

JVLY 194-1

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Thin copper for concealed flashing—simple, effective and inexpensive

"Electro-Sheet" flashing around windows is

concealed by the

sheathing paper.

Anaconda "Electro-Sheet" Copper seals out air and moisture at corners, eaves, and other vulnerable points

Here is a new way to build-in the superior protection of copper at an amazingly low cost. Strong, durable "Electro-Sheet" Copper will not rust. It is impervious to water and air even under excessive wind pressures and it will not dry rot regardless of time.

When bonded to building papers, fabrics or asphaltic compounds, "Electro-Sheet" is extremely easy to install because it has the flexibility of paper, yet stubbornly resists kinking, breaking and tearing. This exceptional material is available in rolls of various lengths, and in widths up to 60"—with the copper in thicknesses of .0013", .0027" and .004" (1 oz., 2 oz. and 3 oz. per square foot).

Recent tests on sheathing papers showed that metallic products, including four reinforced "Electro-Sheet" types, were the only materials impervious to water and water vapor both before and after accelerated aging!

We make only plain "Electro-Sheet" Copper which is combined with paper, fabric and asphaltic compounds by other manufacturers. Samples of the finished products and names of manufacturers will be furnished on request.





"Electro-Sheet" closing in corner of this building provides absolute protection against infiltration of air, dust and water at this vulnerable point. Similar protection is provided at the eaves, around doors and windows and for flashing drip caps. "Electro-Sheet" used here is a product of The Sisalkraft Co., 205 West Wacker Drive, Chicago; the house was built in Johnson County, Kansas. Harry L. Wagner is the architect, R. L. Falkenberg & Co., the contractor.

PENCIL POINTS, published monthly by Reinhold Publishing Corporation at 258 Atlantic St., Stamford, Conn. Publication office, Stamford, Conn. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription \$3.00, single copies 50 cents. Entered as second class matter, March 10, 1930, at the Post Office, Stamford, Conn., under the Act of March 3, 1879. Volume XXII, No. 7, Dated July, 1941. SUITABLE FOR THE IOST MODERN TORE FRONT

wheer STORE FRONT SASH %.85

BAKE STADD

Remember Kawneer No. 85 Sash when you specify the most important item in your next store front. For this distinctive sash is the last word in store front construction—simple and streamlined in its beauty—engineered to time-tested Kawneer standards that provide a strong, yet fully resilient, grip on plate glass.

AT A ALLET

Get latest data from the Kawneer distributor, from SWEETS, or by writing The Kawneer Company, Niles, Mich.

IT'S EASY TO DESIGN AND INSTALL Kawneer STORE FRONTS

COLD-ROLLED BRONZE FOR SAFETY AND PERMANENCE - Libbey.Owens.Ford Broadens National Campaign to Include ALL PRICE CLASSES; Glass Designed for Happiness Theme now to Work for Architects in all Fields

ANNOUNCEMENT that the Libbey-Owens-Ford Glass Designed for Happiness program is being broadened nationally to include homes in *all price classes* is of especial interest to architects. Not only does this program, developed to stimulate the wider use of glass in residences, lend itself directly to the design problems of the architect, but it coincides with the plan of government agencies to provide better housing conditions for the nation.

This is

American architects particularly appreciate the importance of the wider use of glass. They know that its use in windows, for example, lets in more useful outdoor light . . . brightens up the interior . . . and helps to reduce illuminating costs. The use of Window Conditioning is another example of architectural planning which can effect fuel savings as high as 30 percent for the homeowner—a saving with an enormous potential effect on the conservation of national resources. Other inexpensive glass features in residential construction provide proportional convenience and





comfort . . . correspondingly increase property values.

TESTS PROVE THAT GLASS SELLS HOUSES. More than a year of testing in lower price fields has proved the soundness of the Glass Designed for Happiness program ... has repeatedly emphasized public acceptance of homes making a wider use of glass. From coast to coast, these smaller homes have been snapped up by eager buyers men and women who wanted these Glass Features and were unwilling to wait until the homes were completed.

NEW SELLING DRIVE OPENS! Now Libbey-Owens-Ford extends the scope of this successful program... Puts it to work in all price classes where the architect can have the same sure, favorable response from his clients. And, equally important, this new, broadened program makes it easier for both the architect and the homeowner to get the kind of glass features that add so much utility, beauty and value to the private home.

ARCHITECT'S CLIENTS ARE GLASS CONSCIOUS! For many years it was up to the architect to suggest the use of glass. Today, the architect's clients are more receptive to his suggestions and plans. The public's eager reception of Glass Designed for Happiness in the lower price fields is only an indication of what is to come in all fields of home construction.

PLAN IS PRACTICAL FOR ARCHITECTS! The broadened scope of the Design for Happiness program is essentially helpful to and practical for the architect. Standard glass items are available in price ranges to suit every home. Most of these items can be purchased through any recognized finance plan. Even more important, Libbey-Owens-Ford now makes a broadened source of supply open to the architect and builder . . . with glass and lumber dealers ready to provide the glass features needed by the architect and builder. Where service counts, you will appreciate the convenience of these sources of supply. Libbey-Owens-Ford Glass Company, Dept. PP-741, Nicholas Bldg., Toledo, O,



AUTHORITATIVE MODERN DESIGNS SOON READY FOR YOUR CLIENTS

To help you take advantage of the public's reaction to this program we will soon make available a series of authoritative modern designs—created by registered architects—especially assembled for this activity. Some you may want to submit to clients as we have presented them, while any one or all may be altered to meet special desires or conditions. These up-to-the-minute Glass Features Designed for Happiness will be provided to architects in a full color brochure.

GLAD Designed for Happiness





MODERN PICTURE WINDOWS, designed by architects, will be promoted to the public through national advertising on Glass Designed for Happiness features. Your clients will be asking you to design similar windows to frame living pictures in their homes.

HERE'S WHAT THEY SAY ABOUT THIS NEW GLASS PROMOTION!

The ARCHITECT:



"Homes can be made brighter, cheerier and more livable with glass. And now that Libbey-Owens-Ford has led the way in promoting glass features for homes in all price classes, our profession will find a much wider demand for, and a greater appreciation of, glass features among our clients. Making glass and lumber dealers community headquarters also gives us an adequate, on-the-spot source of supply and installation."

The DEALER:







WOMEN LIKE the typical Powder Room designs suggested in this campaign. And, with mirrors of polished L'O'F plate glass, you can create many original arrangements.



MORE LIGHT INSIDE is the function of this entrance way, with extra glass areas creating an attractive exterior. The CONTRACTOR:

"It sounds almost unbelievable, I know, but practically every home in which I've included glass features Designed for Happiness has been sold before it was completed. Surprising, too, how fast built-in glass features can be installed with Libbey-Owens-Ford special methods."



SO UNUSUAL! Illustrated in L+O+F advertising will be occasional suggestions of glass such as this serving bar and window arrangement of fluted glass, paving the way for your new and different glass designs.

*

LITTLE THINGS COUNT. Our promotion will suggest the use of mirrors in handy, helpful locations, such as this Kitchen Primping Mirror another step in creating a greater appreciation of the plans you make for your clients.



3

Vefense Projects EXPANDED METAL

PROVIDES NEEDED PROTECTION at Low Cost

BECAUSE of its great strength, light weight, low cost, and adaptability to many uses, Steelcrete Expanded Metal is being extensively used in defense projects for protection against theft, glass breaking, illegal entry or exit, or acts of sabotage. The rigid strands of Steelcrete Expanded Metal cannot be pried apart and will not unravel. Meshes with openings of various sizes for any type of protection are available. Suitable fittings are also provided for quick installation of window guards, skylight guards, partitions, lockers, and other types of enclosures.

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2

Steelcrete Expanded Metal window guards are made in several styles to barmonize with any architectural design. They are finished in baked enameled paint in any color desired for use on office buildings, industrial plants, apartment houses or other types of structure. The style shown here is a combination fixed and hinged window guard, made of 1½" No. 9 Steelcrete Safe-T-Mesh and Jumbo Bar frame.

Enclosures made of Steelcrete Expanded Metal can be quickly erected and easily altered should plans change later. The open mesh of Steelcrete makes for better ventilation and better light distribution. This strong, fire-safe fabric is ideal for use in partitions, locker-rooms, storage rooms and tool-room enclosures as shown at the right. All necessary accessories, including hinges, frames and vertical supports are available.

LEADERSHIP IS ALSO MEASURED BY THE PROTECTION IT PROVIDES



Make the writing of plumbing drainage specifications Cover 119 types of buildings.

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tion, illustration and detail drawings of most widely used drains . . . supply complete construction, operating and installation data. Write for these valuable free services .. use coupon below.

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against the dangerous hazards of fire ... explosion ... and water pollution is provided by the JOSAM Gas-Oil Interceptor. This unit installed in the drainage line automatically draws off oils, gasoline, naphtha and other volatile liquids from the floor drainage of garages, filling stations, paint factories, refineries, cleaning and dyeing establishments ... every type of building that needs this vital protection. The intercepted oil or other dangerous liquid is automatically discharged into a container placed at a convenient and safe location. Scientifically engineered on the hydraulic cascade principle... effectively separates all oils and inflammable liquids and solids ... prevents them from entering the waste water ... makes drainage clear and harmless. Insurance may pay for damage losses but the JOSAM Gas-Oil Interceptor prevents them. Specify JOSAM and be safe! Write for free literature-use coupon.



5





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Q-Floors are your contractor's cue for speed. Q-Floor units, made of steel, are quickly handled and welded in place; and they *immediately* become safe platforms upon which masons, plasterers, plumbers, electricians and other trades can work and store their materials. Time and again they have saved from 20% to 30% in building time. Floor construction need no longer hold up a building job!



Q-Floors, adaptable to every load requirement, are relatively light in weight and therefore cut the cost of foundations and structural steel. Speedy installation brings savings in construction time. And because of the ease in changing electrical outlets, the building owner will never quit cashing in on Q-Floors.

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Pittsburgh, Pa.

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Details

If you, your engineers, draftsmen or specification writers should desire engineering details, construction data, cost estimates or specifications, information is easily and quickly available through literature, catalogs or personal presentations by Robertson Engineers. Contact the nearest office ... there are Robertson Organizations and Sales Agencies in principal cities.

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44 YEARS ago The Raymond Concrete Pile Company began its business career. Today, over 9500 contracts have been successfully handled—primarily because the Raymond organization has the ability, experience and methods to place the type of foundation best suited to meet the particular situation at the lowest cost. That's why engineers, architects and owners have learned to rely on Raymond Methods with a comfortable feeling of security. • When you have a foundation problem

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includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.



"GOOD TASTE" VS. INVENTIVENESS

Good taste in architecture is a very debatable question. To some it does not exist and many who recognize it regard it as a handicap to creative imagination. To my mind, "good and bad" taste in architecture does exist, but this is not to be confused with "good or bad" design. There is always more than one solution to a problem. The individual's taste frequently makes the choice.

This problem of good taste does not stop with architecture but concerns every art allied to architecture —choice of color, applied ornament, landscaping, interior decoration, furniture, and all appointments. The responsibility of the architect does not stop with the design of the building alone; but he must be able to advise on the many scores mentioned. There are, for instance, innumerable designs of chairs which might be chosen for a living room. All would support you, to be sure, but some would be less tasteful than others.

How does all this apply to the student architect? Simply that when one designs one should not permit "capricious inventions" to get the better of the design. Certainly the question should be asked, "Would this be a practical, acceptable creation, which would wear well, and continue in good taste rather than be some fad of the moment, later to become vulgar, useless, and dated?"

All of us have seen a solution to a problem which meets the *requirements* of the program; but many times we wonder who would want it. It is often difficult to imagine yourself or your friends living with some of these attempts to be new, startling, and different. Because everyone is "doing it" or "the stores are full of this or that" does not mean that it is in good taste.

I do not see how a definition of good taste is possible. Even to claim this trait is a bold act; but certainly one of its characteristics is that a thing in good taste weathers the years. We all know old buildings, furniture, etc., which are still in good taste. It is possible even now to tell which of the contemporary work will be in good taste in years to come.

I believe it is possible to be inven-

tive, clever, and progressive and thus produce tasteful work—without becoming bizarre, extreme, or "capriciously inventive." PAUL PIPPIN Columbia University

MACHINE HOUSES

The assimilation of the Machine into modern life as an integral and motivating influence has been discussed both eruditely and foolishly many times. The present war affords, if additional emphasis is necessary, conclusive proof of the completeness to which civilization has accepted and is affected by it.

How the individual is to maintain his essential, characteristic unity in such an increasingly cooperative venture is probably the major sociological problem of the next generation. Perhaps in architecture we can discern a stabilizing, even protecting force. Here the assembly line has not taken hold and, except in the production of units of construction, there is no valid reason that it should or evidence to suppose that it will.

While one's bathtub, fountain pen, or car have many thousands of counterparts, a home can and should be tailored to the individual existence. It can express personality, financial position, a particular design for living ... and most important ... protect and enhance this valuable singularity.

To stress only the perfection of the functional plan seems to be overlooking the more intangible (and probably equally deserving of study) functions of charm and liveableness. These are the qualities in a design that especially require the architectural mind and talent. These are the qualities that express personality and give to it freedom and an opportunity to expand. The attempt to reduce living to a formula simply to have it express the technological life that surrounds us seems as stupid as producing typewriters in forms that evolved from a study of aerodynamics.

It would seem far more logical for architects to recognize the value of providing a relieving foil for the measured, precise repetitive existence that has become so much a part of our way of life.

> ROBERT SAUNIER LUNDBERG M.I.T.

LET'S GET STARTED

College has always been a place for idealism and now I, in college, find myself falling an easy victim of super ideals and all forms of wishful thinking. This article is just one big wish.

Modern design is getting pretty old now—old enough to have gone through college and to have had three or four years of working experience in a designers' office. In some fields of design, Modern has had some experience and is doing pretty well. But in the \$5000 house division it is not doing so well! In fact, in Kansas City and vicinity, a Modern House (by title) looks an awful lot like a Cape Cod cottage or a doll house.

These houses have wonderful plumbing, excellent mechanical equipment, and good paint jobs and it is these three factors that are carrying the Designer-Builder along in business. The Designer part is entirely lacking. Have you ever heard a visitor comment on the spacial qualities of a house, the texture of a wall or the general livableness of the place? No, I think the electric garage door, the bathroom and kitchen—all the mechanical devices—are of far more interest. Wholesome, clean, logical design is not a part of these houses.

It is the year-after-year practice of copying out of the files that has made the general character of the small house outmoded in comparison to transportation, advertising, and mechanical equipment. In drawing from these files of ancient plans the primary principles of modern design have been omitted. Transition of space, light, and growing plants is not found in the new houses: space is limited to cubicles with doors and more doors: functional materials for interiors have not yet succeeded the china-shop type of machine-like finishes that require too much care to enjoy. These omissions are required by the styles of these overworked plans. To get these lasting principles of design into the small house, do away with the old plans and styles and go modern.

I hope that the new small houses of the future will be truly modern. Let them no longer be mainly a display of mechanical devices but be ideal in design! LYMAN ENNIS University of Kansas

9

Holophane CONTROLENSES FLUORESCENT LIGHTING

Types of LENSES for Fluorescent assure PREDICTED PERFORMANCE

Assurance of proper brightness, efficiency, economy with Fluorescent Lighting is possible only when every factor is planned *before* installation . . . The *one* way to be certain of Predicted Performance is through the precise control of Holophane Controlenses. . . These lenses scientifically designed for the purpose are doubly economical. They save through increased efficiency; they save by avoiding costly corrections in installation.

New Controlescent Booklet Compiled for Architects' Reference Will Be Sent on Request



EVERY KNOCK A

Too many times have I listened to and read deprecating articles by wellknown architects concerning Modern Architecture. Since I am wholly in favor of the Modern movement I hereby present a student's brief on behalf of Modern Architecture. I fully realize my shortcomings as an exponent of any type or style of Architecture due to my lack of actual architectural knowledge and experience. But since the purpose of this section is to give students full opportunity to expound their beliefs, I am hereby taking full advantage of its hospitality.

It seems that the critics of Modern Architecture point many of their remarks toward the student. I'm sure that many of these critics would be very much surprised to find the extent of Modern work being done by students in the architectural schools of today. Granted that much done by students, as much done by professional architects, is not what could be termed finished Modern, and much of it is copied or at least inspired by existing Modern work, at least it is a serious attempt. After all, Modern Architecture is still in its primary stages. Yet in its short life thus far it has made tremendous strides. We students who believe in Modern are seriously studying the works, good and bad, and all the available writings concerning this great phase of Architecture. It will be up to these students to carry the cause of Modern still further ahead.

Modern Architecture has ceased to be a fad; in fact, to the faithful, it was never thought of as a fad. It is a real, vital, living architecture. It is truly an architecture born of modern needs for modern people and modern functions.

All this criticism against Modern Architecture and its great exponents, Frank Lloyd Wright, Gropius, et al, is only spurring them and their followers on to greater results. All healthy things thrive on criticism and Modern Architecture is no exception. We student believers in Modern realize this fact and are digging in all the harder to insure ourselves against being termed "copyists" and to insure ourselves against perpetrating any more of the corner-windowed, glassblocked atrocities held up as typical examples of Modern Architecture. We realize too, that the way of a serious Modern Architect is not an easy one and that much hard and

honest labor will be necessary to insure Modern of a healthy progress.

We students are continually being told that in order to do good architecture, Traditional or Modern, we should be well versed in Classic fundamentals. Happily, the courses presented to students in History of Architecture only more strikingly prove to us how unapplicable the past styles of architecture are to presentday life and needs; and only more conclusively prove to us that Modern Architecture is the Architecture for today. We believers in Modern will give our all to insure the cause of Modern Architecture a long, full life despite the criticisms directed its way.

JOHN M. HIRSCH Syracuse University

THE "RIGHT" COLOR

From the beginning, color on the exterior of buildings has been considered a necessary element of architecture. The Egyptians covered their walls with a pattern of hieroglyphs, men and gods painted in brilliant flat tones. The Babylonian and Assyrian palaces were made interesting by friezes of colored tiles. The Greeks and Romans painted their temples and the Byzantine and Gothic builders colored their cathedrals. The Early Renaissance employed polychrome terra cotta. But somewhere along here the great tradition of brilliant color on buildings died out.

The color was gone from the originals and was left off the copies more and more until, under pressure of the smoke of the new industrial era and the poor taste of the Victorian Era, its final shades simulated rigor mortis in a depressing series of muddy browns. Since that time, people consciously or unconsciously have dulled their natural love of color. Anything having a semblance of life or brilliance is frowned upon by the sophisticates as being barbaric and the architects, in a quandary, leave all their houses and buildings grey, white, buff, tan or cream, depending only on the shadows to give an interest to the surface.

But color is a necessary and a beautiful appeal to the emotions and as such could be a great help to modern architecture. It is a field which has received scant study but which is as requiring of study as plans, masses, and volumes. By this I do not mean a study of graded shades, such as we all have been exposed to in painting

(Continued on page 12)



Weather made-to-order here by Carrier and Youngstown

★ What a severe test for any galvanized sheet exposure to man-made weather on one side, to Nature's own brand on the other!

Neither humid salt air outside nor corrosive moisture and heat and cold inside can successfully attack this structure. Its performance is assured, its life guarded, by the high quality built into its construction by Carrier, built into the sheets by Youngstown. Sheet metal men prefer Youngstown Galvanized Sheets because they are made right — made by men whose long experience has given them skill to produce sheets of unvarying excellence, of uncommon ductility and workability, with a smooth, uniform, protective coating of zinc which positively adheres during work and through long years of service as well.

10-15D







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pictures of buildings on paper, but a study of the psychological effect of color on our everyday lives and an application of color to our buildings.

This research is badly needed to supplement our technical skill in producing permanent, easily-cleaned, colored materials—enameled metals, ceramics and glass. It is needed to enable designers to place the right color in the right place for the right purpose. Schools could assist immeasurably in this study, for the field has scarcely been touched yet and the need for correct knowledge of the application of color is growing. The sooner we begin this research the sooner our buildings will function psychologically as well as physically.

> J. STARKE HAMILTON, JR. Georgia Tech.

BUILDING METHODS

A general course of instruction in "Home Building Methods" is to be conducted August 18-30 at the Horton School of Finance and Commerce of the University of Pennsylvania, under auspices of the Home Builders Institute, of the National Association of Real Estate Boards, in an effort to train operative builders in the techniques demanded to create an estimated 200,000 to 300,000 new dwelling units for defense emergency housing.

Paul E. Starke, Madison, Wisconsin, a home builder and former President of the National Association of Real Estate Boards will be Dean of the course. A number of FHA executives have had part of the preparation of the syllabus for this course and FHA divisional chiefs will serve on the faculty with realtors public relations executives, educators, Technical editors, and two architects — Randolph Evans, New York, and Kenneth W. Dalzell, East Orange, New Jersey.

Any home builder of sufficient background and experience to pursue the course profitably may enroll, *David D. Bohannon*, President of the Institute states. Students will meet with the faculty in informal quiz sessions every evening in the school dormitories—the students doing the quizzing. They will make field trips to interesting building operations in the Philadelphia area. Tuition for the course is \$70. Dormitory facilities are available at \$1.00 a day.

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Tiffany & Co's new Fifth Avenue Building, reflecting dignity and rich simplicity, is thoroughly in keeping with the traditions of this famous firm. Architects: Cross & Cross, New York City. Consulting Engineers: Jaros, Baum & Bolles, New York City, General Contractor: Turner Construction Co., New York City. Heating and Ventilating Contractors: Baker, Smith & Co., New York City.



Now awarded the distinction of the A. I. A. medal



Castle Village earns for George Fred. Pelham Jr., its architect, the medal bestowed by the New York Chapter of the American Institute of Architects for outstanding apartment buildings erected in New York City during the year ending Oct. I, 1938.

Castle Village strikingly beautiful apartment development

IMPORTANT FACTS ABOUT CASTLE VILLAGE

Five dominating apartment structures overlooking the famous Palisades — three of 13 stories, one of 12, one of 11. All of reinforced concrete construction. Approximately 550 apartments. Every room an outside room.

Architect, George Fred.Pelham, Jr., New York City. Engineer, Victor Mayper, New York City. Consulting Engineers, Daniel & Wallen, New York City. Heating Contractors, J. H. Bodinger Co., Inc., New York City.

All buildings heated by ten 24,200 sq. ft. oil-fired Fitzgibbons R-Z-U steel boilers.



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This floor is easy to take care of, too. Here's the simple routine: Sweep daily, wash and wax occasionally. That's all you need do to keep Armstrong's Asphalt Tile fresh and glowing with beauty for years.

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YEAST FROM THE WEST

EDITORIAL COMMENT BY KENNETH REID

Civilization, so we have been brought up to believe, has always inexorably taken its course westward. In this country, that has meant its progressive movement across the continent until it stopped against the barrier of the Pacific Ocean. Its advance guard went this far many years ago. Their successors who settled and are still in course of building up the country have by now taken firm root. In time, their descendants will no doubt become as conservative as the east is reputed to be today. Yet our observations on our recent trip to the architects' convention indicate that it is much too early to begin worrying about any flagging of the heritage of energy taken west and handed down by the pioneers to their children and their children's children. The west is alive and young and strong and exuberant. From it, in fact, is emanating a counter-wave of vitality which is rolling back to the east to have its effect on the older and more stolid parts of our national scene.

