**How to plan a HIGH PRESSURE STEAM DISTRIBUTING SYSTEM**

Another in the series of basic Piping Layouts prepared by Jenkins Bros.

---

**HIGH PRESSURE STEAM Distribution Systems**

Systems of the type illustrated in this layout are frequently installed for the efficient heating of the sprawling, monitor type industrial plants, covering a large area, which have been built in increasing numbers during the past few years. The hook-up allows for reduced pipe sizes and takes care of excessive pressure drops due to the long distance between the heating plant and the radiation.

**SUBSTANTIAL SAVINGS** in installation and maintenance costs are effected through the elimination of return lines in many such installations, especially where the heating system takes a small percentage of the steam and treated water. Condensate is collected in vented tanks at the lowest points in the system, and drained off. Check valves prevent back flow from the tanks.

**BRONZE GLOBE VALVES** of the renewable composition disc type are recommended for all shut-off and bypass lines to assure lasting drop-tight service. On steam returns, regrounding type Bronze Check Valves with 45° seats will remain tight even at extremely low pressures, to prevent opening and seepage from back flow.

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Copies of Layout No. 9, enlarged, with additional information, will be furnished on request ... also copies of future Piping Layouts. Just fill out and mail the coupon.

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## VALVE RECOMMENDATIONS

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<th>Service</th>
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Diagram by Hasley Madeheim, Consulting Engineer

1864
APRIL 1946

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makes the big difference
Rich's, Inc. of Atlanta, is more than pleased with the results of its nation-wide $10,000 Architectural Competition in collaboration with Progressive Architecture. The problem, as you recall, was for "a realistic house for a family in Georgia." The winners you will find in this issue. Many thanks to the hundreds of entrants who submitted drawings. Many thanks to the jury—Thomas Harlan Ellett, F.A.I.A. of New York; Ernest A. Grunsfeld, Jr., F.A.I.A. of Chicago; Richard Koch, F.A.I.A. of New Orleans; Ernest J. Kump, A.I.A. of San Francisco; Roland A. Want, A.I.A. of Detroit; Roy F. Larson, F.A.I.A. of Philadelphia; Robert Law Weed, A.I.A. of Coral Gables. Many thanks, too, to Henry J. Toombs, A.I.A. of Atlanta and Kenneth Reid, A.I.A., Editor of Progressive Architecture who acted as professional advisors and to Philip H. Hubbard, publishing director of Progressive Architecture and the entire staff.

And, of course, our heartiest congratulations to the winners. Models of the first, second, third, and Georgia Prize houses will be shown in Rich's GEORGIA BUILDS TO LIVE show, starting April 22.
Yes..."ingredients" make the big difference in quality of performance whether the product is a fine watch or a fine building material.

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\( \frac{7}{8} \)" thickness—2' x 8' with T & G joints on long edges.
\( \frac{3}{4} \)" thickness—4' x 8' and 4' x 10' with square edges.
Hints for those who

PLAN TO REMODEL

Look at these photographs. They show what can be done to improve a home, when one has a little imagination and some Insulux Glass Block.

• Note the large glass block panel in the living room. This attractive "light wall," which adjoins the summer terrace, provides an abundance of daylight all through the year. And in the winter—it brings considerable fuel savings because of the insulating value of the block.

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• Note the glass block partition in the hallway. This is a money-saver, as it borrows needed light from the dining room adjoining.

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The Vermont Marble Company, producers, importers and finishers, maintain branch offices in principal cities to serve you.
organization is to be congratulated on the manner in which the whole matter is handled, and the genuineness of the whole matter are steps in the right direction, and, of course, the production of household duties, solar and seasonal justly entitled. Sizes, open planning and multiple use such as room relationship and relative fundamental and difficult problems connected out since the requirements or limitations on exposure, floor area, climatic conditions, ventilation, occupancy, cost, storage space (this necessary item has and design were so carefully and clearly set forth or implied.

Such a program releases the designer's attention at once for study of the fundamental and difficult problems connected with minimum house design, such as room relationship and relative sizes, open planning and multiple use of space, privacy for occupants, waste corridor space, efficient performance of household duties, solar and seasonal orientation, cross ventilation, good natural lighting, facilities for entertainment, and, of course, the production of a timely design of simple dignity for which all prospective small house owners long and to which they are justly entitled. Thoughtfully prepared competitions of this nature are steps in the right direction toward the solution of real and satisfying minimum housing, and your organization is to be congratulated on the manner in which the whole matter was conducted. I am sure also that the selection of such a reputable jury inspired confidence in the minds of all competitors.

It is to be hoped that the collective results of this competition will have contributed much of real value to the nation-wide problem of the small house. 

R. L. Albert
Arlington, Va.

THAT JANUARY REVIEW

SETTING THE PACE

Dear Editor:

Your January issue of Progressive Architecture is a fine editorial job. The concept of reviewing the achievements in architecture since the beginning of the war gives you an excellent foundation for an informative and ably presented review.

I particularly like the way you have handled the layout and text and the effective manner in which you have condensed the essential story. The section on Modular Coordination of course interested me most, and is probably the best condensation of this subject that has yet appeared.

Congratulations to you and your staff! I hope this sets the pace for many more fine issues under your direction.

Tyler S. Rogers
Owens-Corning Fiberglas Corporation
Toledo, Ohio

WHAT'S COOKING NOW?

Dear Editor:

In your article, "Pearl Harbor to Nagasaki," the subject matter of the first ten pages was academic—and seemed to be a dissertation in defense of the past four years of architectural magazines. Who cares? We who have been away for four years, completely detached, are interested only in what's cooking now! Those ten pages could have helped a lot besides the few plates included therein. The past four years for many of us have been a matter of getting right to the point—the very essence of contemporary architecture. Maybe the four service years can be applied to the drafting board even in such an indirect way?

The youngest entrant in the Progressive Architecture-Rich's, Inc. competition wrote to us of her drawing (left) as follows: "I am senden you this little house just to show you the kind of house I want to live in some day in Atlanta Ga. for I am a Georgia girl. I was born in Atlanta Ga. I am a little girl 7 years old and I have never lived in but one real house and I just lived in it 3 monts so I hope they will make some little houses like this then we mite could get one." Sandra Brittain, Montgomery, Ala.

I must confess the title is very promising, and having hoped to really learn about the progress of the past four years in architecture, after a complete four-year detachment, I find after having read from pages 42-81 no such education. There was mention of the "cavity wall." Well how about a page or so on the cavity wall? Let us in on it and the other items just mentioned. Under "Construction Methods," a very juicy subject, it was polished off by saying, "a great deal of ingenuity was devoted to integrating the architectural conception with specific construction requirements." That calls for a Charlie McCarthy, "Is that so?"

Indeed you may say again the Profession has been misunderstood. The distressing reception given architects in the military profession, especially the Navy, was due solely to the little weight and explanation the senior members of the architectural profession bothered to shoulder and pass on to the public prior to Pearl Harbor. Recruiting officers and the Bureau of Personnel had no idea what architects could do; thus we all ended up a million miles from the profession.

The plate alone of the Rugen School seems to almost make up for the 40 pages in expressing "progress in architecture." It is certainly not only pleasing but seems to possess all the four attributes your article set out to explore, even though you did not define your four elements.

LT. PAUL PIPPIN, USNR
Portsmouth, Virginia

LEADERSHIP POSSIBLE

Dear Editor:

The opinions I shall express will be mine, but I am sure that these opinions are shared by many service men who now contemplate a career in architecture.

In reviewing 135 issues, Mr. Creighton has done a most commendable job of analyzing the advancement in architectural esthetics during the war years, and this service is of value to those who have necessarily been out of touch with that progress. He has ably and interestingly traced the undeniable evolution of the architectural magazines' editorial policies and the developing techniques in building.

RALPH DELOS PETERSON, JR.
Ensign, USNR
New York, N. Y.

MIssED THE BOAT

Dear Editor:

In your comparison of the old and the new in your issue of January 1946, I believe you have missed the boat—there is nothing appealing or beautiful in the modern compared with the past!

WILLIAM SCHUMBERG
Architect
New York, N. Y.
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A Modern Raymond Pile Driver
STOP AND THINK

By Lewis Mumford

My chief criticism of Kenneth Reid's proposal on a home for the U.N.O. can only repeat the advice I would earnestly give the officials in charge of the U.N.O.'s building program: Stop and Think. Mr. Reid's plea for a competition rests on the assumption that a program for the architectural embodiment of the new organization has already been worked out. That is not the case. The fact is that the Committee on the Selection of Site was sent about its work with only the vaguest instructions as to the size, scope, and purpose of the buildings for which they were supposed to find a site. No committee in the U.N.O. had apparently thought it necessary to take time for a preliminary study of the wide range of possibilities that lies before it, or to define an adequate program.

The first matter to be decided is whether the United Nations will be served best by a small complex of buildings, such as those created at Geneva, or whether, in view of the scope and importance of this new organization, a whole urban community, resting like Washington within its own territory, must not be ultimately built. No site can be selected intelligently until this question is settled. If the answer is the second choice, the site that is now favored is plainly inadequate: a site three times the size of the present one in area should probably be the minimum demanded.

Now, I believe that any thorough canvass of the future of the United Nations Organization, which looks beyond its immediate needs, must visualize its architectural program on quite different terms from, say, Senator Vandenberg: it must look forward during the next century to the creation of a great world capital, indeed, to a series of such world capitals, in which international congresses and international services will be established. Not to provide for such a future growth would be to betray a lack of faith, a lack of political energy, that would handicap the development of the United Nations at the beginning. It would be better to overestimate the need for land and space for future expansion, than to face the possibility of repeating, in the new world center, the sordid confusion and congestion of every existing national capital.

The fundamental postulate for such a center, I submit, is that it is to serve not merely a world organization, but a world community. Hence, in the general conception of the project, in the technical method of its development, in the actual structures to be built, it must give play to the processes of world cooperation. The architectural framework, on this assumption, must express the character of the enterprise in no uncertain terms; so that he who enters these precincts will leave part of his nationality behind him, as the Moslem faithful leave their shoes behind at the entrance of the mosque. From the first, the plan, and the scientific, technical, and architectural collaboration needed for working it out, should be on an international basis.

The new building should be part of a new kind of urban community: and this community should be a forecast, in design, in relationship, in harmonization, of the political and social structures that must in time be constructed on a world-wide basis. As soon as one introduces the notion of a community, one introduces the notion of time. Instead of freezing the whole project into a static form, so that it will look as if it were conceived and executed in the same year—the Renaissance concept—the program must allow for change, alteration, progress, transformation—and for the emergence of a fuller unity. Here again the United Nations buildings must have a representative and symbolic character; for the unity to be sought is not an arbitrary, abstract, paper unity, to be imposed at the beginning by a single mind and never departed from, but an organic unity, imperfect as all living things are imperfect, yet serving as a principle of order. Such order and unity must be the goal of each individual effort, but it must never preclude the further working of time and mind.

This element of time has one further bearing upon the building program: a method of selecting architects must be set up which will not merely further international cooperation among architects but allow for their continued selection and replacement over a long period of years. The worst way of establishing such continuity and cooperation would be by an international competition, or a series of such competitions: for in view of the work to be done, it is more important to select men, who will develop together and influence one another, than it is to select abstract designs. Here Dean William Wurster's suggestion seems to be excellent. He has pointed out that the most important function of a competition, the possibility of bringing forth the work of younger men of ability, can be furthered by establishing the rule that a certain percent of each international team should be composed of people under the age of forty.

In raising these issues I have only tried to suggest that the writing of a program for the United Nations center is not something to be attempted after a few hasty weeks of discussion, still less is it something to be done, unaided, by a Committee on Building.

Instead of encouraging the United Nations Organization to make premature decisions and to set in motion second-best or fifth-best procedures, I believe it would be advisable to plead for extending the period for temporary quarters, if need be, in order to provide the time necessary for the research, the reflection, and the discussion essential to prepare an adequate program, and to set up a rational process for choosing the teams of planners, architects, and technicians who will develop the project. In view of the long-term effects of hasty efforts and bad solutions, I say again, with all the urgency I can put into my words: make haste slowly. And first of all: Stop and Think!

We and you are indebted to Mumford for his prompt statement of opinion contrary to ours (see pages 98-100). Typical prize winners of the League of Nations competition (below) serve as additional warnings! These were the entries of Labro, of Paris (left); Putlitz, Klophaus & Schoch, of Hamburg; and Lefèvre, of Paris (below).
It's hard to believe there's glass between the camera and the outdoors in this picture.

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(Continued on page 16)
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First and second prizes in the Smith College Dormitory Competition, conducted by the Museum of Modern Art and Progressive Architecture, went to five young members of the cooperative office, The Architects' Collaborative, in Cambridge, Massachusetts. Norman C. Fletcher, his wife Jean Bodman Fletcher, and Benjamin Thompson (first prize winners), John C. Harkness and his wife, Sarah Harkness (second prize winners), are associated with Dr. Walter Gropius in the recently formed office, and propose to conduct together a general architectural practice. The Fletchers, who also won first prize in the Pencil Points—Pittsburgh architectural competition last summer, went to Cambridge in recent months from Birmingham, Michigan, where they were employed in the office of Saarinen & Swanson. Mrs. Fletcher is an alumna of Smith College and first studied architecture in the graduate school there. She received her B.A. degree from the Harvard Graduate School of Design. Her husband is a graduate of the Yale University School of Architecture, where he also won a fellowship to study regional and city planning. His first professional experience was with FSA in San Francisco under Vernon DeMars, and then with Skidmore, Owings, & Merrill, Architects, New York.

Thompson, who also graduated from the Yale University School of Architecture, worked with Donald Deskey, Foley Brothers, Wallbridge Aldinger, and the U.S. Army Engineers before he was commissioned a lieutenant, USNR, and served as deck officer aboard the USS Courage, 1942-44. He later served OSS and the State Department, before returning to civilian life. His wife, Mary Okes Thompson, a graduate of Wheaton College, is now studying design, and intends to take her place with the collaborative group as soon as her training is completed. Harkness, co-winner of the second prize, received his M.A. from the Harvard Graduate School of Design and went overseas during the war with the American Field Service, attached to the British 8th Army in Africa and Italy. During that time Mrs. Harkness completed her studies at the Smith Graduate School of Architecture and worked as Boston agent for New York designers. She also was associated with the Museum of Modern Art for a year.

Julius Stein, Roy S. Johnson, and Fred M. Ginsbern, winners of the third prize, are in the same age group—25 to 32—as the winners of first and second prizes. They are all graduates of the New York
... it has to meet Tile-Tex standard quality tests and the requirements of Federal Specification SS-T-306A covering asphalt tile purchased by the United States Government.

The uniform quality of Tile-Tex Asphalt Tile does not just happen—it is the result of continuous product control, starting with the raw materials that are used and finishing with a thorough check-up of the completed product.

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Additional tests on samples taken from each manufacturing batch are made to assure maximum resistance to "curling" and "shrinking" in the presence of excessive moisture—to prevent deterioration of the product in service from attack by capillary alkalinity on grade installations—and to inhibit Tile-Tex Asphalt Tile against harmful action of strong soaps and cleaning materials.

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University School of Architecture. Stein
has gained experience in New York
offices, working for Philip Birnbaum,
Fellheimer & Wagner, York & Sawyer,
and at present as a designer for S. J.
Glaberson. Johnson, who is now a ser-
gent in the U. S. Army Signal Corps,
worked for Edward D. Stone, Horn-
bostel & Bennett, Fellheimer & Wagner,
and S. J. Glaberson. Ginsbern, until re-
cently a lieutenant, U. S. Army Avia-
tion Engineers, also worked for E. D.
Stone, P. L. Wiener, and J. L. Sert, and
is at present a designer for Horace
Ginsbern & Associates. He and Johnson
are members of the Building Industry
Design Research Group.

Thus, all of these prize winning draw-
ings result from collaborative efforts
of younger architects—which suggests
the success that can attend the office
practice of The Architects' Collabora-
tive, to which the winners of first and
second places belong. They express the
objective of their group as follows:

"The whole postwar reconstruction
problem, so vast and so complex, hangs
upon our ability to cooperate. The archi-
ctect, as a coordinator by vocation,
should lead the way—first in his own
office—to develop a new "technique of
cooperation" in teams. The essence of
such technique will be to emphasize in-
dividual freedom of initiative instead of

authority direction by a boss. Sync-
chronizing all individual efforts by a
continuous give-and-take of its mem-
ers, a team can raise its integrated
work to higher potentials than the sum
of the work of just so many individuals."

