Nobody's money is safe from "cheap" valves

Architects and contractors know that when it comes to the final pay-off, there's nothing so costly as cheap, unreliable building equipment.

That is especially true of valves, because valves serve so inconspicuously—till something goes wrong. Saving money on any valve installation in the beginning is only an invitation to valve trouble in the end. With frequent servicing, "cheap" valves may stand up for 15 or 20 years . . . but Jenkins' files contain hundreds of "on the job" reports of Jenkins Valves that have given low-cost, almost trouble-free service for half a century or more!

And when you come right down to it, the first cost of Jenkins Valves is only a trifle more than cheap valves—and no more than the cost of other good valves. But there's an extra margin of stamina in Jenkins Valves that makes them cheaper over the long pull. That's why countless architects and contractors recommend "Jenkins" to clients who want their valve dollars to s-t-r-e-t-c-h further!

Jenkins Bros., 80 White Street, New York, 13; Bridgeport; Atlanta; Boston; Philadelphia; Chicago; Jenkins Bros., Ltd., Montreal; London.
October, 1944

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SPECIFICATION:

Tenants to locate electrical outlets themselves

Would such a specification save you grief? And time?

Think what it would mean in client satisfaction if he could point to his new floor and say—"I've changed my mind. I want an outlet here"—and then get it, without trenches, without fuss or woe, in a matter of minutes.

Q-Floors are constructed to provide all-over electrical availability on a six-inch modulus. An electrician can drill anytime into any six-inch area and establish an outlet. It makes the difference between a floor that is electrically alive and a dead shelf.

Q-Floors stay modern. They offer unlimited electrical service—fast and clean—as changeable as your client's mind. Q-Floors enable you to cope with the changing, working nature of today's mechanized buildings.

They also relieve you of a great deal of construction grief.

They are fast in. Two men can lay 32 square feet in half a minute. The floors can be completed almost as soon as the structural frame. There are no wet materials to cause delay. The Q-Floor immediately becomes a working platform for all other trades. Installation is quiet, clean, fireproof, with no shoring or forms. Q-Floors are light in weight, which makes possible lighter framework. All these factors reflect favorably in cost.

The matter of cost, in fact, will probably be a surprise. It's well in line! A Robertson representative will be glad to give you detailed information or you can write for Q-Floor literature. Electrical Fittings for use with Robertson Q-Floors are available through General Electric construction materials distributors.
ern, fully equipped home represents a sounder mortgage investment because it increases the buyer's desire to avoid risk of foreclosure, as well as his ability to meet mortgage payments.

**We've got some answers**

Since as far back as 1936 the General Electric Home Bureau has been studying the problems involved in building "electrical servants" into the home.

We feel that we have got some of the answers to some of the questions which you may want to ask.

We'll be glad to help. *Home Bureau, General Electric Co., Appliance and Merchandise Department, Bridgeport, Conn.*
Bouquet
Dear Editor:
May I extend my congratulations on your August issue. It’s timely, fresh, and contains varied subject matter and presentations.

The color sketches are most effective. It’s a pleasure to “pour-thru” such a magazine. Good work!

G. E. Mayer, Jr.
Dayton, Ohio

Hearts That Beat As One?
Dear Editor:
I note in your recent issues slanders of the “Dies Committee” and other honest and honorable American institutions. A good place for pencil points is in the waste basket; dirt for the dirty. I am for the Dies Committee.

I do not like “Gropius” gas-pipe architecture any better than Adolph did.

George Blumauer
Architect-City Planner
Oklahoma City, Okla.

Additional Planks for the Architects’ Platform
Dear Editor:
I have read with great interest your “Platform for Architects.” It would be constructive if every architectural editor and practitioner did likewise retire into his “smoke-filled room” and emerge with his own special brand of plank for the Architectural Party in postwar days.

To your “choice” dozen, let me suggest that the following be added:

(a) Architecture, both in the field of beauty and in functional use, is a collaborative undertaking. We, the architects, will work to merge our private organizations with those of our collaborators, until no architectural firm without engineers, and no engineering firm without an architect, will be considered complete. To this end we will strive to secure complete reciprocity and understanding between the engineering and architectural registration agencies, to make possible the legal use of the term, “Architect-Engineer.” We will seek full collaboration between the national organizations of architects and engineers.

(b) Planning is the very essence of the professions, including architecture, engineering, landscape architecture, city-planning, housing, and social and economic planning. We will strive to bring these and other qualified groups together through democratically elected representatives into a national council of planners, with headquarters in Washington, D. C. We will do our share to properly finance the activities of this national council, to make it a powerful force in protecting the public against inadequate planning, in educating the public to the social and economic value of wise planning, and to influence Congress and governmental agencies, through the accumulated evidence such a centralized clearing house alone can gather, to the shaping of a wise national planning policy.

(c) Realizing that the architect must deliver a complete service if he is to hold his position in the planning and building profession, we will seek to perfect a method of practice that shall include construction on a professional basis.

(d) Believing that the best in human nature and talent is developed about “The Round Table,” where all elements involved meet on an absolute parity, we will advance and support the building congresses, councils of planners, and inter-professional councils. By so doing we believe the functional consciousness which Robert Kohn has often pleaded for, will be developed, needed exchange of information will be accomplished, wise programs formulated, and the integrity of the professional ideal preserved.

Personally, I was gratified to note in your third Plank that “We pledge ourselves to study this problem (land control) and to work for its equitable solution.” As far as this statement goes, it indicates a willingness to face unpleasant, perhaps unpopular issues. Taxation and this problem are inseparable. Both as now in force do irreparable damage to good architecture, sound housing, and city planning. Would it not be timely to republish the report of the A.I.A. Committee on Taxation, made some years ago?

In the July issue of American City, the following was noted:

“Taxes can be abolished—ground rent cannot. Ground rent is the value of location among people. Someone must inevitably collect it, though no one person creates it. That person should be the Public Treasurer.—Joseph S. Thompson.”

With this in mind, I suggest still another addition to your special “dozen planks”:

(e) The architect, in designing, computing and planning, must be analytical in his approach. He must constantly search for cause and effect. He must have a scientific attitude and never be really satisfied until he finds the truth and can write Q.E.D. after his solution. Taxation and this problem are inseparable. Both as now in force do irreparable damage to good architecture, sound housing, and city planning. Would it not be timely to republish the report of the A.I.A. Committee on Taxation, made some years ago?

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"Taxes can be abolished—ground rent cannot. Ground rent is the value of location among people. Someone must inevitably collect it, though no one person creates it. That person should be the Public Treasurer.—Joseph S. Thompson."
1. INVESTIGATION OF UNDERGROUND CONDITIONS - As test borings are made—either through soil grounds or through timber, solid rock or other obstructions—samples are taken for analysis, water levels noted and reports rendered recording all data.

2. INTERPRETING THE RESULTS - In determining bearing values and allowable loads, all available data are correlated and analyzed to determine the influence of each item on the result.

3. DETERMINING THE BEST SUITED FOUNDATION - With a line of varied sizes and types of piles, Raymond can furnish a foundation to meet the requirements of any condition encountered. Every job is approached with a sincere effort to recommend the type of foundation best suited structurally and economically to the client's interest.

4. INSTALLING THE FOUNDATION - Every Raymond cast-in-place concrete pile has a strong steel shell adequately supported by a driving mandrel which makes the pile shell rigid and transmits the driving force uniformly throughout the FULL LENGTH... all the way down to the point!

During the past four decades Raymond has completed thousands of safe foundations... large and small... in all parts of the world — and as a result of current wartime work its experience, knowledge and equipment is better today than ever before. Your inquiries will receive prompt attention.
Whole Store a Window Display. Stores and shops of all kinds have found that eliminating old-fashioned window displays can do more than almost anything else to step up exterior appearance. Moreover, windows are easier to reach for cleaning. The entire shop becomes an inviting selling display for merchandise.

Counter Package Rack Saves Space, makes shopping easier. The rack fits just below counter-level, giving shoppers a place to rest their purchases. It helps keep counters clear for service. This rack can be attached to present counters or included in new counter design. Covered with Armstrong's Linoleum in a pattern to harmonize with the floor, the counter and rack are both smart looking and easy to keep clean.

These and many other ideas are yours for the asking—Our new Ideas Portfolio offers the best ideas of leading grocers as revealed in a recent survey conducted in collaboration with the National Association of Retail Grocers. It includes a full color print of a model grocery. Designed primarily to stimulate interest in future remodeling, this portfolio may help you meet grocers' or other retailers' needs. Write Armstrong Cork Company, Floor Division, 6910 State St., Lancaster, Pennsylvania.

Authorities to accept without question—"there is an area in which ... subsidized housing ... is necessary and proper." Who is fearlessly showing why this condition exists, what causes it, and how those causes can be eliminated to give to the low wage-earner once more the American privilege of building and owning the home he should have and so desires?

One of my students, now working in an airplane factory, recently bought two old garages, and for two hundred dollars, turned them into an adorable apartment. Where there is a will there is a way, if we do not legislate it out of our reach.

If the collection of economic rent by the Public Treasurer, and the resulting elimination of taxes would remove the causes now preventing private industry from serving those in the low wage bracket, is it not cowardly of us not to face the music—analyze the problem, seek the reform which will make better homes, cities and bring us one step nearer to the Good Life we dream about?

And just one more addition for full measure—how about this?

(f) It is the prime duty of the professional man to give the best that is in him to his client and community. He must not be dictated to, ordered, or commanded. He must give advice that his conscience and his best talents dictate. In short—he must be free. Therefore, as architects, we pledge ourselves to militantly attack anything and everything that menaces our integrity as professional men serving our clients and the public and the cause of good architecture. This means we shall be ardent supporters of the democratic way, and mortal enemies of all things Fascist.

I can't bring this to a close without a word on education, so here it is:

(g) We urge and will work for a system of training young men as architects that will develop their ability to think and to analyze and to understand their duty and their privilege in democratic communities. Every false motivation such as grades, honors, prizes, and competitions must give place to the maximum development of each individual student by himself, with the help of his teachers and his comrades. We, as architects, will strive to cooperate as never before with our educators, to assist them in training progressive architects and good citizens. In such an education of the architect, it is essential
**Economical of Space**

This graceful, fan-like conduit installation will delight the eye of any electrical contractor. More important still, it is evidence of one contractor's skill and ability to economize on space. Note also that for maximum efficiency and to facilitate the insertion of wiring, the conduit has no sharp bends.

Youngstown's BUCKEYE CONDUIT is easy to handle and install. In the hands of experienced men, it can be compactly installed within normal walls and floors, so that it requires no extra space. Hidden from sight it still provides a quick, safe method for enlarging or changing wiring systems at any future time.

Plan now to install Youngstown BUCKEYE conduit in your postwar buildings, as well as for permanently replacing wartime wiring. This full weight, standard-threaded, rigid conduit gives complete and permanent protection to wiring against damage from moisture, vibration, dust, dirt, or crushing.

Just as soon as wartime restrictions permit, BUCKEYE CONDUIT will be available at all distributors.

---

**FOR SAFETY'S SAKE... USE CONDUIT (Full Weight Rigid Steel)**

**YOUNGSTOWN**
THE YOUNGSTOWN SHEET AND TUBE COMPANY
YOUNGSTOWN, OHIO
Manufacturers of
CARBON - ALLOY AND YOLOY STEELS

*Ask your distributor for Youngstown full-threaded Conduit, Pipe, and Tubing Programs...*
that complete collaboration between the profession, the schools, and the registration agencies, as long as they exist, be secured.

We have the following over the entrance door to our School of Architecture and Allied Arts, at the University of Oregon:

"A School of Architecture should be a happy home where students are helped to educate themselves." —Saarinen.

"Here is the minimum of restraint and the maximum sense of responsibility." —Prince Campbell.

Now I have practiced what I preached —I hope others will take up your challenge and advance their own Platform for the architects of the future.

ELLIS F. LAWRENCE, F.A.I.A.
Portland, Oregon

Facts

Dear Editor:

I want to encourage you in the liberal and intelligent position you took on the subject of government housing. It certainly required courage based on belief and this belief based on facts which reactionary yappers and pull backs refuse to consider.

Keep it up, you are doing a great public service, also a service to architects.

W. J. COPPOCK, Reg. Engineer
Moylan, Pa.

What Every Architect Should Know

Dear Editor:

I have just read the May issue of PENCIL POINTS. Permit me to offer congratulations on the whole issue with special commendation on the article entitled "Education for Planning" by K. T. Wittmann, A.I.A.

This is the type of thing Architectural magazines should develop, emphasize, and re-emphasize.

If the Architectural profession is fading out and the term "Architect" must now be supported by hyphenating it with the word "Engineer" to give it a breathing spell, it is, I believe, because Architects have not educated themselves to give complete, responsible, and desirable service in keeping with the opportunities of modern times.

Following traditions involving materials and methods of building can be worse than useless unless they can be proven the best and cheapest under tests of modern knowledge of nature, including human nature.

The Architect must somehow learn to know not only the psychology of aesthetics, but the applicable fundamentals of, economics, finance and business, real estate and building law, hygiene, sociology and civics, as well as structural and mechanical engineering, not to mention the prevailing contrariness, perversity, and capacities of men.

A drawing made by one who cannot evaluate costs, nor even tell how its execution in material form will look, last, or serve, is not nearly enough.

HENRY K. HOLSMAN, F.A.I.A.
Chicago, Illinois

Wanted—The Work of Cram and Ferguson

MARTIN RAY YOUNG, JR., who has just opened offices for the practice of architecture at Fifty South Udall Street, Mesa, Arizona, would like to obtain a copy of the above volume, which has been out of print for some years. It was a Pencil Points Press publication (1929).

Wanted—a late edition of Parker-Nolan "Architects and Builders Handbook." Kindly state price and condition. Write Box No. 25, C/O PENCIL POINTS.

(Continued on page 14)
Evidence of the architect's intention to build for permanence is seen in the bronze windows of the strikingly handsome home office building of the New England Mutual Life Insurance Company of Boston. Fabricated from Anaconda Architectural Extruded Shapes by the General Bronze Corporation, these windows lend impressive dignity and the enduring, rustless beauty that only bronze can impart.

Even more important, perhaps, is the fact that such windows require no maintenance, no painting, operate smoothly, will never bind or cause panes to fracture from rust accumulation in the channels.

Architectural bronze, traditionally beautiful, increasingly useful, provides long run economy over less durable materials.

BUY BONDS . . . buy more than before to shorten the war.

Anaconda Architectural Bronze

The American Brass Company—General Offices: Waterbury 88, Connecticut

Pencil Points, October, 1944 13
BUILDING PRODUCT FACTS

Readers have sent so many letters on the new PENCIL POINTS feature, Building Product Facts, that Don Grot is using these Views columns to publish excerpts from them by way of acknowledgment, instead of attempting to answer them individually. Such suggestions and criticisms are most helpful.

Address your letters to Don Graf, C/O PENCIL POINTS, 330 West 42 St., New York 18, N. Y. A number of comments appeared in the September issue. Others follow:

I like the sheets…

EARL D. HAY, Professor M.E., University of Kansas
Lawrence, Kansas

I believe that the BPF offers opportunities and even greater benefits than the original Data Sheets. I note with interest and approval the additional material covering references, manufacturers’ trade associations and provision for local sources of supply. I intend to save this series…

W. H. SCALES, Architectural Engineer
New Orleans, La.

BPF should be useful to all architects…

J. ADAM FICHER, Architect
Akron, Ohio

I think this is an excellent idea. It will benefit me greatly in writing specifications…

H. I. GAINES, A.I.A.
Asheville, N. C.

Looks good to me. This series should make a valuable file…

L. G. HARDY
Butte, Montana

The idea is an interesting one…

RICHARD SICK, Architect
Atlanta, Georgia

Your presentation would solve a problem that has long been a headache to the architect and engineer. Expect to make good use of it…

THURSTON R. JAHR, Architect
Dearborn, Michigan

Splendid idea, well conceived. It is needed right now…

EDWARD L. BUNTS, A.I.A.
Colorado Springs, Colo.

Congratulations and good luck on this excellent idea…

IVER T. ALMBERG
Chicago, Ill.

If you save us a few minutes of search for facts now and then, you are putting $ in our pockets…

UZZELL S. BRANSON, Architect
Blytheville, Ark.

Very good idea to file these cards according to the principal noun. I have always found it difficult to locate something as filed in A.I.A. filing system…

JACQUES ABADIE, JR., Architect
Washington, D. C.

Just what is needed. Please give us the chemical properties of various products and information as to how, where, when and of what it is made. I have confounded many an owner and contractor with “anhydrous calcined gypsum,” instead of using the term “Keene’s Cement.”…

LINDSAY MADISON GUDGER, A.I.A.
Asheville, N. C.

(Continued on page 16)
Key West reports,

"Aluminum in excellent condition"

Aluminum windows, doors, entrances, spandrels, grille-work, stairs and railings continue to contribute to the distinctive beauty of this structure. Installed twelve years ago, all of this aluminum is in excellent condition today. Its lasting ability has helped hold down upkeep costs, in the face of material and man power shortages.

In those buildings to be constructed as part of the war effort—housing projects, hospitals, recuperation centers, sewage treatment plants and other public works—aluminum will provide these same advantages. Plan on including aluminum for its fine appearance, long life and ease of maintenance. ALUMINUM COMPANY OF AMERICA, 2198 Gulf Bldg., Pittsburgh 19, Pa.
ment-sponsored housing will hardly materialize. The increasing conservatism of the United States, as expressed in our Congress, eliminates the possibility that this body will top our billion-dollar debt structure by housing grants. But houses we shall need, and the only way to get them into the hands of the people is to reduce their cost to fit the average income. Improved construction methods, prefabrication, etc., may help, but will not do the whole job. It will be necessary to attack the complicated organization of the contemporary building industry and eliminate all unnecessary charges which make the home a life-long financial burden.

A few years ago one of our statisticians found that only six percent of all building was executed under the guidance of an architect. Our California Architects' Association took notice with a start and tried to convince the public of the architect's value by means of radio talks. The oncoming war blurred the effectiveness of this campaign and redirected the profession into another frantic attempt: to convince government agencies that we architects had something to contribute to the war effort. Complete failure to accomplish this culminated in the advice to disguise ourselves as simple technicians when applying for public office.

In a way, this was no new disguise. The architect has always over-emphasized his value as a supervisor and policeman of construction work, with the result that his real social contribution is generally unknown. It can be understood why the owner hesitates to employ an architect for the portion of the job which any technician can apparently do as well at lower cost, especially since the law protects the owner against gross structural inadequacies and flagrant dishonesty. In most communities, plans and structures are inspected by structural, plumbing, electrical, and health inspectors, and in addition, the finance agencies (banks, FHA) check the construction at repeated intervals.

Unless the public will come to realize the importance of the architect's spiritual contribution, his standing in the building industry will deteriorate further. The weakness of his present position and his consequent feeling of inferiority can best be shown by comparing the services rendered and remunerations received by the various members of the building industry.

Starting from the end of the undertaking, we find:

1. The landscape architect: He plans the environment of the house, specifies the plants, and supervises their planting. His principle equipment consists of a knowledge of plants and locale, coupled with a feeling for style and enough imagination to give form to his garden. Little detailing is involved, since nature provides the units for his "arrangement." He charges the owner fifteen percent on the total cost of the job, and in addition collects a commission of about twenty percent from the nursery providing the stock.

2. The interior decorator: He purchases and arranges furnishings and textiles. Equipped with a sense of design and a knowledge of the market, he contributes taste and color to the interior. Because he deals largely with historical designs and with the products of mills and shops, his personal creative effort is reduced to a minimum. Mark-up for his services: one hundred percent over cost.

3. The tradesman: The recipient of the so-called subcontract, he furnishes the various materials which compose the building, and through his technical skill
Was the roof of tomorrow here yesterday?

The roof of tomorrow

already has a service record!

Present day buildings are benefiting by the service records piled up in past years by roofs made of Koppers Old Style Pitch and Approved Tarred Felt. And buildings of the future will have roofs made of these same reliable materials which are still giving as good performance as when first installed.

With all the wonderful new products of recent years, no roofing material has been developed which is an improvement on coal tar pitch. It is long lasting, self-healing, requires little or no maintenance.

Specify Koppers Old Style Pitch and Approved Tarred Felt, and enjoy the good will these Koppers products build over a period of years.—Koppers Company, Tar and Chemical Division, Pittsburgh 19, Pa.

Albert Kahn Associated Architects and Engineers, Inc., Detroit—Architects and Engineers.

KOPPERS

The industry that serves all industry

KOPPERS coal tar pitch roofing

KOPPERS coal tar pitch waterproofing
and labor incorporates them into the building.

His profit on the transaction, besides and above expense and a salary for himself, should be at least ten percent.

4. The general contractor: He computes costs and manages execution according to plans and specifications. Provided these are complete, his knowledge of the building processes need not be extensive, which is increasingly the case. The contractor, during the good old times, used to maintain mechanical equipment and possibly lumber and material yards. At present, however, his principal tool is the telephone. He signs the lump sum contract and promptly sublets all work to the various subcontractors, without having to contribute any special talent for the benefit of the owner. Union wage scales and price fixing arrangements amongst manufacturers prevent his helping the deal by shrewd trading. Supervision of the building process by public inspectors relieves him largely of responsibility for structural soundness of the building. The present form of the building loan, with its progress disbursements, reduces to a minimum his financial contribution and his need for capital.

5. The loan agency: It provides the missing portion of the money needed for the building, charging interest. The government now agrees to insure the loan, thereby relieving the agency of mortgage risks. In spite of this, the agency usually forces the owner to build in the most conventional and commonplace fashion so as to assure quick resale in case of default. Thus the architect is prevented from anticipating imminent changes in building conception. This kind of control retards architectural development in general, and victimizes the owner in particular, because designs produced under such limitations depreciate rapidly.