As architects, we are aware of this phenomenon in several ways. First, we sense the general country-wide interest in the development of sane modern design as it appears to flourish with unusual strength on the west coast. Amid all the aberrations that have manifested themselves as a part of the mushroom-like growth of the more raucous parts of the film industry there have come to be substantial islands of sound creative activity, ordered with good taste both by those who have adhered in part to appropriate precedent and by those who have experimented with new forms into which they have woven charm and human quality to produce a distinguished and indigenous architecture. In southern California, in and around San Francisco, Portland, Seattle, we found evidence of the presence of real architects, worthy to take their places with the best our country has produced. And it is a hopeful sign that architects everywhere are studying the work of these men, not in a spirit of imitation, but in a serious effort to

find the essence which gives life and beauty to their creations. The germ is there and it can be used to leaven the mass of our national architecture if we apply it with intelligence and understanding.

Another evidence of the vigor of the architectural west and its leadership is seen in the way it has recognized the present need of the profession to do battle with some of the forces which are seeking to supplant the architect and which are in some areas already having an uncomfortable degree of success in doing so. The cultivation of public understanding and acceptance of the architect as a matter of self-interest has been for too long neglected. Individuals and groups here and there have recognized the menace and done something but their efforts have been scattered and relatively ineffective. In a world where propaganda on behalf of innumerable group interests has proved its power and has become the accepted method for survival and advance, the architectural profession has sat back and let others use the weapon against it. It is high time to begin an active and extended campaign to regain the ground that has been lost. And here again we find the west in the forefront of the movement that is now spreading through the profession, furnishing the spark, developing methods and techniques, and setting the example.

For it has been the radio programs put on by the Southern California men led by Walter Hagedohm and his associates that have impressed the rest of the country with what can be done with this modern medium of communication. It is the work of Ernest Born and his friends in San Francisco that is demonstrating the effectiveness of properly designed exhibits and putting into the hands of their fellow professionals an old weapon, newly sharpened. And it is the whole fighting spirit that comes to us out of the west that is on the way, we think, to enlivening architects everywhere to join the battle for their own survival.



THE DESIGN AND COMPLETION OF THE BROOKLYN CENTRAL LIBRARY, THE INGERSOLL MEMORIAL, FACING GRAND ARMY PLAZA AND THE MEMORIAL ARCH AT THE ENTRANCE TO PROSPECT PARK, BROOKLYN, NEW YORK, PRESENTED PECULIAR AND UNFORESEEN DIFFICULTIES TO DR. MILTON J. FERGUSON, THE LIBRARIAN, AND TO ALFRED MORTON GITHENS AND FRANCIS KEALLY, THE ASSOCIATED ARCHITECTS. MANY LIBRARY SYSTEMS THROUGHOUT THE COUNTRY HAVE CENTRAL BUILD-INGS AND NO BRANCHES: BUT THE BOROUGH OF BROOKLYN HAD A WELL-ORGANIZED SYSTEM OF BRANCHES WITHOUT AN ADMINISTRA-TIVE CENTER. A MONUMENTAL BUILDING HAD BEEN STARTED IN 1907, CONFORMING TO AN IMPRESSIVE TYPE OF LIBRARY DESIGN THEN IN VOGUE, AND IT WAS THE PROBLEM OF THE ARCHITECTS TO PROVIDE A NEW BUILDING MEETING MODERN LIBRARY STANDARDS AND AT THE SAME TIME TO UTILIZE AS MUCH OF THE EXISTING STRUCTURE AS POSSIBLE. THEIR SUCCESSFUL SOLUTION, COMMENCED UNDER THE SUPERVISION OF BOROUGH PRESIDENT RAYMOND V. INGERSOLL AND CONSTRUCTED UNDER THE SUPERVISION OF THE BOARD OF PUBLIC WORKS, NEW YORK, IRVING A. HUIE, COMMISSIONER, IS ILLUSTRATED HERE IN PHOTOGRAPHS BY SAMUEL H. GOTTSCHO. THE DETAIL AT THE MAIN ENTRANCE (ABOVE) SHOWS A PORTION OF THE BRONZE GRILLE, MODELED BY THOMAS H. JONES, AND THE BASE OF ONE OF THE 50-FOOT COLUMNAR JAMBS, CARVED BY C. PAUL JENNEWEIN

INGERSOLL MEMORIAL — BROOKLYN LIBRARY



A MODERN CENTRAL LIBRARY

The theory of the Open Plan—which relegates stack facilities to the less accessible areas below the freely-disposed public rooms and work areas of a library—governed the redesign and completion of the Brooklyn Central Library. The unusually difficult job of designing a building that would meet modern library standards of convenience for the public and efficiency for the staff, at the same time incorporating the wing of a building conforming to an ideal that prevailed before the World War, forced the architects to adopt drastic measures.

For years the Borough of Brooklyn had been obliged to rent space in an office building for administration of its public library branches and much of the library reference material had been in storage, for lack of central reference facilities. Even the one wing that had been erected on the Central Library site was unfinished so did not serve to meet the need for a Central Library. It was intended as the first unit of a building that would have been primarily a civic monument, with the convenience of the staff and public of secondary consequence! Principal rooms were to be in the upper stories, reached by the fatiguing Grand Stairway and complicated corridors that were all considered "normal" in the era. The New York Public Library on Fifth Avenue with its 100 steps up from the sidewalk level to the principal reading room is an example of this type of library. Since it was built there has been a complete revolution in library planning to conform to the newer standards of


First Floor Plan

THE BROOKLYN CENTRAL LIBRARY WAS DESIGNED BY GITHENS & KEALLY, ARCHITECTS, NEW YORK, UNDER SUPERVISION OF THE BOARD OF PUBLIC WORKS, NEW YORK, IRVING A. HUIE, COMMISSIONER



Third Floor Plan



INGERSOLL MEMORIAL - BROOKLYN, NEW YORK, CENTRAL LIBRARY



BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS JULY 1941



THE ORIGINAL LIBRARY SCHEME WAS ABANDONED



THE EXISTING WING WAS STRIPPED AS SHOWN



NEW BUILDING GIVES MAXIMUM WINDOW SPACE

efficiency governing modern building design. The architects' solution of this complicated problem has been reported concisely by Mr. Githens in "The American Public Library Building: Its planning and design with special reference to its administration and service," written in collaboration with Joseph L. Wheeler and published this month by Charles Scribner's Sons. In course of a discussion of the Open Plan type of libraries Mr. Githens writes:

"Brooklyn Central Library presented a peculiar problem. All the foundations and one wing were built part at a time, from 1907 on, conforming to a type of library plan in vogue at the beginning of the century. For awhile the project lapsed. When work was resumed in 1937 the advance in library thought demanded an entirely different plan. This necessitated an ingenious use of the old piers for the foundations of a building little resembling the old design. The existing wing was partially incorporated, its upper story removed, the entire façade torn down except for the structural piers, the spaces between them filled with windows, and the piers covered with a new stone facing conforming to the rest of the new exterior design.

"The scale of the building is so vast it is difficult to envision it. The entrance doorway is fifty feet high but looks none too large for its surroundings. It fronts the huge oval Grand Army Plaza with the Memorial Arch and the entrance to Prospect Park. The ground rises toward the rear, there level with the first floor. This and existing floor construction necessitated the terrace and entrance steps. Behind is an old reservoir now converted to a playground, its plateau level with the library's third floor

"In triangular form with entrance at the apex and long reading rooms at the sides, it resembles Fort Worth; but the flow of people is Radial whereas at Fort Worth it is Concentric around the central stack. At Brooklyn the stack is to fill one basement space after another as the need grows, and finally to extend to a space provided for it over the present roof. As in Baltimore, Rochester, and Toledo there is a central hall



ARCHITECT RAYMOND F. ALMIRALL DESIGNED A MONUMENTAL BUILDING IN 1907 FOR GRAND ARMY PLAZA

with circulation desks and catalog around it and five entrances through a 'service circle' of the department staff desks and workrooms to the outside circle of reading rooms, those in the center-rear not yet constructed. The second floor has space for a similar series of reading rooms directly over those below, approached from two stair-halls and a connecting balcony. These upper rooms are not yet equipped for use. Corridors are avoided on both these floors.

"Department location will change from time to time as more people use the building and more reading space is added. For the present only the side rooms on the first floor are used for readers, the right for adults and the left for young people who enter from the central hall and children who have their own entrance through a paved garden at the furthest end. A future exhibition room is used for the music collection, reached through the entrance hall. The space for the future rear 'service circle' is used for fiction and new books, an arrangement somewhat like Wilmington. In future the entire first floor may possibly be taken for adult use, comprising the departments that most need quick access to the catalog. The invariable difficulties attendant on a library on two floors are bound to occur, unless by that time the functional anatomy of a large library has changed.

"The central hall is lofty, extending through the third floor and lighted by a huge curved clerestory of structural glass over the rear reading rooms.

"The third floor (except for a treasure room) is entirely for administration, book preparation and the staff. Elevators in five locations connect it with the entrances and the floors below. The trustees' and treasure room are combined, in the center over the entrance doorway, with bookroom and vault adjoining. It therefore has the finest position and an outlook over the plaza to lower Brooklyn and Manhattan. At the corner, equal in outlook, are the librarian's office and the staff room. The three are connected by a passage overlooking the circulation hall through plate glass.

"Besides the main public entrance and children's entrance there are basement entrances in each wing counting as fire-exits, on the right for supplies to cafeteria, etc., on the left for staff entrance and for those who cannot negotiate steps. A fifth entrance is through the shipping department at the end of the right wing."

To the architects and to Dr. Milton J. Ferguson, Chief Librarian, the interior arrangement was the most important and vital phase of the problem. The plan permits further



extension of the facilities of the library, particularly the basement auditorium and additional stacks (see section on page 448). Mechanical installations include part hot water radiation and part conditioned air for the comfort of readers and the preservation of stored books; the lighting of reading rooms by lamps and reflectors concealed in the ceilings, with light rays directed by lenses set flush with the plaster; elevators (principally for staff use); other apparatus required by modern building standards; and framing for future escalators from the first to the second floor. The construction and instal-

lation was most difficult and exacting because of the necessity of fitting in with the old work, the predetermined curves and extraordinary forms of the previous design. The ingenuity of the architects was "taxed to the full" in planning the new rooms to rest on old foundations.

As more portions of the building are completed, and the Central Library is used by an increasing number of citizens, the provisions of the revised plan will be fully realized. An extension at the rear, more than doubling the reading space on both the first and second floors, has been planned. There is space in the basement for stacks to store nearly a million volumes. The walls of the central building extend well above the present roof and in the space behind them another stack room for a million volumes can be built.



BROOKLYN CENTRAL LIBRARY — BY GITHENS & KEALLY, ARCHITECTS



EFFECT OF THE LOFTY ENTRANCE HALL AND ADJACENT CIRCULATION DEPARTMENT IS THROUGH CONTRAST



INGERSOLL MEMORIAL - BROOKLYN, NEW YORK, CENTRAL LIBRARY



OF FORMS, MATERIALS, AND DRAMATIC PROPORTIONS. ORNAMENT WAS ENTIRELY AVOIDED ON THE INTERIOR



4 1 7

BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS



CATALOG CASES ARE ARRANGED IN THE CIRCULA-TION ROOM OPPOSITE THE MAIN ENTRANCE, FOR MAXIMUM ACCESSIBILITY AND CONVENIENCE OF THE PUBLIC. THE DOWN-LIGHTS UNDER THE GAL-LERY (SEE ALSO PAGE 447) SUPPLEMENT THE GEN-ERAL ILLUMINATION AT THIS POINT. NOTE THE WALL COUNTER, AT THE PROPER HEIGHT FOR THOSE STANDING IN THE CATALOG SECTION





A COMFORTABLE READING SPACE IMMEDIATELY BACK OF THE CIRCULATION ROOM AND CATALOG IS USED TEMPORARILY FOR THE POPULAR BOOKS, WHICH CAN BE SELECTED DIRECTLY FROM THE SHELVES OR FLOOR CASES. IT IS WELL LIGHTED BY TEN WIDE WINDOWS ON THE CURVED WALL, WHICH WILL BE REMOVED FOR FURTHER EXPAN-SION OF THIS AREA. (SEE SECTION ABOVE)



THE TRUSTEES' ROOM ON THE THIRD FLOOR IS RICH IN EFFECT ALTHOUGH THE ENTIRE TREATMENT AND FURNISHINGS ARE SEVERELY PLAIN. IT IS SIM.LAR IN CHARACTER TO THE LIBRARIAN'S OFFICE SHOWN OVER-PAGE. ANOTHER VIEW OF THE READING SPACE JUST BACK OF THE CIRCULATION ROOM IS SHOWN BELOW. THE CONTRAST OF OAK WAINSCOT AND PLASTER WALLS AND CEILINGS, GLEAM OF CHROMIUM AND GLASS, AND THE SUBTLE DECORAT.VE EFFECT OF THE BOOKS THEMSELVES WERE IN-GENIOUSLY EMPLOYED BY THE ARCHITECTS TO CREATE THE PLEASANT INTERIORS OF THIS LIBRARY





THE LIBRARIAN'S ROOM IN THE OFFICE WING ON THE SECOND FLOOR IS COMFORTABLE AND INVITING



INGERSOLL MEMORIAL — BROOKLYN, NEW YORK, CENTRAL LIBRARY



BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS JULY 1941 451



THE CHILDREN'S ROOM ON THE FIRST FLOOR IS SPACIOUS, LIGHT, AND WELL-VENTILATED. THE VIEW ABOVE IS IN THE JUNIOR READING ROOM LOOKING TOWARD THE OFFICE OF THE CHILDREN'S LIBRARIAN (LEFT), THE BOOK DESK (CENTER) AND THE TOILET ROOMS (RIGHT). THE SENIOR READING ROOM IS SHOWN IN THE VIEW BELOW—SEPARATED FROM THE JUNIOR READING ROOM ONLY BY A ROW OF CASES



BROOKLYN CENTRAL LIBRARY - BY GITHENS & KEALLY, ARCHITECTS

ANALYSIS FOR THE NEW YORK PUBLIC LIBRARY

BY IDES VAN DER GRACHT & WALTER H. KILHAM, JR.

One of the most familiar landmarks on Fifth Avenue is the Central Building of the New York Public Library. It contains not only the principal reference collections but also the heart of the Circulation System.

With increased use by the public, the demands made on the facilities of this building became so heavy that the Trustees decided to investigate the possibilities of devoting the Central Building to reference use only, and housing the Central Circulation Branch and Circulation administrative offices elsewhere.

The Architects were asked to make a study to determine the most economical and the most efficient way of providing space for these departments. Two possibilities were considered. First, the purchase and adaption of an existing building close by. Second, the construction on a site owned by the Library some blocks away of a new building designed especially for the requirements of the Circulation Department. A major consideration was that of future expansion to take care of the growth of the book collections and of the constantly increasing use of the Central Circulation Branch by the public.

* *

The Circulation Department of the New York Public Library comprises a complex group of activities. The *Central Circulation Branch* is the largest and busiest branch in the New York Library system. It must be at or near street level with provision for the return of books, the obtaining of reserve books, the registration of new borrowers, and with adequate adjoining work spaces.

The Executive Offices house the administra-

tive and financial offices for the entire Circulation Department and all its branches. These offices should adjoin the Book Order Office which orders all new books for all the branches; receives, unwraps, inspects and checks them. They are then sent to the Cataloging Department which classifies and catalogs all the books in the circulation system, and handles all books which are to be discarded. A reservoir of books which are less often called for and which are available for circulation to any branch that requests them is housed in the Central Reserve stack. This is administered by the Interbranch Loan Office where transfers of books are cleared at borrowers' requests from one branch to another. Both the Interbranch Loan Office and the Cataloging Department constantly use, and must therefore be adjacent to, the Union Catalog which lists the books in all the branches.

The Extension Division serves eleven subbranches throughout three boroughs of the city, plus many deposit stations, book wagons, camp collections, hospitals, jails, etc. Its work involves a great amount of shipping and receiving of books from its special collection, so that convenience to the freight elevator and truck entrance is essential. The construction of the *Stacks* would be simplified and their use made more flexible by housing the large collections of the Central Reserve and the Extension Division together, adjacent to their respective spaces.

The *Picture Collection* is one of the most heavily consulted departments in the Public Library. It has increased over 400% in both picture stock and circulation during the past



ten years and its growth is expected to continue at a minimum rate of over 6% per year. Special methods of shelving and filing pictures which combine compactness with accessibility had to be developed and space provided for well-lighted drawing tables where pictures can be copied or traced.

Certain other activities at present scattered about the city were to be accommodated in the new quarters of the Circulation Department. The Young People's Reference Department contains a general collection for young people who are now barred from using the Central Building for lack of room; there is a circulating recreational reading collection which provides material not ordinarily available in school libraries, and a teachers' and social workers' collection of books about juvenile pedagogics.

Accommodation was also desired, if possible, for the *Music Library*, now housed in another building and containing books about music and musicians, musical scores and phonograph recordings. The *Library for the Blind*, while part of the Circulation Department, is largely a mail-order activity and is housed elsewhere. MODELS AT THE SAME SCALE OF TWO BUILDINGS UNDER CONSIDERATION SHOW AT A GLANCE THE RELATIONS OF THE DEPARTMENTS IN EACH

The analysis of the highly technical space requirements and interrelating functions of these various divisions, together with reasonable estimates of their growth, added up to a formidable mass of material. The problem presented was how to simplify this, not only so that every possible combination could be developed within the Architects' own office, but also so that these different possible solutions could be discussed clearly and yet in detail with the staff of the Library and finally presented to the Trustees for their decision.

In our office we have always made models of every project we study, from the smallest to the most complex. In this instance a schematic model seemed by far the simplest method of bringing the whole intricate picture into focus. Block models were made of each floor of the building whose purchase and alteration were contemplated. For comparative purposes, we established the maximum envelope for a new building to house the same



THE RELATIVE EFFICIENCY OF THE DEPART-MENTAL LAYOUTS CAN BE READILY GRASPED BY COMPARING THE FLOOR BLOCKS IN EACH SCHEME

number of activities, and this was similarly divided into block floors. Vertical members represent the elevator and utilities shafts and stairways. Each floor was made up of a block of the proper height and area, showing the setbacks and net space available. A plan of the layout of each floor was pasted on top of each block. The name of the division occupying each floor, together with an identifying colored circle, appeared on the face of each floor block. In this way it became immediately evident that whereas Central Circulation, for example, required five levels in the remodeled building it only required two in the new. The blocks showed at a glance the relations of the departments within the buildings and by taking out the blocks these were readily demonstrable.

These studies quickly proved that the remodeled building was not particularly suited to accommodate the large crowds of the Central Branch and the many specialized and closely inter-related activities of the Circulation Department. The total available floor area was inadequate. More serious was the small area of the many individual floors. Central Circulation activities required five floors and the large crowds visiting it would have to use the elevators which were not designed for that type of traffic. Numerous departments, such as the Picture Collection and Young People's Reference, which should occupy single floors for efficient use and supervision had to be spread over several floors where control of the public necessitated the construction of a number of inter-communicating stairs within the departments, separate from the existing fire stairs. This reduced the already inadequate floor space and added to the difficulties of the staff. The Catalog and Interbranch Loan divisions, which both constantly use the Union Catalog, could not be on the same floor, because none was large enough. The freight elevator was so located that it was difficult to place work spaces in the proper relation to their departments, making the installation of a book lift necessary. Shipping and trucking facilities were inadequate. There was no provision for expansion, inasmuch as the building as it stood could not even accommodate the Music Library or the Library for the Blind.

An alternate building on a one-hundred-foot site owned by the Library would provide the large floor areas essential to efficient functioning. In this building Central Circulation can occupy both the first and second floors, connected by a broad open staircase, the public spaces of Young People's Reference and the Picture Collection occupying a full floor each. Cataloging, Interbranch Loan and the Union Catalog used by both can all be accommodated on a single floor. The Central Reserve stack is in two levels of stack construction, saving head room, while providing adequate ceiling height in the adjacent Conference Room. For purposes of comparison, the new building was designed to accommodate the same activities that could be housed in the remodeled taller building.

By adding more floors, the Music Library and the Library for the Blind could also be accommodated. This would provide a safety factor for future expansion, especially of the Picture Collection, as the Music Library might some day find permanent quarters in a museum housing all the musical collections of the city, and the Library for the Blind, which is chiefly a mail order activity, might also be removed at some later date to other quarters and thus provide expansion for those departments which would necessarily have to remain always within the Central Branch building.

The efficacy of this model method of presentation compared to sheaves of blueprints and statistics was demonstrated at a luncheon meeting of Trustees. The relative volume of the buildings, the disposition of the departments and the efficiency of the larger as compared to the smaller floor areas could be grasped quickly. This, together with the fact that a new building could be built and furnished for approximately the same amount as the existing one could be acquired and altered, allowed the Trustees to come to a prompt decision. I. v. p. G.



BLUEPRINTS OF THE FLOOR LAYOUTS ARE PASTED ON FLOOR BLOCKS. PHOTOS BY RICHARD GARRISON



THE EXTERIOR OF THE BUILDING REFLECTS THE DIRECT PLAN. PHOTOS ARE BY ADOLPH STUDLY



SKIDMORE COLLEGE LIBRARY - BY LOUIS E. JALLADE, ARCHITECT 457 JULY 1941



A SOLUTION OF THE INSTITUTIONAL LIBRARY BUILDING IN WHICH THE ENTIRE UPPER FLOOR, WITH LOFTY CEILING HEIGHT AND AMPLE NATURAL AND ARTIFICIAL LIGHT, IS GIVEN TO READING ROOMS, IS FOUND IN THE SKIDMORE COLLEGE LIBRARY AT SARATOGA SPRINGS, NEW YORK. THE STACKS ARE COM-PACTLY ARRANGED IN THREE LEVELS AND OCCUPY THE EQUIVALENT FLOOR AREA OF TWO FULL FLOORS. STAFF FACILITIES ARE LOCATED IN THE BASEMENT AND AT THE GROUND LEVEL. OTHER REQUIREMENTS OF THE LIBRARY BUILDING ARE SOLVED IN THE SIMPLEST WAY POSSIBLE. IT SHOULD BE NOTED THAT THE BUILDING IS SEVERELY PLAIN YET IS INVITING AND SUGGESTS A PLEASANT PLACE FOR RESEARCH, STUDY, OR CASUAL COLLEGE READING, WITH READY ACCESS TO THE STACKS AT THE ENTRANCE LEVEL

SKIDMORE COLLEGE LIBRARY, SARATOGA SPRINGS, NEW YORK



DESIGNED BY LOUIS E. JALLADE, ARCHITECT OF NEW YORK



THE LOBBIES ON BOTH FLOORS OF THE LIBRARY ARE INVITING, THOUGH HANDLED QUITE SIMPLY



SKIDMORE COLLEGE LIBRARY - BY LOUIS E. JALLADE, ARCHITECT

THE VIEWPOINT OF LIBRARIANS

BY PROFESSOR ERNEST J. REECE*

Responsibility for results. Librarians would be untrue to their professional aims if they failed to be concerned about the æsthetic aspects of the buildings in which their collections are housed. At the same time their knowledge of the needs to be met makes them stress practical requirements when a new structure is contemplated. Their interest naturally focuses on those features which are vital to effective use and service.