The winner of first prize in the Pro-
cressive Architecture—Richie Inc.
Competition, Hugh Stubbins, Jr., is an
old hand at competitions. Since his un-
dergraduate days at Georgia School of
Technology where he was top man in

his class, he has received medals, fel-
loows, prizes, and other honors with
reassuring regularity. Meantime he
continued his architectural education
at Harvard Graduate School of Design,
where he instructed in 1940 and served
as assistant to Walter Gropius, and is
currently an assistant professor. His
architectural practice during the same
years has been vigorous, starting in
New England and New York, then Bir-
mingham, Alabama, and next in Boston.
During the war he was active in de-
signing housing projects—notably the
widely-exhibited Windsor Locks, Con-
nnecticut, project—and also advised
FPHA and USHA. He is secretary of
the American Society of Planners and
Architects. Last year, he judged some
competition entries himself, as chairman
of the PENCIL POINTS—Pittsburgh
small house competition.

Without formal architectural education,
Watson Balharrie, winner of the second
prize, became an architect through 17
years' association with architects of
Ottawa. During the war he worked as
an architect for the Naval service of
Canada and is now practicing under the
firm name of Abra, Balharrie & Shore.
He had previously received awards in
Canadian competitions and entered several
conducted by this magazine.

He is secretary of A.R.G.O. (Architec-
tural Research Group of Ottawa)
and belongs to C.I.A.M. as well as R.A.I.C.
and the Ottawa and Quebec associa-
tions and architects.

Completing service with the Navy, late
last year, Harold Calhoun lost no time
in getting back to his office and archi-
tectural activity. He entered the re-
cent competition "to get rid of the cob-
webs because I had hardly drawn a line
for three years" and reports that win-
ing third place was almost too much
for him! Graduating from Rice Insti-
tute in 1932, he organized the firm of

(Continued on page 22)
So clearly and unmistakably are draftsmen able to express their ideas on paper that their drawings have re-shaped the world. Through line, figure and symbol, draftsmen define the work to be done by the labor and machines of a nation. Assisting them to attain precision and clarity are drafting instruments that act almost as living extensions of their own hands...instruments that function figuratively as their partners in creating.

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APRIL, 1946 21
Wirtz & Calhoun (the present name). He also worked for Robert & Company, as designer, and later as manager of architectural work on the U. S. Navy Air Center at Corpus Christi. He joined the Navy in 1943, went to the Pacific theater, and ended his service as a member of the U. S. Strategic Bombing Survey in Japan.

The winners of the fourth prize, Walter Preston Hickey and Raymond Weber, are both employed in the General Motors Corporation styling section. Both

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HCL
HNO3
H3 PO4
CH3 COOH
CO2 HCO3 H + H2O
NH4 Cl

WALTER P. HICKEY

studied architecture at the University of Michigan and Hickey continued as a scholarship student at Cranbrook Academy of Art, where Weber was in charge of the Cranbrook Foundation Architectural Department, under direction of Eliel Saarinen, during the major phase of the Cranbrook development. Both have worked for various Detroit firms. Hickey was an officer with the Army Engineers during the war.

The winner of the special Georgia prize, whose drawing also won mention, describes himself as a Minnesota Swede who went to Atlanta for a rush job and liked the city and its people so much that he decided to stay. After studying at the universities of Minnesota and Pennsylvania where he received his B.S. and M.Arch. degrees, he worked for leading Philadelphia and New York architects, including the late Benjamin Wistar Morris. He became a registered architect in New York (later in Georgia, too) but found time to participate in small house competitions—"squander-

(Continued on page 24)
Why are some roofs like the peaches on the top of the basket?

There is a saying that the Huckster's reputation is on the top of the basket, and that somewhere near the bottom you come upon his character. A roof is like that.

To make certain that the roofing materials which can't be seen when the roof is completed match the fine, quality-look of the finished job, specify Koppers Coal Tar Pitch and Approved Tarred Felt. These products are as good "on the bottom of the basket" as they are on the top. Roofs built of coal tar materials have records of 20, 30, 40—and even more—years of satisfactory service. They require little or no maintenance.

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APRIL, 1946
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Three practical Joint treatments with Weldwood

V-JOINT

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LUPTON METAL WINDOWS
TWO COMPETITIONS

We have recently enjoyed the privilege of participating in the conduct of two more nation-wide competitions. As a result of the experience, we are more than ever convinced that the competition is a fair and efficacious method for finding praiseworthy solutions for any given architectural problem, and that it has the further virtue of discovering and encouraging fresh and vigorous architectural design talent. A competent jury, given adequate time, will always discover the flaws in even the most elaborately presented scheme, and conversely, will find and premiate the designs that most satisfactorily meet the program requirements. We have seen it happen again and again. The cream, provided it is there, inevitably rises.

In the competition for the selection of an architect for the proposed new dormitories at Smith College there were ninety-one entries, which turned out, when the envelopes were opened after the judgment, to have been submitted by a rather widely distributed and on the whole competent group of architects. Both well known and unknown firms and individuals were represented and the designs showed clearly that the problem had been well studied by a variety of men, both young and old. The admirably drawn A.I.A. Competitions Code which was followed, with its provisions for maintaining complete anonymity, insured that the judges must reach their verdicts solely on the basis of merit. This they did, according to their lights, and the results are shown on the following pages. Space limitations unfortunately do not permit inclusion of the Mention designs, whose authors were listed in the announcement of awards in February.

The Progressive Architecture-Rich's, Inc., competition for the design of a "Realistic House for Georgia" was a purely educational effort, intended to develop sound ideas and better understanding of the ever-present small house problem. Five hundred and sixty-eight drawings were submitted from every part of this country and even from outside our borders. We can vouch for the fact that the seven able judges worked seriously and thoroughly for three days and that they overlooked nothing in their search for designs deserving the prizes.

In both of these competitions the quality of the competitors was reasonably high, judging from the names afterward discovered on the list of entries. In both of them, however, there were a disappointingly large number of designs that missed the boat. In seeking the reason for this circumstance it occurred to us that there is perhaps too much of a tendency for designers under the competitive stimulus to attempt the "brilliant" solution and overlook the obvious virtues of a direct and unpretentious answer to the program. As a word of advice to future competitors we venture to suggest that any jury worth its salt is going to look these days for the simple solution rather than the complex. The days when épater les bourgeois was profitable are apparently over.
A COMPETITION

to select
an architect
for a proposed
dormitory group
for Smith College

Conducted by MUSEUM OF MODERN ART and PENNSYLVANIA TRUST COMPANY
Professional Advisory, Richard Neutra, President of Design, Yale University
Approved by the Committee on Competitions of the Boston Chapter, A.I.A.

Smith College, located in the Berkshire Hills and the area is invigorating, with a fine college, with an enrollment of nearly 1,000 students, for the most part, the site to serve as a nucleus and a center of future growth.

The Prize-winning projects are evidence of the jury's insistance upon this last point. All three divide each dormitory into two or three parts to achieve a friendly, domestic scale. Even though this type of plan tends to be more expensive than more concentrated, more rigid, less personal solutions, and tends to cover more ground area, the jury was unanimous in preferring it for this purpose. Resemblance to an urban apartment house or hotel was not held to be desirable, no matter how handsomely contrived.

The First Prize was won by
Norman C. Fletcher
Jean Bodman Fletcher
Benjamin Thompson

Each of the buildings is in two parts: a rectangular dormitory block connected by a bridge with a more freely composed wing devoted to living, dining, and service. The buildings are well placed in the northeast, east, and southeast corners of the plot, preserving an open space where the ground drops sharply to Paradise Pond and retaining as many as possible of the fine existing trees. The building type is so flexible that it could easily be adapted for even better site use and exposure.

Students' rooms face east and west. They are grouped in short corridors and planned for economical construction. Major living rooms face the south and the view and are very pleasantly related to each other. The jury

REPORT OF THE JURY

Ninety-one projects were submitted. Considering the many demands upon architects at this time, the jury felt that this was a gratifying response to the competition, and were pleased with the general quality of the entries as well as with their quantity. Many were very well thought out and beautifully presented. They were well hung and lighted in a series of rooms in Smith's Tryon Museum at Northampton.

The jury met on January 12th for nine hours. They resumed work on Sunday, the 13th, and completed the awards after a five-hour session.

The jury based their decisions upon the following desirabilities:

1. Preservation and exploitation of the pleasant park-like character of the steeply sloping site;
2. Exposure of students' rooms for sunlight and for view of the lake and the mountains beyond;
3. Well organized floor plans with conveniently grouped activities and easy circulation;
4. Informal, non-institutional appearance, harmonious in scale with the existing buildings and the adjacent residential street.

The prize-winning projects are evidence of the jury's

PROGRAM REQUIREMENTS

The proposed dormitory group will consist of three fireproof units to be operated independently and which may be built at different times. Each unit may differ in order to meet the varying conditions of the site but each must contain the following elements:

A Entrance hall. (For administrative reasons, only one main entrance is desired to each unit.)
B Small booth off entry for person on watch. This space will also serve as a receiving room for mail and packages and message center.
C Students' coat room, 80 sq. ft.
D A waiting room for callers off the entry, about 120 sq. ft.
E A living room of 750 sq. ft. with fireplace, to accommodate all residents at one time.
F 2 smaller living rooms of 400 sq. ft. to be used for social purposes or reading by smaller groups desiring privacy.
liked the clean but unforced character of plan and elevations, and felt that the designers had developed their forms out of the requirements instead of forcing their rooms into any arbitrarily imposed shape. There was some criticism of the dormitory ramps and the insufficient control of those entering the building through the dormitory wing, but it was felt that these flaws might easily be remedied. The cubicage of the scheme is remarkably low.

The jury was particularly pleased with the imaginative, intimate quality of the north and south elevations, and approved the use of material, although they hoped that stucco was not to be used.

The Second Prize was won by
Sarah Harkness
John C. Harkness

This project was particularly admired for its easy-going domestic quality, and for its excellent feeling for the site. Each dormitory is divided into three separate groups of students’ rooms, and so arranged that each of these individual rooms faces the south and the view. The jury liked this division into small, well-oriented units and liked the varied, lively relationship between these units, but felt that it would be considerably more expensive than the arrangement which received first prize. Some members also questioned the feasibility of the relatively tight and sunless courtyard and the obstruction of the living room view by the projection of the front wing.

The Third Prize was won by
Roy S. Johnson
Julius Stein
Fred Ginsbern

All the living and service rooms are concentrated on one main floor and on a lower level built into the hill slope. Students’ rooms are divided among the two parallel south-facing wings which rise above the main living floor.

The jury liked the excellent ground floor plan and the unpretentious charm of the scheme as a whole. They particularly admired the friendly scale of the elevations and the sensitive use of materials. They criticized the fact that one wing of students’ rooms faces the back of another and that the diagonal view from these rooms overlooks the broad flat roof of the living and dining rooms. They thoroughly disapproved the site plan, but felt that this might be remedied without changing the basic scheme.

JURY OF AWARD
William Allan Neilson
Mrs. Alan Valentine
Kenneth Reid
Morris Ketchum, Jr.
Elizabeth B. Mock
Philip L. Goodwin, Chairman

AWARD

APRIL, 1946 53
FIRST PRIZE

NORMAN C. FLETCHER, JEAN BODMAN FLETCHER, AND BENJAMIN THOMPSON
CAMBRIDGE, MASSACHUSETTS

- bedroom unit 1
  10 girls per floor
  3 floors
- step-down service unit
  20 girls per floor
  3 floors
- bedroom unit 2
  10 girls per floor
  3 floors

flexible adaptation to site conditions
south elevation

terraces for outdoor living

entrance is under bridge between buildings
SECOND PRIZE

SARAH HARKNESS AND JOHN C. HARKNESS

MILTON, MASSACHUSETTS
THIRD PRIZE
ROY S. JOHNSON, JULIUS STEIN, AND FREDERICK GINSBERN
NEW YORK, NEW YORK
3 dormitory floors

first floor

basement
Progressive Architecture—Rich’s, Inc. Architectural Competition

A Realistic House For A Family In Georgia

REPORT OF THE JURY

The jury was disappointed by the tendency of the entrants to disregard the stated intentions of the program . . . to secure realistic plans for houses that Georgia families of $3000 annual income could afford and in which such families could pursue their normal mode of living, raising children without unnecessary frustration and extra chores. Practically all entries leaned toward complicated plans and extensions which would be wasteful of capital costs as well as undesirable from the point of view of family life, or at least not productive of results commensurate with the investment.

Nevertheless, winners had to be chosen from among the entries submitted. The jury took into account the recent decline of the dollar and agreed that the higher purchasing power which existed at the time the program was written would be adopted in order to grant some degree of feasibility for the entries.

Members of the jury held different points of view with regard to some elements of the program. For example, some jurors strongly regretted the scarcity of good two-story plans because they felt that with the restricted lot size it was desirable to leave as much of it open as possible. Others advocated the one-story house because of its greater convenience for the housewife. Some jurors felt more strongly than others that screened porches are necessary adjuncts to the house, even though contemporary design permits large open areas which give the rooms the same degree of livability that traditionally has been obtained through the use of screened porches.

Some members regretted that relatively few contestants worked out courtyards of satisfactory size, open to the prevailing breeze. It was felt that in the Southern climate and on a restricted lot, a good many family activities might take place in charmingly outlined courts. Most schemes with courtyards required plan and room arrangements too involved for occupants’ needs or beyond their financial ability.

There was general agreement that garages should not be at the back of the house or to the rear of the lot because of the wastage of land area for driveways. There was an inclination to regard the garage, or other provisions for parking the car, as the most frequently used entrance to the house; in effect, its main entrance. For that reason, there was much doubt whether the open car shelter close to the street is really an acceptable solution, since the car shelter would normally attract a good deal of clutter, exposure of which is undesirable. This consideration was taken into account in rating entries which required one to pass through the car shelter or along its open side in order to enter the house. There was some criticism of garages (and particularly open carports) that stood detached in front of the house, fully exposed to the street. The jury felt that garages look bad enough in their usual rear location and that if it became general practice to place similar detached structures in the front, the appearance of the streets would be greatly damaged.

There was disappointment over the relatively small number of entries that made use of sloping roofs, since in Georgia the sloping roof is not only conventional and acceptable, but also of great utility for purposes of insulation.

Several entries, regarded highly during discussion, had to be discarded because of features which were proved impracticable upon close examination. It was noted, for example, that some entries staggered walls of first and second floors in relation to each other so that support, flashing, and establishment of proper differences of level between rooms and abutting balconies appeared far too expensive and not too practical. In other cases, excessive cantilevers were required, or furniture items were drawn to substandard sizes which could not be enlarged within the indicated room sizes.

The jury did not entirely reject plans where such minor shortcomings appeared readily curable, but considered them a cause for rejection where their correction would have required major alterations of the plan. Similarly, there were cases where the circulation between living and sleeping quarters depended on screened porches, or passages which of course could have been glazed but if so treated would have raised the total square-foot area of the house beyond the limit.

Among the entries which received Mention, a good deal of discussion was given to the truly “realistic” scheme shown on page 76. It was deeply regretted by the jury that more capable entrants did not select a condensed parti such as this. There was general agreement that the purpose of the program could be more satisfactorily met by such a natural and unsophisticated approach, not only as to costs but as to livability. It was felt that even designs considered more individually attractive might combine less effectively than this one into a satisfactory residential development composed of small houses in close proximity on small lots.

In spite of the above considerations, the jury did not think that it could place this entrant above the Mention level—not because of its very striking similarity to the one which won a Special Mention last year in the PENCIL POINTS-Pittsburgh Architectural Competition, but because of the inadequate further development of that parti. In particular, it was held that the kitchen layout was not studied to the point where workability could be assured. The coat closet was lacking in the hall, other storage space was inadequate. The grouping of furniture around the fireplace was inappropriate, bedroom closets came in impracticable conflicts with windows, and the carport was placed in a very casual
PROGRAM REQUIREMENTS

The program for this competition called for the design of a house for a Georgia family of four—father, mother, boy of five, and girl of two. Their income was given as $3,000 a year and they could afford only an inside lot (orientation optional) 60 ft. wide and 150 ft. deep in an established residential section of a still growing city. Their budget limited the house to 1350 sq. ft. of usable floor area exclusive of garage and heater room. Lot restrictions required a set back of 20 ft. from the street and no building within 10 ft. of side and rear lot lines. 900 cu. ft. of easily accessible and well disposed storage space were called for over and above the usual closets and kitchen cabinets. The Georgia climate was described in detail. Emphasis was placed on “realism” in that the house must be economically buildable out of materials actually on the market or known to be in production.

FIRST PRIZE

This entry received favorable consideration because the "breezeway" arrangement is well liked in this region, and is a practical method of obtaining ventilation for the principal living quarters. The exterior appearance was considered as the most charming of those which by their other qualifications received attention for high place. The simplicity of the over-all scheming and the relatively small portion of the property occupied by the house were favorable aspects of the design.

Criticisms of the scheme were limited to such particulars as the minimum dimensions of the car shelter, the none too adequate provision for storage which should have been more accessible from the outdoors, lack of privacy in the dining area, and the relation of closets and window sash in the bedrooms.