To be concluded next month

NOTICES
WALTER E. CHURCH, A.I.A., EARL P. NEWBERRY, and FRANK ROEHR, A.I.A., partners of the late Morris H. Whitehouse, A.I.A., announce that they are continuing the practice of architecture under the firm name of WHITEHOUSE, CHURCH, NEWBERRY and ROEHR in their present offices at 619 Railway Exchange Building, Portland, Oregon.

WILLIAM C. SCHNEIDER, A.I.A., announces the opening of his office at 5920 W. North Ave., Milwaukee 8, Wis. The office will be shared with E. W. Burgess, Consulting Engineer.

TYSON T. FERREE, Architect, announces the re-opening of his office at 220 Professional Building, 101 West Green St., High Point, N. C. He will work on postwar projects and jobs carrying priorities.

GEORGE COOPER RUDOLPH and ASSOCIATES, Architect-Designers, have moved their offices to 155 East 44 St., New York 17, N. Y.

WILLIAM ARNOLD JOHNSON, A.I.A., has moved his offices to the First National Bank Building, Everett, Wash., from the Post Building, Tacoma 2, Wash.

B. H. WHINSTON, Architect, announces the re-opening of his office at 405 Lexington Ave., New York 17, N. Y.

WILLIAM ARNOLD JOHNSON, A.I.A., has moved his offices to the First National Bank Building, Everett, Wash., from the Post Building, Tacoma 2, Wash.

JOHN R. CASSELL CO., INC. (drafting instruments, etc.) are located at a new address, 138 E. 47 St., New York City.
NOW, MORE THAN EVER,
DOUGLAS FIR DOORS
MEET MODERN REQUIREMENTS

For Door Specifications

Attractive 3-panel interior doors—basic, all-purpose layouts in keeping with today's design trends—assure the utmost in client satisfaction when you specify Douglas Fir Interior Doors. What's more, these fine doors are durable, long-lasting—and if FACTRI-FIT features are specified (see below) they go up quicker, fit better, hang better.

Plan now to feature these improved Douglas Fir Doors. Write for catalog showing Interior Doors, Tru-Fit Entrance Doors, and new specialty items.

FACTRI-FIT

PRECISION - MADE
DOUGLAS FIR DOORS

Specify Douglas Fir Doors for essential jobs today, for every job tomorrow. Write for catalog showing complete series of Interior Doors, Tru-Fit Entrance Doors and new specialty items.

Douglas Fir DOORS
FIR DOOR INSTITUTE
Tacoma 2, Washington

Remember! NATURE MAKES DOUGLAS FIR Durable!

Durable Douglas Fir Doors are made from all-heart wood, vertical grain, soft, old-growth Douglas Fir.

PENCIL POINTS, OCTOBER, 1944 19
Did U.S.G. Research Men reach a "dead-end" when they came face to face with a blank wall? ... Not at all, because that's exactly what they set out to find ... a system that combined Sheetrock\textsuperscript{*} wall and ceiling panels into one continuous surface ... where joints became notably conspicuous by their absence.

The advantages of Sheetrock fireproof wall and ceiling panels are well known. With their use, interiors go up on the "double-quick" ... no waiting for decorating—wood trim may be applied immediately. These points have been demonstrated through twenty years and more of use.

The treatment of the joints was the one remaining problem to be solved. That became a thing of the past with the Perf-A-Tape\textsuperscript{*} System of Joint Concealment ... not only are joints concealed but "welded" together so securely that the joints are stronger than the Sheetrock panels themselves.

Continual research and new developments, proved in practice with an eye to the future, have kept Sheetrock well in the lead, as the most widely used gypsum wallboard in the world.

\*Trademarks Reg. U. S. Pat. O.
The opposition, so far, seems to come primarily from those who have a sizable stake in things as they are. Has any one polled the inhabitants of the Tennessee Valley, to see what they think of TVA? And how many of those who oppose the idea know the tremendous powers of the Government can do, and with abundant opportunity the blossoming of that once-backward region, and stated: "... unified development, with the Federal Government doing what only the Federal Government can do, and with abundant opportunities left for States, local communities, and private individuals, has prove its worth." 

Orderly postwar development of Washington, D. C., is planned by various Federal and District government agencies, subject to approval of Congress, availability of funds and materials.

Slum clearance, development of park and recreational areas, improvement of housing, construction of bridges, construction of schools and libraries, are among projects listed. The housing issue (see PENCIL POINTS June 1944) is still a controversial one in congressional committees.

The Washington central downtown area is under study by federal and municipal planning agencies and by a firm of consulting engineers; experts are trying to decide whether the city should continue to develop by attacking two areas of Government buildings needed, construction of bridges, construction of schools and libraries, are among projects listed. The housing issue (see PENCIL POINTS June 1944) is still a controversial one in congressional committees.

According to incomplete data, they destroyed more than 3200 Ukrainian schools, many museums, clubs, and theaters. More than 4 million volumes were taken from the Kiev libraries; valuable collections and laboratory equipment were taken from the institutes of the Academy of Science and shipped out of the country.

Local Soviets and People's Commissariats are being urged to put an end to their antipathy toward mechanization and to promote mechanization of small construction jobs; to make use of some structural raw materials (such as gypsum, field stone, limestone) which are plentiful in the locale, rather than using raw materials shipped from a long distance. It is reported that lumber materials are to be substituted with wood from local sources, which is considered durable and suitable for most structural parts.

Specialists are being sent with the Allied forces into France to aid in C. O.'s certain buildings, monuments, and works of art which are to be respected and preserved where possible.

Captain Daniel Lafarge, U. S. Army, one of the many journalists who, as fighting ceases in each area, specialists and their emergency squads will examine and test what they can of the damaged works. Often carved stones, parts of carved beams, etc., have been quickly used to fill shell holes or place improvised arch supports. During the Battle of Caen, most of the 14th Century houses in the town were destroyed completely, though two of its famous churches suffered little damage. The interior of the Hotel de Corville (built in 1538) was burned but walls and sculptures are reported undamaged.

American "building interests" predict that European builders will call on other countries for postwar reconstruction.

The opinion is that, when the call comes, it will be directed to the United States, Canada, Mexico, and South America, since these countries have escaped structural war casualties and can well afford to release their building skill to expedite the building urgency facing all sections of Europe. The American builders stated that builders who may answer the call would be well paid for their work. It is said that common building labor in Europe will be plentiful, but that key men are scarce and will have to be imported; that the reconstruction of Europe's homes and buildings will tax the ability of an army of builders drawn from every section of the world—the greatest aggregation of carpenters, bricklayers, plumbers, carpenters, plasterers, and other building mechanics ever assembled.

3269 dwelling sites in New York State have been approved for postwar use. Of this total, 2300 sites are in N. Y. City, 942 in Buffalo, and 27 in Albany. On each site, construction plans have been made ready by operative builders and the necessary financing has been guaranteed by private institutions. According to Hugh L. Johnson, Director of the Federal Housing Administration, "... this is the reason why European builders will call on other countries for postwar reconstruction."

Micro electronic construction plans of carved, movable figures of machines and men (accurately scaled) are now standard equipment for planning and layout engineers. An equipment for planning and layout engineers of Westinghouse Electric & Manufacturing Company.

After the war, permanent metal figures will replace those in wood and 20 or more of each will be placed in a "bank" from which engineers may draw in planning new facilities required. The company says: "... two-dimen- sional drawings provided engineers with their preconstruction view of a plant, but even engineers and factory planners could not translate mechanical drawings into completely efficient factory units every time. Production was sometimes delayed while adjustments were being made... Given the preview of the factory's workings, engineers can change the design of the miniature plant to better meet its specific needs."

LaGrange Park, Illinois, a Chicago suburban village, has presented a postwar plan through its Planning Committee.

A first step in its re-design is recovery of tax delinquent lots, followed by rezoning, adoption of a new building code, and other measures to conserve property values. The plan is receiving considerable interest from other planning groups as a demonstration of much-needed "grass-roots" initiative by home-owners.
News

Products Progress

Steel Column Substitute
A substitute for structural steel columns has been developed in Northwestern University's Technological Institute. It is reported to be stronger and cheaper than steel, as light as aluminum, and made chiefly of concrete. Inside a spiral steel wire a metal lining is placed which is then filled with concrete compressed by a steel plunger. Body is given by cutting water content to about one gallon to a sack of cement. The steel wire, expanded by the compressed concrete, adds to the column's strength. Tests on a small model, 80% concrete and 20% steel, are said to show the column would support loads much heavier than would a steel column of the same size. It is predicted that the new substitute would conserve iron ore reserves, would reduce building costs, and would be especially useful in European reconstruction. The cost of its production is reported to be 67% less than steel.

Sound Conditioning Plasters
Sound conditioning for every room by means of new types of plaster is introduced by the Gypsum Association, 211 West Wacker Drive, Chicago, Illinois, who explain that sound conditioning is the control of sound waves to reduce undesirable noises. The newly developed gypsum acoustical plaster is said to be very porous, the air passages "blotting up" the sound; it is fireproof; in most cases its use on ceilings alone is sufficient. It is applied very much like ordinary gypsum plaster to scientifically determined thickness.

New Decimal Point Locator—Slide Rule
A new decimal point locator and slide rule, said to determine mechanically the decimal point in involved expressions with results up to 19 places, is announced by Pickett & Eckel, 53 West Jackson Boulevard, Chicago 4, Illinois. A scale arrangement gives 30-inch accuracy for cube root, 20-inch scale accuracy for square root, cube root, and logarithm, and also determines the decimal point location for square root and cube root. It is 11" long, 2" wide, 1/4" thick, constructed of Sorex tag paper stock lithographed, varnished, bonded, and comes complete in box with coat-pocket carrying case and manual (price $3.50). The illustrated instruction manual, written by M. L. Hartung, Associate Professor of the Teaching of Mathematics, University of Chicago, gives beginners' instructions, rules for operating the Decimal Point Locator, and presents the mathematical Theory of Mechanical Decimal Point Location.

Commercial Fluorescent Fixture
A new fluorescent unit said to incorporate all the elements of correct engineering is announced by Spero Electric Corporation, 18220 Lanken Avenue, Cleveland, Ohio. The light from four 40W tubes is shielded by evenly spaced egg-crake louvers to minimize glare; reflecting surfaces are arranged to eliminate "trapped light" resulting in high intensity with low surface brightness. The unit is made for stem or flush mounting.

Thermoplastic Insulation
"Glencaseal" is an elastic, flexible, rubber-like synthetic compound (derived from acetylene) used as insulation and wire and cable cover. It becomes soft and plastic when heated for processing, is firm when cooled to normal working temperatures. It is said to be highly resistant to oils, greases, solvents, acids, alkalies, flame, moisture, ozone, sunlight, weathering; to be remarkably stable electrically; to possess excellent dielectric strength; to be exceptionally slow-aging. Recommended uses: building wire, low-voltage power cable, series lighting cable, portable cords, instrument wire, chemical plant wiring, telephone and telegraph distributing frame wire, and others. "Glencaseal" is claimed to make it possible for architects and builders to dispense with protective coverings and permit use of thinner insulating walls than heretofore. Manufactured by General Cable Corporation, 420 Lexington Ave., New York 17, N. Y.

Waterproof Underground Pipe Conduits
A modified design, "Therm-O-Tile," for dry insulation of underground pipe conduit is announced by H. W. Porter & Company, 825 Freylinghausen Ave., Newark, N. J. The standard design is hermetically sealed by surrounding the entire conduit with a membrane waterproofing and then placing the whole on top of a wide sub-base beneath the standard spread-footing foundation; this membrane is usually 15 lbs. of asphalt-saturated felts laid in hot asphalt and finished with a top mopping of hot asphalt. If there is condensation of moisture out of the air within the conduit, it is claimed the internal drain channel (standard design) will drain it all out. The modified design is recommended for unusual moisture conditions such as partial or full submergence.

Speed Welding
A new method of increasing the speed of welding mild steel is announced by the Lincoln Electric Company, Cleveland 1, Ohio. The technique is said to cut costs as much as 59%. Information on it which may help architects in inspecting welded joints is covered in a 48-page booklet on "Fleet-Welding" which lists subjects as follows: effect of penetration on welding costs; cost reduction of "Fleet-welding"; factors affecting production speed and general information for use of procedure tables; information with corrective suggestions on the procedures used for butt welds, fillet and lap welds. Several pages are given to procedures used in welding 18-gauge to 1-gauge sheet metal. In addition to the 29 photographs and drawings, the manual carries procedure tables which list plate thicknesses, electrode sizes, currents, melt-off rates, arc speeds, number of passes, feet of joint welded per hour, and pounds of electrode per foot of weld.

24 PENCIL POINTS, OCTOBER, 1944
EFFLORESCENCE is an outcropping of minute white crystals on brickwork. When these crystals occur on colored mortar joints, the condition is sometimes mistaken for fading.

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall.

Brixment itself *does not cause efflorescence* because it is practically free from soluble salts. Even when such salts are present in the sand or brick, the waterproofing in Brixment mortar usually prevents them from coming to the surface.

Bricklayers who have used Brixment mortar for years say they have far less efflorescence with Brixment than with any other mortar.
Modern floors do a real selling job in modern stores

A fact which is strikingly proved by sales figures from coast to coast. Whether in great department stores, as in Gimbel Brothers in Philadelphia whose Bath Room Specialty Shop is shown above, or in smaller stores of every type, this most modern of floors—Nairn Linoleum—is being most effectively and convincingly proven as the outstanding floor for your postwar buildings.

A handbook on linoleum specifications has been prepared for your use. May we send you your copy?

CONGOLEUM-NAIRN INC., KEARNY, N. J.

After years of continuous heavy service, Nairn Veltone Pattern #2956 in this Gimbel Brothers Saleroom is fresh, beautiful—like new.

For modern floors and walls

NAIRN LINOLEUM

easy to maintain, colorful, permanent, resilient.
There is a New Trend in Store Design

"The design contemplates merchandise typical of the needs of a small community. To make the interior as inviting as possible to passers-by, display window backs and divisions between departments are limited to structural glass, and both display window and entrance vestibule are strongly illuminated from glass ceiling panels.

The first floor is devoted to the merchandising of men's wear, sports, electrical equipment, etc., together with such items of women's wear as may be attractive to shoppers en route to other departments. The entire second floor is devoted to the outfitting of women.

Structural features, in addition to plate glass, include Herculite Doors, Carrara Structural Glass exterior, mirrors and glass front stock cases and counters."

In this design, as in the store designs of leading architects throughout the country, Pittsburgh Glass plays a prominent part. These glass products are particularly suited to help in the creation of striking, sales-winning store fronts and interiors. They are versatile, consistently high in quality. And serviced through a nationwide system of Pittsburgh branches and dealers which assures ready availability anywhere.

Hundreds of thousands of merchants are being urged to consult architects by Pittsburgh Plate Glass Company. Advertisements running regularly in 21 leading retail magazines suggest planning now for postwar building and alterations, with the help of architects.

Silverman & Levy's conception of a General Store

FREE!

Two perspectives, plan, and several details of this design —on a 21½ x 25½ sheet. The fifth of a series of store designs by some of America's leading architects. Mail the coupon now.

Pittsburgh Plate Glass Company
2291-4 Grant Building, Pittsburgh 18, Pa.

Please send me, without obligation, your sheet showing more complete drawings of the General Store by Silverman & Levy.

Name

Occupation

Address

City

State

"PITTSBURGH" stands for Quality Glass and Paint
UNIT ONE . . . enclosed fluorescent fixture, of glass or plastic, planned for general lighting. Perspective above shows it in combination with unit one.

UNIT TWO . . . a concentrated band of fluorescent lighting which could be mounted end-to-end and directed effectively on shelf space.

G-E MAZDA LAMPS

GENERAL ELECTRIC
Here's the opportunity Mr. Jackson sees . . .

"Lighting can provide effective postwar help for the neighborhood store. Because light can make the store stand out from its surroundings, can invite folks in to buy, can help display merchandise more appealingly.

"For example, if you could pull back the walls of a modernized food shop, this picture shows what you might see. A streamlined arrangement of shelves and counters, all pleasingly illuminated with cool, comfortable fluorescent light, has revitalized the store interior.

"A striking all-glass store front, set back at one side, together with a well­lighted revolving display, has added extra attraction power for people who pass.

"At the same time, to save money on modernization, the high ceiling has been left in its existing state. The stamped metal pattern, painted in a dark, neutral tone, is not illuminated. Shadows have been minimized by keying the rest of the interior, including the floor, to lighter colors.

"The result is a store that invites new customers and old . . . that builds business with light."

A helpful new booklet, "Light revitalizes a neighborhood store" gives additional details on Mr. Jackson's ideas on effective lighting for tomorrow's modernization. For your copy, write Div. 166-PP 10, General Electric Co., Nela Park, Cleveland 12, Ohio.
Typical of the important contributions good communications can make toward hospital efficiency is Connectacall, which enables a nurse to supervise the welfare of her patients more efficiently... with less effort. It enables her to "look in" on any room without leaving her station, ... to talk to patients readily, and send orderlies or aides on less important errands.

Postwar communicating and signalling systems by Connecticut Telephone & Electric Division will incorporate every desirable, proved step forward. We have reason to believe they will be available very soon after major military communications equipment needs have been taken care of.

If you have postwar construction or modernization projects in the planning stage, it will pay now, as always, to look to "Connecticut".
The same techniques that have made prefabricated timber such a satisfactory building material for giant Navy blimp docks have been applied equally well to railway, marine and aviation housing; to factories, bridges, warehouses, commercial and municipal buildings of various types and sizes.

It is difficult to name an industry that cannot benefit from the economy, strength, construction speed, permanence of wood.

This is particularly true when Timber Structures Engineering in Wood policy is harnessed to a given building problem.

**Engineering in Wood** is many things. Research. Design. Engineering. Prefabrication. Transportation. Erection. All are part of Timber Structures service to management, architects, engineers, contractors on buildings in which roof trusses and other heavy timber items are an integral part.

Our **Engineering in Wood** service is available to you. Whether construction plans are immediate or postwar, our specialized knowledge is at your disposal. Inquiries are welcomed on the use of wood and allied structural materials. Write for literature.

![Image of a hangar under construction.](image-url)
Whether you're planning a store, shop or house . . . new or remodelling . . . do not overlook the beauty and utilitarian opportunities presented by Blue Ridge Decorative "3 EX" Glasses. Made in several attractive patterns, these glasses can be semi-transparent or obscure, Satinol finished or plain. All of them provide good light transmission, and create striking, decorative effects. Made by the Blue Ridge Glass Corp. of Kingsport, Tenn., these Decorative Glasses are sold by Libbey-Owens-Ford through leading glass distributors. For additional information write Blue Ridge Sales Division, Libbey-Owens-Ford Glass Company, 65104 Nicholas Building, Toledo 3, Ohio.
PLATE II

This office of color, warmth and quiet is selected from a portfolio of Weatherwood interiors... Walls are in alternating panels of Blendtex and Hi-lite Plank. The ceiling is Hi-lite Tile or Paneltile. This is one example of Weatherwood 'Plus-ability'... the portfolio contains many more new ideas in beauty, quiet and insulation combined in one material.

WEATHERWOOD

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BUILDS • INSULATES

DECORATES • QUIETS SOUND

UNITED STATES GYPSUM

Manufacturers of Building and Industrial Products Since 1901
Contemporary American Home of the
MAHARAJAH OF INDORE

When, Sir Yeshwant Rao Holkar, Maharajah of Indore, planned this home at Santa Ana, California, he could, of course, command the best in equipment. That he chose PAYNEHEAT upon the advice of well-informed American friends and technical experts, is, we feel, a tribute to PAYNE quality and performance. * Tens of thousands of other homes ... from humble cottage to great mansion, coast to coast ... enjoy PAYNE heating and ventilation ... ascribed of carefree comfort for the and many years to come.

Coming ... PAYNE ZONE-CONDITIONING ... Post-war successor to old-fashioned central heating: Healthful circulation of fresh air, gas-heated in winter, with cooling summer ventilation if desired ... controlled by zones or individual rooms. * Available after the war. Write for new folder.

PAYNEHEAT
30 YEARS OF LEADERSHIP

Payne FURNACE & SUPPLY CO., INC., BEVERLY HILLS, CALIFORNIA
...can be shaped
to your own ideas of
beauty and practicality

Versatility is one of the big reasons you specify architectural metals.

You can use them in the way you want, for what you want. They can be shaped and fabricated to your own desires.

Tomorrow . . . you will use functional design more than ever before. Architectural metals, lending themselves readily to architects’ thinking, will enable you to achieve the effects you want, not only from the decorative angle but from the purely utilitarian angle as well.

Architectural metals, ferrous and non-ferrous, offer you a wide choice. There are many different materials — many qualities, colors and characteristics.

Fabricators of architectural metals are anxious to assist you in detailing—as you plan now for tomorrow’s peace-time building. Write today for Directory of Leading Architectural Metal Fabricators. Address Dept. P-10.

NATIONAL ASSOCIATION OF
ORNAMENTAL METAL
MANUFACTURERS

209 CEDAR AVENUE
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Gentlemen:

Please reconvert our plant for thoroughly modern equipment.

Our market time-saving devices which meet competition in the lowered costs make possible preliminary which should enable us our Board of Directors to so that steps may be

The trade-mark that appears on highest quality Butts, Hinges and other Hardware Equipment for commercial, industrial and residential buildings.

Every minute saved in transportation of parts or packages between departments in any industrial plant saves money. Stanley Magic Doors save minutes that add up to dollars every day. They speed up traffic, reduce accidents, save heat, eliminate breakage, cut door repair costs. For these reasons, architects took a professional liking to them right from the start!