Computing areas. The first thought is of space-for the stock of books and other records; for readers, enquirers, students and research workers; for the various operations entailed in administering a library; and for the convenience and necessities of a staff. This space needs not only to be correct in amount, but capable of re-arrangement and expansion. To assure it there must be study of the situation and activities of a library, and a schedule or program setting forth the specifications resulting from this. It is quite feasible, in the light of a building's purposes, to particularize the rooms and departments called for, to reckon the capacities suitable for each, and to translate these capacities into appropriate floor areas. In fact such an approach is indispensable if error and guesswork are to be avoided and if functional requirements are not to be subordinated. A classic example of its neglect is the failure to estimate the number of technicians to be employed in acquiring books and preparing them for the shelves, and to provide floor-space accordingly. Another is the overbuilding of reading rooms.

As indicated above, supplying rooms which are suitable at the moment is not the whole story, for spaces that are right today may be anything but that tomorrow. Librarians therefore ask that no disposition of departments be final; that permanent walls be as few as possible; and that fenestration, piping, wiring and comparable elements be such as to permit free interchange of parts and general readaptation. Moreover, they desire sites that allow expansion, façades that permit alteration, rooms that can be enlarged advantageously, plans that can be supplemented without dislocation of elements, and perhaps foundations for added stories.

Disposition of areas. Almost as important as correctness in amount is efficient distribution of spaces. On this the interests of the clientele merit first consideration. Most readers and users visit libraries with a purpose, and wish to go about their business without obstacles and delay. They desire layouts which they can understand readily. They expect central or prominent placing of the rooms they attend often, and the minimizing of barriers, ascents and descents for any which must be remote. They are entitled to come and go without crowding, and on the other hand without feeling lost in great chasms or oppressed by vast voids.

Conditions of administration and work for the staff similarly claim attention. To some extent the users of libraries must be guided, aided and even supervised, and it is essential that these things be done without undue multiplication of service points, and without great enlargement of staffs and of salary budgets. This indicates a concentration of those facilities which involve numerous or constant contacts between clients and the professional personnel, so far as is practi-

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cable without crowding the public or causing congestion at desks, catalogs, tables, or shelves. As concerns economy of time and effort for the staff, obviously it is desirable to group related operations, to provide short and direct traffic avenues, and to plan a straight-line flow of work in and among processing departments. Moreover, both users and attendants should receive those positions in a building which are favorable for light and air. Normally therefore the periphery would be assigned to reading rooms, studies, technical quarters and rest rooms, rather than to book-stacks.

Avoiding involvements. Librarians feel too that a library building, if it is to be most useful, must be free from extraneous and distracting features. For one thing, this entails divorce from whatever associations might hamper library work or usurp library resources. Where quarters are shared with other agencies the normal space allocations are apt to be deranged, noise and confusion tend to be aggravated, control and supervision are made difficult, and the conditions necessary for study and reading often are rendered impossible. Often, too, it means that areas and funds which would be scant for the libraries alone have to be divided, and directed in part to other purposes.

Another incompatible factor is the ostentation which tends to mark public buildings and which has been the curse of many libraries. Æsthetic development there should be, of course, both within and without. To achieve this, however, it hardly can be necessary to incorporate over-sized lobbies and memorial halls, nor to plan reading rooms so large as to consume space needed elsewhere, nor to adopt architectural forms which preclude adequate lighting from without. Certain interior treatments likewise are to be avoided, e.g., murals which are gaudy or attract sightseers, and mouldings, friezes, panels, and beams of the kinds which collect dust or impede the reflection of light. Indefensible also is the apportioning to marble façades of money which is needed for interior areas or book-stacks, and the expenditure for bronze doors of funds which might install and maintain exhibit cases.

Assurance of light. One essential in library planning which should be fully obvious seems often to have received the last and least consideration, namely the supply of light. Adequacy here means an amount and kind of light that will enable a library to promote the fullest utilization of books. It assumes a level of illumination no lower than would be acceptable at an architect's drafting table or at a jeweler's bench. Experience, experiment and the employment of sight-meters are rendering it feasible to be explicit as to the foot-candle requirements on various working planes.

Provision of equipment. As a library building needs to be designed primarily for work and service, so the fittings should be made and selected with these ends in view. This applies to book-stacks, which a few builders have studied with reference to storage requirements and efficient use. It holds also for furniture, some articles of which are peculiar to libraries, and all of which demands superior craftsmanship and durability. The recommendations of librarians regarding equipment are that there be no improvising, no sacrifice of skilled workmanship, no obligation to accept a lowest bid, no sub-letting without full guarantees on quality, and no awarding of jobs to work shops in state or municipal institutions.

Postword. Probably this article contains nothing which would not hold in principle for a building project of any kind. In the case of libraries, disregard of the precepts has sprung largely from ignoring of the functions to be performed. Readers wishing to go further into building requirements as librarians see them may like to consult the titles in the appended list:

Bostwick, A. E. Librarian's ideas of library design. Arch. Forum 47:507-512, Dec., 1927.

Gerould, J. T. College library building, c1932. American Library Association.

Hadley, Chalmers. Library buildings, 1924. American Library Association.

Hanley, E. R. College and university library buildings, 1939. American Library Association.

Hirshberg, H. S. Elements of the library plan, 1930. American Library Association.

Lowe, J. A. Small public library buildings, 1939. American Library Association.

Wheeler, J. L. and Githens, A. M. The American public library building. Scribner's, 1941.



THE NEW BUILDING OF THE TOLEDO PUBLIC LIBRARY, FOUNDED IN 1838, WAS DESIGNED WITH THREE OBJECTIVES IN MIND, WE ARE TOLD BY ALFRED A. HAHN OF HAHN & HAYES, ARCHITECTS & ENGINEERS. THESE WERE: TO MAKE AVAILABLE TO THE READING PUBLIC THE PRESENT BOOK COLLECTION OF 400,000 VOLUMES, TO PERMIT FLEXIBLE EXPANSION OF THE COLLECTION TO 1,500,000 VOLUMES DURING THE ESTI-MATED EFFICIENT LIFE OF THE STRUCTURE; AND TO GIVE PROPER CARE TO THE PRESENT AND FUTURE COLLECTION. THE FIREPROOF BUILDING IS AMPLY LIGHTED AND HAS EXCEPTIONAL EQUIPMENT FOR AIR CØNDITIONING, VENTILATION, AND PROTECTION AGAINST DUST, VERMIN, FUMES, AND DAMPNESS. AT THE SAME TIME, HEALTHFUL AIR IS PROVIDED FOR LIBRARY USERS AND THE STAFF. IN NO OTHER LIBRARY ARE THE ACOUSTICAL TREATMENT AND THE HEATING AND VENTILATING SYSTEMS MORE HIGHLY DEVELOPED. THE BUILDING REPRESENTS AN EXCEPTIONALLY FINE SOLUTION OF THE "OPEN PLAN" TYPE WITH A SINGLE LOFTY ENTRANCE HALL, ALL ADULT READING AT SIDEWALK LEVEL, AN UNUSUALLY HIGH PERCENTAGE OF READING SPACE, AND REDUCTION OF VERTICAL TRAVEL TO A MINIMUM FOR LIBRARY USERS AND STAFF. THE SETTING OF LAWNS AND PLANTING REDUCES TRAFFIC NOISE AND ASSURES LIGHT

PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS



PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS

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VIEW OF THE CENTRAL HALL LOOKING TOWARD ENTRANCE (LEFT). NOTE WELL-LIGHTED GLASS MURALS



PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS



THIS VIEW OF THE GENERAL REFERENCE ROOM SHOWS THE MEZZANINE CLEARLY. THE LINES OF CASES,



ALSO SHOWN BELOW, CAN BE MOVED AS DEPARTMENTAL NEEDS DICTATE. THE BUILDING IS NOTABLE FOR ITS LIBERAL USE OF GLASS - THE WIN-DOWS UTILIZING GLASS BLOCKS AS WELL AS CLEAR PANES, AND STRUC-TURAL GLASS, MIRRORS, AND GLASS MURALS EMPLOYED IN FURNISHING AND DECORATING THE INTERIOR. IN ADDITION TO THE PUBLIC ELEVA-TORS, A SYSTEM OF LIFTS (ELECTRIC AND MANUALLY-OPERATED) ALSO WAS INSTALLED TO CONVEY BOOKS AND MATERIALS FROM THE STACKS TO THE REFERENCE AND READING ROOMS. FLUORESCENT LIGHTING IS USED FOR THE STANDING BOOK CASES AND SEMI-INDIRECT OVERHEAD LIGHTING PROVIDES THE GENERAL ILLUMINATION. ALL READING ROOMS ARE CEILED WITH CORK ACOUSTI-CAL MATERIAL AND FLOORS ARE RUB-BER TILE. THE EXTERIOR IS LIMESTONE

PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS



VIEWS OF THE FIRST FLOOR READING ROOMS FROM MEZZANINE, AND DETAIL OF A TYPICAL WINDOW



PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS

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THE CHILDREN'S READING ROOM IS DECORATED ABOVE THE DARK PINE WAINSCOTING WITH A BAND OF JADE-GREEN STRUCTURAL GLASS ON WHICH SCENES FROM FAVORITE STORIES ARE PORTRAYED. THE STURDY FURNITURE IS ALL OF MAPLE. ONE OF THE COUNTERS IN THE CENTRAL HALL IS SHOWN BELOW



PUBLIC LIBRARY, TOLEDO, OHIO - BY HAHN & HAYES, ARCHITECTS

SMALLER PUBLIC LIBRARY BUILDINGS

BY TALBOT F. HAMLIN

The architectural problem of the library is essentially a simple one. However complex its mechanical details, at heart it is but a study in the relation of three elements: books, readers, and the devices and personnel necessary to make the connection between them. Around this trio the entire problem devolves, and all good libraries indicate their close connection.

The reader problem is perhaps the simplest. One needs adequate and welcoming entrances which shall at the same time be easy to control, for books have a strange attraction to the kleptomaniac; one needs light, pleasant, and roomy places for reading; and one needs also, naturally, those checkrooms and toilet facilities and other similar services which public buildings nearly always require. Yet this simplicity becomes more complex on a closer examination. Reading itself is not one but many things, and in any except a purely reference library many of the readers come merely to bring back books they have borrowed, to borrow others, and to take them home for reading there. A really good library must therefore, insofar as it is concerned with the public, attempt some kind of arrangement which shall be suited to all the different kinds of readers and the different kinds of reading.

There will be readers who come in merely to "kill" a few minutes between engagements, or because it is pleasanter to loaf inside than outdoors. They cannot be disregarded, for who knows what sudden spark may be kindled in even the most inattentive *flâneur* through books and magazines, by a stray sentence or a stray word? For him there must be places where such literary dawdling is pleasant, where there are many magazines easily obtainable, and where perhaps also there may be certain books of reference, anthologies of verse and essays, and similar types of reading "in small packages." Such a reader will never consult a catalogue, for he does not know what he is looking for, and he brings with him but a vague curiosity. There will be children, eager, full of energy, apt to mischief but apt also to enthusiasm; they must be welcomed, their curiosities stimulated, their search for amusement led on naturally from plane to plane of increasing appreciation. Since they are likely to disturb more serious readers, they should probably have a separate room-a room so designed, with gay colors and places for interesting pictures, with low bookshelves to bring the books within their reach, and tables and chairs designed for various children's sizes, that they will come to feel that the place is in a sense a kind of second home, and they will learn to have naturally good manners because they are interested and happy, and consideration for others because their own concentration demands it for themselves. There will be "serious" readers who come to the library knowing what they want, eager to find it, and demanding little besides quietness and a modicum of comfort. They will want a card catalogue placed for easy consultation, and perhaps shelves of the more serious reference books close to their hand and use.

Rooms for readers generally, it would seem,

must have ample daylight and, if possible, some windows with attractive views, for even the most enthusiastic student likes occasionally to look up from his book and rest his eyes by focusing them on something far away. Such a room, too, it would seem, should have a certain height, for ample height is an excellent killer of extraneous noise, and the sense of height gives a feeling of lift and takes away that sense of impregnable enclosure that a crowded low room so often possesses.

It is in the design of reading areas, perhaps the most important parts of the library, that architectural imagination has been most conspicuously lacking. Standardized plan types developed for mechanical efficiency of supervision and administration do not always yield rooms of the pleasantest proportions, and in the design of many—one might almost say most—small libraries, particularly branch libraries in cities, this same kind of mechanical feeling has crept disastrously into the interior atmosphere, and a certain type of bleak, institutionalized appearance makes many a library reading-room something almost to be feared.

Nor is the occasional attempt to make rooms over-domestic, as though they were merely enlarged sitting-rooms, much more successful. This type of library room, frequent in village libraries built fifteen or twenty years ago, has a kind of artificial charm that looks pretty in photographs but is not ideal for library use. A living-room exists as much for social purposes as for individual reading, and one must believe that the reader comes to the library to read by himself and not to talk with his fellows. The problem of the small library reading-room is thus not a living-room problem any more than it is a problem in mere mechanical efficiency. It is a problem to be faced as something unique, something that shall be pleasant and human, to be sure, with colors that lead to repose and eye rest and occasional lovely views for relaxation, but a room designed above all else around reading.

The illumination of such a room, both by day and night, is an essential part of this problem; but illumination, we must remember, is as much a question of light quality and variety as it is of foot-candles. Diffusing glass in windows, if used at all, must be emploved with discretion so as not to develop any feeling of claustrophobia. Indirect lighting must never create such a brilliant ceiling as to claim hypnotically the upward attention of the eyes. Low table lights must be designed to prevent glare, both direct and as reflected from book pages. Perhaps with the development of luminescent lighting some type of low-intensity fixture of large size-such, for instance, as long tubes at the proper height over a table-may solve all these questions, but the problem is still an open one. In fact, in the whole character proper to a reading-room, there is a challenge to the human imagination of all architects as well as to their technical knowledge, and much finer results can be developed than any thus far achieved.

Then there are books. In a sense, books are the reason for the library; yet from the human point of view it is the reader rather than the book which controls the major public elements of the design. The storage of books is a difficult and an expensive matter, but in this the small library does not face the almost insuperable problems of the continually growing contents of a large library. The branch public library or the small local library will probably aim at a collection which grows slowly, if at all, beyond some definitely assumed optimum number of volumes. Much of its content will be of fairly ephemeral type, in which the older works are discarded as the newer ones are obtained, so that it is only in its relatively small reference or "learned" sections that large growth is to be expected.

Thus in the small library there is little need for an enormous stackroom, if indeed any stackroom at all is required. If the purpose of the library is to bring the readers into the closest possible touch with the riches enclosed between book covers, it would seem that so far as it is practicable the small library should be of open-shelf type; for the ordinary reader in this type of building will frequently, even when he comes to borrow, like to browse and pick by choice from the



appearance of the book itself rather than through the impersonal face of a catalogue card. Nevertheless, even in comparatively small libraries, there will always be certain books-bound volumes of periodicals, for instance, and perhaps the more valuable scientific and artistic works, as well as some types of books less generally used-which it is desirable and economical to store in stack areas; and it is in this stack area that the greatest opportunity for normal and predictable increase may be designed. For a small library the stack need only be a small room with standard stacks installed in it-if possible, all on one level to save steps-but it is often advisable to place this stackroom in a wing or area with a free end facing an unused portion of the lot, so that if the town or the library should grow unexpectedly there would be room for future enlargement. This consideration may frequently play an important part in the general placing of the building on the lot and the basic relationship of its exterior masses.

For the other books, placed on open shelves, there are numerous possible schemes—al-

IN HIS DESIGN FOR AN ADDITION TO EAST 135TH STREET BRANCH LIBRARY, ABRAMSON PRODUCED AN EXCEP-TIONALLY SIMPLE AND DIRECT SOLUTION IN ELEVATION (ABOVE)





THE EAST 135TH STREET BRANCH OF NEW YORK PUBLIC LIBRARY—LOUIS A. ABRAMSON, ARCHITECT

cove types, in which ranges of double-faced shelves separate alcoves with tables; wall shelves; and bookcases freestanding on the floor. In a public library where supervision is of primary importance, the alcove system has many disadvantages, and if it is used the bookcases between the alcoves must be low enough to permit good visibility over them. If used discreetly, they have the advantage of giving a certain sense of pleasant and studious intimacy to the alcove tables, and may break up an overlarge room into something more human in scale. In many cases a portion of the reading space will be devoted to freestanding bookcases arranged with wide aisles between them for pleasant browsing and easy supervision, and another portion kept as open as possible to suggest an almost domestic informality.

It is in this point that the architect will have some of his major decisions to make, for the



KENT BRANCH LIBRARY, TOLEDO, OHIO, BY HAHN & HAYES, ARCHITECTS & ENGINEERS, OF TOLEDO

arrangement of the books and furniture can produce in the same interior space an expression of charm and human beauty, or a dull and mechanical institutionalism. It is in this element, too, that perhaps the major fault of many American small libraries lies, for with use of ample space and with furniture sufficiently expensive there is produced only the sense of a cold and impersonal boredom. Books in themselves may form a magnificent decoration for a room, as for instance in the Prunksall of the Hofbibliothek in Vienna; and, though our customary habit of library book-binding often leads to drab shelves of monotonous dull blues and dull greens, even then, in this denatured state, lines of books have a certain invitation. The true library room will be designed around them, and its "architecture" minimized or restrained to give the books the major importance. One might say that the simplest possible shapes, the clearest and most easily intelligible spacings, combined with well distributed light from pleasantly proportioned sources, is the best way to create a book room. Yet color may be introduced, and should be much more brilliantly and daringly used than is common in library practice. Clear areas of agreeable colors will not only give life to the effect, but they will also have a definite therapeutic value in giving eye rest after a too great intensity of concentration on white paper and black type.

The third element in the library, the administration portion, the particular bailiwick of the librarian, is perhaps the most difficult problem of all. There is not a public library which does not suffer from understaffing in one way or another; for public bodies, though they may see fit to pay money for books or buildings, can see but grudgingly the necessity for people to run the building and take care of the books. The architect in his design has to make up this deficiency. He has to see that in a small library, as far as possible, the entire reading area can be supervised from one point, a point which shall also control the public's entrance and exit. This same place, where naturally the delivery desk will be placed, must also be in closest possible communication with the stack

area and with the various working areas which the librarians will need. There is a tremendous amount of work even in the small library between the time a case of books is received at the door or at the service entrance and the time when the same books are handed over to the readers. They must be recorded, catalogued, classified, placed in their correct positions, and the catalogue cards made or obtained and filed. There is an enormous amount of work after the book is in place, in checking its circulation, in repairing or arranging for its rebinding when the book is old and damaged. There will also be constant demands upon the staff time to answer all sorts of questions.

The greater number of these problems have been carefully studied in this country for nearly a half century, and in the huge flood of small libraries built over the country in the earlier years of the 20th Century certain basic plan types were worked out which have become almost standardized. The librarians' desk will be in the center, opposite the entrance, and forward, with reading areas open on each side-one perhaps for adults and one for children. Immediately behind the desk will be the librarians' offices and workrooms (sometimes on two floors), and also the stackroom, if any. Often the building is raised high above the ground in order to give a well lighted basement, which will contain an auditorium with a separate entrance and a service and delivery entrance to the unpacking- and workrooms in connection with book servicing. Such a scheme is seen in the Kent Branch Library at Toledo, Ohio, recently altered by Hahn and Hayes, where the whole has been brought into a simple plan (across-page). In this case there is no stackroom. Other types in which a stackroom is incorporated are likely to develop into L and T shapes, and many examples of these have been built and work excellently.

Yet this standardization of type, developed from a careful attention to administration efficiency, has not been architecturally an unmixed blessing. It has tended to make the designer think too frequently in terms of processes rather than of purposes. It has tended at times to limit his creative approach



THIS LIBRARY BY SYMINGTON, PRINCE & PIKE, ON A TRIANGULAR SITE IN THE PARK ESTATE, LEICESTER, ENGLAND, IS "DIFFERENT" IN PLAN, THREE CIRCLES TANGENT TO A CENTRAL ROTUNDA



KENTON BRANCH LIBRARY, MIDDLESEX. W. T. CURTIS & H. W. BURCHETT, ARCHITECTS, F.R.I.B.A.

to the problem. The great architect must attack the problem with a mind clear of all of these conventional types, although he must understand the reasons which brought them to birth. To the processes he must add the human element, and his imagination must go beyond a concept of accepted adequacy.

In the larger city branch libraries where departmentalism has begun and where there must be an especially large and carefully arranged children's department, multistory types have usually proved the most economical. Ideally, a children's department should have a completely separate entrance and no connection with the rest of the library except through its close attachment to the central service elements. Yet in many cases and on the average narrow city lot this separate entrance must be dispensed with, and the segregation achieved through the arrangement of different departments on different floor levels served by one public stair. One of the most interesting developments of such a city branch library is the 135th Street Branch of the New York Public Library, now under construction. It was designed by Louis Allen Abramson under the supervision of the Department of Public Works, New York, Irving A. Huie, Commissioner, and is particularly interesting in its handling of mezzanines and balconies, so that some rooms gain the advantage of extra height.

In many communities the library serves as much more than a simple machine for reading. It may become a sort of cultural center and demand a certain amount of exhibition space or even a small separate museum gallery in addition to its auditorium and book elements. The boundary between the fine arts is not so definite as Lessing's Laokoon would have us believe; for, although to the purist the illustrated book may be a contradiction in terms, to the ordinary person illustrations may be meaningful as well as attractive, and it is frequently true that the person sensitive to literature will be sensitive to the visual arts as well. This, too, the architect of the small library must bear in mind.

The last question, and perhaps to the public the most important question, in library design is of course its total visual impact upon the observer—its æsthetic character. The library is frequently a memorial, but it should never have the dead ostentation of the monument. It is a building essentially for human beings, who come to it to amuse themselves or to learn. It must invite them, be gentle with them; it must never fight them with the arrogance of pomposity.

Furthermore, although the perfect library is a perfect machine for reading, and although the technical studies of librarians have developed sufficiently effective mechanisms to help them in their tasks, the architect must remember that all of this mechanism is but a means to an end and that a library, if it is to express anything, should express its major purpose of enjoyment and intellectual development, and not merely the means and processes by which that is made possible. Let each part of the building develop its own natural types of opening; let surfaces be pleasant and simple, openings wide and clear and inviting; let there be, at least in moderate climates, some kind of arrangement for outdoor reading, some kind of a feeling of definite connection between the building and the ground on which it stands. Out of these, if treated with creative imagination, if integrated into a single whole with clarity of design, the true character of the real library will gradually grow.