SECOND PRIZE

The jury, while not particularly attracted by the external appearance of this solution, commented favorably on many features and felt that its merits as compared to the first place design are not adequately expressed by the proportion of the two prizes. It was pointed out, however, that the separation into two wings was more expensive than the program seemed to warrant.

Favorable comment was made upon the subordinated yet practical placement of the garage, the separation of living and sleeping areas which would assure mutual privacy on account of the location of the entrance centrally between the two areas, provision of combined study and guest room and basement space available for shop use or for play on rainy days.

Questioned were: the location and nature of the fireplace; the arrangement of furniture in the children’s bedrooms; the efficiency of the living room storage space without addition of another door at the narrow end; the effectiveness of the clerestory windows in the boy’s bedroom, situated directly above the adjoining roof.

THIRD PRIZE

This entry was commended because of the simplicity of its roof line and general external appearance. Other favorable comments included: the allowance for through ventilation of the living areas; use of intimate court effect at the entrance; use of a sloping roof and attic for ventilation and storage (although some questioned the convenience of a disappearing stairway in the carport).

Some members of the jury questioned whether two bathrooms were warranted, especially since both were located so that the housewife working in the kitchen, or the maid, would not derive any benefit from the duplication. Also questioned were the cost and maintenance of the fence and car gates which seemed essential to the plan as a matter of appearance and privacy.

FOURTH PRIZE

The split level arrangement of living and sleeping areas was considered practical by the jury. The cohesive living and dining areas with unhampered outlook toward the rear received approval, as did the seclusion of the study and guest room in the semi-basement. Some jurors questioned whether the carport was well placed, being open to the main entry, and whether at least the passage from it to the house entrance should not have been weather protected. It was also regretted that the southwest bedroom did not receive cross ventilation.

The main criticism, however, revolved around the lack of adequate study given to the exterior and to the elimination of such conflicts as seem to arise between the roof over the living area and the gabled end of the bedroom wing.

SPECIAL GEORGIA PRIZE

This solution rated high during the discussion of the jury because it seems economical and realistic in terms of popular acceptance and practical for living purposes. It was one of the entries where the garage was integrated as part of the house, although the opportunity derived from that was not fully exploited. Lack of a direct door from garage to hall, and the combination of the garage and main entrance doors, were criticized as not too successful from the point of view of design. In general, the greatest handicap of the design was what the jurors considered as a lack of distinction in its external appearance.

JURY OF AWARD

Thomas Harlan Ellett
Ernest A. Grunsfeld, Jr.
Richard Koch
Ernest J. Kump
Roy F. Larson
Robert Law Weed
Roland A. Wank, Chairman

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FIRST PRIZE

HUGH STUBBINS, JR.
CAMBRIDGE, MASSACHUSETTS
SECOND PRIZE

WATSON BALHARRIE
OTTAWA, CANADA

SOUTH

EAST

PLOT PLAN
THIRD PRIZE

HAROLD CALHOUN
HOUSTON, TEXAS

EAST ELEVATION

SECTION

SOUTH ELEVATION

A REALISTIC HOUSE FOR GEORGIA
PROGRESSIVE ARCHITECTURE
HOUSTON INC. COMPETITION
FOURTH PRIZE

WALTER PRESTON HICKEY AND RAYMOND WEBER

BIRMINGHAM, MICHIGAN, AND HUNTINGTON WOODS, MICHIGAN

A REALISTIC HOUSE FOR GEORGIA

PROGRESSIVE ARCHITECTURE - RICH'S INC. COMPETITION
MENTION AND SPECIAL GEORGIA PRIZE

WILLIAM EWART WILLNER
ATLANTA, GEORGIA

WEST SIDE ELEVATION

REAR (SOUTH) ELEVATION

BASEMENT PLAN

A REALISTIC HOUSE FOR GEORGIA
PROGRESSIVE ARCHITECTURE PENCILING COMPETITION
ROBERT L. ALBERT, Arlington, Va.—Good points: second floor layout with cross ventilation for all bedrooms; design of carport and entrance; handy disposition of storage; use of sloping roof and exterior design readily acceptable in locality; saving in ground area by two-story scheme.

Criticized for long and inward extension of living room; lean-to roof over garden end of living room seemed affected.
BILL ATKINSON, Bloomfield Hills, Mich.—Good points: simplicity of structure as shown by drawing; pleasant opening of living quarters onto well-developed adjoining courts. Criticized for length of house which absorbs most of property; location of children's closets in hall; entrance directly into dining space; amount of paving in front yard for car maneuvering; apparent necessity for two rows of porch columns to support roof.

APRIL, 1946 75
MENTION

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ARTHUR O. DAVIS, JR., Atlanta, Ga.—Good points: compactness of plan and simplicity of massing; easy access from entrance to all parts; heater room and storage located to take up dark space; adequate kitchen and good exposure of principal rooms to breeze. Criticized for lack of cross ventilation in bedrooms; distance from front of house to main entrance; necessity for passing open carport; cold exterior appearance.
JEAN W. DEYOE, Manhattan, Kans., and JOHN F. GRANSTEDT, Kansas City, Mo.—Good points: openness of living space and long view of property from front end; adequate kitchen; fireplace and furniture grouping; main entrance has good access to all parts. Criticized for costly carport; entrance through carport; opening of service entrance into dining room; lack of separation between kitchen and living space.
PROGRESSIVE ARCHITECTURE
RICH'S, INC.
COMPETITION
A REALISTIC HOUSE FOR GEORGIA

C. WILMER HEERY, Athens, Ga.—Good points: relatively short bedroom hall, with provision for cross ventilation of bedrooms; well combined garage and storage, with sheltered entrance to house; screened porch well placed for multiple use and dining room easily accessible from service area; acceptable exterior appearance. Criticized for too many complications of plan with jutting corners.
JOHN HIRONIMUS, Jackson Heights, N. Y.—Good points: simplicity of conception; length and openness of living quarters; good location of screened porch which would enlarge living area in summer; provision for rainy day play space in children’s rooms. Criticized for lack of cross ventilation in all three bedrooms; a rather stiff elevation toward the street.
PHYLLIS HOFFZIMER, Brooklyn, N. Y.—Good points: cross ventilation of living area; direct approach from carport to service area and house; accessibility to play yard from children's rooms. Criticized for no service yard near kitchen-laundry; inadequacy of folding doors for winter use with none indicated for separating terrace from corridor; abrupt entrance into living area; lack of cross ventilation or breeze in children's rooms.
DAVID K. KUECHLE, Oakland, Calif.—Good points: extensiveness of living quarters when thrown together; usefulness of activities room for parties; enclosed garage with direct access to house; good massing and appearance. Criticized for attenuated shape of living area on one side; excessive length of house absorbs property; master bedroom opens directly on living room necessitating two bathrooms.
AMES W. LARSON, Portsmouth, Va.—Good points: cross ventilation of all bedrooms and living room; entrance well related to service, living, and sleeping quarters; enclosed garage. Criticized for long corridor-like structure of garage and storage; abruptness of entrance into living room; depth of living room from court and view side.
LT. DAVID M. LEAF, Fort Belvoir, Va.—Good points: excellent plan; closed garage with good accessibility to living quarters; short bedroom hall with direct exit; extensive living area with cross ventilation at guest and dining corners; storage room at strategic point. Criticized for forbidding street appearance; lack of full utilization of breeze; small bedrooms made to look larger by indicating under-sized beds.
CARTER H. MANNY, JR., Michigan City, Ind.—Good points: compactness of plan for house proper; consolidation of living areas into sizable open space; shortness of bedroom hall. Criticized for open carport at entrance; excessive pergola a costly effort to improve appearance from front; location and narrowness of basement stairs; kitchen wider than necessary but too narrow to permit eating.
George Matsumoto and Gyo Obata, Bloomfield Hills, Mich.—Good points: simplicity of plan; possibility of roofing in different ways if desired; handling of garage; spacious living room suite; possibility of eaves ventilation detailed. Criticized for cold, mechanical appearance; bedrooms too near street noises, particularly sleeping porch; main entrance rather distant from front.
DAVID G. MURRAY, Tulsa, Okla.—Good points: pleasant exterior appearance; protected circulation from carport to main and service entrances; pleasant openness of living areas. Criticized because children’s rooms lack cross ventilation; bulk storage inadequate; food service across hall on social occasions; hall would appear long to persons entering house.
I. M. Pei, Cambridge, Mass.—Good points: very great charm of arrangement and appearance; use of interior courts would make for pleasant living; suppression of carport with sheltered connection to house. Criticized for smallness of courts necessitated by adoption of a relatively complicated scheme for this size of lot; excessive roof and lattice work; main living space pocketed; long halls in bedroom wing.
BARBARA and WILLIAM PFOUTS, Pittsburgh, Pa.—Good points: simplicity of plan and mass; openness of living area. Criticized for entrance directly into dining space; absence of fireplace; use of living room as passageway; use of one solid living room wall for storage cabinets; excessive distance from master bedroom to bathroom.
JOSEPH ELLIOTT PHILLIPS, JR., Atlanta, Ga.—Good points: compact plan; service portion well related to dining area and family entrance; easy access from entrance to all parts of home. Criticized for necessity of passing through car shelter to enter; inadequacy of dining space; skewed corridor near master’s bedroom; failure to plan for exposure to southwest breeze.
A REALISTIC HOUSE FOR GEORGIA
PROGRESSIVE ARCHITECTURE — RICH'S INC. COMPETITION

RICHARD R. RHODES, Balboa Heights, Canal Zone—Good points: simplicity of construction and massing; openness of living quarters and view; multiple-use area in place of bedroom hall. Criticized for lack of adequate cross ventilation; subdivision of bathroom; costly stone and lattice work; loss of space inside main entrance in conjunction with provision for coat closet.
A REALISTIC HOUSE FOR GEORGIA

PROGRESSIVE ARCHITECTURE • RICH'S INC COMPETITION

JOSEPH SALERNO, New York, N. Y.—Good points: openness to prevailing breeze; adequacy of kitchen and provision of front lavatory; study and guest corner well related to living space; entrances well placed. Criticized because kitchen too open towards living room; children's bedroom away from breeze; unnecessary large glass areas in hall; inadequate fenestration on north; lavish use of stone; girl's room small and lacks closet.
Hugh Stubbins, Jr., Cambridge, Mass.—Good points: pleasant living quality of house itself; sheltering of entrance; possibility of throwing guest-study corner into living space; good placement of fireplace; compactness of sleeping area. Criticized for semi-open garage near street; excessive use of plot for relatively small home; costly stone wall essential to design; interior bathroom questioned by some.
LYLE REYNOLDS WHEELER, West Los Angeles, Calif.—Good points: original and striking appearance; subordination of parked car; utility of living quarters on two floors separating noisy and quiet activities. Criticized for lavish use of stone and other expensive materials and construction, including skylight glass, lattice work, and wide cantilevers; sloping windows considered tour de force.
LYLE REYNOLDS WHEELER, West Los Angeles, Calif.—Good points: possibility of very simple construction; good massing and expression; thoughtful planning. Criticized for expensive manner of handling carport; extensive formal paving near street; inadequate storage space; cramped study and guest provisions; lack of cross ventilation for sleeping rooms; capricious furniture treatments.
CHARLES D. WILEY, Chicago, Ill.—Good points: admirably simple construction; use of bedroom corridor as part of play space; extent and flexibility of living space. Criticized for somewhat forbidding appearance with sequence of shed roofs; excessive height and openness of car shelter; lack of front lavatory; questionable type and location of fireplace; placement of master's bedroom in relation to play room.
J. FLOYD YEWELL, New York, N. Y.—Good points: agreeable domestic character; opening of entire house toward prevailing breeze; pleasant shape of living room and its cross ventilation; enclosed garage and front lavatory; study-guest room gains space from hall. Criticized for tendency toward costliness; excessive paving more or less required for court; location of storage room; abruptness of entrance into living room.
A HOME FOR THE U.N.O.

The people of the world are determined that the United Nations shall succeed in organizing the first successful cooperative movement on an international scale. The architects of the world must see to it that this organization is housed in the finest group of structures that the best designers in the world can produce.

Progressive Architecture continues actively to urge an international competition, properly conducted, as the only reasonable method of determining who shall design the U.N.O. headquarters, and to make sure that the best possible design is accepted.

Cables and letters have been sent to the leading architectural magazines and the professional societies in the member nations of the U.N.O., asking them to support, in what ways they are able, the concept of an international professional competition. Within the United States, we have urged a definite stand in favor of such a competition on the members of the A.I.A. advisory committee. We have pointed out to President Truman, Edward R. Stettinius, Chairman of the American Delegation, and the proper U.N.O. committee heads the importance of a competition. We are printing the replies so far received on page 100.

Simply accepting the word "competition" will not be enough. The architects of the United States, with their established methods of fair, professionally conducted competitions free from political or individual pressure, have a definite responsibility to make sure that the result will be the most fit, the most progressive, the most handsome structures that our age can produce. There was a "competition" for the buildings at Geneva, too. Let's not fall into the same trap.

The most important immediate consideration will be the development of the program. This statement of needs must not be narrow, rigid, or inflexible. It must call for a headquarters unit which can grow and develop as the move toward international amity grows and matures. It must not
be a rigid description of a few buildings needed at the moment, but a
description of those immediate requirements as part of an organic world
capital capable of logical growth. With a program thus carefully studied,
with a jury intelligently selected, with competitors chosen by the best
possible means within each country, an international competition should
succeed in producing a design which would rise above stylistic and dated
clichés. We cannot conceive of any other means of selection which would
be free of design prejudices and political pressures.

Progressive Architecture will continue to do everything within its power
to promote the right kind of competition. Every architect who feels the im-
portance of the matter should make his position clear.
I am very much in accord with the idea of a competition for planning the U.N.O. headquarters. Kenneth Reid is quite right: the problem is, who are the jurors, who is the professional adviser? I suggest that the jurors should each be paid for, and work out, a solution himself, to be checked by the professional adviser or advisers before judging the actual competition. Any juror who does not fulfill the conditions of the competition should be cut and not paid. This method would give us at least a jury which is thoroughly familiar with the problem (a desideratum which we nearly always miss, even with the "best" jurors). Of course the projects of the jurors could not be entered in the competition or used later.

Marcel Breuer, A.I.A.
Cambridge, Mass.

Thank you so much for sending me the editorial on the U.N.O. selection of an architect. I believe the case is correctly and splendidly stated. I think an international nominating committee for invited participants might be helpful, but nobody—invited or not—should be excluded from participation at his own cost and risk.

Richard J. Neutra, A.I.A.
Los Angeles, Calif.

I am glad to hear that you favor a competition for the U.N.O. headquarters, and I am pleased to see PROGRESSIVE ARCHITECTURE taking the lead in the organization of such a competition.

Such a group of buildings should inspire a real religious movement in architecture. The religion would be democracy. It has never been expressed in architecture, but today I believe that there are a lot of us to whom such an opportunity is a real inspiration. I think that such an expression should be one of the requirements set forth in the program. As such, this program would be the means of teaching the functions and potentialities of democracy which, after all, I believe is one of the functions of the U.N.O.

Alden B. Dow, A.I.A.
Midland, Mich.

May I add my own endorsement to your editorial suggestion that an international competition be held to select an architect for the permanent home of the United Nations Organization. I believe that a preliminary selection of each national group of competitors could be held, either by an open competition within each country or by government appointment. These chosen groups of competitors could then enter an international and final competition.

Morris Ketchum, Jr., A.I.A.
New York, N. Y.

Thank you for your letter of February 13. Curiously enough, my President, Sir Percy Thomas, wrote several weeks ago to Mr. Noel Baker, Minister of State, who was one of the British representatives at the United Nations Assembly, urging that the British Government should make representations for the holding of an international competition for the design of the headquarters, and we heard from Mr. Noel Baker saying that he would bring the proposal forward.

I will lay your letter before my Committee at their next meeting to see whether they think it is possible for us to take further action.

C. D. Spragg, Secretary
Royal Institute of British Architects
London, England

I have read with interest Ken Reid's editorial concerning the national competition for U.N.O. headquarters, and I think that basically it is very sound if the mechanics can be worked out satisfactorily.

It appears to me, however, that if each nation designates a limited number of its top-flight architects for its entrants it might end up with a creditable group of competitors and with an inadequate jury. Possibly the most important part of the competition would be the determination of a jury of caliber and insight into architecture that would be most beneficial to the determination of the correct competitive results.

In this instance I might suggest for your pondering that a group of architects selected by each country be a pool from which both jurors and competitors be selected, the pool of architects, of course, to be the top-flight members of the profession in each nation, as suggested by Ken Reid.

In any event, I am wholeheartedly behind the basic premises outlined in the editorial for the forthcoming competition.

Ernest J. Kump, A.I.A.
San Francisco, Calif.

There can be no doubt whatever that an international competition is the only possible way for selecting the architect for U.N.O.—or should one say architects, about which more later. PROGRESSIVE ARCHITECTURE should be commended for having taken an uncompromising stand.