Stanley Magic Doors, actuated by "electric eye", have been thoroughly time-tested. Their streamlined action earned a leading place in modern building plans. Make these sturdy, dependable, money-saving doors a part of your earliest discussions of industrial and commercial building projects. Stanley will cooperate with you in preparing plans and specifications. Fill out and mail the coupon now.

STANLEY MAGIC DOORS

STANLEY

SAVING is Basic in Industry

More CURTIS WINDOWS

More than ever, windows will be used in groups. Curtis stock windows—low in cost—easy to install—make such groups economical, even for the smallest homes.

Curtis Silentite windows may be used to design several different kinds of bays to add variety and charm. Such windows, too, help satisfy the demand for more space.

Because the Silentite window line is so complete, you have more scope in planning modern window arrangements, such as this corner window. Wide variety of sash styles.

With the famous Curtis Silentite line, you can find the right window for every size and type of home. Here, large bay sash go to the floor—a very stylish treatment.

ARCHITECTS all over the country are doing some practical thinking about windows for post-war homes. That’s why you’ll find Curtis windows on the boards and in the post-war plans of so many architects. There are sound and compelling reasons back of this choice. Here are some of them:

1. The public wants more windows—and stock windows by Curtis offer the most practical means of meeting this need, at low cost.

2. The demand for a wider variety of window styles and sizes immediately points to the broad Silentite line—including windows for every need, every use, every home.

3. Tomorrow’s windows must be weather-tight—and Curtis Silentite windows, made of wood (in itself an insulating material) provide scientific weather-stripping . . . low fuel cost . . . easy operation.

4. Through years of research, Curtis has become a natural leader in the window and stock woodwork field. That is why architects look to Curtis for latest improvements.

Keep up to date on windows and stock architectural woodwork—with Curtis. Mail the coupon for valuable information.

CURTIS COMPANIES SERVICE BUREAU
Dept. PP-102, Curtis Building
Clinton, Iowa
Gentlemen: Please send me free literature on Silentite Windows and Curtis Stock Architectural Woodwork.

Name: ________________________________
Address: ________________________________
City __________________________ State: ______

PENCIL POINTS, OCTOBER, 1944 39
Whether you are planning hospitals, schools, court houses, or any other type of building for post-war construction, let General Bronze help make the job easier for you.

For more than 25 years we have worked closely with hundreds of leading architectural firms on both large and small building projects. From this extensive experience we have learned what features architects want in windows, doors and architectural metalwork—what kind of help architects appreciate most—what makes their job run easier and smoother.

Today we are producing for Victory. Tomorrow, however, with enlarged facilities and newly acquired techniques in mass production we will produce in standard sizes new and finer windows at greatly reduced costs.

In the meantime, if you are working on post-war building plans, we suggest that you let us help you with your detailing. There's no obligation. For complete information on General Bronze products consult Sweet's or write for the name of our nearest representative.

GENERAL BRONZE CORPORATION

FIVE CONSECUTIVE ARMY-Navy "E" AWARDS

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LONG ISLAND CITY, N.Y.
HOW TRUSCON IS HELPING
Spur Postwar Planning
NOW!

THE TIME IS GETTING SHORT... the end of the war is within sight... and American business must plan its postwar building program with increased energy and foresight!

Truscon is helping stimulate this action with a new series of advertisements in BUSINESS WEEK, whose readership is over a half-million important business executives and civic leaders.

Truscon is illustrating and describing actual jobs that are down on paper, ready to go... plans drawn and everything set for the actual placing of contracts and immediate starting of work.

Truscon feels that the publicizing of these jobs... big jobs, involving large expenditures of money... will encourage American business and municipalities to embark on a nationwide program to fill building needs. The necessity for immediate cooperation with architects and engineers is amply emphasized. We hope that you will benefit from this campaign in many ways.

TRUSCON
Steel Company

YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation
Cape Cod, Modern Colonial or Modern—no matter what type of home you design in the future, the walls of the house will face added responsibilities.

Tomorrow's homes, because of new standards of heat control, must have walls with effective insulation.

Tomorrow's homes, because of air-conditioning, must have walls so constructed that moisture condensation within the walls is reduced to a minimum.

The Approved Insulite Wall of Protection will do the job. This wall gives these effective safeguards:

- Double Insulation...
- Superior Bracing Strength...
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The detailed drawings below explain why. For specifications, refer to Sweets Architectural File, Section 10, or write for "Scientific Facts" Booklet. Address: Insulite, Minneapolis 2, Minnesota.

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Made exclusively from wood
A GOOD RULE

Select your hardware first — then detail to suit it. American manufacturers have standardized to a great degree. By making your details to suit these hardware standards you will save your clients' money, expedite delivery, and eliminate many aggravating hardware problems.

YOU'D be surprised to learn how often improper detailing of pocket pieces in window frames causes extra expense in building. The pocket piece (C) should be wide enough and long enough to permit the inserting of cast iron sash weights. The smaller lead weights cost a lot of money. Your co-operation in planning can also save grief and high costs.

Make sure that the meeting rail and top and bottom rails allow sufficient wood for hardware (B).

Here's additional evidence to show that a keen eye on the hardware when detailing will avoid a black eye on the job.

Let's co-operate: you consider your hardware requirements early, and we will gladly help you solve special hardware problems. Lockwood Builders' Hardware is featured in Sweet's Architectural Catalogs.

As soon as ready please send me the series of 12 Detail Sheets, of which this is No. 10. No obligation.

Name

Address

PENCIL POINTS, OCTOBER, 1944 43
Satisfaction with a home is the sum of many little conveniences.

Graphically illustrated in the photograph is the ease and safety with which HOPE’S metal casements can be cleaned by the housewife herself.

Buyers of the homes to be built in the next few years will also value highly the maximum daylight, the enhanced view from within, and the pleasing exterior effects of metal windows.

And the selection of HOPE’S WINDOWS will assure the practical benefits of positive weather-tightness, controlled ventilation and long-life with a minimum of maintenance care.

HOPE’S WINDOWS, INC., Jamestown, N.Y.
BACK THE ATTACK ★★ ★ BUY WAR BONDS

Insulux Glass Block is a functional building material—not merely a decoration. It is designed to do certain things that other building materials cannot do. Investigate!

Owens-Illinois was one of the first to recognize the advantages of modular design in home construction. All sizes of Insulux Glass Block are made in dimensions that fit into the standard 4-inch module.

Modular Planning for Coordination

Owens-Illinois

Insulux Glass Block

What will the postwar house be like? Nobody knows—exactly!

One thing is certain! The House of Tomorrow will be designed for better living and will make full use of our wonderful new building materials. Plastics—plywood—cork—synthetic rubber—light metal alloys—glass and glass block!

Many of the new houses will display lustrous, light-flooded panels of Insulux Glass Block.

Panels of Insulux can be used to brighten an entry way or to add new beauty to a kitchen, living room, bedroom or bath.

Insulux Glass Block is a practical building material. It transmits light. It keeps out noise and dirt. And it is easy to clean—and to keep clean.

See our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. 70. Toledo, Ohio.

THROUGH THE LOOKING GLASS
of Tomorrow

A PROFITABLE FIELD
for Architect and Builder!

— stimulated by the new Kawneer Program!

LEADING ARCHITECTS AND BUILDERS throughout the nation are becoming more and more interested in the store-front field, which is definitely due for tremendous activity in the years ahead.

The demand for architectural and design services with stores is growing every day. Retail merchants now recognize that proper planning and design create extra selling power. The new Kawneer program, reaching hundreds of thousands of retail merchants in every trade, is accelerating this national trend.

Kawneer Store-Fronts—"Machines For Selling"—are being promoted with special emphasis on the importance of the function of good design.

You can tie into this national campaign, obtain valuable help from Kawneer field men, create more effective fronts with new Kawneer products. WRITE The Kawneer Company, 310 Front St., Niles, Michigan, for ADDITIONAL DATA ON THE KAWNEER PLAN.

Kawneer
STORE-FRONTs
MACHINES FOR SELLING!
We all stand, at the moment, either in the “darkness before the dawn” or in the “lull before the storm,” depending on how you look at it. V-Day (on the European front) is dreadfully near. It will be greeted with general joy, in which we expect to participate. But the American aftermath may not be as comfortable as anticipated—unless there has been more complete and effective planning for it than meets the eye.

It is gratifyingly true that groups here and there throughout the country, in both business and government, have been preparing with more or less skill and thoroughness to deal with the parts of the whole reconversion problem which lie within their respective circles of influence. Yet we are slightly appalled by the apparent absence of any over-all coordinating body to pull all the plans together and give them concerted direction. We are also dismayed at the fact that at this late hour the sum total of all the preparation for peace does not seem nearly adequate to insure reaching that much-talked-of goal of Full Employment. Perhaps that is the way democracy must work things out, and we will have to let it go at that.

Getting back to our own alley, it appears from recently released figures that the building industry is not ready yet to do its own part in the general scheme. A special Congressional Committee on Postwar Economic Policy and Planning pointed out the other day that out of almost $11 billion worth of contemplated state and local public works projects, only about one-third have been advanced beyond the idea stage. Furthermore, two-thirds of all such projects that have been brought to the completed plan stage are confined to five states—New York, California, Michigan, Illinois, and Ohio. “The vast majority of cities under 25,000 population have made very little progress in planning for their needed postwar public works,” continues the Committee’s statement.

As for private projects, the Producers’ Council reports that their volume is “well behind requirements.” “Only a small part of the estimated $5.3 billion of private building [needed for the first postwar year] has reached the planning stage,” says the Council’s latest release. It then concludes, “Failure to expedite the planning of private construction not only will lead to increased unemployment and postpone the completion of urgently needed housing and other building, but also may result in unnecessary spending of many millions of dollars on non-essential work relief.”

This situation is not to be shrugged off. It is unprecedented in history and the cost of failure to meet it successfully will be staggering.

Architects have not, it is true, the power to initiate projects, either public or private, but they do have influence which they can use to persuade many clients to go ahead now with plans, even in the face of uncertainties as to materials. The time has come to put that influence more intensively to work.

The country needs at least $15 billion worth of construction planned and ready to start when unrestricted civilian building is resumed at the final end of the war if we are to be able to cope with the most critical period of reconversion employment. There is no time to spare. It won’t be long now before we will either have to master the deluge or be swamped by it.
Close integration of building elements with each other is one of the many modern headaches that our architectural forefathers did not have to worry about. Building developed much like animal life from the one-cell Protozoa to the almost infinitely complex Vertebratae. Many farmhouses in the South, still in use, were born just like the one-cell amoeba: when another room was needed, another was built, just like the one before it, with a door to the front, a window to the rear. The house is not integrated even by doors between rooms; and, of course, it is innocent of such complications as plumbing or wiring.

For the modern extreme, the Lessing Rosenwald residence, for example, is mainly an urbane skin over an infinitely complicated system of air conditioning, intercommunication, burglar alarms, automatic fire extinguishing systems, and so on and so forth. The new Statler in Washington made history (and hard cash, too) by finally integrating hotel furniture with room sizes and shapes, in fact, with the basic design of the building. Visitors to the Pentagon or to Radio City fortunate enough to be shown the guts of the structures are likely to be even more impressed with the mechanical equipment than with the architecture.

During the advance from farmhouse to Radio City, as soon as the architect absorbed and mastered one of the new contrivances and came up for air, tech
Responsibility

nological development pushed him back under with a couple of new ones. Just when radiators were made to behave in their flush spandrel recesses, air conditioning made them irrelevant altogether; and after door-closers yielded to the inconspicuous Rixson hinge, frameless glass slab doors and electric eyes began to throw all known kinds of hardware into the discard.

So the architect should not be blamed too lightly for his frequent inability to keep riotous building elements under control, although the impulse to cuss clearly, you have a choice: to hang together (right) or to hang separately (below)

him roundly is often irresistible. The office where this is written, for example, situated in one of the most modern buildings of a medium-sized town, discloses the following lapses to the most casual glance: samples of the plumber's art in the form of cold, hot, return and drain piping, in two sets with appropriate branches, an undisciplined washbasin, and a brazenly protruding medicine cabinet; steamfitters' art, ditto, with assorted size radiators—behind, under and between the sections of which the janitorial staff long ago abandoned cleaning; venetian blinds in conflict with window operation when lowered and obstructing light when raised; convenience outlets behind hot pipes, safely beyond human reach; phone, buzzer and fixture wiring liberally distributed over floor, ceilings and walls; a floor so objectionable as to require a carpet which permanently absorbs cigar ashes; fans placed here and there with their long and worn extension cords, hazards to life, limb and property—but why go on? Your office probably looks the same!

Even in much better buildings, though, how easily are those movable partitions really moved? Does the painter still bring his bucket, the floor man his patch of linoleum, and are fixtures reconnected with surface conduit? Desks are still cluttered with lamps because ceiling lights miss the working areas; coat racks and supply cabinets mess up the floor space for lack of closets. Doesn't the radiator still fry the luckless clerk sitting next to it, or the open window give him pneumonia and scatter his papers while his colleague farther away gasps for air?

The memory of tubs on legs with precarious shower curtains on unsteady pipe rings is still familiar. Even among recent installations, there are thousands of hot and cold taps not yet integrated into a mixing faucet, thus precluding the use of tempered running water; or tub and shower supply valves not on speaking terms, an invitation for scalding. Have you ever really appreciated the beauty and convenience of ceiling-hung drying racks in kitchens of apartment houses, or the forests of radio antennae on their roofs, just above the semi-Georgian coping? And how long will we put up with the perverted (and growing) refusal of refrigerators to fit into any sequence of kitchen cabinets and equipment?

And to speak of habits as well as of design, think of the thousands of communities where tradition still requires departing tenants to rip up linoleum, tear down curtains and hardware, shades and blinds, disconnect refrigerators and stoves, carry them cross country and then get rid of them because they do not fit, while the new occupant replaces them, laboriously and expensively. How many decades does it take to discover that such fittings are part of the house, should be integrated with it in design and ownership? And when will the telephone cease to be a surplus luxury, subject to separate negotiations with the Company and installed on a catch-as-can basis?

Well, perhaps it won't be long. Because the great American public has indicated its unmistakable preference. Firstly, it wants labor-saving layout, finishes and equipment (or gadgets, if you prefer). And, secondly, it wants them integrated into a smooth and consistent whole (or streamlined, if you prefer). Perhaps not all of the gadgets or streamlining are in good taste; but the basic trend is hardly open to argument.

Not many years ago one bought a car, then according to one's desires and purse bought and mounted thereon a heater, a defrosting device, radio with antenna, cigar lighter, ashtrays, foglights, trunk, and so forth. The access-

Materials, structure, heating units, light sources and decoration fused into the single concept of progressive, organic architecture
minutes mount to fourteen months or a continuous sinktop or an ashless fuel that will free you of that much drudgery a day is really priceless magic that will extend that most precious of all things: life itself.

Of course, the housewife as well as the management of a commercial or public building can hire their drudgery done. But, alas, there are fewer drudges for hire every time one phones the employment agency—the laundress has gone to turn out washing machines and the man who used to shovel coal works in the stoker factory. So the latter-day architect must do on devices that will save time for living—for the client or his employees—and on simplicity and smoothness so the time saved by modern devices may not be frittered away in taking care of them or of the complexities that arise from their introduction.

Civilization is a daughter of leisure. Only, in our age, leisure must be produced by technology, because it can no longer rest on exploitation of the hand labor of many. Thus labor-saving items are part of the foundation upon which American culture is built, rather than just gadgets competing for the building dollar against more space, light, air, and the other amenities. In the course of postwar progress we should—and may have to—have both; in the meantime, it might be remembered that the importance of amenities was discovered and made a public issue not by those deprived and therefore in worst need of them, but by groups already well enough relieved of drudgery to perceive cultural necessities.

But as the claim is made that the newer accruals to the list of building components (let's call them "equipment" for short) have a basic meaning for our civilization, discussion of their proper treatment begins to verge on esthetics. If it can be agreed that architectural beauty comes with expression of meaning and utility in the design of the selfsame elements that make the building useful, it should be obvious that integration of all building components and equipment into a consistent whole is a first requisite of contemporary design.

Or, if this is too abstract, let us take a fresh start from another angle.
In this restful guest livingroom, the architect has skillfully integrated a dramatic mountain view, simple materials and forthright structure. Look at the wooden baseboard, ripped it off and replaced it with a steel wire—look at the wooden baseboard, ripped it off and replaced it with a steel wire—look at the wooden baseboard, ripped it off and replaced it with a steel wire—look at the wooden baseboard, ripped it off and replaced it with a steel wire. And being readied for the market today, the plastic wire-mold with integral conductors—progress from the casually scattered blemish to the structurally integrated, esthetically satisfying building component.

Or consider the floor outlet over the pipeless furnace, a good place to scrape mud from shoes and watch the skirts of the gentler sex. Then the triumphant encroachment of grilles and registers upon walls and ceilings, playing hob with baseboards, moldings, and pleasantly calm surfaces. A few years ago, with resignation that air outlets and air outlets are controlled poorly to the special care which dwellings are designed and built into the structure itself and all but personal possessions will be integrated into the structure itself and wouldn’t that be a boon to the American citizen, the most nomadic race of the world? Does all this sound too futuristic? Well, consider some of the bedrooms of the crack trains of the last prewar years. They possess many of the features discussed in this article plus a number of extraneous, including built-in ashrays, nightlights, compartments for valuables and the equivalent of furniture. They are completely integrated and comfortable, visually and factually, beyond the wildest imagination of designers of a few decades ago. They are mentioned as examples, of course, not as models for the home; and it is granted that the permissible cost of a Pullman car is quite different from that of a dwelling. But the past history of industrial production abounds in conversion on one-time costly luxuries into the commonplaces of another day.

But, one might object, building is not industrial production. Indeed, it is not. So precisely how will mass production apply its magic to structures, and how does the architect guide, if not direct, building toward a more integrated product? This merits some speculation even within the confines of this article, because the question deals with one of the many factors that may change the architecture of the future in fundamental ways.

Among his many other qualifications, the architect, of course, must be a prophet. So is, for that matter, any other designer of goods yet to be produced; but while the fashion artist doesn’t have to look beyond the season, the architect tries to peer through the veils for years, perhaps a half or a full century ahead.

Therefore, as behooves prophets, he anticipates development that has not yet occurred, sometimes at the expense—although esthetic and functional gain—of the client. Contemporariness often stresses identical repetition, precision of dimensions and finish—hall characteristics of machine products—although identity and close fit may have to be procured laboriously by hand in the current state of the art. For example, when smooth plywood

Louvered screens for a sunny climate keep the sun in its place. The architect has sensibly coordinated this purely functional device with the basic design of the structure.
wainscots in large sheets superseded traditional panel work, scribng and jointing became much more difficult; the plywood is, by and large, an accurate machine product but the rest of the structure is not. Thus the appearance of effortless and ostensibly thrifty simplicity is achieved at the cost of exacting and expensive labor, because the architect’s sense of fitness outruns the construction industry, as it should.

Now what does the architect encounter when he reaches out for greater integration? For an example, take the window. It has been with us practically always, and on every one of our buildings. Here are some of its parts and accessories.

The sash, with hardware that is still often separately selected and specified; glazing; the shading or light-controlling device, again with its hardware; decorative drapery, if any, with tracks, valances, etc.; insect screen, and a method to get rid of it when not in use; winter storm sash, ditto; more recently, summer heat insulation in the form of special glass, double glazing, exterior shading and so forth; often, as in schools and offices, air intakes for local conditioning, or exhaust fans as in kitchens; heating device usually in the immediate vicinity; perhaps flower boxes, shelves or other whatnots.

Now how does the architect design, and the builder construct, the combination of all the elements that make up the complete assembly (not to mention the finishing touches often supplied by the occupant)? Most of the time, and until recently all of the time, by taking one element from the catalog of Manufacturer “A,” another from “B,” designing the third to be made in a plant, a fourth to be fitted on the job, and perhaps the fifth to be delivered from a department store. Small wonder that the architect does not often make very good progress toward smooth, elegant integration.

Nor should the rest of the building industry be expected to emerge with a unified product all of a sudden. Progressive manufacturers have taken many steps in that direction; but the more elements are drawn into the integrating process the more complex the product becomes, requiring special machinery and dies. Which means that it must be sold in greater quantities and in fewer variations; in other words, to a mass market. And where, the manufacturer may ask the builder and the architect, is the mass market? It is there in a small way, of course, in small contracts. Thus fluorescent fixtures for replacement of suspended globes may outsell recessed ones; the bedroom or office size cabinet air conditioner may remain a more appropriate item for mass production than units or combinations designed into the structure. The design and “styling” of such objects will perhaps compromise with average conditions and surroundings; and the small project will have to take and fit them in as available.

Thus, the trend towards integration, like so many developments of this age of technology, favors bigness. In fact, in this age of integration, we should expect the architect to be more closely associated with the manufacturer, rather than just working with restricted and preselected merchandise. 

Nowhere do the joint interests of designer and manufacturer meet more closely than in highly specialized rooms such as an institutional kitchen. That so successful a unit can result is a tribute equally to the correlated products which the manufacturer supplies and the architect’s skill in organizing them.

Doctors and patients alike appreciate an operating room designed for cleanliness and efficiency. The parts are simply materials and equipment chosen for function, properly organized, and frankly expressed.

In this art gallery, ceiling decoration and general lighting system are one. It works well, it looks well, and it is an illuminating instance of how the architect can integrate the products of industry into handsome, efficient architecture.