In the past we have had many libraries in which the public nature of the building, coupled with misguided civic pride, has forced a pompous and impersonal heaviness; we have had libraries in which a reaction from this feeling has produced effeminate and artificial charm; but we have had very few which, whatever their style, somehow accepted the conditions of library design and developed from them a simple, direct, modest, and human appeal. One such, which seems to achieve quiet dignity, is Abramson's 135th Street Library, with its pleasantly proportioned wall surfaces, large windows, and protected roof terraces. In this application of the newer forms to small library design the English have perhaps gone further than we, and several of their newer branch and small town libraries achieve exteriors as attractive as they are contemporary.

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SOME RECENT WORK OF THE TENNESSEE VALLEY AUTHORITY

ROLAND A. WANK, PRINCIPAL ARCHITECT

FOUR OF THE SMALLER BUILDINGS OF THE TENNESSEE VALLEY AUTHORITY DEVELOPMENT THAT MAY BE CONSIDERED REPRESENTATIVE OF THE DESIGN PRINCIPLES EVOLVED IN THIS LARGE-SCALE UNDERTAKING ARE PRESENTED HEREWITH IN PHOTOGRAPHS, SUPPLEMENTED BY PLANS, SECTIONS, AND CONSTRUCTION DETAILS. THESE EXAMPLES ARE MORE SIGNIFICANT AS TYPICAL SOLUTIONS THAN AS INDIVIDUAL BUILD-INGS. THE "VISITORS' BUILDING" SHOWN ABOVE AND ON PAGES 476 AND 477 IS LOCATED ON THE NORTH EMBANKMENT OF CHICKAMAUGA DAM; THE "CONCESSION BUILDING AND COMFORT STATION" SHOWN ON PAGES 478 AND 479 IS ALSO AT THE BOAT HARBOR NEAR THE SOUTH ABUTMENT OF CHICKAMAUGA DAM; THE "OVERLOOK BUILDING" SHOWN ON PAGES 480 AND 481 IS LOCATED ON THE NORTH ABUTMENT OF HIWASSEE DAM; AND THE "HARBOR MASTER'S OFFICE" SHOWN ON PAGE 482 SERVES THE CHICKAMAUGA DAM BOAT HARBOR. DESIGNERS OF THESE BUILDINGS WERE TVA ARCHITECTS HARRISON S. GURNEE AND MARIO BIANCULLI; THE PLANS WERE CARRIED TO COMPLETION UNDER THE SUPERVISION OF CARROLL A. TOWNE AND GEORGE L. RICHARDSON; THE STRUCTURES WERE BUILT BY TVA'S CONSTRUCTION AND MAINTENANCE DIVISION. PHOTOGRAPHS BY THE TVA GRAPHIC ARTS SERVICE, CHARLES KRUTCH, CHIEF





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YOSEMITE CONVENTION

BY TRAVIS G. WALSH

Journeying from Cleveland to Chicago in glorious solitude, I little realized the gallant and congenial company which was assembling to cross the continent. Breakfast in Chicago, at Harvey's *Dearborn Street* Restaurant was, at best, an impatient ritual to be "liquidated" promptly, for how long had it been since an entire Eastern A.I.A. delegation had boarded a special train bent on invading the citadels of the West Coast?

A word with Ed Kemper, a chuckle with Charlie Ingham, a limerick with Ken Reid, a story (?) with Jim Follin and the introductions to the charming ladies of the party all served to quickly retire any atmosphere of conservatism or restraint on the train. A collection of Pullman cars, with Observation, Lounge, and Dining facilities added, may acquire a "personality" which transcends mere railway transportation. Despite the opulent appointments of the Parlor-Observation Car, the popularity of the Lounge - Bar - Barber - Shop - Shower unit was incontestable. 'Twas here that the social activity of the train acquired emphasis and also here that the stalwarts who spurned decorum and sleep raised lusty voices; perhaps not musical but loud! These frolics were not confined to the sterner sex, for vividly do I remember a distinguished lady-architect efficiently taking the "podium," beer bottle in hand, and leading her enthusiastic colleagues in nostalgic musical folk-lore.

Vignettes of Taos Canyon, Indian Pueblos, a very Spanish-Colonial Santa Fé, and much delightful scenery come quickly to mind on a motor trip which joined the A.I.A. Special at Lamy the same afternoon at 6 o'clock. It would be far too casual, at this point, to neglect a reference to the hospitality of the New Mexico architects, who were our gracious hosts with cocktails at old *La Fonda* in Santa Fé, which is merely another way of stating that very few took places afterwards on the same busses in which they had arrived.

The cool clear air, and the soughing of the pines at Grand Canyon, caressed feverish brows on Wednesday morning. Busses, cameras, and superlatives were the order of the day at this point.

The Arizona Chapter thoughtfully provided rooms at the Hotel for both the ladies and gentlemen of the party and I blush to relate how the latter were soon drawing lots for the bathtub which was found to be adjoining.

Boulder Dam caused much excitement. In the ordinary course of an itinerary, one does not expect to have a man-made triumph follow in sequence one of the "seven wonders of the world." For this reason, many of us felt skeptical as to Thursday's program, but apprehensions were dispelled by this great tribute to architectural and engineering genius.

Boulder Dam straddles the Arizona-Nevada line; it was therefore only natural that luncheon arrangements should include a short excursion into Nevada. The busses charged up the steep grade to Boulder City, Nevada, where the question of edibles was efficiently settled. Striking panoramas of Lake Mead (the artificial lake created by the Dam) were recorded by the numerous "camera fiends"; thus invoking the patience and indulgence of the amiable bus drivers.

A faded but reasonably satisfied company distributed themselves throughout the Convention train at four-thirty in the afternoon. Shortly thereafter, the inevitable "moaning at the bar" was in evidence! Such convivial souls as Sam Homsey, Charlie Ingham, Jim Follin, Charlie Cellarius and numerous others seemed to be continuously involved in vocal striving which should have a ten per cent rating for blend but ninety per cent for the effort! A reference to Eccleston, the congenial Santa Fé agent, should not be omitted inasmuch as his indefatigable presence and lusty voice were always a substantial part of these sessions.

Friday morning, upon leaving the train, the congregation gathered for breakfast at the Californian Hotel in Merced, followed by a ninety-mile bus trip up into the Sierras. This terminated at the renowned and exceedingly beautiful Yosemite Valley. Perchance, it would be proper revenge if this chronicle completely ignored the wonders of Yosemite, since the scattered space arrangements, together with the continuity and overlapping of the Convention sessions, prohibited the amount of attention which the Valley deserved. Be that as it may, one might be regarded as somewhat short of human should he not respond to the towering snowclad heights, the majesty of great waterfalls, and the lovely Merced River winding about the green carpeted vale-to list only a few of the compelling virtues of Yosemite.

Resuming our chronicle of human events, we would be exceedingly culpable not to make reference to the Reception and Dinner Dance the evening of Saturday, May 17th. This was a somewhat riotous but decidedly enjoyable affair; there were so many more "stags" than ladies that it imposed a challenge on the latter, but this they retired with colors flying.

The Convention recessed early Monday afternoon, permitting those who had not already "played hookey" to motor up to Glacier Point, through eight-foot snow drifts, and look down at the dizzy 3,200-foot drop to the floor of Yosemite Valley. Your humble servant, as guest of Harry Michelsen of San Francisco, and accompanied by Stanley Parker and John Fugard, chose to motor out to Mirror Lake and, returning, visit the Government Museum. It was at the latter place, I believe, that Stanley Parker (confronted with a slice of Sequoia with annual rings marked with dates as far back as 900 A.D.), with his typical Boston urbanity coined the acme of understatement and said, "It does engender a reasonable degree of humility, doesn't it?" Mayhap, therein is the essence!

The Convention party took a reluctant farewell of Yosemite on the morning of Tuesday, May 20th. Those of you who have seen the California "Big Trees" may disregard this reference but, for most of the Convention party, the stately majesty of the gigantic Redwoods of California leave a deeply etched impression on the mind.

Architects, in general, are irrepressible, even when awe-inspiring factors are predominant; therefore the garrulous is bound to creep in! Witness, if you please, an elderly New York professional with his technical assistant, tape in hand, carefully measuring the base of one of the most noble trees in the Grove (with a cavern capable of accommodating a score of persons); conjure up a vision of numerous individuals taking motion pictures of the entire performance which results in the declaration that the base is precisely sixty-one feet and eight inches in circumference! Contain yourself, if you can, when our own Stanley Parker comes upon the scene, booming, "Some persons have no respect for anything!"

The Convention party found itself in the torrid atmosphere of San Joaquin Valley on the evening of Tuesday, May 20th. In Fresno, at the air-conditioned Hotel California, we foregathered in the Cocktail Lounge for the noble purpose of slaking thirsts and cooling fevered brows. Your chronicler, anxious to avoid the obvious, ordered a "Zombie." Said drink arrived, if you please, in a tall wooden container, with a gaily colored parasol anchored to its top by means of a large wedge of pineapple and three red cherries. Imagine our embarrassment and the astonishment of the multitude! Needless to say, the victim wore the parasol in his buttonhole into Los Angeles and informed the Angelenos that he was "prepared for any kind of weather."

We were not properly prepared for the effusion of our Los Angeles greeting. Possibly, it was because Ken Reid and your humble servant had con-

sulted our itinerary the night before and had remarked that our arrival at eight in the morning and the trip to the "Studios" at ten would permit an interval for a quiet breakfast at the Ambassador and a very swell hot shower; or, possibly, it was the fact that we had never seen the Angelenos in their own habitat before. At all events, the indefatigability of our hosts was appalling! With that intense degree of efficiency which one has come to associate with the name Los Angeles, we discovered that our estimable professional colleagues swarmed over the platforms of their new Union Station with the equivalent of three motor cars for each guest! (more or less exaggerated)

To the tune of Viennese waltzes, lustily broadcast from concealed amplifiers, we were ushered through spacious concourses and courts to a very impressive Harvey Station Restaurant. Occasionally, the music was interrupted by the staccato greeting "train leaving on track 4 for Albuquerque, Emporia, Kansas City, and Chicago." Meanwhile, our genial hosts presided over a bountiful breakfast, taking inventory of the desires and idiosyncrasies of their respective guests. If the "Conventionites" failed in the things they wanted to do, it was not the fault of the Angelenos.

The Annual Convention Dinner the evening of that same day, furnished the "crescendo" and the official finale of the Convention. The preliminaries to the Dinner varied according to the individual. Many spurned the cinema sets and chose quietly to visit the houses and gardens of the area.

Late in the afternoon, events tapered off in preparation for the evening. "Pier" Davis, our thoughtful and solicitous host of the afternoon, paused at his very attractive home where he dispensed long cool drinks in a charming garden. Driving us back to the Ambassador, he joined in our rooms for a continuation of this ritual. This all culminated in a very formidable "children's hour" on the Main Floor.

The Southern California Chapter extended its hospitality over a severalday period, which included numerous subjects of interest. Your humble servant drove with a local friend to San Diego the morning after the Annual Dinner, taking the delightful South Coast drive, lunching at Laguna and arriving at our destination about the middle of the afternoon. Visions of mile upon mile of aircraft manufacturing plants greet the eye, most of them of recent construction, and many in the process of building. Goodhue's lovely buildings in Balboa Park still have a vitality of their own, enhanced as they are by the attractive surroundings. Mr. Requa and other local architects have effectively preserved the established spirit in certain new buildings which have been added to the group.

One could hardly leave the West Coast without paying tribute to Santa Barbara, San Francisco, or Seattle. The Atlantic Seaboard takes its girdle of great cities for granted, but the "visiting firemen" from the East are bound to be excited by the extent and variety of the "Coast," and its for-midable communities. Santa Barbara with her shoulders resting against the mountains and her feet bathed by the Pacific justifies the beautiful homes and gardens which have been developed there. "Shades" of George Washington Smith, Reginald Johnson, Bertram Grosvenor Goodhue were revealed to our enthused gaze by our gracious hosts of the Santa Barbara Chapter.

San Francisco! The exclamation point has not been misplaced. Here indeed is a town where the ingredients of both Nature and man have combined to produce an American answer to those other great ports of the world: Naples, Rio, and Sydney. Her interest and charm should not rest alone with the great Bay spanned by the two breath-taking bridges, nor with her surrounding hills covered with skyscrapers and villas; neither does her intriguing Chinatown, her provocative night-life, or her cosmopolitan waterfront dominate; it is rather the compelling composite which creates such an indelible impression.

It is a pity that in twenty-one days out of Cleveland, one cannot visit all of the interesting spots either en route or when actually on the West Coast; perhaps since a chronological factor must be invoked, it is pathetic that there are not forty-eight instead of twenty-four hours in the day. Be that as it may, the "California Cruise" had to end somewhere and Frank Crutsinger of the USHA and Jim Rose of Los Angeles saw a very dejected delegate take his leave at the Oakland ferry on the evening of Monday, May 26th.

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PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M.Arch.

PENCIL POINTS DATA SHEETS

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HOW TO FIGURE HEAT LOSS COEFFICIENTS (2)

M = RESISTANCE OF SOLID MATERIALS. Different materials used for wall construction have different resistances. Material W in the illustration, for instance, might have considerably less resistance than material X. The resistance of the body of a material is indicated by the letter M with a subscript for identification where several materials are used.

In the illustration, the resistance of material W is shown by the line 2-3 and the vertical distance would indicate the amount of the resistance. The sum of Mw plus Mx plus Mz can be indicated by the symbol Σ M. The following table presents typical resistance values for various types of materials.

The resistance of *heterogeneous* materials, such as hollow tile or plasterboard made of gypsum between layers of heavy paper, do not vary directly as the thickness—and values for each thickness have to be determined experimentally. However, when the resistance of a *homo*geneous material for 1" thickness is known, the resistance for other thicknesses are found by direct proportion, i.e., 2" thickness has twice the resistance of a 1" thickness.

JUL	Type of Material		Thickness	Values of M
1941	Average Brickwork	***********************	1"	0.15
	"	* * * * * * * * * * * * * * * * * * * *	4"	0.60
		***********************	8"	1.20
			12"	1.80
	Typical Stone Maso	onry or Concrete Work	1"	0.08
			4"	0.32
	*		8"	0.64
	**		12"	0.96
-	"		16"	1.28
	Hollow Clay Tile M	asonry	4"	1.00
S.			6"	1.60
	**		8"	1.70
	**			2.50
	Gypsum, Solid			0.50
	Sand and Gravel H	ollow Core Concrete Blocks	. 12"	1.30
	Cinder Hollow Core	Concrete Blocks	1"	1.75
	Gynsum hetween L	avers of Heavy Paper	36"	0.26
-	ajpaun berneen is	ayers of freury raper	1/ "	0.35
<u></u>	**		1"	0.70
	Constant Advert	Duilding Daned	1	0.70
	Cement and Asbesto	os Building Board	1	0.37
	Cement Plaster (Stu	icco)		0.08
	Metal Lath and G	psum Plaster		0.23
	Wood Lath and G	ypsum Plaster		0.40
	Fir Sheathing and	Building Paper	2932	1.16
	Fir Sheathing, Build	ling Paper and Yellow		
-	Pine Siding			2.00
5	Fir Sheathing, Buil	ding Paper and Stucco		1.22
S	Maple Flooring			0.65
			1"	0.83
	Battleship Linoleum			0.74
	Cement and Ashesto	s Building Boards.		0.37
	Asphalt Roofing			0.15
	Tile or Terrazzo Flo	oring	1"	0.08
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PENCIL POINTS DATA SHEETS

HOW TO FIGURE HEAT LOSS COEFFICIENTS (3)

A = AIR SPACE RESISTANCE. Heat is conducted across an air space by a combination of radiation, conduction and convection. The resistance of an air space increases with the air space width until about $\frac{34}{4}$ " has been reached—after which the width has but little effect.

In the illustration the resistance of air space Y is shown by the line 5-6 and the vertical distance indicates the air space resistance which can be identified by the symbol Ax. In a wall having several air spaces their total resistance can be identified by the symbol ΣA . Air spaces bounded by very smooth reflective or rough surfaces vary somewhat from the resistance of air spaces bounded by such ordinary materials as paper, wood, plaster, etc. The following table gives typical resistance values for spaces bounded by ordinary materials and will serve as approximations which are accurate enough for usual calculations.

Type of Air Space Width of Air Space Values of A

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I = RESISTANCE OF INSULATION. Resistance values per inch of thickness do not afford a true basis for comparison between insulating materials as applied altho they are frequently used for that purpose. The value of an insulating material is measured in terms of its heat resistance which depends not only upon the resistance per inch but upon the thickness as installed and the presence of air spaces which produce film resistances. In the illustration no insulation material is shown. The symbol I is used to designate the resistance of an insulation material, and in the case of several occurring in the same construction, the symbol ΣI would be employed. The following table gives typical resistance values for I.

	Type of Insulation	Th	ickness	Val	ues of 1	
	Typical flexible blankets		1"		3.70	
	Blanket of wood fibers between layers of paper		1"		4.00	
	Hair felt blanket between layers of paper		1"		4.00	
	Glass wool, loose fill or bat		1"		3.70	
			2		7.40	
	***************		398	1	5.45	
0.	Loose cellular dry gypsum		1"		1.00	
	Typical mineral wool, loose fill or bat		1"		3.70	
	Loose sandnet and shavings		1"		2 44	
	Tupical nigid corle board		1"		3 7 2	
	Typical fight cork board		1		0.00	
			1/2		5.00	
	Typical rigid fiber board		1"		3.03	

Continued on next Data Sheet



This means that each square foot of the wall construction will transmit 81-thousandths of a Btu per hour per degree difference in temperature between the inside and outside of the construction.



IMPLICATIONS OF A. R. P.

BY SERGE CHERMAYEFF, F.R.I.B.A.

EDITOR'S NOTE—This is the beginning of a series of new discussions by a distinguished British architect (now residing in San Francisco) in which he will attempt to clarify the matter of Air Raid Precautions, commonly known as A.R.P. (In our issue of November, 1940, Mr. Chermayeff outlined a suggested program for architects who were beginning to be concerned about A.R.P. and this outline furnished the point of departure for the activities of several defense committees subsequently organized.) Even in Europe, where the problem of defending populations against air attack has been studied during years of anticipation and more recently under actual war conditions, there is still some room for the improvement of techniques and organization. Over here, where we are still incompletely conscious of the threat, there is every reason to be informing ourselves of the experiences of foreign cities and devising, if possible, better means of handling the modern emergency of air warfare. Mr. Chermayeff, in London, watched the various phases of preliminary fumbling by government with the imperfectly understood problem and the struggles of technical planners, including himself, to develop and secure the adoption of a rational program. He is therefore in a position to tell us how to be sanely expeditious in doing our own job.

History repeats itself with minor variations. Since first writing on A.R.P. last fall for the November issue of PENCIL POINTS certain events which one can recognize have followed a familiar sequence. Architects and engineers here in the U.S., as their colleagues in Europe before them, have reacted inevitably to the approaching storm. A genuine desire to serve their country's needs as well as an equally genuine desire to survive as individuals has inevitably led them to regard building for war, "defense building," as the only alternative to the rapidly receding private "peace" practice for exercising their professional skill.

LONG RANGE ASPECTS

For the most part, all that has been written in the architectural and technical press appears to have accepted a defense activity as something quite separate from a peace activity, and most of the authors on the subject have plunged into technical detail of bomb-proof shelters and have dwelt little, if at all, on the possibility of combining the immediate purposes of defense with the long term "peace" use of A.R.P. as a whole. I hope to deal with this aspect of A.R.P. in later articles. The purpose here is to evaluate what has been done so far by independent technicians.

Because solutions in detail can only follow reasonably after statement of principle has been made and an organization for carrying this principle into action has been established, the most important contribution made so far has been that of the Boston group of architects.

MERIT OF BOSTON PLAN

Their plan, from the moment of its inception, establishes an organizational link between the Federal Government in Washington, local interests and Government departments of State, County and Municipality, and the professional group, in this case the A.I.A. Their action implies the recognition that A.R.P. involves the broadest patterns. The preliminary plan of Boston makes it clear that three major representative groups are involved, the People, the Government, the Technicians. Their plan as a whole, therefore, may well serve as a model for others to follow: that is, a program of genuine objective research into the problem here in the U. S. and not the blind acceptance of specific remedies offered for other ills in other places and under different conditions of war.

The work undertaken in connection with detail rather than matters of principle by the Pratt Institute, New York, into "defense design" and by the American engineering societies who at this moment have representatives making field observations in England will prove its value in later stages. Whatever the relative merits of these different actions may be, enough has been written and done to suggest that the initiative is in the hands of the technicians. It is important that they should not lose this initiative. The moment has come, however, when something must be heard from the others involved.

WE CAN PROFIT BY ENGLAND'S EXPERIENCE

In certain particulars the U.S. may be spared the repetition of undesirable events in England. The U.S. has so far been spared a Government soporific which chose inexplicably; as its first subject matter, protection against the least likely form of attack: gas, while completely neglecting evidence and technical advice on fire and explosives. No doubt, some private shelters complete with cocktail bars and air-conditioning have been erected here at great cost for some obscure purpose of millionaires "a la mode." But at least the public at large has so far been spared hire purchase plans for acquiring patent shelters professing immunity from all attack of man or devil.

PROBLEM MUST BE STATED

The spread of "patent medicine peddlers" can therefore be prevented here if the work to date of the tech-

nicians is carried to its logical conclusion. This can only happen if the other protagonists enter now. No technical solution can be offered, however much good will and knowledge specialists such as architects and engineers may possess, unless the problem is clearly stated. Planners, architects, engineers cannot do this alone. They can assist in clarifying the problem through their objectivity and intelligence. Through their continued organized effort they can stimulate an increased interest and understanding of A.R.P. Finally they can put it into its physical form. But that is all they can do.

In a democratic society it is as important to stimulate intelligent interest in A.R.P. among the people whose survival or obliteration will depend on the efficacy of this, as it is to supply a number of skilled technicians on whom the Government may draw. Without a sufficient and intelligent interest on the part of the people as a whole the actual execution will be heavily handicapped, if not completely ineffectual.

For this reason it seems essential that the issues of A.R.P. as understood by the technicians, are not confined any longer to the technical press with its limited influence but are made known through every possible channel which can reach the public.

FEDERAL GOVERNMENT ALONE CAN CLARIFY

An authoritative answer to the question of what A.R.P., for whom, against whom, should be made without delay: the problem must be stated. The Federal Government alone can do this and should make such a statement without ambiguity. Such a statement would remove the unknown quantities which hamper further progress: who the enemy is, the probable places from which he will attack, the approximate areas in this country which will be involved in such an attack, and the degree of protection the Government deems to be effective, and how far it is prepared to go to see that this protection is supplied. To sum up, until the Government has made some statement on strategy and policy, architects and engineers cannot usefully do more than confine themselves to tasks of organization and theoretical research in preparation for the day when fuller knowledge will make further action possible.

An official statement of this kind will

necessarily be a compromise between strategic policy issues and the need to prevent hysteria, misguided action, and exploitation—which all involve wastage of effort, time and money in the first place, and life in the second—if war becomes an actuality. In spite of this, I still believe that such a declaration from the Government is the next indispensable step towards A.R.P. Whatever the technicians undertake can only be effective if it has the full approval of the Government and its financial support and necessary legislation.