As to the details, a good deal more discussion will be necessary than can be even remotely indicated in a letter. But at any rate, it is time to start free-for-all discussion—and for land's sakes, let us not restrict it to professional journals. With all respect to PROGRESSIVE ARCHITECTURE and its fellow-publications, let us get it into the papers which are read in Congress and in the State Department.

Roland A. Wank, A.I.A.
New York, N. Y.
C. B. & Q. RAILROAD STATION, Burlington, Iowa

HOLABIRD & ROOT, Architects
SELECTED DETAILS

Plan 3/4" Scale

Plan of Window 1/8" Scale

Typical Details 1/2" Scale

HOLABIRD & ROOT, ARCHITECTS

PHOTO on preceding page

CONTINUOUS PLATE INSULATING FILL COMPOSITION ROOFING

REINFORCED CONCRETE

BROWN COAT PLASTER ACOUSTIC TILE

GYPSUM LATH

COLUMNS

PLASTER

MARBLE

FLOOR

TERRAZZO

TERRACE
DRAFTING TABLE and TELEPHONE BOOTH

VAN DOREN, NOWLAND & SCHLADERMUNDT. Designers
DISPLAY CASE

STECKLER SHOP, New York City

MORRIS KETCHUM, JR., Architect
VICTOR GRUENBAUM, Associate

APRIL, 1946
MATERIALS AND METHODS

FROM THE TECHNICAL PRESS

By JEAN SHORT and DAVID ALDRICH

PAMPHLETS, MANUALS


Mr. Schunk has written this pamphlet to serve as a guide to public library planning. It presents a semi-technical introduction rather than a detailed text. The responsibilities of the members of the planning "team" (library board, librarian, and architect) are outlined and discussed with particular attention given to obviating the difficulties and errors of inexperienced "selling." The project, library remodeling, and moving share equal consideration with the problems of planning new units.

The first section of the pamphlet presents pointers for the general development of the building project: section two presents pointers for detailed planning—service spaces, finishes, hardware, equipment, etc.

The appendix contains a very useful section of reference data. Over-all costs, book collection capacities, book sizes, floor areas, reading room dimensions, shelving requirements, lighting, heating, and ventilating requirements are specified and dimensioned.

A selected bibliography refers the reader to more detailed working texts for library planning.


Mr. Weitz, illuminating engineer with C. E., here presents a semi-technical discussion of the development and design of fluorescent lamps. Graphs and tables illustrate fluorescent lamp utilization of energy, efficiency losses, phosphor aging characteristics, current utilizations, lamp size efficiencies, and temperature and light variations.

TECHNICAL ARTICLES


Despite the belief of some building owners, managers, and painters that new "water-thinned" (resin-oil emulsion) paints are merely a wartime expedient, available information and test data show that there are many places in building decoration and maintenance where water-thinned paints can be used to excellent advantage.

This article reports that water-thinned paints have excellent tint retention qualities and may be satisfactorily applied to most surfaces without primers or sealers (metal surfaces should be oil paint primed). The new paints go on very quickly and easily and most brands are odorless and dry within the hour. These paints are sold in a variety of tints and finishes.

Mr. Faulhaber states that the water-thinned paints may be applied without fuss or muss over wallpaper, paint, or plaster, but in conclusion remarks that careful preliminary steps and surface preparation will assure a better job. No information is provided on the application of wallpaper or other finishes over surfaces painted with water-thinned paints.

Mr. Couzens, research engineer and author of a recent book on plastics, has a most refreshing attitude toward the loudly heralded "Plastic Age." Claiming that most promises made, and some have been made by Mr. Couzens himself, were grossly exaggerated, he makes a strong plea for cooperation between the designer and the producer. Plastics, have, to date, been classed largely as "cheaper" substitutes; Mr. Couzens asks that they be classed as plastics, not ersatz, and used as such by designers. They are, essentially, non-structural, and should be employed as auxiliaries, in which field they have enormous value. Structurally, laminates have been tested and proven successful and the speaker makes a strong point of the difference between true plastics and those materials which have been laminated with plastic adhesives.

In speaking about design of plastic articles, Mr. Couzens brings up the well-worn complaint about plastics looking "cheap." He suggests that such articles be thicker; that if an appearance of solidity is put into plastics there will be a gain in marketability.


This article briefly discusses and outlines testing procedures for the following properties of porcelain enamels: fusibility; thermal expansion; thermal shock resistance; adherence; hardness; and resistance to abrasion; opacity; acid resistance of vitreous porcelain enamels; alkali resistance of vitreous porcelain enamels; weather-resistance of architectural enamels.


Mr. Bevan emphasizes the point that fire grading is concerned with the establishment of standards, and, while he does not suggest the method of attainment of such standards, he does maintain that no adequate fire prevention codes can be enforced without a broad standardization within the building industry. By first categorizing fire hazards (classification of occupancy, personal, and community hazards), Mr. Bevan is able to set up a rather clear-cut set of necessary precautionary measures. Limitations set up for the various classes include height and size, and surroundings.

Editor's Note: The Materials and Methods section is abbreviated this month because the pages ordinarily devoted to technical articles had to be made available for presentations of competition results.

Incidentally, last month considerable space in these columns was given to a review of the first issue of a new French technical-architectural magazine, "L'Homme et L'Architecture." That was an excellent first issue!
Acoustics

1-38. Burgess Acousti-Booth (Bulletin 459), 4-p. illus. folder on a doorless all-wood telephone booth equipped with sound-absorbing acoustic material; for industrial use. Burgess-Manning Co.

1-39. Zenolite Acoustical Plastic, 4-p. illus. folder on a sound-absorbing, fireproof plaster applicable with a trowel to old or new, flat or irregular surfaces. Universal Zenolite Insulation Co.

Airport Equipment

1-40. Announcing Bayley All Metal Prefabricated Tee Hangar, 4-p. illus. folder describing features of a prefab, low-cost, T-shape hangar of easy single or multiple erection. Suggested plan for small airport. William Bayley Co.

1-41. Low Cost Housing for Small Airplanes, AIA File 91-B, 8 pp., illus. Features wood hangars, suggested layouts for construction in single or multiple units, repair shops, large commercial hangars. Timber Engineering Co.

Air Conditioning


Air Treatment

1-42. AAF in Industry (Form 502), 32 pp., illus. Discussion of general dust problems in industry and suggested applications of air filters and dust control equipment. American Air Filter Co., Inc.

1-44. Disinfectaire Ultraviolet Germicide Equipment (Cat. 815), 20 pp. Brief discussion of germicidal ultraviolet electrically applied to air disinfection. Energy output distribution curves and tables of requirements. Data on and photos of types of units usable for upper and lower air disinfection, for air-duct installations, for industry and product application. Reference list. Art Metal Co.

Color Values in Vision


Concrete

3-61. Concrete Floors, 12-p. illus. booklet. General information on concrete floor construction; recommended specifications for heavy- and normal-duty floors; advantages of "Incor" 24-hour cement; test data. Lone Star Cement Corp.

Concrete Block


Connectors


Doors


Fireplace Equipment

6-61. Bennett Fireplace Supplies, 8-p. illus. booklet. Information on a fireplace-air heater unit applicable to any outside fireplace design; heating data; dimensions. List of fireplace accessories—grilles, dampers, spark curtains. Bennett-Ireland, Fireplace Div.

6-57. The Modern Fire Screen, Bennett-Ireland, Fireplace Div. Reviewed March.

Floors, Coverings


Floor Finishes

6-62. Roach Repellent Cement, 5-p. reprint of an article by F. O. Hazard on "Hubbellinian cupriferous magnesite cement; tests and results of repellency effect on various kinds of roaches. H. H. Robertson Co.

Furniture

6-60. The Arnol Sleeper, Arnol & Co. Reviewed March.

Garage Equipment


Glass


Gypsum Products


Hardware

8-87. Solid Brass and Bronze Hardware, 16-p. illus. booklet (8x10¼). General historical discussion of brass and bronze hardware; data on hardware designs by Sargent, Schlage, Stanley, Corbin. Copper & Brass Research Assn.

Heating Equipment


8-81. Ratings and Installation Guide (Form 860), Burnham Boiler Corp. Reviewed March.

8-82. Coleman Gas Floor Furnace, Coleman Lamp and Stove Co. Reviewed March.


8-75. Assured Economy in Automatic Heat (Form 242), Hershey Machine & Foundry Co. Reviewed March.


8-90. Hot Water Circulators, AIA File 29-D, 8 pp., illus. Data on a motorless pump (pressure operated) for hot water heating systems; an installation and specification manual. Vita Motivator Co.

Insulation

9-16. B-H No. 1 Insulating Cement, 4-p. illus. folder on a plastic insulating cement especially suitable for maintenance purposes. Bridge-Hill Co.


9-47. PC Foamglas Insulation for Tanks, Towers, Ducts, and Breeching (G5711) 24 pp., illus. Information on "Foamglas"—its properties, uses industrially, thermal conductivity; details and specifications. Pittsburgh Corning Corp.

Kitchen Equipment

11-09. Case Histories of Successful Mass-Feeding Operations, 14 pp. of plans for large-scale kitchens (hospitals, industrial plants, schools, Army and Navy buildings); list of cooking equipment used. G. S. Blodgett Co., Inc.

Laboratory Equipment

12-61. Laboratory Equipment (Bulletin 498), 10 pp., illus. Data on corrosion-resistant chemical stoneware; laboratory sinks, stands, outfits; table troughs, tops; pipe (fittings, traps, floor drains); diluting sump tanks, cement-asbestos pipe, ventilating equipment, paint, floors, etc. Dimension tables. U. S. Stoneware Co.

Library Equipment


Lighting Equipment

From General Electric Co., Lamp Dept. Reviewed March:
12-56. Super Service With Light (Y-546) (service stations).
12-57. Walk-to-Wall Lighting for Tomorrow’s Office (Y-547).

Marble
From Vermont Marble Co., reviewed March:
13-30. Individualizing the Store Front, AIA File 8-B-1.

Metals
13-31. Wrought Iron for Sewage Treatment and Disposal Installations, 28 pp., illus. Installations of sewage disposal plants. Technical bulletin on: heating coils in sludge digester tanks; gas handling; sewer outfall lines; air lines; distributor arms; waste heat boilers; vent stacks; bar screens; creek crossings, etc. A. M. Byers Co.
13-33. Expanded Metals, 22-pp., illus., on advantages and industrial uses of variations of sheet steel mesh: reinforcing, catwalks, walkways, safety guards, storage bins, etc. Technical data, standard accessories, partition details, design and load test data. U. S. Gypsum Co.

Office Equipment

Point

Partitions

Photomurals
16-82. From Blank Walls to Pictorial Epics with Kaufmann & Fabry Photomurals, 12-p. illus. brochure presenting installations of enlarged photos (available in color) for wall covering or decor. Kaufmann & Fabry Co.

Plastics

Piping Equipment
16-84. Functional Spring Hangers and Vibration Eliminators (Cat. 206), 32-p. illus. booklet on pipe and drainage equipment made of acid-proof, silicon iron alloy, especially manufactured to handle corrosive liquids and fumes. Duriron Co., Inc.
16-85. Duriron Acid-Proof Equipment, AIA File 298/1 (Bulletin 708-12), 12-p. illus. brochure on pipe and drainage equipment made of acid-proof, silicon iron alloy, especially manufactured to handle corrosive liquids and fumes. Duriron Co., Inc.
16-86. Better Drainage Made Easy, illus. folder (3X4x6) on perforated fiber pipe for septic tank fillers beds, drainage, irrigation, foundation drains. Fibre Conduit Co.

Pump Equipment

Refrigeration. Industrial
From Worthington Pump and Machinery Corp., reviewed March:
18-23. Bulletin C1100B-10A.

Steel

Trims. Metal

Welding
23-59. Airco Arc Welding Accessories (Cat. 130), 12 pp., illus. List of accessories for all types of arc welding machines and operations (electrode holders, graphite electrodes, welding cable, cable connectors, cable lugs, etc.). Air Reduction Sales Co.
23-60. The Welding, Flame Cutting, and Flame Descaling of Wrought Iron, 24-p. illus. information bulletin. Data on plastic and fusion welding of wrought iron, fittings, physical properties of welds, etc.; tables, tests. A. M. Byers Co.

Windows. Wood and Metal
Charting the progress of development of contemporary building materials and equipment is a most baffling occupation. One so bold as to essay it must be willing to winnow a huge mass of ridiculous chaff in hope of finding a few sublime grains; to hold in the back of a confused mind the current grim struggle for world power, speculating as to its effect on an American economy of which building construction is so important a part; to wonder at the tenacity with which we Americans cling to outmoded building codes and other practices when we have just seen—during a war emergency, of course—how much better a job we can do when freed from such restrictions; and eventually to arrive at a reasonable evaluation of the accumulation of developments in building products and their use. To compress all this into a few inches of type is a Herculean job in reverse, but we're stuck with it.

**GRAINS OF REASON**

With that off our chest, we report that certain logical trends are in the process of developing into action. Unnoticed in the whirl of news were a meeting on Sept. 27, 1945, of an A.S.T.M. Administrative Committee on Simulated Service Testing, and another of building industry representatives held at the National Bureau of Standards. Result: A proposal for formation of a new A.S.T.M. Committee on Methods of Testing Building Constructions (italics ours), for which L. J. Markwardt of the Forest Products Laboratory would be temporary chairman, J. H. Courtney of American Standards Association, temporary secretary.

A setup to test complete constructions, including as the proposal does the three primary elements of materials, engineering design, and fabrication details, should be heartily welcomed by code officials, building designers, and all others concerned in building. Both new and old developments could be assessed on the score of safety, and approved or disapproved, if such a procedure were in operation. Perhaps some day we will evolve a similar method of pre-evaluating a building's success in providing a healthful, amenable, happy, productive environment for the simple routines of living and working. Then, indeed, the millennium will have arrived.

We can't resist this: At the same time, A.S.T.M. received a recommendation from its Administrative Committee that the Society's present Committee on Fatigue of Metals be reconstituted as a Committee on Fatigue.

Gordon Lorimer's slide film on Modular Coordination is being shown at professional and commercial meetings and schools of architecture all over the country. (We presented an inadequate preview of it last January.) A staggering number of publications, associations, manufacturers, and individuals are enthusiastically backing the modular program. The need now is for a concise, simple explanation for use on drafting boards—nothing verbose or intricate because one of the virtues of Modular Construction is its simplicity. We come across increasing evidence of its acceptance abroad; just the other day a friend newly in from Sweden told us how many million kroner the Swedes expect to save on door construction alone if they can put across their 10-centimeter module; and the British technical press is following developments here closely. There's more than a hint that Modular Coordination may become an international standard.

**SPIRALING COSTS**

Coordinated or not, we hear a lot about the short supply of building materials. They are short—and, despite attempts at controls, expensive. According to American Builder, a St. Louis firm of real estate analysts found materials to be more costly last October than at any time since 1913, with the single exception of 1920, judging by costs of building a typical 25,300 cu ft suburban house. At the same time, labor costs involved were substantially higher than in any recorded year. Since October, if anything, both costs have probably increased. We come across increasing evidence of this.

The Glenn L. Martin Co. must be preparing to market many of the developments which it found satisfactory in producing war-planes. Recently it announced the impending release of a liquid photographic emulsion which can be brushed on any surface—an outgrowth of the war practice of photo-printing drawings directly on materials to be fabricated, called "photo-lofting." Metal, wood, cloth, leather, plastic—any material—can be used as a base; Junior can enlarge his girl's photo directly on the wall, or Pop can decorate the living room with homemade photomurals; bill posters may have to learn a new trade. Martin calls it the tintype up-to-date.
risen. In addition to the generally recognized factors behind the situation are two which less attention has been paid: building codes and labor supply.

AS TO BUILDING CODES...

On codes, George N. Thompson, Chief, Division of Codes and Specifications, National Bureau of Standards, has stated that a need for cooperative action is generally recognized throughout the building industry, and that some kind of a national base, to which local codes can be compared, appears indicated. Rather than a “national” code (which could hardly encompass such diverse local needs as earthquake-resistance in California, cyclone-resistance in Kansas, and snow-loads in Maine) he suggests establishment of a reference base, which might take the form of national building standards. Illustrations are the excellent, recently issued Bureau of Standards publications, *American Standard Building Code Requirements for Minimum Design Loads*, and *American Standard Building Requirements for Masonry*. Others have been issued or are in preparation.

... AND LABOR ...

On labor, the U. S. Chamber of Commerce is anticipating a shortage even (Continued on page 112)

**THIS MONTH’S PRODUCTS**

**AIR TREATMENT**

Precipiton. Electrostatic air cleaner for homes; refrigerator-sized unit installable with duct work of an air conditioning or central warm-air heating system; said to remove up to 90% of dust particles. Westinghouse Electric Corp., 40 Wall St., New York, N. Y.