This long, narrow shop, with walls arranged at an angle to provide complete merchandise display to the entering customer, results from the knowing arrangement and joining of planes, cabinet work, lighting and ventilating elements, decorative plaques, floor covering, furniture and color. Progress has been achieved, and in which any lack of integration can justly be taken for dereliction of the designer. But for some time to come—perhaps until we decide to rebuild America—the real volume market is in refurbishing and in large totals of individually small contracts. Thus fluorescent fixtures for replacement of suspended globes may outsell recessed ones; the bedroom or office size cabinet air conditioner may remain a more appropriate item for mass production than units or combinations designed into the structure. The design and “styling” of such objects will perhaps compromise with average conditions and surroundings; and the small project will have to take and fit them in as available.
it is quite possible that the completely, organically integrated building will emerge only as the divided branches of the building industry will be integrated into big units to serve mass markets with products that leave less individual choice but are more advanced, better designed and equipped. The house prefabrication industry has already made some passes in that direction; and it might have gone further but for the handicap of war conditions.

Architects may wonder whether the design content per unit of mass product would be higher or lower than that of the average building of today; but in any case, the function of design would change. New kinds of discipline would be imposed upon it by the peculiarities and limitations of manufacturing equipment, by research and guesswork on trends of popular acceptance, by premeditated manipulation of the obsolescence rate. The approach is more familiar to the industrial designer than to the architect.

So there we are. Within our lifetime the circle begun with the medieval guilds may come full turn, at least for large categories of building. The disintegration of guild skills into many independent professions and trades had a fundamental connection with the accidental, undigested character of so many structures of more recent vintage. Reintegration of structures, now occasionally accomplished by sheer sweat and grit, may come naturally through the modern equivalent of the guild. As architects we may mourn or rejoice over the drift of events; but the handwriting is on the wall.
Branch Bank, Irving Trust Company,
VOORHEES, WALKER, FOLEY & SMITH, ARCHITECTS

54 PENCIL POINTS, OCTOBER, 1944
Seldom has the word “integration” been more clearly defined in architectural terms than in the remarkable ceiling of this bank. Composed entirely of structural, lighting, fire-control and air-conditioning elements, it is a splendid instance of the proud and efficient architecture that results from intelligent use of contemporary design tools.

In general, the bank needs were standard—a public space, tellers’ cages, space for officers’ desks readily accessible to the public, bookkeeping and work space, and (in the basement) a vault with private booths. These facilities have been provided in a direct way, including the use of low-height booths for tellers, and officers’ space separated from the public area by only a handrail. One notable exception to standard facilities is the paycheck banking space provided at the rear of the basement. This separate area, used only at pay periods, handles the temporary, extra-heavy load of business expeditiously without disruption of normal business on the main floor.

While the design of the bank as a whole is worthy of more than passing study, the ceiling is where our main interest lies in this issue, devoted to the subject of architectural integration. Not only does it provide 35 foot candles at desk height, but it forms a distinguished piece of design that is wholly derived from twentieth-century technical elements. Here, frequently labeled mundane things like a sprinkler head, a light socket, a ventilating outlet, and a reflector cove are organized into a room surface that is as striking in appearance as it is efficient in function.

New York City
The warm wood tones of the tellers’ booths are repeated in canvas-backed veneer applied in selected areas as a wainscot. Other wall surfaces are painted canvas. The columns and under side of beams are painted deep blue-green. The floor is terrazzo divided by brass strips.
Integrated Ceiling, Irving Trust Company; Voorhees, Walker, Foley and Smith, Architects

Selected Details

CEILING PLAN $\frac{1}{4}'' = 1'-0''$

PLASTER

SPRINKLER

AIR CONDITIONING OUTLET

6'-1\(\frac{3}{4}\)''

SPRINKLER

FIXTURE STUD EXTENSION

SPUN ALUMINUM

GLASS SCREEN

METAL

REMovable REFLECTOR

LIGHTING FIXTURE 3''=1'-0''

GOLD LEAF BAND

DUCT

1\(\frac{1}{2}\)'' STRAP

SPRINKLER

SHEET METAL

PLASTER 1\(\frac{1}{2}\)''=1'-0''

SECTION A-A

SECTION A-A

SPRINKLER DETAIL 3'-1''0''

PL.

500W LAMP

500W LAMP

PL.

500W LAMP
Successful coordination of the parts into a unified whole is a laudable design goal at every level—whether the problem involves the scheme for a coat closet or the master plan for a city. It is in the single building, however, that the architect most often has the opportunity to demonstrate his skill as a master coordinator. All too frequently, alas, the finished building demonstrates a compromise somewhere along the line—a plan cramped to suit some stylistic prejudice, a structural system which provides less than desirable flexibility within the building, “stage-set architecture” laboriously worked out to conceal elements of lighting, air conditioning, or sound-control systems (because the architect was unsure or scorned the new elements as “non-architectural”), or some other half measure, resulting in an architectural what-have-you.

It is therefore particularly gratifying to present this fine new office building, wherein the architects have achieved a rare degree of integration between the diverse elements of plan, materials, structural system, and systems of control. It is not only a striking instance of this important design factor, illustrating the fine architecture that results from a knowledgeable approach, but it sets a high standard for the design of office buildings of this size, a great many of which are likely to be built in postwar years.

There are two chief points of view from which we shall analyze this extraordinary office building:

1. From the more obvious standpoint of its success in providing the physical space for the conduct of a company’s business.

2. As an outstanding instance of progressive architecture: exceptional coordination between the basic structural and equipment elements, a unit which clearly improves the block in which it is located, establishes a new high of architectural excellence for the city itself and indicates the benefits which Charleston—or any other city of its general character—would gain were this type of rational design approach applied to the wider sphere of over-all community planning.

When the United Carbon Company, one of America’s chief producers of carbon black, natural gas and oil, decided to build its own home office building, initial plans called for a 6-story structure to care for immediate needs. Further studies, indicating the advisability of providing for probable future expansion, resulted in the 12-story building described on these pages. Meanwhile, the floors not needed by the company are rented, bringing a good return on the additional investment.

The site is on the outer edge of Charleston’s business district on a boulevard bordering the Kanawha River. Ample space was available to permit placement of the structure back from street property lines, insuring for the predictable future good light and pleasant views from every office. This generous “plus” space has been put to good use—landscaping along the sidewalks, a
The west elevation

MARTENS AND SON, ARCHITECTS

Consulting Engineer: Elwood S. Tower
Structural Engineer: R. W. Haworth

The portico columns and bronze sculptured figure (Robert Martens, sculptor) frame a view across the river valley
From a distance, the building mass adds a well-proportioned unit to the city skyline. For the future planning of the community as a whole, it establishes a standard for reference.

walled parking space for tenants' cars at the rear, and a long paved court inside the west property line, which is used as an outdoor restaurant.

That the building is well composed and agreeable in detail and mass from every direction is a logical outcome of the unusual prominence of the site. To this most basic of design-integration problems—the correlation of the four walls of a building, the proportioning of materials, areas of different color, and fenestration patterns into a balanced and satisfying unit—the architects devoted extensive study. Theoretically there should be nothing remarkable about regard for this a-b-c of harmonious design; yet a walk along any city street reveals to the most casual observer how rarely it is respected.

After the required floor area and a scheme for efficient subdivision of this area into desirable office space were determined, the project was at once translated into a model made of wood, plastics, and cardboard. From this, exact placement and relationships of structural and decorative features were worked out; nighttime conditions were studied by means of light bulbs inside the model. In fact, the model, rather than the usual series of perspective drawings, was used for presenting the design to the client.

The adopted structural system is a steel skeleton, with steel pan concrete floor slabs and steel roof joists; the concrete piling was cast in place in steel shells. Basement walls are of solid concrete, with membrane waterproofing; upper walls are of 6-in. fire clay hollow tile, with brick, granite, or stone facing. Corridor walls are 4-in. hollow tile; office partitions are 2-in. insulating structural block, plastered.

The fact that the building is about three times as high as its least width necessitated introduction in the steel skeleton of three panels of vertical diagonal wind bracing, which has been inconspicuously coordinated with partition placement.

Careful consideration was given to spandrel beams and lintels, as columns had to be set back to clear the walls of the lower stories, which meant about 9 inches from face of wall to face of columns on upper stories. Wind bracing required that all columns be continuous and have stiff connections with the beams. This was accomplished by placing spandrel beams on the outer face of columns, with plate or angle clips to take wind stresses. The torque developed in the spandrel beams by the overhanging wall was taken by the floor construction. The latter consists of 6-inch joists and 3-inch slabs with permanent metal pans with attached lath. One inch of

A continuous window strip tops the rear elevation at the 11th floor.

Rear entrance from tenants' parking area; black alberene stone surfaces the lower floors on this elevation.
The portico walls, columns, and ceiling are finished with the polished black granite used for the building base on the three principal sides. Bronze trim and gold-color face brick emphasize the company colors.

Planting strips border the two sidewalk elevations.

The slab depth is another noteworthy instance of structural and mechanical coordination, for the electrical distribution system for each typical floor consists of a grid of underfloor raceways underlying the office-bay areas. The raceway ducts are contained partly in the one-inch finish course of the floor and partly in the structural slab. Carefully spaced to avoid location near points of maximum stress in the slab, the raceways were thus installed without heavy and expensive fills on the floor or loss of efficiency in the duct system.

In the main, the design approach is highly functional with a negligible amount of superficial ornamentation, and a sound regard for materials used in their natural form, texture, and color. The relationship between elevator shaft, stair tower, and fire escape is at once planned for optimum efficiency and organized in design to form a unified vertical shaft in excellent proportion to the rest of the building and an important element in the over-all organization of the building mass. The most striking instance of thoroughgoing integration is the notable air-conditioning system described in detail on Page 68.

There has been some compromise with functional design expression in the device at window levels of surfacing the exterior columns with dark-colored brick to give the effect of continuous horizontal window bands—an archi-
On the west elevation, the stair tower and diagonal lines of the fire escape unite to form a bold vertical element, highlighted at night through the building-height glass-block panel.

A structural result that logically derives only from cantilever construction. To most critics, however, this obvious attention to surface illusion is of minor importance compared with the rare degree of logic which typifies the design and the fact that the building works and works well.

Placement of the entrance portico at the corner, open to both street fronts, is a sensible scheme for a corner location, and the use of a rounded line, carried the full height of the structure, eliminates any sharp dividing line between the two equally important frontages, at the same time increasing the building's apparent width. The portico also provides desirable shelter in inclement weather.

Here again, the structural system apparently interferes somewhat with the desired end result. Actually the offices that occur at this corner, while amply lighted and efficient in use, are not bordered by a solid row of windows, as they appear to be, but have two interrupting columns quite closely spaced. At the ground-floor level, this framing situation is most apparent. The theory seems to have been to open up the corner for entrance at any point; yet the two portico columns intercept the area directly at the corner. While easy access is not in fact jeopardized, as openings at either side are generous
Office space at the rear of the 11th floor. Windows are equipped with stainless steel venetian blinds. Each typical corridor door (above right) is equipped with a fluted glass panel and a steel ventilating panel with adjustable shutters. The black drinking fountain helps carry out the black and gold color scheme.

In dimension, it is instructive perhaps to point out the inevitable architectural connection between elements of structure and plan. Faced with this problem, the architects made capital of it and developed the facing of the two columns in such a way as to form a broken niche for the mounting of a symbolic sculptured figure.

The company colors of black and gold have been judiciously used throughout the design. On the exterior, these are carried out in the black base, black-painted steel sash, combined with golden-toned brick and bronze trim, lettering, and sculpture. Adjacent sidewalks and parking area concrete are treated with company-produced integral black coloring, which eliminates glare.

Inside the building, the entrance lobby is faced with polished black marble; elevator doors, mail box, directory board, and concession stand are either all bronze or designed with substantial bronze elements. Numerals above the elevator doors are of back-lighted transparent plastic; floor surfaces on the first story are terrazzo.

In upper floors, rubber tile flooring and base in black and gold is used; in offices, window stools are black terrazzo, while wall surfaces are a golden-ivory plaster. Each typical floor contains 14 office bays, subdividable where tenants require smaller spaces. Evenly spaced wide window mullions were purposely provided to allow frequent partition placement without awkward intersection—yet another instance of careful coordination of plan, structure, and equipment. Windows, glazed with ⅛-in. polished plate glass, are 5 feet high and 3 feet above the floor line, providing proper height for efficient integration of the air-conditioning units beneath the stools. Except on the executive office floor, the windows are all equipped with stainless steel venetian blinds.
Executive Offices

Occupying the entire twelfth floor of the building are the company's executive offices. In addition to a reception room, the head executive's office, and three smaller offices, a dining room, bar, and kitchen are provided for the entertainment of customers. Throughout the suite, furniture and decorative materials and objects were specially designed and fabricated. The furniture
The chief executive’s office includes a bay window and a terrace overlooking the river and country beyond.

Conference table at one end of the president’s office

of the offices is by Robert E. Martens; window hangings were designed and woven by Mrs. Eliel Saarinen; the wall hanging in the reception room is by Marianne Strengell Dusenbury. Even incidental pottery and other ceramic objects were created for these offices by the Ceramic Department of the Cranbrook Academy of Art.

All walls in these twelfth-floor offices are surfaced with fabric-backed, quarter-sawn teakwood veneer. The floors are carpeted.

In the chief executive office, a semicircular bay window curves out onto a roof deck, which extends across the entire front of the building. At one end of this office, a conference table is arranged alongside doors leading out to the deck.

Lighting derives from concealed fluorescent tubes; elsewhere in the building, fluorescent units are used in custom-designed fixtures. Total cost of the structure including equipment, furnishings, carpets, venetian blinds, pavement, landscaping, etc., was $665,000.
Inner corner of the chief executive's office; the walls are surfaced with teakwood veneer

Coat rack for an office

The bar adjoining the executive dining room
While the entire United Carbon Building constitutes an eloquent argument for the benefits to be gained from design integration, nowhere is the argument more convincingly stated than in the exceptional air-conditioning installation. Not only is it an extraordinarily flexible, year-round system, but it is so coordinated with other architectural elements that it is impossible to find a point where engineering or mechanical equipment or finished design are clearly defined. All are inseparably fused into the single concept of architecture—progressive architecture of a high order.

Two things particularly distinguish the air conditioning installation in this building:

1. Unlike the usual, large-building system, which delivers conditioned air through ducts to rooms from a central plant, the system in the United Carbon Building brings to unit conditioners in each room only water, controlled in temperature by zones corresponding to the four building exposures, and clean air.

2. The temperature of the conditioned air is locally controlled by each room occupant by means of a dial set attached to each unit conditioner.

The under-window unit consists of a mixing stack in which outside air, which has been filtered and humidified (or dehumidified), is brought from the central source and mixed with air drawn from the room. The temperature of the water delivered to the units is controlled by outdoor pilot thermostats on each building exposure. These thermostats balance the difference between dry bulb temperature and solar radiation, guaranteeing that water temperature will have sufficient heating or cooling capacity to fulfill any requirements.

For each cubic foot of outside air discharged, four cubic feet of room air are drawn into the unit; with this large quantity of induced air, it is possible to tend to practically all cooling and heating with this one air stream, the outside air serving only to fulfill the ventilating requirements and maintain proper humidity conditions.

Room temperature is controlled by varying the rate of water flow through the cooling coil in each under-window unit; this is done by a control valve accessible to the room occupant through a small metal door. Since the system is for both heating and cooling, it is necessary to reverse the valve operation when changing from one cycle to another.

The air-distribution system, located in the basement, is similar to that used on most conventional central stations, except that it is smaller, due to the fact that only that quantity of outside air required for ventilation is handled by the central apparatus. Two high-speed fans supply the entire building. Air connection from riser to conditioner is through flexible metal hose to allow for riser expansion. Welded to the hose is a 3-in. diameter seamless steel tube inserted in the air-connection tee of each unit; in bays with two or more conditioner units, the connection is made to the opposite side of the tee and carried on to the adjacent unit in the bay.

The water circulating systems are divided into zones for the four building exposures. Controls are so arranged that each zone becomes an isolated circulating system when hot water is being supplied to that zone.

For cooling, a centrifugal type compressor is used to chill the 350 gallons of water in circulation; the condensing type turbine is supplied with steam from a gas-fired boiler, which is used for the normal winter heating requirements.
Furring Channels

3' x 3' Angle

Light Fixture

Furring Channels

3' x 3' Angle

1/2" Marble

6" Hollow Tile

Acoustical Tile Ceiling

Plaster Cove 8" Rad.

Plaster Trough

Elevation 1

70 PENCIL POINTS, OCTOBER, 1944
Executive Dining Room. Grilles in walls and window stools are component parts of the room design.
Concessions Counter, United Carbon Building; Martens and Son, Architects

Selected Details

BRONZE ROLLING GRILLE
OPEN TO BE CLOSED BY ROLL DOOR
FLUSH WOOD DOORS
DISPLAY WINDOWS MARBLE
ELEVATION SCALE 3/8" = 1'-0"
SECT. B-B

SECTION A-A SCALE 3" = 1'-0"
WOOD BRONZE MARBLE

SECT. D-D BRONZE LINOL. TOP WOOD LINOL. PLATE 103/8"

SECT. C-C SCALE 3" = 1'-0"
EXPANSION SCREW TRACK FOR ROLLING DOOR BRONZE MARBLE
The Architect’s Office

These offices are located in the forecourt of the Pasadena Community Playhouse, one of that City’s notable structures painstakingly worked out in California Spanish style. Despite the stylistic entourage, there was much to recommend it as the location for the professional practice of a progressive young architect. Daily theater crowds bring to the doors of tenants a remarkable cross section of the citizenry. In adopting an open-front scheme, the architect has taken full advantage of the extraordinary display opportunity.

The partition placed at an angle serves as a backdrop against which to mount drawings or photographs; a moveable, hinged lattice screen provides a flexible element for varying the organization of the display area. Over the entire front portion, a lowered ceiling, made up of a grid of 1 x 4 redwood boards, has been introduced. Space above this ceiling brings ventilation to the drafting room from transoms in the exterior wall. Artificial light in the drafting room produces optimum working conditions at all times.

The architect seated at his conference table at one end of the front office

A frequent design-integration problem that confronts the contemporary architect is the need to plan a modern unit within rental space in a well located but highly stylized existing building. Two extreme approaches suggest themselves: total disregard of the sentimental frame, or total subservience to it. That neither extreme is necessarily the answer is well demonstrated in the design shown here.

While the offices themselves are entirely fresh in design and form a striking and functional setting for the architect’s professional activities, they are so integrated with the major elements of a Spanish-styled courtyard that the carefully considered basic organization of the latter is in no way disrupted. Certainly there is nothing “Spanish” about the new work, and large single panes of glass replace the many-paned windows and doors of the original; yet in scale, proportion, even dimensioning, the units already established in the courtyard design have been rigorously respected.

As a foil to the open-front scheme, the paired doors are treated as solid panels
The partition wall is of redwood boards, with joints covered with battens.
One of the most baffling problems of design synthesis is a situation wherein it becomes necessary to provide facilities within an existing framework that in no way anticipated the new needs.

A wartime example is provision of lounges and related facilities for members of the armed forces. In many instances, new structures have been specifically designed and built for the purpose. In most, however, they have been contrived within any available space. One of the least promising locations architecturally—yet one of the most needed and logical from the point of view of function—is in a big-city railroad station. Almost everything that exists is out of scale with the desired club-like, restful atmosphere. The project shown here is an unusually successful solution of just such a poser.
Transformation of the area was accomplished with the simplest of available materials. A lowered plaster ceiling over the rear portion of the lounge brings the room into appropriate scale and coordinates an ugly structural beam with the design scheme. Continuation of this plane into a wall of corrugated asbestos board slanting back to the base line (photo above) provides a background for display of cut-out plywood replicas of service insignia. The light wall areas of the room are gray and off-white; bookshelf woodwork is deep gray, while light gray is used on the lowered ceiling and sloping wall panel. The furniture is upholstered in red and brown tones. Powder room and details Pages 77-78.
The glass-top desk was designed by the architect

LESTER C. TICHY, A.I.A., ARCHITECT

In the mirrored powder room, the linoleum floor repeats the green-and-gray stripes used in the lounge. The figured wallpaper is patterned in two tones of green with a whimsical Pegasus picked out in red against a star and cloud design. Details on the facing page show the generous provision of well-lighted mirrors. In addition, a wall-height mirror surfaces one whole wall of the room (at left of photo below). Writing desk details are on Page 78.
Powder Room Details, Service Women's Lounge; Lester C. Tichy, A. I. A., Architect

1/4" MIRROR ON THIS WALL FROM TOP OF BASE TO TOP OF PARTITION

LIGHT FIXTURE: MIRROR

COUNTER TOPS

LINOL. BASE

ELEV WALL A
SCALE • 3/16" = 1'-0"

PLASTER LINE
STEAM RISER

MIRROR SECURELY CLIPPED TO COUNTER, WITH METAL CLIPS

HINGED ACCESS TO RAD. VALVE

MIRROR LIGHT

GIRLLE

ELEV. WALL B
SECT. 1-1

PART PLAN
SCALE • 3/16" = 1'-0"

DETAILS OF POWDER ROOM

DETAILS OF BAG TABLE
SCALE • 3/16" = 1'-0"
Public and Commercial Structures

Chabot Terrace (FPHA), Vallejo, California

ARCHITECTS ASSOCIATED:
FRANKLIN & KUMP
WILLIAM WILSON WURSTER, A.I.A.
Chabot Terrace

In simple terms, design integration is the logical and harmonious relation between the various, often riotous, component elements that make up the thing designed. And this applies, whether the thing is a small object or a regional plan.

On this and the next few pages, we present a notable example of successful application of the principle to one of the larger-scale problems—the design and interrelation of several commercial and public structures needed to serve a 3,000-family war-housing project. The principle has been respected throughout—in the individual structure, in its relation to all other buildings, in the street system, and in the planning of the project as a whole. Undoubtedly the most important factor in its success is the reference point against which the architects judged every step of their work: “the needs and pride of human beings—a place for people, adults and children—a happy place in which to live.”

