latter procedure, wet bed marble tile with suitable mallet until bedded firmly to proper floor level.
(c) Tamp marble tile with suitable mallet until bedded firmly to proper floor level. (See alternate below.)
(d) Temp marble tile with suitable mallet until bedded firmly to proper floor level.
(e) Remove and back parget tile with wet cement or sprinkle bed with water and cement. In latter procedure, wet tile back. Method of buttering tile edges fully as it is laid is acceptable.
(f) Joints between tile: 1/16" when finished.
(g) Grout off floor for 24 hours; grout with water and neat cement.

14. saddles (thresholds):
(a) Flush saddles: approximately 7/8" thick by jamb width.
(b) Raised saddles: (1½") (1½") thick, rounded or beveled as detailed.
(c) Notch saddles occurring between steel (ambs to jamb profile). Run saddles, occurring between wood jamb, under door stops.

15. window stools:
(a) Marble window stools: (plain, polished edge) or (molded nosing); furnished where indicated (on window schedule) or (at window openings in plaster or tile walls); set securely in place. Where practicable, install in one piece; if joints are necessary install joint at mullion centres, Thickness: (7/8") (1¼").
(b) Riser and string: 7/8" thick. Extend risers from top of one tread to underside of tread above, butt string; anchor securely.
(c) Nosings: (plain) or (have nosing molded to detail). Where nosing is formed by separate piece, balance of platform may be 7/8" thick.

16. stair marble:
(a) Bed in cement mortar treads and platforms on stain of metal frame or steel frame construction.
(b) Where toilet enclosures project from wall to allow for pipe space, others will furnish proper supports for marble.
(c) Extend water closed stall (5'-10") or (6'-0") high above finished floor.
(d) Stiles and screen partitions: 1/4" thick (1½" thick if used with heavy doors and coin boxes); extend at least 1" below finished floor line.
(e) Partitions: 7/8" thick, rebated into stiles 5/16"; extend thru backs.
(f) Set dividing partitions 12" above finished floor; rebate into stiles not less than 5/16"; extend thru backs.
(g) Extend partitions 1" into floor.
(h) Urinal stall partitions: 5/8" thick and, if built to floor, extend 2" below finished floor; recess into or extend finished wall.

17. toilet marble:
(a) Assemble stiles and partitions with concealed dowel fastenings or (secure intersections of stiles and partitions or partitions and walls with chromium-plated angles, 3 in height of stall).
(b) Extend water closed stall (5'-10") or (6'-0") high above finished floor.
(c) Bed in cement mortar treads and platforms on stain of metal frame or steel frame construction.
(d) Rebate vertical slabs at corners; set into slot or rebate in receptor, as indicated.
(e) Joints, except as otherwise specified: 1/16" thick; butter with litharge and glycerine or ¼" thick buttered with non-staining mastic.
(f) Others will furnish and install precast receptors.

18. shower and dressing stalls:
(i) Others will furnish stall doors, door hardware and accessories.
(j) Assemble stiles and partitions with concealed dowel and cramp fastenings or (secure intersections of stiles and partitions or partitions and walls with chromium-plated angles, 3 in height of stall).
(k) Extend shower and dressing stalls 7'-0" above finished floor; recess 1" into finished wall; furnish complete with marble wall linings and marble (or tile and terrazzo) floor slabs as detailed. Stiles: 1¼" thick; partitions and wall slabs: 5/8" thick.
(l) Install marble seats in dressing stalls, of indicated size and thickness.
(m) Rebate vertical slabs at corners; set into slot or rebate in receptor, as indicated.
(n) Joints, except as otherwise specified: 1/16" thick; butter with litharge and glycerine or ¼" thick buttered with non-staining mastic.
(o) Others will furnish and install precast receptors.
INTERIOR MARBLEWORK

19. marble templates:

20. center tops, cheek desks and deal plates:

21. drinking fountains:

22. columns, column enclosures and pilasters:

23. cutting and fitting:

24. delivery and protection:

25. cleaning:

(a) Where lead pan construction is required, pan will be furnished, formed, installed, and connected under "Plumbing Work." (Lead pan should be covered with suitable protection against chemical action.)
(b) Butter bottom, slab backs, and vertical edges that are rebated into marble faces with non-staining waterproof cement.
(c) Others will furnish curtain rods, curtains, all fittings and accessories.
(d) Others will furnish curtain rods, curtains, all fittings and accessories.
(e) Provide drinking fountains as detailed. Others will furnish and install hardware for same.
(f) Others will furnish and install backing or other supports for marble.
(g) Operate fully with other trades; do such cutting and drilling to accommodate work of others as may be reasonably implied from Drawings and Specifications.
(h) Pack marble carefully for transportation; take necessary precautions against damage in transit.
(i) Others will furnish curtain rods, curtains, all fittings and accessories.
(j) furnish, install, and maintain wood guards for protection of projecting members, corners, window stools, sills, and the like.
(k) Protect marble flooring with non-staining materials, against traffic, other damage.
(l) Protect marble adequately from paint, oil and other stains.
(m) After completion of work and at such time as Architect shall direct, clean marble installation; point any open joints; replace any defective marblework.

NOTES TO JOB CAPTAIN

1. samples:

(a) Marble is a product of nature; hence it is impossible to guarantee uniformity of color, veining or any other characteristic that may be represented in any particular sample submitted. A sample will indicate an average color and marking as well as the general texture and specified finish.

2. definition of surface finishes and uses:

(a) Sand rubbed or wet sand finish is a smooth surface produced on a cast iron rubbing bed with sand and water. Used for treads, saddles, platforms, and floors; on floors by surfacing operation after setting.

(b) Grit finish is a smooth finish between sand and hone, produced by grits. Used for treads, saddles, platforms, and floors; on floors by surfacing operation after setting.

(c) Honed or eggshell finish is a dull glass surface giving relatively little reflection of light; produced by a natural or artificial hone by hand work or machine. Used for treads, floors, and standing marble.

(d) Polish finish is a glass surface that will reflect light and emphasize color and marking of material, produced by a buffer with pumice powder applied to a honed surface. Generally used for standing marble.

3. thicknesses:

(a) Standard thickness. Unless otherwise indicated or specified, the standard thickness for marble, where one face

is finished, is accepted by the trade to be approximately 7/8" from the saw. Finishing processes will reduce any

thickness slightly.

(b) Floor tile. Commercial floor tile are approximately 7/8" thick. Standard sizes are 8" x 16", 12" x 12", 10" x 20"; the tile ordinarily are supplied 1/32" scant of standard nominal size in each dimension in order to produce the usual 1/16" joint when laid in floor. Other sizes are classed as floor slabs. In designing a pattern floor, the different varieties of marble selected should have similar wear characteristics.

(c) Molded work. In molded work, the minimum thickness at the thinnest point of the mold should be 7/8". This minimum thickness may have to be increased, depending upon width or height of molded work in question.

(d) Thick slabs. When thicker marble slab work is required, as for counters, sanitary partitions, etc., standard sawing gages produce approximate thicknesses of 1 1/4", 1 1/4", and 2". (Avoid 1", 1 1/8", 1 1/4", or other intermediate thicknesses where economy is important as these are special and disproportionately costly.)

(e) The progress of any contract can be expedited if measurements can be established and guaranteed in advance. Otherwise the marble subcontractor must delay fabrication until conditions at building enable him to secure measurements. The method of predetermination measurements not only hastens the work, but if established for all trades, reduces costs and prevents many errors.

4. measurements:

(a) Plaster of Paris, Portland cement, lighthouse and glycerine have been used in standard practice by the trade for years. All such materials should conform to and meet all requirements of standard specifications of A.S.T.M. for each of the above mentioned materials.

(b) Plaster of Paris "SPOTS" (a term used in the trade) are used as backing for standing marble. For ashlar work and smaller pieces these spots are usually sufficient if applied around the location of anchors only. For larger pieces, such as wall panels, spots are usually applied between top and bottom joints in addition to those around anchors. No fixed rule should be given as to the number of spots; this should be left to discretion of marble subcontractor. (Some newer developments in setting materials are described herein. The manner of a brand should serve only as a standard and should not be construed to exclude other materials that have shown results equally satisfactory in long term laboratory tests and field installations and otherwise comply with the requirements.)

(c) Portland cement and shrinkage reducing accelerator. Plaster of Paris is soluble in the presence of moisture and it is not suitable for spotting or jointing on exterior veneer, in shower stalls, in unheated moulseums, or whenever dampness may be present.

Portland cement and shrinkage reducing accelerator, equal to Sika 22C, manufactured by the Sika Chemical Corporation, can be used like Plaster of Paris and will be permanent where moisture is a factor. It is economical
6. miscellaneous setting suggestions:

7. toilet room and shower construction:

8. framing or wall supports:

9. external corners:

10. non-slip inserts and nosings:

11. maintenance note:

and equal or superior to all other setting materials listed and will be permanent even where moisture is present. Sika \( C \) is usually mixed in a proportion of 1 part Sika \( C \) to 5 parts of water mixed with Portland cement. This mortar has a setting time that allows enough time to set marble in proper position and at the same time quick enough so that minimum support of slab is required. The dilution mentioned may vary depending on type of cement, temperature, and setting time required on each job.

Plasticized synthetic resin bonding cement. This is a black or dark mastic material, impervious to moisture, not affected by heat or cold, that adheres with a strong suction to all clean surfaces without sogging, and sets to a stiff plastic state, not brittle, not hard, but capable of absorbing moderate shock or settlement. It will not "blood through" a stain on \( \frac{3}{8} \)" marble. Damage to wall backing or external corners is eliminated, since normally no anchors are necessary in setting vertical marble \( 2 " \) or under in thickness in this manner. It is especially desirable where setting space is tight or at points where anchoring is difficult. Cushions may be required in joints to avoid movement in shear. This material should be equal to Vermont Bonding Cement, distributed by the Vermont Marble Company.