Evapatrol Unit. Odor control and air freshening in enclosed spaces by mechanical or natural volatilization of “Airkem”—complex group of aromatic substances from plants and activated charcoal. (Not an air conditioner.) W. H. Wheeler, Inc., 7 East 47th St., New York 17, N. Y.

**COMMUNICATIONS SYSTEMS**

Home Inter-Com. 2-way inter-com appliance for home use, operates on 110 volts, A.C. or D.C. Excutoone, Inc., 415 Lexington Ave., New York 17, N. Y.

**DRAFTING ROOM EQUIPMENT**

S & J Quadrangle. Adjustable plastic triangle (4" x 11") with 8 drawing edges, pitch scales to 24/12, angles to 90°, sine or cosine functions. Stewart-Jackson Instrument Co., A. G. Bartlett Bldg., Los Angeles 14, Calif.

Layout Protractor. Ruled lines on underside of quarter-inch beveled glass, in actual contact with layout, for fine readings, accurate marking. Universal Engraving & Colorplate Co., Inc., Engineers Specialties Div., 980 Ellicott St, Buffalo 8, N. Y.

**ELECTRICAL EQUIPMENT**

Aireon Circuit Breaker. 15-35 amp circuit breaker designed to keep electrical contacts approximately 1" apart when overload occurs; operable any position; front or back connection. Aireon Mfg. Corp., Kansas City, Kansas.

**FLOOR COVERINGS**


Floor Mat. Synthetic rubber mat for heavy duty use; available in color, corrugated or pyramidal surface, with or without perforations. United States Rubber Co., Rockefeller Center, New York, N. Y.

**FURNITURE**

Arnot Sleeper, Model 12. Hotel sleeping unit, used as living-room divan, convertible by push button to full-size single bed; self-counter-balance principle. Arnot and Co., 200 W. Saratoga St., Baltimore 1, Md.

**GAGES**

Pressure Gage. New bellows type, low-range, bronze gage to indicate draft pressure or any low pressures of gases or liquids not corrosive to bronze. Type 1188 P ranges from 10" of water to 10 lbs pressure; Type 1188 V from 10" of water to 20" mercury vacuum. Manning, Maxwell & Moore, Inc., Bridgeport 2, Conn.

**HARDWARE**

Authotone “Suburban” Chime. Brass doorknocker with automatic, ivory chime box mounted on inside of door; no wiring, battery, etc. Auth Electrical Specialties Co., 422 East 53rd St., New York 22, N. Y.

Aluminum Finished Locks. Locks coated with aluminum oxide; stain, tarnish, and weather-resistant. Schlage Lock Co., 2201 Bayshore Drive, San Francisco 19, Calif.

Doormaster. Aluminum, spring-loaded doorstop, with bullet catch and rubber foot, for “rugged” use. Swallow Airplane Co., Inc., Wichita 1, Kansas.

**HEATING EQUIPMENT**

Heat-O-Meter. Celluloid calculator to measure radiation for steam and hot water heating systems. Heat-O-Meter, 424 West 42nd St., New York 18, N. Y.

**KITCHEN EQUIPMENT**

Rolling Door Cabinet. Enamelled steel kitchen cabinet (18” and 24” widths) with roll-up (Continued on page 112)
worse than the existing squeeze. In cooperation with the Society of Civil Engineers and other associations, the Chamber has prepared a pamphlet, Opportunity Unlimited, for distribution through local chambers to veterans and others interested in being trained in skills needed in construction. Miles Colean, in a series of articles in Banking magazine early in the war years, predicted postwar labor shortage; now the U. S. Chamber says "... it has long been evident ... that, once building activity is under way in substantial volume, the next shortage will be one of skilled men, both professional and construction and building workers." A bit late, that statement; the labor shortage has been with us for some time. Ask any architect who's tried to hire a draftsman since V-E Day.

.... AND SUBSIDIES?
In view of these high costs, we cannot help but side with Wilson Wyatt in his fight for subsidies for building materials production. We need inexpensive houses. Materials and labor cost too much to make such houses possible. Cutting labor costs is impossible. Ergo, stimulate the flow of building materials until they become available, at low cost, to consumers. The forces which, professing sympathy for house-less veterans and others, nevertheless cannot see the validity of such direct reasoning, have successfully blocked Wyatt's straightforward appeal for materials subsidies. But Wyatt is a resourceful man. There are probably indirect ways of attaining the same end; in spite of Congressional defeat, in spite of recantation by the National Association of Home Builders of its endorsement of the subsidy idea, he will find a way.

FOR A CLEANER WORLD
Westinghouse, through Automatic Laundry Distributors, Inc., is pushing a new, coin-in-slot, automatic, Laundromat-equipped planned laundry for apartment houses. A.L.D., Inc., has had some years of experience; now, with Westinghouse backing, it has offices in a few key cities and plans to license operators in many others. Under the usual agreement the landlord provides space, rent-free, in consideration for the additional service provided for tenants; A.L.D. pays installation, maintenance, and current costs. Another, older outfit, Telecoin, Inc., offers a similar service.

LOAD TRANSPORTATION
Small Power Truck. For lifting and transporting loads to 3,000 lbs in limited areas; equipped with horizontal non-swivel room. Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 14, Ohio.

Fork Attachment for Power Trucks. Fork and lade attachment for industrial trucks, for quick and safe transport of hot or cold materials. Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland, Ohio.

HANDY-ROASTER. Light, steel production tool for quick and safe transport of hot or cold materials. Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland, Ohio.

WELDING
Airco 312 Electrode. All-position mild steel gas welding electrode for preventing underbead cracking, for laying "wild" grain, for providing even foundation to keep grain from showing through finishes. United States Plywood Corp., 55 West 44th St., New York 18, N. Y.

PLUMBING
PLUMBING EQUIPMENT

Pipefite-Stik. Compound in stick form for lubricating and sealing pipe joints. Withstands gasoline, oil, butane, Freon, air, water, cold, brine, etc.; prevents rust, scale and corrosion of metal. Lake Chemical Co., 607 N. Western Ave., Chicago, Ill.

Refrigeration Equipment
Form and Home Freezer. Capacity 12 1/2 cu ft; dimensions 28 1/4" x 36" x 63". Ben-Hur Mfg. Co., Milwaukee 12, Wis.

AIRCOOLER. Tower unit for outdoor installation to cool air, directly, for air conditioned areas; 6,000,000 Btu capacity. American Home Metal Window. Residential casement sash, "packaged" unit, glazed or unglazed, prefitted with wood surround and exterior trim, installable in 5 min. Automatic operators, 100% venting. Snap-on metal storm sash, inside screens, space for Venetian blinds; can be cleaned from inside. Meeker Brothers Iron Co., 424 S. 7th St., St. Louis 2, Mo.
Ordinary glass can be subjected to two types of treatment to increase its strength and offset its brittleness. One process is lamination with sheets of transparent plastic, which produces safety glass, and another is the production of tempered glass. The former is used in safety glass, but safety glass cannot be tempered. Both processes have been widely tested in civilian use, and bullet-resisting glass has been further developed for military purposes during World War II.

SAFETY (LAMINATED) GLASS

DESCRIPTION. All types of safety glass (including bullet-resistant, for which see below) consist of multiple layers of glass bonded with controlled heat and pressure to interlayers of transparent plastic. Safety glass, in common trade practice, ordinarily has two layers of glass, one of plastic; bullet-resisting glass has more than two glass layers. The glass layers may fracture, but the splinters or granules will ordinarily adhere to the plastic membrane instead of flying off. With the comparatively recent introduction of improved plastics and new methods of combining the materials, most types of safety glass now available will "dent" rather than puncture under impact at reasonable velocities.

Physical characteristics and properties are tabulated elsewhere on this page. In most respects, the properties of safety glass are the same as those of homogeneous glass of the kind used in the glass laminations, except that, due to the plastic layer, safety glass will not withstand prolonged exposure to high temperature (max., one hour at approx. 175°F, or longer at approx. 150°F). Except in special types of safety glass, the plastic layer is held to the minimum thickness that will fulfill its function—a few hundredths of an inch. The plastic used is a tough, transparent derivative of the vinyl group; vinyl acetate, polyvinyl acetate, and vinyl butyral are used; all are thermoplastic (soften at high temperature). Maximum sizes available in the various thicknesses vary according to the manufacturer (see table) and are governed primarily by the maximum flat dimensions of the sheet plastic interlayer. However, larger sizes can be obtained by but-joining the plastic.

Glass used in safety glass may be picture-framing quality, single or double strength glazing quality, or various thicknesses of plate glass. Combinations of single and double strength are also available as a standard product. On special order, safety glass may be obtained with one or more glass laminations tempered (see below). Bent safety glass may be obtained, but is comparatively expensive because each layer must be bent individually (or in pairs) before laminating. Greater tolerances than normal are required. Bends are limited to dimensions and types available in the particular kind of glass from which the safety product is made. Bent safety glass is obtainable in sizes where projected area or dimensions do not exceed those of the flat safety glass.

USE. Depending on the quality selected, safety glass is useful for glazing automobiles, airplanes, railroad cars, buses, etc.; for air-conditioned precautionary glazing in buildings; for all purposes subject to impact hazards, such as glazing for toll booths, protecting shields or glazing in laboratories, pressure chambers; for large glasses not subject to excessive temperatures; for animal cages in zoos or aquariums; and for glass-top tables, other furniture, screens, doors, windows, etc.; particularly when there is likelihood that glass breakage might cause physical injury.

Safety glass may be worked in shop or field (cut, drilled, ground, etc.) with little difficulty if manufacturer's directions are followed. However, safety glass containing tempered glass cannot be worked after manufacture (see "Tempered Glass"). Ordinary glazing putty or mastic cannot be used with safety glass because it will affect the plastic adversely. Special compounds and mountings are used. For unusual conditions consult manufacturers.

"FLEXSEAL" is a special laminated safety glass produced only by one manufacturer. It consists of two panes of glass, with between them, a much thicker, tougher layer of plastic than ordinarily used in safety glass. This plastic layer is purposely larger in extent than the glass, so that a plastic rim surrounds the product. This plastic rim may be any desired thickness and may be machined to any desired contour; the rim may be clamped into the channel or other frame, and being

<table>
<thead>
<tr>
<th>SAFETY GLASS—Kinds, Sizes, Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kind of Glass</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Thin (photo)</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Combination</td>
</tr>
<tr>
<td>Double</td>
</tr>
<tr>
<td>Plate</td>
</tr>
<tr>
<td>Heavy Plate</td>
</tr>
<tr>
<td>Flexseal</td>
</tr>
</tbody>
</table>

*Where two areas are given, upper figure is standard for Libby-Owens-Ford Glass Co.; lower for Pittsburgh Plate Glass Co.

**Note:** All kinds consist of two laminations of glass, one of plastic.

BULLET-RESISTING (LAMINATED) GLASS

DESCRIPTION. Bullet-resistant glass is built up of more laminations than safety glass, and the glass employed is plate; otherwise its characteristics and those of safety glass. Research by the Libby-Owens-Ford Glass Co. (Aircraft Technical Bulletin 85-62, L-O-F) indicates that "unbalanced" laminations, in which a thicker layer of glass is used for one interior lamination, will provide maximum protection for a given over-all thickness provided the thicker layer is near the outside of the unit. For instance, a typical unbalanced unit has individual lights 1/4", 1/4", and 1/4" thick, with the 1/4" layer in the center and the 1/4" layers on the outside. The following table shows the thicknesses, tolerances, etc., for certain types of double or triple glazing, or wherever safety glass of unusual resistance to penetration is required. However, Flexseal is not comparable to bullet-resisting glass; it will not resist the impact of a bullet as well.

BULLET-RESISTING GLASS—Thicknesses, Tolerances, Etc.

<table>
<thead>
<tr>
<th>Thickness (nominal in.)</th>
<th>Tolerance (in.)</th>
<th>No. of Glass Plies</th>
<th>Max. Area</th>
<th>Weight (lb/sq ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>3/4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1/2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1/8</td>
<td>1.3/16</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1/2</td>
<td>1.9/16</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.3/32</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1/2</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Variations from standard products listed may be obtainable on special order.
Regardless of superficial area, the greater uniformly distributed load which any square light of glass can bear is as given in the table. Strength of a square piece may be obtained from the formula:

\[
P = \frac{3.3 \cdot M \cdot R}{A \cdot S}
\]

where:
- \(P\) = pressure in lb/sq in.
- \(M\) = modulus of rupture, lb/sq in.
- \(R\) = glass thickness, in.
- \(A\) = area, sq in.
- \(S\) = factor of safety; usually 10 for higher loadings

\[S\] for lower, including noted.

**BUILDING PRODUCT FACTS**

1/4", 1/4", 1/4" thick, reading from outside (source of danger) to inside; the resulting glass would be nominally 1 - 1/2" thick. The same report states that, for any given over-all thickness, the resistance to penetration decreases as glass is substituted for glass; in other words, for resistance to the impact of a bullet, the plastic films must be as thin as possible. Thin glass is used for outside layers; this reduces the amount of glass spalling or dislodgment off the inner surface due to bullet impact.

Transparency, or visible light transmission, varies from 70 to 84%, depending on amount and type of glass and plastic contained in the assembly. Bullet-resisting glass should satisfactorily withstand temperatures as low as minus 40C, hot, humid air, and ultra-violet radiation without cracking, separation of glass, or formation of bubbles in, or discoloration of, the plastic interlayers. Bent bullet-resisting glass is obtainable in cylindrical sections with a minimum radius of 15" and girt between 60 and 90 degrees of arc, depending on radius and thickness. Spherical or two-way bends are not yet obtainable. Thickness of individual glass layers should not exceed 1/4" if glass is to be bent.

Use of tempered or semi-tempered glass does not improve bullet-resistant glass; stresses in a bullet impact are too high and too concentrated.

**TEMPERED (HEAT-TREATED) GLASS**

**DESCRIPTION.** Almost any type of glass (excepting such products as laminated safety glass and wire glass) may be tempered. The process consists of reheating the manufactured product almost to the softening point and then chilling it suddenly. The sudden cooling induces high compression of the outer surfaces and tension in the inner portions, a sort of "stressed-skin" effect which makes the product more resistant to shock and temperature change than ordinary glass. The skin must be penetrated before tempered glass will fracture; when it does, the glass disintegrates into many small crystals rather than sharp splinters.

Tempered glass is from three to five times stronger than comparable plate glass in sustaining loads or resisting stress, up to seven times as strong in resisting impact, and more than three times stronger in resisting heat shock. It will withstand limited bending stress; depending on such factors as size, shape, etc., it can be twisted up to an angle of 20 degrees without breaking. Safe working temperature is 650°F.

The tempering process may cause a small amount of distortion, or "bow" (variable from 1/8" to 13/32" depending on thickness and too concentrated. The tempering process may cause a small amount of distortion, or "bow" (variable from 1/8" to 13/32" depending on size, shape, etc., it can be twisted up to an angle of 20 degrees without breaking. Safe working temperature is 650°F.

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**Sources of Supply**

**Specifications**

**Tempered Glass—Properties: Compared with Plate Glass**

<table>
<thead>
<tr>
<th>Property</th>
<th>Plate Glass</th>
<th>Tempered Glass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (Mod. of Rupture)</td>
<td>6,500 lb/sq in.</td>
<td>29,500 lb/sq in.</td>
</tr>
<tr>
<td>Hardness (Moh's Scale)</td>
<td>5.5 - 6.5</td>
<td>7</td>
</tr>
<tr>
<td>Heat Resistance (Average temp. diff. °F required to cause failure)</td>
<td>100 - 147°F</td>
<td>400 - 465°F</td>
</tr>
<tr>
<td>Impact Resistance (Critical height for dropping)</td>
<td>2 lb steel ball</td>
<td>8&quot;, 37&quot;</td>
</tr>
<tr>
<td>Max. Load*</td>
<td>21,000 lb</td>
<td>94,500 lb</td>
</tr>
</tbody>
</table>

*Regardless of superficial area, the greater uniformly distributed load which any square light of glass can bear is as given in the table. Strength of a square piece may be obtained from the formula:

\[P = \frac{3.3 \cdot M \cdot R}{A \cdot S}\]

where:
- \(P\) = pressure in lb/sq in.
- \(M\) = modulus of rupture, lb/sq in.
- \(R\) = glass thickness, in.
- \(A\) = area, sq in.
- \(S\) = factor of safety; usually 10 for higher loadings

5 for lower, including noted.