The principle has been respected throughout—in the individual structure, in its relation to all other buildings, in the street system, and in the planning of the project as a whole. Undoubtedly the most important factor in its success is the reference point against which the architects judged every step of their work: “the needs and pride of human beings—a place for people, adults and children—a happy place in which to live.”

To tell the story behind the over-all development of Chabot Terrace, we can do no better than to quote Mr. Wurster, one of the associated architects: “Originally it was designated as several projects, to be built on various sites. Possibly this came from the thought of interspersing it with existing portions of the town so that it would not be so conspicuously one thing—thinking of bombing, etc. But when you realize how small Vallejo was before all this war demand, it soon becomes apparent that the tail would wag the dog, with no gain. Then, too, when dealing with water supply, sewage, etc.—and all the need of enlarged facilities—it seemed wise to gain the economy and time efficiency of one operation. Added to this was the feeling that if it were put on one piece of land we could control the ‘emergency strips’...”
between groups of construction for fire and bombing protection, for play spaces, and for road layout. Mr. Kump and I felt that it was a superb opportunity to do a thoughtful unified job, and we bent every energy to this end.”

Construction of all of these buildings—management and maintenance building, major and minor commercial structures, and fire house—was, like most of the rest of the project, of demountable panel type. Only the school buildings were of standard construction, schemed with a view to salvaging materials rather than for actual demountability.

As may be seen in the photographs and in a study of the project plot plan, the management and maintenance building is arranged as a major civic-center point, in conjunction with the large commercial structure. In the planting scheme, Thomas D. Church, Landscape Architect, further carried out the architects’ efforts toward design integration.

The management-maintenance building combines all of the usual accounting, rental, and business offices, organized for efficient use at one end, with a sizable store room, work shop, loading platform and yard arranged as an extended wing of the structure. Framing is of 6” x 6” posts, with as few intermediate supports as possible. A clerestory lights interior work space.

The exterior wall panels, connected around vertical spline members, occur outside of the structural frame. Joints between panels are covered with 2” x 3” battens. Exterior surface of panels is tongue and groove boards; interior finish is plywood. The interior views show the roof construction and doubling of members where adjoining panels meet. These and other structural details of the building are similar to those used on the commercial structures, shown on Pages 82-83.

The project’s temporary character plus physical difficulties led to a street plan arranged for car parking, developed by Civil Engineer Hutchison. The architects comment: “The ingenious street-corner scheme slows too-fast traffic, forms a recess for the parked cars, and makes a minimum distance for the pedestrian in the street when crossing.”
Chabot Terrace

COMMERCIAL STRUCTURES

The Major Commercial Building, a block and a half long, is designed as a unit with the Project offices (below, left)
When the Vallejo Housing Authority and the architects undertook to provide for publicly operated commercial enterprises, they embarked on an unprecedented venture: no Federal, State, or local law or policy existed to serve as a guide. At last report, the solution provided in the block-and-a-half-long store structure (shown here) and four all-alike minor food stores (detailed over page) has been satisfactory to businessmen and tenants alike.

The need was great; Vallejo's existing facilities were heavily overburdened; the four miles of travel between the project and downtown were wasteful of gasoline, time, and patience. A Director of Business Operations was appointed to coordinate the details; Vallejo merchants were given first chance to submit proposals; only when they refused were outside lessees sought.

The result: a supermarket dispensing foodstuffs, a drug store, a liquor store, a general merchandise-novelty store, barber shop, laundry and cleaning establishment, smoke shop, two beauty parlors and a shoe-repair shop. One portion of the structure is used as a large restaurant.

The building is a single large unit, with movable interior partition panels, for maximum flexibility in number and size of shops.

Location of this major commercial structure, toward one end of the project, depended, as the architects explain, upon the fact that "all employment was at the southwest of the project, so all traffic would normally go in this general direction. Also this is toward Vallejo which further emphasized the directional needs of the plan."

The four minor commercial structures are located at convenient points throughout the 560-acre project; a bus line with a 5-cent fare connects the various centers. In each of the minor stores, a portion was allotted for maintenance use in case this type of dividing up should prove more efficient than centralization of all equipment in the large management-maintenance structure.
The small store buildings were planned also to accommodate Red Cross emergency centers or public meetings.

PANEL NUMBERS INDICATE VARIETY OF PANELS USED.
Assembly of demountable panels provides varied types of architecture

Near the center of the huge project (see plot plan) is the fire house, joined by a covered passage to a small structure housing police and emergency units. Like the other Chabot buildings presented in this issue, construction is of the demountable panel type.

The Chabot Terrace schools were published in the September 1943 PENCIL POINTS. The only non-demountable buildings of the group, they are also the one point at which the architects' plans for a completely equipped and integrated community were frustrated. As Mr. Wurster reports: "The original idea was that the social life of the project was to center around the three schools, and each was to have an auditorium. This was to be particularly true of the High School, in which a Clinic for the entire project was included. It is with regret and a feeling that it should not have happened that they omitted the High School entirely, as well as the auditoriums of the two grade schools."

Chabot Terrace
FIRE HOUSE, ETC.
New Castle, Indiana, has put into practice certain principles for which PENCIL POINTS has consistently argued: the principles which underlie democratic planning. Furthermore, the New Castle Planning Commission is composed of reasonable, human men, not theoreticians, and they went about their job in a human way. They early realized that they must first educate themselves, and decided that they had to have all their citizens' help.

Excerpts from "NEW CASTLE PLANS," a booklet by Scott Chambers, published by the New Castle Chamber of Commerce.

ONCE UPON A TIME...

Soon after our great grandfathers floated down the Ohio River, Ashael Woodward stopped along the east bank of Blue River. About him was a luxuriant growth, supported by an ideal rainfall and soil rich with plant food. Behind him was a fertile plain, before him a rich bottom land, and to the right and left for miles one of the most beautiful wooded river valleys in America.

In the spring crops were planted, and the harvest that fall was good. The trees were turning, the valley was more beautiful than ever, and God seemed close to the banks of Blue River. Here was food for his flesh and soul, and Ashael Woodward became the first citizen of New Castle.

10 YEARS LATER...

New Castle had passed from a wilderness to a trading post to a town, and for three-quarters of a century it remained a town. Everybody knew everybody else, and on warm days people visited from the front porch with friends who passed. There was room at the Court House rack for every farmer's rig, the streets were wide, and in every block there was generous shade.

New Castle was primarily a trading center serving the needs of a rapidly-developing agricultural area, and a large part of the townspeople were engaged in merchandising or crafts: custom craftsmen serving the needs of their neighbors, and the stamp of their character and the soul of their honor were in their work.

The honor of their work and the lusty cries of their games and parties were a culture in a new land where dwelt laughter and freedom and art and letters—things of the spirit and things of the flesh side by side.

In 1907 the Maxwell automobile factory located in New Castle, and other industries followed. The town has grown since then and has been continuously prosperous, but there was no plan and no preparation for that growth.

Streets laid out for wagons and rigs became filled with autos and trucks, the activity of an industrial city settled down over the frame of a small town, and it worked just like gasoline in a horse—violently. There arose a congestion in housing and traffic. The streets became narrow, the business district crowded, and homes afflicted with the noise, dirt, and danger of fast vehicles.

It was more than a change in the physical town, however, for all of this had an effect on the people who lived here. They became restless and wanted to be amused, and a large part of the population went to the doctor with some sort of a nervous ailment. Their thinking and sense of values changed. They became more interested in what they could get and less in what they could give; more in what they had and less in what they were—and in 1940 there were fewer music and art teachers in the public schools than there were in 1904.

Here was food for the flesh, but starvation for the soul.

NEW CASTLE TODAY...

is an industrial city with more workers per capita population than any other town in Indiana. At the same time, it remains the trading center for an intensely-developed, fertile farming section.

It has now a high degree of home owner-
New Castle helps his city plan

that they needed the best consultants available; and that those consultants must be architects because, as they have publicly stated, the best city planning is a three-dimensional job and because they wanted their plan to be social as well as physical, based on the homely daily needs and habits of their people. As consultants they chose the firm of Saarinen and Swanson.

by Scott Chambers
President,
New Castle City Plan Commission

“I suppose that your planning is somewhat vague and nebulous?”

That’s the remark a newspaper man from Indianapolis made as we sat down in a New Castle restaurant the other day to have a bite of lunch and give him some dope for a story.

Well, it was just like sticking me with a pin.

No sir, I told him. Our plans are not vague and they aren’t nebulous. Intangible, maybe, but we know what we want, and we think we know how to get it.

“How did all this get started?” he wanted to know.

Well, it really sprouted in the grass roots.

You will have to admit that the New Castle Chamber of Commerce is unique. It inclines to the Town Hall method of operation rather than to the loud-speaker technique of self-appointed leaders and boosters.

When Clifford F. Payne, the merchant-president of the Chamber, looked around for a program, he found that in New Castle and Henry County there were more than 300 separate clubs, societies, lodges, congregations, unions, service clubs, veterans’ groups, political and sewing circles, chapters of this and that.

Instead of running the Chamber of Commerce as one more in a long and vague list of activities, the president and his associates thought of setting up the organization in a kind of partnership with all the others, offering them help in getting good things done, enlisting them to reach out with their contacts and their influence in behalf of worthy programs.

The Chamber of Commerce hit upon the idea of a “civic clinic.” For a week in the spring of 1942 it held daily public meetings at which neighbors talked about their ideas of what the town needed. The ideas were assembled on hundreds of cards, and they included:


Two-thirds of what they wanted looked like a job for a Plan Commission, so a committee was set up to tell the community about the virtue of orderly planning. Speakers were engaged for organizations, and com-
LINE-UP FOR PLANNING:
Linemen of New Castle's ball team are members of the New Castle Plan Commission (left to right), Leonard Gold, UAW-CIO; H. D. Oberdorfer, head of New Castle Products, Inc.; Frank Bland, city councilman and AFL contractor; Scott Chambers, newspaper editor; E. G. McQuinn, real estate owner and manufacturer; Arthur W. Wright, county engineer; Ernest Guyer, city engineer. Quarterback: Mayor Sidney E. Baker; halfbacks, Clifford F. Payne and Floyd Hutchison, president and secretary of the Chamber of Commerce. Fullback: Henry Chenick, chairman of the Citizenship Participation Committee.

New Castle, county seat of Henry County, Indiana, is the trading center of its area, with some 14 large industries which normally employ over 6000 men and women. It has plentiful transportation facilities by highway, railroad, and air. It possesses 7 schools, 23 churches, 4 financial institutions, library, 2 hospitals, 2 fire stations, and numerous social and recreational facilities. Present population: slightly less than 20,000.

Complete reports of these talks were carried in the press, so that they reached the whole community.

"Then the town was pretty well pledged to back it up even before Mayor Baker appointed the Plan Commission?"
That's right.
"You said you knew what you wanted."
Yes, we want what Ashael Woodward had.
"Who's he?"
He's the first fellow that ever lived here. Came down along the east bank of Blue River, and built his cabin here about a century and a quarter ago. Behind that cabin was a fertile plain, and from his front door Ashael Woodward could look up and down one of the most beautiful river valleys in America. He had a home that was safe, and peaceful and satisfying, and that's what we want for the people here today.

"You were going to tell me about the people and what they think about this planning."
Well, it isn't something they just think about; it's something they're helping to do. Everybody who can throw any light on the city's problems is being enlisted to help.

We went to the library officials, and said to them, "Now look here. Nobody on this City Plan Commission ever had anything to do with a library; instead of us telling you what kind of a library you ought to have in 25 and 50 years, why don't you tell us what the town will need then in the way of library facilities." Today we have a report from the library board which is being given careful attention by the commission and our consultants.

The active executives of the tuberculosis association, the welfare board, and the city schools have been asked to study the town's health and delinquency problems.

The commission is in constant touch with school officials regarding their needs, and the hospital is making a study similar to that prepared by the library.

The commission knew that the business district was unsightly and needed some special attention, so we talked to the merchants' committee of the Chamber of Commerce. If such a cleaning was good for the town, it was better for them, we told the merchants, and asked them to draft a program and submit it to the Plan Commission. As a result the commission now has from them a program calling for the elimination of every overhanging street sign, along with posts..."
and wires that clutter the business district, and the provision of ample parking facilities.

These reports are gone over by the Plan Commission and then referred to the consultants for study, and it might interest you to know that the merchants' plan for cleaning up the business district has been adopted exactly as they presented it.

You see, we've really got a community that is working together to make the town as comfortable as your favorite slippers.

"That's all right for the merchants and the hospital board and some others, but what about the rank and file of your citizens?"

As a matter of fact, we recognized the need to report to the people at large on the progress of the planning. The newspapers have carried many news articles to keep the public informed as the planning progressed, and then we came to the place where we thought a comprehensive picture of the planning ought to be given to the public.

A booklet was prepared setting forth the problem as the Plan Commission understood it, our approach to its solution and the objectives and purposes which guide our work, and this was published by the Chamber of Commerce.

"What about tangible results?"

We have at least three definite accomplishments.

You know, of course, that the first thing this commission did was to get the best consultants we could find. We were convinced at the outset that the plan for New Castle would be just as good as the consultants we got, so we secured Saarinen and Swanson, of Birmingham, Mich. Every step of the way is a revelation of the importance of good technical assistance. I don't believe any city can do a planning job that amounts to anything without it.

"I've seen a lot of Plan Commissions come and go, and I'm wondering if selfish interests here or there won't undermine you. You know—somebody that wants a road past their filling station or a park across the street from them."

Every Plan Commission has to face this, but I'm persuaded that there is less trouble because of selfishness than because of ignorance. Not ignorant people, but the failure of intelligent people to be informed about the planning.

For the remaining few who are willing to put their own selfish interests ahead of the welfare of the community, we are ready.

Actively engaged in the planning are labor, the Chamber of Commerce, the boards of our various institutions, the press, and of course the city administration which created the commission. That's somewhat of a ball team, and frankly we're ready to play any challengers.

People have been used to shooting at Plan Commissions as though there were a year-around open season on them, but we expect to stand our ground, and those who want to play rough must not cry when they themselves get hurt.

"Now let's see if I've got this straight. "You wanted a good plan so you got good consultants. "You realize that even a good plan wouldn't do your town any good stuck away in a pigeon hole, so you organized the planning on a community-wide basis. "You set up human values as your objectives. You don't want wider streets or more parks or greater wealth for their own sake, but a place for your people to live which shall be safe and peaceful and satisfying. "Is that it?"

That's it.
From the drive, the particular features are the wall planes, narrow windows and the dramatic projection of the carport.

Country House
Perryville, R. I.

ROCKWELL K. DUMOULIN, A.I.A., ARCHITECT

Looking from hall toward living room. On the right is the curved wall of the store room.
In judging a house design, the criterion of integration of all elements is less clear-cut as a rule than in other types of structures; for there is frequently a strong personal equation, surrounding client, architect, or both, that tends to compromise logic. In the case of the house shown here, however, there appears to have been an unusually happy meeting of minds. The owners wanted a good house designed for their particular needs rather than one that would impress the neighbors or echo an old tradition, and the architect was both sympathetic to this sensible approach and competent to carry through a fresh, creative design without apology or qualification.

From the point of view of coordination two features of the design seem of special importance. The house grows out of three-dimensional considerations, rather than from plan alone. The living room, with its window wall, merited greater ceiling height and emphasis than other rooms; the structural device of a clerestory above lower roofs is a logical design expression. In turn, this allowed introduction of cross ventilation and light into the middle of the house and interior placement of one of the bath rooms.

A change in level places the kitchen and dining space above the rest of the floor. Three 8-inch risers join the hall and kitchen; four 6-inch steps lead up from the living room to the dining space. The latter is further separated from the living room by only a low partition, designed to serve many purposes.

The other feature that at once is apparent is the close coordination between the various rooms and specially designed storage spaces. In both of the boys' bedrooms...
Exterior walls are of scored plywood. The roof overhang is designed to cope with the sun at different seasons.

A recess is provided alongside the closets for flush installation of drawers; in the master bedroom, there are not only a built-in dressing table and drawers, but a series of closets—some equipped with sliding trays—that were planned on the basis of actual possessions to be stored rather than by rule of thumb.

Direct framing of the big window into the fireplace exploits the distinctive qualities of each material, and the provision of space and a drip pan to take care of condensation on the window glass is yet another instance of esthetics and function inseparably joined (see detail Page 94).

The full-length door and window are the exterior wall of the dining space.
ROCKWELL K. DUMOULIN, A.I.A., ARCHITECT

Interior walls are either plaster or plywood; closets and built-ins reduce the need for moveable furniture.

Kitchen

General storage is amply provided in the closet-lined bedroom hall and a room specifically designed for the purpose (see plan).
**INSULATION, Low Temperature Block, Continued**

**USES**—Cold rooms are used for the cold storage of meat, fruit, vegetables, candy, dairy products, ice, fur, beer, etc., and for the processing of foods, ice cream, beer and other products. Locator plants, air conditioned ducts and apparatus require a low temperature type of insulation. One feature of the better class homes of the future will undoubtedly be a walk-in cold storage room with a fast freezer compartment.

**GENERAL PRINCIPLES**—Three forces attempt to drive moisture from the warm to cold side of a barrier: (1) Wind or air current pressures, (2) atmospheric pressures due to difference in the density of air at different temperatures, (3) vapor pressure due to the difference in the absolute humidity at the different temperatures.

It should be apparent that a cold room with one or more walls exposed to extremely low outside temperatures in the wintertime might have heat, air and vapor differentials tending to create a flow from the inside of the cold room to the exterior, instead of the other way around as would occur in the summer.

The basic principle of low temperature installations which utilize organic or fibrous insulation is the protection of the insulating material from the damaging effects of moisture penetration on the material itself and on its performance. At the same time the joints between any type of rigid blocks must be sealed against the infiltration of air and moisture which would make it uneconomical to maintain the interior temperature and would create a deposit of frost on coils, pipes or plates.

In addition to a satisfactory thermal coefficient, low temperature insulation may be examined for strength, freedom from odors, workability with tools, bond strength with asphalt, incombustibility, moisture resistance, susceptibility to rot, likelihood of attack from vermin.

**THICKNESS OF INSULATION REQUIRED**—The correct temperatures of cold rooms for different purposes will vary between quite wide limits. Most manufacturers' catalogs and various government specifications carry suggested minimum thicknesses of insulation based only upon such cold room temperatures, irrespective of average outside temperatures during the period of peak refrigerating load. This is ridiculous because the total heat leakage through the walls, floor and ceiling is a function of the temperature differences—not the interior temperature only. The heat leakage establishes the original cost of the refrigeration plant and maintenance.

The dewpoint temperature of the exterior surface of cold rooms might be a factor in insulation thickness where spaces adjoining the cold room were at high humidity.

The thermal coefficients given in the table were furnished by the separate manufacturers, from each one's own independent laboratory work. It should be noted that the temperatures of which the coefficients were determined were not necessarily the same for all the different products given.

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### Manufacturers
- **Armstrong Cork Co.**
- **Cork Import Corp.**
- **Cork Insulation Co.**
- **Corkboard**
- **Novoid Standard Corkboard**
- **Corinco Corkboard**
- **Fire-Tex Ins. Bd. Co.**
- **Johns-Manville**
- **Mundet Cork Corp.**
- **United Cork Co.**

### Trade Name of Product
- Corkboard
- Novoid Standard Corkboard
- Fire-Tex Z Blocks
- Rock Cork
- Mundet Corkboard
- Blocked Baked Corkboard

### Size

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### Thicknesses

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### Sources of Supply

- AIA File No. 37 for Insulation
- Compressed Corkboard, HM-C-561a (LLL-F-321), Superintendent of Documents, Washington, D.C.

### References

- Celotex Corp., 120 S. LaSalle St., Chicago
- Cork Import Corp., 330 W. 42nd St., N.Y.C. 18
- Cork Insulation Co., 155 E. 44th St., N.Y.C.
- Fir-Tex Ins. Bd. Co., Portland, Oregon
- Johns-Manville, 22 E. 40th St., N.Y. C.
- Mundet Cork Corp., 65 S. 11th St., Bklyn.
- United Cork Co., Kearny, N.J.

A complete analysis of required thickness of insulation would involve the cost of electric current and interest on the plant investment balanced against the interest on the cost of added inches of insulating material so that the most favorable economic balance is obtained.

The graph given on this page for insulation thickness will be found, under average conditions, to economically maintain the interior design temperature of the cold room. If the supporting construction contributes to the overall coefficient, its value would be credited in the selection of the insulation thickness.
INSULATION, Low Temperature Block

DESCRIPTION—The rigid low temperature insulations are variously referred to as sheets, boards and blocks. Neither the word “sheet” nor “board” seems to describe accurately the material in the dimensions in which it is manufactured. A “board” is defined as a piece of rigid material of little thickness, and of length greatly exceeding the width. Therefore, in this B.P. the material is referred to as “block.”

CORK block is manufactured from ground cork which is molded and backed. The backing melts the natural resinous gums surrounding the cells, binding them together.

MASONRY WALL

WOOD FRAME WALL

CONCRETE SUBFLOOR

WOOD SUBFLOOR

WOOD CEILING

FALSE TEE CEILING

FIBER block is made of partially refined vegetable fibers obtained principally from crop plant wastes or wood. The blocks are fabricated from the pulp, suitable sizing material being incorporated in the product to render it water resistant. The drying temperature is such as to destroy rot-producing fungi.

GLASS block consists of true glass which has been culletted in manufacture so that a section reveals a structure of tiny (5 million per cubic foot) sealed air chambers which are completely impervious to moisture.

MINERAL WOOL block consists of compressed loose wool with suitable binders to form a rigid material. Mineral wool is a generic term denoting a number of similar products differentiated chiefly by the raw materials from which they are made, and being composed of very fine interlaced mineral fibers having the appearance of loose wool or cotton.