Elastic non-staining painting and caulking mastic. It is now possible to secure white and gray elastic painting or caulking mastic that are compounded to combine long plastic life and non-staining characteristics. If properly installed, these knife-consistency mastics remain plastic for a long period of years and produce an impervious and elastic joint. They are recommended for buttering joints of thin marble, exterior veneer or ashlar and store fronts and for interior shower stalls, etc. The greater the mass the longer will the mastic retain its plasticity. Buttered joints should be at least \( \frac{1}{2} " \) to \( \frac{3}{16} " \) thick. Superficial painting of a small joint is of little permanent value. There are also available red and black mastics compounded to be non-staining on dark decorative marbles. Never use cheap, oily mastics or linseed oil putty on marble. Mastics should be equal to those distributed by:

- Tremco Manufacturing Company.
- Pecora Paint Company.
- Vermont Marble Company.
- Non Skid: Non Skid Surfacing Corporation.
- Notolon: National Grinding Wheel Company.
- Vermont Marble Company.

Plastic or aluminum cushions. These are available in \( \frac{1}{16} " \), \( \frac{1}{8} " \), and \( \frac{3}{16} " \) thicknesses and recommended to maintain uniform joints in marble assembled with non-staining mastic where the weight of the mastic might force the mastic out of the joint. On light-colored marble, never use wood or lead cushions which may stain.

Integral waterproofing. When casting concrete floor slabs it is important, especially at ground level, to density concrete to stop transmission of moisture through floor surfacing material. Concrete should be densified by others and made water-resistant by use of integral waterproofing.

Setting space (a term used by the trade) indicates distance from rough wall backing to finished face of the marble.

Normally \( \frac{3}{4} " \) is the minimum setting space. Where reinforcing liners may be required, \( \frac{2}{16} " \) setting space should be allowed.

Concealed anchors and dowels are copper, brass or aluminum wire, approximately \( \frac{1}{6} " \) in diameter.

Joints should be buttered fully with joint material, colored, if specified. Superficial painting of joints after installation is not satisfactory.

Ceiling marble that must be supported by special anchors requires a space not less than \( \frac{3}{8} " \) back of the marble.

Supports and anchors must be sufficiently heavy and numerous to prevent sagging.

Plaster work above marble should be in place before marble installation starts. Otherwise there will be a back charge by marble subcontractor for special protection.

Marble should not be set directly against unpainted structural steel, piping, reinforcing, etc.

Only such hardware necessary for erection of marble should be included in the marble specifications. This should be chromium-plated brass or any non-staining metal.

Stall doors and all accessories, although ultimately attached to marble, should be supplied by others.

All backing and supports required by the marble subcontractor should be furnished and installed by others.

Unless otherwise specified or indicated, it is accepted by the trade that butt joints should be used. That is, the exposed return of the member should be the accepted or specified thickness of the member.

Another method of treating external corners, especially where only the minimum thickness of marble is required, is what is commonly called a "quirk miter joint." This method involves more labor and is not accepted by the trade that butt joints should be used. That is, the exposed return of the member should be the accepted or specified thickness of the member.

The quirk miter joint is not recommended for base as this construction forms an unsanitary internal angle at the floor; also, there is more danger of chipping. The use of butt joints is distinctly preferable where members extend to the floor.

The following materials have been used successfully:

- Notolon: National Grinding Wheel Company.
- Non Skid: Non Skid Surfacing Corporation.
- Tru-Tread: Vermont Marble Company.

Decorative marbles selected for exterior veneer require cleaning and reasonable maintenance for continued good appearance and therefore should be treated at least once a year with a spray of cellulose acetate or similar plastic lacquer.
A new, "foolproof" pneumatic-tube system for inter-office and plant communication—the first of its kind in America and the largest in the world—was recently installed in the office building and mill of the Bridgeport Brass Company of Connecticut. Designed for flexibility, economy of space, and reduced materials requirements, the Bridgeport installation utilizes many of the principles involved in the dial telephone and, unlike the conventional pneumatic-tube system, is both automatic and selective.

The M & G system, a development of Mix & Genest, German subsidiary of the International Telephone & Telegraph Company, employs two electronically controlled loop lines—one for sending, the other for receiving—which serve the nine stations of the Bridgeport plant. (Diagram of a typical two-loop system is shown in Figure 1.) The carrier itself, a 13½"-long cylinder with a 2½" inside diameter, has a selective dial on its sheathing that is marked with digits from 0 to 9 (Figure 2). The sender dials the number of the station to which he wishes to direct the carrier. After the cylinder is placed in the sender opening of a station (Figure 9), it is propelled by suction, at the rate of 1500 fpm, to a central control station where it is routed to the correct receiving line and admitted into its destined station by means of a relay panel and electronically controlled switches. At no point throughout the carrier's transit is there any intervention of an operator or central dispatcher. In the event of overloading, all sender openings lock automatically to prevent the insertion of additional carriers. If a carrier is set accidently for a non-existent station, a control device will dispatch it to a supervisory position—the telephone operator's desk or any other convenient location—where its proper destination can be determined for redispaching.

The relay panel at the central point not only directs the course of each carrier, but it also provides temporary blocking devices between traveling carriers to avoid collision. In addition, it controls a signal annunciator on which the tubes in operation and blower performance, as well as incorrectly dialed carriers, blown fuses, or any power failure, are visually indicated.

Allocation of a special room for the central station is not essential; the equipment is so designed as to fit into any location having a through wall—in dead corners, corridors, unused spaces near elevator shafts. By eliminating the need for a main dispatching room, a saving of almost 100% in floor space is realized.

Fewer tubes are employed in the M & G system. In a 15-station manual system, for example, from 10,000 to 12,000 feet of steel tubing are required, as compared with 4000 to 5000 feet for a similar sized automatic installation (Figure 1)—a saving in materials cost of more than 50%. Since fewer tubes are employed, considerably less air volume is required to operate the carriers, so that smaller blowers and air piping can be used.

Additional stations may be added or eliminated with comparative ease. The number of stations that can be installed is practically limitless and can vary from a few automatic stations with pushbuttons instead of a central, to several automatically operated pneumatic tube centralss with interconnecting facilities for hundreds of receiving and sending stations.

The M & G system in the Bridgeport Brass plant was supplied and installed by the International Standard Trading Corporation of New York, an associate of the International Telephone & Telegraph Company.
air and temperature control

Delta Suspended Furnace: oil-fired, warm-air furnace for larger two- to four-family types. Two separate refrigeration circuits are designed for economical operation at either full or half capacity; suitable for installations involving low to medium electric capacity usage. Easy conversion to heating plant made by adding steam or hot-water heating coils or grid systems and comparatively low temperature of water will deliver from 28 to 60 gallons of hot water per hour, depending on heater size used. Interior heating coils or grids and comparable low temperature of water will deliver from 28 to 60 gallons of hot water per hour, depending on heater size used. Interior heat is confined to a simple, inexpensive operation. Offered in 2-, 3-, and 4-frontal model variations.

Hi-Boy No. 70A: completely assembled furnace features precast combustion chamber of heavy-gage steel construction, cold air and filter rack on lower side of furnace, and flanged, automatic burner; accessibility doors provided for easy servicing. Rated at 75,000 Btu. Quiet Automatic Oil Burner Corp., 33 Bloomfield Ave., Newark 4, N. J.

Refrigerated Cooler-aire: packaged air-conditioning unit, containing all elements of central station plant. Two separate refrigeration circuits designed for economical operation at either full or half capacity; suitable for installations involving lower to medium electric capacity usage. Easy conversion to heating plant made by adding steam or hot-water heating coils. Offered in 2-, 3-, and 4-frontal model variations.

construction

Beam Load Selector: handy, pocket-sized selector devised for those who use Unistrut metal framing, to be used in place of load selector. Available in various capacities, suitable for use in localities where extreme alkalinity and acidity are found. Mor-Flo Healer Corp., 2175 E. 76 St., Cleveland 3, Ohio.

Mobilwall: new feature combines plywood core with smooth, tough surface of hardboard. Strong, rigid, puncture-proof, dimensionally stable properties give material many diverse applications in cabinet forms, flooring, cabinet work, table tops, etc. At present being produced by 10 Western plywood manufacturers, in 4' x 8' sheet forms. For further information, write directly to Douglas Fir Plywood Assn., Tacoma Bldg., Tacoma 2, Wash.

Pyrolon panel material combines plywood core with smooth, tough surface of hardboard. Strong, rigid, puncture-proof, dimensionally stable properties give material many diverse applications in cabinet forms, flooring, cabinet work, table tops, etc. At present being produced by 10 Western plywood manufacturers, in 4' x 8' sheet forms. For further information, write directly to Douglas Fir Plywood Assn., Tacoma Bldg., Tacoma 2, Wash.

doors and windows

Sliding Hollow Metal Door: designed to solve problems of door-swinging space in small apartment homes, homes, and offices. Constructed of fine quality steel, electrically welded throughout for maximum strength and rigidity; will not warp, bow, or sag. Entire frame, overhead track, and sliding mechanism are completely fabricated, making installation a simple, inexpensive operation. Concealed floor guide prevents contact between door and frame, eliminates all danger of scratching door surface. Available in standard 2'-6" x 6'-8" size. Diebold, Inc., 1411 Fifth St., S. W., Canton, Ohio.

Challenger "800": new line of 19 semi-heavy duty latchsets and latches to meet requirements of virtually every building need. Non-rusting aluminum housing, heavy steel spline spindle and refraction, Hollymade Hardware Mfg. Co., 4866 Exposition Blvd., Los Angeles 16, Calif.

Pierson 20-20 Window: "all-glass" window consists of redwood frame and no hardware except for pull-latch which locks closed or open window; knockdown-frame comes in seven redwood pieces ready to install; entire frame unit requires no nasha, puffy, or weight. Two glass panes are used, with one of them sliding (glazing not included with fabricated window). In one size at present: 4'-0" x 3'-0". Ernest Pierson Co., 4100 Broadway, Eureka, Calif.