**USBS of tempered glass include frameless entrance doors, partitions subject to reasonable impact or thermal shock, port-holes, gage covers, shelving, furniture tops, showcases, enclosures in zoos and aquariums, balustrades, stair rails, kick plates, institutions such as hospitals, faiis, or asymlums; and for applications where high or suddenly changing temperatures are encountered, such as fire screens, lamp covers, sterilizers, cooking ovens, etc.**

**Special Considerations.** Because any kind of working subsequent to tempering would rupture the stressed skin, special shapes, drilling, cutting, decoration, etc., must be submitted to the manufacturer for approval and execution in advance of tempering. Tempered glass is obtainable in circles, squares, rectangles, curves, special shapes pre-cut to pattern. It can be sandblasted providing the design is simple and the depth of cut is limited to 3/4" maximum; complicated designs must be approved by the manufacturer. Sandblasting weakens the product somewhat and tends to increase bow, particularly if on one side only.

Holes (circular) must have a diameter at least equal to glass thickness up to 1/2" thick, or 1/16" greater than glass thickness over 1/2" thick. Minimum width of lights containing holes is 8 times glass thickness. Distance from edge to rim of hole must be at least 3 times glass thickness up to 1/2" thick, 4 times if over 1/2" thick. Holes near corners must have nearest edge at least 6 - 1/2 times glass thickness from tip to corner. Non-circular holes must have rounded corners, radius at least equal to glass thickness. Requirements for large or numerous holes, and for unusual notches, cuts, etc., should be submitted to the manufacturer.

Edges on 1/4" tempered glass can be clean cut and sawed. Glass over 3/8" thick must have ground and seamed edges. Polished edges are available. Bevels can be up to 7/16" on the face, not deeper than half the glass thickness. Mitters cannot be greater than 30 degrees, lower edge slightly rounded.

**Semi-Tempering** may be employed when a product is desired with only part of the characteristics of fully tempered glass. Strength imported by this process is more than double that of annealed plate glass; its fracture characteristics are between those of tempered and untempered glass.

**Sources of Supply**

**Abbreviations** in the list below refer to the following: American Window Glass Co., Pittsburgh, Pa.; Libbey-Owens-Ford Glass Co., Toledo, Ohio; Pittsburgh Plate Glass Co., Pittsburgh, Pa.; Blue Ridge Glass Corp., Division of Libbey-Owens-Ford.

**Trade Name**

**SAFETY GLASS**

1/32" - Hi-Test Thin Safety
- Aerolite
7/32" - Hi-Test S.S. Safety
- Duolite S.S.
15/64" - Hi-Test Combination Safety
- Duolite Combination
1/4" - Hi-Test Safety Plate
- Duolite D.S.
- Duolite Combination Plate
11/32" - Hi-Test Heavy Safety Plate
- Flexasite
- Plexite
- Supratest

**BULLET-RESISTING GLASS**

Armor-Lite
3/4" to 5" - Bullet-Resisting Glass
- 1/2" to 1 - 1/8" - Super Multiple
1 - 1/2" - Hi-Resist Multiple
2" - Hi-Power Multiple

**Tempered Glass**

Herculite
Semi-Tempered
Securit
Tuf-Flex

**Manufacturer**

Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
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Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
Pittsburgh, Pa.
Libbey-Owens-Ford
Pittsburgh, Pa.
Adlake Aluminum Windows offer many advantages for so little more. Elimination of excessive air infiltration, finger-tip control, no warping or sticking—thanks to an exclusive combination of nonmetallic weatherstripping and serrated guides. What's more, they're beautifully designed for lasting architectural appeal and efficiency. We believe you'll find it well worth while to get full information about Adlake Windows before specifying or detailing any window.

THE ADAMS & WESTLAKE COMPANY
 ALSO WINDOW MAKERS TO THE TRANSPORTATION INDUSTRY
 ESTABLISHED 1857   ELKHART, INDIANA   NEW YORK • CHICAGO
ACOUSTICAL CEILINGS—With high coefficients of sound absorption and light reflection, Johns-Manville Acoustical Ceilings are proved aids to concentration and working efficiency. Demountable units give ready access to wiring, etc., in the furred space, and allow quick relocation of the ceiling if desired. An exclusive Johns-Manville patented construction system permits interchangeability of flush-type fluorescent lighting and acoustical units.

MOVABLE WALLS—The keystone of flexibility in Unit Construction is the J-M Transite Wall. Can be disassembled and relocated as needs require. Made of fireproof asbestos and cement, practically indestructible materials, the movable panels form rigid, double-faced partitions, 4" thick. Can also be used as interior finish of the outside walls. Removable Transite panels permit ready access to concealed pipes and wires. Special brackets and supports, easily attached to the steel studs, provide unlimited flexibility in arranging shelves, piping services, etc.

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"The sidewalk café and the indoor bar are unified by the triangular shaped Plate Glass partition, through which the decoration carries from the outside to the inside areas. The exterior material is grey Carrara Glass.

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World-Wide Building Service

April, 1946 121
REVIEWS

BOOKS

ACCEPTABLE REALISM


This singularly sane book presents a definite, reasoned program of action for city planning. It is comprehensive and logical.

Louis Justement sees the picture whole. He knows that no city plan can go beyond the economic limitations that beset its acceptance, and he also knows that any plan which wholly accepts those limitations is not worth anyone's consideration. He discusses in detail the working out of the following essential elements, the adoption of which in some form is a precedent to action:

1. Continued adoption of urban re-development laws by the various states and amendment of existing laws to contain the following provisions:

2. Redevelopment shall not be undertaken in a haphazard, piecemeal fashion but shall be done on the basis of a master plan for the entire city.

3. In order to facilitate the execution of such a plan, the municipal authorities will determine the areas to be re-developed and the order in which they shall be reconstructed.

4. The assemblage of land for re-development will be undertaken by the city or a municipal realty corporation acting on behalf of the various municipal corporate units within a metropolitan urban region.

5. The land thus acquired by the municipality will be leased to private developers. It may be sold only in the case of projects consisting entirely of individual houses for sale.

6. When such land is leased, the term of the lease shall not exceed fifty years.

7. In order to permit adequate city planning without unnecessary disturbance of existing property relationships, the condemnation laws shall be modified as follows: The price paid by the city for land and existing improvements shall be based on the fair market value of such land and improvements as of the date the legislation implementing a general urban reconstruction program is approved.

8. In view of the time that may elapse between condemnation of individual properties and the start of reconstruction, valuations may be made in advance of actual acquisition by the municipalities; in any event, due allowance shall be made for fluctuations in the purchasing value of the dollar as well as for depreciation of improvements.

Thus condensed there is nothing that is particularly new: The virtue of the book lies in the extremely well-reasoned analysis which supports the need for these steps, the reasons for the need, and the results of getting them. The chapter on "A Retirement Plan for Buildings" is the best "time zoning" proposal I have yet seen; the series of suggestions for legislation and administration are forward looking and provocative. There are many things to disagree with, as there should be; but disagreement can be based on principle and logic, and not on emotion.

Nor do I want to overlook the fact that this book is written by an architect of wide experience with business and government, and that it therefore comprehends the physical world in relation to those basic facts of our economy which underly all city-planning efforts: the multiple ownership of land and the need for control, the complications of the tax structure, the impact of subsidy, costs, and the "business cycle." Justement's point is that these are the things, as they affect city planning, we must resolve, and his program is aimed at their resolution in relation to city planning. Planning can then become a reality instead of merely a statistical collection of difficulties without solution. His "case study" of Washington

(Continued on page 124)
• Hard to believe, but this beautiful lawn is actually the roof of an apartment garage! It's a modern roof, covered with luxurious grass and shrubbery. Putting valuable roof space to work is typical of the new architectural trend—not only as garden areas but for practical utility as well. Sunny, safe areas for schools; storage and heavy traffic roofs for factories—yes, even roof parking lots are a practical possibility today, not just something to be hoped for tomorrow!

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FREE ON REQUEST!
REVIEW

(Continued from page 122)

presents a physical interpretation. We could not have his replanned Washington today, but we could have it tomorrow if we wished.

I hope this book is as widely read as it should be, by professionals and laymen. We are not going to rebuild our cities either into Road Town or The City of Light, nor are we going to rebuild them by street-widening and mere analysis. Justement indicates an approach to the compromise we must some day reach, a socially--and therefore economically and politically--acceptable framework for urban planning within which a creative imagination can find play. He makes it seem not altogether impossible. It is unfortunate that his plan studies of Washington, excellent as originals and so important to the second part of the book, are so incredibly badly reproduced.

HENRY S. CHURCHILL

FATHERLY PEP TALK


The first impulse for a modern architect after reading this book would be to rename it from an anagram of the title and call it "Architectural Arsenic."

The opening paragraph gives the reader a clue to the author's conception of contemporary architecture. He states, "Even the most advanced and enlightened contemporary critics of architecture still, in the main, assess the merits of buildings on the basis of their external effect." That statement and further expansion of it in later chapters of the book place the author in that group of architects who consider contemporary architecture "just another style." Even the most casually informed student in any of our progressive schools would take exception to the above quotation and to many others that follow.

Howard Robertson, the author of this book, is an architect and educator of some note in Great Britain. One of his previous books, _The Principles of Architectural Composition_, may be recalled as having some following in this country several decades ago. In that book he attempts to set down rules and formulae—the modern Vignola. It is therefore not surprising to read his new book and to find it mainly a fatherly pep talk to the young men engrossed in the modern movement in architecture.

The author is conscious of the turmoil going on in architecture and tries to analyze it without understanding it basically. He regrets that the client must often make the difficult choice between a traditionalist and a modernist. He dubs the architect as a man suffering from schizophrenia. He makes the architect a trafficker in styles—a pandering to the young men engaged in the modern movement in architecture.

The book is dangerous because it is filled with double talk and contradictions. A superficial reading of the stated platitudes could mislead the reader into the belief that the author is pleading for a progressive and democratic architecture.

Such statements as "An artist who works down to a low level of public taste is not going to produce the best
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The good statements are negated by such tripe as "There is nothing against eccentricity, but if eclecticism is once admitted, it should be frankly recognized in principle as contributing to the richness of the architectural vocabulary." And, as he goes on to say, "But it is undeniable that there exists a school of contemporary designers whose reputations would scarcely survive the production by their drafting rooms of a building with arcaded fenestration." On the contrary, there is no first-rate school of designers who deny any of the basic structural systems if they are used with honesty of expression and structural integrity, but to use the arch as a sentimental tour de force is contrary to the fundamental honesty of any good contemporary designer. Robertson overlooks that fact.

This book is not a wholesome book nor is it honest. It is, however, interesting in that it shrills the cacophonous death rattle of the eclectic school of architecture. He botches his discussion of the basic problems of the architect. The evidence he uses to support his argument is suspect. The indictments are not valid.

PROF. HENRY L. KAMPHOEFNER, A.I.A.
University of Oklahoma

DELAYED-ACTION BOMB


The publication of an English language version of Camillo Sitte's book on City Building According To Its Artistic Fundamentals was long overdue. Eliel Saarinen (who contributes a note on the author to the present volume) had analyzed Sitte's contribution to town planning rather thoroughly and perspicaciously in his book, The City, and other critics and students have, according to their views, belittled or extolled the value of Sitte's influence a half century ago. For the most part, however, architects and city planners of this century, if they even knew that the work existed, have been busy about its argument.

In 1889 Sitte, a Viennese architect, disgusted with the stilted formality and the lack of either taste or imagination in the city plan typified in Huysmann's work, wrote his book which, as the translator says, "burst like a demolition bomb on the city planning practices of Europe." His thesis was that the studied application of formal design rules to the planning and building of cities had forced a neglect of fundamental principles—those very principles, he claimed, which resulted in pleasant, naturally organized, socially useful cities in the classic period and in the middle ages.

Those principles for which Sitte was seeking, and in the defense of which he wrote his book, were, first, informality (as opposed to symmetry), second, the treatment of squares and open areas in the city plan as specific enclosed spaces (as opposed to considering them merely termini of formal avenues), and finally, a pleasant, as well as usable, arrangement of buildings which, he contended, would result from an "artistic" correlation of buildings aided by broken street fronts and bent axes (as opposed to the forced regularity of buildings planned on a rectangular street pattern).

It is easy to contend that Sitte's observations were made at a time when neither skyscrapers nor automobiles had been conceived. It is also easy to point to signs of limited vision in his
Teen-aged boys are rough on hardware. Leo A. Daly Company, Architects, of Omaha, Nebr. say ... "it is very important that the hardware in Boys' Town buildings be very durable ... capable of standing the hard wear it is bound to get. We feel that Corbin hardware meets this important requirement."

The ease of installation of the famous Corbin Unit Lock (Pat. No. 41,961) was another factor in the Architect's decision to specify Corbin hardware for the Trade School Building, The Administration Welfare Building, the High School, and the twenty-five residence units in the $3,000,000 building expansion program at Father Flanagan's nationally famed Boys' Town.

Since 1899, when Corbin Unit Locks were introduced, they have been specified by Architects for outstanding commercial, civic and other types of monumental buildings from coast-to-coast.

Corbin Cast Bronze Unit Lock, America design, specified for Boys' Town. This lock was used on all office entrance doors throughout Rockefeller Center, except on the R. K. O. Bldg. Sets are shipped assembled, as shown, eliminating the danger of missing parts. Adjustable to different thicknesses of doors. Frame is one solid piece, holding all the parts; no possibility of displacement.
theories of design (in his insistence on the use of arcades to "embellish" ornamental buildings, for example). Nevertheless, his conception of a city as a place in which to live happily, his recognition that over-all plan­ning is needed and that "under no cir­cumstances should the building parcels be given over to the unrestricted use of the purchasers," but that an obliga­tion should attach to every parcel re­quiring development without essential departure from the established plan"—these attitudes indicate a rational method of thinking about the building of cities which is as valuable today as it was in 1889.

Ralph Walker contributes an introduc­tion to the present volume in which he comments Sitte's emphasis on "human comprehen­sion and scale," and Arthur Holden appends a supplementary chap­ter devoted to an analysis of present­day usefulness of Sitte's principles, il­lustrated by possible improvements, had these principles been observed, in

PARADOX REFLECTED

The war, which is now almost finished, has been a paradox from its very begin­ning to its end. It was foreseen and planned—it came treacherously and un­expectedly. It brought suffering and it brought alleviation (from unemploy­ment). It was fought for and by demo­cracy and the issue finally at stake for termination of hostilities was—the mon­arch. It killed and taught how to fight and defeat death. It destroyed and it caused planning. It broke off ties by force—reinforcing to greater strength the imperceptible and, thus far, unrealized ones. Its death, suffering, and destruction were at the same time growth, strength, and new beauty.

That, in very brief, is the background against which we see Mr. Brom­berg's book Doelmatig Bouwen En Wonen ("Appropriate Building and Living"). This book, too, is paradoxical and, as such, typical of World War II. Written by a Dutchman in the Dutch language—unknown to most of us—it is published by a New York firm, print­ed, bound, and illustrated in the United States. Written during the war, it deals with what was then postwar housing in the Netherlands. Prefabrication sets the tone. The "pre" it speaks of in time of destruction, becomes the light and the solution for the "post," then not fully known as to conditions and needs.

The appearance of this book, however, is far from being pre-post-erous. It is of greater significance than the contents alone. The author and the publisher agreed that it would be nearly impos­sible to publish any new books in Hol­land during the first year of liberation. Total lack of paper and paper manu­facturing facilities, as well as the ab­sence of printing presses and heavy rationing of electric power, have post­poned the distribution of much needed information for a considerable period in Holland and other countries. By the time it is resummed at normal capacity, many factors will have changed, par­ticularly in the field of housing.

We may consider it a very hopeful indi­cation of future trends that under such difficult circumstances a publisher can be found in an entirely different part of the world. Obviously, it points very strongly towards another factor in the abolishment of frontiers and interna­tional differences. In the future, the little notation "Printed in the U. S. A." may well become a weapon more power­ful than atomic energy.

As to the contents of the book, it is not
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REVIEWS
(Continued from page 128)

only words, words, words. There are many illustrations. Upon this, one may reflect how much more internationally minded the eye is than the isolationist ear.

Both text and pictures deal with the various types of prefabrication and touch upon details of building construction which are superior to those commonly used in Holland. The prefabrication methods are closely tied in with the immediate needs of housing in the Netherlands after the liberation. At the time of writing, those needs came, I am sure, to the attention of the author in an indirect way, via underground channels. As such, it is of course written without complete knowledge of what was, and would be, the thinking boards of the architects in Holland. Moreover, a correct analysis of the needs and demands must have been difficult under the circumstances.

The author assumes optimistically that the Dutch people will be open-minded toward new things coming across the Atlantic. Whether they will accept new ways for immediate housing relief (comfort), or whether they will prefer to bear somewhat longer the discomforts of the past five years in order to have things back in the “good established ways,” remains to be seen.

As a whole, the technical part—the “doelmatig bouwen,” “appropriate building”—is a good exposé of the best in prefabrication methods and could well serve as an elementary textbook on the subject, comparing newer and older methods in America and some other countries. The contemplated English translation will be valuable and usable on that basis. In its present Dutch edition, the compilation of photographs and sketches could well serve for a quick survey of the most important phases of the process.