STRUCTURAL SHELL.—Walls, floors and ceilings should be preferably of solid construction. Monolithic concrete or solid brick with flush joints are recommended.

All masonry walls, except excellent monolithic concrete surfaces, should receive a coat of 1:2 Portland cement plaster floated to a true surface to fill the voids and to provide a true surface to receive the block. When dry it should receive an approved asphalt primer.

Construction with air spaces such as occur in hollow masonry or sheathed frames should be avoided but if used, the spaces should be left open to provide free air circulation. Shingling should be treated T&G hemlock, pine, spruce or fir.

Self-sustaining partitions and interior walls can be constructed by utilizing temporary studs for alignment.

INSTALLATION.—Some manufacturers maintain their own installation crews. Other manufacturers supply their materials to independent contract installers.

It is generally recommended that walls, floors and ceilings be constructed of 2 layers, both applied with hot asphalt (except for surfaces where 3 layers or more are required to obtain the thickness called for by heat loss calculation). Both transverse and longitudinal joints are staggered to prevent infiltration.

The 2nd (and any succeeding) layer of blocks is nailed or skewed to the preceding layer and on wood construction the 1st layer is nailed to the wood backing. The glass type of block, however, is not suitable but the bond of the glass surface with the asphalt provides satisfactory adhesion. The bottom layer of block in glass type ceilings is laid on T-irons.

The use of cold asphalt or the application of the 1st layer against masonry with Portland cement grout instead of hot asphalt is not recommended in the best practice.

*Manufacturers' literature on insulation refers to this plaster coat as "back-plaster" which, of course, it is not.

FLOOR FINISH.—Wearing surface of floors can be wood on treated sleepers in the final course of insulation, or Portland cement, or mastic.

WALL AND CEILING FINISHES.—Glass type block is finished with asphalt emulsion. Other insulations may be finished with fibered or unfibered asphalt emulsion, mastic, or two 1/4" coats of Portland cement plaster jointed to localize cracking. Various types of special paint for cold storage work may then be applied to any of the foregoing finish materials.

COST.—The cost of block insulation in place is subject to wide variation depending upon the type of insulation, the size of the job, local labor costs, transportation charges, and various other factors. The price range given here does not include the erection of the structural shell or the installation of finish. An average price for low temperature insulating block in place can be taken from 15c to 25c per board foot but this figure must be regarded only as an approximation and should by no means be taken as a basis for estimates to an owner.

LOCAL SERVICE.—Fill in the blank spaces provided below with the names of manufacturers' local representatives who can help in problems involving this product.

| Product | Local Agency
|---------|-----------------
|         | Representative
|         | Address
|         | Telephone

| Product | Local Agency
|---------|-----------------
|         | Representative
|         | Address
|         | Telephone

| Product | Local Agency
|---------|-----------------
|         | Representative
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A Famous Drawing Pencil on the Job!

The power and delicacy of this drawing were achieved with Typhonite Eldorado, degrees 2B, 5B, 6B, HB and 2H. The artist has pictured the lifting of a main cofferdam into place in an oil tanker in one of America's great shipyards.

Here is imposing proof that made-in-America Typhonite Eldorado is a superior drawing tool. In fact, it has supplanted foreign-made pencils so brilliantly that the tradition of "foreign-made" is now just an old-fashioned quirk. Pick up America's finest—Typhonite Eldorado! It will be a happy experience in use and results.

TYPHONITE ELDORADO
PENCIL SALES DEPT. 167-J10, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY 3, N. J.
Ideas for the use of GLASS in public buildings

Recent example of the generous use of glass to assist in providing good lighting, good vision and good looks is this striking college building. Pennvernon Window Glass, with its fine finish on both sides of the sheet, its remarkable freedom from flaws, is always a dependable glazing material for structures like this. Hornbostel and Bennet, Associated Architects.
Winning universal favor among architects is the use of Herculite Doors at the entrances of many public buildings. These crystal-clear, impressively handsome doors have great strength, sturdiness and exceptional good looks. In the application pictured, two sets of Herculite Doors and side panels create an attractive vestibule. Architect: Robert Heller.

No gloom or depression of spirit will attack frequenters of a Health and Recreational Center as generously windowed as this distinguished building in Texas. Similarly, large areas of Pittsburgh Plate Glass and Pennvernion Window Glass can contribute enormously to the appearance, brightness and functional “rightness” of public buildings of many kinds. Birdshall P. Briscoe and Maurice J. Sullivan, Associated Architects.

A combination of colorful Carrara Structural Glass and Pittsburgh Structural Mirrors is hard to beat when an entrance lobby, lounge or reception room needs something “special” in the way of beauty. Color combinations are almost limitless, and both Carrara and Mirrors create an impression of luxurious elegance.

* We believe you will find much to interest you in our new, illustrated booklet of ideas concerning the use of Pittsburgh Glass in architectural design. Send the coupon below for your free copy.

PITTSBURGH PLATE GLASS COMPANY

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Pittsburgh 19, Pennsylvania
Please send me, without obligation, your new booklet entitled: “Ideas for the Use of Glass in Building Design.”

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Address......................................
City........................................... State..............
The other day we were talking to an architect about the A.I.A. program to eliminate the "or equal" clause from specifications.

"Mr. Dickinson," we said, "we know the evils of the 'or equal' specification but do you believe that the 'base bid and alternate' type is best?"

"I certainly do," he replied. "We architects must keep both cost and quality under control if we are to serve our clients correctly. This can best be done through the use of a 'base bid and alternate' type of specification.

"What about the 'flat' specification?" we inquired.

"A 'flat' specification," he explained, "names only that material or product which the architect or his client believes will provide the results or service which they desire. Such a specification assures that the desired product will be obtained but it does not protect against extravagant costs. On important items we sometimes wish to compare the prices of two or more makes in order that we may select the best value; or several makes may be acceptable and we wish to purchase the one which is lowest in price thereby saving the difference. Only by use of the 'base bid and alternate' type of specification can we obtain this information regarding prices and yet retain the right to select the desired material or product."

"Some architects write a 'descriptive' type of specification," we offered.

"Yes they do," he agreed. "They attempt to specify in detail exactly what is desired without naming any make. I have usually found this to be impractical. Even though it were possible to ade-
prefer the base bid and type of specifications

quately cover all the tangible factors involved such as size, weight and appearance, there are too many intangible factors which affect the results of service to be obtained. These include the responsibility of the manufacturer and the organization which he maintains for cooperating with the architect and the user during the construction and entire life of the building. The descriptive specification also has many of the disadvantages of the 'or equal' type, inasmuch as the contractor may use a quotation on an inferior product and then of necessity attempt to force approval of this inferior product after the contract has been awarded. This leads to controversies and often delays construction of the building.

"No," he concluded, "there is no specification like the 'base bid and alternate' type. I name a definite make of material or product; ask for alternates where desired; and provide that if the contractors wish to submit proposals on other makes, they may do so. They must, however, file their bids based upon the makes originally named and are required to state in the bid the addition or deduction to be made in case alternates are selected. I further specify that no substitutions will be allowed after contracts are signed. This 'base bid and alternate' specification provides for fair competition, insures reasonable costs and places the determination of both quality and price in the hands of my client and myself."
Books

JUST WHAT IS CONTEMPORARY ARCHITECTURE?


Published in connection with the Museum of Modern Art's architectural exhibition of the same name (part of its fifteenth anniversary show, "Art in Progress"), this modestly sized book shows, the Museum says, "... the setting in which some Americans now live, in which all Americans could live."

In his short preface Mr. Goodwin first traces the history of the Modern Museum's Architectural Department, then rehearses the methods by which examples of architecture were selected for the exhibition, and relates the Department's function to that of the Museum as a whole. Part of this is a record of fact, but when he gets to methods of selection Mr. Goodwin raises again questions which many have asked: Why was this building selected, that not? Why were certain types of buildings omitted? Why are certain architects not architectural Forum's master-straddlers) the esoteric mist from the contemporary architectural design, she trips heavily over that familiar obstacle, love of the super-cute: "Certainly no general dissolution of the right angle has taken place..." Just between us fellows, that's pretty good, but imagine the extent and kind of its influence upon a rugged individualist of an architect in Des Moines.

Yet this fault is small in comparison with the true worth of the critique as a whole, and has been dealt with first only to get done with it. Despite the somewhat detached manner in which it is written, Mrs. Mock's piece is one of the few truly perceptive discussions of the origins, extent, meaning, and hopes of contemporary architectural design. She succeeds in bringing together, in such a way that their influence upon one another is understandable, scheme very diverse elements: Frank Lloyd Wright, the Bauhaus, and Le Corbusier; Sears Roebuck and Company and city planning; structural materials, Hopi villages, and George Fred Keck's solar houses. The juxtaposition is not that close, of course; but one finishes reading the essay with a slight feeling of bewilderment—and a very proper awe—at the number of facets, or components, or driving forces, which compose this thing we so glibly call architecture. It is good to have them so logically related to one another.

Pictorially, the book is also noteworthy. Only those who, like magazine editors, have been confronted during this war by the problem of getting more and better stuff on fewer, poorer, and smaller pages, can fully appreciate the technical difficulties involved. The selection of photographs is excellent in that the essential character of each project carries through to the reader. Above all else, that surely is the prime function of such a volume.

FRANK G. LOPEZ

Reviews

Books

CONTEMPORARY CREDO


From a thousand founts come words—spoken and printed—purportedly defining the timeless principles necessary to guide the architectural profession into a new world of functional and beautiful buildings expressive of a democratic society. In Eric Mendelsohn's three lectures (Architecture in a World Crisis; Architecture Today; and Architecture in a Rebuilt World) delivered at the University of California, can be found the credo of one modern architect.

Mr. Mendelsohn's analysis attempts to place architecture in a cultural position comparable to, though somewhat greater than, those of other arts and letters. His relating of the progress in any one field to that in another usually is valid. However, the discussions of modern fine art and the Museum's selection Mr. Goodwin raises again are considered. The Museum apparently does, that the Museum had not been dazzled by the extent and kind of its influence upon a rugged individualist of an architect in Des Moines.

There can be little doubt where Eric Mendelsohn stands on eclecticism, and he produces all the arguments known against the copybook spirit. Though we have heard and read it before, his engaging style and excellent command of language make these lectures a veritable coup de grace. His arguments are particularly convincing because he himself has produced first-class architecture illustrative of the essential rightness of his principles.

Every architect and intellectually conscious person should enjoy these lectures and profit from having the book on his shelf. The slightly smaller-than-postage-stamp-sized illustrations which dot the pages might be criticized although they are exceptionally clear and save the cost of full-page spreads.

PRIVATE PLANNING IN ENGLAND

Adapting War-Time Sites to Post-War Uses. Booklet showing the proposed treatment of sites chosen for industrial purposes and a planning and Development Companies, Australia, and Regional Reconstruction (APRR), industrial, agricultural, and integrated (balanced industry and agriculture) developments are presented concisely and convincingly. A great role is played through large groups. Several maps which indicate the types of in- (Continued on page 104)
The skill and technique of the architect... master craftsman in boldly fashioning a new and better World... will contribute much to the enjoyment of the fruits of Peace.

Upon the architect rests the responsibility for building our cities of tomorrow... to modernize our offices, factories, schools and institutions... our municipal, county, state and federal buildings... our homes in keeping with the trend to better living.

Men and metal and production facilities have been at War... but they will return... and when they return, GF will again build Aluminum Chairs, Desks, Tables, Filing Cabinets and other items of equipment built to traditional GF standards.

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METAL DESKS • ALUMINUM CHAIRS • METAL FILING CABINETS • STEEL SHELVING • FILING SUPPLIES • SAFES • STORAGE CABINETS
FIAT ANNOUNCES

a postwar standardization of shower cabinet sizes

To establish a standard for architects and plumbers to use in future construction, Fiat is presenting the following sizes to the trade now for the purpose of expediting postwar planning. Fiat showers will be classified into four groups according to structural design (details to be announced later) based on the general price range of prewar models.

GROUP NO. 1
Skipper type, low cost shower

GROUP NO. 2
Cadet type, medium priced shower

GROUP NO. 3
Marine Ensign type, for "above average" installations

GROUP NO. 4
Admiral type, de luxe class

"Measurements conform to the American Institute of Architects 4" unit module system.

Fiat's postwar line of showers will be modernized to take full advantage of advanced design and recent material developments. Included will be standard types of receptors for tile, slate and glass walls and a complete line of glass doors with the exclusive Fiat adjustable jam feature. All shower cabinet models will retain the distinctive Fiat characteristics — leakproof, beauty and trouble-free construction that have made Fiat showers the standard of value with the trade for over twenty-five years.

FIAT METAL MANUFACTURING COMPANY
1205 Roscoe St., Chicago 13, Ill.

Reviews

(Continued from page 102)

formation required to make such plans are reprinted from a larger technical study on "A Rapid Method of District Survey" by APRR.

With few words and illustrations, the Slough Estates indicates the advantages to the individual of organized, controlled development and a realization that private enterprise must fit itself into the publicly planned postwar world. It all adds up to excellent sales publicity for the company and incidentally provides interesting evidence of the major role Englishmen of all stations feel planning must play.

A HOUSING PROGRAM FOR AN ECONOMY OF ABUNDANCE

Good Shelter for Everyone, pamphlet issued by CIO Committee on Housing in collaboration with CIO Post-War Planning Committee, October 1943. 10 cents per copy.

Memorandum on Post War Urban Housing, pamphlet issued by United Automobile Workers-Congress of Industrial Organizations, 1944. 25 cents per copy.

Politics in Housing, by R. J. Thomas, pamphlet published by International Union, UAW-CIO, 1944. 10 cents per copy.

Homes for Workers in Planned Communities Through Collective Action, pamphlet issued by United Automobile, Aircraft and Agricultural Implement Workers of America, 1943.

It is the firm opinion of Catherine Bauer (Modern Housing) "... that there never will be any realistic housing movement in this country until the workers and consumers themselves take a hand in the solution of this problem." In Europe the trade union movement has been instrumental in achieving housing reform. However, American labor organizations until very recently, circumscribed their interests around purely economic reasoning and were not vocal in demanding decent shelter. Consequently, dwellings for workers have been inadequate and, as the CIO admits, "the lack of such demand here is the principal reason for the failure to accomplish anything worthwhile in this country."

However, labor interest in the housing problem has been synchronized with the emergence of the Congress of Industrial Organizations as a political force through its organ, the Political Action Committee. The union utterances reviewed below have been addressed primarily to such earmarked audiences as the CIO membership, labor as a consumer body, and those United Automobile Workers (UAW-CIO) who

*International Union, United Automobile, Aircraft and Agricultural Implement Workers of America. Workers (UAW-CIO) who

(Continued on page 106)
Where Dust is a Hazard

Exposed arcs may set off disastrous explosions. Guard against this danger by installing Dust-Tight Light and Power Panelboards.

They are approved by Underwriters' Laboratories, Inc., for "Class II, Groups F and G, Hazardous Locations." This includes coal mines, coal processing plants, shell-loading plants, grain mills, and other places where dust is a dangerous factor.

These panelboards have a solid steel front plate, gasketed all around, and secured with screws to an extra wide box flange. They are further rendered dust-tight with welded hubs for conduit outlets, welded box corners, and handle bushings riveted directly to the steel cover plate. External mounting brackets are provided, to maintain the dust-tight construction.

The circuits are externally operated by a mechanism of new design. The handles operate through dust-tight bushings, and engage the regular handles of the circuit breakers inside the cabinet. ON and OFF positions are indicated on the front of the cabinet.

Dust-tight Panelboards are of the circuit breaker type. Capacities of Power Panels: 15 to 600 amperes, 250 volts AC or DC, and 600 volts AC. Lighting Panels, standard or narrow column type, equipped with Type AC Thermag or Dublbrak Circuit Breakers (or other types of ranch-circuit circuit breakers). Available with 4 to 42 circuits, 50 amperes or less, for 3 wire, single phase, or 4 wire, 3 phase mains, with lugs only, or main breaker.

Write for Bulletin 67

which contains descriptions, sizes, capacities, wiring diagrams, prices and suggested specifications... Frank Adam Electric Company, Box 357, St. Louis 3, Mo.

The same form of construction but with rubber (or equivalent) type of gasket is available for Vapor Proof installation.
DON'T let your reputation for promptness lie around on the shipping room floor. When a customer marks his order "RUSH"—call for AIR EXPRESS pick-up and get it on its way as early in the day as possible! That's the secret of fastest delivery by AIR EXPRESS—a service that moves cargo on swift Airlines schedules around the clock, for war and reconversion jobs.

SPECIFY AIR EXPRESS
A Money-Saving, High-Speed Tool for Every Business

With additional planes and space available for all types of traffic, 3-mile-a-minute Air Express directly serves hundreds of U.S. cities and scores of foreign countries. And shippers nationwide are now saving an average of more than 10% on Air Express charges—as a result of increased efficiency developed to meet wartime demands.

WRITE TODAY for "North, East, South, West"—an informative booklet that will stimulate the thinking of every executive. Dept. PR-10, Railway Express Agency, 230 Park Avenue, New York 17, N.Y., or ask for it at any local office.

Reviews

(Continued from page 104)

are potential homebuilders. Of all unions in the CIO the automobile workers et al have been most vigorous in this campaign and most prolific in supplementary writings. R. J. Thomas, president of the UAW and chairman of the National CIO Committee on Housing, has been responsible for the appearance of four statements on housing policy.

According to the CIO Housing Committee's pamphlet, Good Shelter for Everyone, there is an annual need for 1,500,000 homes for the next ten to twenty years if adequate housing is to be secured for all. Of this number private enterprise is equipped to build two-thirds, leaving only 500,000 units to be provided in the form of public housing. Private builders are urged to make every effort to tackle their one million unit quota alone. However, recognizing the possibility of the construction industry's inability to reach this total (since in 1925, the industry's peak year, only 900,000 homes were produced), public and cooperative housing are called upon to make up any deficit.

Strikingly enough, the CIO calls for policies designed to stimulate the use of modern techniques, prefabrication, and mass production of materials, thereby dispelling the traditional notion that all labor will attempt to deter technological advance. To realize this aim and to remedy the housing shortage the following proposals are offered: the establishment of a National Planning Office, the reconstitution of the National Housing Agency as a permanent federal agency, the enlargement of the functions of local housing authorities, governmental assistance to private capital seeking entrance into the housing market and labor representation on all housing and planning bodies. The latter is indicative of the bid which labor is making for a place in the housing movement as the representative of a large segment of American consumers. These "housing planks" will serve to achieve maximum productivity in the construction industry and will relate the housing problem to the over-all needs of each community and the national economy. They are being supported by CIO labor, which will give political endorsement to candidates who are committed to advance these aims.

Recognition of the relation of housing to regional and local planning is accorded in the succinct Memorandum on Past War Urban Housing. The brochure deals with housing from the consumers' viewpoint in terms of interest to the layman, who is encouraged to participate in the discussions of the

(Continued on page 108)
The United States Plywood Corporation in cooperation with Arts & Architecture, invites your entry to the second annual contest for the design of a small post-war home.

The competition . . . open to all architects, engineers, designers, draftsmen and students . . . started officially September 20, 1944 and runs for three months until December 20, midnight. Entries will be accepted up to that time at the office of Arts & Architecture, and are eligible if postmarked no later.

Winning designs will be exhibited in principal cities all over the United States. Full credit will be given the designer.

There are no entry fees of any kind. You can get complete information on rules and regulations by writing to Mr. Sumner Spaulding, Arts & Architecture, 3305 Wilshire Boulevard, Los Angeles 5, California.

The United States Plywood Corporation is happy to offer jointly this opportunity for the expression of ideas that must now be uppermost in the minds of all concerned with the improvement of the American standard of living.
IT'S NO FEAT

to turn out professional-looking, neat-as-a-pin drawings fast with any one of the four widely-known Arkwright Tracing Cloths.

CAN'T BE BEAT!

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AMERICA'S STANDARD FOR OVER 20 YEARS

Reviews

(Continued from page 108)

various proposals to rebuild our cities. An eight-point program is offered as a remedy for the ever-spreading social and economic fissures threatening the metropolitan areas. These urban ills resulted from rapid unplanned growth and, subsequently, unorganized decentralization to the suburbs. One of the major readjustments sought is a better relationship between the taxes collected and the increasing cost of city services.

The creation of Metropolitan Regional Planning Agencies with comprehensive powers for the establishment and administration of a master plan is urged. Interrelated with this are programs for slum clearance, blight prevention, extensive home building for middle and low income groups, subsidized housing, protection of public equity in land, orderly disposition of war housing, and design control.

The last is proposed in the belief that the visual forms taken by building construction help stimulate man to higher goals. Likewise, good design makes a substantial contribution to civic stability, thereby tending to preserve property values. This control can be achieved, they say, by (1) the establishment of machinery to control publicly the maintenance of a high standard of visual design for all building construction; (2) the coordination of the basic theory of design control with various interpretations so that a pleasing flexible neighborhood character will result; (3) the discouragement of the slavish imitation of traditional forms which regiments buildings into a fixed neighborhood pattern; (4) the encouragement of an imaginative use of modern techniques in planning and construction to meet the needs of our time; and (5) the accomplishment of the foregoing through the expansion of existing public agencies or through the creation of new agencies with adequate authority to achieve the desired ends.

The Memorandum's program can be realized only by a simultaneous attack on all eight points and in the light of these principles: a social point of view, a large-scale coordinated approach to all factors that have been stumbling blocks to corrective action, conservation of natural resources and elimination of wasteful practices, and the maintenance of full employment. These desiderata were underlined by Mr. Thomas in a speech before the first National Convention of the Public Housing Conference in March 1944 which talk subsequently appeared as a leaflet entitled Politics in Housing. He contended that the forces of progress and reaction were pitted in the political fight and urged that the hous
More and more... "sound-conditioning" is becoming a part of the original building design. This means interiors that won't "talk back"—because they absorb sound—and that generally means Sabinite® "M".