Thermostatically controlled electric panel produces even, comfortable heat by means of Pyrex glass sheet, 16" x 24", backed by conductive coating which serves as heating element when electricity is switched on. Elimination of glowing coils or grids and comparatively low temperature of panel surface—it may be touched momentarily without burning fingers—contribute to indefinite long life of element. Berk Electric Mfg. Corp., 179-05 Jamaica Ave., Jamaica 3, N. Y.

finishers and protectors

Blond: clear, pale coating, oil-based and resin-free, to protect and improve appearance of interior woodwork and linoleum; non-slippery on floors. Can be applied by brush or spray, dries hard in two hours. Either gloss or dull application may be given. Lineerd Oil Products Co., 359 Del Monte St., Pasadena, Calif.

sanitation, water supply, drainage

Stone-Lined Hot Water Tank: designed for residential use in present capacities, new seamless tank of heavy-gage steel has 33-gallon water capacity and will deliver from 28 to 60 gallons of hot water per hour, depending on heater size used. Interior is lined with 1/8" thick composition stone, protecting tank from rust and corrosion and offering insulation to conserve water and fuel. Especially suitable for use in localities where extreme alkalinity and acidity are found. Mon-Flo Heater Corp., 2175 E. 76 St., Cleveland 3, Ohio.

Utility Pump: portable, completely submersible pump for sump usage in boiler-room pits, underground utility installations, elevator pits, and other low areas in factory layouts; may also be used to drain flooded areas, pumping out new excavations, ditches, etc. Submersible feature made possible by means of patented, automatic, liquid-level control switch which eliminates need for float. Unit weighs 50 lb.; can be moved and set into operation quickly. Kenco, Inc., 1125 N. Ridge Rd., Lorain, Ohio.

specialized equipment

Talk-A-Phone CL Series: low-priced, flexible intercommunication system adaptable to wide range of uses in industrial installations, offices, stores, institutions, etc. Inching calls may be answered from distance of up to 40 ft. from any master or substation; substitutions may be called selectively, or exclusively to any station and any master station, and any master may be used privately or not at all. Master stations equipped with talk-listen switches, stand-by station selectors, and volume control, while staff stations require no manual operation. Available in five-station and ten-station combinations. Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago, Ill.
1-138. Radiant Sunshine Comfort (EL-16), 8-p. booklet describes radiant heat panel consisting of tempered glass with chemical heating element fused into back surface; heat is radiated when electricity passes through element; panel is encased in steel frame and is easily installed in new or existing buildings. Types of panels, specifications, photos. Appleman Glass Works, Bergenfield, N. J.

1-139. Controls for Heating and Air Conditioning, AIA 30F (F-1758-3), 46-p. catalog. Illustrations of thermostats, motor-operated valves, control motors, and accessories such as transformers, power boxes, relays, etc. General engineering data, diagrams. Barber-Colman Co., Rockford, Ill.

1-140. Air Filter Sizes (D51-7), 49-p. catalog containing practically all makes and models of filter-equipped warm air furnaces and blower-filter-equipped units, indicating filter size and number of filters used in each case. Table of contents alphabetically arranged by company name. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio.

Circular illustrating four steel boiler installations in warehouse, plant, and two office buildings; descriptions of types used; other models for heating, power, and process steam shown. Also, folder on compact, steel-riveted boilers, originally designed for ships, now used with ceiling-pan-type fixtures. Explains how G-E ballasts are classified according to amount of natural hum they allow to enter.

1-141. Specify Kewanee Steel Boilers (S88)
1-142. Scottie Junior, AIA 34-B-1 (99)
1-143. Selectrol (Vol. 1, No. 4), 22-p. brochure on steam-operated water chiller for air conditioning applications and as source of low-cost chilled water for industrial process requirements in baking plants, breweries, dairies, food processing and storage, leather and textile industry, etc. Description and layouts of several actual installations, application techniques, photos. Servel, Inc., Evansville 20, Ind.

construction


3-121. Foamasol, 6-p. folder describing foaming and dispersing agent, in liquid form, for air-entrained concrete. Field and lab tests, tables, uses. Onyx Oil & Chemical Co., 190 Warren St., Jersey City 2, N. J.


3-123. Stone Creek and Ava Face Brick, AIA 5-F, 28-p. catalog presenting 21 full color reproductions of face brick in straight shades and blends. Photos of different buildings illustrating versatility and adaptability of brick, data on bonds and mortars. Stone Creek Brick Co., Stone Creek, Ohio; Ava Brick Co., Ava, Ohio.

doors and windows


4-131. Securit Interior Glass Doors, AIA 17-A (BRSD-1), 4-p. folder illustrating interior door made of 3/16 tempered glass patterned on both sides, providing sufficient light to enter through but preventing people from seeing in; complete with Sargent hardware in bronze or chrome finish. Advantages, details, standard sizes. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.

4-132. Finishing Hardware, 24-p. catalog designed to assist writing of Finishing Hardware specifications in simplified form, when such information is not available. Illustrations of door and window hardware for all types of buildings and door functions. Lockwood Hardware Mfg. Co., Fitchburg, Mass.

4-133. Series "410" National Lockset (410), 8-p. catalog describing precision-engineered locksets with all exposed parts made of solid brass or bronze, for exterior and interior doors. Types, cross-section drawings, finishes. National Lock Co., Rockford, Ill.

4-134. Duraluminum Tension Screens, AIA 36-P-1, 12-p. booklet demonstrating rust- and stain-proof screen made with reinforced screening edges that eliminate need for side frames; special tension design keeps screen taut and insect-proof. Features, construction details, installation data. New York Wire Cloth Co., 445 Park Ave., New York 22, N. Y.

electrical equipment, lighting
5-91. Aluminum Ceiling-Pan-Type Fixture Constructions with Higher Wattage Ratings, AIA 31-F-2 (951), 4-p. folder. Specification changes, establishing new standards of higher wattages now used with ceiling-pa...
ranged according to ambient noise levels, and recommending the right ballast for each application. General Electric Co., Schenectady 5, N. Y.: 5-92. Fluorescent Ballast Tells Her Story (GEA-5731)

5-93. G-E Ballasts Are Now Sound Rated (5206) 5-94. Holophane Datalog, AIA 31-F-2, 64-p. catalog. Detailed information on lighting equipment designed for specific purposes in hospitals, commercial, industrial, institutional, and educational areas. Recommended illumination levels and other engineering data, photos, drawings. Holophane Co., 342 Madison Ave., New York 17, N.Y.


5-97. Holophane Datalog, AIA 31-F-2, 64-p. catalog. Detailed information on lighting equipment designed for specific purposes in hospitals, commercial, industrial, institutional, and educational areas. Recommended illumination levels and other engineering data, photos, drawings. Holophane Co., 342 Madison Ave., New York 17, N.Y.

5-98. Holophane Datalog, AIA 31-F-2, 64-p. catalog. Detailed information on lighting equipment designed for specific purposes in hospitals, commercial, industrial, institutional, and educational areas. Recommended illumination levels and other engineering data, photos, drawings. Holophane Co., 342 Madison Ave., New York 17, N.Y.


interior furnishings


specialized equipment

19-196. Rotary Leva-DOcks (RE-400), 12-p. booklet. Analysis of loading dock problems in plants, followed by detailed description of hydraulically operated loading ramp designed to facilitate transfer of materials between loading dock and trucks or trailers. Multiple installation layout for mechanized loading dock, plans and sections, installation instructions. Rotary Lift Co., 1055 Kentuck St., Memphis, Tenn.

surfacing materials


vertical traffic


finishes and protectors

6-46. Laykold Fibrecoat (B-13), 4-p. brochure on weatherproof mineral asphalt coating for protection of bituminous asphalt coating for protection of bituminous asphalt saturated felt membrane. Types of patterns, sizes, installation data, typical application photos. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo, Ohio.

6-47. The 100% Latex Wall Paint (C-238) 6-48. Helpful Hints (F-299)

insulation (thermal, acoustic)

9-61. Ehret Insulation, 8-p. booklet on 85% hydrated carbonate of magnesia insulation material reinforced with asbestos fiber, available in sectional and segmental pipe covering, as flat blocks, and cement. Recommended insulation thicknesses and application procedure, brief data on other insulation and asbestos building products. Ehret Magnesia Mfg. Co., Valley Forge, Pa.


vertical traffic


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December 1951
the eyes have it!

...with CECO Metal Windows for Schools

As you read this your eyes are doing more than seeing—they are bringing into action your entire body—nerves, muscles, circulation.

And you are burning up energy—piling up fatigue in direct proportion to the amount of light available for vision. Medical science has proved eyestrain has a marked effect on the well-being of all. So it's necessary then that seeing be done with ease and in comfort. That's why proper illumination is all-important and there's where metal windows come in, for they admit more daylight than any other window.

Add to that fact, most days in most of the country are overcast in winter. Here again metal windows meet the need because only metal windows provide enough daylight for good vision on overcast days.

So there's good reason for the swing to Ceco Metal Windows in modern school construction. Besides giving more light for better sight, they permit distant vision so vital for relaxing young minds.

There are other advantages in Ceco Metal Windows—such as controlled ventilation—won't rot or warp—cost less to install, clean and maintain. And because Ceco Windows are better engineered they fit better—last longer. That's why we say—"When you use Ceco Windows you know you use the very best—you're sure of savings, too."

CECO STEEL PRODUCTS CORPORATION
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In construction products CECO ENGINEERING makes the big difference
When McCulloch Motors executives modernized and enlarged their Los Angeles plant, they chose adhesion type Ceramic Veneer combined with face-brick for a colorful building facing. Where the old exterior required expensive maintenance, the new Ceramic Veneer needs little upkeep and no painting, yet will retain its beauty for the life of the structure.

For any new or old building, Ceramic Veneer provides a permanent facing, in a variety of colors, sizes and shapes. Ceramic Veneer brings your modern designs to reality, at moderate cost.

Glazed Structural Units, another Gladding, McBean & Co. quality product, were used extensively for interior walls and partitions.
Present government regulations still allow you to install copper water tube for hot and cold water lines.

Chase Copper Water Tube's resistance to corrosion makes it the number one choice for domestic water lines.

Underground piping of Type K Chase Copper Water Tube resists the double corrosive action of earth on the outside and water inside.

The easy-to-install coiled lengths of 40, 60 and 100 feet require fewer fittings...and its soft temper permits bending around obstructions.

Since government regulations do not prohibit the use of copper for domestic hot and cold water lines, or underground service lines, it's wise to plan the use of Chase Copper Water Tube for these two important types of installation.

Chase Copper Water Tube is made in hard and soft tempers for use with both solder-joint and flared fittings.