In the second part of the book, Mr. Bromberg deals with the “living inside.” The contents are typical of his own way of working and of Dutch residential architecture. In a way, it contradicts the first part of the book where new ways of thinking in form as well as in methods and equipment were assumed to exist. There, prewar values are taken as a basic departure.

For many years immediately prior to the war, Mr. Bromberg was the leading designer of interiors in Holland. Much of his work was done for and with the wealthier owners of mansions and castles all over this minute but polished country. Eventually, his designs became the religion of the interior elite. Occasionally, of course, he directed some of his abundance toward the less prosperous homes in the form of publications meant to educate the middle classes in the field of comfortable living.

(Continued on page 134)
Broad expanses of subdued wall color harmonize strong accent colors on ceiling and furniture of cocktail lounge.

Buff walls of this private office contrast with cool colors of ceiling, drapes and rugs. Drop ceiling lowers its height.

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No matter where you do business, even in the smallest town, the speed of Air Express is at your service—between thousands of U. S. communities and scores of foreign countries.

Yes, when "getting something fast" means better serving a customer or clinching a deal, keeping a factory open and men at work—Air Express more than pays its way. It's a money-maker.

Specify Air Express—Better Business Buy Than Ever

In the face of rising prices, Air Express rates have been slashed 22% since 1943, saving business millions of dollars. And rates include special pick-up and delivery in all principal U. S. towns and cities—with fast, co-ordinated air-rail service between 23,000 off-airline points. Service direct by air to and from scores of foreign countries in the world's best planes, giving the world's best service.

INTERNATIONAL RATES ALSO REDUCED

(Continued from page 130)

To make a long story short, when Mr. Bromberg came to the United States in 1939, he must have been thoroughly astonished by the number of comfortable realities in our medium priced homes. So he decided to do a little more educating of the unfortunates in Holland who have no knowledge of deep closets with light in them, or of two-way swinging doors between kitchen and dining room, or kitchens with planned work areas, or of the efficient use of a large room with built-in furniture.

Presenting these facts, many of which are merely correctly designed conveniences, brings out the need of realizing what can be done with a house in certain cases to make it more livable. If the people for whom this book is written plan to go back to prewar standards, it is a valuable and highly desirable, much needed exposé of what may be called "minimum standards for simple living."

If, in the past five war years, new ways of thinking have finally found acceptance—imposed at first by force, later by necessity—it will be helpful in crystallizing that thinking and applying it to the building of homes. The future English translation will obviously have to be altered in some places but will prove as helpful to home planners in the less streamlined parts of our own country.

JOHN C. KROMHOUT

"FORERUNNER" OF WHAT?


Cheaply printed booklets on home building are being rushed one after another in quick succession to newsstands, drugstore racks, chain-store counters, everywhere. Such publications will probably be profitable for their publishers and more than probably will influence many small home planners.

The authors of Your Future Home Guide offer 50 house plans and colored elevations as a guide for the prospective home owner, real estate operator, and builder in making their needs more easily known to the local architect "for final preparation of working construction drawings." The plans are given, for reasons not developed, such names as Honeymooner, Foremost, Package Cottage, Smart Set, Visionary, Bountiful, Meteor, Forerunner, Lady Forbes.

The whole is a discouraging collection of inferior draftsmanship and poor writing. It can hardly be expected to improve the present generally poor esthetic standards of the low-priced home.

LAWRENCE E. MAWN
The Point is—

KIMBERLY
Carbo-weld
DRAWING PENCILS

ARE AS MODERN AS TOMORROW'S ARCHITECTURE

KIMBERLY'S styling with the dark green enamel dress, rounded end and white collar is second only to the "Built-in-Quality" in this modern pencil. Lead that is ground for hundreds of hours—the Carbo-Weld processing and accurate uniform grading all contribute to make KIMBERLY the strongest, smoothest, most modern drawing pencil.

Let KIMBERLY help you to turn out a fine job. There are 22 degrees to choose from, 17 are drawing, with an Extra B intense black for layout artists and Tracing 1-2-3-4 to make clean, crisp, dense lines for good blueprint reproduction.

General Pencil Company 67-73 FLEET STREET, JERSEY CITY 6, N. J.

Write to Dept. P for free pencil (mention the degree). Buy them from your dealer or if unavailable send us $1.00 for prepaid trial dozen of your favorite degree or assortment.
(This offer good only within U.S.A.)
If you could pick up a line freshly inked on Arkwright Tracing Cloth, you'd see your preference. Your line retains its edge and doesn't go flat or "mushy". It prints like a taut wire, even re-inked over heavy or repeated erasures.

This evenness and crispness of line, coupled with the unusual transparency of Arkwright Cloths, assures contrasty, easy-to-read prints ... and the transparency is permanent. It is obtained by special mechanical processing. Arkwright Cloths do not cloud up nor become brittle with age, because no surface oils at all are used.

Want a treat? Send for working sample. Rule lines. Notice how they flow on evenly. Erase. Hold up to light and see if you can see the markings of a ghost. You'll then have a real preference. Arkwright Finishing Co., Providence, R. I.

STRENUOUS HOBBY

Make Your Home Your Hobby. Walter J. Coppock, Antioch Press, Yellow Springs, Ohio, 1945. 92 pp. $1.50

The author intends that the ideas of this book and a few good tools be combined by a person of average mechanical aptitude to finish his own home in spare time. Necessary aptitude can be determined by tests; reference is made to the Revised Minnesota Paper Form Board. It is assumed that skilled workmen will have built the principal parts of the house.

The author, a registered engineer, has had practical experience as building contractor and as workman on several of his own homes. He writes with evident sincerity and his ideas are generally sound. They relate to such features as stair design, roofs, floors, foundation walls, windows, air conditioning, wall paper, sheet plaster, heaters, laundry drying rack, trash chute. The home can be a strenuous hobby!

Three of the author's house plans are described in a room-to-room tour: "Leaving the kitchen we cross the hall and go up the stairs landing near a large window. To the left is a peach-colored tiled bathroom with shower on the left, next a small blue-green papered bedroom with built-in dressing table with glass top and large mirror and with three large drawers on each side. " Specific instructions for building special features such as the dressing table are not given.

The photographs of the author's present home suggest that it is well constructed, but certain architectural gaucheries mar the design.

This book, in common with too many books on architecture and building, suffers from an evident lack of editing. The material needs reorganization, elimination of irrelevant and repetitious detail, addition of detail elsewhere. Some of the grammatical constructions will disturb the sensitive reader as much as construction inaccuracies or one-eighth inch flooring cracks rightly disturb the author.

Lawrence E. Mawn

PLANNING PAMPHLETS

Reviewed by

Davidson-Smull

Comparative Analysis of the Principal Provisions of State Urban Redevelopment Legislation. The National Housing Agency, Office of the General Counsel, 1600 Eye St., N.W., Washington 25, D. C., 1945. 74 pp., mimeo. (Also)

(Continued on page 138)
NOW YOU CAN MAKE HIM SAFE!

Now you can give the occupants of your buildings the utmost in sure, safe exit . . . for genuine drop-forged Von Duprins are back in production. These superb exit devices are abundantly strong for the heaviest duty, yet their precise workmanship and their finely balanced parts provide . . . even for the tiniest school child . . . startling ease and speed of operation.

VON DUPRIN DIVISION
VONNEGUT HARDWARE CO., INDIANAPOLIS
for finer, better
drafting work

Try One Free!

Precision is the word for these Esterbrook Drafting Pens—they're accurate to 1/1,000th of an inch. Try one at our expense on your own drafting board—see how much smoother and faster your work goes.

ATTACH THIS TO YOUR LETTERHEAD-

Send the make and number of the drafting pen you now use most—the corresponding pen in the Esterbrook Drafting series will be sent to you for trial without charge. Write today!

Make........................................
Pen No. ......................................

THE ESTERBROOK PEN CO.
38 Cooper Street, Camden, N. J.
or The Brown Brothers, Ltd.,
Toronto, Canada

REVIEWS

(Continued from page 136)


Urban Redevelopment Legislation in the United States. A Comparative Analysis. Prepared by the American Society of Planning Officials, 1313 East 60 St., Chicago 37, Ill., 1945. 7 pp. $2.00


These comparative compilations on urban redevelopment by the ASPO and the NHA are supplementary surveys, best used together. They will facilitate reference to existing state urban redevelopment legislation. The ASPO arranged more than 75 provisions of redevelopment legislation and related them state by state in an easy-to-use seven-page table. On the other hand, the NHA's study, which is more extended, classifies these statutes in three main groupings: (1) legislation intended to encourage private enterprise to assemble, clear, and redevelop an area; (2) legislation which places responsibility for assembly and clearance upon municipal bodies; and (3) legislation which places responsibility for land assembly and clearance upon the local housing authorities.

The ASPO also has prepared a summary of planning legislation adopted in 1944 and 1945 which brings up-to-date the society's earlier report, Planning Legislation-1943. This compendium includes statutes on city, state, county, and regional planning, as well as urban redevelopment, zoning, airports, subdivision, housing, public works, roads, and parking.

PERIODICALS

Reviewed by MAUDE KEMPER RILEY

JOURNAL OF THE R.I.B.A.
66 Portland Place, London W. C. 1, England
DECEMBER 1945

What part architects played in the preservation activities of the British-American fighting forces as regards its Monuments, Fine Arts, and Archives division, is told by Lieut. Colonel Sir Leonard Woolley, architect, in a paper delivered before an informal meeting of the R.I.B.A. in London.

Why protective measures were issued from High Command; why it was that damage to listed buildings was made a military misdemeanor; why armies were not always effective in protecting them; where architect-aid was of most value (principally after a town had been taken and emergency repair was in

(Continued on page 140)

IMPERIAL TRACING CLOTH

IMPERIAL

SOLD BY LEADING STATIONERY AND DRAWING MATERIAL DEALERS EVERYWHERE
PETRO SYSTEMS ARE

"first-rate in every way"

... the reason why another architect will continue to specify Petro in new building plans.

Expressing the opinion of an ever-growing number of architects and engineers, Mr. Fred A. Webster frankly acknowledges the significant economy, efficiency and simplicity of oil burning systems in industrial and commercial structures. He is equally frank in endorsing Petro Systems in particular ... not only because of the excellence of Petro equipment but also because of the cooperation Petro engineers provide in carefully selecting such equipment and then coordinating it into a precisely engineered oil heating installation.

It is this service and painstaking attention to detail that is the architect's and engineer's best assurance of consistently reliable performance and economy for which Petro Systems are known and widely recognized.

Fred A. Webster, well known architect of Waterbury, Connecticut, has designed many outstanding structures in that city. In the past he has used Petro Burners in a number of industrial and commercial buildings. He expresses these ideas on Oil Burning Systems ... 

"Now that architects are planning the building of the future it seems to me that economy, efficiency and simplicity will be musts for the type of heating that will be used, and oil heating encompasses all of these requirements ... I will continue to specify Petro Systems for they are first rate in every way, and Petro engineers are always ready to cooperate in the selection and installation of the right equipment in its proper place."

Industrial Models: #5 or #6 fuel oil; automatic, semi-automatic or manual operation; 8 sizes to 450 bhp. "Thermal Viscosity" preheating.

Domestic Models: #3 or lighter oils; "conversion" and combination-unit types; 7 sizes. "Tubular Atomization" (Patented).

Full data on Petro Industrial Burners are in Sweet's and Domestic Engineering catalog files. Details on Petro domestic burners available in separate catalog. Copy of either sent gladly on request.

CutS STEAM COSTS

PETROLEUM HEAT AND POWER COMPANY • STAMFORD, CONNECTICUT • Makers of Good Oil Burning Equipment Since 1903
Use a facing of prefabricated thin Architectural Concrete Slabs to bring out the lines and mold the character of your building.

The Slabs, made with Atlas White Cement and reinforced with steel, are only 2' or 2 1/2' thick and range in size up to 100 sq. ft or more. Returns, cornices, sills, lintels and lugs for anchoring usually are cast integrally with the slab.

Slabs also may be used as outer forms for structural concrete. When a good bond is obtained between the slab and the structural concrete, half the slab thickness may be considered effective structurally.

Send for booklet and list of slab manufacturers. Write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., New York 17, N.Y.

To simplify design and speed construction

ARCHITECTURAL CONCRETE SLABS
MADE WITH
ATLAS WHITE CEMENT

(Continued from page 138)

order). The division was active in directing local builders at the expense of the country where damage was done; in preventing troop occupation of palaces and museums wherein valuable objects were housed.

“The total of buildings destroyed in Europe and North Africa beyond hope of repair is relatively small,” Woolley reported; although, he said, a reading of the buildings hit contains name after familiar name of historic monuments and places.

The Building Research Station erected at Queens Park, on a platform which lies between a steam line and an electric line, a section of a railroad station. It was a research problem undertaken by the architects of the London Midland & Scottish Railway—a neat little station house, shed and platform, during the building of which man-hours were charted for each operation to determine adjustments of design where time-saving would result. Robust materials and finishes were sought; steel timber and concrete were used; ceramic glazes were studied in view of the filth and smoke which usually ruins the appearance of a station-house; enameled steel was considered for lower section exteriors to withstand abrasion. The findings are published in a seven-page study of the problem.

JOURNAL OF THE R.A.I.C.
57 Queen Street West, Toronto, Canada
JANUARY 1946

Winners in the General Motors design competition for automobile dealers establishments are shown. The needs of four stock types of dealerships are illustrated. Publication of the buildings, and accompanying comment upon their winning properties, illustrate the wisdom of the four solutions.

DESIGN AND CONSTRUCTION
26 Bloomsbury Way, London W. C. 1, England
JANUARY 1946

The Atom City at Oak Ridge, Tennessee, which in a space of four years grew from nothing but a ridge to a city of 75,000 population, presents a modern solution for multiple (emergency) housing, as well as town planning for a complete community. To build a city one by six miles, skilled planning was wedded to high-speed, specialized-crew construction. As the town grew faster than had been initially planned for, buildings became of less permanent nature as construction continued. Trailers and even tents were allowed for overflow of workers. Still under construction in marginal areas, Atom City totals 10,000 family units, 3,000 dormitory units, more than 5,000 trailers, 16,000 huts and barracks. One of the best high schools in the U.S.A. was de-
A look at the past gives you a look into the future for aluminum windows. Their superiority is constantly being demonstrated in buildings of all types.

For example, take the building illustrated here. After 14 years, its 3100 Alcoa Aluminum windows operate just as smooth as the day they were installed . . . and they've never been painted.

Check some aluminum windows yourself. Ask about their maintenance cost. We believe you will convince yourself that windows of Alcoa Aluminum belong at the top of your list for the buildings you are now planning.

ALUMINUM COMPANY OF AMERICA, 2198 Gulf Building, Pittsburgh 19, Pennsylvania.

With Alcoa Aluminum Windows You Can Count On . . .

- Low maintenance
- No painting required
- No rust
- Easy operation
- No warping
- Low installation cost
- No staining
- Maximum glass area
- Better appearance

TO KEEP sketches... drawings ... tracings free from tell-tale signs of correction—say EBERHARD FABER, when you buy Erasers. First choice for First Quality ... Available at Supply Stores everywhere.

REVIEW

manded by highly-paid resident professionals. Hospitals, community centers, theaters, restaurants, shopping centers are convenient to the residential sections and far from the three huge manufacturing plants, guarded and fortress, the raison d'etre of the city.

HOSPITAL REVIEW
18 East Division Street, Chicago 10, Ill.
1945

Situations facing hospitals as a unit are presented in the second section of the 1945 bulletin of the American Hospital Association: "Our avowed purpose is caring for the people—not some of the people but all of them."

NOTICES

THEO BALLOU WHITE announces the reopening of his office for the practice of architecture at 215 S. 15th St., Philadelphia, Pa., after service in the Corps of Engineers, U. S. Army.

BARNET GLICKLER AND SAMUEL K. SCHNEIDMAN, Architects, announce the opening of their new office for the practice of architecture under the name of Carroll and Grisdale, Architects, 100 W. Walnut St., Philadelphia, Pa.

J. ROY CARROLL, JR., announces that J. ROY CARROLL, JR., is now associated with him for the practice of architecture at Room 407-b, 1601 Walnut St., Philadelphia, Pa.

OLINDO GROSSI has opened an office at 542 Fifth Ave., New York 19, N. Y., for the practice of architecture.

GEILE & WILLSON have opened an office for the practice of architecture and engineering at Suite 5, Gibson Bldg., 121 S. Green St., Huntsville, Ala.

FREDERICK R. LOUIS AND A. REA HENRY, having returned from military service, wish to announce the partnership of LOUIS & HENRY, Architects, 1271 Starks Bldg., Louisville 2, Ky.


MACKIE AND KAMRATH, Architects, have reopened their offices at the temporary address of 2500 River Oaks Blvd., Houston, Texas, having returned from service with the Army Engineers.