For Sabinite "M" is the modern way that distinguishes present-day design from outmoded methods or "patched on" procedure.

Sabinite "M" becomes "part and parcel" of standard building practice because it requires no special construction, men or methods—a plaster finish applied over standard bases, by any good plaster craftsman.

It harmonizes with the beauty of design without making itself conspicuous. It has high light-reflectivity and lends an air of quiet dignity—may be had in prepared colors or decorated to suit.

Sabinite "M" decorates, protects from fire, and quiets sound in one operation—a three-way service at a cost extremely low.


TODAY'S "QUIET" WAY
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PENCIL POINTS, OCTOBER, 1944 109
WILL YOUR CLIENTS EXPECT "MIRACLES" IN THEIR POST-WAR HOMES?
Here's how you can actually give them "a new quality of living"

WILL THERE BE a mad scramble for homes in the post-war period? Will people rush out to buy anything that comes off a drawing board. Surveys conducted by the National Association of Home Builders, and others, say "NO!" These surveys indicate people will demand new comfort, new convenience in post-war homes—and that they won't accept any that don't provide them.

You can make sure the homes you design will meet this post-war demand by installing Servel's New All-Year Gas Air Conditioner. This entirely new type of air conditioning equipment brings undreamed-of comfort and health indoors all year round. One simple unit cools and dehumidifies the home in summer, heats and humidifies in winter, provides draft-free circulation of cleaned, filtered air the year round—all at the touch of a finger.

Developed before the war by the makers of the famous Servel Gas Refrigerator, this equipment has already been successfully installed in hundreds of homes and commercial buildings throughout the country. Users everywhere are unanimously enthusiastic about the amazing new comfort and convenience it provides. They all vote it "the next essential for the home of tomorrow."

Test installations definitely prove that homes equipped with the Servel All-Year Gas Air Conditioner are much more acceptable than those with adequate heating only. Financial underwriters recognize this—and the additional fact that obsolescence is bound to be less—by indicating not only a willingness to extend larger loans on buildings so equipped, but an actual preference for such buildings as risks. And even though the Conditioner does cost more than adequate heating alone, proper co-ordination at the time of planning can effect economies that largely offset the extra cost.

The Servel All-Year Gas Air Conditioner will be available for your post-war homes as soon as materials and productive capacity are released from war work. For additional details, get in touch with your local Gas Company. Or write direct to Servel, Inc., 4410 Morton St., Evansville 20, Ind.

SERVEL GAS REFRIGERATORS are standard equipment in the nation's finest apartment houses.

SERVEL
All-Year GAS AIR CONDITIONER
Made by Servel, Inc., maker of the Servel Gas Refrigerator

110 PENCIL POINTS, OCTOBER, 1944
ng program be spared from becoming political capital. One of his chief proposals was substantial public aid for private entrepreneurs by a reduction in mortgage interest rates, longer periods for amortization, and assistance in the acquisition and assembly of suitable land.

In an effort to by-pass the speculative operator and obtain decent housing in planned communities at a price workers can afford, the UAW entered the domain of cooperative housing with a program for Homes for Workers in Planned Communities Through Collective Action (1943). The union recognized that thousands of UAW members will be buying homes immediately after the war. If they do not buy them collectively through their union they will buy them individually from speculative operators at whatever terms are available to them. The formation of Housing Committees in each local is encouraged to circumvent the speculative operator. Potential home builders will work with these committees and will pool their resources to purchase sites and employ architects to create a planned community. In addition to the actual cost savings available because of mass action, a greatly improved product is expected.

Well thought out as the plan is, there have been two major omissions. It would seem to be an implied obligation for a union interested in housing to educate its membership to the financial hazards of home ownership. Workers should be forewarned that their liability will extend for one or two decades and at the amount committed should be estimated in terms of long-range earning power, and not on the basis of present war savings. The discussion is no provision for safeguarding the owner’s equity in the event of default. Thus, although the odious type of developer would be avoided, the owner would still be subject to the financial institution which holds his mortgage to the personal vicissitudes involved therein.

A more prudent course, possibly, would have been the advocating of planned large-scale cooperative communities of fixed housing—flats and duplex apartments—for workers. There would be need for these apartments to be signed as traditional multi-story buildings. They could be two-story attached units including such amenities as a porch and a back yard. Shelter of this type would satisfy the quest for the comforts, individuality, and privacy, while affording centralized ser-

(Continued from page 108)
If the job's worth the time of doing—it's worth doing on cloth. Your knife-sharp pencil lines produce prints so clean-cut they could have been made from ink drawings! Hard pencil drawings made on cloth stand up under handling—and come out of the files next year, or later—still in fine condition, ready to deliver sharp prints. Select the cloth that suits your purpose and for all up-to-date refinements—be sure it's POST tracing cloth.

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Reviews

(Continued from page 111)

The little red schoolhouse is being followed into limbo by the big clumsy factory structure which succeeded it. Modern principles of design, modern apparatus and materials have responded to the demands of current educational methods to bring functional school buildings closer to reality. Possibly because the American School and University Yearbook is designed to serve almost as a catalogue of school supply companies, utilization of architectural advances is strongly encouraged in its thirty-odd articles; yet credit should be given for the emphasis on utilitarian architecture.

The articles are grouped in five sections, each with appropriate advertisements. "Planning and Designing a School Plant" constitutes the first; the discussions here set the keynote for the rest of the book, an appreciation of the role of the school in the education of young citizens. The problems faced in introducing contemporary design into school building programs are presented and the role of school building codes is emphasized.

John E. Nichols' article has an interesting suggestion for democratic codes adjustable to changing conditions. His proposed law would be mainly "informative"—stating the principles desirable for guiding the architect and lay people who plan the school. It would emphasize the optimum standards and only incidentally provide for minimum requirements. By removing the emphasis from the minima, Mr. Nichols hopes to end their role as the maxima; by presenting principles, he plans to give guidance to the administrators in granting exceptions where the spirit is correct but the detail does not conform with previous ideas. Such a code deserves study as a possible solution for a contemporary general building code.

The second section, "Special Features of the School Plant," points out the great role which schools will play in the community and the improved facilities they will provide for public contact with educational programs.
Assurance of delivery of proved equipment, designed to meet the job requirements, is a vital part of every new construction project today.

Because USAIRCO is located in a non-critical defense area, its experienced man power is still intact. USAIRCO can deliver the equipment you need—Blowers, both direct-driven and belt-driven; washers; coils and unit heaters are available in a variety of types and capacities.

USAIRCO Blowers and other air handling equipment is serving the war effort on ships at seas, and at important shipyards. It is being used in airplane factories, food processing plants, cartridge-filling rooms and at army and navy bases. Whatever the job requirements, USAIRCO delivers the equipment you need.

Send your inquiries to USAIRCO. We'll be glad to supply you promptly with complete data, price and delivery dates. Cooperating engineering data and counsel are available.
Acoustical Ceilings. Ceilings of the J-M Unit Office System are sound-absorbing acoustical units which permit hung ceiling construction, concealing air-conditioning ducts, overhead conduit, etc. Since the units are demountable, service equipment is readily accessible. Easy to clean, to maintain. High light-reflection coefficient. Exclusive J-M method of construction allows use of flush-type fluorescent lighting with J-M Acoustical Ceilings.

Movable Walls. J-M Transite Walls are strong, sturdy, durable. They provide a complete system of dry-wall construction, which can be taken down and relocated almost overnight with 100% salvage. Available for any height—even for low railings and counters. Made of asbestos and cement, they have a smooth, hard surface. Fireproof. Last indefinitely. May be left in original gray finish, painted or decorated.
IT'S NOT ENOUGH for the post-war office merely to attain new heights of attractiveness. It must go further than that.

It must also provide new highs in quiet, in comfort, in all-round efficiency. And, because of the ever-changing nature of business, it must be flexible—capable of quick and easy rearrangement without spoiling its attractiveness or efficiency.

All these objectives can be achieved (and at modest cost, too) with the use of Johns-Manville's new System of Unit Office Construction. For this J-M plan involves the use of...

... Acoustical ceilings of demountable units, permitting the use of modern, flush-type fluorescent lighting.

... Movable, salvageable walls—easily erected and relocated.

... Resilient floors—composed of units which permit easy office alterations.

Despite the high degree of flexibility which these three rugged J-M Building Materials provide, they have all the advantages of solid, permanent construction. Also, they may be cleaned simply by washing down—good news for the maintenance department. Yet another advantage: You write only one specification, thus gaining one manufacturer's responsibility.

A new brochure, showing the many possibilities of applying J-M Unit Office System to all types of offices, and showing the many colors and decorative effects possible, is now available to architects and engineers upon request. Write Johns-Manville, 22 E. 40th St., New York 16, N.Y.
Pulls Increased Patronage to Drug Stores

Concealed behind walls, or out in the open, Chrysler Airtemp “Packaged” Air Conditioning keeps the atmosphere in drug stores odorless, fresh and stimulating to customers.

When the war is won, the public will insist on the comfort of air conditioned drug stores. New buildings, with their many new modern features, will be obsolete without year 'round temperature-humidity control. Druggists know this fact! They are asking architects to include Chrysler Airtemp “Packaged” Air Conditioners which, in combination with the famous Airtemp Percolator Boiler, provide ideal year 'round indoor climate control—plus adequate hot water.

Chrysler Airtemp offers architects helpful cooperation in making plans and estimates not only for cooling, but heating and commercial refrigeration installations. Airtemp Division of Chrysler Corporation, Dayton, Ohio. • In Canada, Therm-O-Rite Products, Ltd.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS, 9 p. m., E. W. T.

CHRYSLER AIRTEMP
HEATING • COOLING • REFRIGERATION
Give your interiors a “feel” of outdoor spaciousness with **Daylight Engineering**

When there’s plenty of glass to bring the daylight in . . . when there’s no visual barrier between indoors and outdoors . . . rooms seem bigger, brighter and more pleasant in many ways.

In cold climates, the use of large glass areas has sometimes presented a problem of excessive heat loss. No longer need it be a problem — for those areas can be glazed with Thermopane — the new Libbey-Owens-Ford multiple-pane insulating unit.

You can have Thermopane in sizes from 8”x8” up to 60”x100”—in a variety of thicknesses in plate glass and many other types. Thermopane fits into a modified single sash, just like a single pane of regular glass. For full information, write to Libbey-Owens-Ford Glass Co., 11104 Nicholas Bldg., Toledo 3, O.
Richmond offers without obligation, consultation on the proper types of Forms and Form-Ties to be used for a given job; estimates on job requirements and recommendations on specific Form problems.

Richmond furnishes layout and detail plans covering ties and their application to the form work.

Richmond's method of packing and shipping in accordance with layout plans is a distinct service in itself. Richmond's system of labels and color designations as applied to all cartons and bundles is a definite time-saver, and eliminates confusion. In short, the right material gets to the right spot, without delay.

Richmond's Tyscrus principle is that of a wire coil wound to the contour of a lag thread to receive and develop the full strength of the Richmond Tylag bolt. This bolt, by reason of its simple construction and fast thread, can be re-used indefinitely with no depreciation. For instance...½" diameter Richmond Tyscrus have a 5 turn coil (resistance welded) to each end of high tensile wires. These coils are 1" in length, hence they have 5 threads per inch as against 13 machine threads per inch on other tie systems. This is an immediate saving of better than 50% in tightening and stripping time per tie.

Richmond's policy of loaning its Form-Tie working parts (tools) free of any rental charge is a big factor in reduced costs because you only pay for lost parts, not for their usage.

Form-Ty Engineering Guide on Request.

New schools will not long remain useful without maintenance which is above the standards of the past. The next section, devoted to "Maintenance and Operation of the School Plant," indicates the great progress which is being made in these fields. The principles of scientific maintenance used in most large plants are being applied to schools where, after all, the investment is at least as great and the usage as hard.

With advance in educational methods during recent years has came a greater capital outlay in apparatus designed to teach technical subjects. The fourth section, "Instructional Materials," covers not only shop and scientific apparatus but library design, textbooks, and the use of radio.

Without "Management" (the fifth section) the modern school would deteriorate quickly. As a large-scale enterprise, modern business methods of collecting and keeping records are essential. So, too, is knowledge of the financial structure of the educational system in order that planning will include all factors affecting education.

Future schools should be the result of intelligent planning with its solution of the intricate problems involved in contemporary educational buildings. A new appreciation of the problems of circulation and progressive education requirements, as well as of the new materials and facilities, will make the postwar school a place which attracts and inspires youths and adults alike.

RESEARCH PRODUCES STARTLING RESULTS

The Housing Market in New York City A Study for the Institute of Public Administration, by Herbert Swan. Reinhold Publishing Corporation, New York, 1944. 204 pp., 41 tables, 16 charts, $2.00.

Economic man is up to his tricks again. The old catchwords — "fair market price," "automatic mechanism," "open market," "under conditions of stable population and full employment . . ." have been revamped and skillfully directed by Herbert Swan against the unbalance of the New York City housing market. His analysis of the local real estate doldrums and his solutions may be summed up as follows:

Inasmuch as the "housing market is . . . the mechanism developed to secure the most effective use of land and buildings in our local economy (and) when this mechanism breaks down, chaos and disintegration overtake the housing structure," the clue to the problem is in the articulation between a fluid demand for

(Continued on page 120)
"I'll trade you this Carbine for a Winner-Techno-TONE Drawing Pencil"

"Comes the end of the war and I won't have much use for a shootin' iron. But I'm certainly going to need a whole flock of Techno-TONE drawing pencils for the job of reconversion.

"Yes, Sir, a drawing pencil is going to re-design the world—convert Quonset huts into right pretty bungalows, fix up ATC transports to haul commercial freight, convert tanks into farm tractors, change troopships into luxury liners ... and you'll see PT Boats competing in 4th of July Regattas."

No, Johnny is not indulging in fantasy. When American industry adapts wartime discoveries for the benefit of mankind, Winner Techno-TONE and other good drawing pencils will translate the genius of Engineers, Designers, Architects and Draftsmen into plans for a better world.

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Reviews

(Continued from page 118)

and an inflexible supply of dwellings. Two factors have prevented an equating of supply and demand in the past: market rigidity accentuated by government controls and a lack of factual information about the housing structure.

Controls imposed by the government—rent laws, mortgage moratoria, restrictions on sales, tax exemption for new construction—have served only to augment the evils they were designed to remedy and have worked against sale at a "fair market price." With a minimum of restrictions the market could liquidate its investments as desired and so keep the housing market open. Failing this, a new system of property tenure by the rise of public housing projects and insurance company developments. Dearth of information has made for a rigidity accentuated by government controls and a lack of factual information about the housing structure.

In addition to market revitalization by diminution of controls and expansion of available information, full employment at decent wages is imperative if good housing is to be maintained. This will insure that "housing standards will automatically advance to as high levels as the local economy can support." Lastly, the above must be developed within the framework of a master plan, particularly via neighborhood corporations exercising definite legal powers over their areas.

Such is the program Mr. Swan outlines to pull New York's housing out of its depression. Fortunately, not all of his dissections follow the pattern of the "invisible hand" school of economics. Neoclassicism would repudiate the following brand of thinking, which certainly does not imply automatic adjustment: "Why cannot new mechanisms be devised in collaboration between the construction industry and municipal officials with a view to establishing effective controls over buildings and neighborhoods . . . ?" . . . If stable development is to be achieved, the construction industry must function within the framework of the master plan."

It is to the author's credit that despite his orthodox economic leanings his proposals generally are not constrained within the limits set by his traditional supply-and-demand analysis. At the point where leave is taken of Alfred Marshall and Adam Smith, the discussion has realistic meaning. The proposal for greater research and development of statistics pertaining to housing is noteworthy, provided undue weight is not given it as a solution. Despite earlier disapproval of restraints, recognition (in the latter half of the study) that there should be controls and activity within a planned boundary indicates awareness of the urban redevelopment problem in twentieth century economic terms. However, the plea for a return to home ownership in New York City seems more wistful than possible, for, were Swan to follow his own method of reasoning, the decline in home ownership could be justified statistically in terms of current family size, mores, income and occupational structure.

The study is extremely valuable as a sizeable collection of factual information on housing, particularly as pointed up in the numerous tables and charts. The jargon is predominately that of the economist but the subject matter makes sound reference material. A good precedent has been set for placing future market analyses of residential real estate on a firm quantitative base.

(Continued on page 122)
A Peacetime Use for the Quonset Hut

When the time comes to exchange a tommy-gun for a deer rifle and a machete for a fly rod, the advantages of Stran-Steel engineering will open up a whole new field of architectural development.

Stran-Steel's revolutionary military development in steel buildings with 100 per cent demountable frames offers a portability and a permanency unmatched by any other method of construction. The economy of steel will be applied to warehouses, farm buildings and industrial buildings... to homes, multiple dwellings, cottages, and cabins in the woods. The light-gauge steel forms a rigid framework which will not sag—resists termites and dry-rot—and can be easily transported and erected. The special patented nailing groove for applying collateral materials makes possible cuts in building time and materials.

Stran-Steel's flexibility in use affords the architect wide latitude in design to meet tomorrow's building needs.
Black's primer in planning for small cities departs only slightly from the original. In a few instances current illustrations have been used in lieu of plates now obsolete. The chapter on the legal background of city planning has been revamped completely and the discussion has been related to changes which the war has brought. The book continues to be as sound and practical a guide for urban planning in areas of 50,000 or less as when published originally, more than a decade ago. Walter Blucher of the American Society of Planning Officials has written the new foreword.

Two predictions that New York is to be an international air center, because of its location on the “great circle route,” have been voiced at recent N. Y. Board of Trade and Chamber of Commerce meetings.

JOURNAL, ROYAL ARCHITECTURAL INSTITUTE OF CANADA. April 1944

“Labor Saving Cities of the Future,” by H. V. Lanchester, English architect, is a fairly superficial review of the various plans for the reconstruction of London. A British committee, set up in 1941 to explore the possibilities of prefabrication, has published its first report. A summary is in this issue. Work done in the schools of architecture shows that this country is developing some promising architects. A sample room at the University of Toronto is commendable. Deserving attention in this issue is an article by Eric W. Hanson, Romanticism and Protestant Church Architecture—an invigorating criticism of traditional church “styles.”

June 1944

This issue in its entirety is devoted to the Master Plan of Toronto. All that can be said by any not familiar with the city itself is that the approach is certainly sound, the Board being composed of architects, engineers, and planners, and including younger men and women in addition to well known figures. The preliminary survey, complete with maps and pertinent data, is well presented.

MICHIGAN AIRPORT CONSTRUCTION AND EMPLOYMENT PROGRAM. Michigan Board of Aeronautics. January 1944

Judging by the title and conclusions of this booklet the program is mainly make-work project. Thirty-two million man hours are to be consumed at the cost of approximately twenty-five millions to the state, to produce about three hundred airports. Site locations, cost of site, construction costs and labor man hours are given.

MICHIGAN AIRPORTS. Michigan Board of Aeronautics. February 1944

This, the logical development of the above publication, is meant more for the public at large and contains some useful information on sizes of airports and layouts on various types of sites. There is a discussion of the value of the small airport to recreation centers.
The Answer to Roof Blisters Problems

- The "Double Valve" action of Ruberoid Air-Vent® Felt averts many annoying roof failures. Air, trapped under roofing, expands with the sun's heat, causing blisters that bulge and lift. Patented Air-Vent Felt has pin-point perforations—punched alternately from top and bottom—that form "Outlet" and "Inlet" valves. When Air-Vent is laid, the air or vapor beneath is forced out through these tiny "Outlet" valves. Asphalt seeps through the "Inlet" valves giving a better bond between the layers of felt. Result: freedom from blister problems because there are no air bubbles to expand and lift the felt from below.

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ASPHALT AND ASBESTOS BUILDING MATERIALS
Results of experiments in demolition, salvage, and re-erection costs and methods of Pineacres temporary war housing at Niagara Falls may determine the fate of more than 200,000 such projects in this country, says FPFA.

They also stated that most of the experiments involved razing of buildings that never had a tenant, and re-erection of houses on new sites, complete to the last detail, without any thought of their ever being occupied. One experiment involves converting a 16-family house into 4 "rural" units—each with 3 bedrooms, living room, bath, and kitchen. Results of this particular experiment are said to determine the cost of providing farm homes for veterans who may take advantage of land-and-home-purchase benefits under the "GI Bill of Rights."

On resumption of civilian construction:
The Sub-Committee on L-41 of the Construction Industry Advisory Group (which has been conferring with WPB officials on the relaxation and eventual rescission of construction order L-41) told WPB that several months' time could be saved if the industry could be assured that necessary building equipment and materials could be produced and allowed to flow through industrial channels as rapidly as war needs permit; that, since pipe lines of building equipment are almost empty, it will be necessary to start filling them as early as possible to encourage the start of construction; that owners of transition construction would expect standard and not ersatz material; that the industry and construction users should be chiefly relied upon to decide which work should be started first and local WPB priorities assistance made available quickly.

As a substantial guarantee of its cooperation, WPB has recently granted priorities for conversion work in communities where NHA decrees existence of an extreme housing shortage. However, WPB emphasized that limitations on residential building still apply through L-41. FHA approval is mandatory for this "housing shortage" type of construction; applicants will use form WPB-2806.1. Use of certain materials and high-grade dimensional lumber will still be limited, but millwork and hardwood flooring are not restricted. Contractors are reported to be not too optimistic of early results from the new ruling because of the lumber shortage.