Rustproof, corrosion resistant, easily worked, smooth interior for better flow—these are some of the reasons why Chase Copper Water Tube is ideal for long life, fine service.

...it's Chase Copper Water Tube
ANOTHER ADVANTAGE OF BUILDING WITH HOMASOTE...

AS INTERIOR FINISH

-the perfect base for paint or wallpaper
-with no unnecessary wall joints or batten strips

When you use Homasote for interior finish, you get great structural strength, maximum insulating efficiency and sound-deadening qualities—all in one material. The Big Sheets—up to 8' x 14'—are completely weatherproof and permanently crackproof. You have a drier and quieter house. You are forever through with unsightly wall joints and batten strips. You have the perfect base for paint or wallpaper.

Wood-textured Homasote Panels are individually molded from actual boards—reproducing all the grain and texture of natural wood.

Striated Homasote Panels are the newest and finest development in structural insulation. By varying the panel widths, the angles at which they are cut and placed, you have infinite variety of pattern.

Both Wood-textured and Striated Panels may be stained or painted to achieve almost any desired color effect—pastel or dark, solid or treated to bring out the interesting lines. Homasote in any form may be used for exterior finish as well as interiors.

Let us send you literature and samples on all three types. Kindly give us the name of your lumber dealer and address your inquiry to Department 47.

Nova Sales Co.—a wholly-owned Homasote subsidiary—distributes the Nova Roller Door, Nova-I. P. C. Waterproofing Products, the Nova Shingle and Nova-Speed Shingling Clip and the Nova Loc-Nail. Write for literature.
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SCHOOL ADMINISTRATION BUILDING, Seattle, Wash.

J. LISTER HOLMES & ASSOCIATES, ARCHITECTS
30,000 yds. of Wheeling Diamond Lath
70,000 ft. of Expansion Corner Bead
"Pave the Way" for Better Plastering!

It's New York's newest fully air-conditioned building: the 32-story companion structure to the world-famed Chrysler Building. For their part in its construction, Lathing Contractors William J. Scully, Inc. chose Wheeling products. Almost seven acres of Wheeling Diamond Lath, more than thirteen miles of Wheeling Expansion Corner Bead assure a firm "foundation" for plastered walls and ceilings.

The Wheeling Line of Building Materials includes Steelcrete Reinforcing Mesh, Expanded Metal, Metal Lath and Metal Lath Accessories, Tri-Rib Steel Roof Deck, ExM Angle Partitions and ExM Vault Reinforcing to meet #10 insurance classification.

Building photo courtesy
W. P. Chrysler Building Corporation
If Wheeling Diamond Lath is sturdy and stiff, lies flat, goes on easy—even overhead.

Here a lather "ties in" a length of Wheeling Expansion Corner Bead—turns the corner on another good lathing job.

Diamond Lath and Expansion Corner Bead, both Wheeling products, make a good team for lathers to work with.
The Upjohn Company's new 33 acre plant on a 1500 acre site, outside Kalamazoo, Michigan, is like a precision-engineered laboratory instrument. Here, mechanical building services are developed to a new level in the industrial building field. Here, they have provided for complete flexibility of future operations... with room to expand and install new machinery... the ability to convert quickly from one product to another.

This kind of assignment fascinated research-minded Austin engineers. Working closely with the Upjohn management, Austin engineers developed a warehouse-production-packaging setup that "accomplishes everything in one motion." Realizing the need for a simpler and less expensive suspended ceiling, Austin also developed a revolutionary "integrated" ceiling, where lighting fixtures are set in all-inclusive "troffer" beams. These beams serve as wiring raceways and eliminate all conduit. They also serve to eliminate framework used to support ceiling tile, duct work and sprinkler lines.

It is significant that The Austin Company, whose credo is "function must precede building plan," selected Day-Brite lighting fixtures to illuminate this ultra-modern factory. They realized that Day-Brite fixtures are functional in every way... providing the right kind and amount of modern light... providing the quality that means years of trouble-free service... the lower installation, maintenance and operating costs that are important to the architect, the builder, the plant production man.

Day-Brite has designed a line of lighting fixtures which include the perfect answer to any building or industrial project... and every Day-Brite fixture sold is guaranteed to give stellar performance at reasonable cost. Do you know Day-Brite?

These bridges carry... 

Railings of Alcoa Aluminum on this Little Rock, Ark., railroad bridge have stood up through fifteen years of smoke and soot; never needed paint or upkeep.

International Bridge, Laredo, Texas, has aluminum railings installed in 1935. In the event of floods, the entire railing can be quickly removed.

Five miles of railings made of Alcoa Aluminum stretch across Philadelphia’s recently completed Penrose Ave. Bridge. Longest and highest ever built by the Pennsylvania Dept. of Highways, the bridge was designed by Modjeski and Masters, engineers.
Exposed to the elements on every side, often smothered in smoke and fumes, difficult and expensive to paint, a bridge railing is typical of the places where aluminum's freedom from the damaging effects of rust and corrosion pays off many times over. You'll find proof of this on bridges in every part of the country.

For example, aluminum railings installed nearly a quarter century ago on five bridges in the Chicago area still are structurally sound. And they've never needed a cent for maintenance. We will be glad to supply you with the locations of these and many other bridges throughout the country if you'd like to see for yourself how Alcoa Aluminum stands up to time and weather.

Service reports, design and engineering details are covered in Alcoa's "Report on Bridge Railings." For a free copy call your nearby Alcoa Sales Office or write, ALUMINUM COMPANY OF AMERICA, 1890M Gulf Bldg., Pittsburgh 19, Pennsylvania.

Clark St. Bridge over the Chicago River has aluminum railings installed in 1929. Smoke and weather have had no adverse effect on the aluminum.
Design for Better School Living, Beauty, Better Illumination with G-E Textolite*

G-E Textolite opens the door to brand new opportunities in the field of school design — gives the architect new aid in designing the drabness out of school rooms. It offers new opportunities in color, in cheerfulness — combined with durability unmatched by any other material.

G-E Textolite needs practically no maintenance — no polishing or periodic sanding and finishing—immune to inks, paints, oils, crayons, common acids — cleans to original brightness easily with a damp cloth.

A new Textolite Pattern — Developed Exclusively for School Use. General Electric has developed a new pattern for school use in cooperation with Nela Park Lighting Laboratories. Engineered by lighting experts, it has ideal light reflective properties which improve illumination without glare. Other patterns also meet light reflective specifications.

G-E Textolite is available both in 1/16" thick sheet stock and factory-bonded to Roddiscraft Plywood in accordance with your specifications. Complete information, including free literature, is available from your Roddiscraft warehouse. A Roddiscraft representative will be glad to discuss Textolite applications with you.

Roddiscraft Plywood—The Material of a Thousand Uses

Here is a material that matches its low cost with versatility. Use it for closets, partitions, shelving, built-ins — a host of applications that require lasting service, economy, pleasing appearance. And when you specify Roddiscraft Plywood, you are sure of a product of true craftsmanship quality.

BOOKS RECEIVED

Reports of the East Kilbride and Glenrothes Development Corporations. Edinburgh, His Majesty's Stationery Office.

Planning and Building the Modern Church. William Ward Watkin. Architectural Record, 1/9 W. 40 St., New York 16, N. Y., Oct. 1951. 453 pp., illus. $8

ZONOLITE® PLASTER AGGREGATE beats tough time limit — saves money as well!

The new, 48,000 sq. ft. Oakland Blue Cross office building was occupied only 195 days after ground-breaking! The plastering contractor on this high-speed California job took over after another firm found the time limits too tough. Using Zonolite vermiculite Plaster Aggregate for the first time . . . he completed the job on time . . . kept costs below the estimate. In business 27 years, he had never seen such a large job go so smoothly . . . and Zonolite gets a good share of the credit.

Zonolite Plaster cuts handling time, is more easily mixed and applied. Dropings are fewer, workers are less fatigued using Zonolite. Weighing only one-tenth as much as sand plaster, it has almost 3½ times greater insulating value.

OAKLAND BLUE CROSS BUILDING
Confer & Willis, Archs. • Hamilton & Williges, Eng. • Swinerton & Walberg Co., General Cont. • Murphy Bros., Plastering Cont.

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Zonolite Fireproofing Slashes Dead Weight, Cuts Costs
Zonolite plaster gives you low cost, lightweight fire protection for steel beams, columns, floors and ceilings. Zonolite fireproofing has been accorded 4-hour fire ratings for numerous applications. Wherever you need maximum fire resistance — with lightweight and low cost — specify Zonolite vermiculite plaster aggregate. Write today for complete up-to-date information and summary of fire tests on Zonolite vermiculite plaster, the full story of this money-saving new way to build better in less time with Zonolite plaster.

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Please send me free information about Zonolite Plaster Aggregate.

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

December 1951 121

(Continued on page 122)
Clean and bright as reflected sunlight, portland cement paint highlights the livableness of this Philadelphia housing development. Each home is equally attractive because Atlas White Cement, used to make the paint, is so uniformly white.

Atlas White Cement, being uniform in color and durability, is an important factor in producing a cement paint that enhances appearance and wears well in any climate. Properly applied on concrete, concrete masonry, stone, brick or hollow tile, it penetrates the pores, resisting moisture, dirt and dust. Moreover, it may be used in a full spectrum of colors because the true white of Atlas White Cement enhances the delicate tone values of pigments.

Leading cement-paint manufacturers recognize the uniformity and true whiteness of Atlas White. Their products give superior results, but whether you use a factory-prepared mix or job-mix your own paint, be sure it's made with Atlas White Cement.

For further information see SWEET'S Catalog, sections 4E/7a and 13C/5, or write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.
The **DRAFT STOP** system traps drafts

**OUTMODED METHODS** of ventilation allow drafts and cold air to sweep into classroom. Temperatures vary throughout the day and in different sectors of the room. Such systems are still in use today and unnecessarily so.

**MODERN METHOD**—the DRAFT STOP System engineered by Herman Nelson actually swallows down drafts yet introduces fresh air, heated to the correct comfort level.