MANY FACTORS INVOLVED

In November I endeavored to make the point that defense planning is essentially a problem of organic unity, of which A.R.P. is an integral part. At the cost of repeating myself, I want to stress again the interdependence of apparently unrelated factors. Without the knowledge of the problem of strategy and policy as a whole, no A.R.P. plan can be intelligently evolved for a given area or even the design of an individual shelter.

Let us take a hypothetical situation of a city in a vulnerable area which will be required to provide A.R.P. for its citizens. Without some knowledge of the distance of the bases from which the attack will be made, one cannot proceed. Flying distance determines warning period. This in its turn suggests the distribution and numbers of shelters. Other things being equal, the logical conclusion in the case of a minimum warning period would express itself in a maximum number and a maximum distribution of shelters to make these most readily accessible. The reverse would obviously be the case if the base of the attack were distant. All things are not equal however. Minimal warning period implies a convenient enemy base which in its turn suggests continuous or frequent attacks. In this case shelters would be occupied for prolonged periods. In view of the fact that there seems no completely effective defense against night raiders, night raids will obviously be resorted to, and to obtain even partial rest people would probably have to sleep in shelters. Such conditions would immediately demand equipment of shelters which it would be impossible to provide on grounds of economy alone in anything but very large shelter units. The degree of protection and immunity per head which it is possible

to provide for a given sum of money increases in direct proportion to the size of shelter.

The hypothetical situation cited above contains a paradox. The same set of factors on the one hand seem to demand a large number of small shelters, on the other fewer and larger shelters. The point is that aside from logic and technical knowledge two unknowns are involved, the degree of protection and amenity to be provided —as well as the amount of money available to meet this demand.

HOW FAR MUST WE GO?

The definition of these unknowns is therefore of the most vital importance. Without this A.R.P. can have no meaning. We have heard too much and too often about the English official theory of dispersal. This has always been presented in a detached abstract way. However, as Professor Haldane has repeatedly pointed out, mathematically such a theory has no validity. On the other hand too little has been said concretely about what happens. Anyone killed as a result of air attack is very dead, whether death is caused by mental shock, exposure, fall of debris, as a result of wounds received from splinter of bomb, shell or machine gun bullet, as the result of gas, slow death by burning, or sudden death by direct hit.

A.R.P. which does not give the maximum possible protection to the maximum number of people would be an admission of failure to profit by experience. It is not therefore irrelevant for the technicians at this stage to ask for information on principle. Without it, nothing very useful can be designed in detail.

SUMMARY

To sum up, technicians have taken the initiative in creating an interest in a vital aspect of defense planning. They have further created a nucleus of organization. To translate this initiative into action they must now know the Government's intentions. They are in the position to assist and accelerate Government action and can assist the tasks of both the Government and their own groups by continued development of a philosophy of A.R.P., technical study and organization, and by bringing the issues before the public. Good A.R.P. can only be provided by widespread cooperation. Architects and engineers by themselves are not enough.

MONTHLY WASHINGTON REPORT

COMPILED BY A. D. TAYLOR OF CLEVELAND

The following information is prepared each month as a result of observation of activities in the different Government agencies engaged in National Defense. The Editors welcome comments and suggestions from readers as to the kind and extent of information which may be of the maximum interest to members of the technical planning professions and to the building industry for whose benefit these monthly reports are published.

GENERAL PROGRESS With the increase in the number of defense projects for the Army and for the Navy, as well as industrial plants under Government and private ownership, the demand for additional housing is rapidly growing. This housing will be developed through government agencies and also through private capital.

The Reconstruction Finance Corporation is taking a more important part in the program of providing industrial plants to be operated by private companies and also in connection with the development of new ordnance projects, many of which will, as reported, be constructed under the direction of the Reconstruction Finance Corporation through the Defense Plants Corporation.

It is quite likely that a strong effort will be made to place under contract with architects-engineers a number of projects which to date have been under consideration but which have not to the date of this report been released for actual planning procedures.

DEFENSE HOUSING Increased amounts of money are being made available for defense housing, the major part of the funds for which are allocated to the Federal Works Agency, to the Public Buildings Administration, the United States Housing Authority, the Farm Security Administration, and to special groups within the Federal Works Agency and under the direction of Col. Westbrook and of Dr. Foreman. Some special projects have been handled directly under the Federal Works Administrator, Mr. Carmody, through his assistant Col. Westbrook. The other division of defense housing in the Federal Works Administrator's office has to date handled approximately 12,000 units (8,000 of which represent permanent housing and 4,000 of which represent temporary housing). Architects and representatives of other technical professions have been employed on these projects being done direct through the Federal Works Administrator's office.

The Farm Security Administration is taking a large amount of responsibility for temporary housing which is of the prefabricated and demountable types. This housing is in connection with military reservations and in connection with industrial plants where a portion of the housing is distinctly temporary in character.

A new program of housing through the United States Housing Authority will be released before this report is printed. The amount of housing being done through the United States Housing Authority, as Defense Housing, has been steadily increasing. Information can be procured concerning these lists of projects by referring to the releases and magazines which are published through the government agencies heretofore referred to in other issues of these reports.

PENDING LEGISLATION Senate Bill 1580. This bill on which hearings have been held before the Senate Committee on "Post Offices and Post Roads" was reported out from this committee on June 10 (Report Number 416). It authorizes appropriations to be expended during the emergency on roads for National Defense and for other purposes. The maximum appropriation under the bill in its present form approximates \$250,000,000. These funds are to be expended for the purpose of correcting and improving the conditions in the main lines of the strategic highways, to provide adequate and proper access to defense military sites and other establishments, and to provide new highways where existing highways have been cut off because of military developments. Under this bill "flight" strips may be developed along public highways for emergency use of planes when required.

Funds from this bill may also be used to make necessary advance engineering studies, surveys, plans and to develop programs for this part of the defense work. This bill is also before the House of Representatives as Bill Number H. R. 4935 and hearings have been held before the House Committee on Roads. Copies of these and other bills may be procured from the Clerk's office in the Senate and the House of Representatives.

Senate Bill Number 1617, sometimes known as the Revolving Fund Bill, was referred to the Senate Committee on "Education and Labor" on June 13, 1941. This is a bill to amend the Employment Stabilization Act of 1931 and was introduced in the Senate on June 10, 1941.

This bill is an authorization for appropriations to be allotted to states and political subdivisions thereof for examinations, surveys, legal studies, studies of physical planning problems and of financing for proposed public improvements which will be desirable and necessary after the present emergency.

Under the terms of this legislation desirable opportunities for employment of those persons now engaged by public agencies (federal, state, county and municipal) should be greatly increased.

Community Facilities Bill H. R. 4545. This bill, to which reference has been made in past issues of this magazine, has not to the date of this report been passed by the Senate. Hearings were held before the Senate Committee on "Public Buildings and Grounds," on May 19 and 20. Copies of the report of these hearings are available through the office of the Clerk of the Senate.

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CANTONMENTS, AND ORDNANCE PROJECTS To the date of this report nine cantonment projects have been announced and architects-engineers have been employed to prepare the necessary plans and specifications for these projects, as referred to in the June issue of this magazine.

Published reports indicate that the number of such projects (including cantonments and ordnance projects) may be greatly increased. As and when these projects are finally approved by the War Department, announcement will be made through the regular channels in which such information is released.

In the beginning of the defense program the Quartermaster General's Office had the responsibility for the planning and development of cantonments, ordnance plants, and army air fields. At the present time the preliminary plans for the army air fields are developed by the Air Corps, and the detailed and final plans are prepared by the Corps of Engineers who supervises the construction.

At the time of preparing this report the ordnance projects, for the construction of which Reconstruction Finance Funds are used, had been transferred to the RFC. About June 21, however, the responsibility for administering the program of construction on these ordnance projects was again placed in the Office of the Quartermaster General through the Construction Division.

AIR CORPS ACTIVITIES There will be increased opportunities for those who are interested in the

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construction program, in connection with the army air fields, the number of which will be increased to meet the proposed expansion in the Air Corps activities.

In this work there is more opportunity for the employment of engineering ability than of architectural ability because of the standardized plans and layout which are adopted in the development of these fields.

The housing requirements in connection with the new air fields are being handled largely through the housing agencies and not directly through the Air Corps.

POST-WAR REBUILDING OF BLIGHTED AREAS Much has been written and said concerning the extensive program in connection with the rebuilding of blighted areas in many of the larger centers of population, after the present emergency is over and as a part of the great Public Works Program. There seems to be little question concerning the intent of government

agencies to take an important part in this rehabilitation program. This work will probably be on a large scale and the preliminary preparation in developing plans and solving many other technical problems preparatory to any actual work should provide much opportunity for the members of the technical planning professions.

ADEQUATE FEES

FOR TECHNICAL SERVICES

The question of determining ample fees for the services of representatives of the technical planning professions engaged in Defense Housing has not been finally settled. This important question merits further consideration and in all probability a further meeting between representatives of the professions and representatives of the government agencies engaged in Defense Housing, will be held for the purpose of arriving at a mutually acceptable understanding as to the amount of fees to be paid for such services.

June 11, 1941

MAJOR DEFENSE PROJECTS UNDER THE CONSTRUCTION DIVISION OF THE QUARTERMASTER GENERAL'S OFFICE.

It is generally understood that in the Army Expansion Program there will be a number of additional cantonments including Triangular Divisions and Armored Divisions.

To the date of this report nine of these projects have been announced as follows:

Location of Projects	Architect-Engineer
Blackstone, Va. (Triangular Division)	Wiley & Wilson Lynchburg, Va.
Augusta, Ga. (Triangular Division)	J. V. McCrary Atlanta, Ga.
Neosho, Mo. (Triangular Division)	Burns & McDonnell Kansas City, Mo.
Fort Smith, Ark. (Triangular Division)	Black & Veach Kansas City, Mo.
Cookson Hills, Oklahoma (Triangular Division)	Holway Engineering Co. Tulsa, Oklahoma
Lompoc, Cal. (Combined Armored and Triangular Division)	Leeds, Hill, Barnard & Jewett Los Angeles, California
Eugene, Oregon (Triangular Division)	John W. Cunningham Portland, Oregon
Medford, Oregon (Triangular Division)	Hunt & Chambers Los Angeles, California
Columbus, Indiana (Triangular Division)	Charles H. Hurd Indianapolis, Ind.

PUBLIC RELATIONS

A SECTION EDITED BY D. KNICKERBACKER BOYD

The assembly of architects in California is now history. Members of Chapters and of State Associations have now gone back home or to work. While they were away, some of us in the East looked in the newspapers for accounts of important matters discussed or forward actions taken. We were disappointed to see on different days repetitions of a nature which are always more apt to make news because they seem to portend disaster rather than constructive accomplishments.

"Says Architects Are Losing Status" was a heading in the New York Times, on May 18th. In the same issue was printed a doleful statement attributed to Dean Bossange, on the closing of the Architectural School in the New York University:

"We must admit the profession has slipped badly since engineers were allowed to file drawings. Further, much work is now done under government control, many corporations have an architectural department in their organization and in the last year 'designers' and decorators have become aggressive competitors, so the prestige of the profession has suffered."

This Editor has attempted to prove in the last five issues of this Section, by the words and wise counsel of others, that if we architects begin now to do what we should

"The public in general wants to know and must be better informed regarding the nature, extent, and value of the architect's services. In conference with a small group a short time ago, I was asked the question: Just what does an architect do besides making a building good-looking? Having lately read an article pub-lished in the last issue of *The Florida* Architect entitled 'This Man the Architect,' by Charles S. Symonds, Architect, I gave to this group a sketchy outline of the article and to the most interested ones I submitted a copy for them to read. The reaction of these men to this article makes it clear to me that we must find some way to convey to the public that too much emphasis has been laid on the art of architecture; and as a result, in this day of practical men, the architect has suffered by the public's blind conception of him as being solely the artist, endowed with the limited ability to make things pretty."

HENRY Y. SHAUB, Lancaster; Former President, Pennsylvania Association of Architects

During the years that I have been contacting the various Chapters and State Associations, I have received data and information that suggest a number of thoughts concerning public relations. Of these, I am taking the liberty of recommending one in particular to your attention. It refers to the question, "just what is an ar-chitect?" Some of the answers have been so inadequate or obscure that I have become obsessed with the idea that an answer to this very pertinent question should be formulated, adopted by The Institute and the profession generally, used in public relations and held up to our young men as defining the role for which they should qualify as practicing architects.

FREDERICK A. FLETCHER,

Baltimore, Md.

(EDITOR'S NOTE: We will soon follow this suggestion—and start a discussion. In going before the public we should surely be in agreement as to the article we are urging them to use. Let's work it out and stand with a united front.)

have done years ago in establishing ourselves in public esteem, we can yet make rapid progress. We cannot do it, however, by blatant self-criticism and abnegation and bemoaning of our status. This Section refuses to "enjoy poor health" or to join the group gathered around the wailing post.

Those returning from the Convention bring back grand stories of the trip, the magnificent scenery, the comradeship, and the unparalleled hospitality of the Californians. They also say there was evidence on all sides of an ever-growing consciousness of the need for public service by the architect and the earning of greater recognition of the profession by that public which knows so little about the architect. That mass of people must surely henceforth become better-informed about the value of competent services. We print on this page comments appropriate to this declaration-one by a past President of a State Association, another by one just elected to the Board of Directors of the Institute itself. Congratulations, Mr. Fletcher. As to Public Relations discussions at the Convention, Editor Kenneth Reid has kindly consented to report briefly for amplification later.

> D. KNICKERBACKER BOYD 4 South 15th Street, Philadelphia, Pa.

Public Relations proved to be one of the livest topics considered at the recent convention in Yosemite Valley. One regular round table session and one special session of a selected group each devoted several hours to serious discussion of the problem facing the profession and of ways and means of developing a program and a campaign. Members exchanged information as to the experience of local public information committees and it was voted to make Talmadge Hughes of Detroit, who is the A.I.A. Public Information Chairman, the central officer through whom a full national program shall be worked out this year to be presented to the Board of Directors for approval and action at the next convention.

All individual architects who are really interested in Public Relations activities are urged to write Mr. Hughes at 120 Madison Avenue, Detroit, and to give him all practical suggestions that would fit into an allout campaign. The group backing this movement really means business and deserves your active help. K. R.



HELP BY MATERIAL MEN

(3) The accompanying illustration of an advertisement on the back cover of a trade publication ("Glass Digest") in which is a quotation from the article by Myron L. Matthews affords an interesting story.

Out of a clear sky came to this writer the letter which follows:

PLASTIC PRODUCTS COMPANY

General Offices, Detroit May 15, 1939

Dear Mr. Boyd:

Our Mr. Wood spoke to the writer about the very nice time he had with you when he last in Philadelphia. I would like to thank you for the courtesy shown him.

Mr. Wood also spoke about giving the architects a little publicity when we had the opportunity. It so happens that we have the back cover of the "Glass Digest" magazine published principally to glass jobbers open for the month of June. We also have a cut which is a duplication of our letter-head and would like to write a letter asking everyone concerned to consult an architect, see your architect or some such slogan.

Would you be kind enough to give us your ideas as to just what we should put in there so as to help the architect? Understand, this magazine does not go directly to people who are going to build although it does have quite a wide circulation and is read by a great many people. Possibly we could ask the glass people if they would use a slogan on their advertising.

If you have any ideas along this line, that you would like to have us incorporate in this, they would be certainly most welcome. The writer wants to get this out so it will appeal to people and will show the architects we are trying to cooperate.

Our copy must be in by the 25th of May so if you could get it to us say around the 20th, it would be appreciated. Again thanking you and trusting that the writer may have the privilege of meeting you personally some day, we remain

PLASTIC PRODUCTS COMPANY (Signed) A. D. Covert, President.

While the advertisement gives its own answer to this letter it was a pleasure to receive a reply from Mr. Covert containing this paragraph:

"Thanks a lot for helping us out. We trust it will accomplish something for the architects as well as ourselves. It was very kind of you to help us."

(4) Another gratifying example of cooperation through response to a suggestion is here offered. These cases are presented only to show what can be accomplished by any individual architect who will take an active part in such matters, without any thought of compensation other than the appreciation of co-workers and the gratification at having suggestions acknowledged and courtesies reciprocated.

OTIS ELEVATOR COMPANY Philadelphia Office February 27, 1935

Dear Mr. Boyd:

You will remember at a special meeting called by you and attended by our Mr. Sullivan and the writer, you mentioned the desirability of the larger companies advertising in national publications suggesting that architects should be consulted on building modernization, etc.

We are pleased to advise you that as a result of this conversation we discussed the matter with our Advertising Department and we are enclosing a sample advertisement, which we hope will please you and conform with your ideas along these lines. This advertisement appeared in the February issue of "Fortune," the February 16th issue of "Business Week," and the February 11th issue of "Time."

It is also the writer's intention to discuss this matter further with the members of the Producers Council locally, many of whom represent companies who do national advertising, with the hope that we may be able to have other national organizations follow suit.

OTIS ELEVATOR COMPANY (Signed) H. Welden For Manager.

This is what appeared in a "box" inserted in the advertisement cited:

CONSULT YOUR ARCHITECT

A relatively small expenditure on building modernization is solving the tenantry problem for many building owners. Your architect can show you how a modernization appropriation can be used to advantage.

EXHIBITS & EXHIBITIONS

(5) Exhibits of Building Materials. This subject is timely and a lively one for discussion. On the occasion of other exhibits such as those of Architecture or Allied Arts, or at certain meetings, there may often be opportunities when an exhibition of building materials and devices-especially those relating to homes and housing developments-might readily be arranged. Properly conducted and without undue emphasis on the practical side, they could increase the value and interest of a whole exhibit, at the same time becoming an added source of information to the public.

The subject of "Standards for Exhibits at State Meetings" was on the program for discussion on May 7th at the Chicago Session of the Producer's Council en route to the Institute Convention. This subject would seem to offer possibilities for cooperation with State and even local groups, in Exhibition matters. Such exhibits have already been held. With the cooperation of the Institute, the State Associations, local groups and the Producer's Council, PENCIL POINTS will compile as comprehensive a list as possible, of all Architectural, Allied Arts, Building Materials and similar exhibits held in recent years. This Editor will gladly furnish information about previous exhibits.

RADIO

(11) Woman's Page of the Air

Each weekday morning at 8:45, E.S.T., the Columbia Broadcasting System presents a 15-minute program with the title just given. It is edited and narrated by Adelaide Hawley, Woman's Page Editor of the M.G.M. Newsreel as "The News of the Day."

Recently Elisabeth Coit, New York Architect, was the Guest Speaker and was introduced thus:

"Our guest this morning is a registered architect, a graduate of the Massachusetts Institute of Technology, and her practical experience of many years has taken her among other things into the building of country houses, remodelling cooperative cafeterias and designing industrial interiors in New York City; she is a member of the Old Housing Committee (of the Citizens' Housing Council) of New York, and of the American Institute of Architects."

Miss Coit made some excellent suggestions tending to bring out facts about how the majority of folks live so that architects, city-planners and other technicians may the more acceptably provide for meeting the needs of the average home owner or tenant. These questions and answers were a part of the broadcast:

- Q. "Do you think the things required of a house vary from generation to generation, Miss Coit, or not?"
- "I think they do-very much so-and yet A. we go on building with the same general layout which has been used for years. Take for example the country farmhouse, where one of the good sized spaces was a woodshed, and compare that with the space needed for an oil tank now so common for fuel storage. Or the play room or game room-sometimes we call it the rumpus room-a space quite different from the old-fashioned parlor, always on its best behavior. But this does not mean that the spaces in the old farmhouse may not be modified to suit modern living needs. One of the best houses I have seen recently within a modern development was an old house brought up to date. Its planning was excellent from the point of view of local breezes and privacy-even than the new houses." -much better
- Q. "In other words, one of the chief problems of housing is to make it function according to the needs of modern living. How do architects and builders know what those needs are?"
- A. "There is quite a bit of guess-work—I wish that defense building might be a sort of laboratory where we could find out just what house dwellers like and dislike."
- Q. "How would you propose to find out-by door to door canvassing?"
- A. "That would be the ideal way—if the General Federation of Women's Clubs would include it on their study programs and send out questionnaires to various localities and ask local members to get answers to the questions. Then the questions could be sent, perhaps, to the American Institute of Architects and analyzed."
 Q. "How would this material be utilized?"
- A. "The Federal government; state and local health and educational groups would be

interested; as well as builders, contractors, real estate dealers, and certainly architects would make use of this information."

- Q. "Has such a survey ever been made?"
- "The Oregon State College at Corvallis Α. has published some good studies of the use of space in the home, based on questionnaires answered by farm and town dwellers. It was found, among other things, that the modern 'Streamlined' kitchen is not ideal-the 36-inch height suitable for washing dishes, etc., is too high for stirring and beating, which should be done on a shelf about 4" lower. Then another very fruitful questionnaire was published by the Women's City Club of New York, which tabulated the result of interviews of about 1,400 homemakers in old law tenements in the city. The object was to find out what the tenants liked-and did not like-in their apartments, and, interestingly enough, one of the things most longed for was toy cup-boards—a wish which architects would be slow to appreciate if such a survey had not made it clear to them."
- Q. "What sort of questions would be included in such a questionnaire?"
- A. "Timetable questions:—questions about the use of storage spaces—about wall spaces for furniture requirements—in short, how the family lives in the house, and how it could be better served by different arrangements."
- Q. "I should think it would be sort of fun for any woman—to sit down with a piece of paper and figure out how much space she is paying rent or taxes for which is used only occasionally."
- A. "It would be fun, and rather surprising too. We are apt to take for granted the delinquencies of our house, and a survey of how we really use it would certainly give us many surprises. Architects want to plan houses or large-scale housing in such a way as to best solve the problem of how people live: and they must work from the data at hand. More information about how people live and want to live would bring about the model house to end all 'model houses.'"

BOOKS & PAMPHLETS

(6) "The High Cost of Cheap Construction."

Under this title the Weyerhaeuser Sales Company has been for many years publishing a book of valuable suggestions for eliminating faults frequently found in home construction. In the 1940 revised edition the foreword "How to Obtain a Substantial Home" appears this statement:

"No home can be thoroughly successful unless it combines four basic essentials: good design, efficient plan, right material and sound construction. A home may be large or small, elaborate or inexpensive. It may be attractively finished and it may boast of every modern convenience and labor-saving device, yet without all four of these essentials it can never be a permanent, substantial and satisfactory home.

"The purpose of this book is to treat in simple terms the construction principles and practices that will help to make your house a substantial home. It will show you the means of judging the construction of your home as it is being built; assist you in avoiding endless annoyances and excessive maintenance costs. To the home builder who retains the services of an architect, this book can offer little more than an appreciation for the value of his services. They insure correct design, carefully prepared specifications and intelligent supervision."