An estimated 500 million board feet of specified lumber stocks for sale to homeowners, farmers, and other non-priority consumers has been released by WPB. The release order provides that a distributor may sell the specified lumber... (Continued on page 126)
Flamenol Building Wire

Type SW for Wet Locations
Type SN for Dry Locations

Both types are approved by the Underwriters'. Both are ideal for branch circuits, feeders or special wiring. Their thermo-plastic insulation has long life, is flame retarding and resistant to oils, acids, etc. Type SNW insulation, in addition, has low moisture absorption. Both these wires are small in diameter, too, permitting more conductors to be used in conduits.

NEW G-E Weatherproof Sockets

Specify these sturdy weatherproof sockets for new industrial plants, factory remodelling, shipyards and outdoor construction jobs of all kinds. They are made of a tough compound - resist breakage - have an improved waterproof seal around the lead-in wires. This seal is made with a heat-resisting wax in a liquid state poured into the top of the socket. It covers the whole top of the screw shell and lead-in wire assembly.

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G-E Fiberduct and G-E Q-Floor Wiring — two different systems for different floors — provide complete electrical flexibility in offices, factories, shops, etc. Outlets can be opened at any time.

Specify G-E Fiberduct with masonry and wood type construction.

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FOR COMFORTABLE LIVING and INVESTMENT PROTECTION

Philip A. Benson, President of The Dime Savings Bank of Brooklyn says, "We shall require adequate wiring in the new post-war homes that we finance, not only as a guarantee of comfortable living for the mortgagor, but also as a measure of protection for our investment."

Hear the General Electric radio programs: "The G-E All Girl Orchestra" Sunday 10 P.M. EWT, NBC, "The World Today" news every weekday 6:45 P.M. EWT, CBS

BUY WAR BONDS AND KEEP THEM
GOOD DESIGNERS MAKE AND USE PRACTICAL IDEAS

Our idea years ago was that a good cold application would give the built-up roof construction and re-coat field a then new, but completely practical method.

Abesto Cold Process Roofing materials were developed and have proved their quality and efficiency now beyond question.

Abesto is tops in the three qualities that are essential to a good roofing material—(1) adhesion for close, tight bonding of the laminations in built-up work, (2) elasticity when cured to allow for the expansion and contraction of roof without cracking or checking, and (3) a high resistance to oxidation to give long life to the roof.

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News

(Continued from page 114)

without priority or special authorization until December 31. Total amount of these sales must be held to one-third of the distributor's September 1, 1944, lumber inventory. Stocks thus partially released are of all kinds except No. 2, 3, and 4 grades common in Idaho, ponderosa, and sugar pine. The order also permits sawmill operators and distributors in the West and Midwest to sell excess stocks of Douglas fir, larch, and red cedar to farmers. The released stocks are lower grades of lumber which have been accumulating and are not adaptable to war use.

Material for more domestic-type oil heaters and electric water heaters has been allocated by WPB. Manufacture of 30,000 oil burners and increase of water heater program from 12,500 to 30,000 units during the 1944 Fourth Quarter have been authorized because of critical civilian need.

Arts and Architecture's second annual architectural competition is sponsored by the United States Plywood Corporation. The design problem is a small house for the average American family: a single unit or part of a planned community. The co-sponsors state, however, that the competition aims to uncover designs for houses that can be build "within our experience in technique and materials," and suggests a $5000 to $6000 house (pre-war) for the designs.

Prizes: First, $1250; Second, $500; Third, $250; 5 Honorable Mentions, $100 each. The competition is open to all architects (including A.I.A. members), engineers, designers, draftsmen, and students; more than one submission may be made either individually or as a group. Sumner Spaulding, F.A.I.A., is professional advisor; the competition closes at midnight, December 20, 1944. Complete information can be obtained by writing to Mr. Spaulding, Care of Arts and Architecture, 3305 Wilshire Boulevard, Los Angeles 5, California.

ARCHITECTURAL MEN IN THE NEWS

FRANCIS KEALLY, A.I.A., has been appointed Architectural Consultant to the National Membership Division of the American Hotel Association, 221 West 57th Street, New York City.

HARRY M. PRINCE, A.I.A., former New York City Deputy Commissioner of Housing, has been added to the staff of research consultants and technical advisors to the State of New York Legislative Committee to Recodify the Multiple Dwelling Law.

Rudolph S. Adler, Phil Shutze, and J. Warren Armistead, Jr., announce the formation of a partnership, SHUTZE, ARMISTEAD & ADLER, architects, at 1350 Candler Building, Atlanta, Georgia.

(Continued on page 128)
When you design a store—

FORMICA IS A MUST!

Leading designers of stores in years past have secured such sparkling and interesting modern results with Formica that they can no longer afford to design such commercial premises without considering it.

Sales counters, lunch counters, table tops, column covering, back bars inlaid with silhouette designs, show window backgrounds, doors, wainscot, stairwell wall covering—these are a few of the uses in which Formica laminated plastics have produced fresh and telling effects that have greatly increased the selling effectiveness of the establishment.

Formica is a handsome modern material, with smooth, dense, non-porous surfaces in a wide variety of colors, patterns and genuine wood grains.

It reduces maintenance and cleaning costs. It can be kept in perfect shape by washing with soap and water, or with solvents, if that becomes necessary. It does not stain with ordinary liquids, and for horizontal surfaces may be had in a cigarette-proof grade.

Ask for data describing methods of installation and for writing specifications.

“The Formica Story” is a moving picture in color showing the qualities of Formica, how it is made, how it is used. Available for meetings of designers and business groups.

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Pencil Points, October, 1944
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(Continued from page 126)

Mr. Hal F. Hentz, retired partner of Hentz, Adler & Shutze, will act as consultant to the new firm.

SYLVANUS B. MARSTON, F.A.I.A., has been re-elected chairman of the Pasadena City Planning Commission.

FREDERICK J. ADAMS and LAWRENCE B. ANDERSON have been promoted from the rank of associate professor to professor on the faculty of the School of Architecture and Planning of Massachusetts Institute of Technology.

KENNETH M. ADELSTEIN, construction engineer of the Federal Works Agency, who has been assigned to the Hampton Roads Area in recent months, has been transferred to the Reconstruction Finance Corporation as Supervising Engineer at Washington.

EUGENE HENRY KLAIBER, F.A.I.A., and CHARLES H. WARNER, architect, have been appointed to the faculty of the School of Architecture of Columbia University.

Ernest A. Grunsfeld, Wallace F. Yerkes, and William F. Koenig announce the opening of their new offices for the general practice of architecture under the name of GRUNSFELD, YERKES, AND KOENIG, at 520 North Michigan Avenue, Chicago 11, Illinois.

BUILDING RESEARCH
25 years of research by the University of Illinois on heating, ventilating, cooling, insulating, building materials, mechanical equipment of buildings, sewage disposal, plumbing, sanitation, home management, household art, house planning and construction, and rural architecture is to be collated and made available to the public by means of newspapers, radio broadcasts, conferences, short courses, and demonstrations. Its purpose is to aid in postwar small home planning; specimen homes may also be built.

A program to give farmers the benefits of modern improvements in building techniques, materials, and design is to be initiated at New Jersey College of Agriculture and Experiment Station, Rutgers University. The program, taking in all parts of the country east of the Rockies, was made possible by a grant from the John B. Pierce Foundation.

As a first step, Rutgers is organizing a national council to plan and guide a comprehensive study of farm building design. Housing for farmers and farm laborers, farm animal shelter, crops and machinery storage will be included. The council will consist of outstanding representatives of dairy, poultry, livestock, and engineering fields, most of them staff members of agricultural colleges and experiment stations. Architects and agricultural engineers will be asked to develop building designs meeting these needs.

"I believe steam will be the preferred medium for heating larger buildings being planned for construction after the war," writes Mr. A. Ernest D'Amby, Philadelphia Consulting Engineer. "Not only because of its low first cost and economical operation, but because steam easily meets the wide range of heating needs. With modern Controlled Steam Heating we can anticipate and satisfy any demands that the weather may make. The amount of steam produced can be automatically varied as outdoor temperatures change, or as heating requirements for different parts of a building may vary."

A. Ernest D'Amby has specified the Webster Moderator System of Steam Heating for such installations as Abington Hospital, Abington, Pa.; St. Elizabeth's Convent, Cornwells Heights, Pa.; Hill Creek Homes, and Home of the Merciful Saviour for Crippled Children, both in Philadelphia. He also acted as engineer for the following Webster Hylo System installations: Nazareth General Hospital and St. Christopher's Hospital, Phila.

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128 PENCIL POINTS, OCTOBER, 1944
RODDIS—world's largest manufacturer of hardwood solid core flush doors, stakes its half-century reputation on the perfection of workmanship and materials built into every door made according to its Standard Construction, with its Guarantee Bond. Each door is permanently identified by the built-in red, white, and blue RODDIS-CRAFT dowel — indestructible as the door itself. There can never be a question of RODDIS quality or responsibility.

RODDISCRAFT Standard Construction fuses the wood fibres and welds the core, crossbanding, and face veneer into a single unit — absolutely waterproof, verminproof, and fungproof — with inherently high resistance to fire and sound. Specify RODDIS-CRAFT doors in your plans for present and postwar building. Get the quality—guarantee—and permanent identity that only RODDIS gives.

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RODDIS owns many years' supply of timber, does its own logging, sawing, cuts veneer in the largest hardwood plywood plant in the world—containing the largest hot-plate presses in the world, where 30 years of craftsmanship and know-how with wood, are applied in the manufacture of doors, wainscoting, and complete Door Units.

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Write today—judge for yourself the cleaner, sharper, all-around better results obtained by using a pen made precise to .001".

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Pen Makers Since 1858

JOBS AND MEN . . . . . .

Postwar Employment Service

The war's not over—not by a long shot—but we have increasing evidence of a need for architectural men in offices throughout the country. We hear daily of new plans being filed for postwar building—limited, it is true, principally to metropolitan areas and, in comparison with the country's total need for buildings, still small in quantity. Yet we are certain that plans are going ahead in many more places than those which our facilities reach.

Evidence of design activity has come to us in the form of telephone calls and letters, sometimes in casual conversations, all asking how to find men for definite jobs. At present the demand outweighs the supply considerably. This, of course, augurs as well for those in need of jobs as the current interest in preparation for building does for their potential employers.

Where men will be found for all the jobs which, sooner or later, are bound to be open, is a question beyond our answering. We hope, by means of this Employment Service, to put the available opportunities before architectural men whose war-industry jobs may be terminated by war production cutbacks or contract cancellations, and men discharged from the services. To date, age or physical disability are apparently the only grounds for military discharge. Perhaps the time has come to start questioning the proper authorities on the advisability of eventually discharging architectural men on the basis of overwhealing need for them. The actual date for selective demobilization is, of course, not yet at hand; as it approaches, PENCIL POINTS will intensify its efforts.

Meanwhile, we present current opportunities. In addition, we have received informal inquiries indicating substantial renewed activity in such diverse centers as New York City, Detroit, and a smaller city in North Carolina. Our Employment Service is a non-profit venture. Rates (which barely cover production cost) : $3.00 per insertion; maximum length, one inch (approximately 40 words). Clearly written or typed copy must reach the Employment Editor by the 10th of the month preceding date of issue. Each item is given a box number unless otherwise specified. Replies are promptly forwarded.

MEN WANTED
Architectural Engineer for permanent position with large Eastern corporation. Good draftsman, preferably a graduate. At least 5 years experience in reinforced concrete and steel structure design for large industrial buildings. Write full data, salary desired. Box 100, PENCIL POINTS.

Architectural Draftsman wanted. Must be well experienced, capable of preparing sketches and working drawings. Permanent employment for well qualified man. Office in State of Maryland. Box 102, PENCIL POINTS.

Specification Writer—Practical man with broad, general experience in building construction work (not mechanical). Architect's office in Detroit. State qualifications and salary expected. Box 103, PENCIL POINTS.


Architect or Architectural Draftsman wanted for work in Saint Paul, Minnesota—year's work. Box 104, PENCIL POINTS.

Large firm of architects-engineers in Detroit needs Architectural Draftsman, Structural Engineers, Mechanical Engineers. Write education, experience, salary desired. Box 105, PENCIL POINTS.

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Air Conditioning
1-06. Refrigeration and air conditioning accessories and supplies catalog, York Corporation.

Air Express
1-08. Air Express Now and Tomorrow, Railway Express Agency.

Cement
3-09. Heavy Duty Floors with "Incar" 24-Hour Cement, Lone Star Cement Corporation.

Communication Systems
3-15. Holzter-Cabot Communication Systems, A.I.A. File 28/11, is a 12-page booklet describing hospital call systems, with illustrative data concerning nurses' call systems, "Phonecall" systems, visual and voice paging, staff register, and doctors' register systems. Also described are two types of hospital night lights—flush and exposed louver. Published by the Holzter-Cabot Electric Company.

Concrete
Lone Star Cement Corporation:
3-10. Cutting Concrete Costs.
3-11. Cold-Weather Concreting.
3-12. Watertight Concrete.
3-16. Modern Developments in Reinforced Concrete (No. 10) is a 24-page illustrated booklet prepared by the Structural Bureau of Portland Cement Association, containing 3 technical articles. "Analysis Applied to Flat Slab Bridges": "Vertical Pressure on Culverts Under Wheel Loads on Concrete Pavement Slabs": "Continuous Concrete Girder Bridge Spans Chattahoochee," by C. N. Crocker, bridge engineer, Georgia State Highway Department. Tables on applications of coefficients to design problems, and detail drawings are given.

Conveyors
3-14. Case Histories to Aid You in Blueprinting Conversion to Peace, Lamson Corporation.

Crematories
3-17. A pamphlet, Crematories, Bulletin No. 150, published by the Morse Bouger Destructor Company, describes general design, construction, and operating procedure of crematories. The company offers its services in preparing a suitable layout for the installation of crematory units to architects, builders, and owners of buildings where cremation service is to be supplied.

Doors
1-04. Modernfold Doors for Homes, New Castle Products.
1-05. Doors by Roddis, Roddis Lumber & Veneer Company.
1-06. Roddis Wood Doors Approved for One Hour Fireproof Openings, an 8-page illustrated booklet from Roddis Lumber & Veneer Company, describes doors that meet the one hour fire tests required by the City of New York under the Multiple Dwelling Law. It is claimed architects can carry out their decorative plans using wood doors and still meet requirements with this firm's flush type wood door. Other types of fireproof doors and wainscoting are listed.
1-07. Tucson Steel Hangar Doors—Vertical Lift Canopy Type, 8-page booklet from Tucson Steel Company, gives illustrations and specifications on this particular type of door. It is of structural frame design divided horizontally in two sections or leaves, the upper leaf hinged near the top to the supporting steel and the lower leaf arranged to slide up and in back of the upper leaf. In operation the lower one is raised vertically by cables to approximately one-half the opening height, at which point both leaves tilt out to form a canopy in the extreme open portion. No part of the door encroaches on the storage space within nor on the apron space outside the building. Detail drawings of construction and installation are shown.

Electrical Equipment
5-06. More Capacity, Square D Company.

Floors
6-07. Floor Treatment and Maintenance Job Specifications, Hillyard Company.

Glass
7-05. Magnalite Diffusing Glass (A.I.A. File 26 A 526), J. Merrill Richards.

Heating
8-21. Bulletin G-44 (8 pages) from Babcock & Wilcox Company gives data on integral furnace boilers applied to installations of lower capacity fired by stokers or oil burners. Features: water-cooled furnace construction in which the front wall, rear or bridge wall, side walls, and roof are all water-cooled; a furnace arrangement in which the primary combustion zone is followed by an open pass (gaseous and liquid while at high temperatures); "Cycloverse" steam separators increase circulation by eliminating steam from the down-flow of water and provide a water level indication. Illustrations, drawings of typical installations, etc., are given.
8-17. Bison Steel Heating Boilers, Catalog No. 3, Farrar and Trefelts, Inc.

Insulation
9-01. What Formica Is, Formica Insulation Company.
9-03. (Data sheets on insulation) Wood Conversion Company.
9-04. Nu-Wood Roof Insulation is an information sheet from Wood Conversion Company giving specifications or application of insulation over wood roof decks under built-up roofing; on roof decks of poured concrete or gypsum, on roof decks of unit tile or slab construction under built-up roofing; and on application over steel roof decks under built-up roofing.

Maintenance
12-03. From Foundation to Flaggpoles L. Sonneborn Sons, Inc.

13-05. A consumer booklet, How to Plan A Home Workshop, 56 pages, is published by the Delta Manufacturing Company. Among practical subjects covered are: type, size, and location of workshop; windows, light, and ventilation; type of floor; heating, wiring, lighting, sound deadening; tool racks and storage cabinets; lumber storage. Typical shop illustrations and layouts are given.

Paint
16-12. Paint Progress, A.I.A. File No. 25, is a 12-page folder from New Jersey Zinc Company. It discusses the versatility of zinc oxide as a paint pigment for mildew resistance; the tint retention of new water-thinned paints (zinc sulfide pigments); radiator painting; luminescent coating; paint for traffic marking.

Pigments

Piping
16-12. Revere Pipe and Tube, Revere Copper and Brass, Inc.

Plastics
16-14. Plaskon, Plastic Materials for Modern Industrial Production is a 16-page booklet from the Plaskon Division of Libbey-Owens-Ford Glass Company, demonstrating practical application of "Plaskon" materials to industrial and individual needs. "Plaskon" in resinous form is used for commercial bonding of wood, paper, cork, fabric, and other materials.

Plumbing Fixtures

Steel

Temperature Control
10-05. Thermoswitches for Complete Temperature Regulation, Fenwal, Inc.

Tile

Tube
20-06. Tube Data is a bound, loose-leaf, abuluted handbook assembled and published by the Seamless Steel Tube Institute, intended as a service to manufacturers and users of equipment employing carbon-steel and alloy tubing. Section 1 contains the history of the seamless tube, manufacturing, mill practices and trade customs, lists of standard steels. Section 2 deals with and classification of mechanical tubes includes data on properties of beams, tubular and solid beams, elements of sections, factor of safety torsion, torsion columns, pipe columns. Section 3 on tubes for pressure service includes data on determining whether tubing is for mechanical or pressure service. Includes data on boiler tubes; heat exchanger and condenser tubing; still tubes; alloy pipe specifications; iron, iron carbide equilibrium diagram; alloy pressure tubes; metallurgical technical data; seamless tubing; galvanie action; pressure formulas. Section 4 contains reference tables—weight formulas, pounds per foot, inside diameter, length, displacement, functions of numbers, circles, temperature conversion, gage equivalents, decimal equivalents, metric conversion. Price: $2.50.

Walls
23-18. Steel or steel-and-glass, sound-proof, fireproof, movable partitions and accessories are described in a 28-page, illustrated booklet from Snead & Company, Steel Mobilwalla. Types of walls combining the general characteristics of fixed masonry walls with instant mobility have panels and door units that are also interchangeable; it is claimed that changes can be made overnight without disturbing office routine. Units are locked in place by positive, self-aligning internal one-piece link plates (with "snap-on" pilaster covers); are made of furniture grade steel, roller die-processed; a wide range of light colors to match plastered wall finishes is available. Tables on noise intensities (shown in decibels) are given, also detail drawings, information on wiring, insulation, specifications, etc.

Water Softener

Windows
23-19. How and Where to Use More Windows is a consumer booklet (12 pages) from Curtis Companies, Inc. Featured are bay, corner, picture, grouped arrangements of windows, with illustrations and suggestions.

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LITERATURE, SAMPLES WANTED
H. W. PETTY, Architect, 225 East Main St., Moorstown, N. J. (Data, samples, and catalogs for complete A.I.A. file).
FRANK WYATT WOODS, Architect, Ocean View Station, Miami Beach, Florida (Data, samples, and catalogs for complete A.I.A. file).
TYSON T. FERREZ, Architect, 220 Professional Building, 101 W. Green St., Chicago, Ill. (Data, samples, and catalogs for complete A.I.A. file).
R. C. EASTMAN, Architect, 233 Crest, Ann Arbor, Michigan (Data, samples, and catalogs for complete A.I.A. file).
SAMUEL I. OSBIRER, Designer & Delineator, 802 Chestnut St., Philadelphia, Pa. (Data, samples, and catalogs for complete A.I.A. file, literature from interior decorators, plastic and lighting data).
HAROLD RICHARD AMES, Architect, 1015 Chapin Street, Beloit, Wisconsin (Data, samples, and catalogs for complete A.I.A. file).
ANTHONY F. PESSOLANO, Registered Architect and Licensed Professional Engineer, Box "P", Navy 121, Fleet Post Office, New York, N. Y. (Data, samples, and catalogs for complete A.I.A. file).
WILLIAM A. JOHNSON, A.I.A. First National Bank Building, Everett, Washington (Data, samples, and catalogs for complete A.I.A. file).
R. C. KANTZ, Civil Engineer, Public Works Dept., U. S. Naval Air Station, Klamath Falls, Oregon (Data, samples, and catalogs for complete A.I.A. file).

Pencil Points, 525 West 32nd St., New York 18, N. Y. I should like a copy of each piece of Manufacturers' Literature listed. We request students to send their inquiries directly to the manufacturers.
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Edited by Don Graf
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142 PENCIL POINTS, OCTOBER, 1944
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William I. Hohauser is the architect of many outstanding projects among which are Kheel Tower, Riveredge Apartments, 307 Fifth Avenue Building, Franklin Towers Hotel, all in Manhattan; Clinton Theater and Granada Hotel in Brooklyn; Avon Theater in Stamford; Kensington Gardens in Buffalo and Manchester Gardens in Manchester, Connecticut, developed under F.H.A. He also was one of the architects of Red Hook, Fort Greene and Wallabout Houses, public housing in Brooklyn. Based on long experience with oil heating for both large scale housing and non-residential buildings, Mr. Hohauser gives these opinions on oil heating systems:

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Pencil Points, October 1944
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