MANOUG EXERJIAN, Architect, announces the opening of his new office at 140 S. Middle Neck Rd., Great Neck, N. Y.

E. ELLSWORTH GILES, Architect, announces the opening of his office at 115 Morristown Rd., Bernardsville, N. J.
RECESSED CABINETS

Important factors in planning the modern hospital—
Specify Scanlan-Morris

Typical of the trend in the planning of modern hospitals are these photographs of Scanlan-Morris recessed cabinets built into St. Nicholas Hospital, Sheboygan, and St. Alphonsus Hospital, Port Washington, Wis. In addition to the cabinets shown, other Scanlan-Morris cabinets in these hospitals are:

1. Recessed combination cabinet for storage and for warming of solutions and blankets—in main corridor of maternity department near Central Service Room and delivery rooms.
2. Recessed supply cabinets in unsterile work room, Central Service Department, surgical floor.
3. Recessed supply cabinet in surgical corridor.
4. Recessed cabinets in splint room, surgical floor—three equipped with swinging type harness hooks for splints and fracture equipment; others with metal shelves and plaster barrel compartments.
5. Recessed cabinets, counter type, in unsterile work room of Central Service Department—stainless steel counter tops.

6. Counter type cabinets for soiled utensils, equipped with double sink—in maternity department.

Scanlan-Morris recessed cabinets, each cabinet custom built from plans and specifications covering the individual requirements of the hospital, are installed in many leading hospitals.

The cabinet bodies are made of 20 gauge furniture steel. All corners are made with double lapped and sweated seams, insuring dust-proof construction. Frames are flat teel, electrically welded to insure maximum strength and rigidity. The cabinets may be finished in any color to harmonize with the color of walls and other equipment. Fittings are finished in nickel plate or chromium plate, as specified.

Years of designing and manufacturing experience and contact with surgeons, hospital superintendents, engineers and architects, qualify our Technical Sales Service Department to give valuable assistance and authentic guidance in hospital planning. Suggested layouts supplied without obligation.

Ohio Chemical
MANUFACTURERS OF MEDICAL APPARATUS, GASES AND SUPPLIES FOR THE PROFESSION, HOSPITALS AND RESEARCH LABORATORIES

GENERAL OFFICES - 60 EAST 42nd STREET, NEW YORK 17, N. Y.

APRIL, 1946 143
A building—two or more stories in height—is only as modern as its elevator system. This applies to office, industrial and commercial buildings alike.

With the adoption of new materials and building construction techniques developed during the past few years, new elevator problems have arisen. In planning for any type of new building or modernization of an existing building, you can depend upon Montgomery for assistance in designing and engineering the efficient, modern vertical transportation system to best meet its requirements.

A Montgomery designed elevator system will usually be lower in initial cost, always dependable in service and most economical in operation and maintenance. Montgomery Elevators have proved their worth in thousands of installations.

Montgomery manufactures a complete line of passenger and freight elevators, electric dumbwaiters and special equipment for vertical transportation.

NOTICES

(Continued from page 142)

PHelps Barnum, for three and one-half years an architect for Pan American World Airways, has returned to private practice, having formed a partnership with W. Stuart Thompson, with offices at 125 E. 46th St., New York, N. Y.

CHARLES W. Eliot, 415 South Hill Ave., Pasadena 4, Calif., is prepared to provide consulting services on community development and city and regional planning to public and private agencies and individuals.

HEnry J. Toombs announces a partnership with William J. Creighton, for the practice of architecture under the name of Toombs & Creighton, Architects, 7 Peachtree St., Atlanta, Ga.

FAxON E. LOTT, Architect, announces the opening of his office at 12 E. Pleasant St., Baltimore 7, Md.

WALTER SANDERS and Arthur Malson, Architects, have moved their office to 425 Fifth Ave., New York 16, N. Y.

WILBUR A. MEANOR, Architect, announces that a partnership has been formed with Robert Preston Greffe and Robert House Daley, which is now doing business under the name of Meanor, Greffe & Daley, 306 Payne Bldg., 811 Lee St., Charleston 1, W. Va.

GEORGE NEMENY, Architect, has moved his office to 14 E. 39th St., New York 19, N. Y.

JOHN W. CROSS and his son, H. PAGE CROSS, announce the opening of a firm for the general practice of architecture at 730 Fifth Ave., New York 19, N. Y., under the name of Cross & Son.

MORRIS LAPIDUS, Architect, is remodeling a brownstone house at 256 E. 49th St., New York, and expects to move his offices to this location shortly.

F. HERBERT RADEY and CLARENCE L. MacNelly, Architect and Engineer, 101 N. Seventh St., Camden, N. J., have combined organizations in order to render more complete professional service to their clients.

JOHN POE TYLER, J ACKSON P. KETCHAM, and ROBERT E. MYERS have announced the formation of a partnership for the practice of architecture, temporarily located at 10 E. Lexington St., Baltimore 2, Md.

AARON COLISH and CHARLES G. ETTER announce the formation of a partnership with offices at Architects Bldg., Philadelphia 3, Pa.

Returned from the Armed Services, JOHN VINCENT ANDERSON announces the reopening of his offices for the practice of architecture in the Builder's Bldg. at 228 N. LaSalle St., Chicago, Ill.
Radiant walls point a trend in illumination ...

A new technique in lighting is a feature of the PLEXIGLAS "Dream Suite," a three-room "apartment-of-tomorrow" currently touring leading department stores and architectural centers. In warm-colored walls, artistic patterns "etched in light" glow softly with realistic three-dimensional effect.

These radiant walls of edge-lighted PLEXIGLAS have a richness and visual appeal never before approached. With the overall, glare-free illumination they provide, the "low-brightness contrast" so long sought by lighting engineers finally is achieved.

Would you like to know more about the possibilities of the plastic that "pipes" light? Just write our nearest office: Philadelphia, Los Angeles, Detroit, Chicago, Cleveland, New York. Canadian Distributor: Hobbs Glass Ltd., Montreal.

Only Rohm & Haas makes PLEXIGLAS ...

PLEXIGLAS is the trade-mark, Reg. U. S. Pat. Of.

Here’s how PLEXIGLAS "pipes" light in Radiant Walls

Light, visible at sides of mirror, is also "piped" through clear PLEXIGLAS shield, escaping only at design-engraved surfaces.

For brand new lighting ideas

transparent PLEXIGLAS

ROHM & HAAS COMPANY
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Manufacturers of Chemicals including Plastics ... Synthetic Insecticides ... Fungicides ... Enzymes ... Chemicals for the Leather, Textile, Enamelware, Rubber and other Industries
The horse that grew out of a bottle

A bottle of Higgins American India Ink, of course — for when Paul Brown, distinguished depictor of the sporting scene, does his vivid illustrations, he relies on Higgins Inks as his medium.

Why? For the excellent reason that Mr. Brown, like other top-ranking artists and designers, knows that, for control and accuracy of line, for precision performance and facility of use, Higgins American Drawing Inks are unsurpassed. Ask for this item by brand name for your protection.

THE INTERNATIONAL STANDARD OF EXCELLENCE

SINCE 1880

HIGGINS INK CO., INC.

271 NINTH STREET, BROOKLYN 15, N.Y.

The Harbor

THAT MOVED INDOORS...

Three miles from the Orrington Hotel in Evanston, Illinois, lies the picturesque Wilmette Harbor ... but not for the guests of the Orrington's modern dining room ... for their enjoyment this local scenic spot was brought indoors in full natural color through the magic of Kaufmann & Fabry Photomurals!

K & F Photomurals, today's decorative motif, are approved by leading architects everywhere ... and are readily available without priority restrictions ... let them serve you!

FREE Handsome Brochure illustrates many interesting applications of Photomurals. Write for your copy today.

KAUFMANN & FABRY CO.

425 SOUTH WABASH AVE. - CHICAGO 5, ILL.
NOW... Rustless Piping for even the Smallest Home!

Today, there is no reason why any new home, no matter how modest, should be equipped with water lines that rust. For Anaconda Copper Tubes assembled with Solder Type Fittings can be installed at a price competitive with rustable pipe.

Such a system provides a clean supply of rustless hot and cold water, and guards against trouble and premature piping replacement.

Anaconda Copper Tubes are made from specially deoxidized 99.9+% pure copper. They are furnished soft in sizes up to and including 1¼" in 30, 45 and 60-foot coils; also hard and soft in 20-foot straight lengths. Larger sizes are supplied hard or soft in 20-foot straight lengths only.

In addition to their use as water lines, Anaconda Copper Tubes provide long, economical service for heating lines, garden and lawn sprinkler systems and as tank-to-oil-burner, bottled gas and other connections.

For detailed information, write for Publications B-1 and C-2.
The Frederick Post Company
3650 AVONDALE AVENUE • CHICAGO 18, ILLINOIS

BACK AGAIN!
Pure Copper Home Protection at ½ the Normal Cost

SAVE TIME... SAVE MONEY
Here's the Modern low cost way to put lasting pure copper protection into even inexpensive homes.

YES, it's here again—the same fine Copper Armored Sisalkraft you specified before the war—now ready for new home building! Ideal for all concealed flashing and foundation damp coursing, easy-to-use as paper—will not kink, break or tear, gives all homes enduring copper protection impermeable to the elements. Write for folder and your free sample!

The SISALKRAFT Co., 205 W. WACKER DRIVE
CHICAGO 6, ILLINOIS

Only CHROMEDGE* gives you CHROMALITE the permanently rub-proof velvet-tone finish —

In CHROMEDGE METAL TRIMS, you get the widest choice of smartly-styled mouldings for quicker, easier, more durable installation of all types of floor and wall materials. And the soft, rich tones of the exquisite Chromalite Finish give them permanently new-looking beauty! (Standard bright finish available). Write!

The B&T Metals Co., Columbus 16, Ohio
Penicillin—the wonder drug of the year—can well stir the imagination... for from the lowly mold of ordinary earth comes a life sustaining substance so potent that through its healing power, ravaging diseases become powerless and almost incurable persons are made whole once more. But the production of Penicillin is still another story, for the problems of culture and control on a large scale basis were far different than obtaining a drop or two from a mold.

To the men who designed and created this great modern laboratory-type building—home of Penicillin at Ledle Laboratories, Inc., Pearl River, New York, goes the lasting appreciation of a grateful people who have already seen the wonders this drug has performed since it has been available in quantities. Here is a building unique in construction, in which every material, equipment and product used had to measure up to a standard that tolerated no compromise with the perfection of controls so necessary to the specialized production of Penicillin. Proud that Josam drains and other products were used throughout, Josam has still greater pride in the part that it contributed to the means by which new hope is given to so much of humanity.

ONE ACHIEVEMENT DESERVES ANOTHER... TO BE SURE, PUT JOSAM ON THE JOB!

LEDERLE LABORATORIES, INC.
Pearl River, N. Y.

A DESIGN for PRODUCTION

Construction: Steel and brick, daylight lighting provided through multi-window installations. Total space 120,000 feet.

Temperature control: Third and fourth floors almost entirely filled with incubators with temperature maintained at 37°F; fluctuation allowance—1°F.

Peak employment—500.

First building of its particular type, devoted to the production of Penicillin on a commercial scale by the flask method. Penicillin, as a result, is now available for general use as the need for it arises.

Josam DRAINS again met every requirement

Penicillin—the wonder drug of the year—can well stir the imagination... far from the lowly mold of ordinary earth comes a life sustaining substance so potent that through its healing power, ravaging diseases become powerless and almost incurable persons are made whole once more. But the production of Penicillin is still another story, for the problems of culture and control on a large scale basis were far different than obtaining a drop or two from a mold.

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Josam DRAINS again met every requirement

Penicillin—the wonder drug of the year—can well stir the imagination... far from the lowly mold of ordinary earth comes a life sustaining substance so potent that through its healing power, ravaging diseases become powerless and almost incurable persons are made whole once more. But the production of Penicillin is still another story, for the problems of culture and control on a large scale basis were far different than obtaining a drop or two from a mold.

To the men who designed and created this great modern laboratory-type building—home of Penicillin at Ledle Laboratories, Inc., Pearl River, New York, goes the lasting appreciation of a grateful people who have already seen the wonders this drug has performed since it has been available in quantities. Here is a building unique in construction, in which every material, equipment and product used had to measure up to a standard that tolerated no compromise with the perfection of controls so necessary to the specialized production of Penicillin. Proud that Josam drains and other products were used throughout, Josam has still greater pride in the part that it contributed to the means by which new hope is given to so much of humanity.

ONE ACHIEVEMENT DESERVES ANOTHER... TO BE SURE, PUT JOSAM ON THE JOB!

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ONE ACHIEVEMENT DESERVES ANOTHER... TO BE SURE, PUT JOSAM ON THE JOB!
FIELD RESEARCH PRODUCES DATA ON TRENDS IN RETAIL STORE DESIGN

For more than three years the Armstrong Cork Company has been presenting a series of color pages in The Saturday Evening Post, Time, and Newsweek on “Ideas for Store Modernization.” From a variety of sources—trade associations, staffs of leading business magazines, manufacturers, and successful merchants in every section of the country—we have uncovered a good deal of information that we believe is of special interest to architects.

By stimulating interest in the whole subject of store modernization, we have sought to render a service to architects and the building industry in general—and thus, in the end, to increase the market for Armstrong Floors. The accumulation of basic information on merchandising trends has been an interesting by-product of the effort. A brief summary of our findings follows.

Druggists Stress Prescription Sales—Today’s druggist is putting greater effort behind the development of his prescription business than ever before. There is a strong movement afoot to give the prescription department more space... to put it in a more prominent spot. In some instances, it is being moved to the very front of the store.

Grocers Swing to Self-Service—Wartime conditions have strengthened the position of the independent grocer in many communities, but the thinking of most of these merchants is dominated by the self-service merchandising methods of the chains. Consequently, the trend in all types of retail food outlets is toward less over-the-counter selling, more self-service.

Restaurants Seek to Cut Labor Costs—High labor costs are strongly influencing the restaurant owner’s thinking about design. Step-and-labor-saving devices, ideas for more efficient arrangement of tables and counters—any and all design features that help cut the cost of preparing and serving meals—are greatly needed.

Florists Go in for Drama—The trend in florist shops is toward more dramatic display of merchandise. Fully aware that most flowers are bought as gifts, florists are striving to give their shops less of the “greenhouse” look, more of the atmosphere of a smart specialty shop. Full-view glass fronts are replacing the customary bloom-packed window.
Departmentalization in Shoe Stores—In shoe retailing, as in many related fields, the trend is toward departmentalization within the store. Women's and men's shoes are being sold in different sections, by different personnel. Store design to emphasize departmentalization is wanted.

Trends in Meat Merchandising—Many meat dealers today are putting in packaged frozen food departments as a profitable adjunct to the shop's regular line of edibles. There is some trend toward self-service, particularly in sales of pre-packaged meats, but the dealer continues to put major emphasis on cut-to-order business.

New Approach to Jewelry Display—There are some significant changes going on in the retail jewelry field. Trend in most stores is away from mass displays of merchandise. Small show windows are replacing the traditional large store-front window. Interior display cases are smaller. Objective is to show jewelry individually or in small ensembles rather than in the mass.

Men's and Women's Apparel Shops—The trend in men's and women's apparel shops is toward more "visual" selling and "pre-selection" of merchandise. Conventional in-line rows of counters are being supplanted by display units that dramatize the merchandise, help the customer make his own selection.

Atmosphere Important in Bakeries—In a number of retail fields—the baked goods industry in particular—research indicates a strong demand for the "atmospheric" type of interior. Many bake shop owners expressed the feeling that what they regard as the "modern" store interior has become too stereotyped, lacks the distinctive character that they want in their own stores.

Group Demonstrations Sell Appliances—Most appliances have to be shown in actual use before they can be sold. In addition to individual demonstrations, dealers have found group demonstrations—to bridge clubs, service clubs, and other women's organizations—an important factor in building sales. Many dealers plan to set aside a specific area for these demonstrations.

Resilient Floors Hold Favor—As the makers of a complete line of resilient floors, we were naturally gratified to discover that the preference for floors of this type is stronger than ever. Linoleum is found on more shop floors today than any other material. The use of asphalt tile and its favorable reception have increased greatly in the past few years. In many quarters, particularly high-end merchandising, there is a demand for the "luxury" floors, Linotile (Oil-Bonded) and rubber tile, which again are being produced in Armstrong's factories.

Low Cleaning Costs a Factor—Our surveys revealed that economy of maintenance is a most important factor in the widespread preference for resilient floors. Store owners, confronted by rising labor costs, are anxious to reduce overhead wherever possible. Merchants have found that resilient floors, in addition to their beauty and durability, offer a worthwhile saving in maintenance.

If you would like additional information concerning our surveys in these retail fields, write Armstrong Cork Co., 8904 State St., Lancaster, Pa.
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