**SOME schools are still planned to allow invasion of Arctic chill.** There's a sure cure, however. Before a draft can move into a classroom, before chill from large window areas can start the discomfort that distracts students from learning, they can be stopped. It is a revolutionary new principle. The **DRAFT STOP System**, an exclusive development of Herman Nelson. **DRAFT STOP** traps drafts at the source, doesn’t allow them to sweep unhindered into the classroom.

This most modern of all heating and ventilating systems is ready for new schools or the classroom that must be modernized. For the benefit of students in the school where you have responsibility, investigate the definite advantages of **DRAFT STOP**. Just write for new booklet explaining this proper temperature principle. Address Dept. PA-12.
More detailed and reliable results will not be available until several winters have passed; this is particularly true of the tentative conclusion that “insulation in itself did not appear to be a contributing factor in the blistering of the exterior paint,” a somewhat controversial statement.

It is unfortunate that the types of insulation and vapor barriers tested did not include any reflective foils. This seems nearly inexcusable, in view of their growing acceptance and also because of the fact that they combine both insulating and vapor-barrier qualities in the same material. It is to be hoped that some reflective insulation and vapor-barrier panels will be added to the structure for all subsequent tests.

STAFF CONKLIN

SPECIALIZED AID


With costs of building materials and new equipment at a peak, the major items of maintenance, repair, and replacement are straining the budgets of all community churches and synagogues. Effecting small repairs to prevent deterioration and expensive overhauls is now, and will continue to be, more important than ever before. With these factors in mind, the author has written this book as a basic reference guide for clergymen, caretakers, sextons, ladies’ societies, and all those who are concerned with the upkeep of church equipment, buildings, and grounds. The manual offers information and advice on such varied subjects as the cleaning of altar-ware and the care of cut flowers; chapters on the cleaning of church interiors, care of linen, repair of floors, walls, ceilings, bells, organs, and pianos; maintenance of exterior walls, windows, roofs, belfries, and church grounds. Painting is discussed thoroughly, as is the efficient operation of heating, plumbing, and lighting systems. There is a complete index for easy reference, an up-to-date bibliography, and a maintenance calendar serving as a general reminder of particular tasks to be done during each of the four seasons. E.T.

FROM ALL FAITHS


Any person reading this book will find that he is getting a fairly good background in the history of religion, as well as in the history of architecture. Short writes very well indeed and he has chosen the illustrations with great care.

The book begins with a description of what are almost prehistoric religions, the structures for which were grass huts; it ends with descriptions of 19th century revivals of Classic and Gothic buildings. In between, the author discusses buildings of all religions, including Mayan and Aztec. The temples of Karnak and Luxor, the Jewish temples, and the early Egyptian, Greek, and Roman temples are all described by Short. As the history of all Christian religious buildings is traced, so is the history of Buddhist and Hindu religious buildings (Continued on page 126)
Promontory Apartments - Chicago

Another Schlage Lock Installation

Architect, Mies van der Rohe
Associate Architects, Pace Associates
Consulting Architects, Holsman, Holsman,
Klekamp & Taylor

Owner, Promontory Apartments Trust
Builder, Herbert S. Greenwald

Plymouth Design

...used throughout this new apartment building
Stretch both space and appropriation with FoldeR-Way® Automatic FOLDING PARTITIONS by Richards-Wilcox

In these photographs taken at Hinsdale Community High School, Hinsdale, Ill., you can readily see how Richards-Wilcox FoldeR-Way folding partitions provide greatest flexibility to given areas of space. You can see how the partitions close to isolate the boys' and girls' gym classes from each other. Also, how the FoldeR-Way partition opens for conference games, and similar events, making the complete gym one vast playing arena and gallery.

But you can't see these EXCLUSIVE FEATURES:

1. Fully Automatic. All folding, unfolding, locking, unlocking, and sound-proofing operations are accomplished by the electric operator and its auxiliary mechanism. You merely turn the switch key—R-W does the rest.

2. Positive, Silent Action Roller Chain Drive. Will not slip, stretch, or break.

3. Friction-Proof Track. Ball-bearing hanger wheels are machined to provide a line contact with the 5/16" round cold-rolled steel bar runways of the track, assuring minimum friction and silent operation.

4. Gymnasium Doors Are Full Three Inches Thick Over Entire Area. This provides flush surface similar to a solid wall. Eliminates protruding butt-hinges in players' contact zone below seven foot level.

5. Fully Automatic Floor Seals. Self-adjusting to uneven spots in floor. No levers or manual effort required to operate.

For further information about R-W FoldeR-Way Automatic Folding Partitions, write, phone or wire our nearest office.

THE M. I. T. CONFERENCE

Housing, A National Security Resource. Published by Albert Farwell, Bemis Foundation, and the School of Architecture and Planning, Massachusetts Institute of Technology, Cambridge, Mass. $1

The conference and exhibition reported on in this booklet were held last January at the conclusion of the industrialized housing course given during the previous fall term by the Department of Architecture at M. I. T. At the inception of the course, twelve graduate students organized themselves into teams for the purpose of investigating the industrial production of houses, and the exhibition presented the results of their course projects and investigations. Case studies were made of various systems and a proposal for investment in a scheme for mass production of houses was submitted by each group. The opening addresses, given by Professor Carl Koch and Pietro Belluschi, and the ensuing panel discussions, are fully summarized. A number of panels selected from the student exhibition illustrate the final pages of the booklet.

REFERENCE SHELF

Esempi di Arredamento Moderno di Tutto il Mondo by Roberto Aloi, Ulrico Hoepli Editore—Milano. Vol. 3 Salade Pranzo, 1951, 168 pp., illus. Vol. 5 Sale di Soggiorno-Camini, 1951, 180 pp., illus. $3.50, $4.13

Two books, Nos. 3 and 5 showing Dining Rooms and Living Rooms respectively, are the latest additions to a planned series of 18 volumes, the first two of which appeared last year and were reviewed in these columns. Each Esempi book is a collection of the best examples of contemporary interior and furniture design in a given category. The title for the series, which means Examples of Modern Furnishings from All Over the World is an accurate description of what can be found in these books.

(Continued on page 184)
Reinforcing famous buildings

American Welded Wire Fabric

Its efficiency, adaptability and economy have made American Welded Wire Fabric the most widely used reinforcement for concrete.

In famous skyscrapers, hotels, terminals and other well-known buildings all over the country, American Welded Wire Fabric provides concrete reinforcement that has proved structurally superior to other forms. You use less concrete, less metal, for slabs of comparable strength, with this high-strength steel reinforcement. It is easy to handle, readily takes a flat lay, stays put during pouring without ties or braces.

These are the main reasons why American Welded Wire Fabric effects worth-while savings in construction time, in material and labor costs — especially important now, when every hour, every dollar saved contributes to the all-out mobilization effort.

When you are planning any kind of concrete construction, our technical staff will be glad to supply complete data on specific designs and standard styles of U.S.S. American Welded Wire Fabric that are available. Write to our nearest sales office today, you incur no obligation.

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UNITED STATES STEEL EXPORT COMPANY, NEW YORK

This sketch shows where American Welded Wire Fabric is used in modern steel and concrete buildings. It reinforces walls, floors and roofs, can be dropped over beams and girders and wrapped around pillars. Many uses of concrete in irregular shapes are made practical by American Welded Wire Fabric reinforcement.

All 14 buildings of Rockefeller Center, New York City, utilized American Welded Wire Fabric in their floor constructions. The buildings at right are keyed for easy identification:


Every type of concrete construction needs

AMERICAN WELDED WIRE FABRIC
reinforcement

UNITED STATES STEEL
These are authoritative selections with respect for variety of solution. There is no attempt at dramatic presentation but Aloï employs the knowing device of mixing the material nicely for a provocative change of mood and design approach. The generous size photographs, all of which have appeared in magazines here and abroad, are arranged in simple catalog fashion and numbered for ready reference to captions in Italian, French, and English.

These books are arranged first to show interiors in general, then specialized areas which combine with the given interior, and finally examples of related furnishings. These bright, paper covered books are selective and instructive reviews of recent work and for the architect and designer it is always fun and stimulating to see what he and his colleagues have been up to.

We are heartened by the trend towards multi-lingual text for books about art, architecture and design. These books have always been shared and the additional work of translations seems little enough to complete and admit their universality.

It is also a way to learn more about another language. However, I sincerely hope that the Italians do not rely on these translations for the betterment of their English. Palysander is frequently used to describe furniture but no English dictionary reveals the meaning of this intriguing word. “Deck-Chair with slope regulable” and “Felter Armchair...upholstered by a blue-violet velvet” are really not too frequent to interfere with your understanding—but somebody ought to tell those Italian-English dictionary makers.

Each book has an illustrated, authoritative-looking introduction, tracing the precedents for the material that follows. It is regrettable that this as well as the main titles have not been translated too.

— S. S.

**ARTIST'S VIEWPOINT**


The author of this book is one of those rare artists who believes that members of his profession should understand the materials used in a building, and the method by which it is built before proceeding to draw it. In fact, he devotes a whole chapter to this subject. The title of the book is quite descriptive but since it is an English book the country buildings included do not have much relation to similar buildings in the United States.

Finch feels that though anyone can draw, not everyone who draws will necessarily be an artist. With this in mind he begins to give instructions in free-hand drawing starting with the cube and the elements of two point perspective and moving slowly (because he believes in practice) to shades and shadows, and drawing the cylinder, the pyramid, and the cone. With every step the student is taken by the hand, so to speak, and given a full explanation of how the fundamentals shapes apply to almost any object he may wish to draw.

The book has innumerable sketches by the author of some charming native architecture including clay lump and cob construction, stone lab and thatch roof construction, timber framing and a lot more.

The book will be of interest primarily to artists and architectural students but anyone interested in English small
TILE IS STAINPROOF
TILE IS WATERPROOF
TILE IS FIREPROOF
TILE CLEANS LIKE CHINA
TILE LASTS A LIFETIME

TILE DEFIES SCRATCHING

Genuine Clay Tile takes the heavy toll of traffic over the years... in kitchens, utility rooms, foyers and recreation rooms... resisting alike the constant wearing action of footsteps or the scratching of a carelessly dragged toy. Clay tile is proof against water and fire and wages a lifetime battle against staining and fading. It cleans like a china dish, paying a constant maintenance dividend. This handsome, non-critical building material is worth a fresh appraisal every time you design or build any type of building. Remember—whether it is for modern or traditional styling—clay tile is one of the most versatile materials you can use in designing distinctive color schemes.