MISCELLANEOUS

(8) FHA Suggests Employment of Architect. In the opening address of Henry Y. Shaub, President, at the annual meeting in Hershey, Pa., on April 18th, of The Pennsylvania Association of Architects, he included this reference to a matter concerning public relations;

"A short time ago I read in the Philadelphia Inquirer the following paragraph:

" 'The employment of an architect to design a house is a sensible and economic step,' says an FHA statement. 'The architect can often make savings in construction costs, as well as in the use of space. Being acquainted with new materials, new methods of applying them, and new types of equipment, he can suit the house to the needs of the family.'

"This statement is good 'advertising' for the profession but got into the press through FHA's influence.

(9) Release from Federal Home Loan Bank System

In the newspapers of the country there recently appeared this statement covering architectural participation in the "Registered Home Service."

"With tens of thousands of new wage earners being added to the ranks of potential home owners through defense activities, and the normal demand for housing reaching a new peak, home seekers today were urged to insist upon three elements essential to the security of their investments—good design, quality materials and sound construction.

"These essentials can be assured most effectively through home building services such as an increasing number of institutions are offering throughout the country," declared James Twohy, governor of the Federal Home Loan Bank System. "These institutions, which have enlisted the cooperation of architects and technicians in the establishment of home building departments, have taken an important step in raising the standards of American dwellings."

ings." "Twohy pointed out that the 12 regional banks of the Federal Home Loan Bank System now are making available the Registered Home Service, by means of which a mark of quality can be put on homes completed under its protective features.

"In this effort the Federal Home Loan Banks have the support of the American Institute of Architects and the Producers' Council, national association of quality building materials manufacturers," said Twohy. "The service is open to the Bank System's membership of nearly 3,900 savings and loan associations and similar home financing institutions, which have assets of more than \$5,000,000,000."

The Editor of this Section will welcome comments from architects in any part of the country as to whether or not the F.H.L.B.S. proposition reacts to the benefit of themselves and building owners in their localities and is to be regarded as a favorable factor in public relations.



THE MURAL ABOVE TITLED "BRINGING THE NEWS TO OREGON" BY FRANK H. SCHWARZ, OF CROTON-ON-HUDSON, NEW YORK, RECALLS AN INTERESTING EPISODE OF OREGON'S HISTORY WHEN STEPHEN SENTER RODE 16 MILES THROUGH THE SPRING FLOODS TO ANNOUNCE THE LONG-AWAITED ADMISSION OF THE STATE INTO THE UNION. THIS MURAL SUGGESTS A RICH TAPESTRY, AGAINST DARK PANELLED WALNUT

MURAL IN SENATE CHAMBER, OREGON CAPITOL-FRANK H. SCHWARZ

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HERE, THERE, THIS & THAT

POTOMAC PATTER

So it takes an emergency situation, does it?

It does. The belated realization by Congress that the nation is pitifully short of proper hospitalization and inadequately prepared to care for its citizens on a huge scale health program has brought about legislation to make funds available to existing hospitals for expansion of their facilities; so Washington, long in need of additional hospital facilities, is taking action steps to procure the necessary funds to expand its public and private hospitals. Preliminary study plans have already been completed by Faulkner & Kingsbury for a huge addition to a general hospital (The Garfield); Porter & Lockie, with the aid of one of Jos. A. Parks inimitable renderings, have prepared study drawings for a substantial annex to the Columbian Hospital for Women; and Buckler & Fenhagen, of Baltimore, have made drawings for an addition to the Children's Hospital. Under the able guidance of Architectus Specialistus Hospitalus Charles F. Neergard, Consultant for the Health Security Administration,

which office gives the aye or nay on the dispersion of the enabling gold (or is it silver), these plans will be surveyed, hashed and rehashed until the day when it can be said that it will take so many chunks of platinum to bring the dreamed-of structures and their consummate earthly good into the third dimension. And if the H.S.A. thinks that the loan of a few millions (\$15,000,000 was allocated to your nation's capitol) is a good risk, they will "aye" and we will have what we need. Little thanks to a usually disinterested Government, both federal and local, but now less thanks to an emergency which requires preparedness for any situation. Of course, the above-mentioned offices will have the work (we hope) but will sufficient architectural and engineering help be available to shoot the drawings out fast enough?

For the emergency has taken practically all of the available talent into government offices. The local architects, busy with housing, new office space, and remodeling, cannot get help. This boom is really the tops, but the lid might blow any minute now! With priorities and the uncertain procurement of structural materials, how can drawings be made (at a profit) for structures that may not be built? Sue, if you must, but your draftsman assuage; pay him on time and a reasonable wage.

Apropos the proper wage, latest action by Public Buildings Architectural men has been a petition signed by over 300 aggrieved Permanents requesting the powers-that-be for additional remuneration in consideration of their efforts in both good and bad times and in view of the increased cost of living under the present emergency situation. It is understood that the petition was turned over to *Louis A. Simon*, Supervising Architect, who apparently is most sympathetic and understanding of the request. We have a feeling that Mr. Simon will uphold the boys. RED

HOUSING STUDY

On June 3, at the offices of the United States Housing Authority, Nathan Strauss, the Administrator, organized a committee of architects and others he had called together to discuss ways and means of improving (Continued on page 54)

Ground has been broken next to the New York Navy Yard in Brooklyn for "the world's largest public housing project," shown below in an aerial perspective. Fort Greene Houses will cost \$20,404,000 (State funds) and will accommodate 3,501 families. It is the first project of the New York State Program directed by Edward Weinfeld, State Housing Commissioner; and William F. R. Ballard, Housing Consultant, is Coordinator of the units being designed by Associated New York Architects





Published by the UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago

Twin Apartment Fires

BRONXVILLE, N. Y. — A spectacular blaze originating at the ceiling of the top floor destroyed the entire roof and gnawed at top floor apartments. At 10:15 the first fireman arrived and by 11:00 o'clock the fire was under control. Gypsum plaster and gypsum partitions were used in this apartment and the fire damage was \$15,000.

Across the river in Yonkers less than 3 months later, flames were first noticed by neighbors in the upper floor. The smoke could be seen from all over Westchester County. Framing and partitions were of combustible material and the damage was estimated at \$310,000.

BAR-ROOM MIRROR SAVED!

BUFFALO, N. Y .- Grease accumulating around ovens and stoves caught fire in the kitchen of a well-known Buffalo hotel. The kitchen was separated from the bar-room by a 3" Pyrobar tile partition. The kitchen fire was extremely hot - temperatures much higher than the usual fire test temperatures created a raging inferno which destroyed every useful object in the room and completely demolished the kitchen interior. On the opposite side of the 3" Pyrobar partition was mounted one of the longest bar mirrors in Buffalo, a great sheet of glass extending horizontally for many feet. Though the fierce fire was only three inches away from the back of this mirror, the glass was not even cracked and the silvering was not damaged in any way!

Ancient Swimming Tank Test Proved Right By 23 Years Use

NEW YORK, N. Y .- An inspection by Navy engineers of the reinforced gypsum floor under the swimming tank of the old Hammerstein Theater in 1918 resulted in an acceptance of gypsum construction for Navy buildings in proximity to tide water. Long before the time of Ziegfeld, bathing girls disported in Hammerstein's theater tank for the edification of old-time New Yorkers and out-of-town visitors. The tank was supported on a gypsum floor. Leaks were plentiful and water was splashed over the floor. Navy engineers investigated this slab after 20 years of such use, and on their recommendation many gypsum buildings were constructed around 1918 to withstand really serious moisture conditions. These buildings are in prime condition today-23 years later.

PYROBAR AND RED TOP WOOL MAKE HIGHLY EFFICIENT SOUND - ISOLATING PARTITIONS



NEW YORK, N. Y.—Architect Kenneth Norton, one of New York's best-known apartment house design specialists, has stated that sound isolation is one of the most important problems to be solved in city apartment buildings. In the John Murray House now being constructed at Madison Avenue and 37th Street, Mr. Norton has devised a partition system for sound isolation, utilizing 1" USG Red Top Insulating

Wool Blanket to further increase the naturally high resistance of Pyrobar gypsum tile to the transmission of sound. The complete effectiveness of this newly developed partition is proven beyond doubt by the isolation of construction noises while the building is in progress. Floor finishing machines provide a noise level far above that which would be normally created by a group of celebrating tenants—yet the transmission of this intense sound is satisfactorily deadened by the partition Mr. Norton has devised.

This construction consists of 3'' hollow Pyrobar, against which is applied a 1'' Red Top Insulating Wool Blanket. Against this are $3_4'''$ furring channels anchored at the floor and ceiling but not fastened through

the blanket to the Pyrobar in any way. Over the channels metal lath and plaster are applied and on the opposite side of the partition is $\frac{1}{2}$ " plaster on the Pyrobar.

This apartment house will not have vacancies because of noisy tenants driving quiet-loving occupants to other landlords.



Pyrobar Gypsum Tile

Pyrobar is the registered trade name for gypsum tiles made by the United States Gypsum Company. Pyrobar Gypsum Tile is used in the construction of non-bearing partitions; furring; elevator, stair and shaft enclosures. A material for these uses must have certain performance characteristics, as follows:

- 1. Fire Resistance
- 2. Ease of Erection
- 3. Adaptability to Alteration
- 4. Ease of Attachment
- 5. Economy and Light Weight
- 6. Good Plaster Base

USG Pyrobar Gypsum Tile completely fulfills every requirement for the construction of non-bearing partitions and furring.

1. Fire Resistance

Gypsum will not burn. It is a rock and cannot burn regardless of the intensity of heat to which it is subjected.

Gypsum is a dry mineral containing 20% of its weight in combined water. When fire or heat attacks these gypsum products the gypsum itself acts as a good insulator and when the heat rises to about 260° F. the combined water begins to release thus increasing the fire resistance or transmission of heat. This resistance continues long after heat reaches 260° F.

Gypsum will not expand when subjected to fire but as the water of crystallization is evaporated it contracts very slightly.

Underwriters Fire Test

A representative test on Pyrobar by the Underwriters Laboratories is contained in Retardant Report No. 378. A 3" hollow Pyrobar partition with $\frac{1}{2}$ " of gypsum plaster on both sides was subjected to a fire for 2 hours and then submitted to a fire stream test of 50 pounds pressure for 5 minutes. For the last $\frac{1}{2}$ hours the temperature was approximately 1700° F. At the end of the test the temperature rise on the opposite side of the partition was only 90° F. and no fire, smoke or water had passed through the partition.

2. Ease of Erection

Each Pyrobar unit provides 2½ square feet of wall surface which lays up rapidly. Pyrobar Gypsum Tile are cast in steel molds, assuring true, square edges and accurate dimensions which make it easy to build true, plumb partitions. The light weight of the tiles (see table of weights below) means speedy handling during erection. Pyrobar can be readily cut with a plaster saw to fit openings, to form pipe chases, to allow for conduits, and the cut pieces can be used without waste.

3. Adaptability to Alteration

Alterations are quickly made to meet changing conditions in hotels and office buildings. New openings may be cut in a gypsum tile partition, a section or entire partition may be removed with a minimum of labor, time and inconvenience. In most cases the units removed can be salvaged for other use.

4. Ease of Attachment

PYROBAR

Any trim can be nailed with square cut nails directly to Pyrobar Tile, without shattering or breaking it, or trim can be nailed with finishing nails to the usual plaster grounds. For heavier objects, wood nailing blocks are built into vertical joints at proper positions, each block spiked to a tile end as the wall is erected.

5. Economy and Light Weight

Saves Time. Easy cutting and rapid erection of large units, each of which provides $2\frac{1}{2}$ square feet of wall surface.

Saves Mortar. Forty per cent fewer joints as against a wall of equal thickness with only I square foot of surface per unit.

Saves Plaster. Twenty per cent less plaster required over the true, even surface of Pyrobar as against plastering over uneven clay tile. Saves Weight. Twenty-four to 46 per cent

less weight per square foot than clay tile of

equal thickness, reducing dead load, saving construction cost, steel for support, freight, hauling, hoisting and labor.

6. Good Plaster Base

In addition to the saving in plaster resulting from the true, even surfaces of Pyrobar, Pyrobar is an ideal base for gypsum plaster since gypsum bonds most readily with gypsum.

Pyrobar Uses

Gypsum tile has been used for partitions and shaft enclosures in fireproof and nonfireproof buildings for over 30 years. The use of Pyrobar Tile Furring, attached or free-standing, provides a permanent surface to receive plaster or other finish.

In addition to the partition and furring tile United States Gypsum Company manufactures a complete line of special shapes for use as structural steel fireproofing. Literature is available on request or see *Sweet*'s 4/48.



WEIGHTS OF PYROBAR PARTITIONS

Thickness of Pyrobar	Maximum Ceiling Heights in Feet	Pyrobar in Lbs. per Sq. Ft.	Lbs. per Sq. Ft. ½" Plaster 1 Side	Lbs. per Sq. Ft. ¹ /2" Plaster 2 Sides
11/2" Split	Furring	4.9	7.9	
2″ Split	Furring	6.4	9.4	
2" Solid	10'-0"	10.0	13.0	16.0
3" Hollow	13'-0"	10.0	13.0	16.0
4" Hollow	17'-0"	13.0	16.0	19.0
5" Hollow	20'-0"	17.2	20.2	23.2
6" Hollow	30'-0"	19.0	22.0	25.0

A. I. A. FILE NO. 10D

Pyrobar Specifications

A. I. A. FILE NO. 10D

NOTE—Use only the paragraphs which are applicable. Notes in small type are explanatory and are not a part of the Specification. Additional copies of this Specification will be gladly supplied on request—to be used for interlining and crossing out in preparing copy for typing.

1. GENERAL CONDITIONS. The current edition of the A.I.A. General Conditions are part of this Specification.

2. WORK INCLUDED. This Section comprises all labor and materials for the installation of gypsum tile partitions and furring.

3. MATERIALS. Use Pyrobar Gypsum Tile as manufactured by the United States Gypsum Company. Proportion mortar by volume of 1 part U. S. Gypsum "Block-Set" gypsum cement plaster, to not more than 3 parts of clean, sharp sand. Mix thoroly with sufficient water to produce proper consistency. Do not use Portland cement or lime mortar. Do not retemper mortar. Store gypsum tile and gypsum plaster in a dry location until ready to use.

4. INSTALLATION IN GENERAL. Lay all tile plumb and straight with horizontal beds uniformly level on each course. Break vertical joints. Lay with full flush joints. Build corners and intersections with Pyrobar tile interlocking in log cabin fashion. The first course of masonry in partitions or furring is to be (... gypsum tile for mastic, metal, or wood bases ... or ... cinder, cement or hollow clay block for cement bases or other bases requiring water ...).



The drawing at the left shows a typical section through the first course of a Pyrobar tile partition with wood or metal base. Since Portland cement mortar does not bond readily to gypsum, a standard cinder, cement or clay tile first course should be used for granolithic or terrazzo bases.

5. WOOD NAILING BLOCKS. The Contractor for work specified in the Section on Carpentry will supply suitable nailing blocks, for the attachment of grounds for fixtures and trim to partitions and furring. Blocks are to be supplied by the Contractor for Carpentry Work and placed by the Contractor for work in this Section. Space nailing blocks 1%'' thick x 12'' x the thickness of the Pyrobar for the support of heavy construction not to exceed 1'-4%''' o/c. Space nailing blocks $25/32'' \times 12''' x$ the thickness of the Pyrobar for the securing of grounds to receive ordinary trim not to exceed 2'-6 25/32'' o/c. Nailing blocks are to be nailed directly to the end of the gypsum tile with square cut nails.



Consult local practice to determine whether nailing blocks are customarily installed by the Carpenter or by the Contractor who erects the gypsum tile. The drawing shows a typical installation of heavy nailing blocks in a partition or in furring, in this case to support a blackboard. The 2'-6'' long tiles are cut in two to produce 15''lengths of tile. With nominal 2'' stock this would provide nailing grounds 16%'' o/c.

6. PARTITIONS. Start laying tile on (... finished floor for partitions that may be moved, on rough floor for partitions that are permanent ...). Wedge top course at ceiling every 6'-0" with wedges cut from Pyrobar and slush the joint with mortar. Lay no

partitions of a thickness less than that shown in the following table for the heights of partitions given:

2″	Solid1	o ft.	4″	Hollow	 ft.
3″	Solid1	5 ft.	5″	Hollow	 ft.
3″	Hollow1	3 ft.	6″	Hollow	 ft.

Corrugated anchors will be placed $12\frac{1}{4}$ o/c in masonry walls when laid up so that they will project at least 5" into the joints of intersecting gypsum tile partitions.

7. FREE-STANDING FURRING. Use $(\ldots 2" \text{ or } 3" \text{ solid, or } 3", 4", 5" \text{ or } 6" \text{ hollow } \ldots$) Pyrobar gypsum tile for free-standing furring. Start furring on the rough floor. Allow an air space of $(\ldots \text{ specify distance } \ldots)$ between the face of the rough wall and the back of the furring. Suitable wall ties will be installed at intersections by the Contractor for work specified under Masonry and left projecting from the rough wall. Treat areas of free-standing furring as partitions since they are independent walls and are not anchored to the walls which are being furred except at intersections. At jambs of openings the air space is to be closed by $(\ldots \text{ returning gypsum tile, or covered with metal lath and plaster under Lath and Plastering Contract ...).$

8. LINTELS FOR OPENINGS. Where openings less than 1'-10'' are detailed without frames or bucks, form a lintel with a single whole tile with end bearings 4''; for openings more than 1'-10'' but not more than 4'-0'', form jack arches with not less than a 12'' bearing for the skew-back tile and do not project skew-back tile beyond the face of the jamb more than one-half of the bearing;



for openings over 4'-o" set the metal lintels which will be furnished by the Contractor for work specified under Structural Steel.

Where wood bucks are detailed to extend from floor to ceiling, fill in the area over the opening with gypsum tile anchored at every course on both sides of both bucks. Where metal door frames are specified no lintels are required and the gypsum tile is to be continued over the opening in running bond.



9. CONTACT FURRING. Start furring on rough floor. Install $(\ldots, 1\frac{1}{2}" \text{ or } 2" \ldots)$ split furring tile where required by the drawings. Securely anchor furring in contact with the rough construction by means of 10d steel cut nails driven into the rough masonry joints not more than 2'-o" o/c horizontally and vertically to a penetration of 11/2".

The work of installing gypsum partitions and furring is interdependent with a number of other trades. As a check list for this other work, the following paragraphs are suggested for inclusion under their proper sections.

Under Carpentry

WOOD BUCKS. Wood bucks in gypsum partitions must extend from floor to ceiling. Use not less than 1%'' actual thickness of material for The width of material for bucks must be exactly equal to wood bucks. the total thickness of the tile and plaster construction. Either rabbet bucks to receive the ends of the tile or use material equal to the thickness of the tile only with $\frac{1}{2}''$ grounds nailed to the sides with a projection beyond the back of the buck not less than $\frac{3}{4}''$ to form a rabbet for receiving the tile ends. Provide wood bucks with corrugated anchors nailed to the buck so that the anchor will extend at least 5" into every horizontal gypsum tile joint. Set all wood bucks in advance of the partition or fireproofing work.

TRIM. Furnish and install nailing blocks in gypsum tile partitions and furring where required. Cooperate fully with the Partition Contractor to arring which requires the section of the attachment of trim or fixtures as specified in Paragraph 5 of the Section on Partitions and Furring.

Under Hollow Metal

METAL DOOR FRAMES. Level and shim metal door frames and keep frames in alignment by adequate bracing during the construction of the gypsum tile partition. Secure frames to rough or finished floor with suitable bolts. Provide frames with corrugated anchors attached to the frame to extend 5" into every horizontal joint of the gypsum tile. Recheck frames for plumbness after tile is in place.

Under Structural Steel or Miscellaneous Iron

LINTELS. Provide structural lintels of section as detailed on the drawings for all openings in gypsum tile partitions or furring which are more than 4'-0'' in width. Metal lintels will be set by the Contractor for gypsum tile partitions.

Gypsum tile is not a load-bearing material and large openings with a considerable area of tile above them will require struts from

floor to ceiling to support the lintel or the lintel may be hung by anchored rods from the structural ceiling construction. Where openings occur in furred walls, the lintel for support of gypsum will often be a part of the lintel supporting structural masonry lintels. For partitions which are relatively small and which carry a small amount of masonry can be economically formed of flat steel bars having 6" bearing.

Under Waterproofing and Dampproofing

DAMPPROOFING EXTERIOR WALLS. Apply a dampproofing to the interior surface of exterior walls which are to receive gypsum tile contact . specify type, such as pitch coating, paint, mastic, furring. Use (. . etc. . .) as a dampproofing applied according to the manufacturer's directions.

The permeability of masonry walls may require the application of a dampproofing before contact furring is placed. Many thousands of installations of gypsum tile contact furring without dampproofing are on record as completely satisfactory.

Under Lathing and Plastering

METAL LATH. Cover areas of gypsum tile, which are to receive a Portland cement setting bed for ceramic tile, with (. . . specify type . . .) metal lath.

Cover all joints between gypsum tile and other types of masonry with metal strip lath not less than 3" wide weighing not less than 2.2 pounds per square yard. Cover that portion of bucks above openings when bucks extend from floor to ceiling with a strip of metal lath not less than 12" wide weighing not less than 2.2 pounds per square yard. Run metal strip lath not less than 3" wide x 2'-0" long weighing not less than 2.2 pounds per square yard diagonally on both sides of openings with skew-back arch lintels. Cover chases cut in gypsum tile to receive conduits, pipes or other services with a strip of metal lath weighing not less than 2.2 pounds per square yard.

PLASTERING. Apply gypsum plaster on gypsum tile in accordance with the American Standards Association Standard Specifications for Gypsum Plastering.

Under Electrical Work

CONDUITS. Place conduits so as to allow for the full thickness of plaster being applied. Keep conduits back at least 12" from the jambs of openings so that proper bearing of lintels can be obtained.

Under Masonry

ANCHORS. Where corrugated anchors are required for the anchoring of gypsum tile, provide and install suitable corrugated anchors in such a manner as to allow 5" projection into the joints of the gypsum tile.

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- PLASTER BASES. A complete line of standard metal laths, gypsum lath, metal accessories and light weight economical Pyrobar gypsum partition tile.
- ROOFS, FLOORS AND PARTITIONS. Pre-cast and poured gypsum slabs, and ribbed steel decks for roofs and floors. Gypsum block for partitions and fireproofing.

SHEATHING. An insulating board type and Gyplap the fireproof gypsum board sheathing.

SHEETROCK. Fireproof Gypsum panel material for dry wall construction to receive paint, wall paper or any other decoration. Also available predecorated.

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- TRUSSTEEL STUDS. A system of light weight hollow steel partition framing, for speedy erection and non-inflammability.
- USG PLASTERING SYSTEMS. Construction methods for applying Rocklath or Metal Lath to wood frame, steel or masonry, to reduce sound transmission and to minimize plaster cracks and joist streaking.
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NEW TECHNIQUE OF DAYLIGHT TRANSMISSION

Twin photographs show why **INSULUX** Prismatic Block provide more usable light, evenly distributed

PHOTOGRAPHIC DATA: All photos made with same camera on one film roll with sunlight brilliant. Exposures: Both pictures facing opening, 1/50 second, stop f.9. Both pictures facing rear wall, 1/50th second, stop f.5.6. All prints given same exposure in printer. No retouching.

HESE photographs tell better than words that INSULUX Prismatic Block offer architects a new technique of using natural light-economical re-direction and distribution of daylight for even lighting, without glare.

All photographs were made in pairs 1 minute apart, at 1 p.m., April 9, 1941, at latitude of 40° north. Wall opening 5.5 per cent of floor area.

The comparison is striking - INSULUX Prismatic Block vs. a free, unglazed opening, which obviously admits maximum available light. Yet note the better lighting on rear and side walls when INSULUX panel is put in opening.

The principle is simple: Refraction of natural light upwards to a reflective ceiling, plus diffusion for even distribution. No system of louvers, reflectors or baffles are as all-around efficient and as permanently economical as INSULUX Prismatic Block.

Panels of No. 351 Prismatic Block above eye level, with No. 350 No-Glare Block below eye level, can be used on any exposure without glare.

INSULUX Prismatic Block logically solve the problem of ample, usable daylight in industrial plants, offices, or any large interior. Owens-Illinois Glass Company, Insulux Division, Toledo.



PANEL



Sole opening in 23 x 25 room is free, without glass. Little light on ceiling or nearby wall.



View towards rear wall with opening free. Note lack of wall detail, poor light on last card.



Photo taken 1 minute after top picture, with INSULUX Prismatic panel in place. Note man at right, present but not visible in top photo. Faintly visible, right, is extra test panel hung on wall.



Photo taken 1 minute after twin photo above. Compare detail on rear wall, lighting of cards. Note also uniform lighting on the ceiling from first to last card.

Block would be used in panel below eye ievel.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Replies to box numbers should be addressed care of PENCIL POINTS, 330 West 42nd Street, New York. 25 words or less in this Department FREE—over 25 words ten cents per word should accompany all notices. Copy must be in by 12th of month preceding date of issue.

CONTROLLED FLUORESCENT LIGHTING THROUGH HOLOPHANE CONTROLENSES. — New brochure, featuring three recently-developed Controlenses, describes the optical performance of each, lists their advantages, shows how results can be predicted and describes and illustrates equipment using them. Included is a list of the manufacturers who have designed these various units. 16 pp. 8¹/₂ x 11. Holophane Co., Inc., 342 Madison Ave., New York, N. Y.

UNIT HEATING BY CARRIER.—A.I.A. File No. 30-d-11. Condensed handbook presenting detailed rating tables for the selection of the correct requirements for unit heating for commercial and industrial requirements. Included are tables covering different steam pressures together with hot water basic ratings, piping and wiring diagrams, also typical building layouts. 24 pp. 8 ½ x 11. Carrier Corp., Syracuse, N. Y.

ARTHUR L. GUPTILL'S

- BUILD A BEAUTIFUL HOME WITH BEAUTIFUL WINDOWS. — Attractive new brochure prepared especially to assist architects in the planning of beautiful window treatments. Profusely illustrated with photographs of exteriors and interiors of homes picturing the finished effect of Ceco steel casement windows. Included is data on metal frame screens and storm sash, also on Bonderizing treatment given all Ceco casements and screens. 24 pp. 8½ x 11. Ceco Steel Products Corp., 5701 W. 26th St., Chicago, Ill.
- NEW IMPROVED A-H & H CIRCUIT BREAKERS. —A.I.A. File No. 31-d-4. Bulletin listing and illustrating three general types of A-H & H circuit breakers for a wide range of lighting and power circuits. Suggested specifications, price list, box dimensions and knockouts. 12 pp. 8½ x 10. The Arrow-Hart & Hegeman Elec. Co., Industrial Control Div., Hartford, Conn.
- MARBLE IN THE HOME.—Bulletin, dealing with the subject of Vermont marble, illustrates numerous applications for marble in the home, including bathrooms, fireplaces, entrances, staircases, floors, window stools, table tops, etc. 8 pp. 8½ x 11. Vermont Marble Co., Proctor, Vt.
- JOSAM PRODUCTS FOR U. S. GOVERNMENT REQUIREMENTS.—A.I.A. File No. 29-C. Catalog GS illustrates and describes the Josam line of plumbing drainage products which are approved for use in all U. S. Government projects. Dimension drawings and tables. 30 pp. 8½ x 11. Josam Mfg. Co., Empire Bldg., Cleveland, O.
- NEW BILT-WELL SUPERIOR UNIT WINDOWS.— Folder describing the construction and advantages of a new line of complete unit wood windows. Specifications, details, etc. 4 pp. 8½ x 11. Carr, Adams & Collier Co., Dubuque, Iowa.

PENCIL TECHNIQUE PRACTICE SHEETS for use in conjunction with his book— SKETCHING and RENDERING IN PENCIL

This portfolio was designed to save the time of the student anxious to get at the practice of pencil technique with a minimum of lost motion. It consists of eight sheets of drawing paper on which are printed, in pale gray, outlines of the illustrations on pages 74, 90, 113, 123, 124, 127, 136 and 139 of "Sketching and Rendering in Pencil."

The student draws directly on these sheets, using the printed lines as a guide for proportion and referring to the corresponding illustrations in the book for suggestions as to technique. The text of the book describes the best pencils for all such work and explains the procedure. These sheets have been popular in pencil classes as well as with the individual.

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⁽Continued on page 44)

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At Right: Typical instal lation, showing inconspicuous appearance. Ingersoll KOOLSHADE^{*} Sun Screen

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 42)

- VENEERS.—A.I.A. File No. 19-e-5. Folder prepared especially for architects and designers giving useful reference data on the principal veneer cabinet woods. The data covers commercial names, botanical names, origin, color range, types of figures available, price range, hardness, how cut and approximate maximum widths and lengths. 4 pp. 8¹/₂ x 11. The Veneer Assn., 616 S. Michigan Ave., Chicago, Ill.
- MODEL C ELECTRO-MATIC AIR FILTER. Bulletin No. 250-C describing and illustrating the construction and operation of the model C Electro-Matic self-cleaning air filter. Diagrams and cut-away sections show how electrical precipitation and automatic air filtration have been combined in a compact, self-contained unit. 16 pp. $8\frac{1}{2} \times 11$. American Air Filter Co., Inc., Louisville, Ky.
- WESTINGHOUSE WATER COOLERS. Folder 1WC-0201 illustrates and briefly describes a line of water coolers for general industrial and office use. 8 pp. 8¹/₂ x 11. Westinghouse Elec. & Mfg. Co., Dept. 7-N-20, East Pittsburgh, Pa.
- EMERSON ELECTRIC VENTILATING AND EX-HAUST FANS.—A.I.A. File No. 30-d-1. Catalog X4059 describing and illustrating the Emerson line of exhaust and ventilating fans for commercial, industrial and domestic installations. Dimensions, performance and prices are included for all fans. 16 pp. $8\frac{1}{2}$ x 11. The Emerson Electric Mfg. Co., St. Louis, Mo.
- FIR-TEX SUPER INSULATING BOARD. A.I.A. File No. 37. New catalog for architects and builders, dealing with the subject of Fir-Tex insulating board, presents master specifications for interior finish, sheathing, plaster base and roof insulation. 16 pp. 8½ x 11. Fir-Tex Insulating Board Co., Porter Bldg., Portland, Ore.
- MENGEL BOARD.—A.I.A. File No. 19-e-5. Catalog describing Mengel Board, a type of hardwood wall paneling for homes, offices, hospitals, etc. Installation details and instructions. 8 pp. 8¹/₂ x 11. The Mengel Co., Inc., Louisville, Ky.
- AUSTRAL MOVABLE BLACKBOARDS.—A.I.A. File No. 35-b-13. Bulletin with descriptive and specification data covering the Austral line of movable blackboards with Griptite all metal trim. 4 pp. 8¹/₂ x 11. Austral Sales Corp., 101 Park Ave., New York, N. Y.
- GRID UNIT HEATERS.—A.I.A. File No. 30-d-11.
 Useful reference guide for architects and engineers covering a type of unit heater for industrial applications. Capacity tables, piping layouts, dimensions, etc. 16 pp. 8¹/₂ x 11. The Unit Heater & Cooler Co., Wausau, Wis.
- ILG PROPELLER FANS.—Catalog No. 141, just issued, presents specifications for the complete line of Ilg products, together with illustrations, including diagrams and installation views of propeller fans, automatic shutters, fan guards, power roof ventilators, dark room ventilators, special high speed fans, portable floor fans, night cooling fans, kitchen ventilating fans, and volume blowers. Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, Ill.
- ZURN GREASEPTOR.—A.I.A. File No. 29-c. Folder giving detailed description of a type of interceptor for preventing grease from clogging drainage and sewer lines. Installation data and details. 6 pp. 8¹/₂ x 11. J. A. Zurn Mfg. Co., Erie, Pa.

(Continued on page 46)

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 44)

- FIREPLACES AND HOW TO BUILD THEM. A.I.A File No. 14. Catalog No. 13, just issued, gives detailed data on three types of non-smoking, freeburning fireplaces. It describes and illustrates the correct rise of dampers, smoke chambers and complete units of both recirculating and fresh air types. It also illustrates a number of attractive fireplaces in good taste; also fireplace accessories. 12 pp. 8½ x 11. The H. W. Covert Co., 339 E. 48th St., New York, N. Y.
- FENESTRA INDUSTRIAL STEEL WINDOWS. A.I.A. File No. 16-e-1. Reference book for architects covering the Fenestra line of pivoted, projected security and continuous windows and operators. Included are specifications, types and sizes, full size sections and installation details. 40 pp. 8½ x 11. Detroit Steel Products Co., 2250 East Grand Blvd., Detroit, Mich.
- BYERS WROUGHT IRON FOR RADIANT HEAT-ING INSTALLATIONS. — Valuable collection of text material, photographs, tabular matter and piping diagrams for architects and engineers in brochure form devoted to the subject of radiant heating. It describes the history, theory and advantages of radiant heating, calculation principles for the design of radiant heating installations, also selection and fabrication of pipe. Numerous typical radiant heating installations are described and illustrated. 44 pp. 8 1/2 x 11. Copies of brochure may be obtained upon request on business stationery to A. M. Byers Co., Pittsburgh, Pa.
- FEDDERS TYPE K HEATING COILS.—A.I.A. File No. 30-f-4. Catalog AC601, dealing with the subject of Fedders type K heating coils, presents much useful material which saves time for those who design large heating systems. Included are series of useful time saver charts and fully developed tabular data arranged to simplify tabular coil selections, together with piping diagrams. 52 pp. 8½ x 11. Fedders Mfg. Co., Inc., Air Conditioning Div., Buffalo, N. Y.
- NEW POST DRAFTING AIDS.—Series of attractive panels, 10 in. by 12 in., each bearing a single instruction or caution, such as "Remember to Keep Detail Open, Opaque and Sharp—for Perfect Blueprint Reproduction." They are intended to be hung on the walls of drafting rooms as constant reminders to draftsmen to watch their work closely to avoid the necessity of alterations in drawings and consequent loss of time. The Frederick Post Co., Box 803, Chicago, Ill.
- METAL LATH NEWS.—A.I.A. File No. 20-b-1. May issue of this publication, devoted to the subject of furring, reviews the different methods of furring and anchoring. 8 pp. 8¹/₂ x 11. Metal Lath Mfrs. Assn., 208 S. La Salle St., Chicago, Ill.
- ORCO SAFETY TREADS AND FLOORING.—Catalog containing useful reference data for architects on the subject of Orco safety treads and flooring. Included are suggested specifications, installation details, size data and color chart. 8 pp. 8¹/₂ x 11. The Ohio Rubber Co., Willoughby, Ohio.
- MURCO UNIT HEATERS.—A.I.A. File No. 30-d-11. Catalog describing a line of unit heaters for use in industrial buildings, stores, restaurants, shops, gymnasiums, garages, etc. Dimensions, capacity tables, etc. 12 pp. 8¹/₂ x 11. D. J. Murray Mfg. Co., Wausau, Wis.

(Continued on page 48)

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46)

- PARLON BASE PAINTS FOR CONCRETE SUR-FACES.—Booklet discussing the advantages, chemical resistance and application of the new Parlon base paints for protecting and decorating concrete, plaster, stucco, cement, asbestos boards, brick and similar materials. Hercules Powder Co., Inc., Cellulose Products Dept., Delaware Trust Bldg., Wilmington, Del.
- THE NEW TREND IN HOME FURNACE DESIGN. —Brochure dealing with the Mueller warm air system of heating and air conditioning explains the various types of heating equipment most commonly in use in the homes of today, and outlines the advantages of each of the three types of fuel—coal, oil and gas that may be used. Numerous models of Mueller equipment are illustrated and described in detail. 24 pp. $8\frac{1}{2}$ x 11. L. J. Mueller Furnace Co., Milwaukee, Wis.
- WOOD FIBRE CARVINGS.—Catalog No. 122 illustrates a selection of wood fibre carvings, especially adaptable for mantels, cabinets and architectural trim. A group of composition shells for cabinets and niches are also shown. 12 pp. 9 x 12. Decorators Supply Co., Peoria and 26th Sts., Chicago, Ill.
- TRUSCON FLOOR-PATCH. Folder describing a new type of patching compound for holes and ruts in concrete floors. Application directions are included. $8\frac{1}{2} \times 11$. Truscon Laboratories, Detroit, Mich.

MANUFACTURERS' DATA WANTED

- EDWARD H. PETERS, Architect, 518 Newnan Street, Jacksonville, Fla. (Data for complete A.I.A. file.)
- CLARENCE WARREN DOLL, Architect, Donnell Building, Mattoon, Ill. (Data for complete A.I.A. file.)
- VINCENT D. CASE, Assistant Architect, U. S. Engineers Office, 751 South Figueroa Street, Los Angeles, Calif. (Data for complete A.I.A. file, also data on equipment for airport construction.)
- E. W. CARROLL, Architect, El Paso Public Schools, 2520 San Jose Street, El Paso, Texas. (All data as well as A.I.A. data to start a complete new architectural file.)
- P. ARTHUR D'ORAZIO, Architect, 656 Bryson Street, Youngstown, Ohio. (General data, and data for complete A.I.A. file.)
- MICHAEL R. PRUSACK, *Designer*, Verona, Kentucky. (Data for complete A.I.A. file, and data for residential work, for drafting room, also samples.)
- BURTON F. BOOTH, Draftsman, 821 N. Court Street, Rockford, Illinois.
- JOHN F. PASSAFIUME, *Designer*, 325 East 5th Street, New York, N. Y. (Data for complete A.I.A. file, and data on residences, small commercial buildings.)
- CARROLL S. RANKIN, Draftsman, Office of the Quartermaster, Fort Thomas, Kentucky. (Data for complete A.I.A. file.)
- ARNOLD M. FRANKEL, Cost Estimator, Cost Department, Contractors Pacific Naval Air Bases, P. O. Box 2459, Honolulu, T. H.
- JAMES RUKLIC, Student, 12434 Highland Avenue, Blue Island, Ill. (General literature and data for complete A.I.A. file.)
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(Continued from page 36) the architectural level of USHA work. The Committee consists of: Rudolph Adler, Atlanta, Georgia; Henry S. Churchill, New York; Talbot Hamlin, New York; Don Hatch, New York; Albert Mayer, New York; Howard Myers, New York; George Nelson, New York; Eero Saarinen, Bloomfield Hills, Michigan; Edward Stone, New York; and Hugh Stubbins, Jr., Boston, Mass. Howard Myers was elected chairman.

It is planned to make this body a continuing committee, and to add to

its personnel other members representing the various other regions of the country.

Mr. Strauss, Mr. Seaver, and Mr. Shire, the Chief Technical Adviser, presented the problem, as the USHA sees it, and Mr. Strauss expressed the hope that concrete recommendations would be forthcoming from the Committee. The Committee is engaged in formulating its recommendations and it is hoped that its efforts will bear fruit, in real assistance in the achievement of the Administrator's ideals of "housing as beautiful as it is efficient; as livable as it is low-cost."



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AT LARGE IN THE LIBRARY

THE AMERICAN PUBLIC LIBRARY BUILDING, by Joseph L. Wheeler and Alfred M. Githens (\$4.00, illustrated with photographs and plans — Charles Scribner's Sons, aided by Carnegie Corporation of New York by means of a grant through A.I.A.)

It has become increasingly plain in recent years that libraries cannot perform their tasks with efficiency unless they are appropriately housed. Apart from its logic, this lesson has been driven home by numerous examples of buildings which reveal complete lack of suitable planning and which have proved to be serious liabilities to the authorities and staffs responsible for operating them. Until now, however, there has been nothing like a full treatment of the conditions and problems facing those charged with providing quarters for libraries. For one kind of institution this need is now met, after years of effort by two tireless compilers, with the appearance of Wheeler and Githens' THE AMERICAN PUBLIC LIBRARY BUILDING. The new publication pools the life-long experience of a leading librarian and an architect who has been highly successful with library buildings.

In the opinion of one librarian, at least, this book is to be looked upon and judged as an encyclopedia of recommended practice. Viewed so, it is a tool which no party to a public library building project may neglect without dereliction of duty. It will need to be a constant recourse, even though each of the groups it addresses will find in it much that is familiar and although few may care to read it seriatim. To governing bodies it offers the facts required for their numerous decisions, and, incidentally, an exposition of institutional aims. It provides librarians with an aid in formulating their administrative policies, and a check list for reference in outlining their building programs. For architects it furnishes the reasons and details of that "functional anatomy" which is indispensable to a successful structure. To some extent these values reach beyond the field.

The pervasive element in the book is the purpose of public libraries, to (Continued on page 56)





Butter one brick with Brixment mortar, colored with any good black mortar color. Then butter another brick with mortar made with 50-50 lime and cement, and the *same* mortar color. Set both brick aside for a couple of weeks. You'll find that the sample made with Brixment mortar retains its full, rich color (right), while the other turns dull or pale.

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Brixment is therefore recommended by manufacturers of both mortar colors and face brick, for use with their products.





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(Continued from page 54) which everything else is referred. The authors never lose sight of the main point and their treatment of the principles they bring to bear upon this is specific, without being meticulous. The weaknesses of the volume are on the safe side, i.e. of overdoing. From the practical standpoint the classification of plans by types is carried to refinement. It will justify itself if it renders easier the analysis and grasp of the various factors in floor layout which have been treated cursorily in the past. There is heavy repetition of precepts and examples throughout the

book, and most particularly in the summary in Chapter Thirty-three; but the work is a reference tool, and its sundry bits of counsel need to appear wherever they are pertinent and will be caught in topical consultation. This reviewer wishes that the definitions affecting work-spaces in Chapters Seventeen and Eighteen might have been more clear-cut, and that in the treatment of service points there might have been more complete anticipation of arrangements for the relegation of mechanical activities and for reducing or superceding card catalogs. ERNEST J. REECE



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planning washrooms for new buildings, Bradley Washroom Consultants are ready to make suggestions—and a copy of our booklet "Washroom Layouts" will be forwarded on request.

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B.A.C. MEETING

The Boston Architectural Club held its Annual Meeting on Tuesday the 3rd of June, and before it came the combined Club and Atelier Dinner. James Ford Clapp [who died the same evening. Ed.] discoursed on Professor (Harry) Gardner of M.I.T who gave invaluable service as a former Club instructor and left a tradition that his friend John F. Alter has since carried on most successfully. Other speakers were Mr. Alter and Chester Lindsay Churchill.

Another flock of Lamb Prizes was awarded, to 1st, 2nd and 3rd year students who had done outstanding work. So we find John Vahey collecting as a pre-design man; Beston Phinny in the 2nd year; and 3rd year, Ralph Le Blanc. Herbert Glassman won the Special Student Scholarship to M.I.T. and Kenneth Wilkie fell heir to the Harvard Scholarship.

At the election of officers, Clifford Allbright became president, and Mr. Alter found himself re-elected vice president. Carl S. Priestley, having won his spurs as a treasurer in the A. L. of B., was elected to that office by the Club. The three directors are Arcangelo Cascieri (re-elected), Charles G. Loring, retiring as President, and George McClellan.

On May 22nd the Architectural League of Boston shed its old skin and as the integument rustled to earth the smiling face of John H. Shea was revealed as president, with Bill Fopiano backing up in the vice dept. Arranged on either side were Recording Secretary H. M. L. Giduz, Corresponding Secretary Ed Clancy, and Treasurer Gordon Kunz.

One report of the meeting says that after the induction a member looked down upon the valley and seeing cheerful lights in the Crawford House suggested adjournment thereto, only to be rebuffed by President Shea, as follows:

"Fellow member, you may or may not know that there is now showing in the Crawford House a young lady who is nightly set upon by trained pigeons and artfully denuded to the limit [union suit. Ed.] permitted by local statute. If that suggests anything at all it brings to mind the parable of the architect and the interloper, be he whomsoever fits the full, despicable meaning of the term [glaring fiercely to right and left over heads of the Architectural Leaguers].

(Continued on page 58)

Bradley Washfountains in locker-shower room in new Foundry Employees' Service Building, Caterpillar Tractor Co., Peoria, III. Designed by Richard Beisterling and built by Fred Harbers' Sons, Contractor.



Riverside Hospital, Tuberculosis Pavilion, North Brother Island, New York, N. Y., Electus D. Litchfield, Architect.

Sills, coping and trim of Alberene Stone are durable, colorful and economical



Detail showing 1³/₄" thick Slip Sill, and 2¹/₄" thick Belt Course of Alberene Stone as used in Riverside Hospital. At circular sections, Sills carry through to form a band course. Alberene Stone used for roof and balcony copings, also. Alberene Stone is ideal for exterior use because it is impervious to moisture; it does not chip, scale or split. Its natural light blue-grey tone harmonizes with practically any other colors. The fact that it can be cut into thin sections makes for definite economies. Used for sills, coping, spandrels, exterior or interior trim. Alberene Stone is free for all time of maintenance costs. As years pass it weathers to pleasing bluish and greenish tones with glints of yellow. Our Mills in Virginia are the largest in the country devoted to producing special purpose quarried stone. We are prepared to make deliveries promptly of stone in a color range of gray, dark gray, blue, blueblack, dark green and black, in various textures and finishes; and prompt delivery is an important consideration in the present emergency. Inquiries will receive immediate attention.

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ALBERENE STONE

(Continued from page 56)

"Once upon a time there were men of skills and technical dexterity whose blind spot was an inability to see the protective benefits of group action. They always thought that it was the other feller who was going to get termites in his wooden leg. And all the while a mess of interloping wise guys with a fixed purpose to make a dollar kept boring in and stealing their business. The general public didn't know any better and the technicians couldn't get together.

"Gentlemen, you see here in these miserable birds the selfsame interloping usurpation of another's rights, of your right and my right, and we as the lineal descendants of these technicians should not be party to its support. Let's go to Jake Wirth's."

LEON KEACH

DESIGN RESEARCH

To make available for student research the works of early French, Italian, Spanish, and German masters of decorative design, despite Axis control of European museums, the Cooper Union Museum for the Arts of Decoration will remain open throughout the Summer.