Til Council of America, Room 3401, 10 East 40th St., New York 16, N. Y. or Room 433, 727 W. Seventh St., Los Angeles, Calif.
Specify Arkwright Tracing Cloth, and you'll get clean, clear, "ghost-free" blueprints no matter how often you erase the drawing.

You can re-ink razor-sharp lines on Arkwright cloth without "feathering" or "blobbing". More important, you can be sure that drawings will never become brittle, opaque or paper-frayed with age.

They're good reasons for you to remember:

if your work is worth saving, put it on Arkwright Tracing Cloth. Want a sample?

Write Arkwright Finishing Co., Industrial Trust Bldg., Providence, R. I.
Efflorescence is caused by soluble salts which are present in almost all masonry materials. When reached by water, these salts dissolve and may be drawn, by evaporation, to the surface of the wall.

Brixment helps prevent efflorescence. The air-entraining and water-proofing agent in Brixment prevents water from saturating the mortar and dissolving the small amount of salts that it may contain. Moreover, Brixment mortar prevents water from percolating down through the wall, dissolving salts which may be in the brick, and carrying them to the surface.
hundred photographs and sketches which admirably complement the text and enhance the enjoyment of the reader. No one interested in decorative arts, whether from the layman's or the professional's point of view, will want to miss this book. FRANK A. WRENSCH

CHOICE OF HOUSES

The twenty-nine contemporary houses presented in this large, chastely-bound volume, were especially selected by the architectural editor of McCall's from hundreds of homes featured in that magazine from 1945 through 1950. A few were designed for McCall's to help its readers with such problems as price limitations, size, room arrangement, expansibility, and livability; others, because they have workable floor plans, represent progressive construction techniques, utilize new materials, and are considered beautiful, in addition to providing all the facilities for comfortable living.

This collection of residential work by prominent architects throughout the United States is handsomely displayed in photographs—more than 100 of them in full color. In every case there is an over-all photograph of the house showing what it looks like from the garden or street, or both. Interior photographs point out fireplace design, interior trim, built-ins, wall surfacing, flooring, and lighting. Complete floor plans are included as well as elevation drawings and a list of basic materials and techniques used in the construction. All of these houses are in the lower- and middle-price bracket. No prices are quoted, since construction costs vary everywhere and change almost from day to day.

Every phase of planning, financing, building, landscaping, decorating, and furnishing is covered in the text section of the book, in simple, knowledgeable terms that should enable the potential home builder and buyer to approach a contract for a house with a more critical and knowing eye. E.T.

NOTICES

New Addresses

SPANH & BARNES, Architects, 1950 Lee Rd., Cleveland Heights 18, Ohio.
DAVID L. BOCKIUS, JR., Architect, 13 N. Main, Ashland, Ore.
WESTON HOLT BLAKE, Architect, 903 Jefferson St., Wilmington, Dela.
IRVING DICKSTEIN, 307 Alma St., Palo Alto, Calif.

Exhibits

THE ART ALLIANCE, Philadelphia, Pa., announces two exhibits of interest to architects and designers: Paintings by Ozenfant, December 3 to December 31; and Exhibit of work of Wolfgang Roth, Broadway stage-set designer, January 28 to March 3, 1952.
MODERN DOOR CONTROL BY LCN • CLOSER CONCEALED IN DOOR

FINE APPAREL SALON, I. MAGNIN & CO., PASADENA, CALIFORNIA

LCN CATALOG 11-E ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS
Christmas is around again and I’m faced with the problem of deciding on which of the innumerable, attractive, and highly breakable plastic toys I should buy for the kids. There is something particularly final about that sharp crack or crunch as they disintegrate— bright-colored Humpty-Dumpty whose demise is accompanied by perfectly justifiable tears and recriminations. There ought to be a law against the day after Christmas.

I’m going to pick up where I left off last month on planning education and the technical schools, but before I do that there is something to get off my chest. As you have probably gathered by this time, the old perfesser is highly peripatetic. In his weird and wayward wanderings he sees many things which create a miasmic dyspepsia. Perhaps the most galling is the constant reappearance of that vested interest in inertia that permits the wanton destruction of so much of our priceless and irrereplaceable American architectural heritage. This heritage is yours and mine to enjoy, to protect, and to perpetuate.

Let me give you a good example to think about. In the small Kentucky city of Paducah, tucked behind its concrete rampart against the Ohio River, are a few remnants of a once fine valley architecture. The city has so few distinguished buildings and so little of its fine past shows up in the listless mediocrity of its structures that the visitor is hard put to find something worthwhile to look at. But on the same block as the Irving Cobb Hotel, in the center of town on Kentucky Avenue, are two wonderful old houses, about to be swallowed into the limitless future of oblivion—the fragile Colonel Hicks or Fowler House and the dignified bulk of the General Lloyd Tilghman House. They were both built around 1848 and are notable for their architectural quality and historical association. Both are in the final stages of disrepair. Even as I write, they could disappear to be replaced by parking lots or even less utilitarian and attractive land uses. Across the street from the Hicks House is a beautiful small Greek Revival building in yellow-painted brick, with a well proportioned Corinthian porch. It stands a fair chance of quasi-survival, as it is now occupied by a business college.

I don’t care how contemporary-minded you think you may be, you have a responsibility as architect, planner, engineer, teacher, or just plain citizen, to see that the American heritage remains real and a visible part of our community of interests. No archeological reconstruction, no simulacrum of the past, ever provides the emotional verity so important to a full understanding of ourselves, where we came from and why we are where we are at this point in history. Don’t drop a tear for Paducah. Drop one for yourselves! Paducah’s loss is your loss.

Referring to the November issue, I was talking about the relationship of design (Continued on page 136)
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OUT OF SCHOOL

to planning training, using as a base the Report of the Committee on Qualifications of Planners prepared for the Ministry of Town and Country Planning, in the Department of Health for Scotland in 1950. This report is better known as the Schuster Committee Report, after its Chairman. I won't back to what I said, as this article will be a direct continuation of the previous one. May I suggest a review?

Some American planners feel that, being an architect by training, I am overly prejudiced in my emphasis on the design disciplines as part of planning education. May I make this point clear? I do not believe that a planner has to be a graduate of an architectural school. However, if he is a graduate of the right kind of architectural school, such a training as he should have received will prove most beneficial to his future work. For it is clear by this time that a well designed and comprehensive architectural training, including those social sciences so necessary to an understanding of contemporary problems, provides much of the experience in synthesis so heavily emphasized in the Schuster Report.

The ideal training program for a planner, as I have previously indicated, is still to be found. It may well be that it will not be found in the architectural schools. Perhaps it will crop up in some centralized, campuswide focal point still to be determined. At the graduate level we are beginning to see indications in this direction. There are several universities where a graduate degree in planning already results from the agreements reached between deans and department heads, to break down the cell walls which traditionally imprison so much of education. In time, this may provide the freedom of search and of finding so vitally needed in the training of modern man. And there are the freedoms so hard to achieve within those feudal baronies which shackle the prisoner-student in the chains of a fixed curriculum, with the dry bread of tradition in education for sustenance and the dean as jailer. There is perhaps a need to return to the days of Abelard and the wandering scholar, when education was not weighed on the balance of credits—and the diploma was evidence of knowledge and not an imitation sheepskin. But the climate in which we live is not yet favorable to such freedoms. For in our desire to become "professionals" in fields of our major interests, we tighten the prerequisites to our future and restrict the boundaries of our learning. The dilemma, then, in which both inquisitive student and liberal teacher find themselves is going to be difficult to surmount. However, it can be done.
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Mr. McWayne says that Stran-Steel framing permitted complete enclosure of the building to allow interior work to proceed before exterior completion. This means that sub-trades (electrical, plumbing and heating) were not held up waiting for bricklayers, concrete workers, etc., to finish their jobs. Man-hours were saved and costs held down.

If you are planning a school, hospital or industrial building, it will pay you to investigate Stran-Steel framing. Complete literature available on request, or see Sweet's catalog service, architectural (258) and builders' (48) files.

GREAT LAKES STEEL CORPORATION
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out of school

(Continued from page 138)

requires an intelligent appraisal of not only aptitudes and judgment, but whether or not the applicant for planning training is a fit candidate for public life. The planner differs from the average architect in this salient respect. He is a public figure whose every action is in the public service and subject to the public eye. An introspective or shy individual may make a competent architect, but he is a flop as a city planner.

The Schuster Report mentions that at Durham University in 1945 and at Manchester University in 1949, five-year undergraduate courses of planning have been inaugurated. However, the report does not mention affiliation with schools or colleges and at the time of writing there had only been one graduate from Durham, so all that can be said is that we await with interest . . . There are, to the best of my knowledge, only six undergraduate planning degrees given in the United States, all connected with technical collegiate schools. The trend, both here and abroad, seems to be toward graduate rather than undergraduate degrees. What appears to be happening is that at the undergraduate level in the architectural schools the first two or three years are devoted to the basics in design, construction, and the humanities. Also in the last three or two years the student is permitted a "planning option" depending on his aptitudes, interests, and competency. Few undergraduate planning degrees are given, as I have said, but credit is received in some instances for a planning major (or minor, if the architectural curriculum is a major), or in a few cases a degree is given with the planning major attached. However it is done, such undergraduate work remains in the minds of the faculty as preliminary to one or two years of graduate work with the professional designation in the degree.

We could go on at great length here detailing the planning curricula at Rutgers (in the College of Engineering and under Ed Wilkens) or at Michigan State College (in the Department of Landscape Architecture and Urban Planning under Harold Lautner). Or we could distinguish between the planning training in the Department of Architecture at Illinois Institute of Technology and that of the Graduate Program in City Planning in the Department of Architecture at Yale (in the School of Fine Arts), the planning curricula of each under L. Hilberseimer and Christopher Tunnard respectively.* The permutations and combinations of types of parental authority are many and the variables infinite. We had better await the evaluation of these present planning curricula until the findings are available which Fred Adams will make in his planning education survey mentioned in the previous article. We can easily get lost in the catalogs.

The direction planning training is taking at the graduate level is toward a further broadening of the scope of undergraduate work. In several instances metropolitan and regional planning wait for the sixth and seventh years. While courses in government and economics may appear in the early years, heavy emphasis is placed on these in the graduate program. The tendency is always towards a freer range of study, more electives, and more actual work experience. Perhaps the finest specialized development in graduate planning training is the expansion of the "project method" into the field of the community at large. Nearly all graduate schools of planning, in and out of the architectural atmosphere, depend on

*For other course references see November 1951 "Out of School".

(Continued on page 142)
Figured glass with its many advantages is fast becoming the favorite divider for business and industry. Translucent panels protect privacy but permit borrowed light to flood rooms with soft, cheerful illumination. Interesting textures strike a modern note conducive to morale and efficiency.

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out of school

(Continued from page 140)

experience in the field as a major part of the training. Co-operative or assistance programs with local planning commissions or citizens' groups are common enterprises. Student teams are formed and joint projects undertaken, joint studies made, and joint plans prepared and presented for review. This system seems to work well everywhere, although there are cases where a school's welcome has become somewhat outworn because of too much emphasis in one or more particular problem area. The team or task-force system is particularly valuable in teaching the average highly snooty architectural student the fine art of team play and human relationships, neither of which germinate too luxuriously on the drafting board.

Perhaps one of the most interesting results of the contact of the planning teams with the community is the new respect being gained in many localities for the services a university may render. The real life experiences which the students obtain at the same time make them more readily useful upon graduation. The trick is to combine in proper percentages the right amount of theory and the right amount of practice.

I hope I have made clear that there is as yet no fixed pattern of curricula, teaching method, or location of planning education. While I am certain that the present experiments and flexibilities are healthy and are essential to the explorations mandatory in a rapidly changing scene both inside and out of school, I deplore again the lack of intercommunication between schools. Both the A.I.A. and the American Institute of Planners have failed the professions at the student and professorial levels in providing the necessary vehicles for correspondence, contact, and dissemination of information. Once a year, at conventions, a few of the school men and a few of the students get together and warily compare notes and deliver their best lines in a speech or two. But no one today is in a position to assess the changes now taking place, and there is no sounding-board for experience and ideas. As I read the letters to this column, many of which cannot be published because of space considerations, this need for a central intercommunication system becomes more and more apparent.

The Schuster Report lays great stress on the development of a central planning institute. It feels that for Great Britain the existing Town Planning Institute provides an obvious foundation on which to build in order that the following three main purposes might be achieved:

"(1) as to education, the encouragement of further experiments and the critical observation of those made,

(Continued on page 147)
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December 1951 143
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Study the illustration at the top of the page. Note how the pattern unfolds to form an ever-changing, ever-interesting design as installation progresses.
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Whether designing a new building or supervising the modernization of an old one, yours will be a wise decision when you recommend Mosaic ceramic tile. No material, regardless of price, offers such beauty, such freedom from maintenance and lifetime wear. The colors won't fade off, rub off or scrub off. A mop, hose or damp cloth keeps tile sparkling clean. Bumps, thumps and hard use fail to harm its flint-like surface. There is no material more durable, more beautiful or more satisfactory anywhere!

For detailed information about Mosaic Formfree Decorated glazed wall tile and other Mosaic Tile, write for copies of "Floors of ceramic Mosaic Tile" and "Mosaic Formfree Decorated Tile." Address your request to Dept. 28-6, The Mosaic Tile Company, Zanesville, Ohio, or the Mosaic office nearest you. Of course, there's no obligation!
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DOORS • WINDOWS • PANELS
engineered to cut the waste out of building
"(2) as to the advancement of thought and knowledge, to act as a clearing house for programs of study, to indicate which investigations are most needed, and to undertake or sponsor some studies on its own initiative,

"(3) as to the marks of professional qualification, to evolve an effective system for granting recognition to persons qualified in the sense of these conclusions."

It may well be that in a small country with strong, centralized planning powers authorized by the central government, such reliance is safe. Here in the United States, before we accept these recommendations as continuing responsibility to be assigned to the American Institute of Planners we must recognize our vast regional character, our multitudinous education institutions, and above all, our different patterns of planning and development practice under a very different government and a different social structure. That the A.I.P. and A.I.A. both should be continually concerned with such problems goes without saying.

This brings me to a final point for this article, though not by any means the last on the subject of planning education. At the present time there is a serious shortage of well-trained and well-qualified city planners in the United States. Each month the News Letter of the American Society of Planning Officials lists in its "Help Wanted" columns the positions available throughout the country. This is only a partial listing at that, but it is an impressive one. Salaries are still too low in many areas to offer inducements to many. However, wonderful opportunities are now available to ambitious young men to rise rapidly in a field that is definitely understaffed and in which inventive genius, political sagacity, and plenty of common sense are at a premium. While it is the kind of market which swells many a young man's head, it is also one which forces him to produce or get out. There is a sufficient number of important local, state, and national planning programs aimed at solving problems on housing, defense, slum clearance, urban redevelopment, general planning, zoning, subdivision control, traffic, suburban expansion, to absorb every graduate of every planning training program now in the cloisters, for some years to come. The main difficulty, it seems to me, is the gearing of the educational institutions to training this kind of technician—the planning kind of technician—to the public service.

The public service in a democracy is a curious and puzzling phenomenon. A man to survive in it must plan on twenty years of stomach ulcers and calluses on
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Making better products to make other products better

NON-SLIP FLOORS

out of school

(Continued from page 147)

But don’t ask me why men go into the public service today to face the thankless and often vilifying climate of public opinion. For whatever reason, thank God, there are real men and women who are eager to enter the Service and who perform with distinction. The practicing architect may look down on city hall politics, but he should always remember that city hall controls much of his livelihood, the character of his building, his construction methods, and the materials he uses. On an even larger scale, the controls and direction of city building, the planning and zoning, the codes and ordinances, the activities of the many city departments concerned with city development and maintenance are all dependent on trained technicians—or something very much worse.

Perhaps the serious shortage in trained city planners is an encouraging phenomenon in itself. Perhaps it indicates the fact that our people are awakening to the real problems of civic chaos. After all, not long ago there was no such shortage of planners. But then our eyes had not been opened to the chaos either.

Happy New Year!

letters to the schoolmaster

Dear Sir: In connection with your recent discussion of student magazines in out of school, a P/A feature to which I always look forward with pleasure and interest, I thought that you might like to know what we are doing in this line at the Panama University.

Our magazine started informally some three years ago, as a voluntary effort of a group of students, all working on it without any pay in their free time. By now we have conquered for our magazine a definite place in the university, though we are still wrestling with many problems, some of them inherent in the fact that our university is still very young (founded only 16 years ago, first graduation in Architecture in 1950).

As you may see from the enclosed last three issues, our editorial policy includes publication of student's designs, articles relating to architecture and architectural education, and the discussion of educational problems in the school, as these arise. Just now we are in the middle of a campaign for a revision of our program, which we consider could be improved in some of its aspects. The first of the three issues which I enclose contains our present program, while the third contains the program proposed by

(Continued on page 150)
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out of school

(Continued from page 148)

us, which has already been approved in principle during informal discussions with professors and students. During these discussions your column frequently has helped us to reinforce our arguments.

The magazine, which appears about every three to four months, is financed entirely by advertising and subscriptions, the latter both in Panama and in other countries throughout the free world. The question of continuity, which you raised in your last column is here also a difficult problem, so much so that though I myself graduated already last year, I am still in charge and will be until after the publication of the next issue, due in October, after which the new editor will take over. We are trying to assure the subsistence of the magazine by taking in as helpers students of fourth, fifth, and sixth year, so that there will always be available a sixth year student to fill the post of editor, the preceding editor remaining on the staff in an advisory position.

RICHARD HOLZER, Editor
Modulo
Republic of Panama

Dear Mr. Holzer: I was very happy to receive your letter of September 27, with your interesting comments on how you conduct a student publication in Panama. I am sorry that I am not able to produce for the readers of my column copies of the three interesting issues of Modulo which you sent on to me. Since writing my article on student publications, I have received copies of other student publications including the very interesting first two issues produced in North Carolina State College by the students in the school of architecture there.

The main problem that we face in this huge country is the production of a national magazine for the interchange of ideas of our many educational institutions and possibly in such interchange the reprinting of articles and photographic material produced in the publications of the individual schools.

Congratulations on a fine publication and I do hope that I will have an opportunity of seeing succeeding issues of Modulo.

CARL FEISS

NOTICES

New Addresses
MAX M. SANDFIELD, Architect, 4013 Cedar Springs, Dallas, Tex.
L. G. SHERBURNE ASSOCIATES, Designers, 108 E. 37 St., New York 16, N. Y.
WALKER & POOR, Architects, 787 Fifth Ave., New York 22, N. Y.
MICHAEL M. KANE, Architect, 12381 Cedar Rd., Cleveland Heights 18, Ohio.

Appointment
The School of Design of North Carolina State College announces the appointment of HUGO LEIPZIGER-PEARCE as Professor of Architecture; EDUARDO F. CATALANO, Associate Professor of Architecture; ROY GUS SOW, Assistant Professor of Design; LESLIE J. LASK EY and LOUIS TAVELLI, Instructors in Design; and KENNETH McCoy SCOTT, Instructor in Architecture.

LEWIS MUMFORD, Visiting Professor for the past three years, returns to the School for a fourth year.

Visiting lecturers during 1951-52 will be: ALDEN B. D OW, R. BUCKMINSTER FULLER, LUDWIG MIES VAN DE ROHE, PIETRO BELLUSCHI, and NAUM GABO.
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IT'S THE LAW in December 1949 P/A discussed the licensing statutes of Kentucky and Ohio. It was pointed out, at that time, that the exceptions to statutes licensing architects could so emasculate the intended benefits and purposes of the legislation, that in reality, the practice of architecture by incompetents was authorized.