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New office building, Giddings & Lewis Machine Tool Co., Fond du Lac, Wisc, Pecora-calked by Immel-Mabie Const. Co. Sears-Roebuck Bldg., Syracuse, N. Y. Pecora-calked by Duncan Thomson Weatherproofing Co., Syracuse.

Woodward-Lowthrop Warehouse, Washington, D. C. Pecora-calked by Chamberlin Metal Weather Strip Co., Washington.

Facts

Write for Don Graf Data Sheets, also folder describing Pecora Products, including PECOMASTICS for structural glass installations.





NEW YORK CHAPTER

Harvey Stevenson has been elected president of the New York Chapter, A.I.A., succeeding Frederick G. Frost. J. Andre Fouilhoux was chosen vice president of the Chapter, succeeding Mr. Stevenson. Robert S. Hutchins succeeds Frederick J. Woodbridge as secretary; Henry Hofmeister will again serve as treasurer; and Don E. Hatch was named to the post of recorder, formerly occupied by Mr. Hutchins. Albert G. Clay and Otto Eggers, as well as the new officers, become members of the executive committee.

Mr. Stevenson is chairman of the Civilian Protection Committee of the New York Chapter of the American Institute of Architects, and vice chairman of a similar committee of the New York State Association of Architects. He is also a member of the Architectural League and other architectural organizations. Mr. Stevenson, a resident of Croton-on-Hudson, is a member of Morris & O'Connor, Harvey Stevenson.

GREEK AID

We are advised by the American Architects' Committee for War Relief in Greece, on whose behalf we published an appeal last month, that funds are not being solicited at present due to the confusion in international credits. The Committee is now dormant but communications about its affairs will be received by W. Stuart Thompson, A.I.A., 19 West 44th Street, New York City.

GRADUATE STUDY

Beginning in September, 1941, the architectural department of Pratt Institute, Brooklyn, will add a year of graduate study open to professional architects as a "refresher course" in the latest architectural developments, *C. C. Briggs*, Supervisor, announces.

Graduate students may major in the new defense subjects, such as structural air raid precautions, industrial camouflage and defense housing which, according to Mr. Briggs, "are sure to revolutionize the architecture of the future," or may specialize in the more established branches of the profession such as community planning, small residences, public buildings, interior architecture or landscape architecture.

A limited number of fellowships will be available to graduates of accredited architectural courses.

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JULY 1941



COMPETITION ANNOUNCEMENTS AND RESULTS

PARIS PRIZE

Winners of the Special 1941 Paris Prize Competition, conducted by the Society of Beaux-Arts Architects, have been announced by *George A*. *Licht*, Chairman of the Paris Prize Committee. They are: First Medal and Prize—*G. Paulsen*, University of Illinois; First Medal Commended *—L. Woodard*, University of Illinois; First Medal—*F. C. Salmon*, University of Pennsylvania.

Second Meda'-J. C. Tighe, Uni-

versity of Pennsylvania; Second Medal—J. C. Wheeler, University of Pennsylvania; Second Medal— A. B. White, University of Pennsylvania; Second Medal—S. Carter, Syracuse University; Second Medal —J. S. Nants, Jr., Princeton University.

In addition to the 3 First Medals and 5 Second Medals the jury, at the Judgment on June 17, awarded 12 Honorable Mentions. Thirty-six drawings were submitted by the competitors and the Schools and Ateliers



There's one and only one floor that thrives on abuse and improves with age—that's terrazzo. Once laid, years of foot traffic only mellow and enrich its beautiful colors. It's the floor that lasts the life of the building—a low cost material when you remember there are no refinishings, no expensive repairs, no replacements and cleaning costs are minimum. It's smart and sanitary, easy to walk on, inviting. Yes, "Terrazzo has everything" that your clients want in floors or wainscoting—beauty, thousands of color possibilities and almost any design or color combination your office can create. Certainly you will want to specify terrazzo at every opportunity. For latest, up-to-date information, consult your local terrazzo contractor or write—

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60

represented were: Alabama Polytechnic Institute; Carnegie Institute of Technology; Georgia School of Technology; Miami University; New York University; Princeton University; Rensselaer Polytechnic Institute; Syracuse University; University of Illinois; University of Pennsylvania.

The subject of the competition was "A Plant for the Assembly of Motor Cars," and the prize accompanying the First Medal was \$250. The members of the Jury were: Mr. Licht, Chairman; Lt. Charles M. Ackley; Lewis G. Adams; Harvey Wiley Corbett; John W. Cross; William Adams Delano; Joseph H. Freedlander; Alexander P. Morgan; William E. Shepherd; Seth Talcott; and Lawrence Grant White.

AMERICAN ACADEMY

The \$1,000 Architecture prize of the American Academy in Rome has been awarded to *Donald L. Grieb*, Milwaukee, of the graduating class at the University of Illinois. He is 22 years old.

The final problem was "A Primary Training School for U. S. Army Corps Pilots," and there were 8 final competitors chosen from the preliminary competition entered by 65 competitors. Honorable Mentions went to John C. Bonebrake, Shaker Heights, Ohio, a senior at the Cleveland School of Architecture, Western Reserve University; and to John W. Cole, Syracuse, a senior at Syracuse University: Mentions going to Joseph P. Ceruti, Cleveland Heights, a graduate of the Cleveland School of Architecture, W. R. U.; and to Milo D. Folley, a graduate of Syracuse University and M.A. at University of Pennsylvania.

The Academy prize in Landscape Architecture was awarded to *Albert Russell Tryon*, Harrisburg, a graduate of Pennsylvania State College. He is 27 years old. Tryon was one of 4 final competitors and the landscape problem was "A Neighborhood Community."

The prizewinning drawings were exhibited early this month at the Architectural League of New York. The cash prizes of the American Academy in Rome were given this year without restrictions, as interna-(Continued on page 62)

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4 Today, as in the past, Architects are unwilling to relinquish this assurance that their clients will enjoy greater dependability and operating economy because of the slight additional cost of Herman Nelson Products.

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THE HERMAN NELSON CORPORATION MOLINE

Manufacturers of Quality Heating, Ventilating and Air Conditioning Products

(Continued from page 60) tional conditions do not permit Fellows to go to Rome for study and creative work. Both Grieb and Tryon are eligible for selective service induction and they may not be able to carry out their plans for travel and study, but the grants may be used as they wish.

PENCIL POINTS PRIZES AWARDED

Awards in the recent Beaux-Arts Competition, "An Architectural School," conducted in Washington, D. C., and sponsored by Professors Frederick V. Murphy and Thomas H. Locraft, have been announced.

The prizes, given by PENCIL POINTS, went to A. W. Neumann, First, and to W. Eng, Second, both of the Department of Architecture, University of Illinois. In addition there were 7 First Mentioned Placed, 9 First Mentions, and 71 Mentions. There were 163 drawings submitted.

The architectural schools and ateliers participating were: Catholic University of America, Carnegie Institute of Technology, Cleveland School of

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Architecture, W.R.U.; Drexel Institute, Philadelphia; Georgia School of Technology, Kansas State College, New York University, Oklahoma Agricultural U. Mechanical College, Pennsylvania State College, Princeton University, University of Illinois, University of Kentucky, University of Notre Dame, University of Oklahoma, University of Pennsylvania, University of Virginia, Atelier Goudreau, Baltimore; T-Square Club of Philadelphia.

The Jurors were: Francis Almirall, Julian Berla, William V. Cash, Norris Crandall, Cushing Daniel, Edward Donn, George Downs, Waldron Faulkner, Ralph Gulley, George Howe, A. Musgrave Hyde, Louis Justement, Arthur J. Kelsey, L. M. Leisenring, William Reed, E. C. Reubsam, Louis Simon, Delos Smith, Thomas Stathen, Frank Sullivan, Howard Sullivan, John Walker, Nathan C. Wyeth, and Edmund S. Campbell.

MEDALS GIVEN

Awards of the 1941 Apartment House Medal of the New York Chapter, A.I.A., for the best apartment buildings erected within the five boroughs of New York City between October 1, 1938, and October 1, 1939, have been made to Castle Village and to the apartment house at 252 East 61st Street, in Manhattan, and to the Thorneycroft Homes, in Forest Hills.

Medals were presented to the architects of the winning buildings, *George F. Pelham, Jr., Horace Ginsbern,* and *Albert Mayer* by Frederick G. Frost, president of the New York Chapter, at the annual chapter luncheon, June 4, and the owners will receive certificates. They are Dr. Charles V. Paterno of Greenwich, Conn. (Castle Village); the 252 East 61st Street Corporation; and Thornewood Estates, Inc.

SCHWEINFURTH FUND

The Charles Frederick Schweinfurth Traveling Scholarship Fund for the Summer of 1941, to be used for study and research in Mexico and perhaps Guatemala, has been awarded to *Howard Bruce Cain*, 1494 Blossom Park, Lakewood, Ohio, it is announced by Dean Francis R. Bacon, of the School of Architecture of Western Reserve University.

Cain, a fourth-year student, is the (Continued on page 64)

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Write for Bulletin HR-1

L. J. WING MFG. CO., 150 W. 14th St., New York



(Continued from page 62) son of Mr. and Mrs. Oscar Cain. His brother, Walker Cain, held the Schweinfurth Scholarship in 1937, when he went to Paris and worked in the Fontainebleau School. Now, having won the Rome Prize, he is studying on it in New York, not being able to go to Italy, and working in the office of McKim, Meade, & White

BOOTH FELLOWSHIP

The Booth Traveling Fellowship Competition in the College of Architecture and Design at the University of Michigan was awarded on May 6 to Arthur Witt Brewer of Owosso, Michigan. Mr. Brewer is a graduate of the College, completing his work in June, 1940. During this past year Mr. Brewer has taken advanced work at the Cranbrook Academy.

The problem this year was "A Community House in a Medium Size City."

ROW HOUSING DESIGNS

Designs in a competition among forty architectural students at Cooper Union, for the "best low cost row housing project which could be built

without government subsidy for approximately \$5,000 a family," chosen as outstanding were those submitted by Leo Kanter, Bronx, fourth year night student, in the Art School; Irwin Luckman, Brooklyn, second year day student; and Emmanuel Turano, Brooklyn, fourth year night student.

The practical designing of privately owned row houses, visualized as the logical trend in the decentralization of large cities and of residential areas surrounding military objectives, was made the major problem of the year for upper class architectural students at Cooper Union. Detailed drawings and floor plans were submitted by each student after extensive research on new building materials, FHA standards of construction, and the financial limitations of the group to be housed.

WELDING AWARDS

The fifth annual award of the Lincoln Medal for an original contribution to the advancement and use of welding will be featured at the annual meeting of the American Welding Society, October 20 to 24 in Philadelphia. The Medal is do-(Continued on page 66)



"I assure you, Madam, Pm quite capable of designing your house without continuous supervision."

(Continued from page 64)

nated by J. F. Lincoln, president of the Lincoln Electric Company, Cleveland.

Cash prizes totaling \$700 also are offered by the Resistance Welder Manufacturers Association, 505 Arch Street, Philadelphia, in an open contest, until August 31, 1941, for technical papers on resistance welding. These prizes also will be awarded at the American Welding Society Convention.

MODERN PLASTICS

Modern Plastics Magazine is now sponsoring its Sixth Annual Modern Plastics Competition. Without fee, the sponsors of this annual competition invite all plastic-using firms, designers, molders, laminators, fabricators, materials suppliers, machinery and die makers to participate.

Any plastic object or product will be deemed eligible if it has been designed or has reached the market since September 1st, 1940. The competition and concurrent display of entries will be held in the main headquarters of Modern Plastics, Chanin Building, 122 East 42nd Street, New York City. The deadline for all entries is September 8.

As each entry is submitted it will be relegated to one of the following groups: 1. Architecture; 2. Business and Office Equipment; 3. Displays; 4. Furniture; 5. General Housewares; 6. Major Household Appliances; 7. Lighting; 8. Industrial; 9. Jewelry and Novelties; 10. Military and Defense; 11. Objects of Art; 12. Packaging and Closures; 13. Radios and Musical Instruments; 14. Scientific; 15. Sporting Goods, Games, and Toys; 16. Transport; 17. Wearing Apparel; 18. Miscellaneous.

PERSONALS

- MOORE & LLOYD, Architects, 2006 West Alabama; Houston, Texas, have dissolved partnership. Harvin Moore will continue practicing under his own name at the same address.
- CHARLES IRWIN THIELE, Architect, has moved his office from 551 Main Street to 503 Third Street, Niagara Falls, N. Y.
- CLARENCE WARREN DOLL, Architect, has opened an office for the practice of architecture in the Donnell Building, Mattoon, Illinois.

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You make sure of clients' satisfaction when you specify Kinnear Rolling Doors . . . architects have been proving that to themselves for almost half a century! And the most



convincing evidence of this fact is found in the enthusiastic approval expressed by so many users. Here, for example, is a recent letter from the Hydraulic Press Manufacturing Company, of Mt. Gilead, Ohio:

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"Just recently the writer was discussing our Kinnear Doors with Mr. Meyers, one of our Shipping and Receiving Clerks, and it is very interesting to note the opinion of a man who uses these doors constantly. The features he praised most were the speed with which the doors operate, their adjustable height, heavy rugged construction, and last





Louis H. Sullivan 15.00 Charleston, S. C. (Vol. I—Octagon Library of Early American Architecture) 20.00 Bertram Grosvenor Goodhue—Architect and Master of Many Arts 30.00

Transportation prepaid on orders amounting to \$1.00 or more net. Orders, communications and remittances (checks, money-orders, cash or stamps) should be sent to The American Institute of Architects, The Octagon, 1741 N. Y. Ave., N. W., Washington, D. C.

NEW PRODUCTS

NEW IMPROVED BREAKERS

A new line of improved flush and surface breakers has been announced by The Arrow-Hart & Hegeman Electric Co., Hartford, Conn. The listing is greatly simplified and a stock of only three sizes of boxes accommodates combinations of all CB, C-1, CBC type breaker

units. A simple ordering plan provides for a minimum, flexible stock of units.

As breaker units may be easily ordered in parts, the boxes can be delivered when needed for roughing in. Breaker units are delivered later when the wiring is to be completed. This allows for last-minute changes in wiring plans, shows the considerable investment saving of approximately 15% and eliminates breakage, loss or extra handling expense.



Three different types are available, C-1, CB, CBC, all new; designed, developed and improved by Arrow-H&H incorporating six new features. Listed by the Underwriters' Laboratories, Inc. Special catalog 16-A describes this new, improved line of breakers.

NEW MAJESTIC WINDOW WELL

Announcement has just been made by the Majestic Company, Huntington, Ind., of a new, and rather revolutionary design of window well. It is made of heavy gauge steel and reinforced by a steel rod welded to the top edge. The smooth inside surface reflects the light, does not so readily streak with dirt and become unsightly. Likewise the fill around the well does not have a tendency to pull the well away from the foundation. Another unique feature of the new window well is

the 20-year guarantee that it carries. A registration blank is attached to each well. If the owner of the premises signs and returns this registration form to the Majestic Company, he will have a guarantee of a replacement in case the well does not hold up for 20 years. The only provision in the guarantee is that it be painted according to good practice.

The Majestic window wells are offered in both the straight and round types and in all popular sizes. Also available are strongly constructed hinged gratings that can be used over the well when it is desired to make the basement window burglar-proof, or to prevent the accident hazard of a pitfall.

(Continued on page 67)

(Continued from page 66)

HERMAN NELSON ACQUIRES AUTOVENT FAN AND BLOWER

The Herman Nelson Corp., Moline, Ill., announces that it purchased on July 1st the entire assets and business of the Autovent Fan and Blower Co., Chicago, Ill.

The business will be operated as the Autovent Fan and Blower Division of the Herman Nelson Corp. The complete line of Autovent products will continue to be manufactured in the Autovent division in Chicago.

Included in the Autovent line are a complete range of sizes of centrifugal blowers from 6" in diameter to 72" in diameter in both forwardly and backwardly curved blade designs and a complete selection of propeller exhaust and ventilating fans from 12" in diameter to 72" in diameter.

NEW POST NEGATIVE PAPER

The Frederick Post Co., Chicago, Ill., announces the introduction of Post No. 226 Philm, a unique negative medium that assures identical duplications.

The waterproof treatment of Philm is said to keep negatives true-to-scale by preventing shrinkage or expansion. A glossy backing resists dust and dirt thus keeping negatives clean.

Philm is said to give maximum high results when used as a negative medium for ink drawings or pencil drawings that have ink-like detail and opacity. It is available in twenty-yard rolls, thirty-six, forty-two and fifty-four inches and also in ten-yard rolls of the same widths.

NEW LIGHTING AND POWER PHOTO-ELECTRIC RELAY

The United Cinephone Corp., Torrington, Conn., announces the introduction of the Sun-Switch, a new photo-electric relay for lighting and power.

The Sun-Switch is used to control electrical circuits in accordance with the rise and fall of natural illumination. The user chooses the two lighting levels at which he wishes the load switched on and off, and then adjusts the calibrated dials to the corresponding foot candle readings. Operation is entirely automatic, no resetting



being necessary.

Sun-Switch is primarily designed as an aid to greater safety and economy in incandescent lighting applications. Important advantages result from using the device in this service, including: (1) Lighting will always be on when needed, regardless of when darkness comes-(2) Lighting will never be on when the presence of sufficient daylight makes it unnecessary -- (3) No one need be made responsible

for, nor take the time to do, the job of lighting up.

Sun-Switch automatic control may advantageously be applied to: aircraft beacons, airport lights, department and retail store lighting, factory lighting indoors and outdoors, schools, libraries, museums, hospitals, etc.

The housing of the Sun-Switch is weatherproof drawn metal, $10\frac{3}{4}''$ by $5\frac{3}{8}''$ by $3\frac{1}{2}''$. Door gasket is cork, and finish of box, aluminum. Hasp permits padlocking. The control conduit uses a type 921 photo-tube, having a life expectancy of 20,000 hours, and two type 6J5 tubes, having life expectancies of 5,000 hours. Operation is from 110 volts, 50 or 60 cycles, a.c.

(Continued on page 68)

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> Bronze Roller Latch with Rubber Roller. Rubber For wood or metal stops.

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Send for Don Graf's Data Sheets. These authoritative specifications folders on "Pyrofax" Gas Service for homes beyond the gas mains are available. Write to Dept. B, "Pyrofax" Gas Division, Carbide and Carbon Chemicals Corporation, 30 E. 42nd St., New York, N. Y.



(Continued from page 67)

NEW TYPE AIR CONDITIONING SYSTEM

Development of a new type of air conditioning system, called the Conduit System, which, it is stated, will result in substantial savings in bringing air conditioning to the "man in the street," has just been announced by Dr. Willis H. Carrier, chairman of the board of the Carrier Corporation, Syracuse, N. Y.

The new year-round air conditioning system requires no more floor and wall space in buildings than steam pipes for a heating system. It has already been installed and proved successful in the Bankers' Health and Life Insurance Company Building at Macon, Ga.

Adapted primarily to apartments, hospitals, office buildings and other multi-room structures, the new method of air conditioning is made possible through the discharge of conditioned air at high velocities through a small conduit, instead of the large square ducts used with present air conditioning installations.

The Carrier Conduit Weathermaster System comprises heating, cooling, ventilating, cleaning, humidifying and air circulation equipment located in the basement or central apparatus room. This equipment draws in outside air and properly conditions it for cleanliness, ventilation and humidification. Standardized steel conduits



distribute the air to the various rooms. The air is then discharged under pressure through induction nozzles which draw large amounts of room air over the heating and cooling coil located in the Room Weathermasters and diffuse it throughout the room.

One of the first obstacles to be surmounted was that of standardizing

the connections to the unit. The new Conduit system utilized this feature which substantially reduces installation costs—by the provision for standardized equipment from the central station equipment to the units. The Conduit Weathermaster is composed of standard manufactured parts which results in a lowered cost of units, conduit and accessories. The Conduit is fabricated at the factory in standard sizes and requires only assembly in the field with a consequent reduction in installation costs.

Carrier Engineers have designed a "thinking" valve for use with the new Conduit Weathermaster to accommodate heating and cooling. For these purposes, hot or cold water is circulated through the system and the new control valve automatically determines how much hot or cold water must be circulated to maintain a constant temperature in the occupied space.

The new Conduit system, it is stated, saves from 85 to 95 per cent of the rentable space taken up by previous systems. The saving in building space and height has been found to amount to between 20 and 30 per cent of the installed cost of air conditioning.

Model cut-away section of Carrier Conduit System shows insulated pipes for hot and cold water and small drain pipe and, in rear, air supply conduit with front take-off to Room Weathermaster.

(Continued on page 69)

(Continued from page 68)

NEW PNEUMATIC INSERTION THERMOSTATS Two new additions to the line of pneumatic controls, the new Master and Submaster Insertion Thermostats, have just been announced by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

The Submaster thermostat may be used to operate valves or dampers to control the temperature of air or liquids while the Master thermostat, measuring the temperature of some other medium such as outdoor air, automatically resets the control point of the Submaster thermostat as the outdoor temperature changes. In a hot water heating system, for example, the Submaster control, located in the hot water supply, may be set to raise the water temperature from 100° to 180° F. as the outdoor temperature, measured by the Master controller, drops from 60° to 0° F.

The sensitive rod and tube type of element permits accurate control over a wide range of temperatures. Both controllers have a scale range of -20° to 120° F. The Submaster controller may be adjusted to increase the control point 25° to 150° . The Master controller may be adjusted to produce the desired change in control point as the temperature of the outdoor air (or other medium) increases or decreases over a span of from 15° to 75° F.

NEW FAN FOR HEATING AND VENTILATING A new fan designed primarily for heating, ventilating, and air-conditioning has been developed by B. F. Sturtevant Co., Hyde Park, Boston, Mass. Known as the Silentvane Design 8, this fan is said to possess two characteristics which particularly suit it to such duty quietness of operation and low outlet velocity. Though made in Class I only, the new fan is ruggedly built to stand up under the most exacting heating, ventilating and air-conditioning duties. Housings are made of steel plate with strong rolled bead joints reinforced with heavy bracing angles. Side and back plates of rotor are cut from heavy stock and back plate is securely riveted to cast iron hub. Blades are die-formed, riveted to back plate, and welded to the shrouds. In accordance with



N.A.F.M. standards for Class I fans, Design 8 Silentvanes are designed for a maximum tip speed of 9000 f.p.m.

The Design 8 also is said to possess the same desirable features which characterize other fans of the Silentvane line.

These advantages include: (1) Reduced power consumption, (2) Lower maintenance cost, (3) Slow rotative and peripheral speeds — consequently longer life, (4) High efficiency over a large operating range. Mechanical efficiencies in excess of 70% are available over 48% of the performance range, and in excess of 75%over 35% of the performance range, (5) Self-limiting horsepower characteristic with gradually increasing horsepower and volume until the point of maximum efficiency is reached—then decreasing horsepower for larger volumes.

The Design 8 Silentvane Fan is available in all standard discharges, single and double width, single and double inlet, with wheel diameters ranging from $12\frac{1}{4}$ " to $87\frac{3}{4}$ ".



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