The article concluded by stating:

"The significance of the existence of statutes such as those discussed cannot be overlooked. It permits incompetent persons to practice architecture and thus to jeopardize 'life,' 'health,' 'property,' and 'public welfare.' In those states where this situation exists, the local architectural organizations must be militant to bring home to the public and to the legislators the danger inherent in such statutes on the books. In other states, such as New York, where the practice of architecture is generally prohibited to those not qualified, it is equally important for the local organizations to see to it that the letter and spirit of the statutes are scrupulously obeyed. The practice of architecture by incompetents bilks the public and cuts into the livelihood of the architect, who has spent many years preparing to practice. Such a situation should not be tolerated by architects and, if properly brought home to the public, will not long be permitted to exist."

The practice of such emasculation is more widespread than is generally recognized and the process is apt to be regressive as well as progressive. A good example is Oklahoma's licensing statute which was seriously weakened by amendments in 1949, providing that the statute making it mandatory for architects to be licensed was inapplicable to:

"... any building, or to the repairing or remodeling of any building, to be used for one family residential purposes, duplexes, or apartment houses not exceeding two (2) stories in height, Hotel, Lodge, or Fraternal or Institutional building not exceeding two (2) stories in height, nor to any schoolhouses where the reasonably estimated total cost of such building, remodeling or repairing does not exceed the sum of Ten Thousand Dollars ($10,000), ..."

The practice statute of Nebraska exempts from the requirement of obtaining architectural license:

"... persons, mechanics or builders from making plans, specifications for or supervising the erection, enlargement, or alteration of buildings, or any part thereof, to be constructed by themselves or their own employees for their own use."

The practice statutes of Missouri and Kansas are similar to the above quoted section.

The State of Iowa has in effect what is generally referred to as a title statute:

"Nothing contained in this chapter shall prevent any person from making plans and specifications for or supervising the construction of any building or part thereof, for himself or others, provided he does not use any form of the word or title 'Architect.'"

The licensing statute of Iowa further provides, however, for a "certificate" and for its revocation for:

1. Fraud.
2. Gross incompetency or negligence in the planning or construction of buildings.
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Andersen Gliders—Home in Chappaqua, N. Y.—Joseph Douglas Weiss, architect
it's the law

(Continued from page 155)

3. Habitual drunkenness or drug addiction.

It should be noted that there is no provision in this statute preventing an unlicensed, unethical, incompetent, negligent, and habitually drunken fraud from designing and supervising the construction of buildings. The architect, whose certificate has been revoked for any of the aforementioned reasons, is still permitted to practice the profession of architecture provided only he does not use the title "architect."

The emasculated statute of Iowa quoted above is in direct contrast to the engineers' and land surveyors' statute of the same state which has no important exceptions:

"No person shall practice professional engineering or land surveying in the state unless he be a registered professional engineer or land surveyor as provided in this chapter . . ."

The chapter further provides that the requirements for the engineering license are:

1. A four-year college engineering course and two years practical experience.
2. A written examination.

This is a good engineers' statute. Its administration is, of course, not here considered.

Architects throughout the United States should be aggressive in dealing with the problem of weak licensing statutes which permit incompetent designers to prey upon the public. Unfortunately there is some muddied thinking even within the profession on this problem. It is sometimes stated that such a statute "protects" the architects and creates a "favored" class. Such an illogical argument would be applicable to the practice of medicine, pharmacy, law, or any other profession where licensing is necessary "for the public health, safety, and welfare." This is the test and not whether architects are benefited. When the question is squarely put—"Is it necessary for the 'public health, safety and welfare' for architects to be licensed?"—the answer is not only plain, but has already been answered in the affirmative in almost every state in the union. The recognition of this as a fact should permit no exceptions which endanger life, health, safety, and welfare.

CONSTRUCTION (see page 76)


(Continued on page 156)
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Reynolds, leader in aluminum building products, offers literature on technical engineering subjects such as “Aluminum Extrusions” and “Aluminum Structural,” as well as on the specific products shown. Please address inquiries to Reynolds Metals Company, Building Products Division, 2038 South Ninth St., Louisville 1, Kentucky.

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December 1951 181
HUMOROUS WRITING is a most delicate art. It requires a particular kind of wit, and to be amusingly endearing for social relationships, a delicate balance between understatement and exaggeration. Pure humor, as well as satire, is an important aspect of literature and has always been a means through man's history to deflate pomposity, to make subtle points understood, and to provide pleasure and relaxation.

On the other hand, it is very easy to hit upon several articles on architonic fun can be a cruel and dangerous sport. Funny statements are more likely to be based on untruths than on the shift in emphasis which is the basis of humor. Something ridiculous—because of context, outrageousness, crudity of expression—draws a laugh from the funny man's audience, in contrast to the chuckle that more subtle humor gains by an unexpected emphasis of the truth. From children who say to one another, "Go stick your head in a pickle barrel!" and an educated man who uses phrases such as "It's enough to drive you nuts," the techniques for gaining a snicker range to the use of sure-fire laugh-producing "tags" whenever a thing one doesn't like is referred to. For instance, science and research can always be made a target by referring to the complexities of charts and graphs; and contemporary architecture can always be made the butt of a joke by referring to flat roofs and chromium plating. Being funny is as dangerous as it is easy because it can be so damaging to reputations and to serious endeavours.

The reason for this little essay is that Peter Blake has seen fit to write a funny piece about contemporary house design for the November issue of Harper's magazine. It is called "How to Tell a Modern House" and it is illustrated with some wonderful drawings by Robert Osborn. I have no idea what prompted Peter to be so funny about this subject in a magazine that has already published several articles on architecture which indicated a strong prejudice against recent developments, and one of whose editors is also skilful (and much more subtle) at the business of being funny about modern design. (I will come back to Mr. Russell Lynes later). I'm afraid that I wasn't at all amused by Peter's piece. It is so full of the unfair, untruthful clichés of the funny man—the sure search for the belly laugh—that I think it is one of the most damaging pieces to the public understanding of today's trends that has yet been written. Let me give you a few quotes, just for the laughs, and tell why I think they are reprehensible.

"Exhibition houses . . . have remote controls for windows, color TV and sliding walls, cakes of soap with magnets inside, infra-red broilers, trees outside bristling with the nettles, ozone diffusers, brise-soleil, child-pits, and so on. Enough to drive you nuts!"

DAMAGE: By coupling useful things (sliding walls, outside thermostats, etc.) with ridiculous-sounding things, all are made to seem ridiculous. Very funny. This should make a lot of people immediately laugh by association, when Southwest Research Institute promotes an exhibition house to show that architect builder homes can be well designed.

"Some houses get all enwrapped with their natural setting. They never let the outside stay outside, or the inside stay inside: this is privately referred to as an 'indoor-outdoor relationship.'"

DAMAGE: The term "indoor-outdoor relationship" has been popularized by a number of large-circulation consumer magazines, and has caught the general public fancy sufficiently so that there is now a wide appreciation of the fact that houses need not be tight cubicles, and that the site is important. By the funny interpolation of the word "privately" Harper's readers are given to understand that extension of the house to the outdoors is a proprietary idea advanced by a small coterie of peculiar designers.

". . . some architects resort to cantilevers. Frequently the result is a rapid failure of nerve in the dweller, and a somewhat more gradual failure of cantilevers in the cantilever. Frank Lloyd Wright, who started it all, believed that cantilevers would stop earthquakes, and as a matter of cold fact, they did—in 1923, in Tokyo."

DAMAGE: This garbled bit of funny-business, is, I suppose, calculated to make the layman feel uneasy about cantilevers, which, as any architect or engineer knows, can be designed as accurately as any other structural form. Appreciation and enjoyment of structure comes with understanding, and a cantilever can be explained and understood easily. The public can also be easily confused about these newer structural possibilities and Blake is doing his best. And no structural principle can stop an earthquake, Peter.

"prefabs . . . These are brilliantly efficient. They rarely work."

DAMAGE: Prefabs are not supposed to be "brilliantly efficient." Many devoted people, such as Carl Koch and Henry Hill, are working on the prefabrication principle, in the hope that it may ultimately help reduce construction costs. Which one doesn't "work," Peter?

"somebody who should be stuck into a pickle jar decided recently that everything inside a house must always be just about equally warm, equally cold, equally dry, and equally wet. This is called microclimatology and can be readily understood with the aid of charts, graphs, dry-bulbs and wet-bulbs."

DAMAGE: This is the most reprehensible hilarity in the article. Microclimatology (which has nothing whatever to do with air-conditioning) is a young science growing rapidly in importance, served by a number of hard-working and little-understood scientists. Public understanding of its implications for architecture and town-planning had been nil until Jimmy Fitch, in an excellent article in The Architectural Forum some years ago, Elizabeth Gordon, through her informative series in House Beautiful, and the A.I.A., through publication of technical data, brought some knowledge of what was going on to architects and possible clients. This now becomes a great joke. Hilarious, isn't it?

"the pristine house . . . Its walls are either pure glass or pure brick. Its floor is pure chromium. Its roof is flat and also pure chromium."

DAMAGE: This seems pretty obvious. I don't particularly like that house either, but I admire the fact that it achieves its pristine simplicity without the impression of chromium finish. To pull in the old "flat-roof, chromium floor" tag to make it seem funny is very corny.

I THINK THAT THIS SORT OF THING is a lot of fun among a group of architects who can afford to laugh at themselves, but I wonder if Peter Blake realizes how his picketing will be used by, and will bring greater glee to, the people who stand against any advance in architecture and engineering? There is no secret, for instance, about the attitude of Russell Lynes, one of Harper's editors. In the October issue of House & Garden (which soberly features a house where "a brightly designed life-size figure of Victorian carriage boy sits smiling on a bench" and, by means of a phonograph attached to it, "on the Greek Revival porch greets guests, 'Glad to see you'), Mr. Lynes has a funny piece about honesty in architecture. "Honesty in architecture," he says, "is an idea that is just about a century old . . ." He goes on to say that "indeed the concept of honesty in architecture is a prudish one . . . and this seems to me an oddly puritanical point of view for architects who are not, as far as I know, distinguished for their celibacy." See the technique again? Bring in a reference to amatory activities by these roistering architects and you can make even architectural expression seem very funny indeed.

I guess I'm just an old sour-puss. I'll go stick my head in a pickle jar, Peter.